NOVITUS

Communication protocol for fiscal printers (on-line printers) and pharmacy fiscal printers

Current version 1.13

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1. Preliminary information.

The Fiscal printer is a device purposed for cooperation with a PC computer. Its action consists in executing commands sent from the computer through a serial port RS-232. The printer recognizes control codes and executes the recognized commands. In case of error the printer informs the operator by an appropriate message shown on the LCD (liquid crystal display) or sends the information on the error to the computer.

In the main loop of the sequence analysis there are being recognized four control codes (four one-byte command codes sent to fiscal printers) and commands preset (characters <ESC> P).

In case when only some versions of the printers recognize the described codes or control sequences, it has been marked in the concerned text.

We propose to download a test/ service program for the fiscal printers to these programmers who adapt their applications to cooperate with the fiscal printers manufactured by **NOVITUS SA.**

http://www.novitus.pl/pl/dla-programistow/drukarki-fiskalne/

This program is located in a group „Service programs".

This program ten enables one to send to the printer all control sequences which are accepted by the printers. To do it, one shall – after the program has been started – make use of the option Tools – Printer control. After sending a command to the printer, the control sequence can be seen by selecting operation Programming – Control sequence.

These Programmers who create applications acting under the Windows may make use of the controller ActiveX, also presented in the above mentioned page. The file containing the controller and documentation in English is in the group „Communications protocols and drivers purposed for fiscal devices" under name OIC_FPLib.zip. The controller, apart from exercising control on the fiscal printers, has also a possibility to control additional, external alphanumerical display. It is executed without the need of inscription any code – data to the display are sent on the basis of control commands of the fiscal printer.

The main principle assumed while works on new versions of the fiscal printers is to provide full compatibility „downwards". The newer fiscal printers are compatible with their predecessors, and it is why they are fully handled by older versions of the protocol. Any potential departures from the rule of „downwards" compatibility can turn up as a result of implementing new fiscal regulations, which will not allow executing some of the hitherto existing commands.

1.1. Control codes.

ENQ ($05) – status dispatch demand (^E),

In response to status dispatch demand (**ENQ**) printer sends 1 byte of the following format:

7	6	5	4	3	2	1	0
0	1	1	0	FSK	CMD	PAR	TRF

where:

FSK 0: printer is in training mode,
1: printer is in fiscal mode,

CMD 1: the last command has been executed correctly (bit is deleted after receiving **ESC P**, if the command following **ESC P** is not a demand of sending back cash register information and is set after its correct execution),

PAR 1: printer is in transaction mode (after having completed the sequence start of transaction, before completing the sequence annulment of transaction , standard validation of transaction , validation of transaction with payment forms (1) or validation of transaction with payment forms (2)),

TRF 1: the last transaction has been finalized correctly (bit set after correct execution of the sequence standard validation of transaction , validation of transaction with payment forms (1) or validation of transaction with payment forms (2), and deleted after correct execution start of transaction).

NOTE:

1. Bit TRF is stored in a non-volatile memory, thus even there occurs supply failure between the moment of completing the transaction and status testing, the value of this bit, tested by application will remain correct (moreover, the work program of the printer provides that regardless of supply failure the operation of receipt printing, updating the totalizers and TRF settings are UNSEPARABLE!).
2. We would like to draw your attention that in case of receipt annulment both bits remain in state 0.
3. Possible status responses (ENQ) are within the range $60..$6F (range of small letters), which in turns always enables one to identify them (small letters cannot appear in status response while automatic error handling).
4. Order of sending status is on the fiscal printer interpreted synchronously (if in the given moment the printer is during executing earlier demanded activity, or it has no paper or in incorrect situations, the answer can come late or at all. In that case one should use DLE status).

BEL ($07) – sound signal (^G),

CAN ($18) – interruption of command interpretation (^X).

DLE ($10) –status dispatch demand (^P)

Gives a possibility of status readout e.g. lack of paper or error situations.
In response to code DLE ($10) printer sends one-byte status in format:

7	6	5	4	3	2	1	0
0	1	1	1	0	ONL	PE	ERR

Where:

ONL 1: state „On-Line”,
PE 1: state „Lack of Paper” or discharged battery (24V),
ERR 1: state „Mechanism/ controller error”.

We would like to your attention that, this code gives messages from range: $70..$77, so other than the remaining status responses (response to ENQ included).

Attention:

1. Order of sending DLE status is on the printer interpreted asynchronously (in case of lack of paper or in incorrect situations).

DLE2 ($1A) – asynchronous demand of sending back a widen status.
In response a widen printer status is sent back:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**@s**		2	
3	The last error code	Number	;		
4	Number of the last printout	Number	;		
5	Number of the last printout	Number	;		
6	No possibility of processing orders	Value Hex 00..FF	;	8	Byte 1 Bit 8
	Printer during executing a daily report				Byte 1 Bit 7
	Synchronous verification of copy e				Byte 1

	is in progress				Bit 6
	Printer waits for interaction with the user				Byte 1 Bit 5
	Printer in menu				Byte 1 Bit 4
	No paper				Byte 1 Bit 3
	Error of printing mechanism				Byte 1 Bit 2
	Open printer's cover				Byte 1 Bit 1
	The last order ended with error	Value Hex 00..FF			Byte 2 Bit 8
	Printer during transaction mode	Value Hex 00..FF			Byte 3 Bit 8
	Mode of additional lines on receipt				Byte 3 Bit 7
	During printing…	Value Hex 00..FF			Byte 4 Bit 8
	Paper is ending …				Byte 4 Bit 7
7	Control byte	**00..FF**		2	
8		<ESC>\		2	

1.2 Syntax of the control sequences.

Apart from control codes there are recognized format commands:

<ESC> P P1;...;Pn xxxx <text> cc <ESC>

where characters <ESC> P ($1B $50) mean beginning of a new command. Then, one-1byte parameters from P1 to Pn are sent , only if the command requires them to be given. After the parameters is command ('xxxx') of length from 2 do 4 characters. Many commands require giving additional parameters, like product's name, price, value in form of sequences inscriptions (parameter <text>). These sequences are given after sending the command code and may any ASCII characters, control codes excluded. Format of a text sequence depends on particular command and may contain texts and numerical parameters. In case of texts the limiter is character **CR** ($0D), whereas in numerical values character '/' ($2F). Numerical parameters which define the amount may consist of max. 8 digits for the integral part and max. 2 digits for the fraction part, separated with a point (decimal point). The zero fractional part and meaningless zeros in the integral part can be neglected, so the figure instead of sending the sequence '00000013.00' it is enough to send '13' (sequences '0013', '13.00', '13.' will be also correct, nevertheless their sending consumes more time).

At the very end of majority of commands there is sent a check sum 'cc', expressed in form of two hexadecimal figures. The check sum is calculated in the following form:

1. < check sum > = 255;

2. for each character of a sequence following the characters <ESC> P we calculate:

< check sum > = < check sum > **xor** <code of sequence character>

3. The check sum obtained in this way we present in text form on two bytes ad append to the sequence together with characters <ESC> \.

Example:
The following sequence is used to increase cash state and print out non-fiscal pay-in receipt:
<ESC> P 0 # and PAY-IN / < check sum **> <ESC> **
Let's assume that we want to pay 100 PLN (zł) to the cash, thus the sequence will have the following form:
**ESC P 0 # i 100 / < check sum > <ESC> ** it means in hexadecimal notation:
$1B $50 $30 $23 $45 $31 $30 $30 $2F < check sum > $1B $5C.
While calculating the check sum take part: the underlined figures and the initial value 255 ($FF):
$FF xor $30 xor $23 xor $69 xor $31 xor $30 xor $30 xor $2F = $9B
The obtained value $9B we present on two bytes in form of character form '9' and 'B' ($39 $42).
So, the sequence sent to the computer shall assume the following form:
$1B $50 $30 $23 $69 $31 $30 $30 $2F $39 $42 $1B $5C. If no mistake has been made, the printer will increase the counter responsible for state of cash and will print out a receipt which confirms execution of operation confirmation.

Printer starts execution of a command not before the moment of reading out an “ending” of a sequence, it means characters <ESC> \ ($1B $5C). If during analysis of the received sequence there occurs an error – then printer does not interpret the next part of the command up till the moment of receiving the “ending”. The same effect will have receiving a character <ESC> in the middle of a sequence. Finding characters <ESC> P results in starting-up sequence analysis from the very beginning. Appearing the code **CAN** ($18) causes interruption of the analysis command and jumping into the main analysis loop.

Remarks:

1. Sequences: displayer/drawer controlling, demand for sending back cash register information, demand for sending back time sent In cash register, demand for sending back last command’s error, sequence sending back the type and version of software do not require sending check digits ‘**cc**’.
2. After receiving a sequence there may turn-up an error message. One shall note that command may not be recognized also on account of wrong mode of operation of the printer – e.g. while printing data base report the printer does not recognize other commands than those related with the concerned report. .
3. Receiving by the printer a command header: **<ESC>P** always causes suspension of the interpretation of the former command (provided it has not been executed yet). Return to interpretation of the control characters **<ENQ>**, **<DLE>** and **<BEL>** requires receiving by the printer a command terminator : **<ESC>** .For example, interpretation command displayer/drawer controlling ends (regardless of its variation) at the moment of receiving a terminator, although in some variants of this command the characters between its identifier (**$d**) and terminator **<ESC>** will be simply ignored. Occurrence of syntax error or command execution always results in interpretation interruption and return to the main loop of syntax analysis (where codes **ENQ** and **BEL** are being detected).
4. Any data sent to the printer has got ASCII characters – printable (excluded e.g. codes **<ESC>**, **<ENQ>**, **<DLE>**, **<CR>** and the like, which are of special importance), the above concerns also any numerical data, which is to be converted into ASCII before dispatch (it is possible to compress the meaningless zeros).
5. If a parameter is ignored in control codes it means it may have any value, or may not appear, what in turn, respectively exert influence on the value of control byte **cc**.

2 Error handling.

As result of command sending to the printer there may turn up three types of errors:

- error of unrecognized command - printer received a preset command (characters <ESC> P) but did not recognized the command (incorrect ‘xx’).
- syntax command error - command is correct, nevertheless there is discrepancy in e.g. number of sent parameters or the check sum was faulty calculated. Such a command is ignored.
- command execution error - command has been constructed correctly, but due to some reasons it cannot be executed (Overflow of counters, calculation error or error caused by faulty operation of the printer hardware).

In any of the above mentioned cases, the printer will inform the User about an error with appropriate message on the LCD or sends information to the computer of an error after receiving a sequence for sending back cash register information (field- the last error). Possible values of this field contain specification of errors.

3 Controlling sequences.

3.1. Printers’ data readout commands.

3.1.1. Setting errors’ handling mode.

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Service mode	0..4		1	
3	Command	**#e**		2	
4	Control byte	00..FF		2	
5		<ESC>\		2	

Where:

Operating mode

0: appearance of the error during realization of the sequence causes display of the message and stoppage of the processing until pressing the OK button,
1: appearance of the error brings no message and does not stop the processing. The kind of the error may be tested with the appliance of the demand for setting back cash register information sequence (the field: Last response error), or demand for setting back the code of last command's error sequence
2: appearance of the error during realization of the sequence causes display of the message and stoppage of the processing until pressing the OK button. The error code after conducting the Command is automatically sent to the interface,

3: appearance of the error brings no message and does not stop the processing. The error code after conducting the Command is automatically sent to the interface.

4: appearance of the error brings no message and does not stop the processing.

Error code is sent back only if the packet doesn't have its own response.

Error code after conducting the command is automatically sent to the interface.

Format of the automatically sending back message is:

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Error code	0..		1..2	0 – OK.
3	Response code	**#Z**		2	
4	Packet identifier	Text		1..5	Identifier of the sequence
5		<ESC>\		2	

Errors' codes:

2: control byte error,
4: parameter error.

Remarks:

1. After setting on the power supply (not after „waking up" the printer), the mode of working with display of error messages (Service mode = 0) is normally chosen.
2. During cooperation with the more advanced applications which use the dialogue with the printer for receiving the confirmation the correctness of conducting specified operations, it is reasonable to send the described sequence in order to block sending messages about errors.
3. Some sequences, irrespectively of setting off messages about errors, require manual confirmation from the keyboard (using the 'YES' button). It usually applies to operations leading to recording the data to the fiscal memory (e.g. changes in VAT rates [Tax of Goods and Services], daily report).

3.1.2. Demand for return the error code of the last command.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Ignored	0..255 or none		1	
3	Command	**#n**		2	
4		<ESC>\		2	

Format of the sending back information looks as follows:

No	Field name	Content	Separator	Size	Remarks

1		<ESC>P		2	
2	Response code	**1#E**		3	
3	Error code	0..		1..	
4		<ESC>\		2	

Where:

Error code
Number determining the error code.

Remarks:

1. During realization of this command errors not appears.
2. Error code is not modified after realizing this command, unlike the command demand for setting back cash register information, which realization causes resetting of this code.
3. Error code is cancelled in the moment of realization of each command except the described one; a totally dependable procedure of testing the correctness of realization of the command should also test the byte of CMD response to the ENQ code, which should be sent after each command.

4. For this command, the printer does not return automatic response with error code of last command when error handling mode 3 is enabled.

3.1.3. Demand of the sending back cash register information.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Mode	0..21, 22, 23, 24, 99 and: 50, 52, 53, 62, 63, 90, 100, 200 or none		0..2	
3	Command	**#s**		2	
4		<ESC>\		2	

The printer's response format depends on the value of the Mode parameter.

For mode 0..21 (also when the mode does not appear), the format of the printer's response is in accordance to older versions of fiscal printers. It has been stated as a rule that the free charge {No TAX} is defined in the 'G' rate (the last one), thanks to what the response format does not change in relation to previous versions (except the unique number which is 1 character longer). In such case (if one free rate in the printer is attributed to letter 'G') and there are 1...6 VAT defined rates. Format of the sending back information looks as follows:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Response code	**1#X**		3	
3	The last error	0..	;	1..	
4	Fiscalization (Approval)	0..1	;	1	
5	Transaction	0..1	;	1	
6	Transaction OK.	0..1	;	1	
7	Constant value	1	;	1	
8	Number of resets	0..	;	1..	
9	Year	0..99	;	1..2	
10	Month	1..12	;	1..2	

11	Day	1..31	/	1..2	
12	VAT A	Number	/	1..11	The quantity of the VAT rates sent back is the same as programmed in the printer
13	VAT B	Number	/	1..11	
14	VAT C	Number	/	1..11	
15	VAT D	Number	/	1..11	
16	VAT E	Number	/	1..11	
17	VAT F	Number	/	1..11	
18	Quantity of receipts	0..	/	1..	
19	Totalizer A	Number	/	1..11	Quantity of totalizers sent back is at1 higher than the quantity of VAT rates sent back. The last totalizer includes the data for the free rate
20	Totalizer B	Number	/	1..11	
21	Totalizer C	Number	/	1..11	
22	Totalizer D	Number	/	1..11	
23	Totalizer E	Number	/	1..11	
24	Totalizer F	Number	/	1..11	
25	Totalizer G	Number	/	1..11	
26	Cash	Number	/	1..11	
27	Unique number	Inscription		13	Approval 2001 – 11 characters: 3 letters and 8 digits. Approval 2014 – 13 characters: 3 letters and 10 digits. Before approval 2001 10 characters: 2 letters and 8 digits
28		<ESC>\		2	

Note! For this mode (0..21), the printer does not return automatic response with error code of last command when error handling mode 3 is enabled.

If the VAT rates were defined for the printer using the change in VAT rates with the parameter of rates' quantity = 7, the programmers can send the described sequence with the parameter Mode = 22, 23 or 99. In such case, the response format is 'rigid' and looks as follows:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Response code	**2#X**		3	
3	The last error	0..	;	1..	
4	Fiscalization	0..1	;	1	
5	Transaction	0..1	;	1	
6	Transaction OK.	0..1	;	1	
7	Constant value	1	;	1	
8	Number of resets	0..	;	1..	
9	Year	0..99	;	1..2	
10	Month	1..12	;	1..2	
11	Day	1..31	/	1..2	
12	VAT A	Number	/	1..11	
13	VAT B	Number	/	1..11	
14	VAT C	Number	/	1..11	
15	VAT D	Number	/	1..11	
16	VAT E	Number	/	1..11	
17	VAT F	Number	/	1..11	
18	VAT G	Number	/	1..11	
18	Quantity of receipts	0..	/	1..	

19	Totalizer A	Number	/	1..11	
20	Totalizer B	Number	/	1..11	
21	Totalizer C	Number	/	1..11	
22	Totalizer D	Number	/	1..11	
23	Totalizer E	Number	/	1..11	
24	Totalizer F	Number	/	1..11	
25	Totalizer G	Number	/	1..11	
26	Returnable packaging	Number	/	1..11	
27	Unique number	Inscription		13	Approval 2001 – 11 characters: 3 letters and 8 digits. Approval 2014 – 13 characters: 3 letters and 10 digits. Before approval 2001 10 characters: 2 letters and 8 digits
28	Control byte	00..FF		2	
29		<ESC>\		2	

In both cases the response looks the same, but for mode parameter = 22, the information about sent back totalizers concerns the current (open) receipt, while in case of mode = 23 it includes summary values starting from the last daily report and if the mode = 99, the information about the cash is sent in the Cash field, but in €, not in PLN [zł].

Note! For mode 23, the printer does not return automatic response with error code of last command when error handling mode 3 is enabled.

To read detailed information about how much fiscal memory is already occupied, about value of the last receipt and amount of blocked goods, one should use Type = 24. The response packet looks as follow:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Response code	**3#X**		3	
3	Year	0..9999	**;**	4	
4	Month	1..12	**;**	1..2	
5	Day	1..31	**;**	1..2	
6	Amount of recorded reports	Number	**/**	1..10	
7	Amount of free reports	Number	**/**	1..10	
8	Amount of blocked goods	Number	**/**	1..10	
9	Totalizer A par.	Number	/	1..11	
10	Totalizer B par.	Number	/	1..11	
11	Totalizer C par.	Number	/	1..11	
12	Totalizer D par.	Number	/	1..11	
13	Totalizer E par.	Number	/	1..11	
14	Totalizer F par.	Number	/	1..11	
15	Totalizer G par.	Number	/	1..11	
16	Control byte	00..FF		2	
17		<ESC>\		2	

To get cash information: number of the last printout and amount of printed invoices (the printer with invoice operating for protocol "Novitus compatible"), one should use Type = 50. The response packet looks as follow:

For "Novitus compatible" protocol:

No.	Field name	Contents	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	50**#X**		2	
3	Number of documents reduced by number of invoices	Number	/	1..10	
4	Number of invoices	Number	/	1..10	Number of the last printed invoice
5	Constant value	0	/	1	
6	Constant value	0	/	1	
7	Constant value	0	/	1	
8	Control byte	00..FF		2	
9		<ESC>\		2	

For Novitus protocol:

No.	Field name	Contents	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	50**#X**		2	
3	Number of document	Number	/	1..10	Number of the last printed document
4	Reset printer's totalizers	0,1	/	1	1 – yes 0 – no
5	Number of invoices	0	/	1…10	Field accessible if device manage invoice operating
6	Constant value	0	/	1	
7	Constant value	0	/	1	
8	Constant value	0		1	
9	Control byte	00..FF		2	
10		<ESC>\		2	

To get information about state of cache memory carrier, one should use Type = 90. The response packet looks as follow:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**90#X**		2	
3	Card label	Text	<CR>	1..10	
4	Card state	Text	<CR>	1	'O' – open, 'Z' – closed, 'N' – unknown, 'W' – card out (no card), 'B' – error on the card, '?' – unknown state
5	Card size	Number	<CR>	1..14	(in bytes)
6	How much free place	Number	<CR>	1..14	(in bytes)
7	Amount of data files on the card	Number	<CR>	1..10	
8	Amount of free daily reports	Number	<CR>	1..4	
9	Number of the last daily report	Number	<CR>	1..4	(1830 – max. number)
10	Date and time of the last record on	Date, time	<CR>	16	(The last complete record of the file with report)

	the card				format: yyyy-mm-dd hh:mm
11	Control byte	00..FF		2	
12		<ESC>\		2	

To get information about totalizers value and transaction state, one should use Type = 100. The order packet looks as follow:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	100	;	3	
3	Type of sent back amounts	0..2	;	1	Type of sent back amounts: 0 – gross quota 1 – net quota 2 – VAT quota
5	Command	**#s**		2	
17	Control byte	00..FF		2	
18		<ESC>\		2	

The respond packet looks as follow:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant value	100	;	3	
3	Type of amounts	0..2	;	1	Type of sent back amounts: 0 – gross quota 1 – net quota 2 – VAT quota
4	Transaction state	Number		1..2	Transaction state: 0 – no transaction 1 – receipt 17 – receipt in block mode (OFFLINE) 19 – VAT invoice
5	Command	**#x**		2	
6	Sum of totalizers value	Number	/	1..20	
7	Totalizer A	Number	/	1..20	
8	Totalizer B	Number	/	1..20	
9	Totalizer C	Number	/	1..20	
10	Totalizer D	Number	/	1..20	
11	Totalizer E	Number	/	1..20	
12	Totalizer F	Number	/	1..20	
13	Totalizer G	Number	/	1..20	
14	Constant value	0	/	1	
15	Constant value	0	/	1	
16	Constant value	0	/	1	
17	Control byte	00..FF		2	
18		<ESC>\		2	

To obtain information on the status of a selected item of a VAT invoice (printers with invoice operating), use Type = 200. The order package has the following structure:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant value	200	;	3	
3	Type of information	0..2	;	1	Type of information about selected VAT invoice item:

					0 – gross value, 1 – net value, 2 – VAT value
4	Position number	0..255		1..3	VAT invoice item number counted from 0 (zero).
5	Command	**#s**		2	
6	Control byte	00..FF		2	
7		<ESC>\		2	

The respond packet looks as follow:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant value	200		3	
3	Command	**#x**		2	
4	Amount	Number	/	1..20	
5	Control byte	00..FF		2	
6		<ESC>\		2	

To get information of device working time, one should use Type = 211. The order package has the following structure:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant value	211		3	
3	Command	**#s**		2	
4		<ESC>\		2	

The respond packet looks as follow:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant value	211		3	
3	Command	**#x**		2	
4	Time in milliseconds	Number	;		TickCount
5	Work time in seconds	Number	;		System work time in seconds
6	Application start	Text	<CR>		Text – date and time of starting application
7	Control byte	00..FF		2	
8		<ESC>\		2	

The order is dedicated to setting mode of totalizers resending as answer to order #s Type 22.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant value	243	;	3	
3	Sent back mode	0, 1			Send back mode: 0 – totalizers data from last fiscal document, receipt or invoice, 1 – totalizers data of invoice (total)
5	Command	**$r**		2	
6	Control byte	00..FF		2	

7		<ESC>\		2	

Where:

The last error
Error code of realization of the present sequence, 0 if the sequence was not correctly realized or was not recognized,
Fiscalisation
0: training work mode,
1: fiscal work mode,
Transaction
1: the printer is in the transaction mode,
Transaction OK
1: the last transaction has been successfully finished,
Number of resets
The quantity of RAM resets recorded in fiscal memory,
Year, Month, Day
The date of the last record to the fiscal memory,
VAT A .. VAT G
VAT tax rates. If the rate is free it is sent as 98.99, while if not used – as 99.99.
Quantity of receipts
The quantity of printed fiscal receipts (≤ number of the next ≥ -1); fiscal receipts counter is clear during fiscalization and resets of RAM),
Totalizer A .. Totalizer G
States of totalizers of specified VAT rates (gross values),
Totalizer par. A .. Totalizer par. G
States of totalizers of the last receipt for the specified VAT (tax) rates (gross values),
Cash
Status of cash in the cash register (in PLN [zł] or €),
Unique number
Unique number in the ABCNNNNNNNNNN – a new format of unique number
Amount of recorded reports
Data amount (daily reports) recorded in the fiscal memory
Amount of free reports
Amount of free (daily reports) spaces for recording in the fiscal memory
Amount of blocked goods
Amount of blocked goods

Remark:

Errors do not appear.

3.1.4. Sequence sending back the type and version of software (#v).

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**#v**		2	
3		<ESC>\		2	

Format of the sending back information looks as follow:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Response code	**1#R**		3	
3	Type	Inscription	/	0..	
4	Version	Inscription		0..	
5		<ESC>\		2	

Where:

Type
inscription describing the type of the device, e.g. NOVITUS HD ONLINE,

Version
number of the software version, e.g. '1.60'.

Error code:
1: not initiated printer's clock.
Or

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
3	Command type	0..99		1..2	30- sends back name and original version
4	Command	**#v**		4	
5		<ESC>\		2	

Format of the sending back information looks as follow:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Response code	**1#R**		3	
3	Type	Inscription	/	0..	
4	Version	Inscription		0..	
5		<ESC>\		2	

where:

Type
Inscription describing original type of device, e.g. NOVITUS HD ONLINE,
Version
number of software version e.g. '1.60'.

Note! For that order, the printer does not return automatic response with error code of last command when error handling mode 3 is enabled.

3.1.5. Sequence sending back information about the device.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Type of information	Number		1	0 – general 1 – details for fiscal memory 2 – details on the status of power of battery and accumulator 3 – status of printout 4 – status of drawing 5 – information about cache memory status, 6 – information about data base status, 7 – detailed information for fiscal memory version 3, 8 – additional information for fiscal memory version 4, 10 – detailed information for fiscal memory version 2, 11 – fiscalisation parameters 20 – status of accumulator and power 21 – display type 51 – sending back producer options (via PC) 52 – packets supported by the printer. Warning: Information 7 operated only in printers

					ONLINE type.
3	Command	**$i**		2	
4		<ESC>\		2	

Format of the sending back general information looks as follow:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Information type	0		1	Constant value – general information
3	Response code	**$I**		2	
4	Device name	Text	<CR>	variable	
5	Program version	Text	<CR>	variable	
6	Version of printing module	Text	<CR>	variable	
7	System name	Text	<CR>	variable	
8	System version	Text	<CR>	variable	
9	Quantity of displays	Number	<CR>	variable	
10	Printout width	Number	<CR>	variable	Maximum number of characters per print buffer line
11	Electronic copy	Number	<CR>	variable	0 – none for online
12	Size of fiscal memory	Number	<CR>	variable	In bytes
13	Control byte	00..FF		2	
14		<ESC>\		2	

Format of the sending back detailed information for fiscal memory:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Information type	1		1	Constant value – detailed information for fiscal memory
3	Response code	**$I**		3	
4	Size of fiscal memory	Number	<CR>	variable	In bytes
5	Size of record	Number	<CR>	variable	In bytes
6	Operating mode	Number	<CR>	variable	0 – non-fiscal 1 - fiscal
7	Unique number	Text	<CR>	variable	
8	NIP number	Text	<CR>	variable	
9	Maximum quantity of records	Number	<CR>	variable	
10	Quantity of records	Number	<CR>	variable	
11	Maximum quantity of daily reports	Number	<CR>	variable	
12	Quantity of daily reports	Number	<CR>	variable	
13	Maximum quantity of RAM resettings	Number	<CR>	variable	
14	Quantity of RAM resettings	Number	<CR>	variable	
15	Maximum quantity of PTU rates changes	Number	<CR>	variable	

16	Quantity of PTU rates changes	Number	<CR>	variable	
17	Maximum quantity of currency changes	Number	<CR>	variable	
18	Quantity of currency changes	Number	<CR>	variable	
19	Fiscalisation date	Text	<CR>	19	Format: ”RRRR-MM-DD GG:MM:SS” Warning: Date is valid in fiscal mode and after closing fiscal mode
20	Date of closing fiscal mode	Text	<CR>	19	Format: ”RRRR-MM-DD GG:MM:SS” Warning: Date is valid after closing fiscal mode
21	Name of current currency	Text	<CR>	variable	
22	Control byte	00..FF		2	
23		<ESC>\		2	

Format of the sending back information on status of power:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Information type	2		1	Constant value – information on status of power of battery and accumulator
3	Response code	**$I**		2	
4	Power supplier connected	Text	<CR>	variable	
5	Voltage of power	Text	<CR>	variable	- 1 – device does not have a power supply voltage measurement
6	Voltage of accumulator	Text	<CR>	variable	
7	Voltage of battery	Text	<CR>	variable	
8	Control byte	00..FF		2	
9		<ESC>\		2	

Format of sending back information on status of printout:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Information type	3		1	Constant value – information on status of printout
3	Response code	**$I**		2	
4	Version of printing module	Text	<CR>	variable	
5	Printout width [in characters]	Number	<CR>	variable	Maximum number of characters in line
6	Printout width [in mm]	Number	<CR>	variable	0 – 57 [mm] 1 – 80 [mm]
7	Font	Number	<CR>	variable	0 – normal 1 – increased
8	Paper cutter	Number	<CR>	variable	0 – switched off 1 – switched on 2 – none
9	Paper quantity	Number	<CR>	variable	0 – below critical level 1 – above critical level 2 – not operated
10	Control byte	00..FF		2	
11		<ESC>\		2	

Format of sending back information on status of drawer:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Information type	4		1	Constant value – information on status of drawer
3	Response code	**$I**		2	
4	Status of drawer	Number	<CR>	1	0 – open 1 – closed 2 – not operated
5	Control byte	00..FF		2	
6		<ESC>\		2	

Format of sending back information on cache memory status

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Information type	5		1	Constant value – information about cache memory status
3	Response code	**$I**		2	
4	Total size	Number	<CR>	variable	In bytes
5	Total size	Number	<CR>	variable	Size in printout lines (Different depending on the set print width and font).
6	Critical size	Number	<CR>	variable	Size in bytes, beyond which appears error about cache memory fulfilment.
7	Critical size	Number	<CR>	variable	Size in printout lines (Different depending on the set print width and font).
8	Engaged size	Number	<CR>	variable	Size in bytes engaged by printouts.
9	Engaged size	Number	<CR>	variable	Size in lines engaged by printouts. (Different depending on the set print width and font).
10	Control byte	00..FF		2	
11		<ESC>\		2	

Format of sending back information about data base status:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Information type	6		1	Constant value – information about data base status
3	Response code	**$I**		2	
4	Quantity of goods in base	Number	<CR>	variable	
5	Control byte	00..FF		2	
6		<ESC>\		2	

Format of sending back detailed information for fiscal memory – enlargement 1:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Information type	7		1	Constant value – detailed information for fiscal memory version 3
3	Response code	**$I**		3	
4	Number of	Number	<CR>	variable	

	general events				
5	Maximum number of general events	Number	<CR>	variable	
6	Number of fiscal documents	Number	<CR>	variable	Fiscal documents: - receipts, - cancelled receipts, - invoices, - cancelled invoices
7	Maximum number of fiscal documents	Number	<CR>	variable	
8	Number of public key changes	Number	<CR>	variable	
9	Changes number of discount rates table	Number	<CR>	variable	Concerns ticket ECRs. There is a limitation on maximum number of general events.
10	Changes number of discount group table	Number	<CR>	variable	Concerns ticket ECRs. There is a limitation on maximum number of general events.
11	Number of service reviews	Number	<CR>	variable	There is a limitation on maximum number of general events
12	Size of events data	Number	<CR>	variable	In bytes
13	Maximum size of events data	Number	<CR>	variable	In bytes
14	Registration number	Inscription	<CR>		Registration number given during fiscalisation process. Field used only in online printers.
15	Control byte	00..FF		2	
16		<ESC>\		2	

Format of sending back detailed information for the fiscal memory, version 2:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Information type	10		1	Constant value – detailed information for the fiscal memory, version 2.
3	Response code	**$I**		3	
4	Size of fiscal memory	Number	<CR>	variable	In bytes
5	Size of record	Number	<CR>	variable	In bytes
6	Operating mode	Number	<CR>	variable	0 – non fiscal 1 – fiscal 2 – fiscal closed
7	Unique number	Text	<CR>	variable	
8	NIP number	Text	<CR>	variable	
9	Maximum number of records	Number	<CR>	variable	
10	Number of records	Number	<CR>	variable	
11	Maximum number of daily reports	Number	<CR>	variable	
12	Number of daily reports	Number	<CR>	variable	
13	Maximum number of RAM resettings	Number	<CR>	variable	
14	Number of RAM resettings	Number	<CR>	variable	

15	Maximum number of PTU rates changes	Number	<CR>	variable	
16	Number of PTU rates changes	Number	<CR>	variable	
17	Maximum number of currency changes	Number	<CR>	variable	
18	Number of currency changes	Number	<CR>	variable	
19	Date of fiscalization	Text	<CR>	19	Format: ”YYYY-MM-DD HH:MM:SS” Warning: Date is valid in fiscal mode and after closing fiscal mode
20	Date of closing fiscal mode	Text	<CR>	19	Format: ”YYYY-MM-DD HH:MM:SS” Warning: Date is valid after closing fiscal mode.
21	Name of current currency	Text	<CR>	variable	
19	Date of the last daily report	Text	<CR>	19	Format: ”YYYY-MM-DD HH:MM:SS”
20	Date of the last record to the fiscal memory	Text	<CR>	19	Format: ”YYYY-MM-DD HH:MM:SS”
22	Control byte	00..FF		2	
23		<ESC>\		2	

Format of sending back information – additional information for fiscal memory version 4:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Information type	8		1	Constant value – detailed information for the fiscal memory, version 3.
3	Response code	**$I**		3	
4	Number of records	number	<CR>	variable	
5	Maximum number of records	number	<CR>	variable	It may be smaller depending on how you use free space for other records.
10	Number of discount rates changes	number	<CR>	variable	Concerns ticket ECRs. Maximum number of changes is limited by free space in fiscal memory.
11	Number of discount group changes	number	<CR>	variable	Concerns ticket ECRs. Maximum number of changes is limited by free space in fiscal memory.
12	Number of service reviews	number	<CR>	variable	
	Maximum number of service reviews	number	<CR>	variable	
13	Size of recorded data	number	<CR>	variable	In bytes
14	Maximum size to record	number	<CR>	variable	In bytes
15	Producer options	number	<CR>	variable	Where the following set bits mean: Bit 1 – operating pharmacy options, Bit 2 – operating ticket options
16	Control byte	00..FF		2	
17		<ESC>\		2	

Format of sending back information about fiscalisation parameters:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Information type	11		1	Constant value – detailed information for events database, version 2.
3	Response code	**$I**		2	
4	Status	**Number**	<CR>	1	0 – Non fiscal, 1 – Fiscal, 2 – mode „only read”
5	Fiscalisation date	Text	<CR>	19	Format: ”YYYY-MM-DD HH:MM:SS” Warning: Date is valid in fiscal mode and after closing fiscal mode
6	NIP number	Text	<CR>	variable	
7	Registration number	Text	<CR>	variable	
8	Protected memory ID	Text	<CR>	variable	
9	Device type	**Number**	<CR>	1	0 – General, 1 – Taxi, 2 – Pharmacy, 3 – Tickets, 4 – Gastronomic, 5 – Automats, 6 – Duty free
10	Receipt numbering type	**Number**	<CR>	1	0 – Global, 1 - Daily
11	Ownership type	**Number**	<CR>	1	0 – Ownership, 1 – Leased, 2 – Leasing, 3 – Rent, 4 – Other
12	Control byte	00..FF		2	
13		<ESC>\		2	

Format of sending back information on status of accumulator and power:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Information type	20		1	Constant value – information on status of accumulator and power
3	Response code	**$I**		2	
4	Power mode	Number	<CR>	variable	0 – working on accumulator 1 – working on power supply
5	Voltage of power supply [mV]	Number	<CR>	variable	- 1 – device does not have a power supply voltage measurement
6	Voltage of accumulator [mV]	Number	<CR>	variable	
7	Battery voltage to sustain RAM/ clock [mV]	Number	<CR>	variable	
8	Status of accumulator	Number	<CR>	variable	0 – completely discharged 1 – low level of charging 2 – charged and works correctly 3 – accumulator is charging.... 4 – accumulator voltage out of range 5 – accumulator damaged
9	Status of battery sustaining RAM / clock	Number	<CR>	variable	0 – discharged / damaged 1 – must be charged 2 – correct
10	The accumulator level [%]	Number	<Cr>	variable	

11	Control byte	00..FF		2	
12		<ESC>\		2	

Format of sending back information on display type:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Information type	21		1	Constant value
3	Response code	**$I**		2	
4	Display type	Number	<CR>	1	1 – built-in display (0x01) 2 – external display (0x02) 3 – main network (0x04), 4 – additional network (0x08) Warning ! It is possible to have both built-in and external display at the same time, or built-in and network display
5	Control byte	00..FF		2	
6		<ESC>\		2	

Format of sending back information about producer's options via PC:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Information type	51		1	Constant value
3	Response code	**$I**		2	
4	Unique number	text	<CR>	13	
5	Factory number	text	<CR>	16	
6	Producer's options	Number	/	1…10	The bits set in sequence mean: 1 – operating pharmacy options 2 – operating ticket options 3 – 1830 daily reports 4 – support for head width 3 inches. Warning ! Setting pharmacy options and ticket options is possible only in chosen fiscal printer models.
7	Address MAC	text	<CR>	18	
8	CPD server address	text	<CR>	256	
9	Control byte	00..FF		2	
10		<ESC>\		2	

Format of sending back data regarding functionalities supported by the printer:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Mode	52		2	52 – read information of functionalities supported by the printer
3	Command	**$I**		2	
4	Attribute 1	**Text (HEX**	<CR>	8	• **0x0001** - attribute for time supporting with millisecond

		number)			accuracy in protected memory • **0x0002** – attribute for time supporting in protected memory in mixed mode. Older records without millisecond accuracy, records added after update with millisecond accuracy • **0x0004** – attribute for NoviApi supporting • **0x0008** – attribute for EFT terminal supporting • **0x0010** – attribute for eReceipts supporting • **0x0020** – attribute for MF eReceipts supporting • **0x0040** – attribute for graphic supporting in eReceipts • **0x0080** – attribute for suporting eReceipt read via PC protocol • **0x0100** – attribute for supporting Internet access via USB in the printer • **0x0200** – attribute to support printing all characters from Windows-1250 code page table • **0x0400** – attribute for supporting possibility of printing on external ESC-POS printer • **0x0800** – attribute for supporting STX protocol • **0x1000** – attribute for supporting printer lock mode **0x2000** – attribute for supporting TCP as server or as customer by the printer
5	Attribute 2	**Text (HEX number)**	<CR>	8	
6	Attribute 3	**Text (HEX number)**	<CR>	8	
7	Attribute 4	**Text (HEX number)**	<CR>	8	
8	Attribute 5	**Text (HEX number)**	<CR>	8	
9	Attribute 6	**Text (HEX number)**	<CR>	8	
10	Attribute 7	**Text (HEX number)**	<CR>	8	
11	Attribute 8	**Text (HEX number)**	<CR>	8	
12	Control byte	00..FF		2	
13		<ESC>\		2	

Error code:

1: not initiated printer's clock .

3.1.6. Sequence sending back information of communication port.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Information type	50		1	50 – information of port
3	Command	**$i**		2	
4		<ESC>\		2	

Format of sending back general information:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Information type	50		1	Instant value
3	Response code	**$I**		2	
4	Port name	Text	<CR>	variable	PC1, PC2 or PC3
5	Control byte	00..FF		2	
6		<ESC>\		2	

3.1.7. Sequence sending back information of processes logs.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**#LOG**		4	
3	Status	Number	/	1	1 – beginning read 2 – collecting the following logs
4	Control byte	00..FF		2	
5		<ESC>\		2	

Format of sending back logs:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Response code	**#LOG**		4	
3	Data	Text	<CR>		Data from logs
4	Status	Number	/	1	1 – there are the further data 2 – end of data, the whole file with logs read
5	Control byte	00..FF		2	
6		<ESC>\		2	

Warning:

Logs collected until reaching status 2 – end of data

3.1.8. Sequence sending back information of processes logs.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**@LOG**		4	
3	Date from	Text	<CR>		Date in format `yyyy-mm-dd h:mm:ss`
4	Date to	Text	<CR>		Date in format `yyyy-mm-dd h:mm:ss`
5	Level of logging	Text	<CR>		ALL – all levels DEBUG LOG ERROR CRITICAL
6	Module	Text	<CR>		ALL- all modules General OpenSSL TPM HTTP BIOS SPI FW
7	Status	number	/	1	0- Start collecting 1- The further data

8	Control byte	00..FF		2	
9		<ESC>\		2	

Format of sending back logs:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Response code	**@LOG**		4	
3	Data	Text	<CR>		Data from logs
4	Status	Number	/	1	1 – there are further data 2 – end of data, the whole file with logs read
5	Control byte	00..FF		2	
6		<ESC>\		2	

3.1.9. Demand of sending back the time set in the printer.

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Ignored	0..255 or none		1	
3	Command	**#c**		2	
4		<ESC>\		2	

Format of sending back information looks as follow:

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Response code	**1#C**		3	
3	Year	0..49	**;**	1..2	
4	Month	1..12	**;**	1..2	
5	Day	1..31	**;**	1..2	
6	Hour	0..23	**;**	1..2	
7	Minute	0..59	**;**	1..2	
8	Seconds	0..59		1..2	
9		<ESC>\		2	

Where:

Year, Month, Day
Date set in the printer,
Hour, Minute, Second
Time set in the printer.

Errors' codes:

1: not initiated printer's clock,
5: printer's RTC clock readout error

Note! For that order, the printer does not return automatic response with error code of last command when error handling mode 3 is enabled.

3.1.10. Readout of fiscal memory content.

Readout of the fiscal memory is started by determining the date or the number of the record, starting from which, sending the information back shall be proceeded.

In case of date, the sent sequence looks as follow:

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Mode	25	;	2	
3	Year	0..99	;	1..2	
4	Month	1..12	;	1..2	
5	Day	1..31	;	1..2	
6	Hour	0..23	;	1..2	
7	Minute	0..59	;	1..2	
8	Second	0..59	;	1..2	
9	Command	**#s**		2	
10		<ESC>\		2	

In case of daily report number, the sequence looks as follow:

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Mode	26		2	
3	Command	**#s**		2	
4	Daily report number	Number	/	1..10	
5		<ESC>\		2	

After defining where the readout of the content of fiscal memory should start from, reading out the subsequent records may start. To provide this, prior to each readout, one should send the sequence of each subsequent record, demanding sending it back and setting at the next one. This sequence always looks as follow:

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Mode	27		2	
3	Command	**#s**		2	
4		<ESC>\		2	

Formats of the sending back information look as follow:

Daily report record:

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Response code	**10#X**		4	
3	Year	0..49	;	1..2	
4	Month	1..12	;	1..2	
5	Day	1..31	;	1..2	
6	Hour	0..23	;	1..2	
7	Minute	0..59	;	1..2	
8	Second	0..59	;	1..2	
9	Number of receipts	Number	;	1..10	
10	Number of cancelled receipts	Number	;	1..10	
11	Quantity of changes in PLU base	Number	;	1..10	
12	Value of cancelled receipts	Number	/	1..11	

13	Totalizer A	Number	/	1..11	
14	Totalizer B	Number	/	1..11	
15	Totalizer C	Number	/	1..11	
16	Totalizer D	Number	/	1..11	
17	Totalizer E	Number	/	1..11	
18	Totalizer F	Number	/	1..11	
19	Totalizer G	Number	/	1..11	
20	Control byte	00..FF		2	
21		<ESC>\		2	

Record of changes in VAT rates:

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Response code	**11#X**		4	
3	Year	0..49	;	1..2	
4	Month	1..12	;	1..2	
5	Day	1..31	;	1..2	
6	Hour	0..23	;	1..2	
7	Minute	0..59	;	1..2	
8	Second	0..59	;	1..2	
9	Constant value	0	;	1	
10	Constant value	0	;	1	
11	Constant value	0	;	1	
12	Constant value	0	/	1	
13	VAT A	Number	/	1..11	
14	VAT B	Number	/	1..11	
15	VAT C	Number	/	1..11	
16	VAT D	Number	/	1..11	
17	VAT E	Number	/	1..11	
18	VAT F	Number	/	1..11	
19	VAT G	Number	/	1..11	
20	Control byte	00..FF		2	
21		<ESC>\		2	

Record of RAM resets:

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Response code	**12#X**		4	
3	Year	0..49	;	1..2	
4	Month	1..12	;	1..2	
5	Day	1..31	;	1..2	
6	Hour	0..23	;	1..2	
7	Minute	0..59	;	1..2	
8	Second	0..59	;	1..2	
9	Reason for reset	Number	;	1..10	
10	No of reset	Number	;	1..10	

11	Constant value	0	;	1	
12	Constant value	0	/	1	
13	Constant value	0	/	1	
14	Constant value	0	/	1	
15	Constant value	0	/	1	
16	Constant value	0	/	1	
17	Constant value	0	/	1	
18	Constant value	0	/	1	
19	Constant value	0	/	1	
20	Control byte	00..FF		2	
21		<ESC>\		2	

The sequence informing that there are no more records left to read:

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Response code	**25#X**		4	
3	Constant value	0	;	1	
4	Constant value	0	;	1	
5	Constant value	0	;	1	
6	Constant value	0	;	1	
7	Constant value	0	;	1	
8	Constant value	0	;	1	
9	Constant value	0	;	1	
10	Constant value	0	;	1	
11	Constant value	0	;	1	
12	Constant value	0	/	1	
13	Constant value	0	/	1	
14	Constant value	0	/	1	
15	Constant value	0	/	1	
16	Constant value	0	/	1	
17	Constant value	0	/	1	
18	Constant value	0	/	1	
19	Constant value	0	/	1	
20	Control byte	00..FF		2	
21		<ESC>\		2	

Where:

Year, Month, Day
Date set in the printer,
Hour, Minute
Time set in the printer.

Error codes:

1: not initiated printer's clock,
5: printer's RTC clock readout error

3.1.11. Readout of the fiscal memory for devices with approval of 2009.

Initial orders:

For initiation of the starting record there are used orders with parameter:
25 – setting according dates,
26 – setting according daily report number

After specifying the starting point for reading contents of fiscal memory, you can begin reading subsequent records. For this purpose, before reading each next record, a sequence requesting its return and positioning at the next one must be sent. Additionally, reading always begins with reading the last record of the VAT rate change preceding the specified range. This sequence has the following form:

Readout orders:

Order of readout the current record:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant value	37		2	
3	Command	**#s**		2	
4		<ESC>\		2	

Response

Data of daily report's record:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant value	20		2	
3	Respond code	**#X**		2	
4	Year	0..49	;	1..2	
5	Month	1..12	;	1..2	
6	Day	1..31	;	1..2	
7	Hour	0..23	;	1..2	
8	Minute	0..59	;	1..2	
9	Second	0..59	;	1..2	
10	Amount of receipts	Number	;	1..10	
11	Amount of cancelled receipts	Number	;	1..10	
12	Amount of changes in goods base	Number	;	1..10	
13	Report number	Number	;	1..10	
14	Value of sale	Number	/	1..10	
15	Value of tax	Number	/	1..10	
16	Amount of printouts	Number	;	1..10	
17	Flag of resetting	Number	;	1	1 – there was at least one resetting, 0 – no resetting
18	Number of last receipt	Number	;	1..10	
19	Number of last printout	Number	;	1..10	
20	Amount of valuations	Number	;	1..10	Field appears if printers manages pharmacy options
21	Value of cancelled receipts	Number	/	1..11	
22	Totalizer A	Number	/	1..11	
23	Totalizer B	Number	/	1..11	
24	Totalizer C	Number	/	1..11	
25	Totalizer D	Number	/	1..11	

26	Totalizer E	Number	/	1..11	
27	Totalizer F	Number	/	1..11	
28	Totalizer G	Number	/	1..11	
29	Totalizer AFV	Number	/	1..11	Sent back in read mode 37
30	Totalizer BFV	Number	/	1..11	Sent back in read mode 37
31	Totalizer CFV	Number	/	1..11	Sent back in read mode 37
32	Totalizer DFV	Number	/	1..11	Sent back in read mode 37
33	Totalizer EFV	Number	/	1..11	Sent back in read mode 37
34	Totalizer FFV	Number	/	1..11	Sent back in read mode 37
35	Totalizer GFV	Number	/	1..11	Sent back in read mode 37
36	Amount of VAT invoices	Number	/	1..10	Sent back in read mode 37
37	Control byte	00..FF		2	
38		<ESC>\		2	

Record's data of changing tax rates:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant value	21		2	
3	Response code	**#X**		2	
4	Year	0..49	;	1..2	
5	Month	1..12	;	1..2	
6	Day	1..31	;	1..2	
7	Hour	0..23	;	1..2	
8	Minute	0..59	;	1..2	
9	Second	0..59	;	1..2	
10	Constant value	0	;	1	
11	Constant value	0	;	1	
12	Constant value	0	;	1	
13	Constant value	0	**/**	1	
14	VAT A rate	Number	/	1..11	
15	VAT B rate	Number	/	1..11	
16	VAT C rate	Number	/	1..11	
17	VAT D rate	Number	/	1..11	
18	VAT E rate	Number	/	1..11	
19	VAT F rate	Number	/	1..11	
20	VAT G rate	Number	/	1..11	
21	Constant value	0	/	1	
22	Constant value	0	/	1	
23	Constant value	0	/	1	
24	Constant value	0	/	1	
25	Constant value	0	/	1	
26	Constant value	0	/	1	
27	Constant value	0	/	1	
28	Constant value	0	/	1	
29	Control byte	00..FF		2	
30		<ESC>\		2	

Record's data of RAM memory resetting:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant value	22		2	
3	Response code	**#X**		2	
4	Year	0..49	;	1..2	
5	Month	1..12	;	1..2	
6	Day	1..31	;	1..2	
7	Hour	0..23	;	1..2	
8	Minute	0..59	;	1..2	
9	Second	0..59	;	1..2	
10	Reason of resetting	Number	;	1..10	
11	No. of resetting	Number	;	1..10	
12	Constant value	0	;	1	
13	Constant value	0	/	1	
14	Constant value	0	/	1	
15	Constant value	0	/	1	
16	Constant value	0	/	1	
17	Constant value	0	/	1	
18	Constant value	0	/	1	
19	Constant value	0	/	1	
20	Constant value	0	/	1	
21	Constant value	0	/	1	
22	Constant value	0	/	1	
23	Constant value	0	/	1	
24	Constant value	0	/	1	
25	Constant value	0	/	1	
26	Constant value	0	/	1	
27	Constant value	0	/	1	
28	Constant value	0	/	1	
29	Constant value	0	/	1	
30	Constant value	0	/	1	
31	Control byte	00..FF		2	
32		<ESC>\		2	

Where:

Year, Month, Day
Date set in the printer,
Hour, Minute
Time set in the printer.

Errors' codes:

1: not initiated printer's clock,
5: printer's RTC clock readout error

3.1.12. Readout of the fiscal memory content – extended version.

Order of setting initial record according to date (NOVITUS):

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Mode	53, 54, 55,		2	(read: Warning)

		56			
3	Year	0..99	;	1..2	
4	Month	1..12	;	1..2	
5	Day	1..31	;	1..2	
6	Hour	0..23	;	1..2	
7	Minute	0..59	;	1..2	
8	Second	0..59	;	1..2	
9	Command	**#s**		2	
10		<ESC>\		2	

Order of setting initial record according to daily report number (NOVITUS):

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Mode	63, 64 65, 66		2	(read Warning)
3	Command	**#s**		2	
4	Daily report number	Number	/	1..10	
5		<ESC>\		2	

Warning:

After setting the mode of the fiscal memory reading to 53 or 63, the printer sends back packets with ID: 11, 12, 25, 30, 31, 32, 33.
- (11) – tax rates change,
- (25) – end of data,
- (30) – setting currency change,
- (31) – currency change,
- (32) – daily report,
- (12) – resetting,

After setting the mode of the fiscal memory reading to 54 or 64, the printer sends back packets with ID: 11, 36, 25, 30, 31, 34, 35.
- (11) - tax rates change,
- (25) - end of data,
- (30) - setting currency change,
- (31) - currency change,
- (34) - daily report: pharmacy counters,
- (34) - daily report: electronic signature,
- (36) - resetting: additional flags,

After setting the mode of the fiscal memory reading to 55 or 65, the printer sends back packets with ID: 11, 36, 25, 30, 31, 37, 38.
- (11) - tax rates change,
- (25) - end of data,
- (30) - setting currency change,
- (31) - currency change,
- (37) - daily report: pharmacy counters,
- (37) - daily report: electronic signature,
- (37) – daily report, dates of beginning and ending sales,
- (36) - resetting: additional flags.

After setting the mode of the fiscal memory reading to 56 or 66, the printer sends back packets with ID: 11, 36, 25, 30, 31, 39, 38.
- (11) - tax rates change,
- (25) - end of data,
- (30) - setting currency change,
- (31) - currency change,
- (39) - daily report: pharmacy counters,
- (39) - daily report: electronic signature,
- (39) - daily report, dates of beginning and ending sales,
- (39) – daily report: ticket’s counters (ticket machine functionality),

- (36) - resetting: additional flags,

After specifying the starting point for reading contents of fiscal memory, you can begin reading subsequent records. For this purpose, before reading each next record, a sequence requesting its return and positioning at the next one must be sent. Additionally, reading always begins with reading the last record of the VAT rate change preceding the specified range. This sequence has the following form:

Order of readout:

Order of readout the current record:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Mode	27,40		2	27 – text formatting (detailed for the each response packet), 40 – hexadecimal data formatting (general for all response packets)
3	Command	**#s**		2	
4		<ESC>\		2	

Response:

Record's data for hexadecimal data formatting:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant value	40		2	
3	Response code	**#X**		2	
4	Record status	0 or 1		1	Record status: 0 – standard record 1 – auxiliary record
5	Record number	Number	/	1..7	
6	Record ID	Number	/	1..2	1 – daily report, 2 – RAM resetting, 3 – PLU resetting, 4 – tax rates, 7 – Reset, 11 – setting currency change, 12 – currency change, 16 – producer's data, 17 – Fiscalisation/approval, 18 – end of fiscal mode, 19 – application data, 20 – receipt, 21 – receipt cancellation, 22 – invoice, 23 – invoice cancellation, 24 – Table of discount rates, 25 – Table od discount group, 26 – discounts calculation, 27 – change of date/time, 28 – Address of repository server, 29 – service intervention, 30 – change of protected memory, 31 – Address of application update server, 32 – key, 33 – error of protected memory, 34 – power failure, 35 – sale blockade, 36 – error of application update, 37 – error of printouts counter, 38 – Data of fiscal memory application,

					39 – application change, 40 – service review 41 – Online mode active 42 – Online mode inactive 43 – ECR public key 44 – Repository certificate 45 – Unlocking sales 46 – Point of sale address 47 – General parameter 48 – Printout header 49 – SSL certificate 32767 – record invalid (no data)
7	Total data size	Number	/	1..4	Total data size in binary representation
8	Data	Hexadecimal	<CR>	Variable	Data in hexadecimal-text form
9	Control byte	00..FF		2	
10		<ESC>\		2	

Record's data for hexadecimal data formatting – the end:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant value	40		2	
3	Response code	**#X**		2	
4	Record number	0	/	1	
5	Record ID	0	/	1	
6	Total data size	0	/	1	
7	Data		<CR>	0	Empty field
8	Control byte	00..FF		2	
9		<ESC>\		2	

Remarks:

Detailed data distribution, in hexadecimal format, for the individual records is placed in fiscal memory map.

Record's data of currency change setting (NOVITUS):

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant value	30		2	
3	Response code	**#X**		2	
4	Year	0..99	;	1..2	Two last digits of the year
5	Month	1..12	;	1..2	Number of month in the year
6	Day	1..31	;	1..2	Number of day in the given month
7	Hour	0..23	;	1..2	
8	Minute	0..59	;	1..2	
9	Second	0..59	;	1..2	
10	Constant value	1	;	1	
11	Constant value	1	;	1	
12	Constant value	1	;	1	
13	Name of currency	Test	<CR>	1..3	
14	Year of change	0..99	/	1..2	Two last digits of the year
15	Month of change	1..12	/	1..2	Number of month in the year

16	Day of change	1..31	/	1..2	Number of day in the given month
17	Hour of change	0..23	/	1..2	
18	Minute of change	0..59	/	1..2	
19	Exchange rate	Number	/	1..13	
20	Constant value	1	/	1	
21	Control byte	00..FF		2	
22		<ESC>\		2	

Record's data of currency change (NOVITUS):

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant value	31		1	
3	Response code	**#X**		2	
4	Year	0..99	;	1..2	Two last digits of the year
5	Month	1..12	;	1..2	Number of month in the year
6	Day	1..31	;	1..2	Number of day in the given month
7	Hour	0..23	;	1..2	
8	Minute	0..59	;	1..2	
9	Second	0..59	;	1..2	
10	Constant value	1	;	1	
11	Constant value	1	;	1	
12	Constant value	1	;	1	
13	Name of the currency	Test	<CR>	1..3	
14	Year of change	0..99	/	1..2	Two last digits of the year
15	Month of change	1..12	/	1..2	Number of month in the year
16	Day of change	1..31	/	1..2	Number of day in the given month
17	Hour of change	0..23	/	1..2	
18	Minute of change	0..59	/	1..2	
19	Exchange rate	Number	/	1..13	
20	Constant value	1	/	1	
21	Control byte	00..FF		2	
22		<ESC>\		2	

Record's data of daily report (NOVITUS):

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant value	32		2	
3	Response code	**#X**		2	
4	Year	0..99	;	1..2	Two last digits of the year
5	Month	1..12	;	1..2	Number of month in the year
6	Day	1..31	;	1..2	Number of day in the given month
7	Hour	0..23	;	1..2	
8	Minute	0..59	;	1..2	
9	Second	0..59	;	1..2	
10	Amount of receipts	Number	;	1..10	
11	Amount of annulled receipts	Number	;	1..10	
12	Amount of changes in	Number	;	1..10	

	PLU base				
13	Number of daily report	Number	;	1..10	
14	Sum of gross sale	Number	/	1..11	
15	Sum of tax rates	Number	/	1..11	
16	Amount of printouts	Number	;	1..10	
17	Amount of resettings	Number	;	1..10	
18	Number of the last receipt	Number	;	1..10	
19	Number of the last printout	Number	;	1..10	
20	Number of evaluations	Number	;	1..10	Only in pharmacy printers
21	Value of annulled receipts	Number	/	1..11	
22	Fee	Number	/	1..11	Only in pharmacy printers
23	Totalizer A	Number	/	1..11	Gross
24	Totalizer B	Number	/	1..11	Gross
25	Totalizer C	Number	/	1..11	Gross
26	Totalizer D	Number	/	1..11	Gross
27	Totalizer E	Number	/	1..11	Gross
28	Totalizer F	Number	/	1..11	Gross
29	Totalizer G	Number	/	1..11	Gross
30	Total sum of VAT A	Number	/	1..20	Increasingly
31	Total sum of VAT B	Number	/	1..20	Increasingly *
32	Total sum of VAT C	Number	/	1..20	Increasingly *
33	Total sum of VAT D	Number	/	1..20	Increasingly *
34	Total sum of VAT E	Number	/	1..20	Increasingly *
35	Total sum of VAT F	Number	/	1..20	Increasingly *
36	Total sum of VAT G	Number	/	1..20	Increasingly *
37	Total sum of VAT	Number	/	1..20	Increasingly *
38	Total sum of gross sale	Number	/	1..20	Increasingly *
39	Totalizer AFV	Number	/	1..11	Gross
40	Totalizer BFV	Number	/	1..11	Gross
41	Totalizer CFV	Number	/	1..11	Gross
42	Totalizer DFV	Number	/	1..11	Gross
43	Totalizer EFV	Number	/	1..11	Gross
44	Totalizer FFV	Number	/	1..11	Gross
45	Totalizer GFV	Number	/	1..11	Gross
46	Total sum of AFV tax	Number	/	1..20	Increasingly *
47	Total sum of BFV tax	Number	/	1..20	Increasingly *
48	Total sum of CFV tax	Number	/	1..20	Increasingly *
49	Total sum of DFV tax	Number	/	1..20	Increasingly *
50	Total sum of EFV tax	Number	/	1..20	Increasingly *
51	Total sum of FFV tax	Number	/	1..20	Increasingly *
52	Total sum of GFV tax	Number	/	1..20	Increasingly *
53	Total sum of PTUFV tax	Number	/	1..20	Increasingly *
54	Total sum of FV tax gross sale	Number	/	1..20	Increasingly *
55	Amount of invoices	Number	;	1..10	
56	Number of last invoice	Number	;	1..10	
57	Sum of FV tax sale	Number	/	1..11	

58	Sum of FV tax	Number	/	1..11	
59	A tax rate	Number	/	1..11	
60	B tax rate	Number	/	1..11	
61	C tax rate	Number	/	1..11	
62	D tax rate	Number	/	1..11	
63	E tax rate	Number	/	1..11	
64	F tax rate	Number	/	1..11	
65	G tax rate	Number	/	1..11	
66	Currency name	Inscription	<CR>	3	
67	Control byte	00..FF		2	
68		<ESC>\		2	

Data of daily report record (NOVITUS):

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant value	34	;	2	
3	Format for pharmacy printer	0..1		1	0 – format for standard printer 1 – format for pharmacy printer
4	Response code	#x		2	
5	Year	0..99	;	1..2	Two last digits of the year
6	Month	1..12	;	1..2	Number of month in the year
7	Day	1..31	;	1..2	Number of day in the given month
8	Hour	0..23	;	1..2	
9	Minute	0..59	;	1..2	
10	Second	0..59	;	1..2	
11	Amount of receipts	Number	;	1..10	
12	Amount of annulled receipts	Number	;	1..10	
13	Amount of changes in PLU base	Number	;	1..10	
14	Number of daily report	Number	;	1..10	
15	Sum of gross sale	Number	/	1..11	
16	Sum of tax rates	Number	/	1..11	
17	Amount of printouts	Number	;	1..10	
18	Amount of resettings	Number	;	1..10	
19	Number of the last receipt	Number	;	1..10	
20	Number of the last printout	Number	;	1..10	
21	Number of evaluations	Number	;	1..10	Only in pharmacy printers
22	Value of annulled receipts	Number	/	1..11	
23	Fee	Number	/	1..11	Only in pharmacy printers
24	Totalizer A	Number	/	1..11	Gross
25	Totalizer B	Number	/	1..11	Gross
26	Totalizer C	Number	/	1..11	Gross
27	Totalizer D	Number	/	1..11	Gross
28	Totalizer E	Number	/	1..11	Gross
29	Totalizer F	Number	/	1..11	Gross
30	Totalizer G	Number	/	1..11	Gross
31	Total sum of VAT A	Number	/	1..20	Increasingly

32	Total sum of VAT B	Number	/	1..20	Increasingly *
33	Total sum of VAT C	Number	/	1..20	Increasingly *
34	Total sum of VAT D	Number	/	1..20	Increasingly *
35	Total sum of VAT E	Number	/	1..20	Increasingly *
36	Total sum of VAT F	Number	/	1..20	Increasingly *
37	Total sum of VAT G	Number	/	1..20	Increasingly *
38	Total sum of VAT	Number	/	1..20	Increasingly *
39	Total sum of gross sale	Number	/	1..20	Increasingly *
40	Totalizer AFV	Number	/	1..11	Gross
41	Totalizer BFV	Number	/	1..11	Gross
42	Totalizer CFV	Number	/	1..11	Gross
43	Totalizer DFV	Number	/	1..11	Gross
44	Totalizer EFV	Number	/	1..11	Gross
45	Totalizer FFV	Number	/	1..11	Gross
46	Totalizer GFV	Number	/	1..11	Gross
47	Total sum of AFV tax	Number	/	1..20	Increasingly *
48	Total sum of BFV tax	Number	/	1..20	Increasingly *
49	Total sum of CFV tax	Number	/	1..20	Increasingly *
50	Total sum of DFV tax	Number	/	1..20	Increasingly *
51	Total sum of EFV tax	Number	/	1..20	Increasingly *
52	Total sum of FFV tax	Number	/	1..20	Increasingly *
53	Total sum of GFV tax	Number	/	1..20	Increasingly *
54	Total sum of PTUFV tax	Number	/	1..20	Increasingly *
55	Total sum of FV tax gross sale	Number	/	1..20	Increasingly *
56	Amount of invoices	Number	;	1..10	
57	Number of last invoice	Number	;	1..10	
58	Sum of FV tax sale	Number	/	1..11	
59	Sum of FV tax	Number	/	1..11	
60	A tax rate	Number	/	1..11	
61	B tax rate	Number	/	1..11	
62	C tax rate	Number	/	1..11	
63	D tax rate	Number	/	1..11	
64	E tax rate	Number	/	1..11	
65	F tax rate	Number	/	1..11	
66	G tax rate	Number	/	1..11	
67	Currency name	Inscription	<CR>	3	
68	Shortcut from electronic copy data	Inscription	<CR>	0	Empty field in Online
69	Control byte	00..FF		2	
70		<ESC>\		2	

Record of RAM memory resetting:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Response code	**36#x**		4	
3	Year	0..49	;	1..2	
4	Month	1..12	;	1..2	

5	Day	1..31	;	1..2	
6	Hour	0..23	;	1..2	
7	Minute	0..59	;	1..2	
8	Second	0..59	;	1..2	
9	Reason of resetting	Number	;	1..10	
10	Resetting number	Number	;	1..10	
	Type of resetting	Hexadecimal number	;	1..10	0x0087 – RAM – fiscal 0x0098 – data base – fiscal 0x66FF – cache 0xFFFF – all
	There was sales after resetting	Number	;	1	0 – no sales after resetting (-1) – there was sale (reset with star)
20	Control byte	00..FF		2	
21		<ESC>\		2	

Data of daily report record (NOVITUS):

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant value	37	;	2	
3	Format for pharmcy printer	0..1	;	1	0 – format for standard printer 1 – format for pharmacy printer
4	Supporting pharmacy functions	0..1		1	0 – No 1 – Yes
5	Response code	**#x**		2	
6	Year	0..99	;	1..2	Two last digits of the year
7	Month	1..12	;	1..2	Number of month in the year
8	Day	1..31	;	1..2	Number of day in the given month
9	Hour	0..23	;	1..2	
10	Minute	0..59	;	1..2	
11	Second	0..59	;	1..2	
12	Amount of receipts	Number	;	1..10	
13	Amount of annulled receipts	Number	;	1..10	
14	Amount of changes in PLU base	Number	;	1..10	
15	Number of daily report	Number	;	1..10	
16	Sum of gross sale	Number	/	1..11	
17	Sum of tax rates	Number	/	1..11	
18	Amount of printouts	Number	;	1..10	
19	Amount of resettings	Number	;	1..10	
20	Number of the last receipt	Number	;	1..10	
21	Number of the last printout	Number	;	1..10	
23	Value of annulled receipts	Number	/	1..11	
25	Totalizer AFV	Number	/	1..11	Gross
26	Totalizer BFV	Number	/	1..11	Gross
27	Totalizer CFV	Number	/	1..11	Gross
28	Totalizer DFV	Number	/	1..11	Gross
29	Totalizer EFV	Number	/	1..11	Gross
30	Totalizer FFV	Number	/	1..11	Gross

31	Totalizer GFV	Number	/	1..11	Gross
32	Total sum of AFV tax	Number	/	1..20	Increasingly *
33	Total sum of BFV tax	Number	/	1..20	Increasingly *
34	Total sum of CFV tax	Number	/	1..20	Increasingly *
35	Total sum of DFV tax	Number	/	1..20	Increasingly *
36	Total sum of EFV tax	Number	/	1..20	Increasingly *
37	Total sum of FFV tax	Number	/	1..20	Increasingly *
38	Total sum of GFV tax	Number	/	1..20	Increasingly *
39	Total sum of PTUFV tax	Number	/	1..20	Increasingly *
40	Total sum of FV tax gross sale	Number	/	1..20	Increasingly *
41	Totalizer AFV	Number	/	1..11	Gross
42	Totalizer BFV	Number	/	1..11	Gross
43	Totalizer CFV	Number	/	1..11	Gross
44	Totalizer DFV	Number	/	1..11	Gross
45	Totalizer EFV	Number	/	1..11	Gross
46	Totalizer FFV	Number	/	1..11	Gross
47	Totalizer GFV	Number	/	1..11	Gross
48	Total sum of AFV tax	Number	/	1..20	Increasingly *
49	Total sum of BFV tax	Number	/	1..20	Increasingly *
50	Total sum of CFV tax	Number	/	1..20	Increasingly *
51	Total sum of DFV tax	Number	/	1..20	Increasingly *
52	Total sum of EFV tax	Number	/	1..20	Increasingly *
53	Total sum of FFV tax	Number	/	1..20	Increasingly *
54	Total sum of GFV tax	Number	/	1..20	Increasingly *
55	Total sum of PTUFV tax	Number	/	1..20	Increasingly *
56	Total sum of FV tax gross sale	Number	/	1..20	Increasingly *
57	Amount of invoices	Number	;	1..10	
58	Number of last invoice	Number	;	1..10	
59	Sum of FV tax sale	Number	/	1..11	
60	Sum of FV tax	Number	/	1..11	
61	PTU A rate	Number	/	1..11	
62	PTU B rate	Number	/	1..11	
63	PTU C rate	Number	/	1..11	
64	PTU D rate	Number	/	1..11	
65	PTU E rate	Number	/	1..11	
66	PTU F rate	Number	/	1..11	
67	PTU G rate	Number	/	1..11	
68	Currency name	Inscription	<CR>	3	
69	Number of cancelled valuations	Number	/	1..10	Appears in format for pharmacy printer
70	Shortcut from electronic copy data	Inscription	<CR>	40	Format: „xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx” x – character from range 0..9 or a..f
71	First sales – Year	0..99	;	1..2	Two last digits of the year
72	First sales – Month	1..12	;	1..2	Number of month in the year
73	First sales – Day	1..31	;	1..2	Number of day in the given month

74	First sales – Hour	0..23	;	1..2	
75	First sales - Minute	0..59	;	1..2	
76	First sales - Second	0..59	;	1..2	
77	Last sales – Year	0..99	;	1..2	Two last digits of the year
78	Last sales – Month	1..12	;	1..2	Number of month in the year
79	Last sales – Day	1..31	;	1..2	Number of day in the given month
80	Last sales – Hour	0..23	;	1..2	
81	Last sales - Minute	0..59	;	1..2	
82	Last sales - Second	0..59	;	1..2	
83	Control byte	00..FF		2	
84		<ESC>\		2	

Data of daily report record (NOVITUS):

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant value	38	;	2	
3	Format	2	;	1	Contains fields dedicated to support pharmaceutical functions and ticketing.
4	Supporting pharmacy functions	0..1	;	1	0 – No 1 – Yes
5	Supporting ticketing functions	0..1		1	0 – No 1 – Yes
6	Response code	**#x**		2	
7	Year	0..99	;	1..2	Two last digits of the year
8	Month	1..12	;	1..2	Number of month in the year
9	Day	1..31	;	1..2	Number of day in the given month
10	Hour	0..23	;	1..2	
11	Minute	0..59	;	1..2	
12	Second	0..59	;	1..2	
13	Amount of receipts	Number	;	1..10	
14	Amount of annulled receipts	Number	;	1..10	
15	Amount of changes in PLU base	Number	;	1..10	
16	Number of daily report	Number	;	1..10	
17	Sum of gross sale	Amount	/	1..11	
18	Sum of tax rates	Amount	/	1..11	
19	Amount of printouts	Number	;	1..10	
20	Amount of resettings	Number	;	1..10	
21	Number of the last receipt	Number	;	1..10	
22	Number of the last printout	Number	;	1..10	
23	Number of valuations	Number	;	1..10	Pharmacy functions
24	Value of annulled receipts	Amount	/	1..11	
25	Fee	Amount	/	1..11	Pharmacy functions
26	Totalizer A	Amount	/	1..11	Gross
27	Totalizer B	Amount	/	1..11	Gross
28	Totalizer C	Amount	/	1..11	Gross

29	Totalizer D	Amount	/	1..11	Gross
30	Totalizer E	Amount	/	1..11	Gross
31	Totalizer F	Amount	/	1..11	Gross
32	Totalizer G	Amount	/	1..11	Gross
33	Totalizer AFV	Amount	/	1..11	Gross
34	Totalizer BFV	Amount	/	1..11	Gross
35	Totalizer CFV	Amount	/	1..11	Gross
36	Totalizer DFV	Amount	/	1..11	Gross
37	Totalizer EFV	Amount	/	1..11	Gross
38	Totalizer FFV	Amount	/	1..11	Gross
39	Totalizer GFV	Amount	/	1..11	Gross
40	Amount of invoices	Number	;	1..10	
41	Number of last invoice	Number	;	1..10	
42	Sum of FV tax sale	Amount	/	1..11	
43	Sum of FV tax	Amount	/	1..11	
44	PTU A rate	Number	/	1..11	
45	PTU B rate	Number	/	1..11	
46	PTU C rate	Number	/	1..11	
47	PTU D rate	Number	/	1..11	
48	PTU E rate	Number	/	1..11	
49	PTU F rate	Number	/	1..11	
50	PTU G rate	Number	/	1..11	
51	Currency name	Inscription	<CR>	3	
52	Number of cancelled valuations	Number	/	1..10	Pharmacy functions
53	Shortcut from electronic copy data	Inscription	<CR>	40	Format: „xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx” x – character from range 0..9 or a..f
54	First sales – Year	0..99	;	1..2	Two last digits of the year
55	First sales – Month	1..12	;	1..2	Number of month in the year
56	First sales – Day	1..31	;	1..2	Number of day in the given month
57	First sales – Hour	0..23	;	1..2	
58	First sales - Minute	0..59	;	1..2	
59	First sales - Second	0..59	;	1..2	
60	Last sales – Year	0..99	;	1..2	Two last digits of the year
61	Last sales – Month	1..12	;	1..2	Number of month in the year
62	Last sales – Day	1..31	;	1..2	Number of day in the given month
63	Last sales – Hour	0..23	;	1..2	
64	Last sales – Minute	0..59	;	1..2	
65	Last sales – Second	0..59	;	1..2	
66	Totalizer of A fee	Amount	/	1..11	Gross (pharmacy functions)
67	Totalizer of B fee	Amount	/	1..11	Gross (pharmacy functions)
68	Totalizer of C fee	Amount	/	1..11	Gross (pharmacy functions)
69	Totalizer of D fee	Amount	/	1..11	Gross (pharmacy functions)
70	Totalizer of E fee	Amount	/	1..11	Gross (pharmacy functions)
71	Totalizer of F fee	Amount	/	1..11	Gross (pharmacy functions)
72	Totalizer of G fee	Amount	/	1..11	Gross (pharmacy functions)

73	Number of annulled invoices	Number	;	1..10	
74	Value of annulled invoices	Amount	/	1..11	
75	Number of emergency situations	Number	;	1..10	
76	Number of local program settings	Number	;	1..10	
77	Number of ONLINE programming	Number	;	1..10	
78	Control byte	00..FF		2	
79		<ESC>\		2	

Data of daily report record (electronic copy, VAT invoice, pharmacy functions, ticketing) (NOVITUS):

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant value	39	;	2	
3	Supporting pharmacy functions	0..1	;	1	0 – No 1 - Yes
4	Supporting ticketing functions	0..1		1	0 – No 1 - Yes
5	Response code	#x		2	
6	Year	0..99	;	1..2	Two last digits of the year
7	Month	1..12	;	1..2	Number of month in the year
8	Day	1..31	;	1..2	Number of day in the given month
9	Hour	0..23	;	1..2	
10	Minute	0..59	;	1..2	
11	Second	0..59	;	1..2	
12	Amount of receipts	Number	;	1..10	
13	Amount of annulled receipts	Number	;	1..10	
14	Amount of changes in PLU base	Number	;	1..10	
15	Number of daily report	Number	;	1..10	
16	Sum of gross sale	Number	/	1..11	
17	Sum of tax rates	Number	/	1..11	
18	Amount of printouts	Number	;	1..10	
19	Amount of resettings	Number	;	1..10	
20	Number of the last receipt	Number	;	1..10	
21	Number of the last printout	Number	;	1..10	
22	Number of valuations	Number	;	1..10	Pharmacy functions
23	Value of annulled receipts	Number	/	1..11	
24	Fee	Number	/	1..11	Pharmacy functions
25	Totalizer A	Number	/	1..11	Gross
26	Totalizer B	Number	/	1..11	Gross
27	Totalizer C	Number	/	1..11	Gross
28	Totalizer D	Number	/	1..11	Gross
29	Totalizer E	Number	/	1..11	Gross
30	Totalizer F	Number	/	1..11	Gross
31	Totalizer G	Number	/	1..11	Gross

32	Total sum of VAT A	Number	/	1..20	Increasingly *
33	Total sum of VAT B	Number	/	1..20	Increasingly *
34	Total sum of VAT C	Number	/	1..20	Increasingly *
35	Total sum of VAT D	Number	/	1..20	Increasingly *
36	Total sum of VAT E	Number	/	1..20	Increasingly *
37	Total sum of VAT F	Number	/	1..20	Increasingly *
38	Total sum of VAT G	Number	/	1..20	Increasingly *
39	Total sum of VAT	Number	/	1..20	Increasingly *
40	Total sum of gross sale	Number	/	1..20	Increasingly *
41	Totalizer AFV	Number	/	1..11	Gross
42	Totalizer BFV	Number	/	1..11	Gross
43	Totalizer CFV	Number	/	1..11	Gross
44	Totalizer DFV	Number	/	1..11	Gross
45	Totalizer EFV	Number	/	1..11	Gross
46	Totalizer FFV	Number	/	1..11	Gross
47	Totalizer GFV	Number	/	1..11	Gross
48	Total sum of AFV tax	Number	/	1..20	Increasingly *
49	Total sum of BFV tax	Number	/	1..20	Increasingly *
50	Total sum of CFV tax	Number	/	1..20	Increasingly *
51	Total sum of DFV tax	Number	/	1..20	Increasingly *
52	Total sum of EFV tax	Number	/	1..20	Increasingly *
53	Total sum of FFV tax	Number	/	1..20	Increasingly *
54	Total sum of GFV tax	Number	/	1..20	Increasingly *
55	Total sum of PTUFV tax	Number	/	1..20	Increasingly *
56	Total sum of FV tax gross sale	Number	/	1..20	Increasingly *
57	Amount of invoices	Number	;	1..10	
58	Number of last invoice	Number	;	1..10	
59	Sum of FV tax sale	Number	/	1..11	
60	Sum of FV tax	Number	/	1..11	
61	PTU A rate	Number	/	1..11	
62	PTU B rate	Number	/	1..11	
63	PTU C rate	Number	/	1..11	
64	PTU D rate	Number	/	1..11	
65	PTU E rate	Number	/	1..11	
66	PTU F rate	Number	/	1..11	
67	PTU G rate	Number	/	1..11	
68	Currency name	Inscription	<CR>	3	
69	Number of cancelled valuations	Number	;	1..10	Pharmacy functions
70	Shortcut from electronic copy data	Inscription	<CR>	40	Format: „xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx” x – character from range 0..9 or a..f
71	First sales – Year	0..99	;	1..2	Two last digits of the year
72	First sales – Month	1..12	;	1..2	Number of month in the year
73	First sales – Day	1..31	;	1..2	Number of day in the given month
74	First sales – Hour	0..23	;	1..2	

75	First sales - Minute	0..59	;	1..2	
76	First sales - Second	0..59	;	1..2	
77	Last sales – Year	0..99	;	1..2	Two last digits of the year
78	Last sales – Month	1..12	;	1..2	Number of month in the year
79	Last sales – Day	1..31	;	1..2	Number of day in the given month
80	Last sales – Hour	0..23	;	1..2	
81	Last sales – Minute	0..59	;	1..2	
82	Last sales – Second	0..59	;	1..2	
83	Number of regular tickets	Number	/	1..11	Ticketing functions
84	Number of discounted tickets with surcharges	Number	/	1..11	Ticketing functions
85	Number of discounted tickets without surcharges	Number	/	1..11	Ticketing functions
86	Number of international tickets	Number	/	1..11	Ticketing functions
87	Sales not subject to VAT	Number	/	1.11	Ticketing functions
88	Control byte	00..FF		2	
89	Frame	<ESC>\		2	

* - Increasingly from the moment of fiscalisation/approval or currency change.

Remarks:

After setting mode of fiscal memory readout to 53 or 63, the printer sends back packets with ID: 11, 12, 25, 30, 31, 32, 33.
After setting mode of fiscal memory readout to 54 or 64, the printer sends back packets with ID: 11, 36, 25, 30, 31, 34, 35.
After setting mode of fiscal memory readout to 55 or 65, the printer sends back packets with ID: 11, 36, 25, 30, 31, 37, 35.

Where:

Year, Month, Day
Date set in the fiscal printer,
Hour, Minute
Time set in the fiscal printer.

Error's codes:

1: not initiated printer's clock,
5: printer's RTC clock readout error

3.1.13. Readout of information about protected memory.

Demanding packet of collecting information of protected memory:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Mode	210		3	
3	Command	**#s**		2	
4		<ESC>\		2	

Format of sending back information:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Response code	**210#X**		3	

3	Number of protected memory	Number	;	4	Number in format: 0001
4	Label of protected memory	Text	**<CR>**	18	Label in format: ABC0123456789.0001
5	The last JPKID	Number 64 Bit	**<CR>**	1…	
6	Number of first daily report in protected memory	Number	;	1…	
7	How much free space	Number	;	1…	
8	Memory capacity	Number	;	1…	
9	Control byte	00..FF		2	
10		<ESC>\		2	

3.1.14. Request of sending back the last daily report.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Mode	101		3	
3	Command	**#s**		2	
4		<ESC>\		2	

Response:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Response code	**101#X**		5	
3	Unique number	Text	**<CR>**	13	
4	Date/time of report	Date/time	**<CR>**	16	Format: „YYYY-MM-DD HH:MM”
5	Report number	Number	/	1..4	
6	Gross A	Amount	/	3..11	
7	Gross B	Amount	/	3..11	
8	Gross C	Amount	/	3..11	
9	Gross D	Amount	/	3..11	
10	Gross E	Amount	/	3..11	
11	Gross F	Amount	/	3..11	
12	Gross G	Amount	/	3..11	
13	Total gross	Amount	/	3..11	
14	Receipts number	Number	/	1..7	
15	Printouts number	Number	/	1..7	
16	Number of cancelled receipts	Number	/	1..7	
17	Gross AFV	Amount	/	3..11	Invoices
18	Gross BFV	Amount	/	3..11	Invoices
19	Gross CFV	Amount	/	3..11	Invoices
20	Gross DFV	Amount	/	3..11	Invoices
21	Gross EFV	Amount	/	3..11	Invoices
22	Gross FFV	Amount	/	3..11	Invoices
23	Gross GFV	Amount	/	3..11	Invoices

24	Total gross from invoices	Amount	/	3..11	Invoices
25	Invoices number	Number	/	1..7	
26	Number of cancelled invoices	Number	/	1..7	
27	Fee A	Amount	/	3..11	Pharmacy receipts
28	Fee B	Amount	/	3..11	Pharmacy receipts
29	Fee C	Amount	/	3..11	Pharmacy receipts
30	Fee D	Amount	/	3..11	Pharmacy receipts
31	Fee E	Amount	/	3..11	Pharmacy receipts
32	Fee F	Amount	/	3..11	Pharmacy receipts
33	Fee G	Amount	/	3..11	Pharmacy receipts
34	Total fees	Amount	/	3..11	Pharmacy receipts
35	Valuations number	Number	/	1..7	
36	Number of cancelled valuations	Number	/	1..7	
37	Number of last receipt	Number	/	1..7	
38	Number of last printout	Number	/	1..7	
39	Number of last invoice	Number	/	1..7	
40	Number of non-fiscal printouts	Number	/	1..7	
41	Sales no subject to Tax	Amount	/	3..11	
42	Tax A	Rate	/	4..6	
43	Tax B	Rate	/	4..6	
44	Tax C	Rate	/	4..6	
45	Tax D	Rate	/	4..6	
46	Tax E	Rate	/	4..6	
47	Tax F	Rate	/	4..6	
48	Tax G	Rate	/	4..6	
49	Currency	Rate	**<CR>**	3	
50	Date/time of first selling	Date/time	**<CR>**	16	Format: „YYYY-MM-DD HH:MM”
51	Date/time of last selling	Date/time	**<CR>**	16	Format: „YYYY-MM-DD HH:MM”
52		<ESC>\		2	

Tax A ... Tax G: value of Tax rates:

- xx.yy - a number in the range 0.00..99.99 except 98.99 and 99.99 (assigning a value means that the rate is active),
- 98.99 – marking a released rate {only for parameter = 7}.
- 99.99 – marking non-active rate {only for parameter Rates number = 7}.

3.1.15. Readout information of dispatch from repository.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**?PROC**		5	
3	Control byte	00..FF		2	
4		<ESC>\		2	

Response:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**?PROC**		5	
3	Date of last dispatch	Text	CR	20	Date of last dispatch to repository
4	Date of last correct dispatch	Text	CR	20	Date of last correct dispatch to repository
5	Number jpk to dispatch	Number	/	10	
6	Last sent jpk	Number	/	10	
7		00..FF		2	
8		<ESC>\		2	

3.1.16. Information about connecting displays.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Mode	**Number**		1	0 or none – USB displays, 1 – USB displays and Eth
3	Command	**?D**		2	
4	Control byte	00..FF		2	
5		<ESC>\		2	

Response:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**?D**		2	
3	Internal display	Number	/	1	0 – no display 1 – display connected
4	External display	Number	/	1	0 – no display 1 – display connected
5	Eth main display (option)	Number	/	1	The field appears when mode = 1 0 – no display 1 – display connected
6	Eth additional display (option)	Number	/	1	The field appears when mode = 1 0 – no display 1 – display connected
7	Control byte	00..FF		2	
8		<ESC>\		2	

3.1.17 Read AES254 key for PFX certificate password encryption for NoviAPI server.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**?NAAK**		5	
3	Control byte	00..FF		2	
4		<ESC>\		2	

Response:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**@NAAK**		5	
3	AES256 key	Text	<CR>		In format Base64.

					It is valid until a new key is downloaded or device is restarted.
4	Control byte	00..FF		2	
5		<ESC>\		2	

3.1.18 Readout information about interface.

Reading information according a given interface index

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Parameter	0	;	1	Constant value
3	Command	**?ifi**		4	
4	Interface index	Number	/	1	0 – eth0 1 – wlan0 2 – ppp0
5	Control byte	00..FF		2	
6		<ESC>\		2	

Response:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Parametr	1	;	1	Constant value
3	Command	**?ifi**		4	
4	Interface name	Text	<CR>	1..	
5	Result	Number	/	0..1	0 – no interface in system 1 – interface is raised
6	Control byte	00..FF		2	
7		<ESC>\		2	

Or readout according to interface name

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Parameter	2	;	1	Constant value
3	Command	**?ifi**		4	
4	Interface name	Text	<CR>	1..	
5	Control byte	00..FF		2	
6		<ESC>\		2	

Response:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Parameter	3	;	1	Constant value
3	Command	**?ifi**		4	
4	Interface name	Text	<CR>	1..	
5	Result	Number	/	0..1	0 – no interface in system 1 – interface is raised
6	Control byte	00..FF		2	
7		<ESC>\		2	

Or checking connection of ethernet cable

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Parameter	4	;	1	Constant value
3	Command	**?ifi**		4	
4	Control byte	00..FF		2	
5		<ESC>\		2	

Response:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Parameter	5	;	1	Constant value
3	Command	**?ifi**		4	
4	Interface name	Text	<CR>	1..	
5	Result	Number	/	0..1	0 – Ethernet cable not connected 1 – Ethernet cable connected
6	Control byte	00..FF		2	
7		<ESC>\		2	

Exemplary sequences:

Request: <ESC>P0?ifi1/88<ESC>\
Response: <ESC>P1$ifiwlan0<CR>1/BB<ESC>\

Request: <ESC>P2?ifieth0<CR>D0<ESC>\
Response: <ESC>P3$ifieth0<CR>1/D4<ESC>\

Request: <ESC>P4?ifi92<ESC>\

Response: <ESC>P5$ifieth0<CR>1/D2<ESC>\

3.1.19 Sending diagnostic logs

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Parameter	0	;	1	Constant value
3	Command	**$DLOG**		5	
4	Logs types	Number	/	1	0 - All 1 - General 2 - Communication 3 - NoviApi
5	Password	Number	/	1..8	
6	Control byte	00..FF		2	
7		<ESC>\		2	

3.2. Packets connected with eDocuments.

3.2.1 Programming and reading e-receipt settings.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Order	**@EPAR**		5	

3	Server address	Text	<CR>	200	
4	Encryption	Number	/	3	0 – No 1 – Yes If it is enabled and there is additional certificate programmed in device for e-receipt, the data will be encrypted using the public key in this certificate
5	Format	Number	/	3	1 – Data 2 – Image+Data
6	Protocol	Number	/	1	Protocol 0 – Novitus 1 – MF
7	Key	Text	<CR>	64	In Novitus protocol the key is not used
8	Control byte	00..FF		2	
9		<ESC>\		2	

or

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Type	Number	;	1	1 – programming server address
3	Command	**@EPAR**		5	
4	Server address	Text	<CR>	200	
5	Encryption	Number	/	3	Ignored when „Type” = 1
6	Format	Number	/	3	Ignored when „Type” = 1
7	Protocol	Number	/	1	Ignored when „Type” = 1
8	Key	Text	<CR>	64	Ignored when „Type” = 1
9	Control byte	00..FF		2	
10		<ESC>\		2	

or

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Type	Number	;	1	2 – enlarged e-receipt settings 3 – enlarged e-receipt settings with possibility of setting document types
3	Command	**@EPAR**		5	
4	Server address	Text	<CR>	200	Ignored when „Type” = 2
5	Encryption	Number	/	3	
6	Format	Number	/	3	
7	Protocol	Number	/	1	
8	Key	Text	<CR>	64	
9	Operating mode	Number	/	3	Operating mode: 0 – if there is no confirmation of e-receipt receiving by server, print receipt and don’t repeat attempts to send e-receipt, 1 – if there is no confirmation of e-receipt receiving by server, keep attempts to send e-receipt until successful, 2 – if there is no confirmation of e-receipt receiving by server, print receipt and keep attempts to send e-receipt until successful

					3 – always print and put away to base in order to send it later
10	Timeout	Number	/	10	Timeout – number of milliseconds that device waits for confirmation of e-receipt receiving by server
11	Message Timeout	Number	/	10	Time for which e-receipt message appears. Maximum value is 120,000 ms - 120 seconds.
12	Checking connection	Number	/	10	Flag if check connection with Internet before sending e-receipt 1 – check 0 – not check
13	Sent document types	Number	/	1…	Field exists if type of e-receipt settings programming - 3 Bit-set types: 0x0001 – receipt, 0x0002 – cancelled receipt, 0x0004 – invoice, 0x0008 – cancelled invoice, 0x0010 – non-fiscal printout, 0x0020 – packaging settlement.
14	Control byte	00..FF		2	
15		<ESC>\		2	

Settings readout:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
	Type	Number	;	1	0 or none – basic data of e-receipt settings 1 – extended data of e-receipt settings 2 – extended data of e-receipt settings with settings from server 3 – extended data of e-receipt setting including sent e-documents types
3	Order	**?EPAR**		5	
9	Control byte	00..FF		2	
10		<ESC>\		2	

Response:

Basic settings of e-receipt settings:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Order	**?EPAR**		5	
3	Server address	Text	<CR>	200	
4	Encryption	Number	/	3	0 – No 1 – Yes
5	Format	Number	/	3	0 – Image 1 – Data 2 – Image+Data
6	Protocol	Number	/	1	Protocol 0 – Novitus 1 – MF
7	Key	Text	<CR>	64	
8	Control byte	00..FF		2	
9		<ESC>\		2	

or enlarged data of e-receipt settings:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Type	Number	;		1 – enlarged data
3	Order	**?EPAR**		5	
4	Server address	Text	<CR>	200	
5	Encryption	Number	/	3	0 – No 1 – Yes
6	Format	Number	/	3	1 – Data 2 – Image+Data
7	Protocol	Number	/	1	Protocol 0 – Novitus 1 – MF
8	Key	Text	<CR>	64	
9	Operating mode		/	1	Operating mode: 0 – if there is no confirmation of e-receipt receiving by server, print receipt and don't repeat attempts to send e-receipt, 1 – if there is no confirmation of e-receipt receiving by server, keep attempts to send e-receipt until successful, 2 – if there is no confirmation of e-receipt receiving by server, print receipt and keep attempts to send e-receipt until successful.
10	Timeout		/	10	Timeout – number of milliseconds that device waits for confirmation of e-receipt receiving by server. Maximum is 30000 ms – 30 seconds
11	Message Timeout		/	10	Time for which e-receipt message appears. Maximum value is 120,000 ms - 120 seconds.
12	Checking connection		/	10	Flag if check connection with Internet before sending e-receipt 1 – check 0 – not check
13	Control byte	00..FF		2	
14		<ESC>\		2	

or

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Type	Number	;		2 – enlarged e-receipt settings 3 – enlarged e-receipt settings with possibility of setting edocument types
3	Order	**?EPAR**		5	
4	Server address	Text	<CR>	200	
5	Encryption	Number	/	3	0 – No 1 – Yes
6	Format	Number	/	3	1 – Data 2 – Image+Data
7	Protocol	Number	/	1	Protocol 0 – Novitus 1 – MF
8	Key	Text	<CR>	64	

9	Operating mode		/	1	Operating mode: 0 – if there is no confirmation of e-receipt receiving by server, print receipt and don't repeat attempts to send e-receipt, 1 – if there is no confirmation of e-receipt receiving by server, keep attempts to send e-receipt until successful, 2 – if there is no confirmation of e-receipt receiving by server, print receipt and keep attempts to send e-receipt until successful 3 – always print and put away to base in order to send it later
10	Timeout	Number	/	10	Timeout – number of milliseconds that device waits for confirmation of e-receipt receiving by server. Maximum is 30000 ms – 30 seconds
11	Message Timeout	Number	/	10	Time for which e-receipt message appears. Maximum value is 120,000 ms - 120 seconds.
12	Checking connection	Number	/	10	Flag if check connection with Internet before sending e-receipt 1 – check 0 – not check
13	Changing server address from menu	Number	/	1	0 - Forbidden 1 - Allowed
14	Changing server address after protocol	Number	/	1	0 - Forbidden 1 - Allowed
15	Automatic transaction ID	Number	/	1	0-no 1-yes
16	Allow to e-receipt creation	Number	/	1	0-no 1-yes
17	Allow to e-receipt sending	Number	/	1	0-no 1-yes
18	Sent e-document types	Number	/	1…	Bit-set types: 0x0001 – receipt, 0x0002 – cancelled receipt, 0x0004 – invoice, 0x0008 – cancelled invoice, 0x0010 – non-fiscal printout, 0x0020 – packaging settlement.
19	Control byte	00..FF		2	
20		<ESC>\		2	

3.2.2 Last e-receipt status.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
3	Order	**?e**		2	
9	Control byte	00..FF		2	
10		<ESC>\		2	

Response:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	

2	Order	**?e**		2	
3	Status	Number	/	1…2	Status sent back bit by bit: Bit 1 – sent e-receipt Bit 2 – printed receipt Bit 3 – added to send later Bit 4 – required to download e new KID MF number. Possibly combination of individual bits, e.g. Receipt printed and sent
4	Printout number	Number	/	1..10	
8	Control byte	00..FF		2	
9		<ESC>\		2	

3.2.3 E-receipt readout.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**!e**		2	
3	Mode	Number	/	1	0 – beginning of search, 1 – next data, 2 – retransmission
4	Search type	Number	/	1	0 – search by JPKID, 1 – search by printout number.
5	Number	Number	/	1…	Printout number or JPKID, depending on chosen mode.
6	Data type	Number	/	1	0 – JWS, 1 – visualization, 2 – visualization without graphic, 3 – JWS + visualization, 4 – JWS + visualization without graphic.
7	Control byte	00..FF		2	
8		<ESC>\		2	

Response:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**!e**		2	
3	Status	Number	/	1	0 – sending data, 1 – end of data, 2 – no data, 3 – during processing, 4 – incorrect parameters, 8 – error, a new generating can't be started, the previous must be ended first, 9 – error.
4	Number (optionally)	Number	/	1…	Printout number or PKID, depending on chosen mode. Field appears, if Status is 0 or 1.
5	Data type (optionally)	Number	/	1	0 – JWS, 1 – Visualization. Field appears, if Status is 0 or 1.
6	Total size (optionally)	Number	/	0…	Data size to send. Field appears, if Status is 0 or 1.
7	Position (optionally)	Number	/	0…	Total amount of sent data.

					Field appears, if Status is 0 or 1.
8	Size (optionally)	Number	/	0…	Size of sent data package. Field appears, if Status is 0 or 1.
9	Data (optionally)	Text	CR	1… 262144	JWS data of document. For receipt and cancelled receipt, JWS header is generated in mode - „for documents in electronic form" (it has parameters: alg, jpkmetadata, **x5c**, eParagon.mf.gov.pl) For invoice, cancelled invoice of non-fiscal printout, JWS header is generated in mode - „for data set" (it has parameters: alg, jpkmetadata, **jpkcertificate**) **OR** Printout visualization Base64 encoded in format png. Field appears, if Status is 0 or 1.
10	Control byte	00..FF		2	
11		<ESC>\		2	

3.2.4 Read information from e-receipt base.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Mode	Number	;	1	0 – number of documents in base, 1 – start read, 2 – next record from base.
3	Command	**?EDB**		4	
4	Protocol	Number	/	1	0 – NOVITUS, 1 – MF, 2 – any.
5	Document status	Number	/	1	0 – waiting to be sent and not printed, 1 – waiting to be sent and printed, 2 – rejected by server and not printed, 3 – rejected by server and printed, 4 – waiting to be sent, 5 – rejected by server, 6 – any.
6	Number	Number	/	1…	
7	Control byte	00..FF		2	
8		<ESC>\		2	

Response, if mode 0:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**?EDB**		4	
3	Protocol	Number	/	1	0 – NOVITUS, 1 – MF,

					2 – any
4	Document status	Number	/	1	0 – waiting to be sent and not printed, 1 – waiting to be sent and printed, 2 – rejected by server and not printed, 3 – rejected by server and printed, 4 – waiting to be sent, 5 – rejected by server, 6 – any.
5	Quantity	Number	/	1…	
	Control byte	00..FF		2	
		<ESC>\		2	

Response, if mode 1 or 2:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Mode	Number	;	1	0 – next record from base, 1 – end of data, 2 – incorrect search parameters.
3	Command	**?EDB**		4	
4	Protocol (appears if mode 0)	Number	/	1	0 – NOVITUS, 1 – MF
5	Document status (appears if mode 0)	Number	/	1	0 – waiting to be sent and not printed, 1 – waiting to be sent and printed, 2 – rejected by server and not printed, 3 – rejected by server and printed.
6	JPKID (appears if mode 0)	Number	/	1…	Document's JPKID.
	Control byte	00..FF		2	
		<ESC>\		2	

3.2.5 Programming parameters to generate e-receipt visualization.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**@EPNG**		4	
3	Strategy	Number	/	1	0 – Z_DEFAULT_STRATEGY, 1 – Z_FILTERED, 2 – Z_HUFFMAN_ONLY, 3 – Z_RLE, 4 – Z_FIXED
4	Compression level	-1..9	/	1	-1 – Z_DEFAULT_COMPRESSION, 0 – Z_NO_COMPRESSION, 1 – Z_BEST_SPEED, 9 – Z_BEST_COMPRESSION
5	Filtration	Number	/	1…	0 – PNG_NO_FILTERS, 8 – PNG_FILTER_NONE, 16 – PNG_FILTER_SUB, 32 – PNG_FILTER_UP, 64 – PNG_FILTER_AVG,

					128 – PNG_FILTER_PAETH
6	Control byte	00..FF		2	
7		<ESC>\		2	

3.2.6 Read parameters to generate e-receipt visualization.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**?EPNG**		4	
4	Control byte	00..FF		2	
5		<ESC>\		2	

Response:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
3	Command	**?EPNG**		4	
3	Strategy	Number	/	1	0 – Z_DEFAULT_STRATEGY, 1 – Z_FILTERED, 2 – Z_HUFFMAN_ONLY, 3 – Z_RLE, 4 – Z_FIXED
4	Compression level	-1..9	/	1	-1 – Z_DEFAULT_COMPRESSION, 0 – Z_NO_COMPRESSION, 1 – Z_BEST_SPEED, 2 – Z_DEST_COMPRESSION
5	Filtration	Number	/	1…	0 – PNG_NO_FILTERS, 8 – PNG_FILTER_NONE, 16 – PNG_FILTER_SUB, 32 – PNG_FILTER_UP, 64 – PNG_FILTER_AVG, 128 – PNG_FILTER_PAETH
6	Control byte	00..FF		2	
7		<ESC>\		2	

3.2.7 Deleting rejected eDocuments from base.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**!EDB**		4	
3	JPKID	Number	/	1..	Document JPKID number to be deleted.
4	Control byte	00..FF		2	
5		<ESC>\		2	

Error codes:

1523: Document not found.
1524: Deleting failed.

3.2.8 Programming HUB settings of MF e-receipts.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	

2	Flag size	0..1	;	1	Flag that informs if there is field e-receipt size.
3	Flag sent documents	0..1	;	1	Flag that informs if there is field specifying sent documents.
4	Command	**@EMF**		4	
5	Server address	Text	<CR>	200	
6	E-receipt size	Number	/	1…	
7	Sent document types	Number	/	1…	Bit-set types: 0x0001 – receipt, 0x0002 – cancelled receipt, 0x0004 – invoice, 0x0008 – cancelled invoice, 0x0010 – non-fiscal printout, 0x0020 – packaging settlement.
8	Control byte	00..FF		2	
9		<ESC>\		2	

Read HUB settings of MF e-receipts.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**?EMF**		4	
4	Control byte	00..FF		2	
5		<ESC>\		2	

Response:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**?EMF**		4	
3	Server address	Text	<CR>	200	
4	E-receipt size	Number	/	1…	E-receipt size in bytes, defaulty 200kB
5	Sent document types	Number	/	1…	Bit-set types: 0x0001 – receipt, 0x0002 – cancelled receipt, 0x0004 – invoice, 0x0008 – cancelled invoice, 0x0010 – non-fiscal printout, 0x0020 – packaging settlement
6	Control bytes	00..FF		2	
7		<ESC>\		2	

3.3 Printer's programming commands.

3.3.1. Setting the clock.

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Year	0..99	;	1..2	Two last digits of year
3	Month	1..12	;	1..2	
4	Day	1..31	;	1..2	
5	Hour	0..23	;	1..2	
6	Minute	0..59	;	1..2	

7	Second	0..59		1..2	
8	Command	**$c**		2	
9	Cash register number	Inscription	<CR>	0..8	Optional parameters – replacing those introduced during cashiers log-in.
10	Cashier	Inscription	<CR>	0..32	
11	Control byte	00..FF		2	
12		<ESC>\		2	

Where:

Year
Two last digits of the year,
Month
Number of the month of the year,
Day
Number of the day of the month,
Hour
Set hour,
Minute
Set minute,
Second
Ignored parameter,
Cash register number
Inscription including cash register number,
Cashier
Inscription including cashier's name,

Errors' codes:

2: control byte error,
3: wrong quantity of parameters,
4: data error,
5: printer's RTC clock readout error
6: totalizers readout error,
7: a date earlier than the date of the last record in the fiscal memory (realization impossible!),
8: operation error – non-reset totalizers.

Remarks:

1. In the fiscal mode, if the printer's clock requires initiation (at the first setting on and after its possible 'de-programming' in the effect of discharging of battery) that fact is signalized by a proper message on the display and the stoppage of further performance of the printer takes place! The service can set the proper date with the appliance of service functions.
2. In the fiscal mode, in case of proper performance of the clock, a correcting of not more than 1hour is possible, but only if the totalizers are reset (condition after conducting daily report) and only once after the daily report. The programmed date cannot be earlier than the last record written to the fiscal memory. In the fiscal mode, the described sequence may be used only for clock's corrects of +/- 1 hour once after the daily report.
3. In case of lack of initiation of the clock, realization of controlling sequences is blocked, except ENQ, DLE, BEL, CAN, send cash register information back and set Service mode of the errors. Conducting the reports is also blocked.

3.14.2. Change of tax (PTU) rate.

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Quantity of rates	None, 0..7		0..1	
3	Confirmation	0 lub 1		1	0 – programowanie stawek z potwierdzeniem na drukarce, 1 – programowanie stawek bez potwierdzenia na drukarce
4	Command	**$p**		2	

5	Cash register number	Inscription	<CR>	0..8	Optional parameters – replacing those introduced during cashiers log-in.
6	Cashier	Inscription	<CR>	0..32	
7	VAT A	Number	/	1..5	Quantity of parameters determining VAT rates depends on the value of parameter 2 (Quantity of the tax rates). If there is none or it is 0, there are always four rates, in other cases as much as this parameter is.
8	VAT B	Number	/	1..5	
9	VAT C	Number	/	1..5	
10	VAT D	Number	/	1..5	
11	VAT E	Number	/	1..5	
12	VAT F	Number	/	1..5	
13	VAT G	Number	/	1..5	
14	Date	Date	;	10	Date in format: **RRRR-MM-DD**. Field is required when programming rates in mode without confirmation on fiscal printer. Field has a control function. If date complies with date in printer, programming will be performed without confirmation, otherwise confirmation will be required.
15	Control byte	00..FF		2	
16		<ESC>\		2	

Where:

Quantity of VAT rates

0 or none: 4 rates are programmed and G rate is presumably programmed as free rate,
1..6: G rate is presumably programmed as free rate. Other rates are programmed in accordance with the parameters,
7: All rates are programmed in accordance with the given parameters.

For such programming of the VAT rates, the programmers shall use the demand for setting back the cash register information sequence with parameter 23. In such case, in the response the information about all VAT rates is always sent back (7).

Confirmation:

Takes values:
0 – programming rates with confirmation on fiscal printer,
1 – programming rates without confirmation fiscal printer

Cash register number

Inscription including cash register number,

Cashier

Inscription including cashier's name,

VAT A ... VAT G*:* values of VAT rates:

- xx.yy - number from the range 0,00..99,99 excluding 98.99 and 99.99 (attributing a value means that the rate is active),
- 98.99 – signification of a free rate {only for rate quantity parameter = 7}.
- 99.99 – signification of a non-active rate { only for rate quantity parameter = 7}.

Errors' codes:

1: not initiated printer's clock,
2: control byte error,
5: printer's RTC clock operation error
6: operation with fiscal memory error
7: date error (the one currently set is earlier than the date of last record),
8: executing impossible – totalizers not reset,
11: wrong quantity of VAT values, error of number or a trial to re-define the same rates as the ones recorded in printer's fiscal memory.

Remarks:

1. In the non-fiscal mode, the sequence causes a record of the VAT rates to the printer's RAM memory,
2. In a newly manufactured facility all rates are inactive,
3. When all rates are inactive:
   - the printer interprets only the sequences: setting the clock, change in VAT rates, printing periodical report, demand for sending back the time set in the printer, demand for sending back cash register information, demand for sending back error code of the last command, sequence sending back the type and version of the software. For other sequences, the device reports error No 18.
   - Trial of fiscalisation (programming the header) causes projecting the proper message.
4. In case of error of realization (error in record to the fiscal memory), further performance of the printer will be suspended, i.e. the printer allows only to conduct periodical reports (it shifts to the condition only for readout),
5. This operation (like all, conducting stable record to the fiscal memory) requires confirmation from the keyboard after prior checking and approval the correctness of the date of printer's clock,
6. Sale in the „non-active" rate is blocked (compare the sequence receipt line). In the daily report only amounts of sale in „active" rates are included.

3.14.3. Automatic PTU rates change.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	1	;		Constant value
3	Year	0..99	;	0..2	Two last digits of year
4	Month	1..12	;	0..2	
5	Day	1..31	;	0..2	
6	Hour	0..23	;	0..2	
7	Minute	0..59	;	0..2	
8	Second	0..59	;	0..2	
9	Confirmation mode	0..1		1	0 – with confirmation from keyboard 1 – without confirmation
10	Command	**$P**		2	
11	VAT A	Number	/	1..5	
12	VAT B	Number	/	1..5	
13	VAT C	Number	/	1..5	
14	VAT D	Number	/	1..5	
15	VAT E	Number	/	1..5	
16	VAT F	Number	/	1..5	
17	Control byte	00..FF		2	
18		<ESC>\		2	

Where:
VAT A ... VAT G*:* values of VAT rates:

- xx.yy - number from the range 0,00..99,99 excluding 98.99 and 99.99 (attributing a value means that the rate is active),
- 98.99 – signification of a free rate {only for rate quantity parameter = 7}.
- 99.99 – signification of a non-active rate { only for rate quantity parameter = 7}.

Errors' codes:

1: not initiated printer's clock,
2: control byte error,
5: printer's RTC clock operation error
6: operation with fiscal memory error
7: date error (the one currently set is earlier than the date of last record),
8: executing impossible – totalizers not reset,
11: wrong quantity of VAT values, error of number or a trial to re-define the same rates as the ones recorded in printer's fiscal memory.

Remarks:

7. In the non-fiscal mode, the sequence causes a record of the VAT rates to the printer's RAM memory,
8. In a newly manufactured facility all rates are inactive,
9. When all rates are inactive:
   - the printer interprets only the sequences: setting the clock, change in VAT rates, printing periodical report, demand for sending back the time set in the printer, demand for sending back cash register information, demand for sending back error code of the last command, sequence sending back the type and version of the software. For other sequences, the device reports error No 18.
   - Trial of fiscalization (programming the header) causes projecting the proper message.
10. In case of error of realization (error in record to the fiscal memory), further performance of the printer will be suspended, i.e. the printer allows only to conduct periodical reports (it shifts to the condition only for readout),
11. This operation (like all, conducting stable record to the fiscal memory) requires confirmation from the keyboard after prior checking and approval the correctness of the date of printer's clock.
12. Sale in the „non-active" rate is blocked (compare the sequence receipt line). In the daily report only amounts of sale in „active" rates are included.

3.14.4. Fiscalisation/approval.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Mode	Number	;	1	
3	ECR category	Number	;	1	
4	The way of using ECR	Number	;	1	
5	Type of ECR ownership	Number	;	1	
6	Type of receipts numbering	Number		1	
7	Command	**@f**		2	
8	NIP	text	<CR>	13	
9	Code of tax office	Test	<CR>	10	
10	Data of tax office	text	<CR>	0..120	
11	Data of service point	text	<CR>	0..120	
12	Data of service man	text	<CR>	0..40	
13	Identification number of service man	text	<CR>	0..40	
14	Registration number	text	<CR>	0..15	
15	NIP of service point	text	<CR>	0..13	
16	Control byte	00..FF		2	
17			<ESC>\	2	

where:

Error's codes:

1: not initiated RTC clock,
4: parameter error,

3.14.5. Programming the header in devices online type.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Number of header lines	1..8		1	
3	Number of fields in the each of lines	**0..7**	;	1	Number of parameters is the same like described in field 2.

4	Command	**#a**		2	
5	Blocks of the line definition				Number of blocks is the same like described in parameter 2. Block's format is described below.
6	Control byte	00..FF		2	
7		<ESC>\		2	

Definition block of header lines:

No.	Field name	Content	Separator	Size	Remarks
1	Text attributes in line	0..1	/	1	0 – left-aligned 1 – centring 2 – right-aligned
2	Font attributes in line	0..63	/	1..2	Font attributes set on bits: 1 – font enlarged, less characters in line by half (enlargement included in the font style) 2 – font raised 3 – font widen, less characters in line by half 4 – invers
3	Block of definition field				Number of these blocks is the same like described in parameter 3. Format of block is described below.

Block of definition field in definition block of header line.

1	Field indexes, the number depends on parameter n + 1 …	1..7	/	1	0. Field not exist 1. Tax payer name 2. Postal code 3. City 4. Building number 5. Place/flat number 6. Name of postal office 7. Name of street 8. User field – printed only
2	Field text, the number depends on parameter n+1 …	Inscription	<CR>		

WARNING. A field with one index is allowed more than once (in subsequent lines). In this case, the device should store the value of this field as a concatenation of individual fragments separated by spaces (this is important when saved in protected memory). However, the header should be stored in the form as above, so that it can be sent back as a response to the request for its content.

3.14.6. Header readout in online devices.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
4	Command	**^h**		2	
6	Control byte	00..FF		2	
7		<ESC>\		2	

Response:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Number of header lines	1..8	;	1	
3	Fields number	0..7	;	1	Number of these parameters is as

	in each line				specified in field no. 2
4	Command	**#a**		2	
5	Block of line definition				Number of these blocks is as specified in parameter ”Number of header lines”. Block format described below.
6	Control byte	00..FF		2	
7		<ESC>\		2	

Definition block of header line.

1	Text attributes in line	0..1	/	1	0 – left-aligned 1 – centring 2 – right-aligned
2	Font attributes in line	0..63	/	1..2	Font attributes set on bits: 1 – enlarged font, number of characters in line reduced by half (enlargement included in font) 2 – raised font 3 – widen font, number of characters in line reduced by half 4 – invers
3	Field definition block				Number of these blocks is as specified in parameter 3. Block format described below.

Field definition block in definition block of header line.

1	Field indexes, quantity depending on parameter n + 1 …	1..7	/	1	0. Field not exist 1. Tax payer name 2. Postal code 3. City 4. Building number 5. Apartment number 6. Post office name 7. Street name 8. User field – printed only
2	Field texts, quantity depending on parameter n+1 …	Inscription	<CR>		

3.14.7. Programming header in online devices (version 10 lines).

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Number of header lines	1..10	;	1	
3	Number of fields in each line	0..9	;	1	Number of these parameters is the same like described in field No.2
4	Command	**!a**		2	
5	Blocks of line definition				Number of these parameters is the same like described in field No.2 Block format described below.
6	Control byte	00..FF		2	
7		<ESC>\		2	

Definition block of header line.

No.	Field name	Content	Separator	Size	Remarks
1	Text attributes in line	0..1	/	1	0 – left-aligned 1 – centring 2 – right-aligned
2	Font attributes in line	0..63	/	1..2	Font attributes set on bits: 1 – font enlarged, less characters in line by half (enlargement included in the font style) 2 – font raised 3 – font widen, less characters in line by half 4 – invers 5 – font raised 4 x 6 – font widen 4 x
3	Field indexes	1..8	/	1	0. Field not exist 1. Tax payer name 2. Postal code 3. City 4. Building number 5. Apartment number 6. Post office name 7. Street name 8. User field – printed only Number of these parameters is equal to the number of fields in line
4	Field texts	Inscription	<CR>		Number of these parameters is equal to the number of fields in line

WARNING. A field with one index is allowed more than once (in subsequent lines). In this case, the device should store the value of this field as a concatenation of individual fragments separated by spaces (this is important when saved in protected memory). However, the header should be stored in the form as above, so that it can be sent back as a response to the request for its content.

3.14.8. Certificate's programming

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
3	Command	**@CERT**		5	
4	Kind of certificate	Number	/		1 – cacert.pem 2 – client3_cert.pem 3 – client3_key.pem 5 – eReceipt certificate 1 (format DER
5	Total data size	Number	/		Total data size in binary format
6	Data offset	Number	/		Data offset in format hex
7	Data	Text	<CR>		Data in format hex
8	Control byte	00..FF		2	
9		<ESC>\		2	

3.14.9. Sha256 certificate readout

No.	Field name	Content		Separator	Size	Remarks
1		<ESC>P			2	
3	Command	**?CERT**			5	
4	Kind of certificate	Number		/		1 – cacert.pem 2 – client3_cert.pem 3 – client3_key.pem
9	Control byte	00..FF			2	
10		<ESC>\			2	

Response:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
3	Command	**?CERT**		5	
4	Certificate's Sha256 in hex	Text	<CR>	64	
9	Control byte	00..FF		2	
10		<ESC>\		2	

3.14.10. Controlling the display/drawer.

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Action	1..5, 8..9, 255		1	
3	Command	**$d**		2	
4	Text	Inscription			Must not include <ESC>...
5		<ESC>\		2	

Where:

Action
1: opening the drawer
2: sending the inscription to the display
3: switching the display into clock and data display mode
4: switching the display back into cash register mode
5: ignored
8: ignored
9: ignored
255: switching on sleep mode (NOVITUS HDe – PC, PC2)

Text
Inscription sent to the display

Errors' codes:

4: parameter error,
9: error of enter/ exit operation

Remarks:

1. Sequence does not possess control byte – characters are sent to the display without buffering (directly after being read out by the printer).
2. The following controlling codes are allowed: CR, LF, BS and FF ($0C) causing cleaning the display and moving the vector to the upper left corner. Display of the vector and automatic moving to a new line are blocked.
3. During issuing the receipt, the display is automatically serviced by the printer's program. Names of the subsequent goods appear in the first line, while in the second – the growing sum of charge. Thus, nothing shall be sent to the display in this mode.

3.14.11. Controlling the display in mode out off receipt.

No.	Field name	Content	Separator	Size	Remarks
1		**<ESC>P**		**2**	
2	Operation	0		1	0 – displaying text on customer display 1 – display switch off
4	Command	**!d**		2	
5	Text to display	Text			Text to show on display. May be used <CR> as character of transition to the new line

26	Control byte	00..FF		2	
27		<ESC>\		2	

3.14.12. Controlling the display with QR code supporting.

No. .	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	2	;	1	
3	Clock on the display	0..1			0-
4	Switched on				
5	Command	!d		3	
6	Line 1	text	<CR>	70	
7	Line 2	text	<CR>	70	
8	Line 3	text	<CR>	70	
9	QR code data	text	<CR>	512	
10	Control byte	00..FF		2	

Line 1..3
The maximum line length is 70 characters, but depending on width of the letters, fewer characters may fit on the screen. In that case, text will be shortened, and at the end, additional characters will be added „…".
QR code data
Depending on number of sent lines, QR code is scaled, and smaller amount of data can be transmitted.

3.14.13. Setting data to be displayed as QR code on the screen.

No..	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Type	0..1		1	Type of displayed QR code: 0 – small QR code gr (111x111), maximum 106 characters, 1 – large QR code qr (171x171), maximum 271 characters
3	Command	**!qr**		3	
4	Text	text	<CR>	271	
5	Control byte	00..FF		2	
6		<ESC>\		2	

3.14.14. Controlling the cutter and paper feeding in open document.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**!p**		2	
3	Cutting	Number	/	1	1 – unchanged value, 0 – no cutting, 1 – complete cutting, 2 – partial cutting
4	Paper feed after printout end	Number	/	1	1 – unchanged value, 0 – no cutting, 1 – paper feed after printout end
5	Control byte	00..FF		2	
6		<ESC>\		2	

Warning:
- order should be sent in open receipt, invoice or non-fiscal printout,
- paper feeding after printout end concerns situation if there is no paper cutting.

Error codes:

1: not initiated RTC clock,
2: control byte error,
4: parameter error,
1031: order not allowed in this mode

3.14.13. Choosing the method of charging the discount.

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Method	0..2		1	0 – bezpośrednia, 1 – pośrednia 2 – odczyt metody liczenia
3	Command	**$r**		2	
4	Control byte	00..FF		2	
5		<ESC>\		2	

Where:

Method

$r_p = W * n_{\%}$ direct

or

$r_p = W * (100\% + n_{\%}) - W$ *indirect*

where:

W - basic value (quantity x price in case of discount, price in case of reduction),

$n_{\%}$ - percentage value of discount / reduction ($n_{\%} < 0 - rabat, n_{\%} > 0 - narzut$) with precision up to 2 decimal places

Errors' codes:

1: not initiated printer's clock,
4: parameter error,

Remarks:

1. The presumable setting is the first method of charging the discount. More information you can find in chapter 7 - Calculations made by the fiscal printer during receipts printing.
2. $n_{\%} < 0$ always in case of reduction.

Received packet:

No.	Field number	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**$R**		2	
3	Method	Number	/	1	0 – direct, 1 – indirect
4	Control byte	00..FF		2	
5		<ESC>\		2	

3.14.14. Programming date of periodical review.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	0		1	
3	Command	**$o**		2	

4	Number of days	Number	/	1..10	
5	Text	Inscription	<CR>	0..30	Optional argument
6	Control byte	00..FF		2	
7		<ESC>\		2	

or

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	1		1	
3	Command	**^t**		2	
4	Year	00..99	/	2	Two last digits of the year
5	Month	01..12	/	2	Number of month in the year
6	Day	01..31	/	2	Number of day in the given month
7	Text	Inscription	<CR>	0..30	Optional argument
8	Control byte	00..FF		2	
9		<ESC>\		2	

Where:

Number of days
Number of days which left to periodical review
Year, Month, Day
Date of periodical review
Text
Telephone number of the service point, exceeding characters are cut. In case of lack of argument – the recent one remains. If the argument is empty then the option is switched off, there is displayed only reminder about calling the service team.

Errors' codes:

1: not initiated printer's clock,
4: parameter error,

3.14.15. Readout of periodical review date.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	11		1	
3	Command	**^t**		2	
4	Control byte	00..FF		2	
5		<ESC>\		2	

Response

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	1		1	
3	Command	**^t**		2	
4	Year	00..99	/	2	Two last digits of the year
5	Month	01..12	/	2	Number of the month in year
6	Day	01..31	/	2	Number of day in given month
7	Text	Inscription	<CR>	0..30	Optionally
8	Control byte	00..FF		2	
9		<ESC>\		2	

Where:

Number of days
Number of days left for periodical review
Year, Month, Day
Date of periodical review
Text
Telephone number of the service point, exceeding characters are cut. In case of lack of argument – the recent one remains. If the argument is empty then the option is switched off, there is displayed only reminder about calling the service team.

Errors codes:

1: not initiated printer's clock,
4: parameter error,

Remarks:

1. It concerns ports PC/PC2

3.14.16. Programming date of service blockade.

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	2		1	
3	Command	**^t**		2	
4	Year	00..99	/	2	Two last digits of the year
5	Month	01..12	/	2	Number of the month in the year
6	Day	01..31	/	2	Number of the day of the given month
7	Password	Inscription	<CR>	0..30	
8	Text	Inscription	<CR>	0..30	
9	Control byte	00..FF		2	
10		<ESC>\		2	

Where:

Year, Month, Day
Date of periodical review
Text
Telephone number of the service point, exceeding characters are cut.

Errors' codes:

1: not initiated printer's clock,
4: parameter error

3.14.17. Readout of service blockade date.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	12		1	
3	Command	**^t**		2	
4	Control byte	00..FF		2	
5		<ESC>\		2	

Response

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	

2	Constant	2		1	
3	Command	**^t**		2	
4	Year	00..99	/	2	Two last digits of the year
5	Month	01..12	/	2	Number of month in the year
6	Day	01..31	/	2	Number of day in the given month
7	Password	Inscription	<CR>	0..30	In view of safety, it is not sent back, empty field is sent back
8	Text	Inscription	<CR>	0..30	
9	Control byte	00..FF		2	
10		<ESC>\		2	

Where:

Year, Month, Day
Date of periodical review
Text
Telephone number of the service point, exceeding characters are cut.

Errors codes:

1: not initiated printer's clock,
4: parameter error

Remarks:

1. It concerns ports PC/PC2

3.14.18. Operating with graphic logo.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Function	Decimal digit	;		This item informs about what operation is about to be done: 0 – register to printer 1 – deleting graphic from printer 10 – read of graphic control sum 11 – read of graphic data
3	ID of advertisement graphic	Decimal digit	;		ID of advertisement graphic, operated in devices with graphic advertisements (BONO). **In case of programming graphic of printout, the parameter value should be 0.**
4	ID of printout graphic	Decimal digit			ID of printout graphic. **In case of programming graphic of advertisement, the parameter doesn't appear.** HDE – possibility of programming up to 128 graphics.
3	Order	**^f**			
4	Centring	Decimal digit	/		Not operated, default = 0
5	Total size of graphic (hexadecimal)	Decimal number	/		Total size of graphic together with dimensions (first 4 bytes (8 hexadecimally)) in hexadecimal form (binary x2)
6	Graphic offset	Decimal number	/		Item of graphic data offset in hexadecimal format (binary x2)
7	Size of graphic part in package	Decimal number	/		Item of graphic data size sent in package in hexadecimal format (binary x2)

8	Graphic data	Text	<CR>	0..128	Data should be sent in hexadecimal format (binary size x 2). First 4 bytes (8 hexadecimally) represents width and height sent graphic. Graphic should be in monochromatic form sent from the first line to the last one. Maximum size of graphic in binary form for graphic with resolution of 396x256 is (12804 [B] (together with 4 bytes of width and height parameters).
9	Control byte	00..FF		2	
10		<ESC>\		2	

Where:

Graphic data

Graphic data more than 128 bytes (binary, so 64 binary) should be sent in many packages with simultaneous asking about ENQ status after sending each package.

Function

Function 10 to read control sum – the device analyses taking parameter: graphic ID and send back data of control sum in field Graphic data.

Function 11 to graphic read - the device takes parameters: graphic ID and graphic offset and it sends back: total size, size in package and graphic data.

Graphic data

Maximum graphic size for the devices can have a different resolution:

HDe	576 x 256px
Delio	396 x 256px
Bono	384 x 256px
Deon	384 x 256px
Sento	384 x 256px

Errors' codes:

1: not initiated printer's clock,
2: control byte error,
4: parameter error,
1075: incorrect format of graphic header (e.g. too big dimensions),
1076: header already programmed, one must delete existing header and then program a new one

3.14.19. Operating with graphic logo, version 2.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Function	Decimal digit	;		This item informs about what operation is about to be done: 0 – register to printer 1 – deleting graphic from printer 10 – read of graphic control sum 11 – read of graphic data
3	Command	**^F**			
4	Centring	Decimal digit	/		Not operated, default = 0
5	Total size of graphic (hexadecimal)	Decimal number	/		Total size of graphic together with dimensions (first 4 bytes (8 hexadecimally)) in hexadecimal form (binary x2)
6	Graphic Offset	Decimal number	/		Item of graphic data offset in hexadecimal format (binary x2)
7	Size of graphic part in package	Decimal number	/		Item of graphic data size sent in package in hexadecimal format (binary

					x2)
8	Graphic data	Text	<CR>	0..128	Data should be sent in hexadecimal format (binary size x 2). First 4 bytes (8 hexadecimally) represents width and height sent graphic. Graphic should be in monochromatic form sent from the first line to the last one. Maximum size of graphic in binary form for graphic with resolution of 396x256 is (12804 [B] (together with 4 bytes of width and height parameters).
9	Graphic ID	Decimal number	/	0..1024	
10	Control byte	00..FF		2	
11		<ESC>\		2	

3.14.20. Indexes list readout of programmed graphics.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**?f**		2	
3	Control byte	00..FF		2	
4		<ESC>\		2	

Response:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**?f**		2	
…	Index	Number	/	1..4	Subsequent indexes of programmed graphics separated with '/'. Maximum 1024 graphics.
3	Control byte	00..FF		2	
4		<ESC>\		2	

Data of daily report record (NOVITUS):

No.	Field name	Contents	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant value	34	;	2	
3	Format for pharmacy printer	0..1		1	0 – format for standard printer 1 – format for pharmacy printer
4	Response code	**#X**		2	
5	Year	0..99	;	1..2	Two last digits of the year
6	Month	1..12	;	1..2	Number of month in the year
7	Day	1..31	;	1..2	Number of day in given month
8	Hour	0..23	;	1..2	
9	Minute	0..59	;	1..2	
10	Second	0..59	;	1..2	
11	Number of receipts	Number	;	1..10	
12	Number of cancelled receipts	Number	;	1..10	
13	Number of changes in	Number	;	1..10	

	goods base				
14	Daily report number	Number	;	1..10	
15	Total gross sale	Number	/	1..11	
16	Total PTU	Number	/	1..11	
17	Number of printouts	Number	;	1..10	
18	Number of resettings	Number	;	1..10	
19	Number of the last receipt	Number	;	1..10	
20	Number of the last printout	Number	;	1..10	
21	Number of evaluations	Number	;	1..10	Appears in format for pharmacy printer
22	Value of cancelled receipts	Number	/	1..11	
23	Fee	Number	/	1..11	Appears in format for pharmacy printer
24	Totalizer A	Number	/	1..11	Gross
25	Totalizer B	Number	/	1..11	Gross
26	Totalizer C	Number	/	1..11	Gross
27	Totalizer D	Number	/	1..11	Gross
28	Totalizer E	Number	/	1..11	Gross
29	Totalizer F	Number	/	1..11	Gross
30	Totalizer G	Number	/	1..11	Gross
31	Total PTU A	Number	/	1..20	Increasingly*
32	Total PTU B	Number	/	1..20	Increasingly*
33	Total PTU C	Number	/	1..20	Increasingly*
34	Total PTU D	Number	/	1..20	Increasingly*
35	Total PTU E	Number	/	1..20	Increasingly*
36	Total PTU F	Number	/	1..20	Increasingly*
37	Total PTU G	Number	/	1..20	Increasingly*
38	Total sum of PTU	Number	/	1..20	Increasingly*
39	Total sum of gross sale	Number	/	1..20	Increasingly*
40	Totalizer AFV	Number	/	1..11	Gross
41	Totalizer BFV	Number	/	1..11	Gross
42	Totalizer CFV	Number	/	1..11	Gross
43	Totalizer DFV	Number	/	1..11	Gross
44	Totalizer EFV	Number	/	1..11	Gross
45	Totalizer FFV	Number	/	1..11	Gross
46	Totalizer GFV	Number	/	1..11	Gross
47	Total sum of PTU AFV	Number	/	1..20	Increasingly*
48	Total sum of PTU BFV	Number	/	1..20	Increasingly*
49	Total sum of PTU CFV	Number	/	1..20	Increasingly*
50	Total sum of PTU DFV	Number	/	1..20	Increasingly*
51	Total sum of PTU EFV	Number	/	1..20	Increasingly*
52	Total sum of PTU FFV	Number	/	1..20	Increasingly*
53	Total sum of PTU GFV	Number	/	1..20	Increasingly*
54	Total sum of PTU FV	Number	/	1..20	Increasingly*
55	Total sum of FV gross sale	Number	/	1..20	Increasingly*
56	Number of invoices	Number	;	1..10	
57	Number of the last invoice	Number	;	1..10	

58	Sum of FV sale	Number	/	1..11	
59	Sum of PTU FV	Number	/	1..11	
60	Sum of PTU A	Number	/	1..11	
61	Sum of PTU B	Number	/	1..11	
62	Rate of PTU C	Number	/	1..11	
63	Rate of PTU D	Number	/	1..11	
64	Rate of PTU E	Number	/	1..11	
65	Rate of PTU F	Number	/	1..11	
66	Rate of PTU G	Number	/	1..11	
67	Currency name	Inscription	<CR>	3	
68	Abbreviation from electronic copy data	Inscription	<CR>	0	Empty field in online devices
69	Control byte	00..FF		2	
70		<ESC>\		2	

* - Increasingly from moment of fiscalisation/approval or currency change.

3.14 Record of RAM memory resetting:

No.	Field name	Contents	Separator	Size	Remarks
1		<ESC>P		2	
2	Response code	**36#X**		4	
3	Year	0..49	;	1..2	
4	Month	1..12	;	1..2	
5	Day	1..31	;	1..2	
6	Hour	0..23	;	1..2	
7	Minute	0..59	;	1..2	
8	Second	0..59	;	1..2	
9	Reason of resetting	Number	;	1..10	
10	Number of resetting	Number	;	1..10	
	Kind of resetting	Hexadecimal number	;	1..10	0x0087 – RAM – fiscal 0x0098 – data base – fiscal 0x66FF – cache memory 0xFFFF – all
	There appeared sale after resetting	Number	;	1	0 – no sale after resetting (-1) – there was sale (resetting with star *)
20	Control byte	00..FF		2	
21		<ESC>\		2	

3.15 Data of daily report's record (NOVITUS):

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant value	37	;	2	
3	Format for pharmacy printer	0..1	;	1	0 – format for standard printer 1 – format for pharmacy printer
4	Pharmacy functions operating	0..1		1	0 – No 1 - Yes
5	Response code	**#X**		2	
6	Year	0..99	;	1..2	Two last digits of year
7	Month	1..12	;	1..2	Number of month in year

8	Day	1..31	;	1..2	Number of day in given month
9	Hour	0..23	;	1..2	
10	Minute	0..59	;	1..2	
11	Second	0..59	;	1..2	
12	Quantity of receipts	Number	;	1..10	
13	Quantity of cancelled receipts	Number	;	1..10	
14	Quantity of changes in goods base	Number	;	1..10	
15	No. of daily report	Number	;	1..10	
16	Gross sale sum	Number	/	1..11	
17	PTU sum	Number	/	1..11	
18	Quantity of printouts	Number	;	1..10	
19	Quantity of resettings	Number	;	1..10	
20	No. of the last receipt	Number	;	1..10	
21	No. of the last printout	Number	;	1..10	
23	Value of cancelled receipts	Number	/	1..11	
25	Totalizer A	Number	/	1..11	Gross
26	Totalizer B	Number	/	1..11	Gross
27	Totalizer C	Number	/	1..11	Gross
28	Totalizer D	Number	/	1..11	Gross
29	Totalizer E	Number	/	1..11	Gross
30	Totalizer F	Number	/	1..11	Gross
31	Totalizer G	Number	/	1..11	Gross
32	Total PTU A	Number	/	1..20	Increasingly*
33	Total PTU B	Number	/	1..20	Increasingly*
34	Total PTU C	Number	/	1..20	Increasingly*
35	Total PTU D	Number	/	1..20	Increasingly*
36	Total PTU E	Number	/	1..20	Increasingly*
37	Total PTU F	Number	/	1..20	Increasingly*
38	Total PTU G	Number	/	1..20	Increasingly*
39	Total PTU	Number	/	1..20	Increasingly*
40	Total gross sale	Number	/	1..20	Increasingly*
41	Totalizer AFV	Number	/	1..11	Gross
42	Totalizer BFV	Number	/	1..11	Gross
43	Totalizer CFV	Number	/	1..11	Gross
44	Totalizer DFV	Number	/	1..11	Gross
45	Totalizer EFV	Number	/	1..11	Gross
46	Totalizer FFV	Number	/	1..11	Gross
47	Totalizer GFV	Number	/	1..11	Gross
48	Total PTU AFV	Number	/	1..20	Increasingly*
49	Total PTU BFV	Number	/	1..20	Increasingly*
50	Total PTU CFV	Number	/	1..20	Increasingly*

51	Total PTU DFV	Number	/	1..20	Increasingly*
52	Total PTU EFV	Number	/	1..20	Increasingly*
53	Total PTU FFV	Number	/	1..20	Increasingly*
54	Total PTU GFV	Number	/	1..20	Increasingly*
55	Total PTUFV	Number	/	1..20	Increasingly*
56	Total gross sale FV	Number	/	1..20	Increasingly*
57	Quantity of invoices	Number	;	1..10	
58	No. of the last invoice	Number	;	1..10	
59	FV sale sum	Number	/	1..11	
60	PTU FV sum	Number	/	1..11	
61	PTU A rate	Number	/	1..11	
62	PTU B rate	Number	/	1..11	
63	PTU C rate	Number	/	1..11	
64	PTU D rate	Number	/	1..11	
65	PTU E rate	Number	/	1..11	
66	PTU F rate	Number	/	1..11	
67	PTU G rate	Number	/	1..11	
68	Currency name	Inscription	<CR>	3	
69	Quantity of cancelled evaluations	Number	/	1..10	Appears in format for pharmacy printer
70	Abbreviation from data of electronic copy	Inscription	<CR>	40	Format: „xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx” x – character from range 0..9 or a..f
71	First sale – Year	0..99	;	1..2	Two last digits of year
72	First sale – Month	1..12	;	1..2	Number of month in year
73	First sale – Day	1..31	;	1..2	Number of day in given month
74	First sale – Hour	0..23	;	1..2	
75	First sale – Minute	0..59	;	1..2	
76	First sale – Second	0..59	;	1..2	
77	Last sale – Year	0..99	;	1..2	Two last digits of year
78	Last sale – Month	1..12	;	1..2	Number of month in year
79	Last sale – Day	1..31	;	1..2	Number of day in given month
80	Last sale – Hour	0..23	;	1..2	
81	Last sale – Minute	0..59	;	1..2	
82	Last sale – Second	0..59	;	1..2	
83	Control byte	00..FF		2	
84		<ESC>\		2	

* - Increasingly from the moment of fiscalisation/approval or currency change.

Data of daily report's record (NOVITUS):

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant value	38	;	2	

3	Format	2	;	1	Contains fields dedicated for managing pharmacy options and ticket options
4	Pharmacy functions operating	0..1	;	1	0 – No 1 – yes
5	Ticket functions operating	0..1		1	0 – No 1 – yes
6	Response code	**#X**		2	
7	Year	0..99	**;**	1..2	Two last digits of year
8	Month	1..12	**;**	1..2	Number of month in year
9	Day	1..31	**;**	1..2	Number of day in given month
10	Hour	0..23	**;**	1..2	
11	Minute	0..59	**;**	1..2	
12	Second	0..59	**;**	1..2	
13	Quantity of receipts	Number	**;**	1..10	
14	Quantity of cancelled receipts	Number	**;**	1..10	
15	Quantity of changes in goods base	Number	**;**	1..10	
16	No. of daily report	Number	;	1..10	
17	Gross sale sum	Amount	**/**	1..11	
18	PTU sum	Amount	**/**	1..11	
19	Quantity of printouts	Number	**;**	1..10	
20	Quantity of resettings	Number	**;**	1..10	
21	No. of the last receipt	Number	**;**	1..10	
22	No. of the last printout	Number	**;**	1..10	
23	Quantity of evaluations	Number	;	1..10	Pharmacy options
24	Value of cancelled receipts	Amount	/	1..11	
25	Fee	Amount	/	1..11	Pharmacy options
26	Totalizer A	Amount	/	1..11	Gross
27	Totalizer B	Amount	/	1..11	Gross
28	Totalizer C	Amount	/	1..11	Gross
29	Totalizer D	Amount	/	1..11	Gross
30	Totalizer E	Amount	/	1..11	Gross
31	Totalizer F	Amount	/	1..11	Gross
32	Totalizer G	Amount	/	1..11	Gross
33	Totalizer AFV	Amount	/	1..11	Gross
34	Totalizer BFV	Amount	/	1..11	Gross
35	Totalizer CFV	Amount	/	1..11	Gross
36	Totalizer DFV	Amount	/	1..11	Gross
37	Totalizer EFV	Amount	/	1..11	Gross
38	Totalizer FFV	Amount	/	1..11	Gross
39	Totalizer GFV	Amount	/	1..11	Gross
40	Quantity of invoices	Number	**;**	1..10	
41	No. of the last invoice	Number	**;**	1..10	
42	FV sale sum	Amount	**/**	1..11	
43	PTU FV sum	Amount	**/**	1..11	
44	PTU A rate	Number	/	1..11	
45	PTU B rate	Number	/	1..11	
46	PTU C rate	Number	/	1..11	

47	PTU D rate	Number	/	1..11	
48	PTU E rate	Number	/	1..11	
49	PTU F rate	Number	/	1..11	
50	PTU G rate	Number	/	1..11	
51	Currency name	Inscription	<CR>	3	
52	Quantity of cancelled evaluations	Number	/	1..10	Pharmacy options
53	Abbreviation from data of electronic copy	Inscription	<CR>	40	Format: „xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx” x – character from range 0..9 or a..f
54	First sale – Year	0..99	;	1..2	Two last digits of year
55	First sale – Month	1..12	;	1..2	Number of month in year
56	First sale – Day	1..31	;	1..2	Number of day in given month
57	First sale – Hour	0..23	;	1..2	
58	First sale – Minute	0..59	;	1..2	
59	First sale – Second	0..59	;	1..2	
60	Last sale – Year	0..99	;	1..2	Two last digits of year
61	Last sale – Month	1..12	;	1..2	Number of month in year
62	Last sale – Day	1..31	;	1..2	Number of day in given month
63	Last sale – Hour	0..23	;	1..2	
64	Last sale – Minute	0..59	;	1..2	
65	Last sale – Second	0..59	;	1..2	
66	Totalizer A	Amount	/	1..11	Gross (pharmacy options)
67	Totalizer B	Amount	/	1..11	Gross (pharmacy options)
68	Totalizer C	Amount	/	1..11	Gross (pharmacy options)
69	Totalizer D	Amount	/	1..11	Gross (pharmacy options)
70	Totalizer E	Amount	/	1..11	Gross (pharmacy options)
71	Totalizer F	Amount	/	1..11	Gross (pharmacy options)
72	Totalizer G	Amount	/	1..11	Gross (pharmacy options)
73	Number of cancelled invoices	Number	;	1..10	
74	Value of cancelled invoices	Amount	/	1..11	
75	Number of emergency situations	Number	;	1..10	
76	Number of local programming	Number	;	1..10	
77	Number of ONLINE programming	Number	;	1..10	
78	Control byte	00..FF		2	
79		<ESC>\		2	

Data of daily report’s record (electronic copy, VAT invoice, pharmacy options, ticket options) (NOVITUS):

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant value	39	;	2	
3	Pharmacy functions operating	0..1	;	1	0 – no 1 – yes
4	Ticket functions operating	0..1		1	0 – no 1 – yes
5	Response code	**#X**		2	

6	Year	0..99	;	1..2	Two last digits of year
7	Month	1..12	;	1..2	Number of month in year
8	Day	1..31	;	1..2	Number of day in given month
9	Hour	0..23	;	1..2	
10	Minute	0..59	;	1..2	
11	Second	0..59	;	1..2	
12	Quantity of receipts	Number	;	1..10	
13	Quantity of cancelled receipts	Number	;	1..10	
14	Quantity of changes in PLU base	Number	;	1..10	
15	No. of daily report	Number	;	1..10	
16	Gross sale sum	Number	/	1..11	
17	PTU sum	Number	/	1..11	
18	Quantity of printouts	Number	;	1..10	
19	Quantity of resettings	Number	;	1..10	
20	No. of the last receipt	Number	;	1..10	
21	No. of the last printout	Number	;	1..10	
22	Quantity of evaluations	Number	;	1..10	Pharmacy options
23	Value of cancelled receipts	Number	/	1..11	
24	Fee	Number	/	1..11	Pharmacy options
25	Totalizer A	Number	/	1..11	Gross
26	Totalizer B	Number	/	1..11	Gross
27	Totalizer C	Number	/	1..11	Gross
28	Totalizer D	Number	/	1..11	Gross
29	Totalizer E	Number	/	1..11	Gross
30	Totalizer F	Number	/	1..11	Gross
31	Totalizer G	Number	/	1..11	Gross
32	Total PTU A	Number	/	1..20	Increasingly*
33	Total PTU B	Number	/	1..20	Increasingly*
34	Total PTU C	Number	/	1..20	Increasingly*
35	Total PTU D	Number	/	1..20	Increasingly*
36	Total PTU E	Number	/	1..20	Increasingly*
37	Total PTU F	Number	/	1..20	Increasingly*
38	Total PTU G	Number	/	1..20	Increasingly*
39	Total PTU	Number	/	1..20	Increasingly*
40	Total gross sale	Number	/	1..20	Increasingly*
41	Totalizer AFV	Number	/	1..11	Gross
42	Totalizer BFV	Number	/	1..11	Gross
43	Totalizer CFV	Number	/	1..11	Gross
44	Totalizer DFV	Number	/	1..11	Gross
45	Totalizer EFV	Number	/	1..11	Gross
46	Totalizer FFV	Number	/	1..11	Gross
47	Totalizer GFV	Number	/	1..11	Gross
48	Total PTU AFV	Number	/	1..20	Increasingly*
49	Total PTU BFV	Number	/	1..20	Increasingly*
50	Total PTU CFV	Number	/	1..20	Increasingly*
51	Total PTU DFV	Number	/	1..20	Increasingly*

52	Total PTU EFV	Number	/	1..20	Increasingly*
53	Total PTU FFV	Number	/	1..20	Increasingly*
54	Total PTU GFV	Number	/	1..20	Increasingly*
55	Total PTUFV	Number	/	1..20	Increasingly*
56	Total gross sale FV	Number	/	1..20	Increasingly*
57	Number of invoices	Number	;	1..10	
58	Number of last invoice	Number	;	1..10	
59	Total sale FV	Number	/	1..11	
60	Total PTU FV	Number	/	1..11	
61	Total PTU A	Number	/	1..11	
62	Total PTU B	Number	/	1..11	
63	Total PTU C	Number	/	1..11	
64	Total PTU D	Number	/	1..11	
65	Total PTU E	Number	/	1..11	
66	Total PTU F	Number	/	1..11	
67	Total PTU G	Number	/	1..11	
68	Currency name	Inscription	<CR>	3	
69	Number of cancelled valuations	Number	;	1..10	Pharmacy options
70	Abbreviation from data on electronic copy	Inscription	<CR>	40	Format: „xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx” x –character from range 0..9 or a..f
71	First sale - year	0..99	;	1..2	Two last digits of year
72	First sale – Month	1..12	;	1..2	Number of month in year
73	First sale - Day	1..31	;	1..2	Number of day in given month
74	First sale – hour	0..23	;	1..2	
75	First sale – Minute	0..59	;	1..2	
76	First sale – Second	0..59	;	1..2	
77	Last sale – year	0..99	;	1..2	Two last digits of year
78	Last sale – Month	1..12	;	1..2	Number of month in year
79	Last sale – Day	1..31	;	1..2	Number of day in given month
80	Last sale – hour	0..23	;	1..2	
81	Last sale – Minute	0..59	;	1..2	
82	Last sale – Second	0..59	;	1..2	
83	Number of normal tickets	Number	/	1..11	Ticketing options
84	Number of reduction tickets with additional payments	Number	/	1..11	Ticketing options
85	Number of reduction tickets without additional payments	Number	/	1..11	Ticketing options
86	Number of foreign tickets	Number	/	1..11	Ticketing options
87	Sales no subject to PTU	Number	/	1.11	Ticketing options
88	Control byte	00..FF		2	
89	Frame	<ESC>\		2	

3.15. Receipts' printing orders.

3.15.1. Beginning of transaction.

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Quantity of positions	0..255		1..3	
3	Command	**$h**		2	
4	Control byte	00..FF		2	
5		<ESC>\		2	

or

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Quantity of positions	0..255	**;**	1..3	
3	Quantity of lines	0..3		1	
4	Command	**$h**		2	
5	Line No 1	Inscription	<CR>	0..	Quantity of these parameters is the same it was fixed in field No 3 (Quantity of lines). Compare printer configuration.
6	Line No 2	Inscription	<CR>	0..	
7	Line No 3	Inscription	<CR>	0..	
8	Control byte	00..FF		2	
9		<ESC>\		2	

or

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Quantity of positions	0..255	**;**	1..3	
3	Quantity of lines	0..3	;	1	
4	Constant	0	;	1	
5	Type of buyer identification number	0..2		1	1 – NIP 2 – REGON 3 – PESEL
6	„PL"symbol before NIP number	0..1		1	A printout of "PL" symbol before the Seller's NIP number 0 – no symbol's printout, 1 – symbol's printout
7	Command	**$h**		2	
8	Line no. 1	Inscription	<CR>	0..	Quantity of these parameters is the same like described in field no. 3 (number of lines).
9	Line no. 2	Inscription	<CR>	0..	
10	Line no. 3	Inscription	<CR>	0..	
11	Buyer identification number	Inscription	<CR>	0..13	
12	Control byte	00..FF		2	
13		<ESC>\		2	

Where:

Quantity of positions
Quantity of sale positions = 0..255, if 0 than the ON-LINE receipts (the received lines are printed currently).

Quantity of lines
Quantity of additional lines localized at foot note of the receipt, after the fiscal logo to which the application possesses the access,
Line No 1...Line No 3
Content of additional lines,

Errors' codes:

1: not initiated printer's clock,
2: control byte error,
4: parameter error (wrong number of positions),
5: printer's RTC clock readout error,
6: error of operation on fiscal memory,
40: lack of the header in RAM (only in fiscal mode),
94: blockage of sale because of putting service switch

Remarks:

1. Collecting this sequence by the printer, unlike in cases of previous facilities, does not lead to printing the header. Only the PAR and CMD bits are fixed (providing the command was correctly realized).
2. Vivo Apteka printer possesses a limit of lines up to 80. If a necessity of printing a receipt arises, one should use the **„On-Line"** mode.
3. Older printers do not posses „Off-Line" receipt buffer.
4. Quarto printers can print the same quantity of receipt lines in „Off-Line" and „On-Line" modes.
5. The provided discounts are counted as receipt lines.
6. If in the time of 30 minutes since the receive of the described sequence the printer does not receive any other sequence than the software reset the PAR bit (cancelling the transaction mode without printing the information).
7. The printer prints additional lines depending on configuration fixes in Administration Mode (see Configuration of printers' work – Administration mode.)

3.15.2. Receipt line.

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Line number	0..255		1..3	If 0 than STORNO (reversal)
3	Command	**$l**		2	
4	Name	Inscription	<CR>	1..60	Name*
5	Quantity	Inscription	<CR>	1..16	
6	VAT	Character	/	1	
7	Price	Number	/	1..11	
8	Gross	Number	/	1..11	
9	Control byte	00..FF		2	
10		<ESC>\		2	

or

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Line number	0..255	**;**	1..3	If 0 than STORNO
3	Kind of discount	0..4		1	
4	Command	**$l**		2	
5	Name	Inscription	<CR>	1..60	Name*
6	Quantity	Inscription	<CR>	1..16	
7	VAT	Character	/	1	
8	Price	Number	/	1..11	
9	Gross	Number	/	1..11	

10	Discount	Number	/	1..11	
11	Control byte	00..FF		2	
12		<ESC>\		2	

or (position of receipt with goods description) (goods description isn't printed on invoice)

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Line number	0..255	**;**	1..3	
3	Kind of discount	0..4	;	1	
4	Discount description	0..16	;	1..2	
5	Goods description	0..1	;	1	
6	Command	**$I**		2	
7	Name	Inscription	<CR>	1..60	Name*
8	Quantity	Inscription	<CR>	1..16	
9	VAT	Character	/	1	
10	Price	Number	/	1..11	
11	Gross	Number	/	1..11	
12	Discount	Number	/	1..11	Appears when parameter „Kind of discount" is different than 0.
13	Discount name	Inscription	<CR>	0..40	Appears when parameter „Kind of discount" is different than 0.
14	Goods description	Inscription	<CR>	0..160	
15	Control byte	00..FF		2	
16		<ESC>\		2	

or

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Line number	0..255	**;**	1..3	If 0 than STORNO
3	Kind of discount	0..4	;	1	
4	Discount description	0..16		1..2	
5	Command	**$I**		2	
6	Name	Inscription	<CR>	1..60	Name*
7	Quantity	Inscription	<CR>	1..16	
8	VAT	Character	/	1	
9	Price	Number	/	1..11	
10	Gross	Number	/	1..11	
11	Discount	Number	/	1..11	
12	Name of discount	Inscription	<CR>	0..40	
13	Control byte	00..FF		2	
14		<ESC>\		2	

or (position of receipt with PLU code)

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Line number	0..255	**;**	1..3	If 0 than STORNO

3	Kind of discount	0..4	;	1	
4	Discount description	0..16		1..2	
5	Command	^1		2	
6	Name	Inscription	<CR>	1..60	Name*
7	PLU code	Inscription	<CR>	1..31	Remarks below
8	Quantity	Inscription	<CR>	1..16	
9	PTU	Character	/	1	
10	Price	Number	/	1..11	
11	Gross	Number	/	1..11	
12	Discount	Number	/	1..11	
13	Discount name	Inscription	<CR>	0..40	
14	Control byte	00..FF		2	
15		<ESC>\		2	

Where:

Line number
0 or 1...255 , if = 0 than STORNO operation,

Kind of discount
0: none,
1: amount discount,
2: percentage discount,
3: amount overhead,
4: percentage overhead,

Discount description
0: no description,
1: „special”,
2: „occasional”,
3: „opportunity”,
4: „holiday”
5: „permanent customer”,
6: „anniversary”,
7: „birthday”,
8: „for the employee”,
9: „promotion”,
10: „gift”,
11: „sell-out”,
12: „re-pricing”,
13: „seasonable”,
14: „night”,
15: „service”,
16: defined by the user (sent in field “Discount name”)

Name*
Name of commodity. Printer’s software:
- Changes coming letters into capital ones for stock base control (small and capital letters are not distinguished),

prints small and capital letters together with prohibited characters,

Maximum length of commodity name depending on fiscal printer model:
Bono Online 1.10: 40 characters
Bono Online 210: 60 characters
Deon Online 1.40: 40 characters
Deon Online 220: 60 characters
HD Online 1.60: 60 characters
HD Online 210: 60 characters
HD ONLINE 320: 60 characters
HD II ONLINE 1.40: 60 characters
HD II ONLINE 2.20: 60 characters

PLU code
PLU code of goods can consists of numerical signs and/or 3 text signs. PLU code can be printed on receipt as:

- text, in that field should appear pure text with code (e.g. ”1234567890123”)
- barcode if text is preceded with character **„#”** (e.g. „#1234567890123”)
- qrcode, if text is preceded with character **„@”** (e.g. „@1234567890123”)

Quantity

meets the same requirements as **Price** but in the “quantity” range all other characters, not only digits, are allowed. The printer distinguishes from this inscription a sequence, being a maximally 10-digits-lon number with optionally fixed ten and prints only the number determining the quantity.

PTU

Character code of PTU rate = ‘A’...’F’ + ‘Z’ or ’G’ . The printer uses symbols of rates from A to G while each of these rates may be free. Using the Z or ‘ ‘ (space) character for signing free commodities is allowed if one free rate was defined in the printer. If more than one free rate was defined the printer will report error No 18,

Price

Gross **price** per unit, given with 1 grosz (cents) accuracy; the format includes up to 10 digits with a precision up to two digits after the point. This format is controlled and printed with a compression of non-meaning zeros before the point, while after the point the compression of non-meaning zeros is not conducted,

Gross

Gross amount of sale, up to 10 digits, > 0,

Discount

amount or percent of discount /overhead. The following limitations are binding:

- the percent has to be from the range 0,01...99.99 %,
- in case of amount discount, allowing the discount may not lead to negative result. Not meeting the above limitations leads to error #20,

Name of discount

If the parameter Discount description is 16, this text is printed on the receipt as the name of the discount.

Goods description

It appears if „goods description” parameter = 1. Goods description can occupy max. 3 lines of text reduced with length of descriptor „description”. Amount of printed text depends on printer’s type (quantity of characters in the line).

Errors’ codes:

1: not initiated printer’s clock,
2: control byte error,
4: wrong number of line (parameter error PI),
16: wrong name (empty or too long),
17: wrong signing of quantity (empty or too long),
18: error caused by:
- wrong signing of VAT rate (or lack of such one),
- wrong signing of free rate (‘ ‘ or ‘Z’) in case if in the printer there are > 1 free rates or the free rate was not defined,
- trial to sell in inactive rate,
- performance of the mechanism of control of stock base,

19: error in Price value (syntax, range or none),
20: 1. error of gross value or discount (syntax, range or none),
2. error of not meeting the condition: quantity x price = value – the printer checks the correctness of the sent information in accordance with the algorithm:
- it multiplies the price and the number ‘caught’ from the quantity,
- it rounds off the result of multiplying up to two digits after the point,
- compares the result of rounding off with the value (gross),
- in case of amount discount, providing the discount must not lead to negative result (not meeting the above leads to error #20),

21: sequence received by the printer at transaction mode set off,
22: error of STORNO operation (e.g. trial to performance in ‘block’ OFF-LINE mode or if as the result of its performance the sum in the given tax group becomes negative) or an error of the operation on the discount, e.g. the value of the commodity, after providing the discount, becomes negative,
90: operation only on securities, it is not possible to send commodities by the described sequence
91: the form of payment was sent, it is not possible to send commodities by the described sequence,

Remarks:

1. Lines’ numeration has to be continuous, also if the STORNO operation is performed, the sequence of numbers 1,2,3,4 is correct, but there has to be: 1,2,0,4 if the STORNO operation is performed.
2. If the receipt is printed in ‘block’ mode (see the parameter Quantity of positions in the sequence beginning of transaction is (0) than the previously declared lines’ number has to be received.

3. Providing a discount for a position bases on subtracting the discount amount against the Gross amount which is sent directly or derives from a fixed percentage rate.
4. The STORNO operation has to be controlled by an application, so that the price and quantity of commodities moved from the list correspond with each other. Moreover, an optional discount should be provided during storning.
5. The „time-out" concept was introduced for the receipt, meaning that in case of not finishing the printing of the receipt in 30 minutes since the moment of its starting, the printer cancels the transaction, at the end inscription the message:

RECEIPT CANCELLED

3.16. Blocking goods during sale.

For different devices there are used different methods of goods blocking:

1) For HDe printer

Printer allows to make up to 32 tax rate changes on each article. After exceeding this limit the printer blocks the possibility of tax rate change reporting tax error. However, sale of that article with previous tax rate will still be possible.

- Goods control is conducted as for the name and tax rate;

- Name control is conducted in the way that all letters in article name are changed for capital letters, all signs apart from alphanumerical ones and comma, dot and slashes are deleted from the name. Such converted name is verified. Example: BEER, beer, Beer%, bEEr etc. is still the same name. However, if to the name will be added one letter or digit , then it would be treated as another article;

- Tax rate control is conducted as for the rate value, not for the letter which distinguishes the particular tax rate.

2) For the rest of printers

Fiscal printer, as opposed to cash register, controls selling goods and assigned to them tax rates. It is controlled during sale if there wasn't done a tax step on particular article.

Rule of the tax step acting:

After decreasing a tax step on particular article you cannot increase it again.

Example: if article (eg. Beer) was sold once with tax rate (eg. 7%) you can change it for 22% and still sell, you can also decrease tax rate to 0% and still sell. However, if you decrease to 0% and then you try sell this product with rate 7% or 22% , then the printer would block selling this article and reports an error.

You can decrease tax rates many times, increase them also, as well as decrease after increasing but you must remember - YOU CANNOT INCREASE TAX RATE IF YOU HAD DECREASED IT EARLIER.

- Goods control is conducted as for the name and tax rate.

- Name control is conducted in his way that all letters in article name are changed for capital letters, all signs apart from alphanumerical ones and comma, dot and slashes are deleted from the name. Such converted name is verified. Example: BEER, beer, Beer%, bEEr etc. is still the same name. However, if to the name will be added one letter or digit , then it would be treated as another article.

- Tax rate control is conducted as for the rate value, not for the letter which distinguishes the particular tax rate.

So, if you sell two articles with identical name but with different tax rates, the fiscal printer after selling article with higher rate and then with lower rate would block possibility of selling article with higher rate.

3.16.1. Operating deposit in the receipt line.

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Kind of deposit (container)	6, 7, 10, 11		1..2	
3	Command	$I		2	

4	Number	Inscription	<CR>	0..4	Optional argument
5	Quantity	Inscription	<CR>	1..16	Optional argument
6	Constant	P	/	1	
7	Price	Number	/	1..11	
8	Value	Number	/	1..11	Argument ignored
9	Control byte	00..FF		2	
10		<ESC>\		2	

Where:

Kind of deposit
6: taken deposit
7: storno (reversal) of received deposit
10: deposit given
11: storno (reversal) of given deposit

Number
Number of the package from the range 0..9999. It is an optional argument. If it appears the printer prints the inscription „Returnable package No …..", while if there is no than only „Returnable package"

Quantity
It is an optional argument. If it appears the numeric part will be separated from it and printed as quantity.

Price
price of the package,

Value
Ignored argument – it has to be sent only in order to keep the format of command $l,

Errors' codes:

1: not initiated printer's clock,
2: control byte error,
18: constant value error (other than P)

3.16.2. Taken deposit (for selling the package).

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	6$d		3	
3	Amount	Number	/	1..11	
4	Package No	1..127	<CR>	0..3	Optional parameters
5	Quantity	Inscription	<CR>	0..16	
6	Control byte	00..FF		2	
7		<ESC>\		2	

Where:

Amount
deposit amount (for taken packages),

Package No
package number. In the current version a number from the range 1..127:
- the printer always prints the text „Returnable package No",
- if the „Package No" parameter was not provided, the following number is printed, increased after each approval of the sequence,

Quantity
the quantity of the package. The printer separates from the sent sequence the numeric value, which is then printed,
- if it appears than the information about quantity and price per package (calculated as price = Amount / quantity) are provided on the receipt,
- if it does not appear the printer assumes that quantity = 1 and price = Amount.

Errors' codes:

2: control byte error,
4: parameter error,
9: I/O operation error,
17: wrong quantity signification (too long) or exceeded number of packages (max 32) or range exceeded for Package No = 1.. 127,
19: error in amount value (syntax, range or none),
21: sequence received by the printer at transaction mode set off.

3.16.3. Storno (reversal) of taken deposit.

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**7$d**		3	
3	Amount	Number	/	1..11	
4	Package No	1..999	<CR>	0..4	Optional parameters
5	Quantity	Inscription	<CR>	0..16	
6	Control byte	00..FF		2	
7		<ESC>\		2	

Where:

Amount
deposit amount (for taken packages),
Package No
package number. In the current version a number from the range 1..127:
- the printer always prints the text „Returnable package No”,
- if the „Package No” parameter was not provided, the following number is printed, increased after each approval of the sequence,

Quantity
the quantity of the package. The printer separates from the sent sequence the numeric value, which is then printed,
- if it appears than the information about quantity and price per package (calculated as price = Amount / quantity) are provided on the receipt,
- if it does not appear the printer assumes that quantity = 1 and price = Amount.

Errors' codes:

2: control byte error,
4: parameter error,
9: I/O operation error,
17: wrong quantity signification (too long) or exceeded number of packages (max 32) or range exceeded for Package No = 1.. 127,
19: error in amount value (syntax, range or none),
21: sequence received by the printer at transaction mode set off

3.16.4. Given deposit (for return of the package).

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**10$d**		4	
3	Amount	Number	/	1..11	Only positive values
4	Package No	1.. 127	<CR>	0..4	Optional parameters
5	Quantity	Inscription	<CR>	0..16	
6	Control byte	00..FF		2	
7		<ESC>\		2	

Where:

Amount

deposit amount (for taken packages) – only positive values

Package No

package number. In the current version a number from the range 1..127:

- the printer always prints the text „Returnable package No”,
- if the „Package No” parameter was not provided, the following number is printed, increased after each approval of the sequence,

Quantity

the quantity of the package. The printer separates from the sent sequence the numeric value, which is then printed,

- if it appears than the information about quantity and price per package (calculated as price = Amount / quantity) are provided on the receipt,
- if it does not appear the printer assumes that quantity = 1 and price = Amount.

Errors' codes:

2: control byte error,
4: parameter error,
9: I/O operation error,
17: wrong quantity signification (too long) or exceeded number of packages (max 32) or range exceeded for Package No = 1.. 127,
19: error in amount value (syntax, range or none),
21: sequence received by the printer at transaction mode set off

3.16.5. Storno (reversal) of given deposit.

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**11$d**		4	
3	Amount	Number	/	1..11	
4	Package No	1.. 127	<CR>	0..4	Optional parameters
5	Quantity	Inscription	<CR>	0..16	
6	Control byte	00..FF		2	
7		<ESC>\		2	

Where:

Amount

deposit amount (for taken packages),

Package No

package number. In the current version a number from the range 1..32:

- the printer always prints the text „Returnable package No”,
- if the „Package No” parameter was not provided, the following number is printed, increased after each approval of the sequence,

Quantity

the quantity of the package. The printer separates from the sent sequence the numeric value, which is then printed,

- if it appears than the information about quantity and price per package (calculated as price = Amount / quantity) are provided on the receipt,

if it does not appear the printer assumes that quantity = 1 and price = Amount.

Errors' codes:

2: control byte error,
4: parameter error,
9: I/O operation error,
17: wrong quantity signification (too long) or exceeded number of packages (max 32) or range exceeded for Package No = 1.. 127,
19: error in amount value (syntax, range or none),
21: sequence received by the printer at transaction mode set off

3.16.6. Cancelling transaction.

No	Field name	Content	Separator	Size	Remarks

1		<ESC>P		2	
2	Constant value	0		1	
3	Command	**$e**		2	
4	Cash register number	Inscription	<CR>	0..8	Optional parameters – replacing those introduced during cashiers log-in.
5	Cashier	Inscription	<CR>	0..32	
6	Control byte	00..FF		2	
7		<ESC>\		2	

Where:

Cash register number
Inscription including cash register number,
Cashier
Inscription including cashier's name,

Remarks:

If the sequence prior to the described sequence was the beginning of transaction than the only effect is reset of the PAR bit.

3.16.7. Standard transaction approval.

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Action	0..1	;	1	0 – cancelling, 1 – approving
3	Discount	0..99		0..2	Optional
3	Command	**$e**		2	
4	Cashier name	Inscription	<CR>	0..31	
5	Payment	Number	/	1..11	
6	Total	Number	/	1..11	
7	Control byte	00..FF		2	
8		<ESC>\		2	

or

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Action	0..1	;	1	0 – cancelling, 1 – approving
3	Discount	0..99	;	0..2	Optional
4	Quantity of lines	0..3	;	1	Quantity of additional lines at the foot note
5	Ending	0..2		1	Way of ending the receipt
6	Command	**$e**		2	
7	Cashier's name	Inscription	<CR>	0..31	
8	Line No 1	Inscription	<CR>	0..	Quantity of these parameters is as it was fixed in field No 4 (Quantity of lines). Compare configuration of the printer
9	Line No 2	Inscription	<CR>	0..	
10	Line No 3	Inscription	<CR>	0..	
11	Payment	Number	/	1..11	
12	Total	Number	/	1..11	
13	Control byte	00..FF		2	
14		<ESC>\		2	

or

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Action	0..1	;	1	0 – cancelling, 1 – approving
3	Discount	0..99	;	0..2	Optional
4	Quantity of lines	0..3	;	1	Quantity of additional lines at the foot note
5	Ending	0..2	;	1	Way of ending the receipt
6	Kind of discount	0..2	;	1	
7	Constant value	1		1	
8	Command	**$e**		2	
9	Cashier's name	Inscription	<CR>	0..31	
10	Line No 1	Inscription	<CR>	0..	Quantity of these parameters is as it was fixed in field No 4 (Quantity of lines). Compare configuration of the printer
11	Line No 2	Inscription	<CR>	0..	
12	Line No 3	Inscription	<CR>	0..	
13	Payment	Number	/	1..11	
14	Total	Number	/	1..11	
15	Discount value	Number	/	1..5	
15	Control byte	00..FF		2	
16		<ESC>\		2	

3 variants of „positive" approval of the transaction.

Where:

Action
0: canceling the receipt,
1: positive compliance of the transaction,
Discount
optional percentage discount for the whole transaction. This parameter is ignored when the discount is defined by **Kind of discount** and **Value of discount** fields
Quantity of lines
quantity of additional lines localized at the foot note of the receipt, after the fiscal logo, access to which is possessed by the application,
Ending
Value of the parameter is ignored. They appear in order to keep compatibility with POSNET printers.
Kind of discount
0: none,
1: percentage discount,
2: percentage overhead,
Cashier name
the field is ignored if cashier's log-in took place earlier.
Line No 1...Line No 3
Content of additional lines.
Payment
Amount paid by the customer, when = 0 than inscriptions „payment/ rest" will not be printed,
Total
total charge for the customer, for control of the previous transfers,
Discount value
discount or percentage overhead for the whole transaction, the rate is fixed at the accuracy to 0.01 if the kind of discount parameter ≠ 0,

Errors' codes:

1: not initiated printer's clock,
2: control byte error,
4: parameter error (Action, Discount, Quantity of lines, Ending or Kind of discount),
5: printer's clock operation error,
6: error of operation on fiscal memory,

23: wrong number of records (lines) of receipt,
24: overfilling the buffer of receipt printer,
25: wrong terminal/ cashier code (wrong length or format) or wrong content of additional lines,
26:wrong amount of Payment (syntax; if the difference Payment - Total ≤ 0 than 'cash', 'rest' inscriptions will not be printed),
27: wrong total sum Total or wrong Discount amount,
28: overfilling the totalizer (max 99 999 999,99 for one tax group),
29: demand for (positive) finishing the transaction mode when it has not been set on yet,

Remarks:

1. If the kind of discount parameter ≠ 0 than the value of discount parameter is ignored.
2. The printer prints these lines depending on configuration fixes in Administration Mode (see configuration of the work of the printers – Administration mode).

3.16.8. Approval of transaction with forms of payment (1).

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Ignored	0..5	;	1	
3	Ignored	0..2	;	1	
4	Ignored	0..255	;	1	
5	Kind of discount	0..2	;	1	
6	Payment flag	0..1	;	1	
7	Card flag	0..1	;	1	
8	Cheque flag	0..1	;	1	
9	Voucher flag	0..1	;	1	
10	Receive flag	0..1	;	1	
11	Giving back flag	0..1	;	1	
12	Rest flag	0..1		1	
13	Command	**$x**		2	
14	Cashier name	Inscription	<CR>	0..31	
15	Line No 1	Inscription	<CR>	0..40	
16	Line No 2	Inscription	<CR>	0..40	
17	Line No 3	Inscription	<CR>	0..40	
18	Line No 4	Inscription	<CR>	0..40	
19	Line No 5	Inscription	<CR>	0..40	
21	Name of card	Inscription	<CR>	0..16	
22	Name of cheque	Inscription	<CR>	0..16	
23	Name of voucher	Inscription	<CR>	0..16	
24	Total	Number	/	1..11	
25	Discount	Number	/	1..11	
26	Payment	Number	/	1..11	
27	Card	Number	/	1..11	
28	Cheque	Number	/	1..11	
29	voucher	Number	/	1..11	
30	Receive	Number	/	1..11	
31	Giving back	Number	/	1..11	
32	Rest	Number	/	1..11	
33	Control byte	00..FF		2	
34		<ESC>\		2	

Where:

Ignored
ignored parameter,
Kind of discount
0: none,
1: percentage discount,
2: percentage overhead,
Payment flag
0: payment amount is ignored (payment in cash does not take place),
1: payment in cash takes place,
Card flag
0: card amount is ignored (payment by card does not take place),
1: payment by card takes place,
Cheque flag
0: cheque amount is ignored (payment by cheque does not take place),
1: payment by cheque takes place,
v**oucher flag**
0: voucher amount is ignored (payment by voucher does not take place),
1: payment by voucher takes place,
Receive flag
0: receive amount is ignored (printer calculates proper value),
1: printer receives the sent value,
Giving back flag
0: the amount given back is ignored (printer calculates proper value),
1: printer receives the sent value,
Change flag
0: rest amount is ignored (printer calculates proper value),
1: printer receives the sent value,
Total
total charge for the customer, for control of the proper transfers (this value is controlled by the printer),
Discount
amount or percent discount for the while transaction, amount or rate fixed with an accuracy at up to 0.01 if the kind of discount parameter $\neq 0$,
Payment
amount paid by the customer,
Card, Cheque, Voucher
amounts for proper forms of payment,
Receive
amount of the deposit for return package, increasing the charge amount (i.e. decreasing the sum of forms of payment),
Giving back
The amount of deposit for returned returnable package, decreasing the charge amount (i.e. increasing the sum of forms of payment),
Line No 1...Line No 5
Content of additional lines,
Name of card, Name of cheque, Name of voucher
additional signification of forms of payment
Cashier name
the field is ignored if cashier's log-in took place earlier

Errors' codes:

1: not initiated printer's clock,
2: control byte error,
4: parameter error (Quantity of lines, Ending or Kind of discount),
5: printer's clock operation error,
6: error in operation on fiscal memory,
23: wrong number of records (lines) of receipt,
24: overfilling of printer's buffer,
25: wrong terminal/ cashier's code (wrong length or format) or wrong content of additional lines,
26: error of one of amounts Pay in/Change
27: wrong total sum Total or wrong Discount amount,
28: overfilling of the totalizer,
29: demand for (positive) finishing transaction mode when it was not set on yet,
83: wrong deposit value.

3.16.9. Different forms of payments managing.

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Action	1..2	;	1	
3	Type of payment	0..10		1	
4	Command	**$b**		2	
5	Amount	Number	/	1..11	
6	Name	Inscription	<CR>	0..24	
7	Control byte	00..FF		2	
8		<ESC>\		2	

Where:

Action
1: Amount causes registration of the form of payment, increasing the sum of additional payments in the given type of payments.
2: Amount causes cancellation of the form of payment, decreasing the sum of additional payments in the given type of payments.

Type of payment
0: CASH,
1: CARD,
2: CHEQUE,
3: PURCHASE VOUCHER,
4: OTHER,
5: CREDIT,
6: CUSTOMER'S ACCOUNT,
7: CURRENCY (NOVITUS protocol), VOUCHER ("Novitus accordable" protocol)
8: TRANSFER
9: mobile
10:voucher

Name
name of the form of payment,

Amount
Amount of the form of payment.

Errors' codes:

1: not initiated printer's clock,
2: control byte error,
4: parameter error (Action or Type of payment),
5: printer's RTC clock operation error,
6: error in operation on fiscal memory,
19: error in code value (syntax, range or none),
22: cancellation error (Action = 2) of the form of payment (the declared „cancellation" amount is higher than the so-long-existing amounts sent from Action = 1),
26: the limit of maximal quantity of payment forms of payment was exceeded (16).

3.16.10. Approval of transaction with forms of payment (2).

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Quantity of lines	0..3	;	1	
3	Ending	0..3	;	1	
4	Summary	0..1	;	1	
5	DSP Sign	0..1	;	1	
6	Kind of discount	0..4	;	1	
7	Quantity of received deposits	0..32	;	1..2	

8	Quantity of deposits given back	0..32	;	1..2	
9	System number flag	0..1	;	1	
10	Quantity of payment forms	0..16	;	1	
11	Rest flag	0..1	;	1	
12	Payment flag	0..1	;	1	
13	Type of payment No ...	1..5	;	1	Quantity of these parameters is as it was in field 10 (Quantity of forms of payment).
14	Command	**$y**		2	
15	Cash register number	Inscription	<CR>	0..8	
16	Cashier	Inscription	<CR>	0..32	
17	System number	Inscription (digits)	<CR>	1..60	In case of using QRCode text dedicated for system number of max. length 512B **Warning !** For keeping compatibility with other printers it's recommended not to exceed parameters given in the packet definition.
18	Line No ...	Inscription	<CR>	0..40	Quantity of these parameters is as it was in field 2 (Quantity of lines). Compare configuration of the printer.
19	Name of form of payment No ...	Inscription	<CR>	0..24	Quantity of these parameters is as it was in field 10 (Quantity of forms of payment).
20	Number of taken deposits ...	Inscription	<CR>	1..4	Quantity of these parameters is as it was in field 7 (Quantity of received securities)
21	Quantity of taken deposits ...	Inscription	<CR>	1..16	Quantity of these parameters is as it was in field 7 (Quantity of received securities)
22	Number of deposits given back ...	Inscription	<CR>	1..4	Quantity of these parameters is as it was in field 8 (quantity of deposit given back)
23	Quantity of deposits given back ...	Inscription	<CR>	1..16	Quantity of these parameters is the same as it was fixed in field No 8 (quantity of deposit given back)
24	Total	Number	/	1..11	
25	DSP	Number	/	1..11	
26	Discount	Number	/	1..11	
27	Payment	Number	/	1..11	
28	Amount of form of payment No ...	Number	/	1..11	Quantity of these parameters is as it was in field 10 (Quantity of forms of payment).
29	Change	Number	/	1..11	
30	Amount of taken deposit ..	Number	/	1..11	Quantity of these parameters is as it was in field 7 (Quantity of received securities)
31	Amount of deposit given back ...	Number	/	1..11	Quantity of these parameters is as it was in field 8 (quantity of securities given back)
32	Control byte	00..FF		2	
33		<ESC>\		2	

Where:

Quantity of lines

quantity of additional lines localized at the foot note of the receipt, after the fiscal logo, access to which is possessed by application 0...3, these lines are printed in the nearest daily report; between daily reports, one set of additional lines may be sent which will be printed while all other sets of lines will be ignored,

Ending

Parameter value other than 3 is ignored. When the parameter is 3 than:

- if, during the transaction, receives of the deposit were sent, 1 received deposit shall be sent
  - name and quantity – empty inscriptions (only <CR> separators)
  - the sum of all received securities sent in the transaction shall be sent as the deposit amount
- if, during the transaction, returns of the deposit were sent, 1 returned deposit shall be sent
  - name and quantity – empty inscriptions (only <CR> separators)
  - the sum of returned securities sent in the transaction shall be sent as the deposit amount
- if, during the transaction, forms of payment were sent, the amount of Payment shall be sent
  - as the amount of Payment there shall be sent the sum of all forms of payment sent in transaction
- if the discount/ overhead was sent during the transaction, the discount/ overhead sent in command $y has to correspond with discount/ overhead sent in command $n
- do not send lines 1, 2, 3
- do not send forms of payment

After such modification, command $y shall not be longer than 200 bytes.

Summary

1: if it is only possible in one group, print the shortened summary,

DSP character

1: Negative DSP amount,

The parameter value is ignored. It appears in order to keep compatibility with “NOVITUS accordable” printers.

Kind of discount:

0: none,
1: percentage discount,
2: percentage overhead,
3: amount discount,
4: amount overhead,

Quantity of taken deposits

0: „Taken deposits” block does not exist,
1..n: „Taken deposits” block is printed and includes 1.. n lines + title,

Quantity of returned deposits

0: „Returned deposits” block does not exist,
1..n: „Returned deposits” block is printed and includes 1.. n lines + title,

System number flag

1: A System number sequence appears,
0: A System number sequence does not appear

Quantity of payment forms

0: there are no forms of payment, the block of names forms of payment does not appear,
1..n: the parameters of type of payment appear, determining various kinds of payments, the block of names of forms of payments appears,

Change flag

0: change amount is ignored,
1: change amount is printed,

Payment flag

0: payment amount is ignored (payment of cash does not take place),
1: payment of cash takes place,

Type of payment

1: the amount of payment by a card is printed,
2: the amount of payment by a cheque is printed,
3: the amount of payment by a bond is printed,,
4: the amount of payment in other form is printed,,
5: the amount of payment by a credit is printed,,
6: the amount of payment from customer’s account is printed,
7: the amount of payment by foreign currency is printed (or *voucher in case of “NOVITUS accordable” protocol),
8: the amount of payment by a transfer is printed (or currency in case of “NOVITUS accordable” protocol)

Cash register number

name of the cash register,

Cashier

name of the cashier,

Line

Content of additional lines,

System number

system number of the transaction (digits only),
system number digits preceded by '#' are printed as a bar code (it concerns: Delio printer)
From printer Delio 4.0 in order to print QR code in place of system number, characters string must be preceded by a '@. In this case the field takes up to 120 characters.

Name of the form of payment
additional signification of forms of payment

Number of taken deposit, Number of returned deposit
number of secured package,

Total
total charge from the customer, for the control of the previous transfers – this value is controlled by the printer. Total amount is the sum of all receipt lines, corrected by the amount or value of discount/ overhead (value / discount amount / overhead declared in the ending has no influence on any of the values sent in this sequence and will be calculated by the printer – the similar situation is in the sequence of receipt line).

DSP
Parameter value is ignored. It appears in order to keep compatibility with "NOVITUS accordable" printers.

Discount
Amount or percentage discount for the whole transaction, amount or rate is fixed at an accuracy up to 0.01 if the kind of discount parameter $\neq 0$,

Payment
payment in cash. The Payment field would be equal to DSP in case if the DSP value was positive. In other case, the Payment field shows zero. If there were no forms of payment, the payment field has to be calculated (the required parameter Payment flag = 0); the printer will do it instead of us.

Forms of payment amount
Amounts for proper forms of payment (now in case if the quantity of forms of payment $\neq 0$),

Change
payment in cash. The Change field would be equal to DSP in case if the DSP value was negative, but this field can always be automatically calculated by the printer (Change flag = 0) and its service is not required, unless for controlling reasons.

Taken deposit amount
Amount of the deposit for returnable packages taken by the customer (in case that the quantity of received securities $\neq 0$),

Returned deposit amount
Amount of the deposit for returnable packages returned by the customer (in case that the quantity of returned securities $\neq 0$),,

Errors' codes:

1: not initiated printer's clock,
2: control byte error,
4: parameter error,
5: printer's RTC clock operation error,
6: error of operation on fiscal memory,
23: wrong number of records (lines) of receipt,
24: overfilling of printer's buffer,
25: wrong terminal/ cashier's code (wrong length or format) or wrong content of additional lines,
26: error of one of amounts pay in/change
27: wrong total sum Total or wrong Discount amount,
28: overfilling of the totalizer,
29: demand for (positive) finishing transaction mode when it was not set on yet,

Remarks:

- 1. Received deposits, returned deposits, forms of payment can be used in two forms. In connection with the sequences of turnover of packages, forms of payment sent during realization of transactions, thanks to what values and texts on the display change currently, together with the actual packages or finalization of transactions with the appliance of various forms of payment.
- Received and returned deposits, forms of payment are declared only in receipt ending sequence. Values of deposits and packages sent in the ending „overwrite" the values sent during realization of the transaction (the last ones are ignored then).

3. The following fields:
- lines 1..3,
- names of forms of payment,
- numbers of taken deposits,
- quantity of taken deposits,

- numbers of returned deposits,
- quantity of returned deposits,
- amounts of forms of payments,
- amounts of taken deposits,
- amounts of returned deposits,

do not appear in the sequence at all (their terminators do not appear there either) if the value of byte parameter corresponding with them is zero.
Other fields :

- system number,
- discount,
- payment,
- change,

have to appear, even if the byte parameters corresponding to them is 0. Values included in these fields will be ignored by the printer.

3.16.11. Discount / overhead during transaction.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Kind	0..4		1	
3	Command	**$n**		2	
4	Name	Inscription	<CR>	0..20	
5	Value	Number	/		Percent or quota discount
6	Control byte	00..FF		2	
7		<ESC>\		2	

Where:

Kind
0: no discount / overhead, cancelling the previously provided discount / overhead and all forms of payment,
1: percentage discount
2: percentage overhead
3: amount discount
4: amount overhead

Errors' codes:

1: not initiated printer's clock,
4: parameter error,
21 : transaction mode set off or turnover of securities only,
26 : error in discount value,
82 : discount/ overhead already sent previously.

Remarks:

1. Command should be sent in the transaction before command $b and before command $y.

3.16.12. Discount / overhead for a group of goods in a given VAT rate.

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Number of rate	0..6	;	1	
3	Kind of discount	0..4	;	1	
4	Number of description	0..16 or none		0..2	Optional parameter
5	Command	**$L**		2	
6	Sale	Number	/	1..11	
7	Discount	Number	/	1..11	

8	Description of discount	Inscription	<CR>	0..20	Optional argument
9	Control byte	00..FF		2	
10		<ESC>\		2	

Where:

Number of VAT rate
0: A
1: B
2: C
3: D
4: E
5: F
6: G

Kind of discount
1: percentage discount
2: percentage overhead
3: amount discount
4: amount overhead

Number of description
0: no description
1: „special”
2: „occasional”
3: „opportunity”
4: „holiday”,
5: „permanent customer”,
6: „anniversary”,
7: „birthday”,
8: „for the employee”,
9: „promotion”,
10: „gift”,
11: „sale”,
12: „re-pricing”,
13: „seasonable”,
14: “night”
15: “service”
16: defined by the user

Sale
The value of the sale in a rate defined before discount/ overhead

Discount value
Value of discount/ overhead

Discount description
Name of discount/ overhead

Errors’ codes:

1: not initiated printer’s clock,
4: parameter error,
21 : transaction mode set off or turnover of deposits only,
26 : error in discount value,
82 : discount/ overhead already sent previously.

Remarks:

The sequence leads to printing information about providing a discount/ overhead to the sub-total as well decreasing/ increasing the totalizer in the specified rate. Discount cannot lead to empty totalizers.

3.16.13. Discount / overhead to the sub-total receipt.

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Kind of discount	0..4	;	1	
3	Number of description	0..16 or none		0..2	Optional parameter

4	Command	**$Y**		2	
5	Sub-total	Number	/	1..11	
6	Discount	Number	/	1..11	
7	Description of discount	Inscription	<CR>	0..20	Optional argument
8	Control byte	00..FF		2	
9		<ESC>\		2	

Where:

Kind of discount
0: none
1: percentage discount
2: percentage overhead
3: amount discount
4: amount overhead
Number of description
0. no description
1. „special”
2. „occasional”
3. „opportunity”
4. „holiday”,
5. „permanent customer”,
6. „anniversary”,
7. „birthday”,
8. „for the employee”,
9. „promotion”,
10. „gift”,
11. „sale”,
12. „re-pricing”,
13. „seasonable”,
14. “night”
15. “service”
16. defined by the user

Sub-total
Value of the sale without deposit before discount / overhead
Discount value
Percentage value of discount/ overhead
Discount description
Name of discount/ overhead

Errors’ codes:
1: not initiated printer’s clock,
4: parameter error,
21 : transaction mode set off or turnover of securities only,
26 : error in discount value,
82 : discount/ overhead already sent previously.

Remarks:

The sequence leads to printing information about providing a discount/ overhead to the sub-total as well decreasing/ increasing the totalizer in the specified rate. Discount cannot lead to resetting of totalizers.

3.17. Additional lines on the receipt after the fiscal logo.

This command may be used only when the command approval of the transaction with the forms of payment (2) was applied to finish this program with a parameter End = 3.

3.17.1. Lines of packages’ returns.

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	8		1	
3	Command	**$z**		2	
4	Name of package	0..65535 or none	<CR>	0..5	Optional arguments.
5	Quantity	Inscription or none	<CR>	0..8	
6	Amount	Number	/	1..11	
7	Control byte	00..FF		2	
8		<ESC>\		2	

Where:

Name of packaging
Number of packaging (number from the area 0...65535),
Quantity
inscription including quantity of returned packages. The quantity is subjected to identical limitations with the quantity of commodities sent in the receipt line,

Errors' codes:

1: not initiated printer's clock,
2: control byte error,
4: parameter error
5: printer's RTC clock readout error,
82: prohibited command in transaction with $z,
83: the quantity of the amount for package is wrong.

Remarks:

1. A line is printed: return of a package

   return of a package <Name of a package> amount

2. The command can be repeated many times.
3. The amount has to correspond with the amount of packages sent in the transaction. In case of a trial to exceed the amount an error will be reported and in case of too low amount a line will be printed:

   Returnable package 1x Remained amount Remained amount

4. The command has to be sent after command $y.

3.17.2. Lines of packages' receives.

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	4		1	
3	Command	**$z**		2	
4	Name of package	0..65535 or none	<CR>	0..5	The field can be empty.
5	Quantity	Inscription	<CR>	0..8	
6	Amount	Number	/	1..11	
7	Control byte	00..FF		2	
8		<ESC>\		2	

Where:

Name of packaging
Number of packaging (number from the area 0...65535),
Quantity

inscription including quantity of received packages. The quantity is subjected to identical limitations with the quantity of commodities sent in the receipt line,

Errors' codes:

1: not initiated printer's clock,
2: control byte error,
4: parameter error
5: printer's RTC clock readout error,
82: prohibited command in transaction with $z,
83: the quantity of the amount for package is wrong.

Remarks:

1. A line is printed: receive of a package

   return of a package <Name of a package> Amount
2. The command can be repeated many times.
3. The amount has to correspond with the amount of packages sent in the transaction. In case of a trial to exceed the amount an error will be reported and in case of too low amount a line will be printed:

Returnable package 1x Remained amount Remained amount

4. The command has to be sent after command $y.

3.17.3. Forms of payment settlement.

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	12		2	
3	Command	**$z**		2	
4	Control byte	00..FF		2	
5		<ESC>\		2	

Errors' codes:

1: not initiated printer's clock,
2: control byte error,
4: parameter error
5: printer's RTC clock readout error,
82: prohibited command in transaction with $z,

Remarks:

1. Forms of payment from the data collected during transaction are printed as well as the rest amount.
2. The command has to be sent after $y command.
3. During transaction should be sent forms of payment using $b sequence.
4. In $y sequence shouldn't be sent forms of payment.

3.17.4. Lines of additional receipt's footers.

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	20	**;**	2	
3	Kind of footer	0..25			
4	Command	**$z**		2	
5	Text	Inscription	<CR>	changeable	It depends on type of foot and printout width
6	Control byte	00..FF		2	
7		<ESC>\		2	

Where

No.	Id	Kind of footer	Argument	Text	Field size	Remarks

				modifiers		
1	**0**	**Transaction No**	Numeric	-	25	
2	**1**	**Points**	Numeric	-	25	
3	**2**	**Sum of points**	Numeric	-	25	
4	**3**	**Register no.**	Numeric	-	25	
5	**4**	**Name**	Letter	-	25	
6	**5**	**Card**	Letter	-	25	
7	**6**	**Card name**	Numeric	-	25	
8	**7**	**Valid to**	Numeric	-	25	
9	**8**	**Cashier**	Numeric	-	25	
10	**9**	**Cashier name**	Letter	-	25	
11	**10**	**Pre-pay**	Numeric	-	25	
12	**11**	**Currency**	Alphanumeric	-	25	
13	**12**	**Calculator**	Numeric	-	25	
14	**13**	**Order number**	Numeric	-	25	
15	**14**	**Employee number**	Numeric	-	25	
16	**15**	**Employee name**	Letter	-	25	
17	**16**	**Account before trans.**	Numeric	-	25	
18	**17**	**Provided**	Numeric	-	25	
19	**18**	**Used**	Numeric	-	25	
20	**19**	**Account after trans.**	Numeric	-	25	
21	**20**	**Constant customer**	Alphanumeric	-	25	
22	**21**	**Voucher**	Numeric	-	25	
23	**22**	**Voucher value**	Numeric	-	25	
24	**23**	**Voucher payment**	Numeric	-	25	
25	**24**	**Inscription predefined in RAM without argument. All digits are turned into spaces, the line, in case of its usage is printed after the daily report.**	-	-	-	In case of ONLINE printers there is printed empty line
26	**25**	**Line without key word**	Numeric	-	25	
27	**26**	**Number of sold goods**	Numeric	-	25	
28	**27**	**Employee's number**	Numeric	-	25	
29	**28**	**Customer number**	Numeric	-	25	
30	**29**	**Given discounts total**	Numeric	-	25	
31	**30**	**Number**	Alphanumeric	-	25	
32	**31**	**Code**	Alphanumeric	-	25	
33	**32**	**Name**	Alphanumeric	-	25	
34	**33**	**Description**	Alphanumeric	-	25	
35	**34**	**Number**	Alphanumeric	-	25	
36	**35**	**Customer**	Alphanumeric	-	25	
37	**36**	**Quota**	Alphanumeric	-	25	
38	**80**	**Ticket number**	Numeric	-	25	
39	**81**	Issued in cash box	Letter	-	25	
40	**82**	**From**	Letter	-	25	
41	**83**	**To**	Letter	-	25	
42	**84**	**By**	Letter	-	25	
43	**85**	**Class**	Numeric	-	25	
44	**86**	**Departure on day**	Numeric	-	25	
45	**87**	**Back on**	Numeric	-	25	
46	**88**	**Validity period**	Numeric	-	25	
47	**89**	**Valid to**	Numeric	-	25	
48	**90**	**Valid for train**	Letter	-	25	
49	**91**	**THERE valid to**	Numeric	-	25	
50	**92**	**BACK valid to**	Numeric	-	25	
51	**93**	**Km**	Numeric	-	25	
52	**94**	**Ticket type**	Letter	-	25	
53	**95**	**Basic**	Numeric	-	25	
54	**96**	**Reduction**	Numeric	-	25	
55	**97**	**Amount of persons**	Numeric	-	25	
56	**98**	**Tariff**	Numeric	-	25	
57	**99**	**Destination port**	Numeric	-	25	

58	**100**	**Transit port**	Numeric	-	25	
59	**101**	**Boarding pass No.**	Numeric	-	25	
60	**102**	**Flight No.**	Numeric	-	25	
61	**103**	**Ticket No.**	Numeric	-	25	
62	**120**	**Rebate**	Numeric	-	25	Operated by pharmacy printers
63	**121**	**To pay after rebate**	Numeric	-	25	
64	**122**	**Customer**	Numeric	-	25	
65	**123**	**Bonus**	Numeric	-	25	
66	**124**	**Premium**	Numeric	-	25	
67	**130**	**Excise**	Numeric	-	25	Operated by printers with invoice - enabled printers
68	**131**	**Information about invoice**	Letter	-	3 lines in printout	
69	**132**	**Account No.**	Numeric	-	26	
70	**133**	**Bank name**	Numeric	-	25	
71	**134**	**Added VITAY points**	Numeric	-	25	
72	**140**	**NIP number**	Numeric	-	25	
73	**141**	**REGON number**	Numeric	-	25	
74	**142**	**PESEL number**	Numeric	-	25	
75	**143**	**Program**	Alphanumeric	Big font, centering	24	
76	**144**	**Customer**	Alphanumeric	-	60	Label stuck to the argument
77	**145**	**Access**	Alphanumeric	Centering	25	
78	**146**	**CLUB**	Alphanumeric	Big font, centering	25	
79	**147**	**<empty line**	-	-	-	-
80	**148**	**PKT**	Numeric	Big font, centering	25	Label to right side of line
81	**149**	**CODE**	Numeric	Big font, centering	25	
82	**150**	**Program No.**	Numeric	-	25	
83	**151**	**Ticket**	Letter	-	60	Label stuck to the argument
84	**152**	**Car wash**	Letter	Big font, centering	25	
85	**153**	**WWW**	Alphanumeric	Centering	60	Label stuck to the argument
86	**154**	**Buyer NIP No.**	Numeric	-	25	
87	**155**	**Buyer REGON No.**	Numeric	-	25	
88	**156**	**Buyer PESEL No.**	Numeric	-	25	
89	**157**	**CLUB**	Alphanumeric	Big font, centering	25	
90	**158**	**VITAY card No.**	Alphanumeric	-	25	
91	**159**	**Added points**	Numeric	-	25	
92	**160**	**Yours**	Alphanumeric	Centering	25	
93	**161**	**Join**	Alphanumeric	Centering	25	
94	**162**	**Being**	Alphanumeric	-	60	Label stuck to the argument
95	**163**	**Charged**	Alphanumeric	Centering	60	Label stuck to the argument
96	**164**	**Yours**	Numeric	-	25	
97	**165**	**KDR**	Numeric	-	25	
98	**166**	**Navigator**	Numeric	-	25	
99	**167**	**Cafe**	Numeric	-	25	
100	**168**	**Stop**	Numeric	-	25	
101	**169**	**Start**	Numeric	-	25	
102	**170**	**Efecta**	Numeric	-	25	
103	**171**	**O!**	Numeric	-	25	
104	**172**	**Foundation**	Numeric	-	25	
105	**173**	**Regulations**	Numeric	-	25	

106	**174**	**Change**	Numeric	-	25	
107	**175**	**ECO**	Numeric	-	25	
108	**176**	**On**	Numeric	-	25	
109	177	**For**	Numeric	-	25	
110	178	**for**	Numeric	-	25	
111	179	**Catalogue**	Numeric	-	25	
112	180	**LOT**	Numeric	-	25	
113	181	**ORL**	Numeric	-	25	
114	182	**Group**	Numeric	-	25	
115	183	**Destination**	Numeric	-	25	
116	184	**LPG**	Numeric	-	25	
117	185	**Station**	Alphanumeric	-	60	Label stuck to the argument
118	186	**Collection**	Alphanumeric	-	60	Label stuck to the argument
119	187	**GIOŚ**	Numeric	-	60	Label stuck to the argument
120	188	**Card**	Alphanumeric	-	25	
121	189	**FLEET**	Numeric	-	25	
122	190	**Information**	Alphanumeric	-	60	Label stuck to the argument
123	191	**Telephone**	Numeric	-	25	

Text
Inscription sent from application,

Errors' codes:

1: not initiated printer's clock,
2: control byte error,
4: parameter error
5: printer's RTC clock readout error,
84: exceeded number of sent lines of predefined inscription of various content. The sum of the sent predefined inscriptions and additional information lines in Vento printer must not exceed 25 and in the rest of printers 3 between two daily reports.

Remarks:

1. Numeric parameters can include maximally 3 digits (exceeding ones will be changed to spaces).
2. Letter parameters can include maximally 3 digits (exceeding ones will be changed to spaces).
3. The command has to be sent after $y command.
4. In case of lines printed with a larger font and setting the larger font in the printer options (HD printers), the number of characters per line will be limited to 22

3.17.5. Information lines – definition.

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	24	**;**	2	
3	Quantity of lines	0..3			
4	Command	**$z**		2	
5	Line No 1	Inscription	<CR>	0..64*	Quantity of these arguments is the same as given in Quantity of lines
6	Line No 2	Inscription	<CR>	0..64*	

7	Line No 3	Inscription	<CR>	0..64*	parameter * - 64 characters for HD, wide paper, normal font, - 44 characters for HD, wide paper, enlarged font - 44 characters for HD, narrow paper, - 42 characters for Bono Online, Deon Online,
8	Control byte	00..FF		2	
9		<ESC>\		2	

Where:

Quantity of lines
Quantity of defined lines – from 0 to 3

Line No 1, 2, 3
Texts of defined lines

Errors' codes:

1: not initiated printer's clock,
2: control byte error,
4: parameter error
5: printer's RTC clock readout error

Remarks:

1. Information lines „We invite you to further visits" are printed.
2. It is possible to define only one set of information lines between daily reports.
3. Such defined information lines are printed after receiving the $z command ending the printout (described below).
4. The command has to be sent after the $y command.

3.17.6. Payment in EURO.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	99	;	2	
3	Amount of arguments	5		1	Amount of arguments sending with that packet. **Warning!** The field is required in case of using argument „Change in zł"
4	Command	**$z**		2	
5	€ currency	Number	<CR>	1..11	If zero value is given, payment in € will be cancelled
6	Receipt value in €	Number	<CR>	1..11	The value shall also include various returnable packages
7	Payment in €	Number	<CR>	1..11	
8	Change in €	Number	<CR>	1..11	
9	Change in PLN [zł]	Number	<CR>	1..11	
10	Control byte	00..FF		2	
11		<ESC>\		2	

Where:

€ currency, Receipt value in €, Payment in €, Rest in €, Rest in PLN [zł]
Numeric values

Errors' codes:

1: not initiated printer's clock,
2: control byte error,
4: parameter error
5: printer's RTC clock readout error

Remarks:

The command is sent in transaction mode.
Text including € currency is printed after the „€: currency" label
The receipt value in € currency is printed after the label „To be paid" and is preceded by the € symbol
Payment in € is printed after the label „Cash:„and is preceded by the € symbol
Rest in € is printed after the label „Rest:„ and is preceded by the € symbol
Rest in PLN [zł] is printed after the label „Rest:„
The command has to be sent before the $y command.
On the displays, the amounts in € are precede by the text „EUR" (on the customer's display only if it is an LCD display). Additionally, the amount in € is blinking on customer's display.
There must „Amount of arguments" parameter appear as the second parameter, in order to the last argument (Change in zł) could be interpreted by the printer.

3.17.7. Buyer's ID .

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	100	;	3	
3	Type of buyer's ID number	1		1	1 – NIP
4	Command	**$z**		2	
5	Buyer's ID	text	<CR>	0..16	It can contain letters and numbers
6	Control byte	00..FF		2	
7		<ESC>\		2	

Error code:

2: control byte error ,

Remarks:
Command should be sent after beginning or before ending the receipt.

3.17.8. ID of receipt transaction (@e).

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Type	**number**	;	1	2 – delete transaction ID
3	Protocol (optionally)	**number**	;	1	0 – NOVITUS, 1 – MF
4	Command	**@e**		2	
5	Transaction ID	text	<CR>	0..100	It can contain letters and numbers If Type = 2, the field is ignored
6	Control byte	00..FF		2	
7		<ESC>\		2	

Error code:

4: parameter error,
21: switched off transaction mode,
1504: E-receipt support is inactive

Remarks:
Command should be sent after beginning or before ending the receipt.

3.17.9. ID of receipt transaction – extended.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Type	Number	;	1	3 – extended transaction id
3	Flag protocol	0..1	;	1	Flag informing if protocol is present.
4	Flag operating mode	0..1	;	1	Flag informing if operating mode is present.
5	Command	**@e**		2	
6	Transaction ID	text	<CR>	0..100	It can include letters and digits. If *type = 2* field is ignored.
7	Protocol	Number	/		0 – NOVITUS, 1 – MF.
8	Operating mode	Number	/		Operating mode: 0 – if there is no confirmation of receiving e-receipt by server, print receipt and don't try to send e-receipt again, 1 – if there is no confirmation of receiving e-receipt by server, keep trying to send e-receipt until successful, 2 - if there is no confirmation of receiving e-receipt by server, print receipt and keep trying to send e-receipt until successful, 3 – always print and try to send until successful.
9	Control byte	00..FF		2	
10		<ESC>\		2	

Error codes:

4: parameter error,
21: switched off transaction mode,

Remarks:
Command should be sent after beginning or before ending the receipt.

3.17.10. End of printout.

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	28	;	2	
3	Ending	0..2		1	
4	Command	**$z**		2	
5	Control byte	00..FF		2	
6		<ESC>\		2	

Where:

Ending
0: finishing the printing and finishing the transaction mode.
1: as above
2: printing a header for the new receipt.

Errors' codes:

1: not initiated printer's clock,
2: control byte error,
4: parameter error
5: printer's RTC clock readout error,

Remarks:

1. After the $y command, command 28 ; ... $z can be sent, additionally causing printing the lacking elements i.e. deposits and/ or forms of payment.
2. Amounts of deposits sent in 4$z and 8$z must not exceed the amounts sent during transaction, but they may be lower.
3. The command has to be sent after the $y command.

3.18. Orders of printing invoices.

Invoices are printed always in offline mode. The packets have very similar form to the receipts packets. Packets like „Receipt cancelling" are also used in invoices.

3.18.1. Packet of invoice beginning ($h).

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Amount of positions	0..255	**;**	1..3	
3	Amount of lines in invoice's receiver data	0..3	;	1	For amount 0 – 3 lines (standard parameter). In other cases max. amount of lines = 8.
4	Invoice type	1..2	;	1	1 – VAT Invoice, 2 – pharmacy VAT invoice
5	Original/Copy	2	;	1	There are printed 2 documents, the both with additional description.
6	Upper margin (5 lines)	0..1	;	1	0 – there is no upper margin 1 – there is upper margin
7	Ignored parameter	-	;	1	
8	Amount of additional copies	0..9	;	1 or 3	255 – only original
9	Ignored parameter	-	;	1	
10	Ignored parameter	-	;	1	
11	Space for signatures	0..1	;	1	0 – fields are printed - default 1 – fields are not printed
12	„PL" symbol before NIP number	0..1		1	„PL" symbol's printout before seller's NIP number 0 – without symbol's printout, 1 – symbol's printout
16	Command	**$h**		2	
17	Invoice number	Number	<CR>	0..56	It may contain alphanumeric characters
18	Buyer's data - Line no. 1	Inscription	<CR>	0..64*	(required field) Amount of lines is such as described in field no 3 (amount of lines). Lines should contain data (address) of
19	Buyer's data - Line no. 2	Inscription	<CR>	0..64*	

20+ n	Buyer's data – Line no. n	Inscription	<CR>	0..64*	buyer. *) - 64 characters for HD, wide paper, normal font, - 44 characters for HD, wide paper, font enlarged - 44 characters for HD, narrow paper, - 42 characters for Bono Online, Deon Online, - 44 characters for Delio E, - 48 characters for Bono E, Deon E
21 + n	NIP (id tax number)	Number	<CR>	16	(required field) Additional accepted signs: '-' or '.'
22 + n	Term of payment	Inscription	<CR>	16	(Optionally)
23 + n	Form of payment	Inscription	<CR>	20	Name of payment forms. It's not allowed to use name OTHER / OTHERS. (Optionally). Submitting form of payment in beginning invoice adds receipt's value to payment value . It's recommended to send payment only in 1 place.
24 + n	Receiver	Inscription	<CR>	26	Receiver name (Optionally)
25 + n	Issuer	Inscription	<CR>	26	Name of the issuer (Optionally)
26 + n	System number	Inscription	<CR>	0..30	Additional options: Begins with character # if system number is to be printed in form of bar code. Begins with character @ if system number is to be printed in form of QR code.
27 + n	Buyer's name	Inscription	<CR>	0..256	(required field) Text printed in invoice header Text modifier: '0x1B>' – text alignment to right, '0x1B|' – text centring, '0x1B+' – text bolded, '0x0A' – transfer to new line, '0x1B+0x1B>' – bolded text alignment to right, '0x1B+0x1B|' – bolded text centring
28 + n	Control byte	00..FF		2	
29 + n		<ESC>\		2	

Where:

Amount of positions
Amount of sale positions = 0..255 – invoices are always printed in OFF-LINE mode (it doesn't apply to online devices)
Amount of lines
Amount of additional lines placed in the receipt's footer, after fiscal logo, to which application has access
Line no. 1...Line no. 3
Content of additional lines.

Error's codes:

1: not initiated printer's clock,
2: control byte error,
4: parameter error (wrong position number)
5: printer's RTC clock readout error
6: error of operation with fiscal memory,
40: no header in RAM memory (only in fiscal mode),
94: blockade of sale because of installing a service cramp

Remarks:

1. NIP number for HD II Online cannot be an empty field, in case of not using NIP number, you must send a space.

3.19. Invoice's line ($l).

See chapter „Receipt's line".

3.19.1. Finishing the invoice ($e).

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Action	0..1	**;**	1	0 – cancelling, 1 – accepting
3	Discount	0..99	**;**	0..2	Optionally (parameter is ignored)
4	Amount of lines	0..3	**;**	1	Amount of additional lines in the footer. Parameter ignored.
5	End	0..2	**;**	1	Way of transaction ending (parameter is ignored)
6	Discount type	0..2	**;**	1	(parameter is ignored)
7	Constant value	1	;	1	
8	Inscription „Paid"	0..1	;	1	0 – there is no line „Paid" printed 1 – there is line „Paid" printed
9	Options for buyer's name	0..2	;	1	0 – there is only information block printed 1 – there are buyer's name and information block printed 2 – no information about buyer (no information block and buyer's name)
10	Options for seller's name	0..2		1	0 – there is only information block printed 1 – there are seller's name and information block printed 2 – no information about the seller (no information block and seller's name)
11	Command	**$e**		2	
12	Cashier name	Inscription	<CR>	0..31	
13	Line no. 1	Inscription	<CR>	0..	Amount of these parameters are like described in field no.4 (amount of lines) **WARNING!** Possibility of using only 20 different texts between daily reports.
14	Line no. 2	Inscription	<CR>	0..	
15	Line no. 3	Inscription	<CR>	0..	
16	Paid	Inscription	<CR>	1..29	
17	Buyer's name	Inscription	<CR>	1..40	
18	Seller's name	Inscription	<CR>	1..40	
19	Payment	Number	/	1..11	
20	Total	Number	/	1..11	
21	Discount value	Number	/	1..5	
22	Control byte	00..FF		2	
23		<ESC>\		2	

Where:

Action
0: cancelling receipt,
1: positive transaction ending,

Discount
Optionally percentage discount for the whole transaction. That parameter is ignored when discount is defined with fields **Discount type** and **Discount value**

Amount of lines

Amount of additional lines placed in the receipt's footer after fiscal logo to which application has access,

Ending

Parameter's value is ignored. It exists in purpose of keeping compatibility with NOVITUS accordable fiscal printers.

Discount type

0: no discount,
1: percentage discount,
2: percentage overhead,

Code

Code of cash register (1 sign) + code of cashier (2 signs), the field is ignored if earlier was cashier's log-in.

Line no 1...Line no 3

Content of additional lines.

Payment

Amount paid by the customer, if = 0, than inscriptions „payment / change" will not be printed.

Total

Total charge for the customer, for controlling the previous transfers,

Discount value

Percentage discount or overhead for the whole transaction, the rate is required with accuracy to 0.01, if parameter Discount type ≠ 0,

Error's codes:

1: not initiated printer's clock,
2: control byte error,
4: parameter error
5: printer's RTC clock readout error
6: error of operation with fiscal memory,
23: wrong amount of records (lines) of the receipt,
24: overfilling of receipt's printer buffer,
25: wrong code of terminal/ cashier (wrong length or format), or wrong content of additional lines,
26: wrong amount of Payment (syntactic; if difference Payment - Total ≤ 0, than inscriptions 'cash', 'change' will not be printed),
27: wrong total sum Total or wrong amount of Discount,
28: overfilling of totalizer (max 99 999 999,99 for the single tax group),
29: demand of (positive) ending of transaction mode, in moment when it wasn't switched on yet.

3.19.2. Order of setting invoice options. (@c)

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Amount of additional copies	0..9	;	1 or 3	255 – only original
3	Options for buyer's name	0..2	;	1	0 – there is only information block printed 1 – there are buyer's name and information block printed 2 – no information about buyer (no information block and buyer's name)
4	Option for seller's name	0..2	;	1	0 – there is only information block printed 1 – there are seller's name and information block printed 2 – no information about the seller (no information block and seller's name)
5	Inscription „Paid"	0..1	;	1	0 – there is no line „Paid" printed 1 – there is line „Paid" printed
6	Date of sale: Year	0..99	;	1..2	
7	Date of sale: Month	1..12	;	1..2	
8	Date of sale: Day	1..31	;	1..2	
9	Option of summary printout	0..255	;	1..3	0x01 – omit words description of amount to pay, 0x02 – omit block of gross amounts in

					tax accounting, 0x04 – bold label „**Buyer**”, 0x08 – bold label „**Seller**”, 0x10 – bold NIP no. of buyer, 0x20 – bold NIP no. of seller WARNING! Switching on the option means setting adequate byte and that resultant number is sent in decimal format.
10	Options of printout 2	0..255	;	1..3	0x01 – label printout **„description/symbol**” in the invoice header before invoice positions, 0x02 – printout of position number in invoice’s position, 0x04 – label **„to pay”** before block of tax accounting, 0x08 – printout of grosz amount in words format, 0x10 – do not print sale date if it is the same like date of issuing the invoice 0x20 – do not print seller’s data 0x40 – do not print descriptions to invoice’s position (information describing fields content in invoice’s position) 0x80 – switched on payment operating (the same like in receipt) WARNING! Switching on the option means setting adequate bite and that resultant number is sent in decimal format.
11	Type of buyer’s Id number	0..2	;	1	0 – NIP number 1 – REGON number 2 – PESEL number
12	Options of printout 3	0..255	;	1..3	0x01 – do not print receiver’s data, do not include field with nip number (regon number, pesel number)) 0x02 – print information „Paid by cash” 0x04 – omit label „Seller:” 0x08 – omit label „ORIGINAL” (operates only in case if there is no copy to print 0x10 – print label „VAT Invoice” (instead of label „INVOICE”)
13	Option of label „Buyer” printout	0..1		1	Option of label „Buyer” printout in invoice header: 0 – printout of label „Buyer” 1 – printout of label „Receiver” (instead of „Buyer”).
14	Command	**@c**		2	
15	Term of payment	Inscription	<CR>	0..16	(Optionally)
16	Form of payment	Inscription	<CR>	0..20	Name of payment form. Do not use OTHER/OTHERS name. (Optionally)
17	Receiver	Inscription	<CR>	0..26	Receiver’s name (Optionally)
18	Issuer	Inscription	<CR>	0..26	Issuer’s name (Optionally)
19	Paid	Inscription	<CR>	0..29	(Optionally)
20	System number	Inscription	<CR>	0..30	There can be used max. up to 10 letters, special signs and digits. (Optionally)
21	Additional information to the invoice	Text	<CR>	0..512	(optional field) Text printed in invoice header Text modifier: ‘0x1B>’ – text alignment to right, ‘0x1B|’ – text centring, ‘0x1B+’ – text bolded, ‘0x0A’ – transfer to new line,

					‘0x1B+0x1B>’ – bolded text alignment to right, ‘0x1B+0x1B|’ – bolded text centring.
22	Buyer’s name	Text	<CR>	0..256	(required field) Text printed in invoice header. Text modifiers operated (accessible since HD Online).
23	Control byte	00..FF		2	
24		<ESC>\		2	

Error’s codes:

1: not initiated printer’s clock,
2: control byte error,
4: parameter error

3.19.3. Additional lines of invoice’s footers. ($z)

The order should be sent after order of invoice beginning.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	20	;	2	
3	Footer type	0..131			
4	Command	**$z**		2	
5	Text	Inscription	<CR>	0..25	
6	Control byte	00..FF		2	
7		<ESC>\		2	

Where:

Footer type

130: Tax — numerical argument
131: Information about invoice — 3 lines of text

In invoices can also be applied receipt’s footers used in printing receipts.

Error’s codes:

1: not initiated printer’s clock,
2: control byte error,
4: parameter error
5: printer’s RTC clock readout error,
84: exceeded number of sent lines of predefined inscription of various content. The sum of the sent predefined inscriptions and additional information lines must not exceed 25 between two daily reports.

Remarks:

1. On one receipt can be printed 20 additional lines.
2. Numeric parameters can include maximally 3 letters (exceeding ones will be changed to spaces).
3. Letter parameters can include maximally 3 digits (exceeding ones will be changed to spaces).
4. The command has to be sent after $y command.

3.20. Orders of cash register and cashier operating.

3.20.1. Log-in the cashier.

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Action	0..255 or none		1	0 or none – cashier log-in 1 – cashier logged-in readout

3	Command	**#p**		2	
4	Cashier	Inscription	<CR>	0..32	
5	Cash register number	Inscription	<CR>	0..8	
6	Control byte	00..FF		2	
7		<ESC>\		2	

Where:

Cashier
inscription reserved to cashier's name and surname,
Cash register number
inscription including the name of the cash register

Errors' codes:

1: not initiated printer's clock,
2: control byte error,
5: printer's RTC clock readout error,
33: error in Cash register number inscription of (e.g. too long or including wrong characters),
34: error in Cashier inscription.

3.20.2. Readout of cashier status.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	1		1	
3	Command	**#p**		2	
4	Control byte	00..FF		2	
5		<ESC>\		2	

Response:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**#P**		2	
3	Cashier	Inscription	<CR>	0..32	
4	ECR number	Inscription	<CR>	0..8	
5	Status	Number	/	1	0 – not logged 1 – logged in
6	Control byte	00..FF		2	
7		<ESC>\		2	

Principles of cashier login / logout and printout of cashier information in the receipt footer:

1. The highest priority has the data of registered cashier.
2. If the order has dedicated fields for the cash register / cashier data, they will be printed if the cashier is not logged in.
3. If the order does not have dedicated fields for the cash register / cashier data or the fields are empty, then symbols of lack of cash register and no cashier will be printed in the footer: "0 K0".

3.20.3. Log-out the cashier.

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Ignored	0..255 or none		1	
3	Command	**#q**		2	
4	Cashier	Inscription	<CR>	0..32	
5	Cash register number	Inscription	<CR>	0..8	

6	Control byte	00..FF		2	
7		<ESC>\		2	

Where:

Cashier
inscription reserved to cashier's name and surname,
Cash register number
inscription including the name of the cash register

Errors' codes:

1: not initiated printer's clock,
2: control byte error,
5: printer's RTC clock readout error,
33: error in inscription of Cash register number (e.g. too long or including wrong characters),
34: error in inscription of Cashier.

3.20.4. Payment to the cash.

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Parameter	0..255 or none		0..3	0 – cash, 1 - card, 2 - cheque, 3 - Bond, 4 - other, 5 - credit, 6 – customer account, 7 - currency (protocol NOVITUS), Voucher (protocol „NOVITUS accordable") 8 - transfer 9 - Mobile 10 - Voucher 99 – payment in € currency
3	Space for signature	0 or 1		1	0 – no space for signature, 1 – space for signature
4	Command	**#i**		2	
5	Payment	Number	/	1..11	Amount paid to the ECR
6	Cash register number	Inscription	<CR>	0..8	Inscription contains ECR number. Optional parameter – replacing that introduced during cashiers log- in..
7	Cashier	Inscription	<CR>	0..32	
8	Receipt number	Inscription	<CR>	0..32	Optional parameter
9	Payer name	Inscription	<CR>	0..32	Optional parameter
10	Payment description	Inscription	<CR>	0..32	Optional parameter. It concerns payment in foreign currency (7 - currency). It specifies currency name consisting of 3 capital letters. Designation must be different than current currency. If limitations are not met, parameter error will be reported.
11	Control byte	00..FF		2	
12		<ESC>\		2	

Where:

Payment
Amount paid into the cash register,
Cash register number
Inscription including cash register number,

Cashier
Inscription including cashier's name.
Receipt number
Optional parameter
Payer name
Optional parameter

Errors' codes:

1: not initiated printer's clock,
2: control byte error,
30: error in the amount of Payment (syntax),
31: over-addition (exceeding the range of cash in the cash register).

3.20.5. Pay-out from the cash.

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Parameter	0..255 or none	;	0..3	0 – cash, 1 - card, 2 - cheque, 3 - Bond, 4 - other, 5 - credit, 6 – customer account, 7 - currency (protocol NOVITUS), Voucher (protocol „NOVITUS accordable") 8 - transfer 9 - Mobile 99 – payment in € currency
3	Space for signature	0 or 1	;	1	0 – no space for signature, 1 – space for signature
4	Command	**#d**		2	
5	Pay-out	Number	/	1..11	Amount paid off from ECR.
6	Cash register number	Inscription	<CR>	0..8	Inscription contains ECR number. Optional parameter – replacing that introduced during cashiers log- in..
7	Cashier	Inscription	<CR>	0..32	
8	Receipt number	Inscription	<CR>	0..32	Optional parameter
9	Payer name	Inscription	<CR>	0..32	Optional parameter
10	Payment description	Inscription	<CR>	0..32	Optional parameter. It concerns payment in foreign currency (7 - currency). It specifies currency name consisting of 3 capital letters. Designation must be different than current currency. If limitations are not met, parameter error will be reported.
11	Control byte	00..FF		2	
12		<ESC>\		2	

Where:

Pay-out
Amount paid from the cash register,
Cash register number
Inscription including cash register number,
Cashier
Inscription including cashier's name,
Receipt number
Optional parameter
Payer name
Optional parameter

Errors' codes:

1: not initiated printer's clock,
2: control byte error,
30: error in the amount of Payment (syntax),
32: value after deducting becomes negative (cash register zero level is assumed in such case).

Remarks:

1. Printer supports maximum up to 16 different currencies. If the limit is exceeded, parameter error will be reported.

3.20.6. Inquiry about the possibility of selling goods.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**$g**		2	
3	Goods name	Inscription	<CR>		
4	Tax rate symbol	Inscription	/	1	
5	Control byte	00..FF		2	
7		<ESC>\		2	

In response, the printer sends back the order:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Ignored	1	None	1	Constant
3	Command	**$G**		2	
4	Result	Number	/	1	0 – goods not blocked 1 – goods blocked
5	Tax rate symbol	Inscription	/	1	Tax rate symbol
6		<ESC>\		2	

3.20.7. In advance payment.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Action	number	**;**	1	0 – advance, 1 – advance calculating, 2 – STORNO / reversal of advance, 3 – STORNO / reversal of advance calculating
3	Command	**@z**		2	
4	Goods name	text	<CR>	0..60	The name of the good to which the advance payment or settlement of the advance payment is provided.
5	Tax rate	letter	<CR>	1	
6	Value	Amount	/	Variable	Value of advance payment or advance payment settlement.
7	To pay	Amount	/	variable	Amount to pay after deduction the advance. Nowadays the field is ignored, the printer automatically calculates value for the surcharge, where the reference value is the value of the goods to which we provide the advance payment.
8	Control byte	00..FF		2	

9		<ESC>\		2	

Error's code:

2: control byte error,

Remarks:

1. Command should be sent after start or before end of receipt.
2. Settlement of the advance payment is provided to the first goods on the receipt.
3. The STORNO operation can not be performed on the goods for which the advance payment has been made, until the advance settlements had been cleared earlier.

3.20.8. Information on the table of contents.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Parameter	0..1		1	0 – do not switch the table of contents database 1 – switching the table of contents database
3	Information	0..2			1 – send back information about the basic table of contents 2 – send back information about the backup table of contents
4	Extended information	0..1			0 – basic report 1 – widen report
5	Command	?CINDX		6	
6		<ESC>\		2	

Format of sent back data on table of contents base:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Response code	**?CIX**		2	
3	Base carrier	Number	/	1.11	Carrier of table of content base
4	Record number	Number	/	1.11	Record number in table of content base
5	Size	Number	/	1.11	Size of table of content base [MB]
6	File number	Number	/	1.11	Indexed protected memory file
7	Position in file	Number	/		Indexed item in the file
8	File number	Number	/		Saved file number
9	Position in file	Number	/		Position of saved file
10	Control byte	00..FF		2	
11		<ESC>\		2	

Remarks:
Immediately after the daily report, the file save entries may be zero. The next print initiates the position saving.
Reading extended information may take a bit longer depending on the number of records.
If -1 is returned in the number of records, it may mean that the database is damaged.

Errors' codes:

1: not initiated printer's clock,
2: control byte error

3.20.9. ECR status.

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Report type	Number		1	0 – non-resetting report, 1 – resetting report
3	Command	**#t**		2	
4	Cash register number	Inscription	<CR>	0..8	Optional parameters – replacing those introduced during cashiers log-in...
5	Cashier	Inscription	<CR>	0..32	
6	Control byte	00..FF		2	
7		<ESC>\		2	

Where:

Cash register number
Inscription including cash register number,
Cashier
Inscription including cashier's name,

Errors' codes:

1: not initiated printer's clock,
2: control byte error.

3.20.10. Printing the report of cash / shift.

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Kind of report	0..23		1	
3	Command	**#k**		2	
4	Shift	Inscription	<CR>	0..8	
5	Cashier	Inscription	<CR>	0..32	
6	Cash register number	Inscription	<CR>	0..8	Optional parameters – replacing those introduced during cashiers log-in...
7	Control byte	00..FF		2	
8		<ESC>\		2	

Where:

Form of report
0 (or none): resetting shift report,
23: non-resetting shift report,
Shift
inscription including optional printable characters, corresponding to the numeric or alphanumeric description of the shift,
Cashier
inscription reserved to the name and surname of the cashier,
Cash register number
inscription including the name of the cash register

Errors' codes:

1: not initiated printer's clock,
2: control byte error,
5: printer's RTC clock readout error,
33: error in inscription of Shift (e.g. too long or including wrong characters),
34: error in inscription of Cashier.

3.20.11. Printing the cash / shift report providing forms of payment (1).

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Quantity of cards	8	;	1	8 – constant
3	Quantity of cheques	4	;	1	4 – constant
4	Quantity of vouchers	4		1	4 – constant
5	Command	**#f**		2	
6	Shift	Inscription	<CR>	1..10	
7	Cashier	Inscription	<CR>	0..15	
8	Name of card No ...	Inscription	<CR>	0..16	Quantity of these parameters is 8
9	Name of cheque No ...	Inscription	<CR>	0..16	Quantity of these parameters is 4. Attention! This field appears only if the printer has got “NOVITUS accordable” protocol fixed
10	Name of voucher No ...	Inscription	<CR>	0..16	Quantity of these parameters is 4
11	Beginning	Inscription	<CR>	0..15	
12	End	Inscription	<CR>	0..15	
13	Income	Number	/	1..11	
14	Cash	Number	/	1..11	
15	Card No ...	Number	/	1..10	Quantity of these parameters is 8
16	Cheque No ...	Number	/	1..10	Quantity of these parameters is 4
17	Voucher No ...	Number	/	1..10	Quantity of these parameters is 4
18	Payments	Number	/	1..11	
19	Receives	Number	/	1..11	
20	Pay-out	Number	/	1..11	
21	Returns	Number	/	1..11	
22	Cash register status	Number	/	1..11	
23	Quantity of receipts	Inscription	<CR>	1..5	
24	Quantity of cancelled	Inscription	<CR>	1..5	
25	Quantity of STORNO	Inscription	<CR>	1..5	
26	Cash register number	Inscription	<CR>	0..8	Optional parameter – replacing the one submitted during cashiers log-in...
27	Control byte	00..FF		2	
28		<ESC>\		2	

Where:

Quantity of cards
quantity of various credit cards,
Quantity of cheques
quantity of various cheques,
Quantity of vouchers
quantity of various vouchers,
Shift
inscription including optional printable characters, corresponding to the numeric or alphanumeric characterification of the shift,
Cashier
inscription reserved to the name and surname of the cashier,
Name of the card, Name of the cheque, Name of the bond
inscription parameters sent by an application fixing specified forms of payment,
ATTENTION! The Field name **of the cheque** appears only for the POSNET (see Configuration the work of the printers – „Administration mode”.). Additional information in REMARKS point.
Beginning, End

parameters fixing the beginning and the end of the shift, usually in the format 'yy-mm-dd hh:mm'

Income
total sale during the shift,

Cash
value of cash sale,

Card
value of sale for specified paying cards,

Cheque
value of sale for specified kinds of cheques,

Voucher
value of sale for various kinds of vouchers,

Payments
sum of payments to the cash register during the shift,

Receives
sum of securities received during the shift,

Pay-outs
sum of pay-outs during the shift,

Returns
sum of deposits returned during the shift,

Cash register status
quantity of cash in the cash register after finishing the shift,

Quantity of receipts
quantity of receipts printed during the shift,

Quantity of cancelled
quantity of cancelled receipts,

Quantity of STORNO (reversal)
quantity of stormed positions,

Cash register number
(optional), cash register number.

Errors' codes:

1: not initiated printer's clock,
2: control byte error,
4: error of parameters,
5: printer's RTC clock readout error,
33: error of inscription of Shift or Cashier,
34: error of one of the amounts or the rest of the inscriptions.

Remarks:

1. This Command can have two forms, depending on the fixed protocol of printer's transmission:
   a. NOVITUS – the Field name of Cheque No does not appear, all fields have to appear. Such version is compatible with the previous versions of "Novitus accordable" printers' protocol.
   b. "NOVITUS accordable" – the Field name of Cheque No does not appear, not all fields have to appear (proper parameters > 0). Such version is not compatible with the previous versions of "NOVITUS accordable" printers' protocol.

3.20.12. Printing the cash / shift report providing forms of payment (2).

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Quantity of collected deposits	0..32	;	1..2	
3	Quantity of returned deposits	0..32	;	1..2	
4	Quantity of forms of payment	0..16	;	1	
5	Cash flag	0..1	;	1	
6	Type of payment No ...	1..5		1	Quantity of these parameters is the same as it was fixed in field No 4 (Quantity of forms of payment).
7	Command	**#m**		2	
8	Shift	Inscription	<CR>	0..8	

9	Cash register number	Inscription	<CR>	0..8	
10	Cashier	Inscription	<CR>	0..32	
11	Beginning	Inscription	<CR>	0..15	
12	End	Inscription	<CR>	0..15	
13	Name of forms of payment No ...	Inscription	<CR>	0..16	Quantity of these parameters is the same as it was fixed in field No 4 (Quantity of forms of payment).
14	Name of received deposit No ...	Inscription	<CR>	0..24	Quantity of these parameters is the same as it was fixed in field No 2 (Quantity of collected deposits).
15	Name of returned deposit No ...	Inscription	<CR>	0..24	Quantity of these parameters is the same as it was fixed in field No 3 (Quantity of returned deposits).
16	Income	Number	/	1..11	
17	Cash	Number	/	1..11	
18	Payments	Number	/	1..11	
19	Outcome	Number	/	1..11	
20	Pay-outs	Number	/	1..11	
21	Amount of forms of payment No ...	Number	/	1..11	Quantity of these parameters is the same as it was fixed in field No 4 (Quantity of forms of payment).
22	Received deposit	Number	/	1..11	
23	Amount of received deposit No ...	Number	/	1..11	Quantity of these parameters is the same as it was fixed in field No 2 (Quantity of received deposit)
24	Returned deposit	Number	/	1..11	
25	Amount of returned deposit No ...	Number	/	1..11	Quantity of these parameters is the same as it was fixed in field No 3 (Quantity of returned deposit)
26	Cash register status	Number	/	1..11	
27	Quantity of receipts	Inscription	<CR>		
28	Quantity of cancelled	Inscription	<CR>		
29	Quantity of STORNO	Inscription	<CR>		
30	Control byte	00..FF		2	
31		<ESC>\		2	

Where:

Quantity of collected deposits
0: The block COLLECTED DEPOSIT does not appear,
1..n: The block COLLECTED DEPOSIT is printed and includes 1.. n lines + title,

Quantity of received deposits
0: The block RETURNED DEPOSIT does not appear,
1..n: The block RETURNED DEPOSIT is printed and includes 1.. n lines + title,

Quantity of forms of payment
0: there are no forms of payment, the block of names of forms of payment does not appear,
1..n: The parameters of type of payment appear, determining the kind of forms of payment, the block of names of forms of payment appears,

Cash flag
0: Amount of Cash is ignored (payment of cash does not take place),
1: payment of cash takes place,

Type of payment
According to NOVITUS 2001
1: the amount of payment by paying card is printed,
2: the amount of payment by a cheque is printed,
3: the amount of payment by a voucher-talon is printed,
4: the amount of payment in other form is printed,
5: the amount of payment by credit is printed,
6: the amount of payment from customer’s account is printed

7: the amount of payment by foreign currency is printed
8: *[*] the amount of payment by transfer is printed

According to "NOVITUS accordable" 2001

1: the amount of payment by paying card is printed,
2: the amount of payment by a cheque is printed,
3: the amount of payment by a voucher-talon is printed,
4: the amount of payment in other form is printed,
5: the amount of payment by credit is printed,
6: the amount of payment from customer's account is printed
7: * the amount of payment by voucher is printed
8: * the amount of payment by transfer is printed

Shift
inscription including optional printable characters, corresponding to the numeric or alphanumeric signification of the shift,

Cash register number
cash register number,

Cashier
inscription reserved to the name and surname of the cashier,

Beginning, End
parameters fixing the beginning and the end of the shift, usually in the format 'yy-mm-dd hh:mm'

Name of form of payment
additional significations of forms of payment (now if the quantity of forms of payment $\neq 0$),

Name of the collected deposit
name of the deposit package (now if the quantity of received securities $\neq 0$),

Name of the returned deposit
name of the deposit package (now if the quantity of returned securities $\neq 0$),

Income
total sale during the shift,

Cash
value of cash sale,

Payments
sum of payments to the cash register during the shift,

Outcomes
cash spent on transactions,

Pay-outs
sum of pay-outs from the cash register during the shift,

Amount of the form of payment
amount for proper forms of payment (if the quantity of forms of payment (0),

Returned deposit
accumulated amount for return of the deposit for returnable package,

Amount of the returned deposit
amounts of deposits returned for specified returnable packages (apply if the quantity of returned securities (0),

Collected deposit
accumulated amount of collected deposit for returnable package,

Amount of the collected deposit
amounts of deposits collected for specified returnable packages (apply if the quantity of returned securities (0),

Cash register status
quantity of cash in the cash register after the end of the shift,

Quantity of receipts
quantity of receipts printed during the shift,

Quantity of cancelled
quantity of cancelled receipts,

Quantity of STORNO (reversal)
quantity of stormed positions,

Errors' codes:

1: not initiated printer's clock,
2: control byte error,
4: error of parameters (Pkr..Pkb),
5: printer's RTC clock readout error,
33: error in inscription of Shift or Cashier,

[*] Type of payment appearing in QUARTO and DELIO PRIME printers

34: error of one of the amounts or other inscriptions.

Remarks:

1. In case that one or more parameters are lacking the presumable value is assumed to be = 0.
2. Parameter „Type of payment" can possess other values, depending on the type of protocol. In NOVITUS 2001 protocol, values determining the type correspond with values defining the type of payment in the commands of servicing the payment in the receipt and the end of receipt. In the "NOVITUS accordable" 2001 protocol their values are moved at one number back (1 corresponds to 0).
3. In case of necessity of gaining wide reports, they can be divided partials information concerning:
   - only the forms of payment
   - only the service of sold deposit packages
   - only the service of returned deposit packages.

3.21. Orders of printing fiscal reports.

3.21.1. Printing daily report.

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	#r		2	
3	Cash register number	Inscription	<CR>	0..8	Optional parameters – replacing the ones given by Cashier log-in
4	Cashier	Inscription	<CR>	0..32	
5	Control byte	00..FF		2	
6		<ESC>\		2	

or

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant value	0		1	
3	Command	**#r**		2	
4	Cash register number	Inscription	<CR>	0..8	Optional parameters – replacing those introduced during cashiers log-in.
5	Cashier	Inscription	<CR>	0..32	
6	Control byte	00..FF		2	
7		<ESC>\		2	

or

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant value	1	;	1	
3	Year	0..99	;	1..2	
4	Month	1..12	;	1..2	
5	Day	1..31		1..2	
6	Command	**#r**		2	
7	Cash register number	Inscription	<CR>	0..8	Optional parameters – replacing those introduced during cashiers log-in.
8	Cashier	Inscription	<CR>	0..32	
9	Control byte	00..FF		2	
10		<ESC>\		2	

Where:

Year

number of year (two latest digits, 2000..2099),
Month
number of month,
Day
day,
Cash register number
inscription including the name of the cash register
Cashier
inscription reserved for the cashier's name,

Errors' codes:

1: not initiated printer's clock,
2: control byte error,
6: operation on fiscal memory error (fatal),
7: date error (the one currently fixed is older than the date of the last record) or in the third format there is no correspondence in the printer with the sent date,
35: empty totalizers,
36: a record of that date already exists (if the totalizers are empty),
37: operation broken from the keyboard (prior to starting the printing)

Remarks:

1. The operation requires confirmation if the date was not given (first sequence).
2. In the variant with parameter = 1, a multiple record of the daily report of the same date is possible. Other characteristics of the sequence are not changed, especially if the date Year, Month, Day is conformable with the printer's clock and the totalizers are not empty, the report will be obligatorily recorded without any message/ confirmation.
3. In case that the totalizers are empty and the daily report has already been recorded on that day, the printer reports error 36.

3.21.2. Printing periodical report.

Periodical report with the range determined by dates:

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Year 1	0..99	;	1..2	
3	Month 1	1..12	;	1..2	
4	Day 1	1..31	;	1..2	
5	Year 2	0..99	;	1..2	
6	Month 2	1..12	;	1..2	
7	Day 2	1..31	;	1..2	
8	Kind of report	0..1, 6..7, 96..97		1	
9	Command	**#o**		2	
10	Cashier	Inscription	<CR>	0..32	Optional parameters – replacing those introduced during cashiers log-in.
11	Cash register number	Inscription	<CR>	0..8	
12	Control byte	00..FF		2	
13		<ESC>\		2	

Where:

Year 1, Month 1, Day 1
primal date,
Year 2, Month 2, Day 2
final date,
Kind of report
0 (or none): full report (fiscal document) from the range of the given dates,
1: sale's summary (non-fiscal document) from the range of the given dates,
6: full monthly report (fiscal document),

7: monthly sale's summary (non-fiscal document),
96: full accounting report from the range of the given dates,
97: summary of accounting report from the range of the given dates,

Cashier
inscription reserved to the cashier's name and surname,

Cash register number
inscription including the name of the cash register

Periodical report with the range determined by numbers.

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Kind of report	16..17, 96..97, 100		2	
3	Command	**#o**		2	
4	Number 1	Number	/	1..10	
5	Number 2	Number	/	1..10	
6	Cashier	Inscription	<CR>	0..32	Optional parameters – replacing those introduced during cashiers log-in.
7	Cash register number	Inscription	<CR>	0..8	
8	Control byte	00..FF		2	
9		<ESC>\		2	

Where:

Kind of report
16: full (fiscal document) from the range of the given numbers,
17: sale's summary (non-fiscal document) from the range of the given numbers,
96: accounting report from the range of the given numbers,
97: summary of accounting report from the range of the given numbers,
100: Non-fiscal report of fiscal memory read (parameters of No.1 and No. 2 are ignored)

Number 1
start number,

Number 2
end number,

Cashier
inscription reserved to the cashier's name and surname,

Cash register number
inscription including the name of the cash register

Errors' codes:

1: not initiated printer's clock,
2: control byte error,
3: wrong quantity of parameters,
4: error of parameters (values of the dates, also includes situations when the final date is earlier than the primal one, each of record in fiscal module for the given range of dates),
6: operation on fiscal memory error (fatal).

3.22. Orders of non-fiscal transactions.

3.22.1. Return of the package.

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Ignored	0..255 or none		1	
3	Command	**#w**		2	
4	Package	Inscription	<CR>	1..20	
5	Control byte	00..FF		2	

6		<ESC>\		2	

Where:

Package
Inscription including the name and the value of the returned package,

Errors' codes:

1: not initiated printer's clock,
2: control byte error,
5: printer's RTC clock readout error,
31: over-addition (exceeding the amount of cash in the cash register).
33: error in package inscription.

3.22.2. Receipt of sale.

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Printing the number of the cash register and the cashier	0..1	**;**	1	
3	Way of printing	0..2		1	
4	Command	**#g**		2	
5	Cash register number	Inscription	<CR>	1..2	
6	Cashier's number	Inscription	<CR>	1..5	
7	Receipt number	Inscription	<CR>	1..12	
8	Customer	Inscription	<CR>	1..15	
9	Terminal	Inscription	<CR>	1..8	
10	Name of the card	Inscription	<CR>	1..16	
11	Number of the card	Inscription	<CR>	1..20	
12	Month	Inscription	<CR>	1..2	
13	Year	Inscription	<CR>	1..2	
14	Code of authorization	Inscription	<CR>	1..9	
15	Amount	Number	/	1..11	
16	Control byte	00..FF		2	
17		<ESC>\		2	

Where:

Printing the number of cash register and cashier
0: line including cash register number / cashier's number is printed,
1: the above mentioned line is not printed,
Way of printing
0: print two copies, between the first and the second one a button has to be pushed,
1: print two copies – one after another (useful in a version with a „non-cutting" cutter),
2: print one copy,
Cash register number
Inscription including cash register number,
Cashier's number
Inscription including cashier's number,
Receipt number
Inscription including receipt number, paid with the appliance of a credit card,
Customer
Inscription including customer's name,
Terminal
Inscription including terminal's name,

Name of the card
Inscription including the name of the credit card,
Number of the card
Inscription including the number of the credit card,
Month
Inscription including the number of month in the year, determining the validity of the card,
Year
Inscription including two last digits of the year of validity of the card,
Authorization code
Inscription including authorization code,
Amount
Amount paid by credit card,

Remarks:

1. As in other controlling sequences, the 'string' type parameters may include optional printed characters.
2. If the parameter 'Way of printing' = 0 or 1 than on the first document there is a description printed 'Original for the seller' while on the second one a description 'Copy for the purchaser'. The description is printed directly before the final inscription 'non-fiscal'.

Errors' codes:

1: not initiated printer's clock,
4: parameter error Ps,
2: control byte error,
5: printer's RTC clock readout error,
41: error in inscription Cash register number (too long or including wrong characters),
42: error in inscription Cashier's number,
43: error in inscription Receipt number,
44: error in inscription the Customer,
45: error in inscription the Terminal,
46: error in inscription Name of the card,
47: error in inscription Number of the card,
48: error in inscription the Month,
49: error in inscription the Year,
50: error in inscription authorization Code,
51: error in Amount value.

3.22.3. Transaction of accepting (return of goods).

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Printing the number of the cash register and the cashier	0..1	;	1	
3	Way of printing	0..2		1	
4	Command	**#h**		2	
5	Cash register number	Inscription	<CR>	1..2	
6	Cashier's number	Inscription	<CR>	1..5	
7	Receipt number	Inscription	<CR>	1..12	
8	Customer	Inscription	<CR>	1..15	
9	Terminal	Inscription	<CR>	1..8	
10	Name of the card	Inscription	<CR>	1..16	
11	Number of the card	Inscription	<CR>	1..20	
12	Month	Inscription	<CR>	1..2	
13	Year	Inscription	<CR>	1..2	
14	Authorization code	Inscription	<CR>	1..9	

15	Amount	Number	/	1..11	
16	Control byte	00..FF		2	
17		<ESC>\		2	

Where:

Printing the number of cash register and cashier
0: line including cash register number / cashier's number is printed,
1: the above mentioned line is not printed,
Way of printing
0: print two copies, between the first and the second one a button has to be pushed,
1: print two copies – one after another (useful in a version with a „non-cutting" cutter),
2: print one copy,
Cash register number
Inscription including cash register number,
Cashier's number
Inscription including cashier's number,
Receipt number
Inscription including receipt number, paid with the appliance of a credit card,
Customer
Inscription including customer's name,
Terminal
Inscription including terminal's name,
Name of the card
Inscription including the name of the credit card,
Number of the card
Inscription including the number of the credit card,
Month
Inscription including the number of month in the year, determining the validity of the card,
Year
Inscription including two last digits of the year of validity of the card,
Authorization code
Inscription including authorization code,
Amount
Amount paid by credit card,

Remarks:
1. As in other controlling sequences, the 'string' type parameters may include optional printed characters.
2. If the parameter 'Way of printing' = 0 or 1 than on the first document there is a description printed 'Original for the salver' while on the second one a description 'Copy for the purchaser'. The description is printed directly before the final inscription 'non-fiscal'.

Errors' codes:

1: not initiated printer's clock,
2: control byte error
4: parameter error,
5: printer's RTC clock readout error,
41: error in inscription Cash register number (too long or including wrong characters),
42: error in inscription Cashier's number,
43: error in inscription Receipt number,
44: error in inscription the Customer,
45: error in inscription the Terminal,
46: error in inscription Name of the card,
47: error in inscription Number of the card,
48: error in inscription the Month,
49: error in inscription the Year,
50: error in inscription authorization Code,
51: error in Amount value.

3.23. Additional non-fiscal printouts.

3.23.1. Starting the printout.

No	Field name	Content	Separator	Size	Remarks

1		<ESC>P		2	
2	Constant	0	;	1	
3	Printout number	1..255	;	1..3	
4	Header number	0..255		1..3	0 when the printout possesses only one kind of header
5	Printout options	0..255		1..3	Printout options, where the following bits mean: 1 – left margin on the printout 2 – no printout on paper (only electronic copy), 3 – no text in header printed 4 – without “Non-fiscal” margins printed
6	Whether there is transaction ID	0..1		1	
7	Command	**$w**		2	
8	Transaction ID	Text	<CR>		Optional parameter. It appears if field „Whether there is transaction ID” = 1
9	Control byte	00..FF		2	
10		<ESC>\		2	

Or (when defining protocol to send e-documents):

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	0	;	1	
3	Printout number	1..255	;	1..3	
4	Header number	0..255	;	1..3	0 when the printout possesses only one kind of header
5	Printout options	0..255	;	1..3	Printout options, where the following bits mean: 1 – left margin on the printout 2 – no printout on paper (only electronic copy), 3 – no text in header printed 4 – without “Non-fiscal” margins printed
6	Whether there is transaction ID	0..1		1	
7	Protocol to send eDocument	0..2		1	0 or field not exist – default protocol from configuration, 1 – NOVITUS, 2 – MF.
8	Command	**$w**		2	
9	Transaction ID	**Text**	<CR>		Optional parameter. It appears if field „Whether there is transaction ID” = 1
10	Control byte	00..FF		2	
11		<ESC>\		2	

Where:

Number of printout
Number of the report which line is to be printed. Accepted numbers are in the specification of printouts included in the further part of this chapter.

Number of the header
Number of the header which is to be printed (some reports posses few defined headers). If the printout possesses only one kind of header than this parameter should have the value = 0 (counting of the headers is started from zero). The meaning of each number depends on which printout they are present. Exact specification is included in the further part of this chapter.

Errors’ codes:

1: not initiated printer's clock,
2: control byte error,
4: parameter error,
5: printer's RTC clock readout error,

3.23.2. Printout line ($w).

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Number of printout	2..255	;	1..3	If 254 than in line will be printed a bar code (the fiscal printers which execute bar code printout). The code is sent in argument.
3	Number of lines	0..255	;	1..3	249 when the line is to be a QR code 255 when the line is to empty, 253 when the line „number of last receipt" 250 when the line is to be a graphic (in 1 argument submit a graphic index 0..5) 254 when the line is to be an undersign,
4	Text formatting	0..255	;	1..3	Optionally parameter, it can has value: 1 – bold text (decreases about half amount of characters placed in the single line)
5	Text formatting	0..255	;	1..3	1 – text inverse
6	Font	0..3	;	1	0 – basic font 1 – font 2 2 – font 3 (small)
7	Text formatting	0..1	;	1	0 – no centring 1 – centring
8	Font attributes	0..255		1..3	Attributes set on bits: 1 – font enlarged, reduced number of characters per line by half (enlargement contained in typeface) 2 – increased font 3 – font enlarged, reduced number of characters per line by half 4 – inverse 5 – font increased 4 x 6 – font enlarged 4 x
9	Command	**$w**		2	
10	Argument	Text	<CR>	0..64*	These arguments are optional. Their quantity is optional. *Maximum number of characters in non-fiscal printout line depends on printer model, font formatting and flags set in print start. Detailed values are provided in the additional table.
…					
N	Argument	Text	<CR>	0..64*	
n + 1	Control byte	00..FF		2	
n + 2		<ESC>\		2	

Where:

Number of printout
Number of the report which line is to be printed. Accepted numbers are in the specification of printouts is included in the further part of this chapter.

Number of line

Number of line which is to be printed (counting is started from zero, ignoring the ones which are headers). If this parameter is = 254 than an undersign will be printed, and when = 255 then an empty line will be printed. The meaning of each number depends on which printout they appear. Exact specification is included in the further part of this chapter.

Argument

An optional sequence of characters from the clusters: {a..z}, {A..Z}, {0..9}, {ąćęłóńśżźĄĆĘŁÓŃŚŻŹ}, {`~@#$%^&*()_-+=[{]}\|;:'",<.>/? }. Numeric arguments accept: digits, first three letters, special characters; text arguments accept: letters, first three digits, special characters. Alphanumeric arguments accept all the above mentioned characters. Quantity and kind of arguments which can be sent during the printout of specified lines were specified above.

Remarks:

1. Specification of arguments in lines uses the following symbols:
   a. *** alphanumeric argument
   b. ### numeric argument
   c. @@@ text argument
2. In Delio printers it is possible to print bar codes in non-fiscal printouts. In that case identification 254 should be placed as „Number of printout" parameter and then in field „Argument" place code which should be printed.

Errors' codes:

1: not initiated printer's clock,
2: control byte error,
4: parameter error,
5: printer's RTC clock readout error,

3.23.3. Ending the printout.

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	1	;	1	
3	Number of printout	1..255	;	1..3	If 255 than sending this sequence prior to an optional non-fiscal report would cause printing system number and additional lines after it
4	There is a system number	0..1	;	1	0 – No, 1 - Yes
5	Quantity of additional lines	0..3		1	
6	There is e-document sending mode	0..1	;	1	
7	Command	**$w**		2	
8	System No	Text	<CR>	0..16	Optional argument
9	Line No 1	Text	<CR>	0..64	Optional arguments. * - 64 characters for HD, wide paper, normal font, - 44 characters for HD, wide paper, enlarged font - 44 characters for HD, narrow paper, - 42 characters for Bono Online, Deon Online,
10	Line No 2	Text	<CR>	0..64	
11	Line No 3	Text	<CR>	0..64	
12	e-document sending mode	Number	<CR>	0..2	Optional argument Operating mode: 0 – if no confirmation of e-printout receiving by server, print the printout and don't try to send e-printout again 1 – if no confirmation of e-printout receiving by server, keep trying to send

					e-printout until successful 2 - if no confirmation of e-printout receiving by server, print the printout and keep trying to send e-printout until successful
13	Control byte	00..FF		2	
14		<ESC>\		2	

3.24. Specification of printouts.

In black letters are the fields which length is characteristic for VENTO printer (33 characters in a verse), in blue colour there are the ones lengthened for the QUARTO, DELIO printer (44 characters in a verse), in violet colour there are the ones lengthened for the VIVO printer (48 characters in a verse).

3.24.1. Printout No. 2 – Transactions put off

```
• Header 0:      TRANSACTION PUT OFF
• Header 1:      CONFIRMATION OF TRANSACTION REALISATION

           123456789012345678901234567890123456789012345678
• Line  0: Cash reg.No: ***************************************
• Line  1: Number of transaction:    ##########################
• Line  2: Cashier's number:         ##########################
```

3.24.2. Printout No. 3 – Operator functions report.

```
• Header 0:  RAPORT of OPERATOR'S FUNCTIONS

           123456789012345678901234567890123456789012345678
• Line 0:    Function #### ************************
```

3.24.3. Printout No. 4 – Cashier's report.

```
• Header 0:            REPORT OF CASHIER X
• Header 1:            REPORT OF CASHIER Z
• Header 2:            REPORT OF CASH REGISTER X
• Header 3:            REPORT OF CASH REGISTER Z
• Header 4:            CASHIER'S OFFLINE
• Header 5:            CASHIER'S ONLINE


           123456789012345678901234567890123456789012345678
• Line  0: NUMBER OF RESETS: ###
• Line  1: CASH REGISTER NUMBER ## ********************************
• Line  2:                    TOTAL SUMS
• Line  3: CURRENT POSITIVE SUM              ###############
• Line  4: CURRENT NEGATIVE SUM              ###############
• Line  5: PREVIOUS POSITIVE SUM             ###############
• Line  6: PREVIOUS NEGATIVE SUM             ###############
• Line  7:                                   ---------------
• Line  8: TOTAL POSITIVE SUM                ###############
• Line  9: TOTAL NEGATIVE SUM                ###############
• Line  10:                  SUM OF SALE
• Line  11:                      GOODS:
• Line  12: ##### POSITIVE POSITIONS         ###############
• Line  13: ##### OTHER SERVICES             ###############
• Line  14: ##### NEGATIVE POSITIONS         ###############
• Line  15: ##### POSITIVE CORRECTIONS       ###############
• Line  16: ##### NEGATIVE CORRECTIONS       ###############
• Line  17: ##### SHOP COUPON                ###############
• Line  18: SUB-TOTAL OF GOODS               ###############
```

```
• Line  19: SUB-TOTAL OF TAX                  ###############
• Line  20: DISCOUNT / OVERHEAD
• Line  21: DISCOUNT HEJ HEM                  ###############
• Line  22: DISCOUNT / OVERHEAD               ###############
• Line  23: DISCOUNT / OVERHEAD               ###############
• Line  24: DISCOUNT FOR THE EMPLOYEE         ###############
• Line  25: SUB-TOTAL OF PAYMENT DISCOUNT     ###############
• Line  26:                                   ---------------
• Line  27: TOTAL NET SALE                    ###############
• Line  28:              SUM OF MEANS OF PAYMENT
• Line  29:                 MEANS OF PAYMENT
• Line  30: MEAN OF PAYMENT##: @@@ @@@@@@@@@@       #######
• Line  31: ##### AMOUNT                          ##########
• Line  32: ##### COLLECTED                       ##########
• Line  33: ##### IN TURNOVER                     ##########
• Line  34: ##### START IN TURNOVER               ##########
• Line  35: ##### TYPE OF PAYMENT NO 2        ################
• Line  36: SUB-TOTAL OF MEANS OF PAYMENT      ################
• Line  37:             CORRECTION OF MEANS OF PAYMENT
• Line  38: ##### ADDED BANKING FUN.          ###############
• Line  39: ##### DECREASED BANKING FUN.      ###############
• Line  40: ##### SETTING ROUNDINGS           ###############
• Line  41: ##### SAVING THE CHEQUE           ###############
• Line  42: ##### RECALLING THE CHEQUE        ###############
• Line  43: ##### CONDUCT THE PAYMENT         ###############
• Line  44: SUB-TOTAL OF PAYMENT CORRECT      ###############
• Line  45:                                     -------------
• Line  46: TOTAL MEANS OF PAYMENT            ###############
• Line  47:                      OTHER SUMS
• Line  48: ##### POSITIVE REDUCTIONS         ###############
• Line  49: ##### NEGATIVE REDUCTIONS         ###############
• Line  50: ##### ERROR CORRECTION            ###############
• Line  51: ##### SUM OF RETURNS              ###############
• Line  52: ##### RETURN OF COSTS             ###############
• Line  53: ##### INVALIDATED MEANS           ###############
• Line  54: ##### POSITIONS OF SALE           ###############
• Line  55: ##### TOTAL DISCOUNT              ###############
• Line  56: ##### ANNULLED SALE               ###############
• Line  57: ##### SAVED SALE                  ###############
• Line  58: ##### CANCELLED SALE              ###############
• Line  59: ##### RECALLED SALE               ###############
• Line  60: ##### CHANGE IN PAYMENT MEANS     ###############
• Line  61: ##### WITHOUT TAX                 ###############
• Line  62: ##### FREE AMOUNT                 ###############
• Line  63: ##### RETURN OF OVERPAID VAT      ###############
• Line  64: ##### ISSUED STAMPS               ###############
• Line  65: ##### POSIT. FROM KEYBO. #######
• Line  66: ##### SCANNED POSITIONS  #######
• Line  67: ##### WEIGHTED POSITION  #######
• Line  68: TOTAL WEIGHTED POSITIONS              ##########
• Line  69: ##### POSITIVE TRANSACTIONS       ###############
• Line  70: ##### RETURN OF OVERPAID CASH     ###############
• Line  71: ##### OTHER TRANSACTIONS          ###############
• Line  72: ##### OPENING THE DRAWER          ###############
• Line  73: ##### CURRENT SUM                 ###############
• Line  74: ##### AMOUNT OF CUSTOMERS         ###############
• Line  75: ##:## CASHIER'S WORK TIME
• Line  76: ##:## TEMPOR. CASH REGISTER SET OFF
• Line  77: ##:## MOMENT OF INTRODUCING GOODS
• Line  78: ##:## MOMENT OF PAYMENT
• Line  79: ##:## MOMENT OF OPENING THE DRAWER
```

3.24.4. Printout No. 5 – Report of means of payment.

```
• Header 0:          REPORT OF MEANS OF PAYMENT

           12345678901234567890123456789012345678901234567890123456789012345678
• Line  0: CASHIER @@@@@@@@@@@@@@@@@@@@
```

```
• Line  1: MEAN OF PAYM.##:  @@@ @@@@@@@@@@       #######
• Line  2: ##### AMOUNT                        ##########
• Line  3: ##### COLLECTED                     ##########
• Line  4: ##### IN TURNOVER                   ##########
• Line  5: ##### START IN TURNOVER             ##########
• Line  6: SUB-TOTAL OF MEANS OF PAYMENT       ##########
```

3.24.5. Printout No. 6 – Sale recorded in the cash register.

```
• Header 0:          SALE RECORDED IN THE CASH REGISTER

           12345678901234567890123456789012345678901234567890123456789012345678
• Line  0: CASH REGISTER NUMBER ## @@@
• Line  1: SUB-TOTAL OF SALE                   ##########
• Line  2: SUB-TOTAL OF SALE RECEIPT           ##########
• Line  3: SUB-TOTAL OF DISCOUNT / OVERHEAD    ##########
• Line  4:                                     ----------
• Line  5: TOTAL SALE                          ##########
```

3.24.6. Printout No. 7 – Receipt

```
• Header 0:                  RECEIPT

           12345678901234567890123456789012345678901234567890123456789012345678
• Line  0: RETURN:          ##########################
• Line  1: MEAN OF PAYMENT:     @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
• Line  2: AMOUNT           ##########################
• Line  3: ACCOUNT:         ##########################
• Line  4: SIGNATURE:       ..........................
```

3.24.7. Printout No. 8 – Pre-payment.

```
• Header 0:                  PRE-PAYMENT

           12345678901234567890123456789012345678901234567890123456789012345678
• Line  0: NUMBER OF ORDER:                ##########
• Line  1: MEAN OF PAYMENT:     @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
• Line  2: AMOUNT:          ##########################
• Line  3: ACCOUNT:         ##########################
• Line  4: PRE-PAYMENT:           ####################
• Line  5: CHANGE:                ####################
```

3.24.8. Printout No. 9 – Gift bond.

```
• Header 0:               GIFT BOND

           12345678901234567890123456789012345678901234567890123456789012345678
• Line  0: *** REALIZED ***"
• Line  1: Amount:           ##########################
• Line  2: Cashier:
• Line  3: Date: ########## Hour: ################
           Shop:          **************************
```

3.24.9. Printout No. 10 – Credit note.

```
• Header 0:               CREDIT NOTE

           12345678901234567890123456789012345678901234567890123456789012345678
• Line  0: *** REALIZED ***"
• Line  1: Amount:           ##########################
• Line  2: Cashier:
• Line  3: Date: ########## Hour.: ################
           Shop:          **************************
```

3.24.10. Printout No. 11 – Credit note - return.

```
• Header 0:               CREDIT NOTE

            12345678901234567890123456789012345678901234567890123456789012345678
• Line  0: Amount:          ##########################################
• Line  1: In words:          **********************************************
• Line  2: Return No:          ##########################################
• Line  3: Cashier:
• Line  4: Date: ########## Hour: ################
            Shop:         **********************************************
```

3.24.11. Printout No. 12 – Discount coupon

```
• Header 0:               DISCOUNT COUPON

            12345678901234567890123456789012345678901234567890123456789012345678
• Line  0: *** REALIZED ***
• Line  1: Amount:          ##########################################
• Line  2: Cashier:
• Line  3: Date: ########## Hour: ################
            Shop:         **********************************************
```

3.24.12. Printout No. 13 – Payment on delivery

```
• Header 0:           PAYMENT ON DELIVERY

            12345678901234567890123456789012345678901234567890123456789012345678
• Line  0: *** REGISTERED SALE ***
• Line  1: ID number:                    ##########################################
• Line  2: Amount:          ##########################################
• Line  3: Cashier:
• Line  4: Date: ########## Hour: ################
            Shop:         **********************************************
```

3.24.13. Printout No. 14 – Banking transfer

```
• Header 0:             BANKING TRANSFER

            12345678901234567890123456789012345678901234567890123456789012345678
• Line  0: *** REALIZED ***
• Line  1: Customer No:           ##########################################
• Line  2: Amount:           ##########################################
• Line  3: Balance:          ##########################################
• Line  4: Cashier:
• Line  5: Date: ########## Hour: ################
            Shop:          **********************************************
```

3.24.14. Printout No. 15 – Gift bond

```
• Header 0:       CONFIRMATION OF GIFT BOND SALE

            12345678901234567890123456789012345678901234567890123456789012345678
• Line  0: Bond value:          ##########################################
• Line  1: Name:         **********************************************
• Line  2: Cashier:
• Line  3: Date: ########## Hour: ################
            Shop:         **********************************************
```

3.24.15. Printout No. 16 – Discount for the employee.

```
• Header 0:             DISCOUNT FOR THE EMPLOYEE

          12345678901234567890123456789012345678901234567890123456789012345678
```

```
• Line  0: DISCOUNT FOR THE EMPLOYEE:  ##########**********
• Line  1: Number of the employee:     #####***************
• Line  2: AMOUNT:                     ##########**********
• Line  3: SIGNATURE:       ..............................
```

3.24.16. Printout No. 17 – Change in means of payment.

```
• Header 0:          CHANGE IN MEANS OF PAYMENT

           12345678901234567890123456789012345678901234567890123456789012345678
• Line  0: FROM:            ********************************************
• Line  1: TO:              ********************************************
```

3.24.17. Printout No. 18 – Cash register operations.

```
• Header 0:              CASH REGISTER OPERATIONS

           12345678901234567890123456789012345678901234567890123456789012345678
• Line  0: OPERATION ###:         ********************
```

3.24.18. Printout No. 19 – Errors of the cash register.

```
• Header 0:                 ERRORS OF THE CASH REGISTER

           12345678901234567890123456789012345678901234567890123456789012345678
• Line  0: FATAL ERROR
• Line  1: Service:               **********
• Line  2: Device:                **********
• Line  3: Added device:          **********
• Line  4: Function:              **********
• Line  5: Sub-function:          **********
• Line  6: Register  # :          **********
• Line  7: Trans     # :          **********
• Line  8: Error code  :          **********
```

3.24.19. Printout No. 20 – Price list.

```
• Header 0:                    PRICELIST
• Header 1:                  PRICE CHANGES
• Header 2:             STATISTIC OF SALE
• Header 3:      CONFIRMATION OF CONDUCTING TRANSACTION

           12345678901234567890123456789012345678901234567890123456789012345678
• Line  0: SHOP ************************
• Line  1: DATE   ########  ########
• Line  2: Item code: ############## Price:     ##########
• Line  3: Item code: ##########     Date:      ##########
• Line  4: Price1: ##############  Price2:     ##########
• Line  5: Amount :                             ##########
```

3.24.20. Printout No. 21 – Giving a gift voucher.

```
• Header 0:          GIVING A GIFT VOUCHER
           12345678901234567890123456789012345678901234567890123456789012345678

• Line  0: GIFT VOUCHER:                    ################
• Line  1: VOUCHER NUMBER                 ********************
• Line  2: SUM :                            ###############
• Line  3: MEAN OF PAYMENT     ****************************
• Line  4: AMOUNT:         ##################################
• Line  5: ACCOUNT:        ##################################
• Line  6: CHANGE:              ##############################
```

3.24.21. Printout No. 22 – Confirmation of transaction.

- Header 0: Confirmation of payment with credit card
- Header 1: Confirmation of payment for receipt
- Header 2: Receipt
- Header 3: Receipt of transaction recognition
- Header 4: Receipt of cancellation
- Header 5: Receipt of authorization refusal

```
           12345678901234567890123456789012345678901234567890123456789012345678
- Line  0: Cash reg. No: ****             Cashier: *******
- Line  1: No of sale proof:    **************
- Line  2: No of transaction:   ***************
- Line  3: TID: ********              UID: ****************
- Line  4: TID: ********              MID: ****************
- Line  5: Payment for receipt No:
                      ********************************
- Line  6: For:         ********************************
- Line  7: No of customer:     ********************************
- Line  8: Card:          ********************************
- Line  9: **********************           Valid to: **/**
- Line 10: Sale:                 PLN **********************
- Line 11: Refund:               PLN **********************
- Line 12: Cash:                 PLN **********************
- Line 13: In words:        ********************************
- Line 14:                  ********************************
- Line 15: Commission:              PLN ******************
- Line 16: Total to pay:            PLN ******************
- Line 17: Authorization code:                 ************
- Line 18: Amount of points for transaction:     **********
- Line 19: Amount of points after transaction:   **********
- Line 20: Amount on the card:              ***************
- Line 21: Please debit my account
- Line 22: Please credit my account
- Line 23: Transaction invalid
- Line 24:                  PIN CODE ACCEPTED
- Line 25:             ........................
- Line 26:              signature of card's owner
- Line 27:                  signature of cashier
- Line 28:                  signature of the customer
- Line 29:                 ORIGINAL
- Line 30:                  COPY
- Line 31: Sale:                 *** **********************
- Line 32: Acceptation:          *** **********************
- Line 33: Cash:                 *** **********************
- Line 34: Commission:               *** ******************
- Line 35: Total to pay:             *** ******************
- Line 36: AID:           *********************************
- Line 37: TC:           *********************************
- Line 38: AAC:          *********************************
- Line 39: PSN:          *********************************
- Line 40: ATC:          *********************************
- Line 41: ARC:          *********************************
- Line 42: AAA: **********************************
                                      TD:************
- Line 43: TAC DEFAULT:         ****************************
- Line 44: TAC DENIAL:         ****************************
- Line 45: TAC ONLINE:         ****************************
- Line 46: IAC DEFAULT:         ****************************
- Line 47: IAC DENIAL:         ****************************
- Line 48: IAC ONLINE:         ****************************
- Line 49: Commercial Code **********:         ************
- Line 50: Additional data:        ************************
- Line 51: No. of ID document:         ...................
- Line 52: Authorization centre:       ********************
- Line 53:         CONFIRMATION OF AUTHORIZATION REFUSAL
- Line 54:               TRANSACTION REJECTED
```

```
• Line 55: System message:              ********************
• Line 56: Payment:               *** **********************
• Line 57: Total:                 *** **********************
• Line 58: Return:                *** **********************
• Line 59: Cashback:              *** **********************
• Line 60: Cash:                  *** **********************
• Line 61: SALE:                  *** **********************
• Line 62: REFUND:                *** **********************
• Line 63: FX RATE:          *********************************
• Line 64: TRANSACTION CURRENCY:          ******************
• Line 65: DCC service provided by:         ***************
• Line 66: REJECTION RECEIPT TRANSACTION WAS
• Line 67: REJECTED SYSTEM MESSAGE:         ***************
• Line 68:       CANCELLATION RECEIPT TRANSACTION WAS
• Line 69:                     CANCELED
• Line 70:                   PIN VERIFIED
• Line 71:                     SIGNATURE
```

3.24.22. Printout No. 23 – Confirmation of supercharging.

```
• Header 0:     Confirmation of supercharging GSM number
• Header 1:     Confirmation of number correctness

            12345678901234567890123456789012345678901234567890123456789012345678
• Line  0: Cash reg. No: ***          Cashier: *******
• Line  1: No. of sale proof:     ***************
• Line  2: Supercharging code: ********************
• Line  3: For: ********************************
• Line  4: Telephone number:  *********
• Line  5: Confirmation of supercharging by SMS
• Line  6: Value in PLN:                ************
• Line  7: I confirm correctness of telephone number
• Line  8:            ........................
• Line  9:                    customer signature
```

3.24.23. Printout No. 24 – Purchase of currencies.

```
• Header 0:        Confirmation of currency purchase

            12345678901234567890123456789012345678901234567890123456789012345678
• Line  0: Cash reg. No: ***        Cashier: *******
• Line  1: No. of sale proof:          ***********
• Line  2: Currency purchase:                  **** ************
• Line  3: Exch.rate of currency purchase:*********************
• Line  4: Value in PLN:                             ************
• Line  5: In words:            ********************************
• Line  6:                      ********************************
```

3.24.24. Printout No. 25 – Discount voucher.

```
• Header 0:                 DISCOUNT VOUCHER
• Header 1:                 LIST OF GOODS

            12345678901234567890123456789012345678901234567890123456789012345678
• Line  0: Shop ***    Cash reg. No: ***    Cashier: *******
• Line  1: No of sale proof:  ******************
• Line  2: BONUS GOODS                    AMOUNT OF BONUS
• Line  3: GOODS: ********************          ***********
• Line  4: TOTAL: ***********
• Line  5: BONUS: *************
• Line  6: BONUS: ********************************
• Line  7: VALID: ********************************
```

3.24.25. Printout No. 26 – Shift report.

- Header 0: SHIFT REPORT

```
           12345678901234567890123456789012345678901234567890123456789012345678
- Line  0: SHIFT:                    **********************
- Line  1: Cashier:                  **********************
- Line  2: INCOMS:                   ######################
- Line  3: CASH SALE:                 ####################
- Line  4: Card  ****************:          ################
- Line  5: Cheque ****************:         ################
- Line  6: Voucher ****************:        ################
- Line  7: Payment to the cash reg: ######################
- Line  8: Giving out the packages: #######################
- Line 9:  OUTCOMES:                 ######################
- Line 10: Pay out from the cash reg:######################
- Line 11: Returns of packages:     #######################
- Line 12: ACCOUNTING
- Line 13: Cash:                     ######################
- Line 14: Card  ****************:          ################
- Line 15: Cheque ****************:         ################
- Line 16: Voucher ****************:        ################
- Line 17: Packages:                 ######################
- Line 18: TOTAL
- Line 19: CASH STATE:               ######################
- Line 20: AMOUNT OF RECEIPTS:      #######################
- Line 21: AMOUNT OF ANNULLED RECEIPTS:         ############
- Line 22: Amount of storno positions:          ############
- Line 23: Starting shift:                      ############
- Line 24: Finishing shift:                     ############
```

3.24.26. Printout No. 27 – Clearing the account.

- Header 0: Clearing the account
- Header 1: Gift card balance
- Header 2: Gift card
- Header 3: Confirmation of paying by card
- Header 4: Means of payments change
- Header 5: iCard balance
- Header 6: iCard transaction confirmation

```
           12345678901234567890123456789012345678901234567890123456789012345678
- Line  0:          Clearing the account         **********
- Line  1: State of account before transaction:  **********
- Line  2: Granted bonus:                        **********
- Line  3: Taken advantage:                      **********
- Line  4: State of account after transaction:   **********
- Line  5: Article no:                   ######## ##########
- Line  6: Card name:                @@@@@@@@@@@@@@@@@@@@
- Line  7: Card number:                  ####################
- Line  8: Authorization number:                        ####
- Line  9: Date of card validation:                 ##########
- Line 10: Card balance:                       ###############
- Line 11: iCard - charged:                     #########
- Line 12: iCard:                  *************** #########
- Line 13: Mean of payment issued        ******** #########
- Line 14: iCard quota:                          ##########
- Line 15: Mean of paym.         ***************** #########
- Line 16: Total:                                ##########
- Line 17: Change:                               ##########
           12345678901234567890123456789012345678901234567890123456789012345678
```

3.24.27. Printout No. 28 – Cash register / cashier report.

- Header 0: CASHIER REPORT

```
• Header 1:                SHORTEN REPORT

           12345678901234567890123456789012345678901234567890123456789012345678
• Line  0:                  Type of payment
• Line  1: Customer account                        ############
• Line  2: Routex                                  ############
• Line  3: LOMO                                    ############
• Line  4: DKV                                     ############
• Line  5: UTA                                     ############
• Line  6: Routex Manual                           ############
• Line  7: LOMO Manual                             ############
• Line  8: DKV Manual                              ############
• Line  9: UTA Manual                              ############
• Line 10: Banking card and T&E                    ############
• Line 11: Cheques                                 ############
• Line 12: Vouchers                                ############
• Line 13: Cash in   PLN                           ############
• Line 14: Foreign currenc. calc.                  ############
• Line 15: TOTAL                                  ##############
• Line 16:                      Incomes
• Line 17: Beginning amount                        ############
• Line 18: Sale                                    ############
• Line 19: Pay in                                  ############
• Line 20: Appearing on account                    ############
• Line 21: Incaso differences                      ############
• Line 22: TOTAL                                  ##############
• Line 23:                     Outcomes
• Line 24: Returns                                 ############
• Line 25: Pay out                                 ############
• Line 26: Ending amount                           ############
• Line 27: TOTAL                                  ##############
• Line 28:                   Payments in PLN
• Line 29: Cheques in safe                         ############
• Line 30: Cheques in the cash register            ############
• Line 31: TOTAL                                  ##############
• Line 32: Vouch. In safe                          ############
• Line 33: Vouch. In cash register                 ############
• Line 34: TOTAL                                  ##############
• Line 35: Cash in safe                            ############
• Line 36: Cash in cash register                   ############
• Line 37: TOTAL                                  ##############
• Line 38:                Payments in foreign currencies
• Line 39: DM in safe                              ############
• Line 40: DM in cash register                     ############
• Line 41: TOTAL                                  ##############
• Line 42: USD in safe                             ############
• Line 43: USD in cash register                    ############
• Line 44: TOTAL                                  ##############
• Line 45: GBP in safe                             ############
• Line 46: GBP in cash register                    ############
• Line 47: TOTAL                                  ##############
• Line 48:                       Safe
• Line 49:                  No. of hiding place ####
• Line 50: Cash in PLN                             ############
• Line 51: Cheque                                  ############
• Line 52: Voucher                                 ############
• Line 53: DM                                      ############
• Line 54: USD                                     ############
• Line 55: GBP                                     ############
• Line 56:                Clearing the cashier
• Line 57: Cheques in cash register                ############
• Line 58: Counted cheques                         ############
• Line 59: DIFFERENCE                              ############
• Line 60: Vouch in cash register                  ############
• Line 61: Counted vouch.                          ############
• Line 62: DIFFERENCE                              ############
• Line 63: Cash in PLN                             ############
• Line 64: Cash counted                            ############
```

```
• Line 65: DIFFERENCE                          ############
• Line 66: DM in cash register                 ############
• Line 67: DM counted                          ############
• Line 68: DIFFERENCE                          ############
• Line 69: USD in cash register                ############
• Line 70: USD counted                         ############
• Line 71: DIFFERENCE                          ############
• Line 72: GBP in cash register                ############
• Line 73: GBP counted                         ############
• Line 74: DIFFERENCE                          ############
• Line 75:            Shift closed
• Line 76: Shift No                                     ###
• Line 77: Cashier                      ####################
```

3.24.28. Printout No. 29 – Pay in / Pay out.

```
• Header 0:               RECEIPT FROM PAY IN
• Header 1:               RECEIPT FROM PAY OUT

           123456789012345678901234567890123456789012345678
• Line  0: Number:                                    ######
• Line  1: To whom:                       @@@@@@@@@@@@@@@@@@@
• Line  2: Title of pay in / pay out               how much
• Line  3: Prepayment                          #############
• Line  4: Protection                          #############
• Line  5: To invoice                          #############
• Line  6: Coins                               #############
• Line  7: Pay in 1                            #############
• Line  8: Pay in 2                            #############
• Line  9: Safe                                #############
• Line 10: Pay out 1                           #############
• Line 11: Pay out 2                           #############
• Line 12: To bank                             #############
• Line 13: Coins                               #############
• Line 14: Pay out                             #############
• Line 15: Total                               #############
• Line 16:             Above amount received
• Line 17:               ......................
• Line 18:                      signature
```

3.24.29. Printout No. 30 – States of counters.

```
• Header 0:                STATES OF COUNTERS

           123456789012345678901234567890123456789012345678
• Line  0: Pomp  ## ##### state            #############lit.
• Line  1:                 Counters total
• Line  2: Fuel            ##############################lit.
```

3.24.30. Printout No. 31 – Report of tanking.

```
• Header 0                 REPORT OF TANKING

           123456789012345678901234567890123456789012345678
• Line  0: No Sort                 Cont. Capacity  Reserve    Alarm
• Line  1: ## ##########          ######## #####   ########
```

3.24.31. Printout No. 32 – Confirmation of payment by card.

```
• Header 0                 CREDIT CARD 0 29 0

           123456789012345678901234567890123456789012345678
• Line  0: No of transaction:                        ######
```

```
• Line  1: Date: ########                    Hour:    #####
• Line  2: Name of card:                  @@@@@@@@@@@@@@@@
• Line  3: Number of card:              ##################
• Line  4: Transaction with card:                  ######
• Line  5: No of authorization                     ######
• Line  6: Authorization ID:                      #######
• Line  7: No. Name                          Uom  Amount
• Line  8: ##  @@@@@@@@@@@@@@                 *** #######
• Line  9: AMOUNT:                            ##########
• Line 10.             ........................
• Line 11:                        signature
• Line 12: Owner    :             ************************
• Line 13: Data ident.:           ************************
• Line 14: Data ident.:           ************************
• Line 15: Mileage:                        ###############
• Line 16: Driver code:                         ##########
• Line 17: Registr. No:                   ******************
```

3.24.32. Printout No. 33 – Currency in the safe.

```
• Header 0:                 CURRENCY IN THE SAFE

           12345678901234567890123456789012345678901234567890123456789012345678
• Line  0: TOTAL CASH IN THE SAFE :                          ##########
• Line  1: ### ########## IN THE SAFE :                     ##########
• Line  2: TOTAL CHEQUES IN THE SAFE :                       ##########
• Line  3: TOTAL VOUCHERS IN THE SAFE:                       ##########
• Line  4: TOTAL IN THE SAFE :                               ##########
• Line  5: NUMBER OF HIDING PLACE                          ###############
```

3.24.33. Printout No. 34 – Report of fuel alarm.

```
• Header 0:              REPORT OF FUEL ALARM

           12345678901234567890123456789012345678901234567890123456789012345678
• Line  0: Container no                                            #######
• Line  1: Fuel description                                ##################
• Line  2:         ALARM TYPE:
• Line  3: ************************************
• Line  4: ************************************
• Line  5: ************************************
• Line  6: DATE                                    ###############
• Line  7: TIME                                         #########
```

3.24.34. Printout No. 35 – Ticket to car wash.

```
• Header 0:                 TICKET TO CAR WASH

           12345678901234567890123456789012345678901234567890123456789012345678
• Line  0: VALID ON ## PROGRAM NO ##                        PLN ######
• Line  1:      IN ORDER TO START WASH ENTER
• Line  2:                  PROGRAM CODE
• Line  3: PROGRAM CODE:                           ###############
• Line  4: ISSUED (DAY)  ############                 TIME ########
• Line  5:               INVITE YOU TO
• Line  6:                OUR CAR WASH
```

3.24.35. Printout No. 36 – Report of fuel state.

```
• Header 0:              REPORT OF CONTAINERS STATE

           12345678901234567890123456789012345678901234567890123456789012345678
• Line  0: MODULE: *** POSITION: ### PROBE NO ####
```

```
• Line  1: DESCRIPTION:    ********************************
• Line  2: PRODUCT:        ********************************
• Line  3:                              LEVEL     CAPACITY
• Line  4:                                (CM)      (LTR)
• Line  5: CAPACITY                   ########## ############
• Line  6: PRODUCT                    ########## ############
• Line  7: WATER                      ########## ############
• Line  8: TOTAL                      ########## ############
• Line  9:                  TEMPERATURE CORRECTION
• Line 10: PRODUCT                    ########################
• Line 11: WATER                      ########################
• Line 12: TOTAL                      ########################
• Line 13: MAX.LEVEL OF FILLING:       ########################
• Line 14: MAX.TO FILLING:              ######################
• Line 15: AVERAGE TEMPERAT. OF PRODUCT:          ###########
```

3.24.36. Printout No. 37 – Report of fuel delivery.

```
• Header 0:             REPORT OF FUEL DELIVERY

           12345678901234567890123456789012345678901234567890123456789012345678
• Line  0: CONTAINER:                                              #######
• Line  1: MARK:       ######          PRODUCT: ############
• Line  2: REPORT OF DELIVERY – STABLE
• Line  3: BEFORE DELIVERY
• Line  4: PRODUCT CAPACITY:             ###################
• Line  5: WATER CAPACITY:               ###################
• Line  6: CAPACITY TO FILLING:          ###################
• Line  7: TEMPERAT. OF PRODUCT:            ################
• Line  8: AFTER DELIVERY
• Line  9: PRODUCT CAPACITY:             ###################
• Line 10: WATER CAPACITY:               ###################
• Line 11: CAPACITY TO FILLING:          ###################
• Line 12: TEMPERAT. OF PRODUCT:            ################
• Line 13: DELIVERY
• Line 14: DATE: ############           TIME: ##############
• Line 15: CAPACITY:                      ##################
• Line 16: TEMPERATURE:                   ##################
• Line 17: NET DELIVERY 15C):             ##################
• Line 18: TEMPERAT. OF PRODUCT:            ################
• Line 19: ACCOUNTANT DELIVERY CAPAC.:    ################
• Line 20: DIFFERENCE:                    ##################
```

3.24.37. Printout No. 38 – Report of BP partner club change.

```
• Header 0:              BP partner club

           12345678901234567890123456789012345678901234567890123456789012345678
• Line  0: No of terminal                        Name of station
• Line  1: #########                  @@@@@@@@@@@@@@@@@@@@@@@@
• Line  2: The next number                        ###############
• Line  3: Terminal code                          ###############
• Line  4: Operator                    ########################
• Line  5: Starting time                               #########
• Line  6: Starting date                          ###############
• Line  7: Finishing time                              #########
• Line  8: Finishing date                         ###############
• Line  9: Tariff PKT man. TR. man. 36 9 0
• Line 10: TAR ##:                ############################
• Line 11 : % of emission              ########################
• Line 12 : Sold litres                ########################
• Line 13: Issued litres               ########################
• Line 14: DAR                         ########################
```

```
• Line 15: Points changed            ######################
• Line 16: Points registered         ######################
• Line 17: Trans. Given away         ######################
```

3.24.38. Printout No. 39 – Gift confirmation.

```
• Header 0:              BP partner club

           12345678901234567890123456789012345678901234567890123456789012345678
• Line  0: No of terminal                    Name of station
• Line  1: #########                 ######################
• Line  2: Amount #########              Gift number #######
• Line  3: of points for the gift             ##############
• Line  4: Total points with gift             ##############
• Line  5: Number of card          ##########################
• Line  6: Initial points                     ##############
• Line  7: Cancelled points                   ##############
• Line  8: New points total                   ##############
• Line  9: Name          @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
• Line 10: Thank you. See you again
• Line 11: No of terminal                     ##############
• Line 12: Seller's code                      ##############
• Line 13: Date ##############           Cashier no #########
• Line 14: Time                                   ##########
```

3.24.39. Printout No. 40 – Confirmation of giving away the gift.

```
• Header 0:              BP partnerclub

           12345678901234567890123456789012345678901234567890123456789012345678
• Line  0: Time ##########            Date ##################
• Line  1: Amount ##########              Gift number #######
• Line  2: of points for the gift              ##############
• Line  3: Total points for the gift           ##############
• Line  4: Name     ************************************
```

3.24.40. Printout No. 41 – Confirmation of paying by credit card.

```
 • Header 0: Confirmation of paying by credit card
              12345678901234567890123456789012345678901234567890123456789012345678
 • Line   0: Cash Reg.No: ###       Cashier:       #######
 • Line   1: No. of sale evidence:         ################
 • Line   2: TID: ########          UID: #################
 • Line   3: TID: ########          MID: #################
 • Line   4: Paying for bill No.:     ********************
 • Line   5: For:       @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
 • Line   6: Card:  ************************************
 • Line   7: ********************** Valid to: ##/##
 • Line   8: S A L E :           # # # # # # # # # #    $
 • Line   9: REFUND :            # # # # # # # # # #    $
 • Line  10: CASH :              # # # # # # # # # #    $
 • Line  11: In words:     ******************************
 • Line  12:               ******************************
 • Line  13: Authorisation code:              ************
 • Line  14: No.of points for transaction:      #########
 • Line  15: No.of points after transaction:    #########
 • Line  16: Amount on card:                   ###########
 • Line  17:          Please debit my account
 • Line  18:            Please credit my account
 • Line  19:            TRANSACTION INVALID
 • Line  20:             PIN CODE VERIFIED
 • Line  21:            ......................
 • Line  22:            Signature of card owner
 • Line  23:                   ORIGINAL
 • Line  24:                     COPY
```

3.24.41. Printout No. 42 – Confirmation of GSM number re-charging

```
• Header 0: Confirmation of GSM number re-charging
             12345678901234567890123456789012345678901234
• Line   0: Cash Reg.No: ###            Cashier: #######
• Line   1: No.of sale evidence:         ################
• Line   2: Re-charging code:        ####################
• Line   3: For:
• Line   4:           ********************************
• Line   5: Telephone No:  #########
• Line   6: Re-charging confirmation by SMS
```

3.24.42. Printout No. 43 – Confirmation of re-charging / re-charging cancellation / re-charging order

```
• Header 0: Re-charging confirmation
• Header 1: Re-charging order
• Header 2: Confirmation of re-charging cancellation
             12345678901234567890123456789012345678901234
• Line   0: Cash Reg.No: ###            Cashier: #######
• Line   1: Date: ##########                 Hour: #####
• Line   2: TID: ########         MID: ##################
• Line   3: No.of sale evidence:     ******************
• Line   4: No.of payment:    ************************
• Line   5: Packet: ######      RPN: ####################
• Line   6: AUTHORIZATION CODE:  ***********************
• Line   7: Transaction No:    ************************
• Line   8: Serial No:      ****************************
• Line   9: Control No:
• Line  10:         ***********************************
• Line  11: Bar code:         ************************
• Line  12:         ***********************************
• Line  13: Title:       *******************************
• Line  14:              *******************************
• Line  15: Telephone No:       ########################
• Line  16: Identificator:      ************************
• Line  17: Account re-charging succeed
• Line  18: Re-charging confirmation by SMS
• Line  19: Re-charging code:
• Line  20:              ##################################
• Line  21: Validation date:                   ##########
• Line  22: Price:                          ########## $
• Line  23: Discount:                       ########## $
• Line  24: Charge:                         ########## $
• Line  25: Total to pay:                   ########## $
• Line  26: Charge paid by: cash
• Line  27: Charge paid by: payment card
• Line  28: Card No:      ################################
• Line  29: System message:
• Line  30:               ******************************
• Line  31:               ******************************
• Line  32:          Re-charging confirmation
• Line  33:               Customer signature:
• Line  34:            ......................
• Line  35:               O R I G I N A L
• Line  36:                  C O P Y
• Line  37:         Receipt is a proof of payment
• Line  38:               Keep the receipt
```

3.24.43. Printout No 44 – Payment confirmation / payment cancellation

```
• Header 0: Payment confirmation
• Header 1: Confirmation of payment cancellation
             12345678901234567890123456789012345678901234
• Line   0: Cash Reg.No: ###            Cashier: #######
• Line   1: Date: ##########              Hour:    #####
```

```
• Line   2: TID: ########         MID: ##################
• Line   3: Payment No:       *************************
• Line   4: Transaction No:    *************************
• Line   5: Control No:
• Line   6:         ************************************
• Line   7: Bar code:         ###########################
• Line   8:         ###########################################
• Line   9: Invoice issuer:       **********************
• Line  10: Invoice No:     ****************************
• Line  11: Customer No:    ****************************
• Line  12: Title:       @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
• Line  13:              @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
• Line  14: Term of payment:                    ###########
• Line  15: Value:   $                         ###########
• Line  16: Discount: $                        ###########
• Line  17: Interest: $                        ###########
• Line  18: Charge: $                          ###########
• Line  19: Total to pay: $                    ###########
• Line  20: In words:    @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
• Line  21:              @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
• Line  22: Charge paid by: cash
• Line  23: Charge paid by: payment card
• Line  24: Card No:      ##############################
• Line  25: System message:
• Line  26:     @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
• Line  27:     @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
• Line  28:                O R I G I N A L
• Line  29:                   C O P Y
```

3.24.44. Printout No 45 – Discount coupon

```
• Header 0: Discount coupon
             12345678901234567890123456789012345678901234
• Line   0: Coupon to receipt:   ###### ########## #####
• Line   1: Promoted goods               Amount of bonus
• Line   2: ------------------------------------------
• Line   3: ************************         ###########
• Line   4: ------------------------------------------
• Line   5: TOTAL                            ###########
• Line   6:                            ####################
• Line   7: Valid                 ########## - ##########
• Line   8:                            ####################
• Line   9:              Without bar code
```

3.24.45. Printout No 46 – Confirmation of transaction / pre-authorization / cancellation / authorization rejection

```
• Header 0: TRANSACTION CONFIRMATION
• Header 1: PRE-AUTHORIZATION
• Header 2: CANCELLATION CONFIRMATION
• Header 3: CONFIRMATION OF AUTHORIZATION REJECTION
             12345678901234567890123456789012345678901234
• Line   0: Authorization centre:   ********************
• Line   1: Cash Reg.No: ###            Cashier: #######
• Line   2: No.of sale evidence:         ###############
• Line   3: TID: ########          UID: ##################
• Line   4: TID: ########          MID: ##################
• Line   5: Paying for bill No:      ********************
• Line   6: For:       @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
• Line   7: Card: *************************     PSN:**
• Line   8: ***********************      Valid to: ##/##
• Line   9:  P R E - A U T . :    # # # # # # # # # #    $
• Line  10:  S A L E :           # # # # # # # # # #    $
• Line  11:  R E F U N D :       # # # # # # # # # #    $
• Line  12:  C A S H :           # # # # # # # # # #    $
• Line  13:  P A Y M E N T :     # # # # # # # # # #    $
```

```
• Line  14:  T O T A L :         # # # # # # # # #    $
• Line  15: In words:      ******************************
• Line  16:                ******************************
• Line  17:          Please debit my account
• Line  18:            Please credit my account
• Line  19:            TRANSACTION CANCELLED
• Line  20:             TRANSACTION REJECTED
• Line  21:           PREAUTHORIZATION COMPLETED
• Line  22:           TRANSACTION REGISTERED
• Line  23:             PIN CODE VERIFIED
• Line  24:            ......................
• Line  25:            Signature of card owner
• Line  26: System message:        **********************
• Line  27:     ****************************************
• Line  28:     ****************************************
• Line  29: Authorization code:             ************
• Line  30: Commercial Code     ************************
• Line  31: Additional data:    ************************
• Line  32: ****[****]:     ****************************
• Line  33:                 ****************************
• Line  34: No.of identity card:      ..................
• Line  35: No.of points for transaction:      #########
• Line  36: No.of points after transaction:    #########
• Line  37: Amount on card:                   ###########
• Line  38:                   ORIGINAL
• Line  39:                     COPY
```

3.24.46. Printout nr 47 – Transaction / pre-authorization / cancellation / declination confirmation

```
• Header 0: TRANSACTION CONFIRMATION
• Header 1: PRE-AUTHORIZATION CONFIRMATION
• Header 2: CANCELLATION CONFIRMATION
• Header 3: DECLINATION CONFIRMATION
             12345678901234567890123456789012345678901234
• Line   0: Acquirer/Processor:     ********************
• Line   1: ECR no: ###                 Cashier: #######
• Line   2: Receipt number:              ################
• Line   3: TID: ########          UID: #################
• Line   4: TID: ########          MID: #################
• Line   5: Invoice number:          ********************
• Line   6: For:       @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
• Line   7: Card: ************************** PSN: **
• Line   8: ***********************     Valid date:##/##
• Line   9:  P R E - A U T . : # # # # # # # # # #    $
• Line  10:  S A L E :   # # # # # # # # # #    $
• Line  11:  R E F U N D :   # # # # # # # # # #    $
• Line  12: In words:     ******************************
• Line  13:  ******************************

• Line  14: Fx rate: 1 *** = ############ $
• Line  15: Trans.currency: ########## ***
• Line  16: DCC service provided by     ****************
• Line  17: Statement:     ******************************
• Line  18: ****************************************

• Line  19: ****************************************

• Line  20: ****************************************

• Line  21: ****************************************

• Line  22: ****************************************

• Line  23: ****************************************

• Line  24: ****************************************
```

```
• Line  25: ****************************************

• Line  26:            Please debit my account
• Line  27:           Please credit my account
• Line  28:             TRANSACTION CANCELLED
• Line  29:             TRANSACTION REJECTED
• Line  30:                  COMPLETION
• Line  31:                   OFF-LINE
• Line  32:                 PIN VERIFIED
• Line  33:            .......................
• Line  34:                   Signature
• Line  35: System message: ************************
• Line  36: ****************************************

• Line  37: ****************************************

• Line  38: Authorization code:             ************
• Line  39: Commercial Code     ************************
• Line  40: Extra data:         ************************
• Line  41: ****[****]:     ****************************
• Line  42:  ****************************

• Line  43: Document ID:     ...........................
• Line  44: Points for transaction:            #########
• Line  45: Points after transaction:          #########
• Line  46: Amount on the card:              ###########
• Line  47:                   ORYGINAL
• Line  48:                     COPY
```

3.24.47. Printout No. 100 – Electronic transaction.

```
              123456789012345678901234567890123456789012345678
• Line  0: ******************************************
           ******************************************
           ****************************  POS ID: ########
• Line  1: MID: ############
• Line  2: EVIDENCDE OF SALE NO: ######
• Line  3:          C O N F I R M A T I O N  O F
                    C A N C E L A T I O N
• Line  4: FOR EVIDENCDE OF SALE NO: ######
• Line  5: @@@@@@@@@@@@@@@@  VALID UNTIL: ###########
              * * * * * * * * * * * * * * * * * * * * * * *
• Line  6:  S A L E :   # # # # # # # # # # # # #
• Line  7: TIP:                                  ..........
• Line  8: TOTAL:                                ..........
• Line  9:  P R E - A U T . :   # # # # # # # # # # # # # #
• Line 10:  C L O S I N G  T H E   P R E - A U T .
• Line 11:  Q U O T E :         # # # # # # # # # # # # # #
• Line 12:  C A S H :           # # # # # # # # # # # # # #
• Line 13:  R E T U R N :       # # # # # # # # # # # # # #
• Line 14:             C A N C E L A T I O N
• Line 15: CANCELLED TRANSACTION
• Line 16: PLEASE DEBIT MY ACCOUNT
• Line 17: PLEASE CREDIT MY ACCOUNT
• Line 18: SIGNATURE OF THE OWNER OF THE CARD
• Line 19: ..............................................
• Line 20:          A C C O R D A B L E  P I N
• Line 21: AUTHORIZATION CODE: *********************
• Line 22: DATE: ########## HOUR: ######### CASH REGISTER: ###
• Line 23: INFORMATION:
               **********************************
               **********************************
               **********************************
  Line 24:                    COPY
• Line 25: -------------- NO AUTHORIZATION ----------------
               *******************************************
• Line 26: -------------- NO AUTHORIZATION ----------------
```

```
                * * * * * * * * * * * * * * * * * * * * * * * * *
                 * * * * * * * * * * * * * * * * * * * * * * * * *

• Line 27: No.of document: ..........................
• Line 28: THANK YOU FOR YOUR VISIT
• Line 29: PLEASE TAKE THE RECEIPT
• Line 30: --------------- WE APOLOGIZE -------------------

• Line 31:       C A R D    A C C E P T A N C E
• Line 32: MSG NO: ######
• Line 33: @@@@@@@@@@@@@@@@@@@@         VALID TO: ##########
            ************************
• Line 34: TIP:                                 **************
• Line 35: TOTAL:                               **************
• Line 36: TRANS. NO: ######
• Line 37:                     R E C I P T
• Line 38:                   O F   V O I D
• Line 39: FOR TRANSACTION NO: ######
• Line 40: @@@@@@@@@@@@@@@@                EXP.: ##########
            * * * * * * * * * * * * * * * * * * * * * * * * * * *
• Line 41:  P U R C H A S E :   # # # # # # # # # # # # # # #
• Line 42: TIP:                                      ..........
• Line 43: TOTAL:                                    ..........
• Line 44:   C O M P L E T I O N
• Line 45:   A M O U N T :    # # # # # # # # # # # # # # #
• Line 46:   CASH :    # # # # # # # # # # # # # # #
• Lin  47:   R E F U N D :    # # # # # # # # # # # # # # #
• Line 48:                      V O I D
• Line 49: TRANSACTION VOIDED
• Line 50: PLEASE CREDIT MY ACCOUNT
• Line 51: PLAESE DEBIT MY ACCOUNT
• Line 52: SIGNATURE OF CARDHOLDER
• Line 53:              P I N   V E R I F I E D
• Line 54: AUTHORIZATION CODE: ********************
• Line 55: DATE: ########## TIME: ######## CASHIER: ###
• Line 56: INFORMATIONS:
             ****************************************
             ****************************************
             ****************************************
• Line  57:                    C O P Y
• Line  58:          --- TRANSACTION REJECTED ---
             ****************************************
• Line  59:          --- TRANSACTION REJECTED ---
              * * * * * * * * * * * * * * * * * * * *
• Line  60: Cardholder id.:                          ..........
• Line  61: THANK YOU FOR VISIT
• Line  62: PLEASE KEEP RECEIPT
• Line  63:                  --- SORRY ---
• Line  64:      A C C E P T A N C E   O F   A M O U N T
• Line  65: @@@@@@@@@@@@@@@@   EXP.:##########
             ******************************
• Line  66: TIP:                                 **************
• Line  67: TOTAL:                               **************
• Line  68: Merchant Currency                    **************
• Line  69:  T A X :           # # # # # # # # # # # # # # #
• Line  70: Exchange Rate*: #########                  * it is a reference,
not argument
• Lin  71: Exchange Rate*: #### @@@ = ######### @@@    * it is a reference,
not argument
• Line  72: Commission: ##### @@@ or #####%
• Line  73: Commission: ####### @@@
• Line  74: Fee/Mark-Up: #####%%
• Line  75: Transaction Currency                 **************
• Line  76: This currency conv. serv. is provided by
             ****************************************
• Line  77:       I recognize that I was given a choice
• Line  78:      of payment currencies and that I could
• Line  79:         have paid in @@@. I accepted the
```

```
• Line  80:         Exchange Rate used to perform the
• Line  81:          currency conversion and that my
• Line  82:         decision to paid in @@@ is final.
• Line  83: *Exchange Rate is based on                  * is it a symbol of
footnote, not argument
            ****************************************
• Line  84: Wholesale Rate as at ##########.
• Line  85: STATEMENT:
              @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
              @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
              @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
• Line  86: FOR RECEIPT  ****************
• Line  87: @@@@@@@@@@@@@@@@ (##) (#)
• Line  88: ###### #### (##)                          *****
• Line  89: AID:   ****************************************
• Line  90: TC:   ****************************************
• Line  91: STATUS: ********************
• Line  92:  C O M P L E M E N T
• Line  93: COMMERCIAL CODE   ****************************
• Line  94: ADDITIONAL DATA:  ****************************
• Line  95: W I T H D R A W A L :  # # # # # # # # # # # # #
• Line  96:!! T H A N K   Y O U   F O R   Y O U R   V I S I T !!
                 KEEP TRANSACTION'S EVIDENCE
• Line  97: -------------- NO AUTHORIZATION --------------
                * * * * * * * * * * * * * * * * * * * * *
                * * * * * * * * * * * * * * * * * * * * *
                * * * * * * * * * * * * * * * * * * * * *
• Line  98: -------------------- ERROR --------------------
                * * * * * * * * * * * * * * * * * * * * *
                * * * * * * * * * * * * * * * * * * * * *
                * * * * * * * * * * * * * * * * * * * * *
• Line  99:           D E M O   M O D E
• Line 100:      P I N   C O D E   A C C O R D A B L E
• Line 101: C O M M I S S I O N:     # # # # # # # # # # #
• Line 102:  F E E :           # # # # # # # # # # # # #
• Line 103: AUTHORIZATION:**********              ********
• Line 104: CUSTOMER KNOWS THE PROCEDURE OF GOODS RETURN
• Line 105: DATE: ########## HOUR .: ######## CASHIER: ###
• Line 106: T I P :              # # # # # # # # # # # #
• Line 107: T O T A L :        # # # # # # # # # # # # #
• Line 108: AGENT NO.   **********************************
• Line 109: POLICY NO.  **********************************
• Line 110: BALANCE:                          #############
• Line 111: Please debit my account
• Line 112: UID: # # # # # # # # # # # # # # # # # # # # # # # # #
• Line 113: MID: ########            BILL NO:  ########
• Line 114:            PIN CODE VERIFIED
• Line 115:            BILL FOR CUSTOMER
• Line 116: *************************              PSN: **
• Line 117: ***********************         VALID TO: ##/##
• Line 118: ATC: ########
            12345678901234567890123456789012345678901234567890123456789012345678
```

3.24.48. Printout No. 102 – Confirmation / Cancellation of telecode sale / prepaid.

```
• Header  0:      CONFIRMATION OF TELECODE SALE
• Header  1:      CANCELLATION OF TELECODE SALE
• Header  2:      CONFIRMATION OF PREPAID
• Header  3:      CANCELLATION OF PREPAID SALE

          12345678901234567890123456789012345678901234567890123456789012345678
• Line  0: ADDRESS OF POINT:
               *********************************************
               *********************************************
               *********************************************
• Line  1: CASH REGISTER: ###  CASHIER: @@@@@@@@@@
• Line  2: DATE: ##########  HOUR: ##########
```

```
• Line  3: TID:  ##########  PID: ################
• Line  4: UID:  ######################################
• Line  5: PAYMENT FOR:***************************************
• Line  6: CODE:  ^***************************************
                  ^***************************************
• Line  7: VALUE                        ####################
• Line  8: BONUS                        ####################
• Line  9: PAYMENT                      ####################
• Line 10: TOTAL TO BE PAYED            ####################
• Line 11: PAYMENT                      ####################
• Line 12: CHANGE                       ####################
• Line 13: No OF OPERATION ####################
• Line 14: No OF SERIES    ####################
• Line 15: INFORMATION:
           **********************************
           **********************************
           **********************************
• Line 16: ORIGINAL
• Line 17: COPY
• Line 18: ATTENTION! ***************************************
• Line 19: TERMINAL:   ******************
• Line 20: SALESMAN: ******************
• Line 21: CARD: ***************************************
• Line 22: TELECODE: ***************************************
• Line 23: DATE OF VALIDITY: ##########
• Line 24: INSTRUCTION :****************************************
• Line 25: INFORMATION :****************************************
• Line 26: No OF SALE EVIDENCE: ***************
• Line 27: UPLOADING CODE: ****************************
• Line 28: FOR: ****************************************
• Line 29: TELEPHONE No: ####################
• Line 30: CONFIRMATION OF UPLOADING BY SMS
• Line 31:     I confirm the correctness of the telephone number
• Line 32:             ......................
• Line 33:                  signature of the Customer

• Line 34:                    BILL NO:  ########
• Line 35:          **********************************
                    **********************************
                    ********** TID: ########
• Line 36: TELECARD               * * * * * * * * * * *
• Line 37: Operator's name:          @@@@@@@@@@@@@@@@@@@@
• Line 38: Credit account for:                $ ************
• Line 39: Transaction ID:                    ************
• Line 40: INSTRUCTION:\n ***************************************
                         **********************************
                         **********************************
                         **********************************
                         **********************************
```

3.24.49. Printout No. 103 – Confirmation / Cancellation of the payment for the receipt.

```
• Header  0:      CONFIRMATION OF THE PAYMENT FOR THE RECEIPT
• Header  1:      CANCELLATION OF THE PAYMENT FOR THE RECEIPT

          12345678901234567890123456789012345678901234567890123456789012345678
• Line  0: ADDRESS OF THE POINT:
           **************************************
           **************************************
           **************************************
• Line  1: CASH REGISTER: ###  CASHIER: @@@@@@@@@@
• Line  2: DATE: ##########  HOUR: ##########
• Line  3: TID:  ##########  PID: ################
• Line  4: UID:  ######################################
• Line  5: PAYMENT FOR:***************************************
• Line  6: CODE: ***************************************
                ***************************************
• Line  7: VALUE                        ####################
```

```
• Line  8: BONUS                          ##########
• Line  9: PAYMENT                        ##########
• Line 10: RATES                          ##########
• Line 11: NUMBER OF ACCOUNTS             ##########
• Line 12: PAYMENTS                       ##########
• Line 13: TOTAL TO BE PAID               ##########
• Line 14: PAYMENT                        ##########
• Line 15: CHANGE                         ##########
• Line 16: No OF OPERATION ##########
• Line 15: INFORMATION:
                **********
                **********
                **********
• Line 16: ORIGINAL
• Line 17: COPY
• Line 20: ATTENTION! **************
• Line 21: INFORMATION :**************
• Line 22: No OF SALE EVIDENCE: ********
```

3.24.50. Printout No. 104 – Loyalty transaction.

```
• Header  0:              ACKNOWLEDGEMENT OF POINTS
• Header  1:              CANCELLATION OFPOINTS
• Header  2:              GIVING AWAY THE GIFT
• Header  3:          CANCELLATION OF GIFT GIVING AWAY
• Header  4:               POINTS STATUS

• Header 5:             CORRECTION
• Header 6:            CANCELLATION
• Header 7:              CUMULATION
• Header 8:              GIFT
• Header 9:             CHECKING OUT


           12345678901234567890123456789012345678901234567890123456789012345678
• Line  0: ADDRESS OF THE POINT:
                **********
                **********
                **********
• Line  1: CASH REGISTER: ###  CASHIER: @@@@@@@@@@
• Line  2: DATE: ##########  HOUR: ##########
• Line  3: TID:  ##########  PID: ##########
• Line  4: UID:  ##########
• Line  5: CARD: ##########
• Line  6: QUANTITY OF POINTS: ##########
• Line  7: POINTS FOR:    **********
• Line  8: POINTS TOTAL:                  ##########
• Line  9: GIFT: **********
• Line 10: STATUS OF POINTS:              ##########
• Line 11: FOR:         **********
• Line 12: No OF OPERATION                ##########
• Line 13: PARAMETERS:                    ##########
• Line 14: GROUP OF CUSTOMERS:            ##########
• Line 15: GROUP
• Line 16: INFORMATION:
                **********
                **********
                **********
• Line 17: ORIGINAL
• Line 18: COPY
• Line 19: ATTENTION! **********
• Line 20: ------------------------------------------------
• Line 21:            C A N C E L L A T I O N

• Line 22: AUTHORIZATION CODE:                  **********
• Line 23: QUOTA OF PURCHASE:           ##########
• Line 24: NO.OF CANCELLED TRANSACT:              ##########
• Line 25: TRANSACTION TYPE:                  @@@@@@@@@@@@@@@@
```

```
• Line 26: SIGNATURE:
• Line 27:        ----------------------------------------
• Line 28: ADVERTISEMENT:
                  **********************************
                  **********************************
                  **********************************
• Line 29: POINTS FOR QUOTA:                ##########
• Line 30: POINTS FOR PROMOTION:            ##########
• Line 31: POINTS FOR TIME:                 ##########
• Line 32: POINTS FOR VISIT:                ##########
• Line 33: CARD:            ##########################
• Line 34: GIFT:                          **********
• Line 35:  ARTICLE            QUANTITY/VALUE      POINTS
• Line 36: ****************     *************      **********
• Line 37: NO. OF SALE EVIDENCE:               #########
```

3.24.51. Printout No. 105 – Parameters of loyalty scheme / customer's card.

```
• Header  0:         PARAMETERS OF LOYALTY DRAFT
• Header  1:         PARAMETERS OF CUSTOMER'S CARD

• Header  2:        PARAMETERS OF CUSTOMER REGISTRATION


           12345678901234567890123456789012345678901234567890
• Line  0: ADDRESS OF THE POINT:
               *********************************
               *********************************
               *********************************
• Line  1: CASH REGISTER: ###  CASHIER: @@@@@@@@@@
• Line  2: DATE: ##########  HOUR: ##########
• Line  3: TID:  ##########  PID: ##########
• Line  4: NAME:      **********************************
• Line  5: VALID FROM:                          ##########
• Line  6: VALID UNTIL:                         ##########
• Line  7: ADVERTISEMENT:**********************************
• Line  8: PAN DIGITS: ####################
• Line  9: GROUP: ********    ********************************
• Line 10: LIST OF ITEMS:       ********************************
• Line 11: ARTICLE:   **********************************
• Line 12: COEFFICIENT:               ##########
• Line 13: SUMMING UP:                 ##########
• Line 14: INDEX:                      ####################
• Line 15: LIST OF GIFTS: ##########
• Line 16: LIST OF GIFTS:    **********************************
• Line 17: GIFT:         **********************************
• Line 18: POINTS:     **********************************
• Line 19: PARAMETERS OF OPERATION:**********
• Line 20: PARAMETER:    **********************************
• Line 21: ------------------------------------------------
```

3.24.52. Printout No. 106 – Giving out the gift.

```
• Header  0:        REPORT OF LOYALTY TRANSACTION

           12345678901234567890123456789012345678901234567890
• Line  0: SPECIFIED
• Line  1: SUMMARIC
• Line  2: ADDRESS OF POINT:
               *********************************
               *********************************
               *********************************
• Line  3: CASH REGISTER: ###  CASHIER: @@@@@@@@@@
• Line  4: DATE: ##########  HOUR: ##########
• Line  5: TID:  ##########  PID: ##########
• Line  6: NAME: *********************************
```

```
• Line  7: FROM:                                        ##########
• Line  8: TO:                                          ##########
• Line  9: DATE HOUR:                                ##########
• Line 10: No:                                       ##########
• Line 11: TRANSACTION:  ***************************************
• Line 12: CARD:    ***************************************
• Line 13: GROUP:   ***************************************
• Line 14: PARAMETERS:  ***************************************
• Line 15: POINTS:                                   ##########
• Line 16: POINTS FOR:  ***************************************
• Line 17: GIFT:      ***************************************
• Line 18: QUANTITY:                                 ##########
• Line 19: ------------------------------------------------
• Line 20: IMPORTANT TRANSACTIONS:

• Line 21: CANCELLED TRANSACTIONS:

• Line 22: CUMULATION:                            ####################
• Line 23: QUOTA:                                 ####################
• Line 24: PROMOTION:                             ####################
• Line 25: TIME:                                  ####################
• Line 26: VISIT:                                 ####################
• Line 27: CHECKING OUT:                          ####################
• Line 28: GIFT:                                  ####################
• Line 29: CORRECTION:                            ####################
• Line 30:   (+)                                  ####################
• Line 31:   (-)                                  ####################
• Line 32: BALANCE:                               ####################
• Line 33:   ARTICLE          QUANTITY/VALUE      POINTS
• Line 34: ****************   *************      **********
```

3.24.53. Printout No. 107 – Report of notary fees.

```
• Header 0:          REPORT OF NOTARY FEES.

            12345678901234567890123456789012345678901234567890123456789012345678
• Line  0: ------------------------------------------------
• Line  1: DATE:                                    ##########
• Line  2: FEE:                        *************************
• Line  3: PAYMENTS:                   *************************
• Line  4: LEFT:                       *************************
• Line  5: CHANGE:                     *************************
```

3.24.54. Printout No. 108 – Receipt of payment by card.

```
• Header 0:           CONFIRMATION OF TRANSACTION
• Header 1:        CONFIRMATION OF PRE-AUTHORIZATION
• Header 2:         CONFIRMATION OF CANCELLING
• Header 3:       CONFIRMATION OF AUTHORIZATION REJECTION

            12345678901234567890123456789012345678901234567890123456789012345678
• Line  0: Centre of authorization:          ********************
• Line  1: Cash regist. ###                  Cashier: #######
• Line  2: No.of sale evidence:                ################
• Line  3: TID: ########                  UID: #################
• Line  4: TID: ########                  MID: #################
• Line  5: Payment for bill No.:             ******************
• Line  6: For:            @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
• Line  7: Card:  *************************            PSN:**
• Line  8: ########################              Valid to: ##/##
• Line  9: PRE-AUT.:                            ######### PLN
• Line 10: SALE:                                ######### PLN
• Line 11: REFUND:                              ######### PLN
• Line 12: CASH:                                ######### PLN
• Line 13: PAYMENT:                             ######### PLN
```

```
• Line 14: TOTAL:                                ######### PLN
• Line 15: In words:          ******************************
• Line 16:                    ******************************
• Line 17:            Please, debit my account
• Line 18:             Please, credit my account
• Line 19:             TRANSACTION INVALID
• Line 20:              TRANSACTION CANCELLED
• Line 21:            FINISHING PREAUTHORIZATION
• Line 22:            TRANSACTION REGISTERED
• Line 23:             PIN CODE VERYFIED
• Line 24:            ......................
• Line 25:            Signature of card owner
• Line 26: System message:   *********************
• Line 27:         ****************************************
• Line 28:         ****************************************
• Line 29: Authorization code:                  ************
• Line 30: Commercial Code         ************************
• Line 31: Additional data:        ************************
• Line 32: ****[****]:          ***************************
• Line 33:                      ***************************
• Line 34: No. of Identity Card:          ..................
• Line 35: Points for transaction                  #########
• Line 36: Points after transaction                #########
• Line 37: Quota on the card:                     ############
• Line 38:                       ORIGINAL
• Line 39:                         COPY
```

3.24.55. Printout No. 109 – DCC Receipt

```
• Header 0:          TRANSACTION CONFIRMATION
• Header 1:        PRE-AUTHORIZATION CONFIRMATION
• Header 2:         CANCELLATION CONFIRMATION
• Header 3:          DECLINATION CONFIRMATION

           12345678901234567890123456789012345678901234567890123456789012345678
• Line  0: Acquirer/Processor:                    ********************
• Line  1: ECR no: ### Cashier: #######
• Line  2: Receipt number:                             ################
• Line  3: TID: ########                         UID: #################
• Line  4: TID: ########                         MID: #################
• Line  5: Invoice number:                         ********************
• Line  6: For:                      @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
• Line  7: Card: ************************** PSN:**
• Line  8: ************************                   Valid date:##/##
• Line  9: PRE-AUT.:######### PLN
• Line 10: SALE: ######### PLN
• Line 11: REFUND: ######### PLN
• Line 12: In words:                  ******************************
• Line 13:                            ******************************
• Line 14: Fx rate: 1 *** = ############ PLN
• Line 15: Trans.currency: ########## ***
• Line 16: DCC service provided by                     ****************
• Line 17: Statement:                  ******************************
• Line 18:                  ****************************************
• Line 19:                  ****************************************
• Line 20:                  ****************************************
• Line 21:                  ****************************************
• Line 22:                  ****************************************
• Line 23:                  ****************************************
• Line 24:                  ****************************************
• Line 25:                  ****************************************
• Line 26:                   Please debit my account
• Line 27:                  Please credit my account
• Line 28:                   TRANSACTION CANCELLED
• Line 29:                    TRANSACTION REJECTED
• Line 30:                         COMPLETION
• Line 31:                          OFF-LINE
```

```
• Line 32:                        PIN VERIFIED
• Line 33:                   .......................
• Line 34:                          Signature
• Line 35: System message:                 ************************
• Line 36:                 ****************************************
• Line 37:                 ****************************************
• Line 38: Authorization code:                          ************
• Line 39: Commercial Code                 ************************
• Line 40: Extra data:                     ************************
• Line 41: ****[****]:                 ****************************
• Line 42:                             ****************************
• Line 43: Document ID:                 ..........................
• Line 44: Points for transaction:                        #########
• Line 45: Points after transaction:                      #########
• Line 46: Amount on the card:                           ###########
• Line 47:                           ORIGINAL
• Line 48:                            COPY
```

3.24.56. Printout No. 110 – Opening / closing the drawer.

```
• Header 0:                 OPENING DRAWER
• Header 1:                CLOSING DRAWER
• Header 2:                    BRAKE
• Header 3:                END OF BRAKE
• Header 4:                  BANKING TRANSFER
• Header 5:               CHECKING THE CASH
• Header 6:                  STATE OF CASH
• Header 7:                PAYMENT TO THE CAH REGIST. (DRAWER)

            123456789012345678901234567890123456789012345678
• Line  0: ------------------------------------------------------------
• Line  1: Cash reg. No      ####            No. of cashier ######
• Line  2: Date          ########            Hour         ########
• Line  3: ------------------------------------------------------------
• Line  4: Initial content of drawer           ############
• Line  5: Cash                      ###X####### ###########
• Line  6: Card @@@@@@@@@@           ###X####### ###########
• Line  7: Voucher @@@@@@@@@@          #X####### ###########
• Line  8: Coupon @@@@@@@@@@         ###X####### ###########
• Line  9: Cheque @@@@@@@@@@         ###X####### ###########
• Line 10: Cred. @@@@@@@@@@          ###X####### ###########
• Line 11: Others @@@@@@@@@@         ###X####### ###########
• Line 12: Transfer @@@@@@@@@@       ###X####### ###########
• Line 13: Total declared                        ###########
• Line 14: Total differences                     ###########
• Line 15: Value added to the cash regist.       ###########
• Line 16: Total deleted                         ###########
• Line 17: Total transferred                     ###########
• Line 18: Total                                 ###########
• Line 19: Comment:            @@@@@@@@@@@@@@@@@@@@@@@@@@@@@
```

3.24.57. Printout No. 111 – Payment for the receipt.

```
• Header 0:            Confirmation of payment
• Header 0:       Confirmation of payment annulling

            123456789012345678901234567890123456789012345678
• Line  0: Cash reg. No: ###                Cashier: #######
• Line  1: Data: ##########                   Hour:    #####
• Line  2: TID: ########               MID: ################
• Line  3: No. of payment:        *************************
• Line  4: No. of transaction:     *************************
• Line  5: Control No.:
• Line  6:              ************************************
• Line  7: Bar code:              ##########################
• Line  8:              ####################################
• Line  9: Invoice issuer:            **********************
```

```
• Line 10: No. of invoice:     ****************************
• Line 11: No. of customer:    ****************************
• Line 12: Title:          @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
• Line 13:                 @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
• Line 14: Term of payment:                      ##########
• Line 15: Value: PLN                           ###########
• Line 16: Discount: PLN                        ###########
• Line 17: Interest: PLN                        ###########
• Line 18: Charge: PLN                          ###########
• Line 19: Total to pay: PLN                    ###########
• Line 20: In words:       @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
• Line 21:                 @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
• Line 22: Due amount paid: by cash
• Line 23: Due amount paid: by credit card
• Line 24: No. of card:      ##############################
• Line 25: System message:
• Line 26:         @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
• Line 27:         @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
• Line 28:                       ORIGINAL
• Line 29:                        COPY
```

3.24.58. Printout No. 112 – Discount coupon.

```
• Header 0:            DISCOUNT COUPON

           12345678901234567890123456789012345678901234567890123456789012345678
• Line  0: Coupon to receipt: ###### ########## #####
• Line  1: Promoted goods                   Amount of bonus
• Line  2:  ------------------------------------------------
• Line  3:  ************************           ###########
• Line  4:  ------------------------------------------------
• Line  5: TOTAL                               ###########
• Line  6:                        ####################
• Line  7: Valid                     ########## - ##########
• Line  8: BAR CODE OPTIONALLY (!)
• Line  9:          Without bar code
```

3.24.59. Printout No. 120 – Granting points / Loyalty system / Giving away a gift / Ordering a gift / Giving away an ordered gift / Account balance \"VITAY" program\

```
• Header 0:
• Header 1: Granting points \"VITAY\"
• Header 2: Loyalty system  \"VITAY\"
• Header 3: Giving away a gift \"VITAY\"
• Header 4: Ordering a gift \"VITAY\"
• Header 5: Giving away ordered gift \"VITAY\"
• Header 6: Account balance \"VITAY\"
             12345678901234567890123456789012345678901234
• Line 0:     ****************************************
               ****************************************
               *************************  TID:    ########
            MID: ########## >           STA ID:    ########
• Line 1:              Account No:    ####################
• Line 2:   \"VITAY\"
• Line 3: GRANTING POINTS
• Line 4: PKN ORLEN S.A.
• Line 5: Card number:\n            ########################
• Line 6: (VITAY)
• Line 7: Amount:                                 **********
• Line 8: Number of cash account                  ##########
• Line 9:  FOR BUYING IN THIS SHOP WAS GRANTED
• Line 10: Points:                                ##########
• Line 11: Points:                                ##########
• Line 12: Sum of points on card:                ###########
• Line 13: DATE: ##########               HOUR:    ########
• Line 14: THANKS FOR VISITING US
```

```
• Line 15: KEEP EVIDENCE OF GIVING AWAY
• Line 16: GIVING AWAY GIFT
• Line 17: Gift name:           ****************************
• Line 18:             * * * * * * * * * * * * * * * * * * * * *
• Line 19: Number of units taken away:                ########
• Line 20: Points taken away:                        ##########
• Line 21:                                 # # # # # # # # # #
• Line 22: Authorization code:                       ##########
• Line 23: ORDERING GIFT
• Line 24: Number of ordered units:                   ########
• Line 25: Number of order in ECR:                  ############
• Line 26: GIVING AWAY ORDERED GIFT
• Line 27: Card No:\n#################### Valid to: **********
• Line 28: (TEMPORARY)
```

3.24.60. Printout No. 121 - Program fleet / selling on card dkv / card open drive / card wog / card tank bank type 2

```
• Header 0:
• Header 1:  FLEET Program
• Header 2:  Selling on card DKV
• Header 3:  CARD OPEN DRIVE
• Header 4:  CARD WOG
• Header 5:  CARD TANK BANK TYPE 2
              12345678901234567890123456789012345678901234
• Line 0:    ****************************************
              ****************************************
              *************************  TID: ########
               MID: ########## >       STA ID: ########
• Line 1:    Card No:              Account No: ########
              #################### >Valid to: **********
• Line 2:    Car No:                          ************
• Line 3:    Counter state:                        ########
• Line 4:    MPK parameter:          ********************
• Line 5:    FLEET PROGRAM
• Line 6:    EVIDENCE OF GIVING AWAY
• Line 7:    Quota:                            ************
• Line 8:    No of group:                          ########
• Line 9:    Amount:                           ************
• Line 10:   Authorization code:              ############
• Line 11:   PLEASE DEBIT MY ACCOUNT
• Line 12:   PIN CODE CORRECT
• Line 13:   DATE: ##########              HOUR: ########
• Line 14:   THANKS FOR VISITING US
• Line 15:   KEEP EVIDENCE OF GIVING AWAY
• Line 16:   Value:                            ************
• Line 17:   BILL FOR COMPANY
• Line 18:   SALE ON CARD DKV
• Line 19:   PKN ORLEN S.A.
• Line 20:   OPEN DRIVE CARD
• Line 21:   BILL FOR THE CUSTOMER
• Line 22:   Card No:                  Account No: ########
              ####################
• Line 23:   CARD ************
• Line 24:   Transaction No:                          ########
• Line 25:   Transaction status:      ********************
• Line 26:   Current quota limit:              ************
• Line 27:   Account re-charging
• Line 28:   Card No: ####################\n Valid to: **********
• Line 29:   VERIFIED CARD
• Line 30:   Limit for group **:               ********************
• Line 31:   Quota limit:                      ********************
• Line 32:   Accessible non-fuel assortment:\n********************
```

3.24.61. Printout No. 122 – Transmission report / daily settlement of payment transactions / transmission report online / transmission report vitay / courses dcc / flx diagnostics / flo diagnostics / vitay diagnostics / total report / report dcc / application parameters / daily report

```
• Header 0:
• Header 1: TRANSMISSION REPORT
• Header 2: DAILY SETTLEMENT OF PAYMENT TRANSACTIONS
• Header 3: TRANSMISSION REPORT ONLINE
• Header 4: TRANSMISSION REPORT VITAY
• Header 5: COURSES DCC
• Header 6: FLX DIAGNOSTICS
• Header 7: FLO DIAGNOSTICS
• Header 8: VITAY DIAGNOSTICS
• Header 9: TOTAL REPORT
• Header 10: REPORT DCC
• Header 11: APPLICATION PARAMETERS
• Header 12: DAILY REPORT
              12345678901234567890123456789012345678901234
• Line 0:                            POS ID: ############
• Line 1: UID: ##########
• Line 2: COLLECTION NO: ########
• Line 3: START:  ********************
• Line 4: END: ********************
• Line 5: RESPONSE: ********************
• Line 6: SETTLEMENT TRANSACTIONS
• Line 7: UPDATE:
• Line 8: VERSION: **************        #### **********
• Line 9: #### # #### **** **** **** ####    **********
• Line 10: ****** **************************
• Line 11: NUMBER ***:    #   QUOTA ***:     **********
• Line 12: AMOUNT NET:    #   QUOTA NET:     **********
• Line 13: DATE: ##########   HOUR: ########
• Line 14:  ***************************************
             ***************************************
             *************************  TID: ########
             MID: ########## >STA ID: ########
• Line 15: NO DAILY SETTLEMENTS
• Line 16: Transmission Start:  ********************
• Line 17: Transmission End: ********************
• Line 18: VITAY:    @@@@@@@@@@@@@@@@@@@@@@
• Line 19: Fleet:    @@@@@@@@@@@@@@@@@@@@@@
• Line 20: UTA:      @@@@@@@@@@@@@@@@@@@@@@
• Line 21: DKV:      @@@@@@@@@@@@@@@@@@@@@@
• Line 22: IFC:      @@@@@@@@@@@@@@@@@@@@@@
• Line 23: UTA SETTLEMENTS
• Line 24: Balance according to EFT terminal:
• Line 25: SALE
• Line 26: Number: ####     Value:         **********
• Line 27: SALE CANCELLATION
• Line 28: Balance according to Accounting Centre:
• Line 29: File No: ############
• Line 30: SETTLEMENTS DKV
• Line 31: RETURN CANCELLATION
• Line 32: FLEET SETTLEMENTS
• Line 33: RETURN
• Line 34: IFC SETTLEMENTS
• Line 35: VITAY SETTLEMENTS
• Line 36: REDEMPTIONS
• Line 37: REDEMPTION CANCELLATION
• Line 38: GRANTING POINTS
• Line 39: GRANTING POINTS CANCELLATION
• Line 40: Number: ####    Points:          **********
• Line 41: REDEMPTIONS CANCELLATION
• Line 42: Courses table No: #### from day  **********
• Line 43: @@@            ########       ********** PLN
• Line 44: Last accessible course for day:   **********
• Line 45: Currency         Date               Course
• Line 46: CURRENTC COURSES
```

```
• Line 47: @@@@@@@@@@@@@@@@@@@@@@@@
• Line 48: NO ##:                              Version: ####
• Line 49: @@@@@@@@@@@@ NUMBER ### QUOTA     **********
• Line 50: TankBank: @@@@@@@@@@@@@@@@@@@@@@
• Line 51: Version pinpad.out:                 **********
• Line 52: Config. of pinpad:                  **********
• Line 53: Version Orlen.out:                  **********
• Line 54: Version of payment:                 **********
• Line 55: Version of configuration:           **********
• Line 56: @@@@@@@@@@ TID:                    **********
• Line 57: @@@@@@@@@@ MID:                    **********
• Line 58: Code of pinpad:                     **********
• Line 59: Name of key:            @@@@@@@@@@@@@@@@@@@@@@
• Line 60: Version of list No ##:                    ####
```

3.24.62. Printout No. 123 – Takings transfer, withdrawal from cash drawer

```
• Header 0: Takings transfer withdrawal from cash drawer
              12345678901234567890123456789012345678901234
• Line 0:   Takings transfer No\ n| * * * * * * * * * * * * * * * * * * * *
• Line 1:   ID of cash regist.: ******************************
• Line 2:         Date of issuing:  ********************
• Line 3:   Form of payment:        @@@@@@@@@@@@@@@@@@@@
• Line 4:   WN:                     ********************
• Line 5:   MA:                     ********************
• Line 6:   Balance aft.transaction:********************
• Line 7:   Issuer:  ********************
• Line 8:   I've received above quota ...................
```

3.24.63. Printout No. 170 – Return confirmation

```
• Header 0:            RETURN CONFIRMATION
• Header 1:
           12345678901234567890123456789012345678901234567890
• Line 0: RETURN:  ********************       ###############
• Line 1: TOTAL                                  ############
• Line 2: CURRENCY
• Line 3: TARGET PORT:                                    ***
• Line 4: BOARDING PASS NO:             ********************
• Line 5: FLIGHT NO:                    ********************
• Line 6: TICKET NO:                    ********************
• Line 7: TRANSIT PORT:                                   ***
• Line 8: BOARDING PASS NO:             ********************
• Line 9: FLIGHT NO:                    ********************
• Line 10: TICKET NO:                   ********************
• Line 11: CURRENCY:                    ********************
```

Warning: Operated only in Delio Free E 3.10

3.24.64. Printout No. 180 - Confirmation\x1f of issuing a gift card / a discount card / a special card / an occasional card / an article – complaint / Confirmation\x1fof receiving a gift card / a discount card / a special card / an occasional card / an article – complaint / Confirmation\x1fof exchanging a gift card / a discount card / a special card / an occasional card / an article exchanging

```
• Header 0: CONFIRMATION\x1FOF ISSUING A GIFT CARD
• Header 1: CONFIRMATION\x1FOF ISSUING A DISCOUNT CARD
• Header 2: CONFIRMATION\x1FOF ISSUING A SPECIAL CARD
• Header 3: CONFIRMATION\x1FOF ISSUING AN OCCASSIONAL CARD
• Header 4: CONFIRMATION\x1FOF ISSUING AN ARTICLE - COMPLAINT
• Header 5: CONFIRMATION\x1FOF RECEIVING A GIFT CARD
• Header 6: CONFIRMATION\x1FOF RECEIVING A DISCOUNT CARD
• Header 7: CONFIRMATION\x1FOF RECEIVING A SPECIAL CARD
• Header 8: CONFIRMATION\x1FOF RECEIVING AN OCASSIONAL CARD
• Header 9: CONFIRMATION\x1FOF RECEIVING AN ARTICLE - COMPLAINT
• Header 10: CONFIRMATION\x1FOF EXCHANGING A GIFT CARD
```

```
• Header 11: CONFIRMATION\x1FOF EXCHANGING A DISCOUNT CARD
• Header 12: CONFIRMATION\x1FOF EXCHANGING A SPECIAL CARD
• Header 13: CONFIRMATION\x1FOF EXCHANGING AN OCCASSIONAL CARD
• Header 14: CONFIRMATION\x1FOF AN ARTICLE EXCHANGE
              12345678901234567890123456789012345678901234
• Line   0: TRANSACTION NO:              ################
• Line   1: DATE OF CARD ISSUING:               ##########
• Line   2: CARD VALIDITY DATE:          ################
• Line   3: CARD NAME:   @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
• Line   4: CARD NUMBER:               ##################
• Line   5: RECEIPT NUMBER:             ################
• Line   6: ARTICLE NAME:  @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
• Line   7: CODE:                  ########################
• Line   8: PRICE:                       ################
• Line   9: VALUE:                       ################
• Line  10: CURRENCY:                  ********************
• Line  11: NO. OF ADDED POINTS:       ********************
• Line  12: NO. OF POINTS ON CARD:     ********************
• Line  13: SUMMARY:           ############################
• Line  14: PAID:                          ###############
• Line  15: TOTAL:                         ###############
• Line  16: MEAN OF PAYMENT: ******************************
• Line  17: QUOTA:     ###################################
• Line  18: ACCOUNT:   ###################################
• Line  19: CHANGE:    ###################################
              12345678901234567890123456789012345678901234
```

3.24.65. Printout No. 190 - Woodsman

```
• Line   0: [Woodsman*******************************

• Line   1:                   Voucher No: ***********
• Line   2: to fiscal receipt No: ############
• Line   3: Forrest District:************************
• Line   4: Address:          ************************
• Line   5: Name of Forr.District:************************
• Line   6: Forrest address: ************************
• Line   7: Date of issuing: ************************
• Line   8: Kind of order:   ************************
• Line   9: Buyer:           ************************
• Line  10: Buyer address:   ************************
• Line  11: Term of removal: ************************
• Line  12:   WOD     |Address |Number|Article| Mass
• Line  13: ************|******|#####|***/***|######
• Line  14: Species |   Article  |Amount
• Line  15:   *****|************|######
• Line  16: Total: ##############
• Line  17: Discount: #####
• Line  18: Document issuer:   ********************
• Line  19: Signature:
• Line  20: ....................................
• Line  21: FSC: ***********************************
                 ***********************************
                 ***********************************

• Line  22: continue***********************************
                 ***********************************
                 ***********************************

• Line  23: I've read conditions of sale and purchase transaction
            described by the manager of the Point in letter from
            ********** year, and know them and I accept them.
• Line  24: Buyer signature:
• Line  25: Removal:
• Line  26: Date of removal:        Mass [m3]:
• Line  27: Issuer signature:
              12345678901234567890123456789012345678901234
```

3.24.66. Printout No. 195 - A*D*V*E*R*T*I*S*E*M*E*N*T

```
• Line   0: **********A*D*V*E*R*T*I*S*E*M*E*N*T*********
             ************************************
             ************************************
             ************************************
            **********A*D*V*E*R*T*I*S*E*M*E*N*T*********
• Line   1: Device:
              * * * * * * * * * * * * * * * * * * * * *
              * * * * * * * * * * * * * * * * * * * * *
              * * * * * * * * * * * * * * * * * * * * *

• Line   2: Price: ########## $    #####%% VAT: ####### $
• Line   3: Enter code:
              # # # # # # # # # # # # # # # # # # # # #


• Line   4: Valid to: ########## #####
              ***************************************
              ***************************************
              ***************************************
```

3.24.67. Printout No. 200 – NON-FISCAL PRINTOUT

```
• Header 0: NON-FISCAL PRINTOUT
• Header 1:
             12345678901234567890123456789012345678901234
• Line   0:   ****************************************
• Line   1: ******************************************
• Line   2:  *****************************************
• Line  3:   ****************************************** / stars in protected
memory
• Line   4:   ****************************************  /QR code
• Line   5:   ****************************************  //QR code (as stars
in protected memory, text part)
• Line   6:   ****************************************  //QR code
• Line   7:   ****************************************  //QR code (as stars
in protected memory, text part)
```

4 Non-fiscal printouts.

4.1. Non-fiscal printouts – special lines.

There can be printed special lines on each non-fiscal printouts.
Line 249: Print of „QRCode" (data from the first packet field are printed in graphic form)
Line 250: Print of graphic elements (graphic elements are printed based on numeric identifier placed in the first packet field)
Line 251: Reserved.

Line 252: Print of bar code (data from the first packet field are printed in graphic and text form)
Line 255: Print of empty line.

4.2. QRCode/QR code operating.

Restrictions:
Length of text – up to **120 characters**
Maximum operated version of QR Cod: **9**
Maximum resolution **53** (x scale)
Operated characters:
'0' .. '9'
'A' .. 'Z'
' ' , '$' , '%' ,'*' , '+' , '-' , '.' , '/' , ':'

4.3. Sequences of animation operating (@A)

Restrictions:
Operated by **HDE fiscal printer.**

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Function	0..99	;	variable	0 – start of programming 1 – animation data 9 – animation delete 10 – control sum readout 20 – setting active animation 21 – active animation readout 30 – list of animations readout 99 – deleting all of animations
3	Data format	0..1		1	0 - format hex 1 - format base64
4	Command	**@A**		2	
5	Size of entire file	Number	/	variable	Size in binary format
6	Size of data sent in packet	Number	/	variable	Size in sent format (hex, base 64)
7	File name	Text	<CR>	variable	Textual name of file together with extension, max. 12 characters.
8	Data	Text	<CR>	variable	Data in target format (HEX/BASE64)
9	Control byte	00..FF		2	
10		<ESC>\		2	

Error codes:

1: not initiated printer's clock .

4.4. Sequences of animation operating (@A) – readout of crc animation

Restrictions:
Operated by **HDE fiscal printer.**

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**@A**		2	
3	Control sum calculated by the device	Number in hexadecimal form	/	8	CRC
4	Control byte	00..FF		2	
5		<ESC>\		2	

Error code:

1: not initiated printer's clock.

4.5. Sequences of animation operating (@A) – readout of animations list

Restrictions:
Operated by the printer HDE

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Parameter	1			
3	Command	**@A**		2	

4	Names list	Text	/	0..	Names are separated with sign ';'
5	Control byte	00..FF		2	
6		<ESC>\		2	

Error code:

1: not initiated printer's clock.

4.6. Sequences of animation operating (@A) – readout of active animation

Restrictions:
Operated by the printer HDE

No.	Fields name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Parameter	2			
3	Command	**@A**		2	
4	Name	text	/	4	Name of active animation
5	Control byte	00..FF		2	
6		<ESC>\		2	

Error code:

1: not initiated printer's clock

4.7. Programming packet of Playlist (@APl)

Restrictions:
Operated by the printer HDE.

No.	Field name	Content	Separator	Size	Remarks
1		**<ESC>P**		**2**	
2	Constant value	0	;	1	
3	Entry activity	0..1		1	0 – not active (advertisement is omitted) 1 – active
4	Command	**@APl**		4	
5	Entry position on the list	0..19	/		For HDE 2.0: 0-19
6	Name of advertisement file	Text	<CR>	changeable	The adequate advertisement should be programmed with packet @A
7	Year	0..99	/	1..2	Initial date of clip activity
8	Month	1..12	/	1..2	
9	Day	1..31	/	1..2	
10	Year	0..99	/	1..2	Final date of clip activity
11	Month	1..12	/	1..2	
12	Day	1..31	/	1..2	
13	Hour	0..23	/	1..2	Initial hour of clip activity (time isn't associated with date)
14	Minute	0..59	/	1..2	
15	Second	0..59	/	1..2	
16	Hour	0..23	/	1..2	Final hour of clip activity (time isn't associated with date)
17	Minute	0..59	/	1..2	

18	Second	0..59	/	1..2	
19	Advertisement active in days	0..127	/	1..3	Active day of clip performing depends on setting the adequate bit: Bit 1 – Sunday Bit 2 – Monday Bit 3 – Tuesday Bit 4 – Wednesday Bit 5 – Thursday Bit 6 – Friday Bit 7 – Saturday
20	Number of advertisement plays since transferring to the next one	-1..99999	/	1..5	(-1) – Infinite number of clip plays (0) – It forces taking into account only field 25 – time of displaying an advertisement
21	Default animation	0..1	/	1	0 – Animation is not default 1 – Default animation In the event that none of the animation is eligible to appear in the concrete time, animation is displayed by default. If there are several default animation, the one is taken which has the lowest number in the list.
22	Setting the clock in the vertical	2,3,4	/	1	2 - up 3 - down 4 - centre
23	Setting the clock in the horizontal	0,1	/	1	0 – left 1 - right 4 - centre
24	Clock visibility	0..1	/	1	0 - invisible 1 - visible
25	Minimum time of displaying an advertisement (in millisecond)	0..99999999	/		Field operated since HD E 3.00. When displaying time is set to 0, then the item from field 20 is taken – number of replays.
26	Control byte	00..FF	/	2	
27		<ESC>\		2	

Request about entry from advertisement list:

No.	Field name	Content	Separator	Size	Remarks
1		**<ESC>P**		**2**	
2	Constant value	1..2	;	1	1 – playlist readout 2 – playlist delete
3	Command	**@API**		4	
4	Entry position on the list	0..19	/		For HDE 2.0: 0-19
5	Control byte	00..FF	/	2	
6		<ESC>\		2	

Error codes:

2: control byte error,
4: parameter error – error reported in case when value of field " Entry position on the list" is out of range

Remarks:

To send back the full contents of the list, one should ask about all the positions. If any item is empty, the default value is resent for each field.
File name of advertising is verified when try to play it. In case if it is not correct, that advertising will not be played.

Response packet for reading the playlist:

No.	Field name	Content	Separator	Size	Remarks
1		**<ESC>P**		**2**	
2	Constant	0	;	1	1 – playlist exists 0 – playlist doesn't exist
3	Command	**@API**		4	
4	Playlist index	Number	/		
5	Name	text	<CR>		
6	Year	Number	/		Initial date of clip activity
7	Month	Number	/		
8	Day	Number	/		
9	Year	Number	/		Final date of clip activity
10	Month	Number	/		
11	Day	Number	/		
12	Hour	Number	/		Initial hour of clip activity (time isn't associated with date)
13	Minute	Number	/		
14	Second	Number	/		
15	Hour	Number	/		Final hour of clip activity (time isn't associated with date)
16	Minute	Number	/		
17	Second	Number	/		
18	Advertisement active in days	Number	/		Active day of clip performing depends on setting the adequate bit: Bit 1 – Sunday Bit 2 – Monday Bit 3 – Tuesday Bit 4 – Wednesday Bit 5 – Thursday Bit 6 – Friday Bit 7 – Saturday
19	Number of advertisement plays since transferring to the next one	Number	/		(-1) – Infinite number of clip plays (0) – for HD E since version HD E 3.00 setting to 0 forces taking into account only field 25 – time of displaying an advertisement
20	Default animation	Number	/		0 – Animation is not default 1 – Default animation In the event that none of the animation is eligible to appear in the concrete time, animation is displayed by default. If there are several default animation, the one is

					taken which has the lowest number in the list.
21	Setting the clock in the vertical	Number	/		2 - up 3 - down 4 - centre
22	Setting the clock in the horizontal	Number	/		0 – left 1 - right 4 - centre
23	Clock visibility	Number	/		0 - invisible 1 - visible
24	Minimum time of displaying an advertisement (in millisecond)	Default animation	/		When displaying time is set to 0, then the item from field 20 is taken – number of replays.
25	Control byte	00..FF		2	
26		<ESC>\		2	

4.8. The rest of orders.

4.8.1. Request about number of drawer openings (@dc).

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**@dc**		3	
3	Function	Number	/	1	1 – readout of numbers from counter 2 – counter resetting
4	Control byte			2	
5		<ESC>\		2	

Response

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**@dc**		2	
3	Printout length	Number	/	2	Counter value
4	Control byte			2	
5		<ESC>\		2	

4.8.2. Outdraw of paper (#l).

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Quantity of lines	0..20		1..2	
3	Command	**#l**		2	
4	Control byte	00..FF		2	Optional field
5		<ESC>\		2	

Where:

Quantity of lines
outdraw of paper at 0..20 lines. Sequence is blocked during the transaction and in saving mode.

Errors' codes:

2: control byte error,
4: parameter error - Quantity of lines.

4.8.3. Outdraw of paper (#l) with cutting.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Quantity of lines	0..20	;	1..2	
3	Cutting	1		1	0 – no cutting 1 – cutting 2 – partial cutting
4	Command	**#l**		2	
5	Control byte	00..FF		2	Optional field
6		<ESC>\		2	

Where:

Quantity of lines
outdraw of paper at 0..20 lines. Sequence is blocked during the transaction and in saving mode.

Errors' codes:

2: control byte error,
4: parameter error - Quantity of lines

4.8.4 Database control (#b).

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Action	0		1	
3	Command	**#b**		2	
4	Control byte	00..FF		2	
5		<ESC>\		2	

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Action	1		1	
3	Command	**#b**		2	
4	Name	Inscription	<CR>	1..40	Parameters which appear only when Action = 1
5	PTU	A..G, Z	/	1	
6	Control byte	00..FF		2	
7		<ESC>\		2	

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Action	2		1	
3	Command	**#b**		2	
4	Cash register number	Inscription	<CR>	0..8	Optional parameters which may appear Action = 2. Optional parameters – replacing those introduced during cashiers log-in..
5	Cashier	Inscription	<CR>	0..32	

6	Control byte	00..FF		2	
7		<ESC>\		2	

Where:

Action
0: beginning of the test,
1: sending data record,
2: end of test
Name
name of the item in the base,
PTU
PTU rate signification,
Cash register number
inscription including the name of the cash register
Cashier
inscription reserved for the name of the cashier,

Errors' codes:

1: not initiated printer's clock,
2: control byte error,
4: parameter error / sequence error (e.g. first the end: Action = 2 then data: Action = 1),
38: name error,
39: PTU signification error, PTU out of the A-G range

4.8.5. Menu displaying ($m).

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**$m**		2	
3	Control byte	00..FF		2	Optional field
4		<ESC>\		2	

4.9. Additional communication packets.

Packets present in QUARTO fiscal printers and more recent ones.

4.9.1. Handling tunnelling the transmission of AUX1 and AUX2 ports PC1 and PC2 (^x).

Ports: PC1, PC2

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Function	0..3	**;**	1	0 – resetting of queue 1 – query for the queue size 2 – readout of printer's receiving queue 3 – record of printer's sending queue
3	Port number	2,3	;	1	2 – AUX1, 3 – AUX2
4	No of queue	1-3		1	1 – receiving 2 – sending (from the printer) 3 – both: receiving and sending (for resetting only),
5	Command	**^x**		2	
6	Quantity of bytes	Number	/	1..3	Quantity of bytes depending on the function: in queue, to be sent, received
7	Data buffer	Text	<CR>	1..512	Data to be sent or readout, hexadecimal

					coded, 2 characters per byte e.g. sequence of bytes of values 1,2,3,15 will be sent here as 0102030F
13	Control byte	00..FF		2	
14		<ESC>\		2	

Remarks:

1. The printer does not send anything to the queues resetting function.
2. For the function of readout of the queue size, the printer responses by the same packet as request with a filled field „Quantity of bytes". The „Data" field does not appear in the response.
3. For the function of readout of receiving queue, the printer responses by the same packet as request with a filled field „Quantity of bytes" (actually sent back) and „Data" (size of the Field equal to 2 x "Quantity of bytes").

4.9.2. Handling the controlling of modem lines of transmission of AUX1- AUX2 ports by PC1 and PC2 ports (^m).

Ports: PC1, PC2

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Function	0..1	**;**	1	0 – setting modem signals 1 – readout of modem signals
3	Port number	2,3		1	2 – AUX1, 3-AUX2
4	Command	**^m**		2	
5	Signals for setting	number	/	1	Following bits set on 1 mean signals which are to be set on 1: Bit 0 – RTS Bit 1 – DTR
6	Signals for resetting	number	/	1	Following bits set on 1 mean signals which are to be set on 0: Bit 0 – RTS Bit 1 – DTR
7	Control byte	00..FF		2	
8		<ESC>\		2	

Packet of responses to the readout function (1):

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Function	1	**;**	1	1 – readout of modem signals
3	Port number	2,3	;	1	2 – AUX1, 3-AUX2
4	Command	**^m**		2	
5	Modem signals	number	/	1-2	Following bits set on 1 mean signals which are to be set on 1: Bit 0 – RTS Bit 1 – DTR Bit 2 – CTS Bit 3 – DSR
6	Control byte	00..FF		2	
7		<ESC>\		2	

Remarks:

1. Separate signal Fields for setting and resetting allow full controlling over optional lines without the necessity to know the statuses of non-changed lines.

4.9.3. Readout of periodical review date (^t).

Ports: PC, PC2

No.	Field name	Contents	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	11		1	
3	Command	**^t**		2	
4	Control byte	00..FF		2	
5		<ESC>\		2	

Response

No.	Field name	Contents	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	1		1	
3	Command	**^t**		2	
4	Year	00..99	/	2	Two last digits of year
5	Month	01..12	/	2	Number of month in year
6	Day	01..31	/	2	Number of day in given month
7	Text	Inscription	<CR>	0..30	Optional argument
8	Control byte	00..FF		2	
9		<ESC>\		2	

where:

Amount of days
Number of days which left to periodical review
Year, Month, Day
Date of periodical review
Text
Telephone number of service point, excessive characters are cut. If there is no argument – the previous one stays. If argument is empty, the option is switched off, there is displayed only reminder about calling service team.

Errors codes:

1: not initiated printer's clock,
4: parameter error,

4.9.4. Readout of service blockade date (^t).

Ports: PC, PC2

No.	Field name	Contents	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	12		1	
3	Command	**^t**		2	
4	Control byte	00..FF		2	
5		<ESC>\		2	

Response

No.	Field name	Contents	Separator	Size	Remarks
1		<ESC>P		2	

2	Constant	2		1	
3	Command	**^t**		2	
4	Year	00..99	/	2	Two last digits of year
5	Month	01..12	/	2	Number of month in year
6	Day	01..31	/	2	Number of day in given month
7	Password	Inscription	<CR>	0..30	
8	Text	Inscription	<CR>	0..30	
9	Control byte	00..FF		2	
10		<ESC>\		2	

where:

Year, Month, Day
Date of periodical review
Password
If it's empty, the service blockade is removed.
Text
Telephone number of service point, excessive characters are cut. If there is no argument – the previous one stays.

Errors codes:

1: not initiated printer's clock,
4: parameter error,

4.9.5. Question about data from the last receipt (?I).

Ports: PC2, PC

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
	Kind of information		;		0 – receipt summary 1 – receipt positions 2 – positions of returnable packages 3 – forms of payment 4 – summary of receipt 2 5 – receipt positions and sub-totals 6 – receipt summary
2	Number of position	0..255		1..3	
3	Command	**?I**		2	
4	Control byte	Inscription		2	
5		<ESC>\		2	

Remarks:

1. The PC program has to make queries about each single piece of data. Firstly, a summary of the receipt shall be taken to know how many single pieces are to be asked for. If it makes a query beyond the range it will get a packet of responses without data, i.e.. <ESC>Pi?Ibk<ESC>\ Where i – kind of information and 1i - Control byte.

Responses:

Kind of information = 0 – receipt summary:

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	

2	Kind of information	0		1	
3	Command	**?I**		2	
4	Receipt status		/		Decimal value: 0 – empty 1 – open 2 – closed 3 – cancelled
5	Type of receipt		/		Decimal value: 0 – normal 1 – accounting returnable packages
6	Receipt No		/		
7	Date and time of receipt		<CR>		Format yyyy-mm-dd hh:mm:ss
8	No of printout		/		
9	Transaction system No		<CR>		
10	No of cash register		<CR>		Data from the ending of receipt or logging in
11	Cashier		<CR>		Data from the ending of receipt or logging in
12	Quantity of items		/		
13	Quantity of deposits		/		
14	Quantity of forms of payment		/		
15	Total		/		Fiscal value without deposit provision
16	Type of discount		/		0: none, 1: percentage discount, 2: percentage overhead, 3: amount discount, 4: amount overhead,
17	Discount		/		Amount or percentage value
18	Name of the discount		<CR>		
19	Total after discount		/		
20	Method of discounts' calculating	0..1	/	1	As in the command fixing the method
21	Received deposits	Number	/		For a given package
22	Paid deposits	Number	/		For returned packages
23	To be paid	Number	/		
24	Cash	Number	/		Sum of payments in this form
25	Card	Number	/		Sum of payments in this form
26	Cheque	Number	/		Sum of payments in this form
27	Voucher	Number	/		Sum of payments in this form
28	Other form of payment	Number	/		Sum of payments in this form
29	Credit	Number	/		Sum of payments in this form
30	Customer's account	Number	/		Sum of payments in this form
31	Foreign currency	Number	/		Sum of payments in this form
32	Transfer	Number	/		Sum of payments in this form
33	Euro Cash	Number	/		Sum of payments in this form
34	Name of the card	Inscription	<CR>		Name of the first one (if there were many)
35	Name of the cheque	Inscription	<CR>		Name of the first one (if there were many)

36	Name of the voucher	Inscription	<CR>		Name of the first one (if there were many)
37	Name of other form of payment	Inscription	<CR>		Name of the first one (if there were many)
38	Name of credit	Inscription	<CR>		Name of the first one (if there were many)
39	Name of Customer's account	Inscription	<CR>		Name of the first one (if there were many)
40	Name of transfer	Inscription	<CR>		Name of the first one (if there were many)
41	Euro exchange rate		/		
42	Rest in PLN [zł]		/		
43	Rest in Euro		/		
44	Control byte	00..FF		2	
45		<ESC>\		2	

Kind of information = 1 – receipt items:

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Kind of information	1			
3	Command	**?I**		2	
4	Item No	0..255	**/**	1..3	
5	Name	Inscription	<CR>	2..40	
6	Commodity code	Inscription	<CR>	0..18	
7	Quantity	Inscription	<CR>	1..16	(when storno < 0)
8	VAT	Character	/	1	
9	Price	Number	/	1..11	
10	Gross	Number	/	1..11	(when storno < 0)
11	Kind of discount	0..4	/	1	
12	Description of discount	0..16	/	1..2	
13	Discount	Number	/	1..11	
14	Name of discount	Inscription	<CR>	0..40	
15	Summary percentage discount	Number	/		Total resulting percentage discount deriving from the discount provided per item, for the sub-sum and the whole receipt, amount and percentage.
16	Value after summary discounts	Number	/		Value of items after providing the discounts. **Attention!!! This value in case of multiple discounts is approximated and few-grosz (cents)-high variations connected with the fact that the printer summary amounts in each rate sand does not position the receipt.**
17	Control byte	00..FF		2	
18		<ESC>\		2	

Kind of information = 2 – deposit items (for returnable packages):

No	Field name	Content	Separator	Size	Remarks

1		<ESC>P		2	
2	Kind of information	2			
3	Command	**?I**		2	
4	Item No	0..63	/	1..2	
5	Code of returnable package	Inscription	<CR>	2..40	
6	Quantity	Inscription	<CR>	1..16	(when returned < 0)
7	Price	Number	/	1..11	
8	Gross value	Number	/	1..11	(when returned < 0)
15	Control byte	00..FF		2	
16		<ESC>\		2	

Or

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Kind of information	2			
3	Command	**?1**		2	
4	Control byte	00..FF		2	
5		<ESC>\		2	

Kind of information = 3 – items of forms of payment:

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Kind of information	3			
3	Command	**?I**		2	
4	Item No	0..31	/	1..2	
5	Code of the form of payment	number	/	1	Codes: 0: CASH, 1: CARD, 2: CHEQUE, 3:BOND, 4: OTHER, 5: CREDIT, 6: CUSTOMER'S ACCOUNT, 7: TRANSFER 8: EURO CASH 9: MOBILE 10. VOUCHER
6	Value	Inscription	/	1..16	
7	Name	Number	<CR>	1..10	
8	Control byte	00..FF		2	
9		<ESC>\		2	

Kind of information =4 – summary of receipt 2:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Kind of information	4		1	
3	Command	**?I**		2	

4	Receipt status		/		Decimal value: 0 – empty 1 – open 2 – close 3 – cancelled
5	Receipt type		/		Decimal value: 0 – normal 1 – accounting returnable packages
6	Receipt no.		/		
7	Receipt date and time		<CR>		Format rrrr-mm-dd hh:mm:ss
8	Printout No.		/		
9	Transaction system No.		<CR>		
10	ECR No.		<CR>		Data from the ending of receipt or logging in
11	Cashier		<CR>		Data from the ending of receipt or logging in
12	Number of positions		/		
13	Number of deposits		/		
14	No. of forms of payments		/		
15	Total		/		Fiscal value without deposit provision
16	Discount type		/		0: none, 1: percentage discount, 2: percentage overhead, 3: amount discount, 4: amount overhead,
17	Discount		/		Amount or percentage value
18	Discount name		<CR>		
19	Total after discount		/		
20	Method of discount's calculating	0..1	/	1	As in the command fixing the method
21	Deposits taken	Number	/		For a given package
22	Deposits given away	Number	/		For returned packages
23	To pay	Number	/		
24	Cash	Number	/		Sum of payments in this form
25	Card	Number	/		Sum of payments in this form
26	Cheque	Number	/		Sum of payments in this form
27	Voucher	Number	/		Sum of payments in this form
28	Another form of payment	Number	/		Sum of payments in this form
29	Credit	Number	/		Sum of payments in this form
30	Customer's account	Number	/		Sum of payments in this form
31	Foreign currency	Number	/		Sum of payments in this form
32	Transfer	Number	/		Sum of payments in this form
33	Euro cash	Number	/		Sum of payments in this form
34	Mobile	Number	/		Sum of payments in this form
35	Voucher	Number	/		Sum of payments in this form
36	Name of the card	Inscription	<CR>		Name of the first one (if there were many)
37	Name of the cheque	Inscription	<CR>		Name of the first one (if there were many)

38	Name of the voucher	Inscription	<CR>		Name of the first one (if there were many)
39	Name of other form of payment	Inscription	<CR>		Name of the first one (if there were many)
40	Name of credit	Inscription	<CR>		Name of the first one (if there were many)
41	Name of Customer's account	Inscription	<CR>		Name of the first one (if there were many)
42	Name of transfer	Inscription	<CR>		Name of the first one (if there were many)
43	Name of mobile payment	Inscription	<CR>		Name of the first one (if there were many)
44	Name of voucher	Inscription	<CR>		Name of the first one (if there were many)
45	Euro exchange rate		/		
46	Rest in PLN		/		
47	Rest in Euro		/		
48	Control byte	00..FF		2	
49		<ESC>\		2	

Kind of information =5 – receipt positions and sub-totals:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Kind of information	5			
3	Command	**?I**		2	
4	Position No.	0..255	**/**	1..3	
5	Name	Inscription	<CR>	2..40	
6	PLU code	Inscription	<CR>	0..18	
7	Quantity	Inscription	<CR>	1..16	(when storno / reversal < 0)
8	PTU	Character	/	1	
9	Price	Number	/	1..11	
10	Gross	Number	/	1..11	(when storno / reversal < 0)
11	Type of discount	0..4	/	1	
12	Discount description	0..16	/	1..2	
13	Discount	Number	/	1..11	
14	Discount name	Inscription	<CR>	0..40	
15	Summary percentage discount	Number	/		Total resulting percentage discount deriving from the discount provided per item, for the sub-sum and the whole receipt, amount and percentage.
16	Value after summary discounts	Number	/		Value of items after providing the discounts. **Attention!!! This value in case of multiple discounts is approximated and few-grosz (cents)-high variations connected with the fact that the printer summary amounts in each rate sand does not position the receipt.**
17	Type of position	Number	/	1	0 – receipt position 1 – sub-total
18	Control byte	00..FF		2	
19		<ESC>\		2	

Kind of information =4 – summary of receipt 3:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Kind of information	6		1	
3	Command	**?I**		2	
4	Receipt status		/		Decimal value: 0 – empty 1 – open 2 – closed 3 – cancelled
5	Receipt type		/		Decimal value: 0 – normal 1 – accounting returnable packages
6	Receipt no.		/		
7	Receipt date and time		<CR>		Format rrrr-mm-dd hh:mm:ss
8	Printout No.		/		
9	Transaction system No.		<CR>		
10	ECR No.		<CR>		Data from the ending of receipt or logging in
11	Cashier		<CR>		Data from the ending of receipt or logging in
12	Number of positions		/		
13	Number of deposits		/		
14	No. of forms of payments		/		
15	Total		/		Fiscal value without deposit provision
16	Discount type		/		0: none, 1: percentage discount, 2: percentage overhead, 3: amount discount, 4: amount overhead,
17	Discount		/		Amount or percentage value
18	Discount name		<CR>		
19	Total after discount		/		
20	Method of discount's calculating	0..1	/	1	As in the command fixing the method
21	Deposits taken	Number	/		For a given package
22	Deposits given away	Number	/		For returned packages
23	To pay	Number	/		
24	Cash	Number	/		Sum of payments in this form
25	Card	Number	/		Sum of payments in this form
26	Cheque	Number	/		Sum of payments in this form
27	Voucher	Number	/		Sum of payments in this form
28	Another form of payment	Number	/		Sum of payments in this form
29	Credit	Number	/		Sum of payments in this form
30	Customer's account	Number	/		Sum of payments in this form
31	Foreign currency	Number	/		Sum of payments in this form
32	Transfer	Number	/		Sum of payments in this form

33	Euro cash	Number	/		Sum of payments in this form
34	Mobile	Number	/		Sum of payments in this form
35	Voucher	Number	/		Sum of payments in this form
36	Name of the card	Inscription	<CR>		Name of the first one (if there were many)
37	Name of the cheque	Inscription	<CR>		Name of the first one (if there were many)
38	Name of the voucher	Inscription	<CR>		Name of the first one (if there were many)
39	Name of other form of payment	Inscription	<CR>		Name of the first one (if there were many)
40	Name of credit	Inscription	<CR>		Name of the first one (if there were many)
41	Name of Customer's account	Inscription	<CR>		Name of the first one (if there were many)
42	Name of transfer	Inscription	<CR>		Name of the first one (if there were many)
43	Name of mobile payment	Inscription	<CR>		Name of the first one (if there were many)
44	Name of voucher	Inscription	<CR>		Name of the first one (if there were many)
45	Euro exchange rate		/		
46	Rest in PLN		/		
47	Rest in Euro		/		
48	Buyer's NIP	Inscription	<CR>		
49	Control byte	00..FF		2	
50		<ESC>\		2	

4.9.6. Handling the data of logs of communication monitor (?m)

Ports: PC1, PC2

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Kind of order		;		0 – readout the first log 1 – readout the next log 2 – remove log data for the given port
3	Port number	1..4		1	Identifiers of COM ports: 1 – COM1 2 – COM2 3 – COM3 4 – COM4 N - COMN – depending on number of communication port of device
4	Command	**?m**		2	
5	Control byte	00..FF		2	
6		<ESC>\		2	

Remarks:

1. Kind of order = 0 sets the internal log indicator as first and sends it back. Order = 1 increases the internal log indicator so that it indicates the next log and sends it back or sends an empty log if there is no next log.
2. Packets of big logs may be divided into few packets, 256(Quarto) or 128 (Vivo/Vento) bytes each.
3. The PC always has to inquire about logs or packets of logs if the logs were big and were divided into few packets. The printer itself does not send back following packets of the same log. The following log will be send back as the PC queries about all packets of the previous log (if there are few because the packet was to big).

4. Further information about dividing logs into packets are included in the remarks to the packet of answers including data of logs.

Response for orders of logs' readout:

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
5	Command	**?m**		2	
	Port No	1..4	/		
	Transmission direction	0,1	/		0 – data received by the printer 1 – data sent by the printer
	Date and time of log		<CR>		Format: yyyy-mm-dd hh:mm:ss:mmm
	Total quantity of bytes in log	0	/		
	Offset of data in log	0-nnnn	/		When: =0 : data >0 : continuation of the previous log Log may be sent in many packets if its size exceeds 256 bytes for Quarto and 128 for Vivo/Vento.
6	Quantity of bytes in log in the current packet	Number	/	1..3	Log may be sent in many packets. Here the information is included how many is sent in this packet.
7	Data buffer	Text	<CR>	1..512	Data of log's bytes, hexadecimal coded, 2 characters per byte e.g. sequence of bytes of values 1,2,3,15 will be sent here as 0102030F
13	Control byte	00..FF		2	
14		<ESC>\		2	

Remarks:

1. Receiving an empty log with a null quantity of bytes means the last log
2. If the amount of bytes in log exceeds 256 (Quarto/Delio) or 128 (Vivo/Vento) than such a log will be sent back in many packets. The „Log data offset" and „Quantity of bytes in log in the current packet" Fields shall be used build a full log during the transmission of the following packets. Recognizing that a packet is a transmission of the following part of the previous log bases on the analysis of the „Offset of data in log" Field which is >0 when the packet is a continuation of the previous log.
3. Transmission of the query of communication log data is recorded to communication logs only at the first time, unless the time between inquiries about the further log data is longer than 3[s].
4. During the transmission of the data connected with receiving communication logs, no transmission is logged by the time of its completion or after 3[s] in case that the transmission was not successfully completed.
5. Transmissions of answers for queries of the data of communication monitor logs are not recorded to communication logs in order to avoid their useless usage.

4.9.7. Configuration settings (^c).

Ports: PC1

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**^c**		2	
3	Control byte	00..FF		2	
6		<ESC>\		2	

Response to readout orders item programming:

No	Field name	Content	Separator	Size	Remarks

1		<ESC>P		2	
2	**Quantity of options**			2..3	**Total quantity of options sent in a packet.**
3	Command	**^c**		2	
4	**Option No**	number	<CR>	1..2	0
5	Auto set-off	0..999	<CR>	1..4	Time in seconds after which a non-working printer will set itself off
6	**Option No**	number	<CR>	1..2	1
7	Auto blanking	0..999	<CR>	1..4	Time in seconds after which a non-working printer will blank.
8	**Option No**	number	<CR>	1..2	2
9	Printout contrast	0..9	<CR>	1	Printout contrast,: 9 – maximal printout contrast 0 – minimal printout contrast
10	**Option No**	number	<CR>	1..2	3
11	Printing undersigns' line	0..2	<CR>	1	Printing undersigns' line: 0 – all 1 – only sub-sums 2 – none
12	**Option No**	number	<CR>	1..2	4
13	Communication control	0..1	<CR>	1	Communication control: 0 – XONXOFF+RTSCTS 1 – RTSCTS
14	**Option No**	number	<CR>	1..2	5
15	Communication protocol	0..1	<CR>	1	Communication protocol 0 – NOVITUS accordable 1 – NOVITUS 2– XML
16	**Option No**	number	<CR>	1..2	6
17	Source for additional lines	0..1	<CR>	1	Source for additional lines: 0 – foot note 1 – header
18	**Option No**	number	<CR>	1..2	7
19	Additional lines on the receipt	0..1	<CR>	1	Additional lines on the receipt: 0 – none 1 – stable
20	**Option No**	number	<CR>	1..2	8
21	Receipt system number line	0..6	<CR>	1	Receipt system number line: 0 – none 1 – first 2 – second 3 – third 4 – fourth 5 – fifth 6 – last
22	**Option No**	number	<CR>	1..2	9
23	Sent back name	0..3	<CR>	1	Sent back name: 0 – HD 1 – BONO 2 – DELIO 3 – QUARTO 4 – VIVO 5 – VENTO 6 – WIKING 7 – defined
24	**Option No**	number	<CR>	1..2	10
25	Format of the unique number sent back	0..1	<CR>	1	For printers with 13-digits unique number: 0 – XXX########## 1 – XXX########

					2 – XX########. For printers with 11-digits unique number: 0 – XXX########, 1 – XX########. (X – letters, # -digits)
26	**Option No**	number	<CR>	1..2	11
27	Receipt buffering	0..1	<CR>	1	Receipt buffering: 0 – no 1 – yes
28	**Option No**	number	<CR>	1..2	12
29	Reeling indicator	0..1	<CR>	1	Reeling sensor: 0 – on 1 – off
30	**Option No**	number	<CR>	1..2	13
31	PC1 Speed	0..7	<CR>	1	COM sequence port speed: 0 – 1200 1 – 2400 2 – 4800 3 – 9600 4 – 19200 5 – 38400 6 – 57600 7 – 115200
32	**Option No**	number	<CR>	1..2	14
33	AUX1Speed	0..7	<CR>	1	COM sequence port speed: 0 – 1200 1 – 2400 2 – 4800 3 – 9600 4 – 19200 5 – 38400 6 – 57600 7 – 115200
34	**Option No**	number	<CR>	1..2	15
35	PC2 Speed	0..7	<CR>	1	COM sequence port speed: 0 – 1200 1 – 2400 2 – 4800 3 – 9600 4 – 19200 5 – 38400 6 – 57600 7 – 115200
36	**Option No**	number	<CR>	1..2	16
37	AUX2 Speed	0..7	<CR>	1	COM sequence port speed: 0 – 1200 1 – 2400 2 – 4800 3 – 9600 4 – 19200 5 – 38400 6 – 57600 7 – 115200
38	**Option No**	number	<CR>	1..2	17
39	PC1 parameters	0..1	<CR>	1	Communication control: 0 – XONXOFF+RTSCTS 1 – RTSCTS 2 – None
40	**Option No**	number	<CR>	1..2	18
41	AUX1 parameters	0..1	<CR>	1	Communication control: 0 – XONXOFF+RTSCTS

					1 – RTSCTS 2 – None
42	**Option No**	number	<CR>	1..2	19
43	AUX2 parameters	0..1	<CR>	1	Communication control: 0 – XONXOFF+RTSCTS 1 – RTSCTS 2 – None
44	**Option No**	number	<CR>	1..2	20
45	PC2 parameters	0..1	<CR>	1	Communication control: 0 – XONXOFF+RTSCTS 1 – RTSCTS 2 – None
46	**Option No**	number	<CR>	1..2	21
47	Logging COM1 transmission	0..1	<CR>	1	Logging transmission: 0 – on 1 – off
48	**Option No**	number	<CR>	1..2	22
49	Logging COM2 transmission	0..1	<CR>	1	Logging transmission: 0 – on 1 – off
50	**Option No**	number	<CR>	1..2	23
51	Logging COM3 transmission	0..1	<CR>	1	Logging transmission: 0 – on 1 – off
52	**Option No**	number	<CR>	1..2	24
53	Logging COM4 transmission	0..1	<CR>	1	Logging transmission: 0 – on 1 – off
54	**Option No**	number	<CR>	2	25 (for Delio printer)
55	Logging COM5 transmission	0..1	<CR>	1	Logging transmission: 0 – switched on 1 – switched off
56	**Option No**	**number**	**<CR>**	**2**	**25 (for printers others than Delio)** **26 (for printer Delio)**
57	Configuration of ports (mapping)	0..2	<CR>	1..2	Configuration of ports as follows: HDe – option not sent back Delio Prime: 1. PC PP1 PP2 – PC2 2. PC2 PP1 PP2 – PC1 3. - PP1 PP2 PC PC2 4. PC PC2 PP1 PP2 - 5. PC2 PC PP1 PP2 - Delio: 1. - - PC – PC2 2. - - PP1 PC PC2 Bono: 1. PC PP1 PP2 PC2 2. PC2 PP1 PP2 PC1 3. PC PC2 PP1 PP2 4. PC2 PC PP1 PP2 5. PP1 PP2 PC PC2 6. PC PP2 PP1 PC Deon: 1. PC - - 2. - PC - 3. - - PC Quarto: 1. PP1 PC PP2 PC2 2. PP1 PC2 PP2 PC 3. PP1 PC PC2 PP2 4. PP1 PC2 PC PP2 5. PC PC2 PP1 PP2

58	**Option No.**	**number**	**<CR>**	**2**	**27**
59	Wake up the device from communication port	0..7	<CR>	1	Subsequently set bits mean: For Deon printer: 1 – Waking up from COM1 2 – Waking up from COM2 (BT) 3 – Waking up from COM3 (USB) For Bono printer: 1 – Waking up from COM1 For Delio printer: 1 – Waking up from COM2 and COM3
60	**Option No.**	**number**	**<CR>**	**2**	**28**
61	Control of cashiers logging	0..1	<CR>	1	0 – switched on 1 – switched off Switched on control of cashiers logging causes automatically printout of cashier change report (resetting) – ending cashier change – in moment of new cashier logging
62	**Option No.**	**number**	**<CR>**	**2**	**29 (only MiniPos)**
63	Calibration of printer's clock	-36000.. ..36000	<CR>	1..6	
64	**Option No.**	**number**	**<CR>**	**2**	**30 (only MiniPos)**
65	Contrast of cashier's display	60.. 127	<CR>	2..3	
66	**Option No.**	**number**	**<CR>**	**2**	**31 (printers with invoices operating)**
67	Option of invoice printout	0.. 1	<CR>	1	0 – switched on 1 – switched off Switched on option causes message about copy's (of invoice) printout on printer's display before its printing
68	**Option No.**	**number**	**<CR>**	**2**	**32**
69	Height of bar code on receipt	0.. 255	<CR>	1..3	Height of bar code printed in receipt line 40 – default value
70	**Option No.**	**number**	**<CR>**	**2**	**33**
71	Height of the rest bar codes	0.. 255	<CR>	1..3	Height of bar code printed under receipt, under invoice, under non-fiscal printout and on non-fiscal printout 100 – default value
72	**Option No.**	**number**	**<CR>**	**2**	**34**
73	Font type on printouts	0.. 1	<CR>	1	0 – normal 1 – thin
74	**Option No.**	**number**	**<CR>**	**2**	**35**
75	Font type on printout's title	0.. 1	<CR>	1	0 – normal 1 – thin (enlarged)
76	**Option No.**	**number**	**<CR>**	**2**	**36**
77	Format of position printout on invoice	0.. 1	<CR>	1	0 – basic 1 – shortened
78	**Option No.**	**number**	**<CR>**	**2**	**37**
79	Format of position printout on receipt	0.. 1	<CR>	1	0 – basic 1 – aligning prices
80	**Option No.**	number	<CR>	2	**38**
81	Change control on receipt	0.. 1	<CR>	1	0 – switched on 1 – switched off
82	**Option No.**	**number**	**<CR>**	**2**	**39**
83	Scale of QRCode	2..10	<CR>	2	Uwaga! Zalecana maksymalna wartość

					skali to 10 (dla wydruku szerokiego) i 7(dla wydruku wąskiego), pozwoli ona zachować prawidłowy wydruk dla każdej wersji QR kodu dopuszczalnej w drukarkach. Powyżej 10 (dla wydruku szerokiego) i 7(dla wydruku wąskiego), maksymalna wartość skali zależy od ustawionej wersji QR kodu.
84	**Option No.**	**number**	**<CR>**	**2**	**40**
85	QRCode version	0..9	<CR>	0	0 – automatic 1. 21x21 2. 25x25 3. 29x29 4. 33x33 5. 37x37 6. 41x41 7. 45x45 8. 49x49 9. 53x53
86	**Option No.**	**number**	**<CR>**	**2**	**41**
87	Level of errors correction QRCode(ECL)	0..3	<CR>	3	0. low (L 7%) 1. average (M 15%) 2. high (Q 25%) 3. extremely high (H 30%)
88	**Option No.**	**number**	**<CR>**	**2**	**42**
89	Port COM1 connection	0..5	<CR>	1	0 – none 1 – PC 2 – PC2 3 – PP1 (assistant port 1) 4 – PP2 (assistant port 2) 4 – print monitor 5 6 – Modem 7 – ECREFT 8 – Serwer PPP1 9 – Serwer PPP2 *(read remark 6)*
90	**Option No.**	**number**	**<CR>**	**2**	**43**
91	Port COM2 connection	0..5	<CR>	1	Acceptable parameters the same like for port COM1 connection *(read remark 6)*
92	**Option No.**	**number**	**<CR>**	**2**	**44**
93	Port COM3 connection	0..5	<CR>	1	Acceptable parameters the same like for port COM1 connection *(read remark 6)*
94	**Option No.**	**number**	**<CR>**	**2**	**45**
95	Port COM4 connection	0..5	<CR>	1	Acceptable parameters the same like for port COM1 connection *(read remark 6)*
96	**Option No.**	**number**	**<CR>**	**2**	**46**
97	Port COM5 connection	0..5	<CR>	1	Acceptable parameters the same like for port COM1 connection *(read remark 6)*
98	**Option No.**	**number**	**<CR>**	**2**	**47**
99	Port COM6 connection	0..5	<CR>	1	Acceptable parameters the same like for port COM1 connection *(read remark 6)*
100	**Option No.**	**number**	**<CR>**	**2**	**48**
101	Number of port TCP on PC1	0..9999	<CR>	1	
102	**Option No.**	**number**	**<CR>**	**2**	**49**

103	Filter MAC TCP on PC1	text	<CR>	14	Format: „XX-XX-XX-XX-XX”
104	**Option No.**	**number**	**<CR>**	**2**	**50**
105	Number of port TCP on PC2	0..9999	<CR>	1	
106	**Option No.**	**number**	**<CR>**	**2**	**51**
107	Filter MAC TCP on PC2	text	<CR>	14	Format: „XX-XX-XX-XX-XX”
108	**Option No.**	**number**	**<CR>**	**2**	**52**
109	Number of port TCP on PP1	0..9999	<CR>	1	
110	**Option No.**	**number**	**<CR>**	**2**	**53**
111	Filter MAC TCP on PP1	text	<CR>	14	Format: „XX-XX-XX-XX-XX”
112	**Option No.**	**number**	**<CR>**	**2**	**54**
113	Number of port TCP on PP2	0..9999	<CR>	1	
114	**Option No.**	**number**	**<CR>**	**2**	**55**
115	Filter MAC TCP on PP2	text	<CR>	14	Format: „XX-XX-XX-XX-XX”
116	**Option No.**	**number**	**<CR>**	**2**	**56**
117	Number of port TCP on print monitor.	0..9999	<CR>	1	
118	**Option No.**	**number**	**<CR>**	**2**	**57**
119	Filter MAC TCP on print monitor.	text	<CR>	14	Format: „XX-XX-XX-XX-XX”
120	**Option No.**	**number**	**<CR>**	**2**	**58**
121	Mode of setting net TCP/IP	0..1	<CR>	1	0 – Automatic (DHCP) 1 – manual
122	**Option No.**	**number**	**<CR>**	**2**	**59**
123	Address IP	text	<CR>	15	Format: „###.###.###.###”
124	**Option No.**	**number**	**<CR>**	**2**	**60**
125	Subnet mask	text	<CR>	15	Format: „###.###.###.###”
126	**Option No.**	**number**	**<CR>**	**2**	**61**
127	Default gateway	text	<CR>	15	Format: „###.###.###.###”
128	**Option No.**	**number**	**<CR>**	**2**	**62**
129	Server DNS	text	<CR>	15	Format: „###.###.###.###”
130	**Option No.**	**number**	**<CR>**	**2**	**63**
131	Server HTTP	0..1	<CR>	1	0 – Inactive 1 – Active
132	**Option No.**	**number**	**<CR>**	**2**	**64**
133	Print width	0..1	<CR>	1	0 – 57 [mm] 1 – 80 [mm]
134	**Option No.**	**number**	**<CR>**	**2**	**65**
135	Font	0..1	<CR>	1	0 – Normal 1 – Enlarged Warning! Option is active only for print width 80 [mm]
136	**Option No.**	**number**	**<CR>**	**2**	**66**
137	Cutter	0..1	<CR>	1	0 – switched off 1 – full cut 2 – partial cut
138	**Option No.**	**number**	**<CR>**	**2**	**67**
139	Serial number	number	<CR>	1..15	

140	**Option No.**	**number**	**<CR>**	**2**	**68**
141	Speed of print monitor	0..7	<CR>	1	Speed of serial port COM: 0 – 1200 1 – 2400 2 – 4800 3 – 9600 4 – 19200 6 – 57600 7 – 115200
142	**Option No.**	**number**	**<CR>**	**2**	**69**
143	Control of print monitor communication	0..2	<CR>	1	Communication control: 0 – XONXOFF+RTSCTS 1 – RTSCTS 2 – none
144	**Option No.**	**number**	**<CR>**	**2**	**70**
145	Control of making daily report	0..1	<CR>	1	0 – switched off 1 – switched on
146	**Option No.**	**number**	**<CR>**	**2**	**71**
147	Automatic drawer opening	0..1	<CR>	1	0 – switched off 1 – switched on
148	**Option No.**	**number**	**<CR>**	**2**	**72**
149	Automatic backlight off	0..1	<CR>	1	Automatic backlight off (keyboard, display) while power on 0 – switched off 1 – switched on
150	**Option No.**	**number**	**<CR>**	**2**	**73**
151	Automatic backlight off	0..1	<CR>	1	Automatic backlight off (displays) while power on 0 – switched off 1 – switched on
152	**Option No.**	**number**	**<CR>**	**2**	**74**
153	Automatic backlight off	0..1	<CR>	1	Automatic backlight off (keyboard) while power on 0 – switched off 1 – switched on
154	**Option No.**	**number**	**<CR>**	**3**	**75**
155	Password of HTTP server	text	<CR>	1..6	Field only possible to program
156	**Option No.**	**number**	**<CR>**	**2**	**76**
157	Printout monitor – active server				0 – switched off 1 – switched on
158	**Option No.**	**number**	**<CR>**	**2**	**77**
159	Code page of print monitor	0..2	<CR>	1	0 – Windows 1250 1 – Latin 2 2 – without Polish characters
160	**Option No.**	**number**	**<CR>**	**2**	**80**
161	Print the conversion in receipt's footer	0..2	<CR>	1	0 – switched off 1 – switched on
162	**Option No.**	**number**	**<CR>**	**2**	**81**
163	Print the conversion – currency name	text	<CR>	3	
164	**Option No.**	**number**	**<CR>**	**2**	**82**
165	Print the conversion	number	<CR>	13	Currency exchange rate with precision

	– currency exchange rate				up to 8 decimal places Format: ####.########
166	**Option No.**	**number**	**<CR>**	**2**	**84**
167	Displaying status of accumulator	0..1	<CR>	1	0 – switched off 1 – switched on
168	**Option No.**	**number**	**<CR>**	**2**	**85**
169	Display contrast	number	<CR>	2	10..99 – HD E
170	**Option No.**	**number**	**<CR>**	**2**	**87**
171	Intensity of display backlight	number	<CR>	3	0..100 – HD E
172	**Option No.**	**number**	**<CR>**	**2**	**88**
173	Intensity of keyboard backlight	number	<CR>	3	0..100
174	**Option No.**	**number**	**<CR>**	**2**	**91**
175	Input code page for PC connection	number	<CR>	1	0 – Mazovia 1 – Windows 1250 2 – ISO 8859-2
176	**Option No.**	**number**	**<CR>**	**2**	**92**
177	Output code page for PC connection	number	<CR>	1	0 – Mazovia 1 – Windows 1250 2 – ISO 8859-2
178	**Option No.**	**number**	**<CR>**	**2**	**93**
179	Input code page for PC 2 connection	number	<CR>	1	0 – Mazovia 1 – Windows 1250 2 – ISO 8859-2
180	**Option No.**	**number**	**<CR>**	**2**	**94**
181	Output code page for PC 2 connection	number	<CR>	1	0 – Mazovia 1 – Windows 1250 2 – ISO 8859-2
182	**Option No.**	**number**	**<CR>**	**2**	**95**
183	Name of animation file	text	<CR>	5..12	File name in notation DOS-a (8+3)
184	**Option No.**	**number**	**<CR>**	**2**	**96**
185	Active animation	number	<CR>	1	0 – switched on 1 – switched off
186	**Option No.**	**number**	**<CR>**	**2**	**97**
187	Buzzer volume	number	<CR>	1	Number from range 0-7
188	**Option No.**	**number**	**<CR>**	**2**	**98**
189	Menu appearance style	number	<CR>	1	Number from range 0-7, for HDII 0-3
190	**Option No.**	**number**	**<CR>**	**2**	**99**
191	Verification of paper changing	number	<CR>	1	0 – switched off 1 – switched on
192	**Option No.**	**number**	**<CR>**	**3**	**100**
193	Confirmation of paper changing DLE	number	<CR>	1	0 – switched off 1 – switched on
194	**Option No.**	**number**	**<CR>**	**3**	**101**

195	Verification of wires connecting	number	<CR>	1	0 – switched off 1 – switched on
196	**Option No.**	**number**	**<CR>**	**3**	**102**
197	Inform about paper end	number	<CR>	1	0 – switched off 1 – switched on
198	**Option No.**	**number**	**<CR>**	**3**	**103**
199	Interval between receipt and animation display	number	<CR>	2	10..45 second
200	**Option No.**	**number**	**<CR>**	**3**	**104**
201	Login of COM6 transmission	0..1	<CR>	1	Transmission login: 0 – switched on 1 – switched off
202	**Option No.**	**number**	**<CR>**	**3**	**105**
203	Definition of sent back name	text	<CR>	0..20	Name would be send back by the printer when set option 9 for: 7 – Defined
204	**Option No.**	**number**	**<CR>**	**3**	**106**
205	Sleeping device after daily report	0..1	<CR>	1	0 – switched off 1 – switched on
206	**Option No.**	**number**	**<CR>**	**3**	**107**
207	No paper feed after printing	0..1	<CR>	1	0 – switched off 1 – switched on
208	**Option No.**	**number**	**<CR>**	**3**	**108**
209	Current IP address	text	<CR>	0..15	Address IP in standard notation e.g.: 192.168.1.1
210	**Option No.**	**number**	**<CR>**	**3**	**111**
211	Owner's identifier	text	<CR>	0..9	The identifier for the purposes of limited access function
212	**Option No.**	**number**	**<CR>**	**3**	**112**
213	Graphic footer	number	<CR>	-1..128	Index of graphic, which is to be printed in the receipt's footer (-1 – none)
214	**Option No.**	**number**	**<CR>**	**3**	**113**
215	Style of receipt's window	number	<CR>	1	0 – basic 1 – concentrated
216	**Option No.**	**number**	**<CR>**	**3**	**114 (printers with invoice operating)**
217	Invoice printout options	0..1	<CR>	1	Inserting a left margin on the whole printout length of invoice (invoice copy) 0 – switched off 1 – switched on
218	**Option No.**	**number**	**<CR>**	**3**	**115**
219	Limited access	0..1	<CR>	1	0 – switched off 1 – switched on
220	**Option No.**	**number**	**<CR>**	**3**	**116**
221	Automatic monthly report	0..1	<CR>	1	0 – switched off 1 – switched on
222	**Option No.**	**number**	**<CR>**	**3**	**117**
223	Automatic periodical report	0..1	<CR>	1	0 – switched off 1 – switched on
224	**Option No.**	**number**	**<CR>**	**3**	**119**
225	Inversion of the operator display	0..1	<CR>	1	0 - switched off 1 - switched on

226	**Option number**	**number**	**<CR>**	**3**	**131**
227	Digital signature printout on the receipt in graphical mode	0..1	<CR>	1	0 - switched off 1 - switched on
228	**Option number**	**number**	**<CR>**	**3**	**132**
229	Digital signature printout on the invoice in graphic mode	0..1	<CR>	1	0 - switched off 1 - switched on
230	**Option number**	**number**	**<CR>**	**3**	**133**
231	Daily report without print on paper	0..1	<CR>	1	0 - switched off 1 - switched on
232	**Option number**	**number**	**<CR>**	**3**	**134**
233	Blocking the daily report call from the menu	0..1	<CR>	1	0 - switched off 1 - switched on
234	**Option number**	**number**	**<CR>**	**3**	**135**
235	Password to bypass the blockage of the daily report	0..9999	<CR>	1	Insignificant zeros (preceding) are ignored (0001 == 1) 0 (zero) - disabling the password
236	**Option number**	**number**	**<CR>**	**3**	**136**
237	Blocking configuration change from the printer menu	0..1	<CR>	1	0 - switched off 1 - switched on
238	**Option number**	**number**	**<CR>**	**3**	**137**
239	Password to bypass the lock of configuration change from the printer menu	0..9999	<CR>	1	Insignificant zeros (preceding) are ignored (0001 == 1) 0 (zero) - disabling the password
240	**Option number**	**number**	**<CR>**	**3**	**138**
241	Automatic hiding the printer menu	0..1	<CR>	1	0 - switched off 1 - switched on
242	**Option number**	**number**	**<CR>**	**3**	**139**
243	The time after which the menu will be hidden	5..9999	<CR>	1..4	Time in [s]
244	**Option number**	**number**	**<CR>**	**3**	**140**
245	Digital signature printout on a daily report in graphic form	0..1	<CR>	1	0 - switched off 1 - switched on
246	**Option number**	**number**		**3**	**141**
247	Print graphic header options	0..7	<CR>	1	Subsequent set bits mean 1 – print on paper, 2 – print on invoice, 3 – print on the rest printouts
248	**Option number**	**number**	**<CR>**	**3**	**142**
249	Turning the customer printout monitor on or off (setting to one requires setting 143 and 144)	0..1	<CR>	1	0 - switched off 1 - switched on

250	**Option number**	**text**	**<CR>**	**3**	**143**
251	Address (IP or name) of the printout monitor server - what printer will connect to and send printouts (an integral part of 144)		<CR>	max 128 characters	Address in the form of IP or domain name
252	**Option number**	**number**	**<CR>**	**3**	**144**
253	The print server port to which the printer will connect	1.. 65535	<CR>	16	Port no.
254	**Option number**	**number**	**<CR>**	**3**	**145**
255	Automatic hiding (reference) of the information dialogue	0..1	<CR>	1	0 - switched off 1 - switched on The dialogue will be hidden (cancelled) after 5 seconds
256	**Option number**	**number**	**<CR>**	**3**	**146**
257	Information about errors in animation files. When the option is turned off and the error in the animation is displayed, the default screen (date + time) is displayed instead of the board with information about the error	0..1	<CR>	0..1	0 - switched off 1 - switched on
258	**Option number**	**number**	**<CR>**	**3**	**147**
259	If this option is enabled, the menu will be accessible only by a special key (holding OK for 3s) - elimination of accidental entry to the menu.	0..1	<CR>	0..1	0 - switched off 1 - switched on
260	**Option number**	**number**	**<CR>**	**3**	**150**
261	Is WLAN enabled ?	0..1	<CR>	1	0 - switched off 1 - switched on
262	**Option number**	**number**	**<CR>**	**3**	**151**
263	SSID WLAN	text	<CR>	0..32	SSID name
264	**Option number**	**number**	**<CR>**	**3**	**152**
265	WLAN password	text	<CR>	0..40	WLAN password. Field only possible to program
266	**Option number**	**number**	**<CR>**	**3**	**153**
267	Is DHCP for WLAN active	0..1	<CR>	1	0 – inactive 1 – active
268	**Option number**	**number**	**<CR>**	**3**	**154**
269	IP WLAN address	text	<CR>	0..15	IP in standard notation e.g. 192.168.1.1
270	**Option number**	**number**	**<CR>**	**3**	**155**
271	WLAN default gate	text	<CR>	0..15	IP in standard notation e.g. 192.168.1.1
272	**Option number**	**number**	**<CR>**	**3**	**156**
273	WLAN subnet mask	text	<CR>	0..15	IP in standard notation e.g. 192.168.1.1
274	**Option number**	**number**	**<CR>**	**3**	**157**

275	Is BlueTooth enabled ?	0..1	<CR>	1	0 - switched off 1 - switched on
276	**Option number**	**number**	**<CR>**	**3**	**158**
277	BlueTooth name	text	<CR>	0..30	BlueTooth name
278	**Option number**	**number**	**<CR>**	**3**	**159**
279	PIN BlueTooth	text	<CR>	0..8	BlueTooth PIN. Field only possible to program.
280	**Option number**	**number**	**<CR>**	**3**	**160**
281	Is the GSM modem turned on ?	number	<CR>	1	0 - switched off 1 - switched on
282	**Option number**	**number**	**<CR>**	**3**	**161**
283	Host	text	<CR>	0..50	Host name
284	**Option number**	**number**	**<CR>**	**3**	**162**
285	Modem speed	0..7	<CR>	1	0 – 1200 1 – 2400 2 – 4800 3 – 9600 4 – 19200 5 – 38400 6 – 57600 7 – 115200
286	**Option number**	**number**	**<CR>**	**3**	**163**
287	PPP user name	text	<CR>	0..40	PPP user name
288	**Option number**	**number**	**<CR>**	**3**	**164**
289	PPP password	text	<CR>	0..40	PPP password. Field only possible to program..
290	**Option number**	**number**	**<CR>**	**3**	**165**
291	PIN of SIM card	text	<CR>	0..22	PIN. Field only possible to program..
292	**Option number**	**number**	**<CR>**	**3**	**166**
293	Dial up number	text	<CR>	0..50	Dial up number
294	**Option number**	**number**	**<CR>**	**3**	**167**
295	APN name	text	<CR>	0..50	APN name
296	**Option number**	**number**	**<CR>**	**3**	**168**
297	Customer display invers	0..1	<CR>	1	0 - switched off 1 - switched on
298	**Option number**	**number**	**<CR>**	**1**	**169**
299	Sleep the device after time	0..9999	<CR>	1..4	Number of seconds
300	**Option number**	**number**	**<CR>**	**1**	**170**
301	Wake device up	0..1	<CR>	1	0 – all keys 1 – only [C]
302	**Option number**	**number**	**<CR>**	**1**	**171**
303	The method of default disabling the	0..1	<CR>	1	0 – switched off 1 – sleeping
304	**Option number**	**number**	**<CR>**	**1**	**172**
305	Graphic header on the receipt	0..1	<CR>	1	0 – No 1 – Yes
306	**Option number**	**number**	**<CR>**	**1**	**173**
307	Graphic header on the invoice	0..1	<CR>	1	0 – No 1 – Yes
308	**Option number**	**number**	**<CR>**	**1**	**174**
309	Graphic header on other printouts	0..1	<CR>	1	0 – No 1 – Yes
310	**Option number**	**number**	**<CR>**	**2**	**175**

311	COM7 port connection	0..6	<CR>	1	Acceptable parameters such as for COM1 port connection *(see remark 6)*
312	**Option number**	**number**	**<CR>**	**2**	**176**
313	COM8 port connection	0..6	<CR>	1	Acceptable parameters such as for COM1 port connection *(see remark 6)*
314	**Option number**	**number**	**<CR>**	**2**	**177**
315	COM9 port connection	0..6	<CR>	1	Acceptable parameters such as for COM1 port connection *(see remark 6)*
316	**Option number**	**number**	**<CR>**	**2**	**178**
317	COM10 port connection	0..6	<CR>	1	Acceptable parameters such as for COM1 port connection *(see remark 6)*
318	**Option number**	**number**	**<CR>**	**2**	**179**
319	COM11 port connection	0..6	<CR>	1	Acceptable parameters such as for COM1 port connection *(see remark 6)*
320	**Option number**	**number**	**<CR>**	**2**	**180**
321	COM12 port connection	0..6	<CR>	1	Acceptable parameters such as for COM1 port connection *(see remark 6)*
322	**Option number**	**number**	**<CR>**	**2**	**181**
323	COM13 port connection	0..6	<CR>	1	Acceptable parameters such as for COM1 port connection *(see remark 6)*
324	**Option number**	**number**	**<CR>**	**2**	**182**
325	COM14 port connection	0..6	<CR>	1	Acceptable parameters such as for COM1 port connection *(see remark 6)*
326	**Option number**	**number**	**<CR>**	**2**	**183**
327	COM15 port connection	0..6	<CR>	1	Acceptable parameters such as for COM1 port connection *(see remark 6)*
328	**Option number**	**number**	**<CR>**	**1..2**	**184**
329	Logging of COM7 transmissions	0..1	<CR>	1	Logging of transmissions: 0 – switched on 1 – switched off
330	**Option number**	**number**	**<CR>**	**1..2**	**185**
331	Logging of COM8 transmissions	0..1	<CR>	1	Logging of transmissions: 0 – switched on 1 – switched off
332	**Option number**	**number**	**<CR>**	**1..2**	**186**
333	Logging of COM9 transmissions	0..1	<CR>	1	Logging of transmissions: 0 – switched on 1 – switched off
334	**Option number**	**number**	**<CR>**	**1..2**	**187**
335	Logging of COM10 transmissions	0..1	<CR>	1	Logging of transmissions: 0 – switched on 1 – switched off
336	**Option number**	**number**	**<CR>**	**1..2**	**188**
337	Logging of COM11 transmissions	0..1	<CR>	1	Logging of transmissions: 0 – switched on 1 – switched off
338	**Option number**	**number**	**<CR>**	**1..2**	**189**
339	Logging of COM12 transmissions	0..1	<CR>	1	Logging of transmissions: 0 – switched on 1 – switched off
340	**Option number**	**number**	**<CR>**	**1..2**	**190**

341	Logging of COM13 transmissions	0..1	<CR>	1	Logging of transmissions: 0 – switched on 1 – switched off
342	**Option number**	**number**	**<CR>**	**1..2**	**191**
343	Logging of COM14 transmissions	0..1	<CR>	1	Logging of transmissions: 0 – switched on 1 – switched off
344	**Option number**	**number**	**<CR>**	**1..2**	**192**
345	Logging of COM15 transmissions	0..1	<CR>	1	Logging of transmissions: 0 – switched on 1 – switched off
346	**Option number**	**number**	**<CR>**	**2**	**193**
347	Input code page for PP1 connection	0..2	<CR>	1	0 – Mazovia 1 – Windows 1250 2 – ISO 8859-2
348	**Option number**	**number**	**<CR>**	**2**	**194**
349	Output code page for PP1 connection	0..2	<CR>	1	0 – Mazovia 1 – Windows 1250 2 – ISO 8859-2
350	**Option number**	**number**	**<CR>**	**2**	**195**
351	Input code page for PP2 connection	0..2	<CR>	1	0 – Mazovia 1 – Windows 1250 2 – ISO 8859-2
352	**Option number**	**number**	**<CR>**	**2**	**196**
353	Output code page for PP2 connection	0..2	<CR>	1	0 – Mazovia 1 – Windows 1250 2 – ISO 8859-2
354	**Option number**	**number**	**<CR>**	**3**	**200**
355	A compact printout of recipe valuation	0..1	<CR>	1	0 - switched off 1 - switched on
356	**Option number**	**number**	**<CR>**	**3**	**201**
357	Valuations combining	0..1	<CR>	1	0 - switched off 1 - switched on
358	**Option number**	**number**	**<CR>**	**3**	**202**
359	Date / time update only from the server	0..1	<CR>	1	0 - switched off 1 - switched on *Warning!* Enabling date / time update from the server means blocking date / time changes from PC, PC2 and PC3 interfaces. The off option allows you to change the date / time from both the server and the PC, PC2 and PC3 interfaces
360	**Option number**	**number**	**<CR>**	**3**	**203**
361	DNS setting mode	0..1	<CR>	1	0 – automatic, 1 – manual
362	**Option number**	**number**	**<CR>**	**3**	**204**
363	Automatic periodical report, non-fiscal	0..1	<CR>	1	0 - switched off 1 - switched on
364	**Option number**	**number**	**<CR>**	**3**	**205**
365	Non-fiscal QR Code on the receipt	0..1	<CR>	1	0 - switched off 1 - switched on
366	**Option number**	**number**	**<CR>**	**3**	**206**
367	Proxy URL	Text	<CR>	0..256	
368	**Option number**	**number**	**<CR>**	**3**	**207**

369	Proxy Port	0..65535	<CR>	1..5	
370	**Option number**	**number**	**<CR>**	**3**	**210**
371	DNS 2 server	text	<CR>	15	Format: „###.###.###.###”
372	**Option number**	**number**	**<CR>**	**3**	**211**
373	DNS 3 server	text	<CR>	15	Format: „###.###.###.###”
374	**Option number**	**number**	**<CR>**	**3**	**213**
375	DNS mode for WLAN	0..1	<CR>	1	0 - manual DNS 1 – automatic DNS
376	**Option number**	**number**	**<CR>**	**3**	**214**
377	DNS 1 WLAN server	text	<CR>	15	Format: „###.###.###.###”
378	**Option number**	**number**	**<CR>**	**3**	**215**
379	DNS 2 WLAN server	text	<CR>	15	Format: „###.###.###.###”
380	**Option number**	**number**	**<CR>**	**3**	**216**
381	DNS 3 WLAN server	text	<CR>	15	Format: „###.###.###.###”
382	**Option number**	**number**	**<CR>**	**3**	**217**
383	Eth port speed	0..1	<CR>	1	0 – 10 Mbit 1 – 100 Mbit
384	**Option number**	**number**	**<CR>**	**3**	**218**
385	Choosing the internet interface	0..3	<CR>	1	0 – Ethernet 1 – WLAN 2 – Modem GPRS 3 – USB
386	**Option number**	**number**	**<CR>**	**3**	**219**
387	Time changing	0..2	<CR>	1	0 – automatic 1 – summer time 2 – winter time
388	**Option number**	**number**	**<CR>**	**3**	**220**
389	Encryption method	0..1	<CR>	1	0 - WPA/WPA2 Personal 1 - WPA/WPA2 Enterprise TLS
390	**Option number**	**number**	**<CR>**	**3**	**221**
391	Identity	text	<CR>	0..40	Identity
392	**Option number**	**number**	**<CR>**	**3**	**222**
393	Waking up from USB	number	<CR>	0..15	Option setting on bits 0x00 – waking up from USB switched off 0x01 – waking up from port 1 switched on 0x02 – waking up from port 2 switched on 0x04 – waking up from port 3 switched on 0x08 – waking up from port 4 switched on
394	**Option number**	**number**	**<CR>**	**3**	**223**
395	Setting test connection	0..2	<CR>	1	0 – ping to gate 1 – ping to address 2 – none
396	**Option number**	**number**	**<CR>**	**3**	**224**
397	Ip address for ping test	text	<CR>	1	Format: „###.###.###.###”
398	**Option number**	**number**	**<CR>**	**3**	**225**
399	Enable / disable login of diagnostic information	**0..1**	**<CR>**	**1**	0 – enable login 1 – disable login
400	**Option number**	**number**	**<CR>**	**3**	**226**
401	Value after discount / markup	**0..1**	**<CR>**	**1**	Printout of the item's value on the receipt after taking into account the discount /

					mark-up 0 – printout disabled 1 – printout enabled
402	**Option number**	**number**	**<CR>**	**3**	**227**
403	WLAN Configuration 2 - SSID	**text**	**<CR>**	**0..32**	WLAN configuration 2 – SSID
404	**Option number**	**number**	**<CR>**	**3**	**228**
405	WLAN Configuration 3 - SSID	**text**	**<CR>**	**0..32**	WLAN configuration 3 – SSID
406	**Option number**	**number**	**<CR>**	**3**	**229**
407	WLAN Configuration 4 - SSID	**text**	**<CR>**	**0..32**	WLAN configuration 4 – SSID
408	**Option number**	**number**	**<CR>**	**3**	**230**
409	WLAN Configuration 5 - SSID	**text**	**<CR>**	**0..32**	WLAN configuration 5 – SSID
410	**Option number**	**number**	**<CR>**	**3**	**231**
411	WLAN Configuration 6 - SSID	**text**	**<CR>**	**0..32**	WLAN configuration 6 – SSID
412	**Option number**	**number**	**<CR>**	**3**	**232**
413	WLAN Configuration 7 - SSID	**text**	**<CR>**	**0..32**	WLAN configuration 7 – SSID
414	**Option number**	**number**	**<CR>**	**3**	**233**
415	WLAN Configuration 8 - SSID	**text**	**<CR>**	**0..32**	WLAN configuration 8 – SSID
416	**Option number**	**number**	**<CR>**	**3**	**234**
417	WLAN Configuration 9 - SSID	**text**	**<CR>**	**0..32**	WLAN configuration 9 – SSID
418	**Option number**	**number**	**<CR>**	**3**	**235**
419	WLAN Configuration 10 - SSID	**text**	**<CR>**	**0..32**	WLAN configuration 10 – SSID
420	**Option number**	**number**	**<CR>**	**3**	**236**
421	WLAN Configuration 2 - Password	**text**	**<CR>**	**0..40**	WLAN configuration 2 – password
422	**Option number**	**number**	**<CR>**	**3**	**237**
423	WLAN Configuration 3 - Password	**text**	**<CR>**	**0..40**	WLAN configuration 3 – password
424	**Option number**	**number**	**<CR>**	**3**	**238**
425	WLAN Configuration 4 - Password	**text**	**<CR>**	**0..40**	WLAN configuration 4 – password
426	**Option number**	**number**	**<CR>**	**3**	**239**
427	WLAN Configuration 5 - Password	**text**	**<CR>**	**0..40**	WLAN configuration 5 – password
428	**Option number**	**number**	**<CR>**	**3**	**240**
429	WLAN Configuration 6 - Password	**text**	**<CR>**	**0..40**	WLAN configuration 6 – password
430	**Option number**	**number**	**<CR>**	**3**	**241**
431	WLAN Configuration 7 - Password	**text**	**<CR>**	**0..40**	WLAN configuration 7 – password
432	**Option number**	**number**	**<CR>**	**3**	**242**
433	WLAN Configuration 8 - Password	**text**	**<CR>**	**0..40**	WLAN configuration 8 – password
434	**Option number**	**number**	**<CR>**	**3**	**243**
435	WLAN Configuratjon	**text**	**<CR>**	**0..40**	WLAN configuration 9 – password

	9 - Password				
436	**Option number**	**number**	**<CR>**	**3**	**244**
437	WLAN Configuration 10 - Password	**text**	**<CR>**	**0..40**	WLAN configuration 10 – password
438	**Option number**	**number**	**<CR>**	**3**	**245**
439	WLAN Configuration 2 – Encryption type	**number**	**<CR>**	**0..1**	WLAN configuration 2 – Encryption type 0 - WPA/WPA2 Personal 1 - WPA/WPA2 Enterprise TLS default: 0 - WPA/WPA2 Personal
440	**Option number**	**number**	**<CR>**	**3**	**246**
441	WLAN Configuration 3 – Encryption type	**number**	**<CR>**	**0..1**	WLAN configuration 3 – Encryption type 0 - WPA/WPA2 Personal 1 - WPA/WPA2 Enterprise TLS default:: 0 - WPA/WPA2 Personal
442	**Option number**	**number**	**<CR>**	**3**	**247**
443	WLAN Configuration 4 – Encryption type	**number**	**<CR>**	**0..1**	WLAN configuration 4 – Encryption type 0 - WPA/WPA2 Personal 1 - WPA/WPA2 Enterprise TLS default:: 0 - WPA/WPA2 Personal
444	**Option number**	**number**	**<CR>**	**3**	**248**
445	WLAN Configuration 5 – Encryption type	**number**	**<CR>**	**0..1**	WLAN configuration 5 – Encryption type 0 - WPA/WPA2 Personal 1 - WPA/WPA2 Enterprise TLS default: 0 - WPA/WPA2 Personal
446	**Option number**	**number**	**<CR>**	**3**	**249**
447	WLAN Configuration 6 – Encryption type	**number**	**<CR>**	**0..1**	WLAN configuration 6 – Encryption type 0 - WPA/WPA2 Personal 1 - WPA/WPA2 Enterprise TLS default:: 0 - WPA/WPA2 Personal
448	**Option number**	**number**	**<CR>**	**3**	**250**
449	WLAN Configuration 7 – Encryption type	**number**	**<CR>**	**0..1**	WLAN configuration 7 – Encryption type 0 - WPA/WPA2 Personal 1 - WPA/WPA2 Enterprise TLS default: 0 - WPA/WPA2 Personal
450	**Option number**	**number**	**<CR>**	**3**	**251**
451	WLAN Configuration 8 – Encryption type	**number**	**<CR>**	**0..1**	WLAN configuration 8 – Encryption type 0 - WPA/WPA2 Personal 1 - WPA/WPA2 Enterprise TLS default: 0 - WPA/WPA2 Personal
452	**Option number**	**number**	**<CR>**	**3**	**252**
453	WLAN Configuration 9 – Encryption type	**number**	**<CR>**	**0..1**	WLAN configuration 9 – Encryption type 0 - WPA/WPA2 Personal 1 - WPA/WPA2 Enterprise TLS default: 0 - WPA/WPA2 Personal
454	**Option number**	**number**	**<CR>**	**3**	**253**
455	WLAN Configuration 10 – Encryption type	**number**	**<CR>**	**0..1**	WLAN configuration 10 – Encryption type 0 - WPA/WPA2 Personal 1 - WPA/WPA2 Enterprise TLS default: 0 - WPA/WPA2 Personal
456	**Option number**	**number**	**<CR>**	**3**	**254**

457	WLAN Configuration 2 - Identifying name	**text**	**<CR>**	**0..40**	WLAN configuration 2 – Identifying name
458	**Option number**	**number**	**<CR>**	**3**	**255**
459	WLAN Configuration 3 - Identifying name	**text**	**<CR>**	**0..40**	WLAN configuration 3 – Identifying name
460	**Option number**	**number**	**<CR>**	**3**	**256**
461	WLAN Configuration 4 - Identifying name	**text**	**<CR>**	**0..40**	WLAN configuration 4 – Identifying name
462	**Option number**	**number**	**<CR>**	**3**	**257**
463	WLAN Configuration 5 - Identifying name	**text**	**<CR>**	**0..40**	WLAN configuration 5 – Identifying name
464	**Option number**	**number**	**<CR>**	**3**	**258**
465	WLAN Configuration 6 - Identifying name	**text**	**<CR>**	**0..40**	WLAN configuration 6 – Identifying name
466	**Option number**	**number**	**<CR>**	**3**	**259**
467	WLAN Configuration 7 - Identifying name	**text**	**<CR>**	**0..40**	WLAN configuration 7 – Identifying name
468	**Option number**	**number**	**<CR>**	**3**	**260**
469	WLAN Configuration 8 - Identifying name	**text**	**<CR>**	**0..40**	WLAN configuration 8 – Identifying name
470	**Option number**	**number**	**<CR>**	**3**	**261**
471	WLAN Configuration 9 - Identifying name	**text**	**<CR>**	**0..40**	WLAN configuration 9 – Identifying name
472	**Option number**	**number**	**<CR>**	**3**	**262**
473	WLAN Configuration 10 - Identifying name	**text**	**<CR>**	**0..40**	WLAN configuration 10 – Identifying name
474	**Option number**	**number**	**<CR>**	**3**	**263**
475	WLAN Switching AP	**number**	**<CR>**	**0..2**	AP switching: 0 – Ignore hidden networks 1 – Include all hidden networks 2 – Include selected hidden networks default: 0 – Ignore hidden networks
476	**Option number**	**number**	**<CR>**	**3**	**264**
477	WLAN AP scan every [s]	**number**	**<CR>**		AP scan every [s] default: 5 [s]
478	**Option number**	**number**	**<CR>**	**3**	**265**
479	WLAN Switching AP Min. Signal level [%]	**number**	**<CR>**	**0..100**	Switching AP. Min. Signal level [%] default: 30 [%]
480	**Option number**	**number**	**<CR>**	**3**	**266**
481	WLAN Switching AP. Min. Signal difference [%]	**number**	**<CR>**	**0..100**	Switching AP. Min. Signal difference [%] default:: 10 [%]
482	**Option number**	**number**	**<CR>**	**3**	**267**
483	WLAN Hidden network allowed 1	**text**	**<CR>**	**0..18**	WLAN Hidden network allowed MAC (BSSID) 1
484	**Option number**	**number**	**<CR>**	**3**	**268**
485	WLAN Hidden network allowed 2	**text**	**<CR>**	**0..18**	WLAN Hidden network allowed MAC (BSSID) 2
486	**Option number**	**number**	**<CR>**	**3**	**269**
487	WLAN Hidden network allowed 3	**text**	**<CR>**	**0..18**	WLAN Hidden network allowed (BSSID) 3
488	**Option number**	**number**	**<CR>**	**3**	**270**

489	WLAN Hidden network allowed 4	**text**	**<CR>**	**0..18**	WLAN Hidden network allowed MAC (BSSID) 4
490	**Option number**	**number**	**<CR>**	**3**	**271**
491	WLAN Hidden network allowed 5	**text**	**<CR>**	**0..18**	WLAN Hidden network allowed MAC (BSSID) 5
492	**Option number**	**number**	**<CR>**	**3**	**272**
493	WLAN Hidden network allowed 6	**text**	**<CR>**	**0..18**	WLAN Hidden network allowed (BSSID) 6
494	**Option number**	**number**	**<CR>**	**3**	**273**
495	WLAN Hidden network allowed 7	**text**	**<CR>**	**0..18**	WLAN Hidden network allowed (BSSID) 7
496	**Option number**	**number**	**<CR>**	**3**	**274**
497	WLAN Hidden network allowed 8	**text**	**<CR>**	**0..18**	WLAN Hidden network allowed MAC (BSSID) 8
498	**Option number**	**number**	**<CR>**	**3**	**275**
499	WLAN Hidden network allowed 9	**text**	**<CR>**	**0..18**	WLAN Hidden network allowed MAC (BSSID) 9
500	**Option number**	**number**	**<CR>**	**3**	**276**
501	WLAN Hidden network allowed 10	**text**	**<CR>**	**0..18**	WLAN Hidden network allowed MAC (BSSID) 10
502	**Option number**	**number**	**<CR>**	**3**	**277**
503	Automatic printout of daily report	0…1	<CR>	1	0 – printout disabled 1 – printout enabled
504	**Option number**	**number**	**<CR>**	**3**	**278**
505	Hour of automatic daily report printout	0…1	**<CR>**	**1**	Format of hour: *Conditions of executing report:* *- the printer is turned on when time of report occurs,* *- the printer is in clock mode,* *- report time is correctly defined*
506	**Option number**	**number**	**<CR>**	**3**	**279**
507	Average price	0…1	**<CR>**	**1**	Displaying average price: 0 - switched off 1 - switched on *Displaying the average price of the goods on the customer / service display (discounted).*
508	**Option number**	**number**	**<CR>**	**3**	**280**
509	Temporary cashier change	0…1	**<CR>**	**1**	Temporary cashier change: 0 - switched off 1 - switched on *Option enables printing information about the ECR / cashier in the footer of receipt sent in command of receipt end if the cashier is logged in.*
510	**Option number**	**number**	**<CR>**	**3**	**281**
511	Power on RS232	0…1	**<CR>**	**1**	0 - switched off 1 - switched on
512	**Option number**	**number**	**<CR>**	**3**	**322**
513	System number as transaction ID	**number**	**<CR>**	**1**	0 – system number not set as transaction ID 1 – system number set as transaction ID
514	**Option number**	**number**	**<CR>**	**3**	**323**
515	Cashier Log in/ Log out without printout	**0..1**	**<CR>**	**1**	0 – printout switched on, 1 - printout switched off
516	**Option number**	**number**	**<CR>**	**3**	**331**

517	Non-fiscal printouts on paper	0..1	<CR>	1	0 – printout switched on, 1 - printout switched off
518	**Option number**	**number**	<CR>	3	**334**
519	Wake up printer from power supply	0..1	<CR>	1	0 – don't wake up 1 – wake up
520	**Option number**	**number**	<CR>	3	**335**
521	Allow for 2G in modem	0..1	<CR>	1	0 – don't allow 1 – allow
522	**Option number**	**number**	<CR>	3	**336**
523	Modem configuration string	Text	<CR>	0..100	
524	**Option number**	**number**	<CR>	3	**337**
525	Enabling ability to manage option: Allow 2G	0..1	<CR>		0 – switched on for 2G 1 – switched off
526	**Option number**	**number**	<CR>	3	**338**
527	Modem operating mode	0..1	<CR>	1	0 – PPP 1 – HiLink
528	**Option number**	**number**	<CR>	3	**339**
529	Display rotation	0..2	<CR>	1	0 – switched off 1 – automatic 2 – always switched on
530	**Option number**	**number**	<CR>	3	**340**
531	Cancelling receipt without printout	0..1	<CR>	1	0 – with printout, 1 – without printout Warning: Option possible only while printing receipt in OFFLINE mode
532	**Option number**	**number**	<CR>	3	341
533	Cancelling invoice without printout	0..1	<CR>	1	0 – with printout, 1 – without printout Warning: Option possible only while printing invoice in OFFLINE mode
534	**Option number**	**number**	<CR>	3	342
535	Blockade of daily report printing in case of zero sales	0..1	<CR>	1	0 – blockade switched off, 1 – blockade switched on
536	**Option number**	**number**	<CR>	3	343
537	Printing additional text of system number below graphic QR code	0..1	<CR>	1	0 – only graphic form of QR code, 1 – QR graphic and text
538	**Option number**	**number**	<CR>	3	344
539	Network sharing via USB	0..1	<CR>	1	0 – inactive, 1 – active
540	**Option number**	**number**	<CR>	3	345
541	TCP connection mode for PC	0…1	<CR>	1	0 – Server 1 – customer
542	**Option number**	**number**	<CR>	3	346
543	Server address	**text**		60	Address as IP or domain name
544	**Option number**	**number**	<CR>	3	347
545	TCP connection mode for PC2	0…1	<CR>	1	0 – Server 1 – customer
546	**Option number**	**number**	<CR>	3	348
547	Server address	**text**		60	Address as IP or domain name
548	**Option number**	**number**	<CR>	3	**349**
549	Auto sleep mode	0…2	<CR>	1	0-no

					1-yes 2-battery operating
550	**Option number**	**number**	**<CR>**	**3**	**350**
551	Auto power off in sleep	**0..1**	**<CR>**	**1**	0 – no 1 - yes
552	**Option number**	**number**	**<CR>**	**3**	**351**
553	Time of auto power off in sleep	**0…9999**	**<CR>**	**4**	Time of auto power off in sleep 0 -9999 [s] – time after which printer will turn off from sleep mode if option „auto power off in sleep" is active
554	**Option number**	**number**	**<CR>**	**3**	**352**
555	Auto power off mode	**0..2**	**<CR>**	**1**	0-no 1-yes 2-battery operating
556	**Control byte**	**00..FF**		**2**	
557		<ESC>\		2	

Remarks:

1. Item No relates to item Field situated below.
2. Accepting QRCode scale that exceeds print can cause not printing the code.
3. QRCode acts in alphanumeric mode, what means that acceptable are the following characters: capital letters A..Z, digits 0..9 and space, $, %, *, +, -, ., /, :
4. One device can be connected only to one COM port.

Printer / Option number	HD Online	Deon Online	Bono Online
0.	√	√	√
1.	√	√	√
2.	√	√	√
3.	√	√	√
4.	√	√	√
5.	√	√	√
6.	√	√	√
7.	√	√	√
8.	√	√	√
9.	√	√	√
10.	√	√	√
11.	√	√	√
12.	√	√	√
13.	√	√	√
14.	√	√	√
15.	√	√	√
16.	√	√	√
17.	√	√	√
18.	√	√	√
19.	√	√	√
20.	√	√	√
21.	√	√	√
22.	√	√	√
23.	√	√	√
24.	√	√	√
25.	√	√	√
26.	x	x	x
27.	√	√	√
28.	√	√	√
29.	x	x	x
30.	x	x	x

31.	√	√	√
32.	√	√	√
33.	√	√	√
34.	x	x	x
35.	x	x	x
36.	√	√	√
37.	√	√	√
38.	√	√	√
39.	√	√	√
40.	√	√	√
41.	√	√	√
42.	√	√	√
43.	√	√	√
44.	√	√	√
45.	√	√	√
46.	√	√	√
47.	√	√	√
48.	√	√	√
49.	√	√	√
50.	√	√	√
51.	√	√	√
52.	√	√	√
53.	√	√	√
54.	√	√	√
55.	√	√	√
56.	√	√	√
57.	√	√	√
58.	√	√	√
59.	√	√	√
60.	√	√	√
61.	√	√	√
62.	√	√	√
63.	√	√	√
64.	√	x	x
65.	√	x	x
66.	√	x	x
67. *	√	√	√
68.	√	√	√
69.	√	√	√
70.	√	√	√
71.	√	x	x
72.	√	√	√
73.	√	√	√
74.	√	√	√
75. **	√	x	x
76.	x	x	x
77.	√	√	√
78.	x	x	x
79.	x	x	x
80.	√	√	√
81.	√	√	√
82.	√	√	√
83.	x	x	x
84.	√	√	√
85.	√	√	√
86.	x	x	x
87.	√	x	x

88.	√	√	√
89.	x	x	x
90.	x	x	x
91.	√	√	√
92.	√	√	√
93.	√	√	√
94.	√	√	√
95.	√	x	x
96.	√	x	x
97.	√	√	√
98.	√	x	x
99.	x	x	x
100.	x	x	x
101.	√	√	√
102.	√	x	x
103.	√	x	x
104.	√	√	√
105.	√	√	√
106.	√	√	√
107.	√	√	√
108.	√	√	√
109.	x	x	x
110.	x	x	x
111.	√	√	√
112.	√	√	√
113.	√	x	x
114.	√	x	x
115.	√	√	√
116.	√	√	√
117.	√	√	√
118.	x	x	x
119.	x	√	√
120.	x	x	x
121.	x	x	x
122.	x	x	x
123.	x	x	x
124.	x	x	x
125.	x	x	x
126.	x	x	x
127.	x	x	x
128.	x	x	x
129.	x	x	x
130.	x	x	x
131.	√	√	√
132.	√	√	√
133.	√	√	√
134.	√	√	√
135.	√	√	√
136.	√	√	√
137.	√	√	√
138.	√	√	√
139.	√	√	√
140.	√	√	√
141.	√	√	√
142.	√	√	√

143.	√	√	√
144.	√	√	√
145.	√	√	√
146.	√	x	x
147.	√	x	x
148.	x	x	x
149.	x	x	x
150.	x	√	√
151.	x	√	√
152.	x	√	√
153.	x	√	√
154.	x	√	√
155.	x	√	√
156.	x	√	√
157.	x	√	√
158.	x	√	√
159.	x	√	√
160.	x	√	√
161.	x	√	√
162.	x	√	√
163.	x	√	√
164.	x	√	√
165.	x	√	√
166.	x	√	√
167.	x	√	√
168.	x	√	√
169.	x	√	√
170.	x	√	√
171.	x	√	√
172.	x	√	√
173.	x	√	√
174.	x	√	√
175.	x	√	√
176.	x	√	√
177.	x	x	√
178.	x	x	x
179.	x	x	x
180.	x	x	x
181.	x	x	x
182.	x	x	x
183.	x	x	x
184.	x	√	√
185.	x	√	√
186.	x	x	√
187.	x	x	x
188.	x	x	x
189.	x	x	x
190.	x	x	x
191.	x	x	x
192.	x	x	x
193.	x	√	√
194.	x	√	√
195.	x	√	√

196.	x	√	√
197.	x	√	√
198.	x	√	√
199.	x	√	√
200.	x	x	x
201.	x	x	x
202.	√	√	√
203.	√	√	√
204.	√	√	√
205.	√	√	√
206.	√	√	√
207.	√	√	√
208.	x	x	x
209.	x	x	x
210.	√	√	√
211.	√	√	√
212.	x	x	x
213.	x	√	√
214.	x	√	√
215.	x	√	√
216.	x	√	√
217.	x	√	√
218.	x	√	√
219.	√	√	√
220.	x	√	√
221.	x	√	√
222.	x	√	x
223.	x	√	√
224.	x	√	√
225.	√	√	√

The table shows information on which configuration options are available in which printer.

Warning:

* option only to read

** option only to program

4.9.8. Reading parameters from the specified range (^c)

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Readout command	0	;	1	
3	Range readout	1		1	
4	Command	**^c**		2	
5	No. of the first option	Number	/	1..3	
6	No. of the last option	Number	/	1..3	
7	Control byte	00..FF		2	
8		<ESC>\		2	

4.9.9. Programming a single option (^c)

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Quantity of options to program	0		1	
3	Command	**^c**		2	
4	Number of option	number	<CR>	1..3	
5	Value	number	<CR>	1..3	
6	Control byte	00..FF		2	
7		<ESC>\		2	

4.9.10 Setting the messages on PC2 (^e).

Ports: PC2

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
	Function				0 – reset the messages and stable items for presumable messages 1 – set the messages and items temporarily (until setting off) 2 – set the messages and items permanently 9 – readout the events
2	Command	**^e**		2	
	Flags of messages about events	number	/	1-5	Decimal number which bits determine what messages shall be sent by the printer. When the bit = 1 inform about: 0 – setting on (ENQ) 1 – starting the receipt (ENQ) 2 – receipt item (ENQ) (also package and storno) 3 – form of payment (ENQ) 4 – ending the receipt (ENQ) (also the cancelled ones) 5 – Appearance of data on PP1 port (ENQ) 6 – Sending all the data by PP1 port (empty sending queue) 7 – Change of modem entry signals of the PP1 port (ENQ) 8 – Appearance of data on PP2 port (ENQ) 9 – Sending all the data by PP2 port (empty sending queue) (ENQ) 10 – Change of modem entry signals of the PP2 port (ENQ) 11- starting the printout (not the receipt) (ENQ) 12 – ending the printout (not the receipt) (ENQ) 13 – switching of (CAN)
	Special items	number	/	1	0 – block the PC port in 5s after finishing the receipt 1 – block the PC port in 5s after finishing a printout other than a receipt
3	Control byte	00..FF		2	
6		<ESC>\		2	

Remarks:

1. Presumable messages mean that all messages are set off.
2. Temporary setting is active only until the printer has been set off
3. Permanent setting is active also after the printer has been set off but it may be reset by clocking the printer
4. After receiving the message (characters ENQ or CAN), the program on PC2 should inquire the printer (9^e function) of what tasks exactly took place. New messages cannot come in that time until final reading out the information about events, except the information about setting off (CAN).
5. Flags of receive transmission events of ports PP1 and PP2 will not be reset until receiving/ cancelling this data by the PC2 port or by setting the printer off.
6. After setting of, the non-received information about messages is reset.
7. The PC2 application, after its restart shall receive the information about messages as soon as possible to allow sending new messages, as it might have omitted the earlier ones and, thus, block sending further messages.
8. Blocking the PC port for 5s is possible only when activity is found on PC2 port – i.e. the PC2 application has to inquire about statuses, cash information or event flags. Lack of activity for 3 following receipts would cause that PC port blockages would not appear despite the settings of special items.

Information about events – response to function 9:

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**^e**		2	
	Flags of messages about events	number	/	1-5	Decimal number which bits determine what messages shall be sent by the printer since the last messages readout (of that packet). When the bit = 1 inform about: 0 – setting on (ENQ) 1 – starting the receipt (ENQ) 2 – receipt item (ENQ) (also package and storno (reversal)) 3 – form of payment (ENQ) 4 – ending the receipt (ENQ) (also the cancelled ones) 5 – Appearance of data on PP1 port (ENQ) 6 – Sending all the data by PP2 port (empty sending queue) 7 – Change of modem entry signals of the PP1 port (ENQ) 8 – Appearance of data on PP2 port (ENQ) 9 – Sending all the data by PP2 port (empty sending queue) (ENQ) 10 – Change of modem entry signals of the PP2 port (ENQ) 11- starting the printout (not the receipt) (ENQ) 12 – ending the printout (not the receipt) (ENQ) 13 – switching off (CAN)
	Special items	number	/	1	0 – block the PC port in 5s after finishing the receipt 1 – block the PC port in 5s after finishing a printout other than a receipt
3	Control byte	00..FF		2	
4		<ESC>\		2	

Remarks:

1. After receiving this packet of responses, response flags are reset (with two exceptions – see p. 2) and new messages may be sent.

2. Flags of receive transmission events of PP1 and PP2 ports will not be reset until the receive/ cancellation of this data by the PC2 port or setting off the printer.

4.9.11. Controlling PC2 application from the PC and receiving the status (^s).

Ports: PC

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Function	Number		;	Commands to be sent to PC2 application: 1 – start the transaction 2 – read transaction status 3 – cancel the transaction 4 – confirmations may be printed
3	Type of transaction	number		;	0 – payment 1 – loyalty
	Options of transaction	number			(not defined yet)
4	Command	**^s**		2	
5	Amount of transaction	number	/	1-10	Optional amount of transaction
6	Data of transaction	Text	<CR>	0..128	Optional data of transaction
7	Control byte			2	
8		<ESC>\		2	

Response to function 2:

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**^s**		2	
3	Transaction status		/	1	0 – unknown 1 – started (on the run) 2 – rejected 3 – cancelled 4 – successfully completed 5 – unsuccessfully completed 40 – printed for successful completion 41 – printed out for successful completion 50 – printed for unsuccessful completion 51 – printed out for unsuccessful completion
4	Options of transaction		/	1	Bits set on 1 mean: 0 – transaction will require a printout (the statuses will be 4x and 5x after finishing the receipt) 1 – transaction returns the value (fields 7 and 8) 2 – transaction returns the data (field 9)
5	Type of value	number	/	1	0 – none 1 – amount 2 – percentage discount 3 – amount discount
6	Transaction value	number	/	1-10	Optional amount of transaction
7	Transaction data		<CR>	0..128	Optional data of transaction
8	Control byte			2	
9		<ESC>\		2	

4.9.12. Controlling the status of PC2 application and receive of orders from PC to PC2 (^r).

Ports: PC2

No	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Function				Commands to be sent to PC2 application 1 – read commands from PC application 2 – set status of PC2 application transaction
3	Type of transaction				0 – payment 1 – loyalty
4	Command	**^r**		2	
5	Transaction status		/	1	0 – unknown 1 – started (on the run) 2 – rejected 3 – cancelled 4 – successfully completed 5 – unsuccessfully completed 10 – printed 11 – printed out
6	Options of transaction		/	1	Bits set on 1 mean: 0 – transaction will require a printout (the statuses are 10 and 11 after finishing the receipt) 1 – transaction returns the value (fields 7 and 8) 2 – transaction returns the data (field 9)
7	Type of value	number	/	1	0 – none 1 – amount 2 – percentage discount 3 – amount discount
8	Value of transaction	number	/	1-10	Optional amount of transaction
9	Date transaction		<CR>	0..128	Optional data of transaction
10	Control byte			2	
11		<ESC>\		2	

Response to function 1:

1		<ESC>P		2	
2	Command	**^r**		2	
3	Function	Number	/	1	Commands send by PC to PC2 application: 1 – start the transaction 3 – cancel the transaction
4	Type of transaction	number	/	1	0 – payment 1 – loyalty
5	Options of transaction	number	/	1	(not defined yet)
6	Amount of transaction	number	/	1-10	Optional amount of transaction
7	Data of transaction	Text	<CR>	0..128	Optional data of transaction
8	Control byte			2	
9		<ESC>\		2	

4.9.13. Readout of the header printout (^u).

Query for header printout

1		<ESC>P		2	
2	Command	**^u**		2	
3	Control byte			2	Optional field
4		<ESC>\		2	

Response:

1		<ESC>P		3	
2	Command	**#U**		2	
3	Header	Text		0..450	The header format depends on the kind of printer. The header is sent with the spaces, without controlling signs, signalizing the attributes of the line (centring, bold font)
4	Control byte			2	
5		<ESC>\		2	

4.9.14. Collecting information about amount of printed paper (@p).

Ports: PC

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**@p**		2	
3	Function	Number	/	1	1 – readout of quantity 2 – resetting
4	Control byte			2	
5		<ESC>\		2	

Response to function 1:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**@p**		2	
3	Printout length	number	/	1-10	Value expressed in mm
4	Control byte			2	
5		<ESC>\		2	

4.9.15. Printout packet stored after receipt (PC2).

Ports: PC2

No.	Field name	Content	Separator	Size	Remarks
7		<ESC>P		2	
8	Mode			1	1- start printing after receipt, 3- end printing after receipt, 4- cancel printing after receipt
9	Command	**@ws**		3	
10	Control byte	00..FF		2	
11		<ESC>\		2	

For printing lines after receipt:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Mode	2		1	Print lines after receipt
3	Command	**@ws**		3	
4	Attribute		<CR>	variable	Line attributes (description in table below). Attributes are optional, when one is missing, basic attributes are assumed, i.e. an ordinary font of single width and height. Attributes can be combined as long as it makes sense.
5	Inscription	text	<CR>	variable	* - 64 characters for HD, wide paper, normal font, - 44 characters for HD, wide paper, enlarged font, - 44 characters for HD, narrow paper, - 42 characters for Bono Online, Deon Online,
6	Control byte	00..FF		2	
7		<ESC>\		2	

Warning ! The text in line of printout stored after receipt can be formatted in the same way as in case of text formatting using ECR-EFT protocol. Details at link: https://www.gov.pl/web/rozwoj-technologia/kasy-on-line

Line attributes:

Attribute	**Description**
Wx	Font width, **x** is a multiple, e.g. **W4** - quadruple
Hx	Font height, **x** is a multiple, e.g.**H2** – double height
N	Header font
I	Invers (negative)
U	Hidden data (stars) on copy (e.g. card number)
E	Content printed as bar code
Q	Content printed as QR code
G	Graphic printout

4.10. Packet of currency operating (approval 2009).

Below were described packets of currency changes, which were entered to the fiscal printers according to the Decree of the Ministry of Finance from 28th November 2008.

4.10.1. Programming currency changing (^b).

Information is recorded in the fiscal memory, there is maximum quantity of currency changes depending on device type (standard - 4 changes).

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	1		1	
3	Command	**^b**		2	
4	Year	00..99	/	2	Two last digits of the year
5	Month	01..12	/	2	Number of month in the year
6	Day	01..31	/	2	Number of day in given month

7	Hour	0..23	/	2	
8	Minute	0..59	/	2	
9	Currency name	Inscription	<CR>	3	Three-letters name of the currency used according to the convention of National Bank of Poland.
10	Exchange rate	Number	/	10..13	from: 0.00000001 to: 9999.99999999
11	Control byte	00..FF		2	
12		<ESC>\		2	

Errors' codes:

1: not initiated printer's clock,
2: control byte error,
4: parameter error

Remarks:

1: Year, month, day, hour and minute – it is the date of entering the new currency. Switching on the new currency will be done automatically.
2: Only last record in the fiscal memory about planned currency change is valid.
3: **WARNING!!** The information is recorded in the fiscal memory of device. The currency change can be executed limited quantity of times.

4.10.2. Programming of mode of printout re-calculating to currency in the receipt's footer (^b).

Information about re-calculation of currency change is recorded in the device's configuration and setting that function enables printing additional information in the receipt's summary. That information contains re-calculation of transaction value to the other currency.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	0	;	1	
	Printout mode	0..3		1	0 – no re-calculation , 1 – to the previous currency, 2 – to the next currency, 3 – to defined currency WARNING! For printout mode 3 currency name and exchange rate are taken from packet fields. Fields date and hour are ignored.
3	Command	**^b**		2	
4	Year	00..99	/	2	Ignored
5	Month	01..12	/	2	Ignored
6	Day	01..31	/	2	Ignored
7	Hour	0..23	/	2	Ignored
8	Minute	0..59	/	2	Ignored
9	Currency name	Inscription	<CR>	3	Three-letters name of the currency used according to the convention of National Bank of Poland.
10	Exchange rate	Number	/	10..13	from: 0.00000001 to: 9999.99999999
11	Control byte	00..FF		2	
12		<ESC>\		2	

Errors' codes:

1: not initiated printer's clock,
2: control byte error,
4: parameter error

4.10.3. Supporting forms of payment in currency ($b).

Before sending ending of the receipt, there can be described fixed payment in different currencies.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Action	1..2	;	1	1 – submitting payment method 2 – cancelling payment method
3	Type of payment	0..10	;	1	
4	Reserved	Ignored	;	1	
5	Reserved	Ignored	;	1	
6	Type of value	0..1	;	1	0 – payment 1 – rest of payment
7	Precision of exchange rate	0..4		1	4 – maximum precision
7	Command	**$b**		2	
8	Amount	Number	/	1..11	Value in the current currency
9	Name	Inscription	<CR>	0..15	Name of currency
10	Exchange rate	Number	<CR>	1…8	from: 0.00000001 to: 9999.99999999
11	Amount of currency	Number	/	1..11	The value is „Amount” multiply by „Exchange rate”.
7	Control byte	00..FF		2	
8		<ESC>\		2	

Payment type

0: cash,
1: credit,
2: cheque,
3: talon,
4: other,
5: credit,
6: customer account,
7: currency (NOVITUS protocol), Voucher („Novitus accordable” protocol)
8: banking transfer (NOVITUS protocol), currency („Novitus accordable” protocol)
9: Mobil
10: Voucher

Errors' codes:

1: not initiated printer's clock,
2: control byte error,
4: parameter error

4.10.4. Request about server address.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**?SERW**		5	
3	Type of server	Number	/	2	1 – server cpd 2 – server WebApi
4	Control byte	00..FF		2	
5		<ESC>\		2	

Response:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**?SERW**		5	

3	Type of server	Number	/	2	1 – server cpd 2 – server WebApi
4	Server's address	Text	CR	0..300	When no address, returned text is „none"
5	Control byte	00..FF		2	
6		<ESC>\		2	

4.10.5. Servers' programming.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**@SERW**		5	
3	Address	text	<CR>	0…256	
4	Type	number	/	2	
5	Control byte	00..FF		2	
6		<ESC>\		2	

Warning:
Field Type – option is intended for service technicians and producers.

4.10.6 DNS addresses redout.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
3	Command	?dns		4	
4	Control byte	00..FF		2	
5		<ESC>\		2	

Automatic sent response for format:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Addresses number		;		Number of read addresses
3	Response code	**?dns**			
4	Address		<CR>		Number of read DNS addresses equal to number of addresses from field 2.
6		<ESC>\		2	

4.10.7 Sequence sending back information about update status.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**?FWUPD**		6	
3	Control byte	00..FF		2	
4		<ESC>\		2	

Format of sent back data

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Response code	**?FWUPD**		6	
3	Status	Number	/	1	OFP_FW_CHECK = 0 – waiting to be checked, checked, or checked and no update (there is sent back date of last correct checking),

					OFP_FW_CHECK_CPD_CNF = 1 – update available and checks approval in MF, OFP_FW_DOWNLOAD_AVAILIABLE = 2 – update available for download, OFP_FW_DOWNLOAD = 3 – gets an update, OFP_FW_VERIFY = 4 – verifies the downloaded update (SHA256), OFP_FW_CHECK_CPD_CNF_AFTERDOWNLOAD = 5 – checks approval in MF, OFP_FW_UPDATE_AVAILIABLE = 6 – available update for download, waits for daily report OFP_FW_UPDATE = 7 – during installation,
4	Last error	Number	/	1	OFP_FW_NONE = -1 – no error, OFP_FW_CHECK = 0 – error while checking update OFP_FW_CHECK_CPD_CNF = 1 – error while checking approval in MF, OFP_FW_DOWNLOAD = 3 – error while downloading update, OFP_FW_VERIFY = 4 – error while verification of downloaded update (SHA256),
5	Kind of last error	Number	/	1	FW_ERROR_DETAIL_NONE = 0 - none, FW_ERROR_DETAIL_CONNECTION = 1 – connection error, FW_ERROR_DETAIL_VERIFICATION = 2 – verification error, FW_ERROR_DETAIL_HOMOLOGATION = 3 – no approval, FW_ERROR_DETAIL_SERVER_BUSY = 4 – server busy
6	Date of last correct checking	Text	<CR>		Data w formacie `yyyy-mm-dd h:mm:ss`
7	New version number	Number	<CR>		Version number without dot (v1.23 to 123)
8	Sha256	Text	<CR>	64	Check sum of new version Sha256 - HEX
9	Control byte	00..FF		2	
10		<ESC>\		2	

4.10.8 Sequence of update controlling.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	

2	Command	**#FWUPD**		6	
3	Order	Number	/	1	1 – check update
4	Control byte	00..FF		2	
5		<ESC>\		2	

4.10.9 Programming address of the MAC network card.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
3	Command	**$u**		2	
8	Mac number	Number	/	1..10	
8	Control byte	00..FF		2	
9		<ESC>\		2	

4.10.10. Programming NoviApi settings.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Mode	Number		1	0 – General settings
3	Command	**@NA**		3	
4	Active	**Number**	/	1	0 – NoviApi off, 1 – NoviApi on
5	Protocol	**Number**	/	1	0 – HTTP, 1 – HTTPS
6	Logger	**Number**	/	1	0 – logger inactive, 1 – logger active
7	Control byte	00..FF		2	
8		<ESC>\		2	

or

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Mode	Number		1	1 – setting selected server
3	Command	**@NA**		3	
4	ID	**Number**	/	1	Server Id, from 0 to 9 for subsequent servers
5	Port	**Number**	/	1..5	Port of NoviApi server, range from 1 to 65535.
6	MAC filter	**Inscription**	<CR>	0…	Format: „XX-XX-XX-XX-XX-XX” or „XX:XX:XX:XX:XX:XX”.
7	Control byte	00..FF		2	
8		<ESC>\		2	

Warnings:
Sales must be zero !

4.10.11. Readout of NoviApi settings.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Mode	Number		1	0 – readout of general information
3	Command	**?NA**		3	
4	Control byte	00..FF		2	

5		<ESC>\		2	

or

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Mode	Number		1	1 – information readout about particular server
3	Command	**?NA**		3	
4	Server ID	**Number**	/	1	Number of server, which settings are to be read, range from 0 to 9 for subsequent NoviApi servers.
5	Control byte	00..FF		2	
6		<ESC>\		2	

Response:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Mode	Number		1	0 – readout of general information
3	Command	**?NA**		3	
4	Active	Number	/	1	0 – NoviApi inactive, 1 – NoviApi active
5	Protocol	Number	/	1	0 – HTTP, 1 – HTTPS.
6	Logger	Number	/	1	0 – logger inactive, 1 – logger active
7	Number of active NoviApi servers	Number	/	1..2	Number of active NoviApi servers, maximum 10.
8	Validity time of authorisation token	Number	/	1..	Token validity time in minutes
9	Maximum number of allowed token downloads in specified time	Number	/	1..	Maximum number of allowed token downloads in specified time
10	Time needed to verify number of token downloads	Number	/	1..	Time in seconds, needed to verify number of token downloads.
11	Control byte	00..FF		2	
12		<ESC>\		2	

or:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Mode	Number		1	1 – read information about particular server
3	Command	**?NA**		3	
4	ID	Number	/	1	Server Id, value from 0 to 9 for subsequent servers
5	Port	Number	/	1..5	NoviApi server port, range from 1 to 65535.
6	MAC filter	**Inscription**	<CR>	0…	Format: „XX-XX-XX-XX-XX-XX” lub „XX:XX:XX:XX:XX:XX”.
7	Control byte	00..FF		2	

8		<ESC>\		2	

4.11. Packets concerning EFT terminal.

It concerns Point fiscal printer and newer ones.

4.11.1. Payment to EFT terminal.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**^q**		2	
3	Type		/		1 – new payment 0 – check status of last transaction
4	ID		<CR>		Sales document ID
5	Amount		/		Gross sales quota
6	Value		/		Net sales value
7	VAT		/		VAT value
8	Cashback		/		Cashback quota
9	Max cashback		/		Maximum cashback quota
10	Currency code		<CR>	3	
11	Additional attributes		<CR>		
12	Control byte	00..FF		2	
13		<ESC>\		2	

Error codes:

1527 – transaction eft started

4.11.2. Cancelling payment to EFT terminal.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Parameter	2		1	2 – cancelling payment Warning: on terminal depends if cancelling can be processed. Transaction status should be always checked to know its result.
3	Command	**^q**		2	
4	Control byte	00..FF		2	
5		<ESC>\		2	

4.11.3. Request to execute command of terminal connection test (^eft).

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**^eft**		4	
3	Type		/		1 – connection test
4	Control byte	00..FF		2	
5		<ESC>\		2	

4.11.4. Check status of terminal connection (?eft).

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**?eft**		4	
3	Type		/		1 – connection test
4	Control byte	00..FF		2	
5		<ESC>\		2	

Response:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Type	Number		1	Sends back type from request. 1 – connection test
3	Command	**$eft**		4	
4	Result	**Number**	/		0 – no connection 1 – connection OK
5	Control byte	00..FF		2	
6		<ESC>\		2	

4.11.5. Question about payment status to EFT terminal (?q).

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Kind				1 – question about current transaction state 3 – question about current transaction state – extended information 2 – question about last transaction state 4 – question about last transaction state – extended information
3	Command	**?q**		2	
4	Control byte	00..FF		2	
5		<ESC>\		2	

Response:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Kind				1 – current transaction 3 – current transaction extended
3	Command	**$q**		2	
4	Result	**Number**	/		0 – transaction failed 1 – transaction completed successfully
5	Error code	**Number**	/		0 – no errors Otherwise returned error code
6	Token of payment card	**Text**	<CR>		
7	Agent name	**Text**	<CR>		
8	EFT ID	**Text**	<CR>		
9	ID transaction	**Text**	<CR>		
10	Value	**Number**	/		
11	Cashback	**Number**	/		

12	Transaction state code	**Number**	/		
13	Transaction state message	**Text**	<CR>		
14	Additional information	**Text**	<CR>	0..100	Field sent back for Kind = 3
15	Control byte	00..FF		2	
16		<ESC>\		2	

or

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Kind				2 – last transaction 4 – last transaction extended
3	Command	**$q**		2	
4	Result	**Number**	/		0 – transaction failed 1 – transaction completed successfully
5	Error code	**Number**	/		0 – no errors Otherwise returned error code
6	Token of payment card	**Text**	<CR>		
7	Agent name	**Text**	<CR>		
8	EFT ID	**Text**	<CR>		
9	ID transaction	**Text**	<CR>		
10	Value	**Number**	/		
11	Cashback	**Number**	/		
12	Additional information	**Text**	<CR>	0..100	Field sent back for Kind = 4
13	Control byte	00..FF		2	
14		<ESC>\		2	

4.12. Programming ECREFT settings.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**@EFT**		3	
3	Port TCP	**Number**	/	1 .. 5	TCP port number, from 1 to 65535.
4	MAC TCP	**Inscripti on**	<CR>		Format: „XX-XX-XX-XX-XX-XX” or „XX:XX:XX:XX:XX:XX”.
5	TCP connection mode for ECR-EFT	**0…1**	**/**	**1**	0 – Server 1 – customer
6	Server address ECR-EFT	**Text**	**<CR>**	**60**	Address in form of IP or domain name
7	Speed RS232 for ECR-EFT	0..7	**/**		COM serial port speed: 0 – 1200 1 – 2400 2 – 4800 3 – 9600 4 – 19200 6 – 57600 7 – 115200
8	Communication control RS232	**0..2**	**/**		Communication control: 0 – XONXOFF+RTSCTS

	for ECR-EFT				1 – RTSCTS 2 – Brak
9	Communication logging ECREFT	0..3	/	1	0 – switched off 1 – switched on
10	Control byte	00..FF		2	
11		<ESC>\		2	

Readout of ECREFT settings.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**?EFT**		3	
3	Control byte	00..FF		2	
4		<ESC>\		2	

Response:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**?EFT**		3	
3	TCP port	**Number**	/	1 .. 5	TCP port number, from 1 to 65535.
4	MAC TCP	**Inscripti on**	<CR>		Format: „XX-XX-XX-XX-XX-XX” or „XX:XX:XX:XX:XX:XX”.
5	TCP connection mode for ECR-EFT	**0…1**	**/**	**1**	0 – Server 1 – customer
6	Server address ECR-EFT	**Text**	**<CR>**	**60**	Address in form of IP or domain name
7	Speed RS232 for ECR-EFT	0..7	**/**		COM serial port speed: 0 – 1200 1 – 2400 2 – 4800 3 – 9600 4 – 19200 6 – 57600 7 – 115200
8	Communication control RS232 for ECR-EFT	**0..2**	**/**		Communication control: 0 – XONXOFF+RTSCTS 1 – RTSCTS 2 – Brak
9	Communication logging ECREFT	0..3	/	1	0 – switched off 1 – switched on
10	Control byte	00..FF		2	
11		<ESC>\		2	

4.12.1. Request about USB setting configuration.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**?usb**			
3		<ESC>\		2	

Response:

No.	Field name	Content	Separator	Size	Remarks

1		<ESC>P		2	
2	Command	**@usb**			
3	Usb Modem Pid	Text	<CR>	4	Text w hex, e.g 12AB
4	Usb Extern Pid	Text	<CR>	4	Text w hex, e.g 12AB
5	Usb Ext Vid	Text	<CR>	4	Text w hex, e.g. 12AB
6	Usb Ext Vid	Text	<CR>	4	Text w hex, e.g. 12AB
7	Usb Modem Typ	Number	/	1	0 – Acmx, 1 - USBx
8	Usb Ext Typ	Number	/	1	0 – Acmx, 1 – USBx
9	Usb Modem Interface	Text	/	4	Text in hex, e.g. 12AB
10	Usb Ext. Interface	Text	/	4	Text in hex, e.g. 12AB
11	Usb Modem Protocol	Text	/	4	Text in hex, e.g. 12AB
12	Usb Ext. Protocol	Text	/	4	Text in hex, e.g. 12AB
13	Control byte	00..FF		2	
14		<ESC>\		2	

4.12.2. USB settings configuration.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Action	0..1	;	1	0 – set USB configuration 1 – cancel USB configuration
3	Command	**@usb**			
4	Usb Modem Pid	Text	<CR>	4	Text w hex, e.g 12AB
5	Usb Extern Pid	Text	<CR>	4	Text w hex, e.g 12AB
6	Usb Ext Vid	Text	<CR>	4	Text w hex, e.g. 12AB
7	Usb Ext Vid	Text	<CR>	4	Text w hex, e.g. 12AB
8	Usb Modem Type	Number	/	1	0 – Acmx, 1 - USBx
9	Usb Ext Type	Number	/	1	0 – Acmx, 1 – USBx
10	Usb Modem Interface	Text	/	4	Text in hex, e.g. 12AB
11	Usb Ext. Interface	Text	/	4	Text in hex, e.g. 12AB
12	Usb Modem Protocol	Text	/	4	Text in hex, e.g. 12AB
13	Usb Ext. Protocol	Text	/	4	Text in hex, e.g. 12AB
14	Control byte	00..FF		2	
15		<ESC>\		2	

4.12.3 Readout of network interfaces (for ONLINE devices).

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Mode	Number	;	1	0 – readout of first record 1 – readout of next record
3	Command	**?if**		3	
4	Control byte	00..FF		2	
5		<ESC>\		2	

Response:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Mode	0 or 1	;	1	0 – no data, 1 – subsequent data
3	Command	**$if**		2	
4	Interface name	Text	<CR>		
5	MAC address	Text	<CR>		Format: „XX-XX-XX-XX-XX”
6	IP address	Text	<CR>		
7	Mask	Text	<CR>		
8	Gate	Text	<CR>		
9	Wireless	0 or 1	/	1	0 – no 1 – yes
10	Active	0 or 1	/	1	0 – no 1 – yes
11	Control byte	00..FF		2	
12		<ESC>\		2	

4.13. Packets connected with protected memory.

4.13.1. Printout from protected memory.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Format	Number	;		0 – standard 1 – non-fiscal printout
3	Command	@PR		2	
4	Type of range	Number	/	1	0 – constant for printouts' range according to dates 1 – constant for printouts' range according to numbers 2 - all
5	Filter of printouts	Number	/	1..2	0 – receipts 1 - invoices 2 - Reports 3 – non fiscal printouts 4 – e vents 5 – cancelling receipts 6 – invoices cancelled 7 – all 8 – receipts with buyer's NIP
6	Range from	Text	<CR>		Depending on type of range, when type is 2 – all, then enter 0
7	Range to	Text	<CR>		Depending on type of range, when type is 2 – all, then enter 0
8	Control byte	00..FF		2	
9		<ESC>\		2	

where:

Range from
Range to
Data in format: DD-MM-YYYY HH:mm (date in format Y – year , M – month, D – day, H – hour, m - minute) or range in numeric format (e.g. from/to printout number).

Error's code:

2:control byte error,
4: parameter error
1024: incorrect report range
1054: no access to executing command

4.13.2. Confirmation of service review.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	2		1	
3	Command	**$o**		2	
4	Service technician	Inscription	<CR>	0..15	Id of service technician
5	Control byte	00..FF		2	
6		<ESC>\		2	

Remarks:

1. Confirmation of the service review consists of a confirmation printout and a record of executing date and id of service man in the fiscal memory.
2. Maximum records in the fiscal memory: 20.

4.13.3. Order to set confirmation of statutory service review.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	20		1	
3	Command	**$o**		2	
4	Service technician Id	Text	<CR>	0..15	
5	Service technician name	Text	<CR>	0..	
6	Service technician surname	Text	<CR>	0..	
7	Service technician telephone number	Text	<CR>	0..20	
8	Date of next service review	Text	<CR>	0..10	Date in format DD-MM-YYYY
9	Control byte	00..FF		2	
10		<ESC>\		2	

4.13.4. Printout of records report in the fiscal memory by numbers range.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	4 or 5		1	4 – detailed report, 5 – only summary
3	Command	**$o**		2	
4	Initial number	Number	/	1..7	
5	Final number	Number	/	1..7	
6	Report options	Hexadecimal number	/	2	The following bit means records reported optionally: 1 – receipts, 2 – invoices, 3 – daily reports, 4 – tax rates changes, 5 – calculating discounts Warning: 5 – only in printers with function of ticket

					operating
7	Control byte	00..FF		2	
8		<ESC>\		2	

4.13.5. Printout of records report in the fiscal memory by dates range.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	6 or 7		1	6 – detailed report, 7 – only summary
3	Command	**$o**		2	
4	Initial date	Text	<CR>	10	Format: ”RRRR-MM-DD”
5	Final date	Text	<CR>	10	Format: ”RRRR-MM-DD”
6	Report options	Hexadecimal number	/	2	The following bit means records reported optionally: 1 – receipts, 2 – invoices, 3 – daily reports, 4 – tax rates changes, 5 – calculating discounts Warning: 5 – only in printers with function of ticket operating
7	Control byte	00..FF		2	
8		<ESC>\		2	

4.13.6. Last printout.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Format	Number	;	1	0 – standard 1 – non-fiscal printout
3	Command	**@PML**		4	
4	Kind of document	Number	/		0 – receipt 1 – report 2 – invoice 3 – other
5	Control byte	00..FF		2	
6		<ESC>\		2	

4.13.7. Printout of document data- JPK.

All printouts stored in protected memory can be printed. However, these prints will not be saved again in this memory.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	**@PMR**		4	
3	Range type	Number	/	1	1 – constant for printouts range according to dates 2 – constant for printouts range according to numbers 3 – constant for printouts range according to jpk numbers
4	Document type	Number	/	1...4	Bit values:

					1 – Fiscal report RF 2 - Receipt PR 4 – Cancelled receipt PA 8 - Invoice FK 16 – Cancelled invoice FA 32 – Daily report RD 64 – Non-fiscal Printout WN 128 - Event ZE 256 – Graphic GA 512 – Printout copy 1024 – Metadata 4095 – All types ALL
5	Range from	Text	<CR>		Depending on range type
6	Range to	Text	<CR>		Depending on range type
7	Control byte	00..FF		2	
8		<ESC>\		2	

where:

Range from
Range to
Data in format: DD-MM-YYYY HH:mm (Y – year , M – month, D – day, H – hour, m - minute) or range in numeric format (e.g. from/to printout number or jpk id).

Error's code:

2:control byte error,
4: parameter error
1024: incorrect report range
1054: no access to executing command

4.13.8. Readout of document data – JPK

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Status				0 – search 1 – enter the next data
3	Command	**@PMI**		4	
4	JPK ID	Number	/	Int 64	
5	With IDZ ?	0..1	/	1	
6	Content	0..1	/	1	0 – jpk 1 – printout copy 2 – meta data Warning! When request of sending back the copy, the meta data, the "Document type" field is ignored
7	Type of document	Number	/		Bits values: 1 – fiscal report RF 2 – receipt PR 4 – cancelled receipt PA 8 - invoice FK 16 – cancelled invoice FA 32 – daily report RD 64 – non fiscal printout WN 128 – event ZE
8	Control byte	00..FF		2	
9		<ESC>\		2	

Format of sent back information:

No.	Field name	Content	Separator	Size	Remarks

1		<ESC>P		2	
2	Response code	**@PMD**		4	
3	Status	0..9	/	1	0 – sending data 1 – end of data 2 – no data (in the case of a request for a document printout copy or metadata) 9 - error
4	Document type	Number	/	1..3	See description of “Document type” in @PMI request packet
5	Size	Number	/	0...	Size in bytes (before conversion to hex)
6	Position	Number	/	0…	Position in bytes (before conversion to hex)
7	JPK_ID	Number	<CR>	0…	JPK_ID Number of sent back document
8	Buyer ID	Text	<CR>	Variable	If to the particular document is assigned a buyer code, then it is sent in this field.
9	Data	Text	<CR>	Variable	Data converted in the format: - Packed with the DEFLATE algorithm, - Encoded with the Base64URL algorithm
10	Control byte	00..FF		2	
11		<ESC>\		2	

4.13.9. Readout of document data – JPK by daily report number and receipt number.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Status				0 – search 1 – provide further data
3	Command	**@PMJ**		4	
4	Daily report number	Number	/		
5	Receipt number	Number	/		
6	Content	0..1	/	1	0 – jpk 1 – printout copy 2 – metadata
7	Control byte	00..FF		2	
8		<ESC>\		2	

Response:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Response code	**@PMD**		4	
3	Status	0..9	/	1	0 – sending data 1 – end of data 2 – no data (in the case of a request for a document printout copy or metadata) 9 - error
4	Document type	Number	/	1..3	See description “Document type” in the @PMI request packet
5	Size	Number	/	0...	Size in bytes (before conversion)
6	Position	Number	/	0…	Position in bytes (before conversion)
7	JPK_ID	Number	<CR>	0…	JPK_ID number of sent back document
8	Buyer’s code	Text	<CR>	Variable	If the buyer's code is assigned to a

					given document, it is sent in this field
9	Data	Text	<CR>	Variable	Data converted in the format: - Packed with the DEFLATE algorithm, - Encoded with the Base64URL algorithm
10	Control byte	00..FF		2	
11		<ESC>\		2	

4.13.10. Readout of protected memory data.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Status				0 – search 1 – provide further data
3	Command	**@PMF**		4	
4	Report number	Number	/	4	Report number from which the contents of the protected memory will be sent
5	Control byte	00..FF		2	
6		<ESC>\		2	

Format of sent back information:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Response code	**@PMR**		4	
3	Status	0..9	/	1	0 – sending data 1 – end of data 9 - error
4	Size	Number	/	0...	File size in bytes (before conversion)
5	Recording date	Number	/		Date of file recording (usually date of daily report)
6	Data	Text	<CR>	Variable	Data
7	Control byte	00..FF		2	
8		<ESC>\		2	

"Data" field consists of records which format has been described in detail below:

Record CRC	Header CRC	Position in file	Data size (N data + 2 [B] 0xA9,0xAE)	Document type	Report number	Printout number	Fiscal No.
10 [B]	10[B]	10[B]	10[B]	10[B]	10[B]	10[B]	10[B]

JPK ID	Date of registration	Attributes	IDZ	Data packed with the DEFLATE algorithm and encoded with the Base64URL	0xA9,0xAE
20[B]	20[B]	8[B]	32[B]	N data	2 [B]

Example of data headers:

```
a1e06d22  804cb26f     152     1382      1     4     16     1          4 2018-03-16 07:23:10
bf839ade  af20b56a    1686     1414      1     4     17     2          5 2018-03-16 07:23:12
```

4.13.11. Readout of protected memory data – certificates (@PMK).

Available through PC, PC2, PC3

No.	Field name	Content	Separator	Size	Remarks

1		<ESC>P		2	
2	Status				0 – search
3	Command	**@PMK**		4	
4	Certificate number	Number	/	4	The following certificate number in PM
5	Control byte	00..FF		2	
6		<ESC>\		2	

Format of sent back information:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Response code	**@PMC**		4	
3	Status	0..9	/	1	0 – sending data 1 – end of data 9 - error
4	Size	Number	/	0...	File size in bytes (before conversion)
5	Recording date	Number	/		Date of file recording (usually date of daily report)
6	Data	Text	<CR>	Variable	Data encoded with the Base64URL
7	Control byte	00..FF		2	
8		<ESC>\		2	

Frame in data field:

The following certificate number in PM	Certificate size	Certificate	SHA1
2 [B]	2[B]	2048[B]	20[B]

4.13.12. Stream readout of fiscal memory – data.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Status				0 – start from beginning 1 – provide further data
3	Command	**@FMF**		4	
4	Control byte	00..FF		2	
5		<ESC>\		2	

Format of sent back information:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Response code	**@FMR**		4	
3	Status	0..9	/	1	0 – sending data 1 – end of data 9 - error
4	Size	Number	/	0...	File size in bytes (before conversion)
5	Offset	Number	/	0…	Offset in fiscal memory
6	Data	Text	<CR>	Variable	Data
7	Control byte	00..FF		2	
8		<ESC>\		2	

4.13.13. Stream readout of fiscal memory - headers.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Status	0..1			0 – start from beginning 1 – provide further data
3	Command	**@FMH**		4	
4	Control byte	00..FF		2	
5		<ESC>\		2	

Format of sent back information:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Response code	**@FMS**		4	
3	Status	0..9	/	1	0 – sending data 1 – end of data 9 - error
4	Size	Number	/	0...	File size in bytes (before conversion)
5	Offset	Number	/	0…	Offset in fiscal memory
6	Data	Text	<CR>	Variable	Data
7	Control byte	00..FF		2	
8		<ESC>\		2	

4.13.14. Events readout.

Order of setting initial and final event by date:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	10		1	
3	Command	**$o**		2	
4	Initial date	Text	<CR>	10	Format: ”RRRR-MM-DD”
5	Final date	Text	<CR>	10	Format: ”RRRR-MM-DD”
6	Control byte	00..FF		2	
7		<ESC>\		2	

Order of setting initial and final event by number:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	11		1	
3	Command	**$o**		2	
4	Initial number	Number	/	1..7	
5	Final number	Number	/	1..7	
6	Control byte	00..FF		2	
7		<ESC>\		2	
8		<ESC>P		2	

Order of setting initial and final events according to the date of chosen event type:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	13		1	
3	Command	**$o**		2	

4	Initial date	Text	<CR>	10	Format: ”YYYY-MM-DD”
5	Final date	Text	<CR>	10	Format: ”YYYY-MM-DD”
6	Event type	Number	/	1..3	Event identifier
7	Control byte	00..FF		2	
8		<ESC>\		2	

Order of setting initial and final events according to the chosen event type:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	14		1	
3	Command	**$o**		2	
4	Initial number	Number	/	1..7	
5	Final number	Number	/	1..7	
6	Event type	Number	/	1..3	Event identifier
7	Control byte	00..FF		2	
8		<ESC>\		2	

Readout order:

Order of current event readout:

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	12		2	
3	Record status	**0 or 1**		1	Sending back record status: 0 – not sending back record status 1 – sending back record status
4	Command	**$o**		2	
5	Control byte	00..FF		2	
6		<ESC>\		2	

Response:

Packet: Record data for hexadecimal data formatting: "40 # X" (Reading the contents of fiscal memory)

4.13.15. Report of service reviews.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	3		1	
3	Command	**$o**		2	
4	Control byte	00..FF		2	
5		<ESC>\		2	

4.13.16. Example of protected memory readout implementation.

Protected memory is the place where documents issued by cash register are stored. Protected memory during existence of cash register's fiscal mode can be changed, e.g. after it is full. If sales program needs to know exactly the documents issued by cash registers, it must implement its reading. Since protected memory may contain a lot of data, reading it should be organized in incremental way. This chapter describes method of reading protected memory in incremental way.

Each document has a unique JPKID in the protected memory - it is in no way related to report number, receipt number or printout number. This is the unique ID of saved record in protected memory. Each protected memory record may consist of 3 sections. These sections are: JSON, Print Data, Metadata. Data of each protected memory starts with JPKID 1. When implementing readout, use PC2 port (in case of cash registers) or PC/PC2 (in case of fiscal printers). Cash register can send documents in stream way (fast but not accurate) and

in record way (accurate but not fast). In incremental method of reading protected memory, it is recommended to use record readout mode - and this one is described here. After reading the protected memory record, it is possible to identify the type (Daily report, fiscal receipt, canceled receipt, event, etc.). It is best to store this data in database and perform SQL queries regardless of status of data downloading from device.

Commands to read status data of cash register enable reading the following information:

- what is protected memory label (used to identify protected memory, it is usually the cash register unique number plus the next memory number for a given cash register, e.g.: ABC0123456789.0001,ABC0123456789.0002 ... ABC0123456789.000n),
- what is maximum JPKID saved in the cash register
- query for a specific JPKID for each section separately.

1) Implementation of algorithm can be started by reading information about current protected memory and what is maximum JPKID issued by cash register. This can be done with command:
-> <ESC>P210#s9C<ESC>\
<- <ESC>P210#X0000;ZBN1901007722.0000<CR>3;0;2954;1024;FE<ESC>\
2) In the next step, you should ask about the first JPKID with JSON section, in record way it is done as follows:
-> <ESC>P0@PMI0/0/0/511/DE<ESC>\
<- <ESC>P@PMD1/64/982/0/1<CR><CR>(data ...)CR><LF><CR>AE<ESC>\
3) Then you need to ask about print section:
-> <ESC>P0@PMI1/0/1/511/DE<ESC>\
<- <ESC>P@PMD1/256/298/0/1<CR><CR>(data ...)CR><LF><CR>AD<ESC>\
4) and metadata section:
-> <ESC>P0@PMI1/0/2/511/DD<ESC>\
<- <ESC>P@PMD2/0/0/0/1<CR><CR>(data ...)<CR>D8<ESC>\
Not every JPKID contains all sections (e.g. the last transmission with Metadata is empty - zero record size).
5) After trying to read all 3 sections, you can proceed to trying to read next JPKID until maximum value is reached, in accordance with what was read in point 1.
6) Please remember what JPKID was last processed so that you can start reading from this JPKID document in next session.

Comments:

- Detailed description of packet fields is discussed in protocol documentation.
- The maximum record size cannot be larger than 256 KB
- In case of RS232 communication, it is recommended to use the highest possible transmission speed (115200).
- The read data is in BASE64URL format - it must be decoded and unpacked using zlib Deflate algorithm.
- Printout section data and metadata are used internally by the printer and do not need to be read.

This description includes most important aspects of protected memory readout. If you have additional questions, please contact technical support.

4.14. Orders for printers in pharmacy version.

4.14.1. Header of “pharmacy” receipt.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Number of positions	0..30	;	1..2	
3	Number of lines	0..3		1	Optional
4	Command	**$s**		2	
5	Line no 1	Inscription	<CR>	0..	Number of parameters is the same like described in field no. 3 (number of lines).
6	Line no 2	Inscription	<CR>	0..	
7	Line nr 3	Inscription	<CR>	0..	
8	Control byte	00..FF		2	
9		<ESC>\		2	

Where:

Number of positions
Amount of sale positions = 0..48, if 0 then online receipt (received lines are printed currently). It doesn’t concern printers VENTO and VIVO in versions 1.xx.

Number of lines

Amount of additional lines placed in the receipt's footer, after fiscal logo, to which application has access
Line no. 1...Line no. 3
Content of additional lines.

Error's codes:

1: not initiated printer's clock,
2: control byte error,
4: parameter error (wrong position number)
5: printer's RTC clock readout error
6: error of operation with fiscal memory,
40: error in additional header lines (e.g. too long descriptions)

or

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Number of positions	0..30	;	1..2	
3	Number of lines	0..3		1	Optional
4	Type of buyer identification number	0..2		1	1 – NIP 2 – REGON 3 – PESEL
5	Symbol „PL" before NIP number	0..1		1	Printout of symbol „PL" before seller NIP number 0 – without symbol print, 1 – with symbol print
6	Command	**$s**		2	
7	Line no 1	Inscription	<CR>	0..	Number of parameters is the same like described in field no. 3 (number of lines).
8	Line no 2	Inscription	<CR>	0..	
9	Line nr 3	Inscription	<CR>	0..	
10	NIP (buyer identification number)	Inscription	<CR>	0..13	
11	Control byte	00..FF		2	
12		<ESC>\		2	

Where:

Number of positions
Amount of sale positions = 0..48, if 0 then online receipt (received lines are printed currently). It doesn't concern printers VENTO and VIVO in versions 1.xx.
Number of lines
Amount of additional lines placed in the receipt's footer, after fiscal logo, to which application has access
Line no. 1...Line no. 3
Content of additional lines

Error's codes:
1: not initiated printer's clock,
2: control byte error,
4: parameter error (wrong position number)
5: printer's RTC clock readout error
6: error of operation with fiscal memory,
40: error in additional header lines (e.g. too long descriptions)

Example:
<ESC>P0;3;1;1$sLine no. 1<CR>Line no. 2<CR>Line no. 3<CR>111-222-33-33<CR>D1<ESC>\

4.14.2. Receipt line.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Line number	1..48		1..2	
3	Command	**$a**		2	
4	Name	Inscription	<CR>	1..40(33)	
5	Quantity	Inscription	<CR>	1..12	
6	Prescription	Inscription	<CR>	1..14(15)	
7	PTU	A..G, Z	/	1	
8	Price	Number	/	1..11	
9	Gross	Number	/	1..11	
10	Chargé	Number	/	1..11	
11	Control byte	00..FF		2	
12		<ESC>\		2	

Where:

Line number
0 or 1...255, if = 0 then STORNO/reversal operation
Name
Article name
Quantity
Article quantity
Prescription
Kind of discount for prescription
PTU
Marking PTU rate
Price
Article unit price
Gross
Quota of gross sale
Charge
Quota of charge

Error's codes:
1: not initiated printer's clock,
2: control byte error,
4: parameter error (wrong position number)
16: wrong name (empty or too long),

17 : wrong marking of quantity (empty or too long),

18: wrong marking of PTU rate (or none),

19: „Price" error (syntax, range or none),

20: „Gross" error (syntax, range or none),

21: sequence received by printer with disabled transaction mode,
22: STORNO operation error - as a result of its implementation, the sum in a given tax group is negative,

4.14.3. Acceptation / Cancellation of pharmacy receipt.

Negative approval of transaction

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	0		1	
3	Command	**$e**		2	
4	Control byte	00..FF		2	
5		<ESC>\		2	

Standard approval of transaction

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	1	;	1	
3	Constant	0	;	1	Optional
4	Number of lines	0..3		1	Optional
5	Command	**$e**		2	
6	Code	Inscription	<CR>	3	
7	Line no.1	Inscription	<CR>	0..	Number of parameters is the same like described in field no.4 (number of lines).
8	Line no.2	Inscription	<CR>	0..	
9	Line no.3	Inscription	<CR>	0..	
10	Payment	Number	/	1..11	
11	Total	Number	/	1..11	
12	Control byte	00..FF		2	
13		<ESC>\		2	

Ending pharmacy receipt

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Constant	1	;	1	
3	Constant	0	;	1	Optional
4	Number of lines	0..3		1	Optional
5	Command	**$e**		2	
6	Code	Inscription	<CR>	3	
7	Line no.1	Inscription	<CR>	0..	Number of parameters is the same like described in field no.4 (number of lines).
8	Line no.2	Inscription	<CR>	0..	
9	Line no.3	Inscription	<CR>	0..	
10	Payment	Number	/	1..11	
11	Total	Number	/	1..11	
12	Charge	Number	/	1..11	
13	Control byte	00..FF		2	
14		<ESC>\		2	

Where:

Number of lines
Number of additional lines placed in the receipt footer after fiscal logo, to which application has access,
Code

Terminal number (2 digits) + cashier code (letter),
Line no.1 .. Line no.3
Additional lines,
Payment
Quota paid by customer,
Total
total amount due for the customer (sum of the "Value" fields for all items of the receipt),
Charge
the total amount that the customer must pay (sum of the "Charge" fields for all items of the receipt)

Error's codes:

1: not initiated printer's clock,
2: control byte error,
4: parameter error (wrong position number)
5: printer's RTC clock readout error
6: error of operation with fiscal memory,
23: wrong number of records (lines) of receipt,
24: printer buffer overflow,
25: wrong terminal/cashier code (wrong length or format), or wrong contents of additional lines,
26: quota error in „Payment"
27: wrong total sum in „Total",
28: totalizer overflowing,
29: request to end (positive!) a transaction mode while it has not been yet turned on,
43: quota error in „Charge",

44: the drug receipt for which the valuation was printed is missing in the receipt (the transaction cannot be completed correctly because the table of remembered drug valuations is not empty).

4.15. Drug valuation.

Sequence causes:

- Printout of drug valuation (NON-FISCAL),
- adding a given item to the table of "remembered valuations" - name and value (if a given name already appears in the table, the value stored in the table is incremented by the current amount transferred in the sequence).

No.	Field name	Content	Separator	Size	Remarks
1.		<ESC>P		2	
2.	SO	0 or 1	;	1	Cutter controlling 0 – cutting receipt, 1 – without cutting receipt, 2 – partial cutting
3.	SW1	0 or 1	;	1	Controlling quota printout (Optional)
4.	SW2	0 or 1	;	1	
5.	SW3	0 or 1	;	1	
6.	SW4	0 or 1	;	1	
7.	SW5	0 or 1		1	
8.	Number of additional lines	0..5		1	
9.	Command	***w**		2	
10.	Name	Inscription	<CR>	1..40(26)	
11.	Dose	Inscription	<CR>	1..20(18)	
12.	Package	Inscription	<CR>	1..20(21)	
13.	PTU rate	Character	<CR>	1	
14.	Quantity	Inscription	<CR>	1..10(26)	
15.	ECR number	Inscription	<CR>	1..20(27)	
16.	Payable	Inscription	<CR>	1..10(25)	
17.	Prescription	Inscription	<CR>	1..10(24)	
18.	Refund	Inscription	<CR>	1..10(21)	
19.	Issued	Inscription	<CR>	1..30(26)	
20.	Date	Inscription	<CR>	0..10(27)	Printing if Size > 0
21.	Quantity of written drugs	Inscription	<CR>	0..10(14)	
22.	Patient	Inscription	<CR>	0..30(24)	
23.	Doctor	Inscription	<CR>	0..30(25)	
24.	Refoundation	Inscription	<CR>	0..20	
25.	Province	Inscription	<CR>	0..20(20)	
26.	Value	Number	/	1..11	
27.	Price	Number	/	1..11	
28.	PTU	Number	/	1..11	
29.	Charge	Number	/	1..11	
30.	Limit	Number	/	1..11	Not printed if „SW1” = 1 and „Limit” = 0
31.	Above limit	Number	/	1..11	Not printed if „SW2” = 1 and „Above limit” = 0
32.	Surcharge	Number	/	1..11	Not printed if „SW3” = 1 and „Surcharge” = 0
33.	Basic charge	Number	/	1..11	Not printed if „SW4” = 1 and „Basic charge” = 0
34.	Refund	Number	/	1..11	Not printed if „SW5” = 1 and „Refund” = 0
35.	Additional line 1	Inscription	<CR>	1..44	Number of lines corresponds to number given in parameter number of additional lines
	Additional line n	Inscription	<CR>	1..44	
36.	Control byte	00..FF		2	
37.		<ESC>\		2	

Where:

SO
Controlling printer's cutter,
SW1
Controlling printout of „Limit" quota,
SW2
Controlling printout of „Above limit" quota,
SW3
Controlling printout of „Surcharge" quota,
SW4
Controlling printout of „Basic charge" quota,
SW5
Controlling printout of „Refund" quota,
Name, Dose, Package, PTU rate, Quantity, ECR Number, Payable, Prescription, Refund, Issued, Date, Written drugs quantity, Patient, Doctor, Refoundation, Province
Inscription parameters
Value, Price, PTU, Charge, Limit, Above limit, Surcharge, Basic Charge, Refund
Numeric parameters

WARNING:
Parameters SW1,..,SW5 block printing of selected amounts if a given parameter is different from zero (SW1, .., SW5 <> 0) and a given amount is zero. No parameter or a zero value causes printing a line related to a given amount, also if the amount is zero

WARNING2:
Amounts must appear all, even if not all are printed

WARNING3:
Drug name in version 2.11 is limited to 32 characters. Ultimately, the value will be increased to 40 characters
WARNING4:
Number of valuations in version 2.11 is limited to 10. Ultimately it will be increased to 20.
Error's codes:
1: not initiated printer's clock,
2: control byte error,
3: wrong umber of parameters (more than 6),
4: parameter error (SO, SW1..SW5)
5: printer's RTC clock readout error
58: valuation table overflow (too many valuations printed),

4.15.1. Deleting saved data of drug valuation ("cancellation of valuation").

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Command	*c		2	
3	Name	Inscription	<CR>	1..32	
4	Control byte	00..FF		2	
5		<ESC>\		2	

Where:

Name
Drug name for which valuation was made

Error's codes:
1: not initiated printer's clock,
2: control byte error,
63: the given name is missing from table of remembered valuations

4.15.2. Deleting the whole remembered drug valuations list.

No.	Field name	Content	Separator	Size	Remarks

1		<ESC>P		2	
2	Command	***a**		2	
3	Control byte	00..FF		2	
4		<ESC>\		2	

Error's codes:

1: not initiated printer's clock,
2: control byte error,

WARNING:

Executing sequence when table is empty doesn't generate error.

4.15.3. Cash report in format for drug store.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Year 1	0..99	;	1..2	Initial date: Year
3	Month 1	1..12	;	1..2	Initial date: Month
4	Day 1	1..31	;	1..2	Initial date: Day
5	Hour 1	0..23	;	1..2	Initial hour: Hour
6	Minute1	0..59	;	1..2	Initial hour: Minute
7	Year 2	0..99	;	1..2	Final date: Year
8	Month 2	1..12	;	1..2	Final date: Month
9	Day 2	1..31	;	1..2	Final date: Day
10	Hour 2	0..23	;	1..2	Final hour: Hour
11	Minute2	0..59	;	1..2	Final hour: Minute
12	SW1	0 or 1	;	1	Controlling printout
13	SW2	0 or 1		1	
14	Command	***r**		2	
15	Cash box	Inscription	<CR>	1..4	
16	Person	Inscription	<CR>	1..27(23)	
17	Receipt No.1	Inscription	<CR>	1..6	Receipt initial No.
18	Receipt No.2	Inscription	<CR>	1..6	Receipt final No.
19	Gross A	Number	/	1..11	
20	Gross B	Number	/	1..11	
21	Gross C	Number	/	1..11	
22	Gross D	Number	/	1..11	
23	Gross Z	Number	/	1..11	
24	Total gross total	Number	/	1..11	
25	PTU A	Number	/	1..11	Not printed if „SW1" = 1
26	PTU B	Number	/	1..11	
27	PTU C	Number	/	1..11	
28	PTU D	Number	/	1..11	
29	Total PTU	Number	/	1..11	
30	Advance sign	' ' or '-'	<CR>	1	Character printed with advance quota
31	Advance payments	Number	/	1..11	Not printed if „SW2" = 1
32	Initial cash	Number	/	1..11	
33	Final cash	Number	/	1..11	
34	Control byte	00..FF		2	
35		<ESC>\		2	

Where:

Cash box
Cash box number (treated as any string),
Person
Identification of operating person (operator),
No.of receipt 1
Initial receipt No.for report,
No.of receipt 2
Final receipt No.for report,
Gross A,.., Gross D
Sale amounts in tax groups: A,.., D,
Gross Z

Quota released from tax,

Total gross

Sum of all gross amounts,

PTU A,.., PTU D

Amount of input tax from sale amounts in tax groups: A,.., D,

Total PTU

Sum of all tax amounts

WARNING1:

Sign of amount printed next to "Advances" amount must appear even if this block is not printed

WARNING2:

Numeric parameters (amounts) must always appear all even if block of VAT amounts and/ or block of cash report are not printed.

Error's codes:

1: not initiated printer's clock,
2: control byte error,
3: wrong number of parameters (more than 12),
4: parameter error (Year1, ...SW2)
5: printer's RTC clock readout error
69: error in one of numeric values „Gross A", .. etc.

4.15.4. Prescription drug order.

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Year 1	0..99	;	1..2	Date of acceptance: Year
3	Month 1	1..12	;	1..2	Date of acceptance: Month
4	Day 1	1..31	;	1..2	Date of acceptance: Day
5	Year 2	0..99	;	1..2	Term of receiving: Year
6	Month 2	1..12	;	1..2	Term of receiving: Month
7	Day 2	1..31	;	1..2	Term of receiving: Day
8	SW	0 or 1	;	1	Controlling printout
9	Number of copies	0..8		1	
10	Command	***k**		2	
11	Number	Inscription	<CR>	1..10	
12	Person	Inscription	<CR>	1..30(24)	
13	Patient	Inscription	<CR>	0..30(24)	Printed if Size > 0
14	Doctor	Inscription	<CR>	0..30(25)	
15	Chargé	Number	/	1..11	
3	Control byte	00..FF		2	
4		<ESC>\		2	

Where:

Number

Order number (treated as string),

Person

Data of person accepting the order,

Patient

Patient data,

Doctor

Doctor data

WARNING:

- if „Year2" = „Month2" = „Day2" = 0, then line „Term of receiving.." is not printed,
- if „Year2" = 100, then at the end of line „Term of receiving..." are printed dots,
- otherwise there is printed date

„Number of copies" = 0, it results in printing 1 copy

Error's codes:

1: not initiated printer's clock,
2: control byte error,

3: wrong number of parameters (more than 7),
4: parameter error (Year1, ...”Number of copies”)
5: printer’s RTC clock readout error

4.15.5. Prescription valuation.

No.	Field name	Content	Separator	Size	Remarks	
1.		<ESC>P		2		
2.	Number of positions	1..5	;	1		
3.	SW1	0 or 1	;	1		
4.	SW2	0 or 1	;	1		
5.	SW3	0 or 1	;	1		
6.	SW4	0 or 1	;	1		
7.	SW5	0 or 1	;	1		
8.	Number of additional lines in summary	0..5	;	1		
9.	Number of additional lines positions	0..5		1		
10.	Command	**@r**		2		
11.	Prescription	Inscription	<CR>	1..32(24)		Each field appears as many times as value of parameter "Number of positions”
12.	Name	Inscription	<CR>	1..32(26)		
13.	Dose ...	Inscription	<CR>	1..32(18)		
14.	Package ...	Inscription	<CR>	1..32(21)		
15.	Quantity ...	Number	/	1..10		
16.	Price ...	Number	/	1..11		
17.	Value ..	Number	/	1..11		
18.	Refund...	Number	/	1..11	Printed if „SW1” > 0	
19.	Limit...	Number	/	1..11	Printed if „SW2” > 0	
20.	Additional line 1	Inscription	<CR>	1..44	Number of lines corresponds to number specified in parameter Number of additional lines positions	
21.	Additional line n	Inscription	<CR>	1..44		
22.	Total value	Number	/	1..11		
23.	ECR	Inscription	<CR>	1..11(27)		
24.	Issued	Inscription	<CR>	1..32(26)		
25.	Total refund	Number	/	1..11		
26.	Surcharge	Number	/	1..11	Printed if „SW3” > 0	
27.	Charge	Number	/	1..11		
28.	Margin	Number	/	1..11	Printed if „SW4” > 0	
29.	Taxa laborum	Number	/	1..11	Printed if „SW5” > 0	
30.	Patient	Inscription	<CR>	0..32(24)	Printed if inscription length > 0	
31.	Doctor	Inscription	<CR>	0..32(25)		
32.	Refundation	Inscription	<CR>	0..32(21)		
33.	Province	Inscription	<CR>	0..32(20)		
34.	Additional line 1	Inscription	<CR>	1..44	Number of lines corresponds to number specified in parameter Number of additional lines positions	
35.	Additional line n	Inscription	<CR>	1..44		
36.	Control byte	00..FF		2		
37.		<ESC>\		2		

Where:

Prescription, Name, Dose, Package, ECR, Issued, Patient, Doctor, Refundation, Province
Inscription parameters
Quantity, Price, Value, Refund, Limit, Total value, Total Refund, Subcharge, Charge, Margin, Taxa laborum
Numeric parameters

Error’s codes:
1: not initiated printer’s clock,

2: control byte error,
4: parameter error (Year1, ...”Number of copies”)
5: printer’s RTC clock readout error

4.15.6. Prescription valuation according to protocol „NOVITUS accordable”.

No.	Field name	Content	Separator	Size	Rmarks	
1		<ESC>P		2		
2	Number of positions	1..5	;	1		
3	SW1	0 or 1	;	1		
4	SW2	0 or 1	;	1		
5	SW3	0 or 1	;	1		
6	SW4	0 or 1	;	1		
7	SW5	0 or 1	;	1		
8	SW6	0 or 1	;	1		
9	SW7	0 or 1	;	1		
10	SW8	0 or 1	;	1		
11	Command	***x**	;	2		
12	Prescription	Inscription	<CR>	1..30		
13	Name	Inscription	<CR>	1..32(24)		Each field appears as many times as value of parameter "Number of positions”
14	Form/Dose ...	Inscription	<CR>	1..32(26)		
15	Package ...	Inscription	<CR>	1..32(18)		
16	Quantity ...	Inscription	<CR>	1..32(21)		
17	Price ...	Number	/	1..11		
18	Value ..	Number	/	1..11		
19	Limit	Number	/	1..11	Printed if „SW1” > 0	
20	Total value	Number	/	1..11		
21	Refund	Number		1.11		
22	Subcharge	Number	/	1..11	Printed if „SW2” > 0	
23	Charge	Number	/	1..11		
24	Margin	Number	/	1..11	Printed if „SW3” > 0	
25	Taxa laborum	Number	/	1..11	Printed if „SW4” > 0	
19	ECR	Inscription	<CR>	1..11(27)		
20	Issued	Inscription	<CR>	1..32(26)		
26	Patient	Inscription	<CR>	0..32(24)	Printed if „SW5” > 0	
27	Doctor	Inscription	<CR>	0..32(25)	Printed if „SW6” > 0	
28	Refundation	Inscription	<CR>	0..32(21)	Printed if „SW7” > 0	
29	Province	Inscription	<CR>	0..32(20)	Printed if „SW8” > 0	
30	Control byte	00..FF		2		
31		<ESC>\		2		

Where:

Prescription, Name, Dose, Package, ECR, Issued, Patient, Doctor, Refundation, Province
Inscription parameters
Quantity, Price, Value, Refund, Limit, Total value, Total Refund, Subcharge, Charge, Margin, Taxa laborum
Numeric parameters

Error’s codes:
1: not initiated printer’s clock,
2: control byte error,
4: parameter error (Year1, ...”Number of copies”)
5: printer’s RTC clock readout error

4.15.7. Prescription drug valuation.

No.	Field name	Content	Separator	Size	Remarks
1.		<ESC>P		2	
2.	Number of components	1..5	;	1	

3.	SW	0 or 1	;	1	
4.	Number of additional lines in summary	0..5	;	1	
5.	Number of additional lines positions	0..5		1	
6.	Command	**@I**		2	
7.	Name	Inscription	<CR>	1..40(26)	
8.	Prescription	Inscription	<CR>	1..32(24)	
9.	Number of drugs	Number	/	1..6	
10.	Received	Inscription	<CR>	0..32(24)	Printed if inscription length > 0
11.	Compiled	Inscription	<CR>	0..32(23)	
12.	Issued	Inscription	<CR>	0..32(26)	
13.	Component name ..	Inscription	<CR>	1..32(26)	Each field appears as many times as value of parameter "Number of compositions "
14.	Component quantity ...	Number	/	1..6	
15.	Component price...	Number	/	1..11	
16.	Additional line 1	Inscription	<CR>	1..44	Number of lines corresponds to number specified in parameter Number of additional lines positions
17.	Additional line n	Inscription	<CR>	1..44	
18.	PTU rate	Character	<CR>	1	
19.	Value	Number	/	1..11	
20.	PTU	Number	/	1..11	
21.	Taxa laborum	Number	/	1..11	
22.	Chargé	Number	/	1..11	
23.	Patient	Inscription	<CR>	1..32(24)	
24.	Doctor	Inscription	<CR>	0..32(25)	Printed if inscription length > 0
25.	Refundation	Inscription	<CR>	0..32(21)	
26.	Province	Inscription	<CR>	0..32(20)	
27.	Margin	Number	/	1..11	Printed if „SW" > 0
28.	Additional line 1	Inscription	<CR>	1..44	Number of lines corresponds to number specified in parameter Number of additional lines in summary
29.	Additional line n	Inscription	<CR>	1..44	
30.	Control byte	00..FF		2	
31.		<ESC>\		2	

Where:

Prescription, Name, Dose, Package, ECR, Issued, Patient, Doctor, Refundation, Province
Inscription parameters
PTU rate
Character parameter
Quantity, Price, Value, Refund, Limit, Total value, Total Refund, Subcharge, Charge, Margin, Taxa laborum
Numeric parameters

Error's codes:
1: not initiated printer's clock,
2: control byte error,
3: wrong number of parameters,
4: parameter error ("Number of components")
5: printer's RTC clock readout error

WARNING:
The maximum size that does not move the string to the next line is given in parentheses.

4.15.8. Prescription drug valuation according to protocol „NOVITUS accordable".

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Number of	1..5	;	1	

	positions					
3	SW1	0 or 1	;	1		
4	SW2	0 or 1	;	1		
5	SW3	0 or 1	;	1		
6	SW4	0 or 1	;	1		
7	SW5	0 or 1	;	1		
8	SW6	0 or 1	;	1		
9	SW7	0 or 1	;	1		
10	SW8	0 or 1	;	1		
11	Command	***y**	;	2		
12	Name	Inscription	<CR>	1..30		
13	Prescription	Inscription	<CR>	1..30		
14	Quantity	Inscription	<CR>	1..30		
15	Received	Inscription	<CR>	1..30	Printed if „SW1" > 0	
16	Compiled	Inscription	<CR>	1..30	Printed if „SW2" > 0	
17	Issued	Inscription	<CR>	1..30	Printed if „SW3" > 0	
18	Name	Inscription	<CR>	1..32(24)		Each field appears as many times as value of parameter "Number of positions"
19	Quantity	Inscription	<CR>	1..32(21)		
20	Price	Number	/	1..11		
21	Total value	Number	/	1..11		
22	Vat	Number		1..11		
23	Taxa laborum	Number	/	1..11		
24	Chargé	Number	/	1..11		
25	Margin	Number	/	1..11	Printed if „SW4" > 0	
26	Taxa laborum	Number	/	1..11		
27	Patient	Inscription	<CR>	0..32(24)	Printed if „SW5" > 0	
28	Doctor	Inscription	<CR>	0..32(25)	Printed if „SW6" > 0	
29	Refundation	Inscription	<CR>	0..32(21)	Printed if „SW7" > 0	
30	Province	Inscription	<CR>	0..32(20)	Printed if „SW8" > 0	
31	Control byte	00..FF		2		
32		<ESC>\		2		

Where:

Prescription, Name, Dose, Package, ECR, Issued, Patient, Doctor, Refundation, Province
Inscription parameters
Quantity, Price, Value, Refund, Limit, Total value, Total Refund, Subcharge, Charge, Margin, Taxa laborum
Numeric parameters

Error's codes:
1: not initiated printer's clock,
2: control byte error,
4: parameter error (Year1, ..."Number of copies")
5: printer's RTC clock readout error

5. Orders for printer in ticket machine version.

5.1. Discount programming. (1@R).

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Parameter	1		1	Operation type: 1 – discount programming
3	Command	@R		2	Programming discount / discount groups
4	Discount index	Number	/	1-3	Number from range 1..100 that describe discount group index
5	Discount group index	Number	/	1-2	Number from range 1…10 that describe discount group index, to which belongs the discount

6	Discount value	Number	/	1-5	Discount value in %
7	Name	Text	<CR>	1-40	Discount name
8	Control byte	00-FF		2	
9		<ESC>\		2	

Remarks:

Fields 4 to 7 form group of discount data, this group may appear in order up to 20 times one after another (up to 20 reliefs can be programmed once).

5.2. Programming discount groups (2@R).

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Parameter	2		1	Operation type: 2 – programming discount groups
3	Command	@R		2	Programming discounts / discount groups
4	Discount group index	Number	/	1-3	Number from range 1..10 that describe discount group index
5	Name	Text	<CR>	1-40	Discount name
6	Control byte	00-FF		2	
7		<ESC>\		2	

Remarks:

Fields 4-5 form a data group of discount groups, such a group may appear up to 10 times in programming order, one after another (up to 10 discount groups can be programmed once).

Example of programming discount group:

2@R1/Ulga ustawowa<CR>2/Ulga regionalna<CR>3/Emeryci<CR>4/Wojsko<CR>

5.3. Ticket receipt items.

Ticket receipt item is a special type of PLU, programmed with command **@L or @L3**. Adding ticket items is possible after opening receipt in a standard way (there is no special type of ticket receipt). After adding ticket item, receipt automatically becomes a ticket receipt.

Adding ticket item to receipt is possible if any common PLU items haven' been added to receipt yet.

Ticket receipt can include one or more ticket items of different types as well as optionally common PLU items.

5.3.1. Ticket receipt item (@L).

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Parameter	1-10	; (only if appears parameter 2)	1	Ticket type 1 – ordinary ticket (single trip) 2 – periodical ticket 3 – daily ticket 4 – weekly ticket 5 – weekend ticket 6 – monthly ticket 7 – quarterly ticket Since protocol version ≥ 3.00: 8 – network ticket 9 – multi-trip ticket 10 – zone ticket
3	Parameter	0 or none 1-2			0 – one-piece ticket (only domestic part) - default 1 – cross-border ticket, domestic part 2 – cross-border ticket, foreign part
4	Command	**@L**		2	Ticket item
5	PLU name	Name	<CR>	1-40	Article name (description) of ticket item
6	Quantity	Text	/	1-40	Quantity (integer number)
7	Price	Number	/		Unit price
8	Value	Number	/		Value
9	PTU	Character	/		Letter code of VAT rate. *Valid only for domestic tickets. In case of*

					foreign ticket (not subject to taxation), this field is ignored and no VAT is charged.
10	Discount index	Number	/	0-3	Index from discount table 0 – no discount (normal ticket) 1..100 for protocol version < 3.00 1..200 for protocol version ≥ 3.00 *In case of protocol version* < 3.00 *discounts apply only to domestic tickets. In case of a foreign ticket, this field is ignored and always equal to 0.*
11	Valid from	Date	<CR>	8-10	Optional parameter, default – none. Ticket initial validity date in format dd.mm.yyyy
12	Valid to	Date	<CR>	8-10	Optional parameter, default – none. Ticket final validity date in format dd.mm.yyyy
13	Passenger	Text	<CR>	0-40	Optional parameter, default – none. Passenger name
14	Initial bus stop	Text	<CR>	0-40	Optional parameter, default – none. Bus stop name
15	Departure course	Text	<CR>	0-40	Optional parameter, but line is always printed. In case of no data, label “none” will be printed. Departure course identifier
16	Final bus stop	Text	<CR>	0-40	Optional parameter, default – none. Final stop bus name.
17	Return course	Text	<CR>	0-40	Optional parameter, default – none. Return course identifier
18	Additional information	Text	<CR>	0-512 0-2048*	Optional parameter. Text modifiers: ‘0x1B>’ – align text to the right, ‘0x1B+’ – bold text, ‘0x0A’ – switch to new line, ‘0x1B+0x1B>’ – align bold text to the right, ‘0x1B|’ – centring, ‘0x1B+0x1B|’ – centring bold text * - protocol since version 3.00
19	Control byte	00-FF		2	
20		<ESC>\		2	

Remarks:
1. At least one of parameters „Initial bus stop” or „Final bus stop” must appear.
2. At least one of parameters „Valid from” or „Valid to” must appear.

5.3.2. Ticket receipt item with chargé and discount (@L3)

No.	Field name	Content	Separator	Size	Remarks
1	<ESC>P			2	
2	Parameter	1-10	; (only if appears parameter 2)	1	Ticket type 1 – ordinary ticket (single trip) 2 – periodical ticket 3 – daily ticket 4 – weekly ticket 5 – weekend ticket 6 – monthly ticket 7 – quarterly ticket Since protocol version ≥ 3.00: 8 – network ticket 9 – multi-trip ticket 10 – zone ticket

3	Parameter	0 or none 1-2			0 – one-piece ticket (only domestic part) - default 1 – cross-border ticket, domestic part 2 – cross-border ticket, foreign part
4	Parameter - Discount type				0 – none, 1 – quota discount, 2 – percentage discount, 3 – quota surcharge, 4 – percentage surcharge (remarks: 2)
5	Parameter - Chargé				0 – no information of charge, 1 – information of chargé (printed value sent in field Charge) (remarks: 3)
6	Parameter – service refund				0 – discounted ticket with a surcharge (discount settled on the surcharges report) 1 – reduced ticket without surcharge (discount not settled on the surcharges report). Parameter ignored in case of no relief.
7	Parameter – STORNO (cancellation)				0 – sale, 1 – STORNO (remarks: 1)
8	Command	**@L3**		3	Ticket item
9	PLU name	Name	<CR>	1-40	Article name (description) of ticket item
10	Quantity	Text	/	1-40	Quantity (integer number)
11	Price	Number	/		Unit price
12	Value	Number	/		Value
13	PTU (tax)	Character	/		Letter code of VAT rate. *Valid only for domestic tickets. In case of foreign ticket (not subject to taxation), this field is ignored and no VAT is charged*.
14	Discount	Number	/		(remarks: 4)
15	Discount index	Number	/	0-3	Index from discount table 0 – no discount (normal ticket) 1..100 – discount index *Discounts apply only to domestic tickets. In case of a foreign ticket, this field is ignored and always equal to 0.*
16	Chargé	Number	/		(remarks: 5)
17	Valid from	Date	<CR>	8-10	Optional parameter, default – none. Ticket initial validity date in format dd.mm.yyyy
18	Valid to	Date	<CR>	8-10	Optional parameter, default – none. Ticket final validity date in format dd.mm.yyyy
19	Passenger	Text	<CR>	0-40	Optional parameter, default – none. Passenger name
20	Initial bus stop	Text	<CR>	0-40	Optional parameter, default – none. Bus stop name
21	Departure course	Text	<CR>	0-40	Optional parameter, default – none. Departure course identifier
22	Final bus stop	Text	<CR>	0-40	Optional parameter, default – none. Final stop bus name.
23	Return course	Text	<CR>	0-40	Optional parameter, default – none. Return course identifier
24	Additional information	Text	<CR>	0-512 0-2048*	Optional parameter. Text modifiers: ‘0x1B>’ – align text to the right,

					‘0x1B+’ – bolded text, ‘0x0A’ – switch to new line, ‘0x1B+0x1B>’ – align bold text to the right, ‘0x1B|’ – centring, ‘0x1B+0x1B|’ – centring bold text * - protocol since version 3.00
25	Control byte	00-FF		2	
26	<ESC>\			2	

Remarks:
1. At least one of parameters „Initial bus stop” or „Final bus stop” must appear.
2. At least one of parameters „Valid from” or „Valid to” must appear.
3. A canceled product (ticket) is identified by its name, price and tax rate. In addition, compliance with the applied relief (percentage value) is verified. The information part of the ticket is not printed.
4. Simultaneous application of discount and relief is blocked.
5. The amount paid by the customer. Value of 0.00 means a free ticket. Fee value cannot be higher than the ticket value, also after taking into account discount and/or reduction.

5.3.3. Ticket receipt item – ticket with no surcharge (@L4).

No.	Field name	Content	Separator	Size	Remarks
1	<ESC>P			2	
2	Parameter	1-10	;	1-2	Ticket type 1 – ordinary ticket (single trip) 2 – periodical ticket 3 – daily ticket 4 – weekly ticket 5 – weekend ticket 6 – monthly ticket 7 – quarterly ticket Since protocol version ≥ 3.00: 8 – network ticket 9 – multi-trip ticket 10 – zone ticket
3	Parameter	0-2	;	1	0 – one-piece ticket (only domestic part) - default 1 – cross-border ticket, domestic part 2 – cross-border ticket, foreign part
4	Parameter - Discount type	0-4	;	1	0 – none, 1 – quota discount, 2 – percentage discount, 3 – quota surcharge, 4 – percentage surcharge (remarks: 2)
5	Parameter - Chargé	0-1	;	1	0 – no information of charge, 1 – information of chargé (printed value sent in field Charge) (remarks: 3)
6	Parameter – service refund	1	;	1	0 – reduced ticket without surcharge (discount not calculated on the surcharges report) Parameter ignored in case of no discount.
7	Parameter – STORNO (cancellation)	0-1	;	1	0 – sale, 1 – STORNO (remarks: 1)
8	Parameter – discount type	0-3		1	0 – no discount (normal ticket) 1 – percentage discount, 2 – quota discount
9	Command	**@L4**		3	Ticket item

10	PLU name	Name	<CR>	1-40	Article name (description) of ticket item
11	Quantity	Text	/	1-40	Quantity (integer number)
12	Price	Number	/		Unit price
13	Value	Number	/		Value
14	PTU (tax)	Character	/		Letter code of VAT rate. *Valid only for domestic tickets. In case of foreign ticket (not subject to taxation), this field is ignored and no VAT is charged*.
15	Discount	Number	/		(remarks: 4)
16	Chargé	Number	/		(remarks: 5)
17	Rounding	Number	/	1	0 – no rounding, 1 – up to 5 cents, 2 – up to 10 cents, 3 – up to 20 cents, 4 – up to 50 cents, 5 – up to 100 cents, 6 – reduced down to 5 cents, 7 – reduced down to 10 cents (rounding price after deducting discount)
18	Discount value	Number	/		Quota or percentage value depending on parameter „Discount type”. 0.00,..,100.00% in case of percentage discount. Unit discount value (one ticket) in case of quota discount.
19	Discount name	Text	<CR>	1-42	Discount name or additional description in case of normal ticket
20	Name of discount group	Text	<CR>	1-42	Name of discount group or additional description in case of normal ticket
21	Valid from	Date	<CR>	8-10	Optional parameter, default – none. Ticket initial validity date in format dd.mm.yyyy
22	Valid to	Date	<CR>	8-10	Optional parameter, default – none. Ticket final validity date in format dd.mm.yyyy
23	Passenger	Text	<CR>	0-40	Optional parameter, default – none. Passenger name
24	Initial bus stop	Text	<CR>	0-40	Optional parameter, default – none. Bus stop name
25	Departure course	Text	<CR>	0-40	Optional parameter, default – none. Departure course identifier
26	Final bus stop	Text	<CR>	0-40	Optional parameter, default – none. Final stop bus name.
27	Return course	Text	<CR>	0-40	Optional parameter, default – none. Return course identifier
28	Additional information	Text	<CR>	0-512 0-2048*	Optional parameter. Text modifiers: ‘0x1B>’ – align text to the right, ‘0x1B+’ – bolded text, ‘0x0A’ – switch to new line, ‘0x1B+0x1B>’ – align bold text to the right, ‘0x1B|’ – centring, ‘0x1B+0x1B|’ – centring bold text * - protocol since version 3.00
29	Control byte	00-FF		2	
30	<ESC>\			2	

Remarks:

1. At least one of parameters „Initial bus stop” or „Final bus stop” must appear.
2. At least one of parameters „Valid from” or „Valid to” must appear.
    1. A canceled product (ticket) is identified by its name, price and tax rate. In addition, compliance with the applied relief (percentage value) is verified. The information part of the ticket is not printed.
    2. Simultaneous application of discount and relief is blocked.
    3. The amount paid by the customer. Value of 0.00 means a free ticket. Fee value cannot be higher than the ticket value, also after taking into account discount and/or reduction.

5.4. Additional fee (with article description) (@L1)

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Line number	0..255	**;**	1..3	
3	Discount type	0..4	;	1	
4	Discount description	0..16	;	1..2	
5	Article description	0..1	;	1	
6	Command	**@L1**		3	
7	Name	Inscription	<CR>	2..40	
8	Quantity	Inscription	<CR>	1..16	
9	PTU (tax)	Character	/	1	
10	Price	Number	/	1..11	
11	Gross	Number	/	1..11	
12	Discount	Number	/	1..11	
13	Discount name	Inscription	<CR>	0..40	
14	Article description	Inscription	<CR>	0..160	Appears if the "Article description" flag is set
15	Control byte	00..FF		2	
16		<ESC>\		2	

Item printout with label „ADDITIONAL FEE”.

5.4.1. Additional fee (with article code) (@L2)

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Line number	0..255	**;**	1..3	If 0 – STORNO (cancelled)
3	Discount type	0..4	;	1	
4	Discount description	0..16	;	1..2	
5	Command	**@L2**		3	
6	Name	Inscription	<CR>	2..40	
7	PLU code	Inscription	<CR>	1..31	
8	Quantity	Inscription	<CR>	1..16	

9	PTU (tax)	Character	/	1	
10	Price	Number	/	1..11	
11	Gross	Number	/	1..11	
12	Discount	Number	/	1..11	
13	Discount name	Inscription	<CR>	0..40	
14	Control byte	00..FF		2	
15		<ESC>\		2	

Item printout with label „ADDITIONAL FEE”.

5.4.2. Additional information to ticket receipt (@I).

No.	Field name	Content	Separator	Size	Remarks
1	<ESC>P			2	
2	Command	**@I**		2	Ticket item
3	Additional information	Text	<CR>	0-2048	Optional parameter Text modifier: ‘0x1B>’ – align text to the right, ‘0x0A’ – switch to new line, ‘0x1B+0x1B>’ – align bold text to the right, ‘0x1B|’ – centring, ‘0x1B+0x1B|’ – centring bold text
4	Control byte	00-FF		2	
5	<ESC>\			2	

Remarks

Additional information is printed in the footer of receipt, only on electronic copy. The order may be sent after receipt opening , in ticket mode, before sending end of receipt.

Example of ticket receipt:

Control sequence	Meaning	Printout
0$h	Opening receipt	
1@LUsluga transportowa<CR>2/100/200/B/3/10.10.2017<CR>10.11.2017<CR>Jan Kowalski<CR>Warszawa DA<CR>kurs 066 (12:30)<CR>Katowice DA<CR>kurs 017 (19:00)<CR>	Ticket item	

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Oddział Nowy Sącz
NOVITUS - Centrum Technologii Sprzedaży

Nawojowska
33-300 Nowy Sącz
NIP: 5220001694 W000047

PARAGON FISKALNY

BILET ULGOWY Z DOPŁATĄ
Nauczyciel
Ulga ustawowa

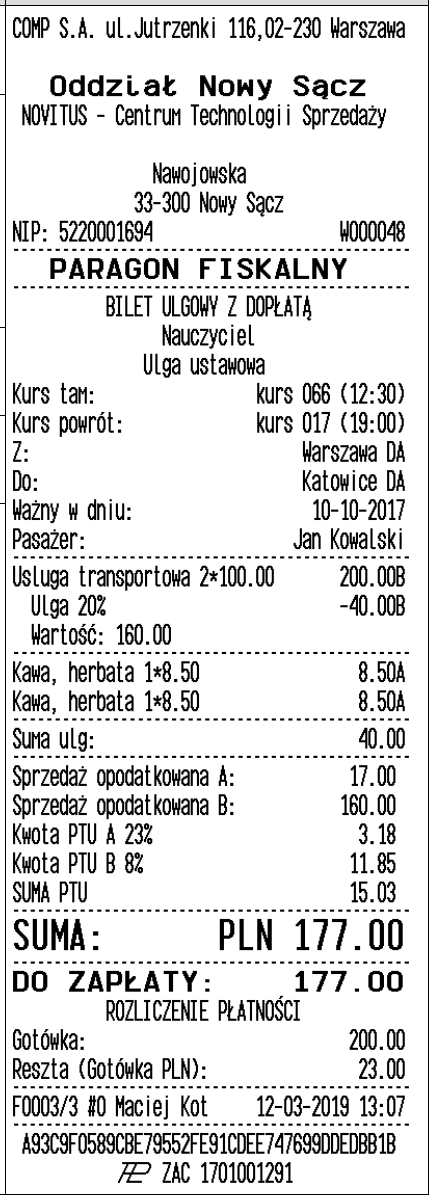
Kurs tam:	kurs 066 (12:30)
Kurs powrót:	kurs 017 (19:00)
Z:	Warszawa DA
Do:	Katowice DA
Ważny w dniu:	10-10-2017
Pasażer:	Jan Kowalski
Usluga transportowa 2*100.00	200.00B
Ulga 20%	-40.00B
Wartość: 160.00	
Suma ulg:	40.00
Sprzedaż opodatkowana B:	160.00
Kwota PTU B 8%	11.85
SUMA PTU	11.85

SUMA: PLN 160.00

DO ZAPŁATY: 160.00

ROZLICZENIE PŁATNOŚCI

1;0$eMaciej Kot<CR>200/160/	Closing receipt	

Control sequence	Meaning	Printout
0$h	Opening receipt	
1@LUsluga transportowa<CR>2/100/200/B/3/10.10.2017<CR>10.11.2017<CR>Jan Kowalski<CR>Warszawa DA<CR>kurs 066 (12:30)<CR>Katowice DA<CR>kurs 017 (19:00)<CR>	Ticket item	
1$lKawa, herbata<CR>1<CR>A/8.50/8.50/	Receipt item	
1$lKawa, herbata<CR>1<CR>A/8.50/8.50/	Receipt item	
1$eMaciej Kot<CR>200/177/	Closing receipt	

5.4.3. Closing ticket item (0@L).

No.	Field name	Content	Separator	Size	Remarks
1		<ESC>P		2	
2	Parameter	0			
3	Command	**@L**		2	Closing ticket item
4	Summary	Text	<CR>	0-6*40	Additional information to print in footer of ticket item. If text starts with '@' character, it is printed in form of QR code. '0x1B+0x1B>' – align bold text to the right, '0x1B|' – centring, '0x1B+0x1B|' – centring bold text

5	Control byte	00-FF		2	
6	<ESC>\			2	

Remarks:

Closing a ticket item is optional. Closing receipt or sending regular receipt item closes ticket item automatically when it is open. In case if ticket item is not open, the order returns without any action. Closing ticket item is used when there is a need to print more than one ticket item on receipt, print additional information about passenger ticket or add a QR code to the ticket.

Example of ticket receipt:

Sekwencja sterująca	Znaczenie	wydruk
0$h	Otwarcie paragonu	
1@LUsluga transportowa<CR>2/100/200/B/3/10.10.2017<CR>10.11.2017<CR>Jan Kowalski<CR>Warszawa DA<CR>kurs 066 (12:30)<CR>Katowice DA<CR>kurs 017 (19:00)<CR>	Pozycja biletowa	
0@L@Kod QR do pozycji biletowej<CR>	Zamknięcie pozycji biletowej z kodem QR	
1$eMaciej Kot<CR>200/160/	Zamknięcie paragonu	

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NIP: 5220001694 W000049

PARAGON FISKALNY

BILET ULGOWY Z DOPŁATĄ
Nauczyciel
Ulga ustawowa

Kurs tam:	kurs 066 (12:30)
Kurs powrót:	kurs 017 (19:00)
Z:	Warszawa DA
Do:	Katowice DA
Ważny w dniu:	10-10-2017
Pasażer:	Jan Kowalski
Usluga transportowa 2*100.00	200.00B
Ulga 20%	-40.00B
Wartość: 160.00	
Suma ulg:	40.00
Sprzedaż opodatkowana B:	160.00
Kwota PTU B 8%	11.85
SUMA PTU	11.85

SUMA: PLN 160.00

DO ZAPŁATY: 160.00

ROZLICZENIE PŁATNOŚCI

Gotówka:	200.00
Reszta (Gotówka PLN):	40.00

F0003/4 #0 Maciej Kot 12-03-2019 13:11

1D93CF4E05F609D9E5D8A7511A129F4BA034D6AF

ZAC 1701001291

Other examples:
Cross-border ticket with domestic and foreign parts

Sekwencja sterująca	Znaczenie	wydruk
0$h	Otwarcie paragonu	

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33-300 Nowy Sącz

NIP: 5220001694 W000050

PARAGON FISKALNY

1;1@LUsluga transportowa<CR>1/150/150/B/0/10.10.2017<CR><CR>Jan Kowalski<CR>	Pozycja biletowa – część krajowa	
1;2@LTransport Niemcy 360km<CR>1/200/200///10.10.2017<CR><CR>Jan Kowalski<CR>	Pozycja biletowa – część zagraniczna, składnik ceny #1	
1;2@LTransport Austria 240km<CR>1/160/160///10.10.2017<CR><CR>Jan Kowalski<CR>	Pozycja biletowa – część zagraniczna, składnik ceny #2	
1$eKierowca1<CR>600/510/	Zamknięcie paragonu	

Sekwencja sterująca	Znaczenie	wydruk
0$h	Otwarcie paragonu	
1@LUsluga transportowa<CR>2/100/200/B/3/10.10.2017<CR>10.11.2017<CR>Jan Kowalski<CR>Warszawa DA<CR>kurs 066 (12:30)<CR>Katowice DA<CR>kurs 017 (19:00)<CR>	Bilet #1 (cena 4.20)	
0@L	Zamknięcie biletu #1	
1@LUsluga transportowa<CR>2/150/300/B/3/10.10.2017<CR>10.11.2017<CR>Jan Kowalski<CR>Warszawa DA<CR>kurs 066 (12:30)<CR>Katowice DA<CR>kurs 017 (19:00)<CR>	Bilet #2 (cena 3.60)	

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PARAGON FISKALNY

BILET ULGOWY Z DOPŁATĄ
Nauczyciel
Ulga ustawowa

Kurs tam:	kurs 066 (12:30)
Kurs powrót:	kurs 017 (19:00)
Z:	Warszawa DA
Do:	Katowice DA
Ważny w dniu:	10-10-2017
Pasażer:	Jan Kowalski
Usluga transportowa 2*100.00	200.00B
Ulga 20%	-40.00B
Wartość: 160.00	

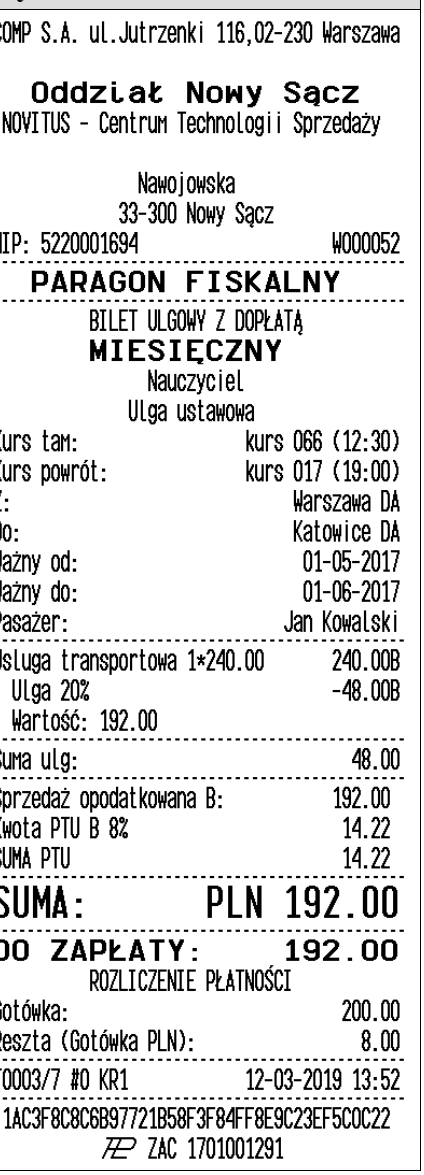
Two tickets on one receipt:

BILET ULGOWY Z DOPŁATĄ
Nauczyciel
Ulga ustawowa

Kurs tam:	kurs 066 (12:30)
Kurs powrót:	kurs 017 (19:00)
Z:	Warszawa DA
Do:	Katowice DA
Ważny w dniu:	10-10-2017
Pasażer:	Jan Kowalski
Usluga transportowa 2*150.00	300.00B
Ulga 20%	-60.00B
Wartość: 240.00	
Suma ulg:	100.00

1$eKR1<CR>500/400/	Zamknięcie paragonu (automatycznie zamyka też bilet #2)	

Monthly ticket:

Sekwencja sterująca	Znaczenie	wydruk
0$h	Otwarcie paragonu	
6@LUsluga transportowa<CR>1/240/240/B/3/01.05.2017<CR>01.06.2017<CR>Jan Kowalski<CR>Warszawa DA<CR>kurs 066 (12:30)<CR>Katowice DA<CR>kurs 017 (19:00)<CR>	Bilet miesięczny ulgowy (ulga 3)	
1$eKR1<CR>200/192/	Zamknięcie paragonu	

5.4.4. Ticket reports (#o).

No.	Field name	Content	Separator	Size	Remarks
1	<ESC>P			2	
2	Year 1	00-99	;	1-2	Year of report initial date
3	Month 1	1-12	;	1-2	Month of report initial date
4	Day 1	1-31	;	1-2	Day of report initial date
5	Year 2	00-99	;	1-2	Year of report final date
6	Month 2	1-12	;	1-2	Month of report final date
7	Day 2	1-31	;	1-2	Day of report final date

8	Report type	20-24		2	Report type of ticket surcharges (non-fiscal reports): 20 – periodical surcharge report 21 – monthly surcharge report 22 – daily surcharge report (reset after daily report) 23 – reports of discounts and discount groups 24 – reports of discount changes and discount groups changes For reports 22 and 23 initial and final dates don't have to be submitted and they will be ignored if they appear
9	Command	**#o**		2	
10	Cashier	Text	<CR>	0-8	
11	ECR number	Text	<CR>		
5	Control byte	00-FF		2	
6	<ESC>\			2	

5.5. Read information about discounts / discounts quota.

5.5.1. Readout of programmed discounts indexes (110#s).

No.	Field name	Content	Separator	Size	Remarks
1	<ESC>P			2	
2		110		3	Readout of programmed discount indexes.
3	Command	**#s**		2	
4	Control byte	00-FF		2	
5	<ESC>\			2	

It returns list of programmed discounts indexes in format:

No.	Field name	Content	Separator	Size	Remarks
1	<ESC>P			2	
2		**110#X**		5	Response packet on 110#s
3	Number of discounts	0-100	;	1-3	Number of programmed discounts • 1..100 for protocol version < 3.00 • 1..200 for protocol version ≥ 3.00
4..n*	Discount Index	1-100	/	1-3	Index of programmed discount. • 1..100 for protocol version < 3.00 • 1..200 for protocol version ≥ 3.00
n+1	Control byte	00-FF		2	
n+2	<ESC>\			2	

** One value is returned for each programmed discount. Number of returned values is equal to number of discounts returned as "number of discounts" value" (#3).*

Example:

Sent order: <ESC>P110#s9F<ESC>\
Received response: <ESC>P110#X8;1/2/3/4/5/6/7/100/B6<ESC>\

It means that fiscal printer has programmed 8 discounts with indexes 1,2,3,4,5,6,7 and 100.

5.5.2. Data readout of programmed discount groups (111#s).

No.	Field name	Content	Separator	Size	Remarks
1	<ESC>P			2	

2		111		3	Data readout of programmed discounts
3	Command	**#s**		2	
4	Control byte	00-FF		2	
5	<ESC>\			2	

It returns data of programmed discount groups in format:

No.	Field name	Content	Separator	Size	Remarks
1	<ESC>P			2	
2		**111#X**		5	Response packet on 111#s
3	Number of discount groups	0-10	;	1-2	Number of programmed discount groups
4..n*	Index of discount group	1-10	/	1-3	Index of programmed discount groups
	Name of discount group		<CR>		Name of programmed discount groups
n+1	Control byte	00-FF		2	
n+2	<ESC>\			2	

** For each discount group, a group of highlighted data is returned. Number of discount data groups is equal to number of programmed discount groups returned as #3.*

Example:

Sent order: <ESC>P111#s9E<ESC>\
Received response: <ESC>P111#X5;1/test group<CR>2/local discounts<CR>3/special discount<CR>4/carrier discount<CR>10/test group<CR>FA<ESC>\

It means that fiscal printer has programmed 5 discount groups:
index: 1: name: test group
index: 2; name: local discounts
index: 3: name: special discount
index: 4; name: carrier discount
index: 10; name: test group

5.5.3. Readout of discount data (112#s).

No.	Field name	Content	Separator	Size	Remarks
1	<ESC>P			2	
2		112	;	3	Readout of programmed discounts data
3	Discount index	1-100		1-3	Discount index *
4	Command	**#s**		2	
5	Control byte	00-FF		2	
6	<ESC>\			2	

* *Request for unprogrammed discount index will result in error. Indexes of programmed discounts can be obtained using command **110#s**.*

It returns information about discount with submitted index in format:

No.	Field name	Content	Separator	Size	Remarks
1	<ESC>P			2	
2		**112#X**		5	Response packet on 112#s
3	Discount index	1-100	/	1-3	Discount index • 1..100 for protocol version < 3.00 • 1..200 for protocol version ≥ 3.00
4	Discount group index	1-10	/	1-2	Discount group index, to which discount belongs • 1..10 • 0 – no group
5	Discount amount	Number	/		Discount amount in % for protocol older

					than 3.00 • for protocol 3.00 or newer one, number ended with character $ means quota discount. Number without character $ means % discount.
Discount. 6	Discount value (receipt)	Number	/		Discount value (receipt)
7	Discount value (printer)	Number	/		Discount value (printer)
8	Name	Text	<CR>	1-20	Discount name
9	Control byte	00-FF		2	
10	<ESC>\			2	

Example:

Sent order: <ESC>P112;1#s97<ESC>\
Received response: <ESC>P112#X1/1/10/6.6/6.6/Krwiodawca 10%<CR>A9<ESC>\

5.5.4. Readout of discount values for given daily report (113#s).

No.	Field name	Content	Separator	Size	Remarks
1	<ESC>P			2	
2		113		3	Readout of discount values for given daily report
3	Command	**#s**		2	
4	Daily report number	Number	/	1-4	Range from 1 to 1830 (2195)
5	Control byte	00-FF		2	
6	<ESC>\			2	

It returns information about discount values for given daily report: 113#X

No.	Field name	Content	Separator	Size	Remarks
1	<ESC>P			2	
2		**113#X**		5	Response packet for 113#s
3	Daily report number	Number	/	1-4	Range from 1 to 1830(2195)
4	Date/hour of daily report	Text	<CR>		Format: ”YYYY-MM-DD HH:MM”
5	Number of active discounts	Number	/	1-3	
6	Discount index	1-100	/	1-3	Each field appears as many times as the value of field: Number of active discounts
7	Discount value	Number	/		
8	Number of applied discounts	Number	/		
9	Control byte	00-FF		2	
10	<ESC>\			2	

Example of discount readout:

sent order: <ESC>P113#s3/80<ESC>\
received response: <ESC>P113#X3/2017-08-02
11:23<CR>20/1/50.00/1/2/832.00/5/3/40.00/1/4/44.00/1/5/40.00/1/6/38.00/1/7/
50.00/1/8/30.00/1/9/75.00/1/10/20.00/1/11/20.00/1/12/30.00/1/13/30.00/1/14/3
0.00/1/15/160.00/1/16/160.00/1/17/160.00/1/18/120.00/1/19/160.00/1/20/160.
00/1/9C<ESC>\

Example of discount readout for not existing daily report:

sent order: <ESC>P113#s10/B2<ESC>\
received response: <ESC>P113#X0/<CR>0/BA<ESC>\

Example of discount readout for daily report not containing discounts:

sent order: <ESC>P113#s2/81<ESC>\
received response: <ESC>P113#X2/2017-08-02 11:22<CR>0/AC<ESC>\

5.5.5. Reading control number from programmed discounts (117#s)

Interfaces: PC, PC2

No.	Field name	Content	Separator	Size	Remarks
1	<ESC>P			2	
2		117		3	Readout of discount values for particular daily report
3	Command	**#s**		2	
4	Control byte	00-FF		2	
5	<ESC>\			2	

It returns control signature from programmed discounts: 117#X

No.	Field name	Content	Separator	Size	Remarks
1	<ESC>P			2	
2		**117#X**		5	Response packet for 117#s
3	Control number	asciihex	<CR>	8	16 hexadecimal characters. Empty field means initialization is in progress.
4	Control byte	00-FF		2	
5	<ESC>\			2	

5.6. Reading information about amount of discounts of daily reports ranges (114#s, 115#s, 116#s).

5.6.1. Setting numbers range of daily reports (114#s)

114#s – setting number ranges of daily reports

No.	Field name	Content	Separator	Size	Remarks
1	<ESC>P			2	
2		114		3	Setting date ranges
3	Command	**#s**		2	
4	Initial number	Number	/	1-4	Range from 1 to 1830 (2195)
5	Final number	Number	/	1-4	Range from 1 to 1830 (2195)
6	Control byte	00-FF		2	
7	<ESC>\			2	

After sending the command, first report in range will be current report.
Report will be sent after sending command **116#s.**

5.6.2. Setting date ranges of daily reports (115#s)

115#s – setting date ranges of daily reports

No.	Field name	Content	Separator	Size	Remarks
1	<ESC>P			2	
2		115		3	Setting date ranges
3	Command	**#s**		2	
4	Initial number	Text	<CR>	1-4	Format: ”YYYY-MM-DD”
5	Final number	Text	<CR>	1-4	Format: ”YYYY-MM-DD”
6	Control byte	00-FF		2	
7	<ESC>\			2	

After sending the command, first report in range will be current report.
Report will be sent after sending command **116#s.**

5.6.3. Readout of discount amounts for current daily report (116#s).

116#s – readout of discount amounts for current daily report

No.	Field name	Content	Separator	Size	Remarks
1	<ESC>P			2	
2		116		3	Readout of discount amounts for current daily report
3	Command	**#s**		2	
4	Control byte	00-FF		2	
5	<ESC>\			2	

It returns information about discount values for given daily report: 113#X
Command **116#s** should be repeated until receiving packet meaning end of reports:
<ESC>P113#X0/<CR>0/BA<ESC>

6 Calculations conducted by the fiscal printer during printing the receipts.

The programmers, whose applications are to be suited to cooperation with fiscal printers, are forced to calculate by themselves the values of specified positions of receipts as well as summary values of receipts and to send them to the printer which controls these values and prints receipts only when the amounts sent by the application are equal to the ones calculated by the printer. Thus, a necessity arises to conduct calculations exactly in the same way as it is done by the printer.

Charging realization of the transaction, the printer gets the information from the system about following receipts' positions (sold articles). This information is sent in a form of sequence of data of receipt line. From the fiscal and calculation point of view, in relation to each article, the following pieces of information are important:

- name of the article,
- price per unit
- quantity
- VAT rate code,
- percentage or amount discount/ surcharge,
- item Gross value.

In fiscal printers, a control of conformability of the GROSS value is realized for a receipt line with the result of multiplication **<price> * <quantity>.** The control performs in such a way that the result of multiplication (rounded up to two positions after the point !) has to be exactly equal to the sent GROSS. In other case, error No 20 will be reported.

Name of the article is important for the printer because of control of correctness of the VAT rate (the printer possesses a database including the information about VAT rates' for commodities of specified names).

Total receipt value

$$S = s_1 + s_2 + .. + s_n$$

where:
s - receipt position value,
1..n - the following positions on receipt

Receipt position value

$$s = W + r_p + r_c$$

where:
W - basic value (quantity x price),
r_p - discount/overhead on receipt position (r_p <0 – discount, r_p >0 – overhead)
r_c - part of discount/overhead on receipt/sub-total in PTU rate *(r_c < 0 – discount, r_c > 0 - overhead)* per receipt position

Value of percentage discount / overhead per position

$$r_p = W * r_{\%} \quad \text{(direct method)}$$

Or

$$r_p = W * (100\% + r_{\%}) - W \quad \text{(indirect method)}$$

where:

W - basic value (quantity x price),

$r_{\%}$ - percentage discount value ($r_{\%} < 0$ – discount, $r_{\%} > 0$ – overhead) with precision of 2 decimal places

Discount/Overhead to receipt, sub-total and in PTU rate

Due to tightening of fiscal regulations regarding STORNO operations, the current method of calculating discount to receipt/subtotal had to be changed. Currently, in ONLINE printers, discount to receipt/subtotal is the sum of discounts from each receipt position. Until now, it was the sum of totalizer discounts at each tax rate. Introduced changes caused breaking compatibility with previous devices.

Amount of discount / overhead to receipt / sub-total in PTU rate

$$R = r_c(1) + r_c(2) + .. + r_c(n)$$

where:

r_c - part of discount/overhead on receipt/sub-total in PTU rate *($r_c < 0$ – discount, $r_c > 0$ - overhead)* per receipt position

1..n - the following positions on receipt

Amount of discount / overhead per receipt position

$$r_c = s * r_{\%} \quad \text{(direct method)}$$

where:

s – receipt position value before discount,

$r_{\%}$ - percentage discount value ($r_{\%} < 0$ – discount, $r_{\%} > 0$ – overhead)

In case of amount discount to receipt/subtotal/in PTU rate, the amount is converted to percentage value:

$$r_{\%} = 100\% \frac{r_{kw}}{S}$$

where:

r_{kw} – amount discount to receipt / sub-total in PTU rate,

S – receipt value (before discount)

Any difference $\Delta R = R - r_{kw}$ is corrected in the "penny distribution" process.

Warning:
Currently, ONLINE printers only use direct method to calculate discount to receipt/subtotal/in PTU rate.

Example 1 Example 2:

COMP S.A. ul. Jutrzenki 116, 02-230 Warszawa

Oddział Nowy Sącz
NOVITUS - Centrum Technologii Sprzedaży

Nawojowska
33-300 Nowy Sącz

NIP: 5220001694 W0000008

PARAGON FISKALNY

towarA 1*100.01 100.01A
towarA 1*100.01 100.01A

Razem: 200.02
OBNIŻKA 50.00%

Suma obniżek: 100.02

Sprzedaż opodatkowana A: 100.00
Kwota PTU A 23% 18.70
SUMA PTU 18.70

SUMA: PLN 100.00

DO ZAPŁATY: 100.00
ROZLICZENIE PŁATNOŚCI

Gotówka: 200.00
Reszta (Gotówka PLN): 100.00

F0002/1 #0 00A 19-12-2019 15:42

498B0E6D4F9E657668E6B9007748A157597C7DE9
ZAC 1701001222

COMP S.A. ul. Jutrzenki 116, 02-230 Warszawa

Oddział Nowy Sącz
NOVITUS - Centrum Technologii Sprzedaży

Nawojowska
33-300 Nowy Sącz

NIP: 5220001694 W0000009

PARAGON FISKALNY

towarA 1*200.02 200.02A

Razem: 200.02
OBNIŻKA 50.00%

Suma obniżek: 100.01

Sprzedaż opodatkowana A: 100.01
Kwota PTU A 23% 18.70
SUMA PTU 18.70

SUMA: PLN 100.01

DO ZAPŁATY: 100.01
ROZLICZENIE PŁATNOŚCI

Gotówka: 200.00
Reszta (Gotówka PLN): 99.99

F0002/2 #0 00A 19-12-2019 15:44

750B26390BCBE8EA5A16118165BBE9EDB73C35C0
ZAC 1701001222

Distribution of pennies in amount discount to receipt / subtotal in PTU rate

- online printer (HDO 2.10)

Difference between value of amount discount and the resulting percentage discount is divided into subsequent receipt positions. Process begins with determining the quantum of difference k.

k = -1 (penny) if $\Delta R < 0$
k = 1 (penny) if $\Delta R > 0$
or
$k = \frac{\Delta R}{L_p}$ (total penny amount) if $\Delta R > L_p$ (penny amount to be distributed is greater than number of positions on receipt)

where:
L_p – number of positions on receipt
ΔR – difference in pennies.

Cycle (determination of k, correction of each receipt position by value of k) is performed until sum of corrections is equal to ΔR . The item is omitted if k could go negative after correction.

Calculating tax from gross amount

$$V = \frac{BR}{100\% + R}$$

where:
V - tax amount,
B - gross amount,
R - tax rate in % with precision of 2 decimal places,

Calculating tax on receipt

$$V_{sum} = \sum_{n=A}^{G} V_n$$

where:
V_{sum} - total value of tax on receipt,
V_n - tax amount in rates (A,..,G) on receipt,

$$V_n = \frac{Bs_n R_n}{100\% + R_n}$$

where:
Bs_n - total value of gross sale in tax rate (n) on receipt,
R_n - tax rate in % (A,..,G)

Calculating tax in daily report

$$Vt_{sum} = \sum_{n=A}^{G} Vt_n$$

where:
Vt_{sum} - total tax value since last daily report,
Vt_n - tax value in rates (A,..,G) since last daily report,

$$Vt_n = \frac{Bt_n R_n}{100\% + R_n}$$

where:
Bt_n - total value of gross sale in tax rate (n) since last daily report,
R_n - tax rate in % (A,..,G)

Rounding:

Fractional part from 0.005 to 0.009 => 0.01
Fractional part from 0.001 to 0.004 => 0.00

Value of returnable containers:

Values of returnable containers are not included in TOTAL amount. Their data should be sent after sending receipt line using the sequences: Deposit operating in receipt line, Deposit taken (for container sales), Storno of taken deposit, Deposit given (for container return) and Storno of given deposit or in Approval transactions with payment methods (2). Their sums should be sent in dedicated fields of sequence Approval transactions with payment methods (1).

7 Configuration of the printer's work – „Administration mode".

The printer possesses, besides the standard sales mode, a mode in which it is possible to conduct a configuration of parameters of printer's work and in which diagnostic tools are available.

The access to administration menu is possible after starting the printer by pushing simultaneously a combination of Power Supply, Paper outcome and Menu buttons.

The construction of administration menu is presented below (in older versions of the printers it was slightly different). The (*) symbol means presumably set values which are advised by the manufacturer. Resetting of the printer leads to resetting configuration parameters (Administration mode) into presumable values. Only options which can be meaning for the programmers were described.

2.Configuration
2.1 Energy
2.1.1. Auto switch off

2.1.1.1 After [s]
2.1.1.2 Auto blanking
2.2. Communication
2.2.1.Communication control

Choosing the controlling of transfer in sequence communication of the printer: software-facility XONXOFF+RTS CTS or facility only RTS-CTS.

2.2.1.1 XONXOFF+RTSCTS
2.2.1.2 RTSCTS
2.2.2 Communication protocols
2.2.2.1 "NOVITUS accordable"
The first method of calculating the discount is presumable.
Released VAT rates sent back by the printer are of value = 101 and the non-used ones = 100.
The value of returnable packages is calculated as multiplication of price and quantity

2.2.2.2 NOVITUS
The second method of calculating the discount is presumable.
Released VAT rates sent back by the printer are of value = 99.99 and the non-used ones = 98.99.
The price of returnable packages is calculated as multiplication of value and quantity
2.3. Conformability

Auxiliary settings to fit to older versions of applications sending the data of additional lines. Because of limitations of new approval process it is not possible to send any possible text on the additional receipt lines. Taking into consideration programs including the name of the printer and format of the unique name, a possibility of setting the way of sending this data back by the printer was introduced.

2.3.1. Additional receipt lines
2.3.1.1. None
2.3.1.2. Constant

The printer allows two modes of reaction for receiving additional lines:

None - ignoring additional lines

Constant – constant text of additional lines saved from the first sales receipt of a the particular day. It is treated as the DECLARED text. If the printer receives an identical one in the further receipts – it will print it below the receipt. The content of DECLARED TEXT will be specified in the daily report. In case that in the further issued receipts the content of the text would not correspond with the DECLARED one, such content would be ignored and will not be printed out.

2.3.2. Source of additional line
2.3.2.1. Footer note
2.3.2.2. Header

Additional lines printed below the receipt will be taken from the received additional foot note lines (Command Beginning of transaction) or additional header lines (Commands Standard

transaction approval, Approval of transaction with forms of payment (1). , Approval of transaction with forms of payment (1) (2).).

2.3.3 Line No System P.

3. None
4. First
5. Second

Third

6. Fourth
7. Fifth
8. Last

In receipt additional lines it is possible to send an individually modified number (the so called System No), which can be the account, the order, etc. This option determines whether the printer is to readout and print the modified system number in additional lines and determines which of the additional lines includes the system number. The line including the system No is not a part of the DECLARED TEXT, it is not printed at the daily report, It can vary for each receipt. It is printed with a „System No" description

Attention! If None (additional lines) was chosen in option 1.3.1 than independently from the setting of the described option, the system will not be printed.

2.3.4 Sent back name

9. VIVO (in VIVO printers) or VENTO (in VENTO printers)
10. WIKING
11. "NOVITUS accordable"

Conformability – Sent back name: Possibility of configuration the printer for applications determining the type of communication protocol after the sent facility name.

2.3.5 Sent back unique No

- XXX ########
- XXX ########
- XX ########

In order to provide compatible work with the older versions of the programs it is possible to change format of sent back unique number.

2.4 Printout

2.4.1. Printout contrast

Low
Normal
High

2.4.2. Receipt buffer

- on
- off

2.5 Displaying

2.5.1. Display options

- Supply status
- Sum on in cl.

2.5.2. Reeling sensor

- on
- off

3. Functions

3.1.Set the clock
3.2. Closing
By dates
By numbers
3.3 RAM reset

4. Tests

4.1. All
4.2. Cyclical

5. Information

5.1. Version
5.2. Fiscal memory
5.3. PLU base
5.4. Measurements

8. Alphabetic specification of commands realized by fiscal printers.

The table below includes an alphabetic specification of commands of fiscal printers, useful while analysing controlling sequences.

Command	Command name
!a	Programming header in online devices (version 10 lines).
!d	Controlling display in out of receipt mode.
#a	Programming header in online devices.
#b	Database control
#c	Demand of sending back the time set in the printer
@c	Order of setting invoice options
#d	Payout from the cash register
#e	Setting the mode of error's service
#f	Printing the cash register/shift report including the form of payment (1)
#g	Sale receipt
#h	Transaction of recognition (return of goods)
#i	Payment to the cash register
#k	Printing the report of cash register/shift
#l	Pull out the paper
#m	Printing the cash register/shift report including form of payment (2)
#n	Demand of sending back the code of error of the last command
#o	Printing periodical report
#p	Log-in the cashier Read cashier status.
#q	Log-out the cahier
#r	Printing daily report
#s	Demand of sending back cash information Readout of fiscal memory content. Odczyt zawartości pamięci fiskalnej dla urządzeń z homologacją 2009. Odczyt zawartości pamięci fiskalnej dla urządzeń Online. Odczyt informacji o pamięci chronionej.
#LOG	Sequence sending back information on process logs.
#t	Cash register status
#v	Sequence sending back the type and version of software
#w	Return of package
$b	Support of forms of payment Support of forms of payment in currency ($b)
$c	Setting the clock
$d	Controlling the display/drawer
$e	Annulling of transaction Standard transaction approval Ending invoice.
$g	Asking about possibility of goods sales.
$i	Sequence sending back information about device. Sequence sending back information about communication port.
$f	Programming the header
$h	Beginning of transaction Packet of starting invoice.
$j	Verification of the invoice
$l	Receipt's line Service of deposit in receipt's line Invoice line

$m	Displaying menu.
?l	*Question about data from the last receipt
$L	Discount /overhead for a group of goods in the particular VAT rate
?m	*4.9.6. Handling the data of logs of communication **monitor (**?m)
$n	Discount / overhead during transaction
$o	Programming date of periodical review Read records in fiscal memory Confirmation of service review. Print report of records in fiscal memory in range of numbers. Print report of records in fiscal memory in range of dates. Report from service reviews. Confirmation of statutory technical inspection.
$p	Changing VAT rates
$P	Automatic VAT rates changing.
$r	Choosing the method of discount accounting Changing mode of re-sending cash information (Type 22)
$u	Programming address of MAC network card.
$w	Additional non-fiscal printouts – start print Additional non-fiscal printouts – printout line Additional non-fiscal printouts – end print
$x	Approval of transaction with forms of payment (1)
$y	Approval of transaction with forms of payment (2)
$Y	Discount / overhead to the receipt of sub-total.
$z	Additional lines on the receipt after fiscal logo Line of additional invoice footers Linie of additional receipt footers Information line - definition Lines of packages receiving. Lines of packages returning. Forms of payment settlement. Payment in EURO. End of printout.
^b	Programming currency change. Programming mode of printing conversion to currency in receipt footer
^c	Read parameters from given range Programming single option Configuration settings
^e	*Setting notifications on PC2
^f	Graphic logo support
^F	Graphic logo support – version 2
^l	*Receipt's line
^m	*Handling the controlling of modem lines of transmission of AUX1 and AUX2 by ports PC1 and PC2.
^r	*Controlling the status of PC2 application and receiving orders from application PC for PC2
^s	*4.9.11. Controlling PC2 application from the PC and receiving the status (^s).
^t	Programming date of periodical review Programming date of service blockade Odczyt daty blokady serwisowej. Odczyt daty przeglądu okresowego.
^u	Readout of the receipt's header
^x	**Handling tunnelling the transmission of AUX1 and AUX2 ports PC1 and PC2 (^x).
10$d	Returned deposit (return of package)
11$d	Storno of returned deposit

* Packets existing in printers Quarto and newer ones

6$d	Taken deposit (for package sale)
7$d	Storno of taken deposit
?CERT	Readout of Sha256 certificate.
?dns	Readout of DNS servers addresses.
?ifi	Interface data.
?l	*Request about last receipt data.
?m	*Support of communication monitor log data.
?PROC	Readout of information about dispatch from repository.
?SERW	Request about server address.
?usb	Request about USB settings configuration.
@A	Sequence of animation support. Sequence of animation support (@A) – crc animation readout Sequence of animation support (@A) – animation list readout Sequence of animation support (@A) – active animation readout
@API	Playlist packet programming (@API)
@c	Order of setting invoice options.
@CERT	Programming certificates.
@dc	Request about number of drawer opening.
@e	ID transakcji paragonu.
@EPAR	Programowanie i odczyt ustawień e-paragonu.
@f	Fiscalisation.
@FMF	Streaming readout of fiscal memory – data.
@FMH	Streaming readout of fiscal memory – headers.
#FWUPD	Packet of upgrade controlling.
?FWUPD	Information packet of upgrade status.
@LOG	Sequence sending back information about process logs.
@p	Receiving information about amount of printed paper.
@PMF	Readout of protected memory data.
@PMI	Readout of JPK document data.
@PMJ	Readout of JPK document data by daily report number and receipt number.
@PMK	Readout pf protected memory data – certificates (@PMK).
@PML	Packet of last printout.
@PMR	Printout of document data – JPK.
@PR	Printout from protected memory.
@SERW	Programming servers.
@usb	USB settings configuration.
@ws	Packet of printout stored on receipt.
@z	In advance payment.

9. Description of interfaces.

The basic way of communication with the printer is the sequential interface RS-232. Sequential interface of the printer works as a voltage interface (according to the V.24 / RS-232C standard). Communication with the computer can also recognise equipment handshaking RTS/CTS DTR/DSR.

9.1. Description of serial interface.

Parameters of serial interface:

PARAMETER	SIZE
Transmission speed	*1200 bods *2400 bods *4800 bods 9600 bods *19200 bods *38400 bods *57600 bods *115200 bods
Quantity of information bits	8
Parity	none,
Quantity of STOP bits	1
Receiver communication protocol	**RTS/CTS, XON-XOFF, *none**
Sender communication protocol	none

Attention:
(*) Parameters placed in QUARTO / Delio printers and more recent ones.

Be aware that the last parameter in the above line shall be interpreted so that the computer has no possibility of stopping the data transmission through the printer. It is important that according to the¹ V.24 norm, the maximal length of the link must not exceed 15 meters (at transfer speed 9600 bods).

Serial interface signals:

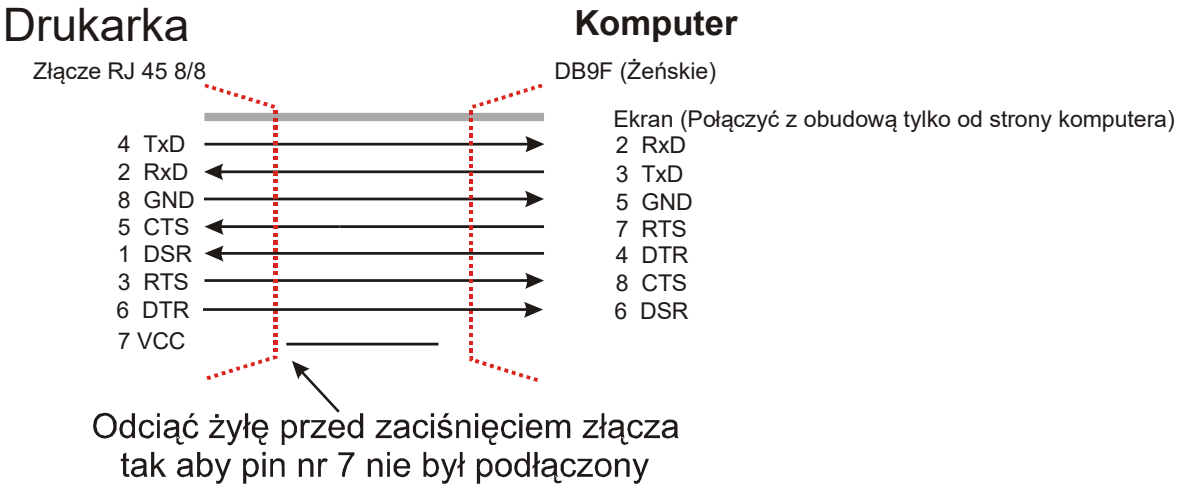
PIN	NAME	TYPE	DESCRIPTION
1	DSR	We	Modem signal – equipment handshake
2	SIN	Wy	Exit of sequence data
3	RTS1	Wy	Modem signal – equipment handshake
4	SOUT	We	Entry of sequence data
5	CTS	We	Modem signal – equipment handshake
6	DTR/SZUF	Wy	The readiness to control active drawers
7	VCC	-	External electrical facilities power supply +5V
8	GND	-	Signal mass

9.2. Connecting cable for protocol XON/XOFF and RTS/CTS.

Figure description:

Przewód komunikacji – communication cable; drukarka – printer; Złącze – joint; Żeńskie – female; Ekran – screen; połaczyć z obudową tylko od strony... – connect with the frame only from thew side...; Odciąć żyłę przed zaciśnięciem złącza tak aby pin nr 7 nie był podłączony – cut the strand prior to fastening the joint so that pin No 7 was not joined

Przewód komunikacji Xon-Xoff i RTS-CTS.



9.3. Sequence of exits of plug RJ45 8/8 for linking external facilities.

All conduits used for linking external facilities on the side of the drawer are ended with an electric-telephone plug RJ45 8/8. Deployment of its pins is shown on the figure below.:

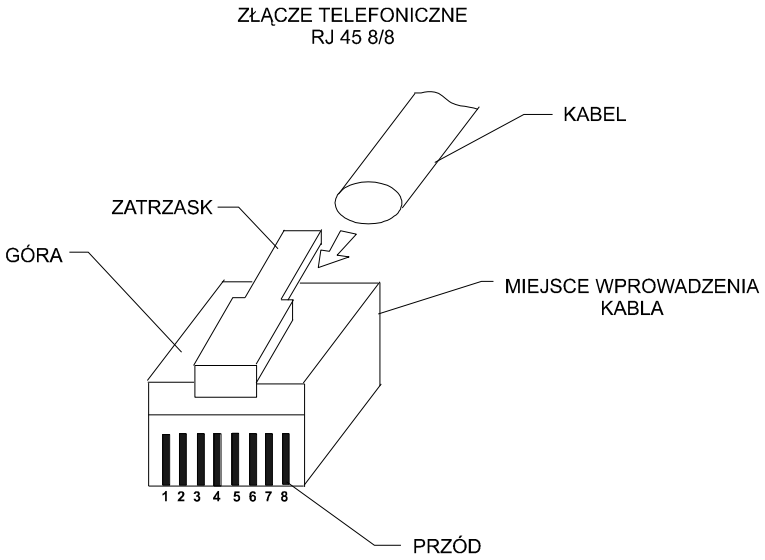


Figure description:
zatrzask – fitting; kabel – cable; miejsce wprowadzenia – point of entrance; przód – front; góra – top

9.4. Printer – active drawer connection.

The printer possesses the possibility of joining a drawer for cash. Only an „active drawer" can be joined to the printer with a separate power supply of the lock. To control an „active drawer" one should link it to the socket of sequential port. The drawer is controlled by negative voltage (-12V) of the DTR signal. Because of the fact that the drawer possesses only one interface socket, to make it possible to control the and the drawer, it is necessary to apply a socket splitter (from 1 to 2, signals 1:1).

PIN in the printer PIN in RJ 8/8	SIGNAL	DESCRIPTION
6	DTR/SZUF	Signal activating the opening of the socket
8	GND	Signal mass

10. Errors.

The following errors can appear during the work of the printer:

Code	Description
1	RTC clock not initiated
2	Wrong control byte
3	Wrong quantity of parameters
4	Wrong parameter
5	Error on operation on RTC clock
6	Error of operation on fiscal module
7	Wrong date
8	Operation error – non-zero totalizers
9	Error of entry/ exit operation
10	Exceeded range of data
11	Wrong a quantity of VAT rates
12	Wrong header
13	The facility cannot be re-fiscalized
14	The header cannot be recorded
15	Wrong additional lines
16	Wrong name of commodity
17	Wrong quantity
18	Wrong PLU VAT rate
19	Wrong PLU price
20	Wrong PLU value
21	Receipt was not started
22	Error in storno (reversal) operation
23	Wrong quantity of receipt lines
24	Overfilling of printout buffer
25	Wrong text or cashier name
26	Wrong value of payment
27	Wrong total value
28	Overfilling sales totalizer
29	Trial to finish a non-started receipt
30	Wrong value of payment 2
31	Overfilling of cash register status
32	Negative cash register status was replaced by a „zero” one
33	Wrong shift text
34	Wrong value or text
35	Sales totalizers are empty
36	The record already exists
37	Cancelled by the user
38	Wrong name
39	Wrong symbol of VAT rate
40	Not programmed header

41	Wrong cash register number
42	Wrong cashier’s number
43	Wrong receipt number
44	Wrong customer’s name
45	Wrong terminal
46	Wrong name of credit card
47	Wrong number of credit card
48	Wrong month of validity of credit card
49	Wrong year of validity of credit card
50	Wrong authorization code
51	Wrong amount
52	**Not empty table of pricing
53	**Value divergent with pricing
54	**Lack of pricing for medicine
55	**Lack of medicine description
56	**Error of CHARGE amount
57	**Overfilling of pricing table
58	Offline receipt full
82	Not permitted command
83	Wrong value of deposit
84	Exceeded number of sent inscriptions
1000	Initiation error
1001	RAM harm
1002	Receipt already started
1003	Lack of VAT rate identifier
1004	Wrong discount
1005	Wrong data
1006	The printer is not in a fiscal mode
1007	Non-programmed VAT rates
1008	Full fiscal memory
1009	Wrong control sum of RAM
1010	Wrong control sum of database
1011	Wrong control sum of header
1012	Wrong control sum of cashier’s name
1013	Wrong control sum of cash register number
1014	Data updating failed
1015	non-programmed unique number
1016	Lack of fiscal memory
1017	Lack of printing mechanism

1018	Lack of display
1019	Fiscal memory was changed
1020	Identical VAT rates have already been programmed
1021	The facility is only in a readout mode
1022	Non-recognized Command
1023	Wrong Command
1024	Wrong range of report
1025	Lack of report data in the given range
1026	Overfilling of the transmission buffer
1027	Non-finished fiscal mode
1028	Harm of fiscal memory
1029	Exceeded limit of limitations in fiscal memory
1030	Harmed map of fiscal memory
1031	Command sent in a wrong mode
1032	Wrong frame indicator
1033	*Fiscal memory is busy
1034	**Fiscal printer is busy
1037	No paper
1038	Error of electronic copy record
1039	Error of memory card installation
1040	Memory card was closed
1041	Error of electronic copy verification
1042	Pocket memory full
1043	Non recorded electronic copy
1044	Error of electronic copy printout
1045	No card
1046	No data
1047	Lack of card readiness
1048	Error of card closing
1049	Error of card opening
1050	Error of id.txt file
1051	Error of no.txt file
1052	Error of files base replaying
1053	Error of memory card password
1054	No access
1055	Error of pocket memory
1056	Error of pocket memory

*Additional numbers of errors appearing in QUARTO and DELIO PRIME fiscal printers
** Error's code appearing in pharmaceutical fiscal printers

1057	Error of card base of electronic copy
1058	Error of files base of electronic copy
1075	Incorrect format of graphic header (e.g. too big dimensions)
1076	Header already programmed, one must delete existing header and then program a new one
1087	IO error of files system
1088	Limit of RAM memory resets has been reached
9999	Fatal error