

Chapter 02

This documents (part of Developer's guide)

contains only (differencies) specifics for each coutry.

All others chapters are common for all SEE countries.

# MetaLINK

## Developer's Guide

specifics

Edition **Bulgaria**

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## Chapter 02 - How to Sell & Pay

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## Before Starting.

Before we introduce data structures you should prepare & send to MetaLINK, let us describe some characteristics - features in this country:

- Every line of sale (goods / services) can have item description of max. 50 (2 x 25 characters)  
which will be printed in two rows,  
first line 25 character + SALE-QTY \* SALE-PRICE, next line 25 characters + SALE-TOTAL.
- Every line of sale can have several lines of additional text after this line, with detail description of this sale.
- Every line of payment can have description of max. 50 ( 2 x 25 characters)  
first line 25 characters, next line 25 characters.
- Discount (-) / Surcharge (+) in % on item is allowed, calculated as percent of SALE-TOTAL..
- Discount (-) / Surcharge (+) in absolute on item is NOT allowed, calculated as absolute value of SALE-TOTAL.
- STORNO-ITEMS in FISCAL-RECEIPT are allowed as »REKLAMACIJA«
- Printing duplicate of last FISCAL-RECEIPT is allowed.
- Printing EANCODE (barcode) is allowed within both FISCAL-RECEIPT and NON-FISCAL-RECEIPT.
- TAX-GROUPS (0, 1, 2, 3) are allowed.
- Payments in Cheque, Debit Card, Cash, Credit are automatically allowed, also another ways of payment (5, 6, 7, 8) can be programmed and use.
- RECLAMATION-RECEIPT is NOT allowed, except on Information Desk.
- NON-FISCAL-TEXT is allowed.
- CANCELED-RECEIPT i.e. breaking FISCAL-RECEIPT with »ANULIRANO« before payment is allowed.
- Max. number of items (sales) in FISCAL-RECEIPT is 250 lines (Includes REKLAMACIJA).
- Max. number of daily closure (Daily reports) is 1981.
- Max. number of cashiers is 24.
- Max. number of article in WORKING-MEMORY is 100.

## Bon

All data needed to generate and print FISCAL-RECEIPT must be part of file ABC\_nnn.DAT, with unique name ABC\_nnn. (CSV, DBF, TXT, XML), using a format (ABC\_nnn.DAT). containing information what to sell (goods / services) ? what quantities ? what prices ? how to pay ?

### Table ABC\_nnn.DAT

ART_ID	Varchar(20),	COL-01
TAX_ID	Varchar(1),	COL-02
ART_DESC	Varchar(50),	COL-03
SALE_PRICE	Numeric(10,2),	COL-04
SALE_QTY	Numeric(10,3),	COL-05
DISC_PERC	Numeric(10,2),	COL-06
DISC_ABS	Numeric(10,2),	COL-07
IND_SALE	Varchar(10),	COL-08

Field format limits are database limits, described as varchar or numeric values.  
Value format limits are usage limits, described for each field separately.

## PART 1. SALES OF ARTICLES – GOODS / SERVICES

### ART\_ID Varchar(20), COL-01

is ID of article – goods / services in your programme (database).  
The only usage of this field is to help a MetaLINK to „recognize“ a new article, and to make a decision to add it or not in Working memory of FP-550.

It is also used in a data files MetaLINK return to you (see: Export Tables) as a proof of sales transaction.

### TAX\_ID Varchar(1), COL-02

is numerical code (TAX-NO) of TAX-GROUP which article belongs. (see Fiscal Law, Trade Law)

Every TAX-NO (You send) has corresponding TAX-LETTER (Cyrillic letter), TAX-PERC (applicable percent), TAX-DESC (examples: High – General Tax, Low Tax, Free Tax, No Tax, Specific Tax.

TAX_NO	0	1	2	3	4	5	6	7
TAX_LETTER (Cyrillic/Latin)	A A	Б B	В V	Г G	Д D	Е E	Ж Ž	З Z
TAX_PERC	0 %	20 %	20 %	7 %				
TAX_DESC	Free	High	Fuel	Low	N/A	N/A	N/A	N/A

### ART\_DESC Varchar(50), COL-03

is article name or description used in printing a FISCAL-RECEIPT

#### Remarks COL-03 ART\_DESC !

According to BLG Law & Regulation and protocol limitation article description is max. 2 x 25 characters,  
First row contains first 25 ch (or less) + SALE\_QTY \* SALE\_PRICE  
Second row contains next 25 ch (or less) + SALE\_TOTAL

SeeBLG - CodePage –for allowed character in article description.

**SALE\_PRICE    Numeric(10,2),    COL-04**

is RETAIL-PRICE including VAT.

**Remarks COL-04 SALE\_PRICE !**

According to BLG Law & Regulation and protocol limitation sales price can have **UP TO 8 significant digits with max. 2 decimals.**

**SALE\_QTY    Numeric(10,3),    COL-05**

is sales quantity of article in this item. The same article can appear in many other items.

If SALE\_QTY is NEGATIVE, that means this item is STORNO-ITEM („REKLAMACIJA“ of some previous item).

**Remarks COL-05 SALE\_QTY !**

According to BLG Law & Regulation and protocol limitation sales quantity can have **UP TO 8 significant digits with max. 3 decimals.**

**DISC\_PERC    Numeric(10,2) COL-06**

is a percent of discount ( - ) / surcharge ( + ) applicable to this item (article).  
DISC\_PERC is based on SALE-TOTAL  
Discount / surcharge (if exists) is printed as a separate row of data.

**Remarks COL\_06 DISC\_PERC !**

According to BLG Law & Regulation and protocol limitation discount / surcharge percent must be: **between ( -99.00 and +99.00)**

**DISC\_ABS    Numeric(10,2) COL-07**

is absolute discount ( - ) / surcharge ( + ) applicable to this item (article).  
DISC\_ABS is related to SALE-TOTAL  
Discount / surcharge (if exists) is printed as a separate row of data). Not allowed.

**Remarks COL-07 DISC\_ABS !**

According to BLG Law & Regulation and protocol limitation discount / surcharge absolute must be: **less than SALE-TOTAL**

**IND\_SALE    Varchar(10)    COL-08**

this is a special indicator used by programme. Not in use.

## PART 2. PAYMENTS

For payments only columns: COL-01, COL-03, COL-04 are used.

**ART\_ID**                      **Varchar(20),    COL-01**

Allowed values are:

PAY\_CHEQUE (C - 1), PAY\_DEBIT (D - 2), PAY\_CASH (P - 3), PAY\_CREDIT (N - 4)

PAY\_5 (I - 5), PAY\_6 (J - 6), PAY\_7 (K - 7), PAY\_8 (L - 8)

First four ways of payment are automatically available.

Four another (user defined) ways of payments are: PAY\_5, PAY\_6, PAY\_7, PAY\_8.

In the next release we will introduce:  
PAY\_CANCELED means break current BON, without payments,  
issuing Command (60) – „ANULIRANO“

**ART\_DESC**                      **Varchar(50),    COL-03**

is additional text max. 2 x 25 characters (optional) corresponding to each row of payments.

For example: Card Type: (MASTER, VISA; DINERS, AMERICAN, Loyalty – Club Card ), Card-Number, Cheque Bank, Cheque Number, Voucher Number, Customer Credit Number, .Invoice Number ,..

### Remarks COL-03 ART\_DESC PAYMENTS !

According to BLG Law & Regulation and protocol limitation  
additional payment description is max. 2 x 25 characters,  
First row contains first 25 characters  
Second row contains next 25 characters.

**SALE\_PRICE**                      **Numeric(10,2),                      COL-04**

is amount of payments corresponds to this way of payments.

### Remarks COL-04 SALE\_PRICE PAYMENTS !

According to BLG Law & Regulation and protocol limitation  
Payment can have **UP TO 8 significant digits**.

## PART 3. FREE PART OF A BON

For free part only columns: COL-01, COL-03 are used. All data are optional.

**ART\_ID**                      **Varchar(20),    COL-01**

### Remarks COL-01 ART\_ID FREE PART !

Allowed values: USER\_ID, USER\_NAME, FOOTER\_1, FOOTER\_2

See. Samples ABC\_nnn.DAT

**ART\_DESC**                      **Varchar(50),    COL-03**

for USER\_ID values are (1 – 24)

for USER\_NAME (max. 24 characters)

for FOOTER\_n, (max. 30 characters)

COL-01	COL-02	COL-03	COL-04	COL-05	COL-06
ART_ID	TAX_ID	ART_DESC	SALE_PRICE	SALE_QTY	DISC_PERC
C (20)	C (1)	C (50)	N 10.2	N 10.3	N 10.2
100	1	Description 2 x 25	100.00	5.000	-5.00
200	1	Description 2 x 25	150.00	123.400	0.00
300	1	Description 2 x 25	200.00	12.340	0.00
XQX-FREETXT		Sales description			
400	1	Description 2 x 25	250.00	1.234	-7.00
500	1	Description 2 x 25	300.00	0.123	0.00
600	1	Description 2 x 25	400.00	1.000	-8.00
END_OF_SALE		End of sale mark			
PAY_CHEQUE	1	Payment desc 2 x 25	200.00		
PAY_DEBIT	2	Payment desc 2 x 25	300.00		
PAY_CASH	3	Payment desc 2 x 25	900.00		
PAY_CREDIT	4	Payment desc 2 x 25	100.00		
PAY_5	5	Payment desc 2 x 25	50.00		
END_OF_PAY		End of sale mark			
USER_ID		Values (1 – 24 )			
USER_NAME		max 24 characters			
FOOTER_1		Footer line 1 desc			
FOOTER_2		Footer line 2 desc			

**Remarks Samples !**

after each sale of article with ART\_ID  
it is allowed to enter one or many rows of free text corresponding to this item. as:  
XQX-FREETXT max. 30-characters

## Processing

Programme analyzes ABC\_nnn.DAT file and If the file's syntax is correct,  
Programme accepts ABC\_nnn.DAT, does logical check, and

Folder	If OK	If not OK
	Open Fiscal Receipt	
	Send sales data to FP	
	Send pay data to FP	
	Close Fiscal Receipt	
	Signal to open a cash drawer	
/TO_FP	Deletes file	
/FROM_FP	Returns ABC_nnnn.OK	Returns ABC_nnnn.ERR

In .OK. and .ERR files are textual data. In TXT\_nnn.ERR is a error description.  
Content of file ABC\_nnn.OK is «Total Sale Amount « Sample: 1020.50, \*



### COMM.ERR – Interrupted Communication

If during input files processing: (ABC\_nnn.DAT, CMD\_nnn.DAT, TXT\_nnn.DAT )

communication with FP-550 gets interrupted (FP-550 no response)  
(power interrupt, cables disconnected ...),  
immediately after detecting the break, MetaLINK returns a file COMM\_nnn.ERR  
containing error description, simultaneously displaying this messages on screen for  
cashier's information.

After that, programme MetaLINK will automatically shutdown.

After restarting MetaLINK again, programme will continue with processing of input  
files and send responses. (.ERR or .OK).

We recommend than after receiving COMM.ERR messages,  
you immediately warn cashier and STOP execution of Your POS programme.

Remarks: All messages which appear in COMM.ERR file are sent automatically to  
LINK\_LOG.txt, too.

### NOPAPER.ERR – No paper on bon and/or journal tape

if during input files processing: ABC\_nnn.DAT, CMD\_nnn.DAT, TXT\_nnn.DAT

there is a lack of paper on bon or journal tape  
immediately after detecting lack of paper, MetaLINK returns file NOPAPER.ERR  
containing date and time, simultaneously displaying this message on screen for  
cashier's information.

After paper tape is replaced (it make take a few seconds to a few minutes) MetaLINK  
will continue with processing and send responses ABC\_nnn.OK or ABC\_nnn.ERR.

Remarks: In the folder will always be only one file NOPAPER.ERR and next file will  
overwrite existing one (only date and time within a file will change).

Remarks: All messages written in NOPAPER.ERR file are automatically written in  
LINK\_LOG.txt, too.

We recommend do not take any action regarding this message from your  
programme, but simply deletes a message from folder.

This message only means that you have to wait for a while until you get an  
»expected message« - confirmation of sucesfull / unsucesfull processing of ABC-  
nnn.DAT file.

## Reclamation Bon

According to Country Law & Regulation in the case when customer after Buy & Pay process, in the next few days, wants to return goods / services which do not fit to Specification, Warranty, etc, he can return some or all goods to retailers.

This process is done on Information desk in the presence of Store Manager using a special Law procedure.

## Non fiscal text

You can send before or after BON (ABC\_nnn.DAT), a file with non fiscal text. Examples: vouchers, special receipts for return bottles, Information on non-working days for Holidays, etc.

### Table TXT\_nnn.DAT

TEXT\_DESC      Varchar(30)      NOT NULL

Attribute description:

TEXT\_DESC      Varchar(30)

One row of free user-defined text.

### Remarks !

Max. Length of row of text is 30 characters.

Text will be printed exactly as entered (from left to right)

You can have (print) as many rows of text as you want.

**It is not allowed to send a text that "LOOKS LIKE" a FISCAL-RECEIPT**

### Processing

Your programme sends a file: TXT\_nnn.(CSV, DBF, TXT, XML).  
according to a format (TXT\_nnn.DAT).

Folder	If OK	If ERROR
	Open non fiscal text	
	Print row by row	
	Close non fiscal text	
In /TO_FP	Delete a file	Delete a file
In /FROM_FP returns	TXT_nnnn.OK	TXT_nnnn.ERR

In .OK. and .ERR files are textual data.

In TXT\_nnn.ERR is a error description.

## Commands

Beside ABC\_nnn.DAT (before or after it) your programme can send some additional commands i.e. CMD\_nnn.DAT file.

### Remarks !

You can send many commands, row by row, one by one.

Commands can be send anytime before or after ABC\_nnn.DAT

MetaLINK besides »listening« to your files, has an additional MetaLINK -Menu (independent programme) used for sending different commands.

So it is not necessary to »do programming« and calling command, end user can simply execute them using this programme.

### Table CMD\_nnn.DAT

CMD\_ID      Varchar(10)      NOT NULL  
CMD\_DESC    Varchar(30)

Attribute description:

CMD\_ID                      Varchar(10)

Command ID.

CMD\_DESC                  Varchar(30)

Command description or blank.

Link	Show text in upper display row up to 20 ch	FP-550	role
DSP47	some text	(47)	Developer
	Show text in lower display row up to 20 ch		
DSP35	some text	(35)	Developer
	Deposit in- plus (200)		
CMD70 P	200	(70)	Cashier
	Deposit out - minus (100)		
CMD70 M	100	(70)	Cashier
	Open a cash drawer		
CMD10 6	NO PARAM	(106)	Cashier
	Print duplicate of the last FISCAL-RECEIPT		
CMD10 9	NO PARAM	(109)	Cashier
	Send sound signal – Beep		

BEEP	NO PARAM	OK	Developer
	returns file FP_STATUS.OK		
STATUS	NO PARAM		Developer

## Samples

10, show in upper row on display

20, show in lower row on display

	Print <b>(X report)</b> Current Status		role
REP-X	NO PARAM	(69) "3"	Cashier
	Print <b>(Z report)</b> i.e. Daily Closure		
REP-Z	NO PARAM	(69) "1"	Manager
	Print periodical report (day – day)		
REP79	DDMMYY-DDMMYY	(79)	TaxAuth
	Print periodical report (day – day)		
REP94	DDMMYY-DDMMYY	(94)	TaxAuth
	Print periodical report (No – No)		
REP73	NNNN-NNNN	(73)	TaxAuth
	Print periodical report (No – No)		
REP95	NNNN-NNNN	(95)	TaxAuth
	Report by Operators		
REP105	NO PARAM	(105)	TaxAuth
	Print all Tax group changes		
REP50	NO PARAM	(50)	TaxAuth
	Print articles sold in a day		
REP111	NO PARAM	(111)	TaxAuth

FP\_STATUS.OK contains:

FISCALIZED	/ or NONFISCALIZED
"1.50SR 26JUL2004 1000, BA46"	/ FW firmware version
2005-03-30 09:11:17	/ date and time from FP
010110000	/ Tax group set AGDĎEŽIJK
123450	/ IBFM , i.e. DT number
123456789	/ VAT number
100	/ # of articles in FP
100	/ # of articles in DB
DAY CLOSED	/or DAY OPEN

## Processing

Your programme sends files: CMD\_00000.(CSV, DBF, TXT, XML).  
According to the format (CMD\_nnn.DAT).

folder	If OK	If not OK
	Read command row by row	
	Execute commands row by row	
In /TO_FP	Delete a file	Delete a file
in /FROM_FP returns	CMD_nnn.OK	CMD_nnn.ERR

Files .OK and/or .ERR contain only textual data  
Programme returns file CMD\_nnn.OK if OK, and file CMD\_nnn.ERR if there are some  
errors.

File CMD\_nnn.ERR contains textual error description.

## MetaLINK – Menu

After starting programme MetaLINK v3-R80 appears in SysTray (as »CAPITAL RED letter« **L**).

Without the interface – starting form, we make it even more difficult to stop a programme by accident.

Therefore all options available previously through Menu – Administration have been extracted to a standalone executable MetaLINK-Menu.

This splitting was necessary because we moved programme MetaLINK to SysTray.

MetaLINK-Menu can be started independently (MetaLINK must be started before).

Also developer can send and execute all options needed by their customers from their POS programme.

// A. Titles on button in MetaLINK-Menu programme

Link		(nn)
REP-X	1. Current Sale Report – X	(69)
REP-Z	2. Daily Report – Z	(69)
REP79	3. Monthly Report	(79)
L-100	4. Periodical Report	(79)
REP111	5. Articles sold in day	(111)
	6. Delete article from FP-550	(107)
N/A	7. Save articles in file	N/A
N/A	8. Send turnover for period	
	9. ----	
CMD70 P	A. Deposit in cash drawer	(70)
CMD70 M	B. Deposit out cash drawer	(70)
	C.	
	D.	
N/A	E. View a log file	N/A
N/A	F. Free command	
	G. ---	
	H. ---	
	I. ---	
CMD10 6	J. Open cash drawer	(106)
	K. Check customer display	(100)
L-150	L. Set header/footer	(43) (53)
STATU S	M. Printer status	
	N. ---	
REP50	P. Tax changes in period	(50)
	R.	
	S.	
	T. ---	
	X. EXIT	