

TOSHIBA

TOSHIBA Portable Printer

B-EP Series

Key Operation Specification

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1. SCOPE

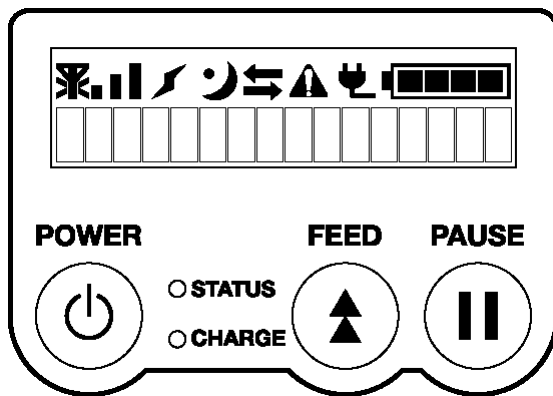
This specification describes key operations of the B-EP2 and B-EP4 portable printers (hereinafter collectively referred to as “B-EP”) using their keys and the LCD display.

2. OUTLINE

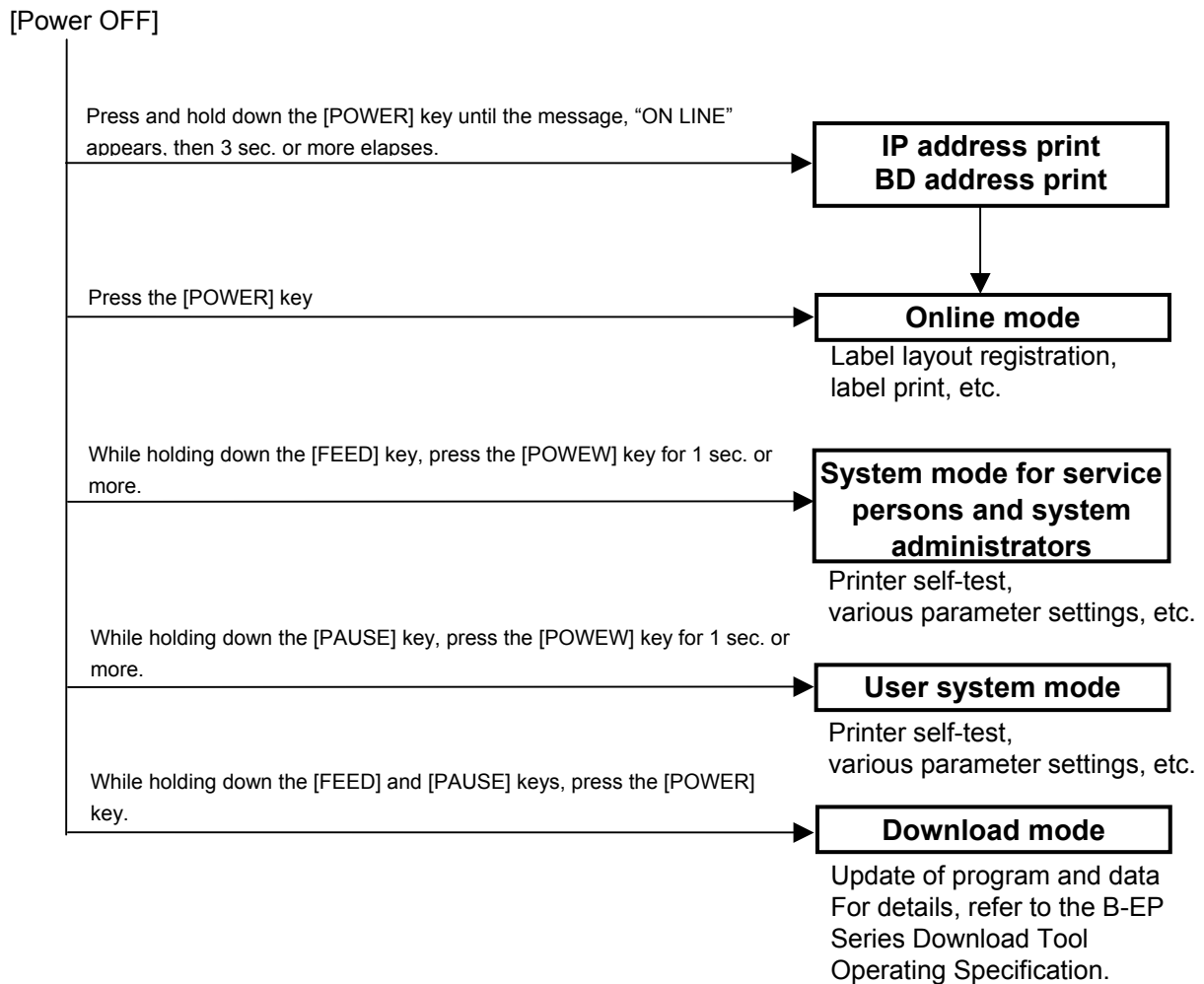
The key operations are performed roughly in two modes: online mode and system mode. In online mode, where the printer is connected to a host device such as a personal computer, the key operations are performed mainly to pause or restart the printer and to display printer status messages and error messages on the LCD. In system mode, the key operations are performed mainly to conduct a self-test and to make various parameter settings. This specification describes the key operations in these two modes.

For explanation purposes, this specification uses English key names and LCD messages of the B-EP, although other languages are available for key names and LCD messages.

3. OPERATION PANEL

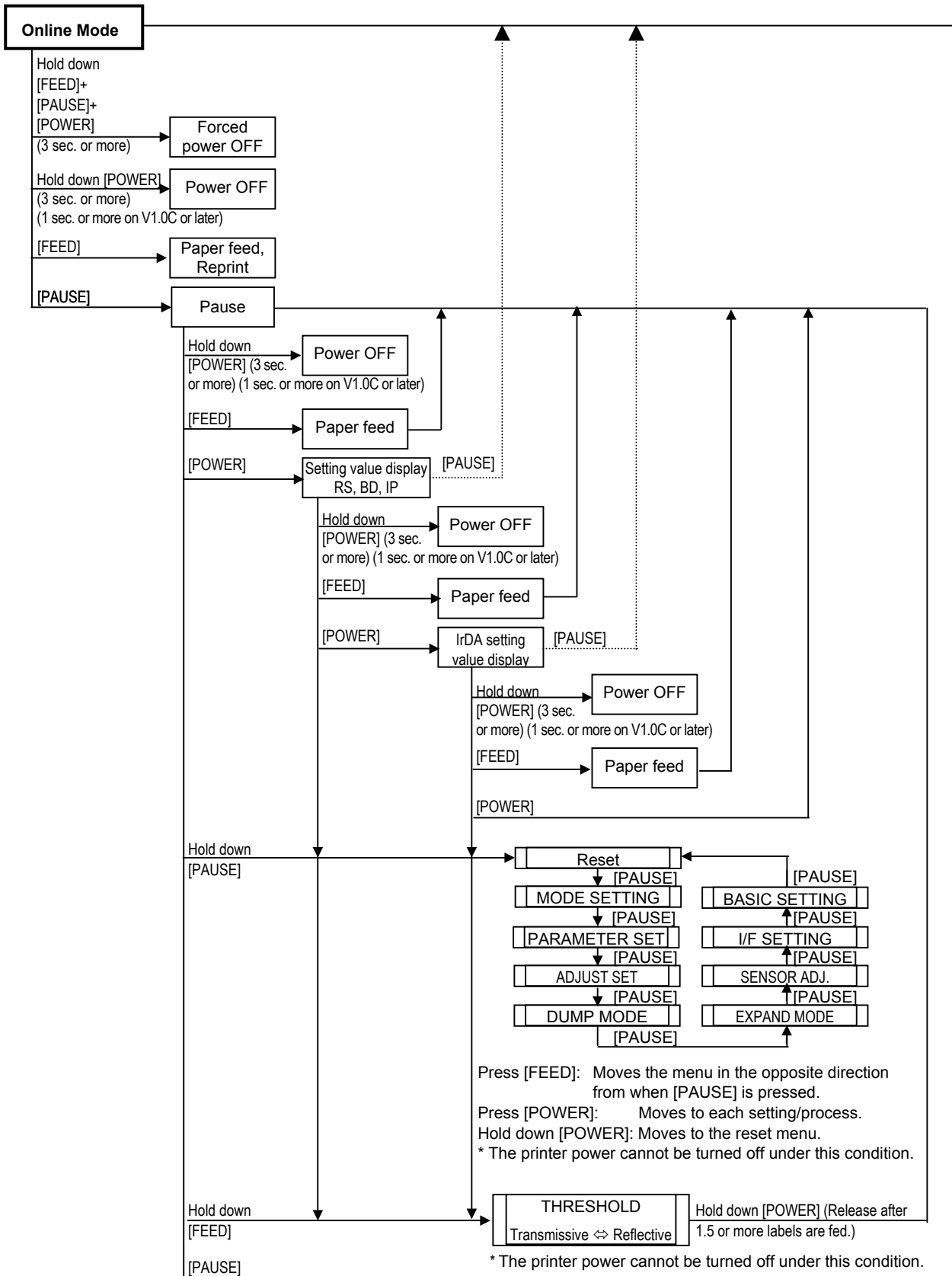


4. GENERAL VIEW OF KEY OPERATION



5. ONLINE MODE

5.1 GENERAL VIEW OF KEY OPERATION



5.2 KEY FUNCTIONS

- [POWER] key (1) Turns the printer power on from a power off state and initializes the printer.
 (2) Performs various parameter settings.
- [FEED] key: (1) Feeds or ejects 1 label. This key is also used to adjust a label to a proper position. When the label is not properly positioned, feed 1 or 2 blank labels using this key before printing so that the printer can start printing at the proper position.
 (2) Prints data in the image buffer on one label (depending on TPCL1 mode or LABEL mode).
 NOTE: *During printing initiated by the [FEED] key, a Clear command or a drawing command should not be sent from the host device, otherwise the resulting printout will not be satisfactory showing an incorrect layout. The same may happen if the [FEED] key is pressed to start printing while data is being drawn in the image buffer.*
 (3) Performs a forced strip issue in strip wait state.
 (4) Programs a threshold value.
- [PAUSE] key: (1) Stops printing temporarily and resumes printing.
 (2) Resumes printing after clearing an error.

Key operations while the printer is in online state

- In pause state
 - Press [PAUSE]: Exits from a pause state.
 - Hold down [PAUSE]: Moves to the reset menu.
 - Press [FEED]: Feeds a paper.
 - Hold down [FEED]: Moves to the threshold setting menu.
- In error state
 - Press [PAUSE]: Recovers from an error.
 - Hold down [PAUSE]: Moves to the reset menu.
 - Press [FEED]: No operation

5.3 LED FUNCTIONS

[STATUS] LED: Indicates the following statuses:
(red/green/orange) Printer power, ON or OFF
Communication status of printer
Printer error
Battery level
Strip wait state

LED lighting patterns

- Power OFF:OFF
- Charging in power OFF stateGreen/ON
- Power ON 1) Battery level 3 or more
 - In idle stateGreen/ON
 - Strip wait stateGreen/Blink
 - ErrorRed/Blink
- 2) Battery level 2 (near-low battery state)
 - In idle stateOrange/ON
 - Strip wait stateGreen/Blink
 - ErrorRed/Blink
- 3) Battery level 1 (low battery state)
 - In idle stateRed/ON
 - Strip wait stateGreen/Blink
 - ErrorRed/Blink

[CHARGE] LED: Indicates the following statuses:
(orange) Connection status of the AC adapter
Battery charge

LED lighting patterns

- Power OFF 1) AC adapter not connectedOFF
- 2) AC adapter connected
 - ChargingOrange/ON
 - Full chargeOFF
 - Temperature errorOrange/Blink
 - Ambient temperature below 0 or higher than 40°C
 - Battery temperature below 0 or higher than 45°C
- Power ON 1) AC adapter not connectedOFF
- 2) AC adapter connected
 - ChargingOrange/ON
 - Full chargeOFF
 - PrintingOFF
 - Temperature errorOrange/Blink
 - Ambient temperature below 0 or higher than 40°C
 - Battery temperature below 0 or higher than 45°C

5.4 BUZZER FUNCTION

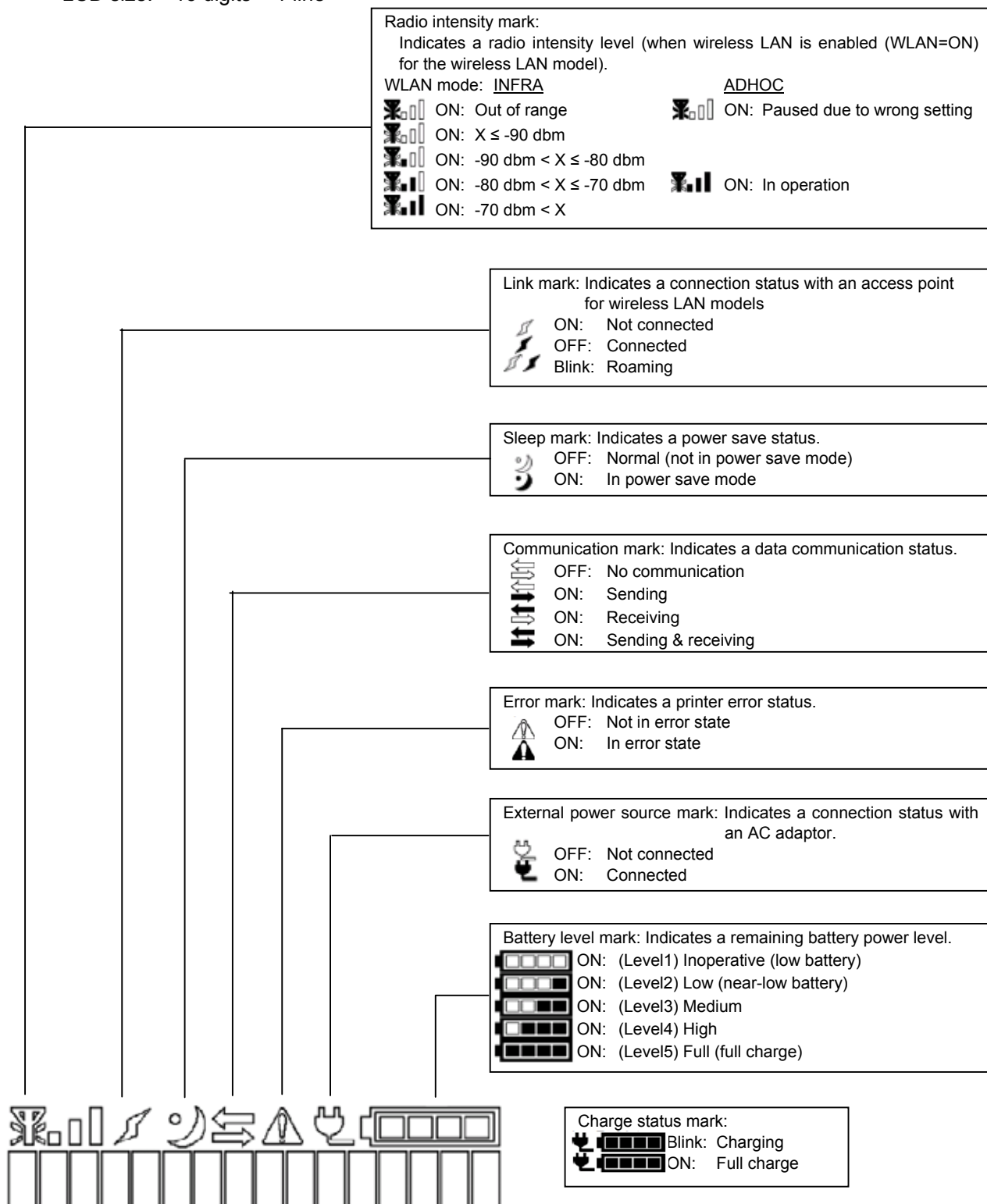
- The buzzer sounds for 400 msec. when an error occurs and automatically stops.
- Buzzer volume (1 to 3) and ON/OFF setting can be done in system mode.

5.5 LCD FUNCTIONS

The LCD displays printer status messages.

The battery level mark and the external power source mark are updated every 5 seconds.

LCD size: 16 digits × 1 line



NOTE: When turning on the printer power, press the [POWER] key when 2 to 15 seconds have passed after a connection of the AC adaptor and the battery level mark and the external power source mark appear on the LCD. Otherwise, the LCD display may not be as expected or it may take a longer time for the printer to start up.

5.6 PARAMETER PRINT

5.6.1 Outline of Parameter Print

The B-EP with the Bluetooth module or the wireless LAN module performs a parameter print when the [POWER] key is pressed for 3 seconds or more after the printer power is turned on and a "ON LINE" message is displayed on the LCD.

An example of parameter print for each module is given in the subsequent section.

5.6.2 Parameter Print Examples

With Bluetooth module (B-EP2/203 dpi)



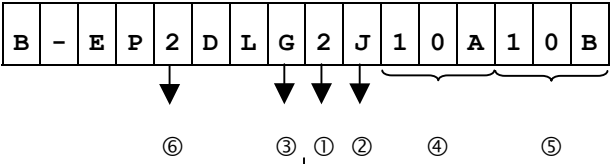
With Wireless LAN module (B-EP2/203 dpi)

```
RF-LAN PARAMS      TYPE[JPN]
IP [192.168.254.254] LPD [ON ]
GW [000.000.000.000] DHCP[ON ]
SUB[255.255.000.000] CON [INF]
SOCK[ON ][08000]
HOST [              ]
      [              ]
ESSID[TOSHIBATEC    ]
      [              ]
MAC: 00-0e-10-10-3e-4d
WLAN Ver1.0.1
```

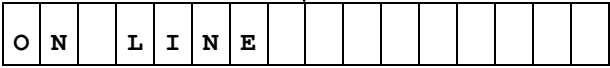


5.7 LCD DISPLAY AT STARTUP

Startup



Online



① Model	2 : RS-232C model 3 : Bluetooth model 4 : Wireless LAN model
② DBCS model	J : Japanese (Japan model) C : Chinese (Global model) K : Korea F : No 2-byte codes
③ Head density	G : 203 dpi (8 dots/mm)
④ Version information	IPL (BOOT) program version
⑤ Version information	MAIN program version
⑥ Head width	2 : 2-inch head 4 : 4-inch head

5.7.1 LCD Display at Startup of Wireless LAN Model

When the B-EP with the wireless LAN module is started up with the DHCP enabled, an IP address is obtained and the LCD display will be as shown below.

When successfully connected to the DHCP server:

D	H	C	P		I	N	I	T	I	A	L				
---	---	---	---	--	---	---	---	---	---	---	---	--	--	--	--

Connecting to the DHCP server



I	x	x	x	.	x	x	x	.	x	x	x	.	x	x	x
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Obtained an IP address



O	N		L	I	N	E									
---	---	--	---	---	---	---	--	--	--	--	--	--	--	--	--

Displays the radio intensity (RSSI) *1



Q	u	a	l		-	Δ	Δ	d	b	m		x	x	x	x
---	---	---	---	--	---	---	---	---	---	---	--	---	---	---	---

-ΔΔdbm: “-ΔΔ” ranges from 00 to 99. (In the case the infrastructure is normal.

In the case of Adhoc, this value is fixed to “00”.)

XXXX: The last 4 digits of hexadecimal BSSID of the connected network.

*1: Displayed only when the radio intensity (RSSI) indication is enabled.
Supported from V1.11.

When failed to connect to the DHCP server:

D	H	C	P		I	N	I	T	I	A	L				
---	---	---	---	--	---	---	---	---	---	---	---	--	--	--	--

Connecting to the DHCP server



D	H	C	P		T	I	M	E	O	U	T				
---	---	---	---	--	---	---	---	---	---	---	---	--	--	--	--

Failed to connect to the DHCP server

↓ [POWER]

O	N		L	I	N	E									
---	---	--	---	---	---	---	--	--	--	--	--	--	--	--	--

Displays the radio intensity (RSSI) *1



Q	u	a	l		-	Δ	Δ	d	b	m		x	x	x	x
---	---	---	---	--	---	---	---	---	---	---	--	---	---	---	---

-ΔΔdbm: “-ΔΔ” ranges from 00 to 99. (In the case the infrastructure is normal.
In the case of Adhoc, this value is fixed to “00”.)

XXXX: The last 4 digits of hexadecimal BSSID of the connected network.

*1: Displayed only when the radio intensity (RSSI) indication is enabled.
Supported from V1.11.

* For the DHCP setting, refer to the section, “6.6.9.2.5.7 DHCP Setting (DHCP)”.

5.8 SETTING VALUE DISPLAY

RS-232C model

Function ON

R	S	1	1	5	2	0	0	b	p	s		N	O	N	E
---	---	---	---	---	---	---	---	---	---	---	--	---	---	---	---

-	-	9	6	0	0							E	V	E	N
-	-	1	9	2	0	0						N	O	N	E
-	-	3	8	4	0	0									
-	-	5	7	6	0	0									
1	1	5	2	0	0										

* An underscore “_” indicates a space.

Function OFF (Same for all interfaces)

R	S		D	E	A	C	T	I	V	A	T	E			
---	---	--	---	---	---	---	---	---	---	---	---	---	--	--	--

R	S	:													
B	D	:													
I	-	:													
I	r	:													

* An underscore “_” indicates a space.

Bluetooth model

B	D	-													-
---	---	---	--	--	--	--	--	--	--	--	--	--	--	--	---

BD (Bluetooth device) address display (12 byte)

* An underscore “_” indicates a space.

Wireless LAN model

I	x	x	x	.	x	x	x	.	x	x	x	.	x	x	x
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

IP address set to the printer or obtained by the DHCP server

5.9 IrDA SETTING VALUE DISPLAY

When IrOBEX/IrCOMM is selected:

I	r		I	r	O	B	E	X	/	I	r	C	O	M	M
---	---	--	---	---	---	---	---	---	---	---	---	---	---	---	---

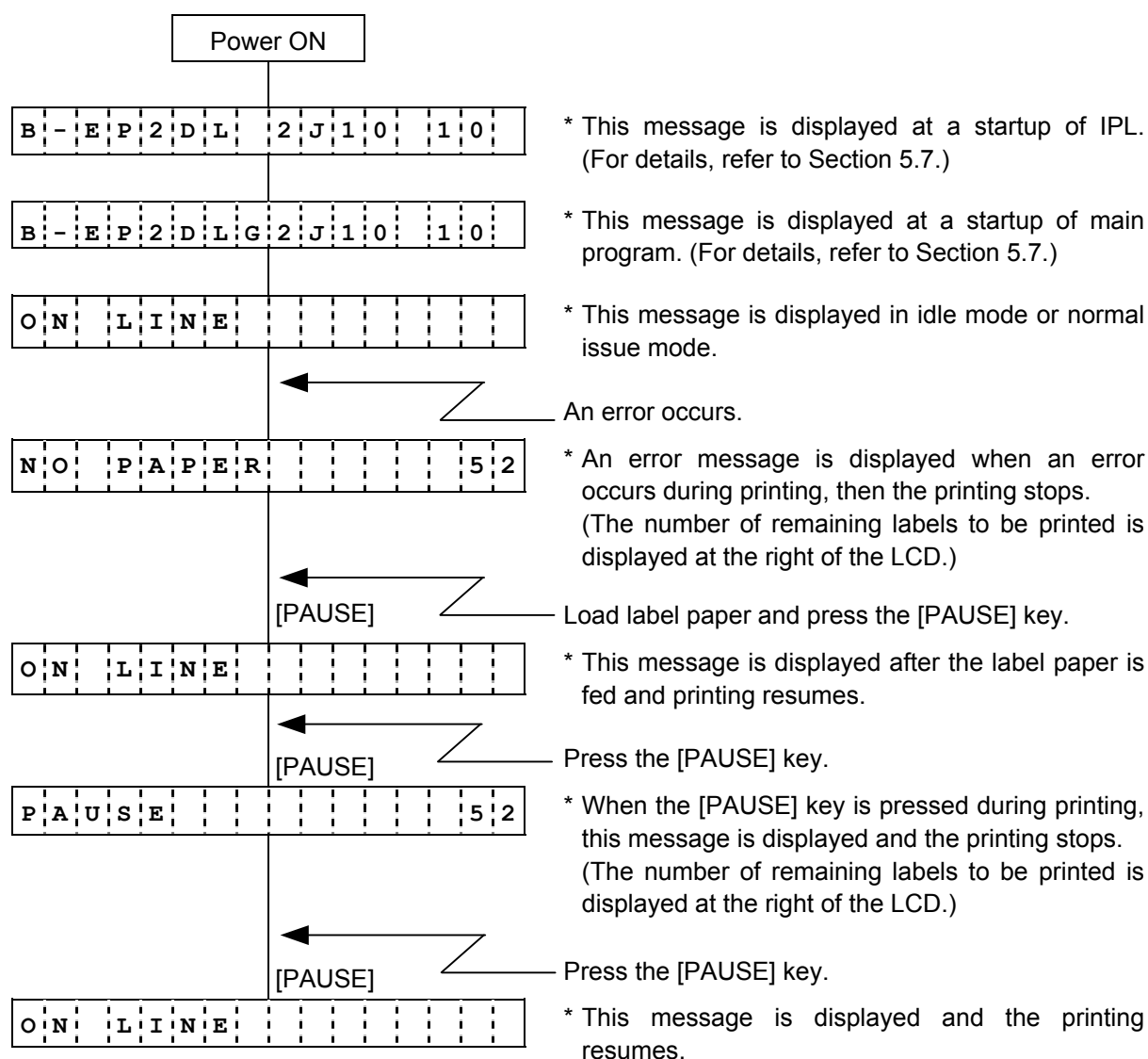
When TEC Protocol is selected:

I	r		T	E	C		1	1	5	2	0	0	b	p	s
---	---	--	---	---	---	--	---	---	---	---	---	---	---	---	---

-	-	9	6	0	0
-	1	9	2	0	0
-	3	8	4	0	0
-	5	7	6	0	0
1	1	5	2	0	0

* An underscore “_” indicates a space.

5.10 ONLINE MODE OPERATION EXAMPLE



NOTE: $[Number\ of\ remaining\ labels\ to\ be\ printed] = [Total\ number\ of\ labels\ to\ be\ printed] - [Number\ of\ labels\ already\ printed\ before\ an\ error\ occurred\ or\ the\ printer\ stopped\ temporarily]$

5.11 THRESHOLD SETTING

5.11.1 Outline of Threshold Setting

When a label is printed, the printer detects the gap between the labels using the transmissive sensor, and corrects the print position automatically to obtain a constant print position.

However, when a preprinted label is used, some inks may prevent proper positioning correction.

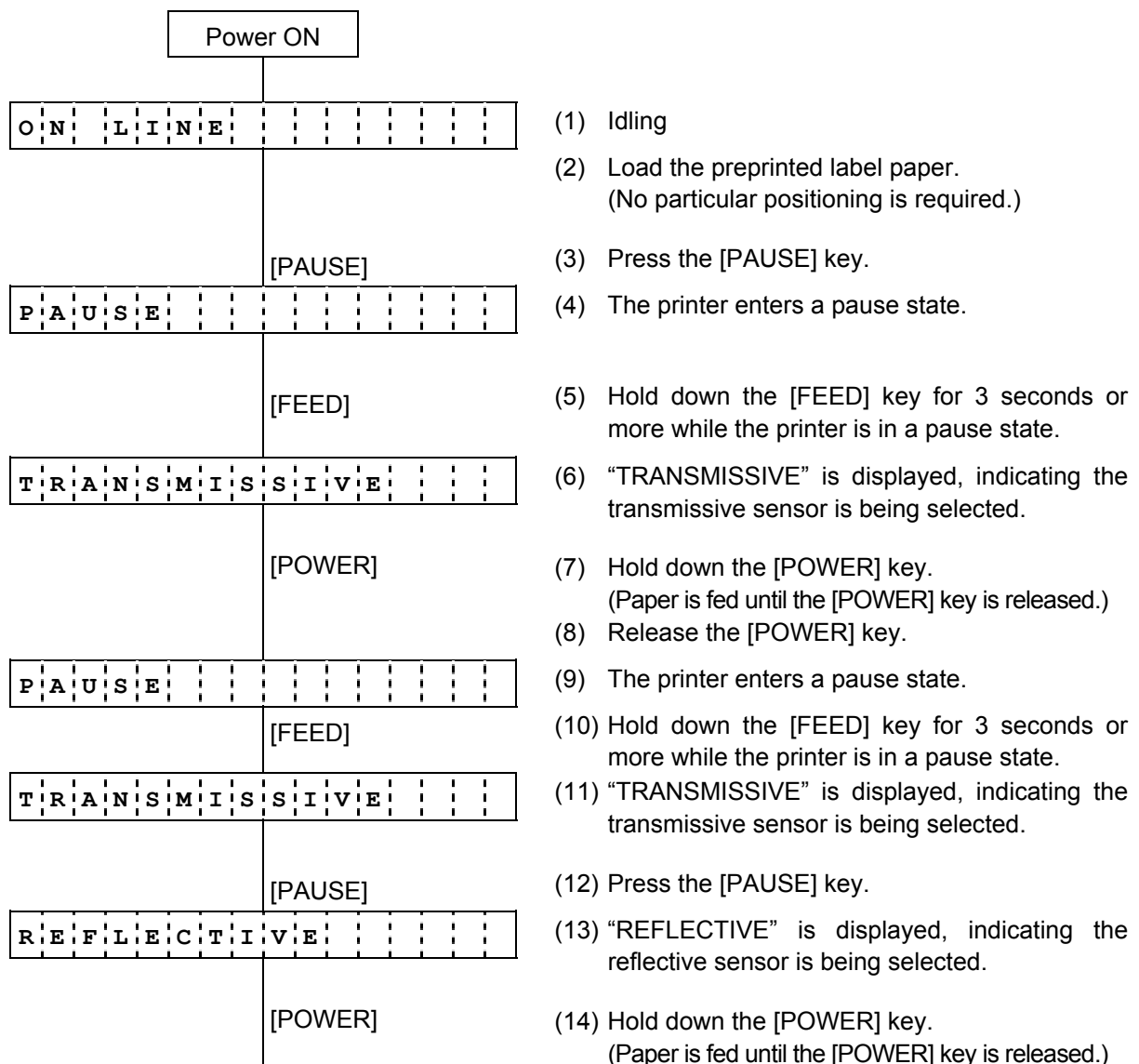
In this case, determine the transmissive sensor threshold manually by key operation and store the value in the non-volatile memory (EEPROM).

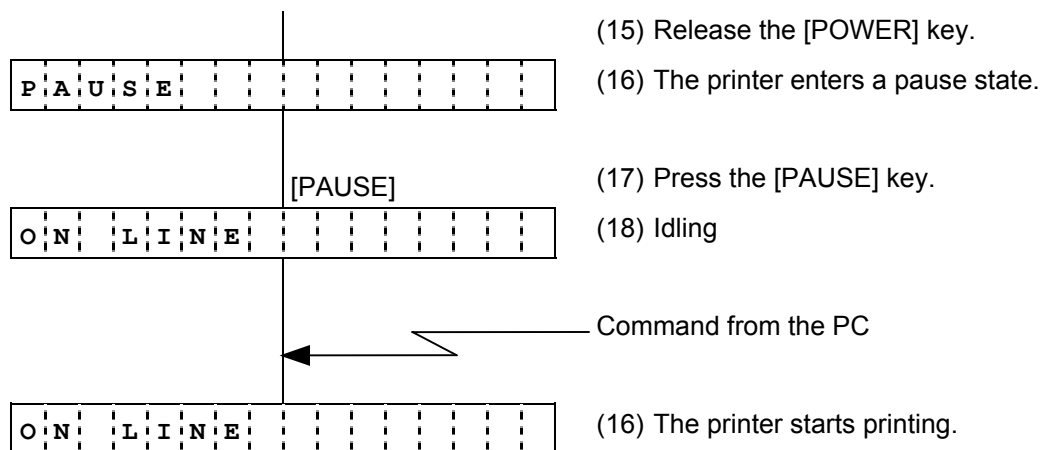
A constant print position can also be obtained when printing on a preprinted label since the print position is always corrected using the threshold stored in the non-volatile memory (EEPROM) by selecting "3: Transmissive Sensor (when using the preprinted label)" for the sensor type of the Issue Command.

When a label is positioned by detecting the black mark on the back of the label, the reflective rate variation of an area of the label other than the black mark may prevent the proper positioning correction. In this case, determine the reflective sensor threshold manually by key operation and store the value in the non-volatile memory (EEPROM).

A constant print position can also be obtained when printing on a tag since the print position is always corrected using the threshold stored in the non-volatile memory (EEPROM) by selecting "4: Reflective Sensor (when using a manual threshold value)" for the sensor type of the Issue Command.

5.11.2 Threshold Setting Operation Example



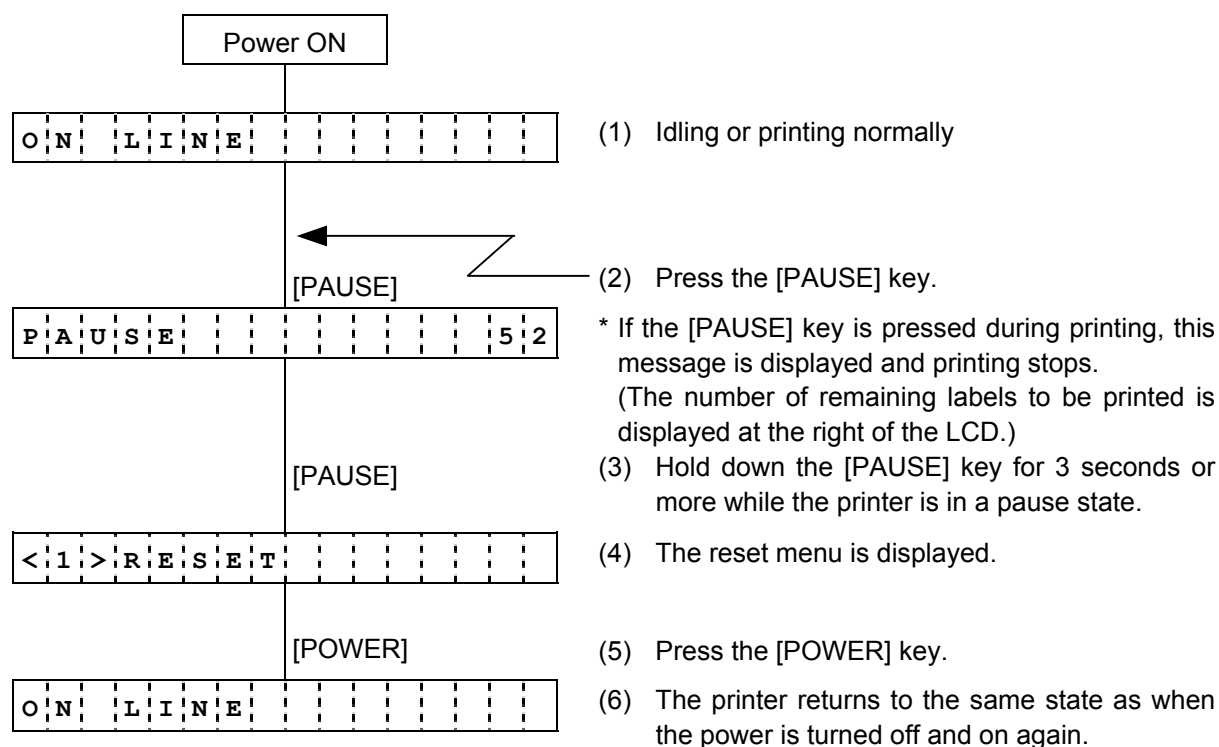


<Supplementary Explanations>

- (1) When the [PAUSE] key is released within 3 seconds while the printer is paused, the [PAUSE] key is invalid.
- (2) To program the threshold, 1.5 labels or more should be fed. (If the label is not fed by the above amount, the threshold may not be properly programmed. In this case, reprogramming is required.)
- (3) While the printer is feeding a label to program the threshold, an error detection including the paper end or cutter error is not performed.
- (4) When the proper print position is not obtained after threshold programming, the sensor may be improperly adjusted. In this case, readjust the sensor in system mode, and program the threshold.

When the backing paper of the label is too thick, the transmissive sensor should be readjusted. In addition, make sure that “3: Transmissive sensor (when using the preprinted label)” or “4: Reflective sensor (when using a manual threshold value)” is selected for sensor type of the Feed Command and the Issue Command.

5.12 RESET

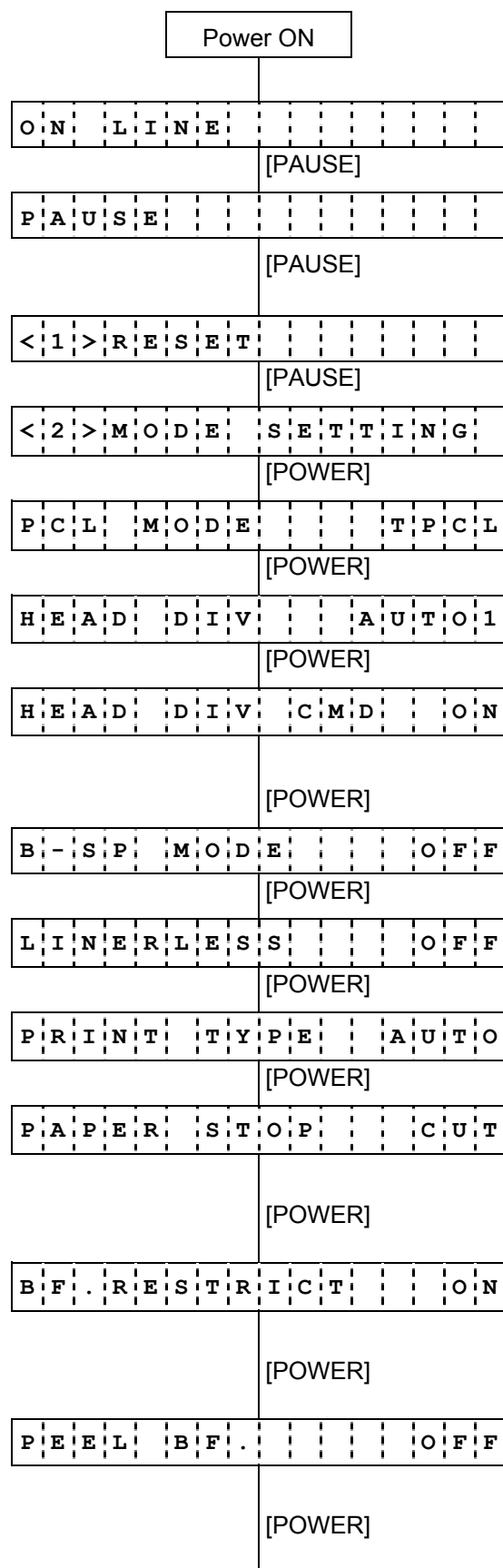


<Supplementary Explanations>

- (1) When the [PAUSE] key is pressed for 3 seconds or more in a recoverable error state, the printer displays the reset menu.
- (2) When the [PAUSE] key is pressed and released within 3 seconds in an error state or a pause state, the printer resumes printing. (The reset menu is not displayed on the LCD.)
However, when the [PAUSE] key is pressed in a communication error state or a command error state, the printer returns to the same state as when the power is turned off and on again, whether or not the [PAUSE] key is held down for 3 seconds or more.
- (3) After changing the radio intensity (RSSI) indication parameter setting, it is required to turn off the power and back to on.

5.13 MODE SETTING

5.13.1 Mode Setting Operation Example



- (1) Idling or printing normally
- (2) Press the [PAUSE] key.
- (3) "PAUSE" is displayed.
- (4) Hold down the [PAUSE] key for 3 seconds or more while the printer is in a pause state.
- (5) The reset menu is displayed.
- (6) Press the [PAUSE] key.
- (7) System mode menu display (Mode setting)
- (8) Press the [POWER] key.
- (9) Print command language setting
- (10) Press the [POWER] key.
- (11) Head division setting
- (12) Press the [POWER] key.
- (13) Head output division command parameter setting
* Supported from V1.1I.
- (14) Press the [POWER] key.
- (15) B-SP series compatibility mode setting
- (16) Press the [POWER] key.
- (17) Linerless setting
- (18) Press the [POWER] key.
- (19) Print type setting
- (20) Press the [POWER] key.
- (21) Post-print stop position setting
* Supported from V1.0E.
- (22) Press the [POWER] key.
* Supported from V1.0E.
- (23) Back feed restriction setting
* Supported from V1.0E.
- (24) Press the [POWER] key.
* Supported from V1.0E.
- (25) Strip issue back feed setting
* Supported from V1.0E.
- (26) Press the [POWER] key.
* Supported from V1.0E.

L B L W I D T H > = 3 0	
	[POWER]
< 2 > M O D E S E T T I N G	
	[POWER]
< 1 > R E S E T	
	[POWER]
O N L I N E	

(27) Label width setting for peel-off issue
 * Supported from V1.0G only for the B-EP2D.

(28) Press the [POWER] key.

(29) System mode menu display (Mode setting)

(30) Hold down the [POWER] key for 3 seconds or more.

(31) The reset menu is displayed.

(32) Press the [POWER] key.

(33) The printer returns to the same state as when the power is turned off and on again.

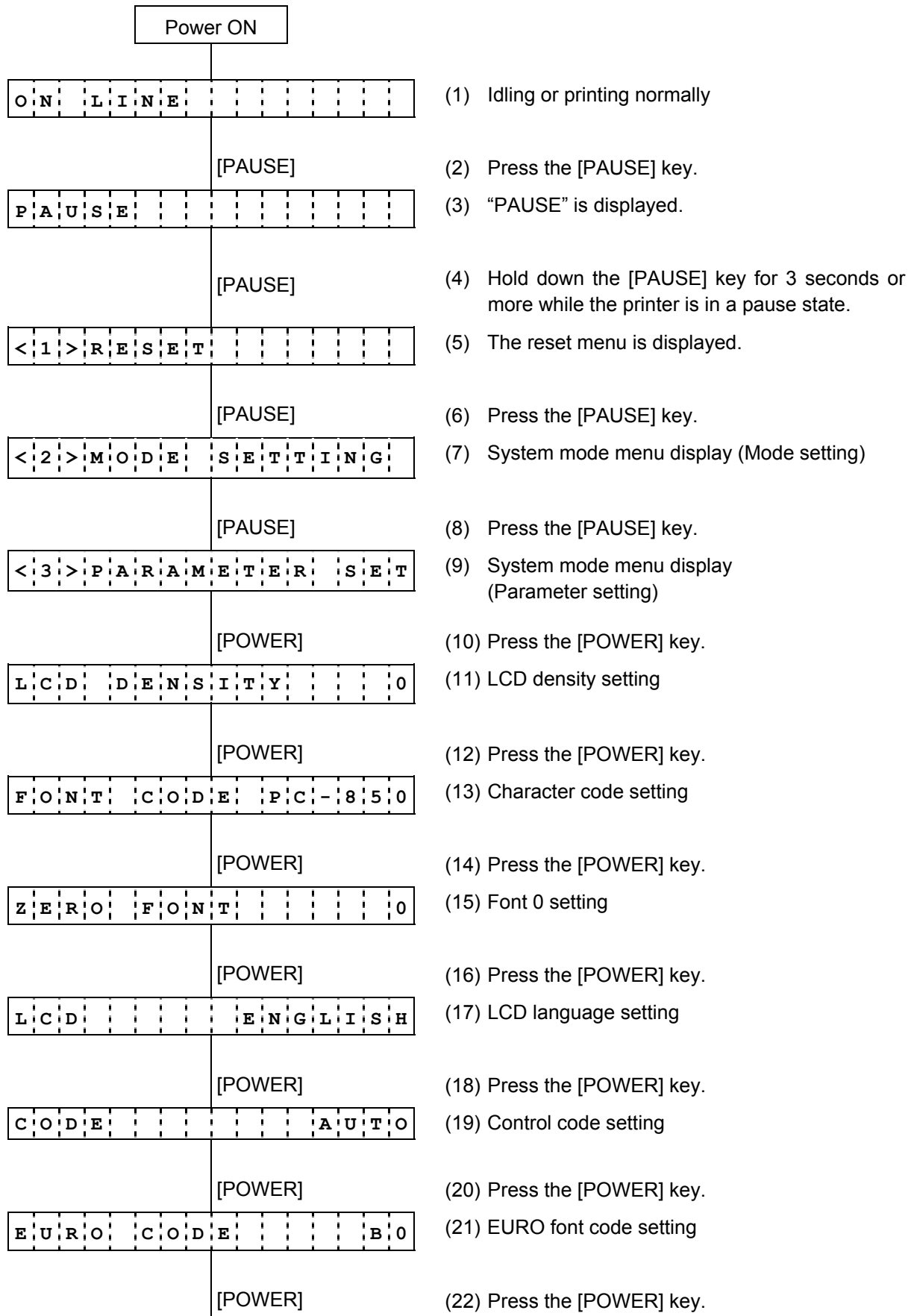
5.13.2 Mode Setting Items

For details, refer to the section, “6.6.3 Various Parameter Settings” in Chapter “6. SYSTEM MODE” (for system administrators).

Item	Default
Print command language setting (PCL Mode)	TPCL
Head division setting (HEAD DIV)	B-EP2: AUTO1 (automatic selection from none, 2 or 3 division) B-EP4: AUTO1 (automatic selection from none, 2, 3 or 6 division)
Head output division command parameter setting (HEAD DIV CMD)	ON (Head output division parameter of the AY command is processed.) * Supported from V1.1I.
B-SP series compatibility mode setting (B-SP MODE)	OFF (B-SP series compatibility mode is disabled.)
Linerless setting (LINERLESS)	OFF (Linerless setting is disabled.)
Print type setting (PRINT TYPE)	AUTO (automatic selection from BATCH or STRIP)
Post-print stop position setting (PAPER STOP)	CUT (Stop at the cut position) * Supported from V1.0E.
Back feed restriction setting (BF.RESTRICT)	ON (Back feed restricted) * Supported from V1.0E.
Strip issue back feed setting (PEEL BF.)	OFF (No back feed allowed) * Supported from V1.0E.
Label width setting for peel-off issue (LBL WIDTH)	>=30 (Label width is 30mm or more) * Supported from V1.0G only for the B-EP2D.

5.14 VARIOUS PARAMETER SETTINGS

5.14.1 Parameter Setting Operation Example



M A X I C O D E T Y P E 1		(23) MaxiCode specification setting
	[POWER]	(24) Press the [POWER] key.
A U T O O F F 1 2 0 m i n		(25) Auto power-off timing setting
	[POWER]	(26) Press the [POWER] key.
E R R P W C T L O N		(27) Auto power off after error * Supported from V1.1H.
	[POWER]	(28) Press the [POWER] key.
S L E E P 3 s e c		(29) Power save mode timing setting
	[POWER]	(30) Press the [POWER] key.
L C D O F F 3 s e c		(31) LCD backlight off timing setting
	[POWER]	(32) Press the [POWER] key.
C H A R G E M O D E N O R M		(33) Battery charge mode * Supported from V1.1H.
	[POWER]	(34) Press the [POWER] key.
A U T O H D C H K O F F		(35) Automatic print head check for broken dots setting
	[POWER]	(36) Press the [POWER] key.
H E A D C H E C K O F F		(37) Print head check for broken dots after cover close setting
	[POWER]	(38) Press the [POWER] key.
H E A D E R R P R T O F F		(39) Resume printing after broken dots error setting
	[POWER]	(40) Press the [POWER] key.
F E E D C H E C K O F F		(41) Feed to top of feed after cover close setting
	[POWER]	(42) Press the [POWER] key.
B E E P V O L 1		(43) Beep volume setting
	[POWER]	(44) Press the [POWER] key.
X M L O F F		(45) XML setting
	[POWER]	(46) Press the [POWER] key.
P A S S W O R D O F F - - - -		(47) System mode password setting
	[POWER]	(48) Press the [POWER] key.

<	3	>	P	A	R	A	M	E	T	E	R	,	S	E	T
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

(49) System mode menu display
(Parameter setting)

[POWER]

(50) Hold down the [POWER] key for 3 seconds or more.

<	1	>	R	E	S	E	T								
---	---	---	---	---	---	---	---	--	--	--	--	--	--	--	--

(51) The reset menu is displayed.

[POWER]

(52) Press the [POWER] key.

O	N		L	I	N	E									
---	---	--	---	---	---	---	--	--	--	--	--	--	--	--	--

(53) The printer returns to the same state as when the power is turned off and on again.

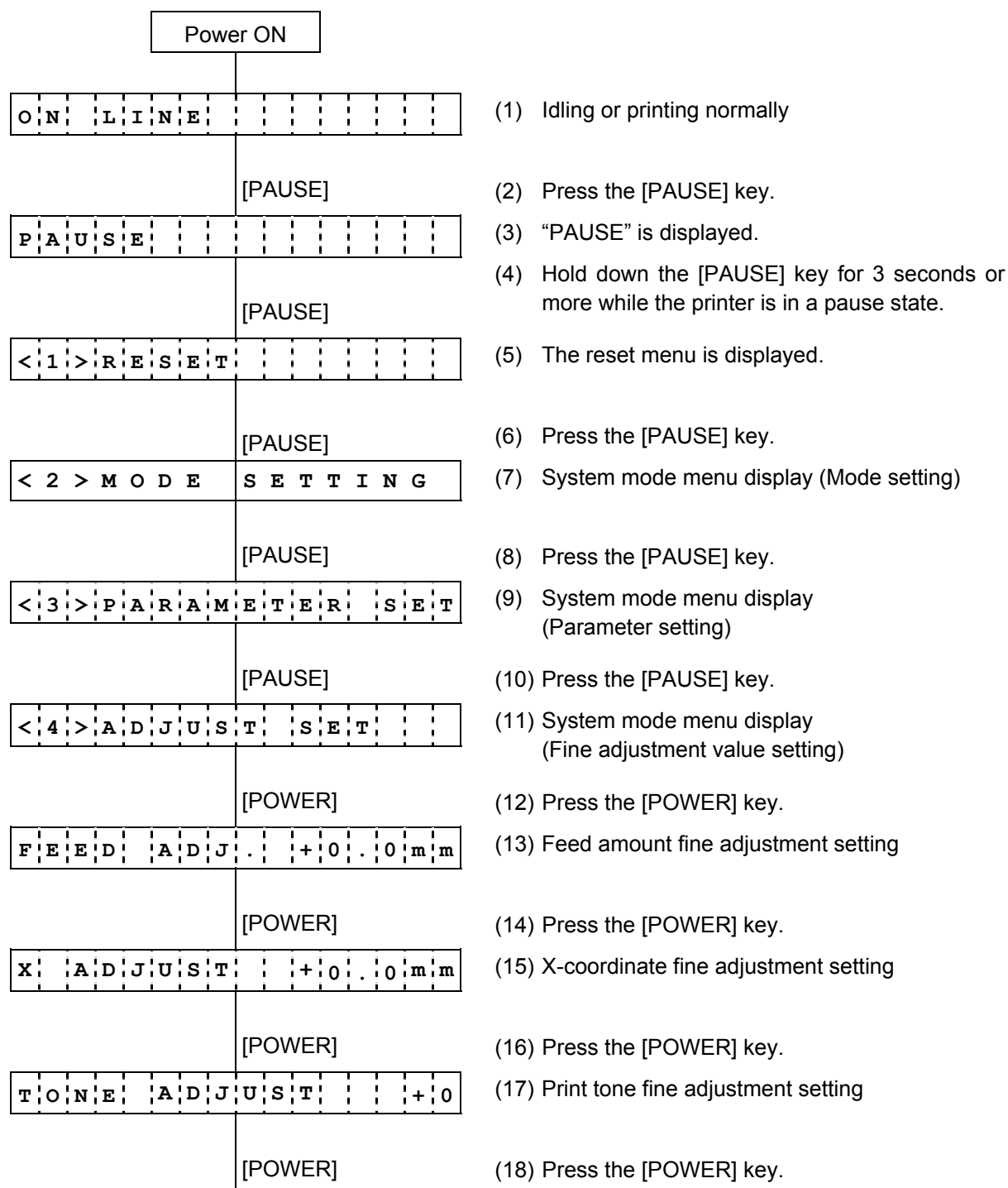
5.14.2 Parameter Setting Items

For details, refer to the section, “6.6.3 Various Parameter Settings” in Chapter “6. SYSTEM MODE.”

Item	Default
LCD density setting (LCD DENSITY)	0
Character code setting (FONT CODE)	PC-850
Font 0 setting (ZERO FONT)	0 (without slash)
LCD language setting (LCD)	ENGLISH
Control code setting (CODE)	AUTO (automatic selection)
EURO font code setting (EURO CODE)	B0
MaxiCode specification setting (MAXI CODE)	TYPE1
Auto power-off timing setting (AUTO OFF)	120 min.
Power save mode timing setting (SLEEP)	3 sec.
Auto power off after error (ERR PW CTL)	ON (The power is turned off in approx. 5 minutes after an occurrence of an error.)
LCD backlight off timing setting (LCD OFF)	3 sec.
Battery charge mode (CHARGE MODE)	NORM (Normal)
Automatic print head check for broken dots setting (AUTO HD CHK)	OFF (An automatic print head check for broken dots is not performed.)
Print head check for broken dots after cover close setting (HEAD CHECK)	OFF (A print head check for broken dots is not performed after the cover is closed.)
Resume printing after broken dots error setting (HEAD ERR PRT)	OFF (The printer does not resume printing after a broken dots error occurs.)
Feed to top of feed after cover close setting (FEED CHECK)	OFF (A feed to the top of feed is not performed.)
Beep volume setting (BEEP VOL)	1
XML setting (XML)	OFF

5.15 FINE ADJUSTMENT VALUE SETTING

5.15.1 Fine Adjustment Value Setting Operation Example



T	H	R	E	S	H	O	L	D	<	R	>	1	.	0	V
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

(19) Reflective sensor manual threshold fine adjustment setting

[POWER]

(20) Press the [POWER] key.

T	H	R	E	S	H	O	L	D	<	T	>	1	.	4	V
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

(21) Transmissive sensor manual threshold fine adjustment setting

[POWER]

(22) Press the [POWER] key.

P	E	E	L	A	D	J	.	.	+	0	.	0	m	m
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

(23) Strip position fine adjustment setting

[POWER]

(24) Press the [POWER] key.

P	A	P	E	R	S	I	Z	E	1	1	4	m	m
---	---	---	---	---	---	---	---	---	---	---	---	---	---

(25) Paper size for ESC/POS setting

[POWER]

(26) Press the [POWER] key.

<	4	>	A	D	J	U	S	T	S	E	T				
---	---	---	---	---	---	---	---	---	---	---	---	--	--	--	--

(27) System mode menu display
(Fine adjustment value setting)

[POWER]

(28) Hold down the [POWER] key for 3 seconds or more.

<	1	>	R	E	S	E	T								
---	---	---	---	---	---	---	---	--	--	--	--	--	--	--	--

(29) The reset menu is displayed.

[POWER]

(30) Press the [POWER] key.

O	N	L	I	N	E										
---	---	---	---	---	---	--	--	--	--	--	--	--	--	--	--

(31) The printer returns to the same state as when the power is turned off and on again.

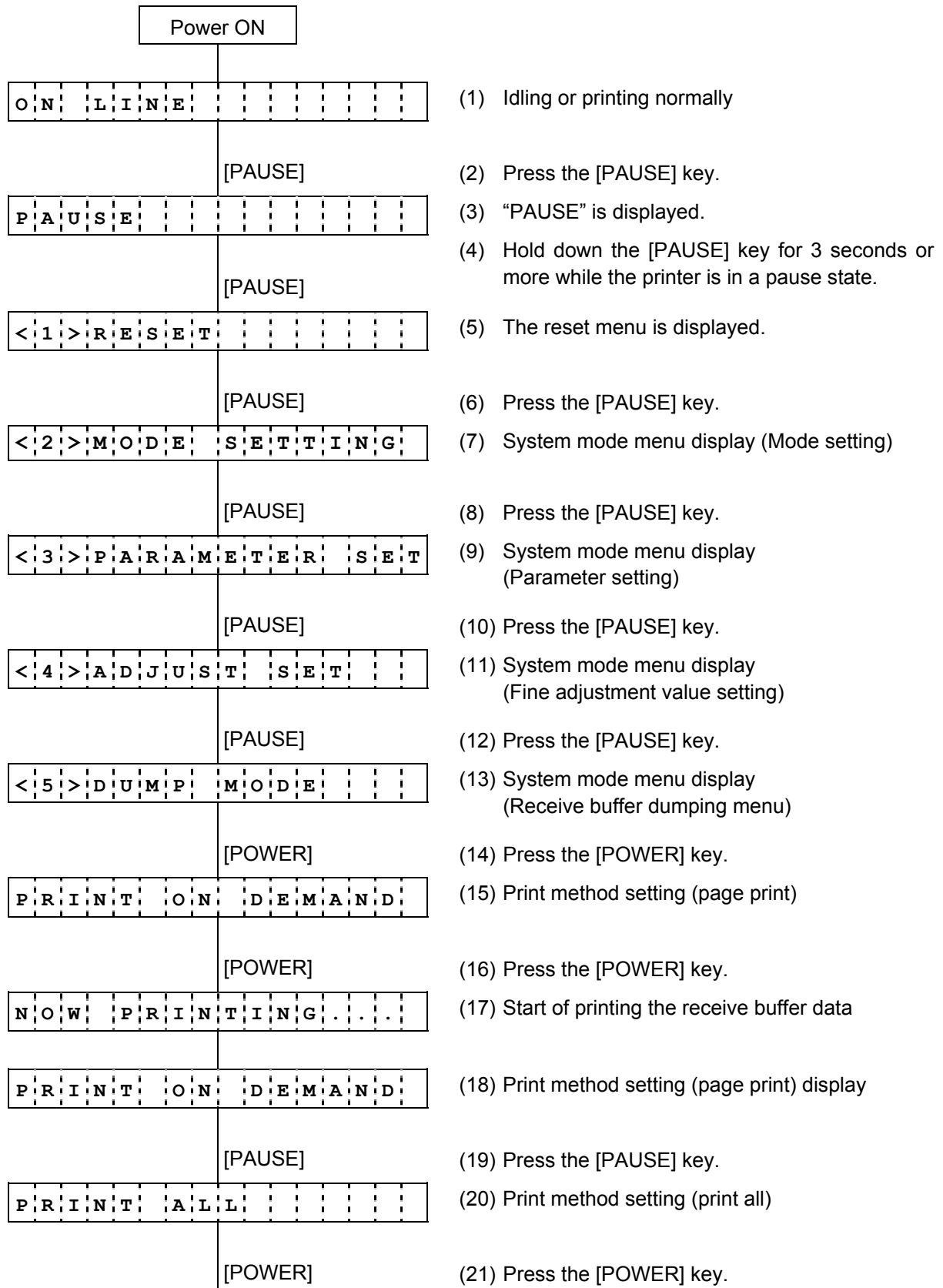
5.15.2 Fine Adjustment Value Setting Items

For details, refer to the section, “6.6.4 Various Fine Adjustment Value Setting” in Chapter “6. SYSTEM MODE.”

Item	Default
Feed amount fine adjustment setting (FEED ADJ.)	+0.0mm
X-coordinate fine adjustment setting (X ADJUST)	+0.0mm
Print tone fine adjustment setting (TONE ADJ.)	+0
Reflective sensor manual threshold fine adjustment setting (THRESHOLD<R>)	1.0V
Transmissive sensor manual threshold fine adjustment setting (THRESHOLD<T>)	1.4V
Strip position find adjustment setting (PEEL ADJ.)	+0.0mm
Paper size for ESC/POS setting (PAPER SIZE)	58mm (B-EP2) 114mm (B-EP4)

5.16 DUMPING OF RECEIVE BUFFER

5.16.1 Receive Buffer Dumping Operation Example



N	O	W		P	R	I	N	T	I	N	G	
---	---	---	--	---	---	---	---	---	---	---	---	---	---	---	---	--

(22) Start of printing the remaining receive buffer data

P	R	I	N	T		A	L	L								
---	---	---	---	---	--	---	---	---	--	--	--	--	--	--	--	--

(23) Print method setting (print all) display

[FEED]

(24) Press the [FEED] key.

<	5	>		D	U	M	P		M	O	D	E				
---	---	---	--	---	---	---	---	--	---	---	---	---	--	--	--	--

(25) After printing is completed, the display returns to the receive buffer dumping menu.

[POWER]

(26) Hold down the [POWER] key for 3 seconds or more.

<	1	>		R	E	S	E	T								
---	---	---	--	---	---	---	---	---	--	--	--	--	--	--	--	--

(27) The reset menu is displayed.

[POWER]

(28) Press the [POWER] key.

O	N			L	I	N	E									
---	---	--	--	---	---	---	---	--	--	--	--	--	--	--	--	--

(29) The printer returns to the same state as when the power is turned off and on again.

NOTE: If an error occurs when the printer is printing the data dumped from the receive buffer, the printer displays an error message, then stops. The error is cleared by pressing the [PAUSE] key, and the display returns to the receive buffer dumping menu "<5> DUMP MODE". After recovering from the error, the printer does not automatically resume printing.

Data in the receive buffer is printed out in the format below.

B-EP2

```

7B 41 58 3B 2B 30 30 30 {AX;+000
2C 2B 30 30 30 2C 2B 30 ,+000,+0
30 7C 7D 7B 44 30 37 37 0|}{D076
30 2C 31 31 30 30 2C 30 0,1100,0
37 34 30 7C 7D 7B 43 7C 740|}{C|
7D 7B 4C 43 3B 30 30 33 }{LC;003
30 2C 30 30 32 30 2C 30 0,0020,0
30 33 30 2C 30 36 36 30 030,0660
2C 30 2C 32 7C 7D 7B 4C ,0,2|}{L
43 3B 30 30 37 30 2C 30 C;0070,0
30 32 30 2C 30 30 37 30 020,0070
2C 30 36 36 30 2C 30 2C ,0660,0,
39 7C 7D 7B 4C 43 3B 30 9|}{LC;0
30 35 30 2C 30 30 32 30 050,0020

:
:
:
:
44 45 46 47 48 49 4A 7C DEFGHIJ|
7D 7B 50 43 31 30 3B 30 }{PC10;0
33 35 30 2C 30 34 30 30 350,0400
2C 31 2C 31 2C 4B 2C 30 ,1,1,K,0
30 2C 42 3D 41 42 43 44 0,B=ABCD
65 66 67 68 69 6A 6B 6C efghijkl

6D 6E 6F 70 7C 7D 7B 50 mnop|}{P
56 30 32 3B 30 33 33 30 V02;0330
2C 30 36 36 30 2C 30 32 ,0660,02
37 30 2C 30 32 35 30 2C 70,0250,
41 2C 30 30 2C 42 3D 42 A,00,B=B
7C 7D 7B 50 56 30 33 3B |}{PV03;

:
:
:
:
3B 30 39 30 30 2C 30 31 ;0900,01
38 30 2C 54 2C 48 2C 30 80,T,H,0
35 2C 41 2C 30 3D 31 32 5,A,0=12
33 34 35 36 37 38 39 30 34567890
41 42 43 44 45 7C 7D 00ABCDE|}
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00

:
:

```

B-EP4

```

7B 41 58 3B 2B 30 30 30 2C 2B 30 30 30 2C 2B 30 {AX;+000,+000,+0
30 7C 7D 7B 44 30 37 37 30 2C 31 31 30 30 2C 30 0|}{D0760,1100,0
37 34 30 7C 7D 7B 43 7C 7D 7B 4C 43 3B 30 30 33 740|}{C|}{LC;003
30 2C 30 30 32 30 2C 30 30 33 30 2C 30 36 36 30 0,0020,0030,0660
2C 30 2C 32 7C 7D 7B 4C 43 3B 30 30 37 30 2C 30 ,0,2|}{LC;0070,0
30 32 30 2C 30 30 37 30 2C 30 36 36 30 2C 30 2C 020,0070,0660,0,
39 7C 7D 7B 4C 43 3B 30 30 35 30 2C 30 30 32 30 9|}{LC;0050,0020

:
:
:
:
44 45 46 47 48 49 4A 7C 7D 7B 50 43 31 30 3B 30 DEFGHIJ|}{PC10;0
33 35 30 2C 30 34 30 30 2C 31 2C 31 2C 4B 2C 30 350,0400,1,1,K,0
30 2C 42 3D 41 42 43 44 65 66 67 68 69 6A 6B 6C 0,B=ABCDefghijkl

6D 6E 6F 70 7C 7D 7B 50 56 30 32 3B 30 33 33 30 mnop|}{PV02;0330
2C 30 36 36 30 2C 30 32 37 30 2C 30 32 35 30 2C ,0660,0270,0250,
41 2C 30 30 2C 42 3D 42 7C 7D 7B 50 56 30 33 3B A,00,B=B|}{PV03;

:
:
:
:
3B 30 39 30 30 2C 30 31 38 30 2C 54 2C 48 2C 30 ;0900,0180,T,H,0
35 2C 41 2C 30 3D 31 32 33 34 35 36 37 38 39 30 5,A,0=1234567890
41 42 43 44 45 7C 7D 00 00 00 00 00 00 00 00 00 00 ABCDE|}
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

:
:

```

Feed direction

Print conditions:

- Paper size: 58 mm for B-EP2, 114 mm for B-EP4
- Sensor setting: NONE
- Printable data: Data of 8 bytes per line for B-EP2, Data of 16 bytes per line for B-EP4
- Data pointed by a receive buffer write pointer is printed in bold type.
- Receive buffer size: 64 KBytes (4,096 lines of printing)

5.17 BASIC EXPANSION MODE

The BASIC expansion mode program runs under the following conditions:

- The BASIC expansion mode program is loaded.
- The BASIC interpreter setting is set to ON (enabled).

When executing the BASIC expansion mode program

<	6	>	E	X	P	A	N	D	M	O	D	E	
---	---	---	---	---	---	---	---	---	---	---	---	---	--

(1) System mode menu display
(BASIC expansion mode)

[POWER]

(2) Press the [POWER] key.

After the BASIC expansion mode is started, LCD display and operations depend on the BASIC expansion mode program.

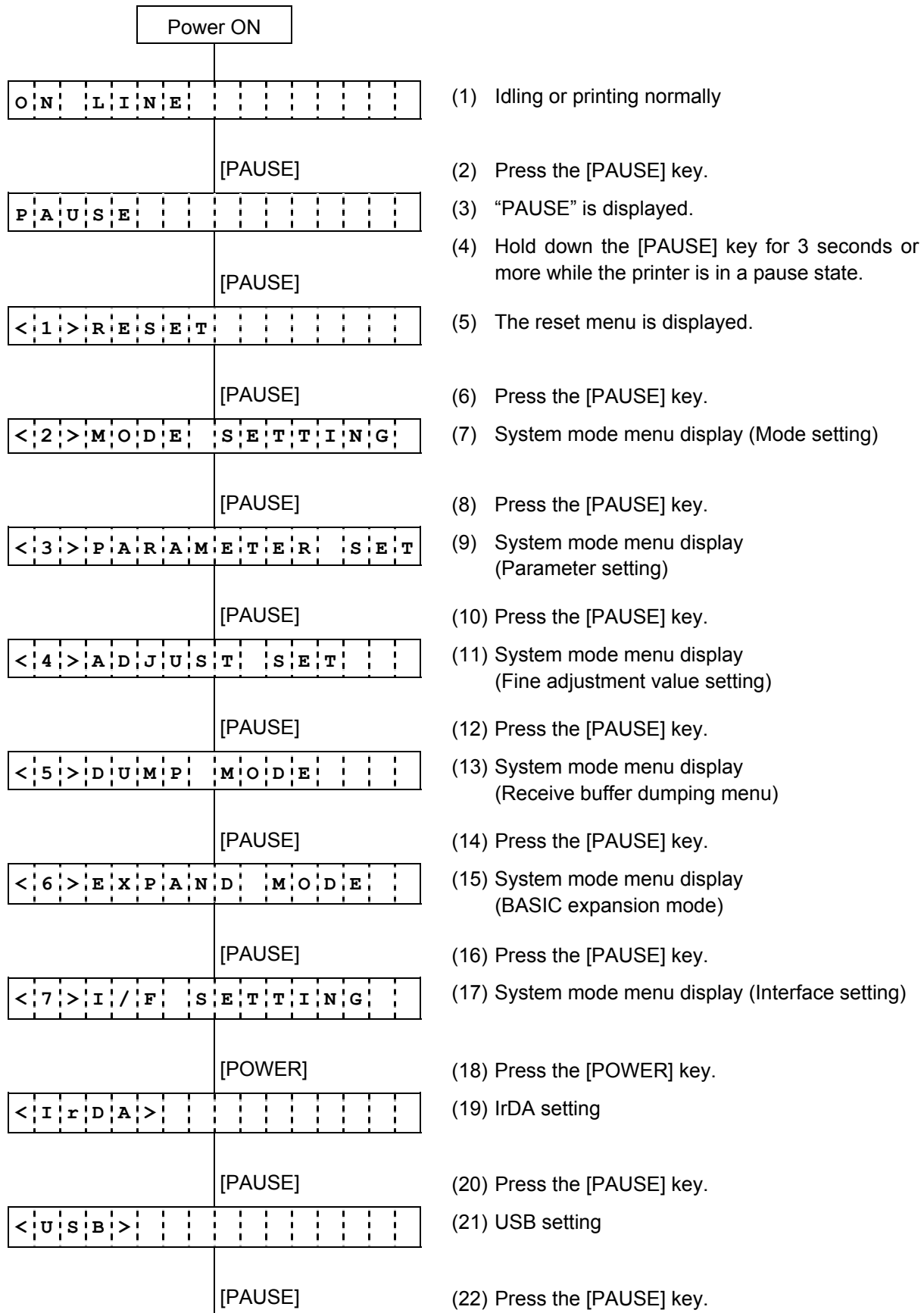
NOTES:

- The BASIC expansion mode ends when the BASIC expansion program is exited.
- When the [POWER] key is pressed without the BASIC expansion mode program loaded, the display does not change from the BASIC expansion mode menu, "<6>EXPAND MODE".

* For details of the BASIC expansion mode, refer to the section, "Startup of System Mode Program" in "the BASIC Interpreter Specification".

5.18 INTERFACE SETTING

5.18.1 Interface Setting Operation Example



<R>S-232C>		(23) RS-232C setting
	[PAUSE]	(24) Press the [PAUSE] key.
LUE<T>O<O>T<H>		(25) Bluetooth setting * Displayed only for the models with the Bluetooth module
	[PAUSE]	(26) Press the [PAUSE] key.
<W>L<A>N>		(27) Wireless LAN enable/disable setting * Displayed only for the models with the wireless LAN module
	[FEED]+[PAUSE]	(28) While holding down the [FEED] key, press the [PAUSE] key.
<7>I/F</>S<E<T<T<I<N<G</>		(29) System mode menu display (Interface setting)
	[POWER]	(30) Holding down the [POWER] key for 3 seconds or more.
<1>R<E<S<E<T</>		(31) The reset menu is displayed.
	[POWER]	(32) Press the [POWER] key.
O<N</>L<I<N<E</>		(33) The printer returns to the same state as when the power is turned off and on again.

5.18.2 Display Examples by Models

- IrDA + USB + RS-232C model
<IrDA>
<USB>
<RS-232C>
- IrDA + USB + Bluetooth model
<IrDA>
<USB>
<BLUETOOTH>
- IrDA + USB + wireless LAN model
<IrDA>
<USB>
<WLAN>

5.18.3 Interface Setting Items

For details, refer to the section, “6.6.9 Interface Setting” in Chapter “6. SYSTEM MODE” (for system administrators).

<IrDA>

Item	Default
IrDA protocol setting (PROTOCOL)	IrCOMM
IrDA baud rate setting (SPEED)	115200 (bps)
Printer ID setting (PRINTER ID)	00001

<USB>

Item	Default
USB serial number setting (SERIAL NUMBER)	12-digit alphanumeric characters (0 to 9, A to Z, space)

<RS-232C>

Item	Default
RS-232C baud rate setting (SPEED)	9600 (bps)
RS-232C parity setting (PARITY)	EVEN

<BLUETOOTH>

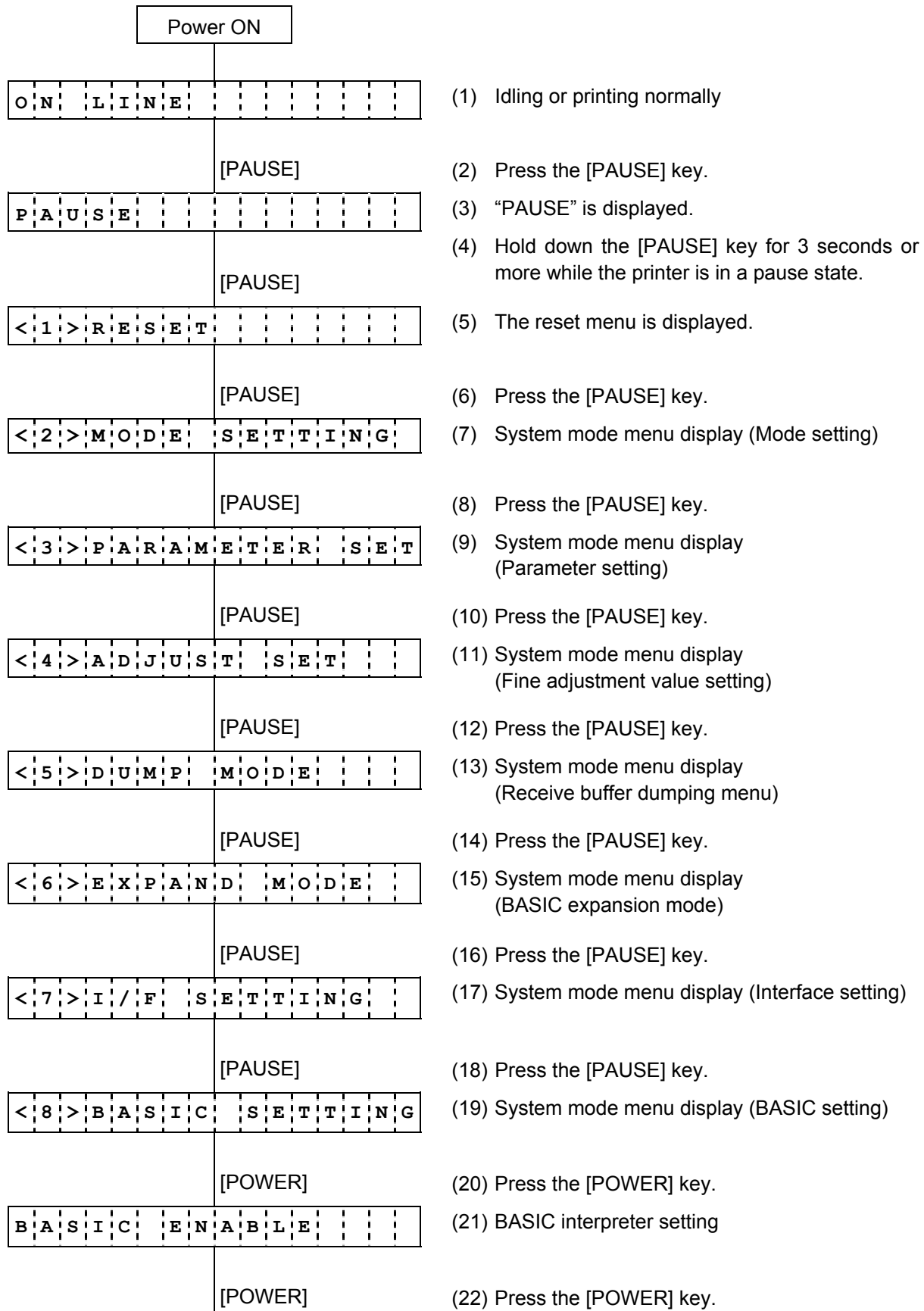
Item	Default
In-process inspection setting (FACTORY TEST)	OFF (Device nickname=TOSHIBA TEC BT)
Inquiry scan time setting (INQUIRY)	EVERY
Security level setting (SECURITY)	OFF
Inquiry/page scan interval setting (SCN INTERVL)	2048
Inquiry/page scan window setting (SCN WINDOW)	36

<WLAN>

Item	Default
Wireless LAN enable/disable setting (WLAN)	ON
Printer IP address setting (PRINTER IP ADRES)	192.168.254.254
Gateway IP address setting (GATEWAY IP ADRES)	000.000.000.000
Subnet mask setting (SUBNET MASK)	255.255.000.000
Socket communication setting (SOCKET PORT)	ON 08000
DHCP setting (DHCP)	OFF
WINS setting (WINS)	OFF
WINS address setting (WINS ADRS)	000.000.000.000
LPR setting (LPR)	OFF
Wireless LAN standard setting (WLAN STANDARD)	11b/g
Wireless LAN connection mode setting (WLAN MODE)	INFRA
Wireless LAN encryption setting (WLAN CODE)	OFF
WEP/WPA connection type setting (WEP/WPA)	OFF
802.1X, WPA, WPA2 connection type setting (WEP)	OFF
802.1X, WPA, WPA2 authentication type setting (SETTING)	OFF
Default key setting (DEFAULT KEY)	1
802.11b channel setting (802.11b CHANNEL)	1
802.11b baud rate setting (802.11b BAUD)	11M
802.11g channel setting (802.11g CHANNEL)	1
802.11g baud rate setting (802.11g BAUD)	54M
Wireless LAN power save setting (POWER SAVE)	ON * Supported from V1.0C.
Radio intensity (RSSI) indication (QUAL DISPLAY)	OFF * Supported from V1.1I.

5.19 BASIC SETTING

5.19.1 BASIC Setting Operation Example



5.19.2 BASIC Setting Items

For details, refer to the section, “6.6.10 BASIC Setting” in Chapter “6. SYSTEM MODE” (for system administrators).

Item	Default
BASIC interpreter setting (BASIC ENABLE)	BASIC OFF
BASIC file browser setting (FILE MAINTENANCE)	Name of data stored in the BASIC file storage area (00 to 13 + name)
BASIC trace setting (BASIC TRACE)	TRACE OFF
BASIC expansion mode (EXPAND MODE)	Executed when the BASIC expansion mode program is loaded.

5.20 LCD MESSAGES AND LED INDICATIONS

On the character display LCD, model and firmware version are displayed.

No.	LCD Message (English)	LED Indication	Printer Status	Recoverable by the [PAUSE] key Yes/No	Acceptance of Status Request and Reset Commands Yes/No
		Status			
1	ON LINE	○	Online mode	-	Yes
	ON LINE	○	Online mode (communicating)	-	Yes
	LBL PRESENT ****	⊙	Strip wait	-	Yes
2	COVER OPEN	○	The cover was opened in online state.	-	Yes
3	PAUSE ****	●	Pause state	Yes	Yes
4	COMMS ERROR	△	A parity error, overrun error, or a framing error occurred during communication by RS-232C.	Yes	Yes
5	PAPER JAM ****	△	A paper jam occurred during paper feed.	Yes	Yes
6	NO PAPER ****	△	The label has run out.	Yes	Yes
7	NO PAPER	△	The label has run out after issuing the label successfully.	Yes	Yes
8	COVER OPEN ****	△	A feed or an issue was attempted with the cover opened. (except when the [PAUSE] key is pressed)	Yes	Yes
9	HEAD ERROR	△	A broken dots error occurred in the thermal head.	Yes	Yes
10	EXCESS HEAD TEMP	△	The thermal head temperature is extremely high (71°C or more).	No	Yes
11	SAVING ##### &&&&	○	In writable character or PC command save mode	-	Yes
12	FORMAT ERROR	△	An error occurred in formatting the flash ROM on the CPU board.	No	Yes
13	FLASH WRITE ERR.	△	An error occurred in writing data into the flash ROM on the CPU board.	No	Yes
14	FLASH MEM FULL	△	Saving failed due to insufficient memory capacity of the flash ROM on the CPU board.	No	Yes
15	EEPROM ERROR	△	Data cannot be read from/written to a backup EEPROM properly.	No	No
16	LOW BATTERY	△	The battery voltage B-EP2: 7.2V or less B-EP4: 14.0V or less	No	Yes
17	AMBIENT TEMP ERR	△	An ambient temperature is below -20°C or over 60°C.	Yes	Yes
18	BATT. TEMP ERROR	△	The battery is in a dangerous condition. Care must be taken not to get burned.	No	Yes
19	HIGH VOLT. ERROR	△	The battery is in a dangerous condition.	No	Yes

No.	LCD Message (English)	LED Indication	Printer Status	Recoverable by the [PAUSE] key Yes/No	Acceptance of Status Request and Reset Commands Yes/No
		Status			
20	SYSTEM ERROR	△	When the following abnormal operations are performed, a system error occurs: (a) Command fetch from an odd address (b) Access to word data at an odd address (c) Access to long-word data at an odd address (d) Access to the area of 80000000H to FFFFFFFFH in the logic space in user mode. (e) An undefined instruction in an area other than a delay slot was decoded. (f) An undefined instruction in a delay slot was decoded. (g) An instruction to rewrite a delay slot was decoded.	No	No
21	WAITING (BATT.)	○	The battery protection function is in operation.	—	Yes
22	WAITING (HEAD)	○	The head protection function is in operation.	—	Yes
23	WAITING (MOTOR)	○	The motor protection function is in operation.	—	Yes
24	BT INIT ERROR	○	Initialization of Bluetooth failed.	No	Yes
25	BT SETTING ERROR	○	There is/are error(s) in the Bluetooth setting.	No	Yes
26	CHARGE ERROR \$	○	An error occurred during battery charge.	No	Yes
27	Ir PACKET ERROR	△	A block number error occurred when using TEC Protocol.	Yes	Yes
28	Display of error command (See NOTE 1.)	△	A command error occurred in analyzing a command.	Yes	Yes

* No.11: The LCD display changes from “SAVING ##### &&&&” to “ON LINE” in B-SP series compatibility mode.

NOTE 1: When a command produces an error, 16 bytes of the command code of the erroneous command are displayed on the LCD. (However, [LF] and [NUL] are not displayed.)

[Example 1] [ESC] PC001; 0A00,0300,2,2,A,00,B [LF] [NUL]

└─ Command error

LCD display

PC001;0A00,0300,

[Example 2] [ESC] T02A30 [LF] [NUL]

└─ Command error

LCD display

T02A30

[Example 3] [ESC] XR; 0200,0300,0450,1200,1[LF] [NUL]

└─ Command error

LCD display

xR;0200,0300,045

NOTE 2: When a command error is displayed, “?” (3FH) is displayed for codes other than 20H to 7FH and A0H to DFH.

NOTE 3: △: Blinking (red)
□: ON (red)
○: ON (green or orange)
⊙: Blinking (green)
●: OFF
****: Number of remaining labels to be printed to 9999 (in units of 1 label/tag)
####: Remaining memory capacity of PC save area in the flash memory on the CPU:
0 to 3200 (in units of 1 Kbyte)
&&&&: Remaining memory capacity of writable character/BASIC file/form/graphic storage area in
the flash memory on the CPU 0 to 3200 (in units of 1 Kbyte)
-- System error number 00 to 21
\$: Charge error number 1 to 5

5.21 CHARGE ERROR NUMBER LIST

No.	Details of Error	Cause
1	Battery ID error	Battery is not loaded or an unspecified battery is detected.
2	Abnormal battery voltage	B-EP2: 8.7V or more B-EP4: 17.4V or more
3	Abnormal charge current (during trickle charge)	B-EP2: 1.2A or more B-EP4: 2.0A or more
4	Trickle charge timeout	After a 90-min. trickle charge, a normal charge did not start.
5	Abnormal charge current (during normal charge)	B-EP2: 1.2A or more B-EP4: 2.0A or more

5.22 LCD MESSAGES IN DIFFERENT LANGUAGES

No.	ENGLISH	No.	GERMAN	No.	FRENCH
1	ON LINE	1	ON LINE	1	PRETE
2	COVER OPEN	2	DECKEL OFFEN	2	ERR. CAPOT
3	PAUSE *****	3	PAUSE *****	3	PAUSE *****
4	COMMS ERROR	4	UEBERTR.-FEHLER	4	ERR. COMMUNICAT.
5	PAPER JAM *****	5	PAPIERSTAU *****	5	PB. PAPIER *****
6	NO PAPER *****	6	PAPIERENDE *****	6	FIN PAPIER *****
7	NO PAPER	7	PAPIERENDE	7	FIN PAPIER
8	COVER OPEN *****	8	DECKEL OFFEN*****	8	ERR. CAPOT *****
9	HEAD ERROR	9	KOPF DEFECT	9	ERREUR TETE
10	EXCESS HEAD TEMP	10	KOPF UEBERHITZT	10	TETE TROP CHAUDE
11	SAVING ##### &&&&	11	SP.-MOD##### &&&&	11	MEM LIB##### &&&&
12	FORMAT ERROR	12	FORMATFEHLER	12	ERREUR DE FORMAT
13	FLASH WRITE ERR.	13	FLASH FEHLER	13	ERREUR MEM FLASH
14	FLASH MEM FULL	14	FLASH ZU KLEIN	14	MEM INSUFFISANTE
15	EEPROM ERROR	15	EEPROM FEHLER	15	ERREUR EEPROM
16	LOW BATTERY	16	BATTERY SCHWACH	16	BATTERIE FAIBLE
17	AMBIENT TEMP ERR	17	TEMP. FEHLER	17	ERR.TEMP.EXTER.
18	BATT. TEMP ERROR	18	BATT.TEMP.FEHLER	18	ERR.TEMP.BATT.
19	HIGH VOLT. ERROR	19	HIGH VOLT.FEHLER	19	HIGH VOLT. ERROR
20	SYSTEM ERROR --	20	SYSTEM FEHLER --	20	ERR. SYSTEME --
21	WAITING (BATT.)	21	WAITING (BATT.)	21	ATTENTE (BATT.)
22	WAITING (HEAD)	22	WAITING (HEAD)	22	ATTENTE (TETE)
23	WAITING (MOTOR)	23	WAITING (MOTOR)	23	ATTENTE (MOT.)
24	BT INIT ERROR	24	BT INIT ERROR	24	ERR. INIT BT
25	BT SETTING ERROR	25	BT SETTING ERROR	25	ERR. CONF BT
26	CHARGE ERROR \$	26	BATT.LADEFEHLER\$	26	ERREUR CHARGE \$
27	Ir PACKET ERROR	27	Ir PACKET ERROR	27	Ir PACKET ERROR
28	LBL PRESENT *****	28	LBL ABNEHMEN*****	28	MEDIA DISPO *****

No.	DUTCH
1	IN LIJN
2	DEKSEL OPEN
3	PAUZE *****
4	COMM. FOUT
5	PAPIER VAST *****
6	PAPIER OP *****
7	PAPIER OP
8	DEKSEL OPEN *****
9	PRINTKOP DEFECT
10	TEMP. FOUT
11	MEM ##### &&&&
12	FORMAAT FOUT
13	FLASH MEM FOUT
14	GEHEUGEN VOL
15	EEPROM ERROR
16	LAGE BATTERIJ
17	OMGEVNG TMP FOUT
18	FOUT BATT. TEMP
19	HIGH VOLT. ERROR
20	SYSTEEM FOUT --
21	Wachten (BATT.)
22	Wachten (HEAD)
23	Wachten (MOTOR)
24	BT INIT ERROR
25	BT SETTING ERROR
26	OPLAADFOUT \$
27	Ir PACKET ERROR
28	ETIKET KLAAR*****

No.	SPANISH
1	ON LINE
2	TAPA ABIERTA
3	PAUSA *****
4	ERROR COMUNICACI
5	ATASCO PAPEL*****
6	SIN PAPEL *****
7	SIN PAPEL
8	TAPA ABIERTA*****
9	ERROR DE CABEZAL
10	TEMP.CABEZA ALTA
11	SALVAR ##### &&&&
12	ERROR DE FORMATO
13	ERROR ESCRITURA
14	MEMORIA INSUFICI
15	EEPROM ERROR
16	BATERIA BAJA
17	TEMP.AMBIEN.ALTA
18	ERR.TEMP.BATERIA
19	ERR.VOLT.BATERIA
20	ERR DE SISTEMA--
21	ESPERA: BATERIA
22	ESPERA: CABEZAL
23	ESPERA: MOTOR
24	ERR.INICIALIZ.BT
25	ERROR CONFIG. BT
26	ERROR DE CARGA \$
27	Ir PACKET ERROR
28	ETQT PRESENT*****

No.	ITALIAN
1	PRONTA
2	TESTA APERTA
3	PAUSA *****
4	ERR. COMUNICAZ.
5	CARTA INCEP.*****
6	NO CARTA *****
7	NO CARTA
8	TESTA APERTA*****
9	ERRORE TESTINA
10	TEMP TESTA ALTA
11	SALVA ##### &&&&
12	ERR. FORMATTAZ
13	ERR.SCRITT.CARD
14	MEM. CARD PIENA
15	EEPROM ERROR
16	LOW BATTERY
17	AMBIENT TEMP ERR
18	BATT. TEMP ERROR
19	ERRORE VOLT BATT
20	ERR. SISTEMA --
21	ATTESA (BATT.)
22	ATT. TESTA CALDA
23	ATT.MOTORE CALDO
24	ERR. INIZ. B.T.
25	ERR.CONFIG. B.T.
26	ERR.CARICANTO \$
27	Ir PACKET ERROR
28	ETICH.PRONTA*****

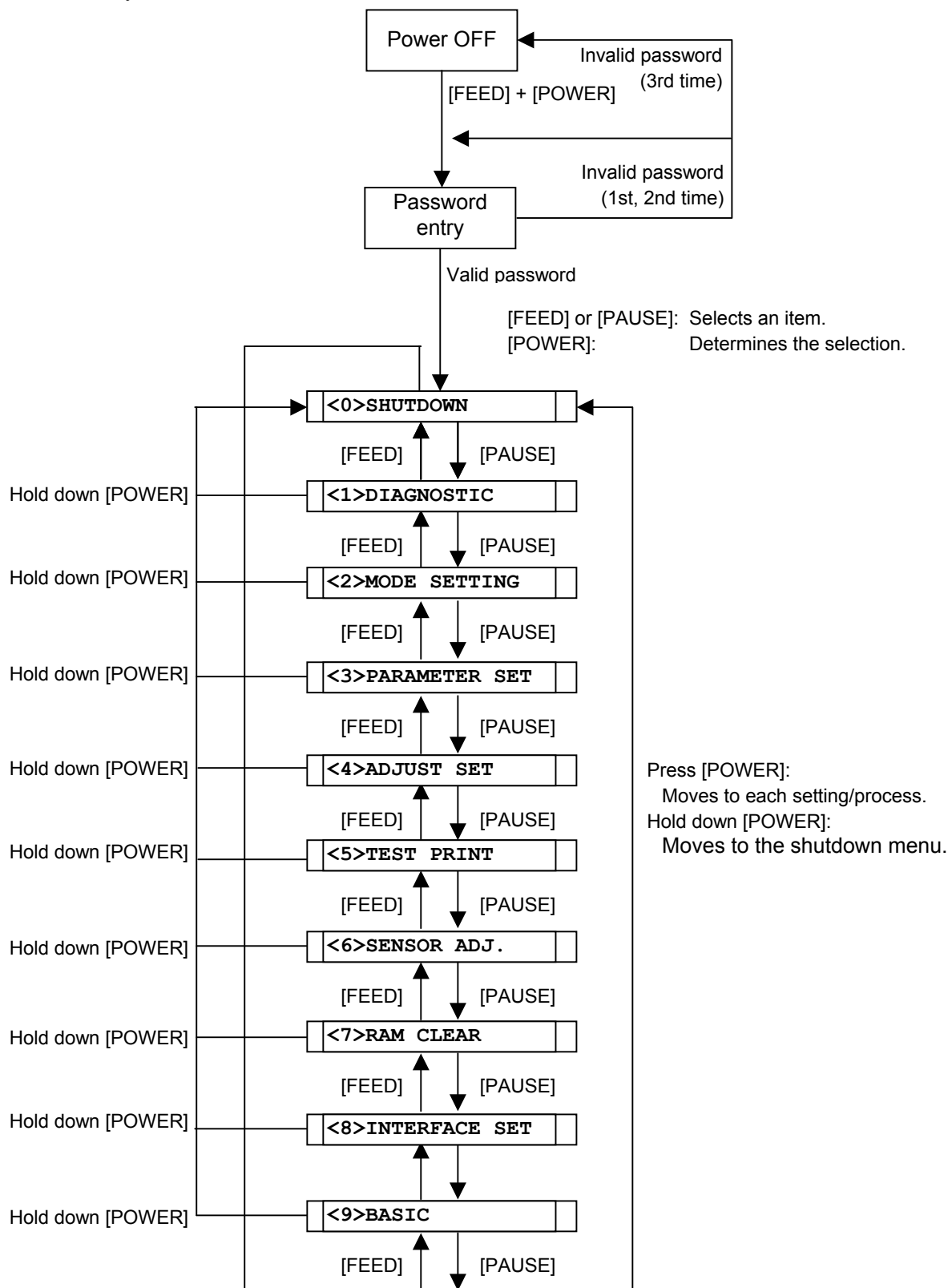
No.	JAPANESE
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
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22	
23	
24	
25	
26	
27	
28	

* Japanese messages are omitted here.

6. SYSTEM MODE

6.1 SYSTEM MODE FOR SERVICE PERSONS AND SYSTEM ADMINISTRATORS (ALL MENU ITEMS ARE AVAILABLE.)

In this mode, self-test and parameter settings are performed. Described below is the key operation procedure in system mode.



6.2 KEY FUNCTIONS

- [POWER] key (1) Determines each of various parameter settings.
- [FEED] key: (1) Moves the menu.
 (2) Selects a setting parameter.
- [PAUSE] key: (1) Moves the menu.
 (2) Selects a setting parameter.

6.3 LED FUNCTIONS

- [STATUS] LED: Indicates the following statuses:
(red/green/orange) Printer power, ON or OFF
 Printer error
 Battery level

LED lighting patterns

- Power OFF:OFF
- Charging in power OFF state:.....Green/ON
- Power ON 1) Battery level 3 or more
 In idle stateGreen/ON
 Strip wait stateGreen/Blink
 ErrorRed/Blink
 2) Battery level 2 (near-low battery state)
 In idle stateOrange/ON
 Strip wait stateGreen/Blink
 ErrorRed/Blink
 3) Battery level 1 (low battery state)
 In idle stateRed/ON
 Strip wait stateGreen/Blink
 ErrorRed/Blink

- [CHARGE] LED: Indicates the following statuses:
(orange) Connection status of the AC adapter
 Battery charge

LED lighting patterns

- Power OFF 1) AC adapter not connectedOFF
 2) AC adapter connected
 ChargingOrange/ON
 Full chargeOFF
 Temperature errorOrange/Blink
 Ambient temperature below 0 or higher than 40°C
 Battery temperature below 0 or higher than 45°C
- Power ON 1) AC adapter not connectedOFF
 2) AC adapter connected
 ChargingOrange/ON
 Full chargeOFF
 PrintingOFF
 Temperature errorOrange/Blink
 Ambient temperature below 0 or higher than 40°C
 Battery temperature below 0 or higher than 45°C

6.4 BUZZER FUNCTION

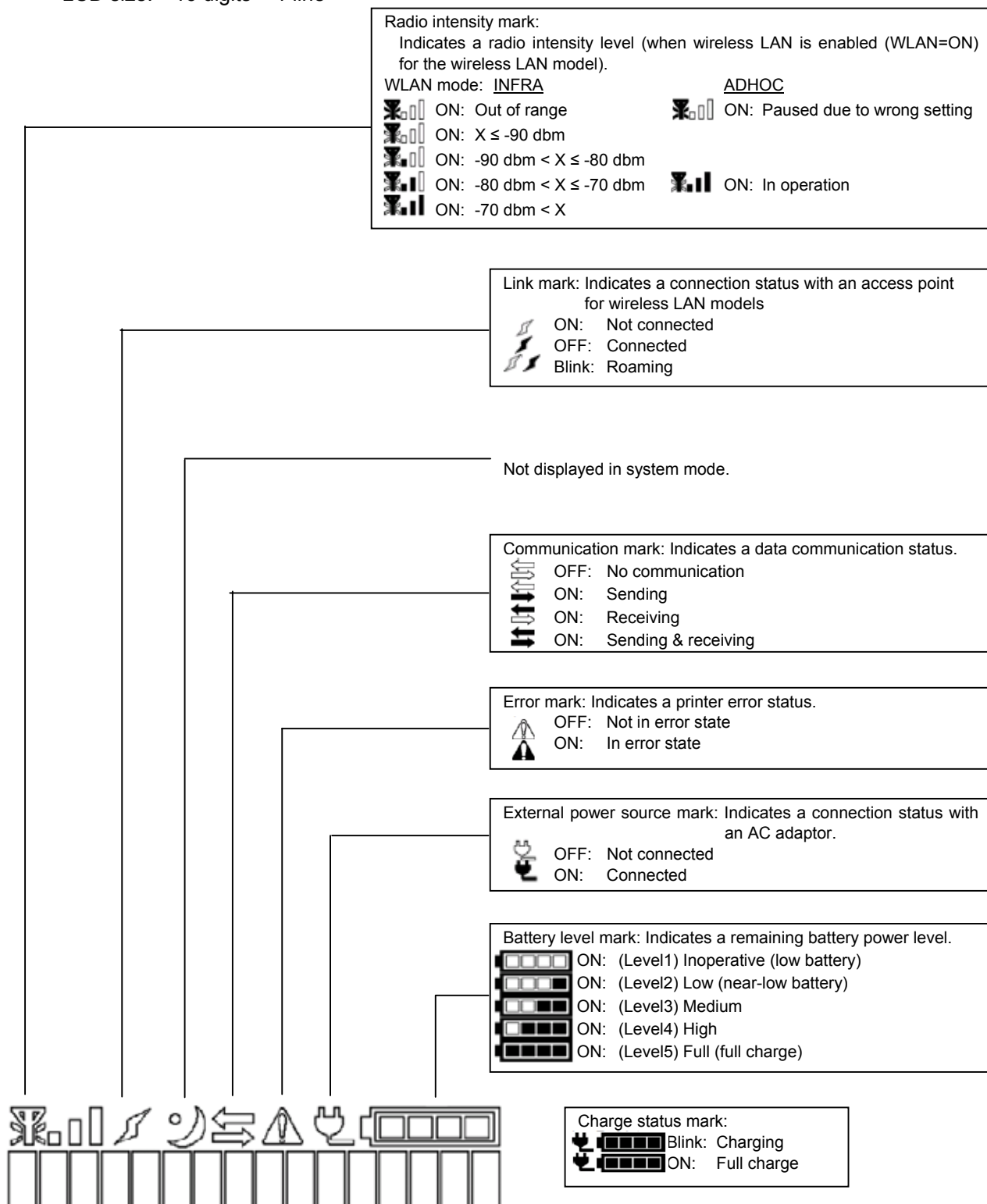
- The buzzer sounds for 400 msec. when an error occurs and automatically stops.
- Buzzer volume (1 to 3) and ON/OFF setting can be done in system mode.

6.5 LCD FUNCTIONS

The LCD displays printer status messages.

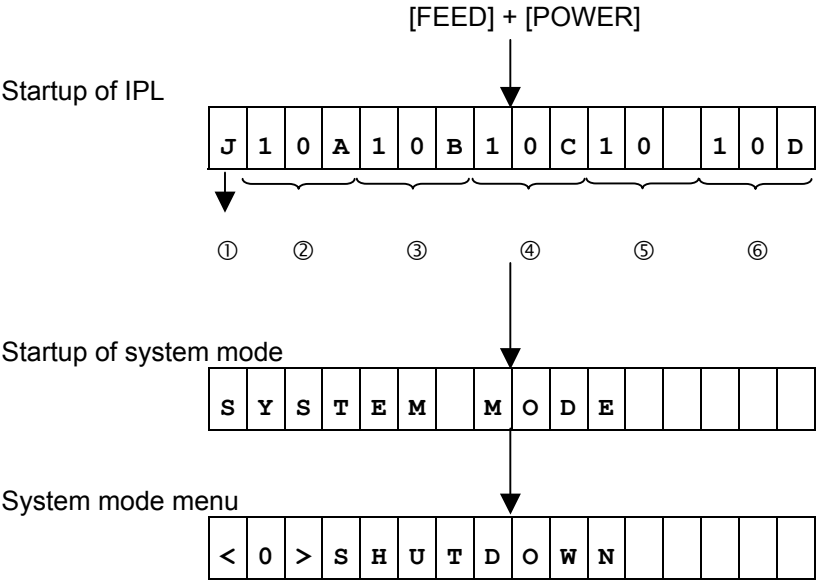
The battery level mark and the external power source mark are updated every 5 seconds.

LCD size: 16 digits × 1 line



NOTE: When turning on the printer power, press the [POWER] key when 2 to 15 seconds have passed after a connection of the AC adapter and the battery level mark and the external power source mark appear on the LCD. Otherwise, the LCD display may not be as expected or it may take a longer time for the printer to start up.

6.6 LCD DISPLAY AT STARTUP

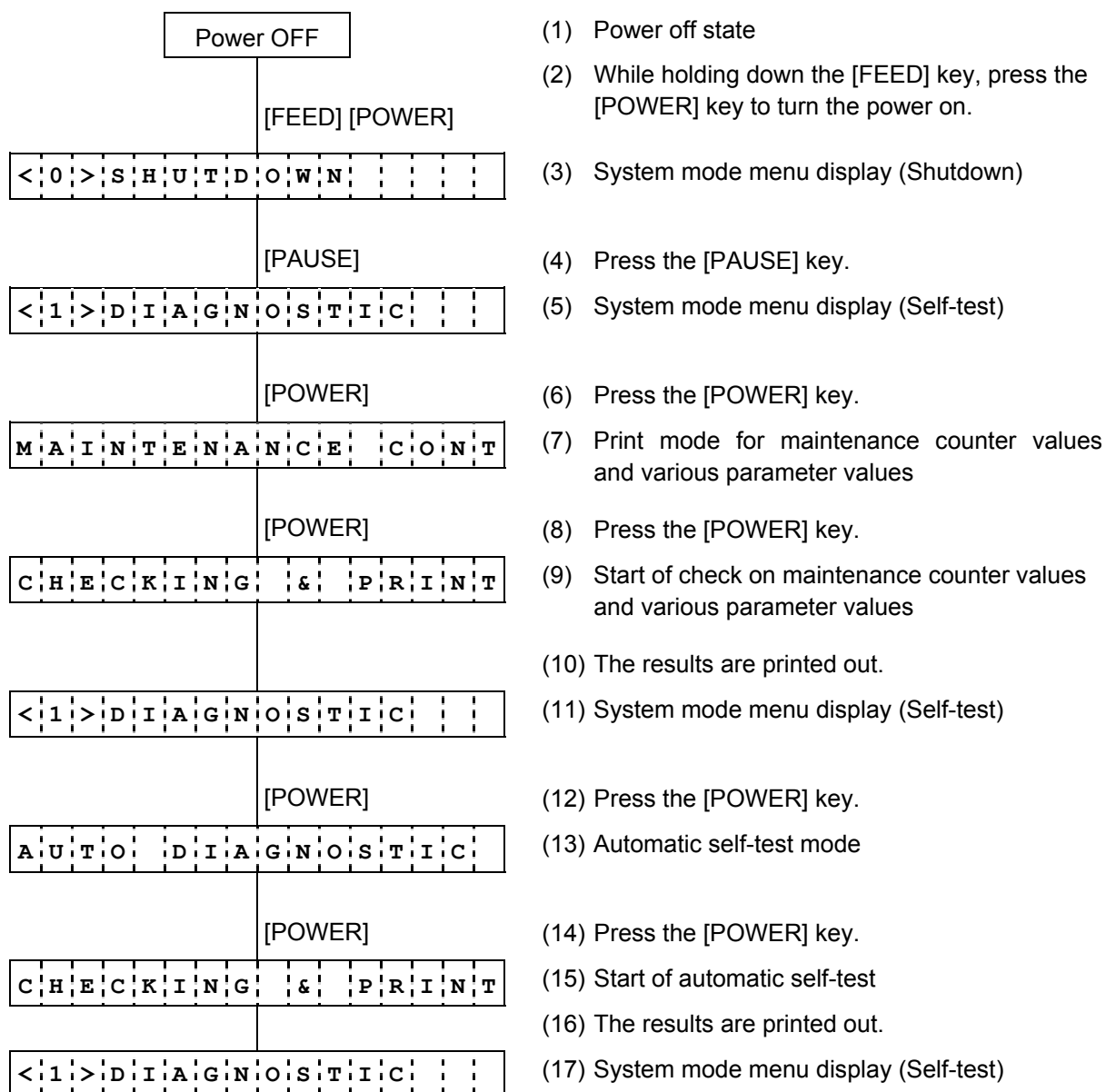


① DBCS model	J : Japanese (Japan model) C : Chinese (Global model) K : Korea F : No 2-byte codes
② Version information	IPL (BOOT) program version
③ Version information	Main program version
④ Version information	SBCS version
⑤ Version information	DBCS version
⑥ Version information	HTML version

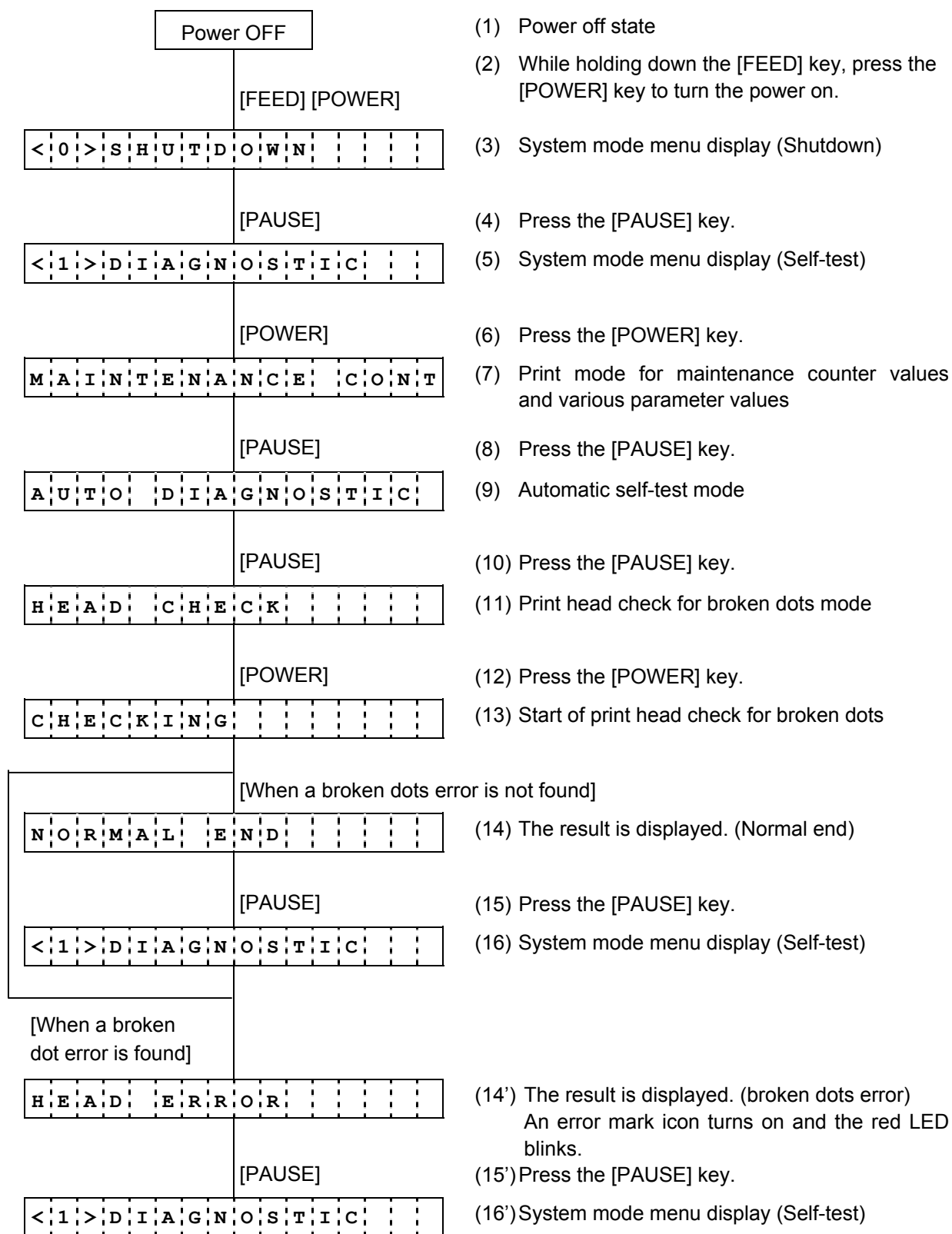
6.6.1 Self-test

6.6.1.1 Self-test Operation Example

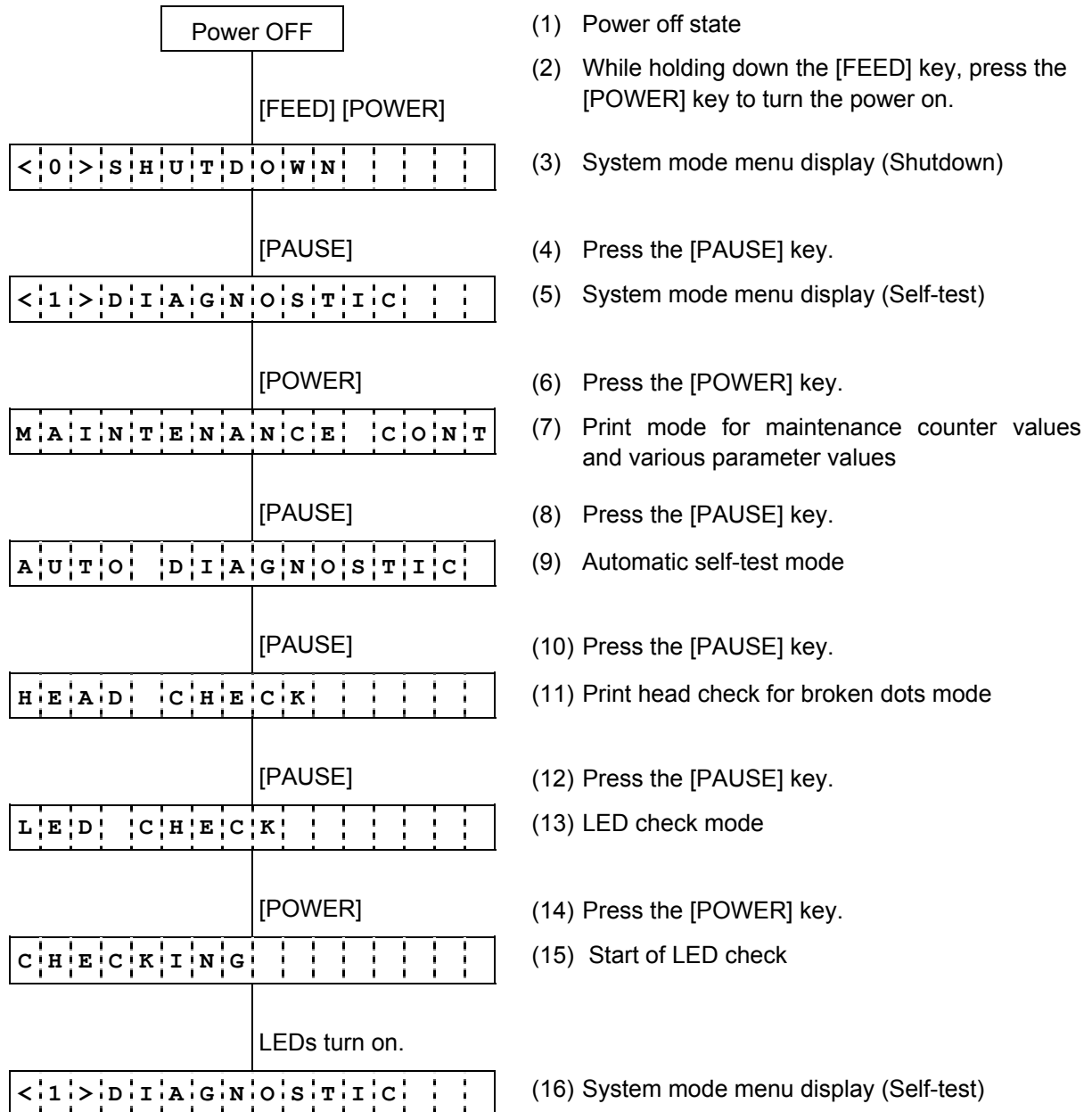
- (1) Printing of maintenance counter values, various parameter values, and automatic self-test result



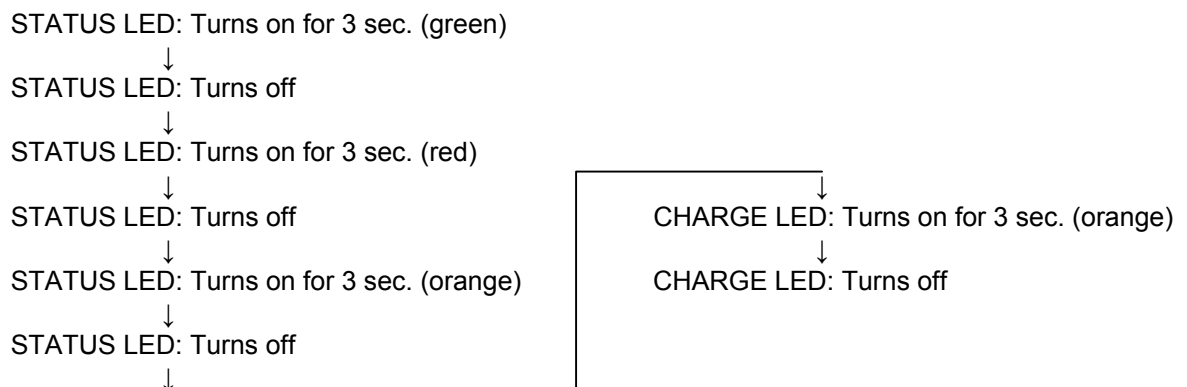
(2) Print head check for broken dots



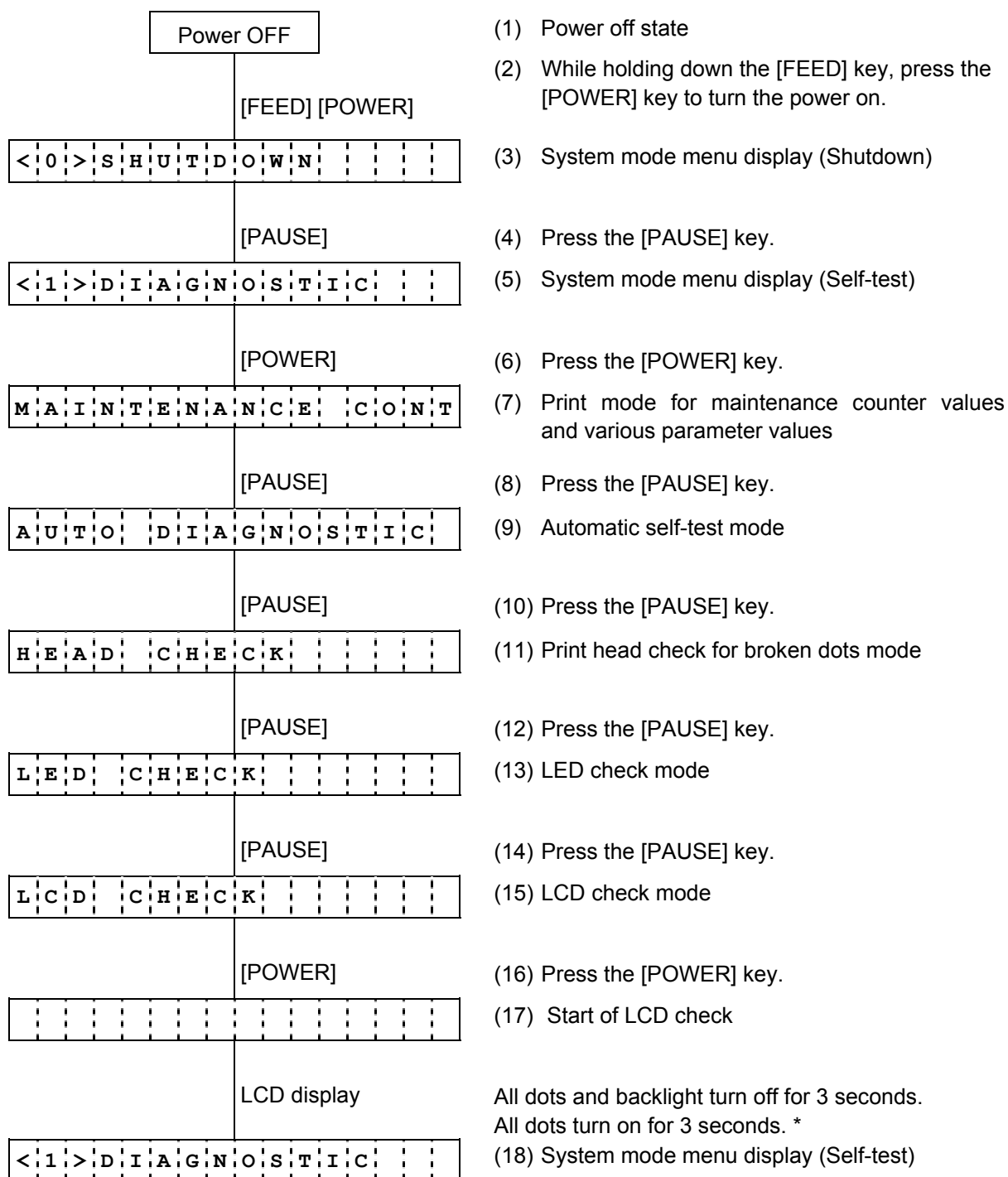
(3) LED check



LED lighting pattern

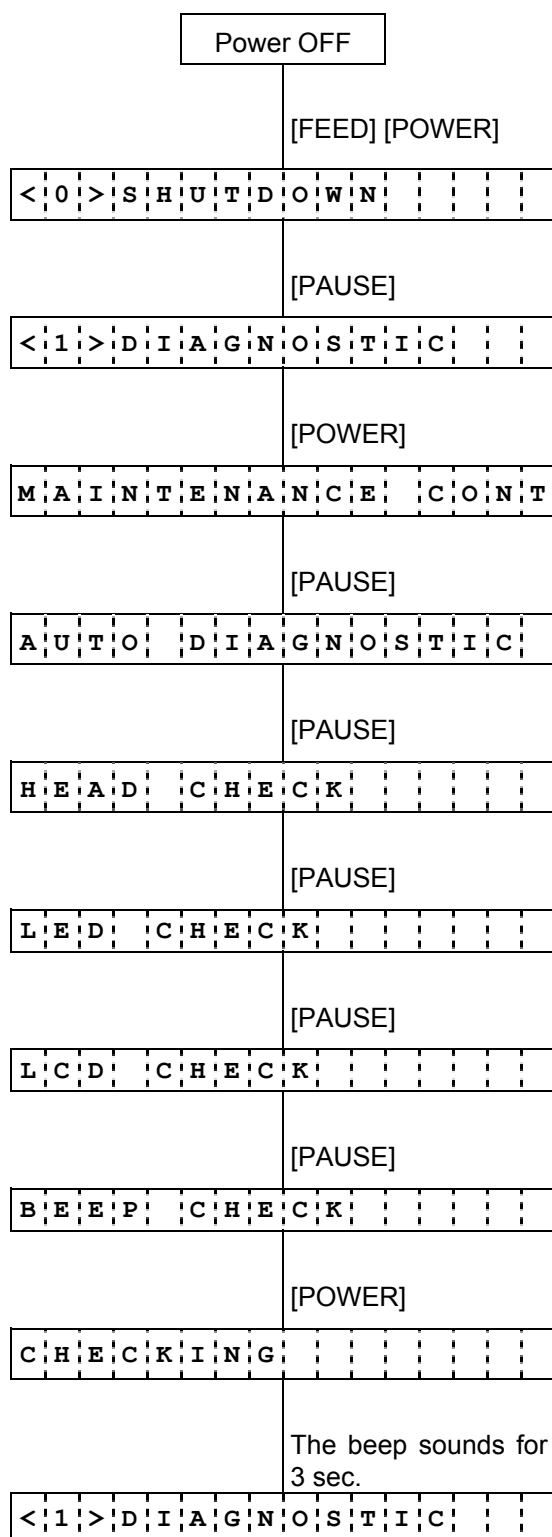


(4) LCD check



* When the [PAUSE] key is pressed with all LCD dots turned on, the printer stops under such condition. Pressing the [PAUSE] key again clears the status and the system mode menu is displayed.

(5) Beep check



- (1) Power off state
- (2) While holding down the [FEED] key, press the [POWER] key to turn the power on.
- (3) System mode menu display (Shutdown)
- (4) Press the [PAUSE] key.
- (5) System mode menu display (Self-test)
- (6) Press the [POWER] key.
- (7) Print mode for maintenance counter values and various parameter values
- (8) Press the [PAUSE] key.
- (9) Automatic self-test mode
- (10) Press the [PAUSE] key.
- (11) Print head check for broken dots mode
- (12) Press the [PAUSE] key.
- (13) LED check mode
- (14) Press the [PAUSE] key.
- (15) LCD check mode
- (16) Press the [PAUSE] key.
- (17) Beep check mode
- (18) Press the [POWER] key.
- (19) Start of beep check
- (20) System mode menu display (Self-test)

6.6.1.2 Self-test Items

(1) Printing of maintenance counter values and various parameter values

① Maintenance counter values

- Total label distance covered (cannot be cleared)
- Total label print distance covered (cannot be cleared)
- Label distance covered (1 to 5)
- Label print distance (1 to 5)
- RS-232C hardware error count
- System error count

② Various parameter values

[Value programmed on the PC]

- Feed amount fine adjustment value
- Print tone fine adjustment value
- Strip position fine adjustment value

[Value programmed using the keys]

- Feed amount fine adjustment value
- Print tone fine adjustment value
- Strip position fine adjustment value
- X-coordinate fine adjustment value
- Reflective sensor manual threshold fine adjustment value
- Transmissive sensor manual threshold fine adjustment value
- Print command language
- Printer ID
- Print type (BATCH/STRIP)
- Strip sensitivity
- Font zero
- Character code
- LCD language
- Control code
- EURO font code
- Automatic print head check for broken dots at power on
- MaxiCode specification
- Head division
- Head output division command parameter setting (*Supported from V1.1I.)
- Print head check for broken dots after cover close
- Resume printing after broken dots error
- Feed to top of feed after cover close
- B-SP series compatibility mode
- Linerless
- Post-print stop position setting (* Supported from V1.0E.)
- Back feed restriction setting (* Supported from V1.0E.)
- Strip issue back feed setting (* Supported from V1.0E later.)
- Label width setting for peel-off issue (*Supported from V1.0G only for B-EP2D.)
- XML
- Beep volume
- Auto power-off timing
- Auto power off after error (*Supported from V1.1H.)
- Power save mode timing
- LCD backlight off timing
- Battery charge mode (*Supported from V1.1I.)
- Writable character storage area
- BASIC file storage area
- PC save area

- Form storage area
- Graphic storage area
- LABEL form version number
- BASIC interpreter
- BASIC trace
- Shell

<<IrDA setting>>

- IrDA mode
- Maximum IrDA baud rate

<<USB setting>>

- USB serial number

<< RS-232C setting>>

- Baud rate
- Parity

<< Bluetooth setting>>

- Device nickname
- Address
- Inquiry scan time
- Inquiry/page scan interval
- Inquiry/page scan window
- Security level

<<WAN setting>>

- Wireless LAN enable/disable
- Printer IP address
- Gateway IP address
- Subnet mask
- Printer MAC address
- Socket communication
- DHCP
- DHCP ID
- DHCP host name
- ESS ID
- WINS
- WINS address
- LPR
- Wireless LAN standard
- Wireless LAN connection mode
- Encryption
- WPA authentication type
- Authentication type
- Default key
- 802.1X supplicant authentication type
- 802.11b channel
- 802.11b baud rate
- 802.11g channel
- Wireless LAN power save setting (* Supported from V1.0C.)
- Radio intensity (RSSI) indication (*Supported from V1.1I.)

Only the setting items of interface(s) installed on the printer are printed.

(2) Automatic self-test

① Model name

② Memory check

- Program area (Creation date, version, checksum)
- Boot area (Creation date, version, checksum)
- Font area (Version, checksum)
- Bit map Kanji ROM (Version, checksum)
- HTML (Creation date, version, checksum)
- EEPROM check
- SDRAM check

③ Sensor check

- Thermal head thermistor
- Ambient thermistor
- Reflective sensor
- Transmissive sensor
- No paper level
- Threshold level

④ Battery voltage

⑤ Installed interface

⑥ Loopback check

- IrDA
- RS-232C
- Bluetooth
- Wireless LAN

(When the wireless LAN is installed, version information is also displayed.)

Print Samples of Self-test Result (1/3)

(1) Maintenance counter values and various parameter values

TOTAL FEED	0.0m[JA]
TOTAL PRINT	0.0m
FEED	0.0m
FEED1	0.0m
FEED2	0.0m
FEED3	0.0m
FEED4	0.0m
PRINT	0.0m
PRINT1	0.0m
PRINT2	0.0m
PRINT3	0.0m
PRINT4	0.0m
232C ERR	0
SYSTEM ERR	0
[PC]	
FEED	+0.0mm
tone	+0step
PEEL	+0.0mm
[KEY]	
FEED	+0.0mm
tone	+0step
PEEL	+0.0mm
X ADJ.	+0.0mm
THRESHOLD(R)	1.0V
THRESHOLD(T)	1.4V
PCL MODE	[TPCL]
PRINTER ID	[00001]
PRINT TYPE	[AUTO]
PEEL LEVEL	[AUTO]
FONT	[0][PC-850]
MESSAGE	[ENGLISH]
CODE	[AUTO]
EURO CODE	[B0]
AUTO HD CHK	[OFF]
MAXI CODE SPEC.	[TYPE1]
HEAD DIVISION	[AUTO1]
HEAD DIV CMD	[OFF] *2
HEAD ERR CHECK	[OFF]
HEAD ERR PRINT	[OFF]
FEED CHECK	[OFF]
B-SP MODE	[OFF]
LINERLESS	[OFF]
PAPER STOP	[CUT] *1
BF.RESTRICT	[ON] *1
PEEL BF.	[OFF] *1
LABEL WIDTH	[>= 30mm] *3
XML	[OFF]
BEEP VOL	[1]
AUTO POWER OFF	[120min]
ERR POWER CTL	[ON] *4
SLEEP	[3sec]
LCD LIGHT OFF	[3sec]
CHARGE MODE	[NORMAL] *5
EXT CHR AREA	[XXXXKB]
BASIC AREA	[XXXXKB]
PC SAVE AREA	[XXXXKB]
FORM AREA	[XXXXKB]
GRAPHIC AREA	[XXXXKB]
FORM VER.	[0000000000]
	[0000000000]
BASIC	[OFF]
BASIC TRACE	[OFF]
SHELL	[OFF]

*1: PAPER STOP, BF.RESTRICT and PEEL BF. are supported from V1.0E.

*2: HEAD DIV CMD is supported from V1.1I.

*3: LABEL WIDTH is supported from V1.0G only for the B-EP2D. (This parameter value is not printed on the B-EP4D.)

*4: ERR POWER CTL is supported from V1.1H.

*5: CHARGE MODE is supported from V1.1I.

(Continued)

```

<< IrDA >>
IrDA MODE          [IrCOMM]
BAUD RATE          [115200]
<< USB >>
SERIAL NUMBER      [DISABLE]
                  [XXXXXXXXXXXX]
<< RS-232C >>
BAUD RATE          [9600]
PARITY             [EVEN]
<< BLUETOOTH >>
DEVICE NICKNAME
[                  ]
ADDRESS            [                  ]
INQUIRY            [EVERY]
SCAN INTERVAL      [2048]
SCAN WINDOW        [ 36]
SECURITY LEVEL     [OFF]
<< WIRELESS LAN >>
LAN                [OFF]
PRTR IP            [192.168.010.020]
GATE IP            [000.000.000.000]
SUBNET             [255.255.255.000]
MAC                [**_**_**_**_**]
SOCKET PORT [OFF][65535]
DHCP               [OFF]
DHCP ID            [                  ]
                  [                  ]
                  [                  ]
                  [                  ]
DHCP HOST NAME     [                  ]
                  [                  ]
                  [                  ]
ESS ID             [                  ]
                  [                  ]
WINS               [ON]
WINS IP            [xxx.xxx.xxx.xxx]
LPR               [OFF]
WLAN STANDARD      [11b/g]
WLAN MODE          [INFRA]
ENCRYPT            [OFF]
WPA MODE          [OFF]
AUTH              [OFF]
DEFAULT KEY        [1]
802.1X SUPPLICANT  [OFF]
802.11b CHANNEL    [01]
802.11b BAUD RATE  [11M]
802.11g CHANNEL    [01]
802.11g BAUD RATE  [54M]
POWER SAVE         [ON] *6
QUAL DISPLAY       [ON] *7

```

*5: POWER SAVE is supported from V1.0C.

*6: QUAL DISPLAY is supported from V1.1I.

NOTE: Print conditions: Label length of 358 mm, direct thermal print mode, no sensors used, one-label issue

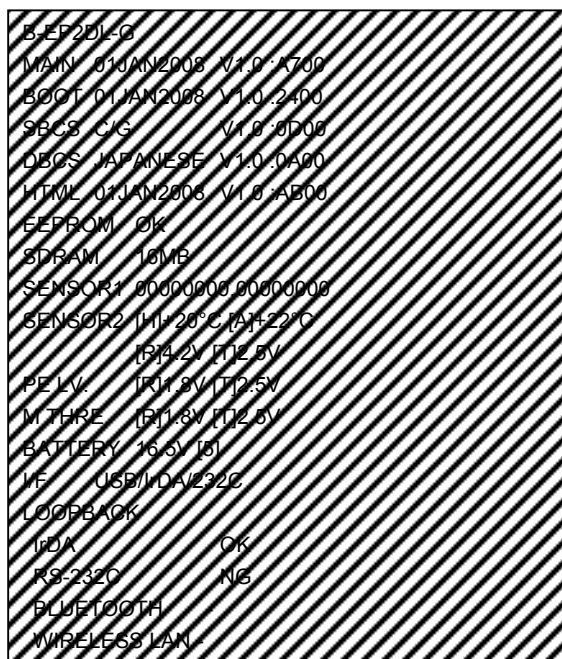
(2) Automatic self-test print example

```
B-EP2DL-G
MAIN 01JAN2008 V1.0 :A700
BOOT 01JAN2008 V1.0 :2400
SBCS C/G      V1.0 :0D00
DBCS JAPANESE V1.0 :0A00
HTML 01JAN2008 V1.0 :AB00
EEPROM OK
SDRAM 16MB
SENSOR1 00000000,00000000
SENSOR2 [H]+20°C [A]+22°C
        [R]4.2V [T]2.5V
PE LV.   [R]1.8V [T]2.5V
M THRE.  [R]1.8V [T]2.5V
BATTERY 16.8V [5]
I/F      USB/IrDA/232C
LOOPBACK
IrDA      OK
RS-232C   NG
BLUETOOTH -
WIRELESS LAN -
WIRELESS LAN VER. (*1)
```

(*1): Not displayed when the wireless LAN is not installed.

- NOTES:**
1. Print conditions: Label length of 90 mm, direct thermal print mode, no sensors used, one-label issue
 2. The character “°” used for “°C” may not be printed correctly, depending on the type of the character code selected.

(2) Automatic self-test (when there is an invalid setting)



```

BEEP2DLG
MAIN 01JAN2008 V1.0-A700
BOOT 01JAN2008 V1.0-2400
SBCS C/G V1.0-0D00
DBCS JAPANESE V1.0-0A00
HTML 01JAN2008 V1.0-AB00
EEPROM OK
SDRAM 16MB
SENSOR1 00000000.00000000
SENSOR2 [H] 20°C [A] 22°C
        [R] 4.2V [I] 2.5V
PELV. [R] 1.8V [I] 2.5V
MTHRE [R] 1.8V [I] 2.5V
BATTERY 16.5V [0]
IF USB/UDA/232C
LOOPBACK
UDA OK
RS-232C NG
BLUETOOTH
WIRELESS LAN

```

When there is an invalid setting, the slant line pattern is printed.

Conditions to print slant line pattern:

- Battery voltage per cell is less than 2.3 V or 4.25V or more.
- Head temperature is -25°C or less or 65°C or more.
- Ambient temperature is -25°C or less or 65°C or more.
- Transmissive sensor input voltage is 0V or 5V.
- Reflective sensor input voltage is 0V or 5V.
- Transmissive sensor: When the D/A value is 0, the A/D value read again is 3V or more. (*1)
- Reflective sensor: When the D/A value is 0, the A/D value read again is 3V or more. (*2)
- Loopback test error (except for RS-232C)

(*1): When the transmissive sensor is attached upside down, the A/D value sometimes becomes 3V or more when the D/A value is set to 0.

(*2): When the reflective sensor is attached upside down, the A/D value sometimes becomes 3V or more when the D/A value is set to 0.

6.6.1.3 Self-test Result Items

(1) Maintenance counter values

Item	Description	Range
TOTAL FEED	Total label distance covered (cannot be cleared)	0.0 to 320000.0 m in units of 10 cm
TOTAL PRINT	Total label print distance covered (cannot be cleared)	0.0 to 320000.0 m in units of 10 cm
FEED	Current label distance covered	0.0 to 320000.0 m in units of 10 cm
FEED (1 to 4)	Previous label distance covered 1 to 4	0.0 to 320000.0 m in units of 10 cm
PRINT	Current label print distance	0.0 to 320000.0 m in units of 10 cm
PRINT (1 to 4)	Previous label print distance 1 to 4	0.0 to 320000.0 m in units of 10 cm
232C ERR	RS-232C hardware error count	0 to 255
SYSTEM ERR	System error count	0 to 15

* For details, refer to the section, "6.6.8.2.3 Maintenance Counter Clear"

Maintenance Counter	Count Conditions
Total label distance covered Label distance covered	Counts whenever the paper feed motor is driven, for example, to feed, print, or exit a label. (Also counts during a reverse feed operation.) When the power is turned off, a label distance of up to 50.0 cm may be rounded down and backed up. When the label distance covered reaches the maximum value, the maintenance counter must be cleared. Otherwise, the total label distance covered cannot be updated.
Label print distance	Counts while printing. (Counting is not performed during a paper exit or reverse feed operation.) When the power is turned off, a print distance of 5.5 m or less is rounded down and backed up.
RS-232C hardware error count	Counts when a parity error, overrun error, or framing error occurs. * When data of several bytes is transmitted continuously, counting is performed per byte.
System error count	Counts when a No.20 system error described in the section, "5.20 LCD MESSAGES AND LED INDICATIONS", occurs.

(2) Various parameter values

Item	Description	Value
[PC]		
FEED	Feed amount fine adjustment	-50.0mm to +50.0mm (See NOTE 1 under the table.)
TONE(T)	Print tone fine adjustment	-30step to +30step
PEEL	Strip position fine adjustment	-2.0mm to +3.0mm
[KEY]		
FEED	Feed amount fine adjustment	-50.0mm to +50.0mm
TONE(T)	Print tone fine adjustment	-30step to +30step
PEEL	Strip position fine adjustment	-2.0mm to +3.0mm
X ADJ.	X-coordinate fine adjustment	-99.9mm to +99.9mm
THRESHOLD<R>	Reflective sensor manual threshold fine adjustment	0.0V to 4.0V
THRESHOLD<T>	Transmissive sensor manual threshold fine adjustment	0.0V to 4.0V
PCL MODE	Print command language	TPCL TPCL1 LABEL RECEIPT RECEIPT1 ESC/POS
PRINTER ID	Printer ID	00000 to 65535
PRINT TYPE	Print type (BATCH/STRIP)	AUTO: Print depending on the sensor used BATCH: Fixed to batch issue STRIP: Fixed to strip issue
PEEL LEVEL	Strip sensitivity	AUTO 1, 2
FONT	Font zero	0: Without slash Ø: With slash
	Character code	PC-850: PC-850 PC-852: PC-852 PC-857: PC-857 PC-8: PC-8 PC-851: PC-851 PC-855: PC-855 PC-866: PC-866 PC-1250: PC-1250 PC-1251: PC-1251 PC-1252: PC-1252 PC-1253: PC-1253 PC-1254: PC-1254 PC-1257: PC-1257 LATIN9: LATIN9 Arabic: Arabic UTF-8: UTF-8
MESSAGE	LCD language	ENGLISH: English GERMAN: German FRENCH: French DUTCH: Dutch SPANISH: Spanish JAPANESE: Japanese ITALIAN: Italian

Item	Description	Value	
CODE	Control code	AUTO: Automatic selection ESC LF NUL: ESC LF NUL method { }: { } method	
EURO CODE	EURO font code	Any code	
AUTO HD CHK	Automatic print head check for broken dots	OFF: An automatic print head check for broken dots is not performed. ON: An automatic print head check for broken dots is performed.	
MAXI CODE SPEC.	MaxiCode specification	TYPE1: Compatible with existing versions TYPE2: Special specification	
HEAD DIVISION	Head division	B-EP2 (2-inch)	B-EP4 (4 inch)
		AUTO1 AUTO2 DIV3 AUTO	AUTO1 DIV6 AUTO
HEAD DIV CMD * Supported from V1.1I.	Head output division parameter of AY command	OFF: The parameter is not processed. ON: The parameter is processed.	
HEAD ERR CHECK.	Print head check for broken dots after cover close	OFF: A print head check for broken dots is not performed after the cover is closed. ON: A print head check for broken dots is performed after the cover is closed.	
HEAD ERR PRINT	Resume printing after broken dots error	OFF: The printer does not resume printing after a broken dots error occurs. ON: The printer resumes printing after a broken dots error occurs.	
FEED CHECK	Feed to top of feed after cover close	OFF: No feed is performed after the cover is closed. ON: A feed is performed after the cover is closed.	
B-SP MODE	B-SP series compatibility mode	OFF: B-SP series compatibility mode is disabled. ON: B-SP series compatibility mode is enabled.	
LINERLESS	Linerless	OFF: Linerless setting is disabled. ON: Linerless setting is enabled.	
PAPER STOP * Supported from V1.0E	Post-print stop position setting	CUT: Stop at the cut position HEAD: Stop at the head position	
BF.RESTRICT * Supported from V1.0E	Back feed restriction setting	ON: Back feed restricted OFF: No back feed restricted	
PEEL BF. * Supported from V1.0E	Strip issue back feed setting	OFF: Back feed allowed ON: No back feed allowed	
LABEL WIDTH * Supported from V1.0G only for the B-EP2D.	Label width setting for peel-off issue	>=30: 30mm or more <30: Less than 30mm	
XML	XML	OFF: XLM setting is disabled. ON: XLM setting is enabled.	
BEEP VOL	Beep (buzzer) volume	OFF 1 to 3	

Item	Description	Value	
AUTO POWER OFF	Auto power-off timing	OFF 1 to 300 min.	
ERR PW CTL * Supported from V1.1H	Auto power off after an occurrence of an error	OFF: The power is not turned off. ON: The power is turned off.	
SLEEP	Power save mode timing	1 to 30 sec.	
LCD LIGHT OFF	LCD backlight off timing	OFF 1 to 30 sec.	
CHARGE MODE * Supported from V1.1I	Battery charge mode	NORMAL: Normal mode LOW: Battery protection mode	
EXT CHR AREA	Writable character storage area size	0 to 3200 KB (in units of 64 KB)	(See NOTE 2 under the table.)
BASIC AREA	BASIC file storage area size	0 to 896 KB (in units of 64 KB)	
PC SAVE AREA	PC save area size	0 to 896 KB (in units of 64 KB)	
FORM AREA	Form storage area size	0 to 896 KB (in units of 64 KB)	
GRAPHIC AREA	Graphic storage area size	0 to 192 KB (in units of 64 KB)	
FORM VER.	LABEL form version number display	0000000000 to 9999999999 0000000000 to 9999999999	
BASIC	BASIC interpreter	OFF: BASIC interpreter function is disabled. ON: BASIC interpreter function is enabled.	
BASIC TRACE	BASIC trace	OFF: BASIC trace function is disabled. ON: BASIC trace function is enabled.	
SHELL	Shell function	OFF: Shell function is disabled. ON: Shell function is enabled.	

Item	Description	Value
<<IrDA Setting>		
IrDA MODE	IrDA mode	IrCOMM TEC OFF
BAUD RATE	Maximum IrDA baud rate	9600 (bps) 19200 (bps) 38400 (bps) 57600 (bps) 115200 (bps)

Item	Description	Value
<<USB Setting>		
SERIAL NUMBER	Enable/disable of USB serial number	DISABLE ENABLE
	USB serial number	8S01FA590001

* USB serial number differs depending on the date of setting and a PC used for setting at the factory.

Item	Description	Value
<<RS-232C Setting> * When the RS-232C module is installed.		
BAUD RATE	RS-232C baud rate	9600 (bps) 19200 (bps) 38400 (bps) 57600 (bps) 115200 (bps)
PARITY	RS-232C Parity	EVEN NONE

Item	Description	Value
<<Bluetooth Setting> * When the Bluetooth module is installed.		
DEVICE NICKNAME	Bluetooth device nickname	
ADDRESS	Bluetooth device address	Fixed module address
INQUIRY	Inquiry scan time	OFF 60 sec. EVERY
SCAN INTERVAL	Inquiry/page scan interval	18 to 4096
SCAN WINDOW	Inquiry/page scan window	18 to 4096
SECURITY LEVEL	Security level	OFF LINK

Item	Description	Value
<<WLAN Setting> * When the wireless LAN module is installed.		
LAN	Wireless LAN enable/disable	OFF: Disable ON: Enable
PRTR IP	Printer IP address	***.***.***.***
GATE IP	Printer gateway IP address	***.***.***.***
SUBNET	Printer subnet mask	***.***.***.***
MAC	Printer MAC address	Fixed module address
SOCKET PORT	Socket communication port number	OFF: Socket communication function is disabled. ON: Socket communication function is enabled. Port No.: 0 to 65535
DHCP	DHCP	OFF: DHCP function is disabled. ON: DHCP function is enabled.
DHCP ID	DHCP ID (32 byte/ASCII in hexadecimal)	0000000000000000 0000000000000000 0000000000000000 0000000000000000
DHCP HOST NAME	DHCP host name (32 byte/ASCII)	
ESS ID	ESS ID	
WINS	WINS	OFF: WINS setting is disabled. ON: WINS setting is enabled. DHCP: DHCP function is enabled.
WINS IP	WINS address	***.***.***.***
LPR	LPR	OFF: LPR setting is disabled. ON: LPR setting is enabled.
WLAN STANDARD	Wireless LAN standard	11b/g 11b 11g
WLAN MODE	Wireless LAN connection mode	ADHOC INFRA

Item	Description	Value
ENCRYPT	Encryption	OFF WEP40 WEP104 AES TKIP
WPA MODE	WPA authentication type	OFF WPA WPA-PSK WPA2 WPA2-PSK
AUTH	Authentication type	OFF OPEN SYSTEM SHARED KEY
DEFAULT KEY	Default key	1 to 4
802.1X SUPPLICANT	802.1X supplicant authentication type	OFF EAP-TLS EAP-TTLS LEAP PEAP EAP-MD5 EAP-FAST
802.11b CHANNEL	802.11b channel	1 to 14
802.11b BAUD RATE	802.11b baud rate	11M 5.5M 2M 1M
802.11g CHANNEL	802.11g channel	1 to 13
802.11g BAUD RATE	802.11g baud rate	54M 48M 36M 24M 18M 12M 9M 6M 11M 5.5M 2M 1M
POWER SAVE * Supported from V1.0C	Wireless LAN power save	ON OFF
QUAL DISPLAY * Supported from V1.1I	Radio intensity (RSSI) indication	OFF: Not displayed ON: Displayed

NOTES: 1. For 203 dpi, the head density is 8 dots/mm. The operation to be performed is the same for both cases: when the value is set to “x.2 mm” and when the value is set to “x.3 mm”. Therefore, “x.3 mm” is printed in the self-test result, even if “x.2 mm” is set. Similarly, if “x.7 mm” is set, “x.8 mm” is printed in the self-test result

2. The size depends on DBCS installed. See the table below.

Writable character	QM type	When downloading Chinese	128 KB
		When downloading Korean	1216 KB
	JA type	When downloading Kanji	448 KB
	When not installing Kanji		2304 KB
BASIC area	QM type	When downloading Chinese	320 KB
		When downloading Korean characters	320 KB
	JA type	When downloading Kanji	320 KB
	When not installing Kanji		320 KB
PC save area	QM type	When downloading Chinese	256 KB
		When downloading Korean characters	256 KB
	JA type	When downloading Kanji	256 KB
	When not installing Kanji		256 KB
Form area	QM type	When downloading Chinese	192 KB
		When downloading Korean	192 KB
	JA type	When downloading Kanji	192 KB
	When not installing Kanji		192 KB
Graphic area	QM type	When downloading Chinese	128 KB
		When downloading Korean	128 KB
	JA type	When downloading Kanji	128 KB

(3) Details of self-test print

B-EP2DL-G
Model name
B-EP2DL-G: B-EP2, 203 dpi
B-EP4DL-G: B-EP4, 203 dpi

MAIN 01JAN2008 V1.0A:1A00
Checksum
Version
Creation date
(Day-Month-Year)
Name MAIN: Program area

BOOT 01JAN2008 V1.0 :2400
Checksum
Version
Creation date
(Day-Month-Year)
Name BOOT: Boot area

SBCS C/G V1.0 :0D00
Checksum of font area
Version
Character generator
Name SBCS: 1-byte font

DBCS CHINESE :0A00
Checksum of 2-byte fonts
JAPANESE: Japanese Kanji
CHINESE: Chinese
KOREAN: Korean
EXP. AREA: Free character generator
Name DBCS: 2-byte fonts

HTML 01JAN2008 V1.0 :AB00

Checksum

Version

Creation date
(Day-Month-Year)

Name HTML: HTML area

EEPROM OK

OK: Data in the check area can be properly read/written.
NG: Data in the check area cannot be properly read/rewritten.

Backup memory (EEPROM)

SDRAM 16MB

Capacity of SDRAM

Memory for the system and drawing

<Supplemental Explanation>

- When the [FEED] and [PAUSE] keys are simultaneously pressed while a self-test item is selected, the LCD returns to the system mode menu display.
- Normally, the last two digits of the checksum of the program area are 0.
- If the first byte of the Kanji ROM is not legitimate, checksum is not calculated and "0000" is printed.
- Version and checksum vary depending on the software version.

(4) Sensor check

SENSOR1 00000000, 00000010

Blank (Fixed to 0)

Cover open sensor
1: The cover is closed.
(Printing is not performed when the cover is open.)

Blank (Fixed to 0)

Blank (Fixed to 0)

SENSOR2 [H] +20 °C [A] +22 °C

— Ambient thermistor status
(-15 °C to 99°C, --°C: if the temperature cannot be detected)
— Thermal head thermistor status (-15 °C to +70 °C)

[R] 4.2V [T] 2.5V

— Transmissive sensor status (0.0V to 5.0V)
— Reflective sensor status (0.0V to 5.0V)

PE LV. [R] 1.8V [T] 2.5V

— Transmissive sensor for no paper level (0.0V to 5.0 V)
— Reflective sensor for no paper level (0.0V to 5.0 V)
— No paper level

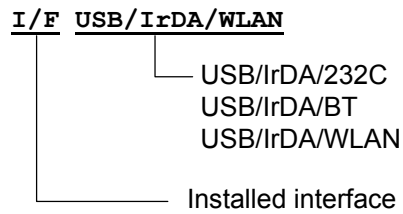
M THRE. [R] 1.8V [T] 2.5V

— Transmissive sensor for manual threshold level (0.0V to 5.0V)
— Threshold value

BATTERY 16.8V [5]

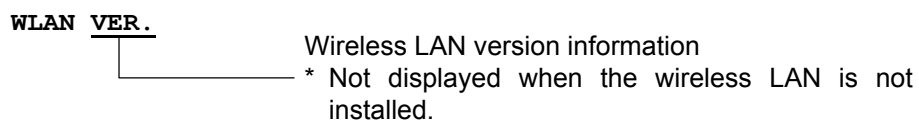
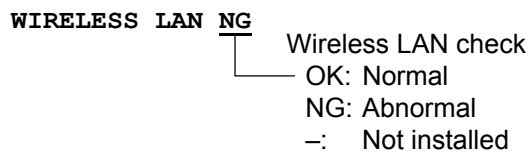
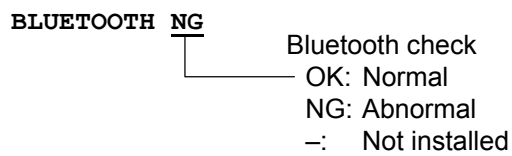
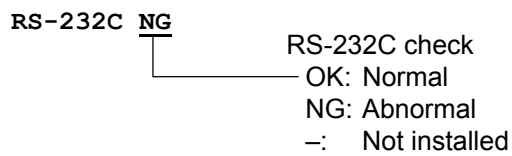
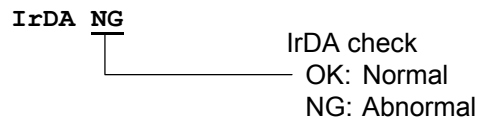
— Battery level
 B-EP2 [1]: 7.2V or less
 [2]: 7.3V to 7.4V
 [3]: 7.5V to 7.7V
 [4]: 7.8V to 7.9V
 [5]: 8.0V to 8.4V
 B-EP4 [1]: 14.0V or less
 [2]: 14.1V to 14.6V
 [3]: 14.7V to 15.2V
 [4]: 15.3V to 15.8V
 [5]: 15.9V to 16.8V
— Battery voltage
 B-EP2: 7.3V to 8.4V
 B-EP4: 14.1V to 16.8V

(5) Installed interface



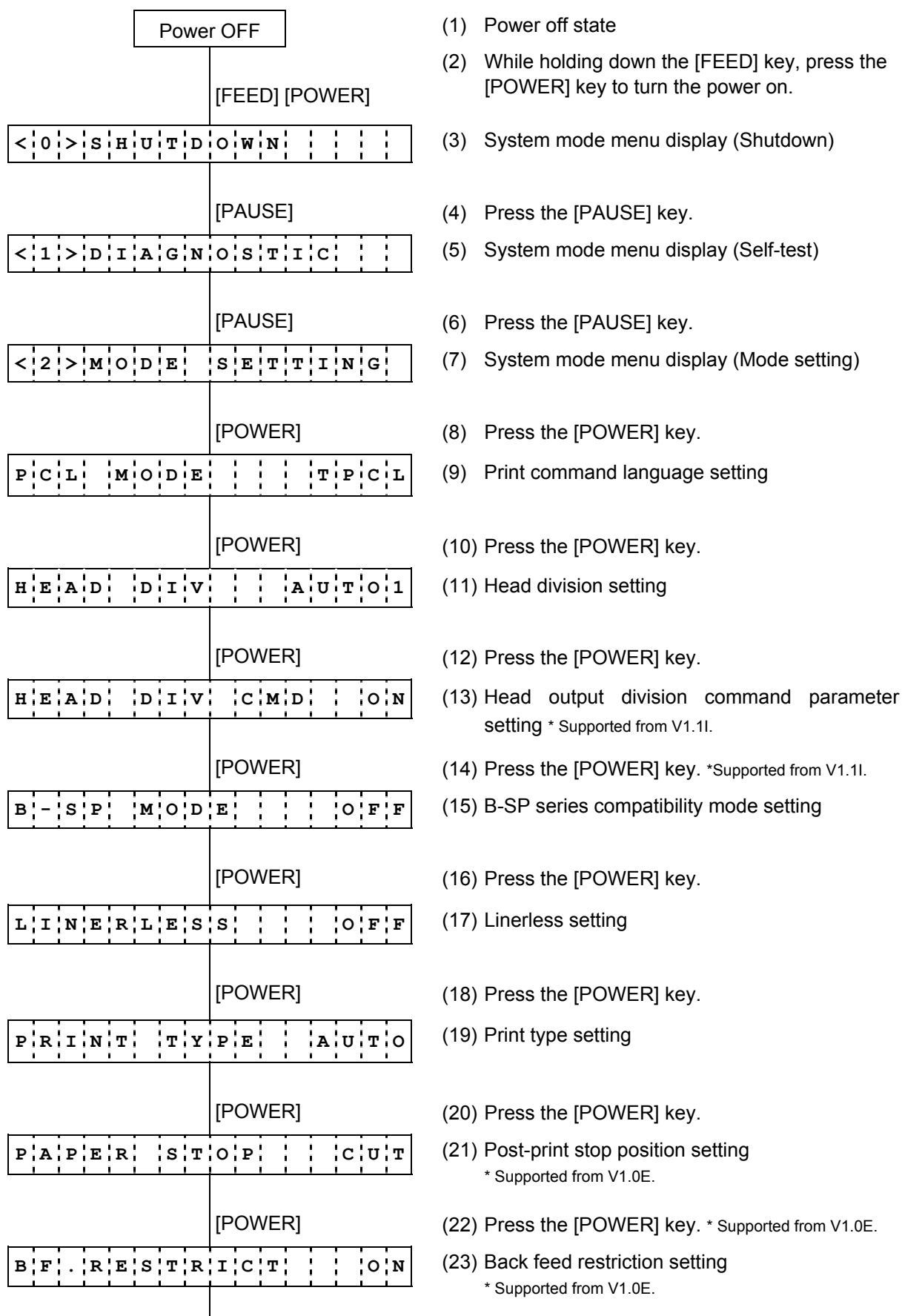
(6) Loopback test result

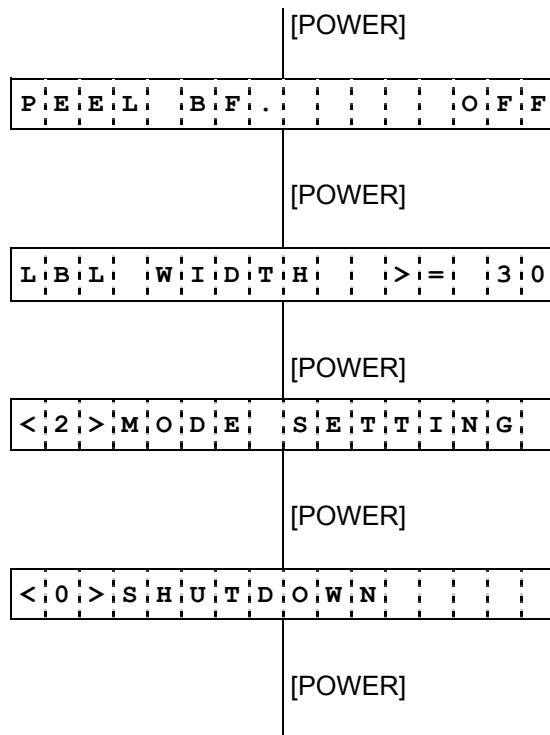
LOOPBACK



6.6.2 Mode Setting

6.6.2.1 Mode Setting Operation Example



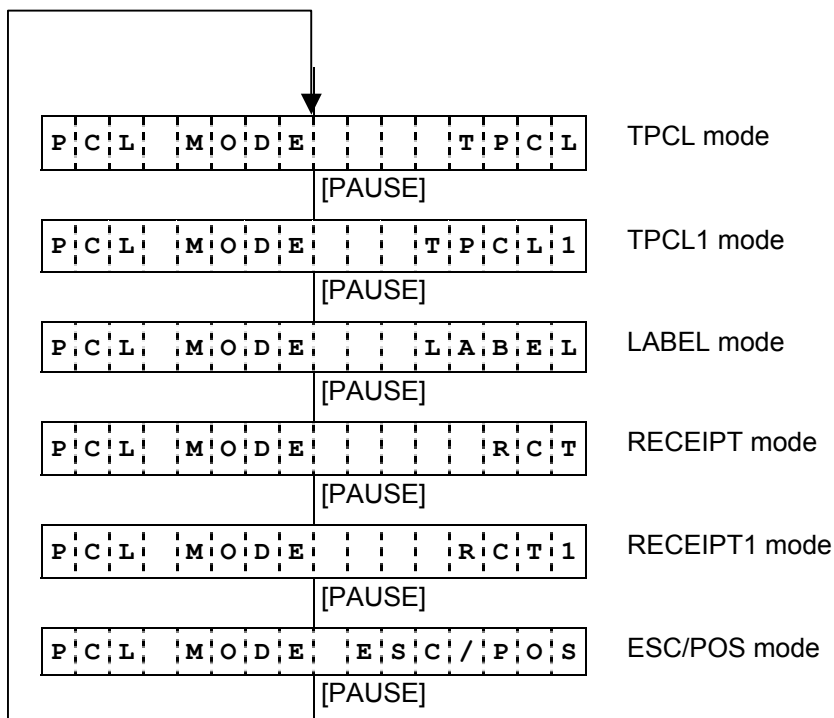


- (24) Press the [POWER] key.
* Supported from V1.0E.
- (25) Strip issue back feed setting
* Supported from V1.0E.
- (26) Press the [POWER] key.
* Supported from V1.0E.
- (27) Label width setting for peel-off issue
* Supported from V1.0G.
- (28) Press the [POWER] key. * Supported from V1.0G.
- (29) System mode menu display (Mode setting)
- (30) Hold down the [POWER] key for 3 seconds or more.
- (31) System mode menu display (Shutdown)
- (32) Press the [POWER] key.
* The setting is updated at shutdown.

6.6.2.2 Mode Setting Items

6.6.2.2.1 Print Command Language Setting (PCL MODE)

This setting selects print mode.



Default value: TPCL

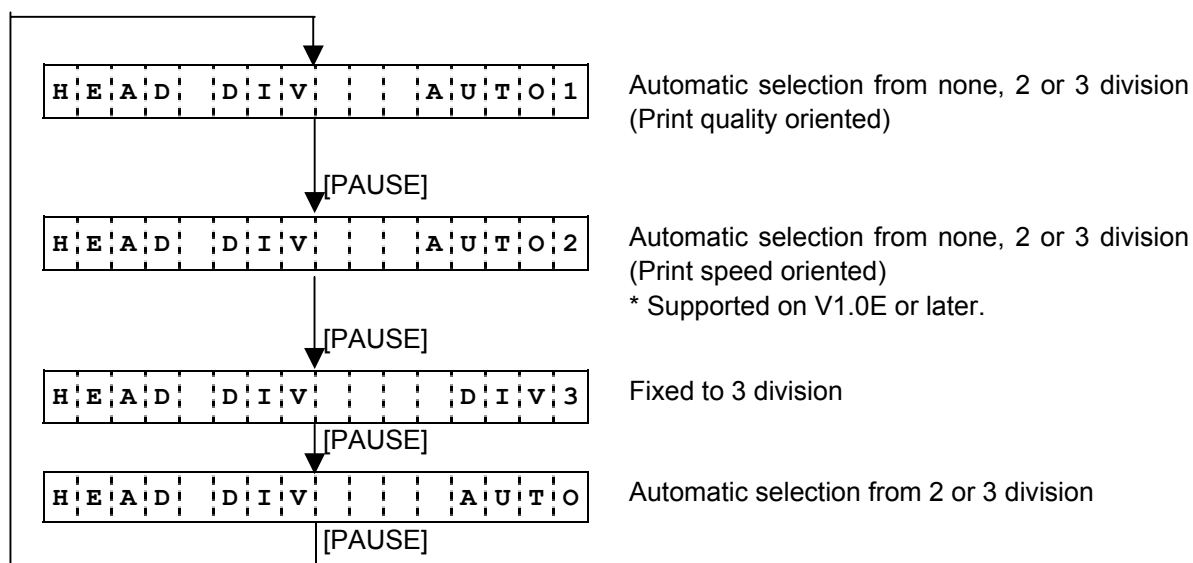
<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this parameter setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.2.2.2 Head Division Setting (HEAD DIV)

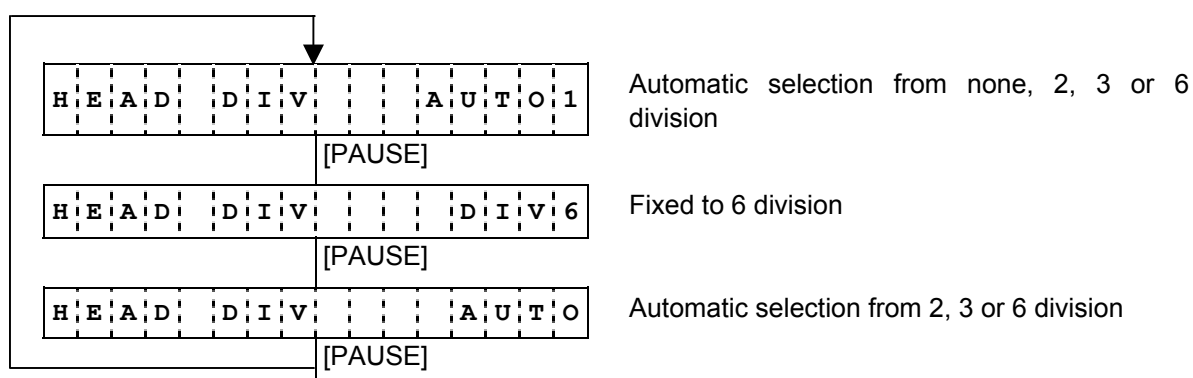
When a printing ratio per line is high, the value of this setting is changed to prevent print tone from becoming lighter.

B-EP2



Default value: AUTO1 (none, 2 division or 3 division)

B-EP4



Default value: AUTO1 (none, 2 division, 3 division or 6 division)

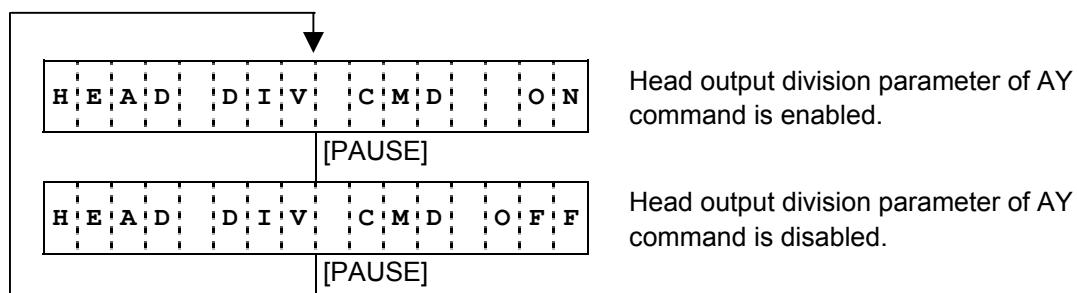
<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this parameter setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.2.2.3 Head Output Division Command Parameter Setting (HEAD DIV CMD)

* Supported from V1.11.

This setting enables or disables the head output division parameter of AY command.



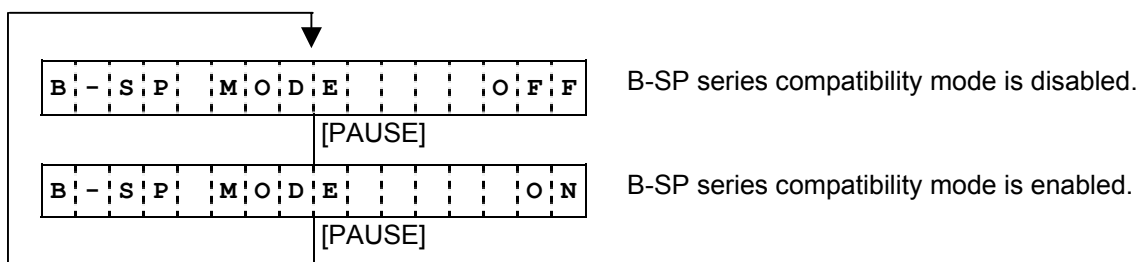
Default value: ON (Head output division parameter of AY command is enabled.)

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this parameter setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.2.2.4 B-SP Series Compatibility Mode Setting (B-SP MODE)

This setting enables the use of software assets created during the development of the B-SP series.



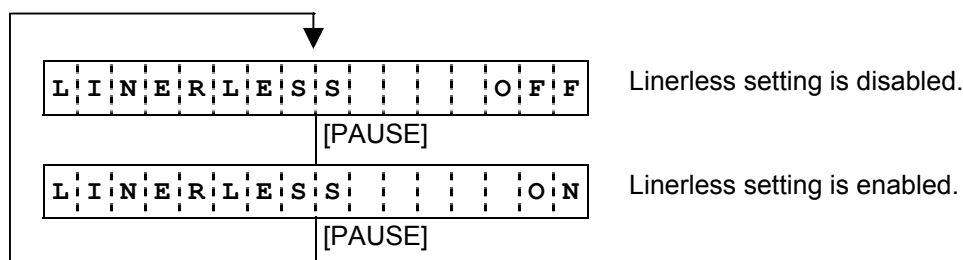
Default value: OFF (B-SP series compatibility mode is disabled.)

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this parameter setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.
- This setting allows the use of software assets of the B-SP series as they are, but the area where the mechanism is different cannot be used (no compatibility).

6.6.2.2.5 Linerless Setting (LINERLESS)

This setting is for using a linerless label.



Default value: OFF (Linerless setting is disabled.)

<Commentary>

- When linerless setting is enabled:
 - On V1.0D or earlier, no back feed is performed.
 - On V1.0E or later, the back feed amount becomes less, compared to when the linerless setting is disabled, as described below. Accordingly, an unprintable area increases at a print start time.

When linerless mode is turned off (common to the 2-inch and 4-inch heads)

Command mode	Back feed amount (Unprintable area when starting printing immediately after a back feed)	
TPCL	B-SP series compatible mode ON	B-SP series compatible mode OFF
	7.3 mm (3.0 mm)	9.3 mm (1.0 mm)
Label	Back feed fine adjustment enabled	Back feed fine adjustment disabled
	7.3 mm (3.0 mm)	5.3 mm (5.0 mm)
Receipt	2.0 mm	
ECR/POS		

When linerless mode is turned on:
(2-inch head)

Command mode	Back feed amount (Unprintable area when starting printing immediately after a back feed)	
TPCL	B-SP series compatible mode ON	B-SP series compatible mode OFF
	7.3 mm (3.0 mm)	7.3 mm (3.0 mm)
Label	Back feed fine adjustment enabled	Back feed fine adjustment disabled
	7.3 mm (3.0 mm)	5.3 mm (5.0 mm)
Receipt	2.0 mm	
ECR/POS		

(4-inch head)

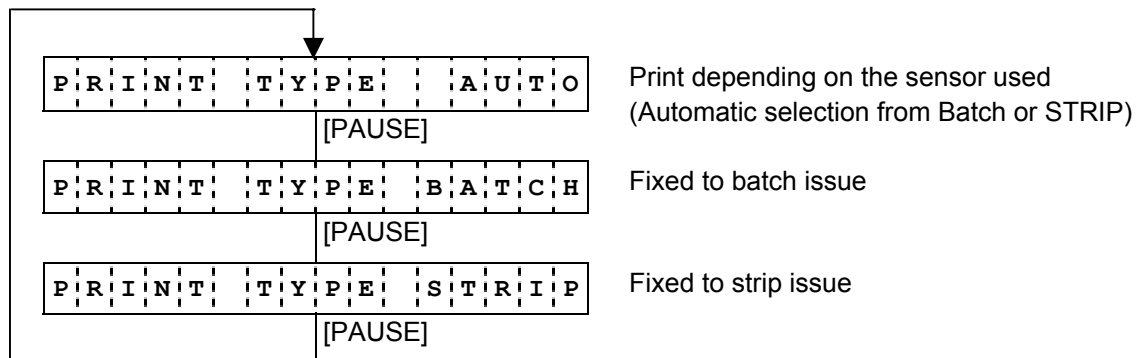
Command mode	Back feed amount (Unprintable area when starting printing immediately after a back feed)	
	B-SP series compatible mode ON	B-SP series compatible mode OFF
TPCL	5.3 mm (5.0 mm)	5.3 mm (5.0 mm)
Label	Back feed fine adjustment enabled	Back feed fine adjustment disabled
	5.3 mm (5.0 mm)	5.3 mm (5.0 mm)
Receipt	2.0 mm	
ECR/POS		

- When linerless setting is enabled, the printer operates with the AUTO setting although AUTO1 or AUTO2 (supported on V1.0E or later only on the B-EP2DL) is selected in head division setting.
- When linerless setting is changed from OFF (disabled) to ON (enabled), back feed restriction is automatically turned OFF (back feed not restricted). [on V1.0E or later]
When linerless setting enable/disable setting is changed from ON (enabled) to OFF (disabled), back feed restriction is automatically turned ON (back feed restricted). [on V1.0E or later]
- When linerless setting is enabled, whether or not to perform a back feed is determined depending on back feed restriction setting regardless of sensor setting. [on V1.0E or later]

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this parameter setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.2.2.6 Print Type Setting (PRINT TYPE)



Default value: AUTO (automatic selection from BATCH or STRIP)

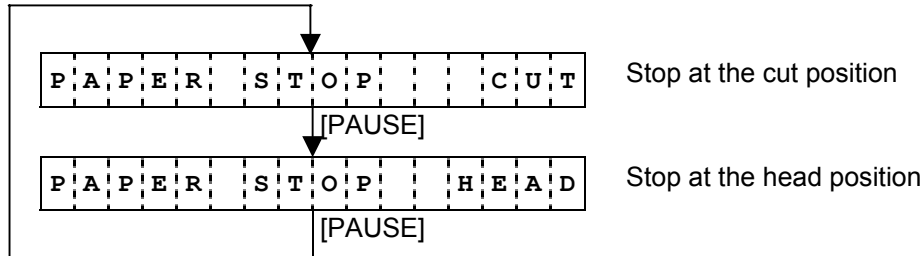
<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this parameter setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.2.2.7 Post-print Stop Position Setting (PAPER STOP) * Supported on V1.0E or later.

When back feed restriction is enabled (ON), printing is disabled on a label located between the head and the cutter during next printing after an issue (of one or more labels) since no back feed is performed. To prevent such waste, stop position setting is performed.

* For details, refer to the External Equipment Interface Specification (EAA-02465).



Default value: CUT (Stop at the cut position)

<Commentary>

Both settings (stop at the cut position/stop at the head position) have advantages and disadvantages.

[Stop at the cut position]

Advantage: Labels can be cut with the cutter after printing is complete.

Disadvantage: A label is wasted during next printing after printing is complete.

[Stop at the head position]

Advantage: Printing can be continued without wasting labels after printing is complete.

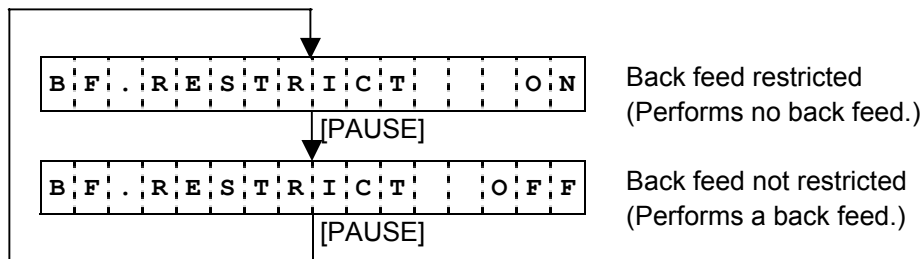
Disadvantage: Since a gap between labels is not located at the cutter position after printing is complete, cutting is disabled until the [FEED] key is pressed.

Cutting is not performed easily on labels after printing is complete. If cutting is performed forcibly, the labels may be dislodged, causing printing to be misaligned.

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this parameter setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.2.2.8 Back Feed Restriction Setting (BF.RESTRICT) * Supported on V1.0E or later.



Default value: ON (Back feed restricted)

<Commentary>

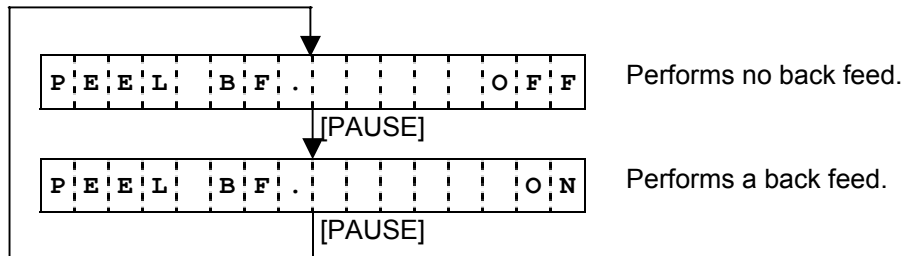
- During label issue with sensor type specified (transmissive/reflective sensor) under the following conditions, this setting determines whether or not to perform a back feed.
However, when linerless setting is enabled, the following conditions are ignored and whether or not to perform a back feed is determined according to this setting.
 - The label pitch is 20.0 mm or more and less than 24.0 mm and the effective print length is less than 15.0 mm.
 - The label pitch is less than 20.0 mm.
- During label issue without sensor type specified, whether or not to perform a back feed is determined according this setting.
- When a feed is performed by using the [FEED] key or the Feed command, no back feed is performed. However, when the label pitch is less than a distance between the head and the sensor (11.5 mm), a back feed is performed regardless of this setting.

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this parameter setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.
- When back feed restriction is disabled (to perform a back feed), the paper stops at the cut position regardless of the post-print stop position setting (stop at the cut position/stop at the head position) in section 6.6.2.2.6.
- When linerless setting is changed from OFF (disabled) to ON (enabled), back feed restriction is automatically turned OFF (back feed not restricted).
When linerless setting is changed from ON (enabled) to OFF (disabled), back feed restriction is automatically turned ON (back feed restricted).

6.6.2.2.9 Strip Issue Back Feed Setting (PEEL BF.) * Supported on V1.0E or later.

When strip position fine adjustment is set to – (negative) by using a command or in system mode, the strip position is finely adjusted and the printing is misaligned simultaneously. This setting is used to perform a back feed and thus correct the print position for the purpose of printing on the normal position.



Default value: OFF (No back feed performed)

<Commentary>

- When the gap length is 5 mm or more, printing is not misaligned on the label, although the strip position fine adjustment is set to - (negative). Therefore, no back feed is performed when ON (back feed performed) is selected in this setting.

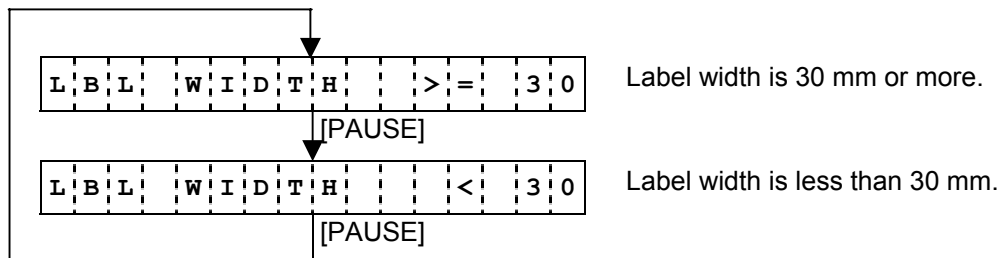
<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this parameter setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.2.2.10 Label Width Setting for Peel-off Issue (LBL WIDTH)

* Supported from V1.0G only for the B-EP2D.

When using a label stock with the width of less than 30mm in the peel-off mode on the B-EP2D, and if a feed error occurs, use this parameter to specify the label width for eliminating the error.



Default value: >=30 (Label width is 30 mm or more.)

<Commentary>

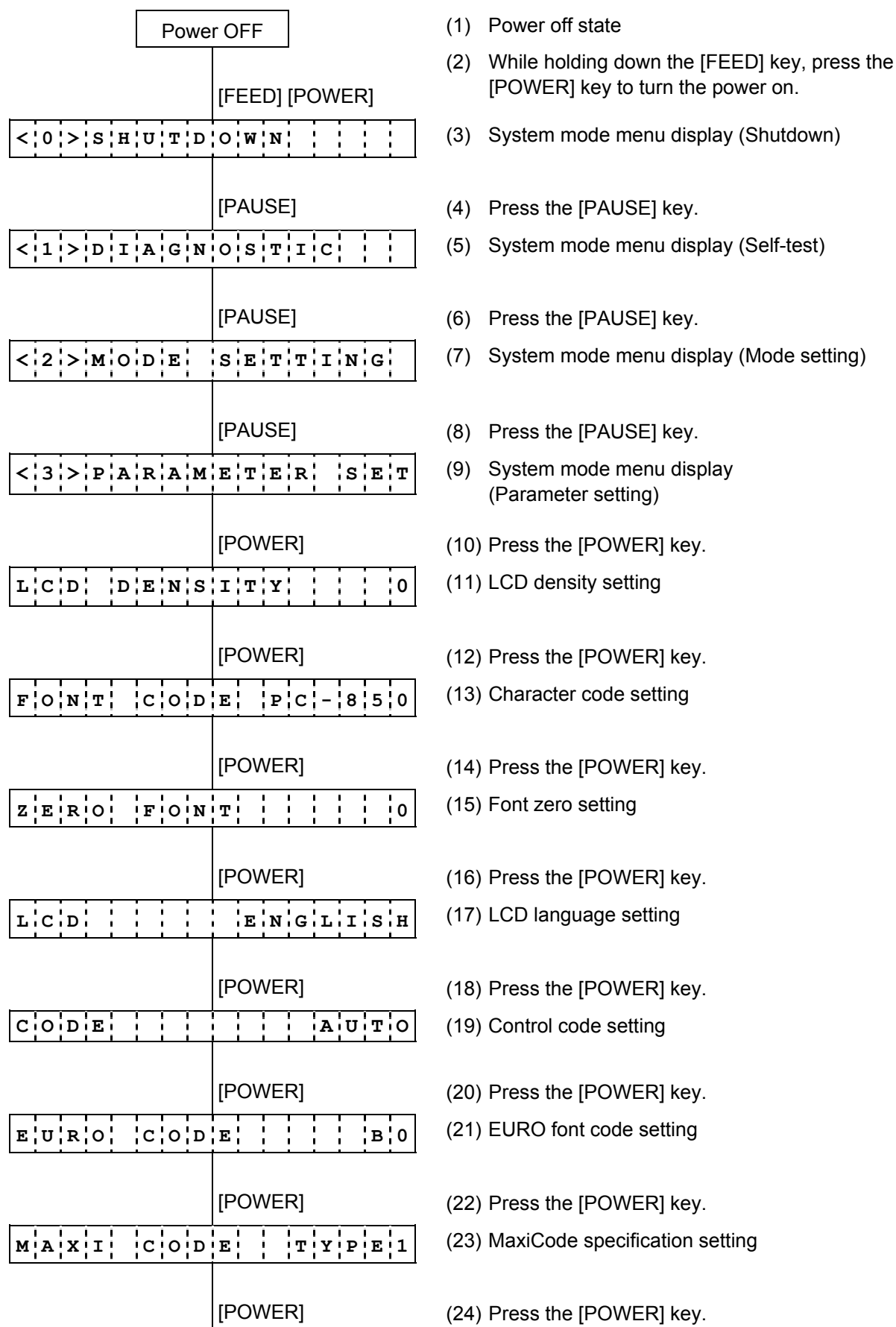
- This parameter is provided only to the B-EP2D. The menu will not be displayed on the B-EP4D.

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this parameter setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.3 Various Parameter Settings

6.6.3.1 Parameter Setting Operation Example



A U T O O F F	1 2 0 m i n	(25) Auto power-off timing setting
	[POWER]	(26) Press the [POWER] key.
E R R P W C T L	O N	(27) Auto power off after error *Supported from V1.1H.
	[POWER]	(28) Press the [POWER] key. * Supported from V1.1H.
S L E E P	3 s e c	(29) Power save mode timing setting
	[POWER]	(30) Press the [POWER] key.
L C D O F F	3 s e c	(31) LCD backlight off timing setting
	[POWER]	(32) Press the [POWER] key.
C H A R G E M O D E	N O R M	(33) Battery charge mode setting * Supported from V1.1I.
	[POWER]	(34) Press the [POWER] key. * Supported from V1.1I.
A U T O H D C H K	O F F	(35) Automatic print head check for broken dots setting
	[POWER]	(36) Press the [POWER] key.
H E A D C H E C K	O F F	(37) Print head check for broken dots after cover close setting
	[POWER]	(38) Press the [POWER] key.
H E A D E R R P R T	O F F	(39) Resume printing after broken dots error setting
	[POWER]	(40) Press the [POWER] key.
F E E D C H E C K	O F F	(41) Feed to top of feed after cover close setting
	[POWER]	(42) Press the [POWER] key.
B E E P V O L	1	(43) Beep volume setting
	[POWER]	(44) Press the [POWER] key.
X M L	O F F	(45) XML setting
	[POWER]	(46) Press the [POWER] key.
P A S S W O R D	O F F - - - -	(47) System mode password setting
	[POWER]	(48) Press the [POWER] key.

<	3	>	P	A	R	A	M	E	T	E	R	,	S	E	T
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

(49) System mode menu display
(Parameter setting)

[POWER]

(50) Hold down the [POWER] key for 3 seconds or more.

<	0	>	S	H	U	T	D	O	W	N	,				
---	---	---	---	---	---	---	---	---	---	---	---	--	--	--	--

(51) System mode menu display (Shutdown)

[POWER]

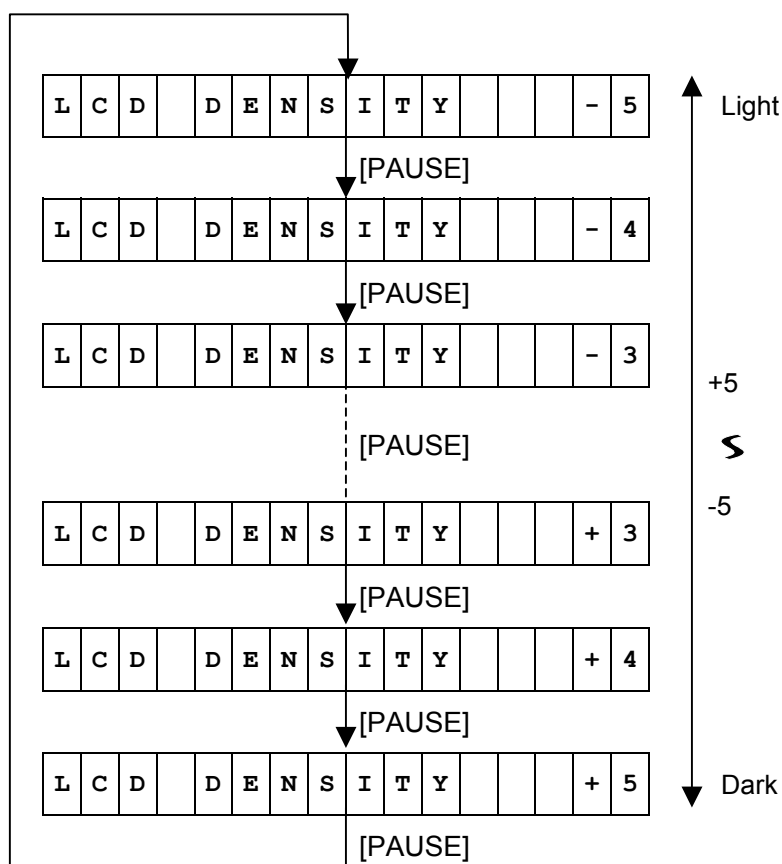
(52) Press the [POWER] key.

* The setting is updated at shutdown.

6.6.3.2 Parameter Setting Items

6.6.3.2.1 LCD Density Setting (LCD DENSITY)

This setting is to adjust the LCD display density.

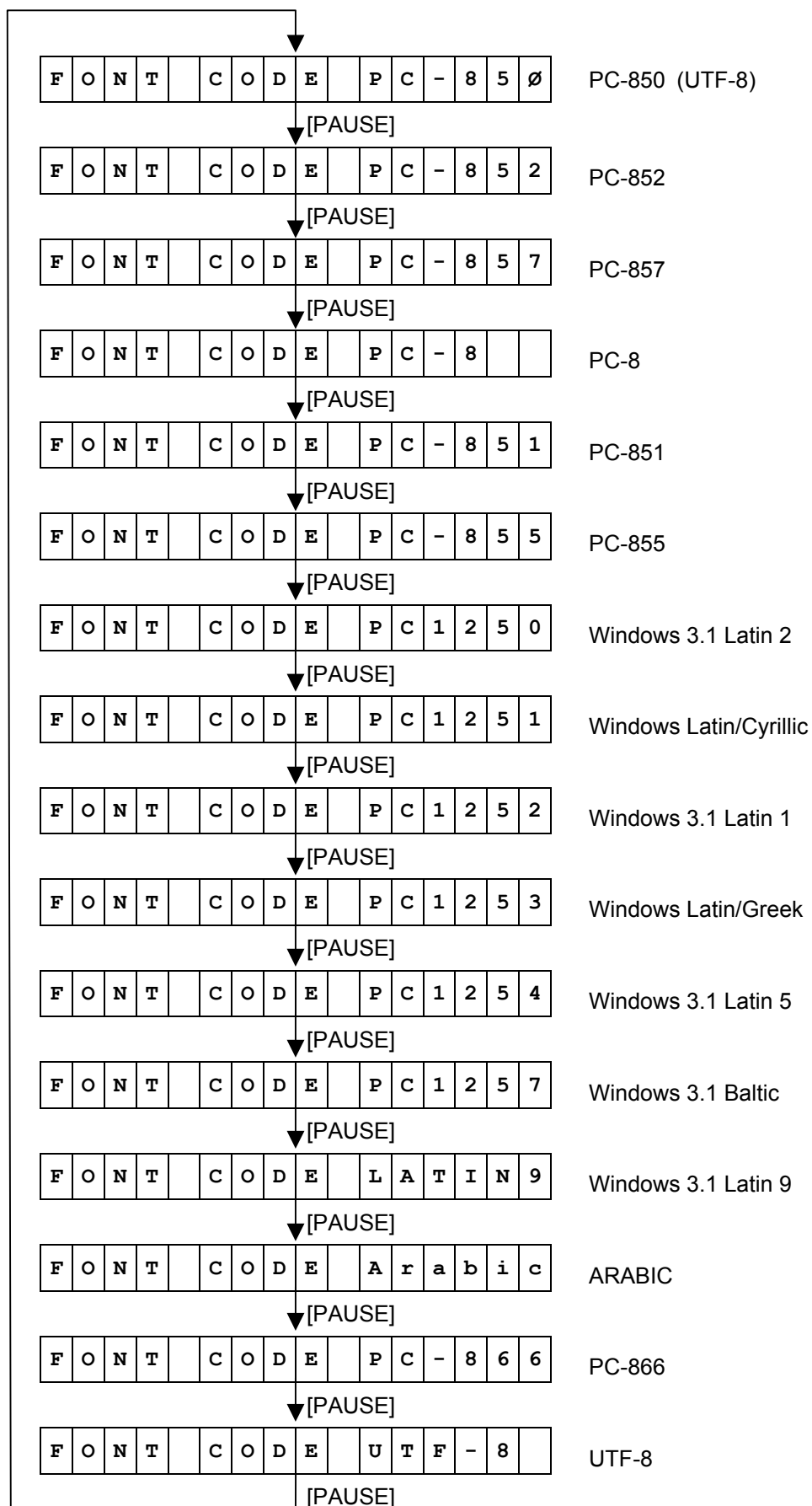


Default value: 0

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this parameter setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.3.2.2 Character Code Setting (FONT CODE)



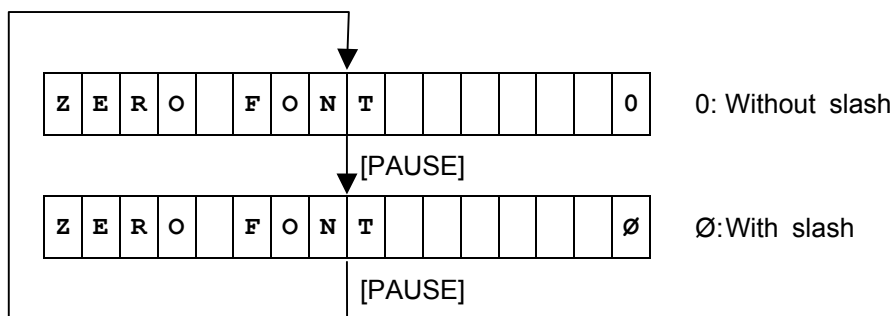
Default value: PC-850

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this parameter setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.3.2.3 Font Zero Setting (ZERO FONT)

This setting determines how zero should be displayed/printed, “Ø” (with slash) or “0” (without slash).



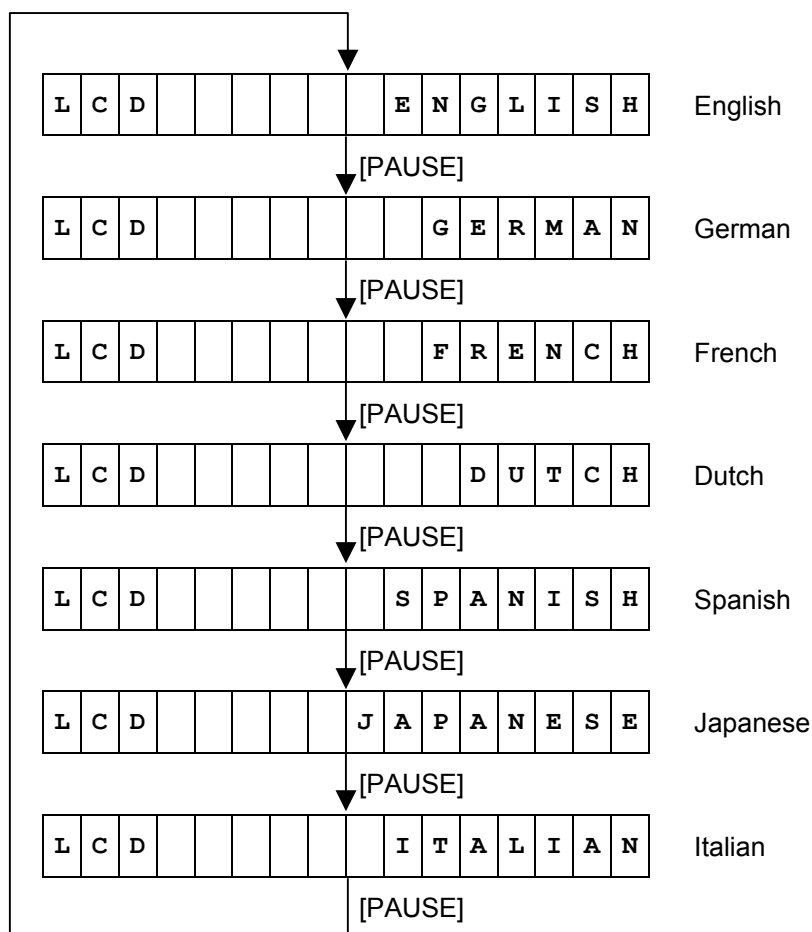
Default value: 0 (Without slash)

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this parameter setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.3.2.4 LCD Language Setting (LCD)

This setting selects a language to be used for displaying messages on the LCD.



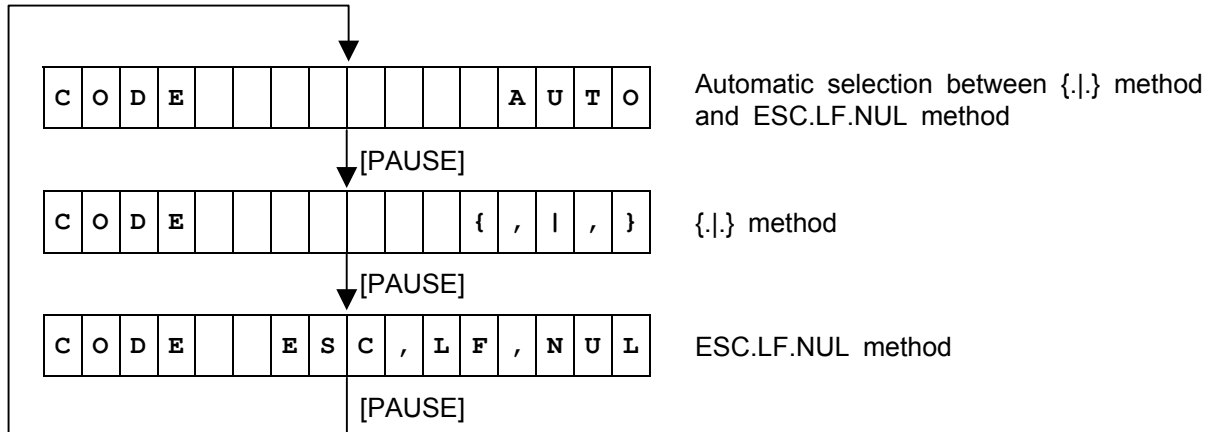
Default value: ENGLISH (English)

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this parameter setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.3.2.5 Control Code Setting (CODE)

This setting selects a control code to be used in TPCL mode.



Default value: AUTO (Automatic selection)

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this parameter setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.
- This setting is effective in TPCL and TPCL1 modes.

(1) AUTO

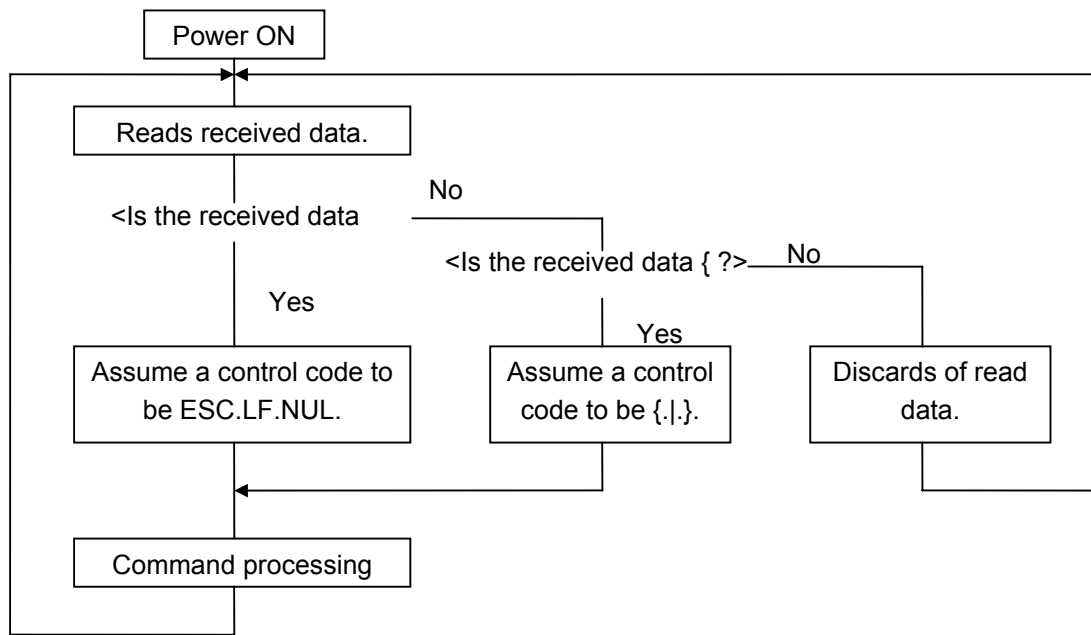
As an interface command control code, [ESC](1BH), [LF](0AH), [NUL](00H) or {(7BH), |(7CH), }(7DH) is automatically selected. After the power is turned on, the data from the host is checked for [ESC] and {, and the data sent first is assumed to be a control code.

For example, if [ESC] is sent first, [ESC].[LF].[NUL] is a control code, and if { is sent first, {.|.} is a control code. The control code is selected for each command.

If the first command ends with [ESC]~ [LF][NUL] and is followed by [ESC], the control code is [ESC].[LF].[NUL]. If { is sent first, the control code for the next command is {.|.}.

When the control code is {.|.}, the data of 00H to 1FH in { ~ | } is ignored.

However, the data of 00H to 1FH becomes valid while processing the graphic command or writable character command in hexadecimal mode. When {.|.} is a control code, {.|.} cannot be used in the data of the Data command or Display command.



(2) Manual Selection (ESC.LF.NUL)

The control code of the command is [ESC](1BH),[LF](0AH),[NUL](00H), and the control code selection is not performed.

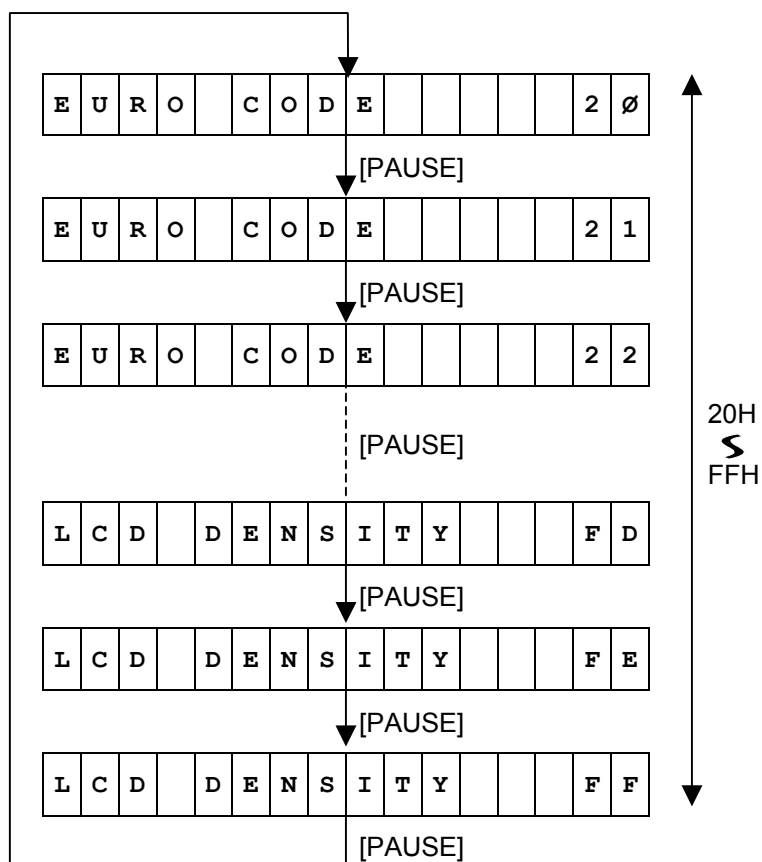
(3) Manual Selection ({.|.})

The control code of the command is {(7BH),|(7CH),}(7DH), and the control code selection is not performed. Data of 00H to 1FH is ignored and discarded of in this mode. However, data of 00H to 1FH becomes valid while processing the Graphic command or Writable Character command in hexadecimal mode.

{.|.} cannot be used in the data of the Data command or Display command.

6.6.3.2.6 EURO Font Code Setting (EURO CODE)

This setting determines to which code the EURO font code is to be assigned.



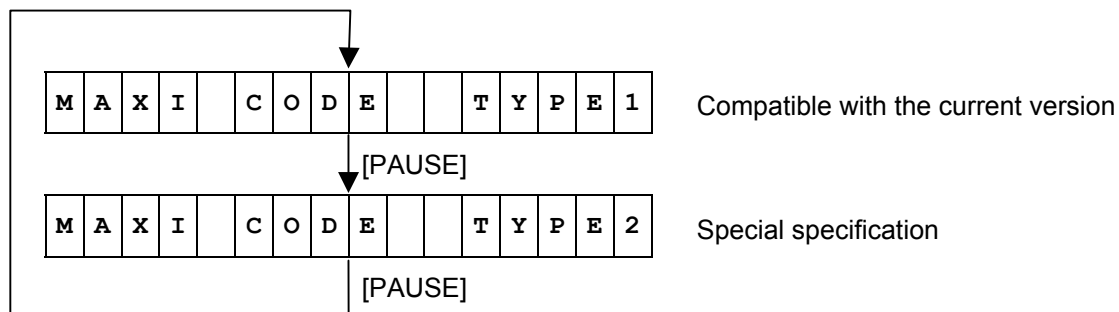
Default value: B0

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this parameter setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.3.2.7 MaxiCode Specification Setting (MAXI CODE)

This setting selects a MaxiCode specification.



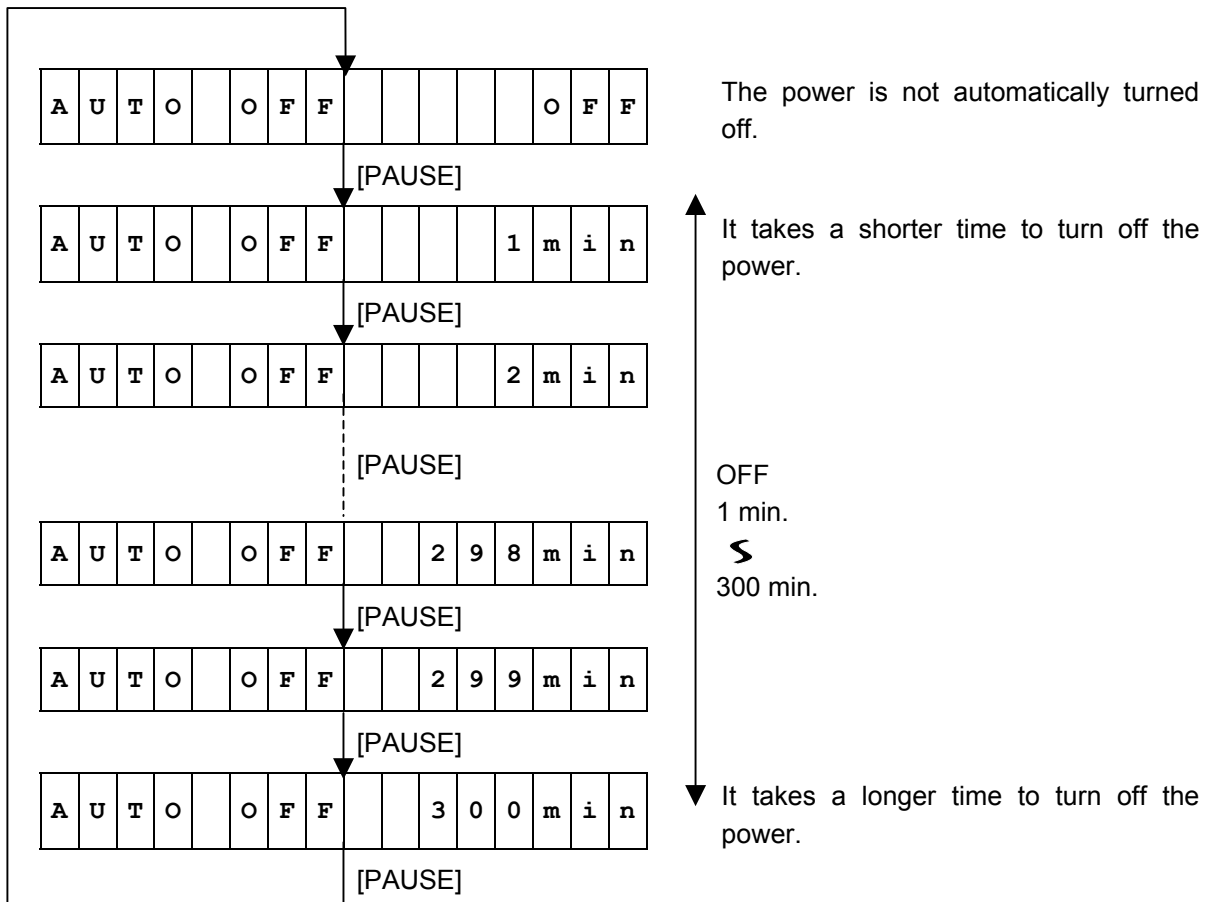
Default value: TYPE1

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this parameter setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.
- The mode specified by the command in accordance with the status of this parameter is different from the actual mode. Also, the data transmission method differs partly. For details, refer to the B-EP Series External Equipment Interface Specification.

6.6.3.2.8 Auto Power-off Timing Setting (AUTO OFF)

This setting selects a time for the printer power to turn off automatically.



Default value: 120 min.

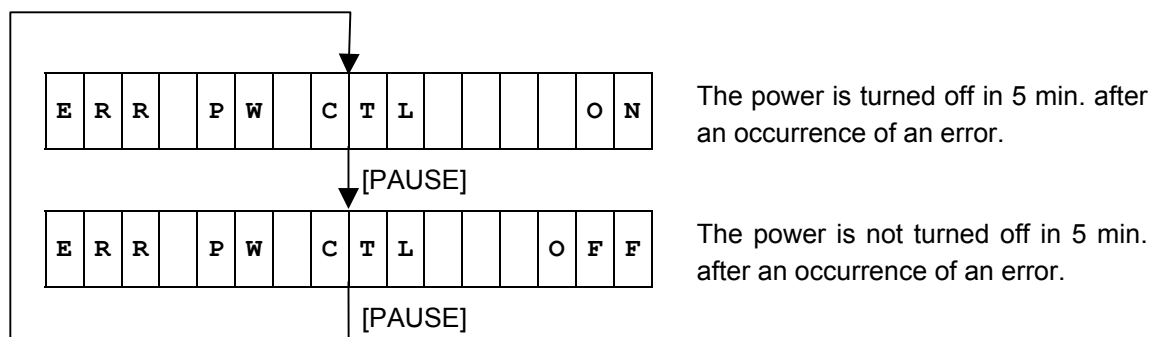
<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this parameter setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.
- When the AC adapter is connected, the printer power does not turn off even when an auto power-off time elapses.

6.6.3.2.9 Auto Power off after Error (ERR PW CTL)

* Supported from V1.1H.

This setting enables selecting whether or not to turn off the power in 5 minutes after an occurrence of an error.




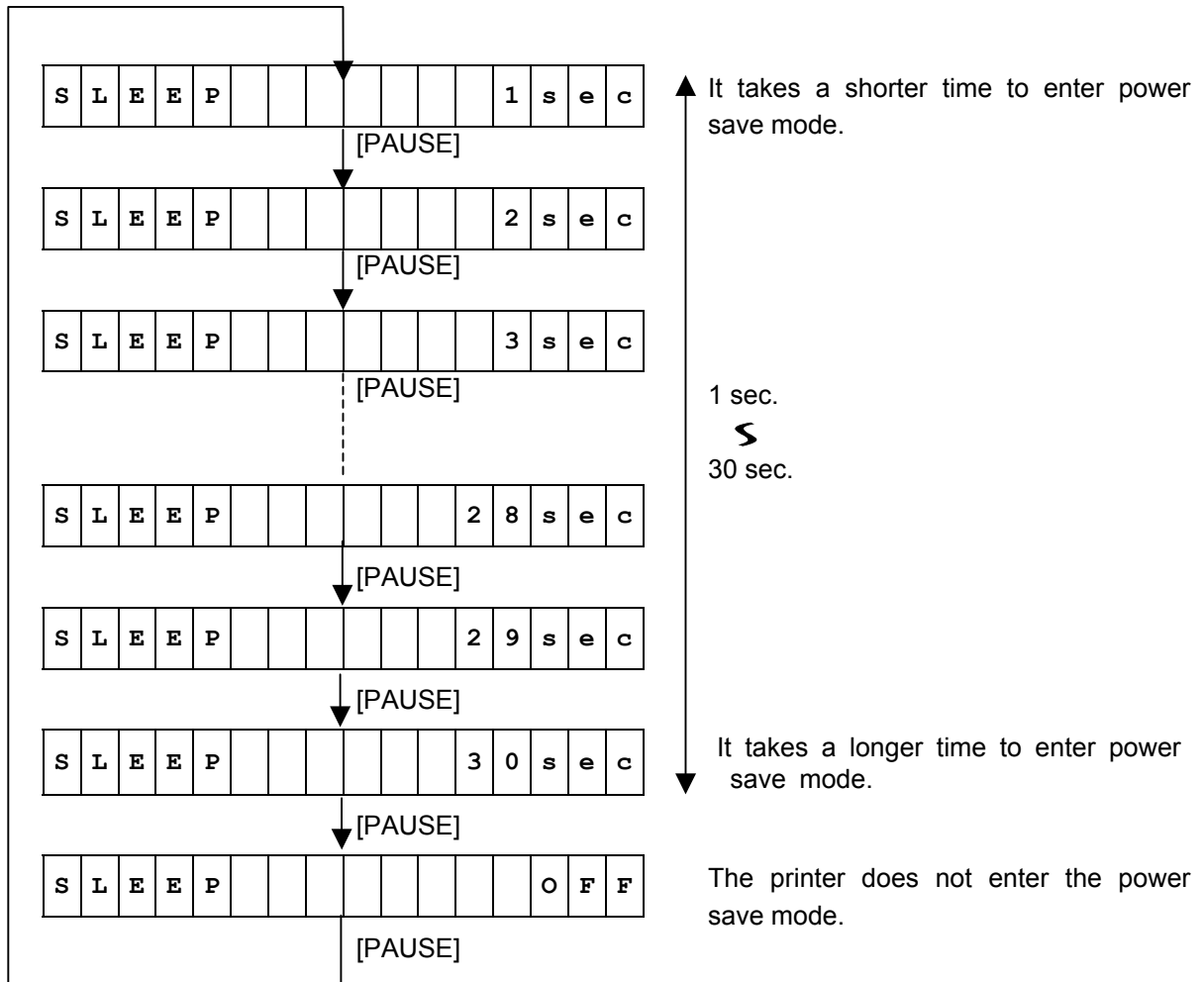
Default value: ON

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this parameter setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.
- Even if this parameter is set to ON, the power is not turned off as long as the printer is connected to the AC power source.

6.6.3.2.10 Power Save Mode Timing Setting (SLEEP)

This setting selects a time for the printer to enter power save mode. When the printer enters power save mode, the sleep mark  on the LCD turns on.



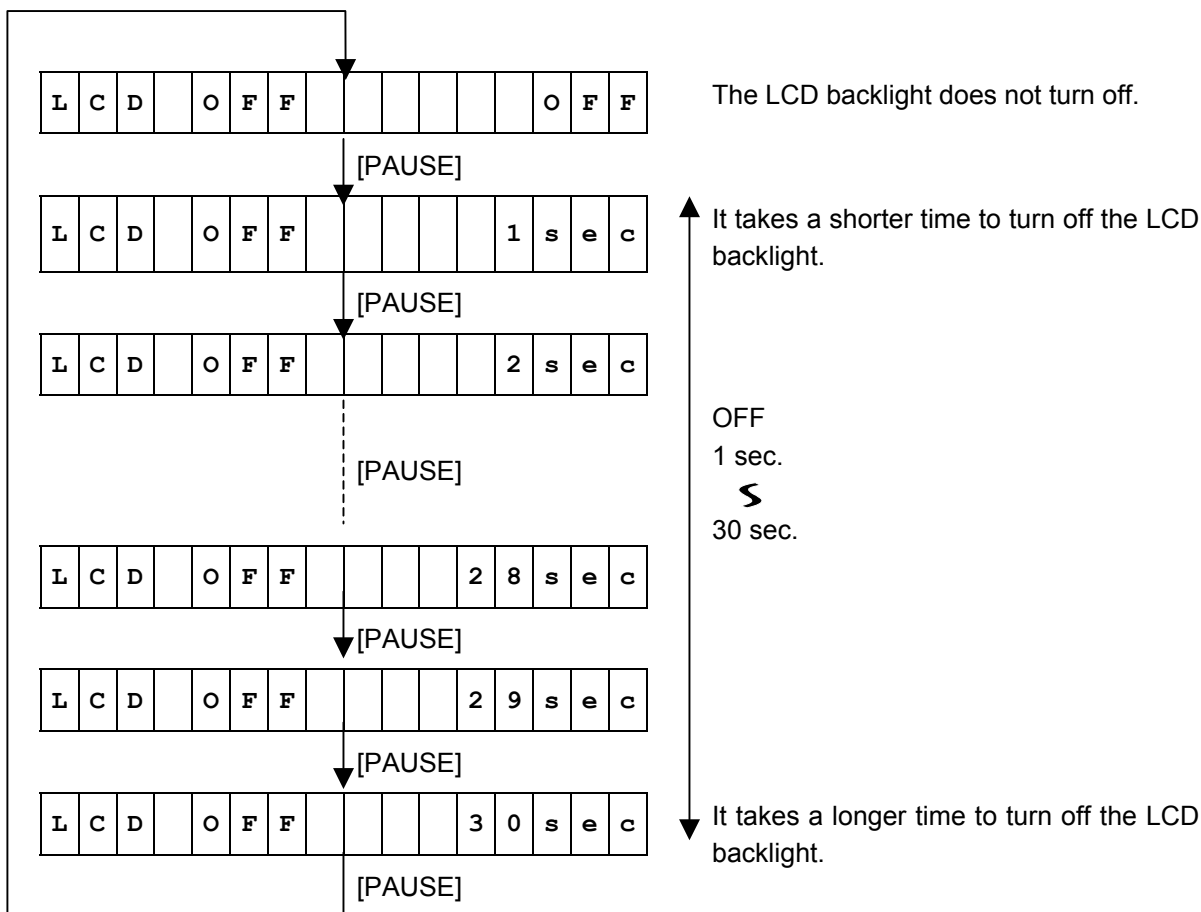
Default value: 3 sec.

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this parameter setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.3.2.11 LCD Backlight Off Timing Setting (LCD OFF)

This setting selects a time to turn off the LCD backlight.



Default value: 3 sec.

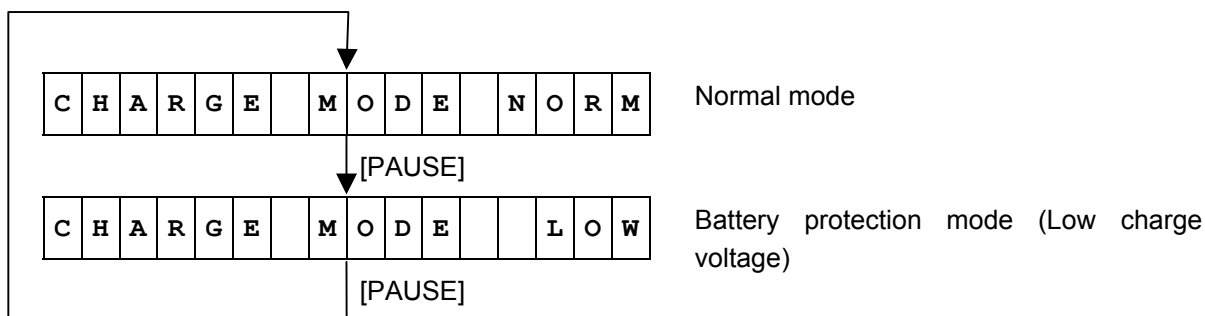
<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this parameter setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.
- If the LCD backlight off timing is set longer than the power save mode timing, the backlight turns off in accordance with the power save mode timing setting before the backlight off timing takes effect.
- When the LCD OFF setting is OFF, the backlight does not turn off even when the printer enters power save mode.

6.6.3.2.12 Battery Charge Mode Setting (CHARGE MODE)

* Supported from V1.11.

This setting enables selecting the battery charge mode.



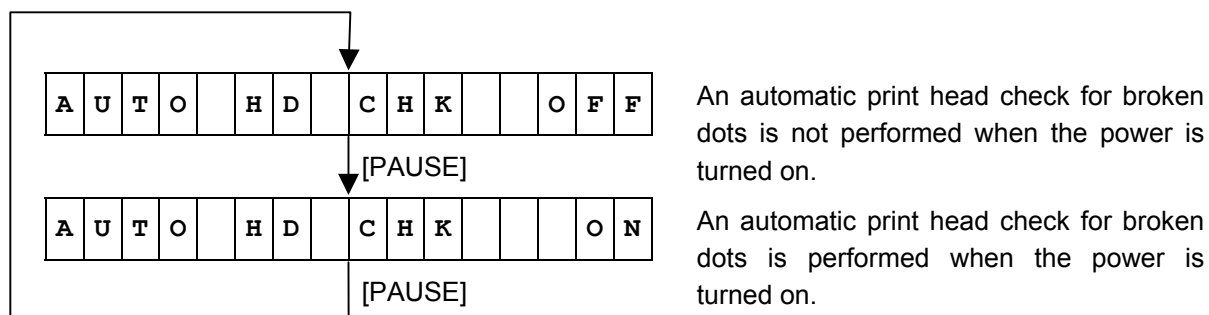
Default value: NORMAL

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this parameter setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.3.2.13 Automatic Print Head Check for Broken Dots At Power On Setting (AUTO HD CHK)

This setting selects whether or not an automatic print head check for broken dots is to be automatically performed when the power is turned on.



An automatic print head check for broken dots is not performed when the power is turned on.

An automatic print head check for broken dots is performed when the power is turned on.

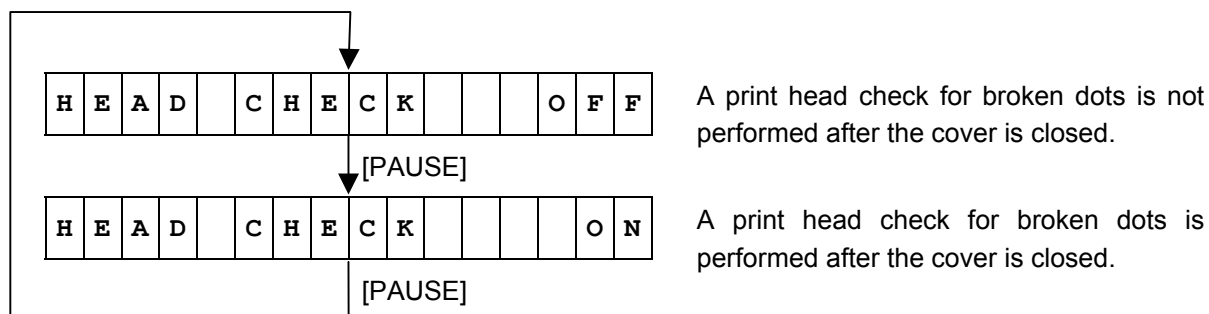
Default value: OFF (An automatic print head check for broken dots is not performed when the power is turned on.)

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this parameter setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.3.2.14 Print Head Check For Broken Dots After Cover Close Setting (HEAD CHECK)

This setting selects whether or not a print head check for broken dots is to be performed after the cover is closed.



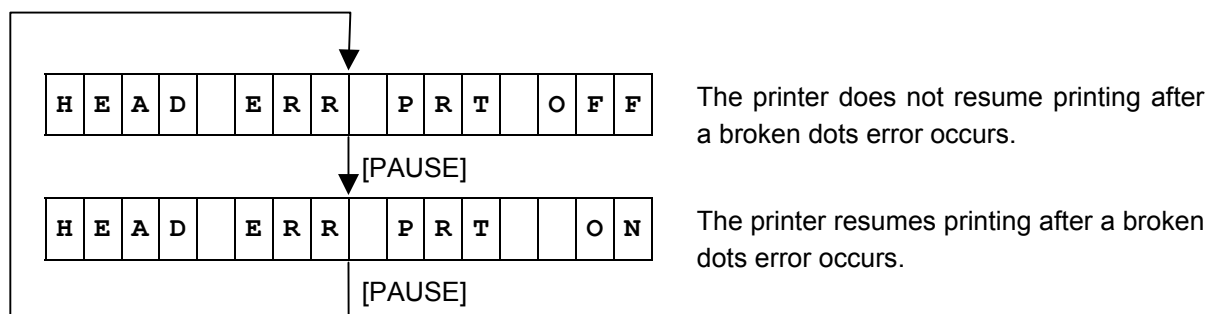
Default value: OFF (A print head check for broken dots is not performed after the cover is closed.)

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this parameter setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.3.2.15 Resume Printing After Broken Dots Error Setting (HEAD ERR PRT)

This setting selects whether or not the printer resumes printing after a broken dots error occurs.



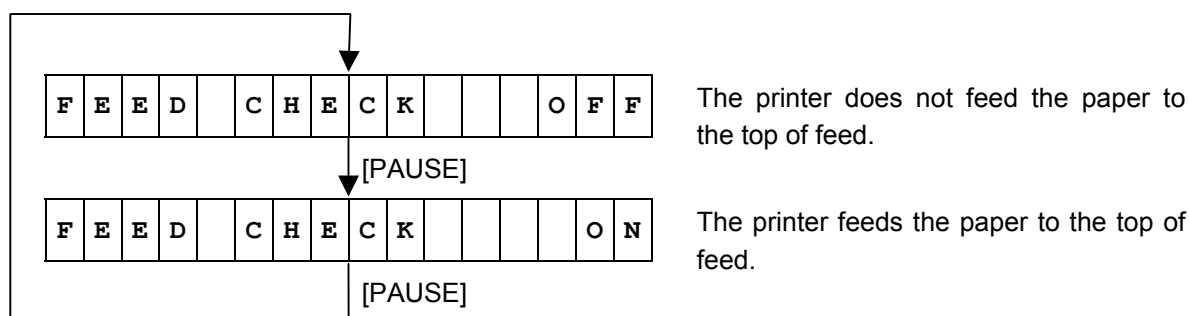
Default value: OFF (The printer does not resume printing after a broken dots error occurs.)

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this parameter setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.3.2.16 Feed To Top Of Feed After Cover Close Setting (FEED CHECK)

This setting selects whether or not the printer feeds the paper to the top of feed after the cover is closed.



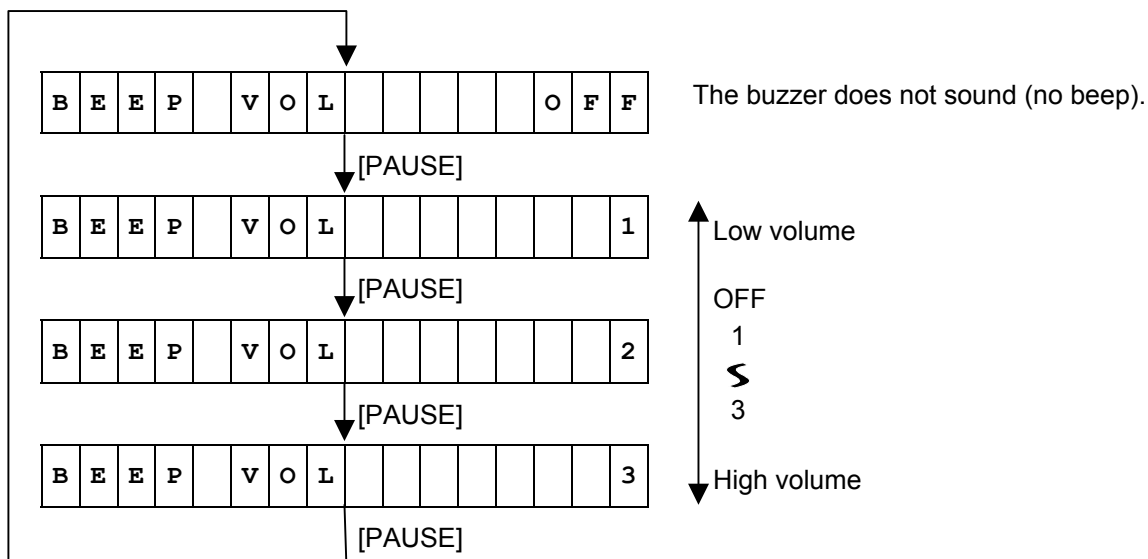
Default value: OFF (The printer does not feed the paper to the top of feed.)

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this parameter setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.
- The printer feeds the paper to the top of feed when the print mode is TPCL, TPCL1, or LABEL and a sensor, transmissive or reflective is used.

6.6.3.2.17 Beep Volume Setting (BEEP VOL)

This setting selects a beep volume.



Default value: 1

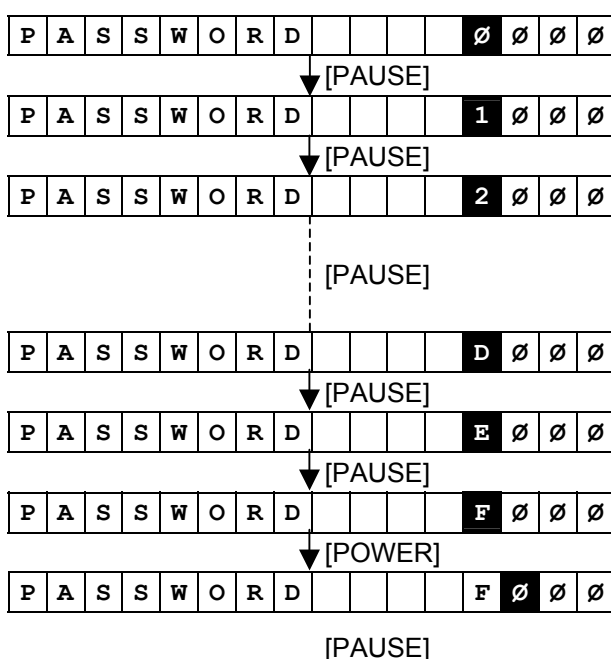
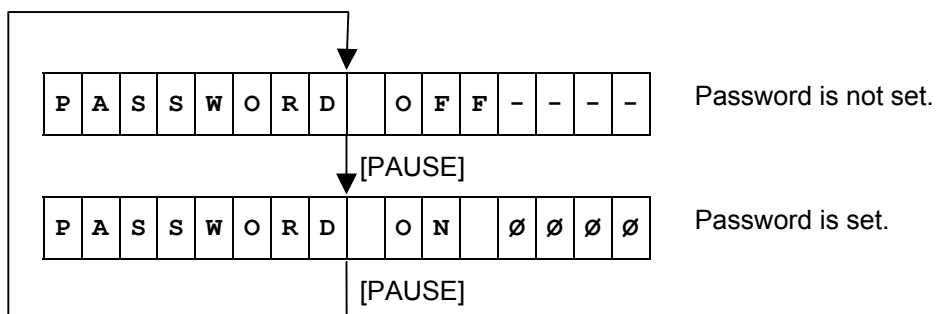
<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this parameter setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.3.2.18 XML Setting (XML)

6.6.3.2.19 System Mode Password Setting (PASSWORD)

This setting selects whether or not a new password, which is required to enter system mode for service persons and system administrators, is to be programmed.



0
Σ
F

Pressing the **[POWER]** key determines a value in the current digit and moves the cursor to the next digit. This operation is same for 3rd and 4th digits.

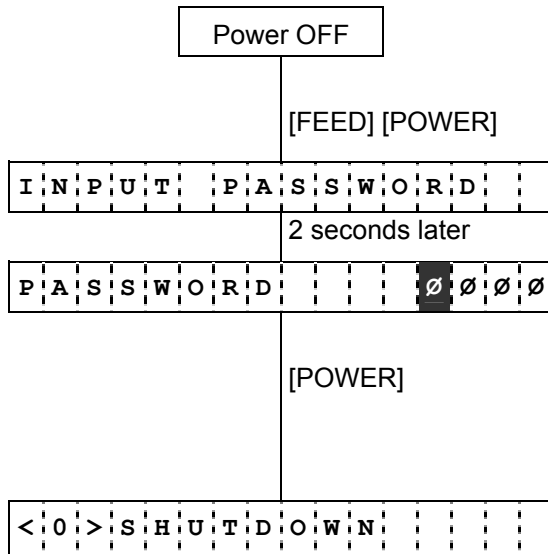
Default value: OFF Password: 0000

<Supplemental Explanations>

- When the **[FEED]** key is pressed, the menu moves in the opposite direction from when the **[PAUSE]** key is pressed.
- When the **[FEED]** and **[PAUSE]** keys are simultaneously pressed, the display returns to the system mode menu.
- When the **[FEED]** key or **[PAUSE]** key is pressed for 0.5 seconds or more during this parameter setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the **[POWER]** key is pressed after setting, then stored in the backup memory.

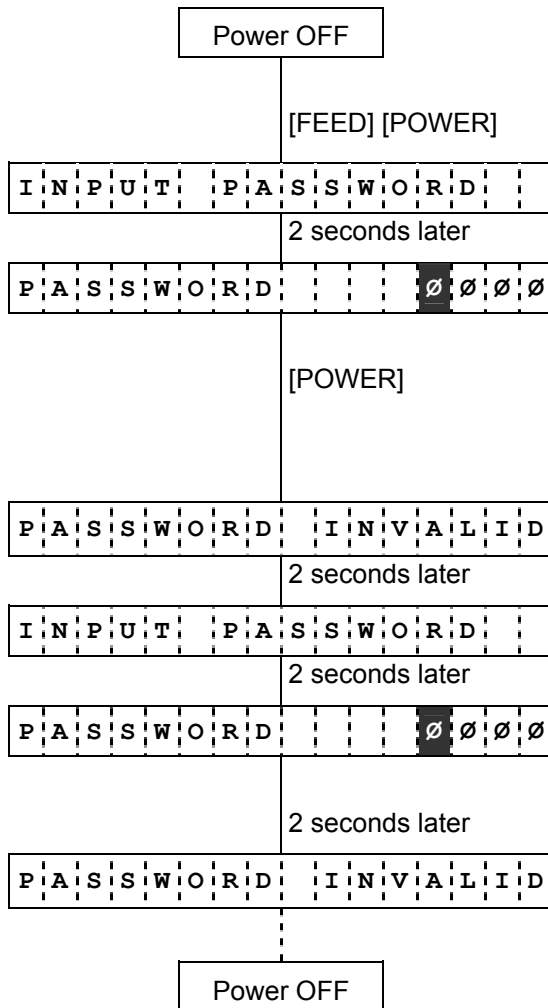
6.6.3.3 System Mode Startup Method When Password Is Set

When a valid password is entered:



- (1) Power off state
- (2) While holding down the [FEED] key, press the [POWER] key to turn the power on.
- (3) "INPUT PASSWORD" is displayed.
- (4) Password entry screen is displayed. (0000 to FFFF)
Press the [FEED] or [PAUSE] key to enter a value.
Press the [POWER] key to move to the next digit.
- (5) Press the [POWER] key.
- (6) System mode menu display (Shutdown)

When an invalid password is entered:

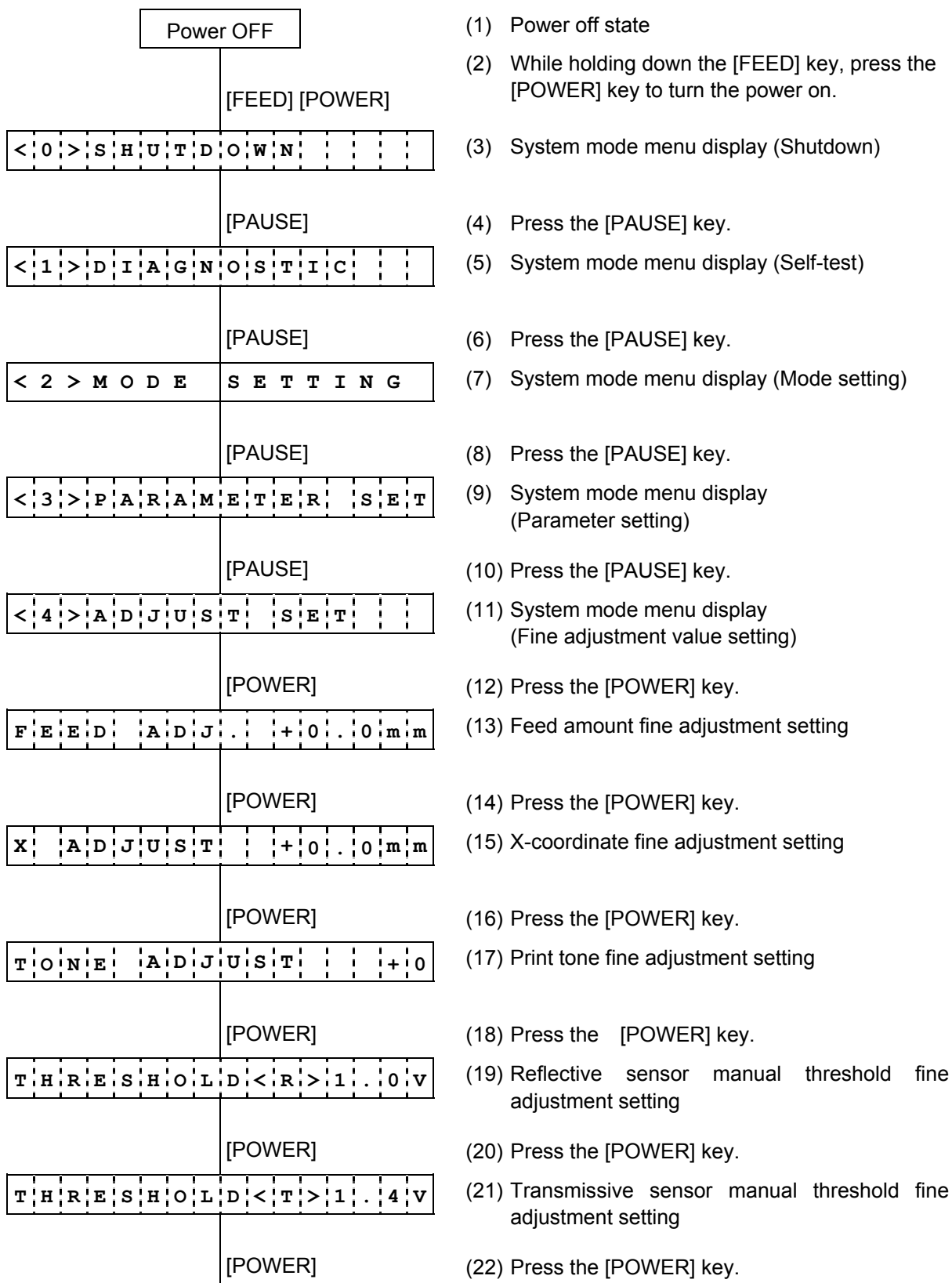


- (1) Power off state
- (2) While holding down the [FEED] key, press the [POWER] key to turn the power on.
- (3) "INPUT PASSWORD" is displayed.
- (4) Password entry screen is displayed. (0000 to FFFF)
Press the [FEED] or [PAUSE] key to enter a value.
Press the [POWER] key to move to the next digit.
- (5) Press the [POWER] key.
- (6) "PASSWORD INVALID" is displayed.
- (7) "INPUT PASSWORD" is displayed.
- (8) Password entry screen is displayed. (0000 to FFFF)
- (9) System mode menu display (Shutdown)
Entry of invalid password three times automatically shuts down the printer.

NOTE: If the [FEED] and [PAUSE] keys are pressed simultaneously during password entry, the password being entered is invalidated and the LCD displays "PASSWORD INVALID".

6.6.4 Fine Adjustment Value Setting

6.6.4.1 Fine Adjustment Value Setting Operation Example



P	E	E	L	A	D	J	.	.	+	0	.	0	m	m
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

(23) Strip position fine adjustment setting

[POWER]

(24) Press the [POWER] key.

P	A	P	E	R	S	I	Z	E	1	1	4	m	m
---	---	---	---	---	---	---	---	---	---	---	---	---	---

(25) Paper size setting for ESC/POS setting

* This display is for the B-EP4.

[POWER]

(26) Press the [POWER] key.

<	4	>	A	D	J	U	S	T	S	E	T	.	.
---	---	---	---	---	---	---	---	---	---	---	---	---	---

(27) System mode menu display

(Fine adjustment value setting)

[POWER]

(28) Hold down the [POWER] key for 3 seconds or more.

<	0	>	S	H	U	T	D	O	W	N	.	.
---	---	---	---	---	---	---	---	---	---	---	---	---

(29) System mode menu display (Shutdown)

[POWER]

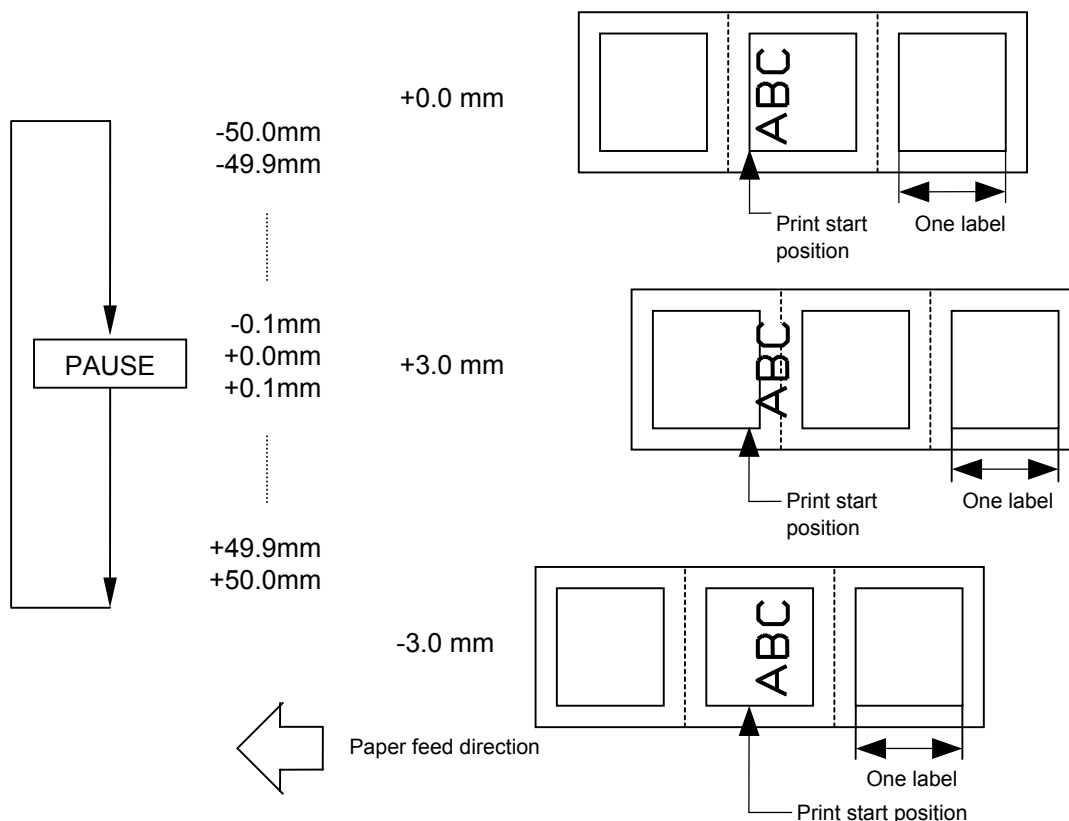
(30) Press the [POWER] key.

* The setting is updated at shutdown.

6.6.4.2 Fine Adjustment Value Setting Items

6.6.4.2.1 Feed Amount Fine Adjustment (FEED ADJ.)

This setting sets a feed amount so that the label is shifted forward or backward from the print start position which has been automatically determined.

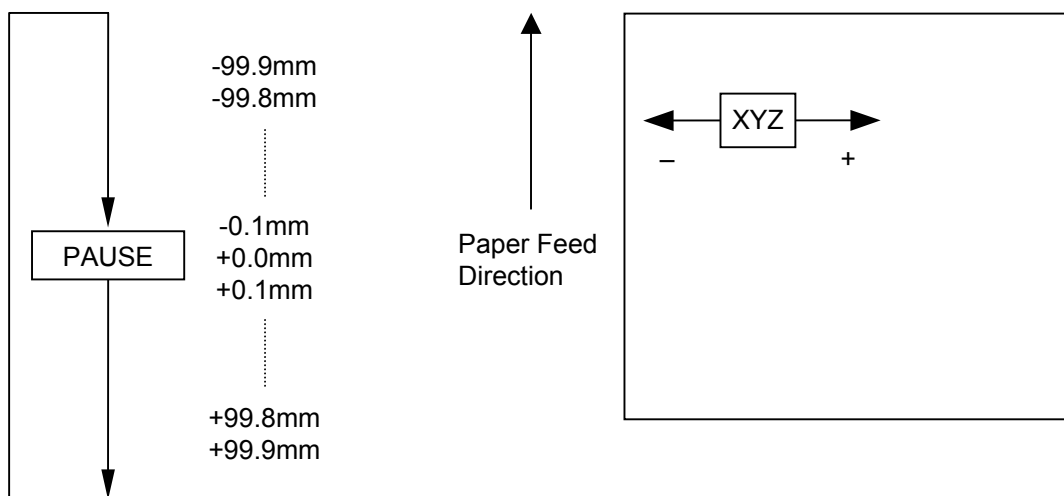


<Supplemental Explanations>

- (1) When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- (2) When the [PAUSE] key is pressed while the [FEED] key is held down, or when the [POWER] key is pressed for 3 seconds or more, the display returns to the system mode menu (ADJUST SET).
- (3) When the [PAUSE] key or [FEED] key is pressed for 0.5 seconds or more during this fine adjustment setting, repeat mode is enabled and the key pressed is repeatedly entered.
- (4) The change in the fine adjustment value becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.
- (5) The printer is controlled by the total amount determined by this command and the Position Fine Adjustment command sent from the PC. However, the maximum value is ± 50.0 mm.
- (6) When the feed amount fine adjustment value for the positive (+) direction is set to more than +10.5 mm (the distance between the print head and the sensor is -1 mm), the actual print position is corrected by +10.5 mm.
- (7) The factory default value is +0.0mm.

6.6.4.2.2 X-coordinate Fine Adjustment (X ADJUST.)

This setting sets an amount by which the X-coordinate is shifted to the left or right.

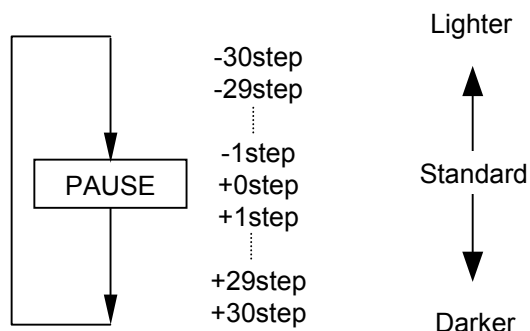


<Supplemental Explanations>

- (1) When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- (2) When the [PAUSE] key is pressed while the [FEED] key is held down, or when the [POWER] key is pressed for 3 seconds or more, the display returns to the system mode menu (ADJUST SET).
- (3) When the [PAUSE] key or [FEED] key is pressed for 0.5 seconds or more during this fine adjustment setting, repeat mode is enabled and the key pressed is repeatedly entered.
- (4) The change in the fine adjustment value becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.
- (5) The factory default value is +0.0mm.
- (6) The X-coordinate fine adjustment setting is performed to finely shift the x-coordinate of graphic data to the right or left. This fine adjustment is performed within the effective print width range. (When the X-coordinate is shifted in the minus direction and reaches its origin (0), it cannot be further shifted and stays at the origin.)
- (7) This fine adjustment is disabled for self-test print (maintenance counter values, various parameter values, and automatic self-test) and test print.

6.6.4.2.3 Print Tone Fine Adjustment (TONE ADJ.)

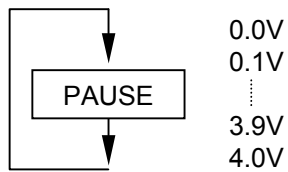
This setting finely adjusts the print tone against the value automatically set.



<Supplemental Explanations>

- (1) When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- (2) When the [PAUSE] key is pressed while the [FEED] key is held down, or when the [POWER] key is pressed for 3 seconds or more, the display returns to the system mode menu (ADJUST SET).
- (3) When the [PAUSE] key or [FEED] key is pressed for 0.5 seconds or more during this fine adjustment setting, repeat mode is enabled and the key pressed is repeatedly entered.
- (4) The change in the fine adjustment value becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.
- (5) The printer is controlled by the total amount determined by this command and the Position Fine Adjustment command sent from the PC. However, the maximum value is ± 30 step.
- (6) The factory default value is +0step.

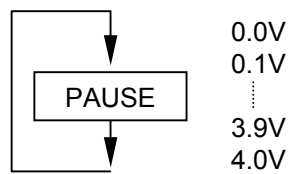
6.6.4.2.4 Reflective Sensor Manual Threshold Fine Adjustment (THRESHOLD<R>)



<Supplemental Explanations>

- (1) When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- (2) When the [PAUSE] key is pressed while the [FEED] key is held down, or when the [POWER] key is pressed for 3 seconds or more, the display returns to the system mode menu (ADJUST SET).
- (3) When the [PAUSE] key or [FEED] key is pressed for 0.5 seconds or more during this fine adjustment setting, repeat mode is enabled and the key pressed is repeatedly entered.
- (4) The change in the fine adjustment value becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.
- (5) The factory default value is 1.0V.
- (6) This setting is effective only in the TPCL and TPCL1 modes.

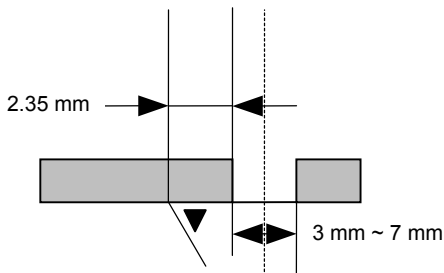
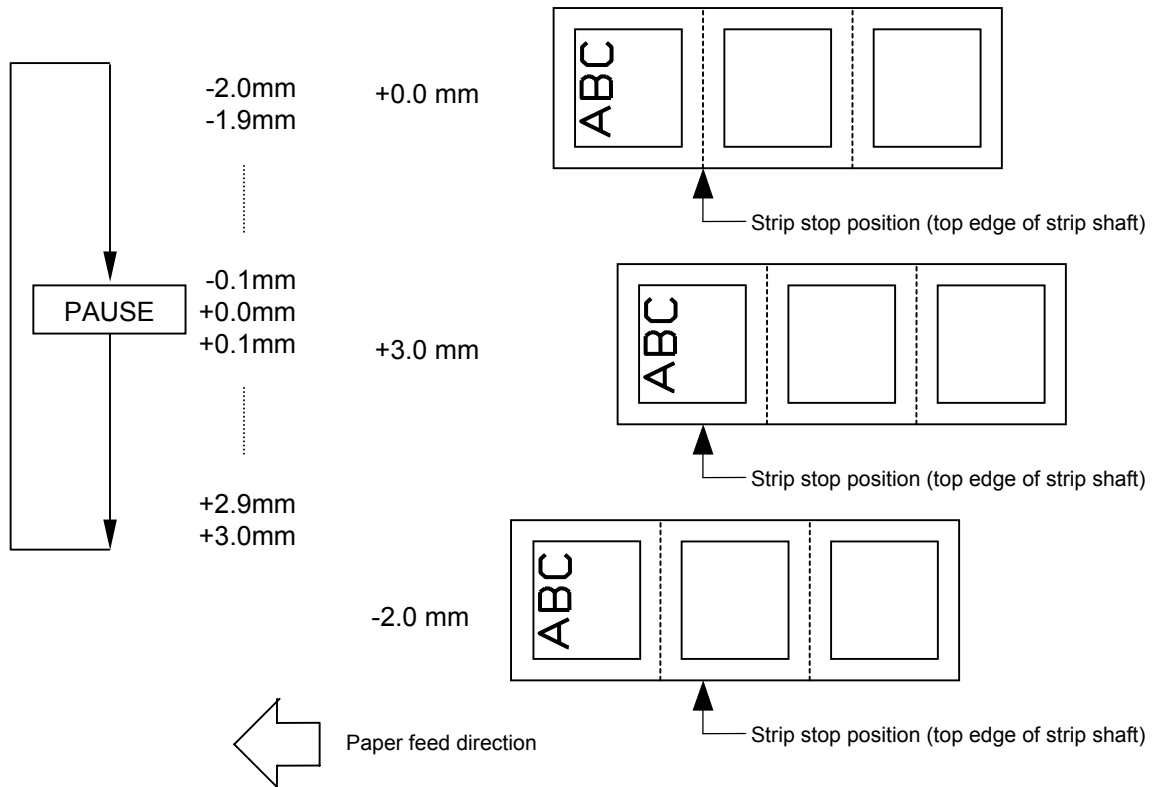
6.6.4.2.5 Transmissive Sensor Manual Threshold Fine Adjustment (THRESHOLD<T>)



<Supplemental Explanations>

- (1) When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- (2) When the [PAUSE] key is pressed while the [FEED] key is held down, or when the [POWER] key is pressed for 3 seconds or more, the display returns to the system mode menu (ADJUST SET).
- (3) When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this fine adjustment setting, repeat mode is enabled and the key pressed is repeatedly entered.
- (4) The change in the fine adjustment value becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.
- (5) The factory default value is 1.4V.
- (6) This setting is effective only in the TPCL and TPCL1 modes.

6.6.4.2.6 Strip Position Fine Adjustment (PEEL ADJ.)



Regardless of gap length, the stop position in strip issue mode is designed in a manner so that printing stops when the distance from the top edge of the strip shaft to the trailing edge of the label is 2.35 mm, if print position fine adjustment value is not set. [up to V1.0C]

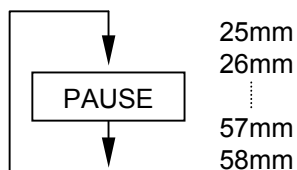
If the above-mentioned stop position is not proper, the stop position should be adjusted using the stop position fine adjust function for the strip issue.

<Supplemental Explanations>

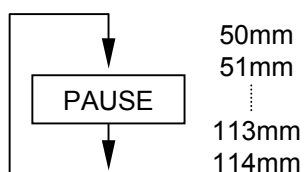
- (1) When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- (2) When the [PAUSE] key is pressed while the [FEED] key is held down, or when the [POWER] key is pressed for 3 seconds or more, the display returns to the system mode menu (ADJUST SET).
- (3) When the [PAUSE] key or [FEED] key is pressed for 0.5 seconds or more during this fine adjustment setting, repeat mode is enabled and the key pressed is repeatedly entered.
- (4) The change in the fine adjustment value becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.
- (5) The printer is controlled by the total amount determined by this command and the Position Fine Adjustment command sent from the PC (strip position fine adjustment value). However, the maximum value is -2.0 mm to $+3.0$ mm.
- (6) The strip position fine adjustment value up to V1.0C is valid only when no print position fine adjustment value is set (value: 0).
- (7) The factory default value is $+0.0$ mm.

6.6.4.2.7 Paper Size for ESC/POS Setting (PAPER SIZE)

B-EP2



B-EP4



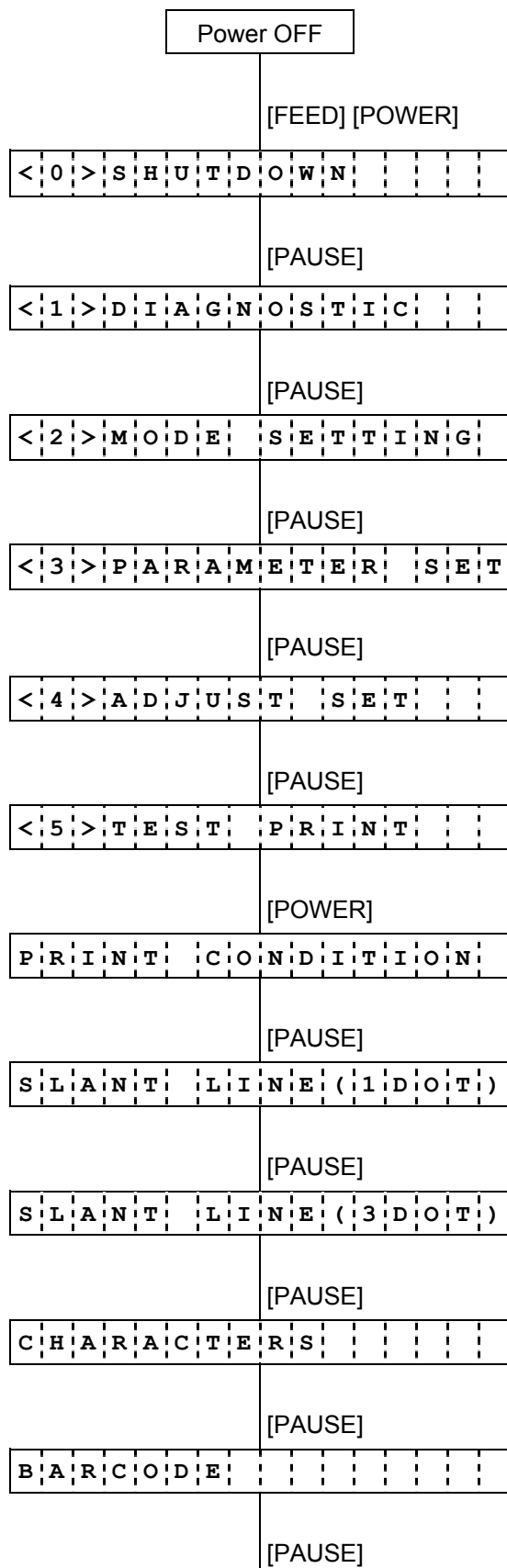
<Supplemental Explanations>

- (1) When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- (2) When the [PAUSE] key is pressed while the [FEED] key is held down, or when the [POWER] key is pressed for 3 seconds or more, the display returns to the system mode menu (ADJUST SET).
- (3) When the [PAUSE] key or [FEED] key is pressed for 0.5 seconds or more during this fine adjustment setting, repeat mode is enabled and the key pressed is repeatedly entered.
- (4) The change in the fine adjustment value becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.
- (5) The factory default value is 58mm for the B-EP2 and 114mm for the B-EP4.
- (6) This setting is effective only in the ESC/POS mode. There is no command to set paper width in the ESC/POS mode. If a paper of which width is short for the print width, the print start position may be outside of the paper. To prevent this problem, the width of paper to be loaded in the printer must be specified.

6.6.5 Test Print

6.6.5.1 Test Print Operation Example

(1) Normal test print



- (1) Power off state
- (2) While holding down the [FEED] key, press the [POWER] key to turn the power on.
- (3) System mode menu display (Shutdown)
- (4) Press the [PAUSE] key.
- (5) System mode menu display (Self-test)
- (6) Press the [PAUSE] key.
- (7) System mode menu display (Mode setting)
- (8) Press the [PAUSE] key.
- (9) System mode menu display (Parameter setting)
- (10) Press the [PAUSE] key.
- (11) System mode menu display (Fine adjustment value setting)
- (12) Press the [PAUSE] key.
- (13) System mode menu display (Test print)
- (14) Press the [POWER] key.
- (15) Test print condition parameter setting mode
- (16) Press the [PAUSE] key.
- (17) 1-dot slant line print mode
- (18) Press the [PAUSE] key.
- (19) 3-dot slant line print mode
- (20) Press the [PAUSE] key.
- (21) Character print mode
- (22) Press the [PAUSE] key.
- (23) Bar code print mode
- (24) Press the [PAUSE] key.

N	O	N	-	P	R	I	N	T	I	N	G				
---	---	---	---	---	---	---	---	---	---	---	---	--	--	--	--

(25) Non-printing mode

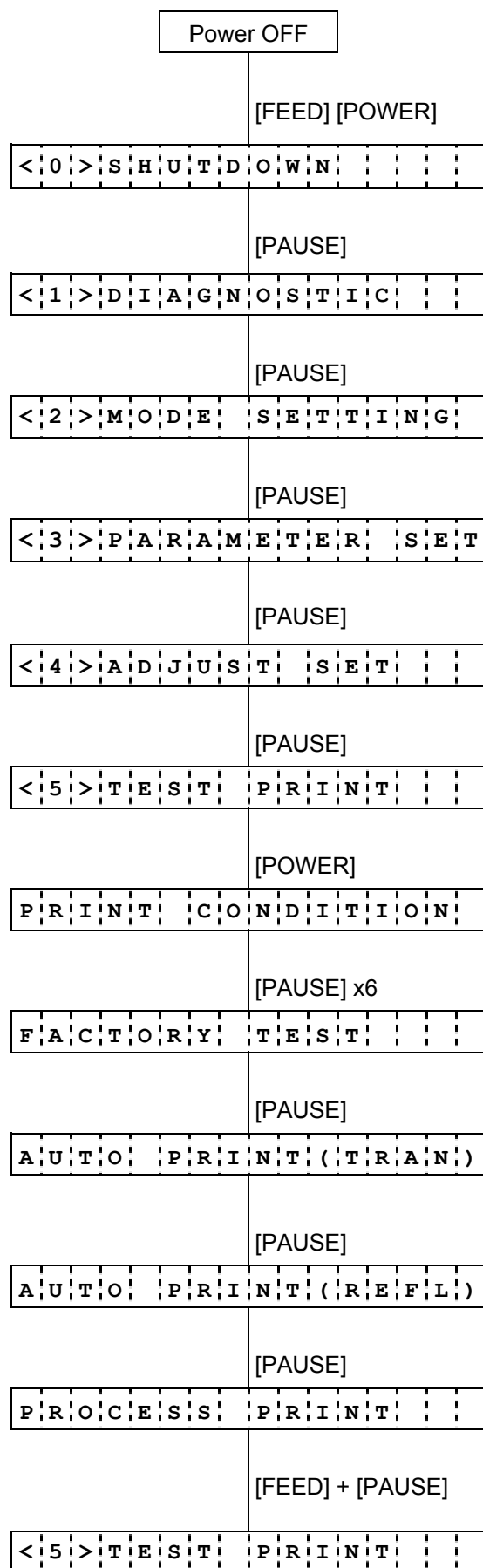
[FEED] + [PAUSE]

(26) While holding down the [FEED] key, press the [PAUSE] key.

<	5	>	T	E	S	T	P	R	I	N	T				
---	---	---	---	---	---	---	---	---	---	---	---	--	--	--	--

(27) System mode menu display (Test print)

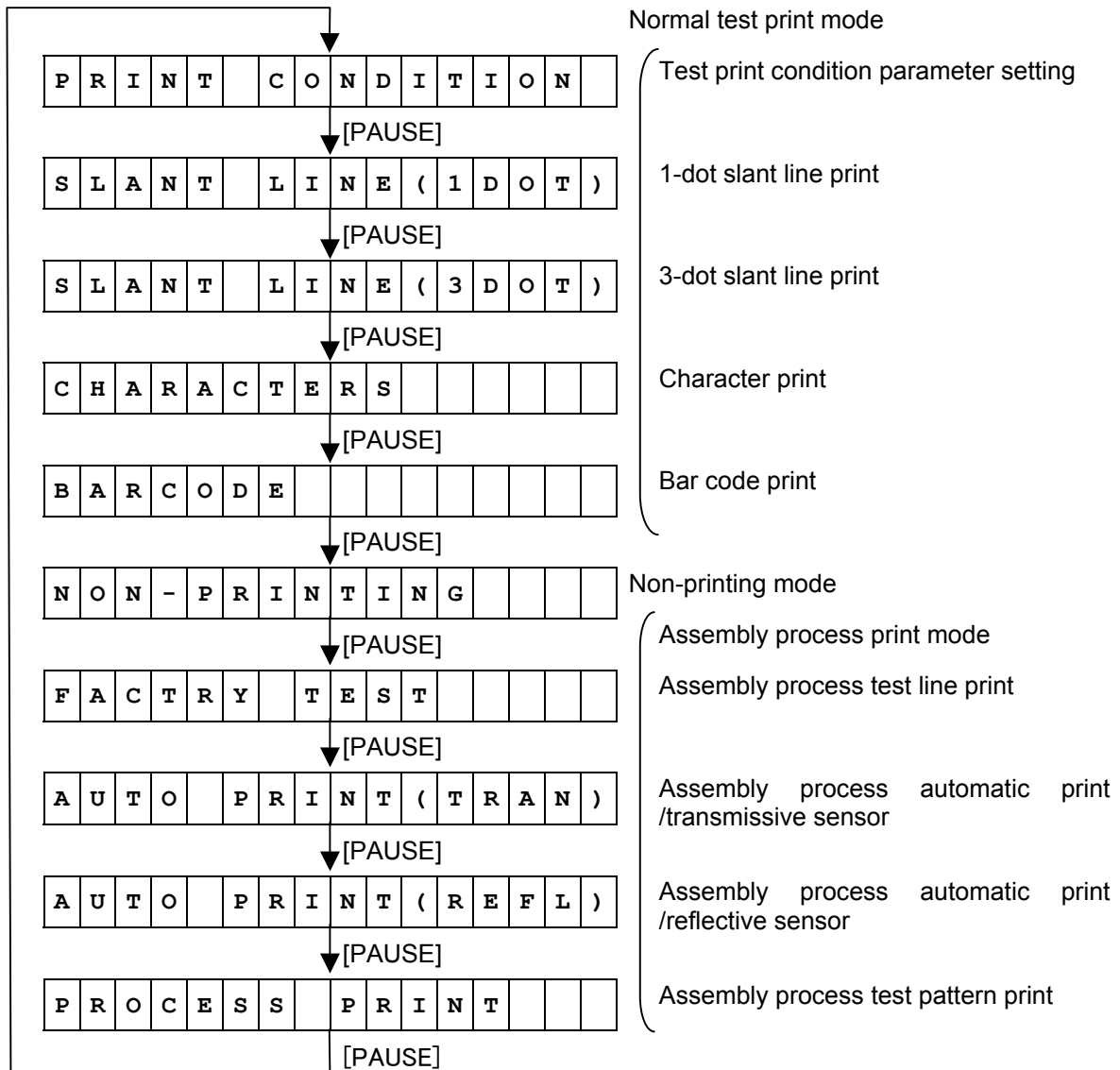
(2) Assembly process test print mode



- (1) Power off state
- (2) While holding down the [FEED] key, press the [POWER] key to turn the power on.
- (3) System mode menu display (Shutdown)
- (4) Press the [PAUSE] key.
- (5) System mode menu display (Self-test)
- (6) Press the [PAUSE] key.
- (7) System mode menu display (Mode setting)
- (8) Press the [PAUSE] key.
- (9) System mode menu display (Parameter setting)
- (10) Press the [PAUSE] key.
- (11) System mode menu display (Fine adjustment value setting)
- (12) Press the [PAUSE] key.
- (13) System mode menu display (Test print)
- (14) Press the [POWER] key.
- (15) Test print condition parameter setting mode
- (16) Press the [PAUSE] key six times.
- (17) Assembly process test line print mode
- (18) Press the [PAUSE] key.
- (19) Assembly process automatic print mode (transmissive sensor)
- (20) Press the [PAUSE] key.
- (21) Assembly process automatic print mode (reflective sensor)
- (22) Press the [PAUSE] key.
- (23) Assembly process test pattern print mode
- (24) While holding down the [FEED] key, press the [PAUSE] key.
- (25) System mode menu display (Test print)

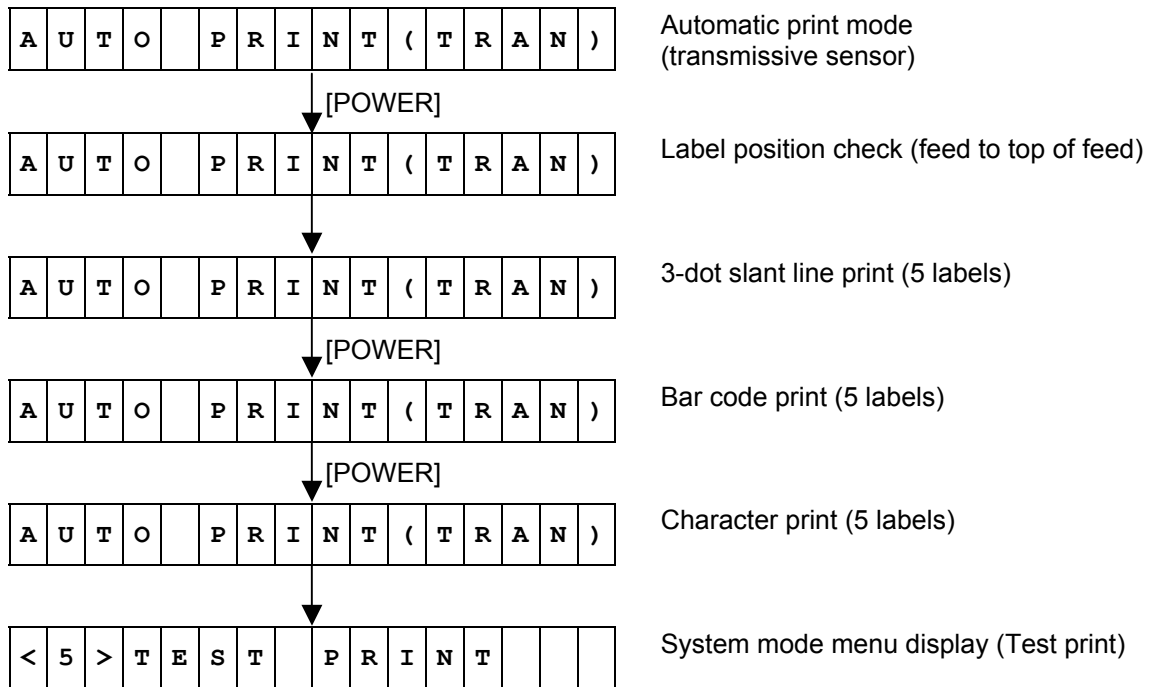
6.6.5.2 Test Print Setting Items

6.6.5.2.1 Test Print Mode

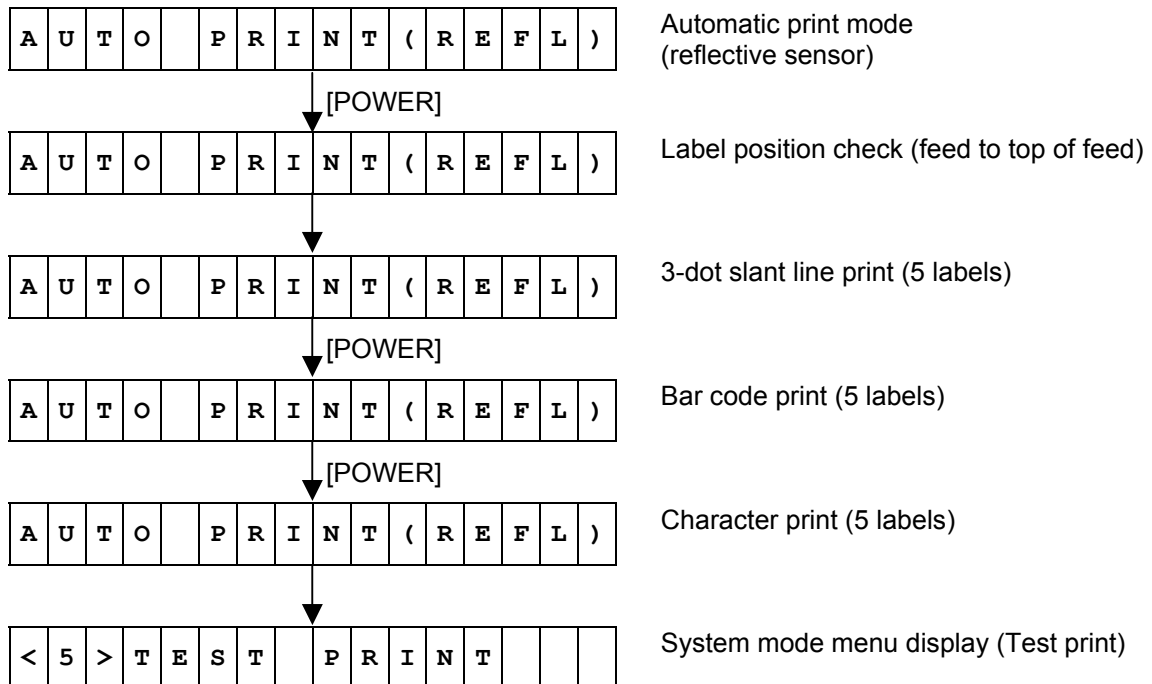


- Operation for assembly process automatic print /transmissive or refractive sensor

When assembly process automatic print /transmissive sensor is selected:



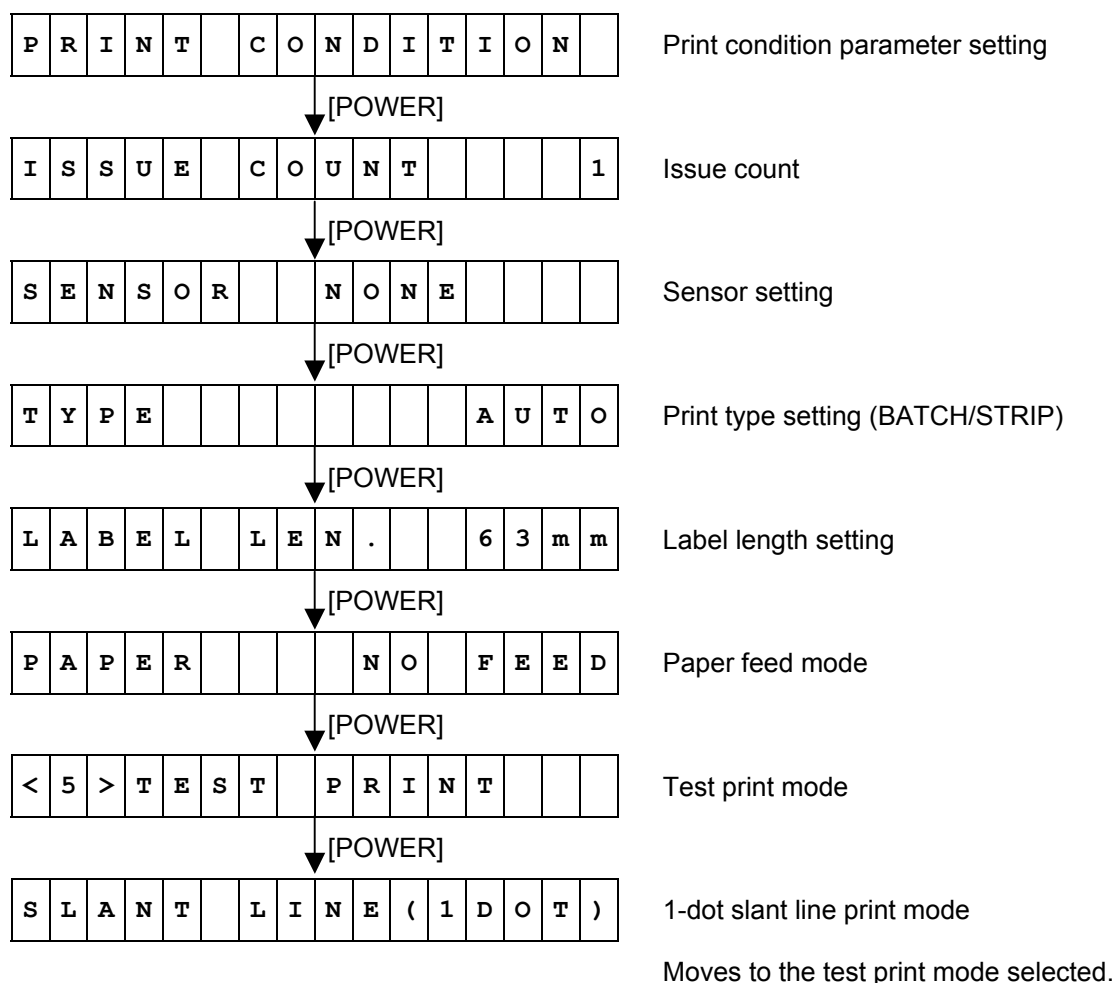
When assembly process automatic print /reflective sensor is selected:



<Supplemental Explanations>

- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.

6.6.5.2.2 Test Print Condition Parameter Setting (PRINT CONDITION)

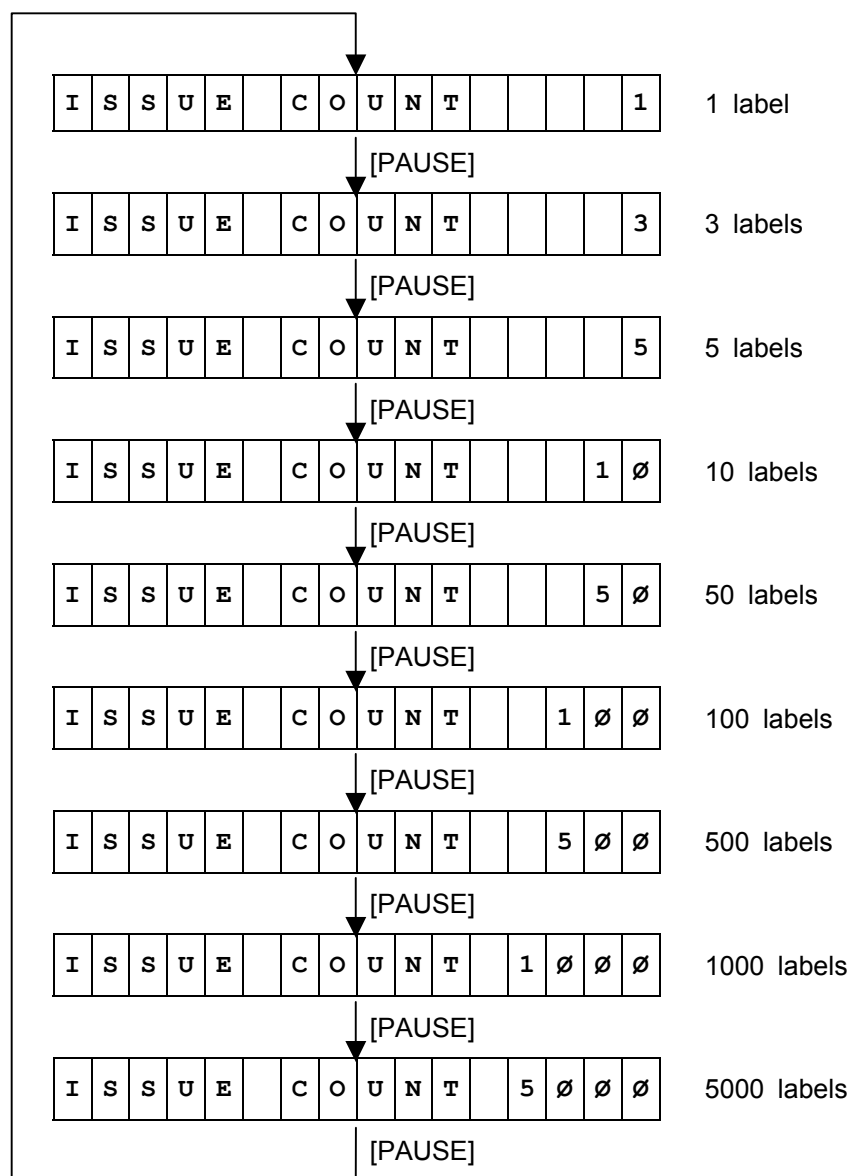


<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.
- The default value at power on is PRINT CONDITION (test print condition parameter setting).

6.6.5.2.3 Issue Count Setting (ISSUE COUNT)

This setting sets the number of labels to be printed for test print.



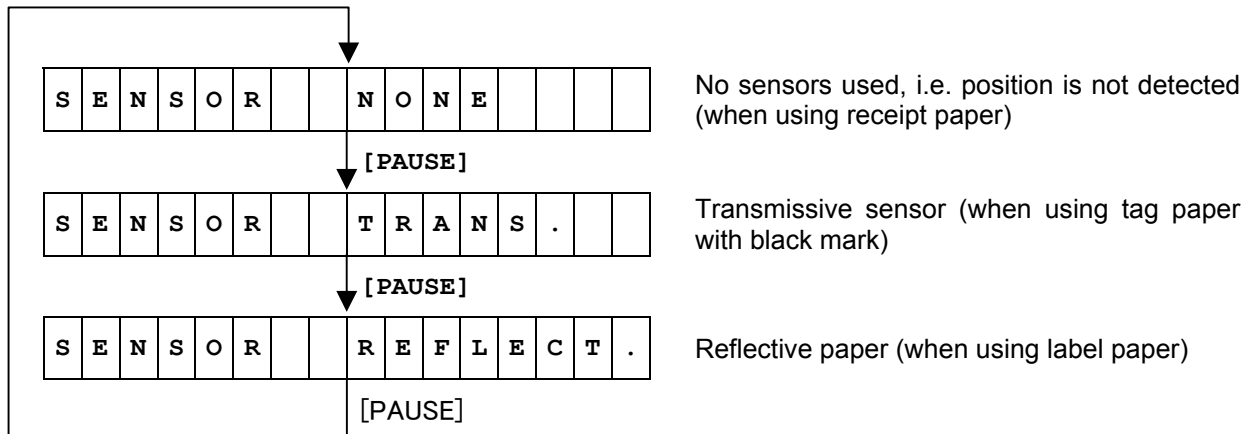
Default value: 1 (One label is to be printed.)

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.
- The default value at power on is 1 (One label is to be printed).

6.6.5.2.4 Sensor Setting (SENSOR)

This setting selects a sensor to be used.



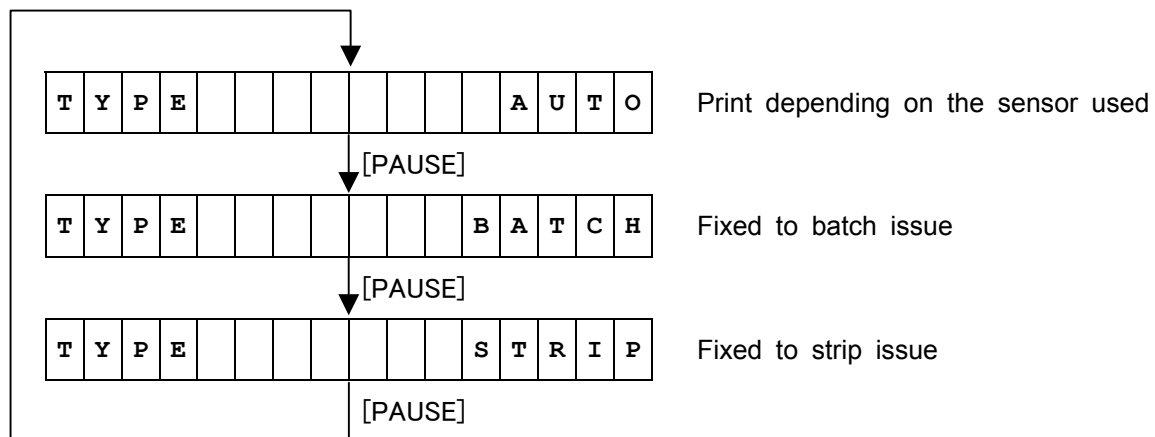
Default value: NONE (No sensors used, i.e. position is not detected)

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.
- The default value at power on is NONE (No sensors used, i.e. position is not detected).

6.6.5.2.5 Print Type Setting (BATCH/STRIP) (TYPE)

This setting selects a print type, auto mode using the strip sensor or fixed mode (BATCH or STRIP) regardless of a sensor status.



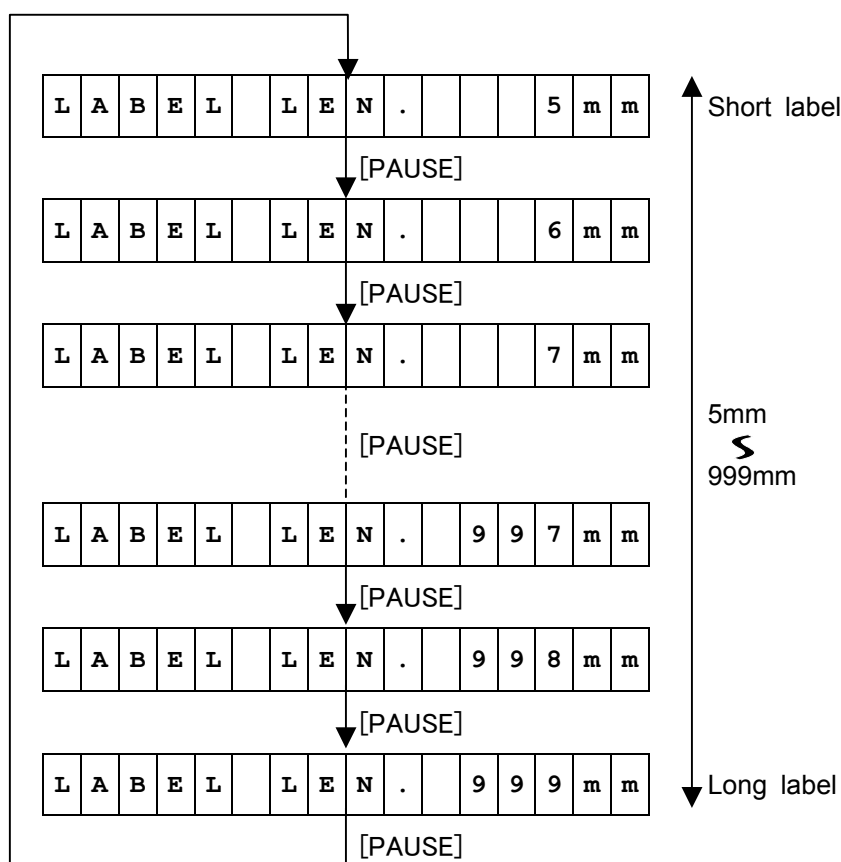
Default value: AUTO (Print depending on the sensor used)

<Supplemental Explanations>:

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.
- The default value at power on is AUTO (Print depending on the sensor used).

6.6.5.2.6 Label Length Setting (LABEL LEN.)

This setting selects a label length for test print.



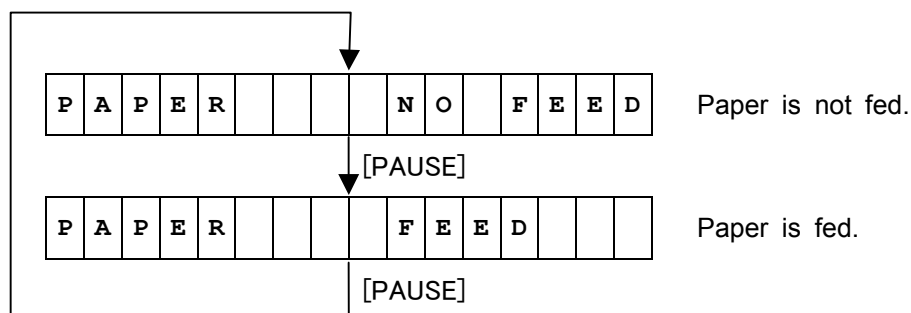
Default value: 63mm

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.
- The default value at power on is 63mm.
- The label length, which is larger than the image buffer length, cannot be specified. If specified, the printer prints the data of image buffer length, then stops.

6.6.5.2.7 Paper Feed Mode Setting (PAPER)

This setting is used to feed a paper without performing printing in system mode where the [FEED] key is invalid to feed a paper.



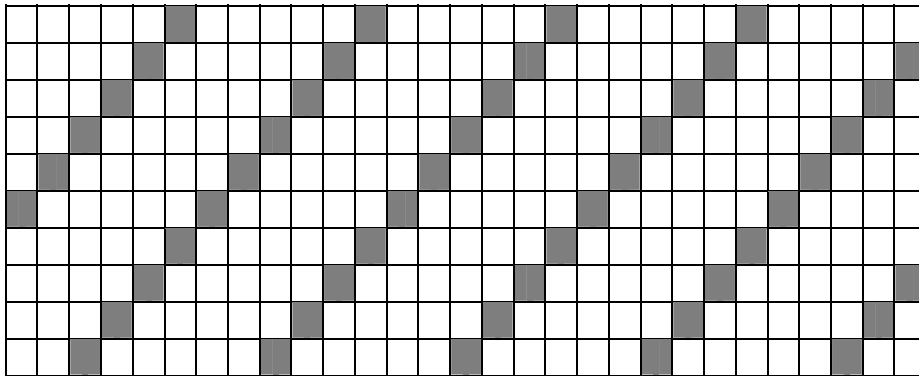
Default value: NO FEED

<Supplemental Explanations>

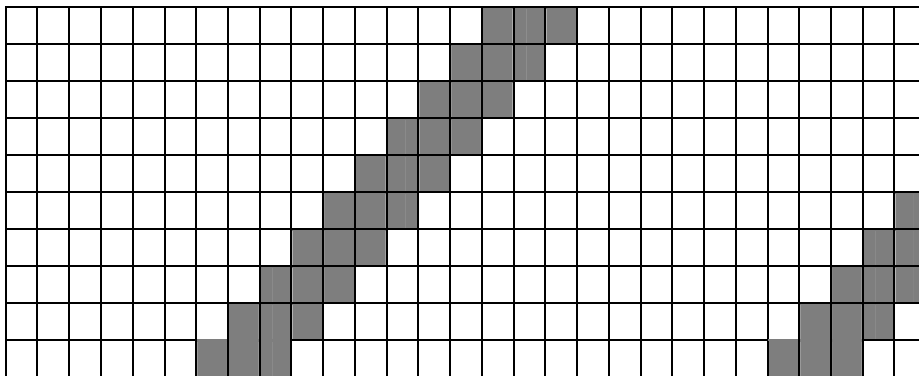
- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.
- By selecting an option using the [FEED] key and determining it using the [POWER] key feeds the paper by an amount specified by LABEL LEN. (See the previous section.). If the label length is not specified, the paper is fed by 63 mm.
- The default value at power on is NO FEED (Paper is not fed.).

- Enlarged view of slant lines

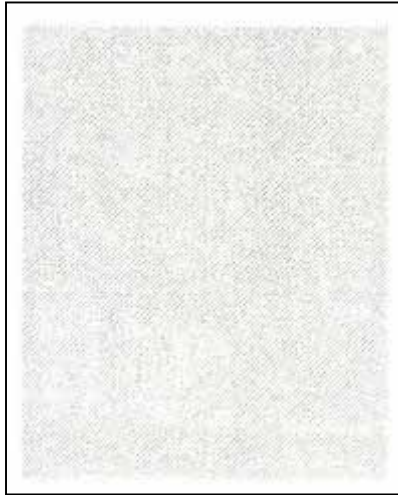
1-dot slant line print (Print ratio: 16.7%)



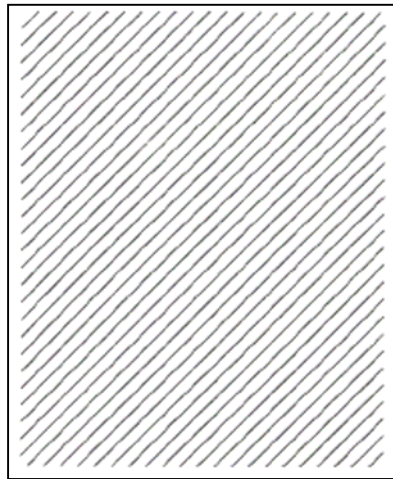
3-dot slant line print (Print ratio: 16.7%)



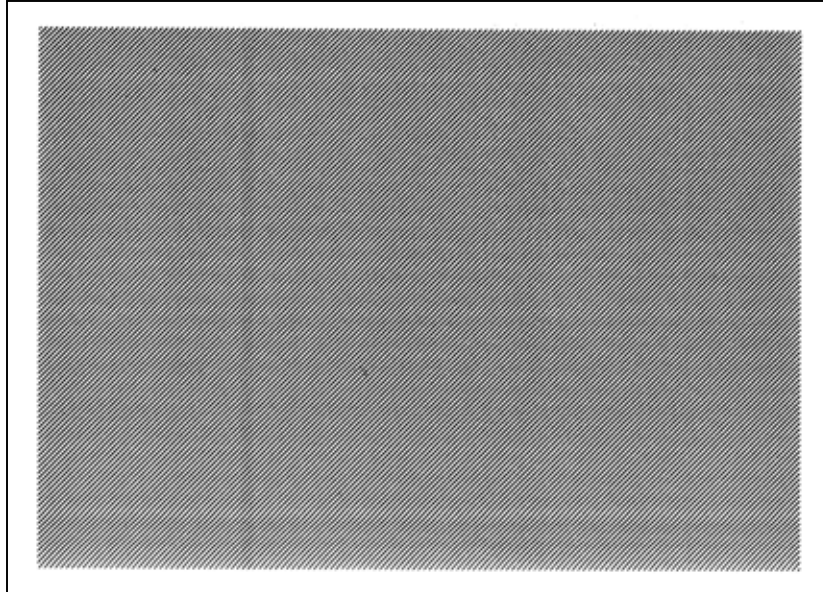
6.6.5.3 Test Print Samples



1-dot slant line print (B-EP2)



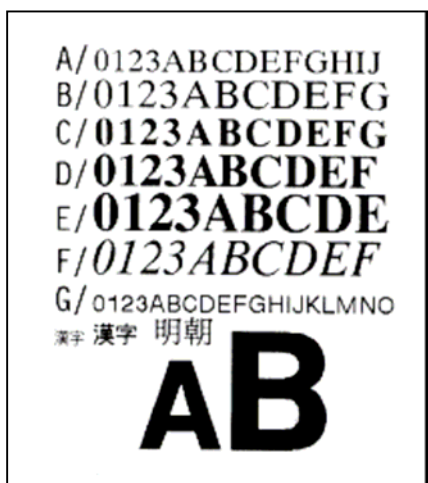
3-dot slant line print (B-EP2)



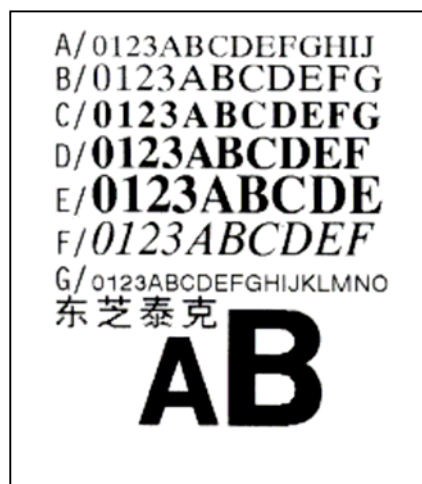
1-dot slant line print (B-EP4)



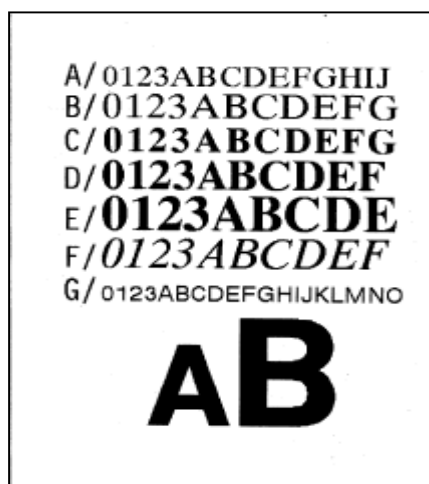
3-dot slant line print (B-EP4)



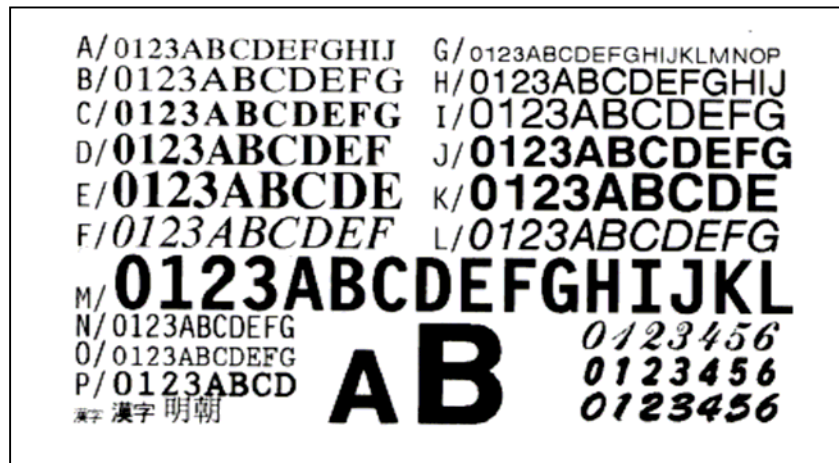
Character print (Kanji) (B-EP2/203 dpi)



Character print (Chinese) (B-EP2/203 dpi)



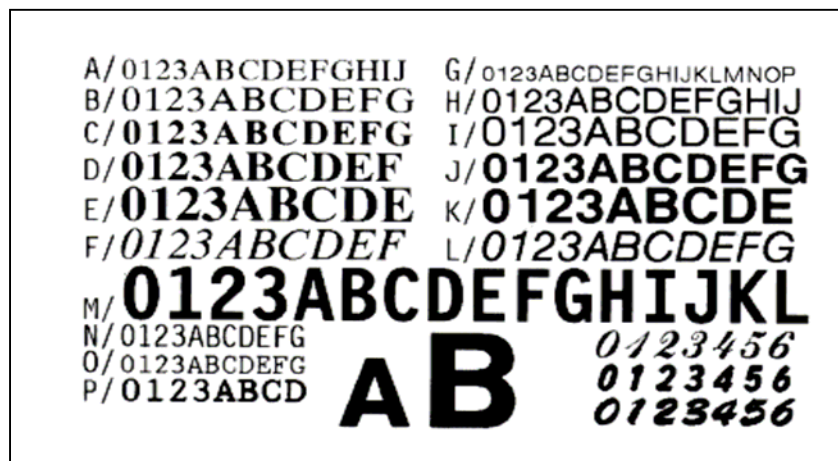
Character print (Korea) (B-EP2/203 dpi)



Character print (Kanji) (B-EP4/203 dpi)



Character print (Chinese) (B-EP4/203 dpi)



Character print (Korea) (B-EP4/203 dpi)



Bar code print (Kanji) (B-EP2/203 dpi)



Bar code print (Chinese) (B-EP2/203 dpi)



Bar code print (Korea) (B-EP2/203 dpi)



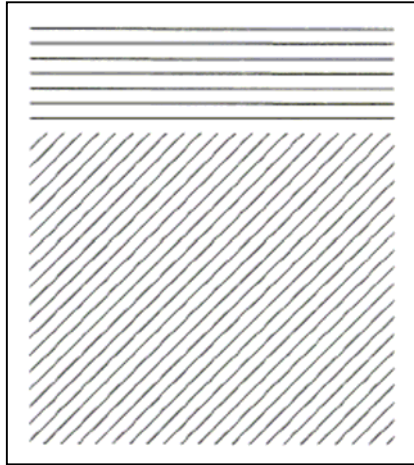
Bar code print (Kanji) (B-EP4/203 dpi)



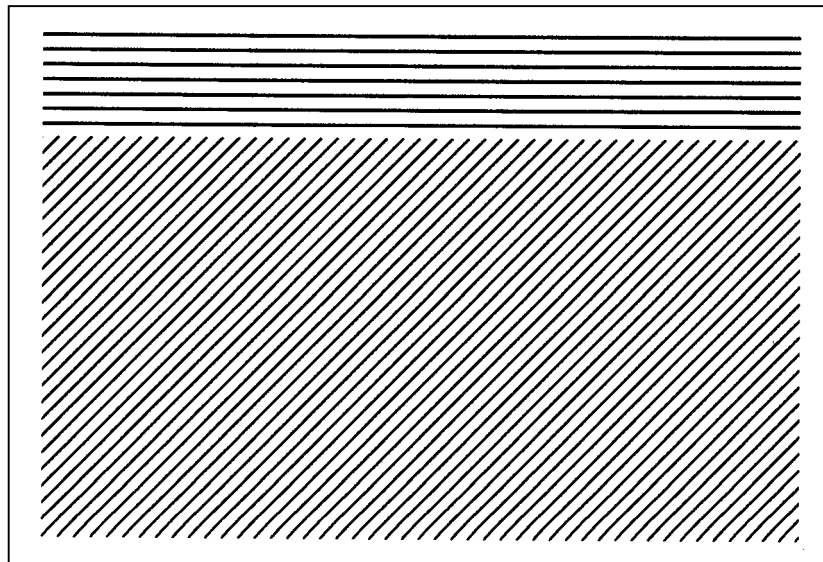
Bar code print (Chinese) (B-EP4/203 dpi)



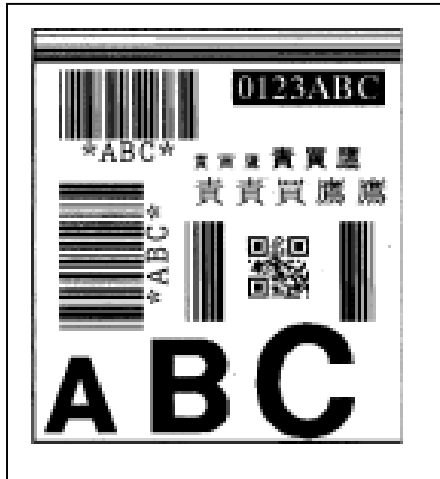
Bar code print (Korea) (B-EP4/203 dpi)



Line print for assembly process (B-EP2)



Line print for assembly process (B-EP4)



Pattern print for assembly process (Kanji)
(B-EP2/203 dpi)



Pattern print for assembly process (Chinese)
(B-EP2/203 dpi)



Pattern print for assembly process (Korea)
(B-EP2/203 dpi)



Pattern print for assembly process (Kanji) (B-EP4/203 dpi)



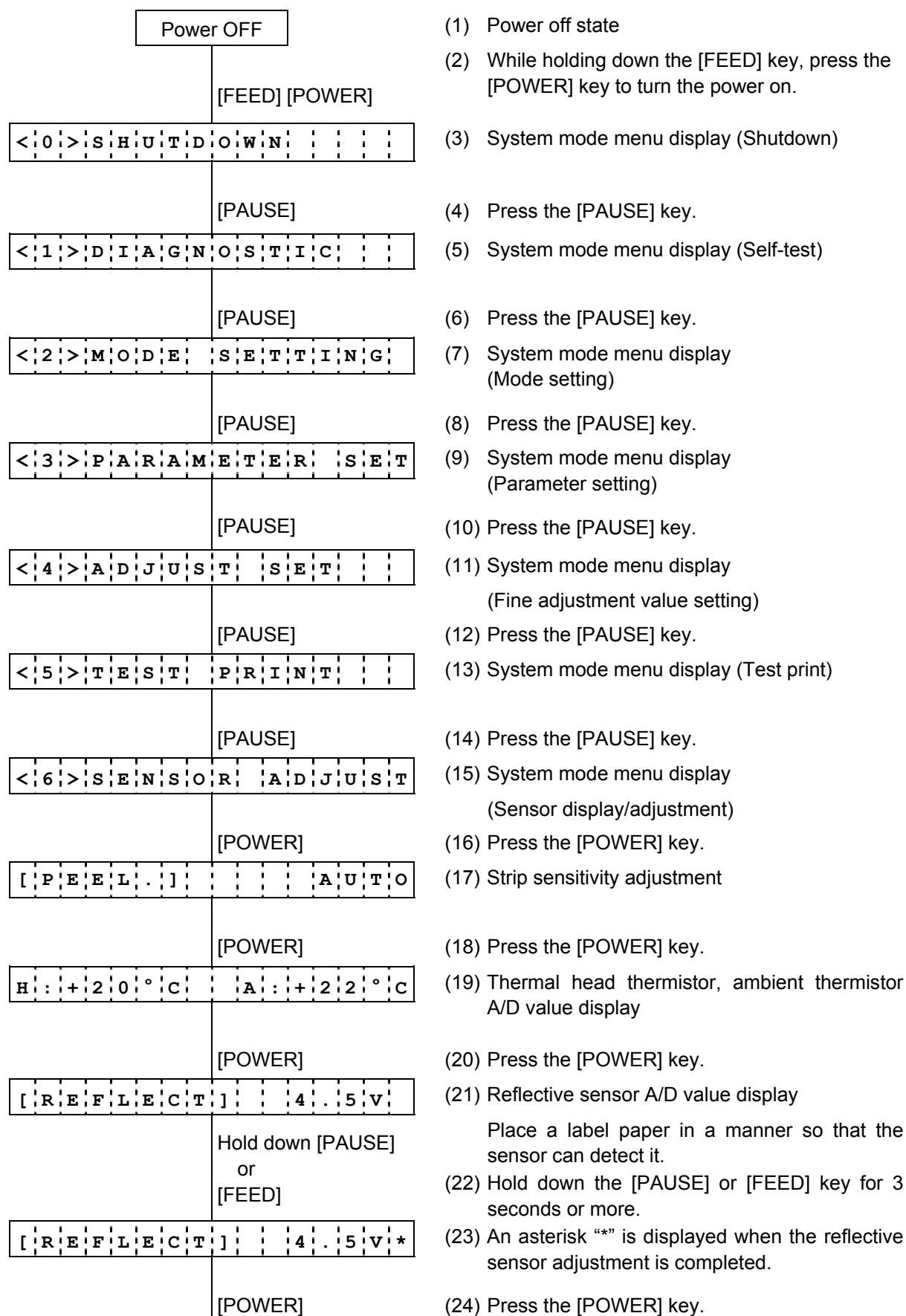
Pattern print for assembly process (Chinese) (B-EP4/203 dpi)



Pattern print for assembly process (Korea) (B-EP4/203 dpi)

6.6.6 Sensor Display/Adjustment

6.6.6.1 Sensor Display/Adjustment Operation Example



[T R A N S . .]	1 . 8 V
	Hold down [PAUSE] or [FEED]
[T R A N S . .]	1 . 8 V *
	[POWER]
[P E] R 4 . 5 V	T 1 . 8 V
	Hold down [PAUSE] or [FEED]
[P E] R 4 . 5 V	T 1 . 8 V *
	[POWER]
[B A T T E R Y]	1 6 . 2 V
	[POWER]
B A C K L A S H 1	ø 8
	[POWER]
B A C K L A S H 2	ø 8
	[POWER]
< 6 > S E N S O R	A D J U S T
	[POWER]
< 0 > S H U T D O W N	
	[POWER]

(25) Transmissive sensor A/D value display

Remove a few labels from the label paper and place the backing paper in a manner so that the sensor can detect it.

(26) Hold down the [PAUSE] or [FEED] key for 3 seconds or more.

(27) An asterisk "*" is displayed when the transmissive sensor adjustment is completed.

(28) Press the [POWER] key.

(29) Reflective sensor/transmissive sensor A/D value without backing paper display

Remove the paper over the sensor.

(30) Hold down the [PAUSE] or [FEED] key for 3 seconds or more.

(31) An asterisk "*" is displayed when the sensor adjustment without the baking paper is completed.

(32) Press the [POWER] key.

(33) Battery voltage display

(34) Press the [POWER] key.

(35) Backlash step count 1 display

(36) Press the [POWER] key.

(37) Backlash step count 2 display

(38) Press the [POWER] key.

(39) System mode menu display
(Sensor display/adjustment)

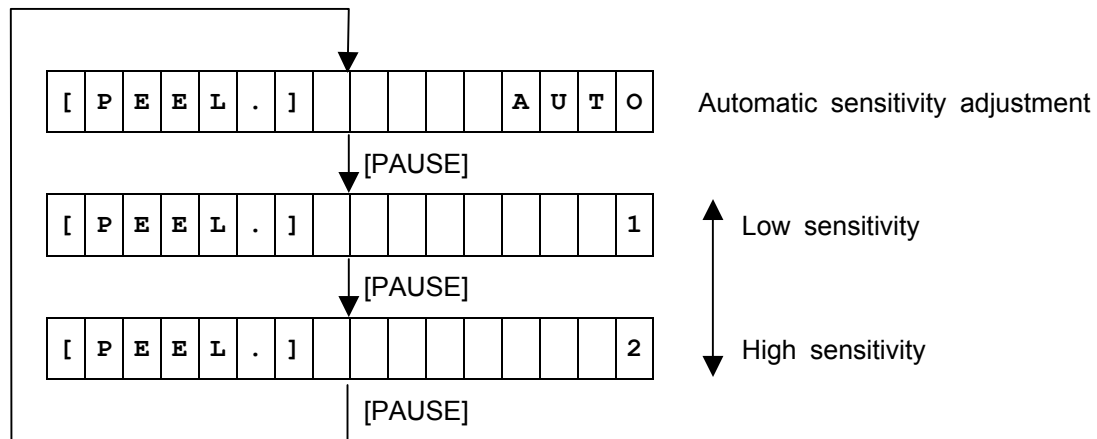
(40) Hold down the [POWER] key for 3 seconds or more.

(41) System mode menu display (Shutdown)

(42) Press the [POWER] key.

* Operation example of the B-EP4.

6.6.6.1.1 Strip Sensitivity Setting ([PEEL])

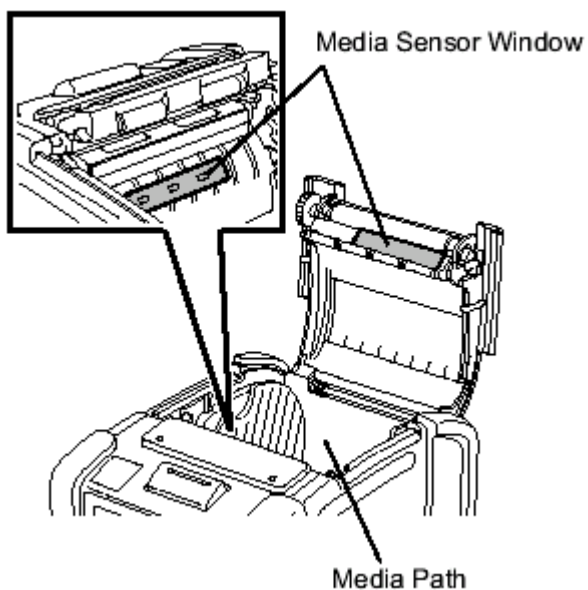


Default value: AUTO

<Supplemental Explanations>

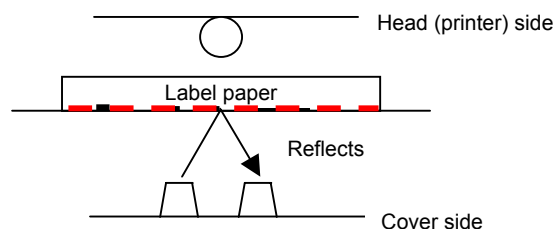
- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.

6.6.7 Label Paper Loading Method



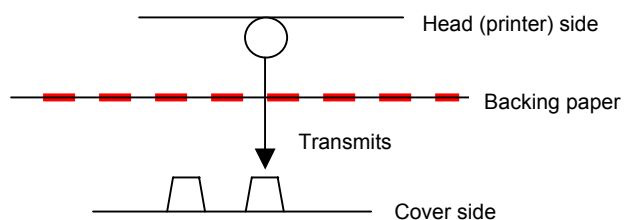
<Reflective sensor adjustment>

Place a specified paper in a manner so that the label (red dashed line) comes in contact with the reflective sensor.



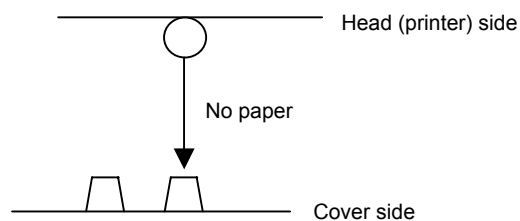
<Transmissive sensor adjustment>

Remove a few labels from a specified paper and place the backing paper (red dashed line) in a manner so that it comes in contact with the transmissive sensor.



<Adjustment without paper>

Do not place a paper in the printer.



6.6.7.1 Details of Sensor Adjustment Value Display

(1) Sensor A/D value display

H	:	+	2	0	°	C	:	A	:	+	2	2	°	C
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Ambient thermistor status
(-15 °C to 86 °C)

Thermal head thermistor status
(-15°C to 86 °C)

[R	E	F	L	E	C	T]	:	3	.	8	V
---	---	---	---	---	---	---	---	---	---	---	---	---	---

Reflective sensor status
(0.0 V to 5.0 V)

[T	R	A	N	S	.]	:	2	.	3	V
---	---	---	---	---	---	---	---	---	---	---	---	---

Transmissive sensor status
(0.0 V to 5.0 V)

[P	E]	R	4	.	6	V	:	T	4	.	3	V
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Transmissive sensor level without paper
((0.0 V to 5.0 V)

Reflective sensor level without paper
((0.0 V to 5.0 V)

[B	A	T	T	E	R	Y]	:	1	6	.	5	V
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Battery voltage status

B-EP2: 7.2V to 8.4 (9.4)V

B-EP4: 14.0V to 16.8 (17.4)V

* The voltage in parenthesis indicates an upper limit which does not cause a high voltage error.

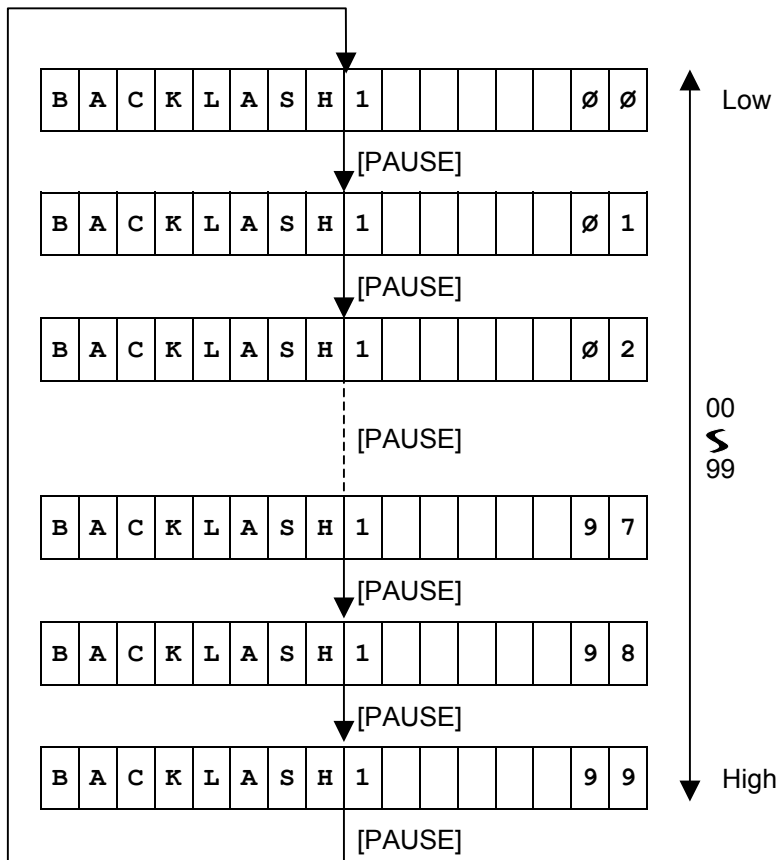
(2) Supplemental explanations

- During a sensor check, status of each sensor is monitored and displayed every 200 msec. (The display changes in accordance with sensor status.)
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.

6.6.7.2 Sensor Display/Adjustment Setting Items

6.6.7.2.1 Backlash Step Count Adjustment 1 (BACKLASH1)

This setting selects a backlash step count for a feed in forward direction.



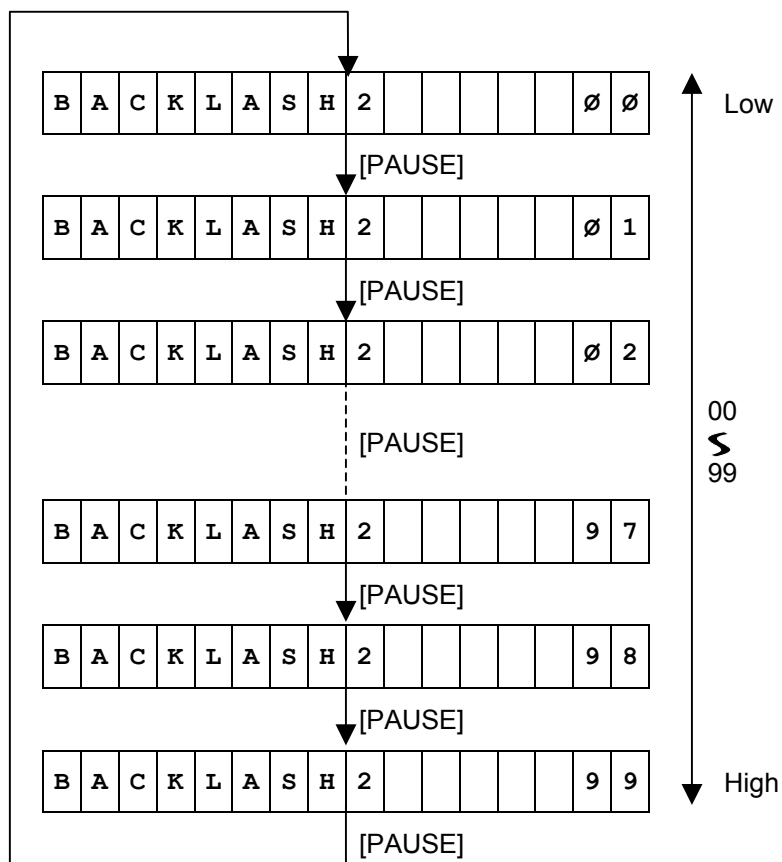
Default value: 01 for the B-EP2
08 for the B-EP4

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.7.2.2 Backlash Step Count Adjustment 2 (BACKLASH2)

This setting selects a backlash step count for a feed in reverse direction.



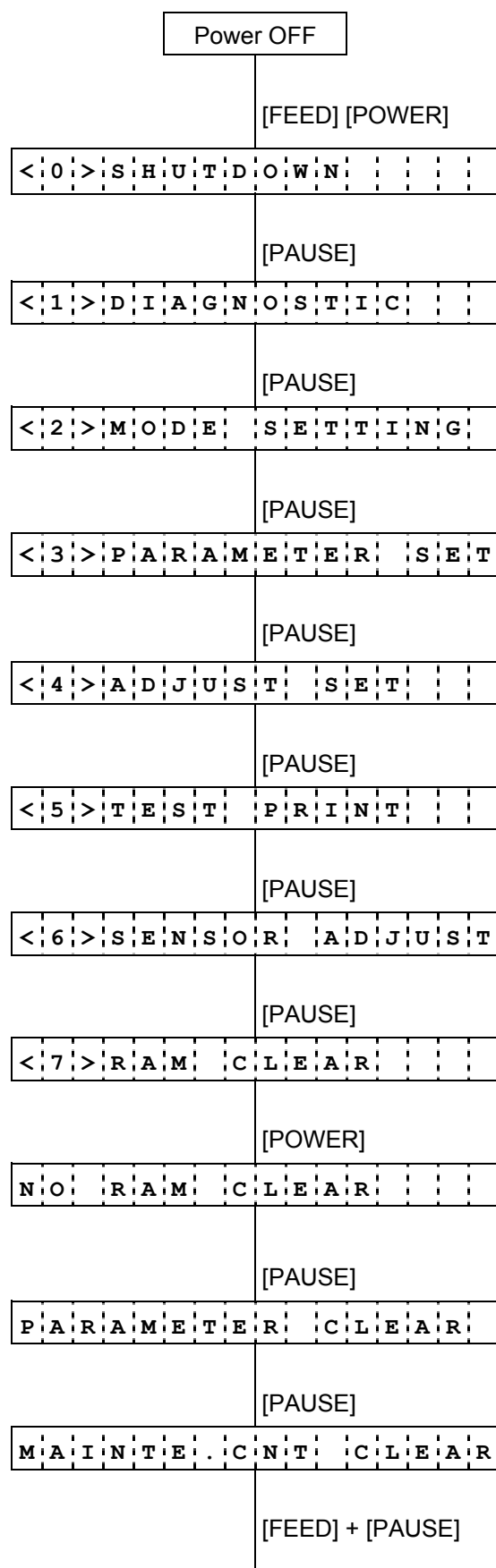
Default value: 01 for the B-EP2
30 for the B-EP4

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.8 RAM Clear

6.6.8.1 RAM Clear Operation Example



- (1) Power off state
- (2) While holding down the [FEED] key, press the [POWER] key to turn the power on.
- (3) System mode menu display (Shutdown)
- (4) Press the [PAUSE] key.
- (5) System mode menu display (Self-test)
- (6) Press the [PAUSE] key.
- (7) System mode menu display (Mode setting)
- (8) Press the [PAUSE] key.
- (9) System mode menu display (Parameter setting)
- (10) Press the [PAUSE] key.
- (11) System mode menu display (Fine adjustment value setting)
- (12) Press the [PAUSE] key.
- (13) System mode menu display (Test print)
- (14) Press the [PAUSE] key.
- (15) System mode menu display (Sensor display/adjustment)
- (16) Press the [PAUSE] key.
- (17) System mode menu display (RAM clear)
- (18) Press the [POWER] key.
- (19) No RAM clear mode
(*) A mode to prevent RAM clear from being performed mistakenly
- (20) Press the [PAUSE] key.
- (21) Parameter clear mode
- (22) Press the [PAUSE] key.
- (23) Maintenance counter clear mode
- (24) While holding down the [FEED] key, press the [PAUSE] key.

<	7	>	R	A	M		C	L	E	A	R				
---	---	---	---	---	---	--	---	---	---	---	---	--	--	--	--

(25) System mode menu display (RAM clear)

[POWER]

(26) Hold down the [POWER] key for 3 seconds or more.

<	0	>	S	H	U	T	D	O	W	N					
---	---	---	---	---	---	---	---	---	---	---	--	--	--	--	--

(27) System mode menu display (Shutdown)

[POWER]

(28) Press the [POWER] key.

6.6.8.2 RAM Clear Setting Items

6.6.8.2.1 NO RAM Clear (NO RAM CLEAR)

This mode prevents RAM clear from being performed mistakenly.

<	7	>	R	A	M		C	L	E	A	R				
---	---	---	---	---	---	--	---	---	---	---	---	--	--	--	--

System mode menu display (RAM clear)

↓ [POWER]

N	O		R	A	M		C	L	E	A	R				
---	---	--	---	---	---	--	---	---	---	---	---	--	--	--	--

No RAM clear mode

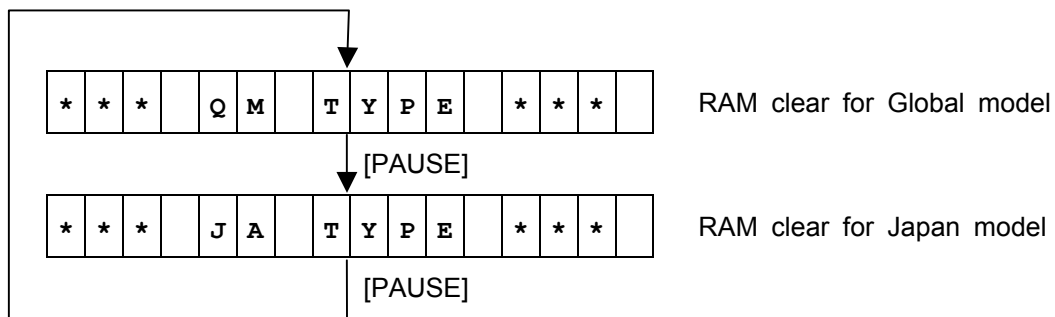
↓ [POWER]

<	7	>	R	A	M		C	L	E	A	R				
---	---	---	---	---	---	--	---	---	---	---	---	--	--	--	--

System mode menu display (RAM clear)

Completion of setting

6.6.8.2.2 Parameter Clear (PARAMETER CLEAR)



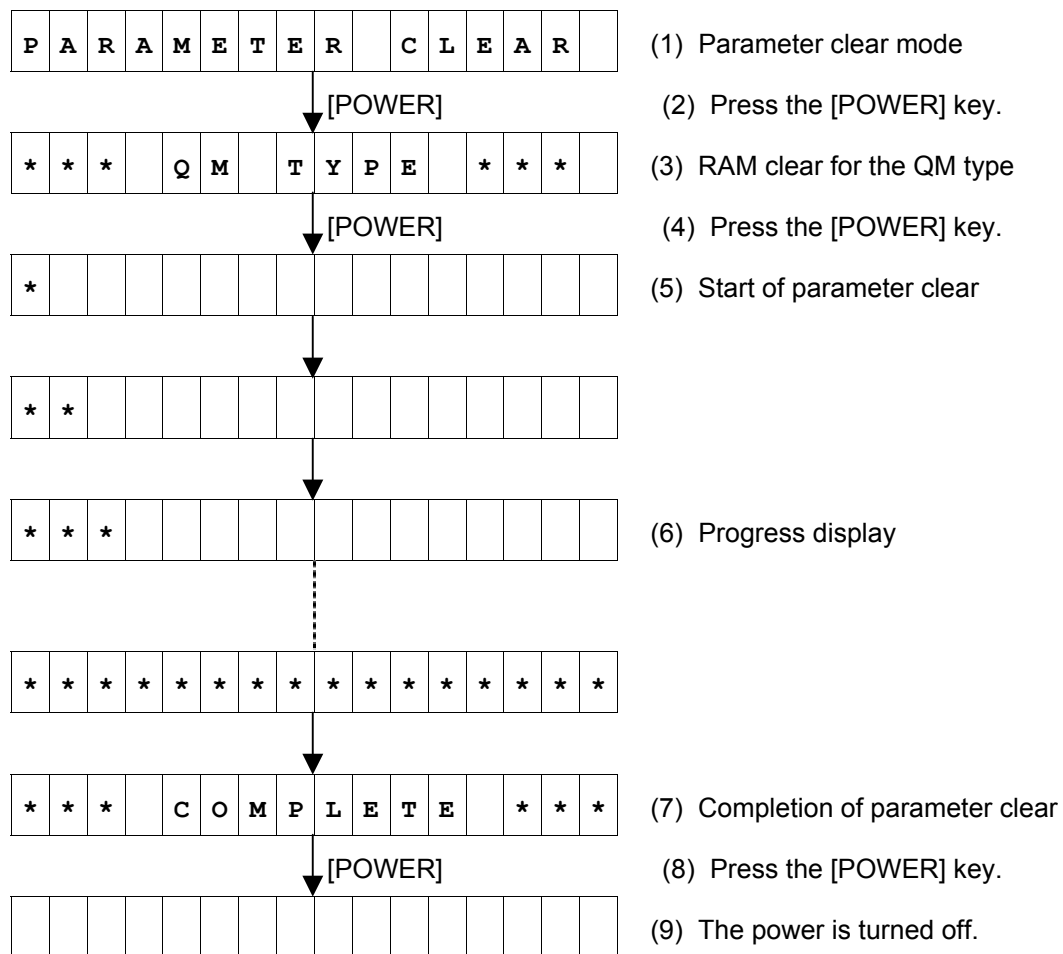
(*) Depending on destination (model type), the default value of the LCD language varies.

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.

Parameter Clear Operation Examples

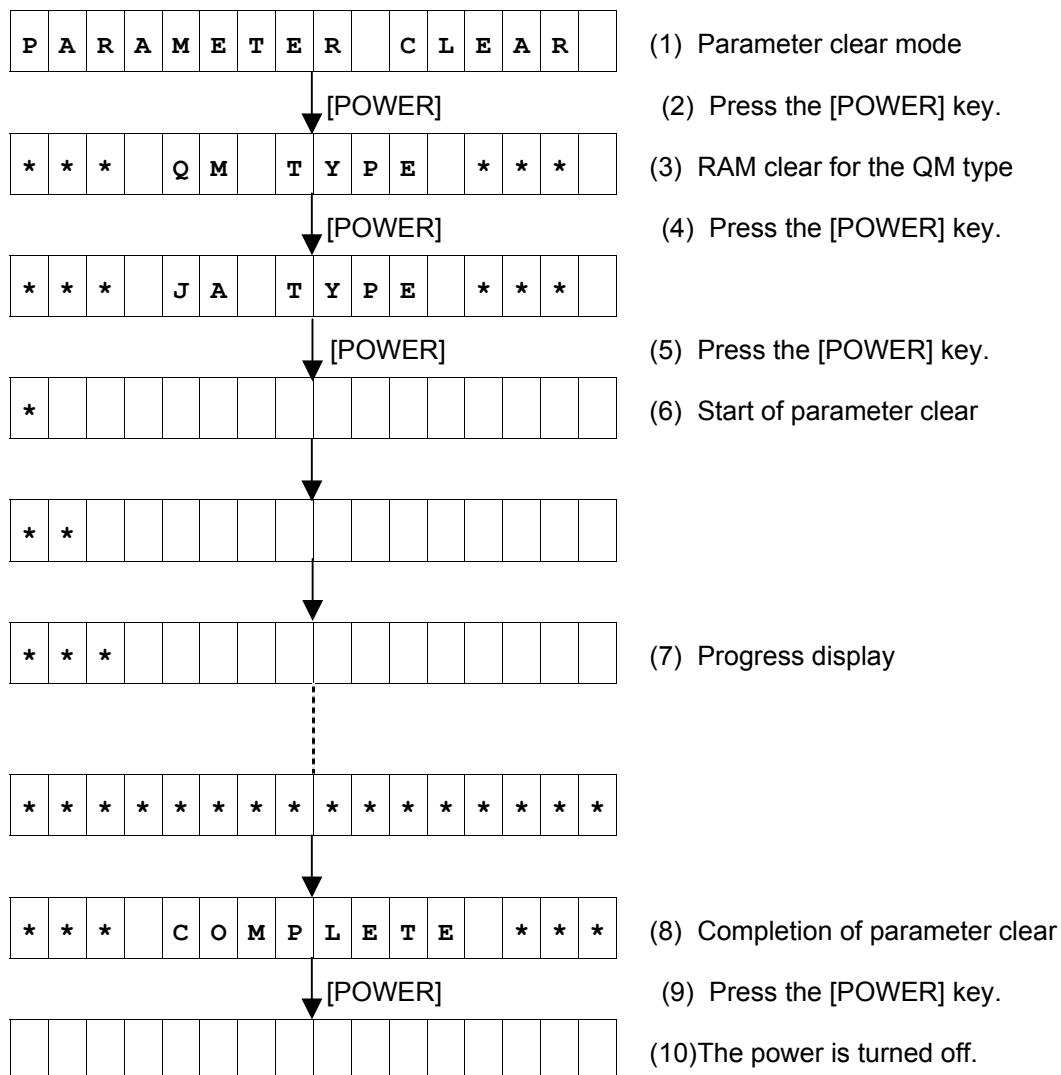
RAM clear for Global (QM) model



<Supplemental Explanations>

- When “COMPLETE” is displayed after RAM clear is completed, turn off the power. (The power can be turned off only by using the [POWER] key.)
- The total label distance covered and sensor adjustment values (system mode <6>) are not cleared by RAM clear.

RAM clear for Japan (JA) model



<Supplemental Explanations>

- When “COMPLETE” is displayed after RAM clear is completed, turn off the power. (The power can be turned off only by using the [POWER] key.)
- The total label distance covered and sensor adjustment values (system mode <6>) are not cleared by RAM clear.

Values after parameter clear

Parameter		Value
Feed amount fine adjustment (PC)		+0.0mm
Print tone fine adjustment (PC)		+0step
Strip position fine adjustment (PC)		+0.0mm
Feed amount fine adjustment (Key)		+0.0mm
Print tone fine adjustment (Key)		+0step
Strip position fine adjustment (Key)		+0.0mm
X-coordinate fine adjustment (Key)		+0.0mm
Transmissive sensor manual threshold fine adjustment value		1.4V
Reflective sensor manual threshold fine adjustment value		1.0V
Print command language		TPCL
Print type (BATCH/STRIP)		AUTO
Post-print stop position setting		CUT
Back feed restriction setting		ON
Strip issue back feed setting		OFF
Label width setting for peel-off issue	B-EP2D only	>= 30 mm
Strip sensor sensitivity adjustment		AUTO
Character code		PC-850
Font zero		"0" (without slash)
LCD language	QM type	ENGLISH
	JA type	JAPANESE
Control code		AUTO
EURO font code		B0H
Automatic print head check for broken dots		OFF
MaxiCode specification		TYPE1
Head division		AUTO1
Head output division command parameter setting		ON
Print head check for broken dots after cover close		OFF
Resume printing after broken dots error		OFF
Feed to top of feed after cover close		OFF
B-SP series compatibility mode		OFF
Linerless		OFF
XML		OFF
Beep volume		1
Auto power-off timing		120 min.
Auto power off after error		ON
Power save mode timing		3 sec.
LCD backlight off timing		3 sec.
Battery charge mode setting		NORM
BASIC interpreter setting		OFF
BASIC trace setting		OFF
Shell function		OFF
Label pitch	B-EP2/203 dpi	63.0 mm
	B-EP4/203 dpi	63.0 mm
Effective print length	B-EP2/203 dpi	60.0 mm
	B-EP4/203 dpi	60.0 mm
Effective print length	B-EP2/203 dpi	48.0 mm
	B-EP4/203 dpi	104.0 mm

Parameter	Value
Sensor	Transmissive sensor
PC-save automatic call	ON

IrDA	
IrDA mode	IrCOMM
Maximum IrDA baud rate	115200

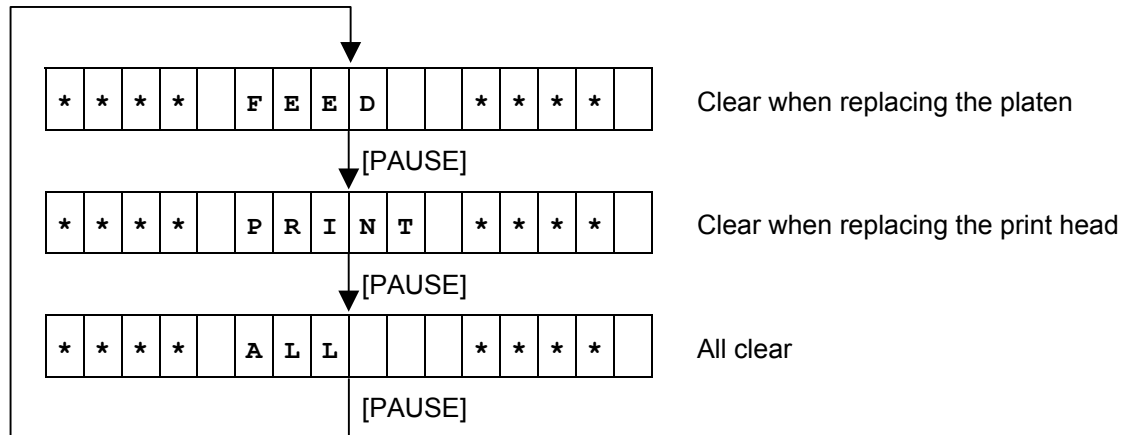
USB	
USB serial number	DISABLE

RS-232C	
RS-232C baud rate	9600
RS-232C PARITY	EVEN

Bluetooth	
Bluetooth device nickname	TOSHIBA TEC BT
Bluetooth device address	Fixed module address
Inquiry scan time	EVERY
Inquiry/page scan interval	2048
Inquiry/page scan window	36
Security level	OFF

WLAN	
Wireless LAN enable/disable	ON
Printer IP address	192.168.254.254
Printer gateway IP address	000.000.000.000
Printer subnet mask	255.255.000.000
Printer MAC address	Fixed module address
Socket communication port number	ON:8000
DHCP	OFF
DHCP ID (32 byte/ASCII in hexadecimal)	0000000000000000 0000000000000000 0000000000000000 0000000000000000
DHCP host name (32 byte/ASCII)	Blank
ESS ID	TOSHIBA TEC
WINS	OFF
WINS address	000.000.000.000
LPR	OFF
Wireless LAN standard	11b/g
Wireless LAN connection mode	INFRA
Encryption	OFF
WPA authentication type	OFF
Authentication type	OFF
Default key	1
802.1X supplicant authentication type	OFF
802.11b channel	01
802.11b baud rate	11M
802.11g channel	01
802.11g baud rate	54M
Wireless LAN power save	ON
Radio intensity (RSSI) indication	OFF

6.6.8.2.3 Maintenance Counter Clear (MAINTE.CNT CLEAR)

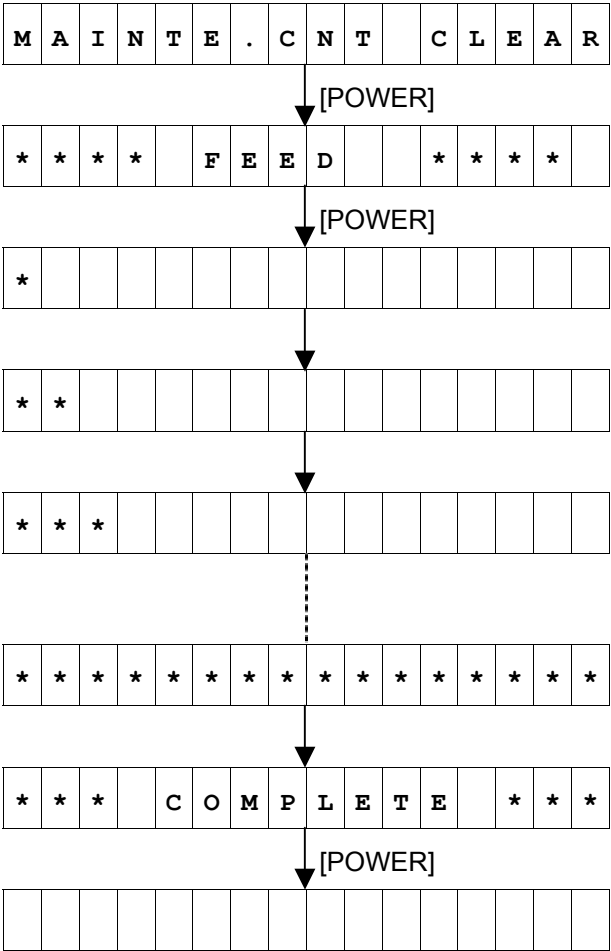


<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.

Maintenance Counter Clear Operation Example

Clear when replacing the platen



- (1) Maintenance counter clear mode
- (2) Press the [POWER] key.
- (3) Clear when replacing the platen
- (4) Press the [POWER] key.
- (5) Start of maintenance counter clear
- (6) Progress display
- (7) Completion of maintenance counter clear
- (8) Press the [POWER] key.
- (9) The power is turned off.

Clear when replacing the print head

M	A	I	N	T	.	C	N	T		C	L	E	A	R
---	---	---	---	---	---	---	---	---	--	---	---	---	---	---

[POWER]

*	*	*	*		F	E	E	D			*	*	*	*
---	---	---	---	--	---	---	---	---	--	--	---	---	---	---

[PAUSE]

*	*	*	*		P	R	I	N	T		*	*	*	*
---	---	---	---	--	---	---	---	---	---	--	---	---	---	---

[POWER]

*														
---	--	--	--	--	--	--	--	--	--	--	--	--	--	--

*	*													
---	---	--	--	--	--	--	--	--	--	--	--	--	--	--

*	*	*												
---	---	---	--	--	--	--	--	--	--	--	--	--	--	--

*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

*	*	*			C	O	M	P	L	E	T	E		*	*	*
---	---	---	--	--	---	---	---	---	---	---	---	---	--	---	---	---

[POWER]

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

(1) Maintenance counter clear mode

(2) Press the [POWER] key.

(3) Clear when replacing the platen

(4) Press the [PAUSE] key.

(5) Clear when replacing the print head

(6) Press the [POWER] key.

(7) Start of maintenance counter clear

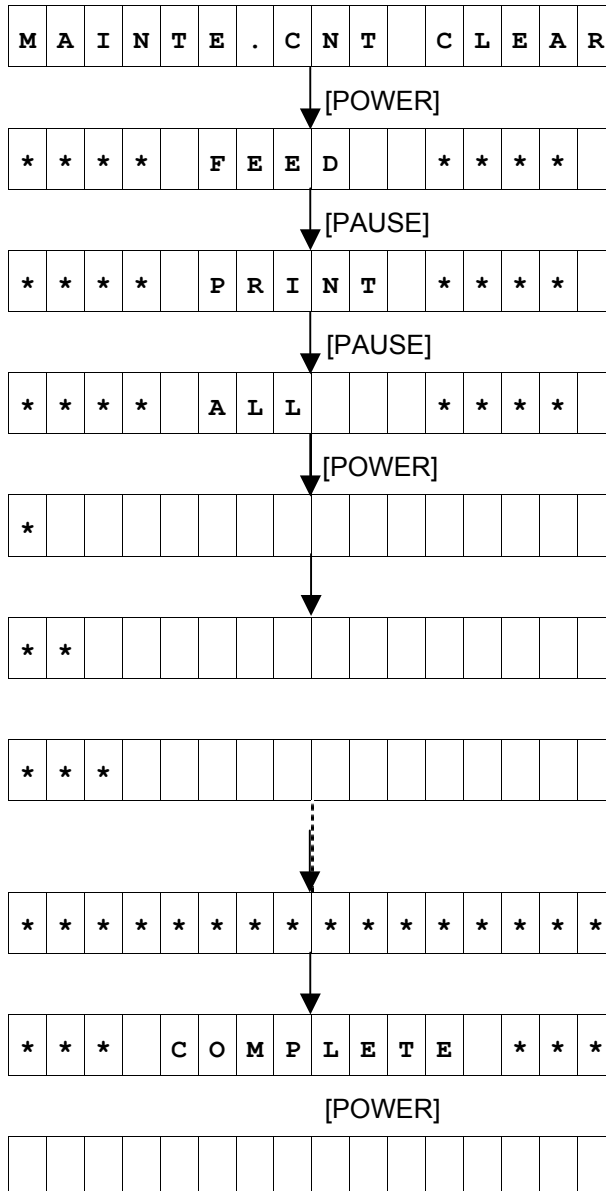
(8) Progress display

(9) Completion of maintenance counter clear

(10) Press the [POWER] key.

(11) The power is turned off.

All clear

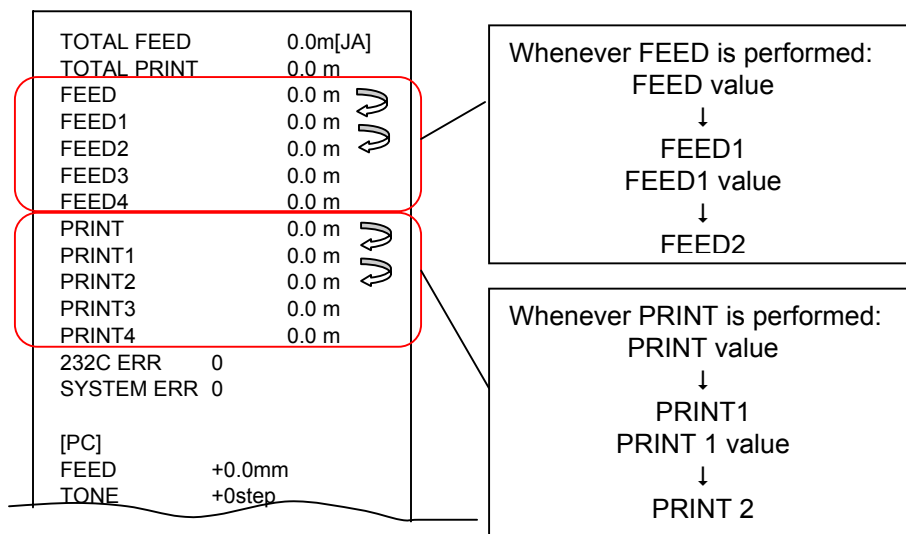


- (1) Maintenance counter clear mode
- (2) Press the [POWER] key.
- (3) Clear when replacing the platen
- (4) Press the [PAUSE] key.
- (5) Clear when replacing the print head
- (6) Press the [PAUSE] key.
- (7) All clear
- (8) Press the [POWER] key.
- (9) Start of maintenance counter clear
- (10) Progress display
- (11) Completion of maintenance counter clear
- (12) Press the [POWER] key.
- (13) The power is turned off.

Print Result of Maintenance Counter Values and Various Parameter Values After Each Type of Clear

- Clear when replacing the platen (FEED)
The total feed up to the last feed moves to FEED1 and the FEED1 value moves to FEED2. (The FEED 4 value is cleared.)
- Clear when replacing the print head (PRINT)
The total print length up to the last print moves to PRINT1 and the PRINT1 value moves to PRINT2. (The PRINT 4 value is cleared.)
- When clearing every thing (ALL)
Both the FEED and PRINT values move.

Maintenance counter value and various parameter value print



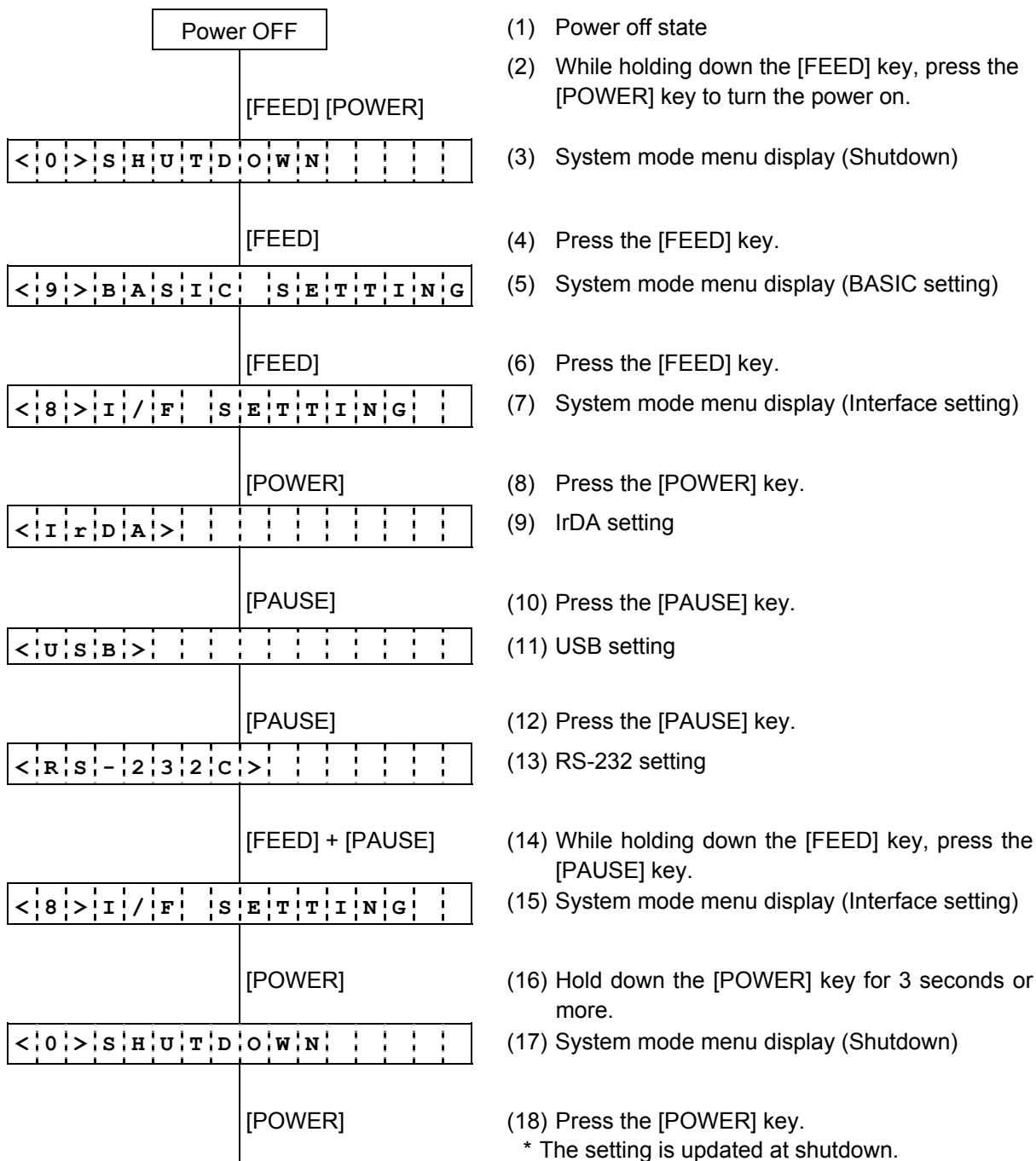
Values after maintenance counter clear

Item	Value
Label distance covered 1-4	Operation as described above
Print distance 1-4	Operation as described above
RS-232C hardware error count	0 times
System error count	0 times

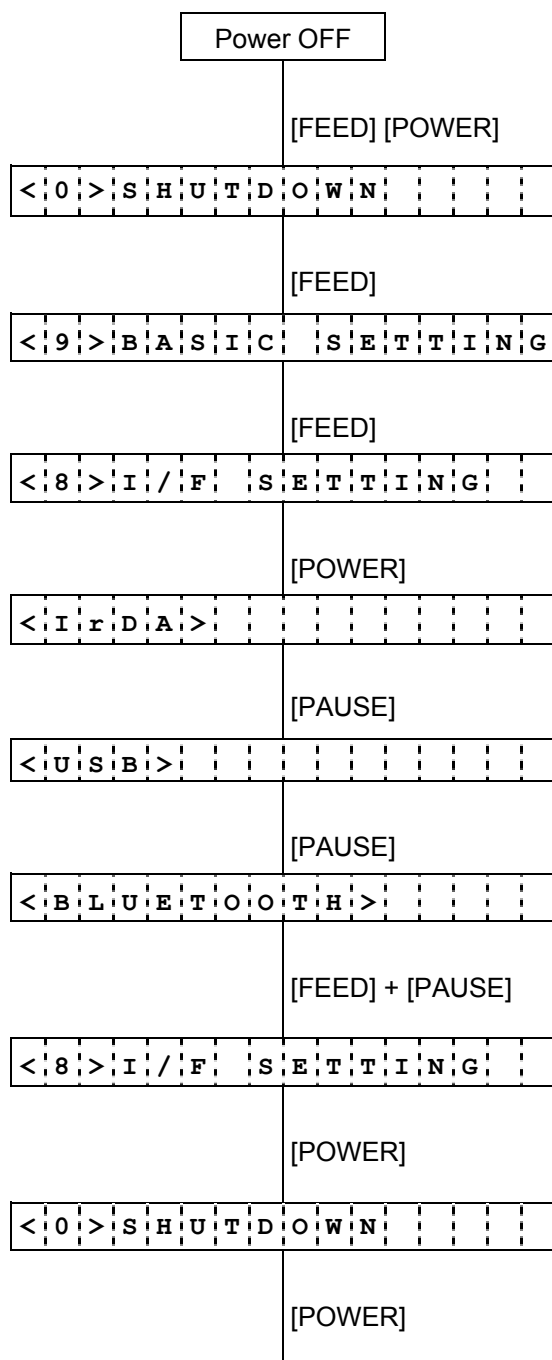
6.6.9 Interface Setting

6.6.9.1 Interface Setting Operation Example

IrDA + USB + RS-232C model

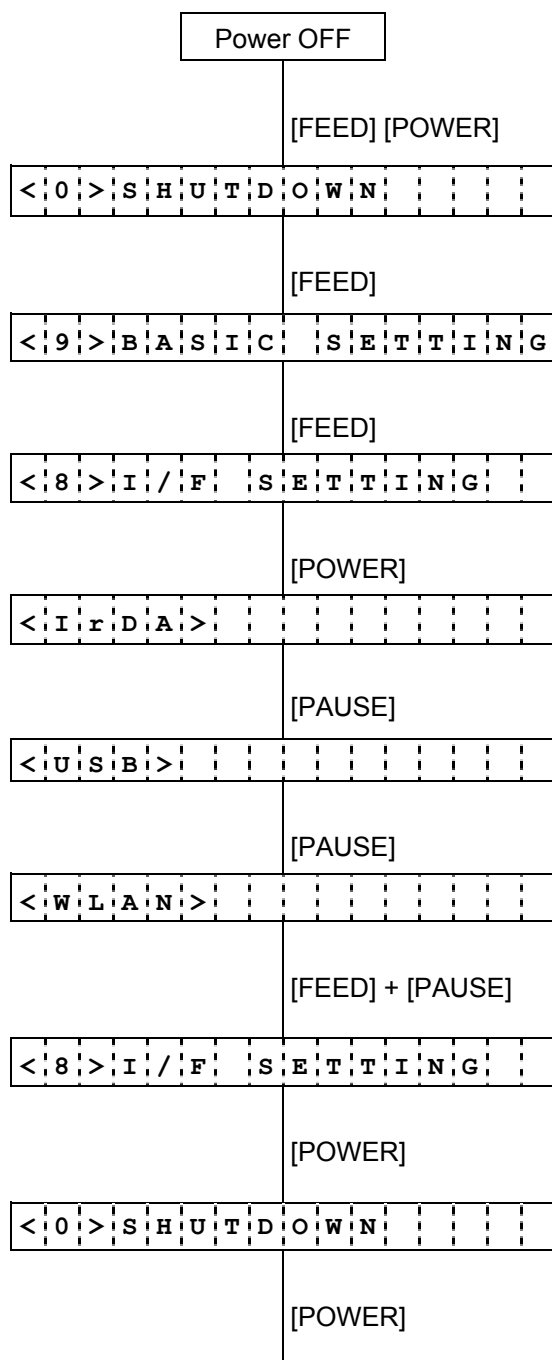


IrDA + USB + Bluetooth model



- (1) Power off state
 - (2) While holding down the [FEED] key, press the [POWER] key to turn the power on.
 - (3) System mode menu display (Shutdown)
 - (4) Press the [FEED] key.
 - (5) System mode menu display (BASIC setting)
 - (6) Press the [FEED] key.
 - (7) System mode menu display (Interface setting)
 - (8) Press the [POWER] key.
 - (9) IrDA setting
 - (10) Press the [PAUSE] key.
 - (11) USB setting
 - (12) Press the [PAUSE] key.
 - (13) Bluetooth setting
 - (14) While holding down the [FEED] key, press the [PAUSE] key.
 - (15) System mode menu display (Interface setting)
 - (16) Hold down the [POWER] key for 3 seconds or more.
 - (17) System mode menu display (Shutdown)
 - (18) Press the [POWER] key.
- * The setting is updated at shutdown.

IrDA + USB + Wireless LAN model

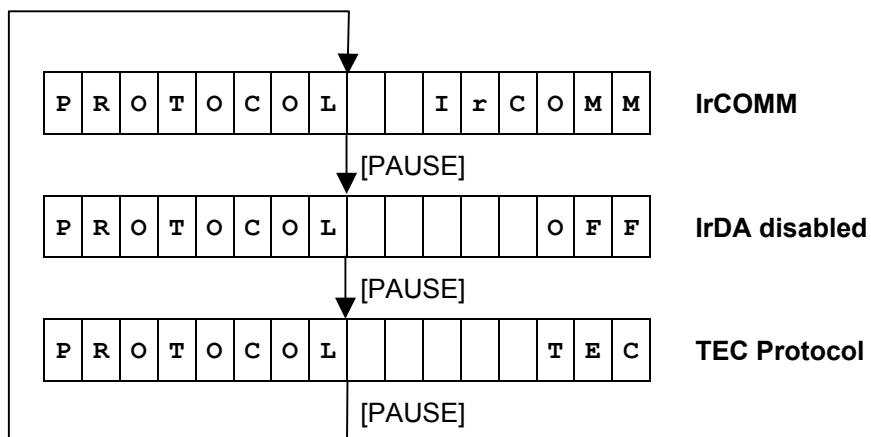


- (1) Power off state
 - (2) While holding down the [FEED] key, press the [POWER] key to turn the power on.
 - (3) System mode menu display (Shutdown)
 - (4) Press the [FEED] key.
 - (5) System mode menu display (BASIC setting)
 - (6) Press the [FEED] key.
 - (7) System mode menu display (Interface setting)
 - (8) Press the [POWER] key.
 - (9) IrDA setting
 - (10) Press the [PAUSE] key.
 - (11) USB setting
 - (12) Press the [PAUSE] key.
 - (13) Wireless LAN enable/disable setting
 - (14) While holding down the [FEED] key, press the [PAUSE] key.
 - (15) System mode menu display (Interface setting)
 - (16) Hold down the [POWER] key for 3 seconds or more.
 - (17) System mode menu display (Shutdown)
 - (18) Press the [POWER] key.
- * The setting is updated at shutdown.

6.6.9.2 Interface Setting Items

6.6.9.2.1 IrDA Setting

6.6.9.2.1.1 IrDA Communication Program Setting (PROTOCOL)

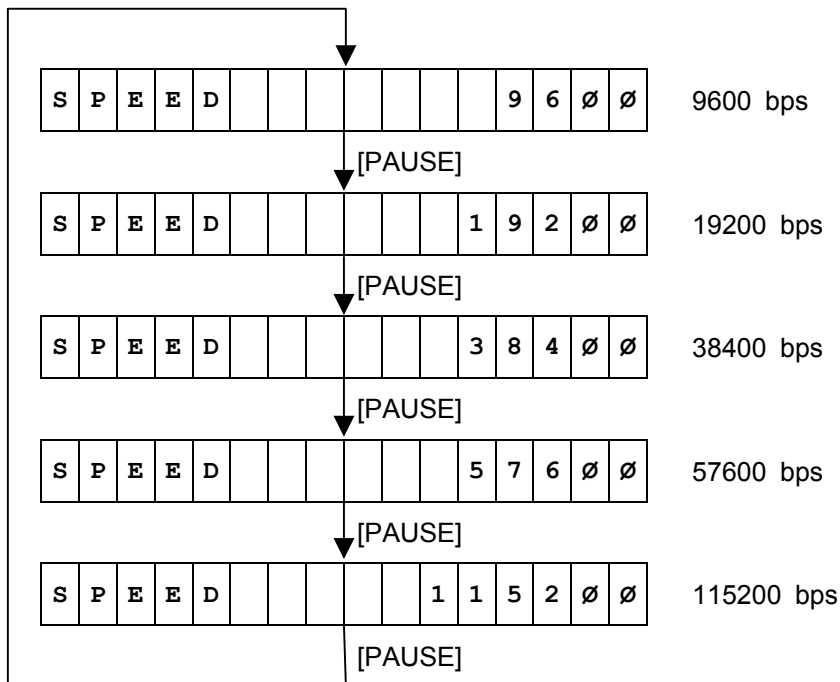


Default value: IrCOMM

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- When the [POWER] key is pressed, the detailed setting of each interface becomes available on the LCD.

6.6.9.2.1.2 IrDA Baud Rate Setting (SPEED)



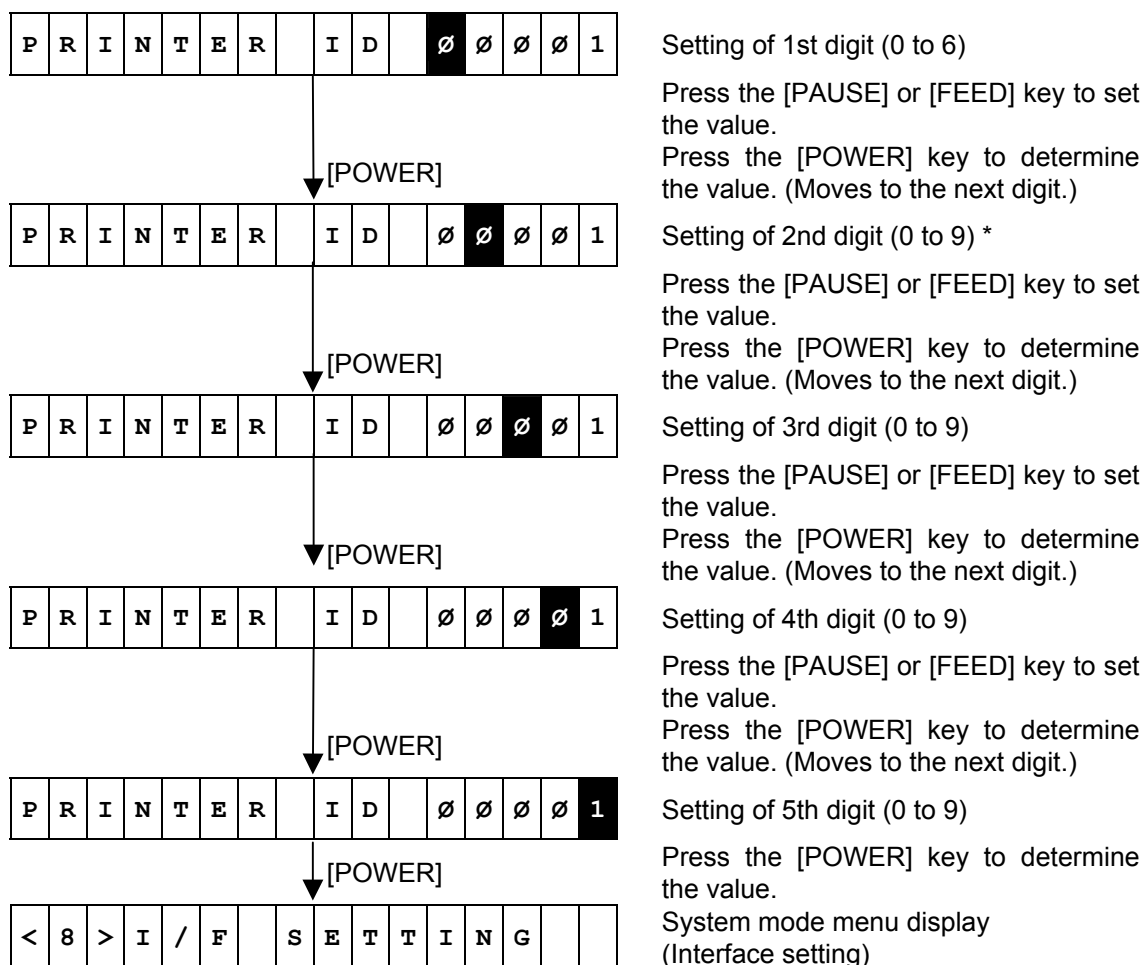
Default value: 115200 bps

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.
- For IrCOMM/IrOBEX, the maximum available baud rate is selected.

6.6.9.2.1.3 Printer ID Setting

This setting is required to identify each printer for wireless communication.



* The value to be entered is limited depending on the number entered in each digit because the printer ID range is 00000 to 65535.

For example:

If 1st digit=6, 2nd digit must be 1 to 5.

If 1st digit=6 and 2nd digit=5, 3rd digit must be 1 to 5.

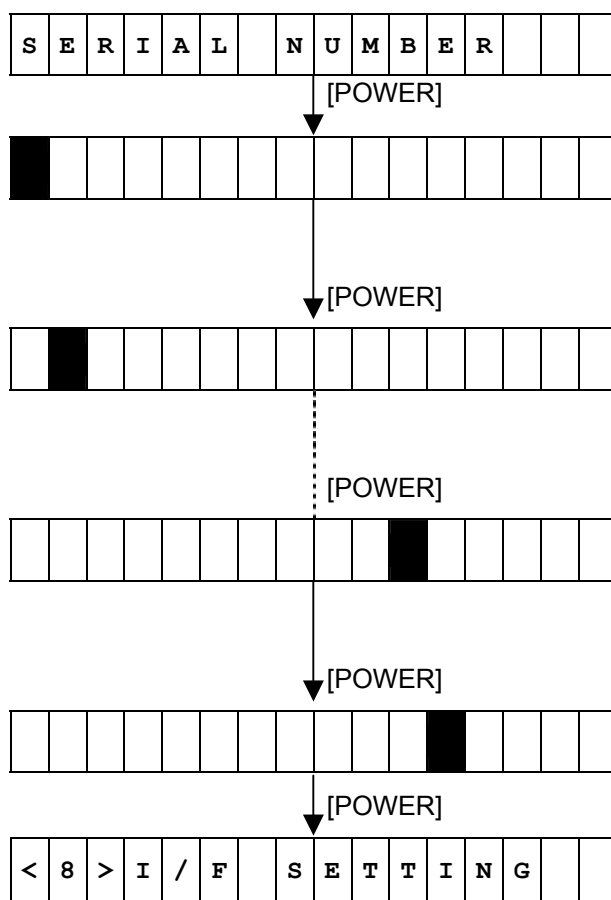
If 1st digit=6, 2nd digit=5, and 3rd digit=5, 4th digit must be 1 to 3.

If 1st digit=6, 2nd digit=5, 3rd digit=5, and 4th digit=3, 5th digit must be 1 to 5.

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.9.2.2 USB Serial Number Setting



USB serial number setting

Press the [POWER] key.

Setting of 1st digit *

Press the [PAUSE] or [FEED] key to set the value.

Press the [POWER] key to determine the value. (Moves to the next digit.)

Setting of 2nd digit *

Press the [PAUSE] or [FEED] key to set the value.

Press the [POWER] key to determine the value. (Moves to the next digit.)

Setting of 11th digit *

Press the [PAUSE] or [FEED] key to set the value.

Press the [POWER] key to determine the value. (Moves to the next digit.)

Setting of 12th digit *

Press the [POWER] key to determine the value.

System mode menu display
(Interface setting)

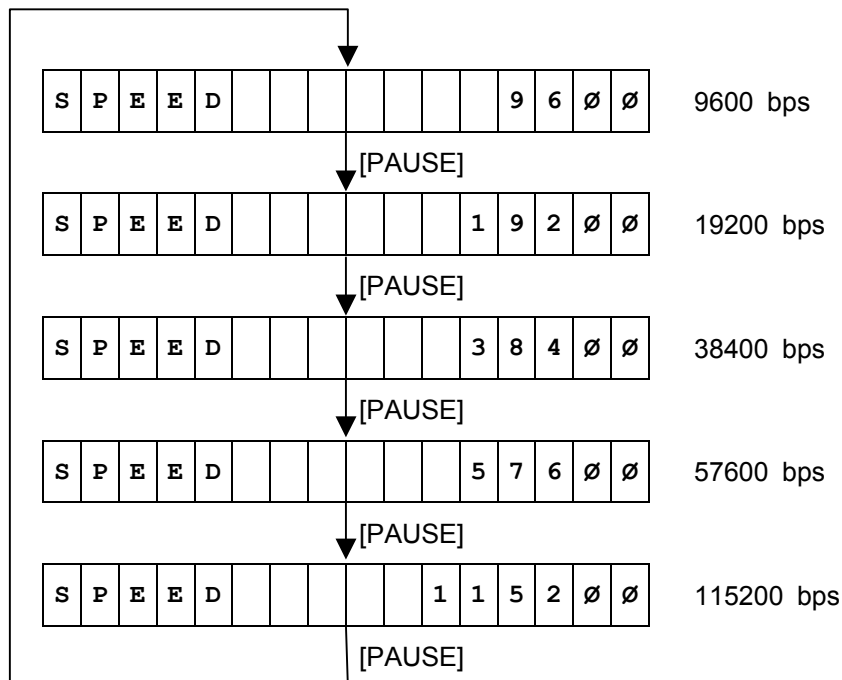
* Characters that can be used for setting: Space, 0 to 9, A to Z

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.9.2.3 RS-232C Setting

6.6.9.2.3.1 RS-232C Baud Rate Setting (SPEED)

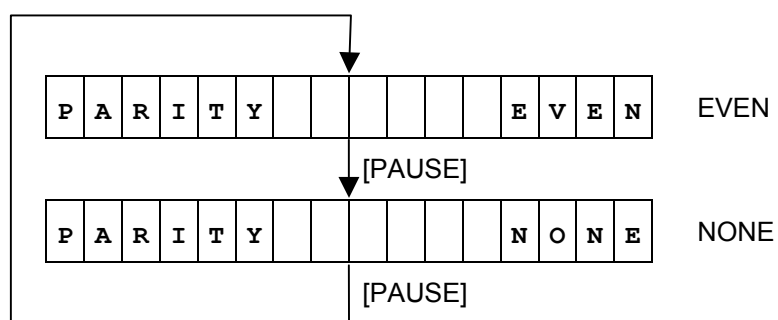


Default value: 9600 (bps)

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.9.2.3.2 RS-232C Parity Setting (PARITY)



Default value: EVEN

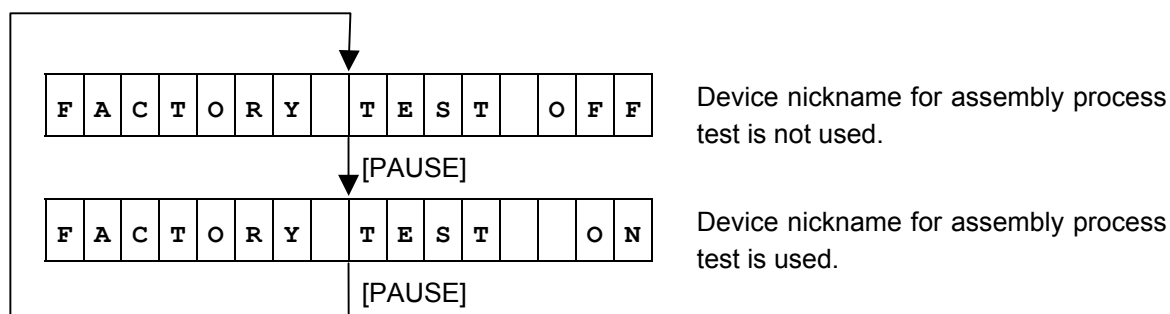
<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.9.2.4 Bluetooth Setting

6.6.9.2.4.1 Device Nickname for Assembly Process Test Setting

This setting is to identify the device nicknames.

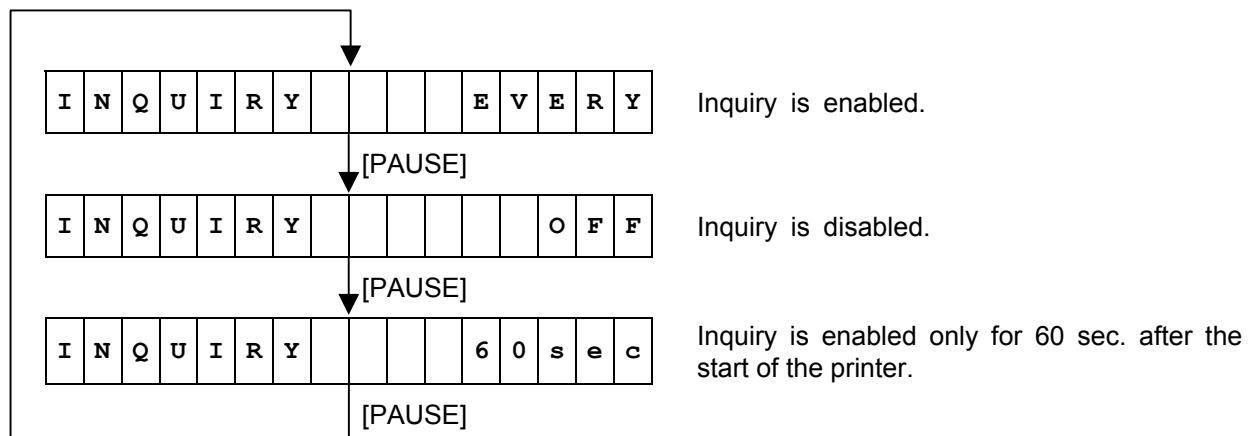


Default value: OFF

<Supplemental Explanations>:

- When set to "ON", the device nickname is "FACTORY TEST".
- When set to "OFF", the device nickname is "TOSHIBA TEC BT".
- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.9.2.4.2 Inquiry Scan Time Setting (INQUIRY)

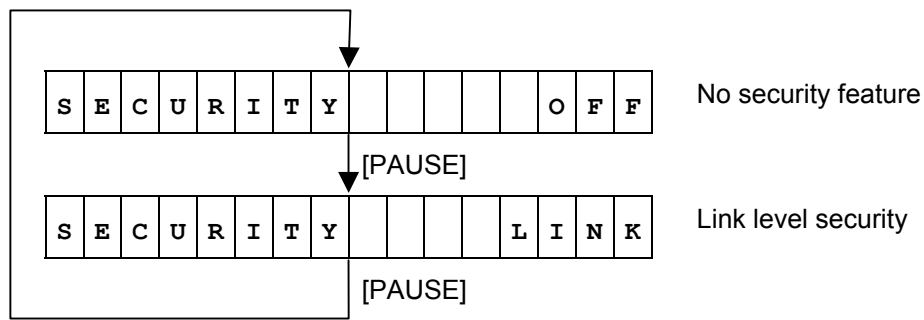


Default value: EVERY

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.9.2.4.3 Security Level Setting (SECURITY)

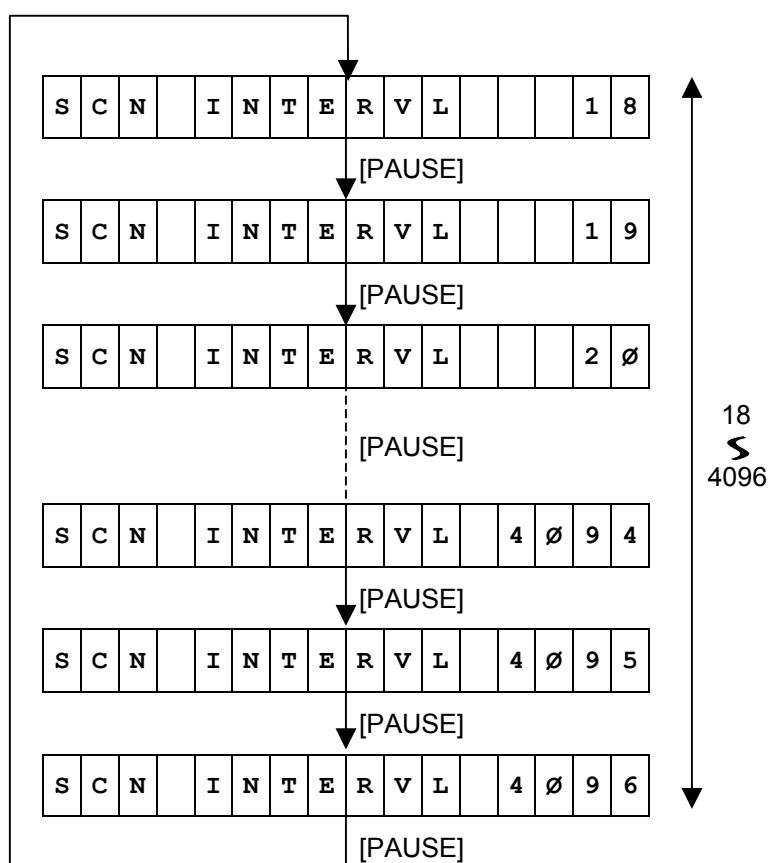


Default value: OFF

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.9.2.4.4 Inquiry/Page Scan Interval Setting (SCN INTERVAL)

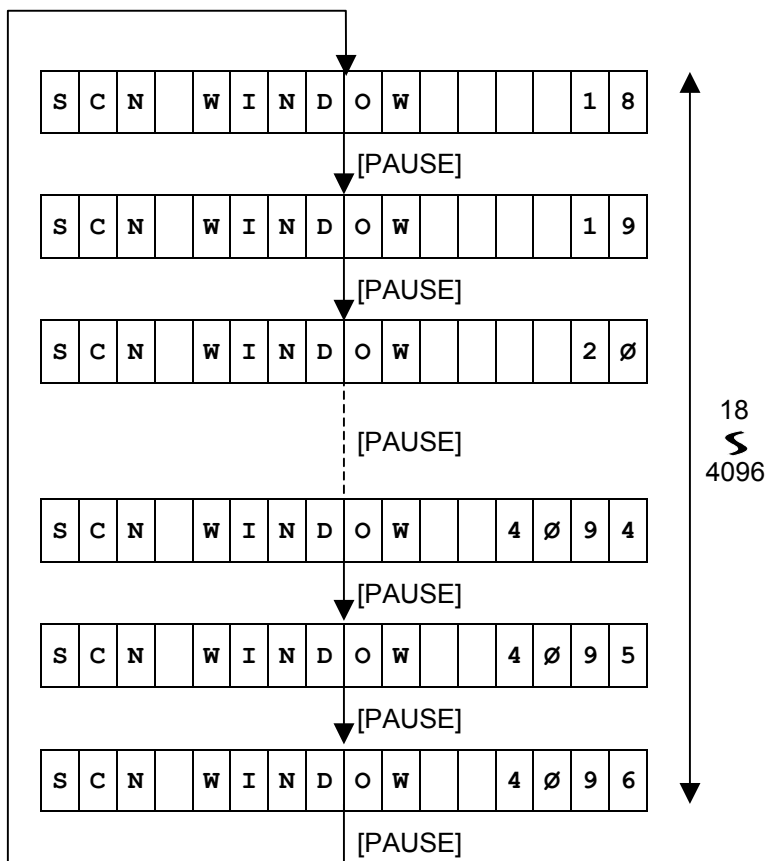


Default value: 2048

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.9.2.4.5 Inquiry/Page Scan Window Setting (SCN WINDOW)



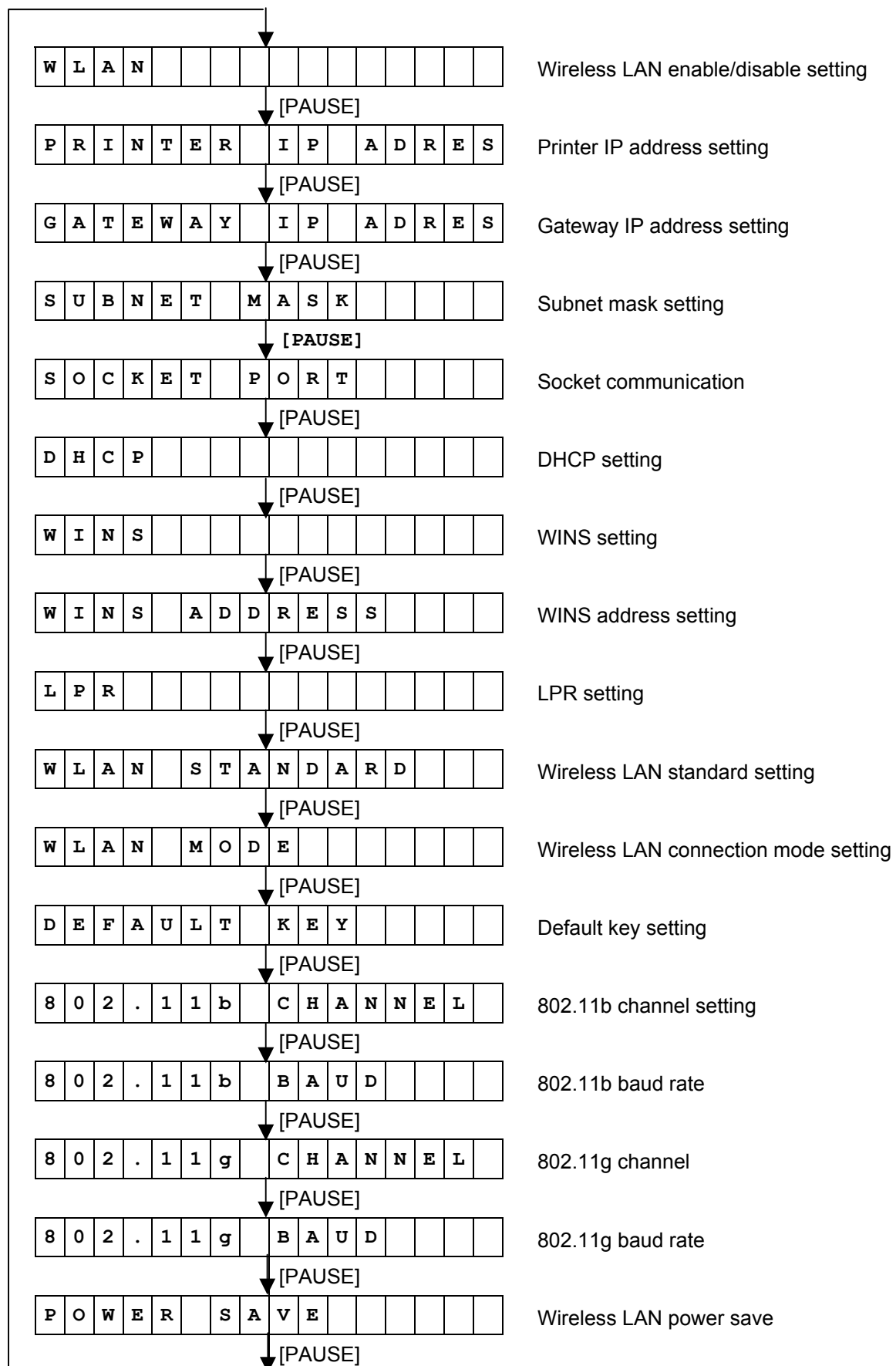
Default value: 36

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.9.2.5 Wireless LAN Setting

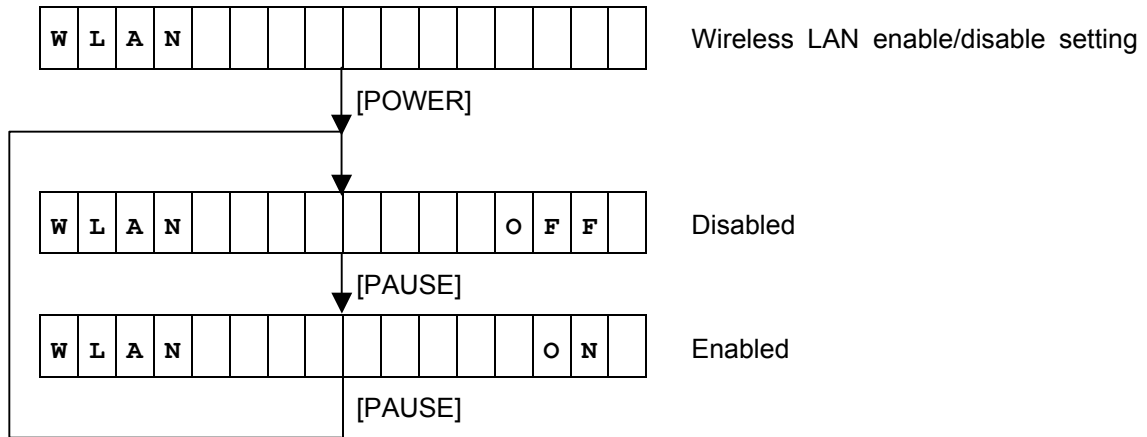
6.6.9.2.5.1 Selection of Wireless LAN Setting Items



<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.9.2.5.2 Wireless LAN Enable/Disable Setting (WLAN)

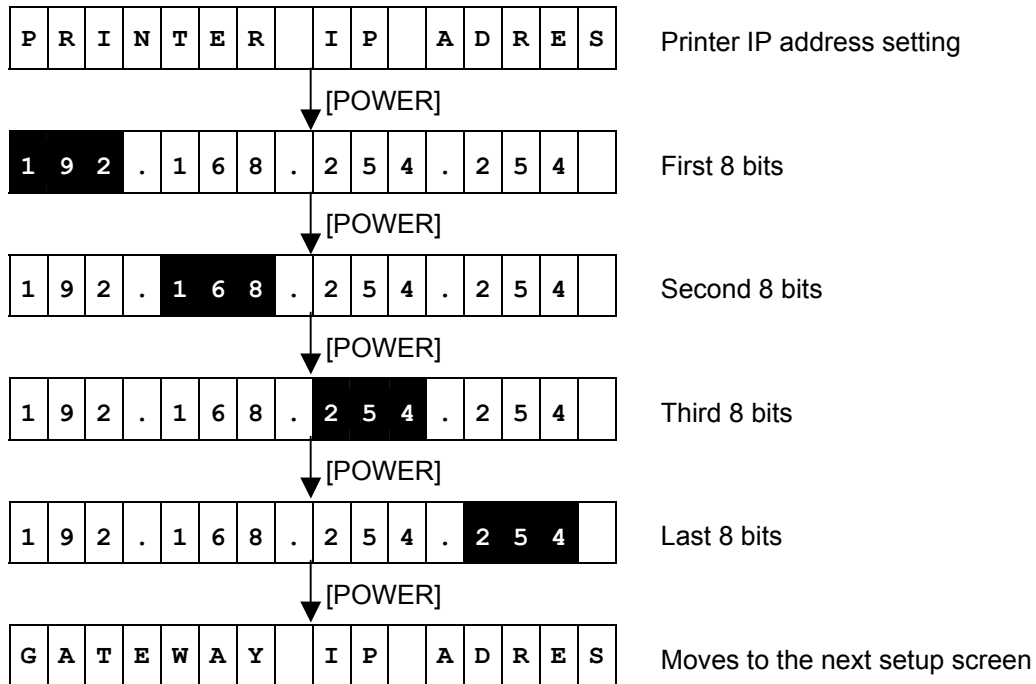


Default value: ON

<Supplemental Explanations>

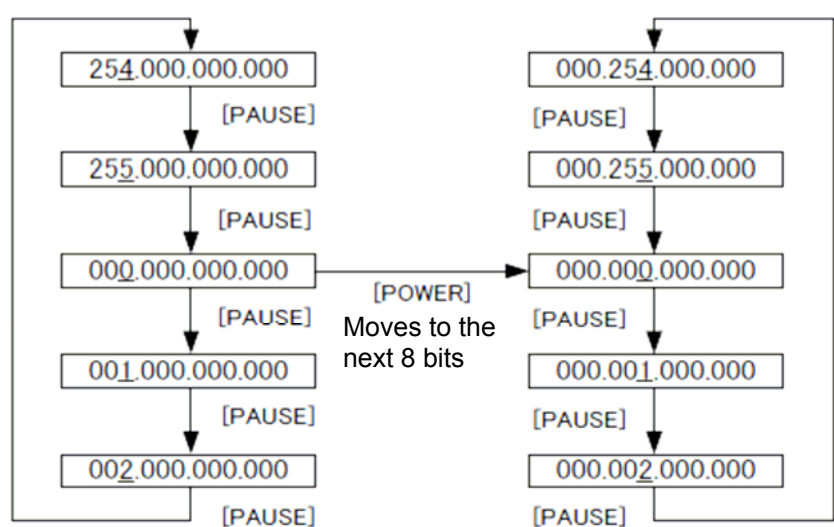
- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.9.2.5.3 Printer IP Address Setting (PRINTER IP ADRES)



Default value: 192.168.254.254

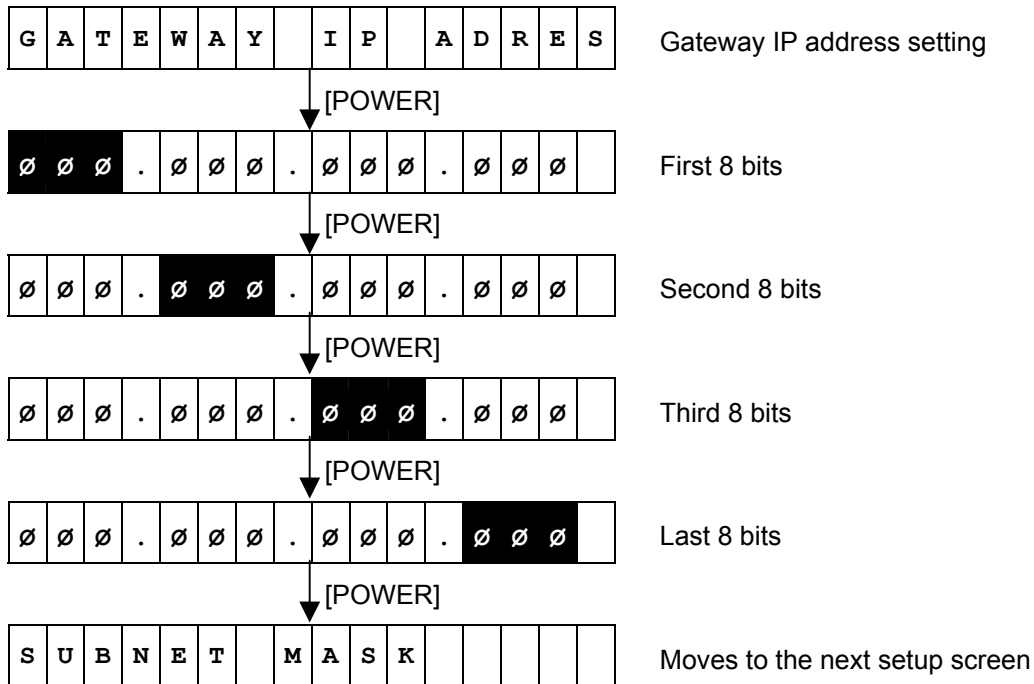
Method to enter a value



<Supplemental Explanations>

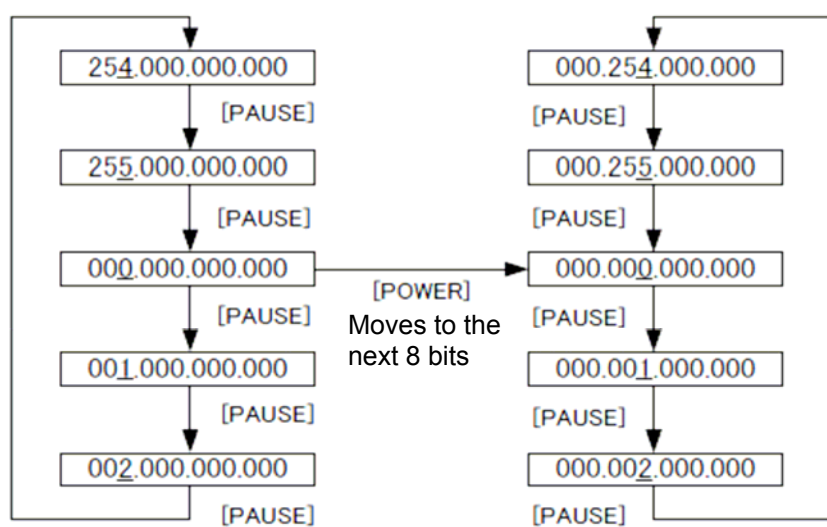
- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.9.2.5.4 Gateway IP Address Setting (GATEWAY IP ADRES)



Default value: 000.000.000.000

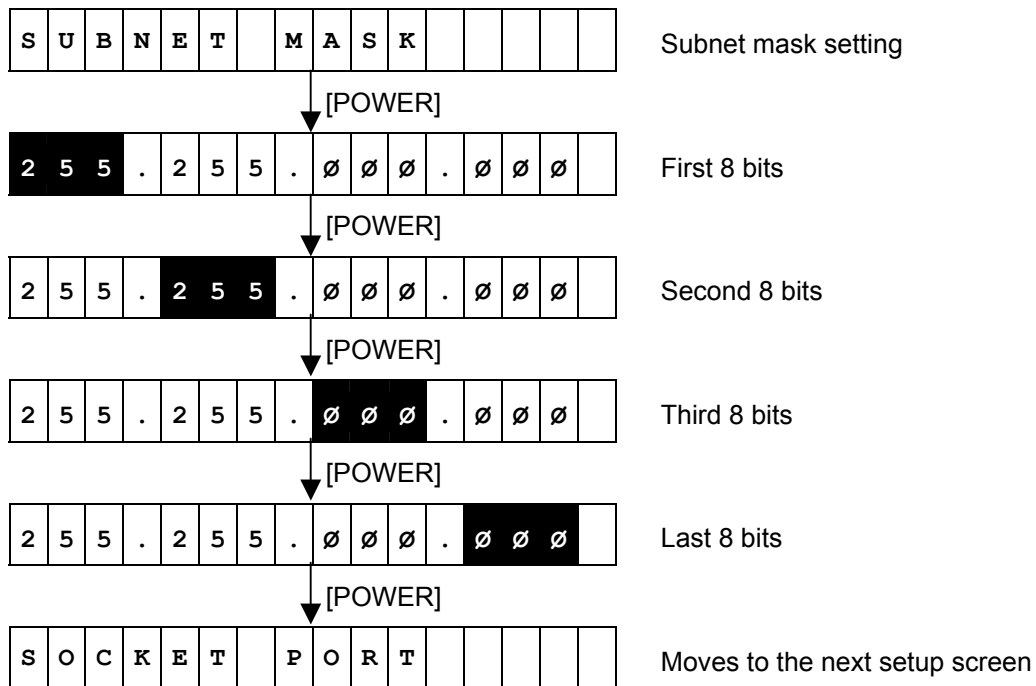
Method to enter a value



<Supplemental Explanations>

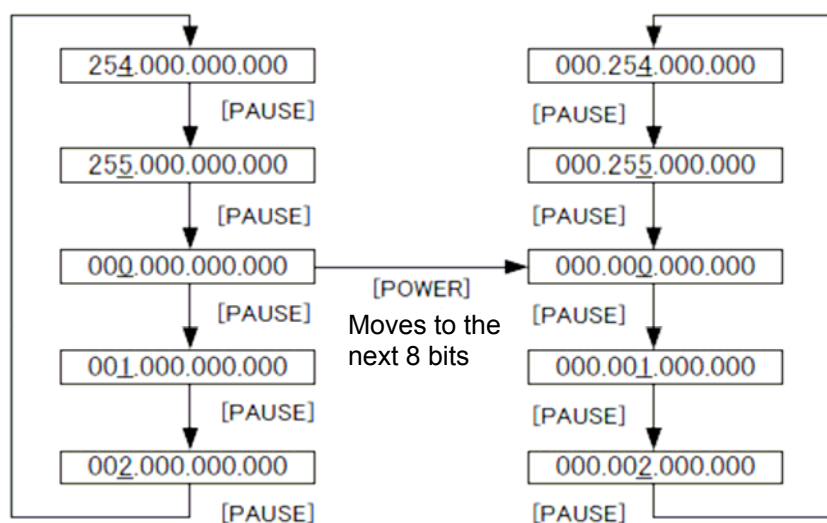
- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.9.2.5.5 Subnet Mask Setting (SUBNET MASK)



Default value: 255.255.000.000

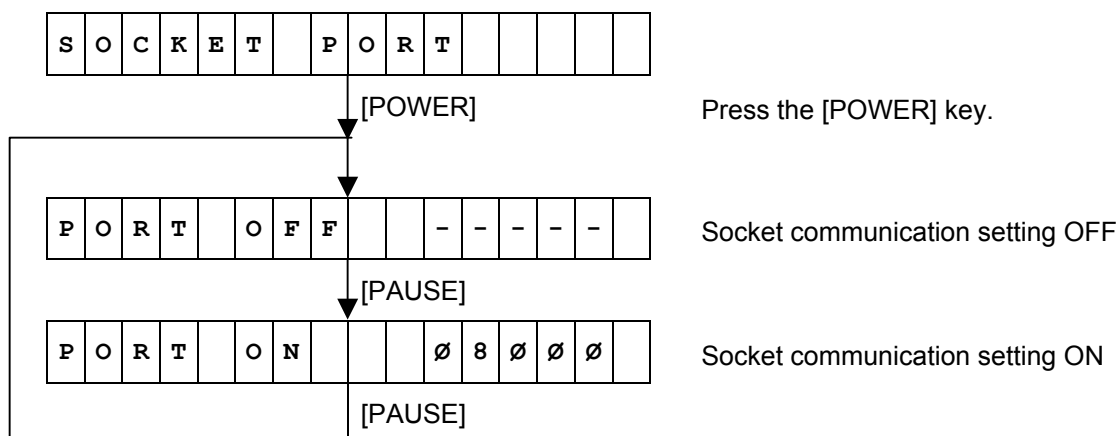
Method to enter a value



<Supplemental Explanations>

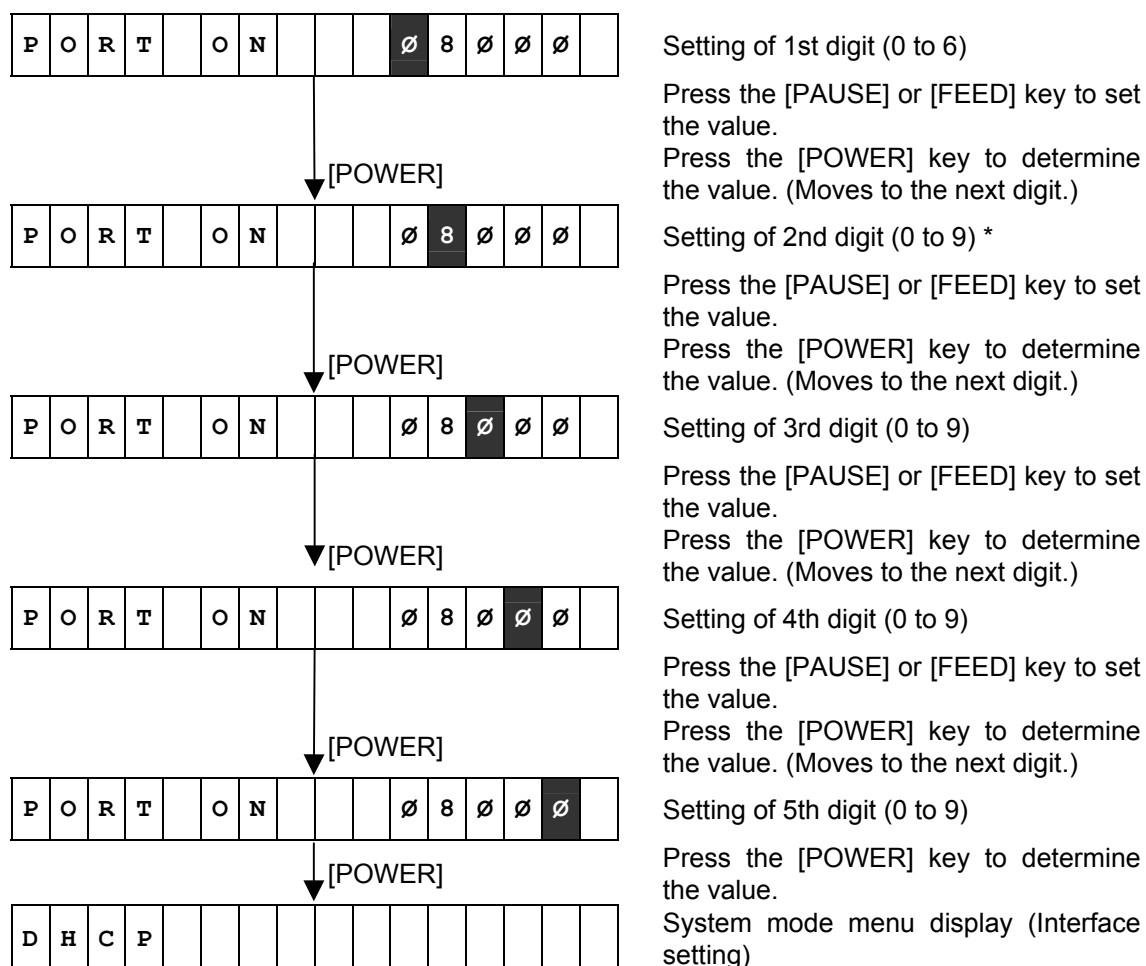
- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.9.2.5.6 Socket Communication Setting (SOCKET PORT)



Default value: ON (08000)

Operation when socket communication is set to ON



* The value to be entered is limited depending on the number entered in each digit because the printer ID range is 00000 to 65535.

For example:

If 1st digit=6, 2nd digit must be 1 to 5.

If 1st digit=6 and 2nd digit=5, 3rd digit must be 1 to 5.

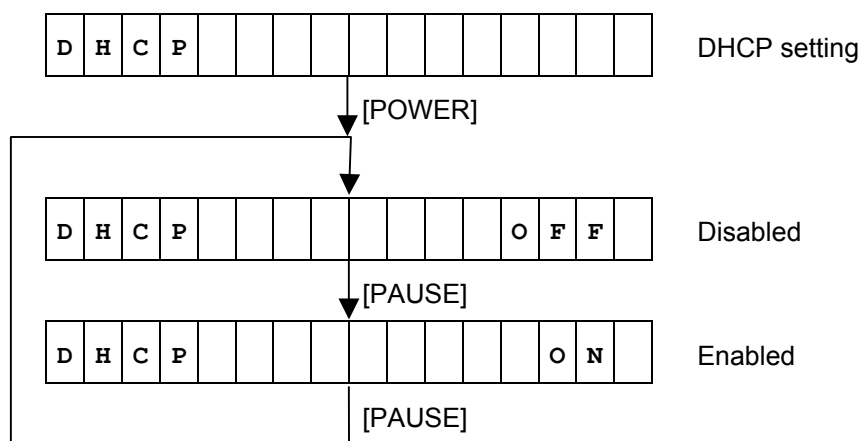
If 1st digit=6, 2nd digit=5, and 3rd digit=5, 4th digit must be 1 to 3.

If 1st digit=6, 2nd digit=5, 3rd digit=5, and 4th digit=3, 5th digit must be 1 to 5.

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.9.2.5.7 DHCP Setting (DHCP)

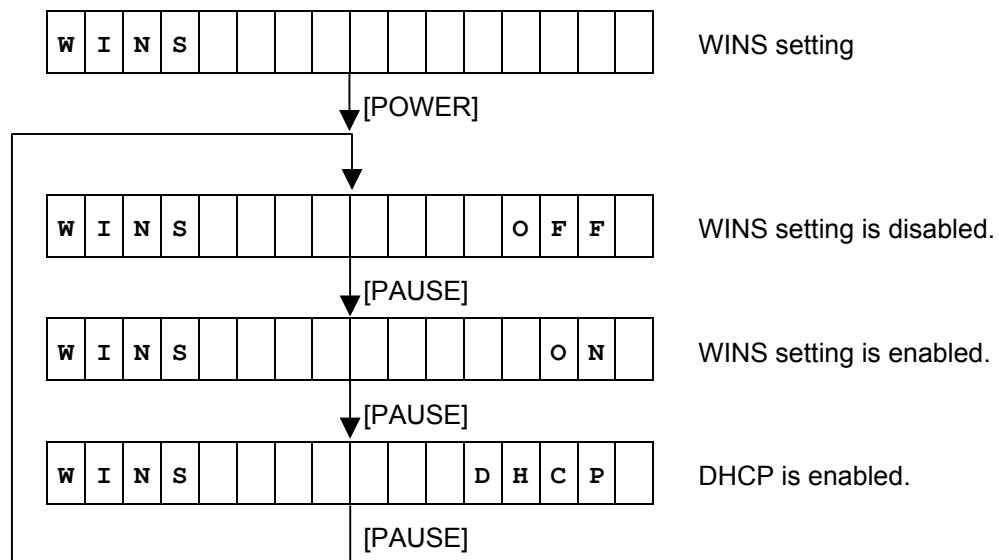


Default value: OFF

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.9.2.5.8 WINS Setting (WINS)

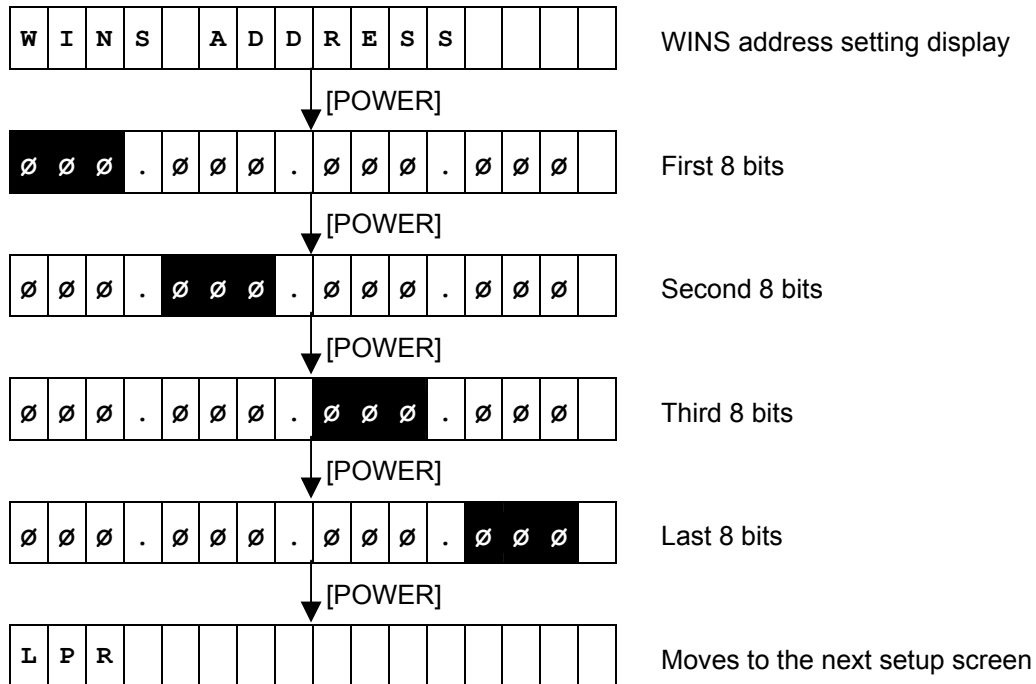


Default value: OFF

<Supplemental Explanations>

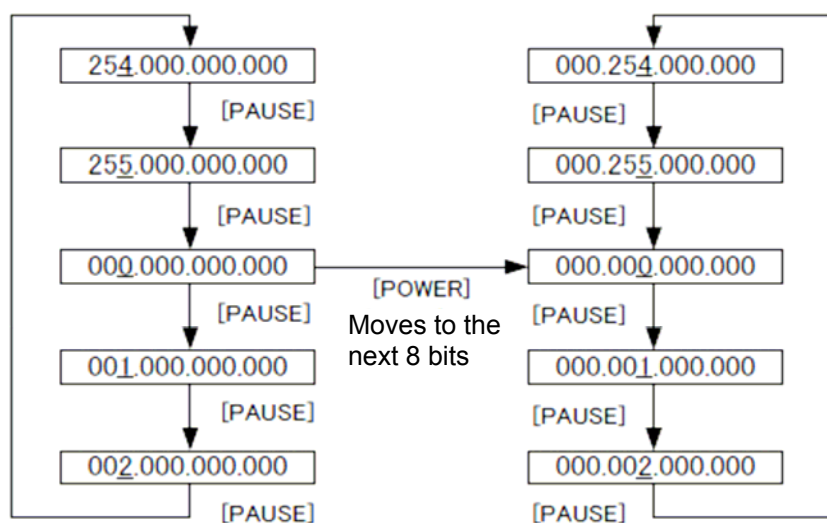
- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.9.2.5.9 WINS Address Setting (WINS ADDRESS)



Default value: 000.000.000.000

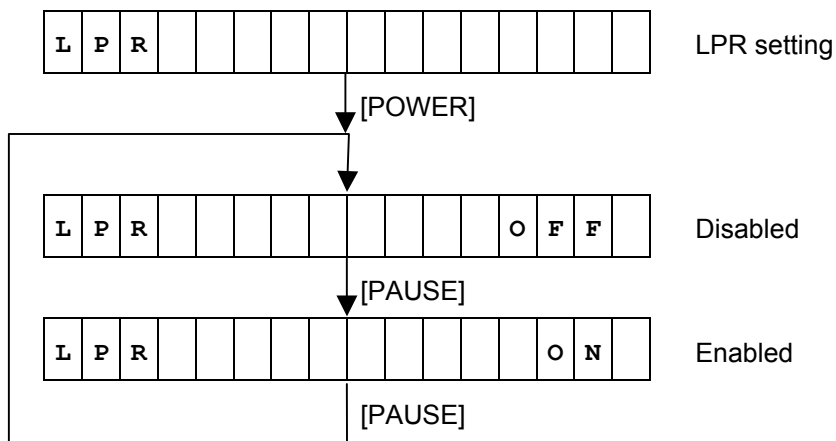
Method to enter a value



<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.9.2.5.10 LPR Setting (LPR)

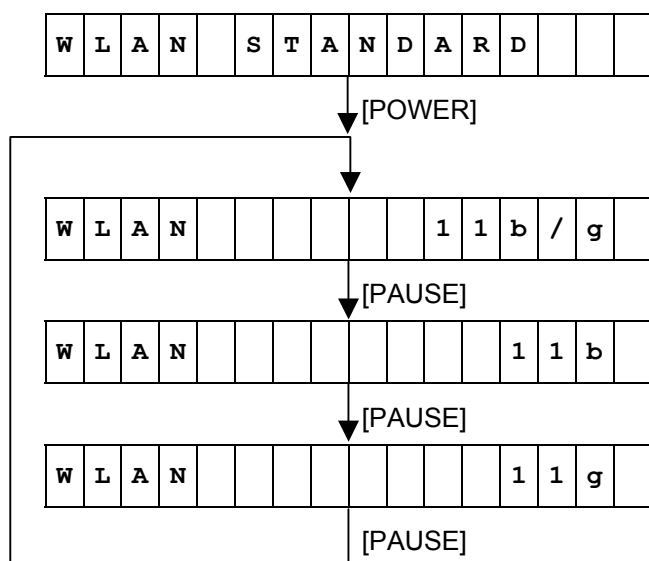


Default value: OFF

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.9.2.5.11 Wireless LAN Standard Setting (WLAN STANDARD)

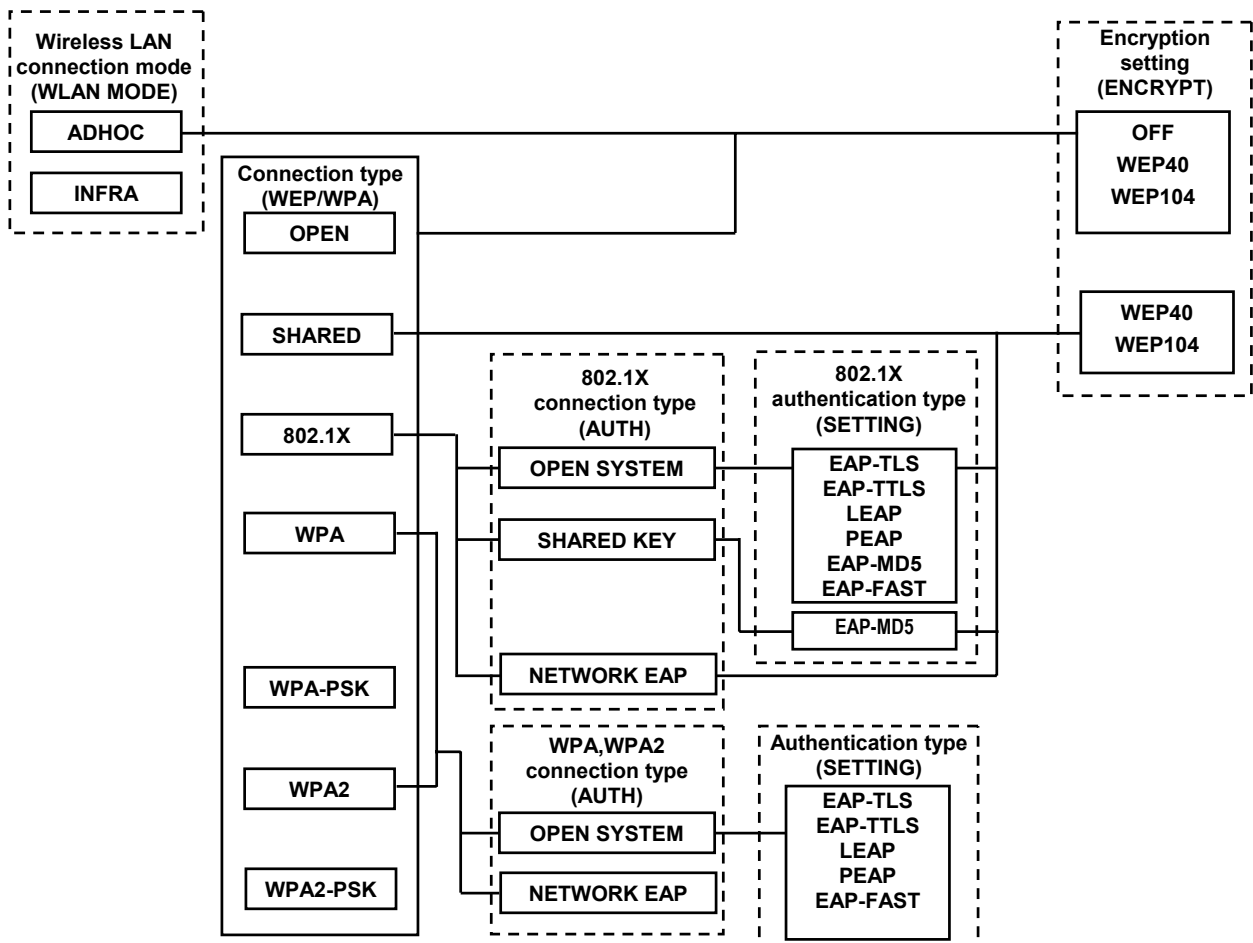


Default value: 11b/g

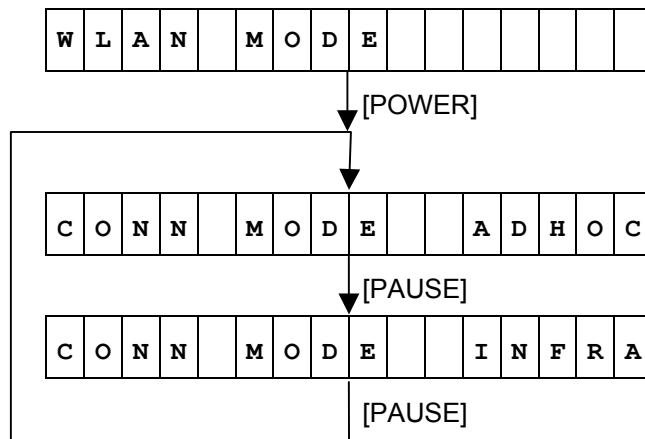
<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.9.2.6 Overview of Wireless LAN Authentication Setting



6.6.9.2.6.1 Wireless LAN Connection Mode Setting (WLAN MODE)

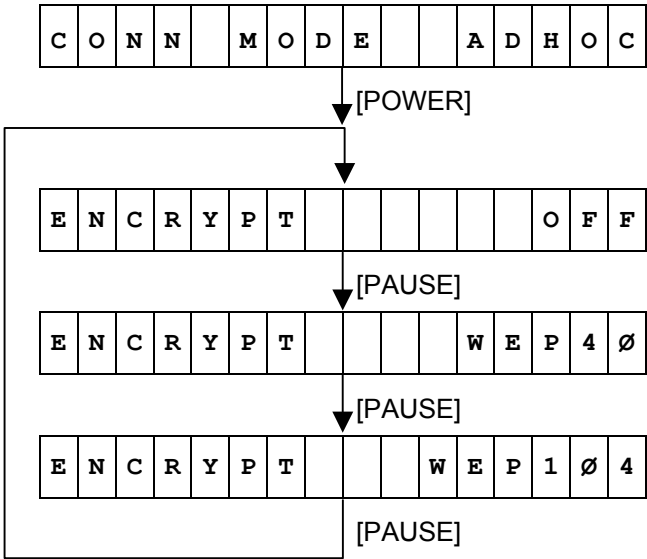


Default value: INFRA

<Supplemental Explanations>

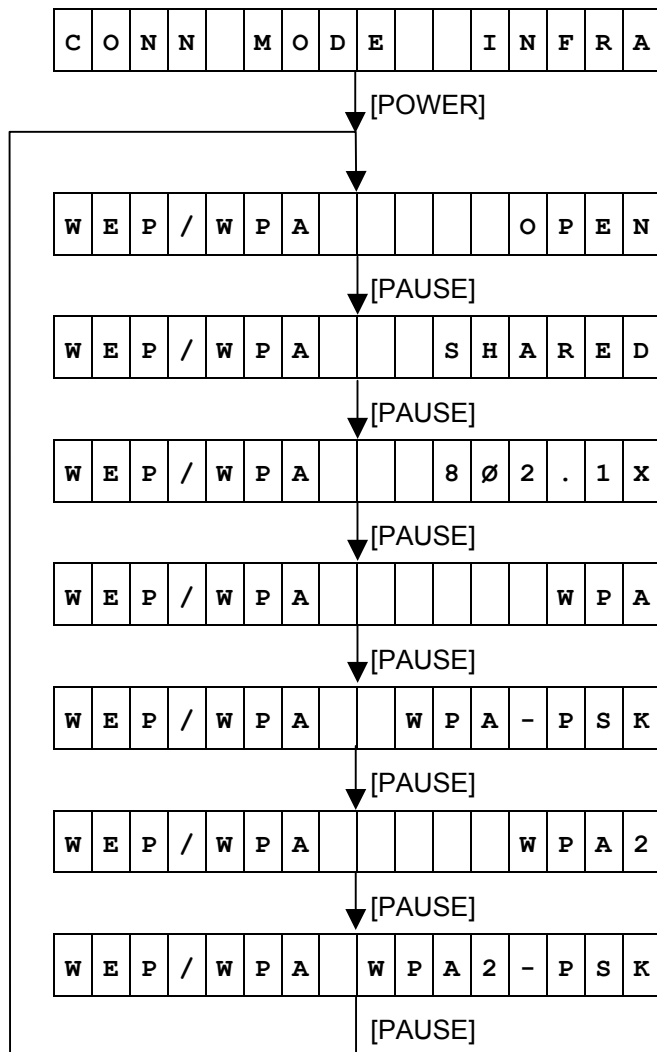
- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.9.2.6.2 ADHOC Encryption Setting (ENCRYPT)



Default value: OFF

6.6.9.2.6.3 INFRA WEP/WPA Connection Type Setting (WEP/WPA)



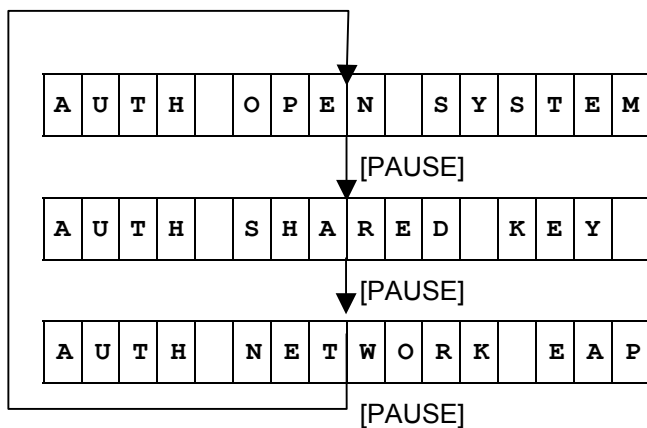
Default value: OPEN

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

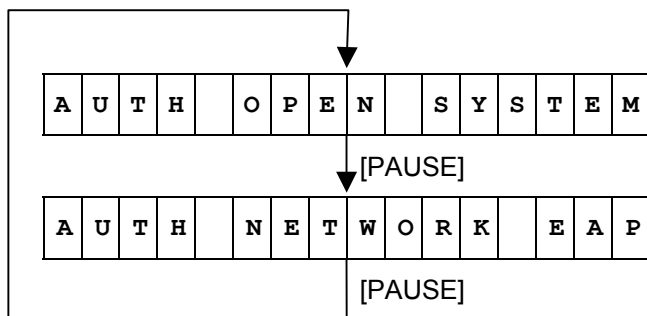
6.6.9.2.6.4 802.1X, WPA, WPA2 Connection Type Setting (AUTH)

When 802.1X is selected:



Default value: OPEN SYSTEM

When WPA or WPA2 is selected:



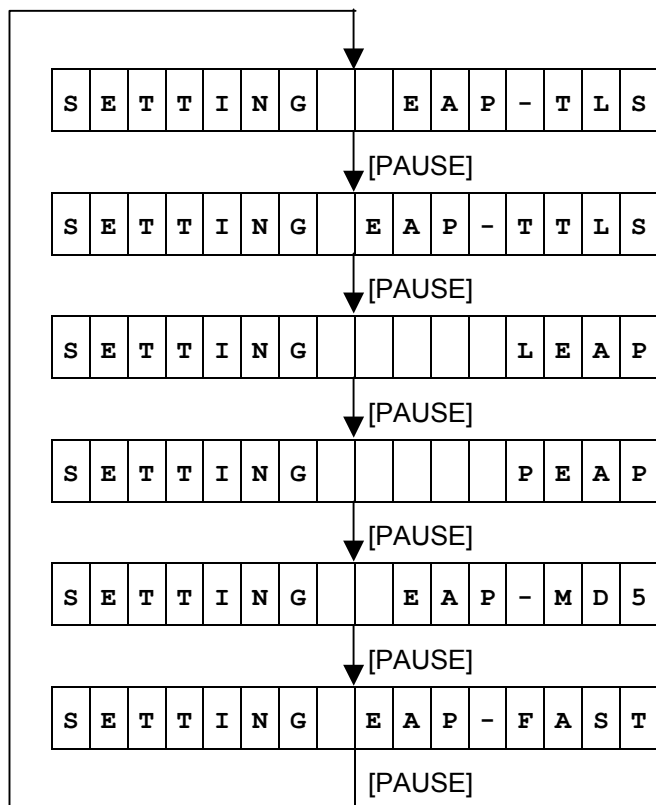
Default value: OPEN SYSTEM

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

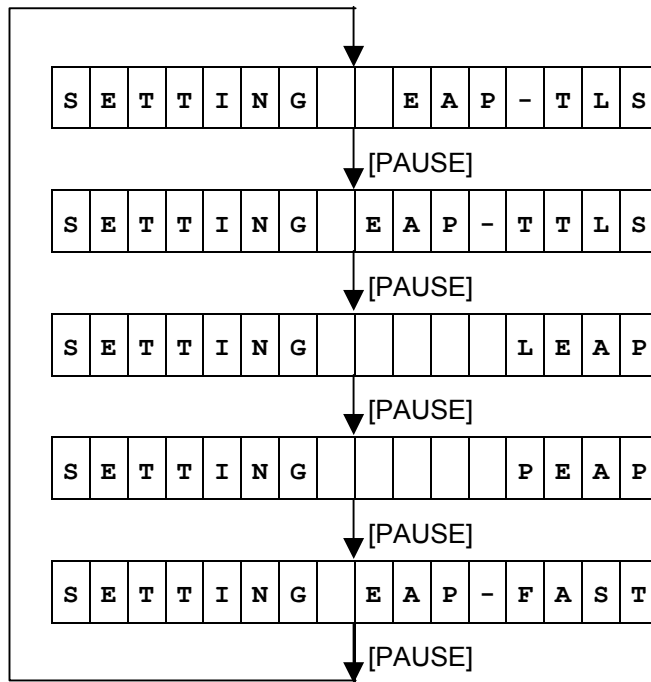
6.6.9.2.6.5 802.1X, WPA, WPA2 Authentication Type Setting (SETTING)

When OPEN SYSTEM is selected for 802.1X:



Default value: EAP-TLS

When WPA or WPA2 is selected for WEP/WPA:



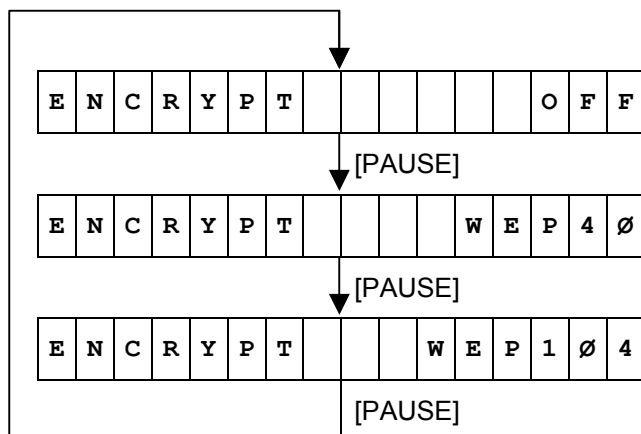
Default value: EAP-TLS

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

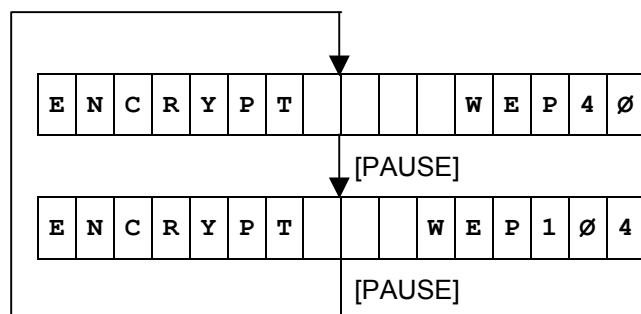
6.6.9.2.6.6 INFRA Encryption Setting (ENCRYPT)

When OPEN is selected:



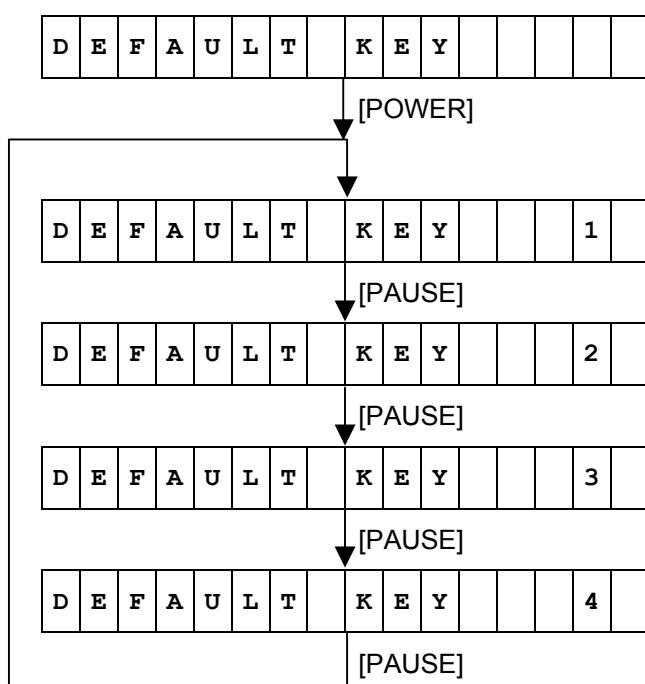
Default value: OFF

When SHARED KEY or 802.1X is selected.



Default value: WEP40

6.6.9.2.6.7 Default Key Setting (DEFAULT KEY)

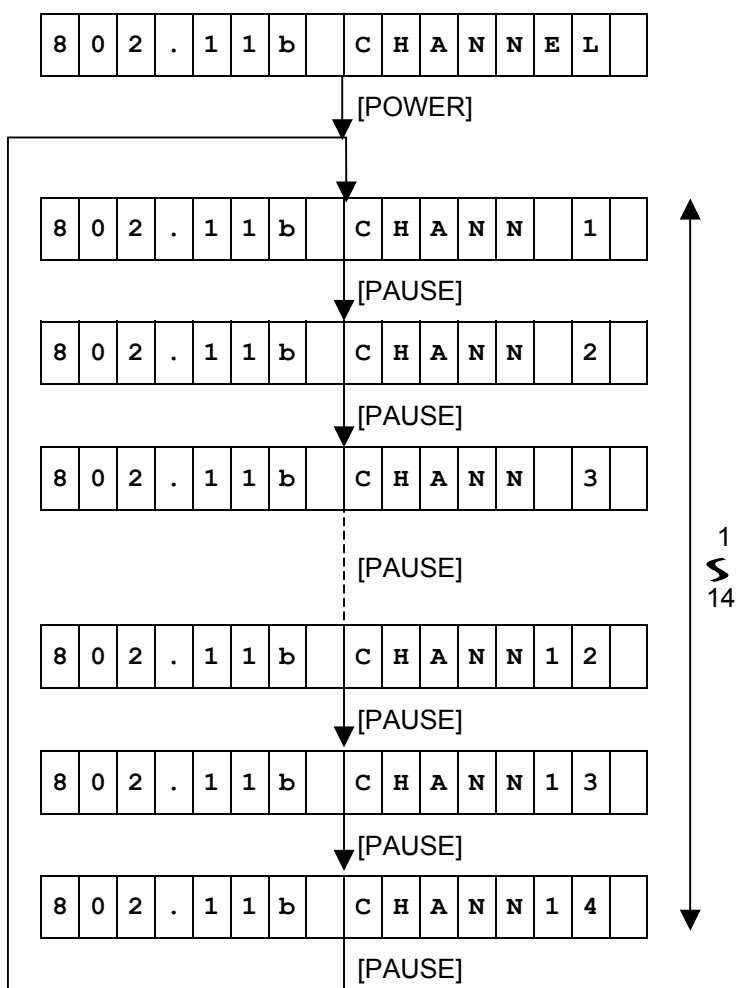


Default value: 1

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.9.2.6.8 802.11b Channel Setting (802.11b CHANNEL)

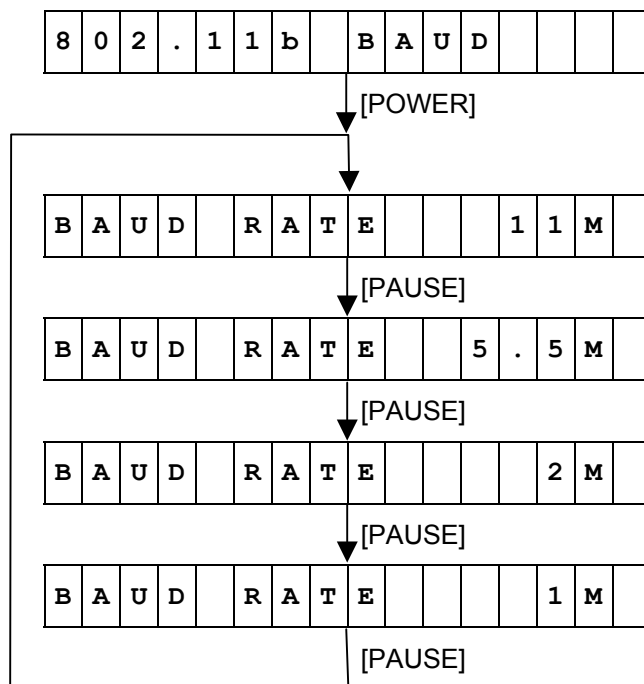


Default value: 1

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.
- When a channel, which cannot be used in the country where the printer is going to be shipped, is selected, the channel is changed to the one which can be used in that country. For the channels which can be used for each country, refer to the section, "6.6.9.2.7 Usable Channel List by Countries".

6.6.9.2.6.9 802.11b Baud Rate Setting (802.11b BAUD)

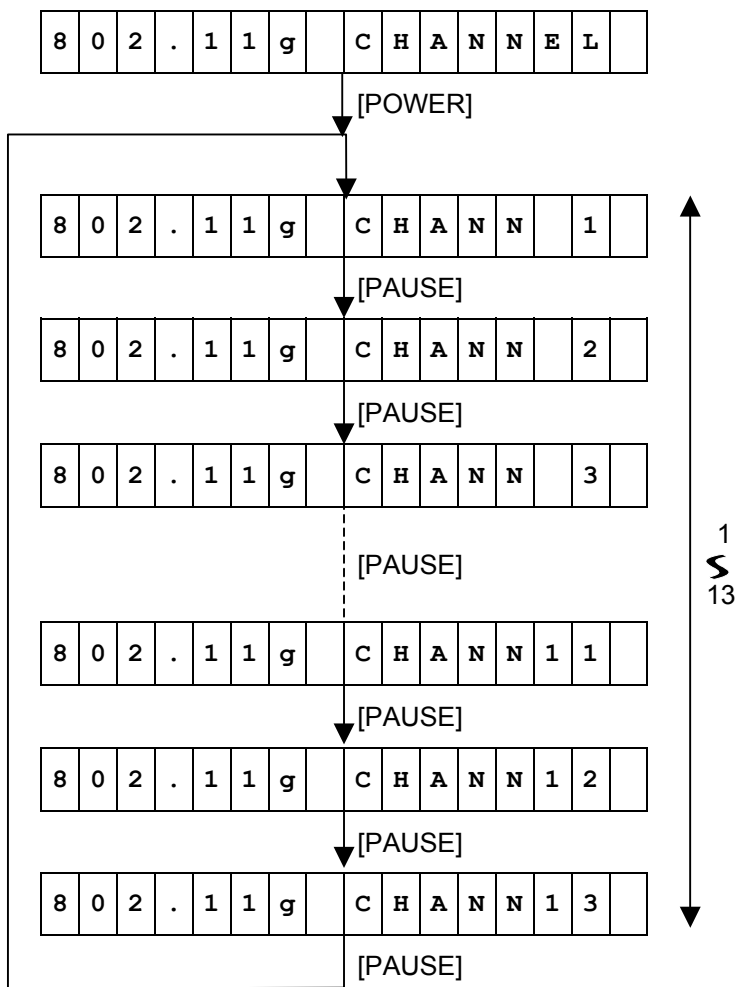


Default value: 11M (Mbps)

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.9.2.6.10 802.11g Channel Setting (802.11g CHANNEL)

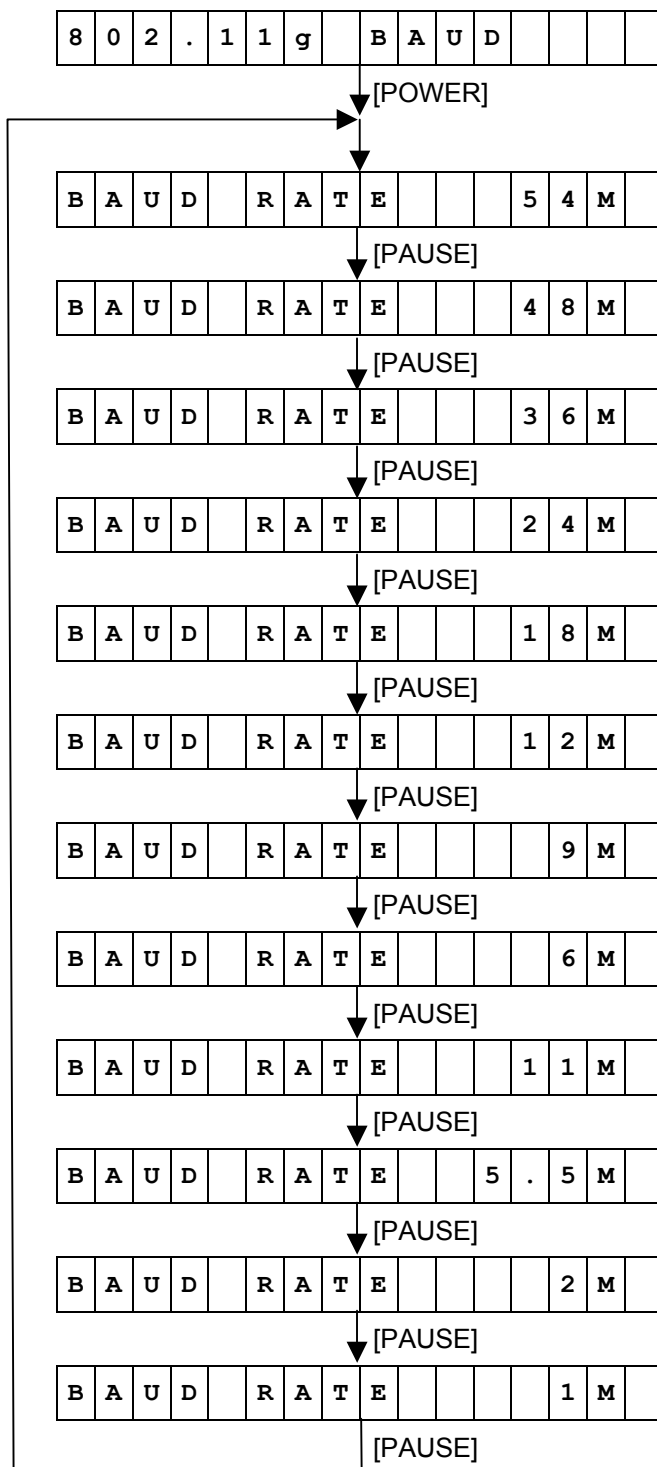


Default value: 1

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.
- When a channel, which cannot be used in the country where the printer is going to be shipped, is selected, the channel is changed to the one which can be used in that country. For the channels which can be used for each country, refer to the section, "6.6.9.2.7 Usable Channel List by Countries".

6.6.9.2.6.11 802.11b Baud Rate Setting (802.11g BAUD)



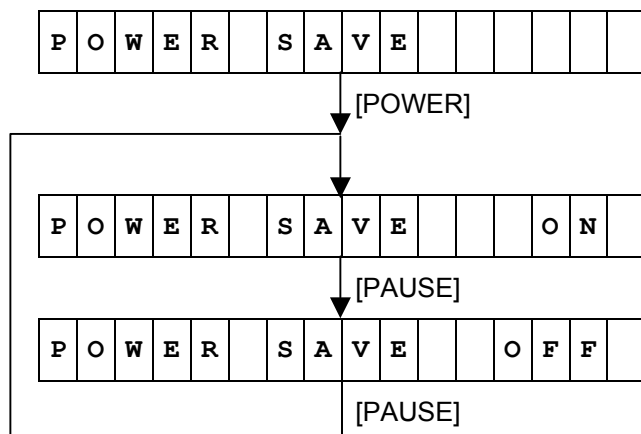
Default value: 54M (Mbps)

<Supplemental Explanations>

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.9.2.6.12 Wireless LAN Power Saving Setting (POWER SAVE)

* Supported from V1.0C.



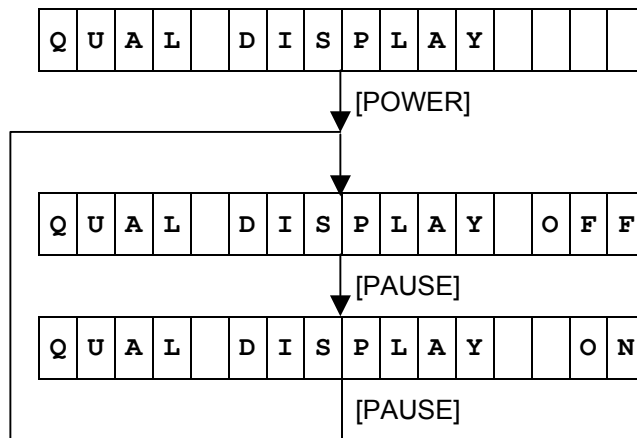
Default value: ON

<Supplemental Explanations>

- When this parameter has been set to ON, the wireless LAN is placed in the power save mode at the same time of the printer's entering the power save mode.
- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this parameter setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.9.2.6.13 Radio Intensity (RSSI) Indication Setting (QUAL DISPLAY)

* Supported from V1.11.



Default value: OFF

<Supplemental Explanations>

- When this parameter has been set to ON, the display message will change to the radio intensity (RSSI) of the wireless LAN after "ON LINE" is displayed for a specified period of time.
- Regarding the displayed messages, refer to Section 6.7.1 LCD Display at Startup of Wireless LAN Model.
- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this parameter setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

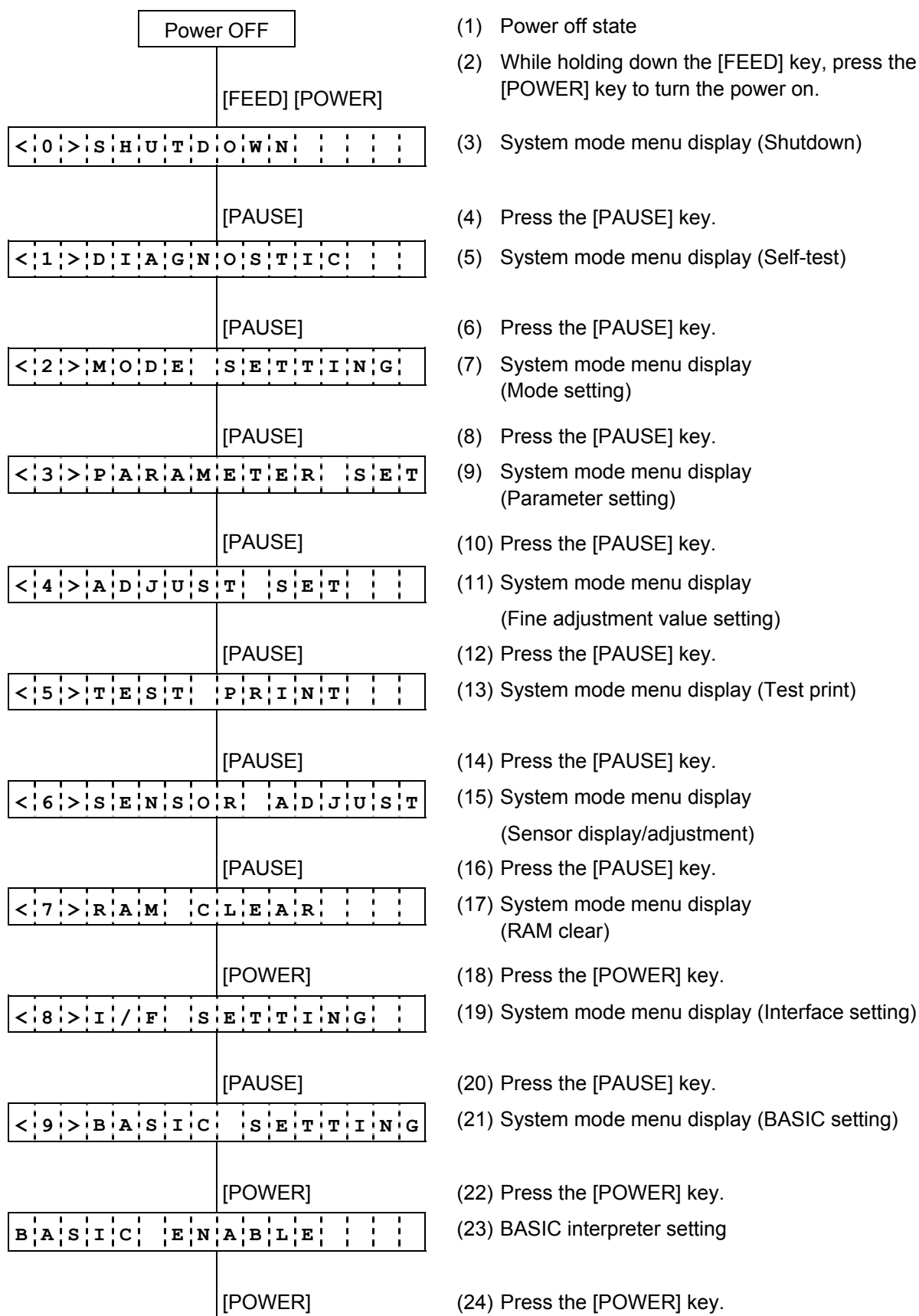
6.6.9.2.7 Usable Channel List by Countries

Country code	Country	11b Usable Channel	11g Usable Channel
392	Japan	1-14	1-13
840	USA	1-11	1-11
124	Canada	1-11	1-11
36	Australia	1-13	1-13
554	New Zealand	1-13	1-13
484	Mexico	1-11	1-11
710	South Africa	1-13	1-13
156	China	1-13	1-13
344	Hong Kong	1-13	1-13
158	Taiwan	1-11	1-11
410	Republic of Korea	1-13	1-13
56	Belgium	1-13	1-13
528	Netherlands	1-13	1-13
442	Luxembourg	1-13	1-13
250	France	1-13	1-13
380	Italy	1-13	1-13
276	Germany	1-13	1-13
208	Denmark	1-13	1-13
372	Ireland	1-13	1-13
826	United Kingdom	1-13	1-13
300	Greece	1-13	1-13
724	Spain	1-13	1-13
620	Portugal	1-13	1-13
40	Austria	1-13	1-13
246	Finland	1-13	1-13
752	Sweden	1-13	1-13
203	Czech Republic	1-13	1-13
233	Estonia	1-13	1-13
196	Cyprus	1-13	1-13
428	Latvia	1-13	1-13
440	Lithuania	1-13	1-13
348	Hungary	1-13	1-13
470	Malta	1-13	1-13
616	Poland	1-13	1-13
705	Slovenia	1-13	1-13
703	Slovakia	1-13	1-13
100	Bulgaria	1-13	1-13
642	Romania	1-13	1-13
578	Norway	1-13	1-13
438	Liechtenstein	1-13	1-13
352	Iceland	1-13	1-13
756	Switzerland	1-13	1-13

If a country code, which is not in this list, is entered, the printer operates using the channel assigned for Japan.

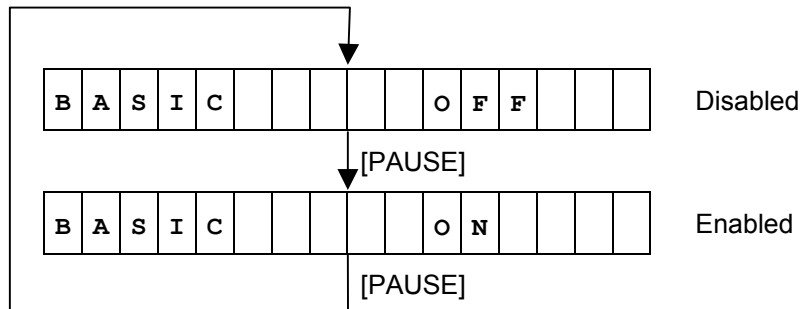
6.6.10 BASIC Setting

6.6.10.1 BASIC Setting Operation Example



6.6.10.1.1 BASIC Interpreter Setting (BASIC ENABLE)

This setting selects whether the BASIC interpreter setting is enabled or disabled.



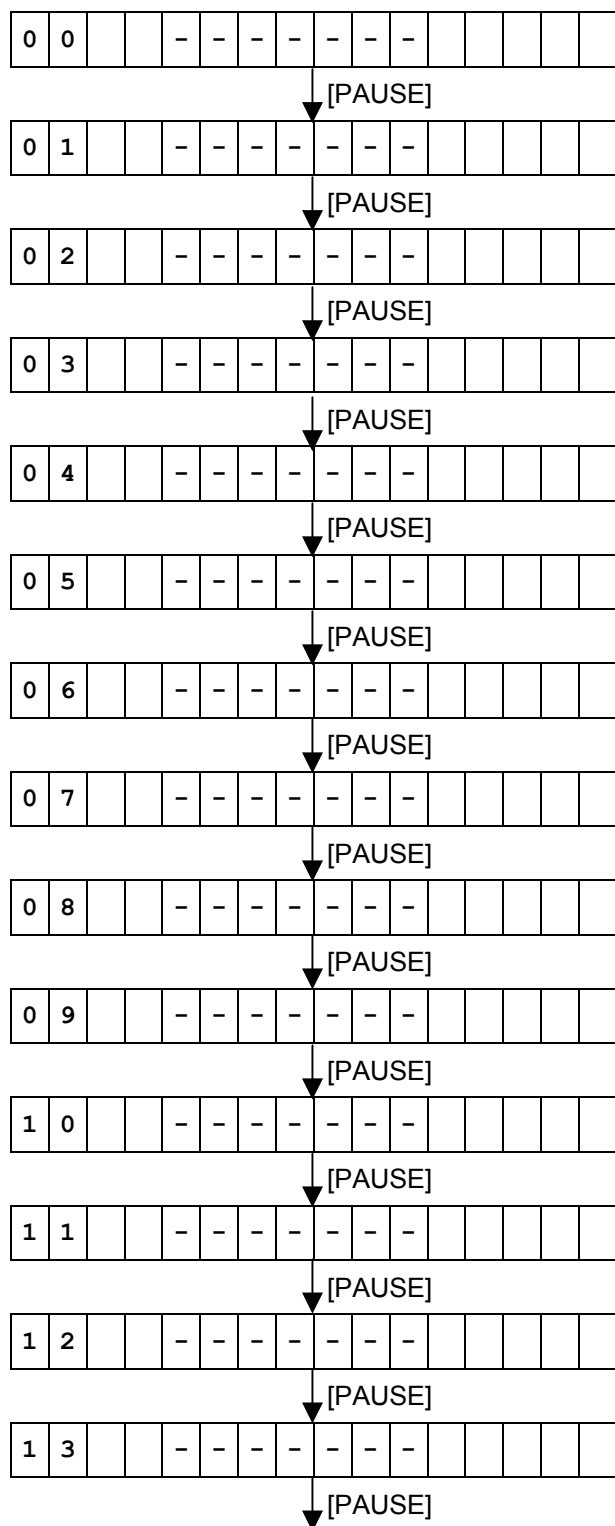
NOTES:

- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the System mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.10.1.2 BASIC File Browser (FILE MAINTENANCE)

This function displays data stored in the BASIC file storage area (00 to 13).

The number of data that can be displayed differs depending on the BASIC file storage area allocated.



* The above shows the LCD display when there is no data stored. For the LCD display when there is data stored, please see below.

LCD display when there is stored data:

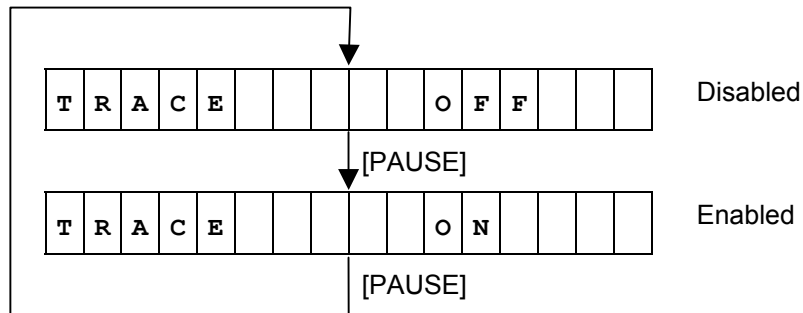
0	7		T	E	S	T	.	T	E	X	T				
---	---	--	---	---	---	---	---	---	---	---	---	--	--	--	--

_____ Name of data stored (Max. 12 characters)

_____ Registration No.

6.6.10.1.3 BASIC Trace Setting (BASIC TRACE)

This setting selects whether the BASIC trace setting is enabled or disabled.



Default value: OFF

<Supplemental Explanations>

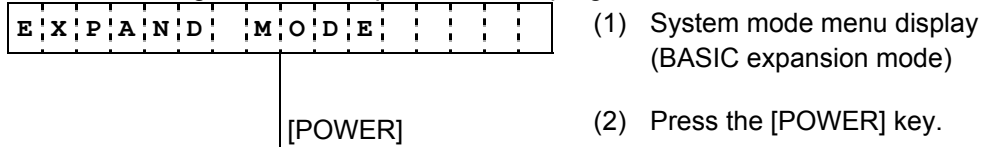
- When the [FEED] key is pressed, the menu moves in the opposite direction from when the [PAUSE] key is pressed.
- When the [FEED] and [PAUSE] keys are simultaneously pressed, the display returns to the system mode menu.
- When the [FEED] key or [PAUSE] key is pressed for 0.5 seconds or more during this setting, repeat mode is enabled and the key pressed is repeatedly entered.
- The change in the parameter setting becomes effective when the [POWER] key is pressed after setting, then stored in the backup memory.

6.6.10.1.4 BASIC Expansion Mode (EXPAND MODE)

The BASIC expansion mode program runs under the following conditions:

- The BASIC expansion mode program has already been loaded.
- The BASIC interpreter setting is set to ON (enabled).

When executing the BASIC expansion mode program

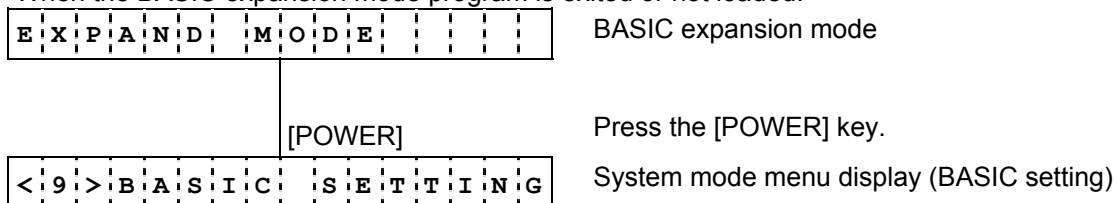


After the BASIC expansion mode is started, LCD display and operations depend on the BASIC expansion mode program.

NOTES:

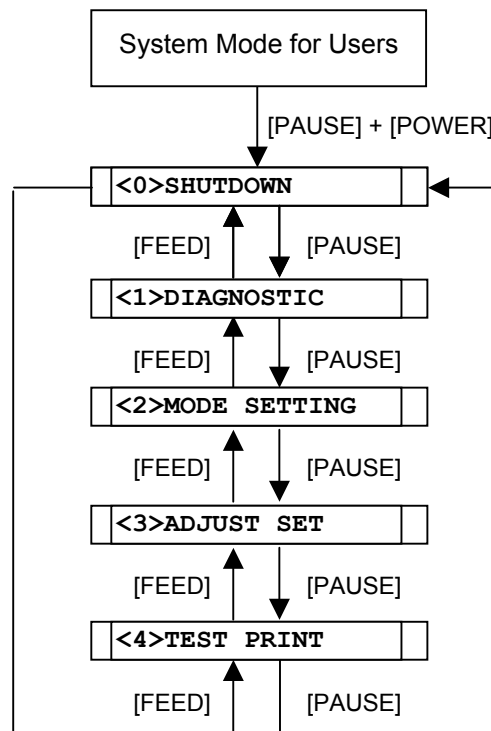
- The BASIC expansion mode ends when the BASIC expansion program is exited.
- When the [POWER] key is pressed without the BASIC expansion mode program loaded, the display does not change from "<9>BASIC SETTING" which indicates the BASIC expansion mode menu.

When the BASIC expansion mode program is exited or not loaded.



* For details of the BASIC expansion mode, refer to the section, "Startup of System Mode Program" in "the BASIC Interpreter Specification".

6.7 SYSTEM MODE FOR USERS (AVAILABLE MENU ITEMS ARE LIMITED.)



6.8 KEY FUNCTIONS

- [POWER] key (1) Determines each of various parameter settings.
- [FEED] key: (1) Moves the menu.
 (2) Selects a setting parameter.
- [PAUSE] key: (1) Moves the menu.
 (2) Selects a setting parameter.

6.9 LED FUNCTIONS

- [STATUS] LED: Indicates the following statuses:
(red/green/orange) Printer power, ON or OFF
 Printer error
 Battery level

LED lighting patterns

- Power OFF: OFFOFF
- Charging in power OFF state:.....Green/ON
- Power ON 1) Battery level 3 or more
 In idle stateGreen/ON
 Strip wait stateGreen/Blink
 ErrorRed/Blink
 2) Battery level 2 (near-low battery state)
 In idle stateOrange/ON
 Strip wait stateGreen/Blink
 ErrorRed/Blink
 3) Battery level 1 (low battery state)
 In idle stateRed/ON
 Strip wait stateGreen/Blink
 ErrorRed/Blink

- [CHARGE] LED: Indicates the following statuses:
(orange) Connection status of the AC adapter
 Battery charge

LED lighting patterns

- Power OFF 1) AC adapter not connectedOFF
 2) AC adapter connected
 ChargingOrange/ON
 Full chargeOFF
 Temperature errorOrange/Blink
 Ambient temperature below 0 or higher than 40°C
 Battery temperature below 0 or higher than 45°C
- Power ON 1) AC adapter not connectedOFF
 2) AC adapter connected
 ChargingOrange/ON
 Full chargeOFF
 PrintingOFF
 Temperature errorOrange/Blink
 Ambient temperature below 0 or higher than 40°C
 Battery temperature below 0 or higher than 45°C

6.10 BUZZER FUNCTION

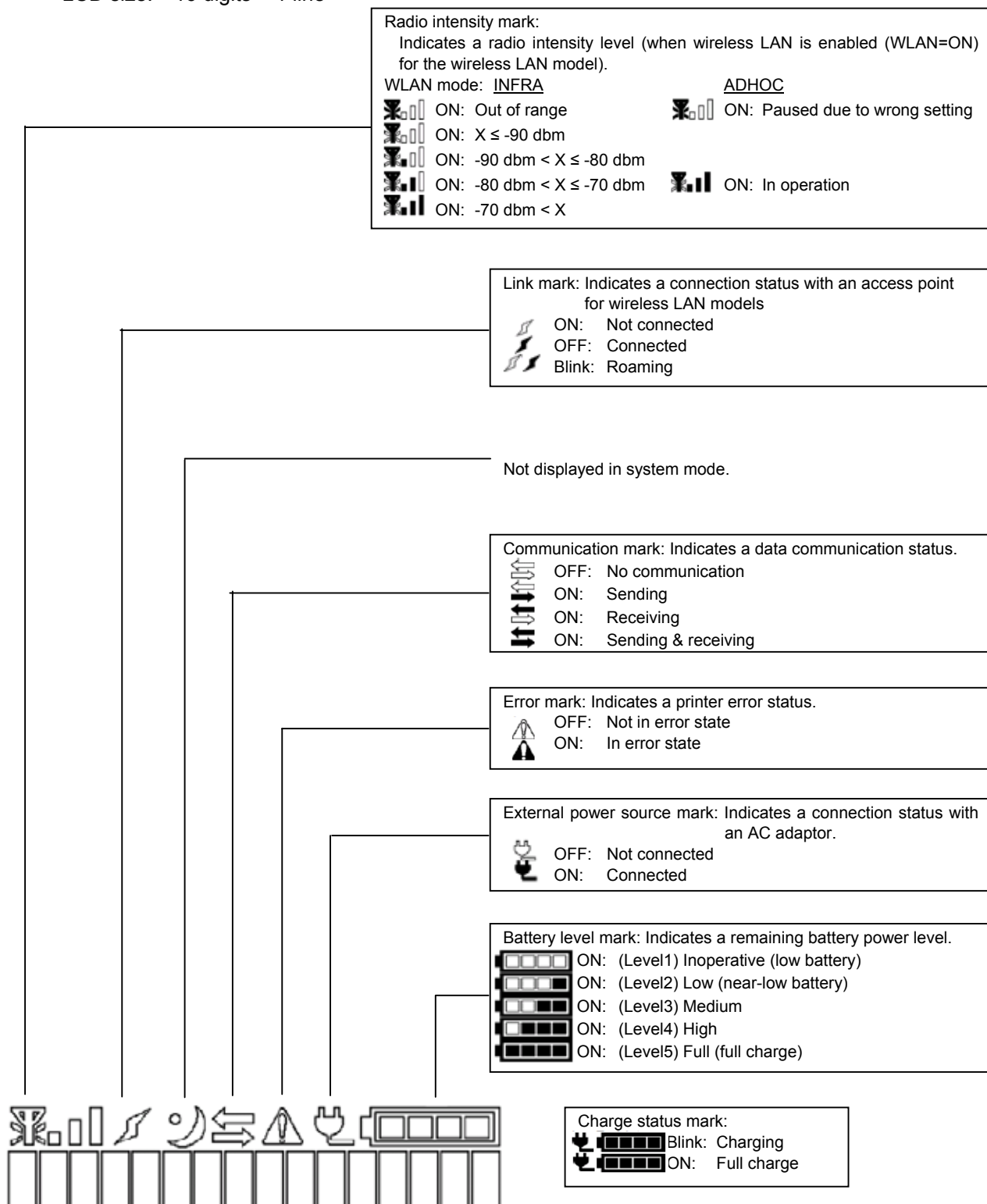
- The buzzer sounds for 400 msec. when an error occurs and automatically stops.
- Buzzer volume (1 to 3) and ON/OFF setting can be done in system mode.

6.11 LCD FUNCTIONS

The LCD displays printer status messages.

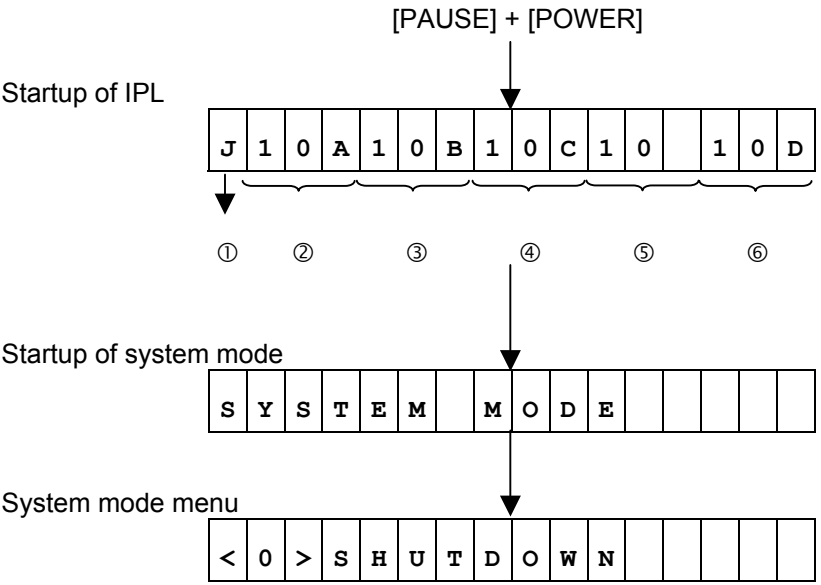
The battery level mark and the external power source mark are updated every 5 seconds.

LCD size: 16 digits × 1 line



NOTE: When turning on the printer power, press the [POWER] key when 2 to 15 seconds have passed after a connection of the AC adaptor and the battery level mark and the external power source mark appear on the LCD. Otherwise, the LCD display may not be as expected or it may take a longer time for the printer to start up.

6.12 LCD DISPLAY AT STARTUP

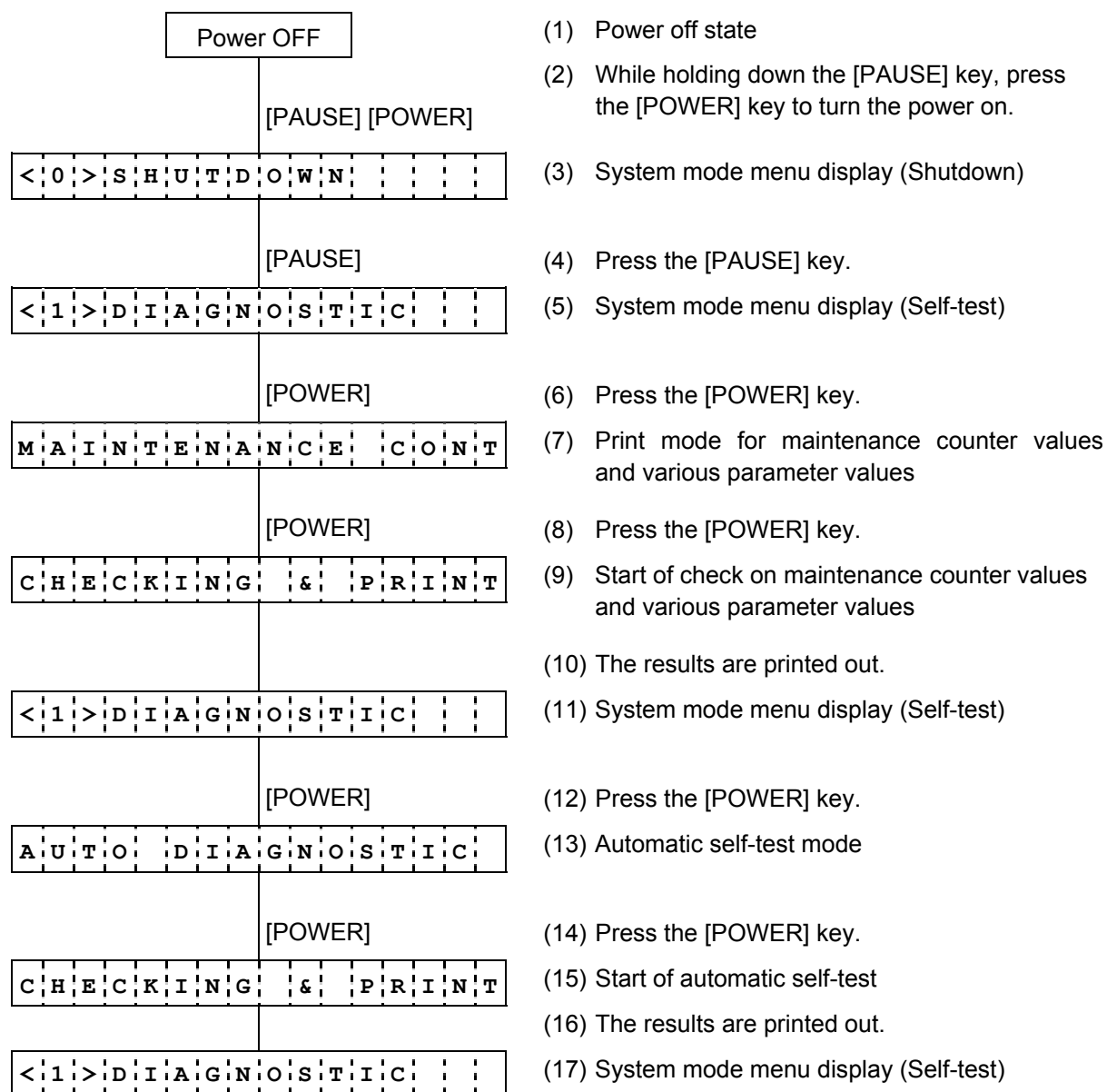


① DBCS model	J : Japanese (Japan model) C : Chinese (Global model) K : Korea F : No 2-byte codes
② Version information	IPL (BOOT) program version
③ Version information	Main program version
④ Version information	SBCS version
⑤ Version information	DBCS version
⑥ Version information	HTML version

6.12.1 Self-test

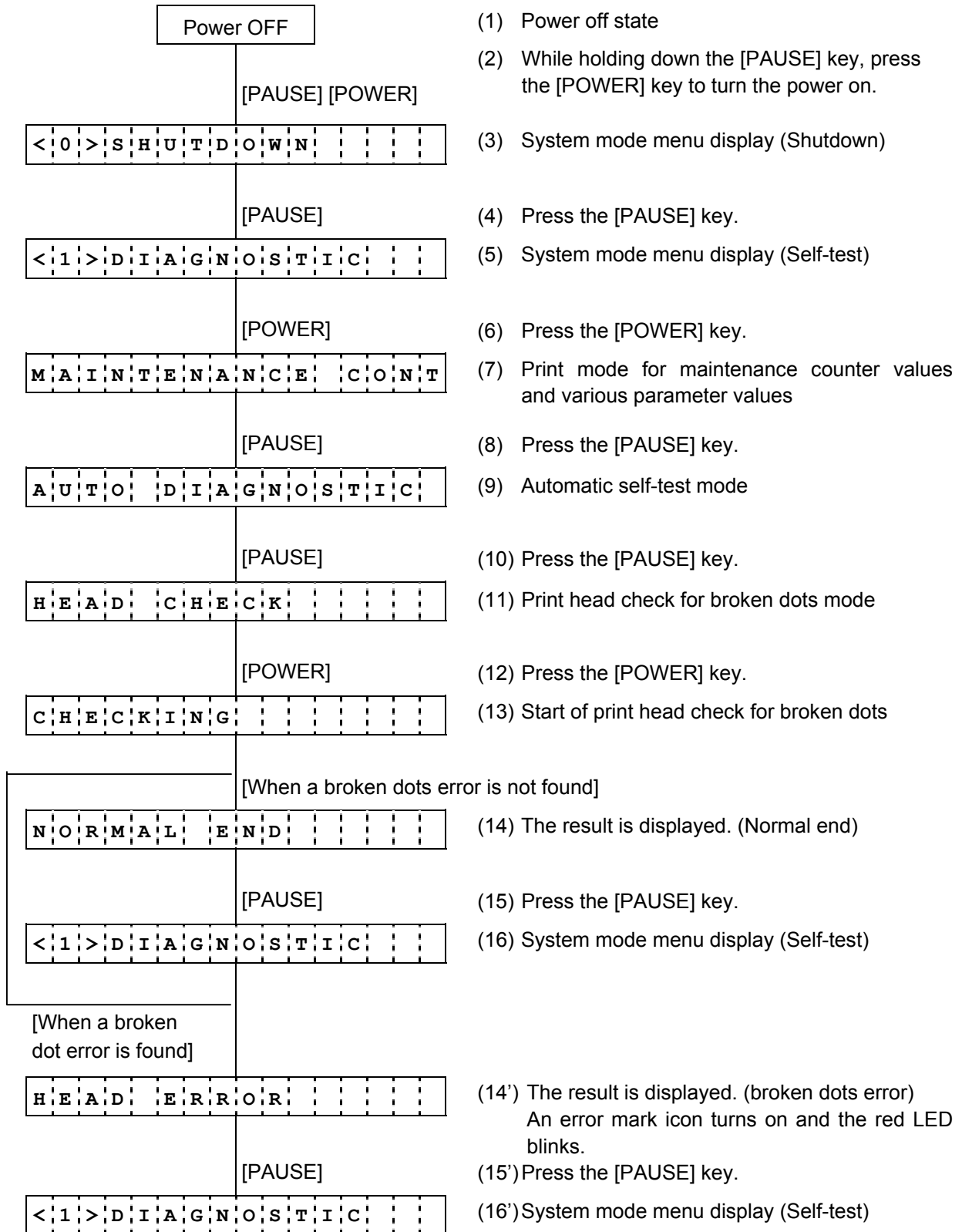
6.12.1.1 Self-test Operation Example

- (1) Printing of maintenance counter values, various parameter values, and automatic self-test result

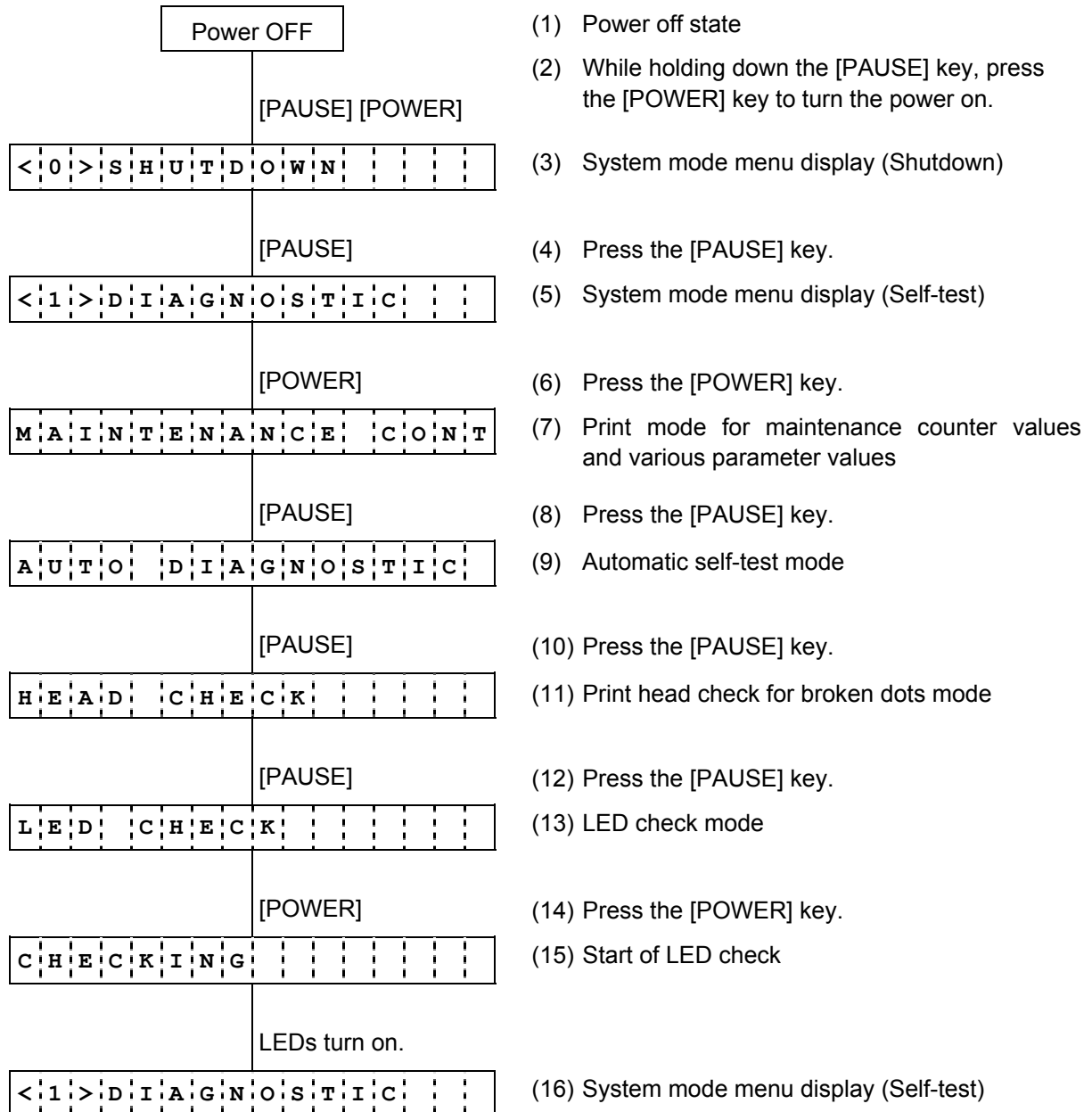


For details, refer to the section, "6.6.1.2 Self-test Items" in Chapter "6. SYSTEM MODE."

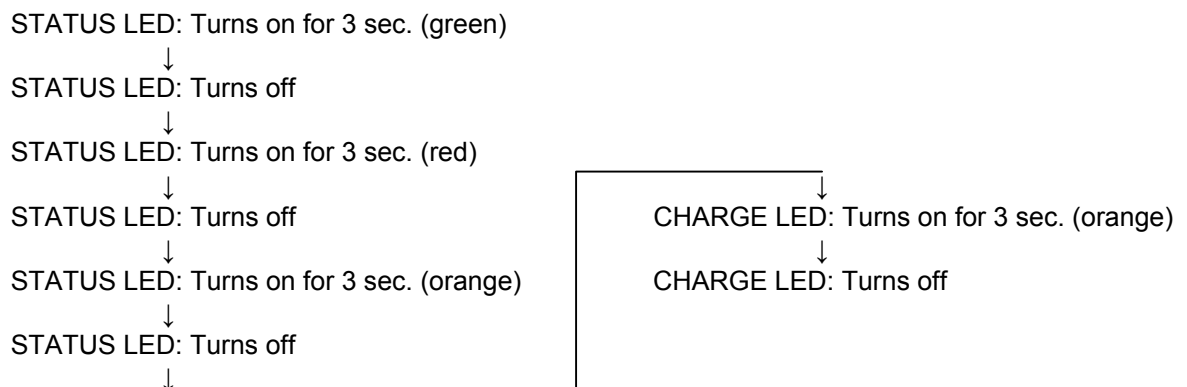
(2) Print head check for broken dots



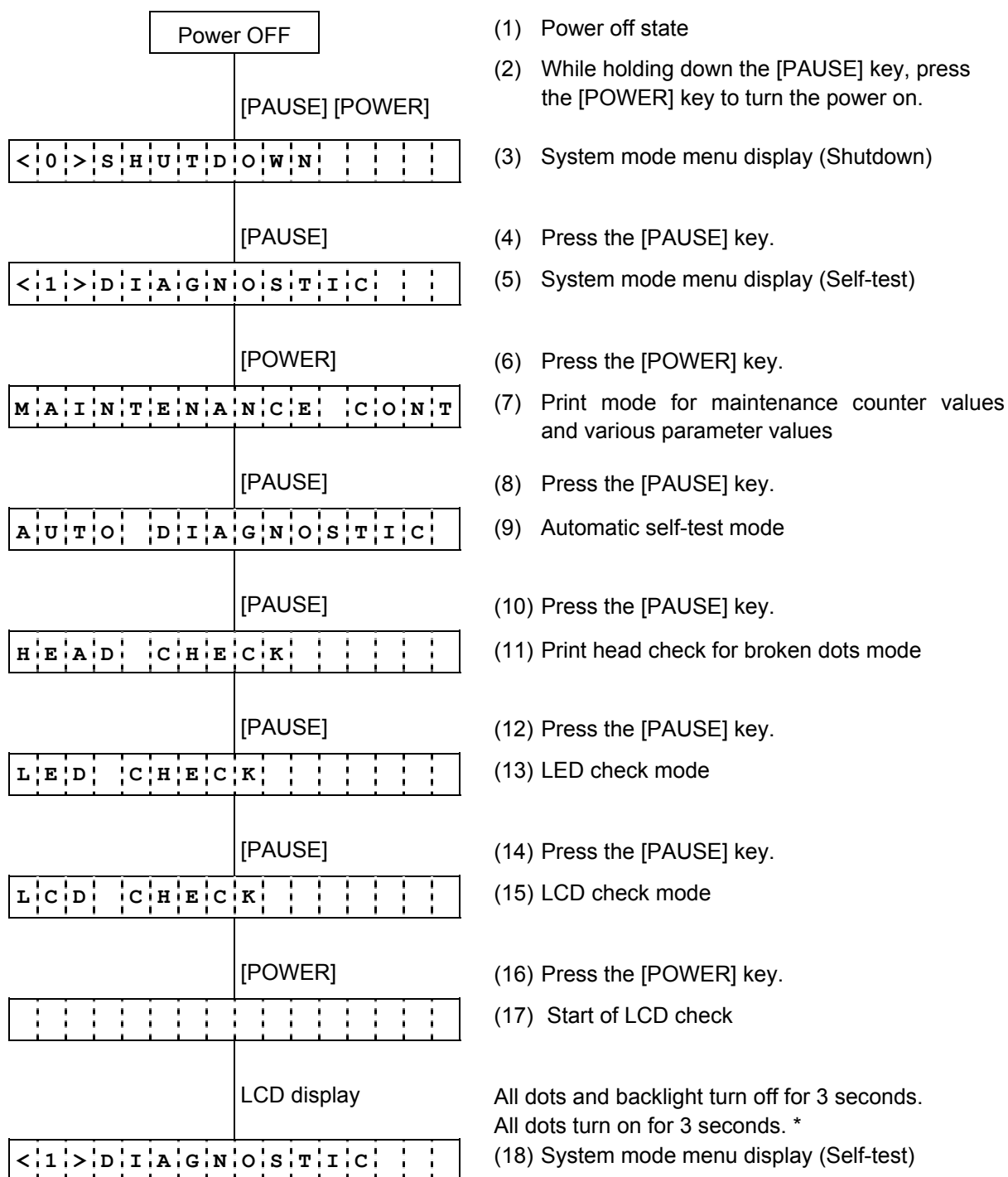
(3) LED check



LED lighting pattern

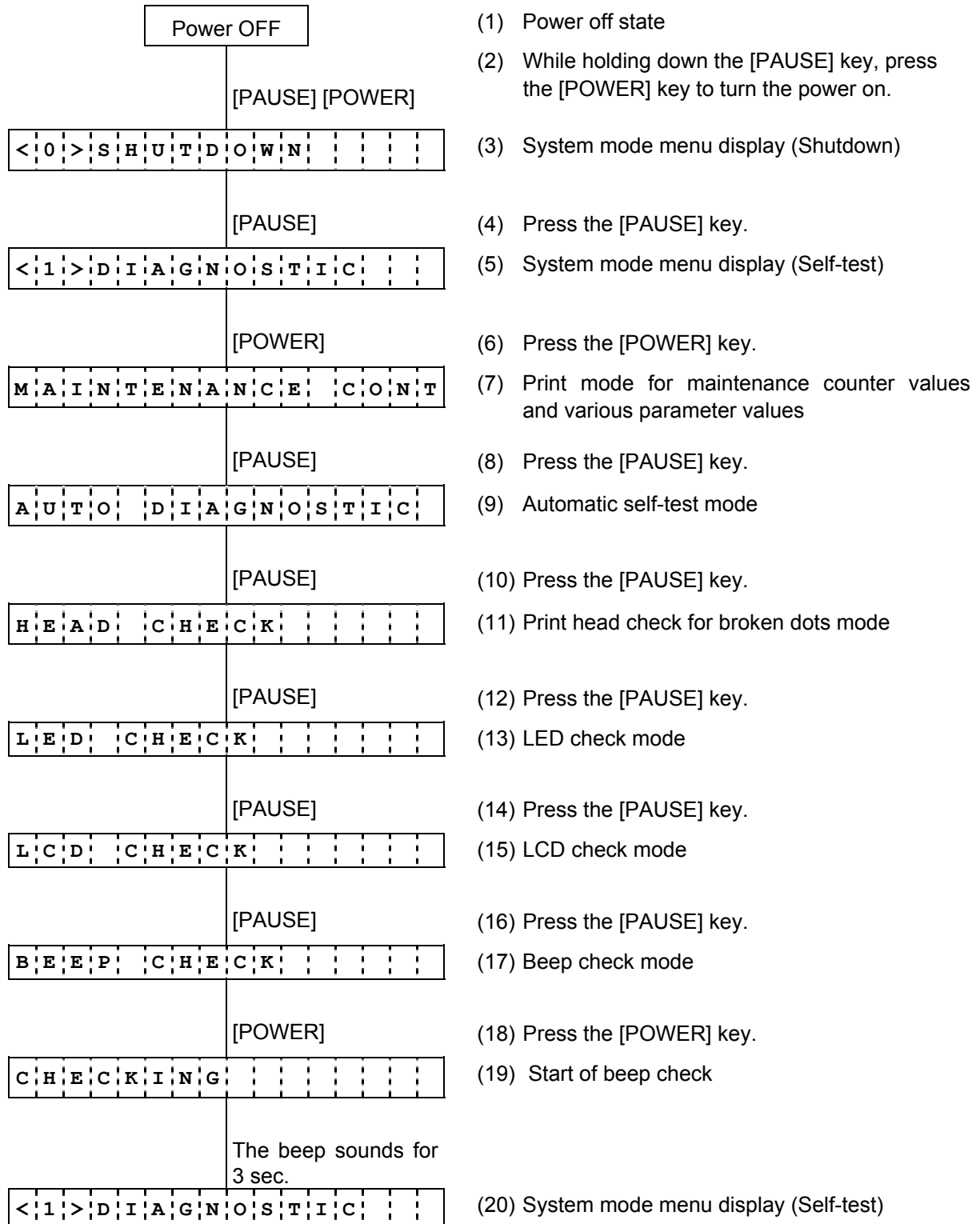


(4) LCD check



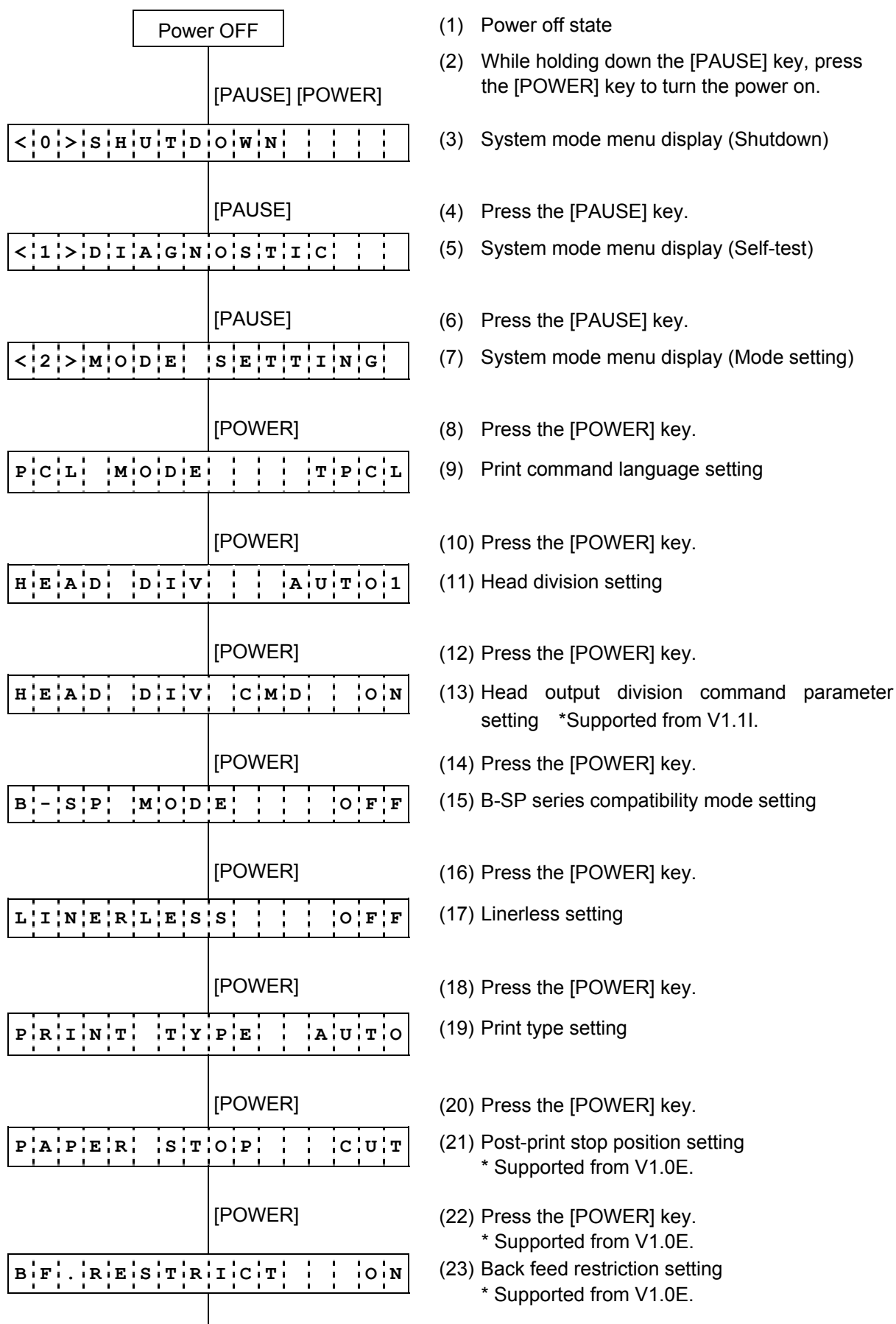
* When the [PAUSE] key is pressed with all LCD dots turned on, the printer stops under such condition. Pressing the [PAUSE] key again clears the status and the system mode menu is displayed.

(5) Beep check



6.12.2 Mode Setting

6.12.2.1 Mode Setting Operation Example



	[POWER]	(24) Press the [POWER] key. * Supported on V1.0E or later.
P E E L B F O F F		(25) Strip issue back feed setting * Supported on V1.0E or later.
	[POWER]	(26) Press the [POWER] key. * Supported on V1.0E or later.
L B L W I D T H . . . > = . 3 0		(27) Label width setting for peel-off issue * Supported from V1.0G only for B-EP2D.
	[POWER]	(28) Press the [POWER] key. * Supported from V1.0G only for B-EP2D.
< 2 > M O D E S E T T I N G		(29) System mode menu display (Mode setting)
	Hold down [POWER]	(30) Hold down the [POWER] key for 3 seconds or more.
< 0 > S H U T D O W N		(31) System mode menu display (Shutdown)
	[POWER]	(32) Press the [POWER] key. * The setting is updated at shutdown.

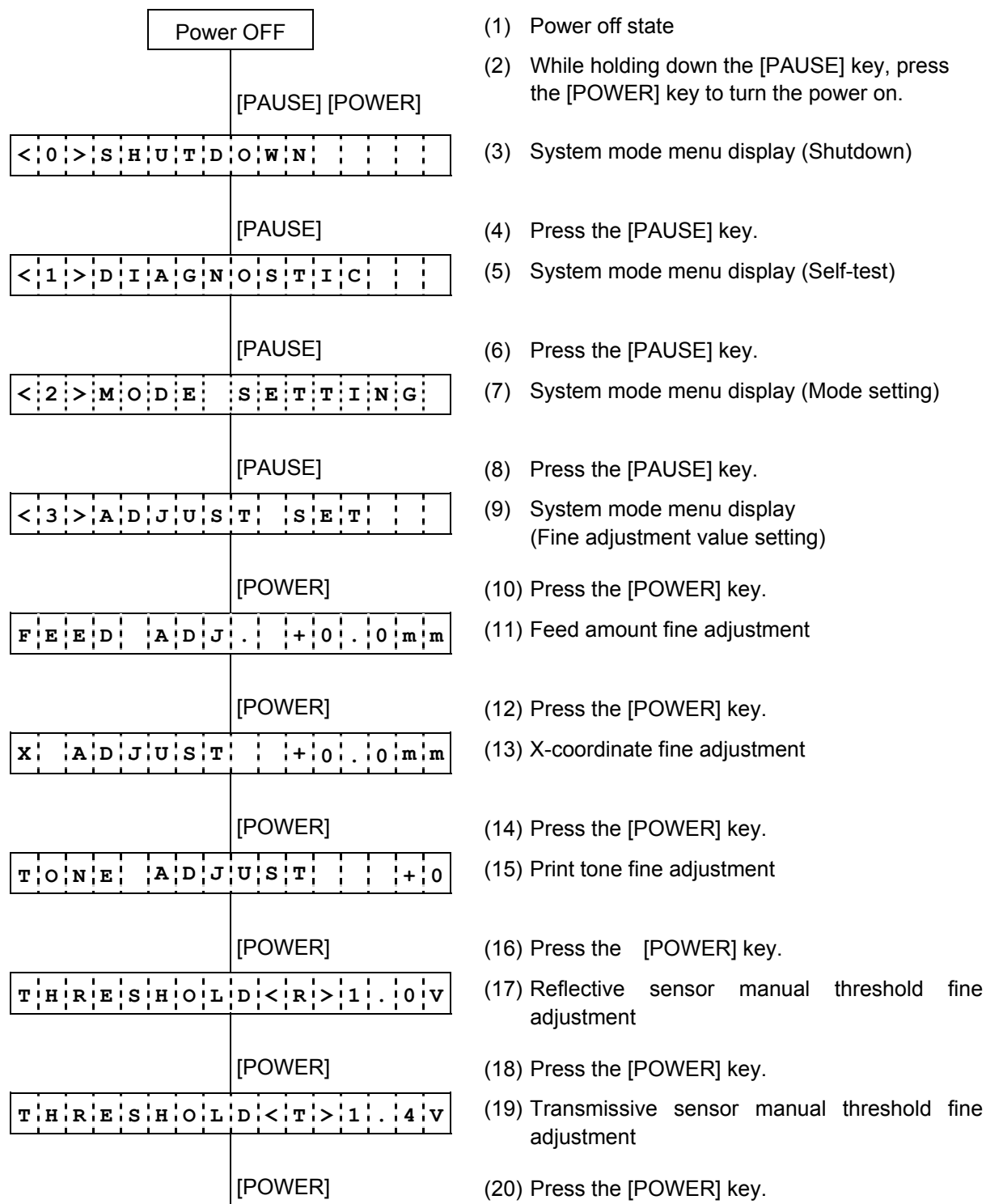
6.12.2.2 Mode Setting Items

For details, refer to the section, “6.6.3 Various Parameter Settings” in Chapter “6. SYSTEM MODE” (for system administrators).

Item	Default
Print command language setting (PCL Mode)	TPCL
Head division setting (HEAD DIV)	B-EP2: AUTO1 (automatic selection from none, 2 or 3 division) B-EP4: AUTO1 (automatic selection from none, 2, 3 or 6 division)
Head output division command parameter setting (HEAD DIV CMD)	ON (Head output division parameter of AY command is processed.) * Supported from V1.1I.
B-SP series compatibility mode setting (B-SP MODE)	OFF (B-SP series compatibility mode is disabled.)
Linerless setting (LINERLESS)	OFF (Linerless setting is disabled.)
Print type setting (PRINT TYPE)	AUTO (automatic selection from BATCH or STRIP)
Post-print stop position setting (PAPER STOP)	CUT (Stop at the cut position) * Supported from V1.0E.
Back feed restriction setting (BF.RESTRICT)	ON (Back feed restricted) * Supported from V1.0E.
Strip issue back feed setting (PEEL BF.)	OFF (No back feed allowed) * Supported from V1.0E.
Label width setting for peel-off issue (LBL WIDTH)	>= 30 (Label width is 30mm or more) * Supported from V1.0G only for B-EP2D

6.12.3 Fine Adjustment Value Setting

6.12.3.1 Fine Adjustment Value Setting Operation Example



P	E	E	L	A	D	J	.	.	+	0	.	0	m	m
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

(21) Strip position fine adjustment

[POWER]

(22) Press the [POWER] key.

P	A	P	E	R	S	I	Z	E	1	1	4	m	m
---	---	---	---	---	---	---	---	---	---	---	---	---	---

(23) Paper size for ESC/POS setting

* This display is for the B-EP4.

[POWER]

(24) Press the [POWER] key.

<	3	>	A	D	J	U	S	T	S	E	T	.	.
---	---	---	---	---	---	---	---	---	---	---	---	---	---

(25) System mode menu display

(Fine adjustment value setting)

[POWER]

(26) Hold down the [PAUSE] key for 3 seconds or more.

<	0	>	S	H	U	T	D	O	W	N
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

(27) System mode menu display (Shutdown)

[POWER]

(28) Press the [POWER] key.

* The setting is updated at shutdown.

6.12.3.2 Fine Adjustment Value Setting Items

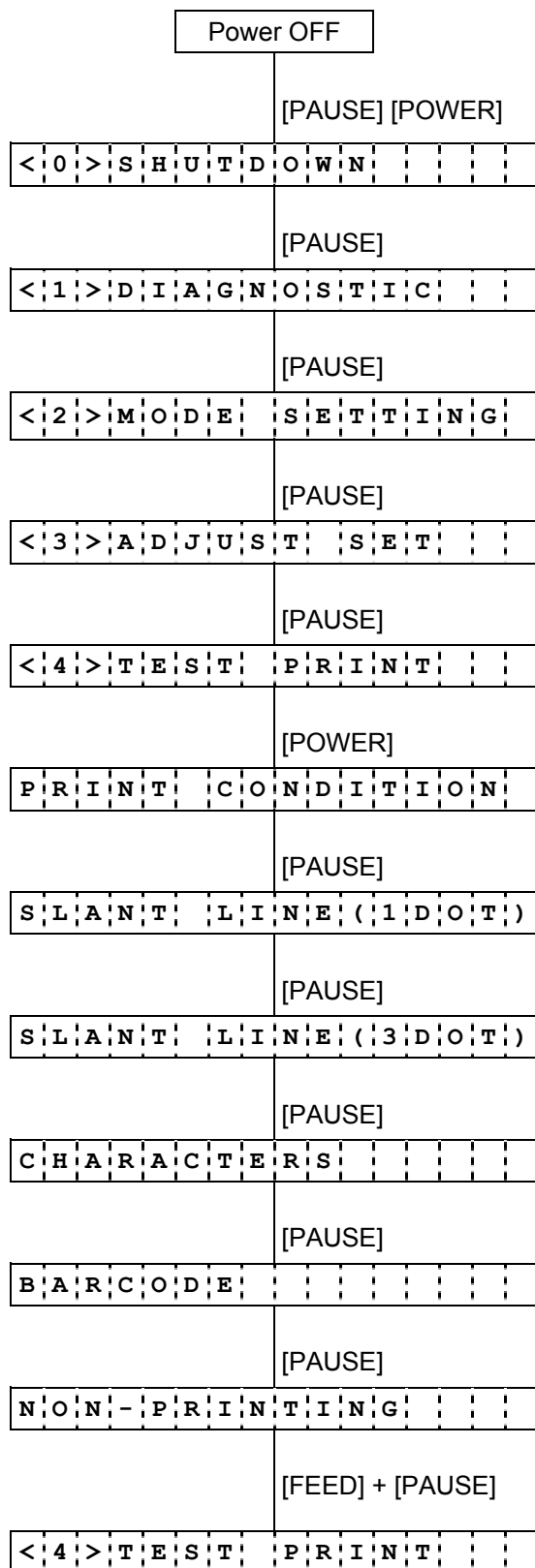
For details, refer to the section, “6.6.4 Various Fine Adjustment Value Setting” in Chapter “6. SYSTEM MODE”.

Item	Default
Feed amount fine adjustment setting (FEED ADJ.)	+0.0mm
X-coordinate fine adjustment setting (X ADJUST)	+0.0mm
Print tone fine adjustment setting (TONE ADJ.)	+0
Reflective sensor manual threshold fine adjustment setting (THRESHOLD<R>)	1.0V
Transmissive sensor manual threshold fine adjustment setting (THRESHOLD<T>)	1.4V
Strip position find adjustment setting (PEEL ADJ.)	+0.0mm
Paper size for ESC/POS setting (PAPER SIZE)	58mm (B-EP2) 114mm (B-EP4)

6.12.4 Test Print

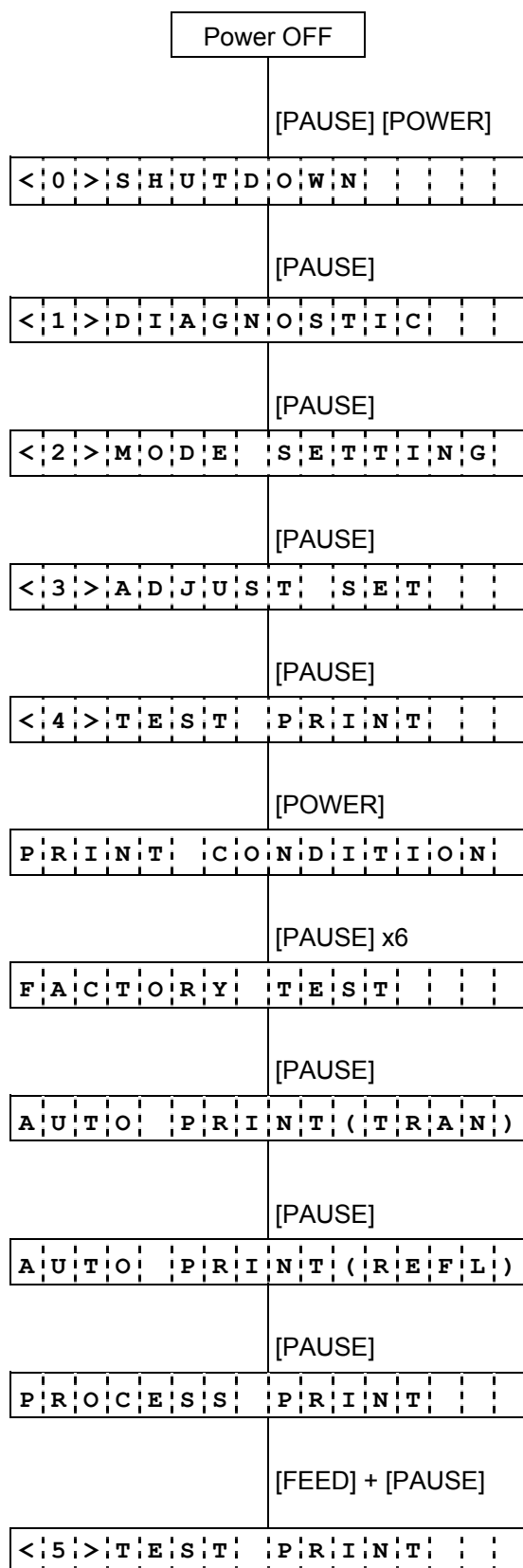
6.12.4.1 Test Print Operation Example

(1) Normal test print



- (1) Power off state
- (2) While holding down the [PAUSE] key, press the [POWER] key to turn the power on.
- (3) System mode menu display (Shutdown)
- (4) Press the [PAUSE] key.
- (5) System mode menu display (Self-test)
- (6) Press the [PAUSE] key.
- (7) System mode menu display (Mode setting)
- (8) Press the [PAUSE] key.
- (9) System mode menu display (Fine adjustment value setting)
- (10) Press the [PAUSE] key.
- (11) System mode menu display (Test print)
- (12) Press the [POWER] key.
- (13) Test print condition parameter setting mode
- (14) Press the [PAUSE] key.
- (15) 1-dot slant line print mode
- (16) Press the [PAUSE] key.
- (17) 3-dot slant line print mode
- (18) Press the [PAUSE] key.
- (19) Character print mode
- (20) Press the [PAUSE] key.
- (21) Bar code print mode
- (22) Press the [PAUSE] key.
- (23) Non-printing mode
- (24) While holding down the [FEED] key, press the [PAUSE] key.
- (25) System mode menu display (Test print)

(2) Assembly process test print mode



- (1) Power off state
- (2) While holding down the [PAUSE] key, press the [POWER] key to turn the power on.
- (3) System mode menu display (Shutdown)
- (4) Press the [PAUSE] key.
- (5) System mode menu display (Self-test)
- (6) Press the [PAUSE] key.
- (7) System mode menu display (Mode setting)
- (8) Press the [PAUSE] key.
- (9) System mode menu display (Fine adjustment value setting)
- (10) Press the [PAUSE] key.
- (11) System mode menu display (Test print)
- (12) Press the [POWER] key.
- (13) Test print condition parameter setting mode
- (14) Press the [PAUSE] key six times.
- (15) Assembly process test line print mode
- (16) Press the [PAUSE] key.
- (17) Assembly process automatic print mode (transmissive sensor)
- (18) Press the [PAUSE] key.
- (19) Assembly process automatic print mode (reflective sensor)
- (20) Press the [PAUSE] key.
- (21) Assembly process test pattern print mode
- (22) While holding down the [FEED] key, press the [PAUSE] key.
- (23) System mode menu display (Test print)

For details, refer to the section, “6.6.1.2 Self-test Items” in Chapter “6. SYSTEM MODE”.

6.12.4.2 Test Print Setting Items

For details, refer to the section, “6.6.4 Fine Adjustment Value Setting” in Chapter “6. SYSTEM MODE”.

Item	Default
Issue count (ISSUE COUNT)	1 label
Sensor (SENSOR)	NONE (No sensors used, i.e. position is not detected)
Print type (TYPE)	AUTO (Print depending on the sensor used)
Label length (LABEL LEN.)	63mm
Paper feed mode (PAPER)	NO FEED (Paper is not fed)

7. OPERATION DURING BATTERY CHARGE BY AC POWER SUPPLY

This chapter describes the printer operations when the battery is charged through the AC adapter.

7.1 IN PRINTER POWER OFF STATE

- (1) When the AC adapter is connected with the battery installed:

LCD

The external power source mark turns on and the battery level mark blinks.

When the battery is fully charged, both the external power source mark and the battery level mark turn on.



LED

[STATUS] LED (Green) ON
[CHARGE] LED (Orange)	Charging..... ON
	Full charge..... OFF

- (2) When the AC adapter is connected without the battery installed:

LCD

The external power source mark and the battery level mark (Level 1) turn on.



LED

[STATUS] LED (Red) ON
[CHARGE] LED OFF

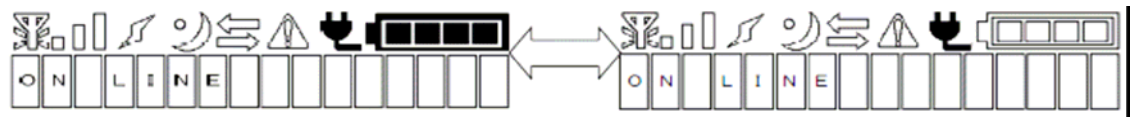
- * If the printer power is turned on under the above condition, a charge error will result.
(For details about the charge error, refer to “5.21 Charge Error Number List” of this specification and Chapter 9. Error Processing of the External Equipment Interface Specification (EAA-02465).)

7.2 IN PRINTER POWER ON STATE

- (1) The AC adapter is connected:

LCD

The external power source mark turns on and the battery level mark blinks.
When the battery is fully charged, both the external power source mark and the battery level mark turn on.



LED

[STATUS] LED (green)	In normal state	ON
[CHARGE] LED (orange)	Charging	ON
	Full charge	OFF

* If the battery is detached under the above condition, a charge error will result.
(For details about the charge error, refer to “5.21 Charge Error Number List” of this specification and Chapter 9. Error Processing of the External Equipment Interface Specification [EAA-02465].)

8. POWER SAVE MODE

This section describes printer operations in power save mode.

8.1 SHIFTING TO POWER SAVE MODE

When communication, key operations and cover open/close operations are not performed in a certain period of time to shift to power save mode, the printer enters power save mode.

When the printer enters power save mode, the SLEEP icon appears on the LCD.

8.2 WHEN A WIRELESS LAN MODULE IS CONNECTED

When a wireless LAN module is connected, "Power Save Mode Setting" inside the module is switched from "No Power Save" to "Auto Power Save" after the printer enters power save mode*.

*: Only when the wireless LAN power save setting is enabled. (Supported from V1.1C.)

8.3 PRECAUTIONS

The printer does not enter power save mode under any of the following conditions.

- When AC power is supplied (the printer does not enter this mode regardless of battery charging status).
- When any error is displayed.
- When the "BASIC interpreter" runs.
- When the printer is in system mode.
- When the printer pauses.