Description of the program interface

The fiscal device operates under the control of an application program, with which communicates via RS232 (or LAN) serial connection. The device executes a previously set of wrapped commands, arranged according to the type of the operations which have to be executed. The application program does not have a direct access to the resources of the fiscal device although it can detect data connected with the status of the fiscal device and the fiscal control unit.

Low level protocol

A) Protocol type - Master (Host) / Slave

The fiscal printer performs the commands sent by the Host and returns messages, which depend on the result. The fiscal printer cannot instigate asynchronous communications itself. Only responses to commands from the Host are sent to the Host. These messages are either wrapped or single byte control codes. The fiscal printer maintains the communication via the RS232 serial connection at baud rates of 1200, 2400, 4800, 9600, 19200, 38400, 57600 and 115200 b/s, 8N1.

B) Sequence of the messages

Host sends a wrapped message, containing a command for the fiscal printer. ECR executes the requested operation and response with a wrapped message. Host has to wait for a response from the fiscal printer before to send another message. The protocol uses non-wrapped messages with a length one byte for processing of the necessary pauses and error conditions.

C) Non-wrapped messages – time-out

When the transmitting of messages from the Host is normal, Slave answers not later than 60 ms either with a wrapped message or with a 1 byte code. Host must have 500 ms of time-out for receiving a message from Slave. If there is no message during this period of time the Host will transmit the message again with the same sequence number and the same command. After several unsuccessful attempts Host must indicate that there is either no connection to the fiscal printer or there is a hardware fault.

Non-wrapped messages consist of one byte and they are:

A) NAK 15H

This code is sent by Slave when an error in the control sum or the form of the received message is found. When Host receives a NAK it must again send a message with the same sequence number.

B) SYN 16H

This code is sent by Slave upon receiving a command which needs longer processing time. SYN is sent every 60 ms until the wrapped message is not ready for transmitting.

D) Wrapped messages

a) Host to fiscal printer (Send)

<01><LEN><SEQ><CMD><DATA><05><BCC><03>

b) Fiscal printer to Host (Receive)

<01><LEN><SEQ><CMD><DATA><04><STATUS><05><BCC><03>

Where:

<01> Preamble. - 1 byte long. Value: 01H.

<LEN> Number of bytes from <01> preamble (excluded) to <05> (included) plus the fixed offset of 20H.

Length: 4 bytes. Each digit from the two bytes is sent after 30H is added to it. For example the sum 1AE3H is presented as 31H, 3AH, 3EH, 33H.

<SEQ> Sequence number of the frame.

Length : 1 byte. Value: 20H – FFH. The fiscal printer saves the same <SEQ> in the return message. If the ECR gets a message with the same <SEQ> as the last message received it will not perform any operation, but will repeat the last sent message.

<CMD> The code of the command.

Length: 4 byte. The fiscal printer saves the same <CMD> in the return message. If the fiscal printer receives a non-existing code it returns a wrapped message with zero length in the data field and sets the respective status bit. Each digit from the two bytes is sent after 30H is added to it. For example the sum 1AE3H is presented as 31H, 3AH, 3EH, 33H.

<DATA> Data.

Length: 0-213 bytes for Host to fiscal printer, 0-218 bytes for Fiscal printer to Host. Value: 20H – FFH. The format and length of the field for storing data depends on the command. If the command has no data the length of this field is zero. If there is a syntax error the respective status bit is established in the data and a wrapped message is returned with zero field length.

<04> Separator (only for fiscal printer-to-Host massages),

Length: 1 byte. Value: 04H.

<STATUS> The field with the current status of the fiscal device.

Length: 8 bytes. Value: 80H-FFH.

<05> Postamble

Length: 1 byte. Value:05H.

<BCC> Control sum (0000H-FFFFH),

Length: 4 bytes. Value of each byte: 30H-3FH. The sum includes between <01> preamble (excluded) to <05>. Each digit from the two bytes is sent after 30H is added to it. For example the sum 1AE3H is presented as 31H, 3AH, 3EH, 33H.

<03> Terminator, Length: 1 byte. Value: 03H.

Message composition, syntax and meanings

a) The data field depends on the command.

b) The parameters sent to the fiscal printer may be separated with a [\t] and/or may have a fixed length.

c) The separator([\t]) between the parameters shows that it is mandatory.

d) Some of the parameters are mandatory and others are optional. Optional parameters can be left empty, but after them must have separator ([\t]).

The symbols with ASCII codes under 32 (20H) have special meanings and their use is explained whenever necessary. If such a symbol has to be sent for some reason (for example in an ESCAPE-command to the display) it must be preceded by 16 (10H) with an added offset 40H.

***Example**:* when we write **255,`PrnQuality`[\t][\t][\t]** for the data field then in that field there will be **50 72 6E 51 75 61 6C 69 74 79 09 09 09** where each hexadecimal digit is an ASCII value.

Status bits of the cash register

The current status of the device is coded in field 8 bytes long which is sent within each message of the cash register. Description of each byte in this field:

Byte 0: General purpose

- 0.7 = 1 Always 1.
- 0.6 = 1 Cover is open.
- 0.5 = 1 General error - this is OR of all errors marked with #.
- 0.4 = 1# Failure in printing mechanism.
- 0.3 = 1 No client display connected.
- 0.2 = 1 The real time clock is not synchronized.
- 0.1 = 1# Command code is invalid.
- 0.0 = 1# Syntax error.

Byte 1: General purpose

- 1.7 = 1 Always 1.
- 1.6 = 0 Always 0.
- 1.5 = 0 Always 0.
- 1.4 = 0 Always 0.
- 1.3 = 0 Always 0.
- 1.2 = 1 More than 24 hours after day opening.
- 1.1 = 1# Command is not permitted.
- 1.0 = 1# Overflow during command execution.

Byte 2: General purpose

- 2.7 = 1 Always 1.
- 2.6 = 0 Always 0.
- 2.5 = 1 Nonfiscal receipt is open.
- 2.4 = 1 EJ nearly full.
- 2.3 = 1 Fiscal receipt is open.
- 2.2 = 1 EJ is full.
- 2.1 = 0 Near paper end.
- 2.0 = 1# End of paper.

Byte 3: Not used

- 3.7 = 1 Always 1.
- 3.6 = 0 Always 0.
- 3.5 = 0 Always 0.
- 3.4 = 0 Always 0.
- 3.3 = 0 Always 0.
- 3.2 = 0 Always 0.
- 3.1 = 0 Always 0.
- 3.0 = 0 Always 0.

Byte 4: Fiscal memory

- 4.7 = 1 Always 1.
- 4.6 = 1 Fiscal memory is not found or damaged.
- 4.5 = 1 OR of all errors marked with '*' from Bytes 4 и 5.
- 4.4 = 1* Fiscal memory is full.
- 4.3 = 1 There is space for less then 60 reports in Fiscal memory.
- 4.2 = 1 Serial number and number of FM are set.
- 4.1 = 1 Tax number is set.
- 4.0 = 1* Error when trying to access data stored in the FM.

Byte 5: Fiscal memory

- 5.7 = 1 Always 1.
- 5.6 = 0 Always 0.
- 5.5 = 0 Always 0.
- 5.4 = 1 VAT are set at least once.
- 5.3 = 1 Device is fiscalized.
- 5.2 = 0 Always 0.
- 5.1 = 1 FM is formatted.
- 5.0 = 0 Always 0.

Byte 6: Not used

- 6.7 = 1 Always 1.
- 6.6 = 0 Always 0.
- 6.5 = 0 Always 0.
- 6.4 = 0 Always 0.
- 6.3 = 0 Always 0.
- 6.2 = 0 Always 0.
- 6.1 = 0 Always 0.
- 6.0 = 0 Always 0.

Byte 7: Not used

- 7.7 = 1 Always 1.
- 7.6 = 0 Always 0.
- 7.5 = 0 Always 0.
- 7.4 = 0 Always 0.
- 7.3 = 0 Always 0.
- 7.2 = 0 Always 0.
- 7.1 = 0 Always 0.
- 7.0 = 0 Always 0.

Command interface

This is example command syntax:

{Parameter1}<SEP>{Parameter2}<SEP>{Parameter3}<SEP><DateTime><SEP>
Note

<SEP> - this tag must be inserted after each parameter to separate different parameters. It's value is '[\t]' (tab). It is the same for all commands.

Mandatory parameters:

- **Parameter1** - This parameter is mandatory, it must be filled;
- **Parameter3** - This parameter is mandatory, it must be filled;
  - **A** - Possible value of Parameter3;
    Answer(1) - if Parameter3 has value 'A' see Answer(1);
  - **B** - Possible value of Parameter3;
    Answer(2) - if Parameter3 has value 'B' see Answer(2);
- **DateTime** - Date and time format: DD-MM-YY hh:mm:ss DST
  - **DD** - Day
  - **MM** - Month
  - **YY** - Year
  - **hh** - Hours
  - **mm** - Minutes
  - **ss** - Seconds
  - **DST** - Text DST. If exist means that summer time is active.

Optional parameters:

- **Parameter2** - This parameter is optional it can be left blank, but separator must exist. Default: X;

  Note
  If left blank parameter will be used with value, after "Default:" in this case 'X', but in some cases blank parameter may change the meaning of the command, which will be explained for each command;

Answer(X) - This is the default answer of the command.
Under each command there will be list with possible answers.

Answer when command fail to execute is the same for all commands, so it will not be explained after each command.
Answer when command fail to execute:

{ErrorCode}<SEP>

- **ErrorCode** - Indicates an error code;

Command: 33 (21h)

Clears the external display.

Parameters of the command:

none

Answer:

{ErrorStatus}<SEP>

- **ErrorCode** - Indicates an error code;

Command: 35 (23h)

Displaying text on second line of the external display.

Parameters of the command:

{Text}<SEP>

Mandatory parameters:

- **Text** - Text to be sent directly to the external display (up to 20 symbols);

Answer:

{ErrorStatus}<SEP>

- **ErrorCode** - Indicates an error code;

Command: 38 (26h)

Opening a non-fiscal receipt

Parameters of the command:
Syntax 1

none

Syntax 2

{Param}<SEP>

Optional parameters:

- **Param** - 1 - Dont print header lines;

Answer:

{ErrorCode}<SEP>{SlipNumber}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **SlipNumber** - Current slip number (1...99999999);

Command: 39 (27h)

Closing a non-fiscal receipt

Parameters of the command:
Syntax 1

none

Syntax 2

{Param}<SEP>

Optional parameters:

- **Param** - 1 - Dont print footer lines;

Answer:

{ErrorCode}<SEP>{SlipNumber}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **SlipNumber** - Current slip number (1...99999999);

Command: 42 (2Ah)

Printing of a free non-fiscal text

Parameters of the command:

{Text}<SEP>{Bold}<SEP>{Italic}<SEP>{DoubleH}<SEP>{Underline}<SEP>{Alignment}<SEP>{Condensed}<SEP>

Optional parameters:

- **Text** - text of 0...XX symbols;
  - for FMP350,FP700: XX is 48/64;
  - for FP800: XX is 48;
  - for DP25, DP35, DP150, WP50, WP500, XX is 42;
  - FP-650 is 42

    Note

  See parameter "PrintColumns" in command 255.

- **Bold** - flag 0 or 1, 1 = print bold text; empty field = normal text;
- **Italic** - flag 0 or 1, 1 = print italic text; empty field = normal text;
- **DoubleH** - flag 0 or 1, 1 = print double height text; empty field = normal text;
- **Underline** - flag 0 or 1, 1 = print underlined text; empty field = normal text;
- **Alignment** - 0, 1 or 2. 0=left alignment, 1=center, 2=right; empty field = left alignment;

- **Condensed** - flag 0 or 1, 1 = print condensed text; empty field = normal text

Answer:

{ErrorCode}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;

Command: 43 (2Bh)

Programming lines of header

Parameters of the command:
Syntax 1:

{OperationType}<SEP>{Param1}<SEP>{Param2}<SEP>

Mandatory parameters:

- **OperationType**
- **'W'** - Write lines;
  - **'Param1'** - Line number 1...10;
  - **'Param2'** - Text of the header line up to 'PrintColumns' parameter;
    Answer(2).
- **'R'** - Read lines;
  - **'Param1'** - Line number 1...10;
  - **'Param2'** - Record number 1...16;
    Answer(4).

Syntax 2:

{OperationType}<SEP>{Param1}<SEP>

Mandatory parameters:

- **OperationType**
- **'W'** - Write lines. The described lines are transfered to the fiscal memory;
  - **'Param1'** - Line number (1...10) - The requested line is returned.;
    Answer(3).

Syntax 3:

{OperationType}<SEP>

Mandatory parameters:

- **OperationType**
- **'W'** - Write lines. The described lines are transfered to the fiscal memory;
  Answer(2).
- **'I'** - Info about header changes;
  Answer(1).

Answer(1):

{ErrorCode}<SEP>{HdrChanges}<SEP>{MaxHdrChanges}<SEP>{MaxHdrLines}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **HdrChanges** - Number of current header changes (0..16);
- **MaxHdrChanges** - Max possible header changes;
- **MaxHdrLines** - Max header lines;

Answer(2):

{ErrorCode}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;

Answer(3):

{ErrorCode}<SEP>{Text}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **Text** - The content of the line;

Answer(4):

{ErrorCode}<SEP>{Text}<SEP>{nZep}<SEP>{DateTime}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **Text** - The content of the line;
- **nZep** - The number of the report from which the line is active;
- **DateTime** - Date and time when the line has become active;

Command: 44 (2Ch)

Paper feed

Parameters of the command:

{Lines}<SEP>

Optional parameters:

- **Lines** - Number of lines to feed from 1 to 99. Default: 1;

Answer:

{ErrorCode}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;

Command: 45 (2Dh)

Check for mode connection with PC

Parameters of the command:

none

Answer:

{ErrorCode}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;

Command: 46 (2Eh)

Paper cutting

Parameters of the command:

none

Answer:

{ErrorCode}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;

Command: 47 (2Fh)

Displaying text on upper line of the external display

Parameters of the command:

{Text}<SEP>

Mandatory parameters:

- **Text** - Text to be sent directly to the external display (up to 20 symbols);

Answer:

{ErrorStatus}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;

Command: 48 (30h)

Open fiscal receipt

Parameters of the command:

{OpCode}<SEP>{OpPwd}<SEP>{TillNmb}<SEP>{Invoice}<SEP>{ClientTAXN}<SEP>{AirPortID}<SEP>

Mandatory parameters:

- **OpCode** - Operator number from 1...30;
- **OpPwd** - Operator password, ascii string of digits. Lenght from 4...8;
- **TillNmb** - Number of point of sale from 1...99999;

Optional parameters:

- **Invoice** - If this parameter has value 'I' it opens a receipt with CIF client.If left blank it opens fiscal receipt;
- **ClientTAXN** - Client's CIF number up to 18 symbols when Invoice='I';

- **AirPortID -** Client's board card number up to 10 symbols when AirPort mode is enabled;

Note

If device is in mode service/training/testing - *Answer(2)*, else *Answer(1)*;

Answer(1):

{ErrorCode}<SEP>{SlipNumber}<SEP>{nZrep}<SEP>{nFNum}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **SlipNumber** - Current slip number (1...99999999);
- **nZrep** - Current Z report number;
- **nFNum** - Number of fiscal receipts for the current Z report;

Answer(2):

{ErrorCode}<SEP>{SlipNumber}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **SlipNumber** - Current slip number (1...99999999);

Command: 49 (31h)

Registration of sale

Parameters of the command:

{PluName}<SEP>{TaxCd}<SEP>{Price}<SEP>{Quantity}<SEP>{DiscountType}<SEP>{DiscountValue}<SEP>{Department}<SEP>{Unit}<SEP>

Mandatory parameters:

- **PluName** - Name of product, up to 72 characters not empty string;
- **TaxCd** - Tax code;
  - **'1'** - vat group A;
  - **'2'** - vat group B;
  - **'3'** - vat group C;
  - **'4'** - vat group D;
  - **'5'** - vat group E;
  - **'6'** - alte taxe;
  - **'7'** - exempt;
- **Price** - Product price, with sign '-' at void operations. Format: 2 decimals; up to *9999999.99
- **Department** - Number of the department 0..99; If '0' - Without department;
- **Unit** - Unit name, up to 6 characters not empty string;

Optional parameters:

- **Quantity** - Quantity of the product (default: 1.000); Format: 3 decimals; up to *999999.999

  Note
  Max value of **Price** * **Quantity** is *9999999.99. !!!

- **DiscountType** - type of discount.
  - **'0'** or empty - no discount;
  - **'1'** - surcharge by percentage;
  - **'2'** - discount by percentage;
  - **'3'** - surcharge by sum;
  - **'4'** - discount by sum;

  - **'5'** - forbidden;
  - **'6'** - special PLU discount by sum;
- **DiscountValue** - value of discount.
  - a number from 0.00 to 21474836.47 for sum operations;
  - a number from 0.00 to 100.00 for percentage operations; If **DiscountType** is zero or empty, this parameter must be empty.

Note

If device is in mode service/training/testing - *Answer(2)*, else *Answer(1)*;

Answer(1):

{ErrorCode}<SEP>{SlipNumber}<SEP>{nZrep}<SEP>{nFNum}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **SlipNumber** - Current slip number (1...99999999);
- **nZrep** - Current Z report number;
- **nFNum** - Number of fiscal receipts for the current Z report;

Answer(2):

{ErrorCode}<SEP>{SlipNumber}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **SlipNumber** - Current slip number (1...99999999);

Command: 50 (32h)

Return the active VAT rates

Parameters of the command:

none

Answer:

{ErrorCode}<SEP>{nZreport}<SEP>{TaxA}<SEP>{TaxB}<SEP>{TaxC}<SEP>{TaxD}<SEP>{TaxE}<SEP>{TaxF}<SEP>{TaxG}<SEP>{DateTime}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **nZreport** - Number of first Z report;
- **TaxX** - Value of VAT rate **X**;
  - **0.00** - **99.99** - enabled;
  - **100.00** - exempt;
  - **100.01** - non taxbl;
  - **100.02** - disabled;
- **DateTime** - Date and time of the entry (format: "DD-MM-YY hh:mm:ss DST");

Command: 51 (33h)

Subtotal

Parameters of the command:

{Print}<SEP>{Display}<SEP>{DiscountType}<SEP>{DiscountValue}<SEP>

Optional parameters:

- **Print** - print out. Default: 0;
  - **'0'** - No print out;
  - **'1'** - The sum of the subtotal will be printed out;
- **Display** - Show the subtotal on the client display. Default: 0;
  - **'0'** - No display;
  - **'1'** - The sum of the subtotal will appear on the display;
- **DiscountType** - type of discount.
  - **'0'** or empty - no discount;
  - **'1'** - surcharge by percentage;
  - **'2'** - discount by percentage;
  - **'3'** - surcharge by sum;
  - **'4'** - discount by sum;
  - **'5'** - forbidden (not used);
  - **'6'** - forbidden (not used);
  - **'7'** - special discont STL by sum; If **DiscountType** is non zero, **DiscountValue** has to contain value. The format must be a value with two decimals.
- **DiscountValue** - value of discount.
  - a number from 0.00 to 21474836.47 for sum operations;
  - a number from 0.00 to 100.00 for percentage operations;

Note
If **DiscountType** is zero or empty, parameter (**DiscountValue**) must be empty.

Answer:

{ErrorCode}<SEP>{SlipNumber}<SEP>{Subtotal}<SEP>{TaxA}<SEP>{TaxB}<SEP>{TaxC}<SEP>{TaxD}<SEP>{TaxE}<SEP>{TaxF}<SEP>{TaxG}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **SlipNumber** - Current slip number (1...9999999);
- **Subtotal** - Subtotal of the receipt (0.00...9999999.99);
- **TaxX** - Recepts turnover by vat groups (0.00...9999999.99);

Command: 53 (35h)

Payments and calculation of the total sum (TOTAL)

Parameters of the command:
Syntax 1:

{PaidMode}<SEP>{Amount}<SEP>

- **PaidMode** - Type of payment;
  - **'0'** – NUMERAR (CASH)
  - **'1'** – CARD
  - **'2'** – CREDIT
  - **'3'** – TICHETE MASA (MEAL VOUCHERS)
  - **'4'** – TICHETE VALORICE (VALUE TICKETS)
  - **'5'** – VOUCHER
  - **'6'** – PLATA MODERNA (MODERN PAYMENT)
  - **'7'** – CARD + AVANS IN NUMERAR (CASH IN ADVANCE)
  - **'8'** – ALTE METODE (OTHER METHODS)
  - **'9'** - Foreign currency
- **Amount** - Amount to pay (0.00...9999999.99);

Note
If **PaidMode** is '7' – CARD + AVANS IN NUMERAR (CASH IN ADVANCE), **Amount** must be bigger than the TOTAL of the bill

Syntax 2:

{PaidMode}<SEP>{Amount}<SEP>{Change}<SEP>

- **PaidMode** - Type of payment;
  - **'9'** - Foreign currency
- **Amount** - Amount to pay (0.00...9999999.99);
- **Change** - Type of change. Only if **PaidMode** = '9';
  - **'0'** - current currency (Forbidden !);
  - **'1'** - foreign currency;

Answer:

{ErrorCode}<SEP>{Status}<SEP>{Amount}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **Status** - Indicates an error;
  - **'D'** - The command passed, return when the paid sum is less than the sum of the receipt. The residual sum due for payment is returned to Amount;
  - **'R'** - The command passed, return when the paid sum is greater than the sum of the receipt. A message “CHANGE” will be printed out and the change will be returned to Amount;
- **Amount** - The sum tendered (0.00...9999999.99);

Command: 54 (36h)

Printing of a free fiscal text

Parameters of the command:

{Text}<SEP>{Bold}<SEP>{Italic}<SEP>{DoubleH}<SEP>{Underline}<SEP>{alignment}<SEP><SEP>

Optional parameters:

- **Text** - text of 0...XX symbols; look at command 255 - PrintColumns
  - for FMP350, XX is 42, 48 or 64;
  - for FP700, XX is 42, 48 or 64;
  - FP-800, XX is 48 or 64;

  - for FP650, XX is 42;
  - for DP25, DP35, DP150, WP50, WP500, XX is 42;
- **Bold** - flag 0 or 1, 1 = print bold text; empty field = normal text;
- **Italic** - flag 0 or 1, 1 = print italic text; empty field = normal text;
- **DoubleH** - flag 0 or 1, 1 = print double height text; empty field = normal text;
- **Underline** - flag 0 or 1, 1 = print underlined text; empty field = normal text;
- **alignment** - 0, 1 or 2. 0=left alignment, 1=center, 2=right; empty field = left alignment;

Answer:

{ErrorCode}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;

Command: 56 (38h)

Close fiscal receipt

Parameters of the command:

none
Note
If device is in mode service/training/testing - *Answer(2)*, else *Answer(1)*;

Answer(1):

{ErrorCode}<SEP>{SlipNumber}<SEP>{nZrep}<SEP>{nFNum}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **SlipNumber** - Current slip number (1...99999999);
- **nZrep** - Current Z report number;
- **nFNum** - Number of fiscal receipts for the current Z report;

Answer(2):

{ErrorCode}<SEP>{SlipNumber}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **SlipNumber** - Current slip number (1...99999999);

Command: 58 (3Ah)

Registering the sale of a programmed item

Parameters of the command:

{PluCode}<SEP>{Quanity}<SEP>{Price}<SEP>{DiscountType}<SEP>{DiscountValue}<SEP>

Mandatory parameters: {PluCode}

- **PluCode:** The code of the item. from 1...100000

Optional parameters: {Quanity}, {DiscountType}, {DiscountValue}

- **Quantity** - Quantity of the product (default: 1.000); Format: 3 decimals; up to *999999.999

  Note
  !!! Max value of **Price** * **Quantity** is *9999999.99. !!!

- **DiscountType** - type of discount.
  - **'0'** or empty - no discount;
  - **'1'** - surcharge by percentage;
  - **'2'** - discount by percentage;
  - **'3'** - surcharge by sum;
  - **'4'** - discount by sum;
  - **'5'** - forbidden;
  - **'6'** - special PLU discount by sum;
- **DiscountValue** - value of discount.
  - a number from 0.00 to 21474836.47 for sum operations;
  - a number from 0.00 to 100.00 for percentage operations;

  Note
  If **DiscountType** is zero or empty, this parameter must be empty.
  Void operations are made by placing '-' before **PluCode** ! In order to make void operation the **Price** parameter must be the same as the price at which the item was sold.

Answer:

{ErrorCode}<SEP>{SlipNumber}<SEP>{nZrep}<SEP>{nFNum}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **SlipNumber** - Current slip number (1...99999999);
- **nZrep** - Current Z report number;
- **nFNum** - Number of fiscal receipts for the current Z report;

Command: 60 (3Ch)

Cancel fiscal receipt

Parameters of the command:

none

Answer:

{ErrorCode}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;

Command: 61 (3Dh)

Set date and time

Parameters of the command:

{DateTime}<SEP>

Mandatory parameters:

- **DateTime** - Date and time in format: "DD-MM-YY hh:mm:ss DST";
  - **DD** - Day;
  - **MM** - Month;
  - **YY** - Year;
  - **hh** - Hour;
  - **mm** - Minute;
  - **ss** - Second;
  - **DST** - Text "DST" if exist time is Summer time;

Answer:

{ErrorCode}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;

Command: 62 (3Eh)

Read date and time

Parameters of the command:

none

Answer:

{ErrorCode}<SEP>{DateTime}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **DateTime** - Date and time in format: "DD-MM-YY hh:mm:ss DST";
  - **DD** - Day;
  - **MM** - Month;
  - **YY** - Year;
  - **hh** - Hour;
  - **mm** - Minute;
  - **ss** - Second;
  - **DST** - Text "DST" if exist time is Summer time;

Command: 64 (40h)

Information on the last fiscal entry

Parameters of the command:

{Type}<SEP>

- **Type** - Type of returned data. Default: 0;
  - 0 - Brut sums (including simplify invoices);
  - 1 - Vat sums (including simplify invoices);

Answer:

{ErrorCode}<SEP>{nRep}<SEP>{SumA}<SEP>{SumB}<SEP>{SumC}<SEP>{SumD}<SEP>{SumE}<SEP>{SumF}<SEP>{SumG}<SEP>{SumSInv}<SEP>{Date}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **nRep** - Number of report 1...2500;
- **SumX** - Depend on **Type**. X is the letter of TAX group (0.00...9999999.99);
- **SumSInv** - Depend on **Type** sum referred to simplify invoice. (0.00...9999999.99);
- **Date** - Date and time of fiscal record in format: "DD-MM-YYYY hh:mm:ss DST";

Command: 65 (41h)

Information on daily taxation

Parameters of the command:

{Type}<SEP>

- **Type** - Type of returned data. Default: 0;
  - 0 - Turnover on TAX group (including simplify invoice receipts);
  - 1 - Amount on TAX group (including simplify invoice receipts);

- 2 - Turnover on TAX group from simplify invoice receipts only;
- 3 - Amount on TAX group from simplify invoice receipts only;

Answer:

{ErrorCode}<SEP>{nRep}<SEP>{SumA}<SEP>{SumB}<SEP>{SumC}<SEP>{SumD}<SEP>{SumE}<SEP>{SumF}<SEP>{SumG}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **nRep** - Number of report (1...2500);
- **SumX** - Depend on **Type**. X is the letter of TAX group (0.00...9999999.99);

Command: 68 (44h)

Number of remaining entries for Z-reports in FM

Parameters of the command:

none

Answer:

{ErrorCode}<SEP>{ReportsLeft}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **ReportsLeft** - The number of remaining entries for Z-reports in FM (1...2500).

Command: 69 (45h)

Reports

Parameters of the command:

{ReportType}<SEP>

Mandatory parameters:

- **ReportType** - Report type;
  - **'X'** - X report; Answer(1)
  - **'Z'** - Z report; Answer(1)
  - **'E'** - ECR report; Answer(2)
  - **'D'** - Departments report; Answer(2)
  - **'G'** - Item groups report; Answer(2)

Answer(1):

{ErrorCode}<SEP>{nRep}<SEP>{TotA}<SEP>{TotB}<SEP>{TotC}<SEP>{TotD}<SEP>{TotE}<SEP>{TotF}<SEP>{TotEXEPTAT}<SEP>{TotSInv}<SEP>{VatSInv}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **nRep** - Number of Z-report (1...2500);
- **TotX** - Total sum accumulated by TAX group X - fiscal operations (0.00...9999999.99);
- **TotEXEPTAT** - Total sum accumulated by EXEPTAT - fiscal operations (0.00...9999999.99);
- **TotSInv** - Total sum accumulated - simplify invoice operations (0.00...9999999.99);
- **VatSInv** - Total vat accumulated - simplify invoice operations (0.00...9999999.99);

Answer(2):

{ErrorCode}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;

Command: 70 (46h)

Cash in and Cash out operations

Parameters of the command:

{Type}<SEP>{Amount}<SEP>

Mandatory parameters:

- **Type** - type of operation;
  - **'0'** - cash in;
  - **'1'** - cash out;
  - **'2'** - cash in - (foreign currency);
  - **'3'** - cash out - (foreign currency);

Optional parameters:

- **Amount** - the sum (0.00...9999999.99);

  Note
  If Amount=0, only **Answer** is returned, and receipt does not print.

  Answer:

  {ErrorCode}<SEP>{CashSum}<SEP>{CashIn}<SEP>{CashOut}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **CashSum** - cash in safe sum (0.00...9999999.99);
- **CashIn** - total sum of cash in operations (0.00...9999999.99);
- **CashOut** - total sum of cash out operations (0.00...9999999.99);

Command: 71 (47h)

Print diagnostic information

Parameters of the command:

{InfoType}<SEP>

Optional parameters:

- **InfoType** - Type of the information printed. Default: 0;
  - **'0'** - General diagnostic information about the device;
  - **'1'** - test of the modem;
  - **'2'** - reserved
  - **'3'** - reserved
  - **'4'** - test of the LAN interface if present;
  - **'5'** - test of the crypto module;

- **'6'** - reserved;

Answer:

{ErrorCode}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;

Command: 72 (48h)

Fiscalization

Parameters of the command:

{FiscalNumber}<SEP>{TAXnumber}<SEP>{VATregistered}<SEP>

Mandatory parameters:

- **FiscalNumber** - Seria fiscala (up to 10 ascii symbols);
- **TAXnumber** - TAX number (up to 18 symbols);
- **VATregistered** = 1 – registered for VAT purposes; 0 – not registered for VAT purposes;

  Note
  If VATregistered is 0 sales will be allowed only in VAT Group 'E' and '#' (Alte Taxe).

  Answer:

  {ErrorCode}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;

Command: 74 (4Ah)

Reading the Status

Parameters of the command:

none

Answer:

{ErrorCode}<SEP>{StatusBytes}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **StatusBytes** - Status Bytes (See the description of the status bytes).

Command: 76 (4Ch)

Status of the fiscal receipt

Parameters of the command:

none

Answer:

{ErrorCode}<SEP>{IsOpen}<SEP>{Number}<SEP>{FnumberRep}<SEP>{FNumber}<SEP>{Items}<SEP>{Amount}<SEP>{Payed}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **IsOpen** - 1 - Receipt is open, 0 - receipt is closed;
- **Number** - The number of the current or the last receipt (1...9999999);
- **FNumberRep** - The number of Z-Report of the current or the last fiscal receipt (1...2500);
- **FNumber** - The number of the current or the last fiscal receipt (1...9999);
- **Items** - number of sales registered on the current or the last fiscal receipt (0...9999999);
- **Amount** - The sum from the current or the last fiscal receipt (0.00...9999999.99);
- **Payed** - The sum payed for the current or the last receipt (0.00...9999999.99);

Command: 80 (50h)

Play sound

Parameters of the command:

{Hz}<SEP>{mSec}<SEP>

Mandatory parameters:

- **Hz** - Frequency (0...65535);
- **mSec** - Time in milliseconds (0...65535);

Answer:

{ErrorCode}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;

Command: 83 (53h)

Programming of VAT rates

Parameters of the command:

{TaxA}<SEP>{TaxB}<SEP>{TaxC}<SEP>{TaxD}<SEP>{TaxE}<SEP>

Mandatory parameters:

- **TaxX** - Value of VAT rate **X**;
  - **0.00**...**99.99** - enabled;
  - **100.02** - disabled;

  Note
  The command is not used if the user is not VAT registered (neplatitor de TVA).

  Answer:

{ErrorCode}<SEP>{RemainingChanges}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **RemainingChanges** - number of remaining changes (1...51);

Command: 84 (54h)

Printing of barcode

Parameters of the command:

{Type}<SEP>{Data}<SEP>{QRcodeSize}<SEP>

Mandatory parameters:

- **Type** - Type of barcode;
  - **'1'** - EAN8 barcode. **Data** must contain only 8 digits;
  - **'2'** - EAN13 barcode. **Data** must contain only 13 digits;
  - **'3'** - Code128 barcode. **Data** must contain symbols with ASCII codes between 32 and 127. **Data** length is between 3 and 31 symbols;
  - **'4'** - QR code. **Data** must contain symbols with ASCII codes between 32 and 127. **Data** length is between 3 and 279 symbols;
  - **'5'** - Interleave 2of5 barcode. **Data** must contain only digits, from 3 to 22 chars;
- **Data** - Data of the barcode; Length of **Data** depents on the type of the barcode.

Optional parameters:

- **QRcodeSize** - Dots multiplier (3...10). Default: 5;

Answer:

{ErrorCode}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;

Command: 86 (56h)

Date of the last fiscal record

Parameters of the command:

none

Answer:

{ErrorCode}<SEP>{DateTime}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **DateTime** - The date and the time of the last fiscal record in format: DD-MM-YYYY hh:mm:ss;

Command: 87 (58h)

Get item groups information

Parameters of the command:

{ItemGroup}<SEP>

Optional parameters:

- **ItemGroup** - Number of item group; If ItemGroup is empty - item group report;

Answer(1) if ItemGroup is empty:

{ErrorCode}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;

Answer(2) if ItemGroup is not empty:

{ErrorCode}<SEP>{TotSales}<SEP>{TotSum}<SEP>{Name}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **TotSales** - Number of sales for this item group for day;
- **TotSum** - Accumulated sum for this item group for day;
- **Name** - Name of item group;

Command: 88 (58h)

Get department information

Parameters of the command:

{Department}<SEP>

Optional parameters:

- **Department** - Number of department; If Department is empty - department report;

Answer(1) if Department is empty:

{ErrorCode}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;

Answer(2) if department is not empty:

{ErrorCode}<SEP>{TotSales}<SEP>{TotSum}<SEP>{Name}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **TotSales** - Number of sales for this department for day;
- **TotSum** - Accumulated sum for this department for day;
- **Name** - Name of the department;

Command: 89 (59h)

Test of Fiscal Memory

Parameters of the command:

{Write}<SEP>

Optional parameters:

- **Write** - Write \ Read test. Default: 0;
  - **0** - Read test.
  - **1** - Write and read test;

Answer:

{ErrorCode}<SEP>{Records}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **Records** - Number of records left (0...16).

Command: 90 (5Ah)

Diagnostic information

This are possible command syntaxes:
Syntax 1:

{Param}<SEP>

Optional parameters:

- **none** - Diagnostic information without firmware checksum;
  Answer(1)
- **'1'** - Diagnostic information with firmware checksum;
  Answer(1)

  Answer(1):

{ErrorCode}<SEP>{Name}<SEP>{FwRev}<SEP>{FwDate}<SEP>{FwTime}<SEP>{Checksum}<SEP>{Sw}<SEP>{SerialNumber}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **Name** - Device name (up to 32 symbols).
- **FwRev** - Firmware version. 6 symbols;
- **FwDate** - Firmware date DDMMMYY. 7 symbols;
- **FwTime** - Firmware time hhmm. 4 symbols.
- **Checksum** - Firmware checksum. 4 symbols;
- **Sw** - Switch from Sw1 to Sw8. 8 symbols (not used at this device, always 00000000);
- **SerialNumber** - Serial Number ;

Command: 91 (5Bh)

Programming of serial number (serie fabricatie)

Parameters of the command:

{SerialNumber}<SEP>

Mandatory parameters:

- **SerialNumber** - Serial Number (Up to 12 chars);

Answer:

{ErrorCode}<SEP>{Country}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **Country** - name of the country (up to 32 symbols);

Command: 92 (5Ch)

Printing of separating line

Parameters of the command:

{Type}<SEP>

Mandatory parameters:

- **Type** - Type of the separating line.
  - **'1'** - Separating line with the symbol '-';
  - **'2'** - Separating line with the symbols '-' and ' ';
  - **'3'** - Separating line with the symbol '=';

Answer:

{ErrorCode}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;

Command: 94 (5Eh)

Fiscal memory report by dates

Parameters of the command:

{Type}<SEP>{Start}<SEP>{End}<SEP>

Mandatory parameters:

- **Type** - Type of report;
  - **'0'** - Short;
  - **'1'** - Detailed;
  - **"10"** - Short to file;
  - **"11"** - Detailed to file; *Answer* (1)
  - **'3'** - Read next line of reports type 10 or 11 as text; *Answer* (2)

Optional parameters:

- **Start** - Start date (format "DD-MM-YY"). Default: Date of fiscalization;

- **End** - End date (format "DD-MM-YY"). Default: Current date;

Answer (1):

{ErrorCode}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;

Answer (2):

{ErrorCode}<SEP>{TextData}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **TextData** - Document text (up to 42 chars);

Command: 95 (5Fh)

Fiscal memory report by Z-report numbers

Parameters of the command:

{Type}<SEP>{First}<SEP>{Last}<SEP>

Mandatory parameters:

- **Type** - Type of report;
  - **'0'** - Short;
  - **'1'** - Detailed;
  - **"10"** - Short to file;
  - **"11"** - Detailed to file; *Answer* (1)
  - **'3'** - Read next line of reports type 10 or 11 as text; *Answer* (2)

Optional parameters:

- **First** - First Z-report in the period. Default: 1;
- **Last** - Last Z-report in the period. Default: Number of last Z-report;

Answer (1):

{ErrorCode}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;

Answer (2):

{ErrorCode}<SEP>{TextData}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **TextData** - Document text (up to 42 chars);

Command: 99 (63h)

Reading the programmed TAX number

Parameters of the command:

none

Answer:

{ErrorCode}<SEP>{TAXnumber}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **TAXnumber** - TAX number;

Command: 100 (64h)

Reading an error

Parameters of the command:

{Code}<SEP>

Mandatory parameters:

- **Code** - Code of the error(negative number);

Answer:

{ErrorCode}<SEP>{Code}<SEP>{ErrorMessage}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **Code** - Code of the error, to be explained;
- **ErrorMessage** - Explanation of the error in **Code**;

Command: 101 (65h)

Set operator password

Parameters of the command:

{OpCode}<SEP>{OldPwd}<SEP>{NewPwd}<SEP>

Mandatory parameters:

- **OpCode** - Operator number (1...30);
- **NewPwd** - Operator password (Ascii string of digits, lenght 4...8);

Optional parameters:

- **OldPwd** - Operator old password or administrator (oper29 & oper30) password. Can be blank if service jumper is on.

Answer:

{ErrorCode}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;

Command: 103 (67h)

Information for the current receipt

Parameters of the command:

none

Answer:

{ErrorCode}<SEP>{SumVATA}<SEP>{SumVATB}<SEP>{SumVATC}<SEP>{SumVATD}<SEP>{SumVATE}<SEP>{SumVATF}<SEP>{SumEXCEPTAT}<SEP>{Inv}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **SumVATx -** The current accumulated sum on VATx (0.00...9999999.99 or 0...999999999 depending dec point position);
- **Inv -** '1' if it is "simplify invoice" receipt; '0' if it is simplified receipt;

Command: 105 (69h)

Operators report

Parameters of the command:

{FirstOper}<SEP>{LastOper}<SEP>{Clear}<SEP>

Optional parameters:

- **FirstOper** - First operator in the report (1...30). Default: 1;
- **LastOper** - Last operator in the report (1...30). Default: 30;
- **Clear** - Type of report. Default: 0;
  - **'0'** - Operators report;
  - **'1'** - Operators report with clearing the operators registers;

Answer:

{ErrorCode}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;

Command: 106 (6Ah)

Drawer opening

Parameters of the command:

{mSec}<SEP>

Optional parameters:

- **mSec** - The length of the impulse in milliseconds (0...65535);

Answer:

{ErrorCode}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;

Command: 107 (6Bh)

Programming and reading items

Parameters of the command:

{Option}<SEP>{Parameters}<SEP>

Mandatory parameters: **Option**

- **'I'** - Items information;
  Syntax:

{Option}<SEP>

Answer(3)

- **'P'** - Item programming;
  Syntax:

  {Option}<SEP>{PLU}<SEP>{TaxGr}<SEP>{Dep}<SEP>{Group}<SEP>{PriceType}<SEP>{Price}<SEP>{AddQty}<SEP>{Quantity}<SEP>{Bar1}<SEP>{Bar2}<SEP>{Bar3}<SEP>{Bar4}<SEP>{Name}<SEP>{Unit}<SEP>

  Mandatory parameters:

  - **PLU** - Item number (1...100000);
  - **TaxGr** - VAT group (digit '1'..'7', letter 'A'...'G';

    Note
    If not VAT registered (neplatitor de TVA) **TaxGr** can be only '5','6' letter 'E','F'

  - **Dep** - Department (0...99);
  - **Group** - Item group (1...99);
  - **PriceType** - Price type ('0' - fixed price, '1' - free price, '2' - max price (for details see user's manual);
  - **Price** - Price (0.00...9999999.99);
  - **Quantity** - Stock quantity (0.001...99999.999);
  - **Name** - Item name (up to 72 symbols);
  - **Unit** - Measurement unit 0 - 19;

  Optional parameters:

  - **AddQty** - A byte with value 'A',
  - **BarX** - Barcode X (up to 13 digits);

  Answer(1)

- **'A'** - Change of the available quantity for item;
  Syntax:

  {Option}<SEP>{PLU}<SEP>{Quantity}<SEP>

  Mandatory parameters:

  - **PLU** - Item number (1...100000);
  - **Quantity** - Stock quantity (0.001...99999.999);

Answer(1)

- **'D'** - Item deleting;
  Syntax:

  {Option}<SEP>{firstPLU}<SEP>{lastPLU}<SEP>

  Mandatory parameters:

  - **firstPLU** - First item to delete (1...100000). If this parameter has value 'A', all items will be deleted (**lastPLU** must be empty);

  Optional parameters:

  - **lastPLU** - Last item to delete (1...100000). Default: **firstPLU**;

  Answer(1)

- **'R'** - Reading item data;
  Syntax:

  {Option}<SEP>{PLU}<SEP>

  Mandatory parameters:

  - **PLU** - Item number (1...100000);

  Answer(2)

- **'F'** - Returns data about the first found programmed item;
  Syntax:

  {Option}<SEP>{PLU}<SEP>

  Optional parameters:

  - **PLU** - Item number (1...100000). Default: 0;

  Answer(2)

- **'L'** - Returns data about the last found programmed item;
  Syntax:

  {Option}<SEP>{PLU}<SEP>

  Optional parameters:

- **PLU** - Item number (1...100000). Default: 100000;

Answer(2)

- **'N'** - Returns data for the next found programmed item;
  Syntax:

  {Option}<SEP>

  Note
  The same command with option 'F' or 'L' must be executed first. This determines whether to get next('F') or previous ('L') item.

  Answer(2)

- **'f'** - Returns data about the first found item with sales on it;
  Syntax:

  {Option}<SEP>{PLU}<SEP>

  Optional parameters:

  - **PLU** - Item number (1...100000). Default: 0;

  Answer(2)

- **'l'** - Returns data about the last found item with sales on it;
  Syntax:

  {Option}<SEP>{PLU}<SEP>

  Optional parameters:

  - **PLU** - Item number (1...100000). Default: 100000;

  Answer(2)

- **'n'** - Returns data for the next found item with sales on it;
  Syntax:

  {Option}<SEP>

  Note
  The same command with option 'f' or 'l' must be executed first. This determines whether to get next('f') or previous ('l') item; *Answer(2)*

- **'X'** - Find the first not programmed item;
  Syntax:

  {Option}<SEP>{PLU}<SEP>

  Optional parameters:

  - **PLU** - Item number (1...100000). Default: 0;

  Answer(4)

- **'x'** - Find the last not programmed item;
  Syntax:

  {Option}<SEP>{PLU}<SEP>

  Optional parameters:

  - **PLU** - Item number (1...100000). Default: 100000;

  Answer(4)

Answer(1):

{ErrorCode}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;

Answer(2):

{ErrorCode}<SEP>{PLU}<SEP>{TaxGr}<SEP>{Dep}<SEP>{Group}<SEP>{PriceType}<SEP>{Price}<SEP>{Turnover}<SEP>{SoldQty}<SEP>{StockQty}<SEP>{Bar1}<SEP>{Bar2}<SEP>{Bar3}<SEP>{Bar4}<SEP>{Name}<SEP>{Unit}<SEP>

- **ErrorCode** - Indicates an error. If command passed, **ErrorCode** is 0;
- **PLU** - Item number (1...100000);
- **TaxGr** - VAT group ('1'...'7');
- **Dep** - Department (0...99);
- **Group** - Item group (1...99);
- **PriceType** - Price type ('0' - fixed price, '1' - free price, '2' - max price (for details see user's manual);
- **Price** - Price (0.00...9999999.99);
- **Turnover** - Accumulated amount of the item (0.00...9999999.99);
- **SoldQty** - Sold out quantity (0.001...99999.999);
- **StockQty** - Current quantity (0.001...99999.999);

- **BarX** - Barcode X (up to 13 digits);
- **Name** - Item name (up to 72 symbols);
- **Units** - Measurement unit 0 - 19;

Answer(3):

{ErrorCode}<SEP>{Total}<SEP>{Prog}<SEP>{NameLen}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **Total** - Total count of the programmable items (100000);
- **Prog** - Total count of the programmed items (0...100000);
- **NameLen** - Maximum length of item name (72);

Answer(4):

{ErrorCode}<SEP>{PLU}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **PLU** - Item number (1...100000);

Command: 110 (6Eh)

Additional daily information

Parameters of the command:

{Type}<SEP>

Optional parameters:

- **Type** - Type of information. Default: 0;
  - **'0'** - Payments;
    Answer(1)
  - **'1'** - not used;
    Answer(2)
  - **'2'** - number and sum of sells;
    Answer(3)
  - **'3'** - number and sum of discounts and surcharges;
    Answer(4)

- **'4'** - number and sum of corrections and annulled receipts;
  Answer(5)
- **'5'** - number and sum of cash in and cash out operations;
  Answer(6)

Answer 1:

{ErrorCode}<SEP>{Pay1}<SEP>{Pay2}<SEP>{Pay3}<SEP>{Pay4}<SEP>{Pay5}<SEP>{Pay6}<SEP>{Pay7}<SEP>{Pay8}<SEP>{Pay9}<SEP>{ForeignPay}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **PayX** - Value payed by payment X (0.00...9999999.99);
- **ForeignPay** - Value payed by foreign currency (0.00...9999999.99);

Answer 2:

{ErrorCode}<SEP>{Pay1}<SEP>{Pay2}<SEP>{Pay3}<SEP>{Pay4}<SEP>{Pay5}<SEP>{Pay6}<SEP>{Pay7}<SEP>{Pay8}<SEP>{Pay9}<SEP>{ForeignPay}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **PayX** - Value payed by payment X for return (always return 0.00 no return operation!);

Answer 3:

{ErrorCode}<SEP>{Num}<SEP>{Sum}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **Num** - number of clients (integer number - 0,1,2, ...);
- **Sum** - sum of the sells (0.00...9999999.99)

Answer 4:

{ErrorCode}<SEP>{qSur}<SEP>{sSur}<SEP>{qDis}<SEP>{sDis}<SEP>{qDisPlu}<SEP>{sDisPlu}<SEP>{qDisStl}<SEP>{sDisStl}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **qSur** - number of surcharges (integer number - 0,1,2, ...);
- **sSur** - sum of surcharges (0.00...9999999.99);
- **qDis** - number of discounts (integer number - 0,1,2, ...);
- **sDis** - sum of discounts(0.00...9999999.99);
- **qDisPlu** - number of special discounts by item (integer number - 0,1,2, ...);
- **sDisPlu** - sum of special discounts by item(0.00...9999999.99);
- **qDisStl** - number of special discounts by subtotal (integer number - 0,1,2, ...);
- **sDisStl** - sum of special discounts by subtotal (0.00...9999999.99);

Answer 5:

{ErrorCode}<SEP>{qVoid}<SEP>{sVoid}<SEP>{qAnul}<SEP>{sAnul}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **qVoid** - number of corrections (integer number - 0,1,2, ...);
- **sVoid** - sum of corrections (0.00...9999999.99);
- **qAnul** - number of annulled (integer number - 0,1,2, ...);
- **sAnul** - sum of annulled (0.00...9999999.99);

Answer 6:

{ErrorCode}<SEP>{qCashIn1}<SEP>{sCashIn1}<SEP>{qCashOut1}<SEP>{sCashOut1}<SEP>{qCashIn2}<SEP>{sCashIn2}<SEP>{qCashOut2}<SEP>{sCashOut2}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **qCashIn1** - number of cash in operations (integer number - 0,1,2, ...);
- **sCashIn1** - sum of cash in operations (0.00...9999999.99);
- **qCashOut1** - number of cash out operations (integer number - 0,1,2, ...);
- **sCashOut1** - sum of cash out operations (0.00...9999999.99);
- **qCashIn2** - number of cash in operations in alternative currency (integer number - 0,1,2, ...);
- **sCashIn2** - sum of cash in operations in alternative currency (0.00...9999999.99);
- **qCashOut2** - number of cash out operations in alternative currency (integer number - 0,1,2, ...);
- **sCashOut2** - sum of cash out operations in alternative currency (0.00...9999999.99);

Command: 111 (65h)

PLU report

Parameters of the command:

{Type}<SEP>{FirstPLU}<SEP>{LastPLU}<SEP>

Mandatory parameters:

- **Type** - Type of report;
  - **'0'** - PLU turnovers detailed;

- **'1'** - PLU turnovers summary;
- **'2'** - PLU turnovers with clearing detailed;
- **'3'** - PLU turnovers with clearing summary;
- **'4'** - PLU parameters;

Optional parameters:

- **FirstPLU** - First PLU in the report (1...100000). Default: 1;
- **LastPLU** - Last PLU in the report (1...100000). Default: 100000;

Answer:

{ErrorCode}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;

Command: 112 (70h)

Information for operator

Parameters of the command:

{Operator}<SEP>

Mandatory parameters:

- **Operator** - Number of operator (1...30);

Answer:

{ErrorCode}<SEP>{Receipts}<SEP>{Total}<SEP>{nDiscount}<SEP>{Discount}<SEP>{nDiscPlu}<SEP>{DiscPlu}<SEP>{nDiscStl}<SEP>{DiscStl}<SEP>{nSurcharge}<SEP>{Surcharge}<SEP>{nVoid}<SEP>{Void}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **Receipts** - Number of fiscal receipts, issued by the operator (0...65535);
- **Total** - Total accumulated sum (0.00...9999999.99);
- **nDiscount** - Number of discounts (0...65535);;
- **Discount** - Total accumulated sum of discounts with sign (0.00...9999999.99);

- **nDiscPlu** - Number of special discounts (0...65535);;
- **DiscPlu** - Total accumulated sum of special discounts with sign (0.00...9999999.99);
- **nDiscStl** - Number of special discounts (0...65535);;
- **DiscStl** - Total accumulated sum of special discounts with sign (0.00...9999999.99);
- **nSurcharge** - Number of surcharges (0...65535);
- **Surcharge** - Total accumulated sum of surcharges with sign(0.00...9999999.99);
- **nVoid** - Number of corrections (0...65535);
- **Void** - Total accumulated sum of corrections with sign(0.00...9999999.99);

Command: 116 (74h)

Reading FM

Parameters of the command:

{Operation}<SEP>{Address}<SEP>{nBytes}<SEP>

Mandatory parameters:

- **Operation** - Type of operation. Always = '0';
- **Address** - Start address 0...FFFFFF (format ascii-hex);
- **nBytes** - Number of bytes (1...104);

Answer:

{ErrorCode}<SEP>{Data}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **Data** - Data read. Number of bytes is equal to **nBytes** requested, multiplied by 2;

Command: 123 (7Bh)

Device information

Parameters of the command:

{Option}[<SEP>]

Mandatory parameters:

- **Option** - Type of information to return;
  - **'1'** - Serial numbers, Header and Tax numbers; *Answer(1)*
  - **'3'** - Last fiscal receipt; *Answer(3)*

Answer(1):

{ErrorCode}<SEP>{SerialNumber}<SEP>{FiscalNumber}<SEP>{Headerline1}<SEP>{Header line2}<SEP>{TAXnumber}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **SerialNumber** - Serie Fabricatie;
- **FiscalNumber** - Serie Fiscala;
- **Headerline1** - Supposed to contain Company name (up to depending on device's maximum printing columns)
- **Headerline2** - Supposed to contain Company address (up to depending on device's maximum printing columns)
- **TAXnumber**

Answer(3):

{ErrorCode}<SEP>{BonFiscal}<SEP>{DateBonFiscal}<SEP>{Znumber}<SEP>{Zdate}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **BonFiscal** - Number of last sales receipt in current Z report (1...9999);
- **DateBonFiscal** - Date and time of last sales receipt (format "DD-MM-YYYY hh:mm:ss");
- **Znumber** - Number of last Z-report (1..2500);
- **Zdate** - Date of last of Z-report (format "DD-MM-YYYY hh:mm:ss");

Command: 124 (7Ch)

Search documents in EJ by date

Parameters of the command:

{StartDate}<SEP>{EndDate}<SEP>{DocType}<SEP>

Optional parameters:

- **StartDate** - Start date and time for searching (format "DD-MM-YY hh:mm:ss DST"). Default: Date and time of first document;
- **EndDate** - End date and time for searching (format "DD-MM-YY hh:mm:ss DST"). Default: Date and time of last document;

  Note
  See DateTime format described at the beginning of the document;

- **DocType** - Type of document;
  - **'0'** - all types;
  - **'1'** - fiscal receipts;
  - **'2'** - daily z reports;
  - **'3'** - invoice receipts;
  - **'4'** - non fiscal receipts;

Answer:

{ErrorCode}<SEP>{StartDate}<SEP>{EndDate}<SEP>{RepFirstDoc}<SEP>{FirstDoc}<SEP>{RepLastDoc}<SEP>{LastDoc}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **StartDate** - Start date for searching, see DateTime format described at the beginning of the document;
- **EndDate** - End date for searching, see DateTime format described at the beginning of the document;
- **RepFirstDoc** - First Z-report for the period. Only for **DocType** = '1' (1...2500), else **RepFirstDoc** is 0;
- **FirstDoc** - First document in the period. For **DocType** = '1' (1...9999), else (1...99999999);
- **RepLastDoc** - Last Z-report for the period. Only for **DocType** = '1' (1...2500), else **RepFirstDoc** is 0;
- **LastDoc** - Last document in the period. For **DocType** = '1' (1...9999), else (1...99999999);

Command: 125 (7Dh)

Information from EJ

Parameters of the command:

{Option}<SEP>{DocNum}<SEP>{DocType}<SEP>

for (option "10", "13" only)

{Option}<SEP>{FirstLOG}<SEP>{LastLOG}<SEP>

Mandatory parameters:

- **Option**
  - **'0'** - Set document to read;
    Answer(1)
  - **'1'** - Read one line as text. Must be called multiple times to read the whole document;
    Answer(2)
  - **'2'** - Read as data. Must be called multiple times to read the whole document;
    Answer(3)
  - **'3'** - Print document;
    Answer(4)
  - **"10"** - Set LOG file(s) to read;
    Answer(4)
  - **"11"** - Read one line of LOG file as text. Must be called multiple time to read whole document;
    Answer(2)
  - **"13"** - Print LOG file(s);
    Answer(4)

Optional parameters:

- **DocNum** - Number of document (1...99999999). Needed for **Option** = 0 and 3;
  - Number of LOG file for Z report. Needed for **Option** = 10 and 13;

    Note
    If **DocType** is '1', it is coded as the examples below:
    example 1: Z report - 1; Fiscal Document - 3 => **DocNum** must be 10003;
    example 2: Z report - 123; Fiscal Document - 1500 => **DocNum** must be 1231500;

- **DocType** - Type of document. Needed for **Option** = 0;
  - **'0'** - all types;
  - **'1'** - fiscal receipts;

- **'2'** - daily z reports;
- **'3'** - invoice receipts;
- **'4'** - nonfiscal receipts;
- **"20"** - full EJ content for Z report specified in **DocNum**;

Answer(1):

{ErrorCode}<SEP>{DocNumber}<SEP>{RecReport}<SEP>{RecNumber}<SEP>{Date}<SEP>{Type}<SEP>{Znumber}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **DocNumber** - Number of document (global 1...9999999);
- **RecReport** - Number of Z-report for the selected document. Only for **DocType** = '1' (1...2500), else **RecReport** is 0;
- **RecNumber** - Number of record. For **DocType** = '1' (1...9999), else depending on **DocType**;
- **Date** - Date of document, see DateTime format described at the beginning of the document;
- **Type** - Type of document;
  - **'0'** - all types;
  - **'1'** - fiscal receipts;
  - **'2'** - daily z reports;
  - **'3'** - invoice receipts;
  - **'4'** - non fiscal receipts;
  - **'5'** - paidout receipts;
- **Znumber** - Number of Z report (1...2500);

Answer(2):

{ErrorCode}<SEP>{TextData}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **TextData** - Document text (up to 42 chars);

Answer(3):

{ErrorCode}<SEP>{Data}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **Data** - Document data, structured information in base64 format. Detailed information in other document;

Answer(4):

{ErrorCode}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;

Command: 127 (7Fh)

Stamp operations (bitmap printing)

Parameters of the command:

{Type}<SEP>{Name}<SEP>

Mandatory parameters:

- **Type** - Type of operation;
  - **'0'** - Print stamp;
  - **'1'** - Rename loaded stamp with command 203;
- **Name** - Name of stamp as filename in format 8.3 (example: stamp123.bmp);

Answer:

{ErrorCode}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;

Command: 128 (80h)

Exporting XML files

Parameters of the command:

{Option}<SEP>{StartDate}<SEP>{EndDate}<SEP> ,
{Option}<SEP>{StartZnumber}<SEP>{EndZnumber}<SEP>,or
{Option}<SEP>{FileName}<SEP>

for option "1"

{Option}<SEP>

Mandatory parameters:

- **Option** - ;
  - **'0'** - Select and sign file;
    Answer(1)
  - **'1'** - Read data from file. Must be called multiple times to read the whole document;
    Answer(2) - file information before sending the data(at the first call after option 0);
    Answer(3) - return data after file info(Must be called multiple times);

Optional parameters:

- **Date** - with this parameter, the ERC generates a sheet of files for the requested month **Option** = 0 ;
  - reading the sheet is done with **Option** = 1;
- **FileName** - path and file name for export. (see sheet of files);

Answer(1):

{ErrorCode}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;

Answer(2):

{ErrorCode}<SEP>{Filename}<SEP>{nBytes}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **Filename** - Name of the selected file;
- **nBytes** - Size of the selected file;

Answer(3):

{ErrorCode}<SEP>{Data}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **Data** - Document data in base64 format.;

Command: 149 (95h)

Switching modes

Parameters of the command:

{Mode}<SEP>

Optional parameters:

- **Mode** - '0' - sets the device to normal mode, '2' prints proba receipts, '3' sets the device to training mode;

  Note
  If left blank the command returns the current active mode.

  Answer:

  {ErrorCode}<SEP>{CurrentMode}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **CurrentMode** - '0' - normal mode, '2' - service mode, '3' - training mode;

Command: 202 (CAh)

Customer graphic logo loading.

Parameters of the command:
Syntax 1:

{Parameter}<SEP>

Mandatory parameters:

- **Parameter** - type of operation;
  - **START** - Praparation for data loading; *Answer(1)*
  - **STOP** - End of data; *Answer(2)*

- **YmFzZTY0ZGF0YQ==** - base64 coded data of the grahpic logo; *Answer(2)*
- **POWEROFF** - Shutting down the device; *Answer(1)*
- **RESTART** - Device restarting; *Answer(1)*

Answer(1):

{ErrorCode}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;

Answer(2):

{ErrorCode}<SEP>{Chechsum}

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **Chechsum** - Sum of decoded base64 data;

Command: 203 (CAh)

Stamp image loading (ex bitmap images).

Parameters of the command: Syntax 1:

{Parameter}<SEP>

Mandatory parameters:

- **Parameter** - type of operation;
  - **START** - Praparation for data loading; *Answer(1)*
  - **STOP** - End of data; *Answer(2)*
  - **YmFzZTY0ZGF0YQ==** - base64 coded data of the grahpic logo; *Answer(2)*

Answer(1):

{ErrorCode}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;

Answer(2):

{ErrorCode}<SEP>{Chechsum}

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **Chechsum** - Sum of decoded base64 data;

Command: 253 (FDh)

Service operations

Parameters of the command: Syntax 1

{Option}<SEP>{Value}<SEP>

Mandatory parameters:

- **Option-** Type of operation;
  - **'0'** - Entering service password (Password of the Service man);
  - **'2'** - Close current EJ. Service jumper is needed. Other parameters in command line are ignored;
  - **'3'** - Factory settings. Other parameters in command line are ignored;
- **Value** - Value of entered parameter;
  - Service password (Password of the Service man). Text up to 8 symbols. The default password is "1234";

Syntax 2

{Option}<SEP>{OldPasw}<SEP>{NewPasw}

Mandatory parameters:

- **Option-** Type of operation;
  - **'1'** - Programming of service password.
- **OldPasw** - Value of the old password. From 4 to 8 digits. The default password is "1234";
- **NewPasw** - Value of the new password. From 4 to 8 digits.

Note

Entering of the service password makes possible changing of some parameters with command 255 (including changing of the service password itself). Reading of the service password with command 255 is also possible only after entering of the service password. If service jumper is on, entering of the service password is not necessary;

Answer:

{ErrorCode}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;

Command: 255 (FFh)

Read/Write parameters

Parameters of the command:

{Name}<SEP>{Index}<SEP>{Value}<SEP>

Mandatory parameters:

- **Name** - Variable name;
  - **Device settings**;
    - **FpComBaudRate** - Baud rate of COM port for communication with PC (from 0 to 9);
    - **AirPortLocated** - Turn on / off airport mode. 0=disabled, 1=enabled;
    - **BthEnable** - turn on / off bluetooth module; (only for bluetooth enabled devices)
    -
    - **BthDiscoverability** - turn on / off bluetooth device discoverability; (1 - discoverable; 0 - non-discoverable); (only for bluetooth enabled devices)
    - **BthPairing** - 0-unsecure, 1-reset and save, 2-reset; (only for bluetooth enabled devices)
    - **BthPinCode** - pin code for bluetooth pairing (default: 0000); (only for bluetooth enabled devices)
    - **BthVersion** - firmware version of bluetooth module; (only for bluetooth enabled devices)
    - **BthAddress** - bluetooth device address; (only for bluetooth enabled devices)
    - **BarCodeHeight** - Barcode height from '1' (7mm) to '10' (70mm);
    - **BarcodeName** - Enable/Disable printing of the barcode data;
    - **AutoPaperCutting** - Permission/rejection of the automatic cutting of paper after each receipt. (1 - permitted, 0 - rejected) (for devices with cutter);
    - **BackFeedSteps** - For FP-800 and FP-650 only. Count of back feed steps after paper cutting; (max: 999, default: 120)

- **PaperCuttingType** - Partial=0/Full=1 cutting of paper (for devices with cutter);
- **TimeOutBeforePrintFlush-** Time out between fiscal printer commands before start auto print(in milliseconds). value 1...999999999;
- **NetInterfaceToUse** - Network interface to connect with national revenue server. 0 - LAN, 1 - GPRS; Need service password!
- **MainInterfaceType** - PC interface type. 0-auto selected, 1-RS232, 2-BLUETOOTH, 3-USB, 4-LAN.

Note
When service jumper is present, the parameter MainInterfaceType = 0.

- **FlushAtEndOnly** - For ECR's only. The receipt is printed after last payment;
- **Line_spacing** - 0...5 - Default 0; Decrease the space between text lines. Greater values = less line spacing.

- **ECR parameters**;
  - **EcrLogNumber** - Logical number in the workplace (from 1 to 99999);
  - **EcrAskForPassword** - For ECR's only. Require password after each receipt (1 - enable; 0 - disable);
  - **EcrAskForVoidPassword** - For ECR's only. Require password for void operations (1 - enable; 0 - disable);
  - **EcrSafeOpening** - Open drawer on every total (1 - enable; 0 - disable);
  - **EcrConnectedOperReport** - When making Z-report, automatically make "Operator report" (1 - enable; 0 - disable);
  - **EcrConnectedGroupsReport** - When making Z-report, automatically make "Group report" (1 - enable; 0 - disable);
  - **EcrConnectedDeptReport** - When making Z-report, automatically make "Report by Departments" (1 - enable; 0 - disable);
  - **EcrConnectedPluSalesReport** - When making Z-report, automatically make "Report by PLU with turnovers" (1 - enable; 0 - disable);
  - **EcrConnectedCashReport** - When making Z-report, automatically make "Ecr report" (1 - enable; 0 - disable);
  - **EcrLogReport** - When making Z-report, automatically print the log file for current day. turnover (1 - enable; 0 - disable);
  - **EcrPluDailyClearing** - When making Z-report, automatically clear PLU turnover (1 - enable; 0 - disable);
  - **EcrNumberBarcode** - Count of used barcodes for each programmed article (1...4);
  - **EcrScaleBarMask** - Text up to 10 symbols. If second number of the weight barcode match any of the symbols in this string, barcode will be interpreted as normal barcode.
  - **AutoPowerOff** - (Only for devices with battery) Minutes to automatically turn off ECR if it is idle. (0 - disable; from 1 minute to 15 minutes);

- **BkLight_AutoOff** - (Only for devices with battery) Minutes to automatically turn off Backlight of the display if ECR is idle. (0 - disable; from 1 minute to 5 minutes);
- **EcrMode** - 0:normal, 1:testing, 2:servicing, 3:training. Read only! To change the mode see command 149.
- **EcrMidnightWarning** - For ECR's only. Minutes before midnight, when ECR starts showing warning for Z report.

- **Receipt parameters**;
  - **PrnQuality** - Contrast of Printing (from 0 to 20);
  - **BarcodePrint** - Print PLU barcode in the receipt (1 - enable, 0 -disable);
  - **LogoPrint** - Print logo in the receipt (1 - enable, 0 -disable); Supported logo sizes - see user's manual.
  - **IntUseReceipts** - Number of internal receipts(from 0 to 9);
  - **ForeignPrint** - Print exchange rate after payment in foreign currency (2 - exchange rate + sum; 1 - sum; 0 - no print);
  - **PrintColumns** - Number of printer columns:
    - for ECR's: only 42 columns;
    - for FP-700 and FMP-350: 42, 48 or 64 columns;
    - for FP-800: 48 or 64 columns;
    - FP-650: only 42 columns
  - **EmptyLineAfterTotal** - Print empty line after TOTAL line in fiscal receipts (1 - enable, 0 -disable);
  - **DblHeigh_totalinreg** - Print TOTAL line in fiscal receipts with double height(1 - enable, 0 -disable);
  - **Bold_payments** - Print the payments with bolded in fiscal receipt(1 - enable, 0 -disable);
  - **ItemsCount** - Flag to print the line with count of items at the end of the fiscal receipt(1 - enable, 0 -disable);
- **Currencies**
  - **CurrNameLocal** - Local currency name(up to 3 chars);
  - **CurrNameForeign** - Foreign currency name(up to 3 chars);
  - **ExchangeRate** - Exchange rate(from 0 to 999999999, decimal point is before last five digits);
- **Unit names**;
  - **Unit_name** - Text up to 6 chars. The line is determined by **"Index"**. Index 0 is for line 1...Index 19 is for line 20;
- **Header of the receipt**;
  - **Header** - Text up to max columns (see the parameter PrintColumns). Header line is determined by **"Index"**. Index 0 is for line 1, Index 9 is for line 10; Read only! To change the header use command 43.
- **Footer of the receipt**;
  - **Footer** - Text up to max columns (see the parameter PrintColumns). Footer line is determined by **"Index"**. Index 0 is for line 1, Index 9 is for line 10;
- **Operators**;

        - **OperName** - Name of operator. Text up to 20 symbols. Number of operator is determined by **"Index"**;
        - **OperPasw** - Password of operator (Read only). see cmd101. Number of operator is determined by **"Index"**;
    - **Item Groups**;
        - **ItemGroups_name** - Name of item group. Text up to 32 symbols. Number of item group is determined by **"Index"**;
    - **Departments**;
        - **Dept_name** - Name of department. Text up to 32 symbols. Number of department is determined by **"Index"**;
    - **Payments**;
        - **Payment_forbidden** - Forbid the payment (1- forbidden, 0 - not forbidden). Number of payment is determined by **"Index"**;
        - **PayNamePgmbl** - The name of last payment type (other payment method). Text up to 16 symbols.;
        - **PYxx_Pgm** - (Only for ECR's)Payment shortcut (from 2 to 8) (read only);
    - **Shortcut keys (Only for ECR's)**
        - **DPxx_PluCode** - Number of PLU assigned to shortcut key. (0 - Key is disabled; from 1 to 99999 for assigning PLU). Number of key is determined by **"Index"**;
    - **Keys discount and surcharge** (Only for ECR's)
        - **KeyNDB_value** - Value for value surcharge; Value is in cents. (from 0 to 999999999);
        - **KeyNDB_percentage** - Percentage for percentage surcharge; Value is in hundredths (0.01) of a percent. (from 0 to 9999);
        - **KeyOTS_value** - Value for value discount; Value is in cents. (from 0 to 999999999);
        - **KeyOTS_percentage** - Percentage for percentage discount; Value is in hundredths (0.01) of a percent. (from 0 to 9999);
        - **KeyNDB_forbidden** - Forbid the surcharge key (1- forbidden, 0 - not forbidden);
        - **KeyOTS_forbidden** - Forbid the discount key (1- forbidden, 0 - not forbidden);
        - **PluDiscountName** - The name of special discount by item up to 16 symbols;
        - **StlDiscountName** - The name of special discount by subtotal up to 16 symbols;
    - **Service** (**Service password or service jumper is required**);
        - **ServMessage** - Message that will be printed when "ServDate" is reached. Message line is determined by **"Index"** from 0...9;
        - **ServiceDate** - Date of blocking of the FPr by Service man;
    - **Modem and network** (**Service password or service jumper is required**);
        - **IMEI** - IMEI of the modem;
        - **APN** - Access Point Name. Text up to 64 symbols. Number of APN is determined by **"Index"**;

- **APN_User** - APN Username. Text up to 32 symbols. Number of APN is determined by **"Index"**;
- **APN_Pass** - APN Password. Text up to 32 symbols. Number of APN is determined by **"Index"**;
- **SimPin** - PIN code of SIM card. Text up to 16 symbols;
- **SimICCID** - ICC number of the SIM card. Text up to 31 symbols (readonly);
- **SimIMSI** - IMSI number of the SIM card. Text up to 16 symbols (readonly);
- **SimTelNumber** - MSISDN number of the SIM card. Text up to 16 symbols (readonly);
- **LanMAC** - MAC address of LAN controller (only for devices with LAN);
- **DHCPenable** - Flag "Use DHCP during LAN connection" (1 - enable, 0 - disable) (only for devices with LAN);
- **LAN_IP** - IP address (only for devices with LAN);
- **LAN_NetMask** - Net mask (only for devices with LAN);
- **LAN_Gateway** - Default gateway (only for devices with LAN);
- **LAN_PriDNS** - Primary DNS (only for devices with LAN);
- **LAN_SecDNS** - Secondary DNS (only for devices with LAN);
- **LANport_fpCommands** - The number of listening port for PC connection. default: 3999. (only for devices with LAN)

- **Variables for FM** (**Read Only**);
  - **nZreport** - Number of current Z-report;
  - **nReset** - Number of current memory failure;
  - **nVatChanges** - Number of current VAT change;
  - **nIDnumberChanges** - Number of current SN (Serial number) changes (0 - not programmed; 1 - programmed);
  - **nFMnumberChanges** - Number of current FM (Seria fiscala) changes (0 - not programmed; 1 - programmed);
  - **nTAXnumberChanges** - Number of current TAX number changes (0 - not programmed; 1 - programmed);
  - **nHeaderChanges** - Number of current Header changes (0 - not programmed;);
  - **valVat** - Current value of VAT. Number of VAT is determined by **"Index"**;
  - **IDnumber** - Serial number of the device (Serial number);
  - **FMnumber** - Fiscal number of the device (Seria fiscala);
  - **TAXnumber** - The tax number (CIF);
  - **UserIsVatRegistered-** User is vat registered (0:no,1:yes);
  - **FmWriteDateTime** - Date and time for writing block to FM;
  - **LastValiddate** - Last valid date (written to FM or EJ);
- **Internal variables** (**Read Only**);
  - **Fiscalized** - Flag that shows if FPr is fiscalized (1 - fiscalized, 0 - not fiscalized);
  - **DFR_needed** - Flag that shows if there is a fiscal receipt issued after last Z-report (1 - issued, 0 - not issued);
  - **nBon** - Number of next document;

- **nFBon** - Number of next sales receipts;
- **nFBonDailyCount** - Number of sales receipts for current Z-report;
- **nRBonDailyCount** - Number of return receipts for current Z-report;
- **Block24h** - Date and time for 24 hour blocking;
- **CurrClerk** - Number of current operator;

- **EJNumber –** Number of current DMJE;

- Only for FP700 and FMP-350 disable or enable operators key functions:

  • **DsblKeyZreport** - Disable Z report generating from the keyboard; (1 - disabled, 0 - enabled);

  • **DsblKeyXreport** - Disable X report generating from the keyboard; (1 - disabled, 0 - enabled);

  • **DsblKeyDiagnostics** - Disable diagnostic info; (1 - disabled, 0 - enabled);

  • **DsblKeyFmReports** - Disable fiscal memory reports; (1 - disabled, 0 - enabled);

  • **DsblKeyOperatorsReports** - Disable reports by operators; (1 - disabled, 0 - enabled);

  • **DsblKeyJournal** - Disable electronic journal menu; (1 - disabled, 0 - enabled);

  • **DsblKeyDateTime** - Disable changing the date and time; (1 - disabled, 0 - enabled);

  • **DsblKeyCloseReceipt** - Disable manualy closing of the receipt; (1 - disabled, 0 - enabled);

  • **DsblKeyCancelReceipt** - Disable manualy cancellation of the receipt; (1 - disabled, 0 - enabled);

Optional parameters:

- **Index** - Used for index if variable is array. If variable is not array, "Index" must be left blank. Default: 0;

  Note
  For example: Header[] - index 0 refers to line 1, index 5 refers to line 6;

- **Value** - If this parameter is blank, ECR will return current value (*Answer(2)*). If the value is set, then ECR will program this value (*Answer(1)*);

Answer(1):

{ErrorCode}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;

Answer(2):

{ErrorCode}<SEP>{VarValue}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **VarValue** - Curent value of the variable;