

7.SRV (SERVICE) MODE

The SRV key is used for operating in the SRV mode.

7-1 SRV. reset (Program Loop Reset)

Used to return the machine back to it operational state after a lock-up has occurred.

Procedure

- 1) Disconnect the AC cord from the wall outlet.
- 2) Set the MODE switch to the SRV position
- 3) Con nect the AC cord to the wall outlet.

*** SRV.RESET ***

7-2 Master reset (All memory clear)

There are two methods for the way of master reset.

• MRS-1

Used to clear all memory contents and return machine back to its initial settings. return keyboard back to default. for default keyboard layout refer to page 3.

Procedure

- 1) Disconnect the AC cord from the wall outlet.
- 2) Set the MODE switch to the SRV position
- 3) Connect the AC cord to the wall outlet, while depressing the JOURNAL FEED key.

• MRS-2

Used to clear all memory and keyboard contents.

This reset returns all programming back to defaults. The keyboard must be enter by hand.

This reset is used if an application needs a different keyboard layout other than that supplied by a normal MRS-1.

Procedure

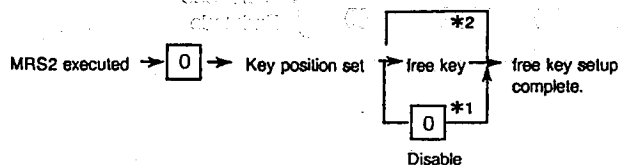
- 1) Disconnect the AC cord from the wall outlet.
- 2) Set the MODE switch to the SRV position
- 3) Connect the AC cord to the wall outlet, while depressing the RECEIPT FEED key and the JOURNAL FEED key.

*** MRS.RESET ***

*Key position assignment:

After the execution of MRS-2, only the RECEIPT FEED and JOURNAL FEED keys can remain effective on key assignment. Any key can be assigned on any key position on the main keyboard.

[key setup procedure]



NOTES:

- *1: When the 0 Key is pressed, the key of the key number on display is disabled.
- *2: Push the key on the position to be assigned. With this, the key of the key number on display is assigned to that key position.

Key number	Key name	Key number	Key name
1	Numeric key "0"	10	Numeric key "9"
2	Numeric key "1"	11	Numeric key "00"
3	Numeric key "2"	12	Numeric key "000"
4	Numeric key "3"	13	Decimal point key
5	Numeric key "4"	14	CL key
6	Numeric key "5"	15	@/FOR key
7	Numeric key "6"	16	#/SBTL key
8	Numeric key "7"	17	CA/AT key
9	Numeric key "8"		

7-3 Reading of the SRV mode program

[JOB code 900]

All paramelers contained for the SRV mode as listed

Key operation.

900→[@/FOR]→[CA/AT]

01/01/00 12:01AM
000#0002

#900

901# 0002
902# 0010
903# 0000
904# 0000
905# 0000
906# 0002
907# 0000
908# 0000
909# 0000
910# 0000
911# 0001
912# 0001
913# 0124
914# 0100
915# 0040
916# 0700
917# 4003
918# 4000
919# 0001
920# 0000
921# 0000
922# 0000
923# 0000
924# 0000
925# 0000
930# Z1 0000
931# Z2 0000
932# Z2 0000
933# Z1 0000
934# Z1 0000
935# Z1 0000
936# Z1 0000
937# Z1 0000

Service
Preset

Z1, Z2
counters

GTs

PGM2 mode
Secret code

GT1 \$0000000000.00
942#
GT2 \$0000000000.00
943#
GT3 \$0000000000.00

944# 0000

[JOB code 950]

The Key layout report is printed in SRV mode

Key operation

950 → [@/FOR] → [CA/AT]

951 → [@/FOR] → [CA/AT]

#950			
001	0	KEY	119
002	1	KEY	120
003	2	KEY	130
004	3	KEY	140
005	4	KEY	121
006	5	KEY	131
007	6	KEY	141
008	7	KEY	122
009	8	KEY	132
010	9	KEY	142
011	00	KEY	129
012	000	KEY	—
013	.	KEY	139
014	CL		143
015	@/FOR		133
016	#/SETL		150
017	CA/AT		149
018	CASH2		153
019	SCALE		058
020	PLU		093
021	TS OUT		—
022	TS IN		—
063	TIP		090
064	PRINT		038
065	RCPT		048
066	SLIP		028
067	EAT 1		—
068	EAT 2		—
069	EAT 3		—
070	FINAL		—

Key number

Key text

Key position number

[ER-3310]

#951			
001	001		104
002	002		105
003	003		106
004	004		107
005	005		108
006	006		114
007	007		115
008	008		116
009	009		117
010	010		118
011	011		124
012	012		125
013	013		126
014	014		127
015	015		128
016	016		134
017	017		135
018	018		136
019	019		137
020	020		138
021	021		095
022	022		094
023	023		001
024	024		010
025	025		019
150	150		—
151	151		—
152	152		—
153	153		—
154	154		—
155	155		—
156	156		—

Key position number

[JOB code 970]

Files on the memory are listed.

Key operation

970 → [@/FOR] → [CA/AT]

#970			
%01%	00022	/00022	
%02%	00073	/00073	
%03%	00012	14/00012	
%04%	00020	04/00020	
%05%	00048	/00048	
%06%	00014	/00014	
%07%	00004	/00004	
%08%	00080	/00019	
%09%	00073	/00073	
%15%	00100	/00000	
%16%	00099	/00099	
%17%	00009	/00009	
BANK 07 2FFA			

Table #

Record count

Block count
used record
count

Bank and
Address number
of top of
vacant memory

[JOB code 995]

Sio handler initial values are listed

Key operation

995 → [@/FOR] → [CA/AT]

#995			
SUM CHECK	Y		
END CODE	Y		
START CODE	N		
CD SENSE	Y		
CS SENSE	Y		
DR SENSE	Y		
	9600		
	7	000 1	
START CODE	00		
END CODE	00		

Transmission

Parameter

Y : Yes

N : No

Baud rate

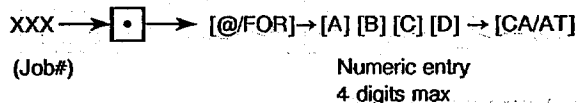
Data format

Start code

End code

7-4 Service mode programming

The following are the key operation required for programming.



Details of [A] [B] [C] [D] will be discussed at each item description.

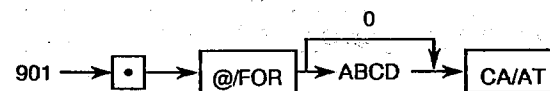
Key entry without depression of [•] key will affect the programmed contents.

[List of service mode program]

- Job
- 901 TAX system, TAB setting
- 902 Option setting,
- 903 SCALE setting, Food stamp system, coin dispenser setting.
- 904 Slip print shifting digits
- 905 Split registration
- 906 STOCK counter, HASH/MINUS DEPT programming,
- 907 Void mode programming
- 908 REPORT programming
- 909 REPORT programming
- 910 Cashier/Server/employee programming
- 911 Fractional disposal/SLIP print program
- 912 Date format, Receipt on/off switch, Time display, Receipt header format, Footer control, VP sensor, Logo format
- 913 Print format, NE check programming, Error beep, Key buffer clear, drawer close operation, error mode, Key catch tone.
- 914 No sale programming, Tax deletion, non-add programming manual TAX.
- 915 Amount reading symbol, NE check, discount, BA
- 916 Negative ST, TRYST programming
- 917 REPORT programming
- 918 Cashier report format, DEPT/PLU TEXT characters, TIP method, chit receipt, void programming, kitchen printer printing edit/no.
- 919 PBLU method, PBLU programming, amount printing when PLU unit price is 0, conversion SBTL print
- 920 In-line setting (1)
Second KP mode, PGM mode can be enable / disable at slave, machine assignment
- 922 In-line setting (2)
SRN transmission speed and carrier-off waiting time
- 924 In-line setting (3)
Back up master Yes / No
- 925 In-line setting (4)
Resetting mode selection
- 930 counter setting
- 937
- 942 GT2 Setting
- 943 GT3 Setting
- 944 PGM2 Secret code Setting
- 950 Free Key layout Setting (1)
- 951 (2)
- 971 File creation

<JOB # 901>

Key operation



- A. -Always 0
- B. -Always 0
- C. -TAX system

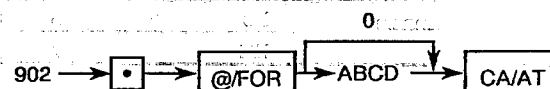
TAX SYSTEM	C
SALES TAX	0
SINGAPORE TAX	4

D. -TAB = Set at 2

MRS = 0002

<JOB # 902>

Key operation



A.

- 1. Choice of RS232C option
- 2. Choice of SRN option

RS-232C	INLINE (SRN)	A
NO	NO	0
	YES	1
YES	NO	2
	YES	3

B. -Choice of KITCHEN PRINTER

Kitchen printer	B
NONE	0
ER-02RP	1
ER-01RP	2
ER-02RP and ER-01RP	3

C. -1. REFUND, RETURN data to send to the kitchen printer

Yes/No

-2. Choice of slip printer Yes/No

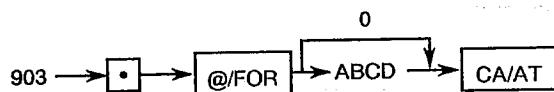
RF/RTN data	Slip printer	C
transmit	NO	1
	YES	3
not transmit	NO	5
	YES	7

D. -Always 0

MRS = 0010

* SRV reset must be performed after any changes to this Job code.

<JOB # 903>



- A. -Always 0
- B. Choice of coin dispenser

Coin dispenser	B
No	0
Yes	1

- C. -1. Scale Auto/Manual
- 2. Tare input Enable/Disable
- 3. Scale weighing unit KG/LB

Scale	Tare input	Weighing unit	C
Manual	Disable	LB	0
		KG	1
	Enable	LB	2
		KG	3
Automatic	Disable	LB	4
		KG	5
	Enable	LB	6
		KG	7

D. -FOOD STAMP SYSTEM

Food stamp	D
No food stamp	0
Tax payable by food stamp	1
No tax payable by food stamp	2
Food stamp forgiveness	3

MRS = 0000

<JOB # 904>

Key operation

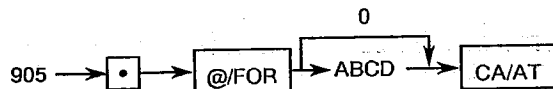


- A. -Always 0
- B. -Always 0
- C D. -SLIP Printer number of digits shifted = 0~14

MRS = 0000

<JOB # 905>

Key operation



- A. -Always 0
- B. -Always 0
- C. -Split item quantity count method

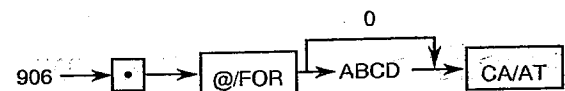
	C
QUANTITY	0
PACKAGE	1

- D. -Always 0

MRS = 0000

<JOB # 906>

Key operation



- A. -Credit figure in stock counter

	A
Enabled unconditionally	0
Operation enabled though error displayed	1
Disable	2

- B. -1. Enable/Disable hash dept setting by PGM2
- 2. Enable/Disable (-) dept setting by PGM 2

Hash DEPT	(-) dept	B
Disable	Disable	0
	Enable	1
Enable	Disable	2
	Enable	3

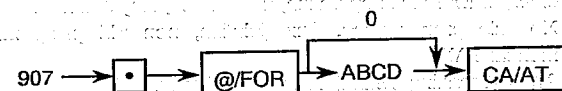
- C. -Always 0

- D. - Dept decimal point position (Always 2)

MRS = 0002

<JOB # 907>

Key operation



- A. -Always 0
- B. -Always 0
- C. -Enable/Disable void mode in REG position

Void mode in REG position	C
Disable	0
Enable	2

- D. -Enable/Disable void mode

Void mode	D
Enable	0
Disable	2

MRS = 0000

<JOB # 908>

Key operation



- A. -1. GT1 PRINT SKIP in Z report
2. GT2 PRINT SKIP in Z report
3. GT2 PRINT SKIP in Z report

GT1	GT1	GT3	A
Print	Print	Print	0
		Skip	1
	Skip	Print	2
		Skip	3
Skip	Print	Print	4
		Skip	5
	Skip	Print	6
		Skip	7

- B. -GT1 PRINT in X REPORT

GT1 in X report	B
Skip	0
Print	4

- C. -1. Yes/No to reset consecutive number (for Z2)
-2. Yes/No to reset consecutive number (for Z1)

CC# reset at Z2	CC# reset at Z1	C
Non reset	Non reset	0
	Reset	1
Reset	Non reset	2
	Reset	3

- D. -Always 0

MRS = 0000

<JOB # 909>
Key operation



- A. -1. TRANSACTION REPORT ZERO SKIP Yes/NO
2. DEPARTMENT REPORT ZERO SKIP Yes/NO
3. PLU(STOCK) REPORT ZERO SKIP Yes/No

Transaction report	DEPT report	PLU(stock) report	A
Zero skip	Zero skip	Zero skip	0
		Non Zero skip	1
	Non Zero skip	Zero skip	2
		Non Zero skip	3
Non Zero skip	Zero skip	Zero skip	4
		Non Zero skip	5
	Non Zero skip	Zero skip	6
		Non Zero skip	7

- B. -HOURLY REPORT ZERO SKIP Yes/No

Hourly report	B
Zero skip	0
Non skip	4

- C. -1. Print/skip to print share on dept report
-2. Refer/skip to refer to prohibit conditions by PGM setting and report *

Printing share	Refer to prohibit condition	C
Print	Yes	0
	No	1
Skip	Yes	2
	No	3

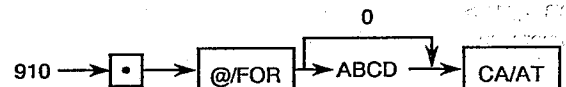
*NOTE)

"If a function is inhibited in SRV programming, any PGM programming relating to that function can be allowed or disallowed depending on the presetting of SRV 909,C. For example, if the RFND function is inhibited in SRV 950, any related PGM programming, such as PGM 230, can still be performed if SRV 909,C, is set to Code 1, to allow it".

- D. Always 0

MRS = 0000

<JOB # 910>
Key operation



- A. -1. Include/Exclude tax in server sales total
2. Include/Exclude tax in cashier sales total

Server total	Cashier total	A
Exclude tax	Tax excluded	0
	Tax included	2
Include tax	Tax excluded	4
	Tax included	6

- B. -1. Compulsory/Non compulsory cashier, server code entry
2. Appear/Hidden cashier, server, manager entry on display
3. Compulsory/non compulsory cashier entry (cashier assign)

Secret code entry	Display	Cashier# entry	A
Disable	Hidden	Non compulsory	0
		Compulsory	1
	Appear	Non compulsory	2
		Compulsory	3
Compulsory	Hidden	Non compulsory	4
		Compulsory	5
	Appear	Non compulsory	6
		Compulsory	7

- C. -1. EMPLOYEE TIME IN operation Compulsory/non compulsory
 2. SERVER # entry Compulsory/non compulsory
 3. MANAGER # entry Compulsory/non compulsory

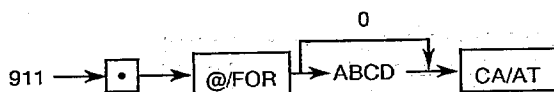
Employee time in	Server# entry	Manager# entry	A
Non compulsory	Non compulsory	Non compulsory	0
		Compulsory	1
	Compulsory	Non compulsory	2
		Compulsory	3
Compulsory	Non compulsory	Non compulsory	4
		Compulsory	5
	Compulsory	Non compulsory	6
		Compulsory	7

- D. -1. Choice of BARREL LOCK or STAY DOWN for CASHIER KEY
 -2. Choice of code or hardware key for cashier identification.

Cashier key	Cashier ID	D
Stay down switch	Hardware Key	0
	Code entry	1
Barrel Lock key	Hardware Key	4
	Code entry	5

MRS = 0000

<JOB # 911>
 Key operation



- A. -Choice of fractional rounding.

Rounding	A
Round off	0
Round up	1
Round down	2

B. -Always 0

C. -Always 0

- D. -1. Choice of Slip print format.
 2. Choice of slip print method.

Slip format	Slip method	D
Full detail format	Buffered	0
	Real time	1
Simplified format	Buffered	4
	Real time	5

SLIP detail format

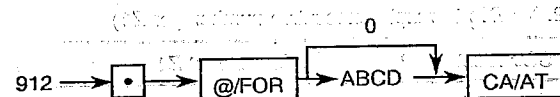
01/01/00 12:17AM 000#0009	A
DPT.01	\$20.00
DPT.03	\$3.00
DPT.07	\$6.00
DPT.17	\$5.00
DPT.20	\$6.00
DPT.09	\$5.00
CASH	\$45.00

Simplified format

01/01/00 12:18AM 000#0011	A
CASH	\$45.00

MRS = 0001

<JOB # 912>
 Key operation



- A. -Choice of date format

Date format	A
Month/day/year	0
Day/month/year	1
Year/month/day	2

- B. -1. Choice of receipt on/off switch active/inactive
 -2. Choice of calendar timer display type 24 hours/12 hours

Receipt on/off SW	Time display	B
Valid	12 hours	0
	24 hours	1
Invalid	12 hours	2
	24 hours	3

- C. -1. Choice of RECEIPT HEADER LINE FORMAT
 -2. Choice of specific key/any key for footer print control.

header line format	Footer print control	D
normal	Any key	0
	Specific key	1
Double size	Any key	2
	Specific key	3
2 lines	Any key	4
	Specific key	5

D. -1. Choice of validation paper sense enable or disable*

-2. LOGO MESSAGE CONTROL 0 : 3 LINE

- 1 : STAMP ONLY
2 : LOGO(FOOTER)
3 : 6 LINES

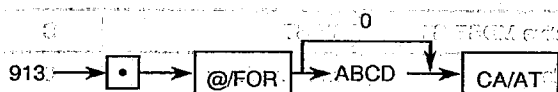
VP paper sense	Logo message format	D
Disable	3 LINES	0
	Stamp only	1
	Logo/footer	2
	6 lines	3
Enable	3 lines	4
	Stamp only	5
	Logo/footer	6
	6 lines	7

*NOTE) When slip printer is connected, the paper is sensed always.

MRS=0001

<JOB # 913>

Key operation



A. -1. Choice of tax print when TAXBL ST=0

2. Validation print format (1) or (2)

Format(1) : Serial NO, machine NO, cashier name, cashier code, and amount are printed.

Format(2) : Date, time, and amount are printed.

3. Choice of total amount only/tendered amount for total validation print

Tax print	VP format	Total VP	A
NO	Date/time	Tendered amount	0
		Total amount	1
	M-No/C-No	Tendered amount	2
		Total amount	3
YES	Date/time	Tendered amount	4
		Total amount	5
	M-No/C-No	Tendered amount	6
		Total amount	7

B. -1. Choice of subtotal print

2. Choice of MDSE ST print

Subtotal print	MDSE ST print	B
Skip*	Skip*	1
	Print	3
Print	Skip	5
	Print	7

Note*: Not printed upon depression of the SBTL or MDSE ST key in the skip mode, but they are displayed.

C. -1. Enable/disable of the [CL] key to clear journal paper near end sensor check error.

2. Choice of continuous beep/2-second beep on error

3. Choice of key buffer clear at the termination of a transaction.

Near end clear	Beep	Key buffer clear	C
Enable	Continuous	Cleared	0
		Not cleared	1
	2-second off	Cleared	2
		Not cleared	3
Disable	Continuous	Cleared	4
		Not cleared	5
	2-second off	Cleared	6
		Not cleared	7

D. -1. Noncompulsory/compulsory registration with drawer closed

2. Misoperation error

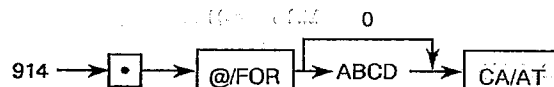
3. Choice of key catch tone generation

Drawer closed	Error action	Catch tone	D
Noncompulsory	All lock	Yes	0
		No	1
	lock and one shot	Yes	2
		No	3
Compulsory	All lock	Yes	4
		No	5
	lock and one shot	Yes	6
		No	7

MRS=0124

<JOB # 914>

Key operation



A. -1. Choice of receipt issuance at no sale

Enable/disable no sale

Enable/disable tax deletion

No sale receipt	No sale operation	Tax deletion	A
Yes	Enable	Disable	0
		Enable	1
	Disable	Disable	2
		Enable	3
No	Enable	Disable	4
		Enable	5
	Disable	Disable	6
		Enable	7

- B. -1. Non-add entry only when compulsory/any time
 2. Non compulsory/compulsory entry of a non-add entry at the beginning of transaction
 3. Enable/disable no sale(change registration) after a non-add entry

Non-add entry	Non-add before	No sale after a non-add entry	B
Enable at any time	Non compulsory	Enable	0
		Disable	1
	Compulsory	Enable	2
		Disable	3
Only when compulsory	Non compulsory	Enable	4
		Disable	5
	Compulsory	Enable	6
		Disable	7

- C. -1. Compulsory/non compulsory non-add entry for PLU and DEPT only
 -2. Choice of number of digits for non-add (4/8/12/16 digits)

Non-add item entry	Non-add digits	C
Non compulsory	16 digits	0
	12 digits	1
	8 digits	2
	4 digits	3
Compulsory	16 digits	4
	12 digits	5
	8 digits	6
	4 digits	7

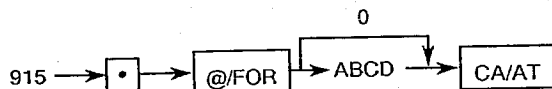
- D. -Enable/disable manual TAX

Manual TAX entry	D
Enable	0
Disable	4

MRS = 0100

<JOB # 915>

Key operation



- A. -Amount leading symbol

Amount leading symbol	A
\$	0
*	2

- B. -Always 0

- C. -1. Choice of paper near end check of journal.
 2. Choice of discount \$/% number limit per transaction.
 3. Choice of direct/tendering mode for received on account.

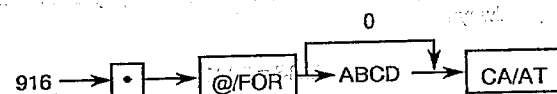
Paper NE check	ST discount \$/%	RA	A
YES	Any time	Tendering	0
		Direct	1
	Single time only	Tendering	2
		Direct	3
NO	Any time	Tendering	4
		Direct	5
	Single time only	Tendering	6
		Direct	7

- D. -Always 0

MRS = 0060

<JOB # 916>

Key operation



- A B. -Always 0, 7

- C. -1. Disable/enable negative MDSE ST.

2. Compulsory/non compulsory TRY ST

Negative MDSE ST	TRY ST	C
Enable	Non compulsory	0
	Compulsory	1
Disable	Non compulsory	4
	Compulsory	5

(only compulsory after first TRY ST)

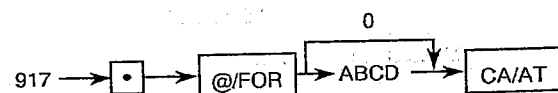
- D. -TAX calculation at TRY ST

TAX calculation at TRY ST	D
No	0
Yes	4

MRS = 0700

<JOB # 917>

Key operation



- A. -1. Print or skip print of COUPON PLU in X/Z REPORT
 2. Print or skip print of NET SALES SUBTOTAL in X/Z REPORT
 3. Print or skip print of CHANGE TTL in X/Z REPORT

Coupon PLU	Net sales subtotal	Check change total	V/A
Print	Print	Print	0
		Skip	1
	Skip	Print	2
		Skip	3
Skip	Print	Print	4
		Skip	5
	Skip	Print	6
		Skip	7

- B. -1. Print or skip print of TAXABLE 1 SUBTOTAL in X/Z REPORT
 2. Print or skip print of GROSS TX1 & REFUND TX1 TTLS in X/Z REPORT
 3. Print or skip print of NET TX1 TTL in X/Z REPORT

Taxable 1 subtotal	Gross TX1 & Refund TX1 totals	Net TX1 total	B
Print	Print	Print	0
		Skip	1
	Skip	Print	2
		Skip	3
Skip	Print	Print	4
		Skip	5
	Skip	Print	6
		Skip	7

- C. -1. Print or skip print of TAXABLE 2 SUBTOTAL in X/Z REPORT
 2. Print or skip print of GROSS TX2 TTLS in X/Z REPORT
 3. Print or skip print of NET TX2 TTL in X/Z REPORT

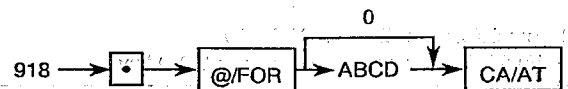
Taxable 2 subtotal	Gross TX2 & Refund TX2 totals	Net TX2 total	C
Print	Print	Print	0
		Skip	1
	Skip	Print	2
		Skip	3
Skip	Print	Print	4
		Skip	5
	Skip	Print	6
		Skip	7

- D. -1. Print or skip print of TOTAL TAX AMOUNT in X/Z REPORT
 2. Print or skip print of GROSS MANUAL TAX in X/Z REPORT
 3. Print or skip print of NET MANUAL MTAX TTL in X/Z REPORT

Total TAX amount	Gross TAX & Refund TAX totals	Net manual TAX total	D
Print	Print	Print	0
		Skip	1
	Skip	Print	2
		Skip	3
Skip	Print	Print	4
		Skip	5
	Skip	Print	6
		Skip	7

MRS = 4003

<JOB # 918>
 Key operation



- A. -1. Cashier detail (by denomination)/simplified report format (media totals)
 2. DEPT and PLU TEXT 12 characters/8 characters

Cashier report	DEPT/PLU TEXT	A
Simplified format	8 characters	0
	12 characters	1
Full detail format	8 characters	4
	12 characters	5

- B. -1. Choice of TIP method.
 2. Printing of 0-amount PLU on the Kitchen printer RED/BLACK.
 3. Choice of print or not TIP total in server report.

TIP method	Printing of 0-amount PLU on K. P.	TIP total	B
Individual	BLACK	Skip	0
		Print	1
	RED	Skip	2
		Print	3
Pool	BLACK	Skip	4
		Print	5
	RED	Skip	6
		Print	7

- C. -1. Choice of chit receipt
 -2. Choice of editing print or not at kitchen printer
 -3. Choice of double character or normal printing of DEPT/PLU text at kitchen printer.

Chit receipt	Kitchen print	DEPT/PLU TEXT on K.P.	C
No	Edit	Normal	0
		D.C.	1
	No.	Normal	2
		D.C.	3
Yes	Edit	Normal	4
		D.C.	5
	No.	Normal	6
		D.C.	7

D.C. = Double size character

- D. -1. Enable/Disable SUBTOTAL VOID
2. Enable/Disable past item Void with VOID key

Subtotal void	Past item void with void key	D
Enable	Enable	0
	Disable	1
Disable	Enable	2
	Disable	3

MRS = 4000

<JOB # 919>
Key operation



- A. -1. PBLU method selection.
-2. Choice of print or skip Slip header when re-order
-3. PBLU code entry at re-order compulsory/not.

PBLU	Slip header		A
PB LOOK UP	Print	Non-compulsory	0
		Compulsory	1
	Skip	Non-compulsory	2
		Compulsory	3
Manual PB/CB	Print	Non-compulsory	4
		Compulsory	5
	Skip	Non-compulsory	6
		Compulsory	7

- B. -1. Check/Not to check server handling guest check
2. Check/Not to check C/D at PB, CB entry
3. Choice of manual/auto generation GUEST check number

SERVER No.	Check digits	Guest check No.	B
No-check	No-check	Manual	0
		Auto	1
	Check	Manual	2
		Auto	3
Check	No-check	Manual	4
		Auto	5
	Check	Manual	6
		Auto	7

- C.-1. Slip print compulsory/non compulsory at guest check registration
2. Choice of compulsory/non compulsory PB/CB registration
3. Choice of amount print or skip print when PLU unit price is 0

Slip in Guest	PB/CB	Amount print	A
Non compulsory	Non compulsory	Skip	0
		Print	1
	Compulsory	Skip	2
		Print	3
Compulsory	Non compulsory	Skip	4
		Print	5
	Compulsory	Skip	6
		Print	7

- D. -1. Choice of print or skip print CONVERSION SUBTOTAL
-2. PBLU system selection charge posting balance system/
guest check balance system.

Conversion SBTL	PBLU system	D
Print	Guest check	1
	Charge posting	3
Skip	Guest check	5
	Charge posting	7

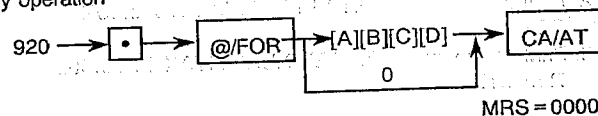
Guest check : Guest check BALANCE SYSTEM
Charge posting : Charge posting BALANCE SYSTEM

MRS = 0001

<JOB# 920> IN-LINE SETTING (1)

More detail of Job# 920~925 and 899, Refer to ER33MA/SL service manual. (00ZER33OPSM2E)

Key operation



MRS = 0000

#920-A : Not used. fixed to 0.

#920-B : Second kitchen printer mode

Second KP	Parameter [B]
Back up	0
Duplicate	2

#920-C : PGM mode can be enable/disable the slave unit in the in-line mode.

Programming by the slave unit	Parameter [C]
Disabled	0
Enabled	1

#920-D : Machine assignment setup (master/slave/stand alone)

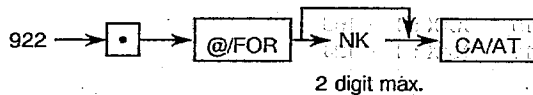
Assignment	Parameter [D]
Standalone	0
Slave	1
Master	2

<JOB# 921> NOT USED

<JOB# 922> IN-LINE SETTING (2)

SRN transmission speed and carrier-off waiting time

"0"

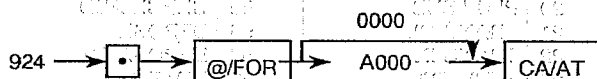


Transmission speed	Carrier-off waiting time (mSec)	Parameter
480K BPS	3.2	1
	6.4	2
	9.6	4
	12.8	0
1M BPS	1.6	9
	3.2	10
	4.8	12
	6.4	8

<JOB# 923> NOT USED

<JOB# 924> IN-LINE SETTING (3)

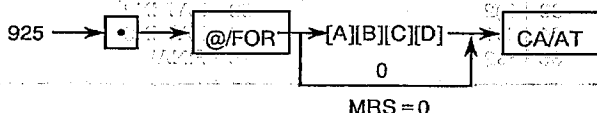
Back up master for guest check Yes / No



Back up master	Parameter [A]
NO	0
YES	1

<JOB# 925> IN-LINE SETTING (4)

Key operation



#925-A : 1. Master consolidation report mode

2. YES/NO to automatically clear individual resetting memory at #71.

3. ENABLE/DISABLE #99 when #71 in not executed.

Consolidation report	Clear save memory at #71	#99 when #71 is not executed	Parameter [A]
*Method 1	To clear	Disable	0
		Enable	1
	To not to clear	Disable	2
		Enable	3
*Method 2	To clear	Disable	4
		Enable	5
	To not to clear	Disable	6
		Enable	7

Method-1 : Resets the current sales along with those already individually reset.

Method-2 : Resets only those already individually reset.

- Entire system general Z-1 (#71) by master
- There are two modes; to reset only those already individually reset or to reset the current sales and those already individually reset
- YES/NO to automatically clear individual resetting memory at system general Z-1 (#71).
- ENABLE/DISABLE to perform #99 (clear individual resetting memory) before executing system general Z-1 (#71).

#925-B : 1. ENABLE/DISABLE General resetting while a slave machine is sign-on.
2. Disable/Enable registration after doing general Z1.
3. Enable/disable individual resetting.

General Z1 at sign-on	Registration after general Z1	Individual reset	Parameter [B]
Disable	Disable	Disable	0
		Enable	1
	Enable	Disable	2
		Enable	3
Enable	Disable	Disable	4
		Enable	5
	Enable	Disable	6
		Enable	7

#925-C : Consolidation report format

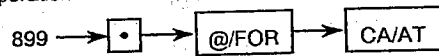
Format	Parameter [C]
Consolidation report and report for each machine	0
Consolidation report only	1
Report for each machine only	2

#925-D : 1. YES/NO to clear the individual resetting memory at open store.
2. Reset at open store.

Clear individual resetting memory	Z in open store	Parameter [D]
To clear at open store	Disable	0
	Enable	1
To not to clear at open store	Disable	2
	Enable	3

<JOB# 899> IN-LINE RAM area clear

Key operation

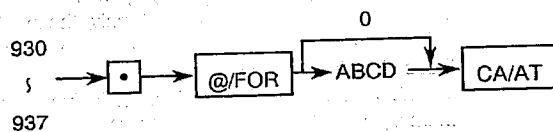


SRV reset must be performed after a #899.

<JOB # 930 - 937>

Key operation

RESET REPORT COUNTER



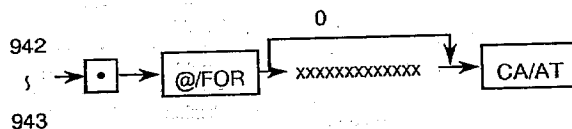
- 930 : Z1 REPORT COUNTER
- 931 : Z2 REPORT COUNTER
- 932 : TAX RESET REPORT COUNTER
- 933 : HOURLY RESET REPORT COUNTER
- 934 : PLU RESET REPORT COUNTER
- 935 : CASHIER RESET REPORT COUNTER
- 936 : BALANCE RESET REPORT COUNTER
- 937 : SERVER RESET REPORT COUNTER

MRS = 0000

<JOB # 942 - 943>

Key operation

GT2, 3



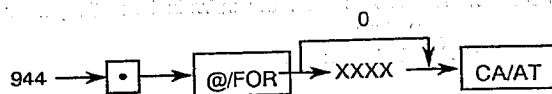
- 942 : GT2 (POSITIVE GT)
- 943 : GT3 (NEGATIVE GT)

Value of GT1 is obtained with the equation below.
Equation: $GT1 = GT2 - GT3$

MRS = 00000000000000

<JOB # 944>

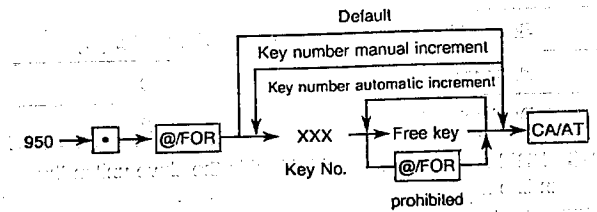
PGM2 MODE SECRET CODE



MRS = 0000

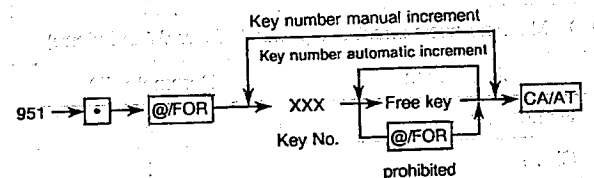
<JOB # 950>

Free key layout (except for department)



<JOB # 951>

Free key layout (department key and direct PLU key)



Sets the keys that are used for the department keys and direct PLU keys.

To assign the key, enter the key number first and then push the key to be assigned for either the department or direct PLU.

ER-3310 XXX : 1 ~ 156

ER-3311 XXX : 1 ~ 124

FUNCTION KEY LIST

NO.	FUNCTION	NO.	FUNCTION
1	0 KEY	36	%3
2	1 KEY	37	%4
3	2 KEY	38	MDSE SBTL
4	3 KEY	39	TRAY TOTAL
5	4 KEY	40	TAX
6	5 KEY	41	CHECK
7	6 KEY	42	CH1
8	7 KEY	43	CH2
9	8 KEY	44	CH3
10	9 KEY	45	CH4
11	00 KEY	46	CH5
12		47	FS TEND
13	•	48	PBAL
14	CL	49	CBAL
15	@ / FOR	50	NS
16	# / SBTL	51	CONVERSION
17	CA / AT	52	RA
18	CASH2	53	PO
19	SCALE	54	SERVICE
20	PLU / SUB	55	CHECK ADD
21	TRANS OUT	56	DEPOSIT
22	TRANS IN	57	DEPOSIT RF
23	SERVER#	58	LEVEL1
24	CASHIER#	59	LEVEL2
25	MGR#	60	LEVEL3
26	TAX1 SHIFT	61	COVER COUNT
27	TAX2 SHIFT	62	TABLE #
28	FS SHIFT	63	TIP
29	REFUND	64	PRINT
30	RETURN	65	RCPT
31	VOID	66	SLIP
32	(-)1	67	EAT IN1
33	(-)2	68	EAT IN2
34	%1	69	EAT IN3
35	%2	70	FINAL

Key position table (ER-3310)

↑ RECEIPT	↑ JOURNAL	28	38	48	58	68	78	88	98	108	118	128	138	148	158
9	18	27	37	47	57	67	77	87	97	107	117	127	137	147	157
8	17	26	36	46	56	66	76	86	96	106	116	126	136	146	156
7	16	25	35	45	55	65	75	85	95	105	115	125	135	145	155
6	15	24	34	44	54	64	74	84	94	104	114	124	134	144	154
5	14	23	33	43	53	63	73	83	93	103	113	123	133	143	153
4	13	22	32	42	52	62	72	82	92	102	112	122	132	142	152
3	12	21	31	41	51	61	71	81	91	101	111	121	131	141	151
2	11	20	30	40	50	60	70	80	90	100	110	120	130	140	150
1	10	19	29	39	49	59	69	79	89	99	109	119	129	139	149

Key position table (ER-3311)

↑ Receipt	↑ Journal	20	28	36	44	52	60	68	76	84	92	100	108	116	124
↑ Receipt	↑ Journal	19	27	35	43	51	59	67	75	83	91	99	107	115	123
6	12	18	26	34	42	50	58	66	74	82	90	98	106	114	122
5	11	17	25	33	41	49	57	65	73	81	89	97	105	113	121
4	10	16	24	32	40	48	56	64	72	80	88	96	104	112	120
3	9	15	23	31	39	47	55	63	71	79	87	95	103	111	119
2	8	14	22	30	38	46	54	62	70	78	86	94	102	110	118
1	7	13	21	29	37	45	53	61	69	77	85	93	101	109	117

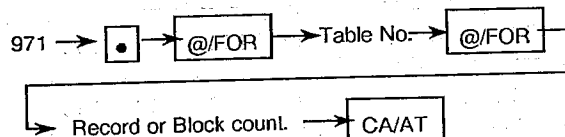
File creation

970 → @/FOR → CA/AT

One of the following key operations is required to create a file and to read the information of files.

- | | |
|-------------------|---------------|
| (1) File creation | Job code #971 |
| (2) File reading | Job code #970 |

(1) File creation
Key operation



When the above key entry is entered, the file of the specified table number is created.

For table

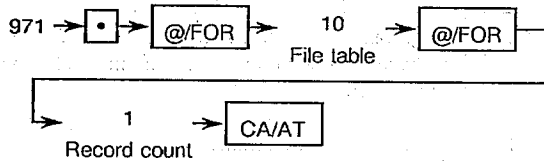
File name	Table NO.	Record count	Block count	Record length	Memory size default/max. [byte]
Department	①	22 (0-99)	1	40	880/3960
Transaction	*2	73	1	34	2482
Server TRANS	③	12	14 (0-99)	11	1380/9540
Cashier TRANS	④	20	4 (0-99)	11	700/15900
Hourly	*5	48	1	9	432
Server PRESET	6	14 (0-99)	1	17	238/1783
Cashier PRESET	7	4 (0-99)	1	14	56/1386
PLU	⑧	80 (0-)	1	43	3440/
REG bufler	*9	73	1	64	4672
Term DEPT	⑩	Table NO.1	1	10	0/990
Term TRANS	*11	73	1	11	0/803
Term server	12	12	Table NO.3	11	0/9540
Term cashier	13	20	Table NO.4	11	0/15900
Term hourly	*14	48	1	9	0/432
PBLU	⑮	100 (0-)	1	58	5800/
Manager	*16	99	1	3	297
Kitchen printer	*17	9	1	11	99
(FOR In-line)					
Server temporary	*18	12	1	11	0/132
DEPT. consolidate	19	Table NO.1	1	10	0/990
TRANS. consolidate	*20	73	1	11	0/803
Hourly consolidate	*21	48	1	9	0/432
PLU consolidate	22	Table NO.8	1	43	0/
DEPT. receive	23	table NO.1	1	10	0/990
TRANS receive	*24	73	1	11	0/803
Hourly receive	*25	48	1	9	0/432
PLU receive	26	Table NO.8	1	43	0
DEPT. IRM	27	Table NO.1	1	10	0/990
TRANS. IRM	*28	73	1	11	0/803
Hourly IRM	*29	48	1	9	0/432
PLU IRM	30	Table NO.8	1	15	0/
Cashier receive	*31	20	1	11	0/220

NOTE-4

NOTE-1: ○ : Record count or block count are presettable by job number 971.

*: Record count or block count are not presettable. "Table NO. n" means that the count data is subject to the setting of the specified file table number. That is, table number 1, 3, 4, and 8 will automatically change corresponding preset, term and in-line tables.

NOTE-2: In case creating term files, the following key entry is required.



In case of deleting Term file, enter "0" as record count. Table numbers 11, 12, 13 and 14 are created when table number 10 is added with above key entry.

NOTE-3: Table number 18 through 31 are created with JOB number 899. (In-line RAM area clear job)

NOTE-4: IRM = individual Resetting Memory

File reading report

Stand alone machine at MRS.

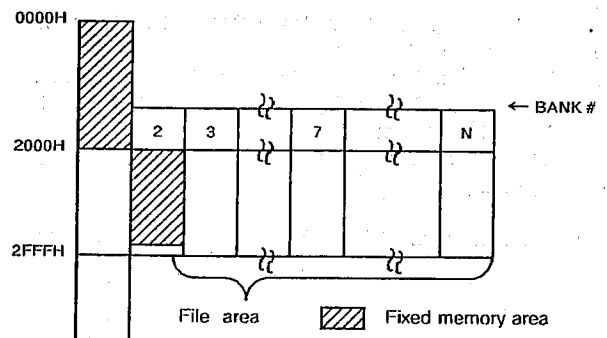
#970		
%01%	00022	/00022
%02%	00073	/00073
%03%	00012	14/00012
%04%	00020	04/00020
%05%	00048	/00048
%06%	00014	/00014
%07%	00004	/00004
%08%	00080	/00019
%09%	00073	/00073
%15%	00100	/00000
%16%	00099	/00099
%17%	00009	/00009
BANK 07 2FFA		

→ Table NO./Record count/Used record count

→ Table NO./Record count/Block count/Used record count

→ Bank and address number of occupied memory

Memory layout



There are 2 parts in memory, fixed memory area and file area. The fixed memory area is 12286 bytes of 0000H ~ 1FFFH of the common RAM and 2000H ~ 2FF5H of the bank 2 RAM.

(In the In-line system, the fixed memory area is 17813 bytes)

File area layout is variable with job number 971 operation and stored in the bank RAM.

Memory size calculation

(1) Calculating file size

(Record length) × (Record count) × (Block count) [bytes]

EX: To create 30 records (30 departments)

Department at record length = 40 bytes (from file table) record count = 30 and block count = 1 :

Memory requirement for department = $40 \times 30 \times 1 = 1200$ bytes

(2) calculating total memory size

(Sum of each files size) + (Fixed memory size) [bytes]

Fixed memory size : Standalone/on-line mode = 12286 bytes

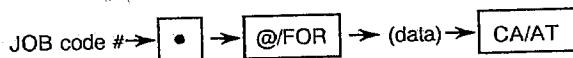
in-line mode = 17813 bytes

8. PGM1,PGM2(PROGRAM)MODES

There are two programming modes PGM1 and PGM2, each one assigned with a set function.

In the PGM1 mode, it is possible to set JOB#100 thru #199 (100 series). In the PGM2 mode, it is possible to set JOB#200 thru #299 (200 series), in addition to the PGM1 mode (100 series). Descriptions will be provided later in the section discussing details.

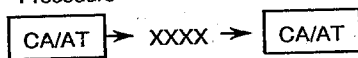
Basic programming format for PGM1 and PGM2 modes areas follows:



Secret code entry

To start the operation of ECR in PGM2, PGM1, X1, Z1/X2/Z2 mode, the secret code which has been preset for the each mode should be entered by the following procedure.

Procedure

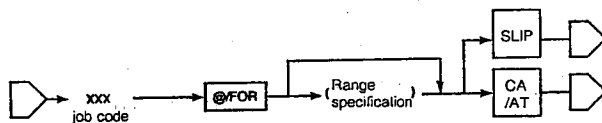


Secret code

The secret code for PGM1, X1, Z1/X2/Z2 mode is preset in the PGM2 mode (JOB#280) and the code for PGM2 mode is preset in the SRV mode (JOB#944). Once the secret code has been entered, re-entry is not necessary to continue the operation in the same mode. If the secret number has been preset as "0", no secret code entry is necessary.

8-1 printing of program reports

Key entry sequence



List of program reports

Job code	Report name
110*	Department programming
215	promotion PLU code programming
219	Department/PLU code programming
120*	PLU/subdepartment programming
227	PLU level start number programming
130	Programming of % rates and other functions (including the programming for the method of each transaction)
131	Other function programming 2
140	Server number list
240	Tax table programming
150	Cashier programming
259	Manager number programming
207	Kitchen printer programming
295	PBLU code programming

The reports on those programming jobs whose job codes are between 100 and 199 can be printed in both the PGM1 and PGM2 modes.

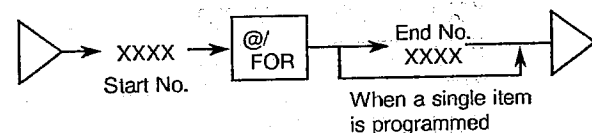
The reports on those programming jobs whose job codes are between 200 and 299 can be printed in the PGM2 mode.

★

Range specification for program reports

Those program reports asterisked in the above list requires range specification. If no range is specified, an error occurs whose the CA/AT Key is pressed.

Range specification can be accomplished by using the following procedure.



When a single item is programmed

Pressing the CA/AT key prints a report on the receipt and journal.

Pressing the SLIP Key in place of the CA/AT Key causes the slip printer to print a report. (When the SLIP Key is pressed, a report is printed on the slip and journal, not on the receipt and journal.)

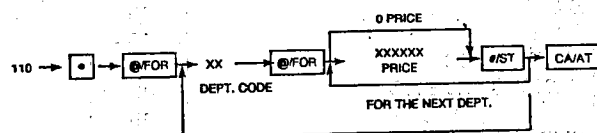
8-2 JOB CODE LIST

SKILL/ASCP 0-0

JOB NO	PROGRAMMING	Page	JOB NO	PROGRAMMING	Page
110	DEPT. PRICE	38	250	DATE	45
210	DEPT. FUNCTION	38	251	TIME	45
211	DEPT. MODIFY	38	252	MACHINE NO.	45
212	AMOUNT LIMIT FOR DEPTS	38	253	CONSECUTIVE NO.	45
213	DEPT. REPORT FORMAT	38	254	LOGO MESSAGE	45
214	DEPT. TEXT	38	255	SLIP, VP MISC	45
215	PROMOTION CODE	39	256	OPTIONAL FEATURE	46
218	PRINT STATION	39	257	SENTINEL AMOUNT	46
219	DIRECT DEPT. KEY	39	158	SCALE TABLE PROGRAMMING	46
120	PLU PRICE	39	260	MEDIA KEY PROGRAMMING	46
121	PLU ASSOCIATED-DEPT	39	261	MEDIA KEY HALO -1	47
122	PLU INVENTORY	39	262	MEDIA KEY HALO -2	47
220	PLU MISC	40	263	MEDIA KEY REPORT FORMAT	47
221	PLU MODIFY	40			
224	PLU TEXT	40	270	TILL TIMER	47
225	BOTTLE DEPOSIT	40	274	CHECK VP MESSAGE	47
226	PLU GROUP	40			
227	PLU LEVEL START CODE	40			
228	PRINT STATION	41			
229	DIRECT PLU KEY	41			
130	RATE	41	280-282	SECRET CODE	47
230	MISC KEY PROGRAMMING 1	41			
231	MISC KEY PROGRAMMING 2	41	286	STACK REPORT	48
232	MISC KEY AMOUNT LIMIT	42			
234	LABEL	42	295	GUEST CHECK # CREATION	48
235	MISC KEY PROGRAMMING 3	43			
236	MISC KEY PROGRAMMING 4	43			
237	CHECK, CHARGE PRINT STATION	43	207	KITCHEN PRINTER PROGRAMMING	48
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8-3 PROGRAMMING

[JOB #110] PROGRAMMING OF DEPT. PRICE



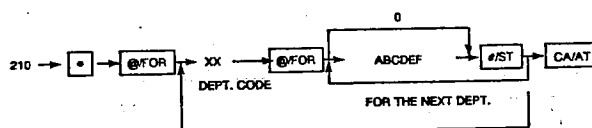
XXXXXX: 0~999999

Preset price is max. 6 digits.

Price can be programmed for each dept. If this programming is performed, the ECR is automatically programmed to allow preset price entry even when it has not been programmed to allow preset price entry in dept. function programming (JOB #210).

MRS=0.00

[JOB#210] DEPT. FUNCTION PROGRAMMING

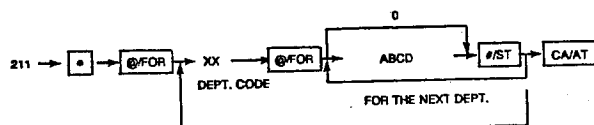


This programming is intended to decide whether or not to inhibit depts, to select preset or keyboarded price, to decide whether or not to finalize the transaction with dept. Key, to assign hash and promotion depts., and to select whether or not to enforce validation printing.

- | | |
|---|-------|
| A: HASH/NORMAL | = 1/0 |
| B: PROMOTION/NORMAL | = 1/0 |
| C: VALIDATION COMPULSORY/NON-COMPULSORY | = 1/0 |
| D: SCALE ENTRY ALLOW / INHIBITED | = 1/0 |
| E: SINGLE ITEM FINALIZE | = 2 |
| SINGLE ITEM CASH SALE | = 1 |
| NORMAL | = 0 |
| F: OPEN & PRESET | = 3 |
| PRESET | = 2 |
| OPEN | = 1 |
| INHIBIT | = 0 |

MRS = 000001

[JOB#211] DEPT. MODIFY PROGRAMMING



This programming is intended to decide the sign, tax status, and food stamp status.

A: SIGN - =1
+ =0

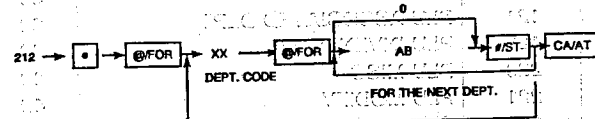
B: FOOD STAMPABLE =1
NON-FOOD =0

C: TAX 2 SORT =1
NON-SORT =0

D: TAX 1 SORT =1
NON-SORT =0

MRS = 0000

[JOB#212] PROGRAMMING OF THE AMOUNT LIMIT FOR DEPTS.



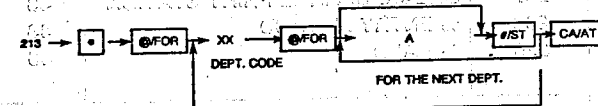
A: MAX DIGIT FIGURE = 1~9

B: NO. OF ZEROS FOLLOWING THE MAX. = 0~7

MRS = 17

"17" stands for 10000000. Up to 9999999 can be entered as amount.

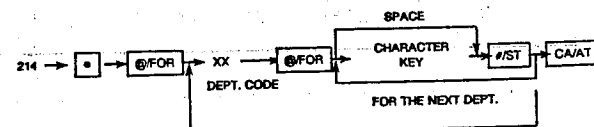
[JOB#213] PROGRAMMING OF DEPT. PRINT FORMAT IN FULL ITEM REPORT



- | | |
|------------------------------------|-----|
| A: NORMAL PRINT & SPECIAL ST PRINT | = 3 |
| NORMAL PRINT & ADDITION TO SPECIAL | |
| SUBTOTAL | = 2 |
| NORMAL PRINT & 1. LINE FEED | = 1 |
| NORMAL PRINT | = 0 |

MRS = 0

[JOB#214] DEPT. TEXT PROGRAMMING

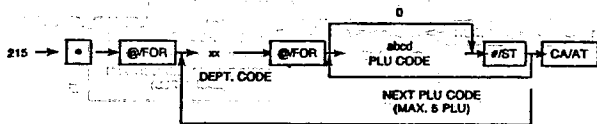


Characters can be entered by using alphabetic keys or numeric keys.

Please refer to section 8-4 character assignment method. (Page 48)

MRS = DPT. X X

[JOB#215]
PROGRAMMING OF PROMOTION CODES



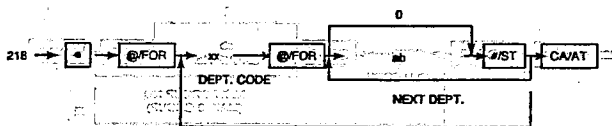
Up to 5 PLUs can be programmed.

※If the number of linked PLU is less than 5, the #/ST key must be depressed once more before another dept. Code is entered.

(---) abcd → #/ST → #/ST → xx → @/FOR → abcd
PLU CODE DEPT. CODE PLU CODE

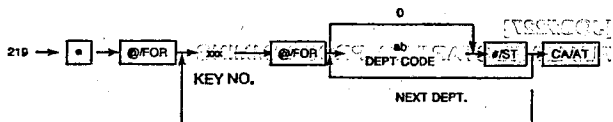
MRS = 0000

[JOB#218]
PRINT STATION



ab : RECEIPT/KITCHEN PRINTER = 00 (NO OUTPUT)
01~09 (KP PRINTER)
10 (RECEIPT)

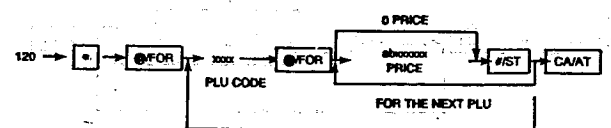
[JOB#219]
DEPARTMENT CODE DEFINITION FOR DIRECT PLU KEYS



Dept. Code is assigned to the key no. Which has been programmed in job# 951 programming.

ab : DEPT CODE = 1~99

[JOB#120]
PRICE PROGRAMMING FOR PLU'S



ab : SPLIT PRICING BASE Q TY = 0~99
xxxxxx : PRICE = 0~999999

PLU code is max. 4 digits.

Price programming for a PLU requires that the PLU has been created in JOB # 121.

MRS = 0.00

[JOB#121]
PROGRAMMING OF DEPARTMENTS TO BE ASSOCIATED WITH PLU'S

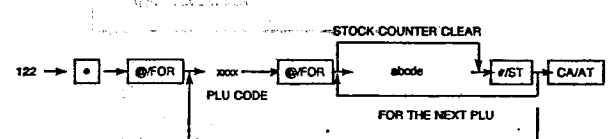


a : DELETE/PLU/SUB-DEPT/INHIBIT = 3/2/1/0
bc : DEPT. CODE = 0~99

"INHIBIT" means that the PLU code and the contents of programming remain valid, but that any entry cannot be made for the PLU.

MRS = 201

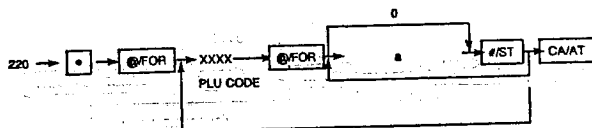
[JOB#122]
PROGRAMMING OF PLU INVENTORY



abcde : stock value = 0~999999
the stock value is max. 5 digits. The stock value entered is added to the PLU stock counter.

MRS = 0.00

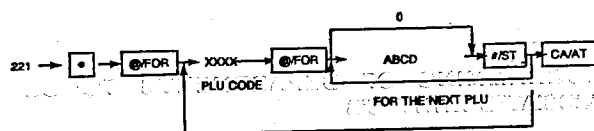
[JOB#220]
PLU MISC PROGRAMMING



a : SCALE COMPULSORY/ALLOW
/INHIBITED = 2/1/0

MRS = 0

[JOB#221]
PLU MODIFY PROGRAMMING

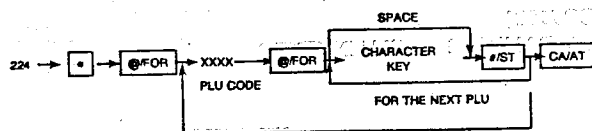


This programming is intended to decide the sign, tax status,
and food stamp status for PLU's.

A: SIGN - =1
+ =0
B: FOOD STAMPABLE =1
NON-FOOD =0
C: TAX 2 SORT =1
NON-SORT =0
D: TAX 1 SORT =1
NON-SORT =0

NRS = 0000

[JOB#224]
PLU TEXT PROGRAMMING

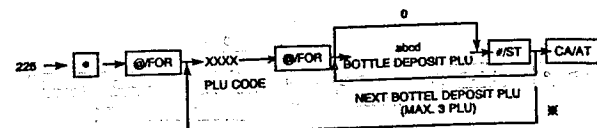


Characters can be entered by using alphabetic keys or
numeric keys.
Please refer to section 8-4 character assignment method.
(Page 48)

UP TO 8 (OR 12) CHARACTERS CAN BE PROGRAMMED.

MRS = PLU-xxxx

[JOB#225]
PROGRAMMING OF BOTTLE DEPOSIT (PLU LINKING)



abcd: PLU CODE = 1~9999
CLEAR = 0

Up to 3 PLUs can be programmed.

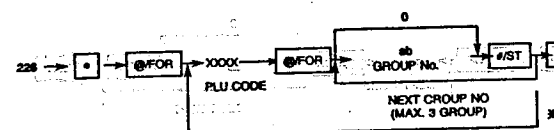
※If the number of bottle deposit PLU is less than 3, #/ST key must be depressed once more before another PLU code is entered.

(--->abcd->#/ST->#/ST->xxxx->@/FOR->abcd->...)

BOTTLE DEPOSIT PLU PLU CODE BOTTLE DEPOSIT PLU

MRS = 0000

[JOB#226]
PLU GROUP PROGRAMMING



ab: GROUP NO. = 1~15

Up to 3 groups can be programmed.

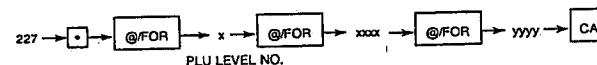
※If the number of group is less than 3, #/st key must be depressed once more before another PLU code is entered.

(--->ab->#/ST->#/ST->xxxx->@/FOR->ab->...)

Group NO. PLU CODE Group NO.

MRS = 00

[JOB#227]
PLU LEVEL START NO. PROGRAMMING

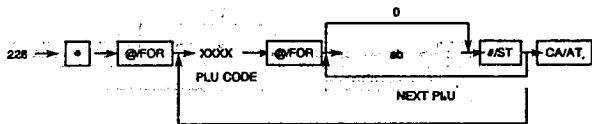


NOTE: This programming assigns ranges of PLUs to each level.

x : PLU LEVEL NO. = 1~3
xxxx : PLU START code.
yyyy : PLU END code

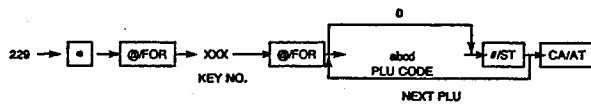
MRS = LEVEL 1:1~80, LEVEL 2:81~160
LEVEL 3:161~240

[JOB#228]
PRINT STATION



ab: RECEIPT/KITCHEN PRINTER = 00 (NO OUTPUT)
01~09 (KP PRINTER)
10 (RECEIPT)

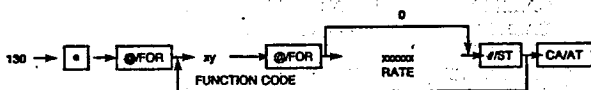
[JOB#229]
PLU CODE DEFINITION FOR DIRECT PLU KEYS



PLU code is assigned to the key no. Which has been programmed in job#951 programming.

abcd: PLU CODE = 1~9999

[JOB#130]
RATE PROGRAMMING



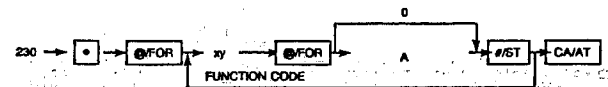
THIS PROGRAMMING IS INTENDED TO PRESET % RATE AND CONVERSION RATE.

xy: %1 = 7
%2 = 8
%3 = 9
%4 = 10
CONVERSION = 56
TIP = 70

RATE: 0.00~99.99 (%1~%4, TIP)
0.000~99999.999 (CONVERSION)
(PROGRAMMING OF 0 INHIBITS THE ENTRY OF % AND CONVERSION RATES.)

MRS = 0

[JOB#230]
MISC KEY PROGRAMMING - 1



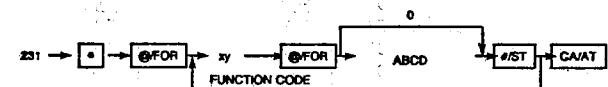
This programming is intended to select whether or not to enforce various functions.

xy: REFUND = 32
RA = 51
PO = 52
TIP = 69
CASH CHECK OPERATION = 53

A: VALIDATION COMPULSORY (RA, PO, TIP, REFUND)/ NON ADD CODE ENTRY COMPULSORY (CASH CHECK)
NONCOMPULSORY = 0
COMPULSORY = 1

MRS = 0

[JOB#231]
MISC KEY PROGRAMMING - 2



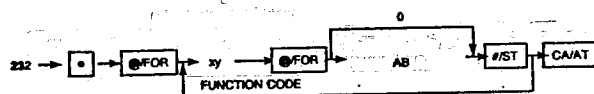
This programming is intended to decide the sign, tax status, and food stamp status for misc keys

xy: %1 = 7
%2 = 8
%3 = 9
%4 = 10
(-)1 = 5
(-)2 = 6

A: SIGN - = 1
+ = 0
B: FOOD STAMPABLE = 1
NON-FOOD = 0
C: TAX 2 SORT = 1
NON-SORT = 0
D: TAX 1 SORT = 1
NON-SORT = 0

MRS = 1000

[JOB#232]
PROGRAMMING OF THE AMOUNT LIMIT FOR MISC
KEYS



xy: (-)1 = 5
 (-)2 = 6
 TAX = 22
 RA = 51
 PO = 52
 TIP = 70

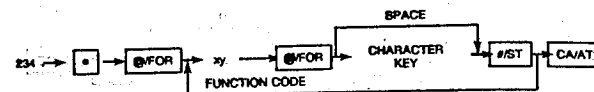
A: MAX DIGIT FIGURE = 1~9
 B: NO. OF ZEROS FOLLOWING THE MAX. DIGIT FIGURE = 0~7

MRS = 17, 18 (FOR RA and PO)

FUNCTION LIST

NO.	FUNCTION	DEFAULT	NO.	FUNCTION	DEFAULT
1	+DEPT TTL	*DEPT TL	51	RA	***RA
2	-DEPT-TTL	DEPT (-)	52	PO	***PO
3	HASH +DEPT	*HASH TL	53	CASH/CHECK	CA/CHK
4	HASH-DEPT	HASH (-)	54	CHECK CHANGE	CHK/CG
5	(-)1	(-) 1	55	FS CHANGE	FS/CG
6	(-)2	(-) 2	56	CONVERSION	CONV
7	%1	%1	57	FS IN DRAWER	FS/ID
8	%2	%2	58	CHARGE1	CHARGE1
9	%3	%3	59	CHARGE2	CHARGE2
10	%4	%4	60	CHARGE3	CHARGE3
11	NET1	NET1	61	CHARGE4	CHARGE4
12	TAXABLE1 ST	TAX1 ST	62	CHARGE5	CHARGE5
13	GROSS TAX1	GRS TAX1	63	CHECK	CHECK
14	REFUND TAX1	RFD TAX1	64	CA/CK ID	CA + CK ID
15	NET TAX1	TAX1	65	CASH ID	***CID
16	TAXABLE2 ST	TAX2 ST	66	DEPOSIT	DEPOSIT
17	GROSS TAX2	GRS TAX2	67	DEPOSIT RF	DEPO RF
18	REFUND TAX2	RFD TAX2	68	SERVICE	***SERV
19	NET TAX2	TAX2	69	TIP PAID	TIP PAID
20	GROSS M-TAX	GRS MTAX	70	TIP IN	TIP IN
21	REFUND M-TAX	RFD MTAX	71	EAT IN1	EAT IN 1
22	NET M-TAX	M-TAX	72	EAT IN2	EAT IN 2
23	FS1 FORGIVE	FS TAX1	73	EAT IN3	EAT IN 3
24	FS2 FORGIVE	FS TAX2	74	PB	***PBAL
25	TOTAL TAX	*TTL TAX	75	CB	***CBAL
26	NET2	NET2	76	SUBTOTAL	SUBTOTAL
27	COUPON PLU	CP PLU	77	MDSE SBTL	MDSE ST
28	VOID	VOID	78	TOTAL	***TOTAL
29	SBTL VD	SBTL VD	79	CHANGE	CHANGE
30	MANAGER VOID	MGR VOID	80	DUE	DUE
31	VOID TRANS	VOID	81	TRY TOTAL	TRAY TL
32	REFUND	REFUND	82	FS SBTL	FS ST
33	RETURN	RETURN	83	FS TEND	FS TEND
34	HASH VOID	HASH VD	84	FS CHANGE	FS CG
35	HASH REFUND	HASH RF	85	TAX12 ST	TAX12ST
36	HASH RETURN	HASH RT	86	FINAL	***FINAL
37	NOSALE	NOSALE	87	SCALE	WEIGHT
38	VP	VPCNT	88	VOID	VOID
39	SLIP	SLIP CNT	89	COPY	COPY
40	TRY ST COUNT	TRAY CNT	90	TRANS OUT	TRAN. OUT
41	DRAWER COUNT	DRW CNT	91	TRANS IN	TRAN.IN
42	PBAL COUNT	PBAL CNT	92	BALANCE	***BAL
43	COVER COUNT	COVER CT	93		
44	TRANS OUT	TRNS OUT	94		
45	TRANS IN	TRNS IN	95		
46	CUSTOMER	CUSTOMER	96		
47	SALES	NET3	97		
48	CASH	CASH	98		
49	CASH2	CASH2	99		
50	FS SALE	FSSALE	100		

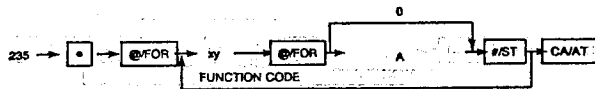
[JOB#234]
TEXT PROGRAMMING FOR MISC KEYS



xy: FUNCTION CODE

Characters can be entered by using alphabetic keys or numeric keys.
 Please refer to section 8-4 character assignment method.
 (Page 48)

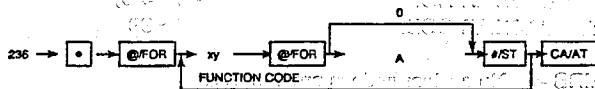
[JOB#235]
MISC KEY PROGRAMMING - 3



xy: %1 = 7
 %2 = 8
 %3 = 9
 %4 = 10
 A: ITEM % = 1
 SBTL % = 0

MRS = 0

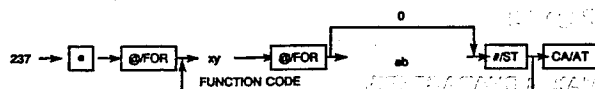
[JOB#236]
MISC KEY PROGRAMMING - 4



xy: (-)1 = 5
 (-)2 = 6
 A: STORE (-) = 1
 VENDER (-) = 0

MRS = 0

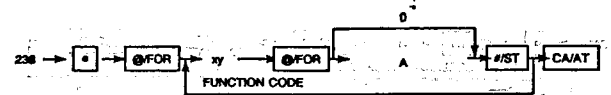
[JOB#237]
CHECK, CHARGE PRINT STATION



xy: CHK = 63
 CH1 = 58
 CH2 = 59
 CH3 = 60
 CH4 = 61
 CH5 = 62

ab: RECEIPT/KITCHEN PRINTER = 00 (NO OUTPUT)
 01~09 (KP PRINTER)
 10 (RECEIPT)

[JOB#238]
PROGRAMMING OF THE % ENTRY METHOD



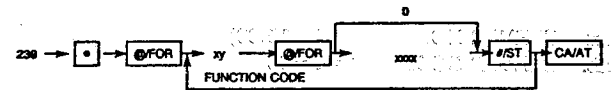
THIS PROGRAMMING IS INTENDED TO DECIDE THE % ENTRY METHOD.

xy: %1 = 7
 %2 = 8
 %3 = 9
 %4 = 10

A: OPEN & PRESET = 3
 PRESET = 2
 OPEN = 1
 INHIBIT = 0

MRS = 1

[JOB#239]
% HALO



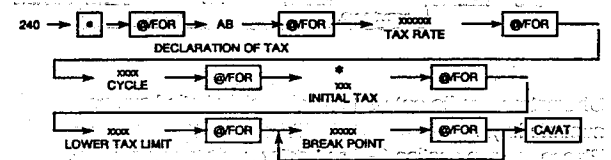
This programming is intended to preset halo for % entries. % rate smaller than preset value can be entered. (selecting "0" inhibits the entry of % rate.)

xy: %1 = 7
 %2 = 8
 %3 = 9
 %4 = 10

xxxx: RATE = 0~9999

MRS = 99.99

[JOB#240]
TAX TABLE PROGRAMMING



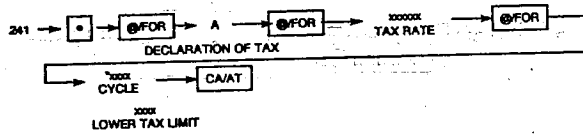
98 breakpoints can be programmed.

*Depression of the #ST key at the following points means a tax table delete operation.

A: INTERVAL BETWEEN BREAKPOINTS IS 1 DOLLAR OR MORE
 INTERVAL BETWEEN BREAKPOINTS IS BELOW 1 DOLLAR
 B: TABLE 1 PROGRAMMING = 1
 TABLE 2 PROGRAMMING = 2

MRS = NO TAX

[JOB#241]
% TAX RATE PROGRAMMING

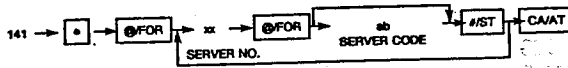


A: TABLE 1 PROGRAMMING = 1
 TABLE 2 PROGRAMMING = 2

% TAX RATE 0.0001~99.9999%
 LOWER TAX LIMITATION max. 99.99

MRS = 0

[JOB#141]
SERVER CODE DEFINITION



xx: SERVER NO. = 1~15(99)
 ab: SERVER CODE = 1~99

MRS = NO SERVER CODE IS PROGRAMMED

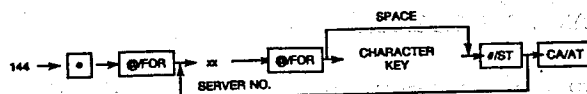
[JOB#242]
SERVER PROGRAMMING

RANGE OF PBLU NUMBERS THAT A SERVER CAN USE



[JOB#144]

SERVER TEXT PROGRAMMING



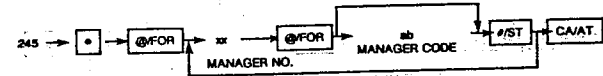
Characters can be entered by using alphabetic keys or numeric keys.
 Please refer to section 8-4 character assignment method. (Page 48)

MAX. 8 CHARACTERS

MRS = 'space'

[JOB#245]

MANAGER CODE DEFINITION

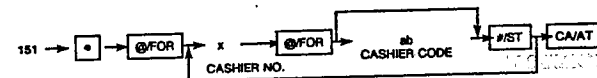


xx: MANAGER NO. = 1~99
 ab: MANAGER CODE = 1~99

MRS = NO MANAGER CODE IS PROGRAMMED

[JOB#151]

CASHIER CODE DEFINITION

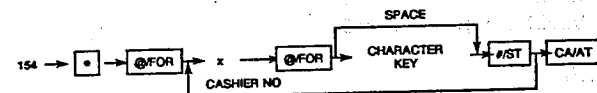


x: CASHIER NO. = 1~4(9)
 ab: CASHIER CODE = 1~99

MRS = No cashier code is programmed

[JOB#154]

CASHIER TEXT PROGRAMMING



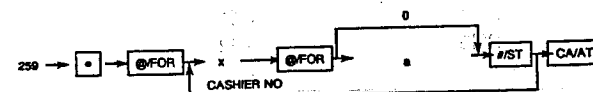
Characters can be entered by using alphabetic keys or numeric keys.
 Please refer to section 8-4 character assignment method. (Page 48)

MAX. 8 CHARACTERS

MRS = 'space'

[JOB#259]

CASHIER DRAWER ASSIGNMENT

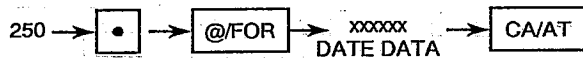


x: CASHIER NO. = 1~4(9)
 a: DRAWER NO. = 1~4
 NOT OPEN = 0

MRS = 1

[JOB#250]

DATE SETTING

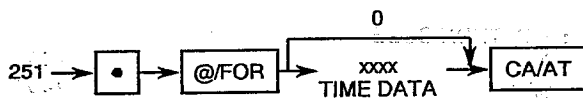


The entry format is the same as the print format (which is decided by srv-mode programming).
A 6-digit integer must be entered for the date setting.
Entering a zero first causes an error.

MRS = 010100

[JOB#251]

TIME SETTING



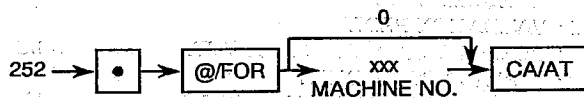
xxxx : 0~2359

The time must be entered on 24-hour system.
A 4-digit integer or smaller one must be entered for the time setting.

MRS = 0000

[JOB#252]

MACHINE NUMBER



A 3-digit integer or smaller one must be entered for the machine number setting.

MRS = 000

[JOB#253]

CONSECUTIVE NO. SETTING

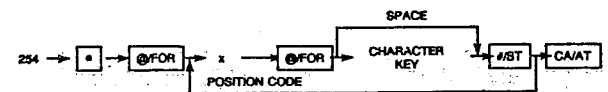


A 4-digit integer or smaller one must be entered for the consecutive no. Setting.

MRS = 0000

[JOB#254]

LOGO TEXT PROGRAMMING



x : 1~6

1
2
3
4
5
6

1 BLOCK MAX. 21 CHARACTERS

Characters can be entered by using alphabetic keys or numeric keys.
Please refer to section 8-4 character assignment method. (Page 46)

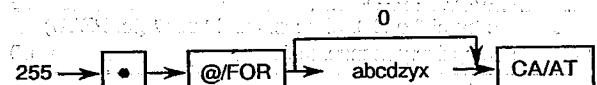
MRS = 'space'

NOTE

This programming is related to JOB#912D programming.
Only when "6-line header instead of a stamp" is selected by JOB#912D programming, all 6 lines are programmable.
when "3-line header instead of a stamp" is selected, upper 3 lines (1st-3rd line) are programmable.
when "stamp and 3-line footer" is selected, lower 3 lines (4th-6th line) are programmable.
when "stamp only" is selected, no line is programmable.

[JOB#255]

PROGRAMMING OF THE LIMITS TO INITIAL SLIP FEED LINE, NO. OF TIMES OF SLIP PRINTING, TRY ST FEED LINE AND NO. OF TIMES OF VALIDATION PRINTING



ab : INITIAL SLIP FEED LINE = 0~64

cd : SLIP PRINT MAX LINE NO. = 0~99

z : NO. OF TIMES OF SLIP PRINTING = 0~9

y : NO. OF TIMES OF VALIDATION PRINTING = 0~9

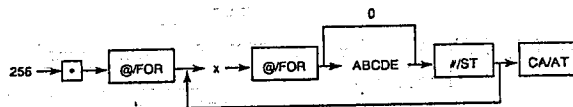
x : FEED LINE AFTER DEPRESSION OF TRAY ST KEY = 0~9

* Options must be present to change.

MRS = 0099110

[JOB#256]

OPTIONAL FEATURE PROGRAMMING



x : 1

A	=0	
B	PLU LEVEL SHIFT SYSTEM	
	MANUAL (MGR MODE ONLY)	=3
	MANUAL (REG and MGR MODE)	=2
	AUTO (MGR MODE ONLY)	=1
	AUTO (REG and MGR MODE)	=0
C	OP X/Z mode Disallowed/ disall	= 1/0
D	Always 0	
E	JOURNAL SELECT/NOT	= 1/0

x : 2

A	CA/AT Key inhibited/allowed	= 1/0
B	INDIRECT VOID IN REG MODE INHIBITED/ALLOWED	= 1/0
C	DIRECT VOID IN REG MODE INHIBITED/ALLOWED	= 1/0
D	REFUND IN REG MODE INHIBITED/ALLOWED	= 1 /0
E	RETURN IN REG MODE INHIBITED/ALLOWED	= 1/0

x : 3

A	=0	
B	NON ADD CODE PRINT	
	DISALLOWED/ALLOWED	= 1/0
C	TIP ENTRY METHOD	
	FIXED-RATE ENTRY/AMOUNT ENTRY	= 1/0
D	PLU RANGE REPORT	
	ZERO SUPPRESS NO/YES	= 1/0
E	PLU GROUP REPORT	
	ZERO SUPPRESS NO/YES	= 1/0

X : 4

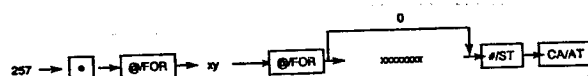
A.B.C	000	
D	METHOD OF PAYMENT CALCULATION (For PBLU)	
	FOR EACH TRANSACTION OPERATION/ GUEST TOTAL	= 1/0
E	Entry of the NO. of guests and table# (for PBLU)	
	compulsory /noncompulsory	= 1/0

Note : X represents the section of this Job code, there are 4 sections.

MRS = 0000

[JOB#257]

SENTINEL AMOUNT PROGRAMMING



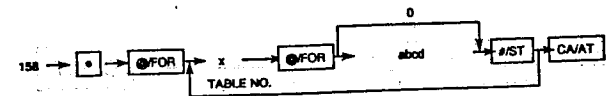
xy : FUNCTION CODE
SENTINEL = 65

xxxxxxx : AMOUNT LIMIT = 0~99999999

MRS = 999999.99

[JOB#158]

SCALE TABLE PROGRAMMING

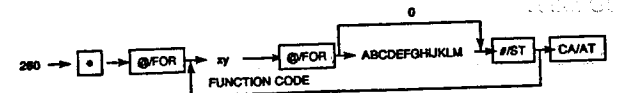


x : TABLE NO. = 1~9
abcd : TARE WEIGHT = 0.00~99.99

MRS = 00.00

[JOB#260]

MEDIA KEY programming.



xy : FUNCTION CODE

CA1	= 48
CA2	= 49
FS TEND	= 50
CHK	= 63
CH1	= 58
CH2	= 59
CH3	= 60
CH4	= 61
CH5	= 62
EAT IN1	= 71
EAT IN2	= 72
EAT IN3	= 73

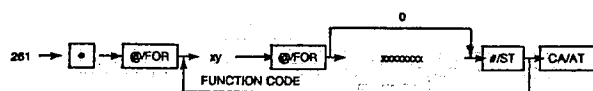
A : FS SUBTOTAL BEFORE FOOD STAMP TENDERING	
COMPULSORY/NONCOMPULSORY	= 1/0
B : SLIP PRINT COMPULSORY/	
NONCOMPULSORY	= 1/0
C : VALIDATION PRINT	
COMPULSORY/NONCOMPULSORY	= 1/0
D : NON ADD CODE ENTRY	
COMPULSORY/NONCOMPULSORY	= 1/0
E : NO. OF ENTRY DIGITS OF NON-ADD CODE	
4/8/12/16	= 3/2/1/0
F : TAX2 DELETE/NOT	= 1/0
G : TAX1 DELETE/NOT	= 1/0
*H : FOOTER PRINT YES/NO	= 1/0
I : DISPLAY OF SUBTOTALS COMPULSORY/	
NONCOMPULSORY	= 1/0
J : CHANGE DISABLE/ENABLE	= 1/0
K : SHORT AMOUNT TENDER DISABLE/ENABLE	= 1/0
L : ENTRY OF AMOUNT TENDERED/	
COMPULSORY	= 1/0
NONCOMPULSORY	= 1/0
M : DRAWER OPEN NO/YES	= 1/0
MRS = 00000000000000	

*Note

(H)FOOTER print yes/no programming is valid only when "stamp and 3-line footer" is selected in job#912d programming.

[JOB#261]

MEDIA KEY HALO-1



xy : FUNCTION CODE

CHECK CHANGE

= 54

CASH CHECK

= 53

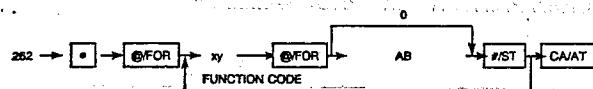
x0000000x : AMOUNT LIMIT

= 0~99999999

MRS = 999999.99

[JOB#262]

MEDIA KEY HALO-2



xy : FUNCTION CODE

CA1

= 48

CA2

= 49

CHK

= 63

CH1

= 58

CH2

= 59

CH3

= 60

CH4

= 61

CH5

= 62

A : MAX DIGIT FIGURE

= 1~9

B : NO. OF ZEROS FOLLOWING THE MAX.

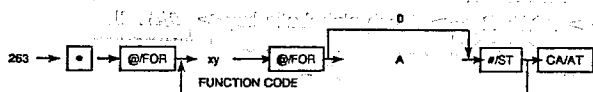
= 0~8

DIGIT FIGURE

MRS = 18

[JOB#263]

MEDIA KEY FULL ITEM REPORT PRINT FORMAT PROGRAMMING



xy : FUNCTION CODE

CA1

= 48

CA2

= 49

CHK

= 63

CH1

= 58

CH2

= 59

CH3

= 60

CH4

= 61

CH5

= 62

A : NORMAL PRINT & SPECIAL ST PRINT

= 3

NORMAL PRINT & ADDITION TO SPECIAL ST

= 2

NORMAL PRINT & 1 LINE FEED

= 1

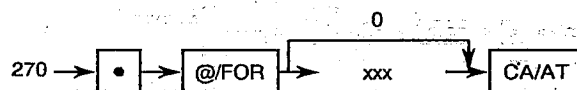
NORMAL PRINT

= 0

MRS = 0

[JOB#270]

PROGRAMMING OF THE TIME INTERVAL FOR THE TILL TIMER

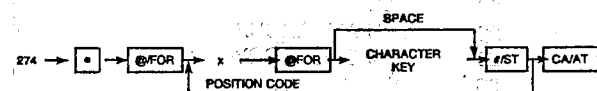


x : 0~255 sec

MRS = 000

[JOB#274]

CHECK VALIDATION MESSAGE PROGRAMMING



x : 1~3

1	CE	CO
2		
3		

1 BLOCK MAX. 21 CHARACTERS

Characters can be entered by using alphabetic keys or numeric keys.

Please refer to section 8-4 character assignment method.

(Page 48)

MRS =

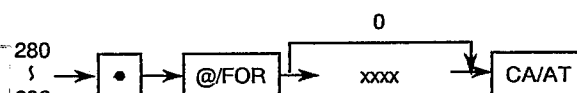
"space"

"space"

FOR DEPOSIT ONLY

[JOB#280, 281, 282]

SECRET CODE PROGRAMMING



#280 : PGM1 MODE

#281 : Z1 MODE

#282 : Z2 MODE

IF "0" IS ENTERED, "COMPULSORY SECRET CODE ENTRY" IS CANCELED.

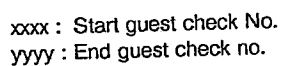
MRS = 0000

STACK REPORT



MRS = ALL DELETE

RANGE PROGRAMMING OF GUEST CHECK NUMBERS



MRS = 0001 ~ 9999

KITCHEN PRINTER PROGRAMMING


$$MRS = 0.000$$

XXX = IRC terminal number of ER-01RP. (1 ~ 254)

YY = Backup / duplicate kitchen printer number (KP).

KITCHEN PRINTER TEXT PROGRAMMING



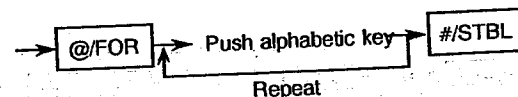
MRS = all space.

Characters can be entered by using alphabetic keys or numeric keys.
Please refer to section 8-4 character assignment method.
(Page 48)

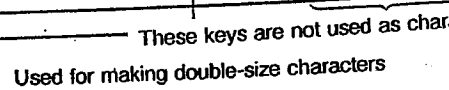
8-4 Character assignment method

The ER-3310/3311 has two kinds of method at character assignment.
One is to use alphabetic assigned key and other one is to use ten keys.

~Using alphabetic assignment method~



- The layout of the programming key sheet is as follows
[ER-3310]

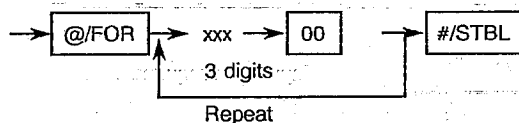


Programming key layout (ER-3311)

		0	1	2	3	4	5	6	7	8	9		;	<
		1	2	3	4	1/2	F _T	A	B	C	D		=	>
F	T	←	→					E	F	G	H		?	@
!!	¢							I	J	K	L		^	—
!	"	#	\$					M	N	O	P		'	{
%	&	'	(					Q	R	S	T			}
)	*	+	,					U	V	W	X			
-	.	/	:					Y	Z	(SPACE)	(DC)			

Note : The (DC) means double-size character code and this key is used for double-size character programming.
Character keycover : GCOVB6925RCZZ

~Using ten keys~



Note : **00** key is used to enter each 3 digit alpha code.

CODE TABLE FOR ALPHA DESCRIPTOR PROGRAMMING

CODE	CHARACTER	CODE	CHARACTER	CODE	CHARACTER	CODE	CHARACTER
032		060	<	088	X	116	l
033	!	061	=	089	Y	117	u
034		062	>	090	Z	118	v
035	#	063	?	091	A	119	w
036	\$	064	@	092	Ö	120	x
037	%	065	A	093	Û	121	y
038	&	066	B	094	^	122	z
039	'	067	C	095	—	123	{
040	(	068	D	096	'	124	
041	)	069	E	097	a	125	}
042	*	070	F	098	b	126	β
043	+	071	G	099	c	127	φ
044	,	072	H	100	d	128	!!
045	-	073	I	101	e	129	1
046		074	J	102	f	130	2
047	/	075	K	103	g	131	3
048	0	076	L	104	h	132	4
049	1	077	M	105	i	133	½
050	2	078	N	106	j	134	F _T
051	3	079	O	107	k	135	←
052	4	080	P	108	l	136	→
053	5	081	Q	109	m	137	~
054	6	082	R	110	n	138	=
055	7	083	S	111	o	139	
056	8	084	T	112	p	140	▶
057	9	085	U	113	q	141	F
058	:	086	V	114	r	142	γ
059	;	087	W	115	s	251	DC

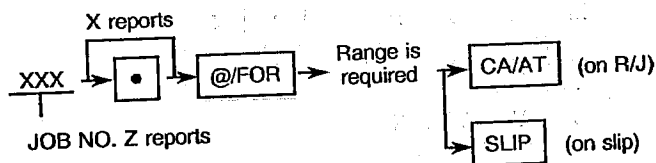
DC: DOUBLE CODE

9. OP X/Z, X1, Z1/X2/Z2 mode

The following categories of reports can be printed by the ECR.

- (1) OP X/Z mode reports (cashier/server report)
- (2) X1 mode (daily sales reports)
- (3) Z1/X2/Z2 mode (daily and periodic sales reports)

To print reports, use the following key entry sequences.



The report will be printed on journal and receipt papers with this procedure.

By depressing [SLIP] key instead of [CA/AT] key in the above key sequence, the reports can be printed on slip papers and journal paper.

The DATA part will be described in the "LIST OF REPORTS".

NOTE —GENERAL RULE—

if [•] key is depressed following a JOB code number entry with these procedures, data inside the ECR will be cleared (i.e. Z reports).

(Some job code numbers do not allow key to follow.)

If [•] key is not depressed following a JOB code number, data inside of ECR will be maintained (i.e. X reports).

The key is allowed only after a secret code entry when the mode switch position has been changed (i.e. when the mode switch is turned and an effective entry is made, the effective of secret code entry disappears.)

Note with a circle "○" in the following table shows the function available on the standard machine and marked with a triangle "△" shows the function that can be used with an option in use.

Note with a circle -○- in the following table shows the function that can be used with an option in use.

Job code (*3)	Kind of report	Mode (*1)						Input data required
		OP X/Z		X1	Z1/X2/Z2			
		X	Z	X1	Z1	X2	Z2	
01	General			○	○	△	△	—
02	Individual cashiers	○	○	○	○	△	△	Cashier numbers
03	Individual servers	○	○	○	○	△	△	Server numbers
04	Hourly (all)			○	○	△	△	—
	Hourly (specified period)			○		△		Hourly zone specify range (0000 ~ 2330)(*2)
05	All cashiers			○	○	△	△	—
06	All servers			○	○	△	△	—
09	Stack report			○	○	△	△	—
12	Department (specific department)			○		△		Dept key depression
20	PLU (specific range)			○	○			PLU code specify range (1 ~ 9999)(*2)
21	PLU subsidiary department specify			○				Department code (1 ~ 50)
22	PLU group specify			○				Group code (1 ~ 15)
23	All PLU groups			○				—
24	PLU INVENTORY			○				PLU code specify range (1 ~ 9999)(*2)
30	CID			○		○		—
240	Tax					△	△	—
60	PB lookup sales			○	○			—
	PB lookup sales (specific range)			○				PBLU code range specify (1 ~ 9999)(*2)
61	PB lookup sales (by servers)			○				Server number specify. range. (*2)

NOTE (*1): X1: Daily reading report
X2: Periodical reading report
Z1: Daily resetting report
Z2: Periodical resetting report

NOTE (*2): Range can be specify by entering the beginning and ending numbers. To specify only one item, enter only the number.

[XXXX] → [@/FOR] → [XXXX]

Beginning number Ending number

NOTE (*3): To issue a periodical summary report, enter "2" on the hundreds position of the job code.

(EX): Job code of the daily general report is 1, and the job code 201 for the general periodical summary report.

• The report will be printed on a receipt and journal tape with depression of the [CA/AT] key.
It will be printed on a slip and journal tape with depression of the [SLIP] key.

• If the decimal point key is pushed following to the job code, the data within the ECR will be cleared (resetting report). The decimal point key may not be pushed for the report that cannot issue a reset report.

• If the decimal point key is not pushed following to the job code, the data within the ECR will be retained (reading report).

10. Service precautions

10-1 SSP (Special Service Preset)

SSP (Special Service Preset) is a software revising tool that developed by SHARP to be used for majority of SHARP electronic cash registers.

Overview

Because electronic cash register program is stored in ROM area, it will be possible to replace ROM chip to do even a small program change, urgent program revision, or to get rid of a bug in program. To avoid this disturbance, the special service preset is provided to permit a program revision through the keyboard without replacing ROM. So, SSP is employed to revise a part of program through the keyboard. Generally, SSP will serve to implement a special program for some user and to do urgent program revision such as to eliminate a program bug.

Description

In order to do SSP, it is necessary to have special hardware and software such as the SSP only memory area to enter the SSP program, monitor ROM to monitor program progress, and software to operate SSP.

For SSP, a part of the program in the ROM is picked up and a new program portion is entered on the keyboard. The program entered will be stored in the 'SSP area' specially provided for it. When it comes to a section of the program to be revised, the control jumps to an SSP area to execute the keyboard entered program portion. That is, a part of the ROM is replaced by the program part entered through the keyboard. (Fig. 10-1)

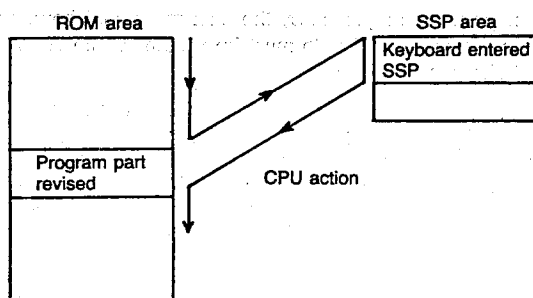
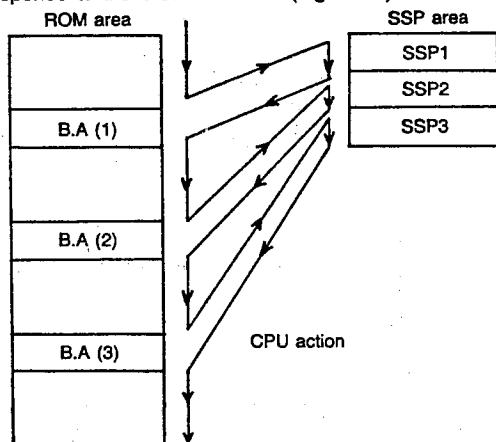


Fig. 10-1

The address from which the control jumps from the ROM program to the SSP area is called BREAK ADDRESS. For it is possible to provide any number of break addresses, it becomes possible to revise a multiple number of program areas.

Naturally, the control jumps to the SSP program area that corresponds to the break address. (Fig. 10-2)



B.A: Break addresses

Fig. 10-2

As the SSP data entered through the keyboard are decimal mnemonics used by the CPU, entry of an insignificant figure may allow the CPU to operate properly.

List of SSP data will be issued on Technical Report, whenever required.

SSP for ER-3310/3311

Although SSP is used for the ER-3310/3311, it has a different specification as SSP used for the (ER-4230, ER-4630,) etc.

NOTE (*): ER-4230 US and Canadian, other version
ER-4630 European, other version

- 1) To revise a large numbers of program portions by the normal SSP, these portions are linked together into one SSP before entered through the keyboard. (Fig. 10-3)

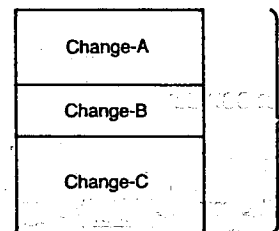


Fig. 10-3

That is, numbers of SSPs must be provided and entered in the following manner; 7 kinds for an example below.

Spec revision (1) Revised by change-A
Spec revision (2) Revised by change-B
Bug elimination (3) Eliminated by change-C

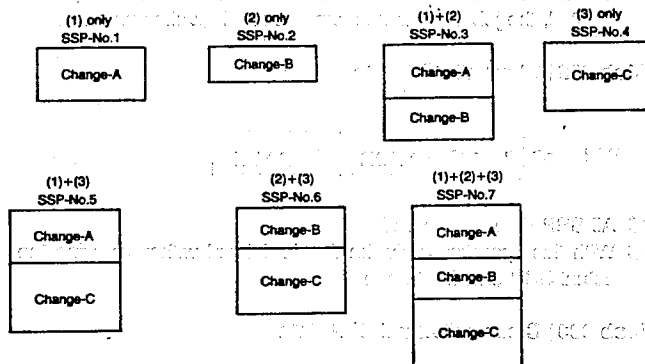


Fig. 10-4

If there are "n" numbers of program revisions and specification changes, it requires SSP of deeper level (2n-1).

- 2) For SSP of the ER-3310/3311, it is made possible to make entry of a several numbers of SSP after an individual SSP was entered as a single SSP. (Add-on type) So, it would be possible to select only the required SSPs out of the library to meet user's request. For those already containing SSPs, a new SSP can be added after mere entry of required SSP.

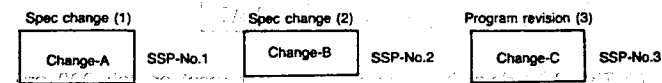


Fig. 10-5

It now becomes possible to make easier specification change and to create SSP library.

For "n" numbers of program changes, SSP will be counted "n".