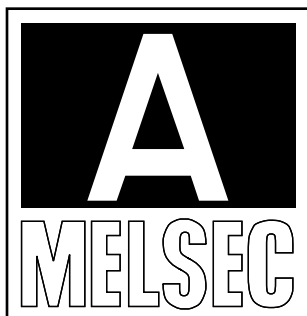
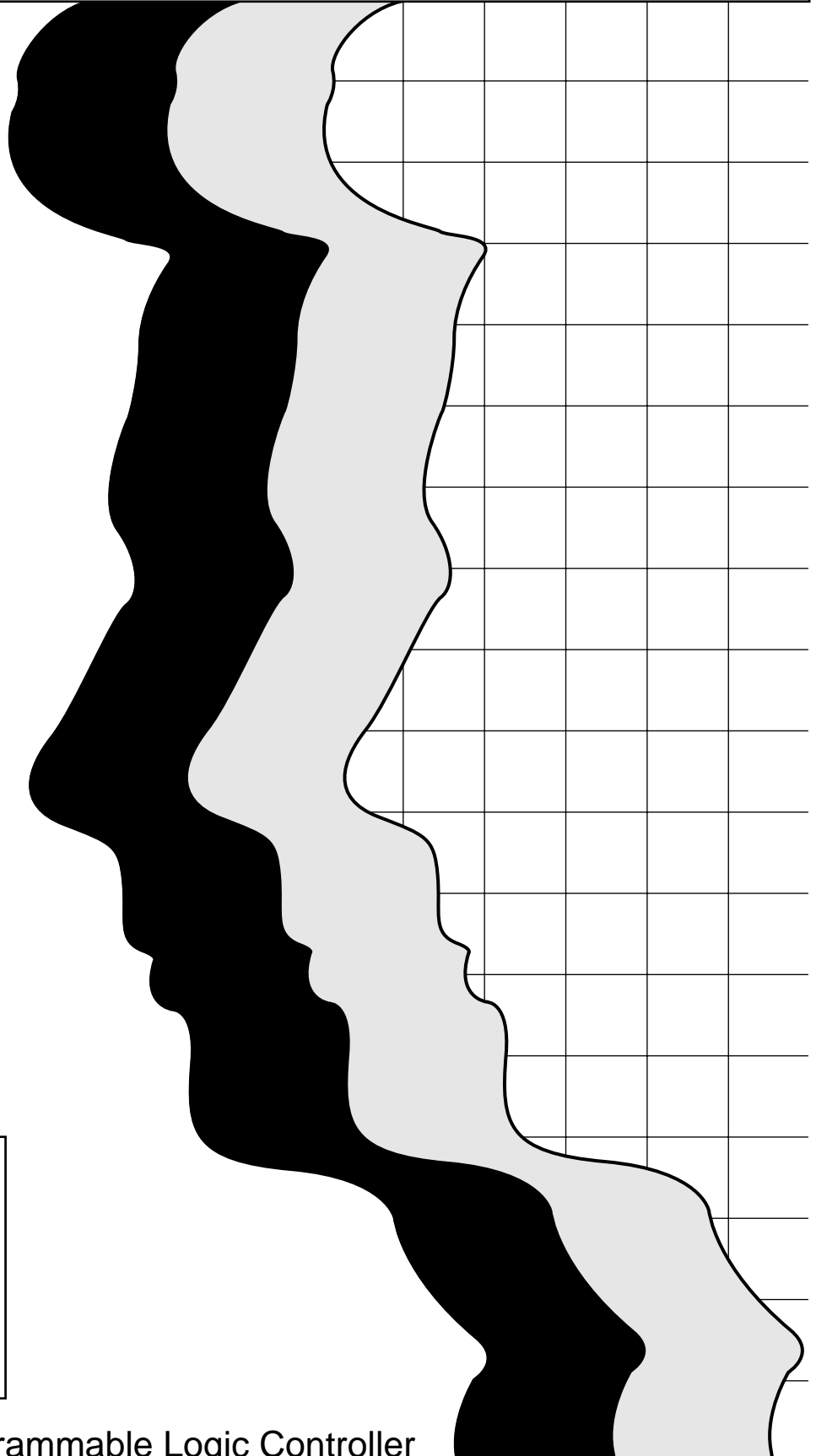


# MITSUBISHI

type SWOGP-MINIPE

Operating Manual



Mitsubishi Programmable Logic Controller

# REVISIONS

※The manual number is given on the bottom left of the back cover.

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Correction				
Addition				

## **INTRODUCTION**

Thank you for choosing the Mitsubishi MELSEC-A Series of General Purpose Programmable Controllers. Please read this manual carefully so that the equipment is used to its optimum. A copy of this manual should be forwarded to the end User.

**1. GENERAL DESCRIPTION**

**2. SYSTEM CONFIGURATION**

**3. OPERATING PROCEDURE**

**4. MINI-S3 INITIAL DATA SETTING MODE**

**5. CHARACTER GENERATOR EDIT MODE FOR OPERATION BOX**

**6. OPERATION BOX MESSAGE EDIT MODE**

**7. ROM MODE**

**8. FDD MODE**

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**10. ERROR MESSAGE LISTS**

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### 1. GENERAL DESCRIPTION

This manual describes the procedure and use of the SW-60GP-MINIP system floppy disk (referred to as MINIP) which is used to create the initial data ROM and message ROM chips which are installed in the AJ71PT32-S3 master module of the MELSECNET/MINI-S3 data link and the character generator ROM chip which is installed in the operation box.

The AJ71PT32-S3 master module has two modes; the extension mode and the I/O dedicated mode. The mode used is selected in accordance with the remote unit type.

When a remote terminal unit, such as an operation box, and the RS-232C interface unit are connected, the AJ71PT32-3 is used in the extension mode. In this mode, it is necessary to install the initial data ROM and the message ROM to the master module and the character generator ROM to the operation box.

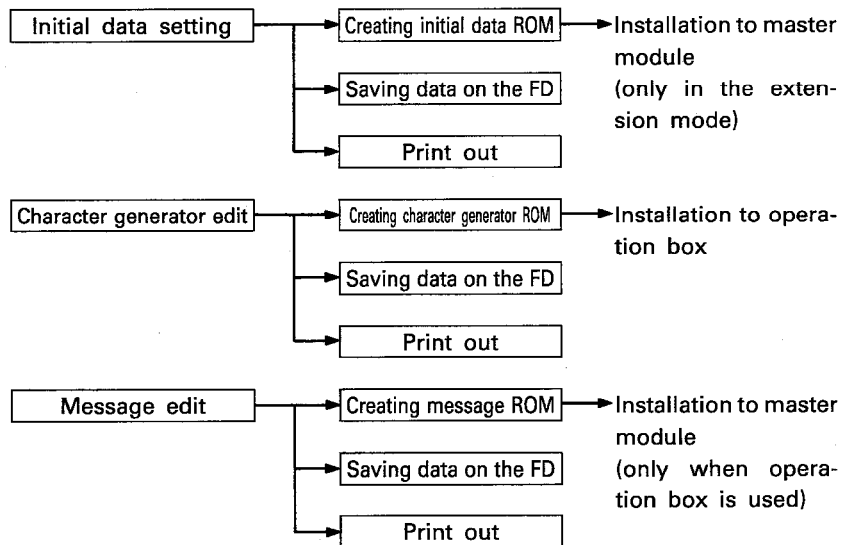
However, if the operation box is not connected, it is not necessary to install the message ROM or the character generator ROM.

When the AJ71PT32-S3 is used in the I/O dedicated mode, data setting and ROM creation using the MINIP are not necessary.

The MINIP is used by placing one of the following peripheral devices:  
A6GPP Intelligent Graphic Programming Panel (referred to as GPP)  
A6PHP Plasma Handy Graphic Programmer (referred to as PHP)



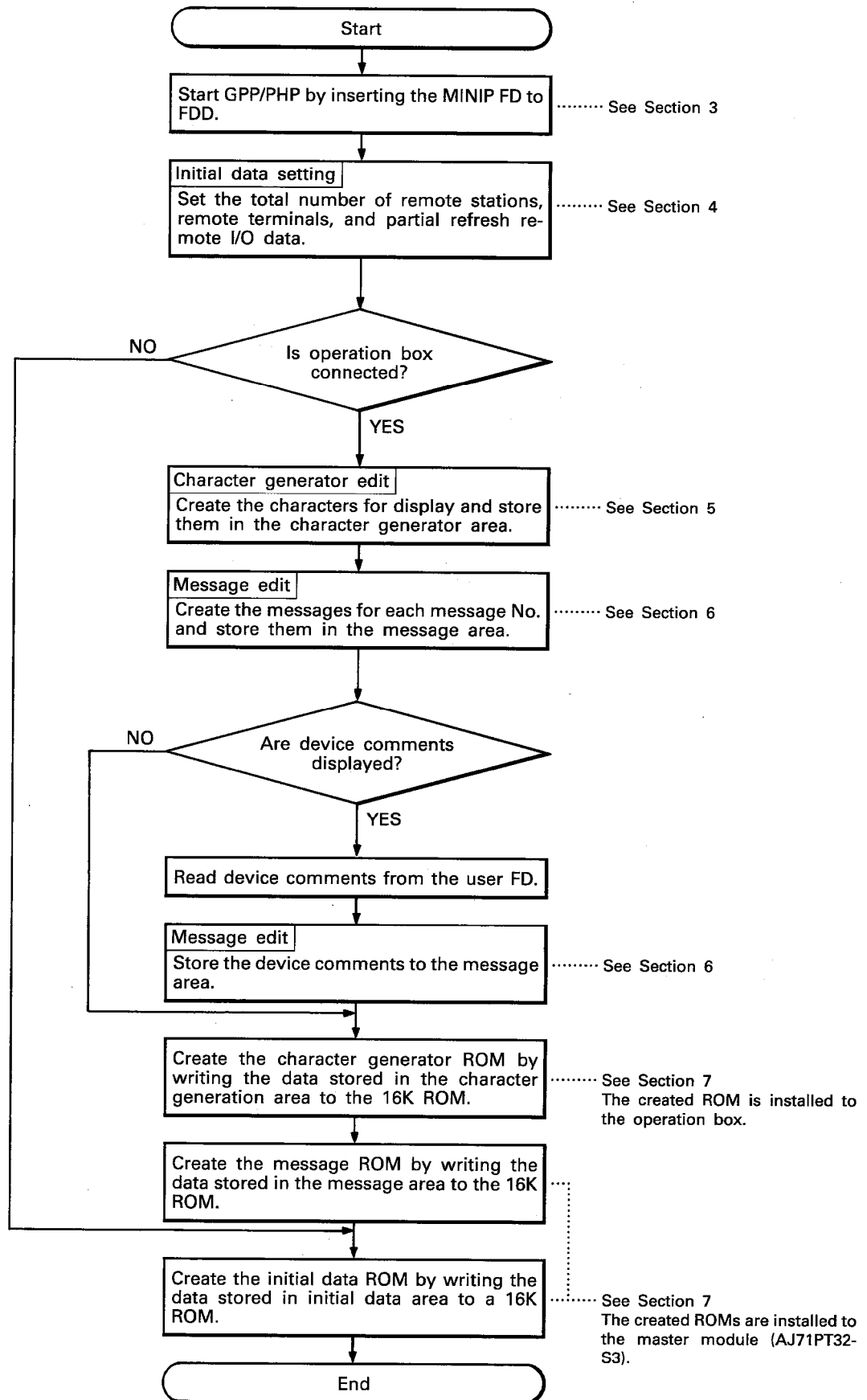
The MINIP system FD can be used for the following functions:



Function	Contents	Refer
Initial data setting	Sets the MELSECNET/MINI-S3 initial data (total number of stations, remote terminal data, partial refresh remote I/O data) in to the GPP/PHP memory.	Section 4
Character generator edit	Creates and saves the characters to be stored in the character generator ROM which is installed in the operation unit (AJ35T(PT)-OPB). (Character generator describes the dot matrix pattern of the characters to be displayed on the operation box's LCD panel.)	Section 5
Message edit	Creates and saves the messages (messages to be displayed on the operation box's LCD panel) to be stored in the message ROM which is installed to the master module (AJ71PT32-S3).	Section 6
Writing setting data to ROM	Writes the initial data, character generator data, and message data stored in the GPP/PHP memory on the ROM chip. Reads the ROM data to the GPP/PHP memory.	Section 7
Saving/reading FD data	Saves the initial data, character generator data, and message data on the FD. Reads the data from the FD.	Section 8
Print out of setting data	Prints the initial data, character generator data, and message data stored in the GPP/PHP memory. Prints the hard copy of the display data on the GPP/PHP screen.	Section 9

Note: In this manual, the initial data indicates the link data.

The operation flow from the start-up using the MINIP FD to ROM creation is described below.



2. SYSTEM CONFIGURATION

2.1 System Configuration Incorporating the A6GPP

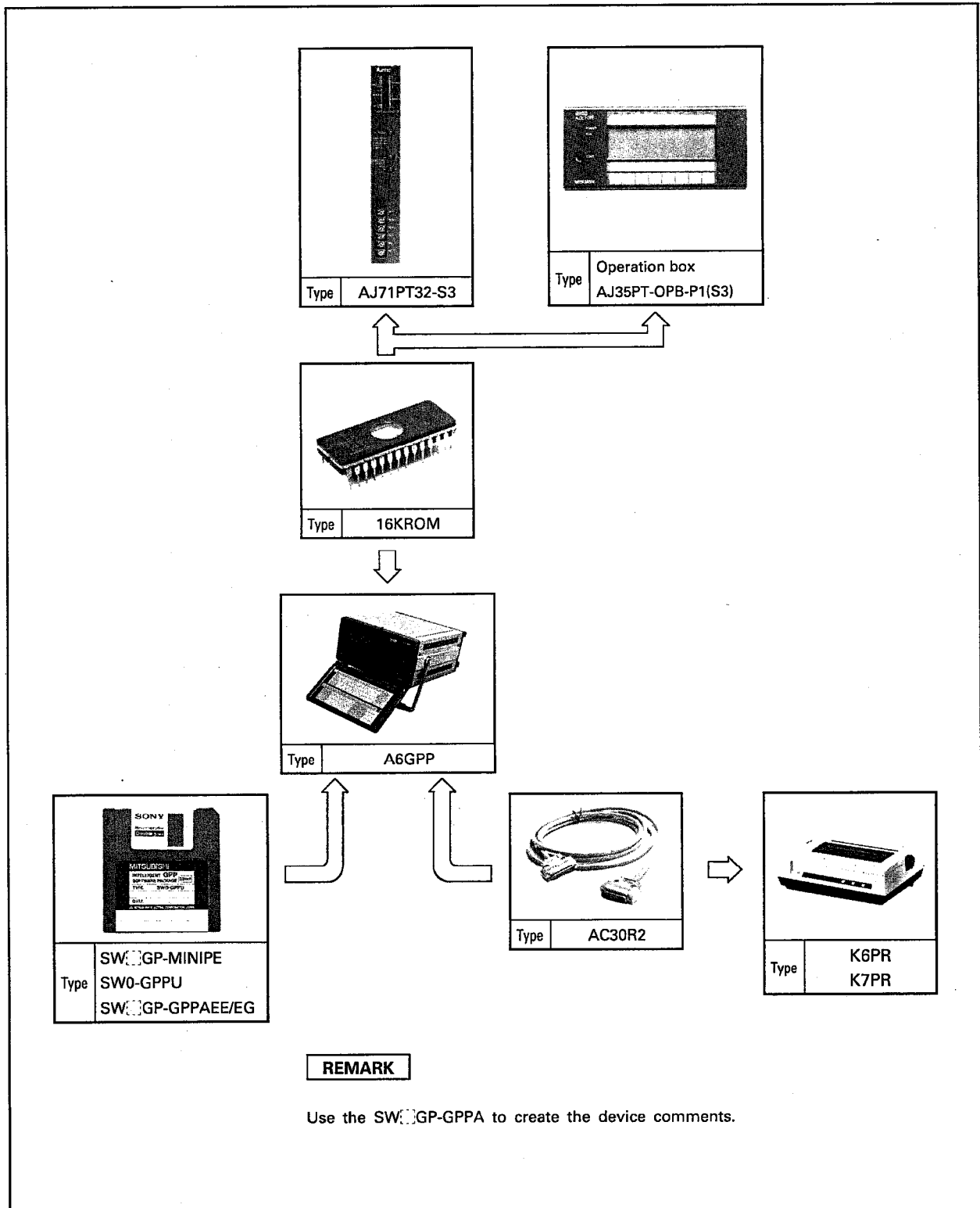


Fig. 2.1 System Configuration when GPP is Used

2.2 System Configuration when A6PHP is Used

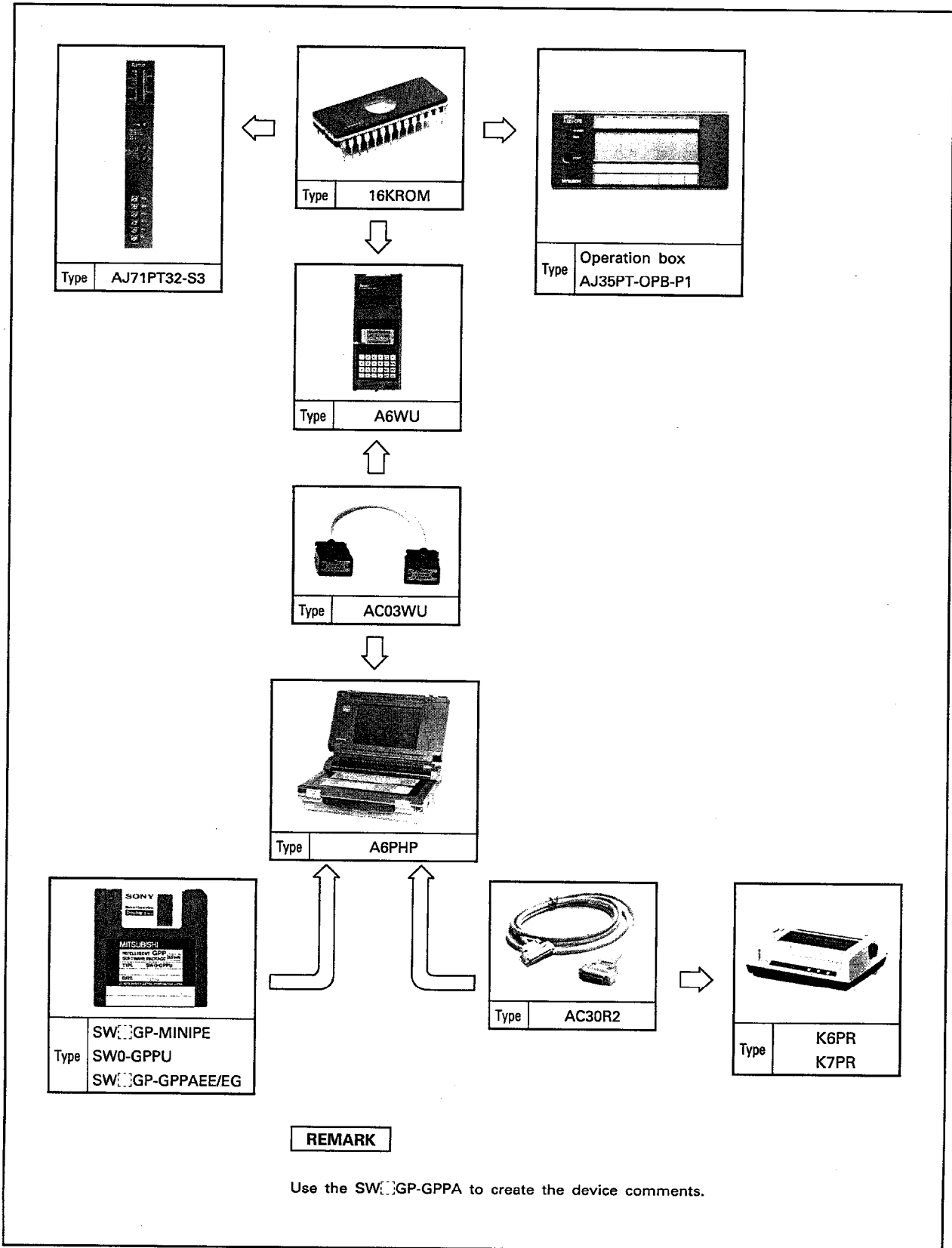
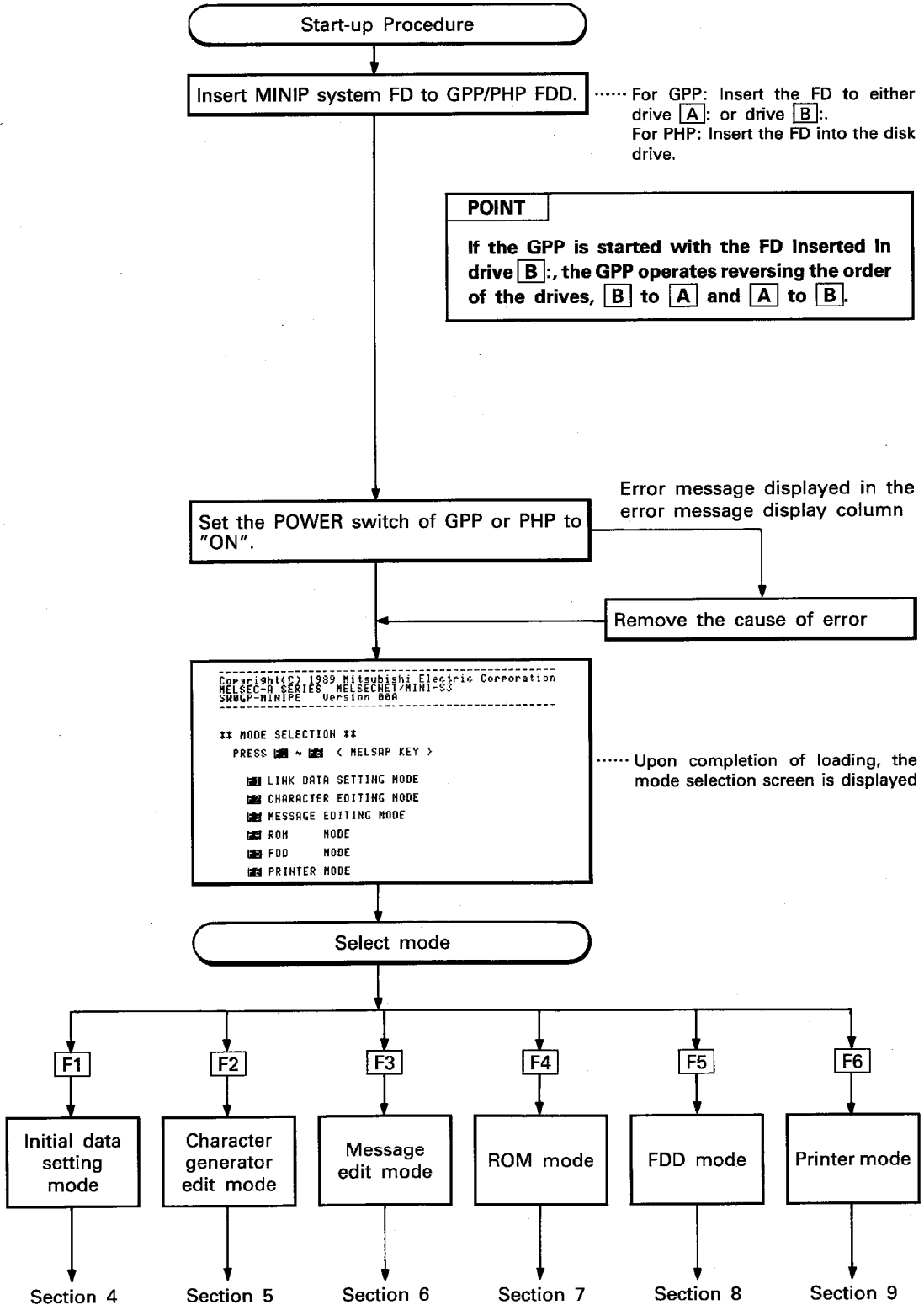


Fig. 2.2 System Configuration when PHP is Used

3. OPERATING PROCEDURE

3.1 Start-up Procedure

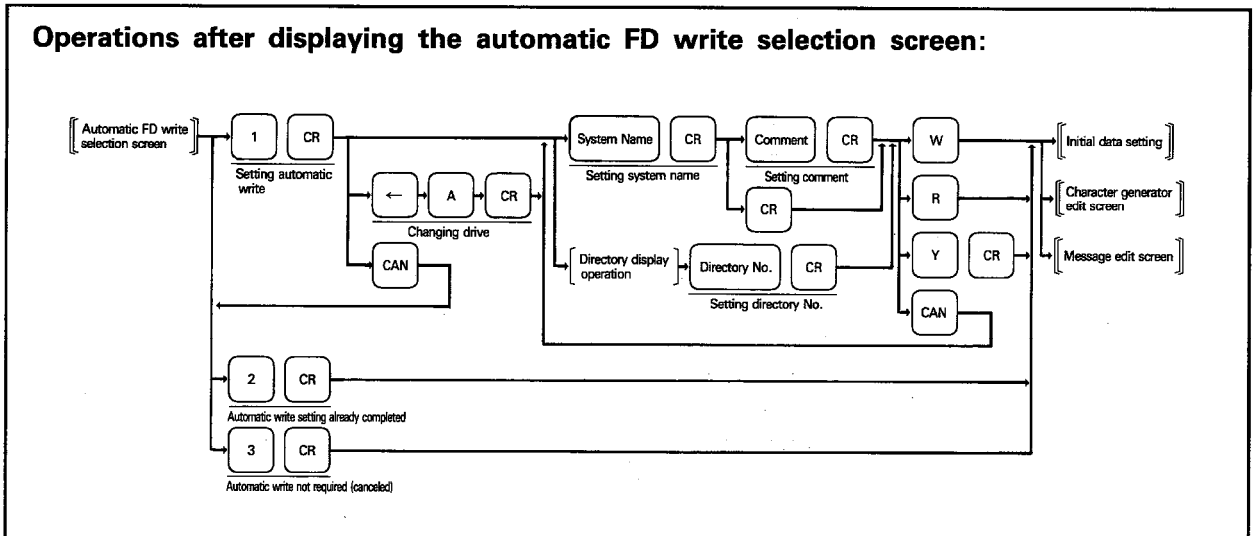
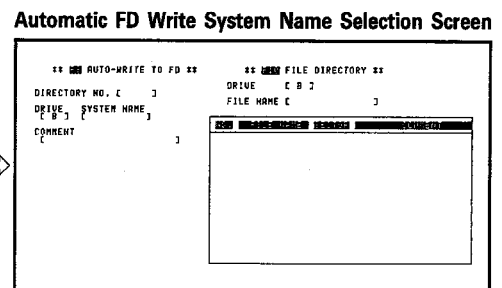
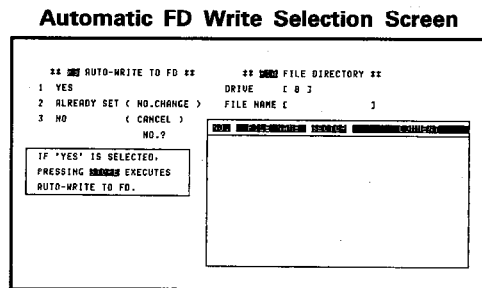
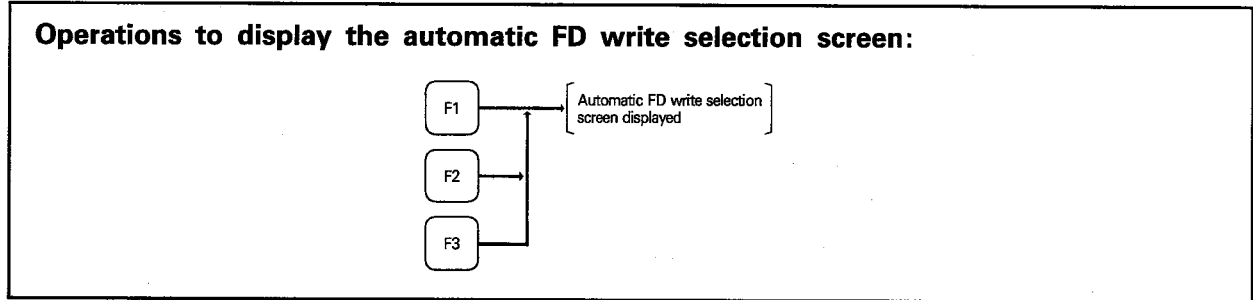


3

#### 3.2 Selecting Automatic FD Write Function

The automatic FD write function is available for the initial data setting mode, character generator edit mode, and message edit mode.

When the automatic FD write function is selected, the data is automatically saved on the FD by pressing **F9 (STORE)**. It is also possible to set or cancel automatic writing after displaying the directory of the designated FD.



**EXPLANATION**

- (1) The automatic FD write selection screen provides the two functions - **F8** (automatic write) and **F10** (file directory).
- (2) After selecting **1** and pressing **CR** to reset the automatic write, it is necessary to set the system name and directory number.  
For the system name, setting of up to eight alphanumeric characters and a minus sign is possible. The first character must be alphabetic.  
Up to 20 alphanumeric characters and special characters are possible for the comment. If a comment is not set, simply press **CR**.  
For the directory number, a file number having the same identifier (RMN, CMN, MMN) as the corresponding data of the files displayed in the file directory can be set.
- (3) After setting the comment, the following message is displayed if the system name designated already exists in the FD.

SYSTEM NAME ALREADY USED!  
PRESS **W** TO WRITE NEW DATA  
PRESS **R** TO READ STORED DATA

- 1) Pressing **W** clears the designated system name data on the FD and executes the automatic write function.
  - 2) Pressing **R** reads the designated system name data on the FD to the GPP/PHP and executes the automatic write function.
- (4) After the setting of the comment, the following message is displayed if the designated system name is not found in the FD.

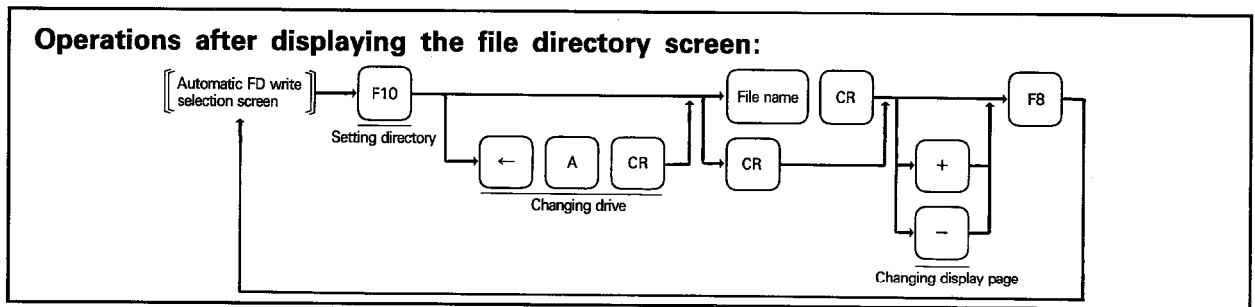
WRITE NEW DATA TO FD  
PRESS <Y><CR> TO START  
PRESS <CR> TO CANCEL

- 1) Pressing **Y** and **CR** sets the designated system name on the FD and executes the automatic write function.
- 2) Pressing **CAN** returns to the system name setting screen, allowing another system name to be set .

**POINT**

**Automatic write to FD is automatically canceled when:**

- 1) The GPP/PHP is turned off or reset,
- 2) Character generator, message, or comment is cleared,
- 3) Any function other than verify or directory is selected in the FDD mode,
- 4) An error occurs while the automatic write function is executed, or
- 5) The read function is selected in the ROM mode.



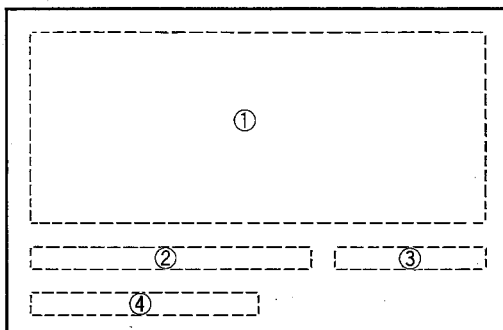
## EXPLANATION

- (1) Pressing **F10** while the automatic FD write selection screen is displayed executes the file directory setting function.
- (2) When the file directory screen is displayed, files can be displayed in two different modes; displaying all files in the FD or displaying the files having the designated system name or designated identifier.
- (3) To read all the files in the FD, press **CR** after calling the directory setting function.
- (4) To read the file for the system name or identifier, designate the file name and press **CR** after calling the directory setting function.
- (5) For details of file name designation and other related information, refer to Section 8.2.
- (6) After calling the directory function, press **F8** and the automatic FD write function is called.



#### 3.3 Common Operations for MINIP System FD

##### 3.3.1 Common display areas

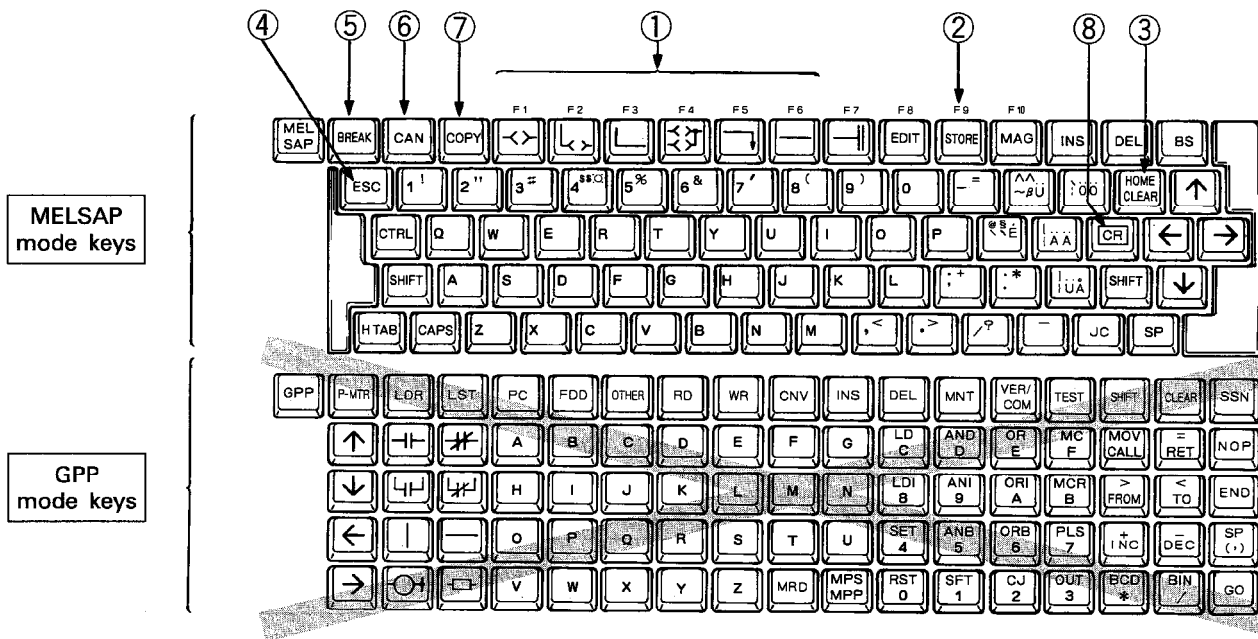


	Area	Description
①	Data display area	Displays operation guide for the selected mode, keyed in data, read data, etc. [ ]: Displays the contents of the setting data, or indicates that the setting is possible. ( ): Displays the setting range of the data to be set, or the operation key to be used for selection.
②	Message display area	Displays messages [i.e. error message] concerning keyed in data or operations.
③	FD file name display area	When the automatic FD write is set, the corresponding file name and the drive are displayed.
④	Mode display area	Displays the function keys which can be used for mode selection. The mode currently selected is displayed in reverse display mode.

### 3. OPERATING PROCEDURE

#### 3.3.2 Valid keys

(1) The MINIP system FD uses the upper, MELSAP keyboard.



(2) The MINIP system FD uses the menu driven software. To select a required function, press the number key or selection key corresponding to the function number.

	Key	Function	Remarks
①	F1	Sets the initial data setting mode	These keys are effective except in the following cases: (1) Data read/write of ROM chip (2) Access to FD (3) Printing
	F2	Sets the character generator edit mode	
	F3	Sets the message edit mode	
	F4	Sets the ROM mode	
	F5	Sets the FDD mode	
	F6	Sets the printer mode	
②	F9 (STORE)	Writes data to GPP/PHP memory or to FD automatically.	Valid after the automatic FD write has been set.
③	HOME CLEAR	Deletes keyed in data	Always valid
④	ESC	Cancels the selected function	
⑤	BREAK	Stops printing when print out function is interrupted in the printer mode. Invalid during GPP/PHP screen hard copy operation.	
⑥	CAN	Returns to the previous screen.	
⑦	COPY	Copies the GPP/PHP screen.	Valid after the setting of a printer in the print mode.
⑧	CR	<ul style="list-style-type: none"> <li>Used to establish the set data.</li> <li>Used to stop printing during GPP/PHP screen hard copy.</li> </ul>	

Table 3.1 Special Keys

3.3.3 A6GPP/A6PHP buzzer adjustment

An electronic buzzer sounds when any key on the GPP/PHP keyboard is pressed. The buzzer has two volume settings and can be set to the required volume setting (LOW or HIGH) following the procedure outlined below.

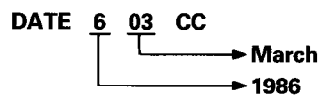
(Using MELSAP mode keys)

Press CTRL and 1 at the same time.

Buzzer volume is factory set to "LOW". By pressing CTRL and 1 at the same time, volume is set to "HIGH". To return volume to "LOW", press these two keys at the same time once again.

POINT

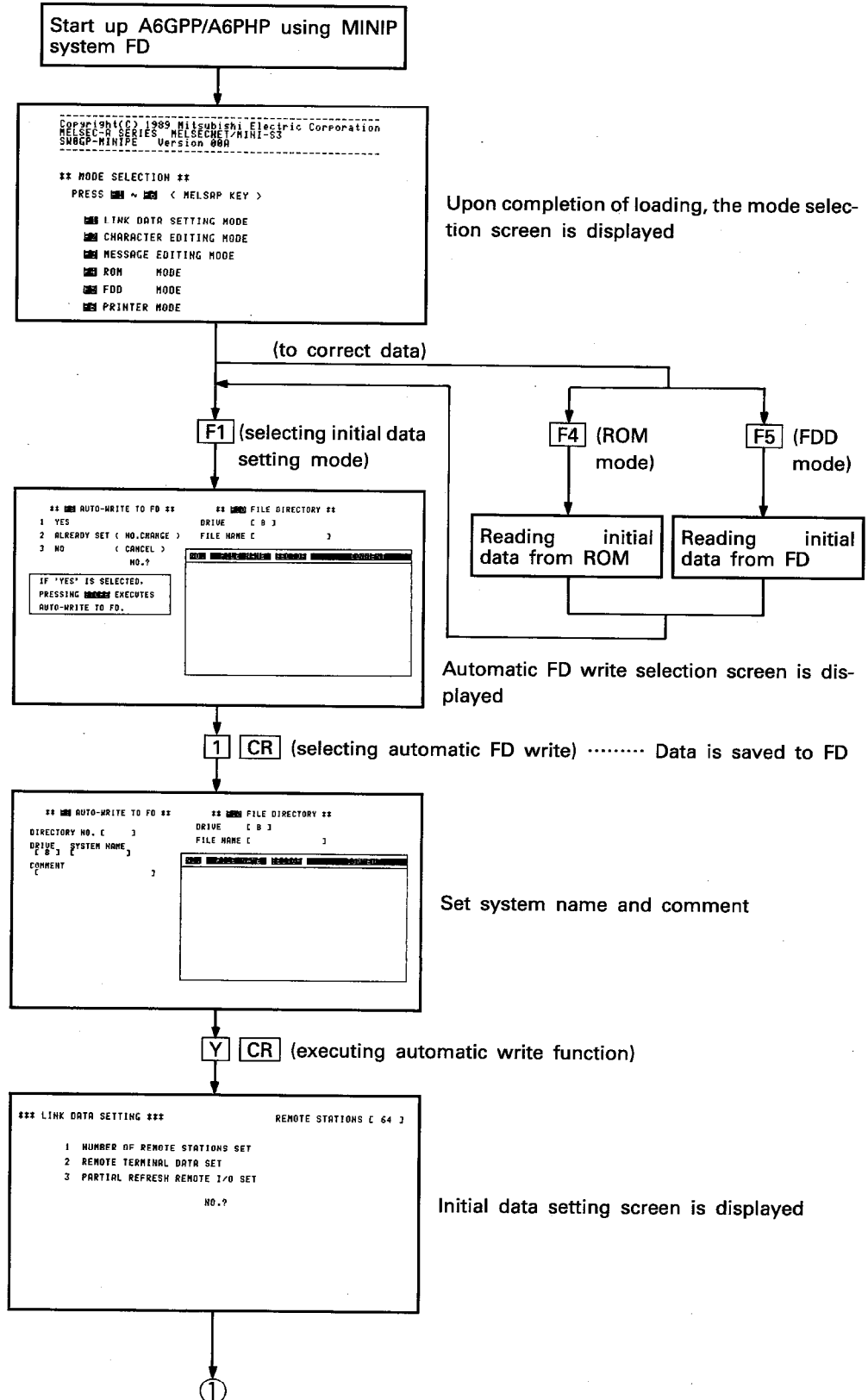
Volume adjustment can be made for the A6GPP/PHP manufactured from March, 1986 onwards. Check the DATA on the A6GPP/PHP rating plate.



### 3. OPERATING PROCEDURE

#### 3.4 Operation Procedure for Each Function

##### 3.4.1 Initial data ROM creation



①

1 CR (selecting the setting of total number of remote stations)

```

*** LINK DATA SETTING ***

NUMBER OF REMOTE STATIONS [ 64 ]
    
```

Set the total number of remote stations

F9 (STORE) (executing automatic FD write function)

CAN (returning to initial data setting screen)

2 CR (selecting remote terminal data setting)

```

** REMOTE TERMINAL **                REMOTE STATIONS [ 70 ]
1 NUMBER OF TERMINAL 2 [ 8 ~ 14 ]
2 REMOTE TERMINAL DATA (DATA ALL CLEAR)
NO. STATION-NO. PROTOCOL MACHINE NAME FROM ADDR TO ADDR
 1 1 1 1 [ 0 0 0 0 0 0 ] [ 0 0 ] [ 0 0 ]
 2 1 1 1 [ 0 0 0 0 0 0 ] [ 0 0 ] [ 0 0 ]

(1~64) 1: NON PROTOCOL ( 8 ~ 999 )
        2: OPERATION BODY
        3: REMI STANDARDS PROTOCOL
KEY IN OPEN [ 1 2 ]
  FROM TO NUMBER OF REMOTE
  TERMINAL SET
MESSAGE>
  NO. CHARACTER MESSAGE ROM FDD PRINTER
    
```

Set the number of remote terminals and the remote terminal data.

F9 (STORE) (executing automatic FD write function)

CAN (returning to initial data setting screen)

3 CR (selecting partial refresh remote I/O data setting)

```

** PARTIAL REFRESH REMOTE I/O **      REMOTE STATIONS [ 64 ]
1 NUMBER OF PARTIAL REFRESH
  REMOTE I/O [ 1 ] [ 6 ~ 16 ]
2 PARTIAL REFRESH REMOTE I/O DATA (DATA ALL CLEAR)
NO. STATION-NO. INPUT DIGITS OUTPUT DIGITS
 1 1 1 [ 0 ] [ 0 ]
 2 1 1 [ 0 ] [ 0 ]

(1~64) ( 0 ~ 16 ) ( 0 ~ 16 )
KEY IN OPEN [ 1 2 ]
  FROM TO PARTIAL REFRESH
  REMOTE I/O SET
    
```

Set the number of partial refresh remote I/O units and partial refresh remote I/O data

F9 (STORE) (executing automatic FD write function)

F6 (selecting printer mode) ..... Confirm the data which has been set by printing it.  
If confirmation is not necessary, the print out operation can be skipped.

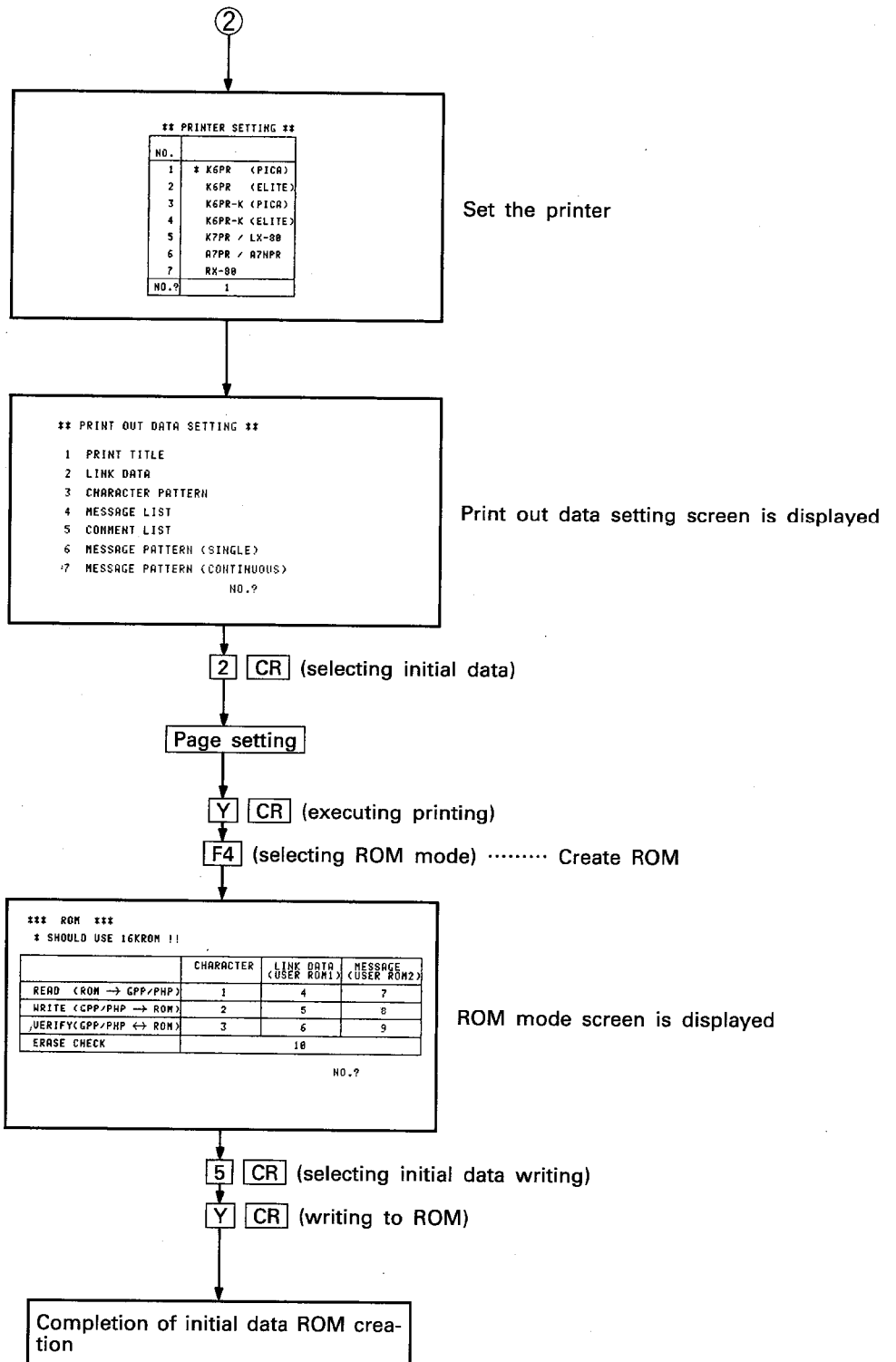
```

*** FUNCTION SELECTION ***
1 PRINTER SELECTION
2 PRINT-OUT DATA SELECTION
NO. 9
PRINTER - KPRR (PKR)
DATA RATE - 2400
PARITY - EVEN
CHARACTER LENGTH - 8
STOP BIT - 1
PAPER LENGTH - 11
START-POSITION - W
    
```

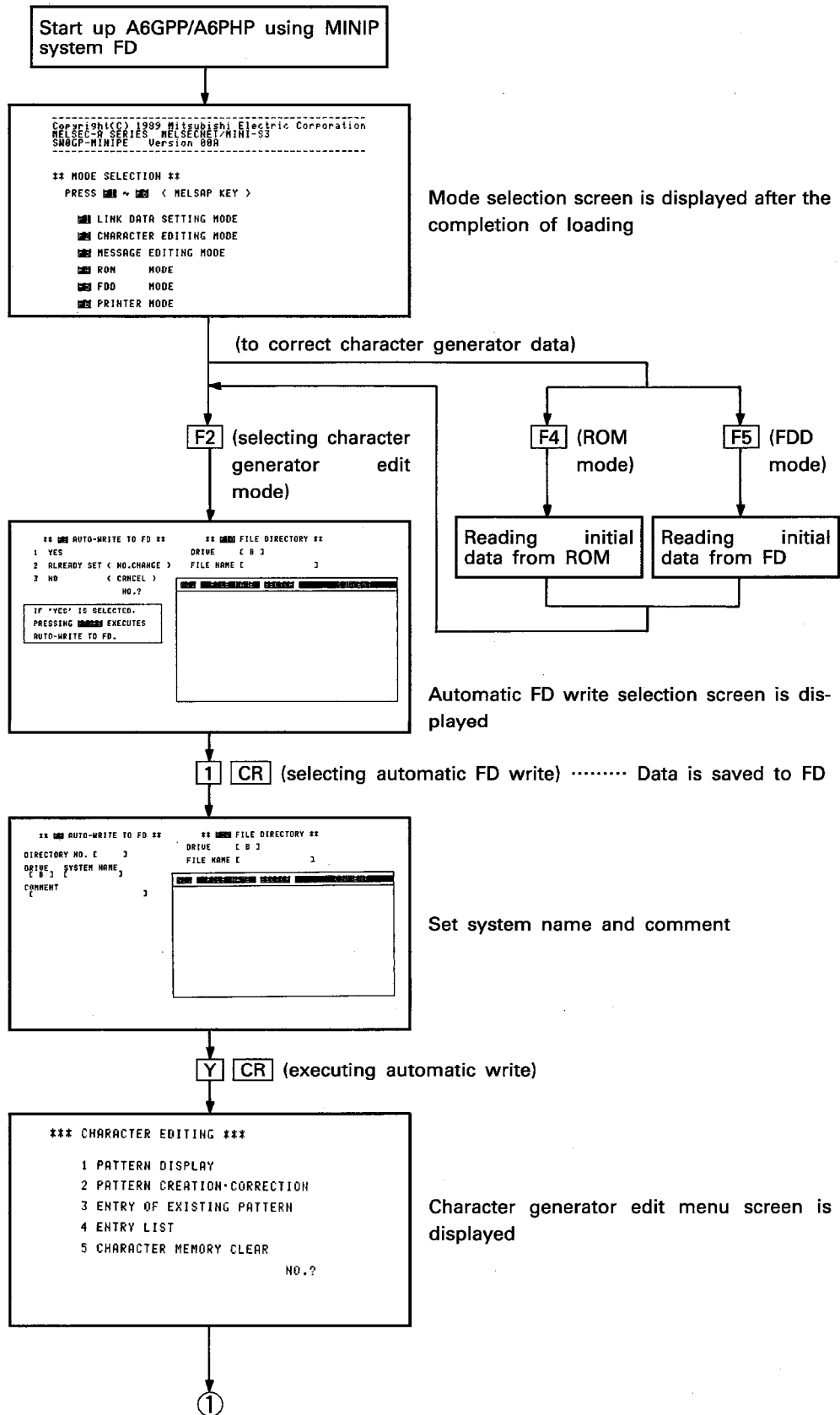
Printer function selection screen is displayed

1 CR (selecting printer setting)

②



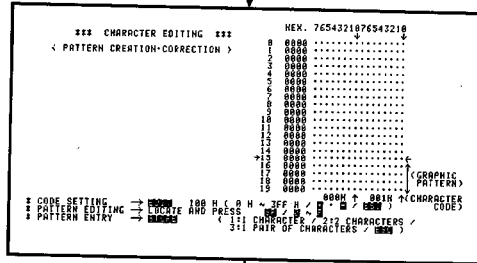
3.4.2 Character generator ROM creation



### 3. OPERATING PROCEDURE

①

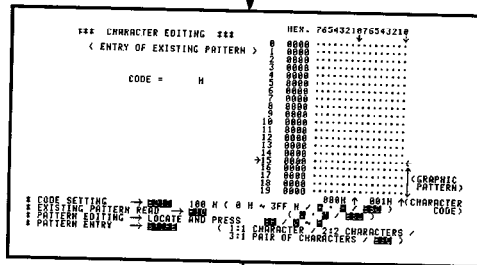
2 CR (selecting the character pattern create: correct, and enter)



Create, correct or enter character patterns

CAN (returning to character generator edit menu screen)

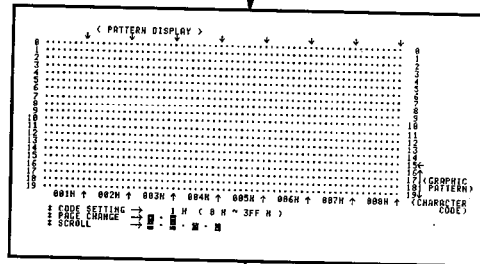
3 CR (selecting entry of existing pattern)



Enter existing character patterns

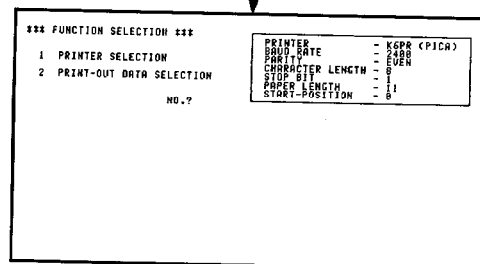
CAN (returning to character generator edit menu screen)

1 CR (selecting the display of character pattern) ..... Confirm the created character patterns



Character pattern is displayed

F6 (selecting printer mode) ..... Confirm the created character patterns by printing them. If confirmation is not necessary, the print out operation can be skipped.

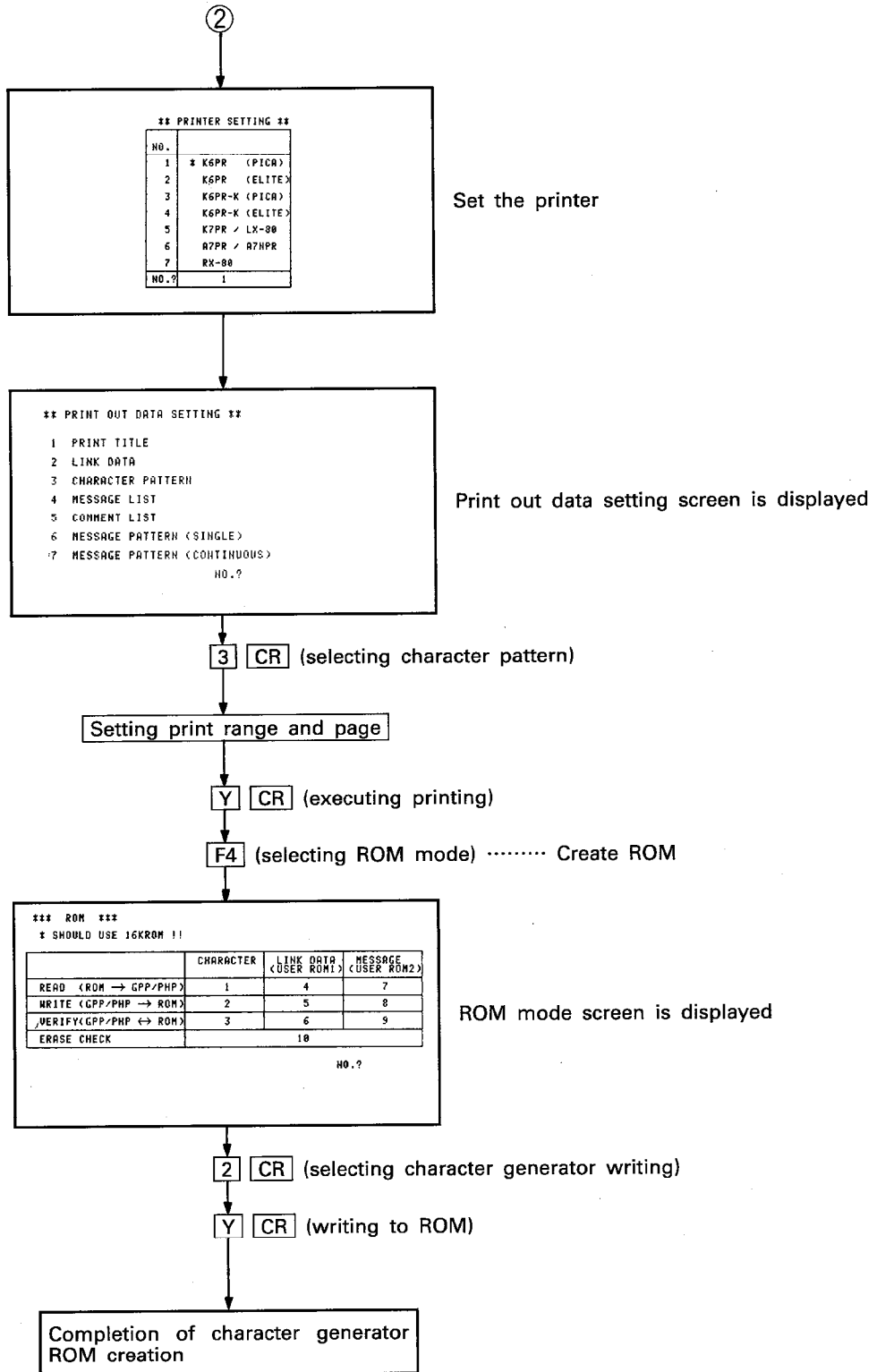


Printer function selection screen is displayed

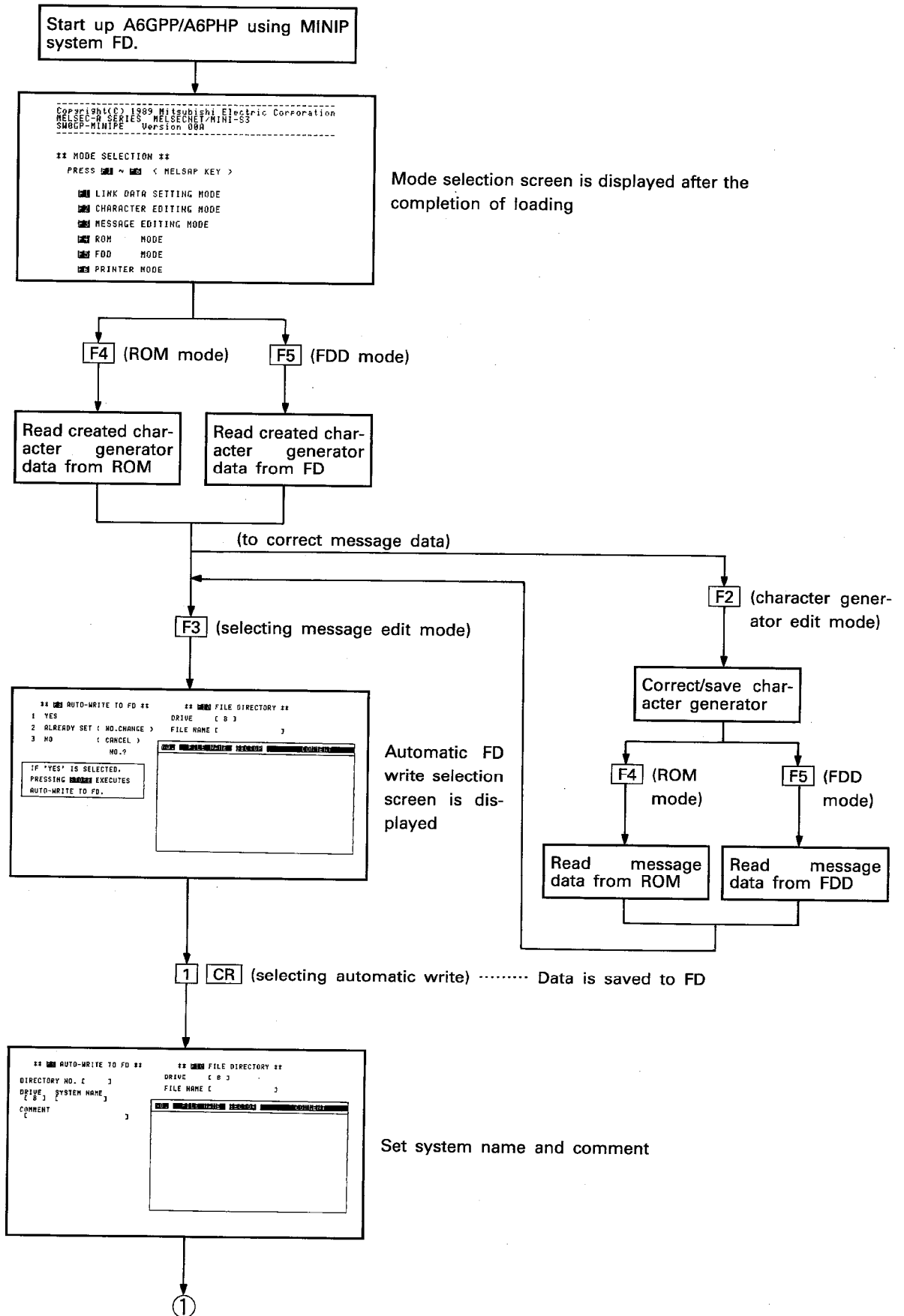
1 CR (selecting printer setting)

②





## 3.4.3 Message ROM creation



①

Y CR (executing automatic write)

```

** MESSAGE EDITING **
MAX. NO. MESSAGES 400
MAX. NO. COMMENTS 8

1 MESSAGE MODE SETTING
2 MESSAGE CREATION-CORRECTION
3 MESSAGE PATTERN DISPLAY
4 COMMENT ENTRY
5 COMMENT DISPLAY
6 MESSAGE COMMENT CLEAR

NO. ?
    
```

Message edit menu screen is displayed

1 CR (selecting message mode setting)

```

** MESSAGE MODE SETTING **

```

	NUMBER OF MESSAGES	NUMBER OF COMMENTS
1	25	120
2	50	120
3	75	120
4	100	120
5	125	120
6	150	120
7	175	120
8	200	120
9	225	120
0	250	120
1	275	120
2	300	120
3	325	120
4	350	120
5	375	120
6	400	120

```

# CURSOR (H, B)
# SETTING (CR)
    
```

Set number of message and mode

F9 (STORE) (executing automatic FD write)

CAN (returning to message mode setting screen)

CAN (returning to message edit menu screen)

2 CR (selecting message create/correct)

```

** CREATION OR CORRECTION OF MESSAGE **
MESSAGE NO. : 1  MODE : MESSAGE

```

MESSAGE NO.	MODE	MESSAGE	COMMENT
1			
2			
3			
4			
5			
6			
7			
8			
9			
0			

```

# MESSAGE NO. SET ( )
# INSERT ( )
# DELETE ( )
# SCROLL ( )

# CHARACTER CODE SET
# CHARACTER SET
# [X] SET
# [ ] NO SET
# ( ) ADDRESS
# # NO SUCCESS
# ( ) GRAPHIC
# ( ) PATTERN
# MESSAGE PATTERN SET ( ) ( )
    
```

Create/correct message

F9 (STORE) (executing automatic FD write)

CAN (returning to message edit menu screen)

3 CR (selecting message pattern display)

..... Confirm messages created

```

** MESSAGE PATTERN DISPLAY **
MESSAGE NO. : 1  MODE : MESSAGE

```

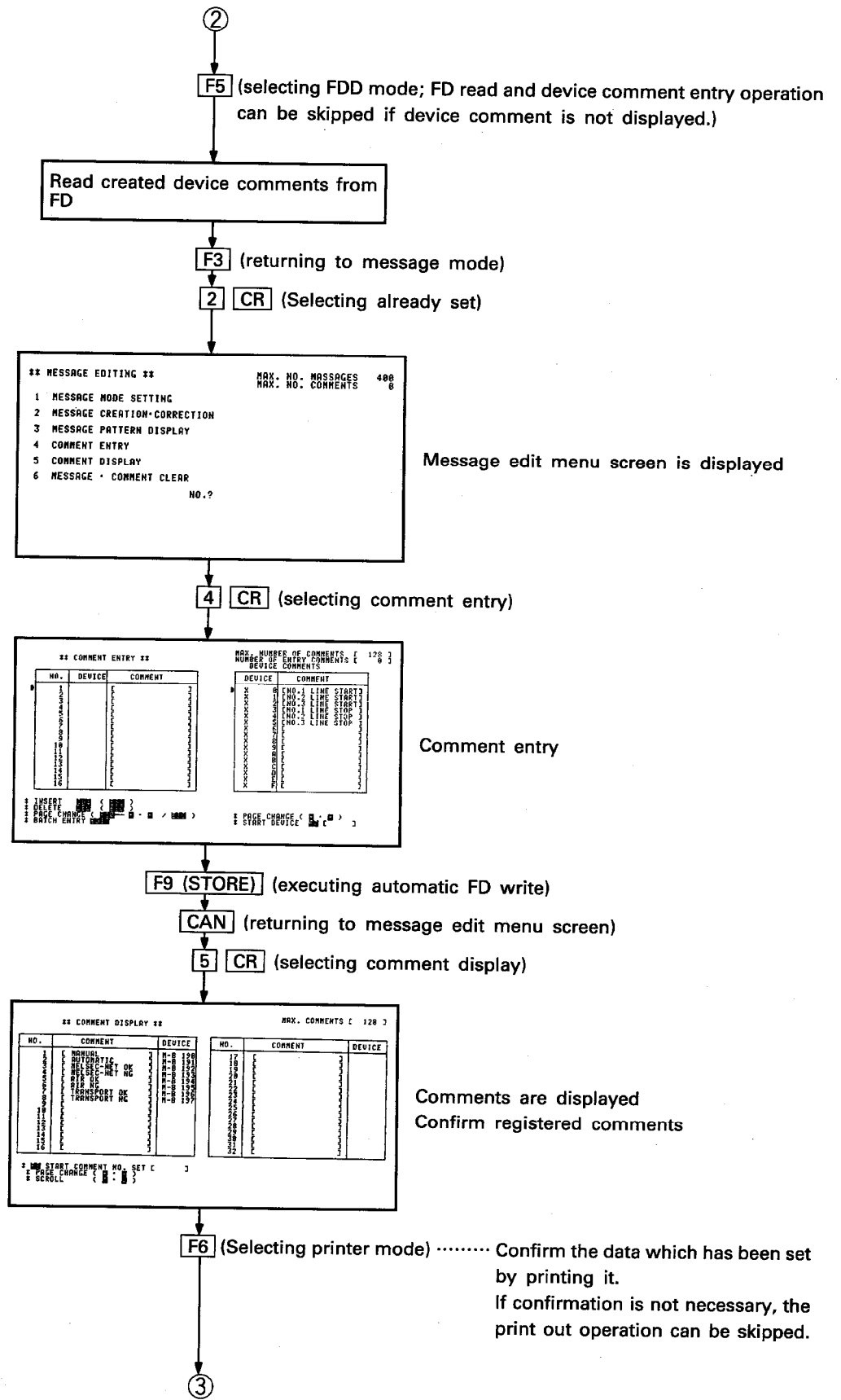
MESSAGE NO.	MODE	MESSAGE	COMMENT
1			
2			
3			
4			
5			
6			
7			
8			
9			
0			

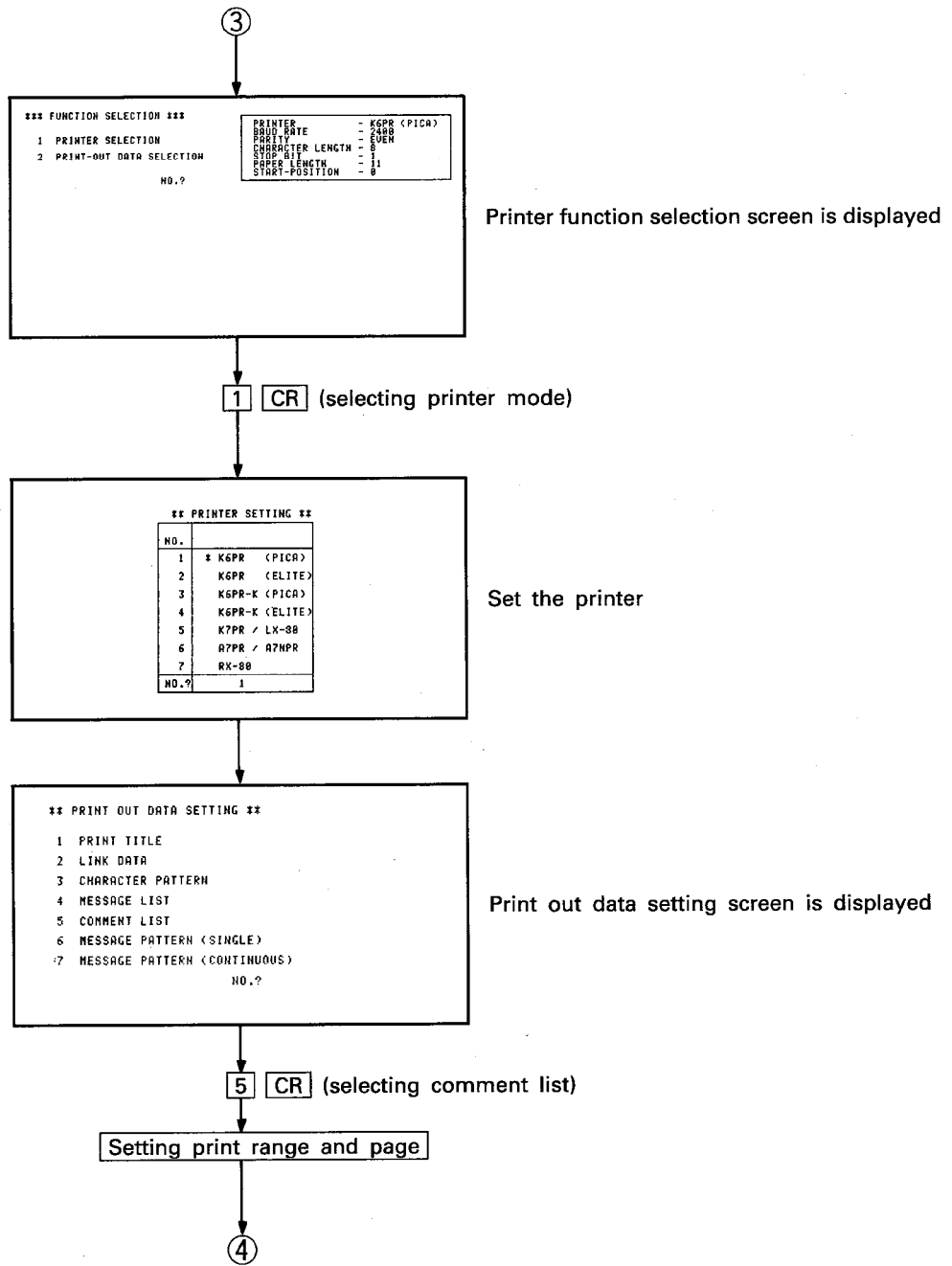
```

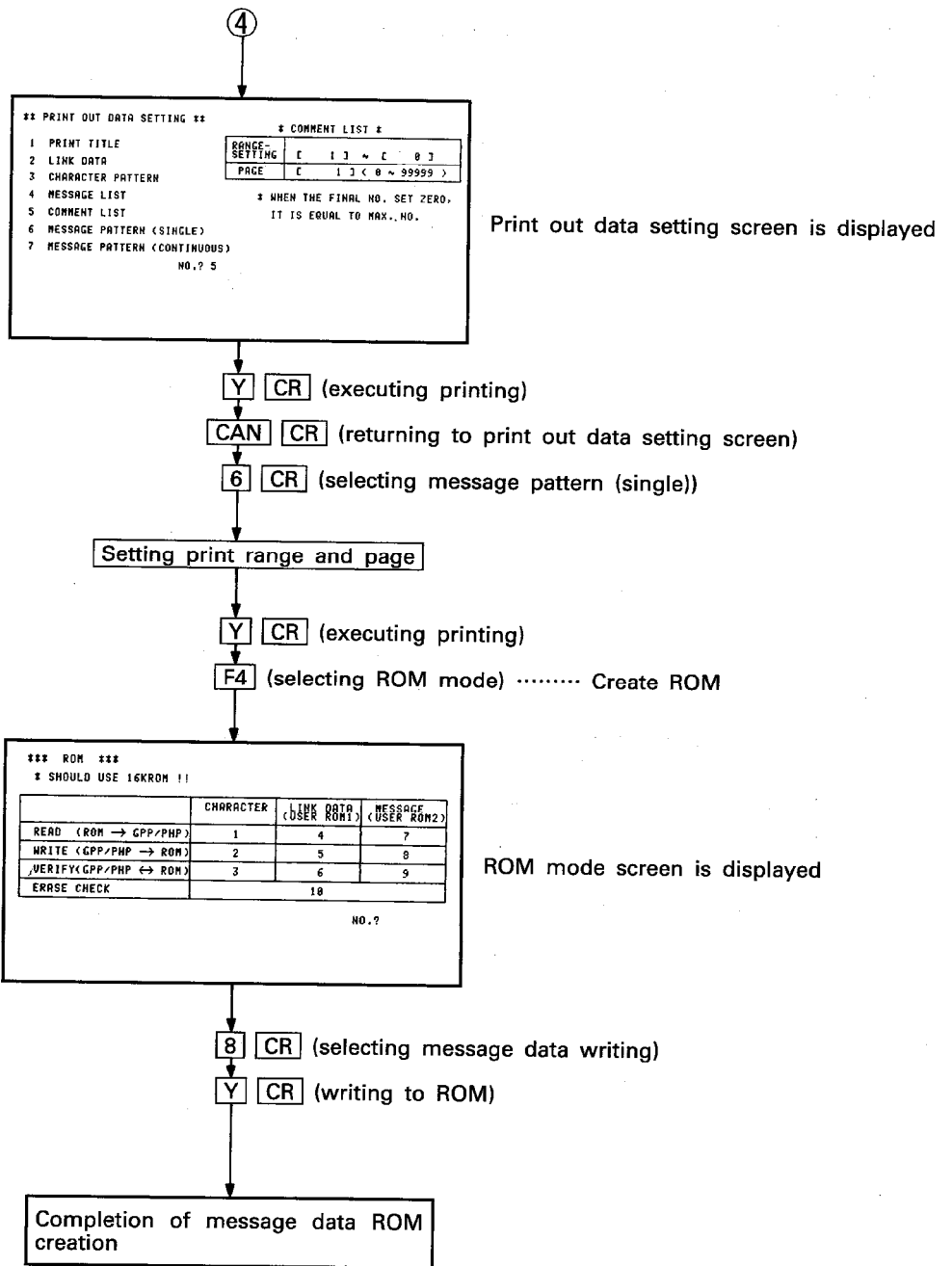
# MESSAGE NO. SET ( )
# SCROLL CHANGE ( )
# MESSAGE NO. SET ( )
# GRAPHIC PATTERN
    
```

Display and confirm message pattern

②







### 4. MINI-S3 INITIAL DATA SETTING MODE

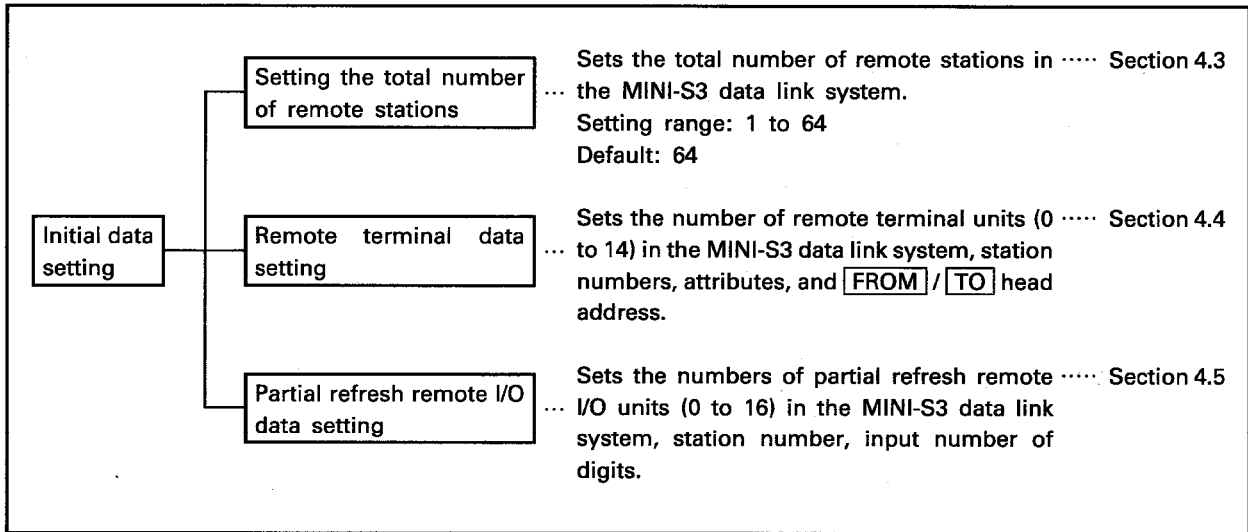
#### 4.1 Initial Data Setting

This section describes the initial data setting for MELSECNET/MINI-S3 (referred to as MINI-S3) data link system.

The initial data includes the total number of remote stations, remote terminal data, and the partial refresh remote I/O data. It is not necessary to set the remote terminal data if a remote terminal such as the operation box or RS-232C interface unit are not used.

If a partial refresh type remote I/O unit is not used, it is not necessary to set the partial refresh type remote I/O data.

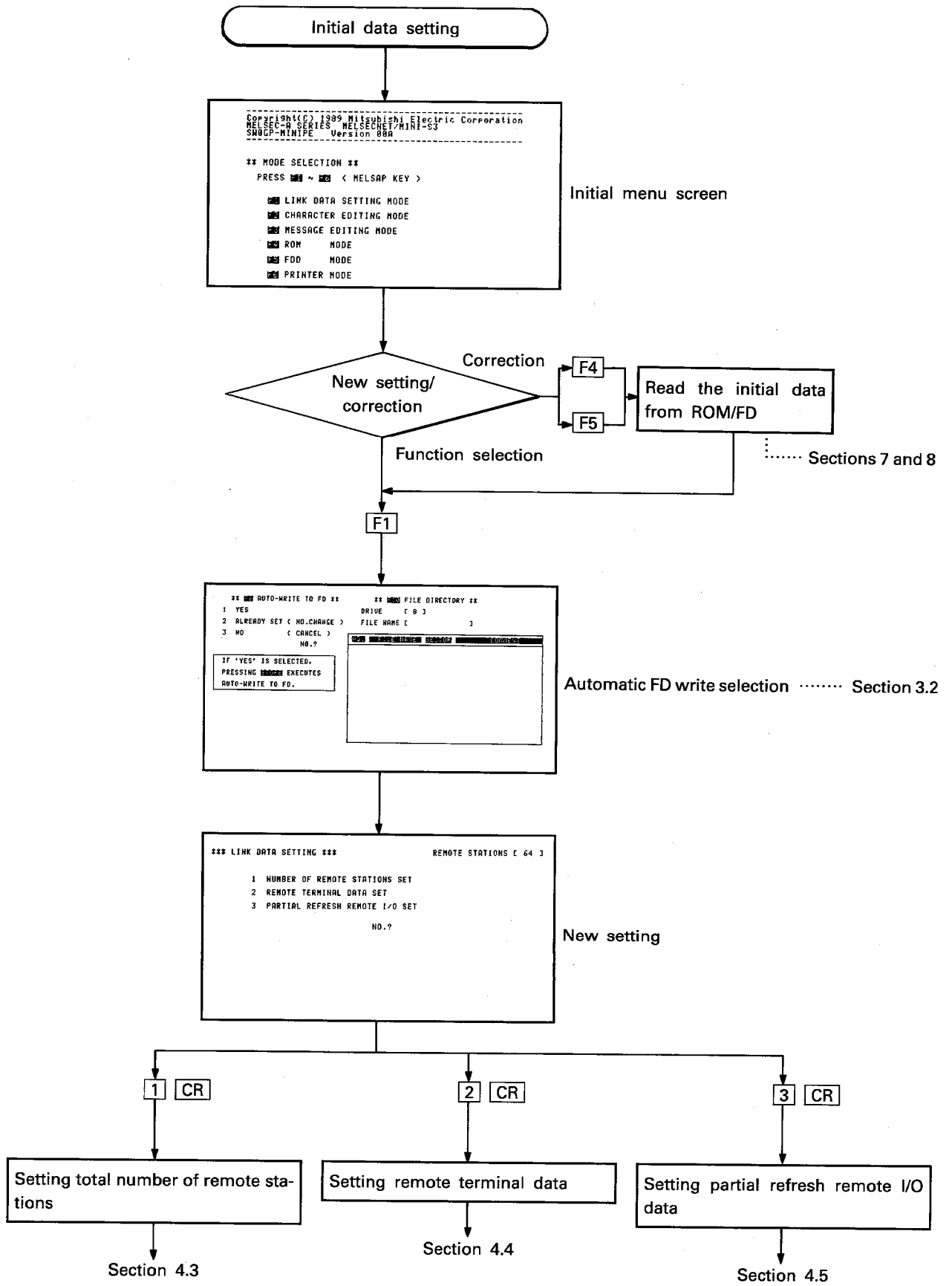
The functions available in the initial data setting mode are indicated below:



# 4. MINI-S3 INITIAL DATA SETTING MODE



The following chart shows the operation flow for initial data setting.

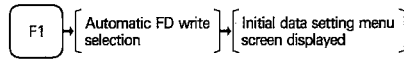




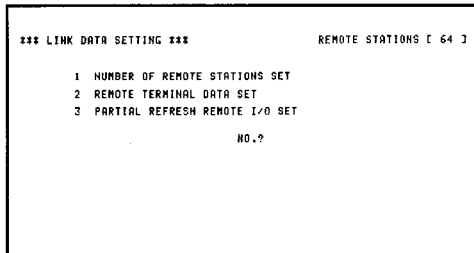
## 4. MINI-S3 INITIAL DATA SETTING MODE

### 4.2 Selecting Initial Data Setting Mode Menu

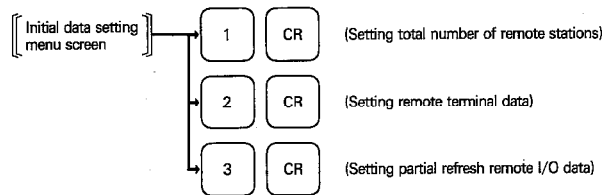
Operation to display the initial data setting menu screen:



#### Initial Data Setting Menu Screen

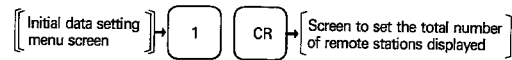


Operations after initial data setting menu screen:

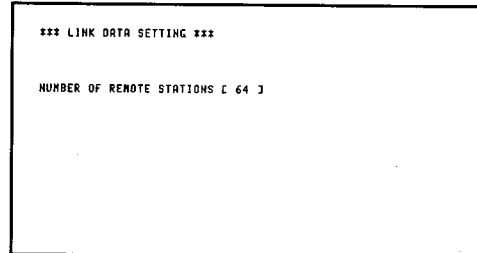


### 4.3 Setting Total Number of Remote Stations

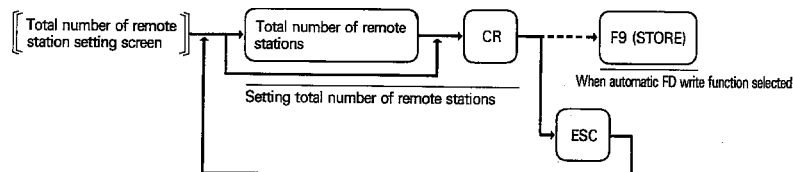
Operations for screen display in setting the total number of remote stations:



#### Total Number of Remote Station Setting Screen



Operations after total number of remote station setting screen:

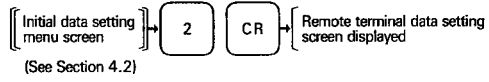


### EXPLANATION

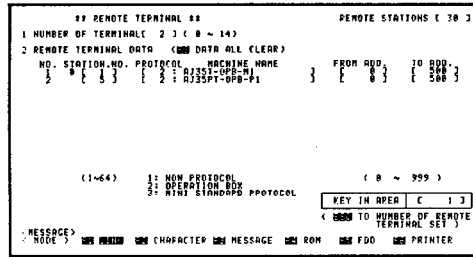
- (1) Set the total number of remote stations in the MINI-S3 system.  
Setting range: 1 to 64  
Default: 64
- (2) When the total number of remote stations has been set, the current setting is displayed.  
To use the current setting, press **CR**.  
To change the current setting, press **ESC** first; key in the new total number of remote stations and press **CR**.  
If the new setting is smaller than the previous setting, the OS checks the station number of the remote terminal unit and partial refresh remote I/O unit. If the newly set total number of remote stations is smaller than the unit station number, the following message is displayed.  
**DECREASE OTHER LINK SETTING DATA (Y/N)**  
**Y** ..... If **Y** is pressed, the data of the stations numbers which are greater than the newly keyed in total number of remote stations is deleted.  
**N** ..... If **N** is pressed, the previous setting remains as is and the newly keyed in data is ignored.
- (3) When the automatic FD write function is selected, the total number of remote stations newly keyed in is saved to the FD when **F9 (STORE)** is pressed.

## 4.4 Setting Remote Terminal Data

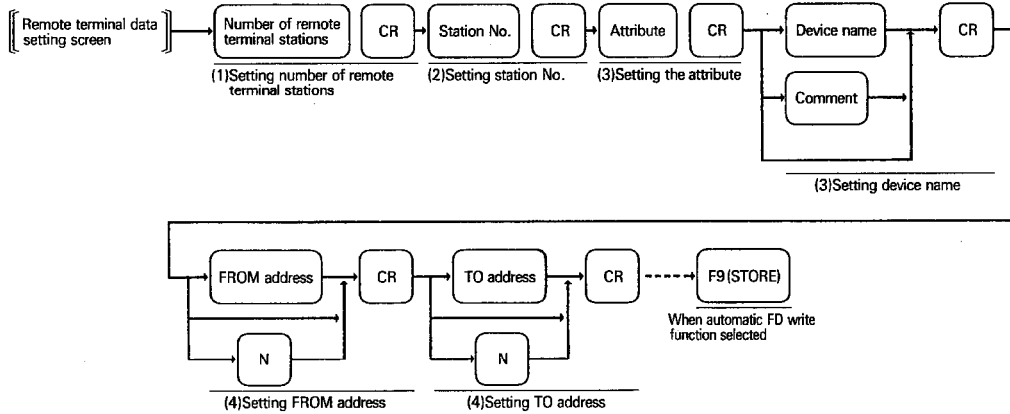
Operations to display the remote terminal data setting screen:



### Remote Terminal Data Setting Screen



Operations after the remote terminal data setting screen:



### EXPLANATION

#### (1) Setting the number of remote terminal stations

- (a) Set the number of remote terminal units which are connected to the MINI-S3 system. Setting range: 0 to 14
- (b) The data columns are displayed, according to the set number of stations:

#### (2) Setting the station number

- (a) Set the remote terminal unit station number. Setting range: 1 to 61  
A remote terminal unit occupies four stations.  
It is not allowed to set the same station number which is assigned to another station.

## 4. MINI-S3 INITIAL DATA SETTING MODE

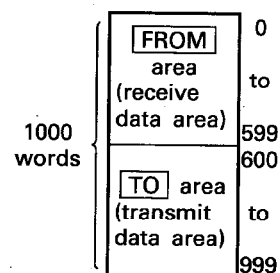
**MELSEC-A**

### (3) Setting the attribute and device name

- (a) Set the attribute (communication protocol) **[1]** to **[3]** of the remote terminal unit.
- [1]**: No-protocol
  - [2]**: Operation box protocol
  - [3]**: MINI standard protocol
- (b) If the selection is any of **[1]**, **[2]**, and **[3]**, set the user comment at the device name column.

### (4) Setting the **FROM** and **TO** addresses

- (a) Allocate the buffer memory communication area to be used when the PC CPU communicates with a remote terminal unit using the **FROM/TO** instruction. Memory area of 1000 words is occupied for one remote terminal and the **FROM/TO** area is allocated within this area.
- To set the **FROM/TO** area, designate the head address of the area. Note that these are not the actual addresses of buffer memory. The setting range is 0 to 999 for each of these areas and the default is 0 and 500 for **FROM** and **TO** address, individually. Designating "0" for **FROM** address and "600" for **TO** address, for example, sets the **FROM** and **TO** areas as illustrated to the right.
- (b) Press **[N]** and **[CR]** when addresses are not set.



### (5) Others

- (a) When **[ESC]** is pressed, the cursor moves to the setting column for the number of remote stations.
- (b) If the data has already been set and exists in the memory, it is displayed. To clear all data, press **[F8]** and the following message is displayed:

**EXECUTING <Y> <CR> / <CAN>**

Press **[Y]** and **[CR]**, and all data is cleared.

- (c) When the automatic FD write function is selected, pressing **[F9 (STORE)]** saves the set data to the FD.
- (d) If **[CAN] / [F9 (STORE)]** is pressed when the set data is not sufficient for the set number of remote terminals, the following message is displayed:

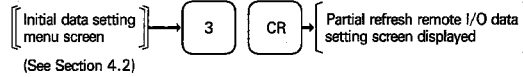
**DATA SHORTAGE (Y/N)**

**[Y]** ..... If **[Y]** is pressed, the number of remote terminals is changed corresponding to the data which has been set.

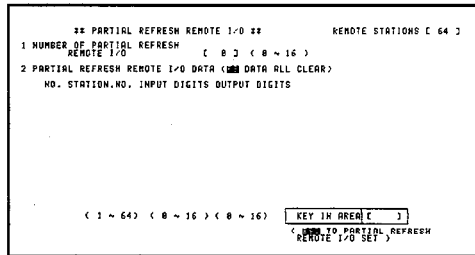
**[N]** ..... If **[N]** is pressed, **[CAN] / [F9 (STORE)]** is ignored and the cursor stays at the current position.

## 4.5 Partial Refresh Remote I/O Data Setting

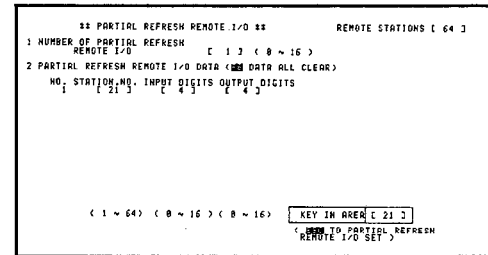
Operations to display the partial refresh remote I/O data setting screen:



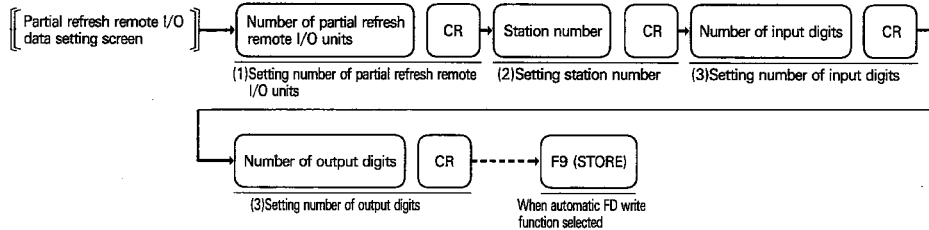
Partial Refresh Remote I/O Data Setting Screen



Example of Partial Refresh Remote I/O Data



Operations after the partial refresh remote I/O data setting screen:



### EXPLANATION

#### (1) Setting the number of partial refresh remote I/O units

- (a) Set the number of partial refresh remote I/O units which are connected to the MINI-S3 system.  
Setting range: 0 to 16
- (b) Data columns are displayed according to the set number of units.

#### (2) Setting the station number

- (a) Set the remote partial refresh I/O unit station number.  
Setting range: 1 to 61  
A partial refresh I/O unit occupies four stations.  
It is not allowed to set a station number which has been assigned to another station.

#### (3) Setting the number of input/output digits

- (a) Set the number of input digits (a number obtained by dividing the input points by 16) and the output digits (a number obtained by dividing the output points by 16) for the partial refresh remote I/O unit.  
Setting range: 1 to 16

## (4) Others

- (a) When **ESC** is pressed, the cursor moves to the setting column for the number of partial refresh remote I/O stations.
- (b) If the data has already been set and exists in the memory, it is displayed. To clear all data, press **F8** and the following message is displayed:

**EXECUTING <Y> <CR> / <CAN>**

Press **Y** and **CR**, and all data is cleared.

- (c) When the automatic FD write function is selected, pressing **F9 (STORE)** saves the set data to the FD.
- (d) If **CAN** / **F9 (STORE)** is pressed when the set data is not sufficient for the set number of partial refresh remote I/O stations, the following message is displayed:

**DATA SHORTAGE (Y/N)**

**Y** ..... If **Y** is pressed, the number of partial refresh remote I/O stations is changed corresponding to the data which has been set.

**N** ..... If **N** is pressed, **CAN** / **F9 (STORE)** is ignored and the cursor stays at the current position.

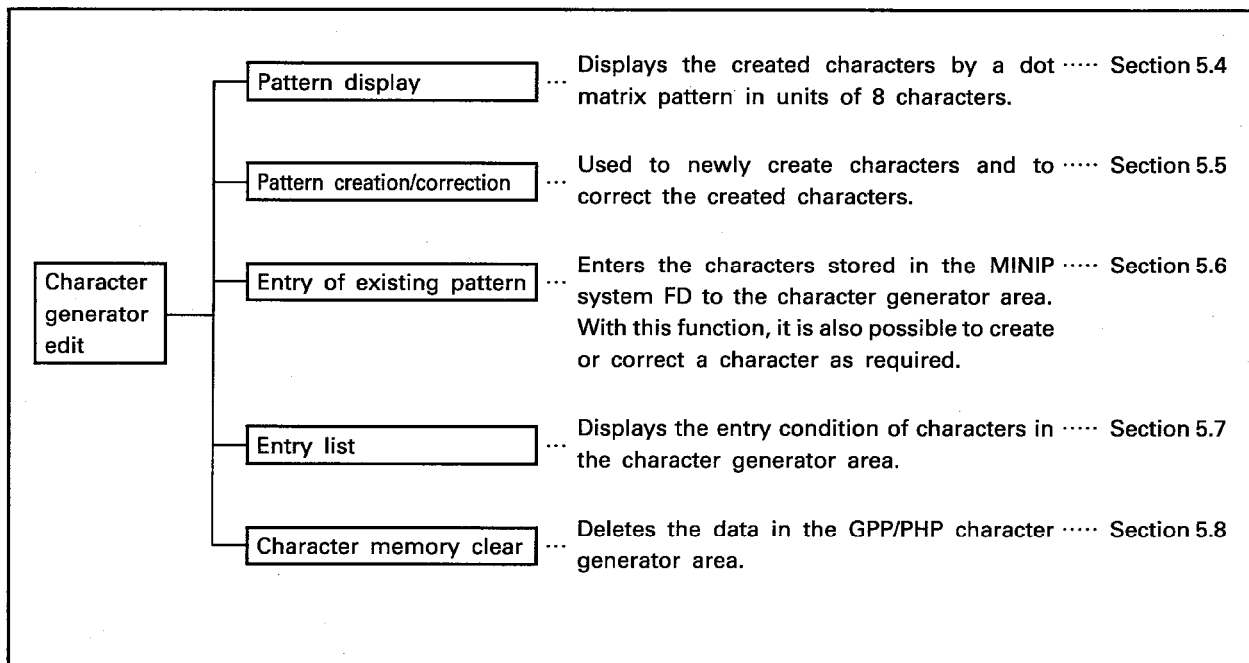
**5. CHARACTER GENERATOR EDIT MODE FOR OPERATION BOX****5.1 Character Generator Edit Mode**

Create the characters to be stored in the character generator ROM which is installed to the operation box, connected with the MINI-S3 data link system, and enter them for the required character codes.

(1) The ASCII codes and semi-graphic characters (dot patterns used for graphic patterns) (Table 5.1) are stored in the character generator area, allowing them to be used as needed.

(2) Any required characters can be created in units of characters. The total number of characters which can be created is 820 characters.

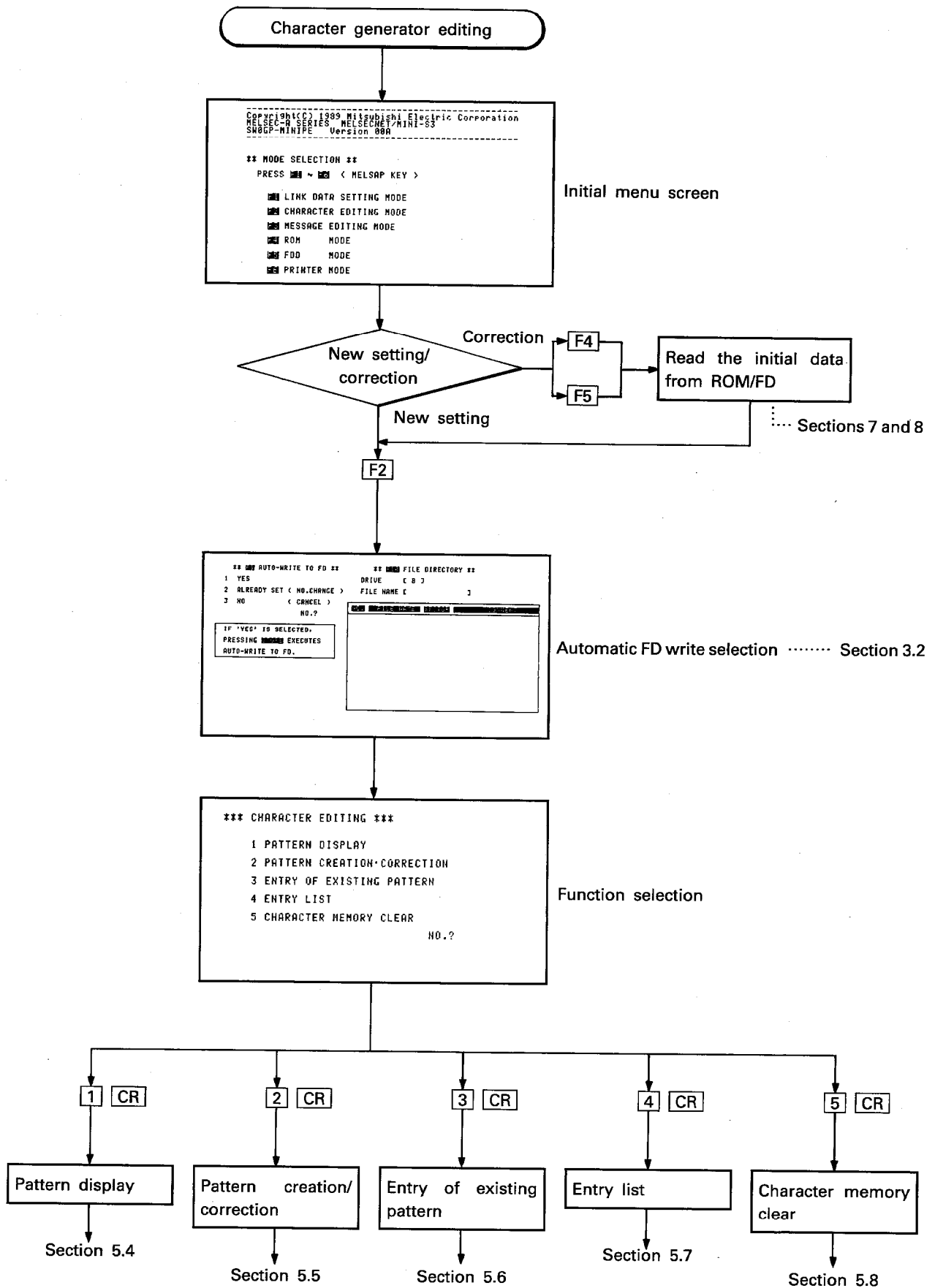
The functions available in the character generator edit mode are indicated below:



# 5. CHARACTER GENERATOR EDIT MODE FOR OPERATION BOX



The following chart shows the operation flow for character generator editing.

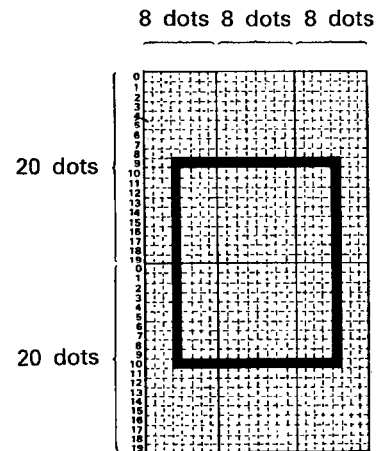
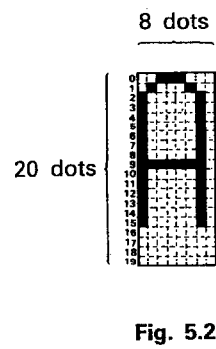
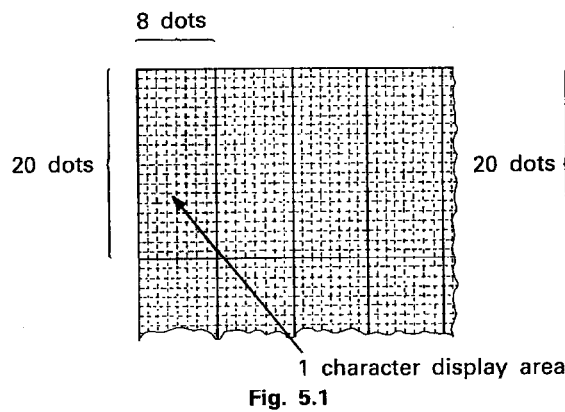




5.2 Notes on Character Generator Creation and Correction

5.2.1 Character dot configuration

- (1) On the operation box screen, one character is displayed in a pattern of 8x20 dots. See Fig. 5.1.
- (2) To provide a space between two characters, create characters of 7x20 dots. See Fig. 5.2.
- (3) If it is not necessary to provide a space between characters when defining graphics etc., create characters of 8x20 dot pattern. See Fig. 5.3.



5.2.2 Character codes

- (1) Character codes indicate the address to enter the created character in the character generator.  
The codes are used to display characters on the display unit or to create the message screen.
- (2) The character code range is 0H through 3FH as indicated in Table 5.1. Use the following ranges to enter user defined characters.
  - 1) 0H to 1FH
  - 2) 80H to 8FH
  - 3) 9DH to 9FH
  - 4) FFH to 3FH
- (3) One character is registered for one character code.

		Final two digits of character code (Hexa)																
		00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	
Final digit of character code (Hexa)	00																*1	
	01																	
	02	(SP)	!	"	#	\$	%	&	'	(	)	*	+	,	-	.		/
	03	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?	*2
	04	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
	05	P	Q	R	S	T	U	V	W	X	Y	Z	[	/	]	^	_	
	06	'	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	
	07	p	q	r	s	t	u	v	w	x	y	z	{		}	→	←	*1
	08																	
	09	[Dot Matrix Pattern]																
	0A																	*2
	0B																	
0C																		
0D																		
0E	[Dot Matrix Pattern]																*1	
0F	[Dot Matrix Pattern]																	
10																		
11																	*1	
3E																		
3F																		

Table 5.1 Character Code Table

<p><b>POINTS</b></p> <ul style="list-style-type: none"> <li>(1) *1: Enter user-defined characters and patterns.</li> <li>(2) *2: Characters entered to MINIP; correction or change of these characters is not allowed.</li> <li>(3) For details of the dot matrix patterns used for graphics patterns (90H to 9CH, E0H to FEH), refer to Appendix 2.</li> </ul>
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

## 5.3 Selecting Character Generator Edit Mode Menu

Operations to display the character generator screen:

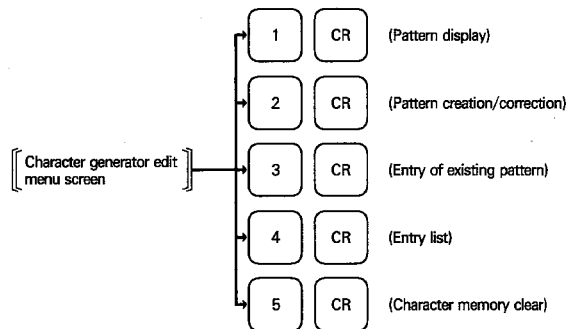


### Character Generator Edit Menu Screen

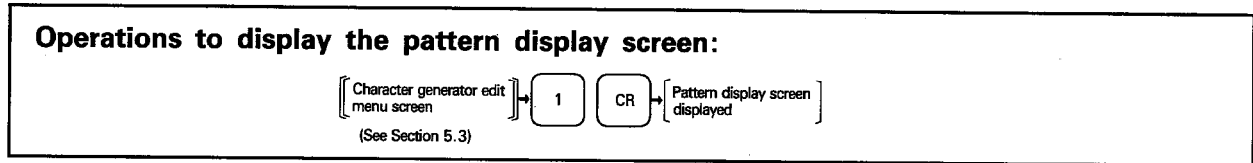
```

** MESSAGE-COMMENT CLEAR **
1 ALL DATA
2 MESSAGE (RANGE SETTING)
3 MESSAGE (RANGE SETTING)
4 COMMENT (ALL DATA)
5 COMMENT (RANGE SETTING)
NO.?
  
```

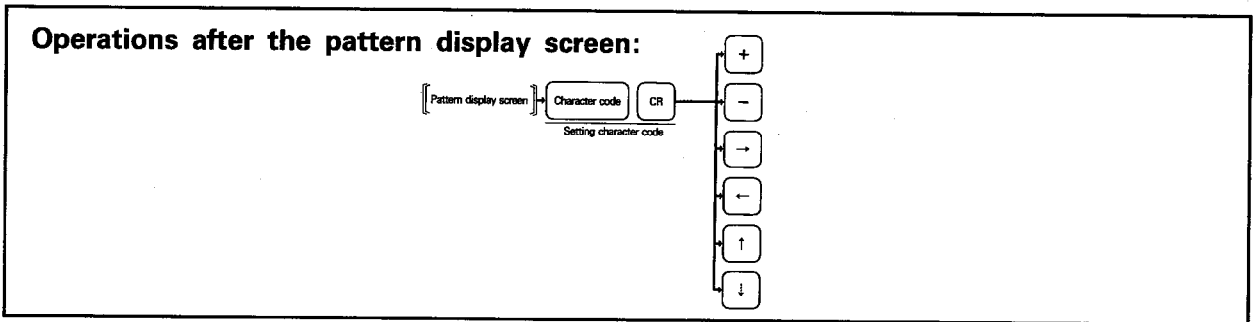
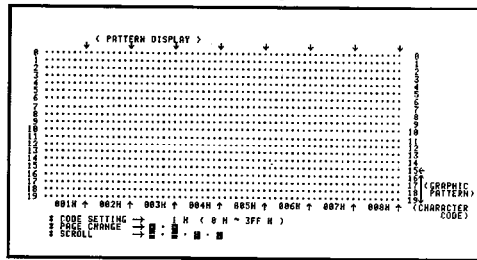
Operations after the character generator edit menu screen:



5.4 Pattern Display



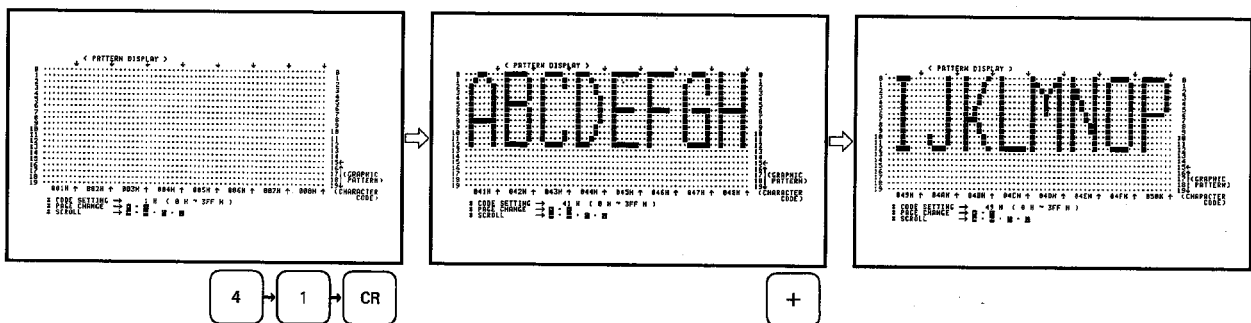
Pattern Display Screen



EXPLANATION

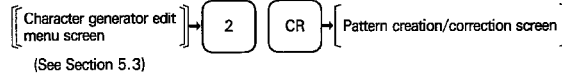
- (1) Dot matrix pattern of eight characters, beginning with the designated character code (0 to 3FF<sub>H</sub>) are displayed.
- (2) For designating the characters, [0] to [9] and [A] to [F] keys are used.
- (3) To change the characters to be displayed, carry out the following operations:
  - 1) Set the character code.
  - 2) Change the character code using the following keys.
 

[+]	..... Character code is incremented by +8 <sub>H</sub> .
[-]	..... Character code is decremented by -8 <sub>H</sub> .
[>]	..... Character code is incremented by +1 <sub>H</sub> .
[<]	..... Character code is decremented by -1 <sub>H</sub> .
[↑]	..... Character code is decremented by -10 <sub>H</sub> .
[↓]	..... Character code is incremented by +10 <sub>H</sub> .
- (4) Screen transfers as indicated below according to the key pressed.

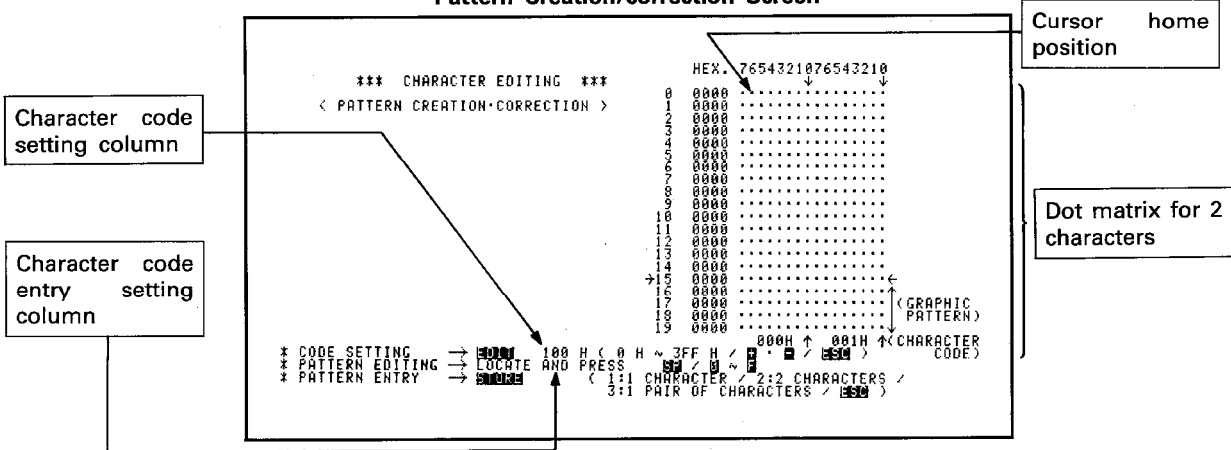


5.5 Creation and Correction of Patterns

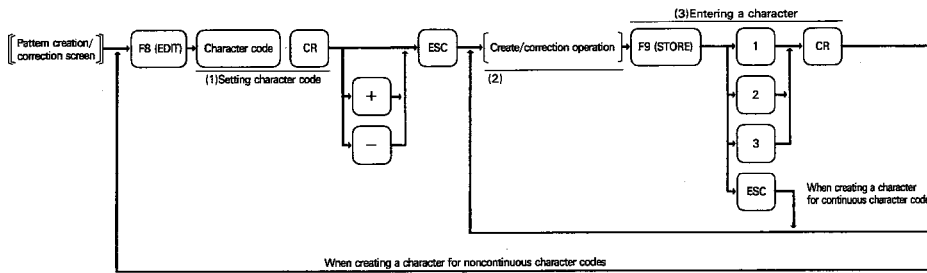
Operations to display the pattern creation/correction screen:



Pattern Creation/correction Screen



Operations after the pattern creation/correction screen:



EXPLANATION

(1) Setting the character code

- (a) When the pattern creation/correction screen is selected, the dot matrix for the two characters corresponding to the character codes of 00H and 01H are displayed. When characters have been entered for these character codes, they are displayed in a dot matrix pattern.
- (b) Press **[F8 (EDIT)]** to set a character code.
- (c) Character codes can be set using the **[0]** to **[9]** and **[A]** to **[F]** keys in the following range.

	0H to 1FH
Character code	80H to 8FH
setting range:	9DH to 9FH
	FFH to 3FFH

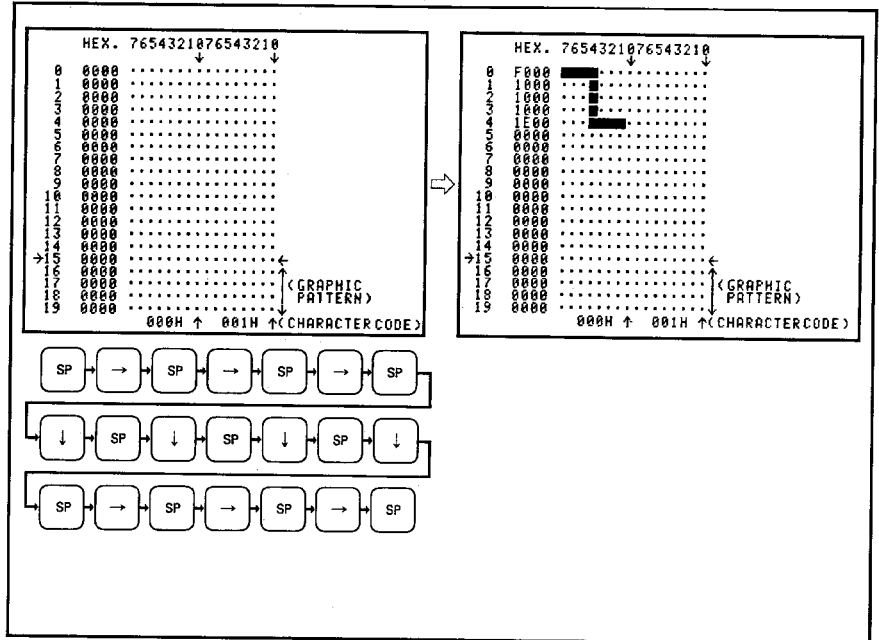
- (d) Press **[CR]** after setting the character code, and the dot matrix for the two characters is displayed beginning with the set character code. To change the character code, follow the procedure below:
  - 1) Set a new character code.
  - 2) Use the following keys:
    - [+]** ..... Character code is incremented by 2.
    - [-]** ..... Character code is decremented by 2.
- (e) Press **[ESC]** after completing the character code setting.. The cursor moves to the home position, allowing creation of a character.

(2) Character creation and correction

- (a) After the completion of the character code setting, the cursor moves to the dot matrix home position, allowing creation and correction of a character.
- (b) When creating a character pay close attention to the notes in Section 5.2.
- (c) Characters can be created in either of the following two methods.
  - 1) By painting dots
  - 2) By using hex. code

Character creation by painting dots:

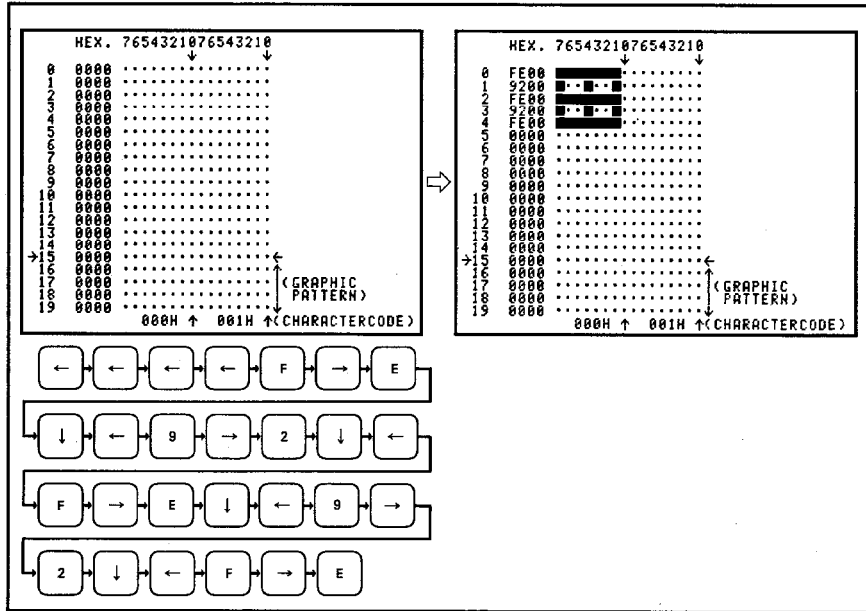
- 1) Move the cursor to the required position on the matrix using the cursor keys (→ ↓ ← ↑) and press [SP].
- 2) The cursor located dot is painted when [SP] is pressed. Pressing [SP] at the dot which has been painted deletes the dot.
- 3) Example



# 5. CHARACTER GENERATOR EDIT MODE FOR OPERATION BOX **MELSEC-A**

**Character creation using hex. codes:**

- 1) Move the cursor to the HEX column using the cursor keys (→ ↓ ← ↑) and enter a value using the 0 to 9 and A to F keys.
- 2) The dot position corresponding to the set bit is painted.
- 3) Example



- (d) Press **HOME CLEAR** to clear the settings in one line (two characters) of the dot matrix.
- (e) Press **F8 (EDIT)** and **ESC** to return the cursor to the home position.
- (f) To set the character code again, press **F8 (EDIT)** and key in a **character code**.  
Note that changing a character code before entering the set character pattern to the GPP/PHP memory deletes the pattern.

**(3) Entering characters**

- (a) To enter created or corrected characters to the character generator area, press **F9 (STORE)** and follow any of the following key operations.

Operation	Function	Application
<b>1</b> <b>CR</b>	Enters the first character pattern of the two character patterns currently displayed.	• Used to enter patterns one by one.
<b>2</b> <b>CR</b>	Enters the two character patterns as an individual pattern.	• Used to enter two character patterns, which are used independently.
<b>3</b> <b>CR</b>	Enters the two character patterns as one character.	Used to enter two character patterns, which are used in combination to express one character.

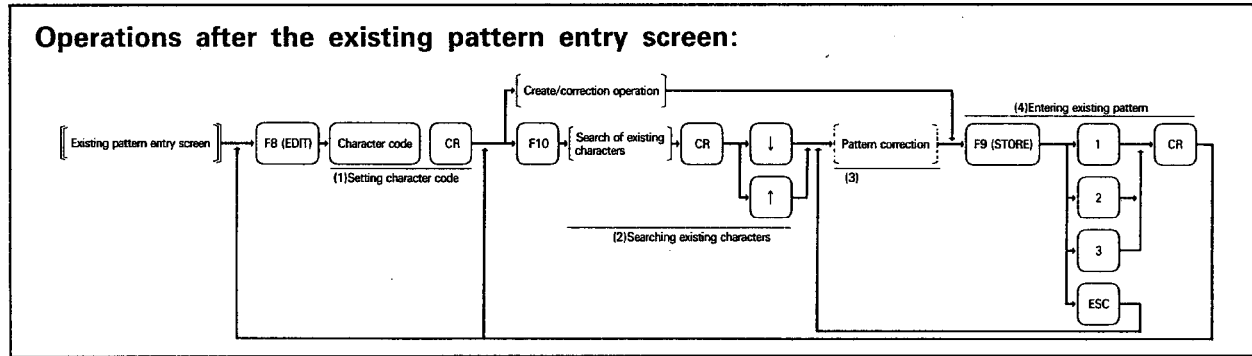
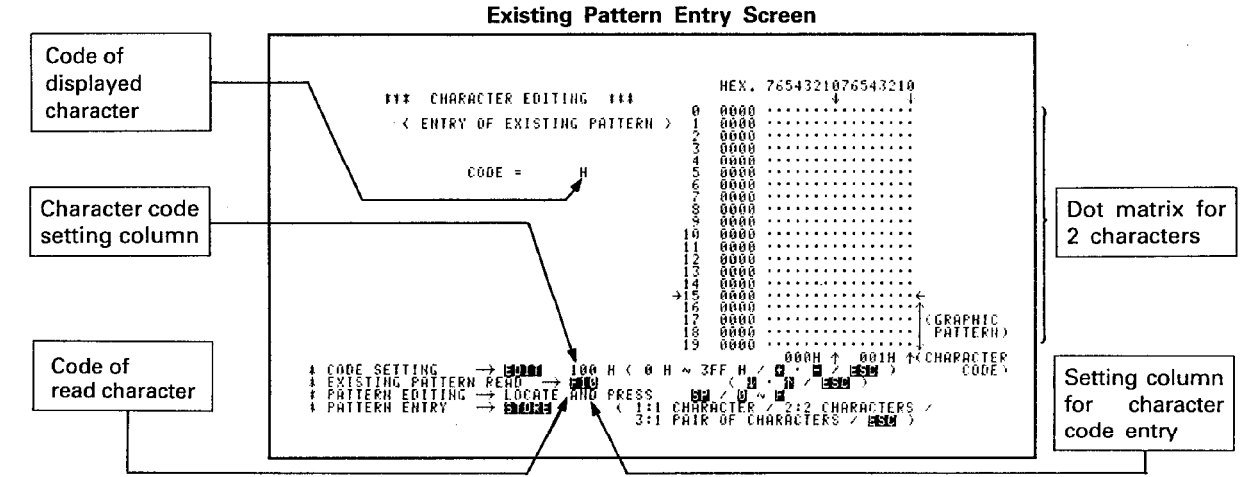
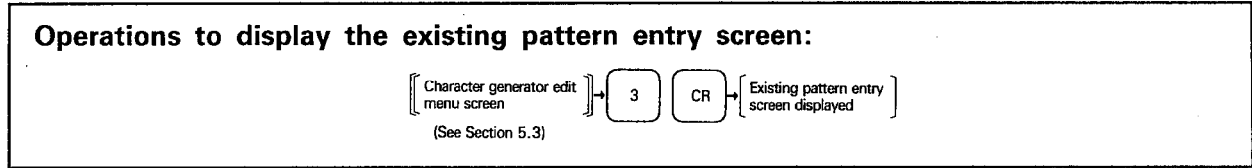
- (b) The operation above enters the displayed character patterns to the GPP/PHP memory. They are also simultaneously saved to the FD when the automatic FD write function has been selected.

**POINT**

**Enter the pattern after completing the creation or correction. If the screen is changed by changing the character code before entering the pattern, the created or corrected pattern is deleted.**



5.6 Entering an Existing Pattern



**EXPLANATION**

**(1) Setting the character code**

- (a) When the existing pattern entry screen is selected, the dot matrix for the two characters corresponding to the character codes of 00H and 01H are displayed. When characters have been entered for these character codes, they are displayed in a dot matrix pattern.
- (b) Press **[F8 (EDIT)]** to set a character code.
- (c) Character codes can be set using **[0]** to **[9]** and **[A]** to **[F]** keys in the following range.

	0H to 1FH
Character code	80H to 8FH
setting range:	9DH to 9FH
	FFH to 3FFH

- (d) Press **[CR]** after setting the character code, and the dot matrix for the two characters is displayed beginning with the set character code.
- (e) To set a character code again, repeat steps by the pressing of **[F8 (EDIT)]**. Note that the created pattern is deleted if the character code is changed before entering the pattern to the GPP/PHP memory.

**(2) Searching existing characters**

- (a) The MINIP system FD stores dot matrix patterns of the following characters.  
Unit symbols ..... 14 symbols
- (b) Pressing **F10** after displaying the dot matrix of the corresponding character code accesses the existing pattern read function.  
Press **ESC** to cancel the existing pattern read function.

**(3) Correcting pattern**

- (a) To correct the dot matrix pattern of the displayed character, press **ESC** and follow the same steps as indicated in Section 5.5.

**(4) Entering existing patterns**

- (a) To enter created or corrected character or character read from the existing patterns to the character generator area, press **F9 (STORE)** and follow any of the following key operations.

Operation	Function	Application
<b>1</b> <b>CR</b>	Enters the first character pattern of the two character patterns currently displayed.	• Used to enter patterns one by one.
<b>2</b> <b>CR</b>	Enters the two character patterns as individual pattern.	• Used to enter two character patterns, which are used independently.
<b>3</b> <b>CR</b>	Enters the two character patterns as one character.	Used to enter two character patterns, which are used in combination to express one character.

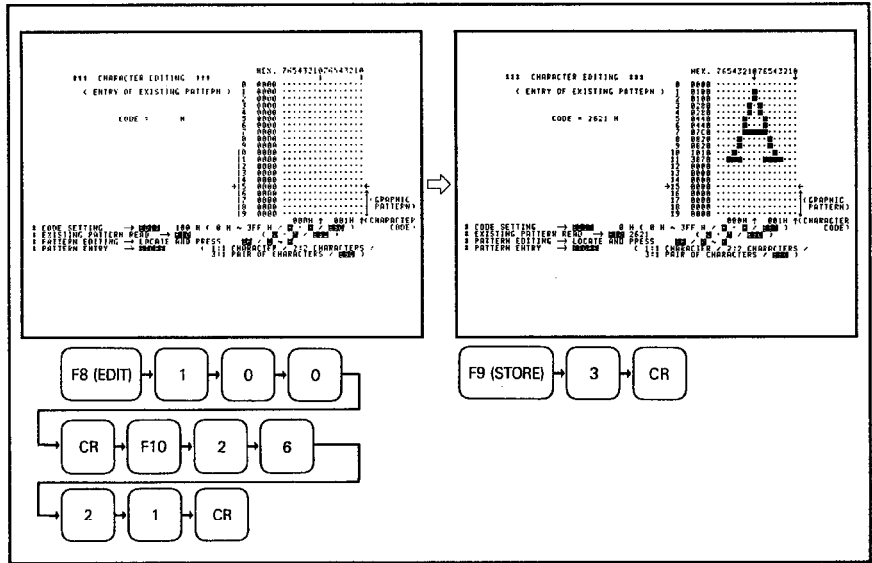
- (b) The operation above enters the displayed character patterns to the GPP/PHP memory. They are also saved to the FD at that same time when the automatic FD write function has been selected.

**POINT**

Enter the pattern after completing the creation or correction. If the screen is changed by such as changing the character code before entering the pattern, the created or corrected pattern is deleted.

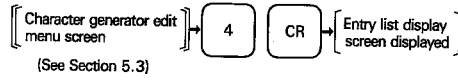
# 5. CHARACTER GENERATOR EDIT MODE FOR OPERATION BOX **MELSEC-A**

The existing pattern entry screen changes as indicated below:



5.7 Displaying Entry List

Operations to display the entry list display screen:



Entry List Display Screen

```

    *** CHARACTER EDITING ***
    < ENTRY LIST >
    * : ENTRY = 148 CHAR.
    . : NON-ENTRY = 876 CHAR.

    \0123456789ABCDEF \0123456789ABCDEF \0123456789ABCDEF \0123456789ABCDEF
    00..... 10..... 20..... 30.....
    01..... 11..... 21..... 31.....
    02***** 12..... 22..... 32.....
    03***** 13..... 23..... 33.....
    04***** 14..... 24..... 34.....
    05***** 15..... 25..... 35.....
    06***** 16..... 26..... 36.....
    07***** 17..... 27..... 37.....
    08***** 18..... 28..... 38.....
    09***** 19..... 29..... 39.....
    0A..... 1A..... 2A..... 3A.....
    0B..... 1B..... 2B..... 3B.....
    0C..... 1C..... 2C..... 3C.....
    0D..... 1D..... 2D..... 3D.....
    0E***** 1E..... 2E..... 3E.....
    0F***** 1F..... 2F..... 3F.....
    <000H ~ 0FFH> <100H ~ 1FFH> <200H ~ 2FFH> <300H ~ 3FFH>
  
```

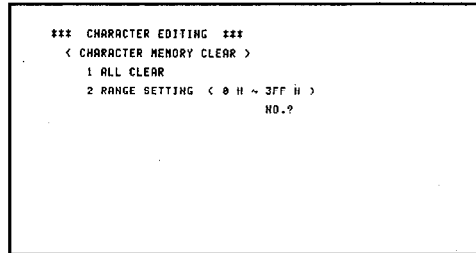
- (1) Symbols
  - "\*": A character is entered for the corresponding character code.
  - ".": A character is not entered.
- (2) To return the screen to the character generator edit mode menu screen, press **CAN**.

## 5.8 Clearing the Character Generator Memory

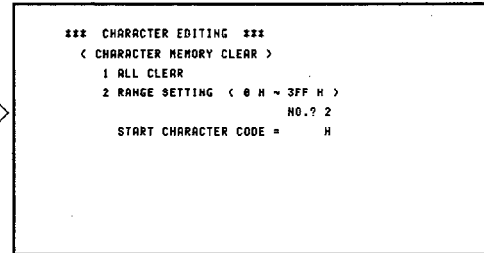
Operations to display the character generator memory clear screen:



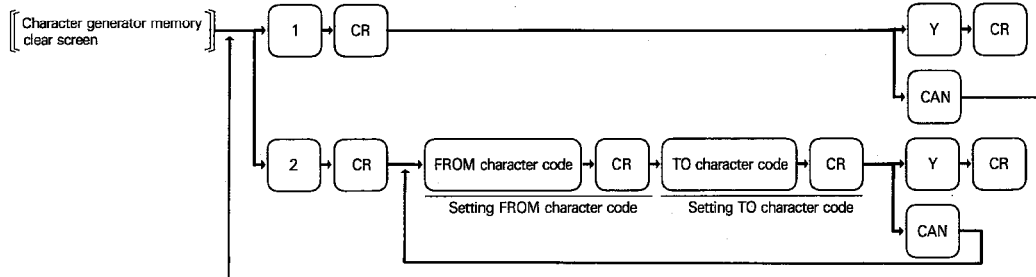
Character Generator Memory Clear Screen



Character Generator Memory Clear (Range Setting) Screen



Operations after the character generator memory clear screen:



### EXPLANATION

- (1) To correct the character generator or copy it partially, clear the memory by designating the range.
- (2) To clear the memory area entirely, press **[1]** and **[CR]**. The GPP/PHP character generator memory area is entirely cleared excluding the following areas:  
Areas not cleared:  
Character code: 20<sub>H</sub> to 7F<sub>H</sub>  
90<sub>H</sub> to 9C<sub>H</sub>  
A0<sub>H</sub> to FE<sub>H</sub>
- (3) To clear the memory area by designating the range, press **[2]** and **[CR]**. The memory area set by the designated FROM and TO character codes is cleared. In this clear operation, the data in the area corresponding to the following character codes is not cleared.  
Character code: 20<sub>H</sub> to 7F<sub>H</sub>  
90<sub>H</sub> to 9C<sub>H</sub>  
A0<sub>H</sub> to FE<sub>H</sub>

Character code setting range: 0<sub>H</sub> ≤ FROM code/END code ≤ 3FE<sub>H</sub>, FROM code ≤ END code

- (4) After the completion of memory clear, the COMPLETED message is displayed.

## 6. OPERATION BOX MESSAGE EDIT MODE

### 6.1 Editing Messages

This mode is used to edit the messages displayed in the LAD display unit of operation box, which is connected to the MINI-S3 data link system. For the message data, it is necessary to set the message number, message (up to 30 characters), and display mode.

The display mode is the preset display format of a message and the message pattern is created according to this format.

#### Display mode 1

Only a message is displayed.

Example: MELSEC-A SERIES FROM MITSUBISHI

#### Display mode 2

A message and designated characters (Characters set in a sequence program) are displayed.

Example: to operate

Characters are set in a sequence program.  
Setting for up to 7 places is possible

#### Display mode 3

A message and a device comment are displayed.

Example: X3( ) is ON

Comment created using SE:GP-GPPA system FD

#### Display mode 4

A message and monitor data (numeric data) are displayed.

Example: RESULT MACHINE A MACHINE B

Monitor data set in a sequence program  
Setting for up to 7 places is possible

#### Display mode 5

A message and bar graph are displayed.

Example: TARGET 30%

The value set in a sequence program is displayed in a bar graph and per cent value.

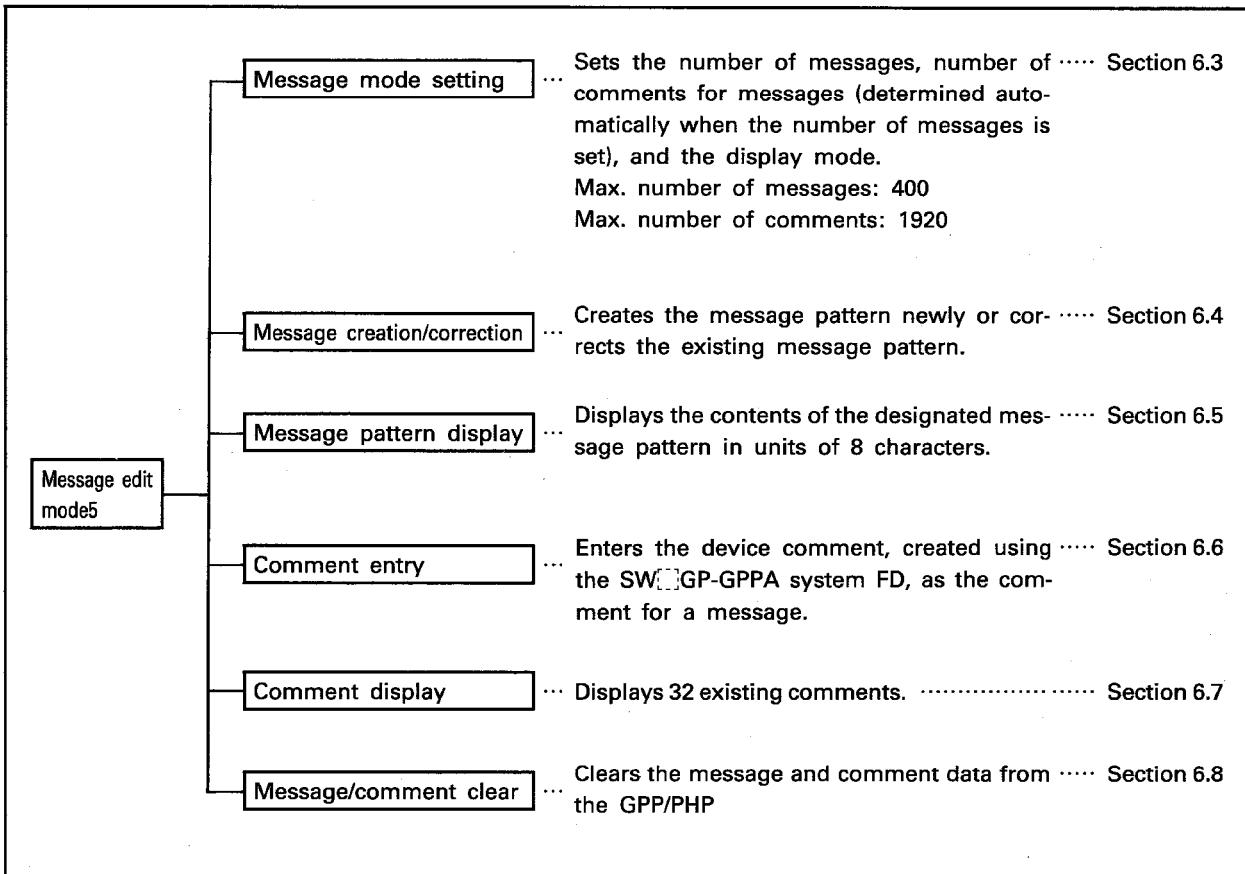
To create a message, the characters used in the message must have been stored in the character generator area.

When a character code is designated without the corresponding character stored in the character generator area, nothing will be displayed.

Characters which can be displayed: Alphanumeric, special symbols (stored in the character generator area), user defined characters

By storing a message number for which no message is assigned, it is possible to delete display in the LCD display unit by designating that message number.

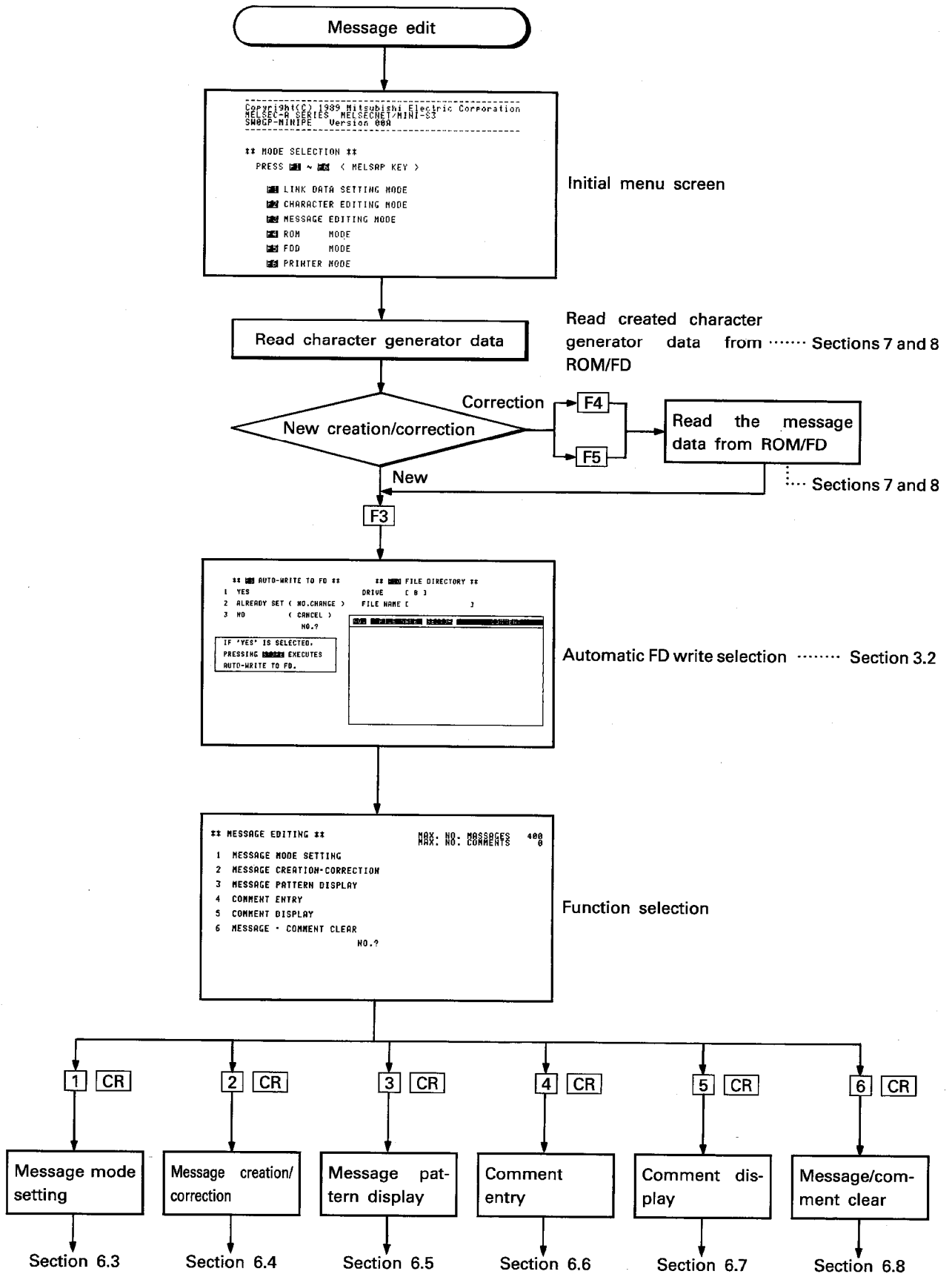
The functions available in the message edit mode are indicated below:



# 6. OPERATION BOX MESSAGE EDIT MODE



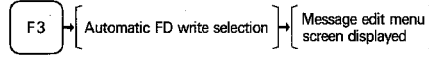
The following chart shows the operation flow for message edit.





## 6.2 Selecting Message Edit Mode Menu

Operations to display the message edit mode screen:



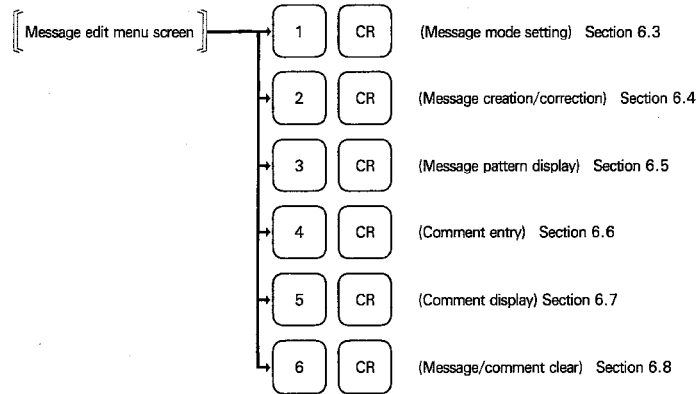
### Message Edit Menu Screen

```

** MESSAGE EDITING **
MAX. NO. MESSAGES 400
MAX. NO. COMMENTS 8

1 MESSAGE MODE SETTING
2 MESSAGE CREATION-CORRECTION
3 MESSAGE PATTERN DISPLAY
4 COMMENT ENTRY
5 COMMENT DISPLAY
6 MESSAGE - COMMENT CLEAR
NO.?
  
```

Operations after the message edit menu screen:



(1) If the number of comments has not been entered (default state) in the message mode setting operation, selection of **4** and **5** is not allowed.

## 6.3 Setting Message Mode

Operations to display the message mode setting screen:



Message Number Setting Screen

** MESSAGE MODE SETTING **	
NUMBER OF MESSAGES	NUMBER OF COMMENTS
1	0
2	1
3	2
4	3
5	4
6	5
7	6
8	7
9	8
0	9
10	0
11	1
12	2
13	3
14	4
15	5
16	6
17	7
18	8
19	9
20	0
21	1
22	2
23	3
24	4
25	5
26	6
27	7
28	8
29	9
30	0
31	1
32	2
33	3
34	4
35	5
36	6
37	7
38	8
39	9
40	0
41	1
42	2
43	3
44	4
45	5
46	6
47	7
48	8
49	9
50	0
51	1
52	2
53	3
54	4
55	5
56	6
57	7
58	8
59	9
60	0
61	1
62	2
63	3
64	4
65	5
66	6
67	7
68	8
69	9
70	0
71	1
72	2
73	3
74	4
75	5
76	6
77	7
78	8
79	9
80	0
81	1
82	2
83	3
84	4
85	5
86	6
87	7
88	8
89	9
90	0
91	1
92	2
93	3
94	4
95	5
96	6
97	7
98	8
99	9
00	0

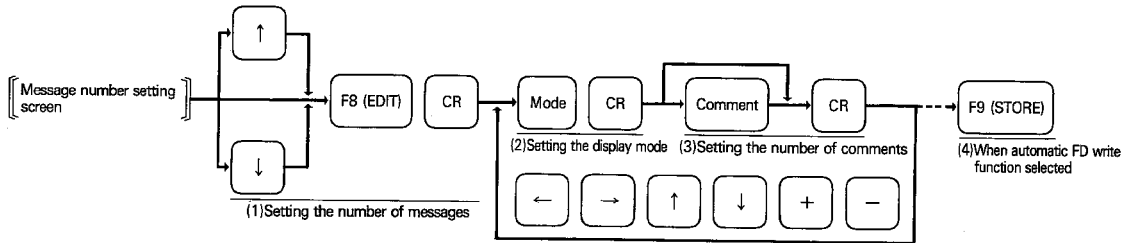
CURSOR (← → ↑ ↓)  
SETTING (EDIT) (CR)

Message Mode screen

** MESSAGE MODE SETTING **			MAX. MESSAGES CSR J		
NO.	MODE	USER COMMENT	NO.	MODE	USER COMMENT
1			1		
2			2		
3			3		
4			4		
5			5		
6			6		
7			7		
8			8		
9			9		
0			0		
10			10		
11			11		
12			12		
13			13		
14			14		
15			15		
16			16		
17			17		
18			18		
19			19		
20			20		
21			21		
22			22		
23			23		
24			24		
25			25		
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27			27		
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31			31		
32			32		
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41			41		
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66			66		
67			67		
68			68		
69			69		
70			70		
71			71		
72			72		
73			73		
74			74		
75			75		
76			76		
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79			79		
80			80		
81			81		
82			82		
83			83		
84			84		
85			85		
86			86		
87			87		
88			88		
89			89		
90			90		
91			91		
92			92		
93			93		
94			94		
95			95		
96			96		
97			97		
98			98		
99			99		
00			00		

INSERT (F8) (CR) | DELETE (F8) (CR)  
PAGE CHANGE (F8) (CR) | CURSOR (← → ↑ ↓)  
COPY (F8) (CR) | FROM (F8) (CR) | TO (F8) (CR)  
AUTO-WRITE TO FD  
MODE MESSAGE CODE  
MESSAGE COMMENT  
PRESENT VALUE  
LINE GRAPH

Operations after the message mode setting screen:



### EXPLANATION

#### (1) Setting the number of messages

- Move the cursor to the line of the number of messages which is required to be set and press **F8 (EDIT)**. An asterisk "\*" is displayed in the cursor located line and pressing **CR** sets the number of messages.

Default values: Number of messages ..... 400  
Number of comments ..... 0

- If the cursor is moved after pressing **F8 (EDIT)**, the asterisk "\*" is cleared from the screen. In this case, it is necessary to press **F8 (EDIT)** again after moving the cursor to the required position.

#### (2) Setting the display mode

- Set the display mode of the message to be entered.  
Setting is possible by pressing any of **1** to **5**, followed by **CR**.

- 1**: Message only
- 2**: Message and character code
- 3**: Message and device comment
- 4**: Present value monitor data  
Monitor display is possible up to 7 places
- 5**: Bar graph

- To change the display page, use the **+** or **-** following keys.

- +**: Displays the page containing the following 30 messages.
- : Displays the page containing the preceding 30 messages.

### (3) Setting the user comments

- (a) A comment can contain up to 20 characters (alphanumerics and special characters).  
When setting of a comment is not required, simply press **CR**.  
The comment set in this step is not displayed in the operation box LCD display unit.

### (4) Automatic FD write

- (a) The message mode is saved to the FD by pressing **F9 (STORE)** when the automatic FD write function is set.

### (5) Insert operation ( **INS** key )

- (a) New message data can be inserted between the two currently set message numbers by using **INS**.
- (b) When **INS** and **CR** are pressed, the message is inserted between the current cursor located message number and the preceding message number. The message numbers below the inserted message number are all shifted.
- (c) After insertion, the cursor moves to the inserted message number. The data can be set following the operation steps (2) and (3) above.
- (d) The insert mode is canceled by pressing **ESC**.

### (6) Delete operation ( **DEL** key )

- (a) Pressing **DEL** and **CR** displays the reversed character **D** preceding the cursor located, set message number. Press **CR** once more and the data right to the reverse display character **D** is deleted.
- (b) The data assigned the message numbers that follow the deleted message number is shifted.
- (c) The delete mode is canceled by pressing **ESC**.

### (7) Copying message data

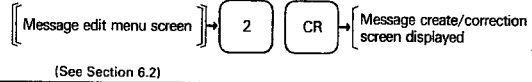
- (a) While the message mode setting screen is displayed, press **F8** and the existing message can be copied to another message number area. When **F8** is pressed, the following message is displayed.

Q: MESSAGE NO. (FROM) [     ] MESSAGE NO. (TO) [     ]

- (b) key in as follows to copy the message.  
**Copy source message number** **CR** **copy destination message number** **CR**
- (c) The copy mode is canceled by pressing **ESC**.

6.4 Creating and Correcting Message Patterns

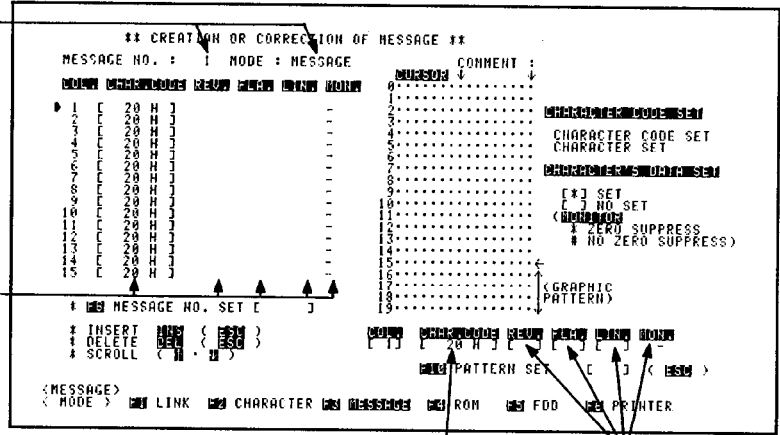
Operations to display the message create/correction screen:



Message Create/Correction Screen

Set message number

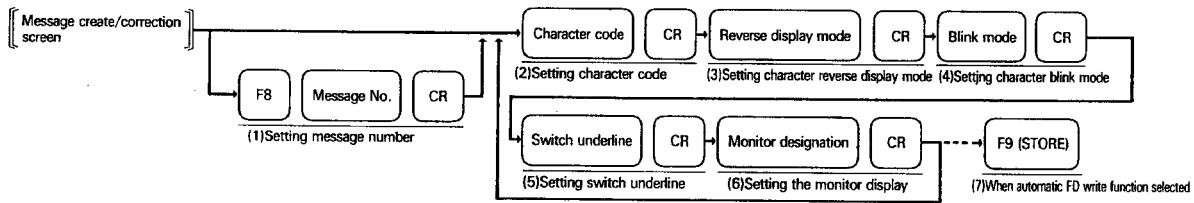
Entered character code and designated display column



Character code setting column

Display designation setting column

Operations after message create/correction screen:



EXPLANATION

(1) Setting message number

(a) When the message create/correction screen is displayed, the list of message numbers, display mode, character code stored in message number 1, and display designation (reverse, blink, switch underline, and monitor) is displayed.

On the same screen, the character which corresponds to the character code in the cursor (█) located column is displayed at the right section of the screen in a dot matrix pattern.

The character code and display designation can be registered in units of characters by designating the corresponding place.

Default: Character ..... 20H  
 Display designation ..... None

A message consists of 30 characters (columns).

(b) A message number can be designated by pressing [F8].

(c) Use [↓] and [↑] to move the cursor.

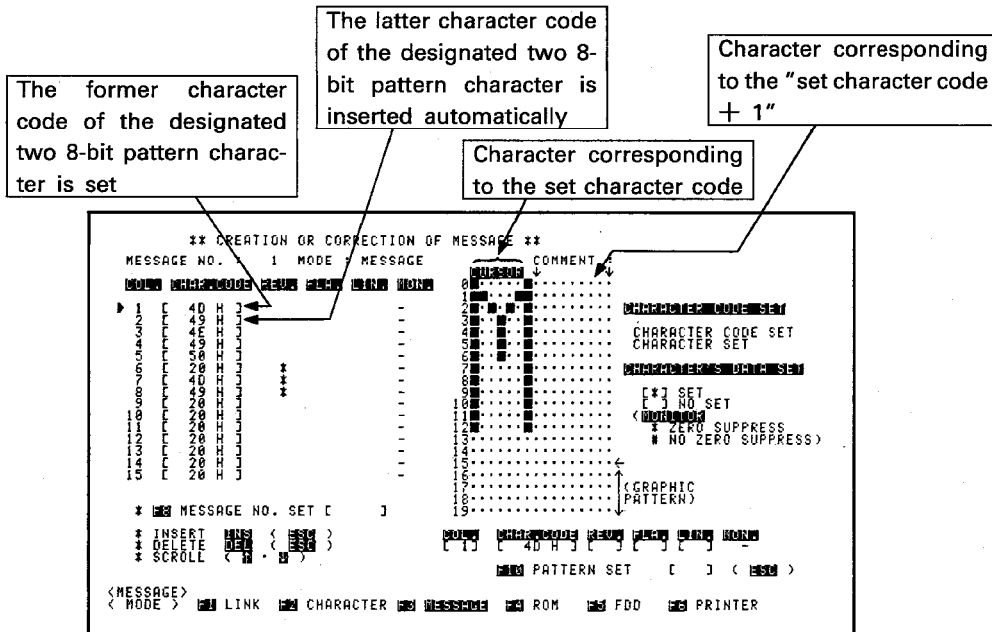
(2) Setting the character code

(a) Set the character code, which is entered in the character generator area, of the character to be displayed at the cursor located column.  
 The character codes which can be set are 0 to 3FF<sub>H</sub>.

(b) Once the character code is set, the character corresponding to the set character code is displayed on the screen in a dot matrix pattern.

If "3" has been selected in the step to enter the character pattern so that two 8-bit patterns are entered to express one character, such a character is displayed regardless of whether the former or latter character code is designated.

When entry is made at the cursor located column, the former character code is set at the cursor position and the latter character code is automatically inserted at the "cursor position + 1" column automatically.



- (c) If the designated character code is the latter one of the two 8-bit pattern characters, the character code in the character code setting column is displayed after decremented by "1".
- (d) When an 8-bit pattern character is changed to two 8-bit pattern character, this change is processed as the one character insert processing. Conversely, if the two 8-bit pattern character is changed to an 8-bit pattern character, a space code (20H) is stored at the latter one character area.
- (e) The character code designation mode is set when [F10] is pressed. In this mode, when a number or letter is keyed in, the character code of the keyed in character is displayed with its pattern at the pattern display area. To cancel the character code designation mode, press [ESC].
- (f) In the bar graph display mode, a character code can be set only for the former six columns. In the latter 24 columns, the fixed character for bar graph is displayed.

### (3) Setting the reverse display of a character

Reverse display mode for the character to be displayed can be set.

[X] [CR]: Reverse display setting. An asterisk [X] is displayed at the corresponding column.

[CR]: Reverse display not set.

### (4) Setting the character blinking mode

Character blinking mode for the character to be displayed can be set.

[X] [CR]: Blink setting. An asterisk [X] is displayed at the corresponding column.

[CR]: Blinking mode not set.

### (5) Setting the switch underline

Set whether the switch underline is displayed or not for the character to be displayed.

The columns where the underline can be set: 1, 2, 5, 6, 9, 10, 13, 14, 17, 18, 21, 22, 25, 26, 29, 30.

**CR**: Underline setting. An asterisk  is displayed at the corresponding column.

**CR**: Underline not set.

For two 8-bit pattern characters, the underline is set for both of the two patterns if the underline is set for either former or latter character.

Underline setting is not possible at the monitor display position in the present value monitor display mode.

### (6) Setting the monitor display

(a) Set the display format for the monitor designated column.

Monitor designation is possible only in the present value monitor mode.

**CR**: Monitor designation (zero suppression) Example : 2

**CR**: Monitor designation (zero not suppressed) Example : 002

**CR**: Monitor not designated

(b) At the completion of monitor display setting, the character code of the corresponding column and the setting whether display is given or not are entered and displayed on the screen.

### (7) Automatic FD write

When the automatic FD write function is set, the set data is saved to the FD by pressing  **F9 (STORE)** .

**POINT**

When the cursor (■) is located at the reverse, flash, line, or monitor setting column, the keyed in data at the cursor (▶) located column is not saved when  **F9 (STORE)** is pressed.

### (8) Insert operation

(a) The insert mode is used to newly insert a character between the columns where setting has been made.

(b) The insert mode is established by pressing  **INS**.

(c) When the insert mode is established, the data in the cursor located column is shifted down by one column and the new data is inserted to the cursor located column.

(d) If a character is set at the latter column of the message number for which the data is inserted, the characters at the latter column is deleted.

In the bar graph display mode, the character at the sixth column is deleted.

(e) For the two 8-bit pattern character, insertion of either the former or latter character code causes both of the patterns to be inserted at the same time.

(f) To cancel the insert mode, press  **ESC**.

### (9) Delete operation

(a) Press  **DEL** to establish the deletion mode.

(b) The data in the cursor located column is deleted and the data in the following columns is shifted left; a space code (20<sub>h</sub>) is stored in the latter column.

(c) For two 8-bit pattern characters, deletion of either the former or latter character code causes both of the patterns to be deleted.

(d) To cancel the delete mode, press  **ESC**





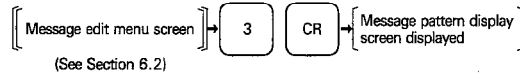


## 6. OPERATION BOX MESSAGE EDIT MODE

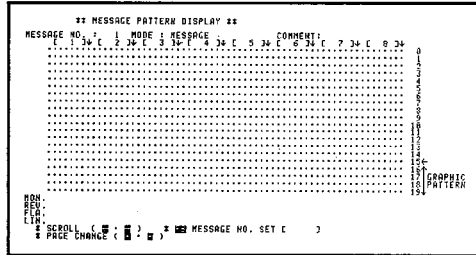


### 6.5 Message Pattern Display

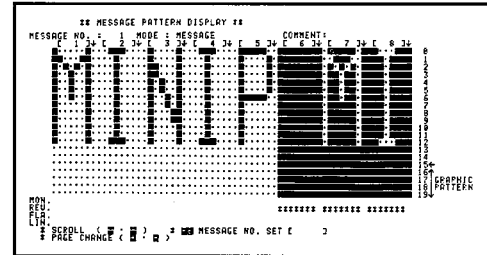
Operations to display the message pattern display screen:



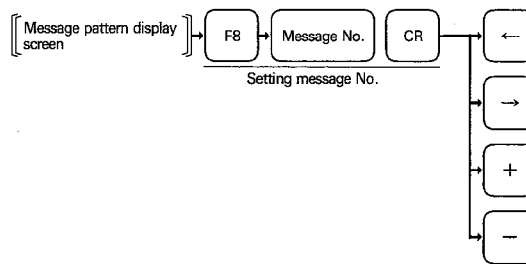
Message Pattern Display Screen



Message Pattern Display Example



Operations after the message pattern display screen:

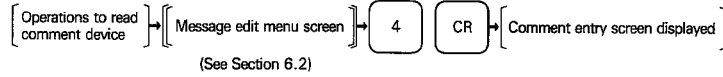


### EXPLANATION

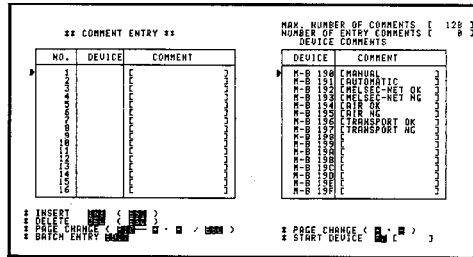
- (1) Set the message number after pressing **[F8]**, and the first eight characters of the designated message number are displayed on the GPP/PHP screen in a dot matrix pattern.
- (2) When "reverse display", "blink" "switch underline", or "monitor" setting has been made for a character, "\*\*\*\*\*" is displayed corresponding to it.
- (3) Display position can be changed using the following keys:
  - [←]**: The display characters are scrolled one character to the right.
  - [→]**: The display characters are scrolled one character to the left.
  - [+]**: The next eight characters are displayed.
  - [-]**: The previous eight characters are displayed.

## 6.6 Entering Device Comment

### Operations to display the comment entry screen:

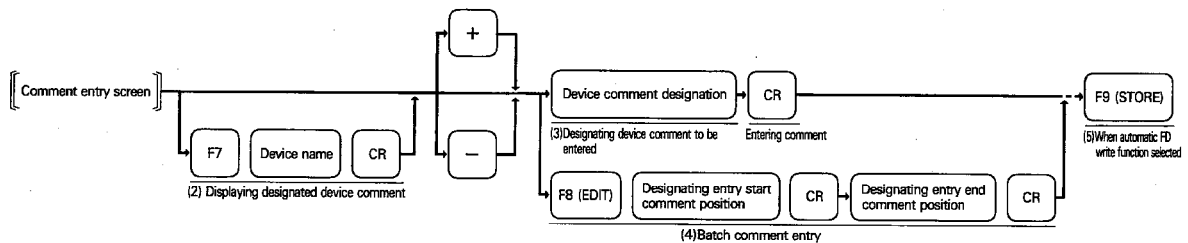


### Comment Entry Screen



Device comment created using SW GP-GPPAEE/EG

### Operations after the comment entry screen:



## EXPLANATION

### (1) Reading the device comment

- (a) Read the device comment created using the SW GP-GPPAEE/EG to the GPP/PHP screen.  
For the procedure to read the device comment, refer to Section 8.4.

### (2) Displaying the designated device comment

- (a) Designate the device for which a set comment should be displayed in the comment column.  
Press **F7** and key in a device name (X, Y, M, L, S, B, F, T, C, D, W, R, P, I, S.M, S.D), then press **CR**. With this operation, the comment for the designated device is displayed.
- (b) Display of the designated device comment can be changed using the following keys:
  - +**: The next 16 comments are displayed.
  - : The previous 16 comments are displayed.

### (3) Entering a device comment (entering one by one)

- (a) Select the device comment to be entered from the comments displayed in the right device comment column by moving the right cursor.
- (b) Press **CR** and the cursor located device is entered as the comment and displayed at the left column.  
The comment numbers are entered beginning with No. 1.  
If some comments have been entered, the new comment is entered following these comments.

### (4) Entering comments (batch)

- (a) Device comments can be entered continuously in batch.
- (b) After pressing **F8 (EDIT)**, move the right cursor to the entry start comment position and to the entry end comment position, and press **CR**. The comments within the designated area are entered in batch and displayed at the left column.
- (c) The batch entry is canceled by pressing the **ESC** key.

### (5) Automatic write to FD

- (a) When the automatic FD write function is set, the set data is saved to the FD by pressing **F9 (STORE)**.

### (6) Insert operation (**INS** key)

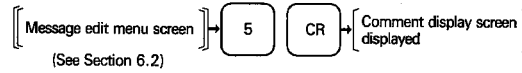
- (a) Use the insert operation when inserting new comment data between the set comment numbers.
- (b) The insert mode is established when **INS** is pressed.
- (c) Move the right cursor to the device comment column to be inserted.  
Move the left cursor to the comment position number where the comment is to be inserted and press **CR**. The designated comment is inserted to the designated position. The comments below this position all shift down.
- (d) The insert mode is canceled by pressing the **ESC** key.

### (7) Delete operation (**DEL** key)

- (a) The delete mode is established when **DEL** is pressed.
- (b) Move the left cursor to the comment number which should be deleted.  
Press **CR**, and **D** is displayed. Pressing **CR** once again deletes the cursor located comment.  
The comments below this deleted comment are all shifted up.
- (c) To cancel the delete mode, press **ESC**.
- (d) To change the display on the entered comment number data screen, use the following keys after pressing **F10**.
  - +**: The next 16 comments are displayed.
  - : The previous 16 comments are displayed.

## 6.7 Displaying Device Comments

Operations to display the comment display screen:

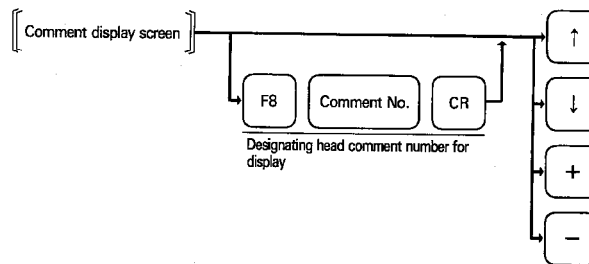


### Comment Display Screen

** COMMENT DISPLAY **			MAX. COMMENTS E 128 J		
NO.	COMMENT	DEVICE	NO.	COMMENT	DEVICE
1	MANUAL	H-B 198	17		
2	DIAGNOSTIC	H-B 199	18		
3	MELSEC-NET OK	H-B 197	19		
4	MELSEC-NET NG	H-B 197	20		
5	DIAGNOSTIC OK	H-B 198	21		
6	DIAGNOSTIC NG	H-B 198	22		
7	TRANSPORT OK	H-B 199	23		
8	TRANSPORT NG	H-B 199	24		
9			25		
10			26		
11			27		
12			28		
13			29		
14			30		
15			31		
16			32		

\* START COMMENT NO. SET E )  
 \* PAGE CHARGE ( 0 - 9 )  
 \* SCROLL ( 0 - 9 )

Operations after the comment display screen:

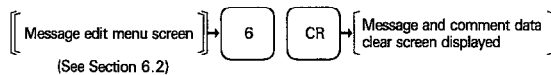


### EXPLANATION

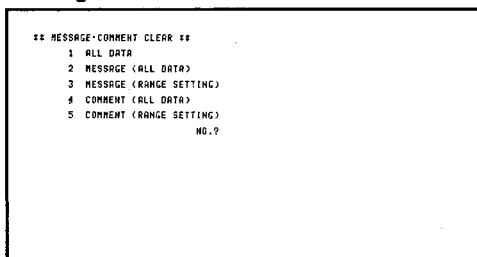
- (1) When the comment display screen is displayed, the 32 sets of entered comment data is displayed beginning with No. 1.
- (2) Designation of the head comment number is possible by pressing [F8].
- (3) The display on the screen can be changed using the following keys:
  - ↑: The screen display is scrolled up by one comment line.
  - ↓: The screen display is scrolled down by one comment line.
  - +: The next 32 sets of the entered comments are displayed.
  - : The previous 32 sets of the entered comments are displayed.

## 6.8 Clearing Message and Comment Data

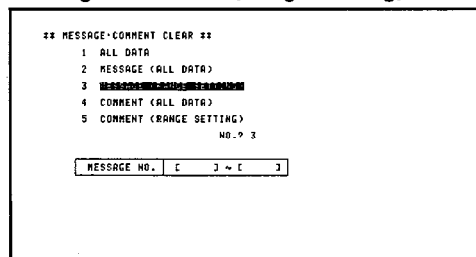
Operations to display the message and comment clear screen:



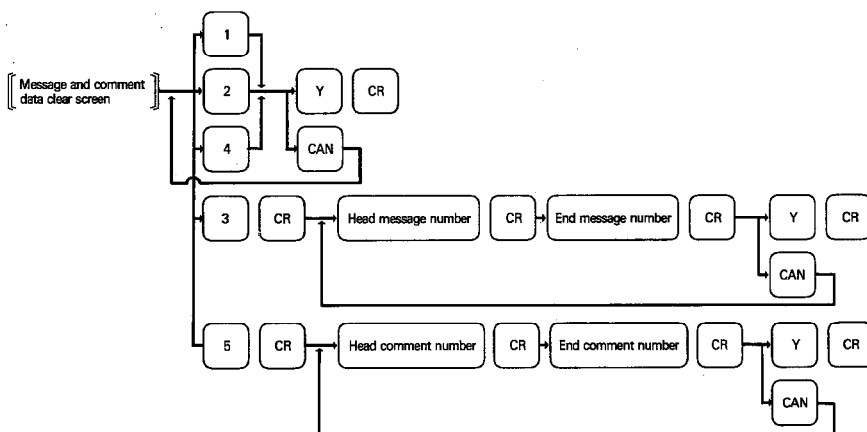
Message and Comment Data Clear Screen



Message Data Clear (Range Setting) Screen



Operations after the message and comment data clear screen:



### EXPLANATION

#### (1) Clearing all data

- (a) To clear all the data (message and comment data) created in the message edit mode, press **[1]** and **[CR]**.
- (b) To clear all the message data created in the message edit mode, press **[2]** and **[CR]**.
- (c) To clear all the comment data created in the message edit mode, press **[4]** and **[CR]**.

#### (2) Clearing message data in the designated range

- (a) To clear the message data by designating the data clear range, press **[3]** and **[CR]**. Then, designate the head and end message numbers of the message data to be cleared.  
The message number which can be set is a number not greater than the number of messages and the head message number must not be greater than the end message number (head message number  $\leq$  end message number).

### (3) Clearing comment data in the designated range

- (a) To clear the comment data by designating the data clear range, press **[5]** and **[CR]**. Then, designate the head and end comment numbers of the comment data to be cleared.

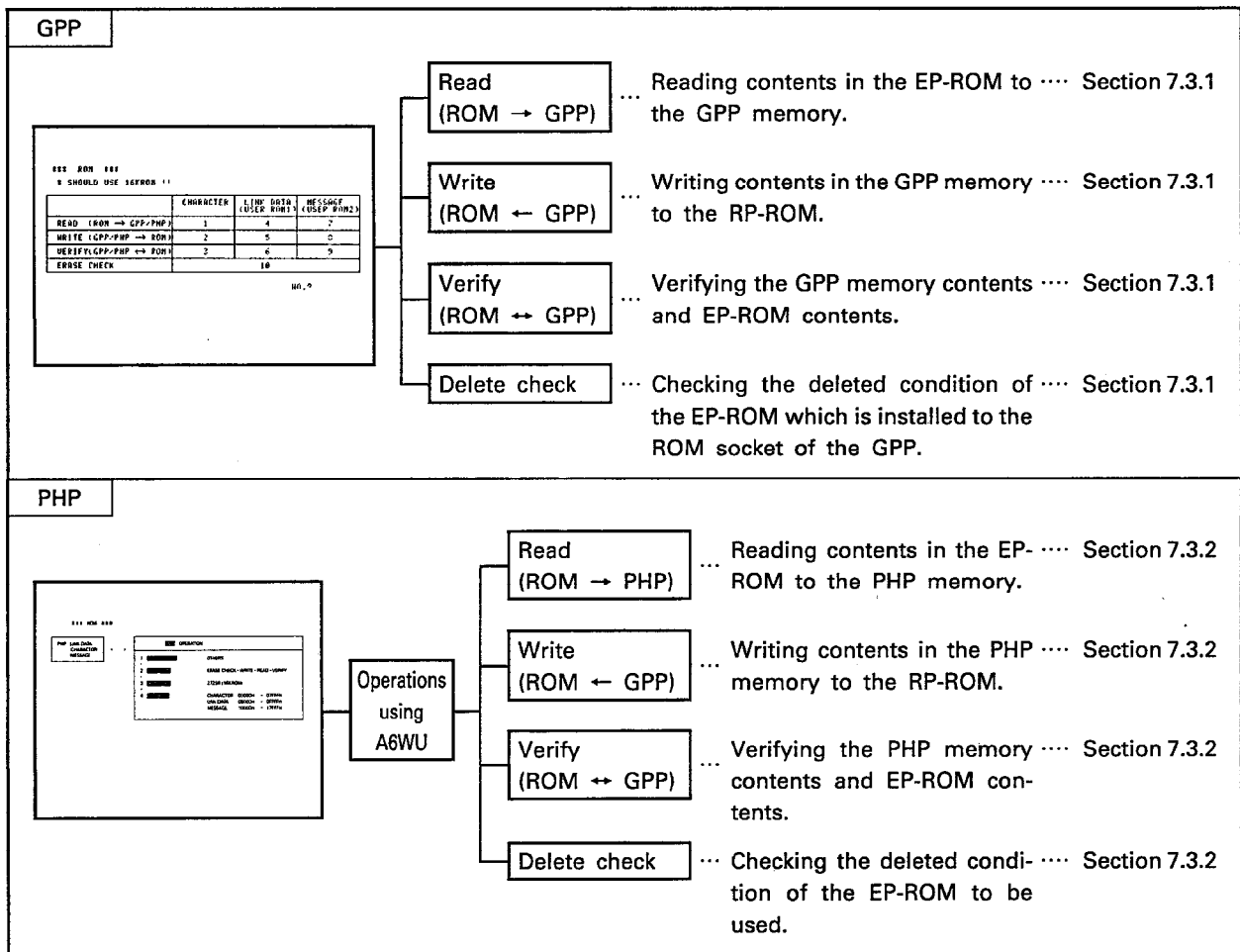
The comment number which can be set is a number not greater than the number of comments and the head comment number must not be greater than the end comment number (head comment number  $\leq$  end comment number).

7. ROM MODE

The ROM mode is used to write the data which has been created in the initial data setting mode, character generator edit mode, or message edit mode to the EP-ROM, or to read the created data from the EP-ROM.

The ROM created in this mode is used by installing it to the AJ71PT32-S3/AJ35(PT)-OPB. With the PHP, writing, reading, verify, and delete check are carried out using the A6WU which is connected to the PHP. For further information concerning operation, refer to the A6WU Operating Manual.

7.1 ROM Mode Functions

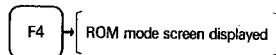


7.2 Precautions for Using ROM Mode

- (1) Only 16KROM can be used with AJ71PT32-S3/AJ35(PT)-OPB.
- (2) The character generator data, initial data, and data messages are written to individual ROMs.
- (3) If the data is written to the ROM without creating characters in the character generator edit mode, only the characters (character code: 20<sub>H</sub> to 7F<sub>H</sub>, 90<sub>H</sub> to 9C<sub>H</sub>, A0<sub>H</sub> to FE<sub>H</sub>) which have been saved to the MINIP are written.
- (4) User comments of the messages and the device data of the device comments are not stored to the message ROM. Therefore, they are not displayed on the screen when the data is read from the ROM.

7.3 ROM Mode Operations

Operations to display the ROM mode screen:



ROM Mode Screen

```

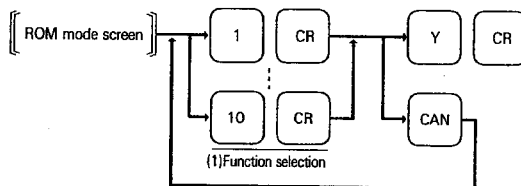
*** ROM ***
* SHOULD USE 16KROM !!
    
```

	CHARACTER	LINK DATA (USER ROM1)	MESSAGE (USER ROM2)
READ (ROM → GPP/PHP)	1	4	7
WRITE (GPP/PHP → ROM)	2	5	8
VERIFY (GPP/PHP ↔ ROM)	3	6	9
ERASE CHECK	10		

NO.?

7.3.1 Operations for A6GPP

Operations after the ROM mode screen:



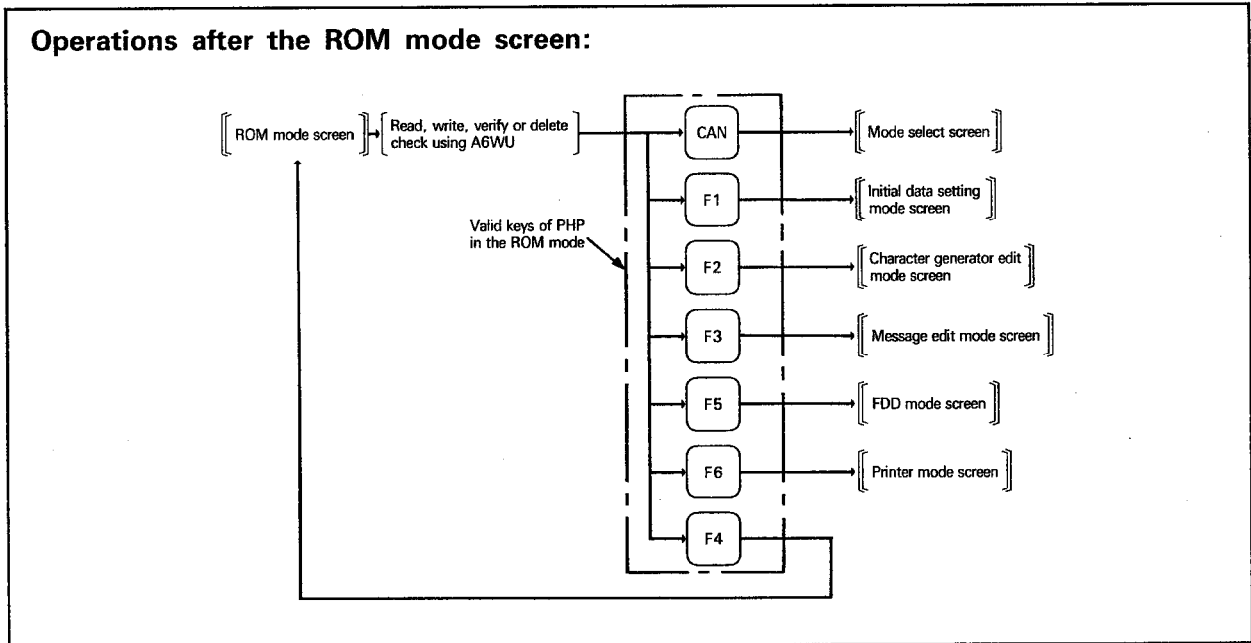
EXPLANATION

(1) Selecting the function

- (a) After displaying the ROM mode screen, select the required function by pressing a numeric key [1] to [10], followed by the pressing of [CR].
- (b) The selected function is executed by pressing [Y] and [CR].  
The screen displays 32 asterisk symbols (X) and they are deleted one by one each time the selected function has been completed for 1k bytes.
- (c) At the completion of the selected function, the "completed" message is displayed.

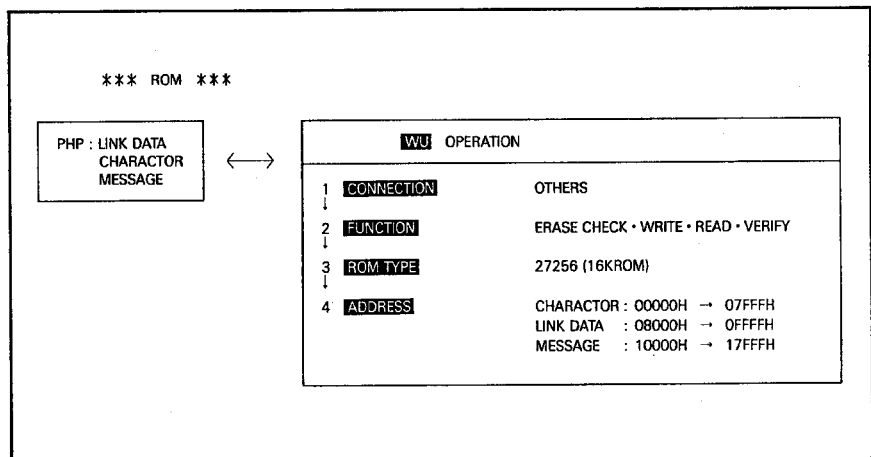


7.3.2 A6PHP operations



**EXPLANATION**

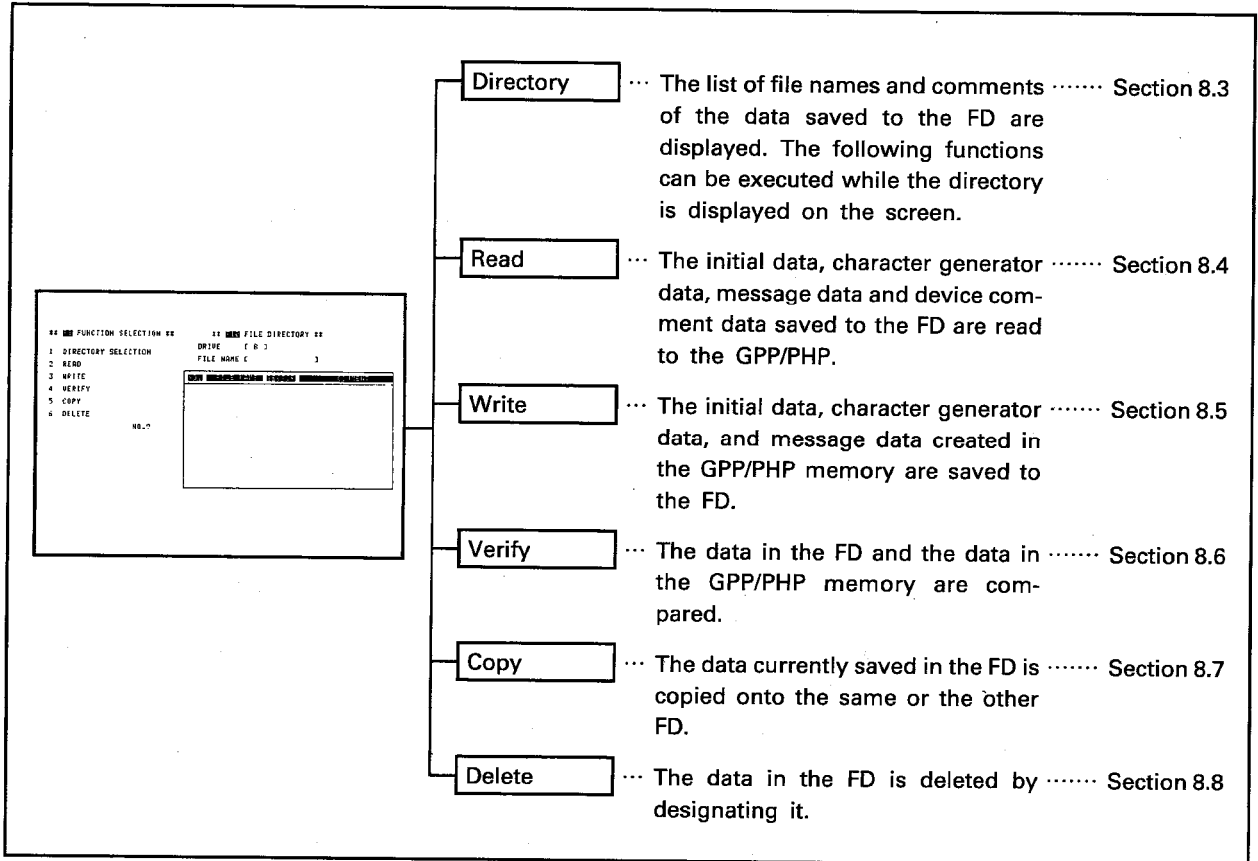
- (1) When the A6WU is connected to the PHP, the A6WU displays "OTHERS" for the connected device.
- (2) To write the initial data, character generator data, and message data to the ROM, set the following addresses.
  - 1) Character generator data ..... 00000<sub>H</sub> to 07FFF<sub>H</sub>
  - 2) Initial data ..... 08000<sub>H</sub> to 0FFFF<sub>H</sub>
  - 3) Message data ..... 10000<sub>H</sub> to 17FFF<sub>H</sub>



8. FDD MODE

The FDD mode is used to save the data which has been created in the initial data setting mode, character generator edit mode, or message edit mode to FD, or to read the created data from the FD.

8.1 FDD Mode Functions



\* With PHP, all the data in the FD is copied to the other FD in batch.

8.2 Common Operations in the FDD Mode

8.2.1 File name structure

- (1) A file name is necessary to write the data to a FD; it is used as an index in the FD.
- (2) File name structure:  
File name = System-name. Identifier
- (3) The system name, to be set by the user, consists of up to eight alphanumeric characters and the minus (-) symbol. A space cannot be contained in the system name.  
The system name must begin with an alphabetic character.
- (4) The identifier is automatically appended to the system name when the data is written to the FD and is used to indicate the memory contents.

Identifier	Data
RMN	Initial data
CMN	Character generator data
MMN	Message data
COT	Device comment data

- (5) To read or delete the file name for the designated system name or identifier, set the file name and press **[CR]**.
- (6) If the file name to be read is not clear, or when deleting unnecessary files in batch, the wild card designation (X) is possible.

- 1) To read/delete all the files having the same system name, but different identifier:

System-name. X ..... All the files for the designated system name are read/deleted.

Example) To read/delete all of the following files, designate as "ABC. X":

- ABC. RMN
- ABC. CMN
- ABC. MMN

- 2) To read/delete all the files having the same identifier:

X. Identifier ..... All the files which have the designated identifier are read/deleted.

Example) To read/delete all of the following files, designate as "X. PMA".

- ABC. PMA
- BCD. PMA
- CDE. PMA

- 3) To read/delete all the files having similar system name:

XXXXX. Identifier ..... All the files which have the designated system name, excluding the position indicated by an asterisk (X), and the designated identifier are read/deleted.

↑  
 Use "X" for a file name character which differs.

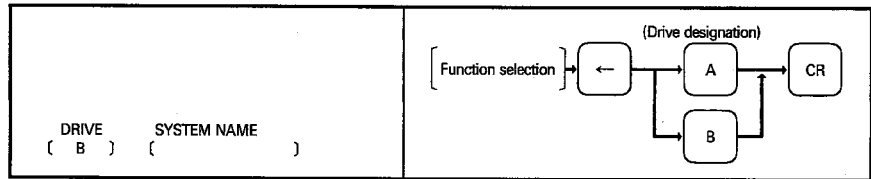
Example) To read/delete all of the following files, designate as "ABCX. PMA".

- ABC-1. PMA
- ABC-2. PMA
- ABC-3. PMA

- 4) To delete all the files in the FD:

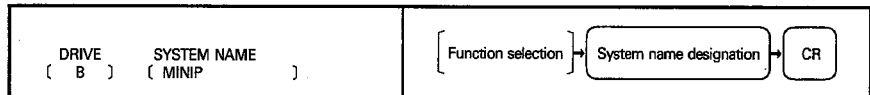
X. X ..... All the files in the FD are deleted.

8.2.2 Changing drive



- (1) After the selection of a required function, using the FDD mode menu screen, the system name designation column as indicated above is displayed with the cursor appearing in the column.
- (2) Press  key to move the cursor to the drive column and designate the required drive name.  
After the drive name has been designated, the cursor moves to the system name designating column.

8.2.3 Designating system name

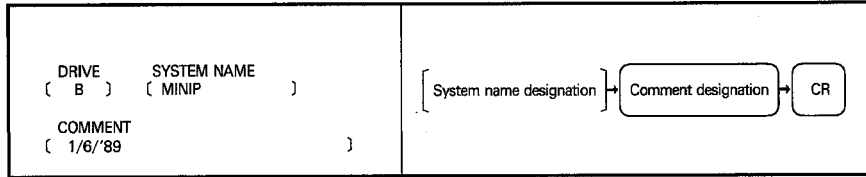


- (1) The following keys are used to designate the system name.
  - ,  (minus) ..... The keyed in characters are displayed at the cursor position.
  - ,  ..... Used to move the cursor.
  - ..... The cursor located character is deleted and the cursor moves to the left by one character.
  - ,  ..... All characters in the system name designation column are cleared; the cursor moves to the left column.
- (2) A system name consists of up to eight characters.
- (3) The system name must begin with an alphabetic character.

**POINT**

The  key cannot be used to designate a system name.  
 A blank, which is inserted by pressing , is not permitted in a system name.  
 Example: MINI  P

8.2.4 Designating comments



(1) The following keys are used to designate a comment.

**[alphanumeric]**, **[special characters]** ..... The keyed in character is displayed at the cursor position.

**[→]**, **[←]** ..... Used to move the cursor.

**[SP]** ..... The cursor located character is deleted and the cursor moves to the right by one character.

**[BS]** ..... The cursor located character is deleted and the cursor moves to the left by one character.

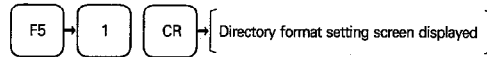
**[HOME CLEAR]**, **[DEL]** ..... All characters in the comment column are cleared; the cursor moves to right end position in the column.

(2) A comment name consists of up to 20 characters.

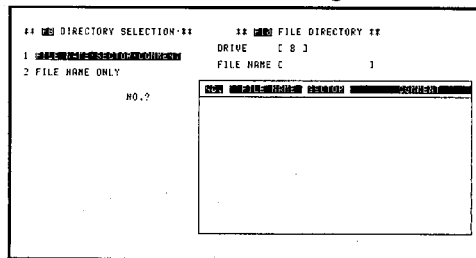
(3) If it is not necessary to use a comment, press **[CR]**.

## 8.3 Directory of Entered Data

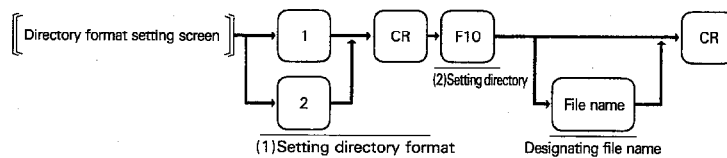
Operations to display the directory format setting screen:



## Directory Format Setting Screen



Operations after the directory format setting screen:



## EXPLANATION

## (1) Setting the directory format

(a) Set the format to display the directory.

**1**: Displays the file name, sector, and comment.

**2**: Displays only the file name.

(b) After the setting of the directory format, the directory is displayed in the set format.

## (2) Setting the directory

(a) Press **F10** to set a file name. When it is pressed, the cursor moves to the file name setting column.

(b) Directory can be displayed in either of the following two methods: to read all files in the FD, and to read only the files having the designated system name and identifier.

(c) To read the files by designating the system name and identifier, first key in the file name and press **CR**. To read all files, press **CR** without keying in a file name.

(d) When setting a file name, designate the system name and identifier as indicated below.

File name = System-name.Identifier

(e) In a directory display screen, 15 file names are displayed.

When there are more than 15 file names, press **+** and the next 15 file names are displayed.

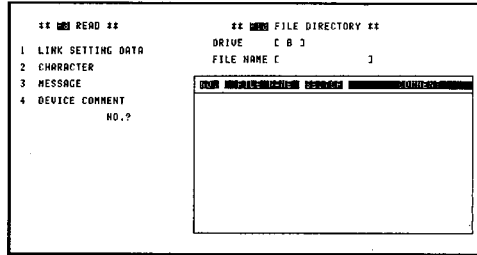
To return to the display of the previous file names, press **-** and the previous 15 file names are displayed.

8.4 Reading from FD

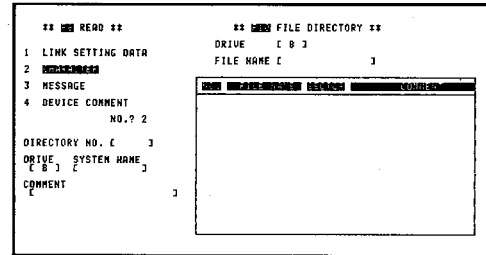
Operations to display the FD read screen:



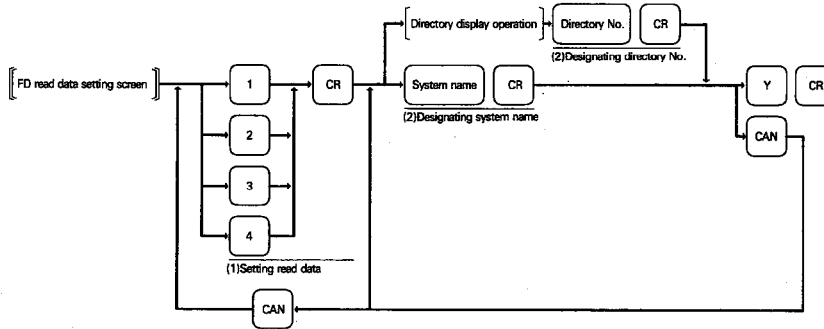
FD Read Data Setting Screen



Character Generator Data Read Screen



Operations after the FD read data setting screen:



EXPLANATION

(1) Setting the read data

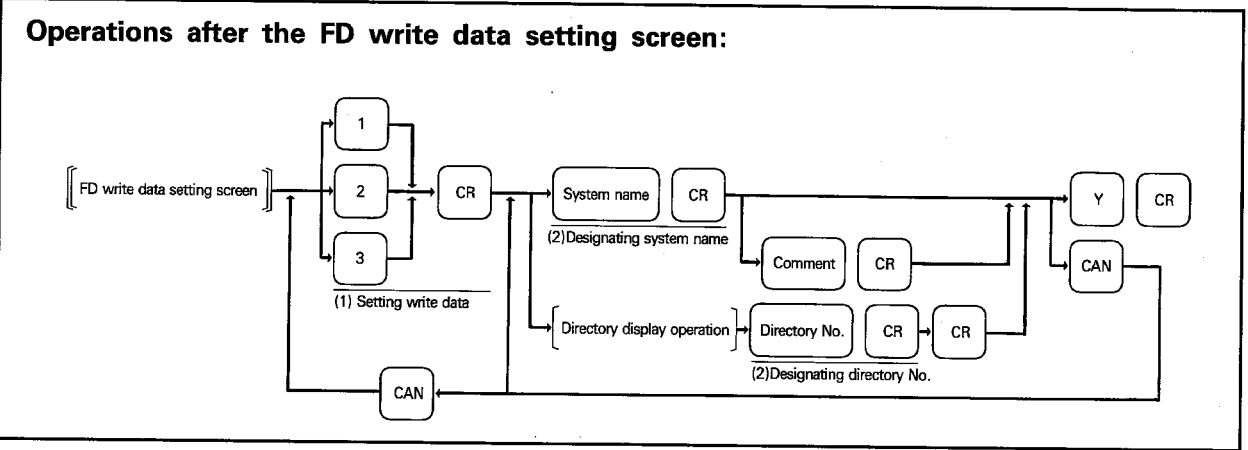
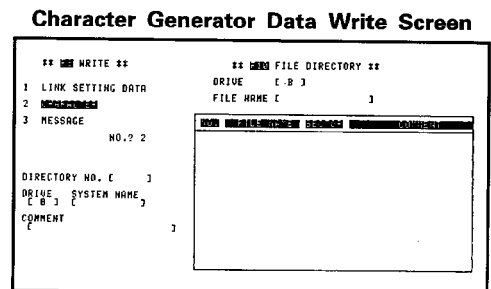
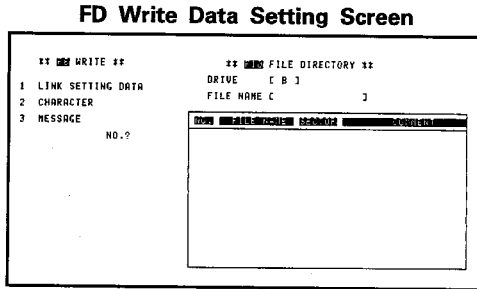
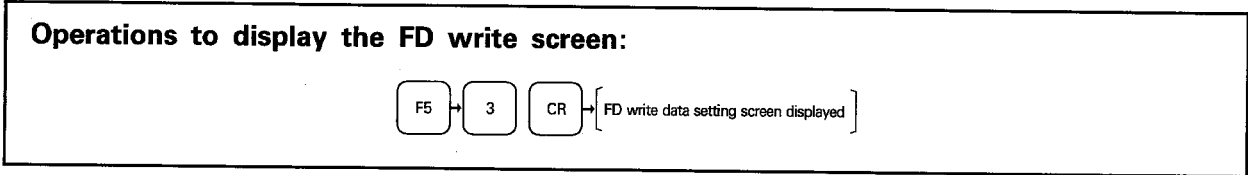
Set the data to be read from the FD to the GPP/PHP memory.

- 1: Initial data
- 2: Character generator data
- 3: Message data
- 4: Device comment data

(2) Reading the file

- (a) A file can be read by either designating the directory number or system name.
- (b) While the directory is displayed, the cursor is located at the directory number designation column. Key in the directory number to read the file.  
To read a file by designating the system name, move the cursor to the system name designation column by pressing  and key in the system name.
- (c) Designate the same system as the corresponding data which has been saved to the FD.
- (d) While the file is being read, "executing" message is displayed in the message column. At the completion of reading, "completed" is displayed.
- (e) Press , and the file directory function is called.
- (f) Press , and the read data setting function becomes effective again after the execution of the file directory function.

8.5 Saving to FD



**EXPLANATION**

**(1) Setting the write data**

Designate the data to be saved to the FD.

- 1**: Initial data
- 2**: Character generator data
- 3**: Message data

**(2) Saving a file**

- (a) When the system name or file number (the file number having the same identifier as the corresponding data which is displayed in the file directory) is designated, the file is saved with the identifier which corresponds to the designated system name automatically appended.



(b) After the comment has been set, the following message is displayed. Continue operation following the displayed message.

- 1) When there is no file name having the same system name as the one designated in the FD:

PRESS <Y><CR> TO START PRESS <CAN> TO CANCEL
-------------------------------------------------

When **Y** and **CR** are pressed, the corresponding data in the GPP/PHP memory is saved to the FD.

When **CAN** is pressed, the cursor returns to the system name setting column, allowing the setting of the system name again.

- 2) When there is the file name having the same system name as the one designated in the FD:

SYSTEM NAME ALREADY USED! PRESS <Y><CR> TO START PRESS <CAN> TO CANCEL
------------------------------------------------------------------------------

When **Y** and **CR** are pressed, the corresponding data in the GPP/PHP memory is saved to the FD overwriting the current file.

When **CAN** is pressed, the cursor returns to the system name setting column, allowing the setting of the system name again.

(c) While the file is being saved, "executing" message is displayed in the message column. At the completion of saving, "completed" is displayed.

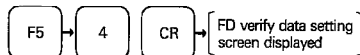
(d) When the file is saved to the FD by designating the directory number, the designated file is saved to the current file in the FD by overwriting it.

(e) Press **F10**, and the file directory function is called.

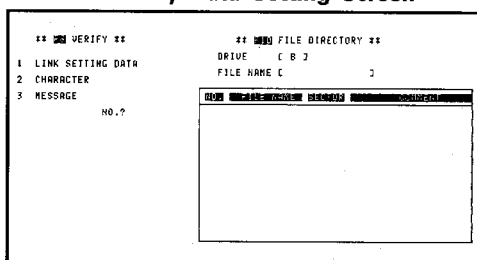
(f) Press **F8**, and the write data setting function becomes effective again after the execution of the file directory function.

8.6 Verify with FD

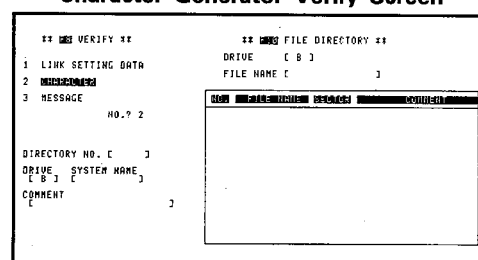
Operations to display the FD verify screen:



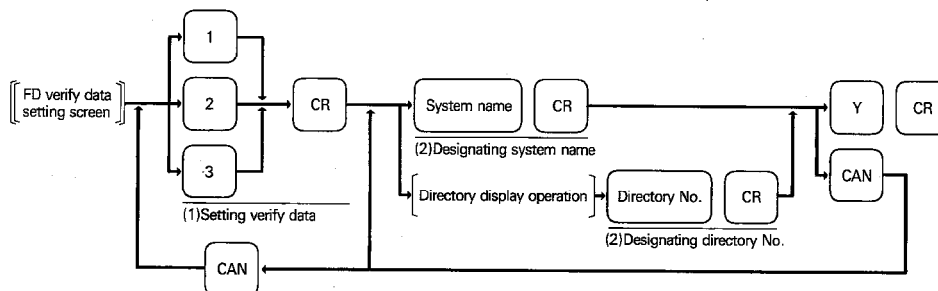
FD Verify Data Setting Screen



Character Generator Verify Screen



Operations after the FD verify data setting screen:



EXPLANATION

(1) Setting the verify data

Designate the data to be verified.

- [1]: Initial data
- [2]: Character generator data
- [3]: Message data

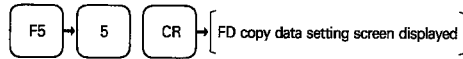
(2) Designating the verify file name

- (a) By designating the system name or directory number, the data in the GPP/PHP memory and the data in the FD are compared.
- (b) While the file is being verified, "executing" message is displayed in the message column. At the completion of verify, "completed" is displayed. If a miss match is found during verify, the "verify error" message is displayed at the message column.
- (c) Press [F10], and the file directory function is called.
- (d) Press [F8], and the verify data setting function becomes effective again after the execution of the file directory function.

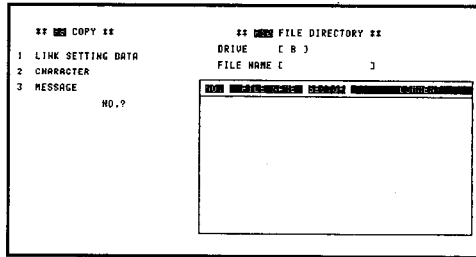
8.7 FD Copy

8.7.1 A6GPP

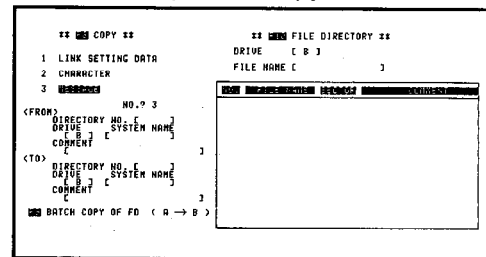
Operations to display the FD copy data screen:



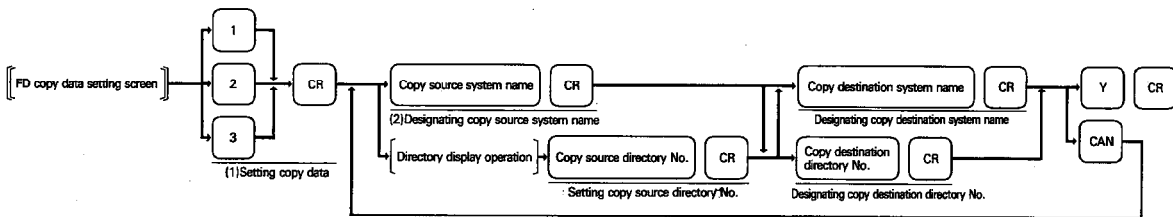
FD Copy Data Setting Screen



Message Data Copy Screen



Operations after the FD copy data setting screen:



EXPLANATION

(1) Setting the copy data

Designate the data to be copied.

- 1: Initial data
- 2: Character generator data
- 3: Message data

(2) Designating the copy file name

(a) The file of the designated system name or directory number (file number having the same identifier as the corresponding data displayed in the file directory) is copied to the same FD. Copying to other FD is possible by designating a system name.

(b) Possible combination of source and destination for file copy is indicated below.

- 1) FDD **A** → FDD **B** (not possible when directory number is designated.)
- 2) FDD **B** → FDD **A** (not possible when directory number is designated.)
- 3) FDD **A** → FDD **A** (copying in the same FD)
- 4) FDD **B** → FDD **B** (copying in the same FD)

- (c) When files are copied using two FDDs as in the case of 1) or 2) in (b) above, the system name of the copy source and destination can either be the same or different.

If files are copied to the same FD, the system name of the copy destination must be different from that of the copy source. If the same system name is used, an error occurs.

- (d) If directory number is designated for the copy destination, the currently existing file is overwritten with the new file.

- (e) To copy in units of FD, press **F9** **Y** **CR**. In this case, it is not necessary to designate the drive or system names.

This mode of copying is possible only from drive **A** to drive **B**.

**POINT**

**It is not possible to copy the MINIP system FD.  
Although the copy will be completed if attempted, the GPP/PHP cannot be started using the copy.**

- (f) After the copy destination system name has been set, the following message is displayed. Continue operation following the displayed message.

- 1) When there is no file name having the same system name as the one designated in the copy destination FD:

PRESS <Y><CR> TO START  
PRESS <CAN> TO CANCEL

When **Y** and **CR** are pressed, the designated file is copied.

When **CAN** is pressed, the cursor returns to the copy source system name setting column, allowing the setting of the system name again.

- 2) When there is the file name having the same system name as the one designated in the copy designation FD:

SYSTEM NAME ALREADY USED!  
PRESS <Y><CR> TO START  
PRESS <CAN> TO CANCEL

When **Y** and **CR** are pressed, the file designated with the system name is overwritten with the file designated with the copy source system name.

When **CAN** is pressed, the cursor returns to the copy source system name setting column, allowing the setting of the system name again.

- (g) While the file is being copied, "executing" message is displayed in the message column. At the completion of copying, "completed" is displayed.

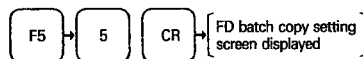
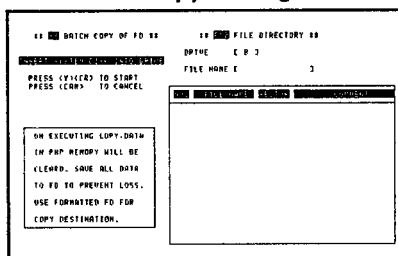
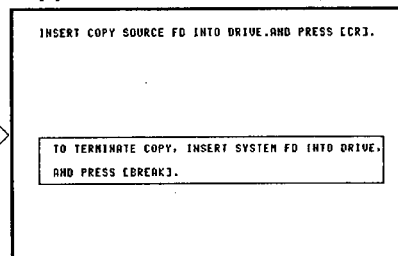
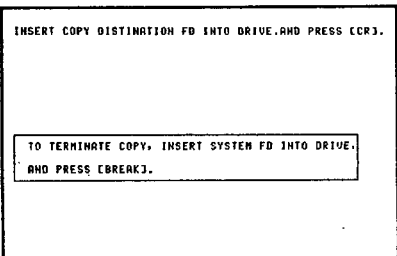
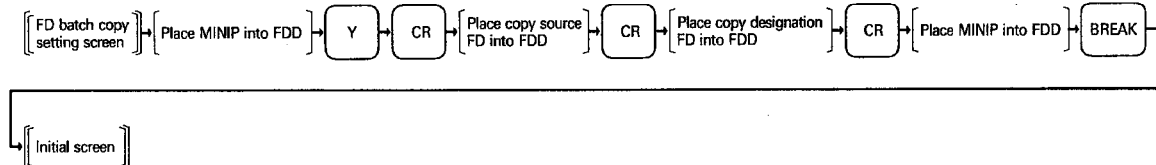
- (h) Press **F10**, and the file directory function is called.

- (i) Press **F8**, and the copy source directory number setting function becomes effective again after the execution of the file directory function.

## 8.7.2 A6PHP

**IMPORTANT**

- (1) Copying using the A6PHP is possible for entire data in FD.  
After executing the copy function, all the data (initial setting data, character generator data, and message data) in the PHP internal memory is lost. Therefore, store the PHP memory data to the user FD (SW0-GPPU) before executing copying.
- (2) The FD to which the files are copied must have been formatted.

**Operations to display the FD copy screen:****FD Batch Copy Setting Screen****Copy Source FD Data Reading Screen****Copy Function Execution Screen****Operations after the FD batch copy setting screen:****EXPLANATION**

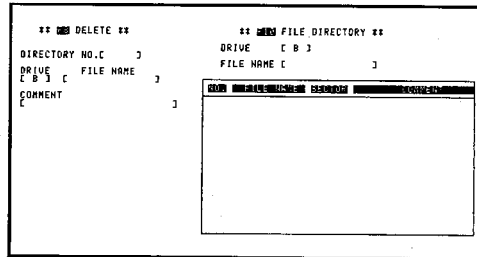
- (1) To carry out FD copying, place SW0-GP-MINIP into the FDD and press **(Y)** and **(CR)**. When **(CR)** is pressed, the OS for copying is read from the MINIP. Press **(CAN)** before pressing **(CR)** if copying is not necessary. In this case, the FDD function selection screen is displayed.
- (2) After placing the copy source FD in the FDD, press **(CR)**. The data in the copy source FD is read to the PHP memory.
- (3) After placing the copy destination FD in the FDD, press **(CR)**. The data having been read to the PHP memory is written to the FD.
- (4) After the completion of copying or to stop copying, place the MINIP in the FDD and press **(BREAK)**. The system data in the MINIP is read to the PHP and the initial screen is displayed.
- (5) Press **(F10)**, and the file directory function is called.
- (6) Press **(F8)**, and the file directory execution confirmation screen is displayed after the execution of the file directory function.

8.8 Deleting File

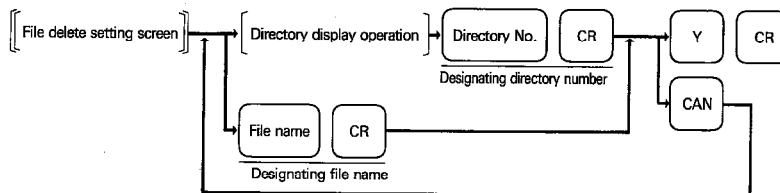
Operations to display the file delete screen:



File Delete Setting Screen



Operations after the file delete screen:



EXPLANATION

- (1) Files can be deleted by designating the directory number or a file name.
- (2) After the file name has been designated, the following message is displayed.

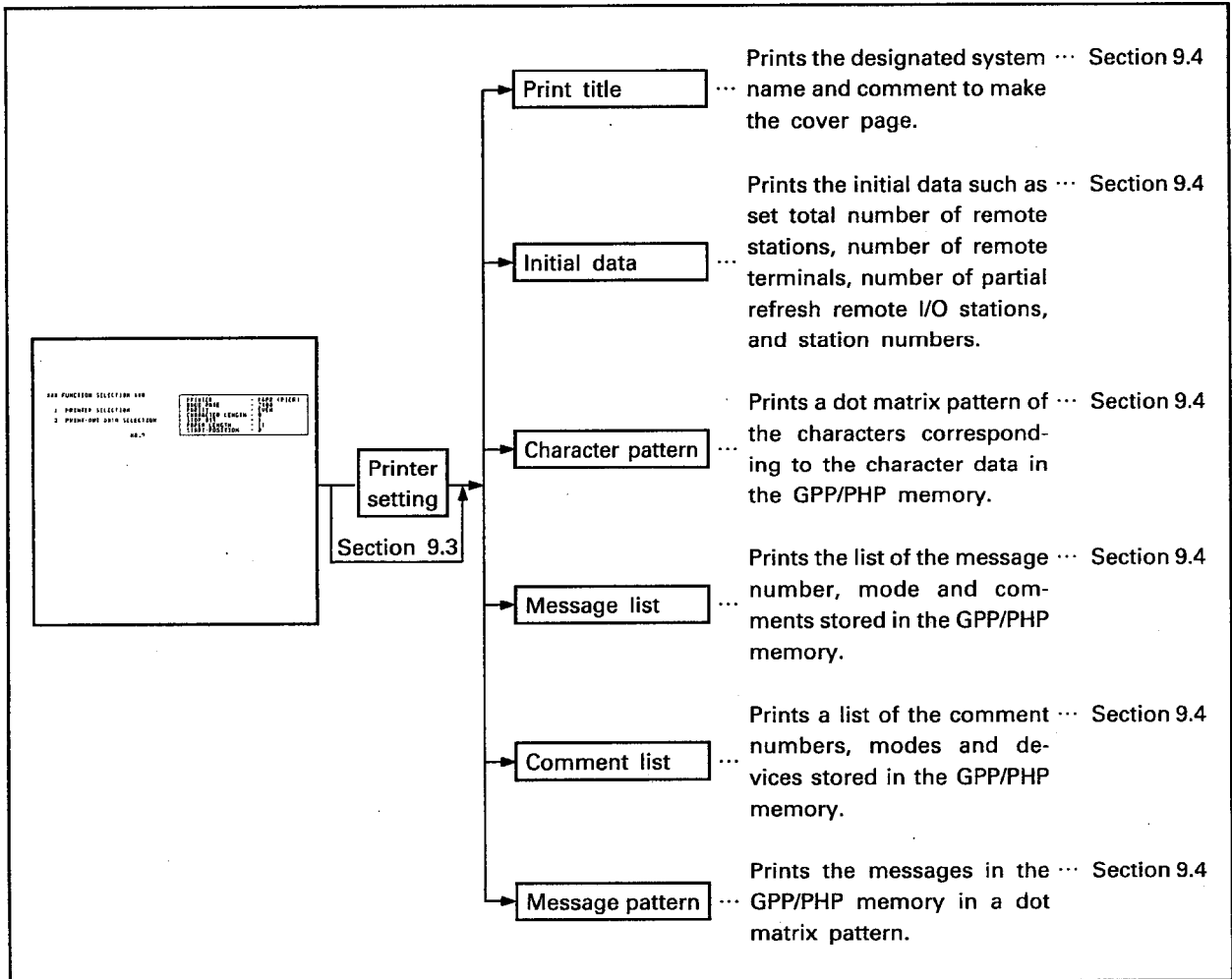
PRESS <Y><CR> TO START  
PRESS <CAN> TO CANCEL

- When **Y** and **CR** are pressed, the designated file is deleted.  
When **CAN** is pressed, the cursor returns to the file name setting column, allowing the setting of the file name again.
- (3) While the file is being deleted, "executing" message is displayed in the message column. At the completion of deletion, "completed" is displayed.
  - (4) Press **F10**, and the file directory function is called.
  - (5) Press **F8**, and the directory number setting function becomes effective if the file directory function has been completed. If not, the screen returns to the file name designation process.

9. PRINTER MODE

This mode is used to output the initial data, character generator data, and message data in the GPP/PHP memory to the printer.

9.1 Printer Mode Functions



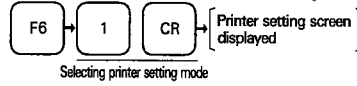
9.2 Precautions for Printer Mode

- (1) Before using the printer for the first time after turning on the power for GPP/PHP or resetting them, always set the printer. Once the data has been set, the data is retained in the memory and, therefore, it is not necessary to set the printer data again unless the power to the GPP/PHP is turned off or they are reset.
- (2) To dump the screen data to the printer, the printer data must have been set also.
- (3) In the MINIP printer mode, the following two types of printers can be used.

**K6PR**  
**K7PR**

9.3 Printer Setting

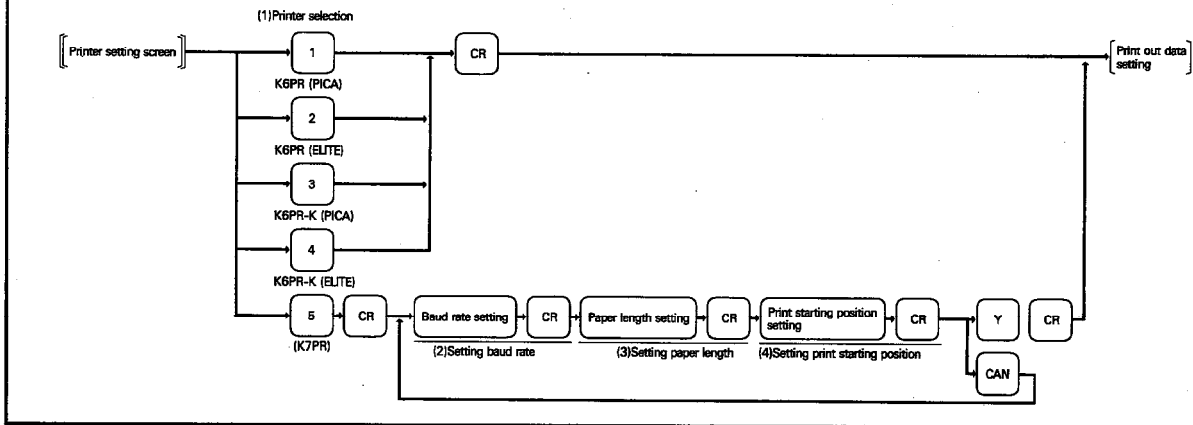
Operations to display the printer setting screen:



Printer Setting Screen

** PRINTER SETTING **			
NO.		PAPER LENGTH	START POSITION
1	K6PR (PICA)	11-inch	0 ~ 99
2	K6PR (ELITE)	12-inch	
3	K6PR-K (PICA)	16-inch	
4	K6PR-K (ELITE)		
5	K7PR / LX-88		
6	A7PR / A7NPR		
7	RX-88		
NO.?	6	1	8

Operations after the printer setting screen:



EXPLANATION

(1) Selecting the printer

- (a) When a printer is selected from "1" to "4" by pressing the corresponding number key ( 1 to 4 ), the preset communication mode is automatically set and the operation as described in Section 9.4 should be carried out.
- (b) When a printer is selected from "5" or "6", the communication mode must be set as indicated below.

(2) Setting the baud rate

Set the data communication speed for the printer.

- 1 ..... 2400 bps
- 2 ..... 9600 bps

(3) Setting the paper length

Set the paper length (between perforations).

- 1 ..... 11 inches (27.94 cm)
- 2 ..... 12 inches (30.48 cm)
- 3 ..... 16 inches (40.64 cm)

(4) Setting print starting position

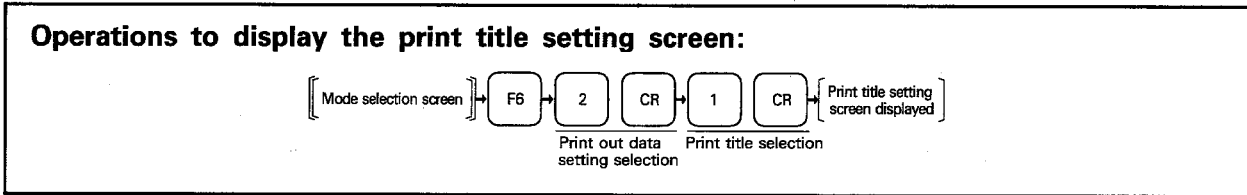
Set the print start column for each line.

Print starts at an offset position to the right of the printer head position by the number of set columns.

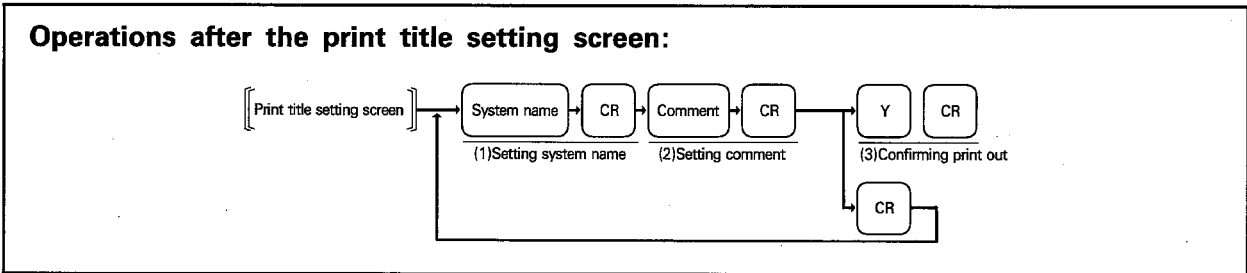
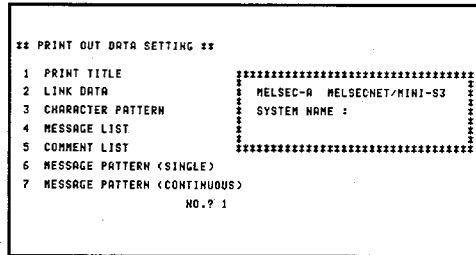


## 9.4 Print Out Data Setting

### 9.4.1 Printing the title



#### Print Title Setting Screen



## EXPLANATION

### (1) Setting the system name

A title can be set up to eight characters using alphanumeric and minus (  ) sign keys.

### (2) Setting the comment

A comment can be set in up to 20 characters using alphanumeric and special character keys.

### (3) Confirming printing

Set whether the set print title should be printed or not.

- (a) To print the set title, press  and .

After the completion of print out, the cursor moves to the system name setting column of each data setting screen.

- (b) Press  when the set title should not be printed.

When  is pressed, the cursor moves to the same position as where the cursor should be after the completion of printing.

- (c) To stop printing while the set title is being printed, press .

When the printing is stopped, "continue/terminate" message is displayed under the "stop print out" message.

To terminate printing, which is currently in the stop state, press .

When  is pressed, the cursor moves to the same position as where the cursor should be after the completion of printing and printing is terminated.

To continue printing, press . Printing is resumed to print the remaining data.

(4) Print out example

Print title printing

Set conditions

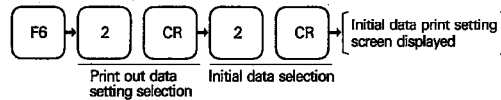
System name : MINIP

Comment : 1989-6-9

```
*****  
* MELSEC-A MELSECNET/MINI-S3 *  
* SYSTEM NAME : TEST *  
* SW0GP-MINIPE *  
*****
```

## 9.4.2 Printing the initial (link) data

Operations to display the initial data print setting screen:



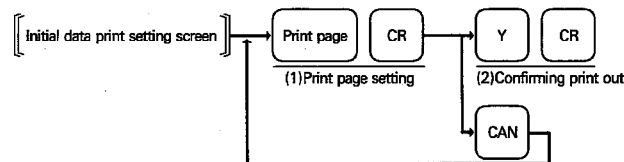
### Initial Data Print Setting Screen

```

** PRINT OUT DATA SETTING **
1 PRINT TITLE
2 LINK DATA
3 CHARACTER PATTERN
4 MESSAGE LIST
5 COMMENT LIST
6 MESSAGE PATTERN (SINGLE)
7 MESSAGE PATTERN (CONTINUOUS)
NO.? 2

* LINK DATA *
PAGE [ 1 ] ( 0 ~ 99999 )
  
```

Operations after the initial data print setting screen:



## EXPLANATION

### (1) Setting the print page

Set the start page of printing.

The page number is printed at the last line of each print out sheet.

Setting range: 0 to 99999

Default: 1

### (2) Confirming printing

Set whether the set initial data should be printed or not.

(a) To print the set initial data, press **Y** and **CR**.

After the completion of print out, the cursor moves to the system name setting column of each data setting screen.

(b) Press **CAN** when the set initial data should not be printed.

When **CAN** is pressed, the cursor moves to the same position as where the cursor should be after the completion of printing.

(c) To stop printing while the set initial data is being printed, press **ESC**.

When the printing is stopped, "continue/terminate" message is displayed under the "stop print out" message.

To terminate printing, which is currently in the stop state, press **BREAK**.

When **BREAK** is pressed, the cursor moves to the same position as where the cursor should be after the completion of printing and the printing is terminated.

To continue printing, press **CR**. Printing is resumed to print the remaining data.

## 9. PRINTER MODE

# MELSEC-A

### (3) Print out example

Printing initial data

Set condition

Page: 1

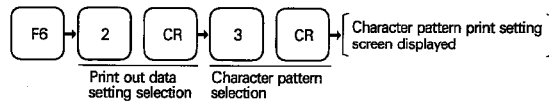
			SYSTEM NAME :	
** LINK DATA **				
* NUMBER OF REMOTE STATIONS [ 32 ] *				
* REMOTE TERMINAL UNIT *				
NO.	STATION NO.	PROTOCOL :	FROM ADDRESS	TO ADDRESS
1	12	OPERATION BOX:	[ 0 ]	[ 500 ]
2	16	NON PROTOCOL :	[ 0 ]	[ 500 ]

			SYSTEM NAME :	
** LINK DATA **				
* NUMBER OF REMOTE STATIONS [ 32 ] *				
* PARTIAL REFRESH TYPE REMOTE I/O				
NO.	STATION NO.	DIGITS		
1	3	0404		

## 9.4.3 Printing character pattern

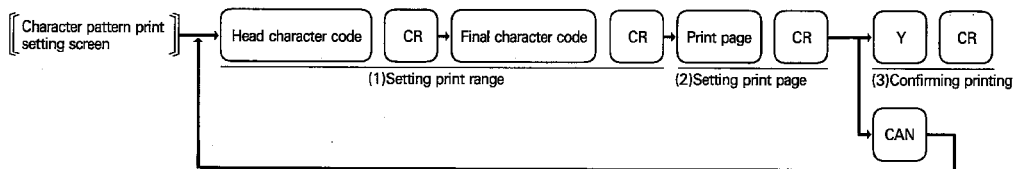
Operations to display character pattern print setting screen:



### Character Pattern Print Setting Screen

** PRINT OUT DATA SETTING **		* CHARACTER PATTERN *	
1 PRINT TITLE		RANGE SETTING	[ E 000 3 ~ E 3FF 3 ]
2 LINK DATA		PAGE	[ E 1 3 ( 0 ~ 99999 ) ]
3 CHARACTER PATTERN			
4 MESSAGE LIST			
5 COMMENT LIST			
6 MESSAGE PATTERN (SINGLE)			
7 MESSAGE PATTERN (CONTINUOUS)			
	NO. ? 3		

Operations after the character pattern print setting screen:



## EXPLANATION

### (1) Setting the print range

Set the range of character codes which correspond to the characters to be printed.  
 Setting range: 0<sub>H</sub> to 3FF<sub>H</sub>  
 Default: 0<sub>H</sub> to 3FF<sub>H</sub>

### (2) Setting the print page

Set the start page of printing.  
 The page number is printed at the last line of each print out sheet.  
 Setting range: 0 to 99999  
 Default: 1

### (3) Confirming printing

Set whether the set character patterns should be printed or not.

(a) To print the set character patterns, press **[Y]** and **[CR]**.

After the completion of print out, the cursor moves to the system name setting column of each data setting screen.

(b) Press **[CAN]** when the set character patterns should not be printed.

When **[CAN]** is pressed, the cursor moves to the same position as the position where the cursor should be after the completion of printing.

(c) To stop printing while the set character patterns are being printed, press **[ESC]**.

When the printing is stopped, "continue/terminate" message is displayed under the "stop print out" message.

To terminate printing, which is currently in the stop state, press **[BREAK]**.

When **[BREAK]** is pressed, the cursor moves to the same position as where the cursor should be after completion of printing and the printing is terminated.

To continue printing, press **[CR]**. Printing is resumed to print the remaining data.

(4) Print out example

Character pattern printing

Set conditions

Range setting : 000 to 07F

Page : 1

```

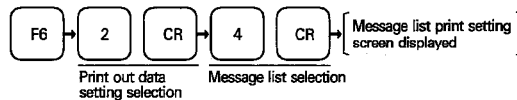
                                                                    SYSTEM NAME :
** CHARACTER LIST **
CHARACTER CODE  0 1 2 3 4 5 6 7 8 9 A B C D E F
000 H ~ 00F H

010 H ~ 01F H

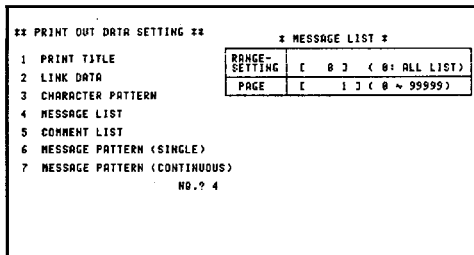
020 H ~ 02F H  !"#$%&'()*+,-./
030 H ~ 03F H  0123456789:;<=>?
040 H ~ 04F H  @ABCDEFGHIJKLMNO
050 H ~ 05F H  PQRSTUVWXYZ[\]^_
060 H ~ 06F H  `abcdefghijklmnop
070 H ~ 07F H  qrstuvwxyz{|}~
    
```

9.4.4 Printing the message list

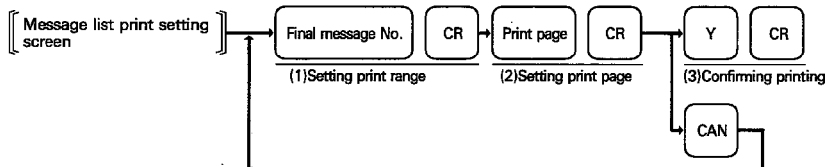
Operations to display the message list print screen:



Message List Print Setting Screen



Operations after the message list print setting screen:



EXPLANATION

(1) Setting the print range

- (a) The display mode and comments are printed from message No. 1 to the designated message number.
- (b) Default of the range setting is "0".
- (c) If the set range is "0", it is "inclusive" and the message list is printed for all messages from message No. 1 to the final message number.

(2) Setting the print page

Set the start page for printing.  
 The page No. is printed on the last line of each page.  
 Setting range: 0 to 99999  
 Default: 1

(3) Confirming printing

- Set whether the set message list should be printed or not.
- (a) To print the set message list, press **Y** and **CR**.  
 After the completion of print out, the cursor moves to the system name setting column of each data setting screen.  
 Set whether the set character patterns should be printed or not.
  - (b) Press **CAN** when the set message list should not be printed.  
 When **CAN** is pressed, the cursor moves to the same position as where the cursor should be after completion of printing.
  - (c) To stop printing while the set message list is being printed, press **ESC**.  
 When the printing is stopped, "continue/terminate" message is displayed under the "stop print out" message.  
 To terminate printing, which is currently in the stop state, press **BREAK**.  
 When **BREAK** is pressed, the cursor moves to the same position as where the cursor should be after completion of printing and the printing is terminated.  
 To continue printing, press **CR**. Printing is resumed to print the remaining data.

(4) Print out example

Message list printing

Setting conditions:

Range setting : 0 to 20

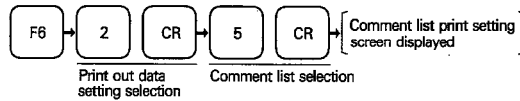
Page : 1

** MESSAGE LIST **		SYSTEM NAME :
MESSAGE NO.	MODE	NUMBER OF MESSAGES [ 375 ]
		COMMENT
1	[ MESSAGE	] [ DEMO ]
2	[ MESSAGE	] [ MELSECNET/MINI-5 ]
3	[ MESSAGE + CODE	] [ TEST ]
4	[ MESSAGE + COMMENT	] [ ]
5	[ PRESENT VALUE	] [ ]
6	[ LINE GRAPH	] [ ACHIEVEMENT RATE ]
7	[ MESSAGE	] [ NO.1 LINE ]
8	[ MESSAGE + CODE	] [ ]
9	[ MESSAGE + COMMENT	] [ ]
10	[ PRESENT VALUE	] [ COUNTER VALUE ]
11	[ LINE GRAPH	] [ ]
12	[ MESSAGE	] [ ]
13	[ MESSAGE	] [ ]
14	[ MESSAGE	] [ ]
15	[ MESSAGE	] [ ]
16	[ MESSAGE	] [ ]
17	[ MESSAGE	] [ ]
18	[ MESSAGE	] [ ]
19	[ MESSAGE	] [ ]
20	[ MESSAGE	] [ ]



9.4.5 Printing the comment list

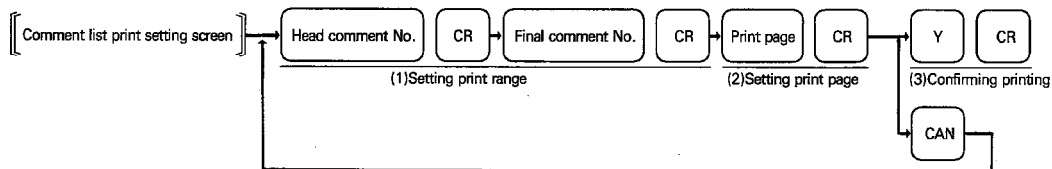
Operations to display the comment list print screen:



Comment List Print Setting Screen

** PRINT OUT DATA SETTING **		* COMMENT LIST *	
1 PRINT TITLE		RANGE-SETTING	[ 1 ] ~ [ 0 ]
2 LINK DATA		PAGE	[ 1 ] ( 0 ~ 99999 )
3 CHARACTER PATTERN			
4 MESSAGE LIST		* WHEN THE FINAL NO. SET ZERO, IT IS EQUAL TO MAX. NO.	
5 COMMENT LIST			
6 MESSAGE PATTERN (SINGLE)			
7 MESSAGE PATTERN (CONTINUOUS)			
	NO. ? 5		

Operations after the comment list print setting screen:



EXPLANATION

(1) Setting the print range

- (a) Set the comment list print range.
- (b) Default of the range setting is "1 to the maximum number".
- (c) If "0" is set for the final message number, it is assumed to be the setting of maximum number.

(2) Setting the print page

Set the start page of printing.  
 The page No. is printed at the last line of each print out sheet.  
 Setting range: 0 to 99999  
 Default: 1

(3) Confirming printing

- Set whether the set comment list should be printed or not.
- (a) To print the set comment list, press **Y** and **CR**.  
 After the completion of print out, the cursor moves to the system name setting column of each data setting screen.
  - (b) Press **CAN** when the set comment list should not be printed.  
 When **CAN** is pressed, the cursor moves to the same position as where the cursor should be after completion of printing.
  - (c) To stop printing while the set comment list is being printed, press **ESC**.  
 When the printing is stopped, "continue/terminate" message is displayed under the "stop print out" message.  
 To terminate printing, which is currently in the stop state, press **BREAK**.  
 When **BREAK** is pressed, the cursor moves to the same position as where the cursor should be after completion of printing and the printing is terminated.  
 To continue printing, press **CR**. Printing is resumed to print the remaining data.

(4) Print out example

Comment list printing

Setting conditions:

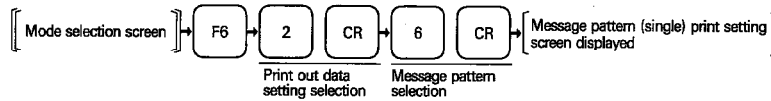
Range setting : 1 to 20

Page : 1

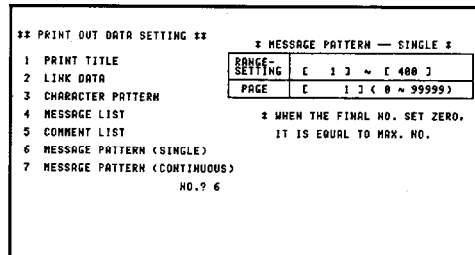
** COMMENT LIST **			SYSTEM NAME :
COMMENT NO.	COMMENT	DEVICE	
[ 1 ]	[ MANUAL	] [ M-B 190	] ]
[ 2 ]	[ AUTOMATIC	] [ M-B 191	] ]
[ 3 ]	[ MELSECNET OK	] [ M-B 192	] ]
[ 4 ]	[ MELSECNET NG	] [ M-B 193	] ]
[ 5 ]	[ AIR OK	] [ M-B 194	] ]
[ 6 ]	[ AIR NG	] [ M-B 195	] ]
[ 7 ]	[ TRANSPORT OK	] [ M-B 196	] ]
[ 8 ]	[ TRANSPORT NG	] [ M-B 197	] ]
[ 9 ]	[	] [	] ]
[ 10 ]	[	] [	] ]
[ 11 ]	[	] [	] ]
[ 12 ]	[	] [	] ]
[ 13 ]	[	] [	] ]
[ 14 ]	[	] [	] ]
[ 15 ]	[	] [	] ]
[ 16 ]	[	] [	] ]
[ 17 ]	[	] [	] ]
[ 18 ]	[	] [	] ]
[ 19 ]	[	] [	] ]
[ 20 ]	[	] [	] ]
[ 21 ]	[	] [	] ]
[ 22 ]	[	] [	] ]
[ 23 ]	[	] [	] ]
[ 24 ]	[	] [	] ]
[ 25 ]	[	] [	] ]

9.4.6 Printing the message pattern (single)

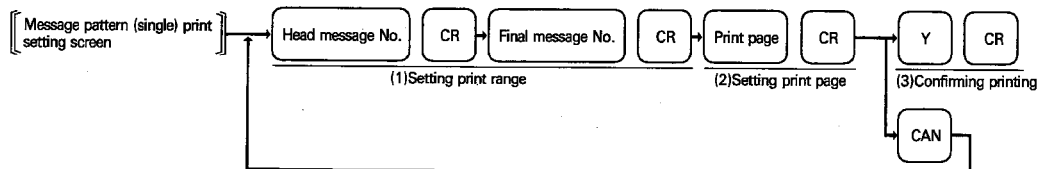
Operations to display the message pattern (single) print screen:



Message Pattern (Single) Print Setting Screen



Operations after the message pattern (single) print setting screen:



EXPLANATION

(1) Setting the print range

- (a) Set the message pattern print range.
- (b) Default of the range setting is "1 to the maximum number".
- (c) If "0" is set for the final message number, it is assumed to be the setting of maximum number.

(2) Setting the print page

Set the start page of printing.  
 The page No. is printed at the last line of each print out sheet.  
 Setting range: 0 to 99999  
 Default: 1

(3) Confirming printing

- Set whether the set message pattern (single) should be printed or not.
- (a) To print the set message pattern (single), press **Y** and **CR**.  
 After the completion of print out, the cursor moves to the system name setting column of each data setting screen.
  - (b) Press **CAN** when the set message pattern (single) should not be printed.  
 When **CAN** is pressed, the cursor moves to the same position as where the cursor should be after completion of printing.
  - (c) To stop printing while the set message pattern (single) is being printed, press **ESC**.  
 When the printing is stopped, "continue/terminate" message is displayed under the "stop print out" message.  
 To terminate printing, which is currently in the stop state, press **BREAK**.  
 When **BREAK** is pressed, the cursor moves to the same position as where the cursor should be after completion of printing and the printing is terminated.  
 To continue printing, press **CR**. Printing is resumed to print the remaining data.

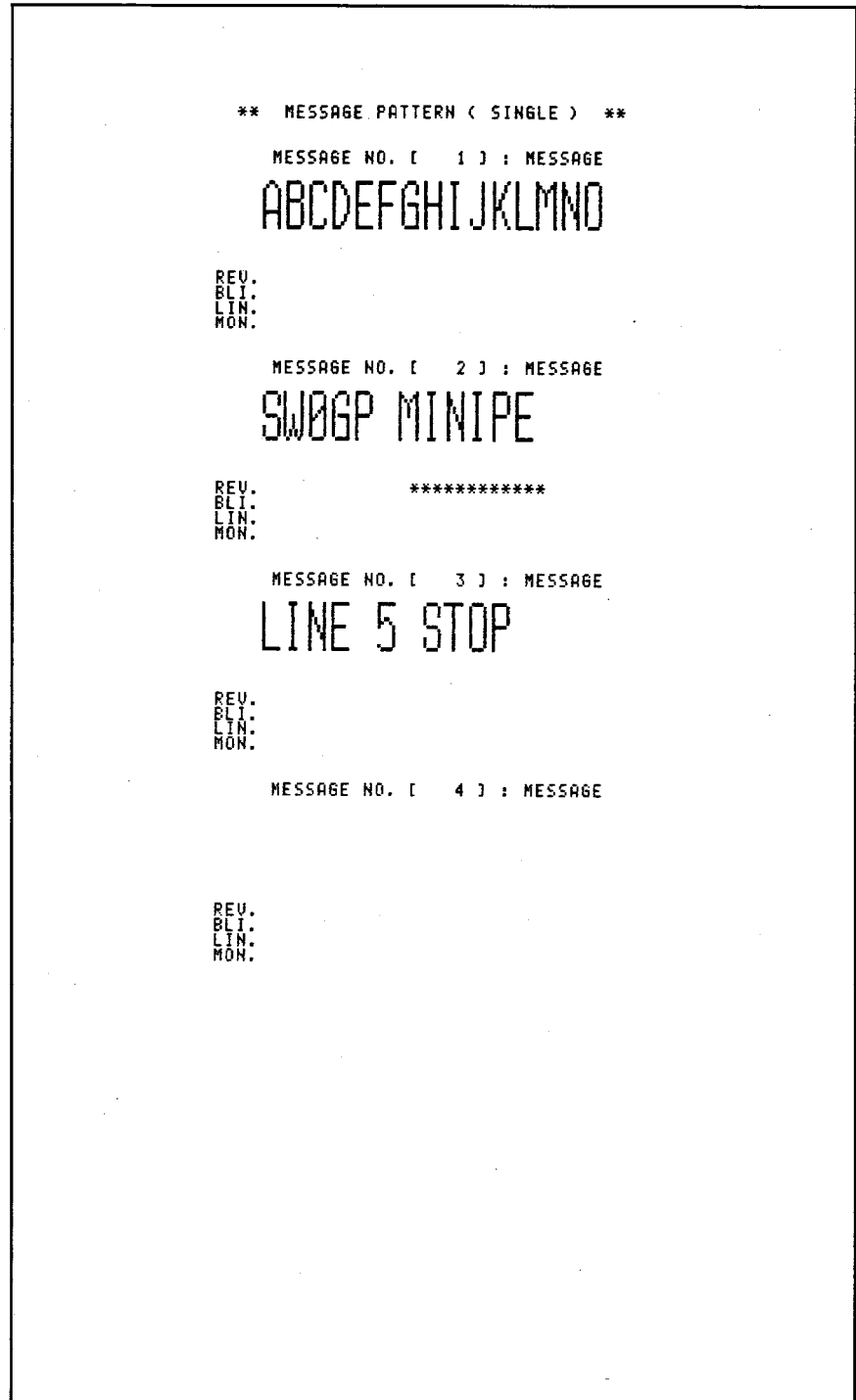
(4) Print out example

Message pattern (single) printing

Setting conditions:

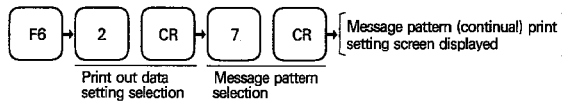
Range setting : 1 to 4

Page : 1



## 9.4.7 Printing the message pattern (continual)

Operations to display the message pattern (continual) print screen:

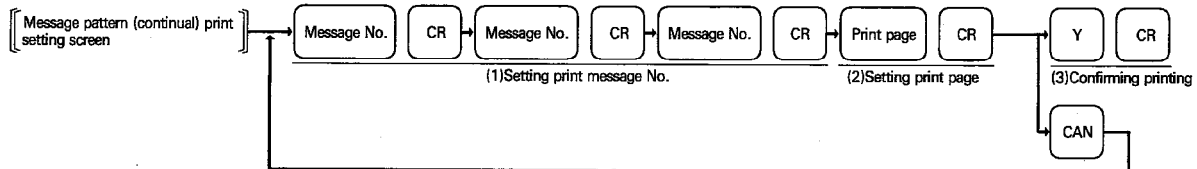


### Message Pattern (Continual) Print Setting Screen

```

** PRINT OUT DATA SETTING **
                                * MESSAGE PATTERN — CONTINUOUS *
1 PRINT TITLE                    SETTING NO. [  ] [  ] [  ] [  ]
2 LINK DATA                      PRGE [  ] [  ] ( 0 ~ 99999 )
3 CHARACTER PATTERN
4 MESSAGE LIST
5 COMMENT LIST
6 MESSAGE PATTERN (SINGLE)
7 MESSAGE PATTERN (CONTINUOUS)
                                NO. ? ?
  
```

Operations after the message pattern (continual) print setting screen:



## EXPLANATION

### (1) Setting the message No.s

- (a) Set the message No. of the messages to be printed.
- (b) One screen contains three messages.

### (2) Setting the print page

Set the start page of printing.  
 The page No. is printed at the last line of each print out sheet.  
 Setting range: 0 to 99999  
 Default: 1

### (3) Confirming printing

Set whether the set message pattern (continual) should be printed or not.

- (a) To print the set message pattern (continual), press **[Y]** and **[CR]**.  
 After the completion of print out, the cursor moves to the system name setting column of each data setting screen.
- (b) Press **[CAN]** when the set message pattern (continual) should not be printed.  
 When **[CAN]** is pressed, the cursor moves to the same position as the position where the cursor should be after the completion of printing.
- (c) To stop printing while the set message pattern (continual) is being printed, press **[ESC]**.  
 When the printing is stopped, "continue/terminate" message is displayed under the "stop print out" message.  
 To terminate printing, which is currently in the stop state, press **[BREAK]**.  
 When **[BREAK]** is pressed, the cursor moves to the same position as where the cursor should be after the completion of printing and the printing is terminated.  
 To continue printing, press **[CR]**. Printing is resumed to print the remaining data.

(4) Print out example

Message pattern (continual) printing

Setting conditions:

Setting No. : 7, 10, 6

Page : 1

```

** MESSAGE PATTERN ( CONTINUOUS )
MESSAGE NO
[ 1 ] : MESSAGE
[ 2 ] : MESSAGE
[ 3 ] : MESSAGE

SYSTEM NAME :

ABCDEFGHIJKLMNO
SWØGP MINIFE
LINE 5 STOP

REV. [ 1]
      [ 2]
      [ 3]
      *****
BLI. [ 1]
      [ 2]
      [ 3]
LIN. [ 1]
      [ 2]
      [ 3]
MON. [ 1]
      [ 2]
      [ 3]
```

10. ERROR MESSAGE LISTS

This section describes the error messages displayed in the message column at the lower left area of the GPP/PHP screen.

Error Message	Contents	Corrective Action
WRITE-IN ERROR	ROM is not installed in GPP/PHP.	Install the ROM correctly.
	ROM whose data has not been deleted is installed. Or a faulty ROM is installed.	Delete the ROM data, or replace the ROM with a new one.
	Remaining FD area size is insufficient to save the data.	<ul style="list-style-type: none"> <li>• Change with new FD.</li> <li>• Delete unnecessary files in the FD.</li> </ul>
WRONG KEY	A wrong key is pressed when designating the system name.	The key pressed is not allowed for designating the system name.
SELECT COMMENT NO. NOT FOUND	When setting a comment No., the set comment No. has not been entered.	Set the comment No. which has been entered.
SELECT MESSAGE NO. NOT FOUND	When setting a message No., the set message No. has not been entered.	Set the message No. which has been entered.
SYSTEM NAME ERR.	The set system name is incorrect. <ul style="list-style-type: none"> <li>• A character other than alphanumeric characters and a minus sign is contained in the system name.</li> <li>• A blank is contained in the system name.</li> <li>• The system name begins with other than a letter.</li> </ul>	Set the correct system name.
SYSTEM NAME SETTING ERR.	The same system name is set to the copy source and copy destination system name when copying the data to the same FD.	Change the copy destination system name.
STATION NUMBER ERR.	The same station number is used for more than one remote I/O stations.	Set other the station number.
	A station number outside the setting allowable range is set.	Set a station number which is within the allowable range.
FIXED CHARACTER	When creation or correcting the character generator, an attempt was made to register a character to any of the following character codes: 20H to 7FH, 90H to 9CH, A0H to FEH	Use a character codes other than those indicated below: 20H to 7FH, 90H to 9CH, A0H to FEH The characters for the above indicated character codes are fixed and cannot be changed.
ROM NOT ERASED	In the ROM check, all the data in the ROM has not been deleted.	Delete all the data in the ROM. Change the ROM.
VERIFY ERR	In the verify process in the FDD mode, a miss match is found between the FD data and GPP/PHP data.	Correct the data.
	In the verify process in the ROM mode, a miss match is found between the ROM data and GPP/PHP data.	
CAN NOT SET	A 2-byte character cannot be set for 1 byte area (0 to 3FFH).	Set a 2-byte character for 2 byte area.
SETTING ERROR	A numeric value outside the allowable range is set.	Set correct data.
OPERATOR ERROR	Wrong key is pressed.	Operate the keys correctly.

# 10. ERROR MESSAGE LISTS



Error Message	Contents	Corrective Action
DIRECTORY NOT FOUND	In the FDD mode, a directory number is designated before executing the directory function.	Execute the directory function before designating the directory number.
DRIVE SETTING ERR.	The same drive and system name are designated for the copy source and copy destination when copying the FD.	Change the drive or system name.
FILE MISSING	The designated file name is not found in the FD.	Search the file name using the directory function and designate a file name in the FD.
FILE NAME ERR.	The set file name is incorrect. <ul style="list-style-type: none"> <li>• A character other than alphanumeric characters, a minus sign, and a period used as a delimiter between a system name and identifier, is contained in the system name.</li> <li>• A blank is contained in the file name.</li> <li>• The file name begins with other than a letter.</li> </ul>	Set the correct file name.
UNMATCHED	The data in the ROM does not agree with the data in the GPP/PHP memory.	Correct the data.
	The data in the FD does not agree with the data in the GPP/PHP memory.	
FLOPPY DISK ERROR	A FD is not placed in the designated FDD.	Place the FD in the designated FDD and carry out the operation again.
	The FD is defective.	Change the FD with new one.
CHECK PRINTER	Printer power is off.	Turn on the printer power.
	The printer SEL switch is OFF.	Set the SEL switch to ON.
	The cable is not connected or cable connection is loose.	Connect the cable correctly.
	The cable is defective.	Change the cable.
PRINTER NOT SET	Printing is started before the printer setting has not been made.	Carry out the printer setting before starting printing.
DISK FULL	The number of files stored to FD exceeds 128.	<ul style="list-style-type: none"> <li>• Store the file to other FD.</li> <li>• Delete an unnecessary file to secure area to store the file.</li> </ul>
READ ERROR	Data cannot be read from FD.	<ul style="list-style-type: none"> <li>• Change the drive and carry out read operation again.</li> <li>• Check whether another file can be read.</li> </ul>
WRITE PROTECT	For write or delete operation, the write protect tab is set in the FORBID position.	Switch the write protect tab to the PERMIT position.



APPENDICES

APPENDIX 1 PROCESSING TIME

Processing times for ROM, FDD, and printer modes are indicated below:

1. ROM Mode (A6GPP)

Processing	Processing Time (sec)
Read	1.5
Write	133
Verify	1.5

2. FDD Mode

Processing	Processing Time (sec)			
	Read	Write	Verify	Copy
Initial data	8.8	15.5	14.0	28
Character generator data	8.8	15.5	14.0	28
Message data	13.9	24.4	20.3	44.5

3. Printer Mode

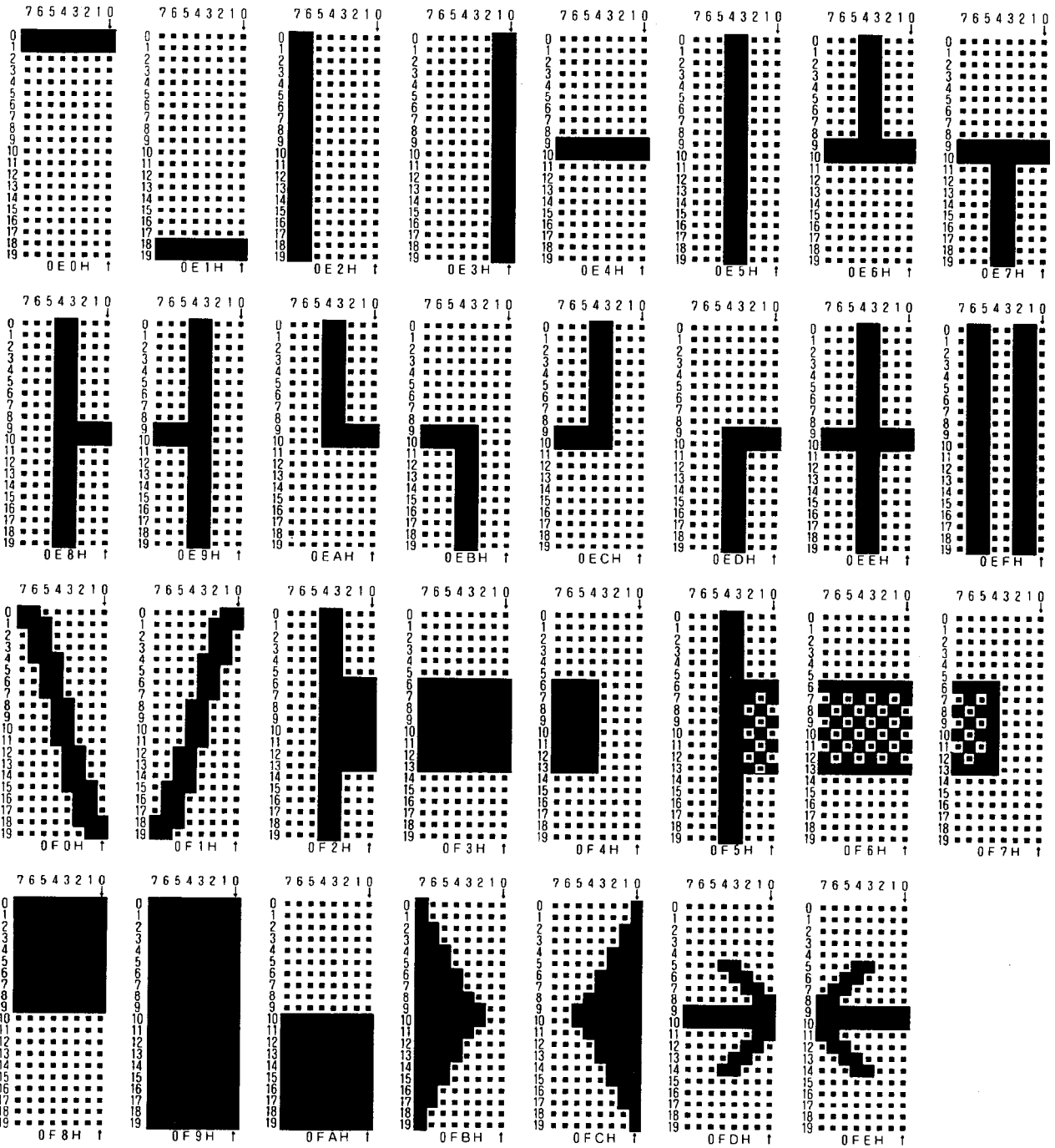
Processing	Processing Time		
	K6PR		K7PR (9600BPS)
	Pica	Elite	
Printer title	15.3 sec	17.9 sec	17.5 sec
Initial data (Remote terminals: No. 1 to No. 14 Partial refresh remote I/O units: No. 1 to No. 16)	1 min 53 sec	2 min 18 sec	1 min 14 sec
Character pattern (0 to 3FFh)	9 min 28 sec	9 min 28 sec	9 min 24 sec
Message list (1 page)	48 sec	58 sec	33 sec
Comment list (1 page)	24 sec	36 sec	36 sec
Message pattern (single) (1 page)	1 min 16 sec	1 min 16 sec	1 min 27 sec
Message pattern (continual) (a page)	57 sec	1 min 0 sec	55 sec

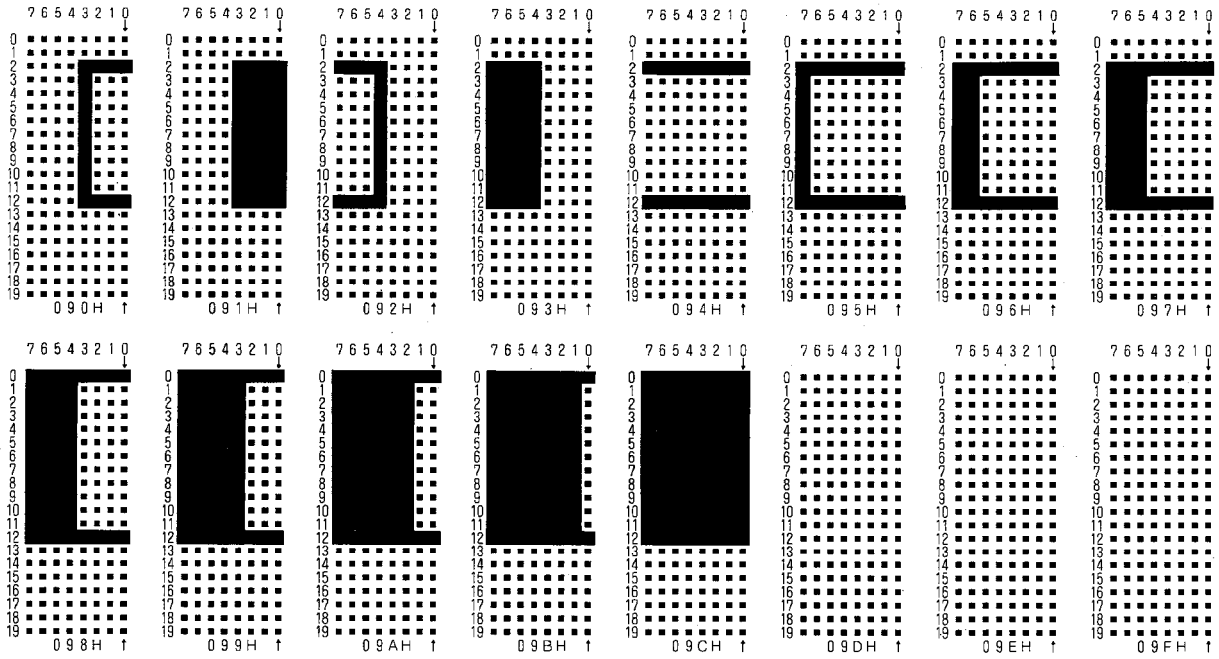
Paper length

K6PR ..... 11 inches  
K7PR ..... 16 inches

APPENDIX 2 SEMI-GRAPHIC CHARACTER DOT PATTERNS

The semi-graphic character dot patterns stored for character codes E0<sub>H</sub> to FE<sub>H</sub> and 90<sub>H</sub> to 9C<sub>H</sub> are indicated below.



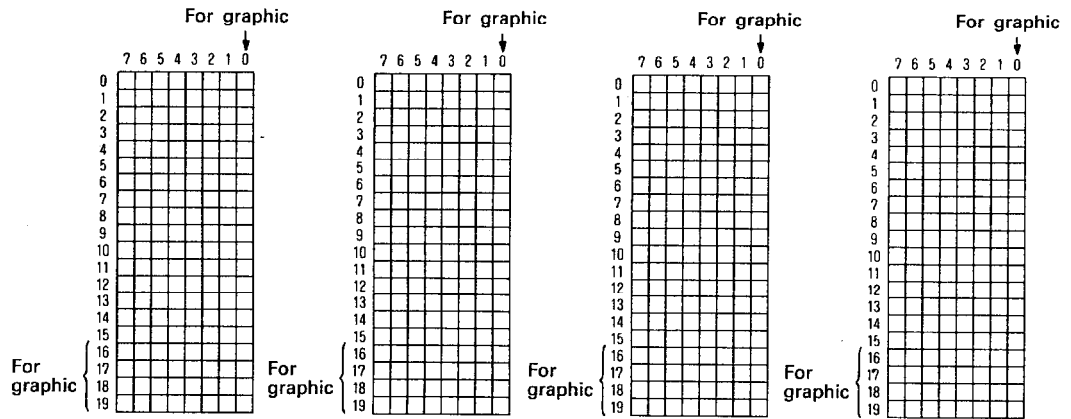


APPENDIX 3 CHARACTER PATTERN AND MESSAGE PATTERN DESIGN SHEET

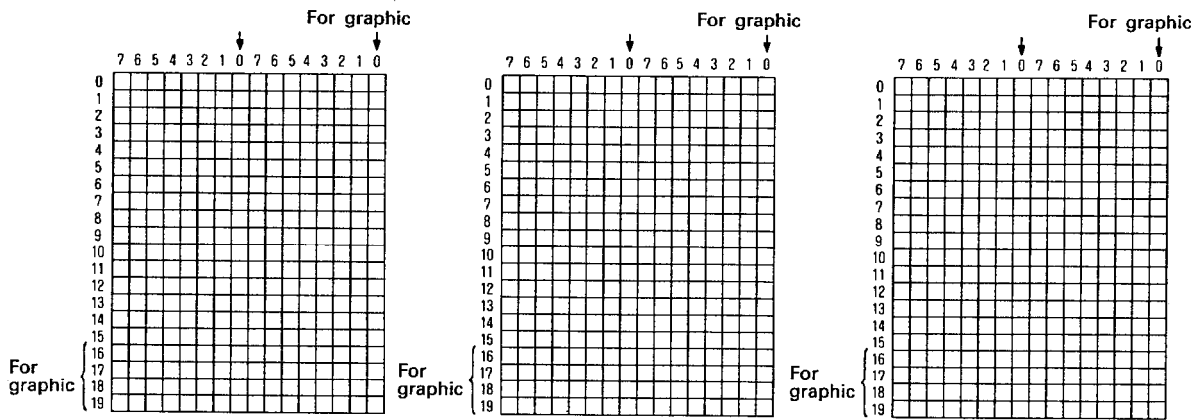
Use the following sheet to create the characters and messages.

1. Character Pattern Grid-sheet

(1) 1-byte characters



(2) 2-byte characters



2. Character Code Registration Sheet

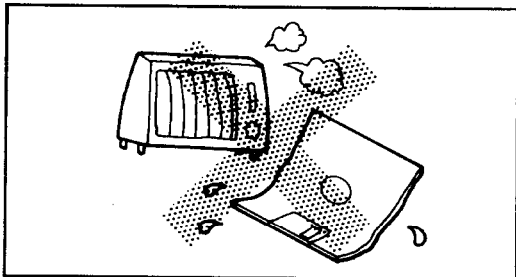
		Final Digit of Character Code															
		00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
First Two Digits of Character Code	00																
	01																
	02	(SP)	!	"	#	\$	%	&	'	(	)	*	+	,	-	.	/
	03	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
	04	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
	05	P	Q	R	S	T	U	V	W	X	Y	Z	[	/	]	^	_
	06	'	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
	07	p	q	r	s	t	u	v	w	x	y	z				→	←
	08																
	09																
	0A																
	0B																
	0C																
	0D																
	0E																
	0F																
	10																
	11																
	12																
	13																
14																	
15																	
16																	
17																	
18																	
19																	
1A																	
1B																	
1C																	
1D																	
1E																	
1F																	

		Final Digit of Character Code															
		0000	0001	0002	0003	0004	0005	0006	0007	0008	0009	000A	000B	000C	000D	000E	000F
First Two Digits of Character Code	20																
	21																
	22																
	23																
	24																
	25																
	26																
	27																
	28																
	29																
	2A																
	2B																
	2C																
	2D																
	2E																
	2F																
	30																
	31																
	32																
	33																
	34																
	35																
	36																
	37																
	38																
	39																
	3A																
	3B																
	3C																
	3D																
	3E																
	3F																

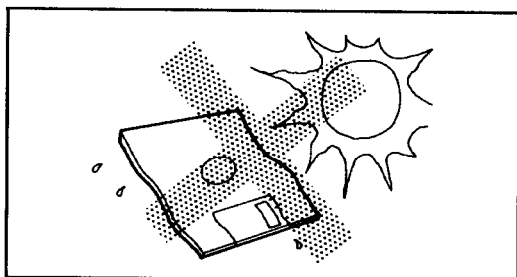
3. Message Pattern Creation Sheet Using Character Codes

Message No.	Mode	Display	Display columns																																				
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30							
		Message																																					
		Character code																																					
		Reverse																																					
		Blink																																					
		Line																																					
		Monitor																																					
		Message																																					
		Character code																																					
		Reverse																																					
		Blink																																					
		Line																																					
		Monitor																																					
		Message																																					
		Character code																																					
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		Character code																																					
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		Blink																																					
		Line																																					
		Monitor																																					
		Message																																					

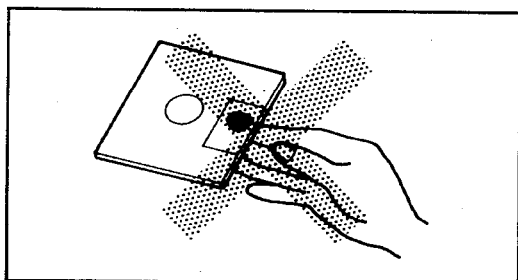
APPENDIX 4 PRECAUTIONS ON HANDLING FLOPPY DISKS



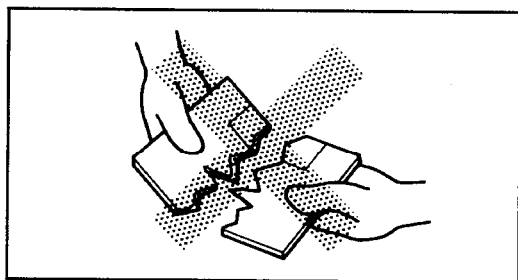
High temperatures and humidity will damage the disk. Allow the disk temperature to stabilize with its surroundings before use to prevent condensation.



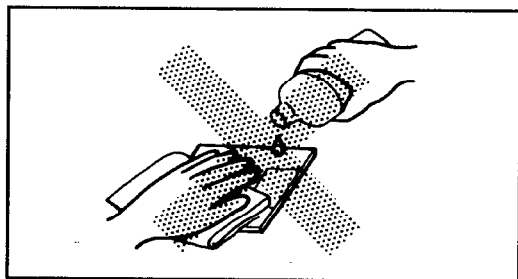
Protect the disk from direct exposure to the sun.



Do not touch the recording surface of the disk. Skin oils on the magnetic disk will cause data distortion and may harm the disk drive reading head.

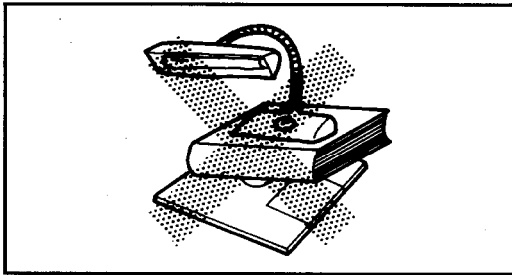


Do not attempt to use a broken or deformed disk -- it may jam in the drive or damage the motor mechanism.

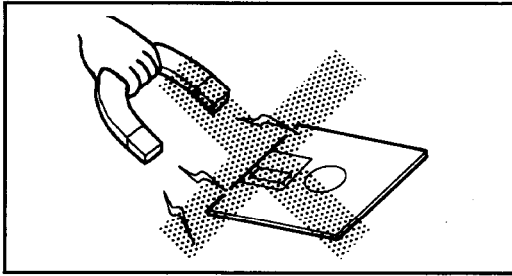


Do not use solvents (thinner, alcohol, freon etc.) to clean the disk.

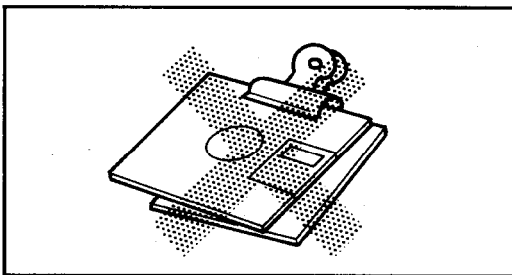




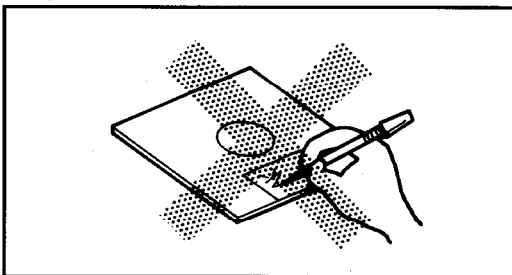
Do not place anything heavy on the disk which may deform it.



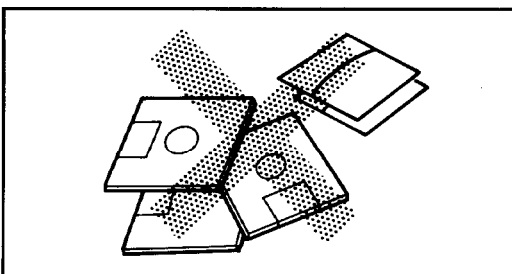
Magnetic fields will distort the data stored on the disk. Avoid using the disk near large CRTs, motors etc.



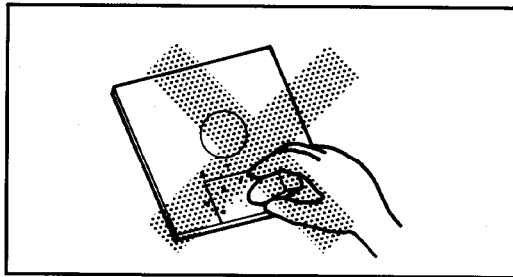
Do not clasp the disk with any sort of clips or clamps which may damage the case.



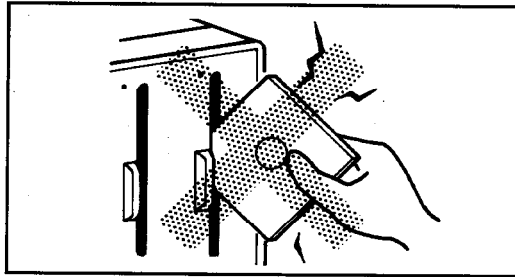
Write information onto the index label before attaching it to the jacket. Writing on the jacket directly can damage the disk.



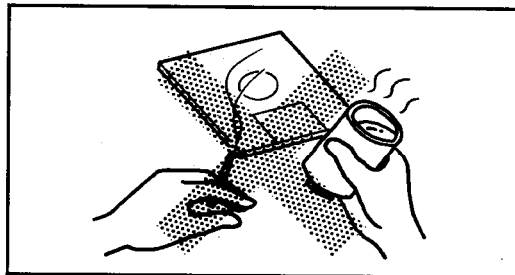
Store all disks vertically, preferably in a disk envelop or a plastic disk storage box, and protected from dust.



Small pieces of eraser material can jam the shutter. Do not erase label entries.



Insert the disk into the drive carefully without forcing it. Careless handling can easily damage both disk and the disk drive.



Nicotine and other particles from tobacco smoke can stain the magnetic disk, store and use in a smoke free environment. Keep the disk safe from possible damage by spilt liquids. Never use a disk which has had any liquid spilt on it.

**IMPORTANT**

**The components on the printed circuit boards will be damaged by static electricity, so avoid handling them directly. If it is necessary to handle them take the following precautions.**

- (1) Ground human body and work bench.**
- (2) Do not touch the conductive areas of the printed circuit board and its electrical parts with any non-grounded tools etc.**

Under no circumstances will Mitsubishi Electric be liable or responsible for any consequential damage that may arise as a result of the installation or use of this equipment.

All examples and diagrams shown in this manual are intended only as an aid to understanding the text, not to guarantee operation. Mitsubishi Electric will accept no responsibility for actual use of the product based on these illustrative examples.

Owing to the very great variety in possible applications of this equipment, you must satisfy yourself as to its suitability for your specific application.

# type SWOGP-MINIPE

## Operating Manual

MODEL	SW0GP-MINIPE-O-E
MODEL CODE	13J772
IB(NA)66226-C(9709)MEE	

 **mitsubishi electric corporation**

HEAD OFFICE : MITSUBISHI DENKI BLDG MARUNOUCHI TOKYO 100-8310 TELEX : J24532 CABLE MELCO TOKYO  
NAGOYA WORKS : 1-14 , YADA-MINAMI 5 , HIGASHI-KU, NAGOYA , JAPAN

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Specifications subject to change without notice.