FISCAL DEVICE

DATECS FMP-350X

DATECS FMP-55X

DATECS FP-700X

DATECS WP-500X

DATECS WP-50X

DATECS DP-25X

DATECS DP-150X

Programmer's Manual

Version: 2.02, 2019

Content

Description of the program interface

The fiscal device operates under the control of an application program, with which communicates via RS232 (USB 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,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 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;

Note: The command is not used on FMP-350X and FMP-55X;

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;
- *Note: The command is not used on FMP-350X and FMP-55X;*

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>{Bold}<SEP>{Italic}<SEP>{Hght}<SEP>{Underline}<SEP>{alignment}<SEP>

Mandatory parameters:

- **Text** - text of 0...XX symbols. XX depend of opened receipt type. XX = (PrintColumns-2);

Optional parameters:

- **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;
- **Hght** - 0, 1 or 2. 0=normal height, 1=double height, 2=half height; empty field = normal height 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: 43 (2Bh) Opening of storno documents

Parameters of the command:

{OpCode}<SEP>{OpPwd}<SEP>{TillNmb}<SEP>{Storno}<SEP>{DocNum}<SEP>{DateTime}<SEP>{FM Number}<SEP>{Invoice}<SEP>{ToInvoice}<SEP>{Reason}<SEP>{NSale}<SEP>

Mandatory parameters:

- **OpCode** - Operator number from 1...30;
- **OpPwd** - Operator password, ascii string of digits. Length from 1...8;
- **TillNmb** - Number of point of sale from 1...99999;
- **Storno** - Reason for storno.
  If **Storno** has value '0' it opens storno receipt. Reason "operator error";
  If **Storno** has value '1' it opens storno receipt. Reason "refund";
  If **Storno** has value '2' it opens storno receipt. Reason "tax base reduction";
- **DocNum** - Number of the original document (global 1...9999999);
- **FMNumber** - Fiscal memory number of the device the issued the original document;
- **DateTime** - Date and time of the original document(format "DD-MM-YY hh:mm:ss DST");

Optional parameters:

- **Invoice** - If this parameter has value 'I' it opens an invoice storno/refund receipt.
- **ToInvoice** - If **Invoice** is 'I' - Number of the invoice that this receipt is referred to; If **Invoice** is blank this parameter has to be blank too;
- **Reason** - If **Invoice** is 'I' - Reason for invoice storno/refund. If **Invoice** is blank this parameter has to be blank too;
- **NSale** - Unique sale number (21 chars "LLDDDDDD-CCCC-DDDDDDD", L[A-Z], C[0-9A-Za-z], D[0-9]) The parameter is not required only if the original document is printed by the cashier and not by the PC program.

Answer:

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

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

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;

  Note: The command is only used on FP-700X;

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;

  Note: The command is not used on FMP-350X and FMP-55X;

Command: 48 (30h) Open fiscal receipt

Parameters of the command:

Syntax 1:
{OpCode}<SEP>{OpPwd}<SEP>{TillNmb}<SEP>{Invoice}<SEP>
Syntax 2:
{OpCode}<SEP>{OpPwd}<SEP>{NSale}<SEP>{TillNmb}<SEP>{Invoice}<SEP>

Mandatory parameters:

- **OpCode** - Operator number from 1...30;
- **OpPwd** - Operator password, ascii string of digits. Lenght from 1...8;
- **NSale** - Unique sale number (21 chars "LLDDDDDD-CCCC-DDDDDDD", L[A-Z], C[0-9A-Za-z], D[0-9])
- **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:

Syntax 1:
{PluName}<SEP>{TaxCd}<SEP>{Price}<SEP>{Quantity}<SEP>{DiscountType}<SEP>{DiscountValue}<SEP>{Department}<SEP>
Syntax 2:
{PluName}<SEP>{TaxCd}<SEP>{Price}<SEP>{Quantity}<SEP>{DiscountType}<SEP>{DiscountValue}<SEP>{Department}<SEP>{Unit}<SEP>

Mandatory parameters: **PluName**, **TaxCd**, **Price**

- **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'** - 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
- **Department** - Number of the department 0..99; If '0' - Without department;

Optional parameters: **Quantity**, **DiscountType**, **DiscountValue**

- **Quantity** - Quantity of the product (default: 1.000); Format: 3 decimals; up to *999999.999
- **Unit** - Unit name, up to 6 characters not empty string;

!!! 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; 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 0.01 to 9999999.99 for sum operations;
  - a number from 0.01 to 99.99 for percentage operations;

    Note

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

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** - 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;
    Note: The option is not used on FMP-350X and FMP-55X;
- **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 0.01 to 21474836.47 for sum operations;
  - a number from 0.01 to 99.99 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>{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) Payments and calculation of the total sum (TOTAL)

Parameters of the command:
Syntax 1:

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

Mandatory parameters:

- **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);

Optional parameters (with PinPad connected):

- **Type** - Type of card payment. Only for payment with debit card;
  - **'1'** - with money;
  - **'12'-** with points from loyal scheme;

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>Bold<SEP>Italic<SEP>DoubleH<SEP>Underline<SEP>alignment<SEP>

Mandatory parameters:

- **Text** - text of 0...XX symbols, XX = PrintColumns-2;

Optional parameters:

- **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: 55 (37h) Pinpad commands

Parameters of the command:

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

Mandatory parameters: {Option}

- **'1'** - Void;
  Syntax: If pinpad is configured for Borica:
  {Option}<SEP>{PayType}<SEP>{Amount}<SEP>{RRN}<SEP>{AC}<SEP>

Mandatory parameters:

.

- **PayType** - Type of payment: 7 - Return with money, 13 - Return with points from loyal scheme;
- **Amount** - The amount of the transaction;
- **RRN** - RRN of the transaction(12 digits max);
- **AC** - AC of the transaction(6 digits max); If pinpad is configured for UBB:
  {Option}<SEP>{PayType}<SEP>{Amount}<SEP>{Number}<SEP>
  Mandatory parameters:
  .
- **PayType** - Type of payment: 16 - Return with AC number, 17 - Return with receipt number;
- **Amount** - The amount of the transaction;
- **Number** - depent on PayType(16 - AC number, 17 - receipt number) If pinpad is configured for DSK:
  {Option}<SEP>{PayType}<SEP>{Amount}<SEP>
  Mandatory parameters:
  .
- **PayType** - Type of payment: 16 - Return with money;
- **Amount** - The amount of the transaction;
  {Option}<SEP>{PayType}<SEP>
  Mandatory parameters:
  .
- **PayType** - Type of payment: 17 - Void last document;

- **'2'** - Copy of last document;
  Syntax:
  {Option}<SEP>
- **'3'** - Copy of document by type;
  Syntax:
  {Option}<SEP>{Type}<SEP>{Number}<SEP>
  Mandatory parameters:
  - **Type** - 1 - RRN, 2 - AC, 3 - Number of the transaction;
  - **Number** - depends on Type(RRN - 12 digits max, AC - 6 digits max, Number - 6 digits max);
- **'4'** - Copy of all documents;
  Syntax:
  {Option}<SEP>
- **'5'** - End of day from Pinpad;
  Syntax:
  {Option}<SEP>
- **'6'** - Report from pinpad;
  Syntax:
  {Option}<SEP>
- **'7'** - Full report from pinpad;
  Syntax:
  {Option}<SEP>
- **'8'** - Enter date and time for Pinpad;
  {Option}<SEP>{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

- **'9'** - Check connection with Pinpad;
  Syntax:
  {Option}<SEP>
  Answer
- **'10'** - Check connection with server;
  Syntax:
  {Option}<SEP>
  Answer
- **'11'** - Loyalty balance;
  Syntax:
  {Option}<SEP>
- **'12'** - Get update;
  Syntax:
  {Option}<SEP>

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 parameters:{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>{Quantity}<SEP>{Price}<SEP>{DiscountType}<SEP>{DiscountValue}<SEP>

Mandatory parameters: **PluCode**

- **PluCode:** The code of the item. from 1 to MAX_PLU. MAX_PLU: ECR-100000, Printer-3000;

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;
- **DiscountValue** - value of discount.
  - a number from 0.01 to 9999999.99 for sum operations;
  - a number from 0.01 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>

- **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;

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: 63 (3Fh) Show current date and time on the external display

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;

Note: The command is not used on FMP-350X and FMP-55X;

Command: 64 (40h) Information on the 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;
  - **2** - Storno turnover on TAX group;
  - **3** - Storno 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...3650;
- **SumX** - Depend on **Type**. X is the letter of TAX group (0.00...9999999.99 or 0...999999999 depending dec point position);
- **Date** - Date of fiscal record in format DD-MM-YY;

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;
  - **1** - Amount on TAX group;
  - **2** - Storno turnover on TAX group;
  - **3** - Storno 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...3650);
- **SumX** - Depend on **Type**. X is the letter of TAX group (0.00...9999999.99 or 0...999999999 depending dec point position);

Command: 66 (42h) Set invoice interval

Parameters of the command:

Syntax 1:

{End}<SEP>

- If the current invoice counter didn't reached the end of the interval.

Syntax 2:

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

- If the current invoice counter have reached the end of the interval.

Syntax 3:

none – read current values.

- **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 or 3650).

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)
  - **'D'** - Departments report; Answer(2)
  - **'G'** - Item groups report; Answer(2)

Answer:

{ErrorCode}<SEP>{nRep}<SEP>{TotA}<SEP>{TotB}<SEP>{TotC}<SEP>{TotD}<SEP>{TotE}<SEP>{TotF}<SEP>{TotG}<SEP>{TotH}<SEP>{StorA}<SEP>{StorB}<SEP>{StorC}<SEP>{StorD}<SEP>{StorE}<SEP>{StorF}<SEP>{StorG}<SEP>{StorH}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **nRep** - Number of Z-report (1...3650);
- **TotX** - Total sum accumulated by TAX group X - sell operations (0.00...9999999.99 or 0...999999999 depending dec point position);
- **StorX** - Total sum accumulated by TAX group X - storno operations (0.00...9999999.99 or 0...999999999 depending dec point position);

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 or 0...999999999 depending dec point position); If Amount=0, the 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 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) General information, modem test

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 with connection to the NRA server;
  - **'2'** - general information about the connection with NRA server;
    Answer(2)
  - **'3'** - print information about the connection with NRA server;

- **'4'** - test of the LAN interface if present;
- **'6'** - test of the SD card performance;
- **'9'** - setup of the Ble module (if present);
- **'10'** - test of the modem without PPP connection;

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>{ZErrZnum}<SEP>{ZErrCnt}<SEP>{ZErrNum}<SEP>{SellErrnDoc}<SEP>{SellErrCnt}<SEP>{SellErrStatus}<SEP>SellNumber<SEP>SellDate<SEP>LastErr<SEP>RemMinutes<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;
- **ZErrZnum** - Number of Z report with error;
- **ZErrCnt** - Sum of all errors for Z reports;
- **ZErrNum** - Error number from the server;
- **SellErrnDoc** - Number of sell document with error;
- **SellErrCnt** - Sum of all errors for sell documents;
- **SellErrStatus** - Error number from the server;
- **SellNumber** - Last received document number from the server;
- **SellDate** - The date and time of last received document from the server;
- **LastErr-** Last error from the server;
- **RemMinutes-** Remaining minutes until next GetDeviceInfo request;

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 transaction

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**
  - 0 - Receipt is closed;
  - 1 - Normal receipt is open;
  - 2 - Storno receipt is open. Reason "mistake by operator";
  - 3 - Storno receipt is open. Reason "refund";
  - 4 - Storno receipt is open. Reason "tax base reduction";
- **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>{decimal_point}<SEP>

Mandatory parameters:

- **TaxX** - Value of VAT rate X;
  - **0.00**...**99.99** - enabled;
  - **100.00** - disabled;
- **decimal_point** - value: 0 or 2(if decimal_point = 0 - work with integer prices. If decimal_point = 2 - work with fract prices);

  Note

  When changing decimal_point is necessart to restart the printer so the correct values indicate on the client display **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>{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;
  - **'6'** - PDF417 truncated **Data** must contain symbols with ASCII codes between 32 and 127. **Data** length is between 3 and 400 symbols;
  - **'7'** - PDF417 normal **Data** must contain symbols with ASCII codes between 32 and 127. **Data** length is between 3 and 400 symbols;
- **Data** - Data of the barcode; Length of **Data** depents on the type of the barcode.

Optional parameters:

- **QRcodeSize** - Dots multiplier (3...10) for QR barcodes and PDF417 barcodes. Default: 4;

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:

{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 (1...99); If **Department** is empty - department report;

Answer:

{ErrorCode}<SEP>{TaxGr}<SEP>{Price}<SEP>{TotSales}<SEP>{TotSum}<SEP>{STotSales}<SEP>{STotSum}<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;
- **STotSales** - Number of storno operations for this department for day;
- **STotSum** - Accumulated sum from storno operations 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 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)

Syntax 2: {Param}
Optional parameters:

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

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): {Name},{FwRev}{Sp}{FwDate}{Sp}{FwTime},{Checksum},{Sw},
{SerialNumber},{FMNumber}

- **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)

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 '=';
  - **'4'** - Print fixed text "НЕ СЕ ДЪЛЖИ ПЛАЩАНЕ";

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 of Z-report

Parameters of the command:

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

Mandatory parameters:

- **Type** - 0 - short; 1 - detailed;

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:

{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 the 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>fStorno<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)
- **fStorno -** '1' if a storno receipt is open; '0' if it is normal receipt;

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;

Note: *only for FP-705*

Command: 107 (6Bh) Defining 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;
  Syntax1:
  {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>
  Syntax2:
  \code
  {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 (For ECRs 1...100000; For FPs 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);
  - **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 (For ECRs 1...100000; For FPs 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 (For ECRs 1...100000; For FPs 1...3000). If this parameter has value 'A', all items will be deleted (**lastPLU** must be empty);

  Optional parameters:
  - **lastPLU** - Last item to delete (For ECRs 1...100000; For FPs 1...3000). Default: **firstPLU**;

  Answer(1)
- **'R'** - Reading item data;
  Syntax:
  {Option}<SEP>{PLU}<SEP>
  Mandatory parameters:
  - **PLU** - Item number (For ECRs 1...100000; For FPs 1...3000);

  Answer(2)
- **'F'** - Returns data about the first found programmed item;
  Syntax:
  {Option}<SEP>{PLU}<SEP>
  Optional parameters:
  - **PLU** - Item number (For ECRs 1...100000; For FPs 1...3000). Default: 1;

  Answer(2)
- **'L'** - Returns data about the last found programmed item;
  Syntax:
  {Option}<SEP>{PLU}<SEP>
  Optional parameters:
  - **PLU** - Item number (For ECRs 1...100000; For FPs 1...3000). Default: For ECRs 100000; For FPs 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 (For ECRs 1...100000; For FPs 1...3000). Default: 1;

  Answer(2)
- **'l'** - Returns data about the last found item with sales on it;
  Syntax:
  {Option}<SEP>{PLU}<SEP>
  Optional parameters:
  - **PLU** - Item number (For ECRs 1...100000; For FPs 1...3000). Default: For ECRs 100000; For FPs 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 (For ECRs 1...100000; For FPs 1...3000). Default: 1;

  Answer(4)
- **'x'** - Find the last not programmed item;
  Syntax:
  {Option}<SEP>{PLU}<SEP>
  Optional parameters:
  - **PLU** - Item number (For ECRs 1...100000; For FPs 1...3000). Default: For ECRs 100000; For FPs 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 (For ECRs 1...100000; For FPs 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 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 (For ECRs: 100000; For FPs: 3000);
- **Prog** - Total count of the programmed items (For ECRs 0...100000; For FPs 0...3000);
- **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 (For ECRs 1...100000; For FPs 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 (sell operations);
    Answer(1)
  - **'1'** - Payments (storno operations);
    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>{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 (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 (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>

- **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 (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;
  - **'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: 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)*
  - **'2'** - Battery and GSM signal status; *Answer(2)*
  - **'3'** - Last fiscal receipt; *Answer(3)*
  - **'4'** - Full EJ verify; *Answer(4)*

Answer(1):

{ErrorCode}<SEP>{SerialNumber}<SEP>{FiscalNumber}<SEP>{Headerline1}<SEP>{Headerline2}<SEP>{TAXnumber}<SEP>{Headerline3}<SEP>{Headerline4}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **SerialNumber** - Serial number;
- **FiscalNumber** - FMemory number;
- **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);
- **Headerline3** - Supposed to contain name of the business premises (up to depending on device's maximum printing columns);
- **Headerline4** - Supposed to contain address of the business premises (up to depending on device's maximum printing columns);
- **TAXnumber**

Answer(2):

{ErrorCode}<SEP>{MainBattery}<SEP>{RamBattery}<SEP>{Signal}<SEP>{Network}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **MainBattery** - Main Battery level in mV;
- **RamBattery** - Ram Battery level in mV;
- **Signal** - GSM Signal level in percentage;
- **Network** - GSM network;

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..????);
- **Zdate** - Date of last of Z-report (format "DD-MM-YYYY hh:mm:ss");

Answer(4):

{ErrorCode}<SEP>

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

Command: 124 (7Ch) Search receipt number by period

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;
  - **'5'** - paidout receipts;
  - **'6'** - fiscal receipts - storno;
  - **'7'** - invoice receipts - storno;
  - **'8'** - cancelled receipts (all voided);
  - **'9'** - daily X reports;
  - **'10'** - fiscal receipts, invoice receipts, fiscal receipts - storno and invoice receipts - storno;

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. For **DocType** = '2' (1...3650), else (1...99999999);
- **LastDoc** - Last document in the period. For **DocType** = '2' (1...3650), else (1...99999999);

Command: 125 (7Dh) Information from EJ

Parameters of the command:

Syntax 1:
{Option}<SEP>{DocNum}<SEP>{RecType}<SEP>
Syntax 2 (read CSV data):
{Option}<SEP>{FirstDoc}<SEP>{LastDoc}<SEP>
Syntax 3 (read CSV data):
{Option}<SEP>

Syntax1: Mandatory parameters:

- **Option** - Type of information;
  - **'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)*

Syntax1: 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;
  - **'5'** - paidout receipts;
  - **'6'** - fiscal receipts - storno;
  - **'7'** - invoice receipts - storno;
  - **'8'** - cancelled receipts (all voided);
  - **'9'** - daily X reports;
  - **'10'** - fiscal receipts, invoice receipts, fiscal receipts - storno and invoice receipts - storno;

Syntax2: Mandatory parameters:

- **Option** - Type of information;
  - **'9'** - Set document to read; *Answer(1)*
- **FirstDoc** - First document in the period (1...99999999). Number received in response to command 124;
- **LastDoc** - Last document in the period. (1...99999999). Number received in response to command 124;

Syntax3: Mandatory parameters:

- **Option** - Type of information;
  - **'8'** - Read as data. Must be called multiple times to read the whole document; *Answer(5)*

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'** - daily Z reports;
  - **'3'** - invoice receipts;
  - **'4'** - non fiscal receipts;
  - **'5'** - paidout receipts;
  - **'6'** - fiscal receipts - storno;
  - **'7'** - invoice receipts - storno;
  - **'8'** - cancelled receipts (all voided);
  - **'9'** - daily X reports;
- **Znumber-** number of Z report (1...3650);

Answer(2):

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

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **TextData** - Document text (up to 64 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;

Answer(5):

{ErrorCode}<SEP>{CSV_Col_1}<SEP> ... {CSV_Col_14}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **CSV_Col_1** - идентификационен номер на ФУ;
- **CSV_Col_2** - вид на ФБ - ФБ, Разширен ФБ, Сторно ФБ или Разширен сторно ФБ;
- **CSV_Col_3** - номер на ФБ;
- **CSV_Col_4** - уникален номер на продажба (УНП) - в случай, че ФУ е от типа "Фискален принтер" или работи в такъв режим;
- **CSV_Col_5** - стока/услуга - наименование;
- **CSV_Col_6** - стока/услуга - единична цена;
- **CSV_Col_7** - стока/услуга - количество;
- **CSV_Col_8** - стока/услуга - стойност;
- **CSV_Col_9** - обща сума на т ФБ/Сторно ФБ или Разширен ФБ/Разширен сторно ФБ;
- **CSV_Col_10** - номер на фактура/кредитно известие - в случай че записът е за Разширен ФБ или съответно - за Разширен сторно ФБ;
- **CSV_Col_11** - ЕИК на получател - в случай че записът е за разширен ФБ или Разширен сторно ФБ;
- **CSV_Col_12** - номер на сторниран ФБ - в случай че записът се отнася за Сторно ФБ или Разширен сторно ФБ;
- **CSV_Col_13** - номер на сторнирана фактура - в случай че записът се отнася за Разширен сторно ФБ;
- **CSV_Col_14** - причина за издаване - в случай че записът се отнася за Сторно ФБ или Разширен сторно ФБ.

Command: 127 (7Fh) Stamp operations

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;

Answer:

{ErrorCode}<SEP>

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

Command: 135 (87h) Modem information

Parameters of the command:

{Option}[<SEP>]

Mandatory parameters:

- **Option** - Type of information to return;
  - **'s'** - Read the IMEI of the modem; *Answer(1)*
  - **'i'** - Read the IMSI of the SIM card; *Answer(2)*
  - **'M'** - Modem status. Returns the last state of the modem; *Answer(3)*

Answer(1):

{ErrorCode}<SEP>{IMEI}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **IMEI** - IMEI number of the modemm;

Answer(2):

{ErrorCode}<SEP>{IMSI}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **IMSI** - IMSI number of the SIM card;

Answer(3):

{ErrorCode}<SEP>{SignalLevel}<SEP>{IMEI}<SEP>{IMSI}<SEP>{MobileOparatorName}<SEP>

- **ErrorCode** - Indicates an error code. If command passed, **ErrorCode** is 0;
- **SignalLevel** - GSM Signal level in percentage 0...100;
- **IMEI** - IMEI number of the modem;
- **IMSI** - IMSI number of the SIM card;
- **MobileOparatorName**;

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.

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: 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) (FP-700X only);
    - **PaperCuttingType** - Partial=0/Full=1 cutting of paper (FP-700X only);
    - **BarCodeHeight** - Barcode height from '1' (7mm) to '10' (70mm);
    - **BarcodeName** - Enable/Disable printing of the barcode data;
    - **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"**.
    - **MainInterfaceType** - PC interface type. 0-auto select, 1-RS232, 2-BLUETOOTH, 3-USB, 4-LAN;
    - **TimeOutBeforePrintFlush-** Time out between fiscal printer commands before start auto print(in milliseconds). value 1...999999999;
    - **WorkBatteryIncluded** - FPr works with battery on main supply (1 - enable; 0 - disable);
    - **Dec2xLineSpacing** - 0...5 - Default 0; Decrease the space between text lines. Greater values = less line spacing.
    - **PrintFontType** - Printer font type. 0: default, coarser with a small line spacing, 1: smaller, with greater spacing between rows.;

- **FooterEmptyLines** - number of blank lines for proper paper cutting;
- **HeaderMinLines** - Minimum number of lines from the header after printing the footer;
- **LogoPrintAfterFooter** - Print the logo after rows to push the paper. 1: yes, 0: no. default: 0;
- **EnableNearPaperEnd** - handling of near paper end. 0: No handling, 1: handling (default);
- **DateFromNAPServDisable** - Synchronize date/time from the NRA server (0 - sync, 1 - does not sync);
- **AutoPowerOff** - Minutes to automatically turn off ECR if it is idle. (0 - disable; from 1 minute to 15 minutes);
- **BkLight_AutoOff** - Minutes to automatically turn off Backlight of the display if FPr is idle. (0 - disable; from 1 minute to 5 minutes);

- **PinPad**
  - **PinpadComPort** - Number of COM port for communication with pinpad;
  - **PinpadComBaudRate** - Baud rate of COM port that has pinpad device assigned.(from 0 to 999999);
  - **PinpadComPortProtocol** - Protocol for communication with pinpad device;
- **Bluetooth** parameters (only for bluetooth enabled devices and not for FMP-55X)
  - **BthEnable** - turn on / off bluetooth module;
  - **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;
- **ECR parameters**;
  - **EcrLogNumber** - Logical number in the workplace (from 1 to 9999);
  - **EcrExtendedReceipt** - Type of the receipt(1 - extended, 0 - simplified);
  - **EcrDoveriteli** - Work with constituents: 1-enable(in one receipt only one constituent), 0 - disable;
  - **EcrWithoutPasswords** - Work without passwords (1 - enable; 0 - disable);
  - **EcrAskForPassword** - Require password after each receipt (1 - enable; 0 - disable);
  - **EcrAskForVoidPassword** - Require password for void operations (1 - enable; 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 "Ecr report" (1 - enable; 0 - disable);
  - **EcrUserPeriodReports** - Periodic reports (1 - enable; 0 - disable) ;
  - **EcrPluDailyClearing** - When making Z-report, automatically clear PLU turnover (1 - enable; 0 - disable);
  - **EcrSafeOpening** - Open drawer on every total (1 - enable; 0 - disable);
  - **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.
  - **EcrNumberBarcode** - Count of used barcodes for each programmed article (1...4);

- **RegModeOnIdle** - Time to clear display after last receipt in miliseconds(1 - 2 147 483 647);
- **FlushAtEndOnly** - For ECR's only. The receipt is printed after last payment;
- **EcrMidnightWarning** - For ECR's only. Minutes before midnight, when ECR starts showing warning for Z report.
- **EcrMandatorySubtotal** - For ECR's only. The operator must press STL key before payment. 1: yes, 0: no. default: 0;
- **Seller** - For ECR's only; Name of the seller; 36 symbols max;
- **AutoMonthReport** - For ECR's only; Flag for a monthly report suggesting; 1: yes, 0: no. default: 1;
- **EcrUnsentWarning** - For ECR's only; Warning for unsent documents from XX hours. The value must be set in hours before device will be blocked; 0: no. default: 0;

- **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 XX symbols. Header line is determined by **"Index"**,
    - for FP-700X XX= 42, 48 or 64 columns;
    - for FMP-350X XX= 42, 48 or 64 columns;
    - for FMP-55X XX= 32 columns;
    - for DP-25X, DP-150X, WP-500X, WP-50X XX= 42 columns; Index 0 is for line 1, Index 9 is for line 10;
- **Footer of the receipt**
  - **Footer** - Text up to XX symbols. Footer line is determined by **"Index"**.
    - for FP-700X XX= 42, 48 or 64 columns;
    - for FMP-350X XX= 42, 48 or 64 columns;
    - for FMP-55X XX= 32 columns;
    - for DP-25X, DP-150X, WP-500X, WP-50X XX= 42 columns; Index 0 is for line 1, Index 9 is for line 10;
- **Operators**;
  - **OperName** - Name of operator. Text up to 32 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 16 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"**;
- **Shortcut keys** (Only for ECRs)
  - **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 ECRs)
  - **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);

- **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 64 symbols. 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);
  - **PrintColumns** - Number of printer columns:
    - for FP-700X = 42, 48 or 64 columns;
    - for FMP-350X = 42, 48 or 64 columns;
    - for FMP-55X = 32 columns;
    - for DP-25X, DP-150X, WP-500X, WP-50X = 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);
  - **DublReceipts** - Print receipt dublicate (1 - enable, 0 -disable);
  - **IntUseReceipts** - Number of internal receipts (from 0 to 9);
  - **BarcodePrint** - Print PLU barcode in the receipt (1 - enable, 0 -disable);
  - **LogoPrint** - Print the logo in the receipt (1 - enable, 0 -disable);
  - **DoveritelPrint** - Print the department name at 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);
  - **CondensedPrint** - global flag for condensed printing. 0-standard font height, 1-condensed. default=0;
  - **EnableNearPaperEnd** - handling of near paper end. 0: No handling, 1: handling (default);
- **Menu functions to enable or disable from the keyboard for fiscal printers only**;
  - **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);
  - **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);
- **Modem and network**
  - **ModemModel** - Model of the modem (0 - Quectel M72, 1 - Quectel UC20, 2 - Quectel M66, 3- Quectel UG96);
  - **SimPin** - PIN code of SIM card. Text up to 16 symbols;

- **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"**;
- **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);
- **IMEI** - IMEI of the modem(read only);
- **LanMAC** - MAC address of the LAN controller(up to 12 chars);
- **DHCPenable** Enable use of DHCP (1 - enable, 0 -disable);
- **LAN_IP** - IP address when DHCP is disabled(up to 15 chars);
- **LAN_NetMask** - Net mask when DHCP is disabled(up to 15 chars);
- **LAN_Gateway** - Default gateway when DHCP is disabled(up to 15 chars);
- **LAN_PriDNS** - Primary DNS when DHCP is disabled(up to 15 chars);
- **LAN_SecDNS** - Second DNS when DHCP is disabled(up to 15 chars);
- **LANport_fpCommands** - The number of listening port for PC connection. default: 3999 (only for devices with LAN);

- **NRA data -(Read Only**)
  - **Nap1RType** - Registration type(1 char);
  - **Nap2FDType** - FD type(1 char);
  - **Nap3EIK** - EIK(up to 16 chars);
  - **Nap4EIKType** - EIK type(1 char);
  - **Nap5FDIN** - ID of the FD(up to 16 chars);
  - **Nap6FMIN** - ID of the fiscal memory of the FD (up to 16 chars);
  - **Nap7FDRID** - FD registration number(up to 16 chars);
  - **Nap8RCFD** - Reason for deregistration(up to 2 chars);
  - **Nap9FDCert** - Certificate number(up to 16 chars);
  - **Nap10IMSI** - IMSI(up to 32 chars);
  - **Nap11MSISDN** - Telephone number(up to 16 chars);
  - **Nap12OPID** - Operator ID(1 char);
  - **Nap13OrgName** - Name of the organisation(up to 200 chars);
  - **Nap14PSNum** - PS number(up to 16 chars);
  - **Nap15PSType** - PS type(up to 3 chars);
  - **Nap16SEKATTE** - EKATTE code(up to 16 chars);
  - **Nap17Settl** - Settlement name(up to 64 chars);
  - **Nap18AEktte** - Area code(up to 16 chars);
  - **Nap19Area** - Area(up to 100 chars);
  - **Nap20StreetCode** - Street code(up to 16 chars);
  - **Nap21Street** - Street(up to 100 chars);
  - **Nap22StrNo** - Street number(up to 16 chars);
  - **Nap23Block** - Block(up to 16 chars);
  - **Nap24En** - Entrance(up to 16 chars);
  - **Nap25Fl** - Floor(up to 16 chars);
  - **Nap26Ap** - Apartment(up to 16 chars);
  - **Nap27PSName** - PS name(up to 200 chars);
  - **Nap28SOD** - Exploitation start date(up to 19 chars);
  - **Nap29ServiceEIK** - Service organization EIK(up to 16 chars);
  - **Nap30ServiceEIKType** - Service organization EIK type(1 char);
  - **Nap31ServiceCo** - Date of expiration of service contract(up to 19 chars);

- **Nap32APN** - APN(up to 100 chars);
- **Nap33IP** - IP(up to 200 chars);
- **Nap34Port** - Port(up to 5 chars);
- **Nap35APNUser** - APN name(up to 32 chars);
- **Nap36APNPassword** - APN password(up to 32 chars);
- **NapBlockDateTime** - The date and time after which the device will be blocked due to a lack of connection with the NRA server;

*Note: **"Index"** = 0 for current values, **"Index"** = 1 for saved values after successful registration/change on the NRA server;*

- **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 changes (0 - not programmed; 1 - programmed);
  - **nFMnumberChanges** - Number of current FM number changes (0 - not programmed; 1 - programmed);
  - **nTAXnumberChanges** - Number of current TAX number changes (0 - not programmed; 1 - programmed);
  - **valVat** - Current value of VAT. Number of VAT is determined by **"Index"**;
  - **FMDeviceID** - ID of the fiscal memory;
  - **IDnumber** - Serial number of the ECR;
  - **FMnumber** - Number of FM;
  - **TAXnumber** - TAX number;
  - **FmWriteDateTime** - Date and time for writting block in FM;
  - **LastValiddate** - Last valid date (written on FM or EJ);
- **Variables for FM** (**Read and Write**)
  - **TAXlabel** - TAX number label(up to 10 chars);
- **Internal variables** (**Read Only**)
  - **UNP** - Last printed unique sale number (21 chars "LLDDDDDD-CCCC-DDDDDDD", L[A-Z], C[0-9A-Za-z], D[0-9]);
  - **StornoUNP** - Last printed unique sale number in strono document (21 chars "LLDDDDDD-CCCC-DDDDDDD", L[A-Z], C[0-9A-Za-z], D[0-9]);
  - **Fiscalized** - flag that shows if FPr is fiscalized. (1 - fiscalized; 0 - not fiscalized);
  - **DFR_needed** - Shows if fiscal receipt is issued after last Z-report. (1 - Z-report is needed; 0 - Z-report is not needed);
  - **DecimalPoint** - number of symbols after decimal point;
  - **nBon** - global number of receipts;
  - **nFBon** - Global number of fiscal receipts;
  - **nInvoice** - Number of invoices;
  - **InvoiceRangeBeg** - Start of the invoice range(from 0 to 9999999999);
  - **InvoiceRangeEnd** - End of the invoice range(from 0 to 9999999999);
  - **nFBonDailyCount** - Number of fiscal receipts for the day;
  - **nLastFiscalDoc** - Last number of fiscal receipt;
  - **CurrClerk** - number of current operator;
  - **NextUpdateCheck** - Date/time for the next update check (Format: DD-MM-YY HH:MM:SS);
  - **EJNewJurnal** - New EJ;
  - **EJNumber** - Number of current EJ;
  - **DateLastSucceededSent** - Date/time of last connection to the server;
  - **NapRegistered** - ECR is registered on the NRA server (1 - registered; 0 -not registered);

- **DeregOnSever** - ECR is deregistered on the NRA server (1 - deregistered; 0 - not deregistered);

- **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 72 symbols. Number of department is determined by **"Index"**;
  - **Dept_price** - Programmed price of department(from 0 to 999999999). 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_unit** - index of unit name of department(from 1 to 20). 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 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;

Status bits

The current status of the device is coded in field 8 bytes long which is sent within each message of the fiscal printer. 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 = 0 Always 0.
- 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 = 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 = 1 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.