Read/Write Device MVT-HH3
IDENT-M, System V

Manual
Edition 04/98

PEPPERL+FUCHS

1 Table of Contents

2 Technical Data

Technical Data	Read/Write Device MVT-HH3
Power supply	
Battery	rechargeable Ni-Cd battery
Interface	
Baud rate	
with data carrier	76,8 kBaud
Environmental Conditions	
Operating temperature	278 ... 313 Kelvin (+5 ... +40 °C)
Storage temperature	253 ... 313 Kelvin (-20 ... +40 °C)
Humidity	20 ... 90 % rel. humidity
Mechanical	
Housing	unit
Dimensions	100 x 390 x 38 mm (without antenna cable)
Weight	1280 g

3 General information

3.1 Recharging Battery

The hand-held is supplied by a rechargeable battery. This battery has to be loaded before use with the battery charger. The rechargeable battery is connected by a cable to the plug of the battery charger. The recharging is finished when the red monitoring LED is off.
If the battery power is low, the hand-held will show the following message:

LOW BATTERIE
After PUSH (RUN) KEY
CHANGE BATTERY

Change the battery and re-start the hand-held (please note that stored information will be lost).

3.2 Power management (automatic turn-off)

The power management turns the device off, if no key is pressed for a certain time. This time is set in the menu „options“ under „power ??? time“. To use the new settings turn the unit off and on again. The setting „time unlimited“ will cause failures of the read- write- process. Therefore you cannot bypass the power management function.

3.3 Switch SW1-SW3

If you take the batteries out of the unit you will find three switches. They have to be set to

SW3 = OFF **SW2 = ON** **SW1 = ON**

3.4 Operating the program

The program is mostly self-explanatory. Special parts of the flow will be explained under „menu“ or the description of the keypad. More information is available in the manual „Microwave identification systems“.

:

4 Hand Read / Write IDENT-M System V

4.1 Wake up screen (After turn on)

When power is turned on at initial shipped condition, screen is below.

IDENT-M System V MODE SELECT
1) DATA FIELD MODE 2) PRESETTING MODE 3) SELECTABLE NEM AREA 4) OPTION MODE

fig 1. Wake up screen

1. Default: Data field mode
2. 1 ... 4: It is decided on item number 1 ... 6, and move to the next screen.
3. Up/Down: Cursor is up/down.
4. SET: An item is decided and move to next screen.

4.2 Setting of a wake up screen

A wake up screen can be set at any page.

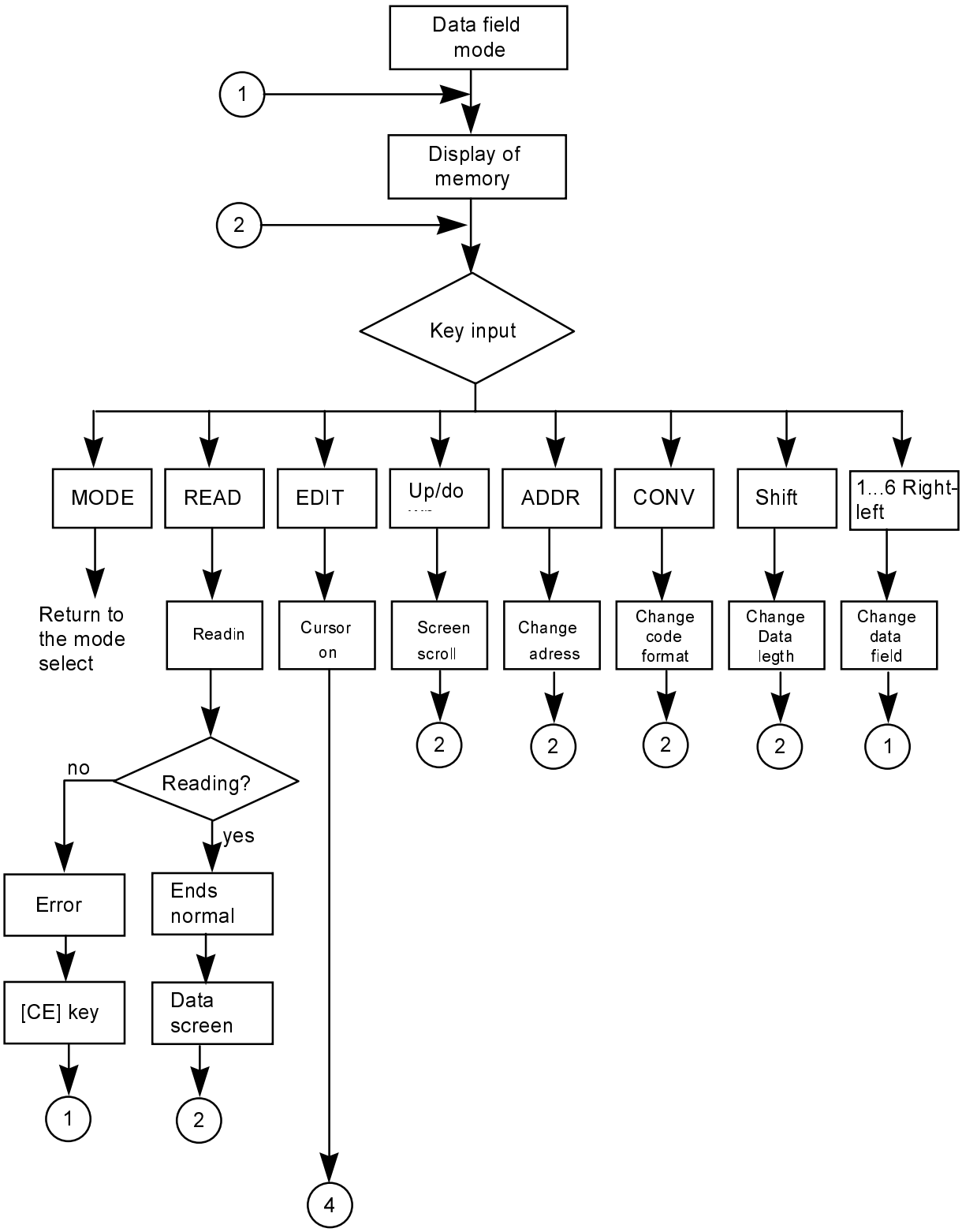
1. Mode select screen: Initial setting
2. Data field screen: It shows contents in memory Data field number which is set already.

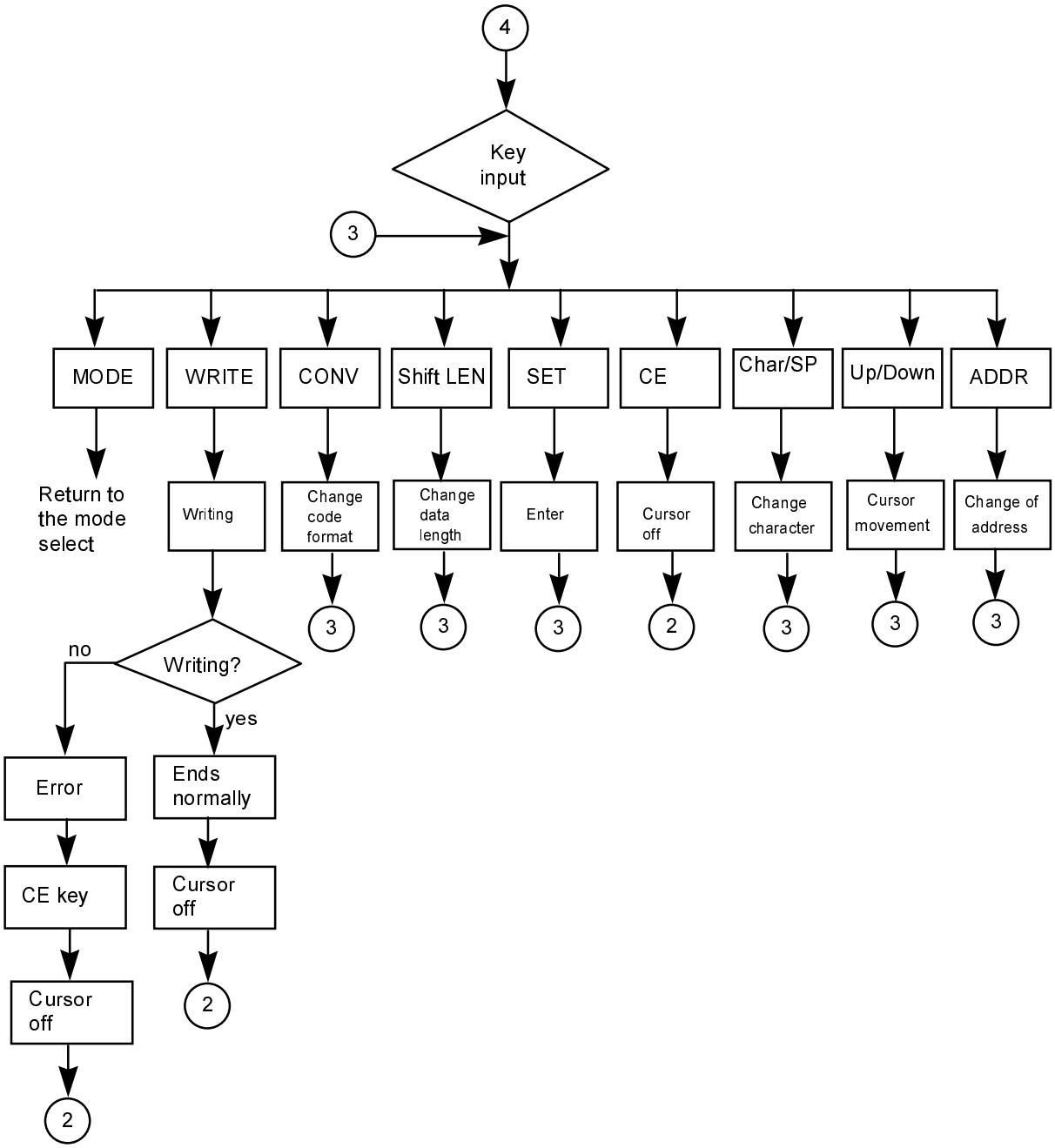
Data field 3	
ADRESS (H)	DATA (H)
0000H	0123456789ABCDEF
0000H	0123456789ABCDEF
0000H	0123456789ABCDEF
0000H	0123456789ABCDEF
0000H	0123456789ABCDEF
0000H	0123456789ABCDEF

Wake up screen

fig 2. DATA FIELD wake up screen

4.3 Flow of data field





4.4 Construction of screen

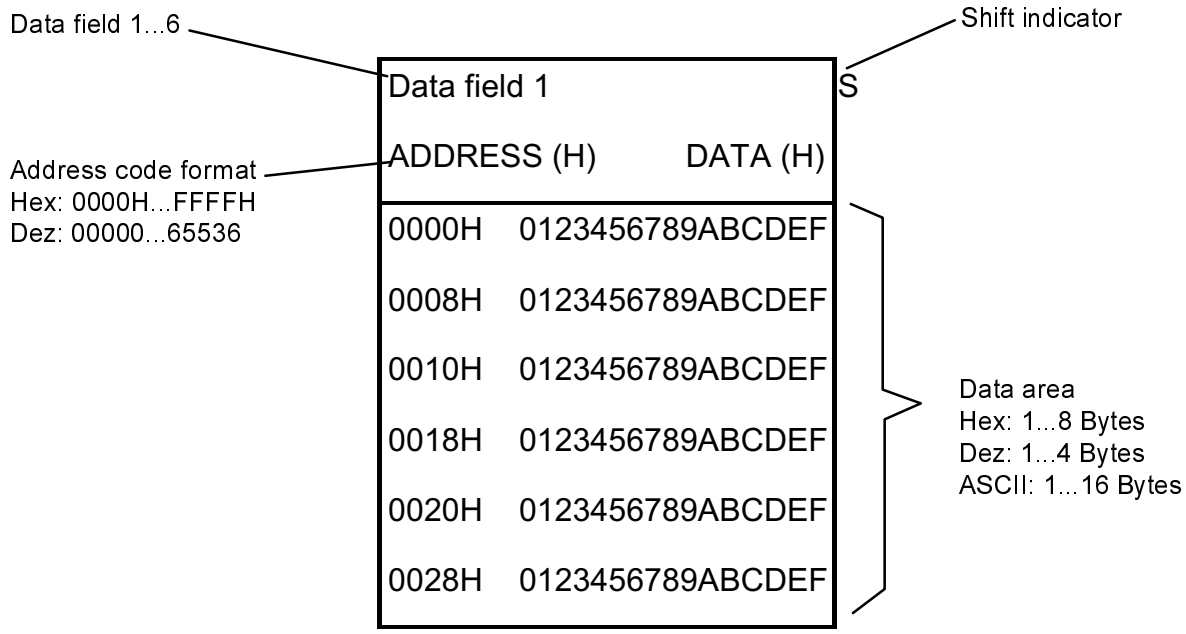


fig 3. Construction of screen

4.5 Screen of each data length

Data (H)

Data field 1	
ADDRESS (H)	DATA (H)
0000H	00
0001H	01
0002H	02
0003H	03
0004H	04
0005H	05

Data length 1 Byte

Same as 2, 3, 4, 5, 6, 7

Data field 1	
ADDRESS (H)	DATA (H)
0000H	0123456789ABCDEF
0008H	0123456789ABCDEF
0010H	0123456789ABCDEF
0018H	0123456789ABCDEF
0020H	0123456789ABCDEF
0028H	0123456789ABCDEF

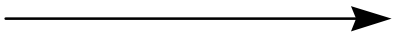
Data length 8 Bytes

Data (D)

Data field 1	
ADDRESS (H)	DATA (D)
0000H	000
0001H	001
0002H	002
0003H	003
0004H	004
0005H	005

Data length 1 Byte

Same as 2, 3



Data field 1	
ADDRESS (H)	DATA (D)
0000H	012034056078
0004H	012034056078
0008H	012034056078
000CH	012034056078
0010H	012034056078
0014H	012034056078

Data length 4 Bytes

Data (A) (Example:

Data field 1	
ADDRESS (D)	DATA (A)
0000D	A
0001D	B
0002D	C
0003D	X
0004D	Y
0005D	Z

Data legth 1 Byte

Same as 2 to 15

Data field 1	
ADDRESS (D)	DATA (A)
0000D	ABCDEFGHIJKLMNOP
0016D	ABCDEFGHIJKLMNOP
0032D	ABCDEFGHIJKLMNOP
0048D	ABCDEFGHIJKLMNOP
0064D	ABCDEFGHIJKLMNOP
0080D	ABCDEFGHIJKLMNOP

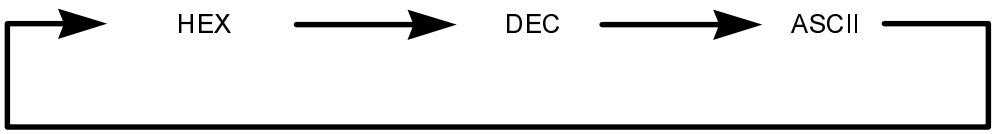
Data length 16 Bytes

4.6 Change of data code format and data length

It can change of data code format and data length other than setting by „PRESETTING MODE“.

4.6.1 Data code format

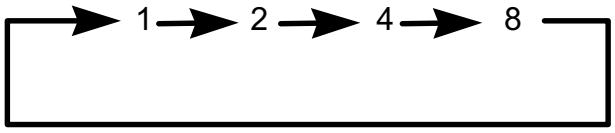
Current format rotates by [CONV] key.



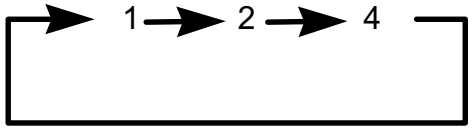
4.6.2 Data length

Current format rotates by [SHIFT] + [LEN] key. Data length is a multiple.

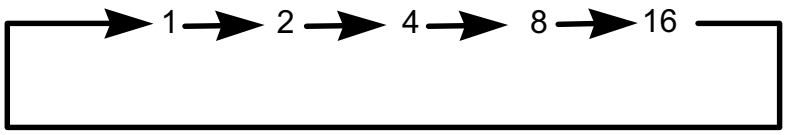
HEX



DEC



ASCII



4.7 Change of data field number

It can change of data field number by [1...6], or [SHIFT] + [UP/DOWN] key. It shows data in memory after changing.

4.8 Screen scroll

4.8.1 Scroll of 1 line

It can be scrolled by [UP/DOWN] key

4.8.2 Jump to any address

It shows start address and end address, and it shows cursor of the upper left in screen after pushing [ADDR] key. When it is set address on cursor, after pushing [SET] key, it shows data form address. And, when it shows cursor on screen, it can change of address code format (HEX - DEC) by [CONV] key.

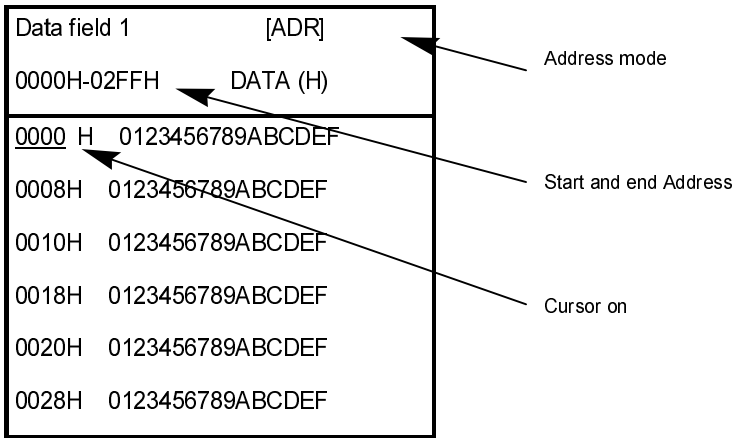


fig 4. Address setting mode

1. Characters: Input address
2. SET: Change top address
3. CONV: Change address code format
4. CE: Cancel input address, and return to data screen
5. MODE: Return to the mode select screen

4.9 Reading from ID plate

4.9.1 Reading start

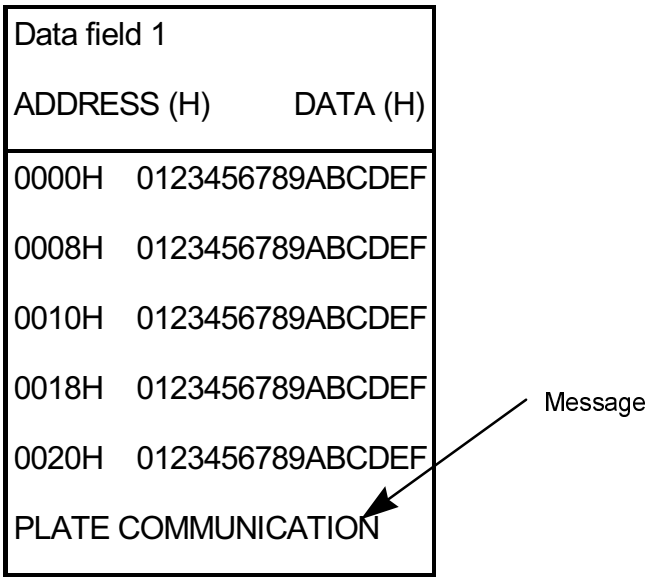


fig 5. Communication screen

1. READ: Start to read data in ID plate
2. CE: Communication is interrupted, and return to data screen
3. MODE: Return to the mode select screen

4.9.2 Reading completed normally

If reading is completed normally, it starts to transfer the reading data in handy R/W. Data is displayed following format set by „PRESETTING MODE“.

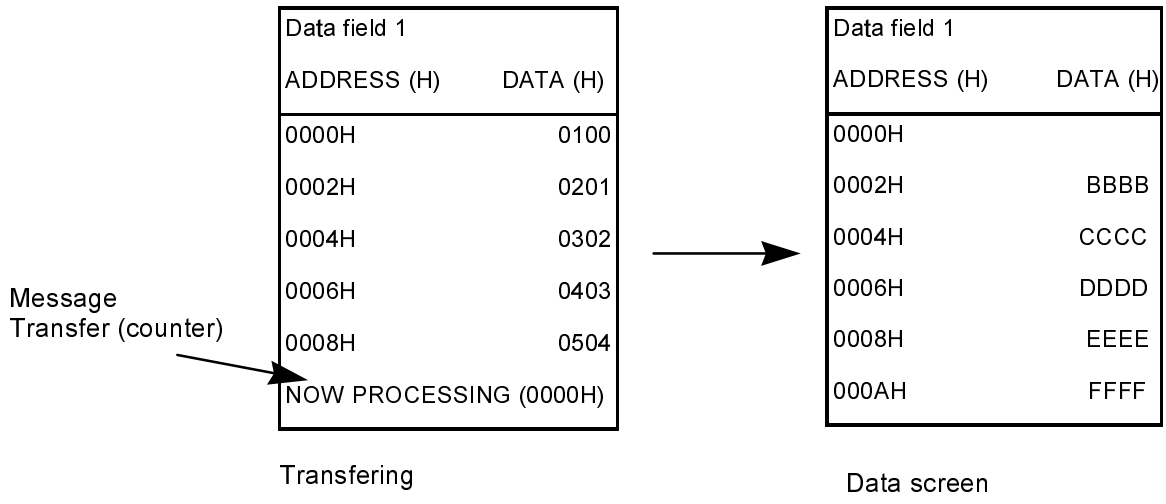


fig 6. Transferring screen

4.9.3 Reading error

If error occurred, it shows error message and error number. And it return to input any key.

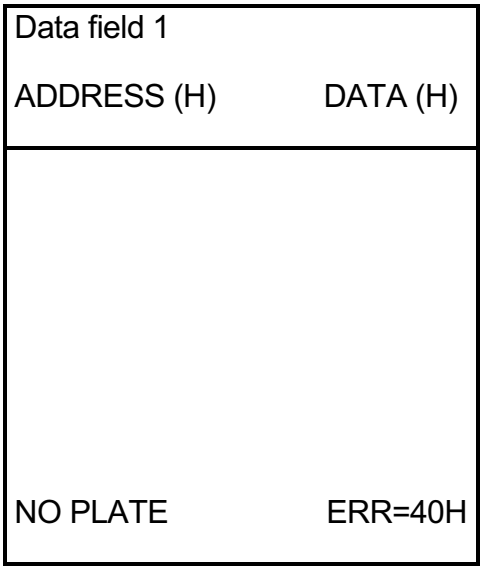


fig 7. Error screen

READ: Starting reading error
CE: Return to the before data screen. (Display current contents at buffer memory).
MODE: Return to the mode select screen

4.10 Editing of data

It can edit data in current screen.
This editor has 2 methods and can be selected by entering [SHIFT]+[left/right].

4.10.1 Line editor

Cursor blinks at 1 line area.
By entering [SHIFT]+[left/right], the method shift to 1 byte editor method.
Input character is added to far right side of character string and character string shifts to right.
By entering [SET], edited one data is set.

4.10.2 Byte editor (DEC excepted)

Cursor blinks at 1 byte data area.
Cursor shifts by entering [SHIFT]+[left/right], also the method shift to character editor method when cursor shifts to far left/right or out of area.
Input character overwrites character at cursor, and cursor shifts as below;

HEX: Cursor shifts to left.
DEC: Invalid at this method.
ASCII: Cursor shifts to right.

By entering [SET], edited one line data is set.

Data (H)

Data field 1	[EDITOR]
ADDRESS (H)	DATA (H)
0000H	234A5B00
0004H	FFAABB01
0008H	
000CH	4D4E4F03
0010H	
0014H	45545D05

Byte editor

Data field 1	[EDITOR]
ADDRESS (H)	DATA (H)
0000H	0706050403020100
0008H	0F0E0D0C0B0A0908
0010H	1716151413121110
0018H	18191A1B1C1D1E1F
0020H	1716151413121110
0028H	18191A1B1C1D1E1F

Line editor

Data (D)

Datenfeld 1	[EDITOR]
ADRESSE (H)	DATEN (D)
0000H	0060462976
0004H	0258649723
0008H	2468791534
000CH	8439516728
0010H	6679458961
0014H	1684559732

Line editor

The method „Byte editor“ is not available here.

Data (ASCII)

Data field 1 [EDITOR]	
ADDRESS (D)	DATA (A)
0000D	PONMLKJIHGFEDCBA
0016D	BQAYISXEDCRFVTGB
0032D	ZHNUJMIK;OL:PÖ_C
0048D	!WÜEF§RG$TH%ZJX
0064D	ÖP=LO)KI(JU/HZ&Y
0080D	9ol8ik7uj6zh5tg4

Byte editor

Data field 1 [EDITOR]	
ADDRESS (D)	DATEN (A)
0000D	PONMLKJIHGFEDCBA
0016D	BQAYISXEDCRFVTGB
0032D	ZHNUJMIK;OL:PÖ_C
0048D	!WÜEF§RG$TH%ZJX
0064D	ÖP=LO)KI(JU/HZ&Y
0080D	9ol8ik7uj6zh5tg4

Line editor

fig 8. Edit mode screen

Key operations:

Up/down: Current cursor is up/down.
When cursor is at highest or the lowest position at screen, it only moves data/address without cursor movement.

Shift+Left/right:
Current cursor moves to left or right by each 1character unit.
When cursor is under the 1 line and is moved to right/left side and more, cursor is displayed under 1line.

Character: Line editor: add input character at far right side of character string and move to left.
Byte editor: overwrite character at cursor.

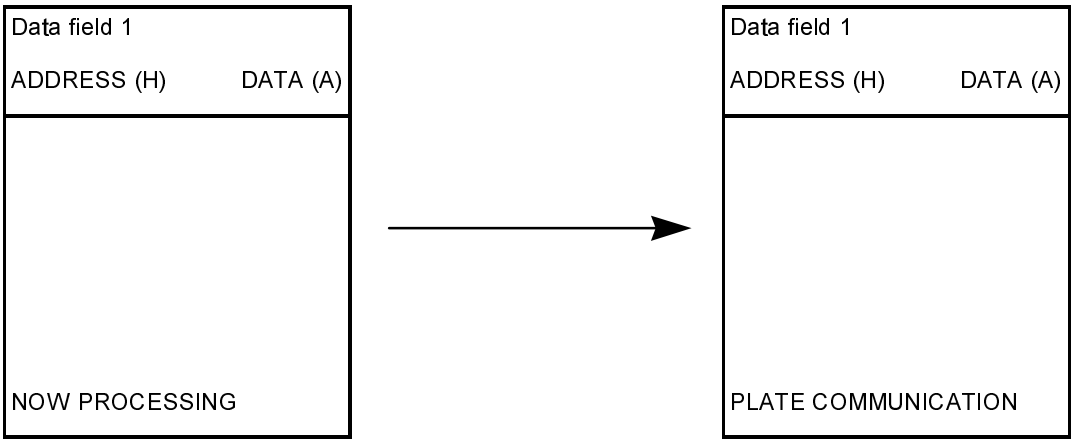
SET: Enter of input data.

CE: Before editing: Return to the before data screen.
After editing: It returns data before editing.

WRITE: Writing data to ID plate.

4.11 Writing data to ID plate

4.11.1 Start writing



Transferring screen Communicating screen

fig 9. Write screen

WRITE: At first, it starts to transfer the writing data in handy R/W. And then, it starts to communicate with the ID plate.
CE: Return to the before data screen.

4.11.2 Writing completed normally

If writing is completed normally, it returns to the current screen.

4.11.3 Writing error

If error occurred, it shows error message and error number. And it return to input to input any key.

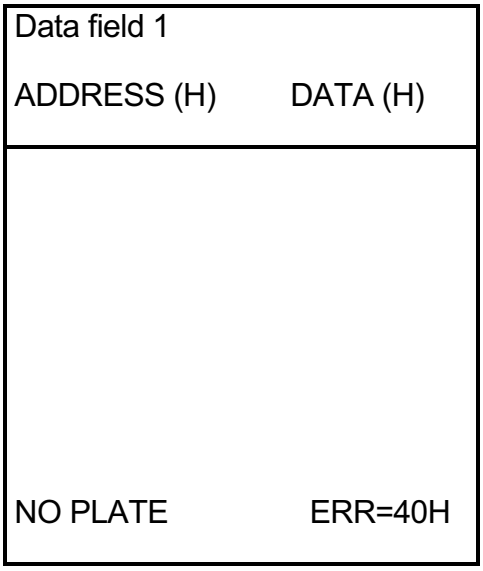


fig 10. Error screen

WRITE: Write again
CE: Return to the before data screen.
MODE: Return to the „MODE SELECT“ screen.

5 Presetting mode

5.1 Data fieldselect

PRESETTING MODE DATA FIELD SELECT
1) DATA FIELD 1 2) DATA FIELD 2 3) DATA FIELD 3 4) DATA FIELD 4 5) DATA FIELD 5 6) DATA FIELD 6

fig. 11. Presetting screen

1...6:	Select item number 1...6, and return to the next screen.
Up/Down	Cursor moves up/down.
SET:	Set item and go to the next screen.
MODE:	Return to the mode select screen

5.2 Setting of accesses area

PRESETTING MODE DATA FIELD 1
ACCESS AREA TOP ADDRESS=0000(H) NUM OF BYTE=0000(H)

fig 11. Setting of area

Default	Data field 1	0000(H)...05FF(H)	(1536 Byte)
	Data field 2	0600(H)...0BFF(H)	(1536 Byte)
	Data field 3	0C00(H)...11FF(H)	(1536 Byte)
	Data field 4	1200(H)...17FF(H)	(1536 Byte)
	Data field 5	1800(H)...1D7F(H)	(1536 Byte)

	Data field 6 8000(H)...807D(H) (126 Byte)
Character	Input address or number of byte.
CONV	Change code format (HEX - DEC); ex 00000(D) at DEC code
SET or Down	It decide value, and cursor go to the next item. When „NUM OF BYTE“ is set, it go to the next screen.
CE	Return to the before value. If push CE key again, return to the before item. Return to before screen in case of „TOP ADDRESS“.
Up	Return to the before item holding set value.
MODE	Return to the mode select screen.

5.3 Setting of data code format

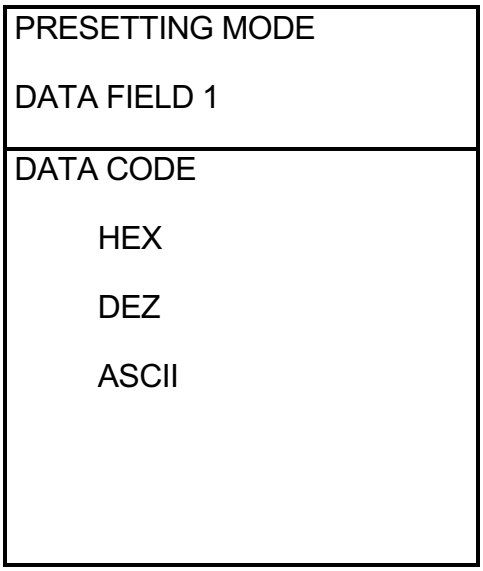


fig 12. Data code format

Up/Down: Cursor move up/down
SET: It is set value, and cursor go to the next screen..
CE: Return the before screen.
MODE: Return to the mode select screen.

5.4 Setting of data length

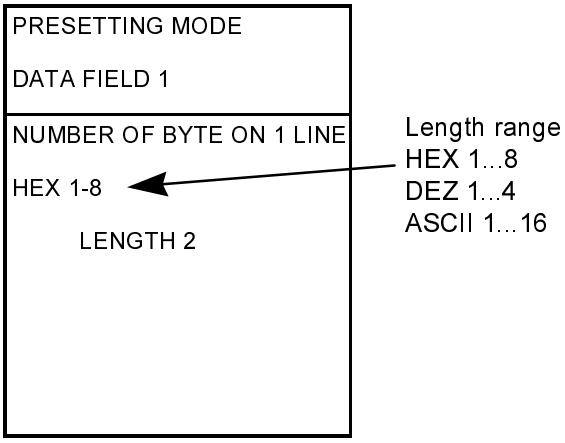


fig 13. Data length

Character: Input number of byte on one line.
SET: It is set value, and cursor go to the next screen.
CE: Return to the before screen.
MODE: Return to the mode select.

5.5 Setting of plate detection method

PRESETTING MODE DATA FIELD 1
PLATE DETECTION METHOD TIME LIMITED TIME UNLIMITED R/W PREPEAT

fig 14. Plate detection method

Operations: In common with before

5.6 Setting of verify

PRESETTING MODE DATA FIELD 1
VERIFY WITHOUT VERIFY WITH VERIFY

fig 15. Verify

Operations: In common with before

5.7 Setting of ID code

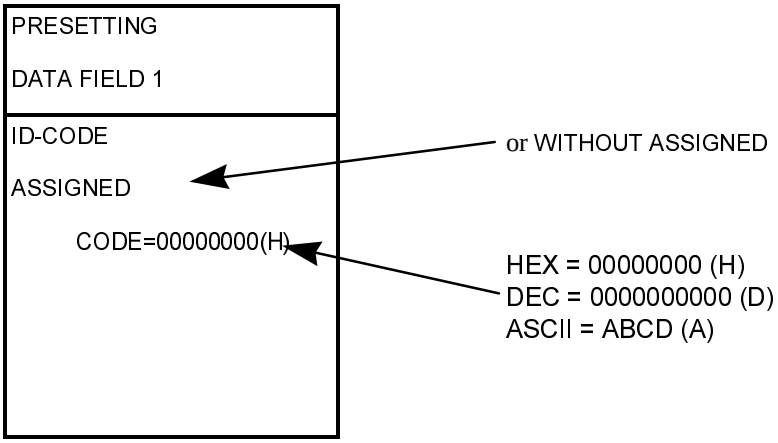


fig 16. ID Code

Operations:
Character: Input ID code.
SET: It is set value, and cursor go to the next screen.
CONV: Change data code format. (HEX - DEC - ASCII).
CE: Return to the before screen.
MODE: Return to the mode select screen.

5.8 Setting of data field name

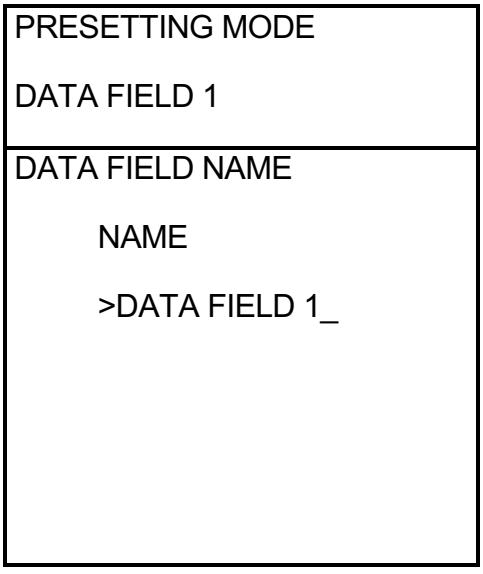


fig 17. Data field name

Default is „DATA FIELD 1“.
Operations:
Character: Input character on cursor. (max. 16 characters).
Shift+CE: Space
Shift Up/Down: Cursor moves to the left/right.
If cursor moves left and the character is deleted.
If cursor moves right, it can move till last character.
SET: It is set value, and cursor go to the next screen.
CE: Return to the before screen, or return to the before value.
MODE: Return to the mode select screen.

5.9 Presetting finished

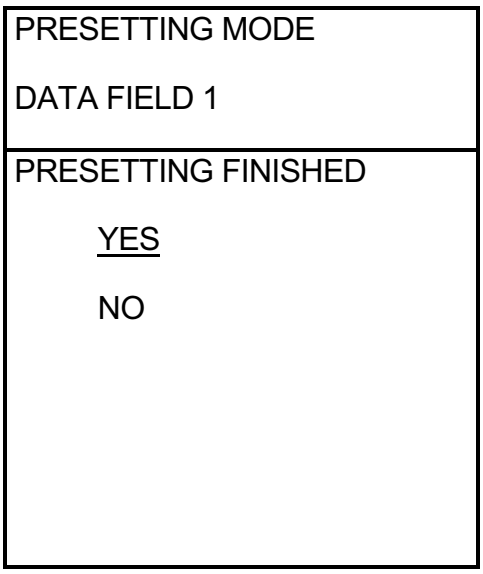


fig 18. Presetting finished

Default is „YES“.
Operations:
Up/Down: cursor us up/down.
SET: It is set value, and go to the mode selected screen.
CE: Return to the before screen.
MODE: Return to the mode select screen without setting.

6 Selectable memory area mode

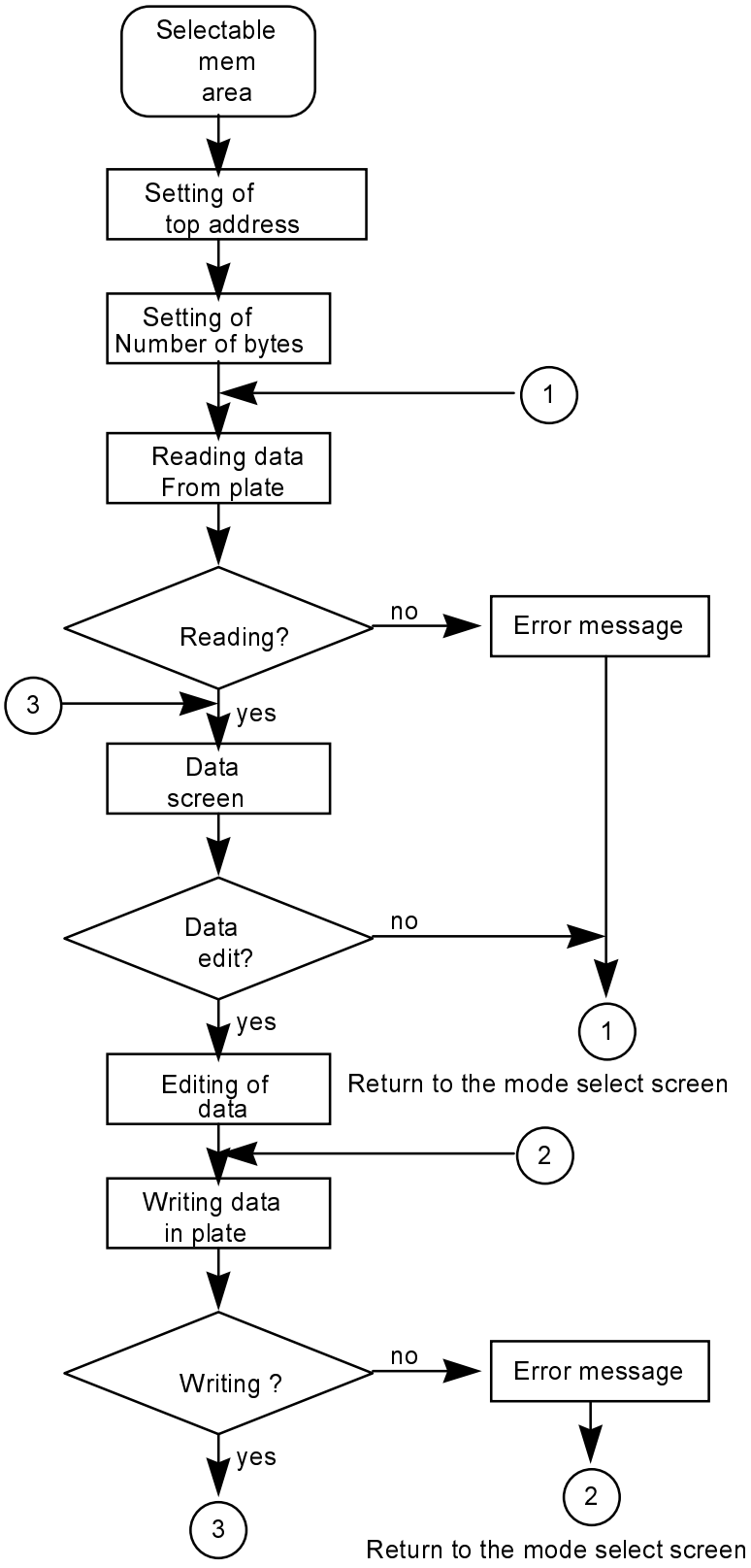


fig 19. Flow of function

6.1 Setting if access area

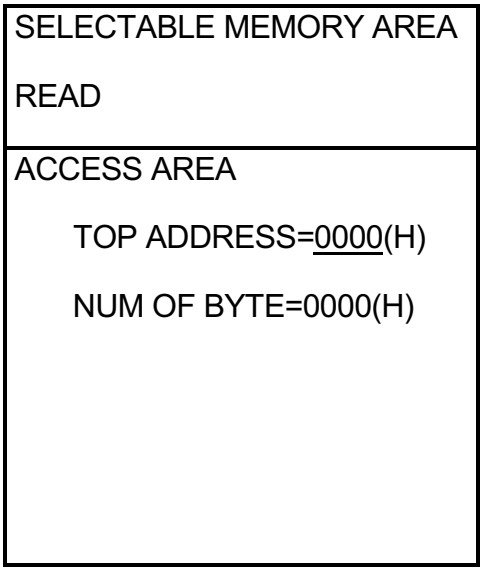


fig 20. Access area

Default: Top address = 0000(H)
Number of byte = 0000(H)
Operations: In common with before

6.2 Reading data

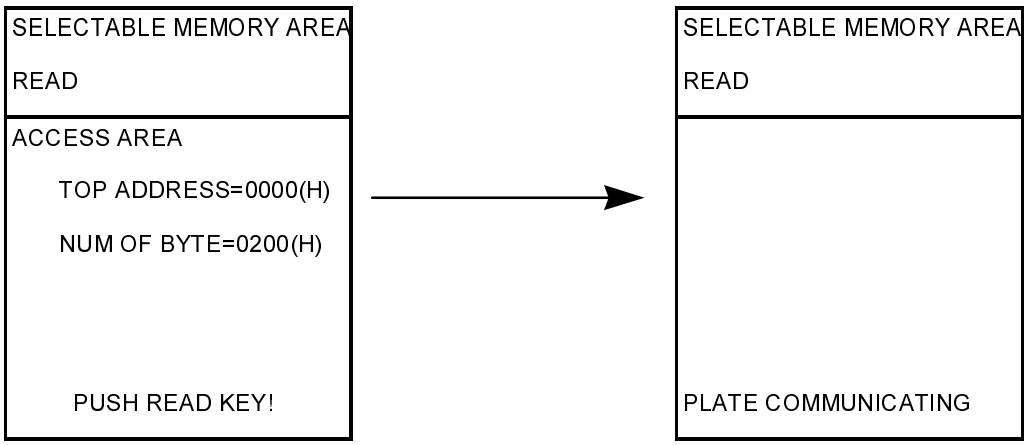


fig 21. Starting communication

READ: Reading data from ID plate.
CE: Return to the before screen. (Setting of number of byte)
MODE: Return to the mode select screen.

6.3 Reading completed normally

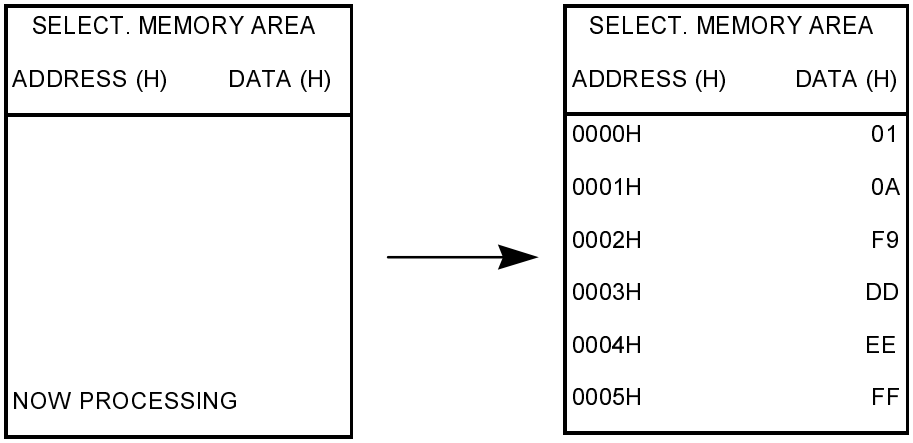


fig 22. Reading data transfer

READ: Read data from plate again.
CE: Return to the setting of number of byte.

6.4 Reading error

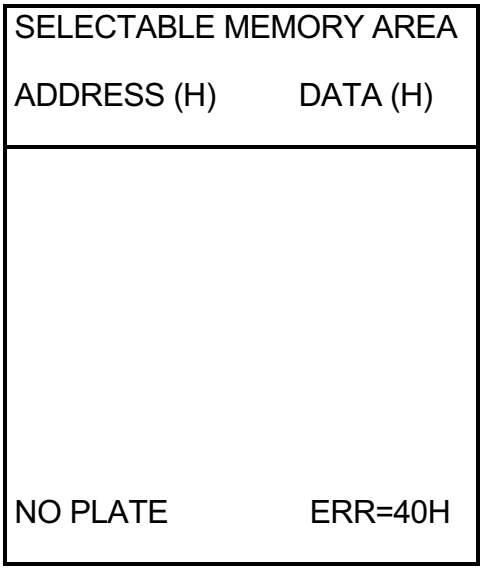


fig 23. Error screen

READ: Reading data from ID plate again.
CE: Return to the screen of „PUSH ANY KEY!“.
MODE: Return to the select screen.

6.5 Editor and writing data

SELECTABLE MEMORY AREA	
ADDRESS (H)	DATA(H)
0000H	01
0001H	0A
0002H	F9
0003H	DD
0004H	EE
0005H	FF

fig 24. Data editor

WRITE: Writing data to the plate.
CE: Return to the data screen.

7 Option mode

7.1 Select item

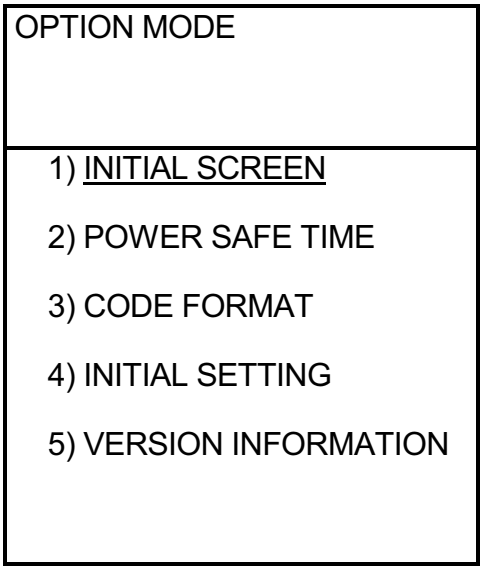


fig 25. Select item

Default is INITIAL SCREEN.
Operations:
Character: It is set item number 1...5, and return to the next screen.
Up/Down: Cursor move up/down.
SET: It is set item, and go to the next screen.
CE: Return to the mode select screen.
MODE: Return to the mode select screen.

7.2 Setting of wake up screen

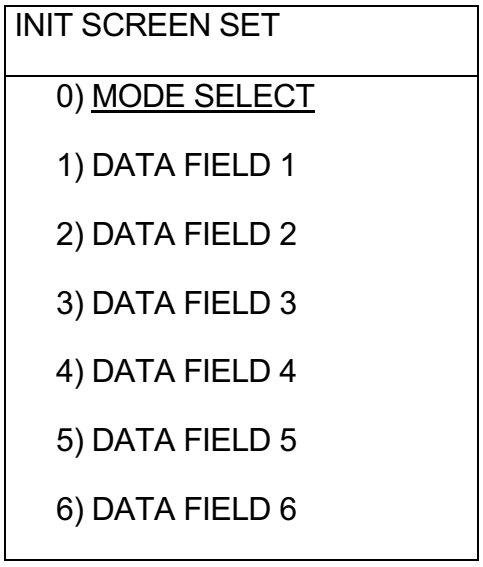


fig 26. Select screen

Default is MODE SELECT.
Operations:
Character: It is set item number 1...6, and return to the mode select screen.
Up/Down: Cursor move up/down.
SET: It is set item, and return to the mode select screen.
CE: Return to the before screen.
MODE: Return to the mode select screen.

7.3 Setting of power save time

This item sets auto power off time of handy R/W.

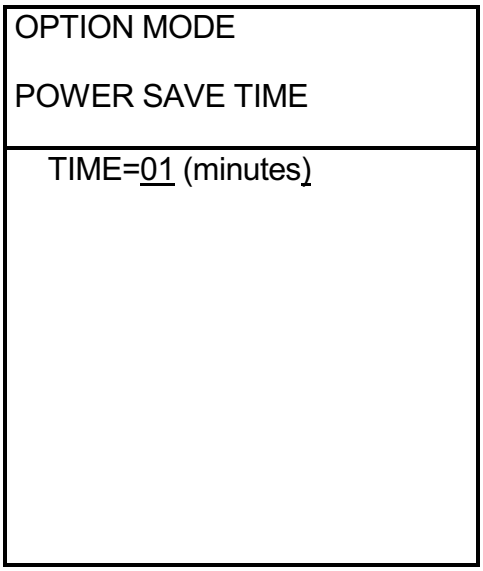


fig 27. Setting of time

Default is 3 minutes.
Operations:
Character: 01...60 minutes. 00 = Unlimited time, do not turn off automatically.
SET: It is set value, and return to the mode select screen.
CE: Return to the before screen.
MODE: Return to the mode select screen.

7.4 Setting of data format

This item set data format turn (Upper digits - Lower digits at each code) when data is 2.

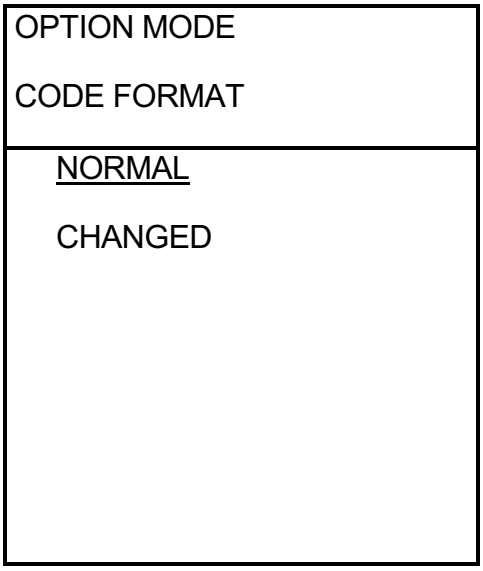


fig 28. Setting of code format

Default is NORMAL.
Operations:
Up/Down: Cursor move up/down.
SET: It is set value, and return to the mode select screen.
CE: Return to the before screen.
MODE: Return to the mode select screen.

7.5 Initial setting

This mode initialize all setting.

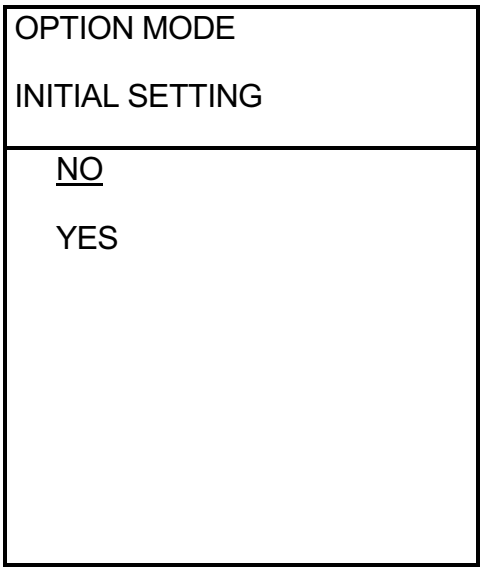


fig 29. Initial setting

Default is NO.
Operations:
Up/Down: Cursor move up/down.

SET: It is item, and return to the mode select screen.
CE: Return to the before screen.
MODE: Return to the mode select screen.

7.6 Version information

It shows the version number in order to maintain software.

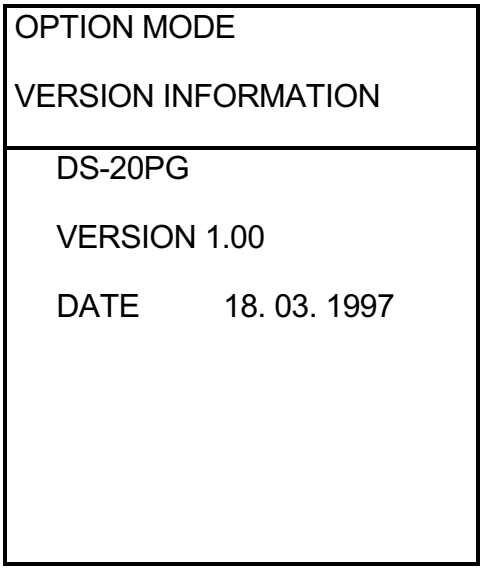
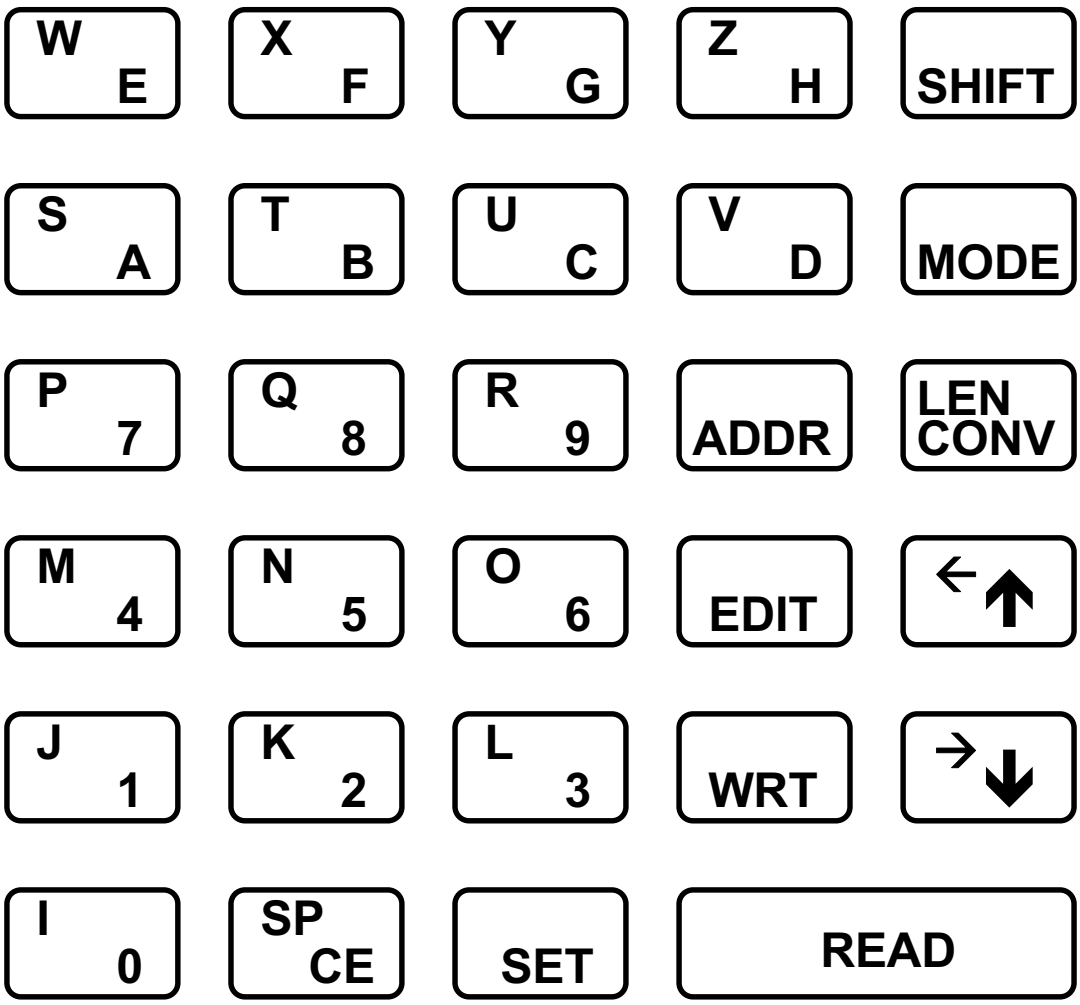


fig 30. Version information

ANY KEY: Return to the mode select screen.

8 Key arrangement



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