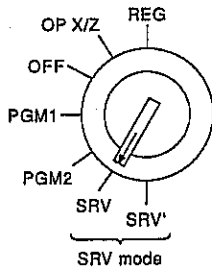


## 7. SRV mode programming

To go into SRV mode, the service key (LKGIM7113RCZZ) is required for service mode programming.



SRV: Used to the settings in the service mode.  
 SRV': Used for reset operation.

### 7-1. Reset Operation

#### (1) Master Reset (All memory clear)

When the Master Reset is executed, the data stored in all the memories will be initialized, such as preset memories. And all the totalizers/counters/date and time is cleared to zeroes.

##### [Key Operation]

- 1) Turn off the AC switch.
- 2) Set the Mode switch to the SRV position.
- 3) While holding down JOURNAL FEED key, turn ON the AC switch.

#### (2) Program Reset

##### • method 1

By turning OFF and ON the AC switch at SRV mode, the register returns to initial status even while in a locked status or any registration.

However, all the data before the reset are kept maintained.

##### • method 2

- 1) Set the mode switch to SRV' position.
- 2) Turn to SRV position from SRV' position.

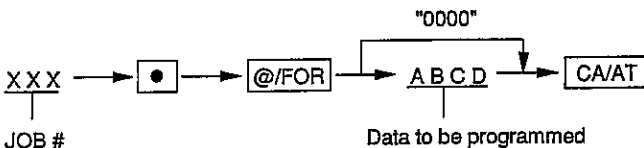
##### • method 3

- 1) Set the mode switch to PGM2 position.
- 2) Turn OFF the AC switch.
- 3) While holding down Journal FEED key and Receipt FEED key, turn ON the AC switch.

### 7-2. SRV mode programming

#### (1) Programming procedure

Key operation

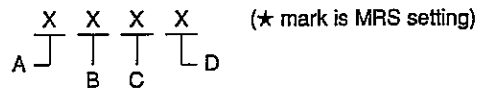


#### (2) SRV mode JOB # Table

JOB #	Function
901	TAB setting
902	RS232C Yes/No, Till Timer
903	SIO loader-dumper baud rate, Food Stamp System
904	Number of Departments, Option RAM Yes/No
905	Not used
906	Has dept programming Enable/disable, split pricing
907	Void mode Enable/disable
908	GTs printing selection on Z report, GT1 print Yes/No on X report, Void mode Transaction, GT reset
909	Zero skip selection of each reports
910	Individual cashier report, cashier assignment (hard wave) Number of cashiers
911	Fractional Treatment
912	Date format, consecutive number print format, Footer print selection, Time format, After transaction receipt format, Copy receipt, Logo message format
913	VP format, Sub-total print, Purchased items print, Error mode, Key-buffer clear, Drawer close operation, Lock-error-beep, Key catch sound Yes/No
914	No-sale receipt issuing, Tax delete function, no-sale after non-add code entry, item non-add code entry compulsory, manual TAX, check cashing
915	Amount symbol, ST%/ST(-), RA Tendering, VP lines
916	Negative sub-total enable, sub-total compulsory, Food STAMP sub-total compulsory, coupon PLU/NET sales ST/check change TTL (X/Z) print
917	Taxable TTL (X/Z) print/No
918	Cashier media report, Direct Finalization Number of DEPT/PLU TEXT, sub-total void, Past item void, Last item void
919	Zero print of PLU unit price
930 ~ 935	Z counter setting
940 ~ 943	GT2/GT3 setting
944	Secret code setting (PGM2 mode)
950	Free key layout function

#### (3) Data to be programmed

Note: "MRS = XXXX" shows the initial preset values (same as the values after master resetting.)



#### [JOB #901] MRS = 0002

#901-A, B, C: Not used. (Fixed to "000".)

#901-D: Tabulation

Tabulation	901-D
TAB = 0 (0)	0
TAB = 1 (0.0)	1
TAB = 2 (0.00)	2 *
TAB = 3 (0.000)	3

Note: The factory preset value may vary according to destinations.

**[JOB #902] MRS = 0000**

#902-A: Choice of RS-232C option (ER-20RS)

RS-232C	902-A	
NO	0	★
YES	2	

#902-B, C: Not used. (Fixed to "00".)

#902-D: Choice of Till timer (drawer opening counter) function

Till timer	902-D	
NO	0	★
YES	2	

**[JOB #903] MRS = 0000**

#903-A: SiO loader dumper baud rate setting.

Baud rate	903-A	
9600 bps	0	★
4800 bps	1	
2400 bps	2	
1200 bps	3	
600 bps	4	
300 bps	5	

#903-B, C: Not used. (Fixed to "00".)

#903-D: Food stamp system (FS = Food stamp)

Food stamp	903-D	
No FS	0	★
Tax not payable in FS	1	
Tax payable in FS	2	
FS TAX, forgiveness	3	

**[JOB #904] MRS = 1500**

#904-A, B: Number of departments (MAX. 40 depts)

Number of departments	904-AB	
1 Dept	01	
2 Depts	02	
3 Depts	03	
4 Depts	04	
?	?	
15 Depts	15	★
?	?	
39 Depts	39	
40 Depts	40	

MRS = 15 departments

ER-01RA required

Note 1) Please note that you may require department up-grade key kits for the change of the department key layout from the standard key layout.

2) Please note that you may require option RAM (ER-01RA) for up-grade more than 16 Departments.

#904-C: Option PLU (ER-01RA) For over 97 PLU's

Optional PLU's over 97	904-C	
Not Exists	0	★
Exists	4	

#904-D: Not used. (Fixed to "0".)

**[JOB #905] MRS = 0000**

#905-A, B, C, D: Not used. (Fixed to "0000".)

**[JOB #906] MRS = 0022**

#906-A: Not used. (Fixed to "0".)

#906-B: PGM2 mode programming of Hash Dept. Enable/disable.

HASH DEPT	906-B	
Disable	0	★
Enable	2	

#906-C: 1. Split pricing item quantity count method  
Package/Quantity  
2. Q'TY @/FOR Q'TY @/FOR operation  
Split pricing/multiplication

Split pricing Q'TY	Q'TY @/FOR	906-C	
	Q'TY @/FOR		
Item quantity	Multiplication	0	
	Split pricing	2	★
Package count	Multiplication	4	
	Split pricing	6	

#906-D: Fixed to "2".

**[JOB #907] MRS = 0000**

#907-A, B, C: Not used. (Fixed to "000".)

#907-D: Void mode Enable/disable

Void mode	907-D	
Enable	0	★
Disable	2	

**[JOB #908] MRS = 0000**

#908-A: GT print on Z report

GT1 (NET)	GT2 (+)	GT3 (-)	908-A	
Print	Print	Print	0	
		Skip	1	★
Skip	Skip	Print	2	
		Skip	3	
	Print	Print	4	
		Skip	5	
	Skip	Print	6	
		Skip	7	

#908-B: GT1 print on General X1 report

GT1	908-B	
Skip	0	★
Print	4	

#908-C: Add Void-mode transaction data to hourly total Yes/No.

Add void mode transactions to Hourly totals	908-C	
No	0	★
Yes	4	

#908-D: Z1 resetting that resets GT Enable/disable.

GT resetting at Z1	908-D	
Disable	0	★
Enable	1	

**[JOB #909] MRS = 0000**

- #909-A: 1. Zero skipping in transaction report printing.  
 2. Zero skipping in department report printing.  
 3. Zero skipping in PLU report printing.

Transaction report	DEPT report	PLU report	909-A	
Zero skip	Zero skip	Zero skip	0	★
		Print	1	
	Print	Zero skip	2	
		Print	3	
Print	Zero skip	Zero skip	4	
		Print	5	
	Print	Zero skip	6	
		Print	7	

#909-B: Zero skipping in hourly report printing.

Hourly report	909-B	
Zero skip	0	★
Print	4	

#909-C: Not used. (Fixed to "0".)

#909-D: Enable X2/Z2 daily net report

Daily net total R.	909-D	
Disable	0	★
Enable	4	

NOTE: To enable the daily net report, an optional RAM (ER-01RA) is required.

**[JOB #910] MRS = 2000**

#910-A: Cashier net 3 sales total includes TAX.

Cashier Net 3 total	910-A	
Tax included	2	★
Net amount	0	

#910-B, C: Not used. (Fixed to "00".)

#910-D: 1. Cashier assignment method  
 2. Number of cashiers

Cashier assignment	Number of cashiers	910-D	
Stay-down key	4-cashiers	0	★
	2-cashiers	2	
Barrel-lock key (ER-25CL)	4-cashiers	4	
	2-cashiers	6	

**[JOB #911] MRS = 0000**

Fractional treatment	911-A	
Round off	0	★
Round up	1	
Round down	2	

#911-B, C, D: Not used. (Fixed to "000".)

**[JOB #912] MRS = 0000**

Date format	912-A	
Month/Day/Year	0	★
Day/Month/Year	1	
Year/Month/Day	2	

- #912-B: 1. Character size of consecutive number on the receipt  
 2. Footer print control  
 3. Time system

CC # size	Footer print	Time system	912-B	
Normal	Only MEDIA key finalization	12H	0	★
		24H	1	
	All receipt	12H	2	
		24H	3	
Double size	Only MEDIA key finalization	12H	4	
		24H	5	
	All receipt	12H	6	
		24H	7	

NOTE: If "Double size" is selected for the CC #, no cashier name is printed in receipt header printing.

- #912-C: 1. After transaction receipt format  
 2. Copy receipt

After transaction receipt	Copy receipt	912-C	
Total only	Disable	0	★
	Enable	2	
Detail	Disable	4	
	Enable	6	

NOTE: 1. To make the after transaction receipt in detail format, an optional RAM is required. (ER-01RA)  
 2. To enable the copy receipt, an optional RAM is required. (ER01RA)

#912-D: Logo message format

Logo message	912-D	
No logo (STAMP only)	0	★
3 lines header (NO STAMP)	1	
STAMP + 3 lines header	2	
6 lines header (NO STAMP)	3	
STAMP + 3 lines footer	4	
STAMP + 3 lines header + 3 lines footer	6	
STAMP + 6 lines footer	8	

**[JOB #913] MRS = 1004**

- #913-A: 1. VP format selection  
 2. CONTENT OF TOTAL VP Amount

VP: Validation print

VP format	VP amount	913-A	
Date + Time	Total amount	0	★
	Tender amount	1	
Machine # + CC #	Total amount	2	
	Tender amount	3	

CC #: Consecutive number

- #913-B: 1. Subtotal printing when [SBTL] key is pressed.  
 2. Merchandise subtotal printing when [MDSE SBTL] key is pressed.  
 3. Printing of the Quantity of purchased.

SBTL PRINTING	MDSE SBTL PRINTING	Quantity of purchased items	913-B
No	No	Print	0
		NOT print	1
	Print	Print	2
		NOT print	3
Print	No	Print	4
		NOT print	5
	Print	Print	6
		NOT print	7

- #913-C: 1. Buzzer off 2 sec after lock error.  
 2. Key buffer clearing at the end of transaction.

Error beep	Key buffer clearing at the end of transaction	913-C
2-second off	Yes	0
	No	1
Continuous	Yes	2
	No	3

- #913-D: 1. Drawer closing operation compulsory, Requires drawer open sensor kit  
 2. All Lock or lock and one shot  
 3. Key catch sound

Drawer close operation	Error mode	Key catch sound	913-D
Noncompulsory	All lock error	Yes	0
		No	1
	Lock and one shot	Yes	2
		No	3
Compulsory	All lock error	Yes	4
		No	5
	Lock and one shot	Yes	6
		No	7

[JOB #914] MRS = 0002

- #914-A: 1. Receipt issuing at no-sale.  
 2. Tax deletion by manual operation. Enable/disable

Receipt issuing at No-sale	Tax deletion	914-A
Yes	Disable	0
	Enable	1
No	Disable	4
	Enable	5

- #914-B: No-sale after NON ADD code entry

No-sale after # entry	B
Allowed	0
Disallowed	1

- #914-C: Non-add code entry for each item (except hash item) compulsory/non-compulsory

Non-add code entry for each item	914-C
Non-compulsory	0
Compulsory	4

- #914-D: 1. Manual TAX Enable/disable  
 2. CHECK CASHING Enable/disable

Manual TAX	Check cashing	914-D
Enable	Disable	0
	Enable	2
Disable	Disable	4
	Enable	6

[JOB #915] MRS = 0001

- #915-A: Amount symbol "\*" / "\$"

Amount symbol	915-A
"\$"	0
"*"	2

- #915-B: Not used. (Fixed to "0".)

- #915-C: 1. ST (-), ST%1, and ST%2 entry in one transaction only once/Any number of times.  
 2. RA Direct/Tendering.

ST (-), ST%1, one transaction	RA	915-C
Any times	Tendering	0
	Direct	1
Only once	Tendering	2
	Direct	3

- #915-D: 1. Item validation printing 2 lines/1 line.  
 2. Validation printing other item validation 2 lines/1 line.

Item VP	VP	915-D
1 line	1 line	0
	2 lines	1
2 lines	1 line	2
	2 lines	3

NOTE: Check VP is always 3 lines VP.

[JOB #916] MRS = 0000

- #916-A, B Not used. (Fixed to "00".)

- #916-C: 1. Negative merchandise subtotal inhibited/Allowed  
 2. Subtotal entry compulsory/non-compulsory  
 3. Food stamp subtotal entry before food stamp tendering compulsory/non-compulsory

Negative merchandise subtotal	Compulsory Subtotal entry	Food stamp subtotal entry	916-C
Enable	Non-compulsory	Non-compulsory	0
		Compulsory	1
	Compulsory	Non-compulsory	2
		Compulsory	3
Disable	Non-Compulsory	Non-compulsory	4
		Compulsory	5
	Compulsory	Non-compulsory	6
		Compulsory	7

- #916-D: 1. Coupon PLU printing on X/Z report  
 2. NET sales subtotal printing on X/Z report  
 3. CHECK change total printing on X/Z report

Coupon PLU	Net sales subtotal	Check change total	916-D
Print	Print	Print	0
		Skip	1
	Skip	Print	2
		Skip	3
Skip	Print	Print	4
		Skip	5
	Skip	Print	6
		Skip	7

**[JOB #917] MRS = 0000**

- #917-A: 1. Taxable 1 subtotal on X/Z report: Print or Skip.  
 2. Gross Tax 1 and refund Tax 1 total on X/Z report: Print or Skip  
 3. Net Tax 1 total on X/Z report: Print or Skip

Taxable 1 subtotal on X/Z report	Gross Tax1 and refund Tax1 total on X/Z report	Net Tax1 total on X/Z report	917-A
Print	Print	Print	0
		Skip	1
	Skip	Print	2
		Skip	3
Skip	Print	Print	4
		Skip	5
	Skip	Print	6
		Skip	7

- #917-B: 1. Taxable 2 subtotal on X/Z report: Print or Skip  
 2. Gross Tax 2 and refund Tax 2 total on X/Z report: Print or Skip  
 3. Net Tax 2 total on X/Z report: Print or Skip

Taxable 2 subtotal on X/Z report	Gross Tax2 and refund Tax2 total on X/Z report	Net Tax2 total on X/Z report	917-B
Print	Print	Print	0
		Skip	1
	Skip	Print	2
		Skip	3
Skip	Print	Print	4
		Skip	5
	Skip	Print	6
		Skip	7

- #917-C: 1. Taxable 3 subtotal on X/Z report: Print or Skip  
 2. Gross Tax 3 and refund Tax 3 total on X/Z report: Print or Skip  
 3. Net Tax 3 total on X/Z report: Print or Skip

Taxable 3 subtotal on X/Z report	Gross Tax3 and refund Tax3 total on X/Z report	Net Tax3 total on X/Z report	917-C
Print	Print	Print	0
		Skip	1
	Skip	Print	2
		Skip	3
Skip	Print	Print	4
		Skip	5
	Skip	Print	6
		Skip	7

- #917-D: 1. Total Tax amount on X/Z report: Print or Skip  
 2. Gross manual Tax and refund manual Tax on X/Z  
 3. Net manual Tax total on X/Z report: Print or Skip

Total Tax Amount	Gross manual Tax and Refund manual Tax on X/Z report	Net manual Tax total on X/Z report	917-D
Print	Print	Print	0
		Skip	1
	Skip	Print	2
		Skip	3
Skip	Print	Print	4
		Skip	5
	Skip	Print	6
		Skip	7

**[JOB #918] MRS = 0003**

- #918-A: 1. Cashier media total on cashier report: Exists/Not exists  
 2. Direct Non-Tender Finalization after under tender Enable/disable  
 3. DEPT/PLU Text 16 CHARACTERS/8 CHARACTERS

Cashier media Total report	Direct Finalization after under tender	DEPT/PLU TEXT	918-A
Disable	Disable	8 characters	0
		16 characters	1
	Enable	8 characters	2
		16 characters	3
Enable	Disable	8 characters	4
		16 characters	5
	Enable	8 characters	6
		16 characters	7

NOTE: To issue the cashier media total report, an optional RAM is required. (ER01RA)

#918-B, C: Not used. (Fixed to "00".)

- #918-D: 1. Subtotal Void Function  
 2. Past item Void Function  
 3. Last item Void Function

Subtotal Void	Past item Void	Last item Void	918-D
Disable	Disable	Disable	0
		Enable	1
	Enable	Disable	2
		Enable	3
Enable	Disable	Disable	4
		Enable	5
	Enable	Disable	6
		Enable	7

Note: To enable the sub-total void function, an optional RAM is required. (ER01RA)

**[JOB #919] MRS = 0000**

#919-A, B: Not used. (Fixed to "00".)

#919-C: Amount printing Yes/No when PLU unit price is 0.

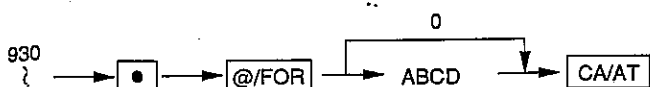
Amount print	919-C
Skip	0
Print	1

#919-D: Not used. (Fixed to "0".)

**[JOB #930-935]**

Key operation

RESET REPORT COUNTER



- 930: Z1 REPORT COUNTER
- 931: Z2 REPORT COUNTER
- 933: HOURLY RESET REPORT COUNTER
- 934: PLU RESET REPORT COUNTER
- 935: CASHIER RESET REPORT COUNTER {Common between ALL CASHIER Z and INDIVIDUAL CASHIER Z}

MRS = 0000

**[JOB #940-943]**

GT2, 3



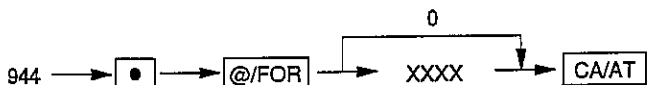
- 940: UPPER GT2 (POSITIVE GT) 6 digits
- 941: LOWER GT2 (POSITIVE GT) 7 digits
- 942: UPPER GT3 (NEGATIVE GT) 6 digits
- 943: LOWER GT3 (NEGATIVE GT) 7 digits

GT1 IS OBTAINED BY THE FOLLOWING EQUATION  
EQUATION:  $GT1 = GT2 - GT3$

MRS = 0000000000000 (13 digits)

**[JOB #944]**

PGM2 MODE SECRET CODE



MRS = 0000

When a secret code is 0000, its entry is noncompulsory.

**[JOB #950]**

JOB #950 is for free key layout.

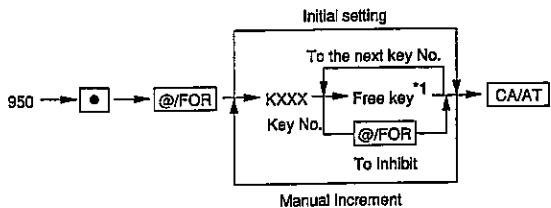
(Programming procedure)

KXXX: Function keys: 18 ~ 50

(Key No.) Dept. keys: 60~99

\*2 Direct PLU keys: 100 ~ 255

MRS: See Fig. 7-5 Free key layout report



Notes: \*1. Just press any one of the keys within the free key area (see Fig. 7-3 a) for the required function.

- \*2. • The relationship among the location number, Key number and PLU number is as follows.  
The location number is a key position code generated hardware-wise.

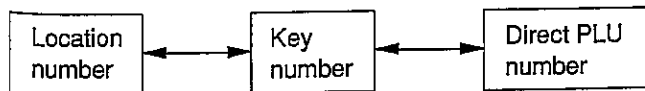


Table 1

Table 2

Table 1: Assigns the relation by SRV Job #950.

Table 2: Assigns the relation by PGM Job #229.

- A Maximum of 126 direct PUL keys can be assigned from the key No. K100 to K225.  
Since the ER-02KP (additional flat keypad) has 104 keys, the location numbers of the ER-02KP are initially assigned for the key number from K100 to K203 respectively as PLU keys.  
The other PLU keys from K204 to K225 are not assigned yet though, may be assigned other location number from the main keyboard or the ER-02KP.
- To enable direct PLU function, you must assign a PLU code (001 to 999) to the each key numbers from K100 to K225 by using PGM Job #229.  
As mentioned above, since the key numbers from K204 to K225 has no location numbers, you must assign a location code to the keys by using SRV Job #950 prior to PLU code assignment.

ER-3220 KEY No. TO FUNCTION TABLE

KEY No.	FUNCTION	KEY No.	FUNCTION
18	CASH2	38	RFND
19	PLU	39	RFSAL
20	#/TM	40	TAX
21	MDST	41	RA
22	CONV	42	PO
23	PRINT	43	NS
24	RCPT	44	CHK
25	TX1SF	45	CH1
26	TX2SF	46	CH2
27	TX3SF	47	CH3
28	FSSFT	48	CH4
29	VOID	49	CH5
30	%1	50	FSTND
31	%2	60	DEPT01
32	%3	?	?
33	%4	99	DEPT40
34	(-) 1	100	DIRECT PLU No.1
35	(-) 2	?	?
36	(-) 3	225	DIRECT PLU No.126
37	(-) 4	999	INHIBIT

Fig. 7-2. Key No. to Function Table

ER3220 KEY LOCATION No. LIST

									50	57	64	71	78	85	92	99	106
									49	56	63	70	77	84	91	98	105
5	10			23	@/FOR	.	CL	43	48	55	62	69	76	83	90	97	104
4	9	14	18	22				42	47	54	61	68	75	82	89	96	103
3	8	13	17	21				41	46	53	60	67	74	81	88	95	102
2	7	12	16	20				40	45	52	59	66	73	80	87		101
1	6	11	15	19	24			39	44	51	58	65	72	79	86		100

Fig. 7-3 (a) : Fixed area

ER3220 KEY LOCATION No. LIST (on additional keyboard ER-02KP)

119	132	145	158	171	184	197	210
118	131	144	157	170	183	196	209
117	130	143	156	169	182	195	208
116	129	142	155	168	181	194	207
115	128	141	154	167	180	193	206
114	127	140	153	166	179	192	205
113	126	139	152	165	178	191	204
112	125	138	151	164	177	190	203
111	124	137	150	163	176	189	202
110	123	136	149	162	175	188	201
109	122	135	148	161	174	187	200
108	121	134	147	160	173	186	199
107	120	133	146	159	172	185	198

Fig. 7-3(b)

7-4. SRV mode program reports

The two kinds of SRV mode program reports are available as shown below:

JOB #900: SRV mode program full item report (excluding keyboard layout)

JOB #950: Keyboard layout report



```

01/01/00 12:00AM
000 #0001

#900

901# 0002
902# 0000
903# 0000
904# 1500
905# 0000
906# 0022
907# 0000
908# 0000
909# 0000
910# 2000
911# 0000
912# 0000
913# 1004
914# 0002
915# 0001
916# 0000
917# 0000
918# 0003
919# 0000
930# Z1 0000
931# Z2 0000
933# Z1 0000
934# Z1 0000
935# Z1 0000

GT1 $0000000000.00
GT2 $0000000000.00
GT3 $0000000000.00

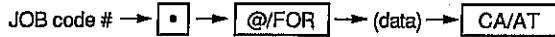
944# 0000
    
```

## 8. PGM1, PGM2 (PROGRAM) MODES

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

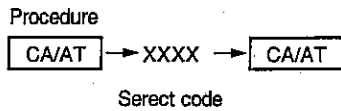
In the PGM1 mode, it is possible to see JOB#100 thru #199 (100 series). In the PGM2 mode, it is possible to see JOB#200 thru #299 (200 series), in addition to the PGM1 mode (100 series). Descriptions will be provided later in the section discussing details.

Basic programming format for PGM1 and PGM2 modes areas follows:



### Secret code entry

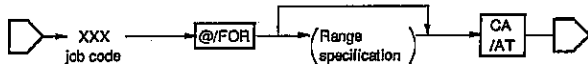
To start the operation of ECR in PGM2, PGM1, X1, Z1/X2/Z2 mode, the secret code which has been preset for the each mode should be entered by the following procedure.



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
120*	PLU code programming
130	Programming of % rates and other functions (including the programming for the method of each transaction)
240	Tax table programming
150	Cashier 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.

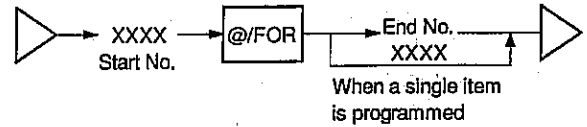
The reports on those programming jobs whose job codes are between 200 and 299 can be printed in the PGM2 mode.

★

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.



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

### 8-2 JOB CODE LIST

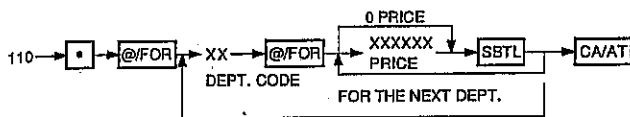
JOB NO	PROGRAMMING	Page
110	DEPT. PRICE	27
210	DEPT. FUNCTION	27
211	DEPT. MODIFY	27
212	AMOUNT LIMIT FOR DEPTS	27
214	DEPT. TEXT	27
215	DEPT. Group	27
121	PLU ASSOCIATED-DEPT	27
120	PLU PRICE	28
221	PLU MODIFY	28
224	PLU TEXT	28
229	DIRECT PLU KEY	28
130	RATE	28
230	MISC KEY PROGRAMMING 1	28
231	MISC KEY PROGRAMMING 2	28
232	MISC KEY AMOUNT LIMIT	29
234	TEXT SETTING	29
235	MISC KEY PROGRAMMING 3	29
236	MISC KEY PROGRAMMING 4	29
240	TAX TABLE	29
241	% TAX	30
154	CASHIER TEXT	30
259	CASHIER DRAWER NO.	30
250	DATE	30
251	TIME	30
252	MACHINE NO.	30
253	CONSECUTIVE NO.	30
254	LOGO MESSAGE	30
255	VP MISC	31
256	OPTIONAL FEATURE	31
257	SENTINEL AMOUNT	31
260	MEDIA KEY PROGRAMMING	31
261	MEDIA KEY HALO -1	32
262	MEDIA KEY HALO -2	32
263	MEDIA KEY REPORT FORMAT	32
270	TILL TIMER	33
274	CHECK VP MESSAGE	33
280-282	SECRET CODE	33
286	STACK REPORT	33



### 8-3 PROGRAMMING

[JOB#110]

PROGRAMMING OF DEPT. PRICE



XXXXXX: 0-999999

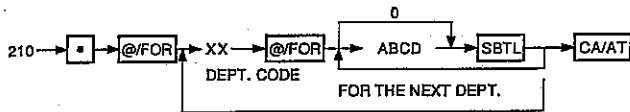
Preset price is max. 6 digits.

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



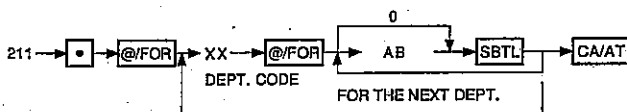
This programming is intended to decide whether or not to inhibit depts, to select preset or keyboarded price, to decide whether or not to finalize the transaction with dept. Key, to assign hash and promotion depts., and to select whether or not to enforce validation printing.

- A: HASH/NORMAL = 1/0
- B: VALIDATION COMPULSORY/NON-COMPULSORY = 1/0
- C: SINGLE ITEM FINALIZE = 2
- SINGLE ITEM CASH SALE = 1
- NORMAL = 0
- D: OPEN & PRESET = 3
- PRESET = 2
- OPEN = 1
- INHIBIT = 0

MRS = 0001

[JOB#211]

DEPT. MODIFY PROGRAMMING



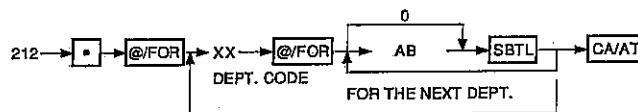
This programming is intended to decide the sign, tax status, and food stamp status.

- A: SIGN - = 1
- + = 0
- B: FOOD STAMPABLE = 1
- NON-FOOD = 0
- C: Taxable by TAX 3 = 1
- Non-taxable 3 = 0
- D: Taxable by TAX 2 = 1
- Non-taxable 2 = 0
- E: Taxable 1 = 1
- Non-taxable 1 = 0

MRS = 00000

[JOB#212]

PROGRAMMING OF THE AMOUNT LIMIT FOR DEPTS.



A: MAX DIGIT FIGURE = 1-9

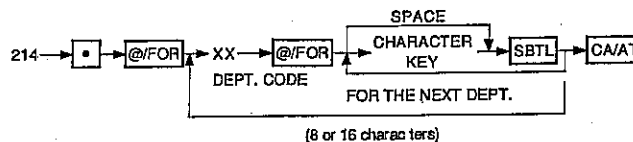
B: NO. OF ZEROS FOLLOWING THE MAX. = 0-7

MRS = 17

"17" stands for 1000000. Up to 9999999 can be entered as amount.

[JOB#214]

DEPT. TEXT PROGRAMMING

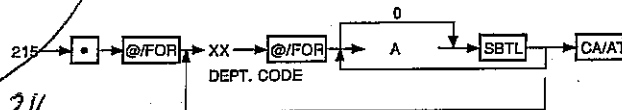


Characters can be entered by using alphabetic keys or numeric keys. Please refer to section 8-4 character assignment method. (Page 33)

MRS = DEPT. XX

[JOB#215]

PROGRAMMING OF DEPT. Group



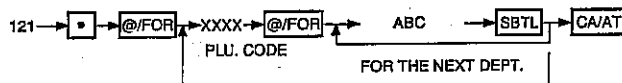
DEPT. code: 01-40

A: Group number (0-9)

MRS = 0

[JOB#121]

PROGRAMMING OF DEPARTMENTS TO BE ASSOCIATED WITH PLU'S



a: DELETE/PLU/SUB-DEPT/INHIBIT = 3/2/1/0

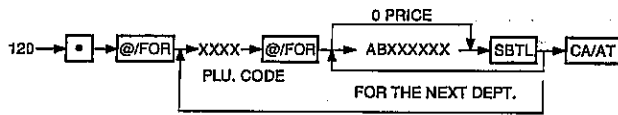
bc: DEPT. CODE = 1-40

"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 (only PLU 001-020).

[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.

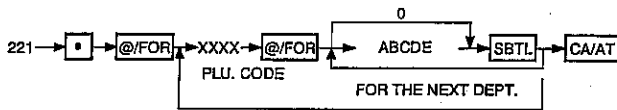
Price programming for a PLU requires that the PLU has been created in JOB#121.

Note: When a sub-department is programmed, the price becomes the High amount limitation of the sub-department.

MRS = 0.00

[JOB#221]

PLU MODIFY PROGRAMMING



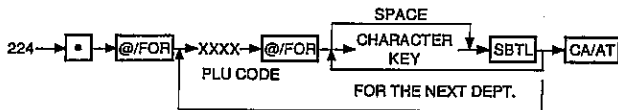
This programming is intended to decide the sign, tax status, and food stamp status for PLU's.

A: SIGN - = 1  
 + = 0  
 B: FOOD STAMPABLE = 1  
 NON-FOOD = 0  
 C: Taxable by TAX 3 = 1  
 Non-taxable 3 = 0  
 D: Taxable by TAX 2 = 1  
 Non-taxable 2 = 0  
 E: Taxable by TAX 1 = 1  
 Non-taxable 1 = 0

NRS = 0000

[JOB#224]

PLU TEXT PROGRAMMING



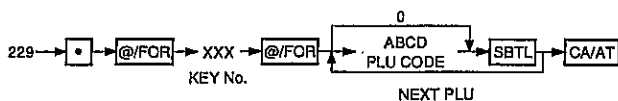
Characters can be entered by using alphabetic keys or numeric keys. Please refer to section 8-4 character assignment method. (Page 33)

UP TO 8 (OR 16) CHARACTERS CAN BE PROGRAMMED.

MRS = PLU-xxxx

[JOB#229]

PLU CODE DEFINITION FOR DIRECT PLU KEYS



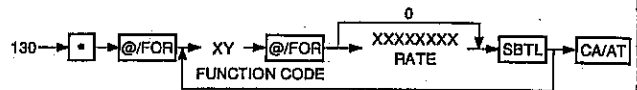
PLU code is assigned to the key no. Which has been programmed in job#950 programming.

abcd: PLU CODE = 1-9999

[JOB#130]

RATE PROGRAMMING

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



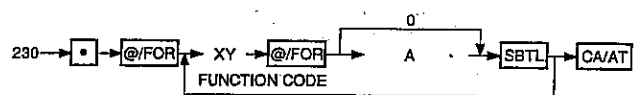
xy: %1 = 7  
 %2 = 8  
 %3 = 9  
 %4 = 10  
 CONVERSION = 56

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

MRS = 0

[JOB#230]

MISC KEY PROGRAMMING - 1

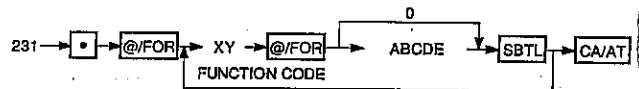


This programming is intended to select whether or not to enforce various functions.

xy: RA = 51  
 PO = 52  
 CHECK CASHING OPERATION = 53  
 A: VALIDATION COMPULSORY (RA, PO)/NON ADD CODE ENTRY COMPULSORY (CASH CHECK) NONCOMPULSORY = 0  
 COMPULSORY = 1

[JOB#231]

MISC KEY PROGRAMMING - 2



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

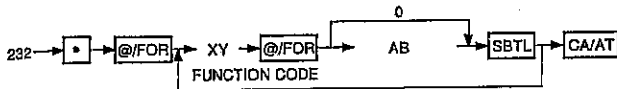
xy: %1 = 7  
 %2 = 8  
 %3 = 9  
 %4 = 10  
 (-)1 = 3  
 (-)2 = 4  
 (-)3 = 5  
 (-)4 = 6

A: SIGN- = 1  
 + = 0  
 B: FOOD STAMPABLE = 1  
 NON-FOOD = 0  
 C: Taxable by TAX 3 = 1  
 Non-taxable 3 = 0  
 D: Taxable by TAX 2 = 1  
 Non-taxable 2 = 0  
 E: Taxable by TAX 1 = 1  
 Non-taxable = 0

MRS = 10000

[JOB#232]

PROGRAMMING OF THE AMOUNT LIMIT FOR MISC KEYS

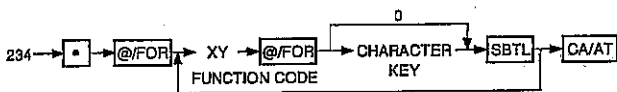


- xy: (-)1 = 3  
 (-)2 = 4  
 (-)3 = 5  
 (-)4 = 6  
 TAX = 22  
 RA = 51  
 PO = 52

A: MAX DIGIT FIGURE = 1-9  
 B: NO. OF ZEROS FOLLOWING THE MAX. DIGIT FIGURE= 0-7  
 MRS = 17, 18 (FOR RA and PO)

[JOB#234]

TEXT PROGRAMMING FOR MISC KEYS



- xy: FUNCTION CODE  
 (8 or 16 characters)

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

Please refer to section 8-4 character assignment method. (Page 33)

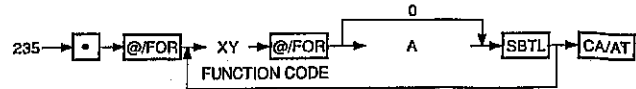
FUNCTION LIST

NO.	FUNCTION	DEFAULT
1	+DEPT TTL	*DEPT TL
2	-DEPT TTL	DEPT (-)
3	(-)1	(-)1
4	(-)2	(-)2
5	(-)3	(-)3
6	(-)4	(-)4
7	%1	%1
8	%2	%2
9	%3	%3
10	%4	%4
22	NET M-TAX	M-TAX
28	VOID	VOID
32	REFUND	REFUND
37	NOSALE	NOSALE
48	CASH	CASH
49	CASH2	CASH2
51	RA	RA
52	PO	PO
56	CONVERSION	CONV
58	CHARGE1	CHARGE1
59	CHARGE2	CHARGE2
60	CHARGE3	CHARGE3
61	CHARGE4	CHARGE4

62	CHARGE5	CHARGE5
63	CHECK	CHECK
76	SUBTOTAL	SBTL
78	TOTAL	***TOTAL
79	CHANGE	CHANGE

[JOB#235]

MISC KEY PROGRAMMING - 3



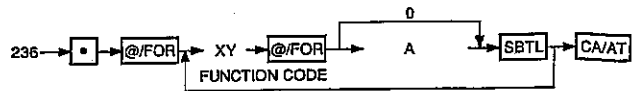
- xy: %1 = 7  
 %2 = 8  
 %3 = 9  
 %4 = 10

A: ITEM % = 1  
 SBTL % = 0

MRS = 0

[JOB#236]

MISC KEY PROGRAMMING - 4



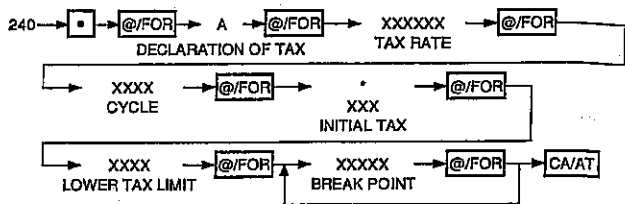
- xy: (-)1 = 3  
 (-)2 = 4  
 (-)3 = 5  
 (-)4 = 6

A: STORE (-) = 1  
 VENDER (-) = 0

MRS = 0

[JOB#240]

TAX TABLE PROGRAMMING



72 breakpoints can be programmed.

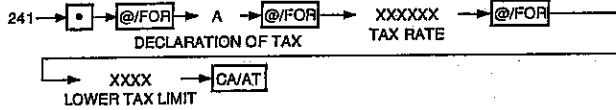
\* Depression of the [#ST] key at the following points means a tax table delete operation.

- A: TABLE 1 PROGRAMMING = 1  
 TABLE 2 PROGRAMMING = 2  
 TABLE 3 PROGRAMMING = 3

MRS = NO TAX

[JOB#241]

% TAX RATE PROGRAMMING

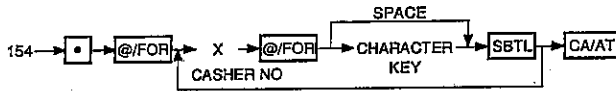


- A: TABLE 1 PROGRAMMING = 1
- TABLE 2 PROGRAMMING = 2
- TABLE 3 PROGRAMMING = 3

% TAX RATE 0.0001-99.9999%  
 LOWER TAX LIMITATION max. 99.99  
 MRS = 0

[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 33)

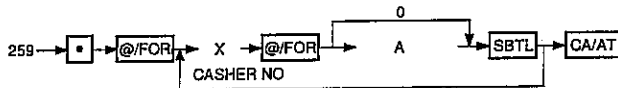
- Cashier NO A = 1
- B = 2
- D = 3
- E = 4

MAX. 8 CHARACTERS

MRS = 'space'

[JOB#259]

CASHIER DRAWER ASSIGNMENT

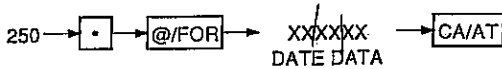


- x: CASHIER NO. (A-E) = 1-4
- a: DRAWER NO. = 1-4
- No drawer = 0

MRS = 1

[JOB#250]

DATE SETTING



The entry format is the same as the print format (which is decided by srv-mode programming).

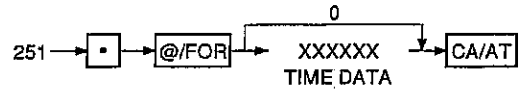
A 6-digit integer must be entered for the date setting.

Entering a zero first causes an error.

MRS = 010100

[JOB#251]

TIME SETTING



xxxx: 0-2359

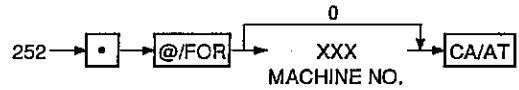
The time must be entered on 24-hour system.

A 4-digit integer or smaller one must be entered for the time setting.

MRS = 0000

[JOB#252]

MACHINE NUMBER

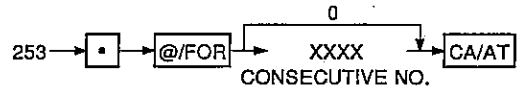


A 3-digit integer or smaller one must be entered for the machine number setting.

MRS = 000

[JOB#253]

CONSECUTIVE NO. SETTING

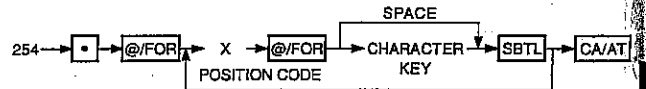


A 4-digit integer or smaller one must be entered for the consecutive no. Setting.

MRS = 0000

[JOB#254]

LOGO TEXT PROGRAMMING



x: 1-6

1
2
3
4
5
6

1 BLOCK MAX. 20 CHARACTERS

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

Please refer to section 8-4 character assignment method. (Page 33)

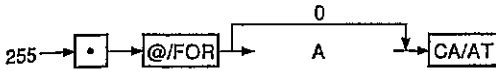
MRS = 'space'

**NOTE**

This programming is related to JOB#912D programming.  
 Only when "6-line header instead of 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]**

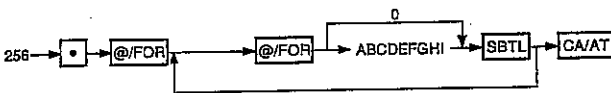
**PROGRAMMING OF NO. OF TIMES OF VALIDATION PRINTING**



a: NO. OF TIMES OF VALIDATION PRINTING = 0-9  
 MRS = 1

**[JOB#256]**

**OPTIONAL FEATURE PROGRAMMING**



A: Refund sales key depression in REG mode

Allowed	0	★
Inhibited	1	

B: Sub-total void in REG mode

Allowed	0	★
Inhibited	1	

C: Past item void in REG mode

Allowed	0	★
Inhibited	1	

D: Last item void in REG mode

Allowed	0	★
Inhibited	1	

E: Refund key depression in REG mode

Allowed	0	★
Inhibited	1	

F: OP X/Z mode

Allowed	0	★
Inhibited	1	

G: Not used (Fixed to "0")

H: Journal select function

Normal print	0	★
Journal select	1	

I: Time print format

No print in Receipt and Journal	0	
Print in Receipt only	1	
Print in Journal only	2	
Print in Receipt and Journal	3	★

MRS = 010000003

**[JOB#257]**

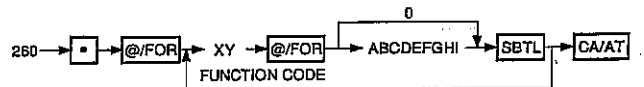
**SENTINEL AMOUNT PROGRAMMING**



xy: FUNCTION CODE SENTINEL = 65  
 xxxxxxxx: AMOUNT LIMIT = 0-999999999  
 MRS = 9999999.99

**[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

A: Non-add code entry

Non-compulsory	0	★
Compulsory	1	

B: Change due

Enable	0	★
Disable	1	

C: Validation print

Non-compulsory	0	★
Compulsory	1	

D: Taxable 3 delete

No	0	★
Yes	1	

E: Taxable 2 delete

No	0	★
Yes	1	

F: Taxable 1 delete

No	0	★
Yes	1	

G: Drawer open

Yes	0	★
No	1	

H: Entry of amount tendered

Cash/check/FS TEND

Non-compulsory	0	★
Compulsory	1	

Charge

Inhibited	0	★
Compulsory	1	

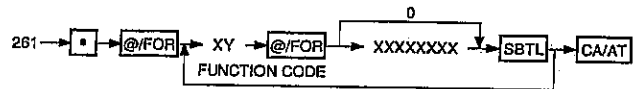
MRS = 00000000

Function No.	Function	A	B	C	D	E	F	G	H
48	CA1	○	x	○	○	○	○	○	○
49	CA2	○	x	○	○	○	○	○	○
63	CHK	○	○	○	○	○	○	○	○
50	FS TEND	○	○	○	○	○	○	○	○
58	CH1	○	○	○	○	○	○	○	○
59	CH2	○	○	○	○	○	○	○	○
60	CH3	○	○	○	○	○	○	○	○
61	CH4	○	○	○	○	○	○	○	○
62	CH5	○	○	○	○	○	○	○	○

\* Items marked with a circle (○) are programmable.

[JOB#261]

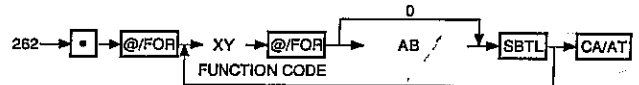
MEDIA KEY HALO-1



xy: FUNCTION CODE  
 CHECK CHANGE = 54  
 CASH CHECK = 53  
 xxxxxxxx: AMOUNT LIMIT = 0-99999999  
 MRS = 999999.99

[JOB#262]

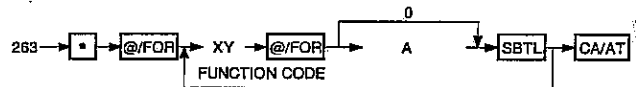
MEDIA KEY HALO-2



xy: FUNCTION CODE  
 CASH = 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. DIGIT FIGURE = 0-8  
 MRS = 18

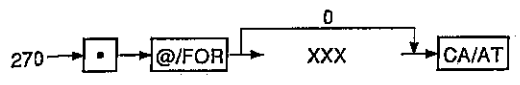
[JOB#263]

MEDIA KEY FULL ITEM REPORT PRINT FORMAT PROGRAMMING



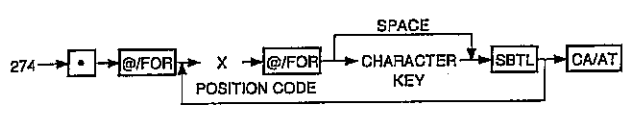
xy: FUNCTION CODE  
 CASH = 48  
 CA2 = 49  
 CHK = 63  
 CH1 = 58  
 CH2 = 59  
 CH3 = 60  
 CH4 = 61  
 CH5 = 62  
 A: NORMAL PRINT & SPECIAL ST PRINT = 3  
 NORMAL PRINT & ADDITION TO SPECIAL ST = 2  
 NORMAL PRINT & 1 LINE FEED = 1  
 NORMAL PRINT = 0  
 MRS = 0

[JOB#270]  
PROGRAMMING OF THE TIME INTERVAL FOR THE TILL TIMER

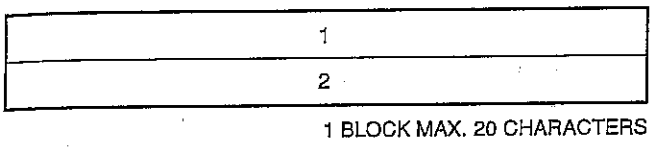


x: 0-255 sec  
MRS = 000

[JOB#274]  
CHECK VALIDATION MESSAGE PROGRAMMING



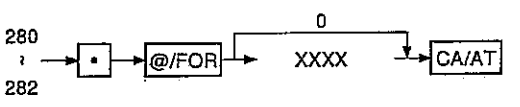
x: 1-2



Characters can be entered by using alphabetic keys or numeric keys.  
2#286 Please refer to section 8-4 character assignment method.  
(Page 33)

MRS = FOR DEPOSIT ONLY — 1st line  
— 2nd line all space

[JOB#280, 281, 282]  
SECRET CODE PROGRAMMING

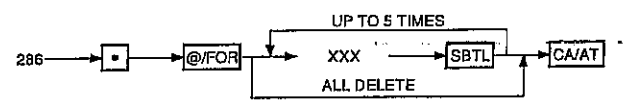


#280: PGM1 MODE  
#281: Z1 MODE  
#282: Z2 MODE

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

MRS = 0000

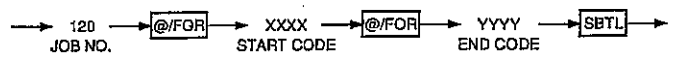
[JOB#286]  
STACK REPORT



xxx: Report JOB code

100	General report
104	(GT reset)
160	Hourly report
150	Full cashier daily total report
120	PLU report *
131	Cash-in-drawer report

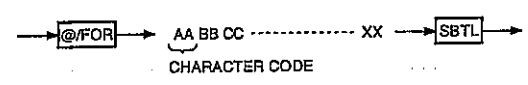
\*: When printing a stacked report by using job code number 120. You can optionally specify the range of report.



8-4. Character assignment method

The ER-3220 has two kinds of method of character assignment. One is to use ten keys (code entry) and other one is to use alphabetic assigned key (ER-02KP).

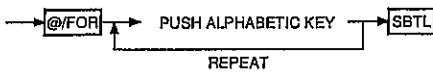
Using ten keys



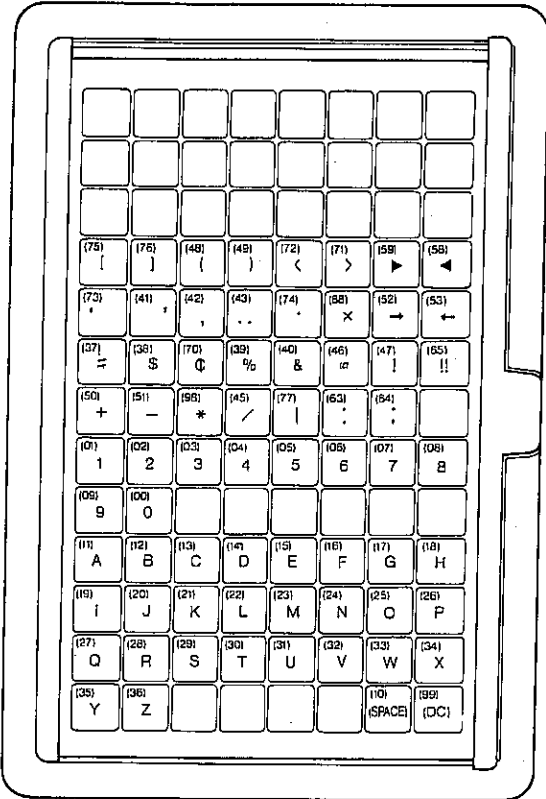
[Alphanumeric character code table]

Code	Char.	Code	Char.	Code	Char.	Code	Char.	Code	Char.	Code	Char.	Code	Char.	Code	Char.	Code	Char.	Code	Char.
00	0	10	Space	20	J	30	T	40	&	50	+	60	∞	70	∅	80	À	90	Ó
01	1	11	A	21	K	31	U	41	'	51	-	61	∞	71	>	81	Ê	91	ú
02	2	12	B	22	L	32	V	42	, 52	→	62	1/2	72	<	82	Ë	92	û	
03	3	13	C	23	M	33	W	43	.	53	←	63	:	73	'	83	Ë	93	ù
04	4	14	D	24	N	34	X	44	*	54	Ä	64	;	74	.	84	í	94	Æ
05	5	15	E	25	O	35	Y	45	/	55	Ö	65		75	[	85	î	95	£
06	6	16	F	26	P	36	Z	46	@	56	Ü	66	1	76	]	86	ï	96	Ñ
07	7	17	G	27	Q	37	#	47	!	57	8	67	2	77		87	ó	97	f
08	8	18	H	28	R	38	\$	48	(	58	◀	68	x	78	Á	88	ô	98	*
09	9	19	I	29	S	39	%	49	)	59	▶	69	T	79	Â	89	ò	99	(DC)

Using alphabetic assignment method (ER-02KP)



[Keypad layout for alphanumeric character entry]



[Programming double-size characters]

If you enter "99" (double-size character code) before entering a specific character code, that character is printed in double size.

If you wish to print the letter S of the label "STEAK" in double size and the rest in single size, enter codes as follows.

9929      30      15      11      21  
 S      T      E      A      K

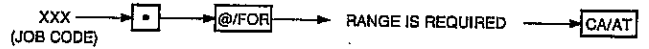
NOTE: Characters can be also programmed by using the character keys of the additional flat keypad (ER-02KP: OPTION).

9. Reading and resetting of sales totals

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

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

To print reports, use the following key entry sequences.



[Report JOB code Table]

Report	Mode and JOB code						Note
	OP X/Z		X1	Z1/X2/Z2			
	X	Z	X	Z1	X2	Z2	
General	—	—	100	100/104	200		104-GT reset (SRV setting)
Individual cashier	51	151		—	—	—	RAM option necessary for MEDIA report
Hourly	All	—	160		—	—	
	Range	—	—	160	—	—	START Time (00-23) → [F10] → END Time
All cashier	—	—	150		—	—	
STACKED Report	—	—	190		—	—	Programmed by PGM #286
Department (Specific dept)	—	—	111	—	211	—	Dept key push
Department (Auto Group)	—	—	112	—	212	—	Group number input (1-9)
Department (All Group)	—	—	113	—	213	—	
PLU	Range	—	120		—	—	START code (xxxx) → [F10] → END code (YYYY) →
	Subsidiary department specify	—	—	121	—	—	Dept number input
Cash in drawer	—	—	131	—	—	—	
Daily net total	—	—	—	—	270		RAM option necessary

Report JOB code



# 10. TEST FUNCTIONS (in SRV mode)

\*1: Before performing these tests, a "Master Reset procedure" must be performed. Otherwise these will not work properly.

## 10-1. General

- (1) This test function is designed to test various operations during field servicing. Test programs are implemented in the ROM of the ER-3220 and executed by the CPU. The following conditions are required for the proper operation of the test program:
  - a) Normal voltage levels to the logic system (5V, P-OFF).
  - b) All I/O signals and CPU logic should be in normal operating condition. An entire CKDCIII and gate array, address bus, data bus, and basic RAM should be in normal working condition.
- (2) Program execution is initiated in the SRV mode. It needs 1 or 2 digits entry plus [SBTL] key depression. Since termination of program varies according to the program executed, it will be discussed in each of program descriptions.
- (3) After program initiation, test command code and test status will be printed on the receipt and journal papers of the printer.
- (4) If power failure occurs during program execution, one of the following actions will take place depending on the MODE switch position at the time of power restoration:
  - a) SRV: Program Reset is performed.
  - b) Other than SRV: Continuous program execution.

## 10-2. List of test functions

No.	JOB #	Test
(1)	1	Cashier/mode switch test
(2)	02	Keyboard test
(3)	3	Display Buzzer test
(4)	4	Receipt ON/OFF switch test
(5)	5 ~ 8	Drawer open/close test
(6)	9	Print test
(7)	92	Validation print test
(8)	95	Print pulse width adjust
(9)	10~12	ROM test
(10)	13, 14	RAM test
(11)	15	Key position code read test
(12)	16	Serial code read test

## 10-3. Test description

### (1) Cashier/Mode switch test

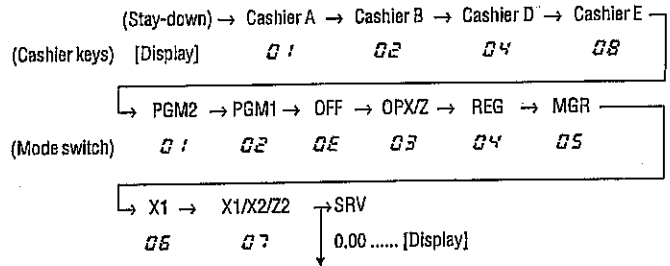
- 1) Key operation to initiate

1 → [SBTL]

Initiate the test program with the cashier A key depressed (When other than A key depressed, Error occurred at terminat.) or without depressing any keys.

- 2) Test procedure

Operate the cashier keys and the mode switch in the sequence as bellow. Check the display at each key and mode switch operation.



While returning the mode switch to SRV mode, no need to check the display.

\* When optional one hole clerk key is installed, use this procedure.

A	B	D	E
01	02	04	08

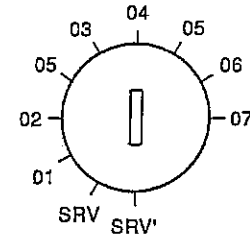
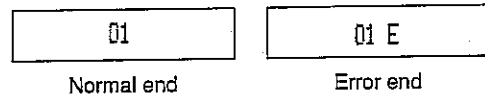


Fig. 10-1 Cashier and mode switch position code

- 3) Termination

To terminate the test, turn the mode switch to SRV mode from other mode. If there is no abnormality, the termination print is made. If there are any abnormalities, the error print is made.



### (2) Keyboard test

- 1) Key operation to initiate

XXXXX → 02 → [SBTL]

Sum check data: 2827 for ER-3220 Main keyboard  
16484 for ER-02KP

- 2) Test procedure

Press all the keys except for the RECEIPT feed key and the JOURNAL feed key, and press the [CA/AT] key at the end.

When the [CA/AT] key is pressed, the sum check data is checked with the actual sum of the key position codes of the pressed keys. (For the key position codes, see the Table of key position codes.) If the sum check data is equal to the actual sum, the termination print is made. If not, the error print is made.

Note: There is no specified sequence in pressing the keys.