

**PROTOCOL FOR COMMUNICATION
BETWEEN FISCAL DEVICES AND PERSONAL COMPUTER**

“DAISY TECHNOLOGY”- LTD
Head Office: 15, Tintiava Str., Izgrev, 1113 Sofia, Bulgaria
tel:02/868-95-51, tel/fax: 02/ 962-42-22

1. INTRODUCTION

Abbreviations:

FD	Fiscal device
PC	Personal computer. Meaning not only the computer itself but the program which executes communication with FD.
FM	Fiscal memory
MRC	Machine Registration Code
REGNO	Registration Number of the owner of FD

FD (Slave) executes the commands, sent from **PC (Host)** and delivers a message, which depends on the result. Messages are sent to the **Host** only if they are a result of the delivered commands. The communication of the FD is supported by RS232C, speed of exchange 9600 b/s, 8N1(by default).

1.1 SEQUENCE OF MESSAGES

Packed message that includes command towards the **SLAVE** is sent from **HOST** . The SLAVE replies after the operation concerning packed and unpacked messages is fulfilled. HOST must wait for an answer from SLAVE, before sending another message.

SLAVE replies to all messages received from **HOST** with a packed message or 1byte code not later than 60ms. HOST must have at least 500ms time-out, in order to receive an answer from SLAVE. If there is no other reply, the message is delivered again with the same serial (sequential) number and code. In case of several unsuccessful attempts, the HOST shows there is no connection to SLAVE.

Messages sent by HOST or SLAVE can be 2 types:

1.1 UNPACKED MESSAGES

They consist of 1 byte:

NAK 15h

If there is an error in receiving the packet and it is found by SLAVE, the device sends a code NAK . When HOST receives this code, it must repeat the message with the same serial number.

SYN 16h

If SLAVE receives a command, which needs longer time for executing it sends code SYN every 60ms until the packed message is ready for an answer.

1.2 PACKED MESSAGES

1.2.1. From HOST to SLAVE

position	1	2	3	4	5	6	7	8
name	SOH	LEN	SEQ	CMD	DATA	post-amble	BCC	ETX
length/ bytes	1	1	1	1	0-200	1	4	1
value	01h	20h-FFh	20h-FFh	20h-FFh	20h-FFh	05h	30h-3Fh	03h

Abbreviations:

“**SOH**”- start of packed message

“**LEN**”- total number of bytes from position 2 to position 6, plus fixed offset of 20h.

“**SEQ**”- serial number of packet. SLAVE puts the same “**SEQ**” in the reply message. In case when SLAVE receives a message with the same “**SEQ**” and “**CMD**” like the last correctly received message, the device ignores the message and repeats the last packet sent to the HOST.

“**CMD**” – code of command

“**DATA**”- data, according to the command. If there is no data, the length field is zero.

“**BCC**” – control sum(0000h-FFFFh). Sum of data bytes from position 2 to position 6. The control sum is transferred in ASCII type (12AB is transferred as 31h 32h 3Ah 3Bh).

“**ETX**” – end of packed message.

1.2.2 From SLAVE to HOST

position	1	2	3	4	5	6	7	8	9	10
name	SOH	LEN	SEQ	CMD	DATA	Post- amble2	STATUS	Post- amble	BCC	ETX
length/bytes	1	1	1	1	0-200	1	6	1	4	1
value	01h	20h-FFh	20h-FFh	20h-FFh	20h-FFh	04h	80h-FFh	05h	30h-3Fh	03h

“**SOH**” – start of packed message .

“**LEN**” – total number of bytes from position 2 to position 8, plus fixed offset of 20h (for example length 0x01 is transmitted as 21h).

“**SEQ**” – serial number of packet . This is the number of the packet transmitted by HOST.

“**CMD**” – code of command . This is the command number, transmitted by HOST. In case of syntactic error or invalid command the corresponding status byte is set in the reply and then a packed message with zero data length is returned.

“**DATA**” – data, according to the command. If there is no data, the length field is zero. In case of syntactic error or invalid command the corresponding status byte is set in the reply and then a packed message with zero data length is returned.

“**STATUS**” – current status field of SLAVE (see Table1 to Table 6).

“**BCC**” – control sum(0000h-FFFFh). Sum of data bytes from position 2 to position 8. The control sum is transferred in ASCII type (12AB is transferred as 31h 32h 3A 3B).

“**ETX**” – end of packed message

2.STATUS FLAGS OF SLAVE

The current status of SLAVE is included within every message from SLAVE, and it has a fieldcode of 6 bytes. Description of every status byte is shown in Table 1 to Table 6.

Table 1

BYTE 0	General function
0.7=1	Reserved
0.6=1	Reserved
0.5=1	OR of all errors with *from bytes 0, 1, 2 – general error
0.4=1*	Printing mechanism error
0.3=1	No external display
0.2=1	Date and time are not set
0.1=1*	Invalid command
0.0=1*	Syntactic error

Table 2

Byte 1	General function
1.7=1	Reserved
1.6=1	Wrong password
1.5=1	Error in cutter
1.4=1*	Not used
1.3=1*	Not used
1.2=1*	Reset memory
1.1=1*	Prohibited command in current mode
1.0=1	Overflow of sum fields

Table 3

Byte 2	General function
2.7=1	Reserved
2.6=1	Print of document is allowed
2.5=1	non-fiscal receipt is opened
2.4=1	Insufficient paper in EJT
2.3=1	Fiscal receipt is opened
2.2=1	No paper (control tape)
2.1=1	Not enough paper
2.0=1*	No paper

Table 4

Byte 3	Error number of Fiscal device
3.7	Reserved
3.0–3.6	Error number of Fiscal device (see the User manual)

Table 5

Byte 4	Fiscal memory
4.7=1	Reserved

4.6=1	Not used
4.5=1	OR of all errors with*from bytes 4 and 5– general error
4.4=1*	Fiscal memory full
4.3=1	Room for less than 50 records in fiscal memory
4.2=1	Invalid record in fiscal memory
4.1=1	Not used
4.0=1*	Record error in fiscal memory

Table 6

Byte 5	Fiscal memory
5.7=1	Reserved
5.6=1	FM ready
5.5=1	MRC is programmed
5.4=1	Tax rate is programmed
5.3=1	Fiscal device is in use
5.2=1*	Not used
5.1=1	Not used
5.0=1*	FM overflowed

Byte 3 - Error codes transferred from FD

FD returns a code of the received error (f.e. overflow) in byte 3. For further information concerning the error numbers please refer to "User's manual"

1. Commands

INITIAL SETTINGS			
№	Code(Hex)	Code	Command function
1	3Dh	61	Set date and time
2	2Bh	43	Header and print options
3	2Bh	43	Header print (allowed/prohibited)
4	60h	96	Tax rates programming
5	65h	101	Operator password
6	66h	102	Operator name
7	96h	150	Set System parameters
8	6Bh	107	Program/delete PLUs
9	83h	131	Program departments
10	73h	115	Set header
11	95h	149	Set text field
12	97h	151	Set payments
13	5Bh	91	Set MRC
14	62h	98	Set TIN
15	48h	72	Fiscalization
16	E5h	229	Restore default passwords

SALES			
№	Code (Hex)	Code	Command function
1	26h	38*	Start of non-fiscal receipt
2	2Ah	42*	Print of non-fiscal text
3	27h	39*	End of non-fiscal receipt
4	30h	48*	Start of fiscal receipt
5	3Ah	58*	Sale by PLU
6	33h	51*	SubTotal sum
7	35h	53*	Total sum(TOTAL)
8	36h	54*	Print of fiscal text
9	82h	130*	Cancel a receipt
10	39h	57	Print information for the client
11	54h	84	Print barcode
12	38h	56*	End of fiscal receipt
13	6Dh	109*	Duplicate print

REPORTS			
№	Code(Hex)	Code	Command function
1	6Fh	111*	Reports by PLUs
2	69h	105*	Reports by operators
3	32h	50*	Get tax rates
4	49h	73*	Report from FM by number
5	4Fh	79*	Brief report from FM by date
6	5Eh	94*	Report from FM by date
7	5Fh	95*	Brief report from FM by number
8	A5h	165*	Report by departments
9	A6h	166*	Print system parameters
10	99h	153	Send reports in text type
11	B0h	176*	Print current tax rates

BALANCE AT THE END OF THE DAY			
№	Code(Hex)	Code	Command function
1	45h	69*	Daily financial report(with or without reset)
2	6Ch	108*	Detailed daily financial report(with or without reset,with printing of PLUs)
3	45h	69*	Print of EJT
4	68h	104	Reset sales by operators

INFORMATION			
№	Code(Hex)	Code	Command function
1	3Eh	62	Date and time information
2	4Ah	74	Status of SLAVE
3	41h	65	Current net / total sums
4	40h	64	Final fiscal record
5	44h	68	Free fiscal records
6	4Ch	76	Status of fiscal receipt
7	5Ah	90	Diagnostic information
8	61h	97	Current tax rates
9	63h	99	Information for TIN
10	6Bh	107	Information for PLU
11	83h	131	Information for department
12	67h	103	Information for the receipt
13	6Eh	110	Information for the day
14	2Bh	42	Get cliché
15	70h	112	Information for operator
16	71h	113	Number of last documents
17	72h	114	Information from FM by number
18	92h	146	Information from FM by date
19	80h	128	Receiving constant values
20	47h	71*	Print diagnostic information
21	B1h	177	Read EJT

PRINTER			
№	Code (Hex)	Code	Command function
1	2Ch	44*	Paper feed
2	2Dh	45*	Paper cut

OTHER			
№	Code (Hex)	Code	Command function
1	46h	70*	Service issued sums
2	6Ah	106*	Open till
3	3Fh	63	Display date and time

Note: Commands which code field is marked with *, can be executed only in mode "Fiscal printer" after entering a password. For further information, please refer to **"User's manual"**. Check status bit 2.6 – It shows that you have entered mode "Fiscal printer" and you are not about to print a document.

2.DETAILED DESCRIPTION OF THE COMMANDS

ABBREVIATIONS:

- { } – Mandatory fields
- [] – Optional fields
- | – Alternative parameters

#XXX# - FD constants. - see description of command **128(80h)** and p.5 – **FD constants 38 (26h)**

38 (26h) START OF NON-FISCAL RECEIPT

Data field: No data
Reply: Allreceipt

Allreceipt Number of all issued receipts (fiscal and non-fiscal) since the last balance at the end of the day till now (4 bytes).

Operation of SLAVE:

- Prints HEADER;
- Prints REGNO;

The SLAVE does not react to the command if:

- There is open non-fiscal receipt;
- There is open fiscal receipt
- The built-in RTC is not set to the correct time

39 (27h) END OF NON-FISCAL RECEIPT

Data field: No data
Reply: Allreceipt

Allreceipt Number of all issued receipts (fiscal and non-fiscal) since the last balance at the end of the day till now (4 bytes).

The SLAVE does not react to the command if:

- There is no open non-fiscal receipt;
- There is open fiscal receipt.

42 (2Ah) PRINT NON-FISCAL TEXT

Data field: Text
Reply: No data

Text Text

The SLAVE does not react to the command if:

- There is no open non-fiscal receipt;
- There is open fiscal receipt.

Note: The text will be “cut” on the right side if it is longer than **#COMMENT_LEN#**

43 (2Bh) CLICHÉ AND PRINTING OPTIONS

Data field: {Option}{Text}
Reply: According to data field

Option 1 symbol, which meaning is:
“0”(30Hex) to “=”(3DHex) – number of line which is set (HEADER lines are with numbers from 0 to 7, and for FOOTER – 8 to 13).
“P” – Set Print options.
“L” – printing of graphic logo.
“C” – automatic paper cutting at the end of the document (if FD has a cutter).
“A” – detailed print of client receipt.
“I” –gives the opportunity to read the values, set earlier by this command. The next symbol after letter “I” follows only one symbol which coincides with the ones mentioned above.

Text Text

If {Option} is digit from “0” to “,” – the text of the the relevant line.

Note: The text will be cut on the right side if it is longer than **#CHARS_PER_LINE#**

If {Option} = “P” – 4 symbols with value “0”=disables or “1”= enables the corresponding option.

Options according to symbols:

- [1] A blank line will be printed after HEADER
- [2] A blank line will be printed after REGNO
- [3] A blank line will be printed after FOOTER
- [4] Delimiter line will be printed before total sum

If{Option} = “L” – One symbol with value “0” or “1”, which forbids or allows the printing of graphical logo.

If {Option} = “A” – One symbol with value “0”= forbids or “1”= allows detailed printing of client receipt.

If {Option} = “C” – One symbol with value “0”= forbids automatic cutting or “1”= allows fully cutting at the end of the receipt; or “2” = allows partial cutting at the end of the receipt.

44 (2Ch) PAPER FEED

Data field: [Lines]
Reply: No data
Lines Number of lines by which the paper will be moved.

45 (2Dh) PAPER CUT

Data field: [Mode]
Reply: Code

Mode Optional parameter indicating cutting type. 1 = full cut, 2 = partial cut.
Code One symbol indicating the result:
“P” – command is successful.
“F” – command is not successful.

48 (30h) START OF FISCAL RECEIPT

Data field: {OperatorNum},{Password}

Reply: Allreceipt, FiscReceipt

OperatorNum Operator number – 1 to #OPER_MAX_CNT#.

Password Operator password – up to 6 digits

Allreceipt Number of all issued receipts (non-fiscal and fiscal) since the last balance at the end of the day till now (4 bytes)

FiscReceipt Number of all issued fiscal receipts since the last balance at the end of the day till now (4 bytes)

Operation of FD:

- Prints HEADER and REGNO
- Prints Operator name and number;

FD does not react to the command if:

- There is open fiscal or non-fiscal receipt;
- Overflowed fiscal memory;
- Overflowed or erased EJT, when the SLAVE operates with EJT
- There is no number or password of operator;
- Password is invalid;
- The built-in RTC is not set to the correct time;

Attention: If FD has not been fiscalized, you are allowed to open a fiscal receipt, to make sale and payment and to close it but at the end of the receipt is printed the text “ NONFISCAL OC“

49 (31h) SALE

Data field: [{Text1}][{CR}{Text2}][Tabulator]{TaxGr}[{Sign}Price]
[*{QTY}][,Percent][\$Netto]

Reply: No data

Text 1 Text that describes the sale

CR One byte, value 0Ah (divider).

Text 2 Additional text which describes the sale.

Tab One byte, value 09h (divider).

TaxGr This is 1 symbol, that shows tax group (Space or one of capital latin letters 'A','B','C','D').

Sign One byte with value '+' or '-'. If there is Sign= '-', a correction of the last sale with the same price, quantity and tax group is made. Besides: Percent and Netto are ignored.

Price This is unit price, including no more than 8 digits

QTY It is not compulsory. . Its length is up to 8 digits. (up to 3 after the decimal point). It indicates sale quantity. It is 1.000 by default.

Percent This is Optional parameter, showing the value of surcharge or discount (according to the sign) in percentage over the current sum. Acceptable values are from 99.99 % to 99.99 %. 2 digits after the decimal point are acceptable.

\$Netto This is Optional parameter indicating the value of the net surcharge or discount (according to the sign) over current sale.

The FD prints the sale name with price and code of tax group (quantity if is set)

In case of discount or surcharge, the print is on a separate line.

The FD doesn't react to the command if:

- There is no open fiscal receipt;
- Maximum number of sales is reached for 1 fiscal receipt;
- A payment has been started in the current fiscal receipt;
- Overflowed EJT ,if FD works with EJT;
- Fileds Percent and Netto are simultenuosly set;
- After the execution an overflow of some of the reports would happen;
- It comes out a negative sum, which is a result from discounts or surcharges within the receipt.
- The indicated tax group is forbidden for sale

Note: The indicated texts are “cut” on the right side if they are longer than #COMMENT_LEN#

50 (32h) GET TAX RATES

Data field: [{StartDate},{EndDate}]

Reply: Code,Tax1,Tax2,Tax3,Tax4,Tax5,Date

StartDate StartDate of the period (DDMMYY) – 6 bytes.

EndDate EndDate of the period (DDMMYY) – 6 bytes.

Code One byte with value "F" – error or "P" – data is found in FM.

Tax1 VAT rate by tax group 0

Tax2 VAT rate by tax group A

Tax3 VAT rate by tax group B

Tax4 VAT rate by tax group C

Tax5 VAT rate by tax group D

Date Date on which rates are recorded in format DDMMYY

FD prints a report for service records in FM for the indicated period.

51 (33h) SUBTOTAL

Data field: {Print}{Display}{[,Percent]}

Reply: SubTotal,TaxFree,Tax1,Tax2,Tax3, Tax4

Print Value 0 (not printing) or 1 (printing) SubTotal sum

Display Value 0 or 1. Indicates whether FD must show SubTotal sum on the external display.

Percent This is Optional parameter, specifying the value of surcharge or discount(according to the sign) in percentage over the accumulated sum by the moment .

SubTotal Amount till the moment for the current FISCAL RECEIPT – 10 symbols.

Tax_Free Total of Non-Taxable sales

Tax1 Total of Taxable A sales

Tax2 Total of Taxable B sales

Tax3 Total of Taxable C sales

Tax4 Total of Taxable D sales

This command calculates the sum of all sales, which are registered into the fiscal receipt by now. If discount or surcharge is entered, it is printed on a separate line. The calculated current sum and all accumulated sums of tax groups for the moment are transmitted to the PC.

52 (34h) SALE AND DISPLAY

Data field: [Text1]{Tab}{TaxGroup}{[Sign]Price}{*QTY}{[,Percent]}[\$Netto]

Reply: No data

Information for data fields.their function and conditions through which FD will complete successfully this command –see description of command 49(31h).

53 (35h) TOTAL SUM (TOTAL)

Data field: [{Text1}][{CR}{Text2}]{Tabulator} [{Payment}] {Amount}
Reply: {PaidCode}{Amount}

Text1 First line for printing– text
CR One byte,value 0Ah (delimiter).
Text2 Second line for printing –text(.see Table 7)
Tab One byte,value 09h (delimiter).
Payment Optional parameter, specifying method of payment. If you haven't chosen parameter nor Amount, the SLAVE usually enacts total payment in cash.

Payment modes:

“P” – In cash;
“N” – payment 1
“C” – payment 2
“D” or “U” – payment 3
“E” or “B” – payment 4

Amount Sum of payment (up to 8 meaning digits)..

PaidCode 1 byte – result of the command.
“F” – error
“I” – if the sum by a certain tax group is negative.
“D” – if the sum, which is paid is less or equal to the Total sum of the receipt.
“R” –if the sum,which is paid is greater than Total sum.
“E” – negative SubTotal.

Amount Change(according to PaidCode).

The SLAVE doesn't react to the command if:

- There is no open fiscal receipt;

Note: The indicated texts are “cut” on the right side if they are longer than #COMMENT_LEN#

Attention: when the command is completed successfully, FD will not allow making sales within this receipt. Error codes “E” and “I” are not valid for Gerogia.

54 (36h) PRINT FISCAL TEXT

Data field: Text
Reply: No data
Text Text for printing

Fiscal receipt must be open in order to print the text.

Note: The indicated texts are “cut” on the right side if they are longer than #COMMENT_LEN#

56 (38h) END OF FISCAL RECEIPT

Data field: No data
Reply: Allreceipt, FiscReceipt

Allreceipt Number of all issued receipts (non-fiscal and fiscal) since the last balance at the end of the day till now

FiscReceipt Number of all issued fiscal receipts since the last balance at the end of the day till now

The SLAVE doesn't react to the command if:

- There is no open fiscal receipt;
- The command "TOTAL SUM" (53) is not executed
- The amount of TOTAL SUM (53) is less than Total Sum of the receipt.

58 (3Ah) SALE BY PLUs

Data field: **{[Sign]PLU}[*{QTY}][,Percent][@Price][Netto]**

Reply: **No data**

Sign 1byte with value '+' or '-'. If Sign = '-', then a correction of the last sale with the same price, quantity and number of PLU is made as well as ignoring fields Percent and Netto.

PLU PLU number (serial).

QTY It is not mandatory. Its length is up to 8 digits. (up to 3 after the decimal point). It indicates sale quantity. It is 1.000 by default.

Percent This is optional parameter, specifying the value of surcharge or discount (according to the sign) in percentage over the current sum. Acceptable values are from 99.99 % to 99.99 %. 2 digits after the decimal point are acceptable.

Netto This is Optional parameter indicating the value of the net surcharge or discount (according to the sign) over current sale.

Price Optional parameter, indicating free PLU price during sale

The SLAVE doesn't react to the command if:

- There is no open fiscal receipt;
- Maximum number of sales is reached for 1 fiscal receipt;
- A payment has been started in the current fiscal receipt;
- Overflowed EJT, when FD works with EJT;
- Fields Percent and Netto are simultaneously set;
- After the execution an overflow of some of the reports would happen;
- PLU with this number is not programmed

61 (3Dh) SET DATE AND TIME

Data field: **{DD-MM-YY}{space}{HH:MM[:SS]}**

Reply: **No data**

Attention: You can't enter date which is earlier than the last date stored in the fiscal memory or the last document, saved in EJT.

62 (3Eh) GET DATE AND TIME INFORMATION

Data field: **No data.**

Reply: **{DD-MM-YY}{Space}{HH:MM:SS}**

Date and time information is received from FD.

63 (3Fh) DISPLAY DATE AND TIME

Data field: **No data.**

Reply : **No data.**

Current date and time are displayed in format : DD-MM-YYYY HH:MM.

64 (40h) FINAL FISCAL RECORD

Data field: [Type]
Reply: Number,SpaceGr,Tax1,Tax2,Tax3,Tax4,Tax5,Date

Type Not compulsory parameter indicating type of the returned data: “T”- amount with VAT (total) and “N”-amount without VAT (net). By default is “N”

Number Number of the last fiscal record.
SpaceGr Session Non-Taxable sales Total .
Tax1 Session Taxable1 sales Total
Tax2 Session Taxable2 sales Total
Tax3 Session Taxable3 sales Total
Tax4 Session Taxable4 sales Total
Tax5 Session Taxable5 sales Total
Date Date of the last fiscal record (6 symbols DDMMYY).

This command returns information from FD for the last daily financial report stored in the fiscal memory.

65 (41h) CURRENT NET/TOTAL SUMS

Data field: [Type]
Reply: SpaceGr,Tax1,Tax2,Tax3, Tax4,Tax5

Type Not compulsory parameter indicating type of the returned data: “T”- amount with VAT (total) and “N”-amount without VAT (net). By default is “N”

SpaceGr Session Non-Taxable sales Total .
Tax1 Session Taxable1 sales Total
Tax2 Session Taxable2 sales Total
Tax3 Session Taxable3 sales Total
Tax4 Session Taxable4 sales Total
Tax5 Session Taxable5 sales Total

The command returns the accumulated sums from the last balance of the day to the moment by all tax groups.

68 (44h) FREE FISCAL RECORDS

Data field: No data
Reply: Logical, Physical

Logical Number of all free blocks for record of the daily reports in the fiscal memory
Physical Repeats the former record .
Returns information for the number of free records in fiscal memory.

69 (45h) DAILY FINANCIAL REPORT WITH OR WITHOUT CLEARING

Data field: [[Item]Option]
Reply: Closure, SpaceGr,Tax1,Tax2,Tax3, Tax4,Tax5

Item Optional parameter, indicating type of record.If it is not entered,it is = ‘0’by default.

= “0” or “1” – executing daily report with clearing (Z report). The report ends with sign “FISCAL RECEIPT” or “NON-FISCAL RECEIPT” depending on whether FD is fiscalized.
= “2” or “3” – executing daily report without clearing (X report).
= “5” Retrieves information for number of free lines in EJT.

Option	Optional parameter.If it is chosen value "N", when issuing daily financial report Z,data is not cleared by operators.
Closure	Number of fiscal record (4 symbols).
SpaceGr	Session Non-Taxable sales Total .
Tax1	Session Taxable1 sales Total
Tax2	Session Taxable2 sales Total
Tax3	Session Taxable3 sales Total
Tax4	Session Taxable4 sales Total
Tax5	Session Taxable5 sales Total

70 (46h) SERVICE INPUT SUM (R/A) AND SERVICE OUTPUT(P/O) SUM

Data field: {Amount}[,{Text1}][{CR}{Text2}][
Reply: Code,CashSum,ServInput,ServOutput

Amount	Registration sum (9 symbols). According to the sign of the digit it is executing ServInput or ServOutput.
Text 1	Commentary text.
CR	One byte with value 0Ah (delimiter).
Text 2	Commentary text.
TAB	One byte with value 09h (delimiter).
Code	“P” – The command was executed successfully. “F” – The command was cancelled.
CashSum	CashSum available. The amount increases not only by using this command but also by every payment in cash.
ServInput	Sum of all commands for the day “ServInput ”
ServOutput	Sum of all commands“for the day ServOutput ”.

Note: The indicated texts are “cut” on the right side if they are longer than #COMMENT_LEN#

71 (47h) PRINT DIAGNOSTIC INFORMATION

Data field: No data
Reply: No data

A service receipt with diagnostic information is printed. It includes:

- Date and version of software;
- Firmware control sum;
- Serial port communication speed;
- Swithes;
- Other information

73 (49h) REPORT FROM FM BY NUMBER

Data field: {StartNum},{EndNum}
Reply: No data

StartNum	Start Number of fiscal record with length 4 symbols.
EndNum	End Number of fiscal record with length 4 symbols.

FD is printing detailed report of the fiscal memory (FM).

Note: This command is not allowed, if ther is not entered TAX Authority Password (see command C0Hex)

74 (4Ah) FD STATUS

Data field: No data
Reply: {S0}{S1}{S2}{S3}{S4}{S5}

Sn Status Byte N.

76 (4Ch) FISCAL REPORT STATUS

Data field: [Option]
Reply: Open,Items,Amount[,Tender, Remainder]

Option "T" – The command returns information for the last made payment .
Open "0" – There is no open receipt
"1" – There is open fiscal receipt.
Items Number of sales, which have been made and registered in the current or the final fiscal receipt.
Amount Total sum of the final fiscal receipt (10 digits).
Tender The amount included in the current receipt or in the final receipt..
Remainder The amount due to be paid in the current or final receipt.

This command enables PC application to determine the status of FD and if it is necessary to restore and complete a fiscal operation, which is interrupted by emergency, for example in case of power supply failure.

79 (4Fh) BRIEF REPORT FROM FM BY DATE

Data field: {StartDate},{EndDate}
Reply: No data

StartDate StartDate with length 6 symbols (DDMMYY)
EndDate EndDate with length 6 symbols (DDMMYY)

The command executes summary report by date from FM.

Note: This command is not allowed, if there is not entered TAX Authority Password (see command C0Hex)

90 (5Ah) DIAGNOSTIC INFORMATION

Data field: {Calculate}
Reply: {FirmwareRev}{Space}{FirmwareDate}{Space}
{FirmwareTime},{ChekSum},{Sw},{Country},{SerNum},{FMNo}

Calculate If "1", it is calculating the control sum of EPROM (1 byte).
FirmwareRev Version of Firmware (4 symbols).
Space Space20h (1 byte).
FirmwareDate Date of Firmware DDMMYY (6 byte).
Space Space 20h (1 byte).
FirmwareTime Time of Firmware HHMM (4 byte).
ChekSum ChekSum of EPROM (4 byte hexadecimal string).
Sw Switches.(4 digits)
Country Number of country, for Georgia = 8
SerNum MRC of FD (#MACHNO_LEN# symbols).
FMNo Fiscal memory number of FD (#FMNO_LEN# symbols).

94 (5Eh) REPORT FROM FM BY DATES

Data field: {StartDate},{EndDate}

Reply: No data

StartDate StartDate of fiscal record (6 symbols DDMMYY).

EndDate EndDate of fiscal record (6 symbols DDMMYY).

After using this command, the FD prints Detailed Financial Report for the period from date to date.

Note: This command is not allowed, if there is not entered TAX Authority Password (see command **C0Hex**)

95 (5Fh) BRIEF REPORT FROM FM BY NUMBER

Data field: {StartNum},{EndNum}

Reply: No data

StartNum Start Number of fiscal record.

EndNum End Number of fiscal record

Brief report from FM is executed by initially set Start Number of fiscal record and End Number of fiscal record.

Note: This command is not allowed, if there is not entered TAX Authority Password (see command **C0Hex**)

96 (60h) TAX RATES PROGRAMMING

Data field: {Tax1},{Tax2},{Tax3},{Tax4},{Tax5}

Reply: Code

Tax1 Tax rate by tax group with code Space (number up to 2 signs after decimal point)

Tax1 Tax rate by tax group with code A (number up to 2 signs after decimal point)

Tax2 Tax rate by tax group with code B (number up to 2 signs after decimal point)

Tax4 Tax rate by tax group with code C (number up to 2 signs after decimal point)

Tax5 Tax rate by tax group with code D (number up to 2 signs after decimal point)

Code 1 byte, including

“P” – no error.

“F” – error

Attention: The tax rate values are from 0.00 to 99.99. Acceptable value is “-1”, which means that the relevant tax group will not be permitted for sale. If all 5 values haven't been set, the rest rates will keep the value which they have had before the execution of this command..

97 (61h) CURRENT TAX RATES

Data field: No data

Reply: Tax1,Tax2,Tax3,Tax4,Tax5

Tax 1 Tax rate Space

Tax 2 Tax rate A

Tax 3 Tax rate B

Tax 4 Tax rate C

Tax 5 Tax rate D

Receiving information about the current tax rates.

101 (65h) SET OPERATOR PASSWORD

Data field: {OperatorNumber},{OldPsw},{NewPsw}

Reply: No data

OperatorNumber Number of operator from 1 to #OPER_MAX_CNT#

OldPsw Old password

NewPsw New password .

Passwords can be entered maximum for #OPER_MAX_CNT# operators. The command must be transmitted while opening FISCAL RECEIPT.

Attention:

1. If it is set password 0, this operator is not allowed to work.
2. It is forbidden to enter one and the same different nonzero passwords for two or more different operators.

Passwords by default: see "User's manual"

102 (66h) SET OPERATOR'S NAME

Data field: {OperatorNum},{Password},{Name}

Reply: No data

OperatorNum Number of operator from 1 to #OPER_MAX_CNT#.

Password Password .

Name Name of operator . It is "cut" on the right side, if it is longer than #NAME_LEN# symbols.

Operator name is programmed. His name and number are printed at the beginning of each FISCAL RECEIPT.

Attention: If the operator has made operations (has issued at least one document), his name can not be changed until the sales by this operator are cleared.

103 (67h) INFORMATION INCLUDED IN THE RECEIPT

Data field: No data

Reply:

CanVoid,TaxFree,Tax1,Tax2,Tax3,Tax4,Tax5,InvoiceFlag,InvoiceNo

CanVoid Indicating the possibility to make corrections. [0/1].

Tax_Free Total of Non-Taxable sales

Tax1 Total of Taxable Space sales

Tax2 Total of Taxable A sales

Tax3 Total of Taxable B sales

Tax4 Total of Taxable C sales

Tax5 Total of Taxable D sales

InvoiceFlag Flag whether is open a detailed fiscal receipt(invoice). For Georgia = 0

InvoiceNo 10 digits 0

This command indicates if it is possible to correct registered sales and gives information for the accumulated sums by tax groups.

104 (68h) RESET SALES BY OPERATORS

Data field: Operator,Password

Reply: No data

Operator: Number of operator : from 0 to #OPER_MAX_CNT#

Password: Operator password

When the number of operator and password are correctly entered, FD clears the accumulated data from sales for the particular operator. When entering operator 0 and password of supervisor, Z report is made for all operators.

105 (69h) REPORT BY OPERATORS

Data field: No data

Reply: No data

FD executes X report by operator

107 (6Bh) PROGRAMMING, ERASING AND READING DATA FOR PLUs

Data field: {Item}[Data]

Reply: Code[,Data]

Code 1 symbol indicating the result:

“P” – valid command.

“F” – invalid command.

Item Setting the required operation. Acceptable values are: “P”, “D”, “R”, “F”, “N”.

“P” – Plu’s programming

Data field: {P}{TaxGroup}{PLUNum},{Price},{Name}[[CR]{BARCODE}
[,Dept[,FracQty[,StockQty]]]]

TaxGroup TaxGroup (Space, 'A', 'B', 'C', 'D').

PLUNum Serial PLU’s number.

Price Unit price of PLU (up to 8 digits).

Name Name of PLU.

CR 1byte with value 0Ah.

BARCODE Barcode of PLU. Transmission of up to 13 bytes in ASCII format (33h 38h 30h 30h 30h 30h 31h 31h 30h 31h 38h 31h 35h).

Dept Number of department to which the PLU refers.

FracQty Is is not used. For compatibility set 1

StockQty PLU on stock

After **Code** the number of free PLU is returned.

Attention: Tax group of PLU is not kept in the record for every PLU, but is taken from the linked to it department. This leads to the following features:

- If the PC sets tax group and department, FD will ignore the set tax group from the PC.
- If during programming a new PLU, PC sets a tax group without a department, FD will “attach” PLU to a service department, and will forbid the sale of this PLU manual.
- If you reprogram the tax group of the department, you automatically re-program the tax groups of all PLUs attached to this department.

“D” – Deleting PLUs..

Data field: {D}{A|PLU|PLU1,PLU2}
A Deleting all PLUs with zero accumulated sums
PLU Deleting the indicated number of PLU, if there is no accumulated sums.
PLU1,PLU2 Deleting PLUs in the increment period with no accumulated sums.
When the command is successfully completed "P" is returned and number of free PLUs

"R" – reading PLU data.

Data field: {R}{PLU}
Reply: {{P},{PLU},{Time},{TaxGroup},{UnitPrice},{SaleQty},{SaleAmount},{RefQty},{RefAmount},{Name}{CR}{BARCODE},Dept,FracQty,StockQty

PLU Number of PLU
Time Date and time of the last PLU programming
TaxGroup TaxGroup (1 byte).
UnitPrice Unit price.
SaleQty Accumulated quantity for sales.
SaleAmount Accumulated sale sum.
SaleQty Accumulated quantity for refund.
SaleAmount Accumulated refund sum.
Name PLU name.
CR 1byte with value 0Ah (delimiter).
BARCODE ASCII string,length up to 13 digits.
Dept Number of department to which the PLU refers.
FracQty It is not used.Always equal to 1.
StockQty Stock quantity of PLU

If the indicated number of PLU is beyond of the acceptable values (from 1 to до #PLU_MAX_CNT#), one byte "F" is returned.

"F" – retrieves data about the first found programmed or sold PLU.

Data field: {F}[Type]
Type - Type - Type of searching:
0 - /Default value/ -searching the first programmed PLU.It influences the following commands "N".
1 – searching the first PLU by which sales are registered. It influences the following commands "N".

"N" – returns data for the first found programmed or sold PLU (according to the type of command "F")

Data field: {F}

The reply of subcommands "F" и "N" is analogical to subcommand "R".

The HOST uses the last 2 for extraction of data for all programmed/sold PLUs. First you have to set subcommand "F" and then subcommand "N" till Reply "F" is received.. This means that the last PLU has been read.

108 (6Ch) DETAILED DAILY REPORT WITH PRINTING OF PLUs

Data field: {Option}
Reply: Closure, SpaceGr,Tax1,Tax2,Tax3,Tax4,Tax5

The command is analogical to "DAILY FINANCIAL REPORT" (69), but at the very start of the report there is printing of sales by PLUs.

109 (6Dh) PRINT DUPLICATE DOCUMENT

Data field: {Count}[DocNo]
Reply: No data

Count	Number of duplicates.
DocNo	Optional parameter, defines the number of the document of which a duplicate should be printed. If this field is not set, FD will print a copy of the last document printed.

110 (6Eh) INFORMATION ABOUT CURRENT DAY

Data field: [All]
Reply: Cash, Pay1,PayX, ZRepNo, DocNo, InvoiceNo

All	Optional parameter(1 byte).If it set equal to "A", FD returns informationby all types of payments(#PAY_MAX_CNT#), if not - by 4
Cash	Payment in cash.
Pay1	Sum Payment 1.
.....	
.....	
PayX	SumPayment X
ZRepNo	Number of the last Daily financial report written in FM.
DocNo	Number of next document.
Receipt	Number of next invoice(10 digits 0).

When this command is received FD returns information about the daily amount distribution by types of payment.

111 (6Fh) REPORT BY PLUs

Data field: {RepType}
Reply: Code

RepType Specifies the type of printed information. Possible values:

“0” – FD is printing X report by PLUs .
 “1” – FD is printing all programmed PLUs
 “Z” – FD is printing Z report by PLUs

If it is not indicated in other way,value “0” is set.

Code One byte with the following options:
 "P" – when the operation is successfully completed
 "F" - when the operation is unsuccessfully completed

112 (70h) INFORMATION ABOUT OPERATORS

Data field: Operator
Reply: Receipts,Total,Discount,Surcharge,Void,Name

Operator	Indicating operator number from 1 to #OPER_MAX_CNT#.
Receipts	Indicating number of fiscal receipts which were issued by a certain operator.
Total	Indicating number of sales and total sum divided by ‘;’.
Discount	Number of discounts and total amount of discounts ,divided by ‘;’.
Surcharge	Number of surcharges and total amount of surcharges ,divided by ‘;’.
Void	Number of corrections and total amount, divided by ‘;’.
Name	Operator name.

113 (71h) FINAL DOCUMENT NUMBER

Data field: No data
Reply: DocNo

DocNo Number of last printed document.

114 (72h) DATA FROM FM BY NUMBER

Data field: {FiscNum}{[,Options][,FiscNum1]}
Reply: Code,Tax1,Tax2,Tax3,Tax4,Tax5

FiscNum number of fiscal record (start date).

Options Specifies the type of the received data (1 byte):

= '0' – returning the sums by tax groups.

= '1' – returning the net sums by tax groups.

= '2' – returning the accumulated taxes by tax groups.

= '3' – returning tax bases.

= '4' – returning the sums by tax groups for the indicated period

= '5' – returning the net sums by tax groups for the indicated period.

= '6' – returning the accumulated taxes by tax groups for the indicated period.

FiscNum1 Number of fiscal record (end date) for check up “4”, ”5” and “6”. For check up 0, 1, 2 и 3, the field must be empty.

Code 1 byte with value:

“P” – valid data;

“F” – invalid control sum of the record;

“E” – the chosen record is empty in FM

Tax1,...,Tax5 Sum or percentage according to **Options**.

115 (73h) LOADING of GRAPHIC LOGO

Data field: {Number},{Data}

Reply: No data

Number Indicates the number of bitmap lines, which are in process of programming. Values from 0 to (#**BITMAP_Y#** - 1).

Data Graphical Logo data in pixels. Set in hexadecimal type. 2 symbols for each data byte (B8h → 42h 38h). The maximum number set pixels is **#BITMAP_X#**. By using this command, a graphical Logo is programmed (BMP) upon request of the customer.

Graphical Logoprinting is activated by command (43).

Attention: In order to determine the content of whole graphical logo, the command must be executed **#BITMAP_Y#** times (once for each line).

128 (80h) GET CONSTANT VALUES

Data field: No data

Reply: {P1},{ P2},{.....},{P25}

P1 Horizontal size of Graphical Logo in pixels.

P2 Vertical size of Graphical Logo in pixels..

P3 Number of payment types

P4 Number of tax group.

P5 Letter for non-taxable items (= 20h)

P6 It is not used for Georgia

P7 Symbol concerning first tax group

P8 Dimension of inner arithmetics

P9 Number of symbols per line..

P10 Number of symbols per comment line

P11	Length of names (operators,PLUs,departments).
P12	Length (number of symbols)of the MRC of FD
P13	Length (number of symbols)of the Fiscal Memory Number
P15	Length (number of symbols)of REGNO
P16	Number of departments.
P17	Number of PLUs.
P18	Flag of stock field, described in PLU (0,1).
P19	Flag of barcode field,described in PLU (0,1).
P20	Number of stock groups.
P21	Number of operators..
P22	Length of the payment names

130 (82h) CANCEL RECEIPT

Data field: **No data**
Reply: **Allreceipt, FiscReceipt**

Allreceipt Number of all issued receipts from the last balance of the day till now.
FiscReceipt Number of all issued fiscal receipts from the last balance of the day till now.

When receiving this command FD:

1. makes correction to all sales in the fiscal receipt;
2. completes operation payment in cash for 0.00;
3. closes fiscal receipt

131 (83h) PROGRAM DEPARTMENTS

Data field: **{Item}[Data]**
Reply: **Code[,Data]**

Code 1 symbol, indicating the result::
 "P" – valid command.
 "F" – invalid command.

Item Specifies the type of required operation. Acceptable values: "P" and "R".

"P" – programming departments

Data field: **{P}{DeptNum},{Name}{CR}{TaxGroup},{Price},{MaxDigits}**

DeptNum Number of department (from 1 to #DEPT_MAX_CNT#)
Name Name of department. It is "cut" at the right side, if it is longer than #NAME_LEN#symbols.
CR 1 byte with value 0Ah.
TaxGroup Tax group. 1 byte of (Space,'A','B','C','D')
Price Unit price of department (up to 8 digits).It is not used.For compatibility send 0.
MaxDigits Maximum digits of entered free price

Attention: You can not change the name or tax group by department, to which there are sales without issuing the corresponding Z reports. Check the error number(status byte 3), and issue the necessary "Z" report

"R" – Reading data about department.

Data field: **{R}{DeptNum}**
Reply: **{P},{DeptNum},{Name}{CR}{TaxGroup},{Price},{Amount},
 {Total},{PerAmount},{PerTotal},{RefAmount},{RefTotal},{MaxDigits}**

The information is analogous to the command for programming departments.

Amount	Accumulated quantity at sale by this department
Total	Accumulated amount from registered sale by this department.
PerAmount	For Ethiopia = 0;..
PerTotal	For Ethiopia = 0;..
RefAmount	Accumulated quantity at refund by this department (For Georgia = 0)
RefTotal	Accumulated amount from registered refunds by this department (For Georgia = 0)

If the indicated number of department is not found, FD returns Code = 'F'.

146 (92h) INFORMATION FROM FM BY DATE

Data field: {FiscDateBgn}{[,Options][,FiscDateEnd]]
Reply: Code, Tax1,Tax2,Tax3,Tax4,Tax5

FiscDateBgn	Date of fiscal record (start of period) in format DDMMYY.
Options	Determines type of the received information (1 byte): = '0' – returns the sums by tax groups. = '1' – returns the net sums by tax groups. = '2' – returns the accumulated taxes by tax groups. = '3' – returns tax rates. = '4' – returns the sums by tax groups for the indicated period. = '5' – returns the net sums by tax groups for the indicated period. = '6' – returns the accumulated taxes for the indicated period.
FiscDateEnd	Date of fiscal record (end of period) in format DDMMYY for reference "4", "5" and "6". For reference 0, 1, 2 and 3 this field must be empty.
Code	One byte with value: "P" – correct data; "F" – incorrect control sum of record; "E" – in FM there is no data for the indicated period.
Tax1,...,Tax5	Sum or percentage depending on Options .

149 (95h) PROGRAMMING TEXT

Data field: {Item}[Data]
Reply: [Data]

Item Determines the type of the required operation.. Acceptable values: "P" and "R".

This command is used for programming and reading text

"P" – programming text.

Data field: {P}{Number},{Text}

"R" – reading text.

Data field: {R}{Number}

Reply {Text}

Number Number, which meaning is:
40 to 53 – (Number – 40) – number of HEADER line/ FOOTER line
 The text is limited to #CHARS_PER_LINE# symbols
60 to 64 – name of payment
 The text is limited to #PAYNAME_LEN# symbols
600 to 610 – commentary lines
 The text is limited to #COMMENT_LEN# symbols

Text Text

150 (96h) SET SYSTEM PARAMETERS

Data field: {Item}[Data]

Reply: [Data]

Item Determines the type of the required operation.. Acceptable values: “P” and “R”.

“P” – programming value parameters.

Data field: {P}{Number},{Value}

“R” – programming value parameters.

Data field: {R}{Number}

Reply {Number},{Value}

Number Number of system parameter (see User’s manual).

Value Parameter value. The specific meaning depends on the type of parameter.

151 (97h) SET PAYMENTS (CURRENCIES)

Data field: {Item}{Data}

Reply: {Data}

Item Determines the type of the required operation. Acceptable values: “P” and “R”.

“P” – programming name and currency rate of payment.

Data field: {P}{Number},{Name}{TAB}{Rate}

“R” – reading parameter value.

Data field: {R}{Number}

Reply {Number},{Name}{TAB}{Rate}

Number Payment number (from 1 to #PAY_MAX_CNT#)

Name Payment name. It is "cut" at the right side, if it is longer than #PAYNAME_LEN# symbols.

TAB Delimiter (ASCII 09)

Rate Currency rate.

153(99h) SEND REPORTS IN TEXT TYPE

Data field: No data

Reply: No data

After receiving this command, if within 5 seconds FD does not receive any new command related to report, then the indicated report is completed, and instead of printing FD sends the data by RS line by line and after every line waits for confirmation from the PC that it is accepted.

Data structure from FD to PC:

<SUB><SndLineNo><TAB><TAB><Text><LF><CR>

or

<SUB><TAB><LF><CR>

<SUB> One byte with value 1Ah

<SndLineNo> Serial number of line in the report

<TAB> Delimiter. One byte with value 09h

 Type of data, one symbol with possible values:
 "N", "B" or "E"
 "N" (Normal) – normal print. Field <Text> contains #CHARS_PER_LINE# symbols
 "B" (Bold) – print with double width of letters. The field <Text> contains
 (#CHARS_PER_LINE#/2) symbols
 "E" (Empty) – empty line (end of data transferring). No field <Text>
 <Text> Text on the corresponding line
 <LF> One byte with value 0Dh
 <CR> One byte with value 0Ah

After sending every line FD waits for confirmation from PC for its accepting. As unpacked one byte code message with code 1Ah.

When there is no confirmation, as well as when turning off the power supply, FD stops sending data to PC.

List of commands for reports, To which FD conforms with the preliminary accepted command 99h

50 (32h) RECEIVING TAX RATES
 73 (49h) REPORT FROM FM BY NUMBER
 79 (4Fh) BRIEF REPORT FROM FM BY DATE
 94 (5Eh) REPORT FROM FM BY DATE
 95 (5Fh) BRIEF REPORT FROM FM BY NUMBER
 105 (69h) REPORT BY OPERATORS
 111 (6Fh) REPORT BY PLU

Note: FD will return error, if will set RepType = "Z", it means., it can't be completed Z report by PLUs

165 (A5h) REPORT BY DEPARTMENTS

Note: FD will return error if it is set RepType = "Z", t.e., it means., it can't be completed periodical Z report by departments

166 (A6h) PRINTING SYSTEM PARAMETERS

After sending all lines from the report, FD replies to the PC with the corresponding reply command.

For example:

In order to receive system parameters by RS, you have to send command 99h, followed by command A6h

In order to receive by RS brief report from FM from 1 January 2008 to 31 December 2009, you have to send command 99h, followed by command 4Fh with data 010107,311208

165 (A5h) REPORT BY DEPARTMENTS

Data field: [RepType]

Reply: Code

RepType	Determines the type of the printed information. Acceptable values: "0" – FD prints X report by departments. "1" – FD prints the programmed data for all departments "X" FD prints periodical X report by departments. "Z" – FD prints periodical Z report by departments. If it is not indicated value "0" is accepted .
Code	One byte with the following options: "P" –when the operation is completed successfully "F" - when the operation is not completed successfully

166 (A6h) PRINT SYSTEM PARAMETERS

Data field: No data

Reply: Code

Code One byte with the following options:
"P" –when the operation is completed successfully
"F" - when the operation is not completed successfully

FD prints number, name and system paraters' values.

176(B0h) PRINT CURRENT TAX RATES

Data field: No data
Reply: No data

FD issues a service document, containig current tax rates values.

192 (C0h) ENTERING TAX AUTHORITY PASSWORD

Data field: [TaxAuthorityPassword]
Reply: Code

TaxAuthorityPassword Tax Authority Password
Code "P" = Pass if password is correct, or "F" if password is not correct. If a wrong password is entered 3 times in a row, FD needs to be restarted (turned off and turned on again) to continue working .

229(E5h) RESTORE DEFAULT PASSWORDS

Data field: No data
Reply: Code

Code One symbol which indicates the result:
"P" – the command is completed successfully.
"F" – the command is completed unsuccessfully.

The command is used to restore the operators' passwords. It can be completed only if **JUMPER2** is put.

5. FD Constants

FD constants can be retrieved from PC via command **128(80h)**

Below a table with constant values for the concrete model FD is applied.

	Name	Comment	FD ECR "eXpert"
P1	#BITMAP_X#	Horizontal size of graphical logo in pixels.	384
P2	#BITMAP_Y#	Vertical size of graphical logo in pixels	144
P3	#PAY_MAX_CNT#	Number of payment types	5
P4	#TAX_MAX_CNT#	Number of tax groups	5
P9	#CHARS_PER_LINE#	Number of symbols per line	32
P10	#COMMENT_LEN#	Number of symbols of comment line	28
P11	#NAME_LEN#	Number of symbols for names (operators, PLUs, departments).	20
P12	#MACHNO_LEN#	Number of symbols of MRC of FD	10
P13	#FMNO_LEN#	Number of symbols of FM number	10
P15	#REGNO_LEN#	Number of symbols of registration numberr	15
P16	#DEPT_MAX_CNT#	Number of departments	50
P17	#PLU_MAX_CNT#	Number of PLUs	8000
P21	#OPER_MAX_CNT#	Number of operators	20
P22	#PAYNAME_LEN#	Number of symbols of payment names	12