FISCAL PRINTER
DATECS FMP–705 KL

Programmer's Manual

Version: november, 2015

Content

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 lebel 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,language[\t][\t][\t]** for the data field then in that field there will be **6C 61 6E 67 75 61 67 65 09 09 09** where each hexadecimal digit is an ASCII value.

Command explanations

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
  - **DD** – Day
  - **MM** – Month
  - **YY** – Year
  - **hh** – Hours
  - **mm** – Minutes
  - **ss** – Seconds

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:

{ErrorStatus}<SEP>{ErrorCode}<SEP>{ErrorMessage}<SEP>

- **ErrorStatus** – Indicates an error;
  - **'P'** – The command passed;
  - **'F'** – The command failed;
- **ErrorCode** – Code of the error from list with errors;
- **ErrorMessage** – Text message of the error (if available);

Status bytes

Byte 0: General purpose
- 0.7 = 1 Always 1.
- 0.6 = 0 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 = 0 Always 0.
- 0.2 = 0 Always 0.
- 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 = 0 Always 0.
- 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 = 0 Always 0.
- 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 50 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 while writing in 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 formated.
- 5.0 = 0 Always 0.

Byte 6: Not used

- 6.7 = 0 if Old Protocol is defined, else = 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 = 0 if Old Protocol is defined, else = 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: 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: none
Answer: {ErrorCode}<SEP>{SlipNumber}<SEP>

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

- **SlipNumber** – Current slip number (1÷9999999);

Command: 39 (27h) – closing a non–fiscal receipt

Parameters of the command: none
Answer: {ErrorCode}<SEP>{SlipNumber}<SEP>

- **ErrorCode** – Indicates an error code. If command passed, **ErrorCode** is 0;
- **SlipNumber** – Current slip number (1÷9999999);

Command: 42 (2Ah) – printing of a free non–fiscal text

Parameters of the command: {Text}<SEP>
Optional parameters:

- **Text** – text of 0÷46 symbols;

Answer: {ErrorCode}<SEP>

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

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>
Mandatory parameters:

- **OpCode** – Operator number from 1÷30;
- **OpPwd** – Operator password, ascii string of digits. Lenght from 1÷8;
- **TillNmb** – Number of point of sale from 1÷99999;
- **Invoice** – If this parameter has value 'I' it opens an invoice receipt. If left blank it opens fiscal receipt;

Answer: {ErrorCode}<SEP>{SlipNumber}<SEP>
ErrorCode – Indicates an error code. If command passed, **ErrorCode** is 0;

- **SlipNumber** – Current slip number (1÷9999999);

Command: 49 (31h) – registration of sale

Parameters of the command: {PluName}<SEP>{TaxCd}<SEP>{Price}<SEP>{Quantity}<SEP>
{DiscountType}<SEP>{DiscountValue}<SEP>{Department}<SEP>
Mandatory parameters: {PluName}, {TaxCd}, {Price}, {Department}

- **PluName** – Name of product, up to 32 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'** – vat group F;
  - **'7'** – vat group G;
  - **'8'** – vat group H;
- **Price** – Product price, with sign '–' at void operations. Format: 2 decimals; up to 9999999.99

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

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

*Note: Max value of {Price} * {Quantity} is *9999999.999*

- **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; If {DiscountType} is non zero, {DiscountValue} have to contain value. The format must be a value with two decimals.

- **DiscountValue** – value of discount. a number from 0.00 to 21474836.47 If {DiscountType} is zero or empty, this paramter must be empty.
- **Department** – Number of the department 0..99; If '0' – without department

Answer: {ErrorCode}<SEP>{SlipNumber}<SEP>
- **ErrorCode** – Indicates an error code. If command passed, **ErrorCode** is 0;
- **SlipNumber** – Current slip number (1÷9999999);

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>{TaxH}<SEP>{EntDate}<SEP>
- **ErrorCode** – Indicates an error code. If command passed, **ErrorCode** is 0;
- **nZreport** – Number of first Z report;
- **TaxX** – Value of Tax group X (0.00÷99.99 taxable,100.00=disabled);
- **EntDate** – Date of entry (format DD–MM–YY);

Command: 51 (33h) – subtotal

Parameters of the command: {Print}<SEP>{Display}<SEP>{DiscountType}<SEP>{DiscountValue}<SEP>
Optional parameters: {Print},{DiscountType},{DiscountValue}

- **Print** – print out;
  - **'0'** – default, 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; If {DiscountType} is non zero, {DiscountValue} have 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 99.99 for percentage operations; If {DiscountType} is zero or empty, this paramter must be empty.

Answer: {ErrorCode}<SEP>{SlipNumber}<SEP>{Subtotal}<SEP>{TaxA}<SEP>{TaxB}<SEP>
{TaxC}<SEP>{TaxD}<SEP>{TaxE}<SEP>{TaxF}<SEP>{TaxG}<SEP>{TaxH}<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 or 0÷999999999 depending dec point position);
- **TaxX** – Recepts turnover by vat groups (0.00÷9999999.99 or 0÷999999999 depending dec point position);

Command: 53 (35h) – payment and calculation of the total sum (Total)

Parameters of the command:
Syntax 1: {PaidMode}<SEP>{Amount}<SEP>

- **PaidMode** – Type of payment;
  - **'0'** – cash;
  - **'1'** – credit card;
  - **'2'** – debit card;
  - **'3'** – other pay#3
  - **'4'** – other pay#4
  - **'5'** – other pay#5
- **Amount** – Amount to pay (0.00÷9999999.99 or 0÷999999999 depending dec point position);

Syntax 2: {PaidMode}<SEP>{Amount}<SEP>{Change}<SEP>

- **PaidMode** – Type of payment;
  - **'6'** – Foreign currency
- **Amount** – Amount to pay (0.00÷9999999.99 or 0÷999999999 depending dec point position);
- **Change** – Type of change. Only if PaidMode = '6';
  - **'0'** – current currency;
  - **'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 or 0÷999999999 depending dec point position);

Command: 54 (36h) – printing of a free fiscal text

Parameters of the command: {Text}<SEP>
Optional parameters:

- **Text** – text of 0÷46 symbols;

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
Answer: {ErrorCode}<SEP>{SlipNumber}<SEP>

- **ErrorCode** – Indicates an error code. If command passed, **ErrorCode** is 0;
- **SlipNumber** – Current slip number (1÷9999999);

Command: 57 (39h) – enter and print invoice data

Parameters of the command: {Seller}<SEP>{Receiver}<SEP>{Buyer}<SEP>{Address1}<SEP>
{Address2}<SEP>{TypeTAXN}<SEP>{TAXN}<SEP>{VATN}<SEP>
Mandatory paramenters:{TypeTAXN} ,{TAXN}, {VATN}

- **TypeTAXN** – Type of client's tax number. 0–BULSTAT; 1–EGN; 2–LNCH; 3–service number
- **TAXN** – Client's tax number. ascii string of digits 8÷13 Optional parameters:
- **VATN** – VAT number of the client. 10÷14 symbols
- **Seller** – Name of the client; 36 symbols max; if left blank prints empty space for hand–writing
- **Receiver** – Name of the receiver; 36 symbols max; if left blank prints empty space for hand–writing
- **Buyer** – Name of the buyer; 36 symbols max; if left blank prints empty space for hand–writing
- **Address1** – First line of the address; 36 symbols max; if left blank prints empty space for hand–writing
- **Address2** – Second line of the address; 36 symbols max; if left blank prints empty space for hand–writing

Answer: {ErrorCode}<SEP>

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

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÷3000

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

- **Quanity:** Example: 1.000; Max: 999999.999;
- **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;
- **DiscountValue** – value of discount. a number from 0.00 to 21474836.47 If {DiscountType} is zero or empty, this paramter must be empty.

Note: 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 you sold the item.

Answer: {ErrorCode}<SEP>{SlipNumber}<SEP>

- **ErrorCode** – Indicates an error code. If command passed, **ErrorCode** is 0;
- **SlipNumber** – Current slip number (1÷9999999);

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;

Note: The command can be executed only one time after daily Z report.
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 for last fiscal entry

Parameters of the command: {Type}<SEP>

- **Type** – Type of returned data. Default: 0;
  - 0 – Turnover on TAX group;
  - 1 – Amount on TAX group;

Answer: {ErrorCode}<SEP>{nRep}<SEP>{SumA}<SEP>{SumB}<SEP>{SumC}<SEP>
{SumD}<SEP>{SumE}<SEP>{SumF}<SEP>{SumG}<SEP>{SumH}<SEP>{Date}<SEP>

- **ErrorCode** – Indicates an error code. If command passed, **ErrorCode** is 0;
- **nRep** – Number of report 1÷1825;
- **SumX**–Depend on **Type**. X–TAX group(0.00÷9999999.99/0÷999999999 depending dec point position);
- **Date** – Date of fiscal record in format DD–MM–YY;

Command: 65 (41h) – daily taxation

Parameters of the command: {Type}<SEP>

- **Type** – Type of returned data. Default: 0;
  - 0 – Turnover on TAX group;
  - 1 – Amount on TAX group;

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

- **ErrorCode** – Indicates an error code. If command passed, **ErrorCode** is 0;
- **nRep** – Number of report (1÷1825);
- **SumX**–Depend on **Type**. X–TAX group (0.00÷9999999.99/0÷999999999 depending dec point position);

Command: 66 (42h) – set invoice interval

Parameters of the command: {End}<SEP>

- If the current invoice counter didn't reached the end of the interval.
  {Start}<SEP>{End}<SEP>
- If the current invoice counter have reached the end of the interval.
- **Start** – The starting number of the interval. Max 10 digits (1÷9999999999).
- **End** – The ending number of the interval. Max 10 digits (1÷9999999999).

Answer: {ErrorCode}<SEP>{Start}<SEP>{End}<SEP>{Current}<SEP>

- **ErrorCode** – Indicates an error code. If command passed, **ErrorCode** is 0;
- **Start** – The current starting value of the interval (1÷9999999999)
- **End** – The current ending value of the interval (1÷9999999999)
- **Current** – The current invoice receipt number (1÷9999999999)

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÷1825).

Command: 69 (45h) – X, Z reports

Parameters of the command: {ReportType}<SEP>

Mandatory parameters:

- **ReportType** – Report type;
  - **'X'** – X report;
  - **'Z'** – Z report;

Answer: {ErrorCode}<SEP>{nRep}<SEP>{TotA}<SEP>{TotB}<SEP>{TotC}<SEP>{TotD}<SEP>
{TotE}<SEP>{TotF}<SEP>{TotG}<SEP>{TotH}<SEP>

- **ErrorCode** – Indicates an error code. If command passed, **ErrorCode** is 0;
- **nRep** – Number of Z–report (1÷1825);
- **TotX** – Total sum accumulated by TAX group X – fiscal operations (0.00÷9999999.99 or 0÷999999999 depending dec point position);

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'** – Received on in foreign currency;
  - **'3'** – Paid out in foreign currency;
- **Amount** – the sum (0.00÷9999999.99 or 0÷999999999 depending dec point position);

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 or 0÷999999999 depending dec point position);
- **CashIn** – total sum of cash in operations (0.00÷9999999.99 or 0÷999999999 depending dec point position);
- **CashOut** – total sum of cash out operations (0.00÷9999999.99 or 0÷999999999 depending dec point position);

Command: 71 (47h) – print diagnostic information

Parameters of the command: {InfoType}<SEP>
Optional parameters: {InfoType}

- **InfoType** – type of the information printed;
  - **'0'** – general information about the device;
  - **'1'** – test of the modem; *Answer(1)*
  - **'2'** – general information about the connection with NAP server;(Servive jumper needed!) *Answer(2)*

Answer(1): {ErrorCode}<SEP>

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

Answer(2):{ErrorCode}<SEP>{LastDate}<SEP>{NextDate}<SEP>{Zrep}<SEP>
{ErrZnum}<SEP>{ErrCnt}<SEP>{ErrNum}<SEP>

- **ErrorCode** – Indicates an error code. If command passed, **ErrorCode** is 0;
- **LastDate** – Last connection to the server;
- **NextDate** – Next connection to the server;
- **Zrep** – Last send Z report;
- **ErrZnum** – Number of Z report with error;
- **ErrCnt** – Sum of all errors;
- **ErrNum** – Error number from the server;

Command: 72 (48h) – fiscalization

Parameters of the command: {SerialNumber}<SEP>{TAXnumber}<SEP>
Mandatory parameters:

- **SerialNumber** – Serial Number (Two letters and six digits: XX123456);
- **TAXnumber** – TAX number (max 13 characters);

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 tranzaction

Parameters of the command: none
Answer: {ErrorCode}<SEP>{IsOpen}<SEP>{Number}<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);
- **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 or 0÷999999999 depending dec point position);
- **Payed** – The sum payed for the current or the last receipt (0.00÷9999999.99 or 0÷999999999 depending dec point position);

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>
{TaxF}<SEP>{TaxG}<SEP>{TaxH}<SEP>{DecimalPoint}<SEP>
Mandatory parameters:

- **TaxX** – Value of VAT rate X;
  - **0.00÷99.99** – enabled;
  - **100.00** – disabled;
  - **DecimalPoint** – number of symbols after decimal point (0 or 2 – if decimal_point = 0 – work with integer prices. If decimal_point = 2 – work with fract prices);

Answer: {ErrorCode}<SEP>{RemainingChanges}<SEP>

- **ErrorCode** – Indicates an error code. If command passed, **ErrorCode** is 0;
- **RemainingChanges** – number of remaining changes (1÷30);

Command: 84 (54h) – Printing of barcode

Parameters of the command: {Type}<SEP>{Data}<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; **Data** – Data of the barcode;
    - **Length** of {Data} depents on the type of the barcode.

Note:Printing a barcode is permitted only in an opened fiscal or non–fiscal receipt.

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>
Mandatory parameters:

- **ItemGroup** – Number of item group;

Answer: {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>
Mandatory parameters:

- **Department** – Number of department;

Answer: {ErrorCode}<SEP>{TaxGr}<SEP>{Price}<SEP>{TotSales}<SEP>{TotSum}<SEP>{Name}<SEP>

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

Command: 89 (59h) – test of fiscal memory

Parameters of the command: {Write}<SEP>
Optional parameters:

- **Write** – Write 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

Parameters of the command:
Syntax 1: {Param}<SEP>
Optional parameters:

- **none** – Diagnostic information without firmware checksum;
  Answer(1)
- **'1'** – Diagnostic information with firmware checksum;
  Answer(1)
- **'#'** – Device identification;
  Answer(2)

Syntax 2: {Param}
Optional parameters:

- **none** – Diagnostic information without firmware checksum;
  Answer(3)
- **'1'** –Diagnostic information with firmware checksum;
  Answer(3)
- **'#'** – Device identification;
  Answer(4)

Answer(1): {ErrorCode}<SEP>{Name}<SEP>{FwRev}<SEP>{FwDate}<SEP>
{FwTime}<SEP>{Checksum}<SEP>{Sw}<SEP>{SerialNumber}<SEP>{FMNumber}<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 (Two letters and six digits: XX123456);
- **FMNumber** –Fiscal memory number (8 digits)

Answer(2): {ErrorCode}<SEP>{DevType}<SEP>{Country}<SEP>{DevName}<SEP>
{CountryCode}<SEP>{Major}<SEP>{Minor}<SEP>{Build}<SEP>
{DevNumber}<SEP>{HardwareVer}<SEP>{BootloaderVer}<SEP>

- **ErrorCode** – Indicates an error code. If command passed, **ErrorCode** is 0;
- **DevType** – Type of fiscal device = 2
- **Country** – Country code = 26
- **DevName** – Device name (up to 32 symbols).
- **CountryCode** – Code of dealer = 01
- **Major** – Official major version number= XX
- **Minor** – Official build number = XX
- **Build** – Internal build number = XX
- **DevNumber** – Device Serial Number
- **HardwareVer** – Hardware Version
- **BootloaderVer** – Bootloader Version

Answer(3):
{Name},{FwRev}{Sp}{FwDate}{Sp}{FwTime},{Checksum},{Sw},{SerialNumber}{FMNumber}<SEP>

- **Name** – Device name (up to 32 symbols).
- **FwRev** – Firmware version. 6 symbols;
- **Sp** – Space. 1 symbol;
- **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;
- **SerialNumber** – Serial Number (Two letters and six digits: XX123456);
- **FMNumber** –Fiscal memory number (8 digits)

Answer(4): {DevType},{Country},{DevName},{CountryCode},{Major},{Minor},{Build},
{SerialNumber},{HardwareVer},{BootloaderVer}

- **DevType** – Type of fiscal device = 2
- **Country** – Country code = 26
- **DevName** – Device name
- **CountryCode** – Code of dealer = 01
- **Major** – Official major version number= XX
- **Minor** – Official build number = XX
- **Build** – Internal build number = XX
- **SerialNumber** – Serial Number (Two letters and six digits: XX123456);
- **HardwareVer** – Hardware Version
- **BootloaderVer** – Bootloader Version

Command: 91 (5Bh) – programming of serial number and FM number

Parameters of the command: {SerialNumber}<SEP>{FMnumber}<SEP>
Mandatory parameters:

- **SerialNumber** – Serial Number (Two letters and six digits: XX123456);
- **FMnumber** – Fiscal Memory Number (Eight digits);

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 date

Parameters of the command: {Type}<SEP>{Start}<SEP>{End}<SEP>
Mandatory parameters:

- **Type** – 0 – short; 1 – detailed;

Optional parameters:

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

Answer: {ErrorCode}<SEP>

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

Command: 95 (5Fh) – fiscal memory report by number Z–report

Parameters of the command: {Type}<SEP>{First}<SEP>{Last}<SEP>
Mandatory parameters:

- **Type** – 0 – short; 1 – detailed;

Optional parameters:

- **First** – First block in the report. Default: 1;
- **Last** – Last block in the report. Default: number of last Z report;

Answer: {ErrorCode}<SEP>

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

Command: 98 (62h) – programming of TAX number

Parameters of the command: {TAXnumber}<SEP>
Mandatory parameters:

- **TAXnumber** – TAX number (max 13 characters);

Answer: {ErrorCode}<SEP>

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

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 (max 13 characters);

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 from 1÷30;
- **NewPwd** – Operator password, ascii string of digits. Lenght from 1÷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 current receipt

Parameters of the command: none
Answer: {ErrorCode}<SEP>{SumVATA}<SEP>{SumVATB}<SEP>{SumVATC}<SEP>
{SumVATD}<SEP>{SumVATE}<SEP>{SumVATF}<SEP>{SumVATG}<SEP>
{SumVATH}<SEP>{Inv}<SEP>{InvNum}<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 expanded receipt; '0' if it is simplified receipt;
- **InvNmb –** Number of the next invoice (up to 10 digits)

Command: 105 (69h) – report operators

Parameters of the command: {FirstOper}<SEP>{LastOper}<SEP>{Clear}<SEP>
Optional parameters:

- **FirstOper** – First operator. Default: 1 (1÷30);
- **LastOper** – Last operator. Default: Maximum operator number (1÷30);
- **Clear** – Clear registers for operators. Default: 0;
  - **'0'** – Does not clear registers for operators.
    '1' – Clear registers for operators.

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) – defening 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>
  Mandatory parameters:
  - **PLU** – Item number (1÷3000);
  - **TaxGr** – VAT group (letter 'A'÷'H' or cyrillic 'A'÷'З');
  - **Dep** – Department (0÷99);
  - **Group** – Stock group (1÷99);
  - **PriceType** – Price type ('0' – fixed price, '1' – free price, '2' – max price);
  - **Price** – Price (0.00÷9999999.99 or 0÷999999999 depending dec point position);
  - **Quantity** – Stock quantity (0.001÷99999.999);
  - **Name** – Item name (up to 32 symbols);

  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÷3000);
  - **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÷3000); If this parameter has value 'A', all items will be deleted(lastPLU must be empty).

  Optional parameters:
  - **lastPLU** – last item to delete (1÷3000). Default: {firstPLU};

  Answer(1)
- **'R'** – Reading item data;
  Syntax: {Option}<SEP>{PLU}<SEP>
  Mandatory parameters:
  - **PLU** – Item number (1÷3000);

  Answer(2)
- **'F'** – Returns data about the first found programmed item;
  Syntax: {Option}<SEP>{PLU}<SEP>
  Optional parameters:
  - **PLU** – Item number (1÷3000). Default: 0;

  Answer(2)
- **'L'** – Returns data about the last found programmed item;
  Syntax: {Option}<SEP>{PLU}<SEP>

Optional parameters:
- **PLU** – Item number (1÷3000). Default: 3000;

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÷3000). 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÷3000). Default: 3000;

  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÷3000). Default: 0;

  Answer(4)

- **'x'** – Find the last not programmed item;
  Syntax: {Option}<SEP>{PLU}<SEP>
  Optional parameters:
  - **PLU** – Item number (1÷3000). Default: 3000;

  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>
- **ErrorCode** – Indicates an error code. If command passed, **ErrorCode** is 0;
- **PLU** – Item number (1÷3000);
- **TaxGr** – VAT group (letter 'A'÷'H' or cyrillic 'A'÷'3');
- **Dep** – Department (0÷99);
- **Group** – Stock group (1÷99);
- **PriceType** – Price type ('0' – fixed price, '1' – free price, '2' – max price) ;
- **Price** – Price (0.00÷9999999.99 or 0÷999999999 depending dec point position);
- **Turnover** – Accumulated amount of the item (0.00÷9999999.99 or 0÷999999999 depending dec point position);
- **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 32 symbols);

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 (3000);
- **Prog** – Total count of the programmed items (0÷3000);
- **NameLen** – Maximum length of item name (32);

Answer(4): {ErrorCode}<SEP>{PLU}<SEP>

- **ErrorCode** – Indicates an error code. If command passed, **ErrorCode** is 0;
- **PLU** – Item number (1÷3000);

Command: 109 (6Dh) – print dublicate receipt

Parameters of the command: none
Answer: {ErrorCode}<SEP>

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

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'** – Refund sums – Answer(2);
  - **'2'** – Number and sum of sells – Answer(3);
  - **'3'** – Number and sum of discount and surcharge – Answer(4);
  - **'4'** – Number and sum corrections and annulled receipts – Answer(5);
  - **'5'** – Number and sum paid out and received on – Answer(6);

Answer 1: {ErrorCode}<SEP>{Pay1}<SEP>{Pay2}<SEP>{Pay3}<SEP>{Pay4}<SEP>
{Pay5}<SEP>{Pay6}<SEP>{ForeignPay}<SEP>

- **ErrorCode** – Indicates an error code. If command passed, **ErrorCode** is 0;
- **PayX** – Value payed by payment X (0.00÷9999999.99 or 0÷999999999 depending dec point position);
- **ForeignPay**–Value payed by foreign currency (0.00÷9999999.99 or 0÷999999999 depending dec point position);

Answer 2: {ErrorCode}<SEP>{Pay1}<SEP>{Pay2}<SEP>{Pay3}<SEP>{Pay4}<SEP>
{Pay5}<SEP>{Pay6}<SEP>{ForeignPay}<SEP>

- **ErrorCode** – Indicates an error code. If command passed, **ErrorCode** is 0;
- **PayX**–Value payed by payment X for return(0.00÷9999999.99 or 0÷999999999 depending dec point position);
- **ForeignPay** – Value payed by foreign currency for return (0.00÷9999999.99 or 0÷999999999 depending dec point position);

Answer 3: {ErrorCode}<SEP>{Num}<SEP>{Sum}<SEP>

- **ErrorCode** – Indicates an error code. If command passed, **ErrorCode** is 0;
- **Num** – number of clients;
- **Sum** – sum of the sells.

Answer 4: {ErrorCode}<SEP>{qSur}<SEP>{sSur}<SEP>{qDis}<SEP>{sDis}<SEP>

- **ErrorCode** – Indicates an error code. If command passed, **ErrorCode** is 0;
- **qSur** – number of surcharges;
- **sSur** – sum of surcharges;
- **qDis** – number of discounts;
- **sDis** – sum of discounts.

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;
- **s Void** – sum of corrections;
- **qAnul** – number of annulled;
- **sAnul** – sum of annulled.

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;
- **sCashIn1** – sum of cash in operations;
- **qCashOut1** – number of cash out operations;
- **sCashOut1** – sum of cash out operations;
- **q CashIn2** – number of cash in operations in alternate currency;
- **sCashIn2** – sum of cash in operations in alternate currency;
- **qCashOut2** – number of cash out operations in alternate currency;
- **sCashOut2** – sum of cash out operations in alternate currency.

Command: 111 (65h) – PLU report

Parameters of the command: {Type}<SEP>{FirstPLU}<SEP>{LastPLU}<SEP>
Mandatory parameters:

- **Type** – Type of report;
  - **'0'** – PLU turnovers;
  - **'1'** – PLU turnovers with clearing;
  - **'2'** – PLU parameters;
  - **'3'** – PLU stock;

Optional parameters:

- **FirstPLU** – First PLU in the report (1÷3000). Default: 1;
- **LastPLU** – Last PLU in the report (1÷3000). Default: Maximum PLU in the FPR;

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>{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 or 0÷999999999 depending dec point position);
- **nDiscount** – Number of discounts (0÷65535);
- **Discount** – Total accumulated sum of discounts with sign (0.00÷9999999.99 or 0÷999999999 depending dec point position);
- **nSurcharge** – Number of surcharges (0÷65535);
- **Surcharge** – Total accumulated sum of surcharges with sign(0.00÷9999999.99 or 0÷999999999 depending dec point position);
- **nVoid** – Number of corrections (0÷65535);
- **Void** – Total accumulated sum of corrections with sign(0.00÷9999999.99 or 0÷999999999 depending dec point position);

Command: 116 (74h) – reading FM

Parameters of the command: {Operation}<SEP>{Address}<SEP>{nBytes}<SEP>
Mandatory parameters:

- **Operation** – type of operation = '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: 124 (7Ch) – search receipt number by period

Parameters of the command: {StartDate}<SEP>{EndDate}<SEP>Type<SEP>
Optional parameters:

- **StartDate** – Start date for searching. Default: Date of first document;
- **EndDate** – End date for searching. Default: Date of last document;
- **Type** – Receipt type;
  - **'0'** – all types;
  - **'1'** – fiscal receipts;
  - **'2'** – daily z reports;
  - **'3'** – invoice receipts;
  - **'4'** – nonfiscal receipts;

Answer: {ErrorCode}<SEP>{StartDate}<SEP>{EndDate}<SEP>{FirstDoc}<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;
- **FirstDoc** – First document in the period, depending "Type" (1÷9999999);
- **LastDoc** – Last document in the period, depending "Type" (1÷9999999);

Command: 125 (7Dh) – info EJ

Parameters of the command: {Option}<SEP>{DocNum}<SEP>{RecType}<SEP>
Mandatory parameters:

- **Option** :
  - **'0'** – Set document to read; *Answer(1)*
  - **'1'** – Read one line as text. Must be called multiple time to read whole document; *Answer(2)*
  - **'2'** – Read as data. Must be called multiple time to read whole document; *Answer(3)*
  - **'3'** – Print document; *Answer(4)*

Optional parameters:

- **DocNum** – Number of document (1÷9999999). Needed for **Option** = 0.
- **RecType** – Document type. Needed for **Option** = 0.
  - **'0'** – all types;
  - **'1'** – fiscal receipts;
  - **'2'** – daily z reports;
  - **'3'** – invoice receipts;
  - **'4'** – nonfiscal receipts;

Answer(1):
{ErrorCode}<SEP>{DocNumber}<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) ;
- **RecNumber** – Number of document (depending "Type");
- **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'** – invoice receipts;
  - **'3'** – daily z reports;
  - **'4'** – non fiscal receipts;
  - **'5'** – paidout receipts;
- **Znumber–** number of Z report (1÷1825);

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: 255 (FFh) – programming

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)
    - **AutoPaperCutting** – Permission/rejection of the automatic cutting of paper after each receipt. (1 – permitted, 0 – rejected);
    - **PaperCuttingType** – Partial=0/Full=1 cutting of paper;
    - **BarCodeHeight** – Barcode height from '1' (7mm) to '10' (70mm);
    - **BarcodeName** – Enagle/Disable printing of the barcode data;
    - **BthDiscoverability** – turn on / off bluetooth device discoverability; (1 – discoverable; 0 – non–discoverable);
    - **BthPairing** – 0–unsecure, 1–reset and save, 2–reset;
    - **BthPinCode** – pin code for bluetooth pairing (default: 0000);
    - **BthVersion** – firmware version of bluetooth module;
    - **BthAddress** – bluetooth device address;
    - **ComPortBaudRate** – Baud rate of COM port that has peripheral device assigned.(from 0 to 999999) Number of COM port is determined by **"Index"**.
    - **ComPortProtocol** – Protocol for communication with peripheral device assigned COM port. (from 0 to 9), if device is scale; Number of COM port is determined by **"Index"**.
  - **FPR parameters**;
    - **EcrLogNumber** – Logical number in the workplace (from 1 to 9999);
    - **EcrExtendedReceipt** – Type of the receipt(1 – extended(invoice), 0 – simplified);
    - **EcrDoveriteli** – Work with constituents: 1–enable(in one receipt only one constituent), 0 – disable;

  - **EcrConnectedOperReport** – When making Z–report, automatically make "Operator 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);
  - **EcrConnectedGroupsReport** – When making Z–report, automatically make "Group report" (1 – enable; 0 – disable);;
  - **EcrConnectedCashReport** – When making Z–report, automatically make "FPr report" (1 – enable; 0 – disable);
  - **EcrPluDailyClearing** – When making Z–report, automatically clear PLU turnover (1 – enable; 0 – disable);
- **Currencies**
  - **CurrNameLocal** – Locam 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);
- **Header of the receipt**
  - **Header** – Text up to 48 symbols. Header line is determined by **"Index"**, Index 0 is for line 1, Index 9 is for line 10;
- **Footer of the receipt**
  - **Footer** – Text up to 48 symbols. 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. Text up to 8 symbols. (Require Service jumper) Number of operator is determined by **"Index"**;
- **Payments**
  - **PayName** – Name of payment. Text up to 10 symbols. Number of payment is determined by **"Index"**;
  - **Payment_forbidden** – Forbid the payment (1– forbidden, 0 – not forbidden). Number of payment is determined by **"Index"**;
- **Service**
  - **ServPasw** – Password of the Service man. Text up to 8 symbols;(Require Service jumper)
  - **ServMessage** – Message that will be printed when "ServDate" is reached, up to 48 symbols.(Require Service jumper) Message line is determined by **"Index"**;
  - **ServiceDate** – Service date(Format: DD–MM–YY HH:MM:SS);
- **Receipt parameters**;
  - **PrnQuality** – Contrast of Printing (from 0 to 20);
  - **DublReceipts** – Print receipt dublicate (1 – enable, 0 –disable);
  - **BarcodePrint** – Print PLU barcode in the receipt (1 – enable, 0 –disable);
  - **LogoPrint** – Print logo in the receipt (1 – enable, 0 –disable);
  - **DoveritelPrint** – Print depratment name in the beginning of the receipt (1 – enable, 0 –disable);
  - **ForeignPrint** – Print total sum in foreign currency (1– enable, 0–disable, 2– print exchange rate);
  - **VatPrintEnable** – Print VAT rates in the receipt (1 – enable, 0 –disable);
- **Item Groups**
  - **ItemGroups_name** – Name of item group. Text up to 32 symbols. Number of item group is determined by **"Index"**;
- **Department registers**
  - **Dept_name** – Name of department. Text up to 32 symbols. Number of department is determined by **"Index"**;

- **Dept_ext_name** – Extendet name of department. Text up to 32 symbols. Number of department is determined by **"Index"**;
- **Dept_vat** – VAT group of department(from 1 to 8). Number of department is determined by **"Index"**;
- **Dept_price** – Programmed price of department(from 0 to 999999999). Number of department is determined by **"Index"**;

Optional parameters:

- **Index** – Used for index if variable is array. For variable that is not array can be left blank. Default: 0; *Note: For example: Header[], Index 0 refer to line 1. Index 9 refer to line 10.*
- **Value** – If this parameter is blank FPR will return current value (*Answer(2)*). If the value is set, then FPR 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;