

SHARP®

ELECTRONIC CASH REGISTER
CAISSE ENREGISTREUSE ELECTRONIQUE

MODEL
MODELE **ER-A310**

INSTRUCTION MANUAL

MANUEL D'INSTRUCTIONS



INTRODUCTION

Thank you very much for your purchase of the SHARP Electronic Cash Register, Model ER-A310. Please read this manual carefully before operating your machine in order to gain a full understanding of its functions and features.

Please keep this manual for future reference. It will help you if you encounter any operational problems.

IMPORTANT

- **Install your cash register in a location that is not subject to direct radiation, unusual temperature changes, or high humidity or exposed to water sources.**
Installation in such locations could cause damage to the cabinet and the electrical components.
- **The register should not be operated by an individual with wet hands.**
The water could seep into the interior of the register and cause component failure.
- **When cleaning your register, use a dry, soft cloth. Never use solvents, such as benzine and thinner.**
The use of such chemicals will lead to discoloration or deterioration of the cabinet.
- **The register plugs into any standard wall outlet (local voltage $\pm 10\%$ AC).**
Other electrical devices on the same electrical circuit could cause the register to malfunction.
- **If the register malfunctions, call your local dealer for service - do not try to repair the register yourself.**
- **For a complete electrical disconnection, pull out the mains plug.**

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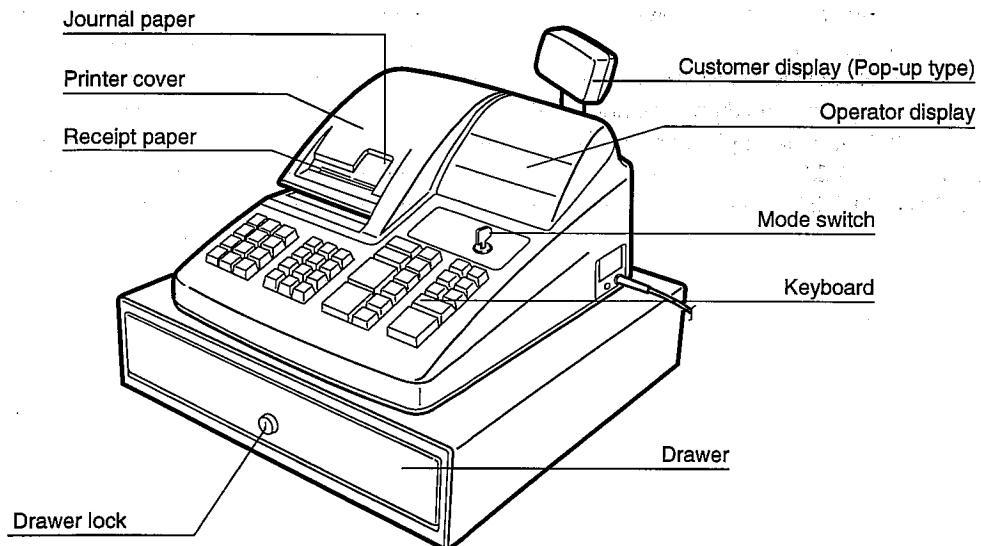
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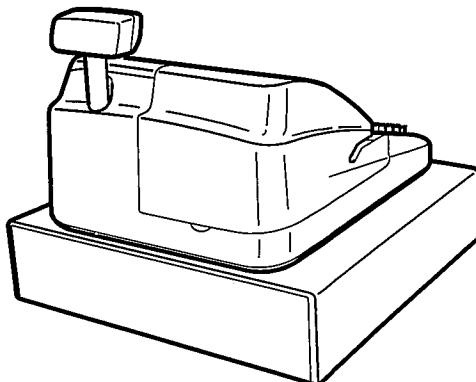
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EXTERNAL VIEW

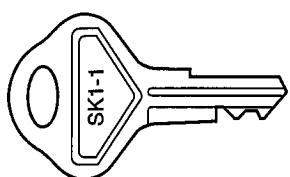
■ Front view



■ Rear view

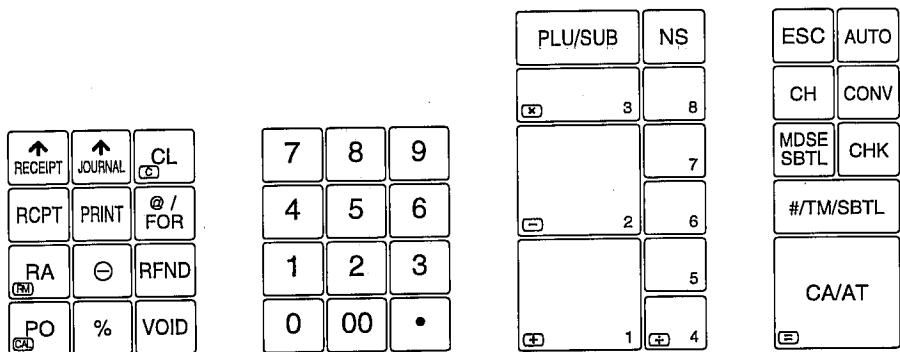


■ Drawer lock key



This key locks and unlocks the drawer. To lock it, turn 90 degrees counterclockwise. To unlock it, turn 90 degrees clockwise.

KEYBOARD



Note

All the keys but the numeric, clear, decimal point, multiplication/split pricing, non-add/time display/subtotal, cash/amount tendered>equals, and two paper feed keys can be changed in their positions. If you want to change the layout, contact your dealer.

■ Standard keys

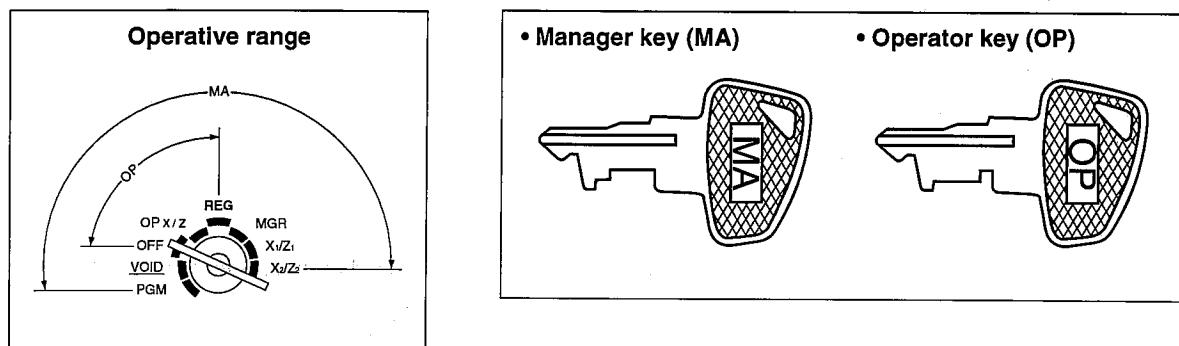
	Receipt paper feed key		Receipt print key
	Journal paper feed key		Discount key
	Numeric keys		Automatic sequencing key
			Percent key
			No-sale key
	Decimal point key		Received-on-account/recall memory key
	Multiplication/split-pricing key		Paid-out/calculation mode key
	Clear key		Refund key
	Validation print key		Void key
	Department 1/plus key		Charge key
	Department 2/minus key		Check key
	Department 3/multiplication key		Conversion key
	Department 4/division key		Merchandise subtotal key
	Department keys		Non-add/time display/subtotal key
	Price lookup/subdepartment key		Cash/amount tendered>equals key
	Error escape key		

■ Optional keys

	Department key		Conversion 2 thru 4 keys
	Department number entry key		Charge 2 key
	Tax 1 thru 4 shift keys		Discount 2 key
	Manual tax key		Percent 2 key
	Cash total 2 key		Automatic sequencing 2 key

MODE SWITCH AND MODE KEYS

The mode switch can be operated by inserting one of the two supplied mode keys - manager (MA) and operator (OP) keys. These keys can be inserted or removed only when the switch is in the "REG" or "OFF" position.



The mode switch has these settings:

OFF: The OFF mode locks all register operations.

No change occurs to register data in this mode.

OP X/Z: This setting allows cashiers to take flash reports (only when your register has been programmed for "OP X/Z mode available" in the PGM mode). It can also be used to display the time, print the employee arrival and departure times, or toggle receipting function status "ON" and "OFF" by pressing the **[RCPT]** key.

REG: For entering sales

PGM: To program various items

VOID: This setting allows correction after finalizing a transaction.

MGR: For manager's entries

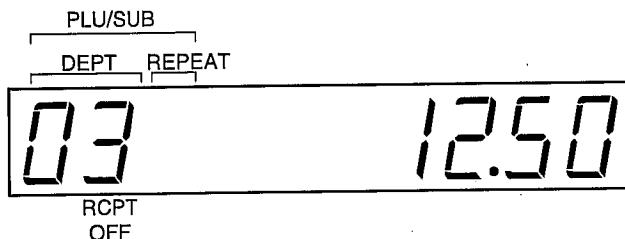
The manager can use this mode for an override entry.

X1/Z1: To take the X/Z report on various daily totals

X2/Z2: To take the X/Z report on various periodic (weekly or monthly) consolidation

DISPLAYS

Operator display



Customer display (Pop-up type)

45678.90

Amount: Appears in the far-right eight (max.) positions.

Number of repeats for repetitive registrations:

The number of repeats is displayed, starting at "2" and incremented with each repeat.

When you have registered ten times, the display will show "0."

Example: (2->3->4.....9->0->1->2...)

Receiving function status:

The indicator "_" appears in the ninth position when the receiving function is put in the OFF status.

Time: Appears in the far-right six positions ("A"-hour-minute or "P"-hour-minute) in the OP X/Z, REG, MGR, or VOID mode. "A" is displayed in the morning (AM), and "P" in the afternoon (PM). In the REG, MGR, or VOID mode, press the **#/TM/STBL** key to display the time.

■ Machine state symbols

P: Appears in the tenth place during programming.

E: Appears in the tenth place when an error is detected.

- (Floating): Appears when a minus department or PLU/subdepartment entry is made or when a discount, refund, or void entry is made.

a: Appears in the tenth place when the tax-included subtotal is displayed or when the amount tendered is smaller than the sale amount.

c: Appears in the tenth place when the **CONV** thru **CONV** key is pressed to calculate a subtotal in foreign currency or your register is in the calculation mode.

F: Appears when a transaction is finalized by pressing the **CNAT**, **CA2**, **CHK**, **CH**, or **CH2** key.

C: Appears when the change due amount is displayed.

L: Appears when the battery replacement is needed.

U: Appears when the validation printing is compulsory.

BEFORE OPERATING THE CASH REGISTER

This chapter describes those steps required to take when you use the cash register for the first time.

1 Installing the cash register

Unpack the cash register and place it in a location near a wall outlet. Be sure to locate it in such a location as described in "IMPORTANT."

2 Initializing the cash register

You must initialize the cash register's memory in advance when programming it for the first time. Use the following procedure:

1. Turn the mode switch to the REG position.
2. Ensure the batteries are not installed in the battery compartment and insert the plug into the outlet.
3. The right most decimal point will blink for a few seconds.
4. The register will sound three beeps.
5. The register will display "L 000."
6. Now proceed with battery installation as described below.

3 Installing batteries

You must install batteries in the cash register. The batteries prevent the data and user-programmed settings from being erased because of an accidental power-down or power failure. Before using the register, purchase and install three AA batteries. They will last approximately one year. If the low battery symbol "L" appears on the far left of the display, you must replace them within two days.

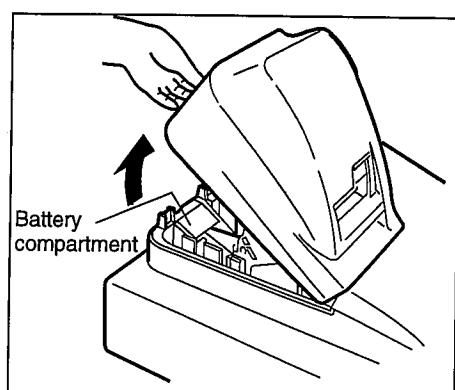
Caution

To protect the AA batteries from failures or leakages:

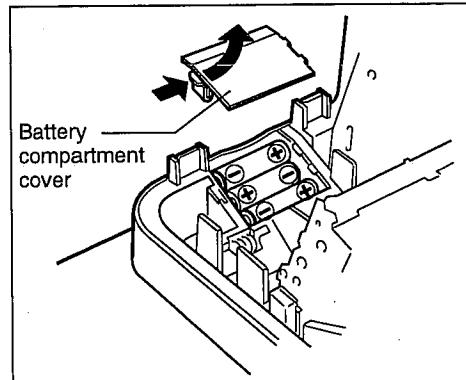
- do not use batteries of different types.
- do not use new batteries with any old ones.
- do not short out any batteries.
- do not disassemble any batteries.
- make sure that the polarity of each battery is correct.
- do not throw any spent batteries into combustible waste.
- do not burn any spent batteries.

To install the batteries:

1. Turn the mode switch to the REG position with the AC cord connected.
2. Remove the printer cover.



3. Open the battery compartment cover.
 - Press the tab in the direction of the arrow then pull and lift the cover to expose the battery compartment.
4. Install the three new AA batteries in the battery compartment and check that the "L" symbol has disappeared.
5. Close the battery compartment cover.
6. Replace the printer cover.

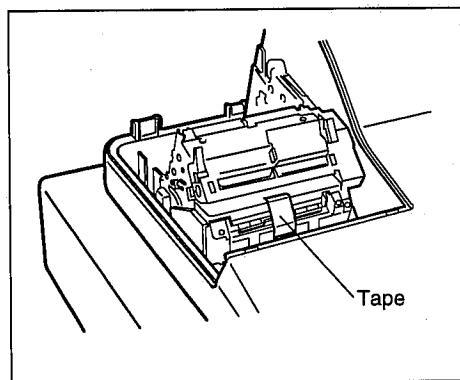


Note Your cash register comes with a battery caution label. Please cut off the appropriate half and attach it to the battery compartment cover.

4 Preparing the paper roll and the ink roller

Before using the cash register, make sure the receipt and journal paper rolls are properly installed. For installing the receipt and journal paper rolls, follow the steps described in "4. Installing and removing the paper roll" under "MAINTENANCE."

Also, as this machine is shipped with the ink roller taped, remove the tape before using the machine.



PRIOR TO ENTRIES

1 Preparations for entries

Before registrations, insert the operator key into the mode switch and turn it to the REG position and check the following items:

■ Receipt and journal paper rolls

If the receipt and journal paper rolls are not set in the machine or there are low rolls, install new ones according to "4. Installing and removing the paper rolls" under "MAINTENANCE."

Receipting function

You can disable receipt printing in the REG mode to save paper using the receipting function. To disable receipt printing, press the **Rcpt** key in the OP X/Z position. This key toggles the receipt printing status ON and OFF. To check the receipt printing status, turn the mode switch to the OP X/Z position or press the **CL** key in the REG mode. When the function is in the OFF status, the receipt off indicator "_" illuminates. Even if the function is in the OFF status, the register prints reports, so always install a receipt roll regardless of the status.

2 Error warning

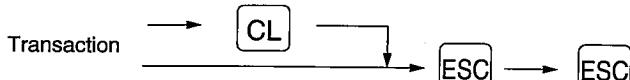
In the following examples, your register will go into an error state accompanied with a warning beep and the error symbol "E" on the display. Clear the error state by pressing the **CL** key and take proper action.

- When you enter an over 13-digit number (entry limit overflow): Cancel the entry and re-enter a correct number.
- When you make an error in key operation: Clear the error and continue operation.
- When you make an entry beyond a programmed amount entry limit: Check to see if the entered amount is correct. If it is correct, it can be rung up in the MGR mode. Contact your manager.
- When an including-tax subtotal exceeds eight digits: Delete the subtotal by pressing the **CL** key and press the **CA1AT**, **CA2**, **CHK**, **CH**, or **CH2** key to finalize the transaction.

■ Error escape function

When you want to quit a transaction because of an error or something uncontrollable, use the error escape function as shown below:

To clear the error state



The transaction is voided and the receipt is issued by this function. If you have already entered tendered amount, the operation is finalized as a cash sale.

ENTRIES

1 Item entries

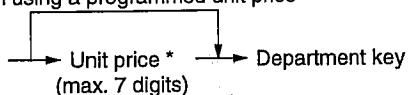
■ Single item entries

Procedure

Department entries (direct entries)

Enter a unit price and press a department key. If you use a programmed unit price, press a department key only.

When using a programmed unit price



*Less than the programmed upper limit amounts

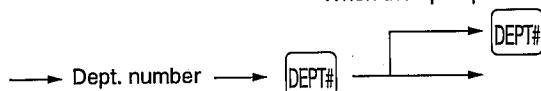
Note

When those departments for which the unit price has been programmed as zero (0) are entered, only the sales quantity is added.

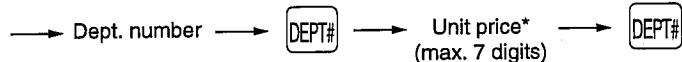
Department entries (indirect entries)

Enter a department number and press the **DEPT#** key.

When the open price entry type is selected



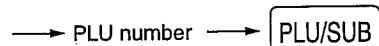
Department entries (open price entries)



*Less than the programmed upper limit amounts

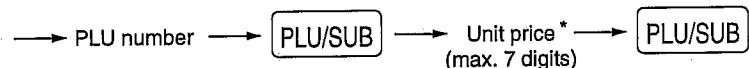
PLU entries

Enter a PLU number and press the **PLU/SUB** key.

**Note**

When those PLUs for which the unit price has been programmed as zero (0) are entered, only the sales quantity is added.

Subdepartment (open PLU) entries



*Less than the programmed upper limit amounts

Example

Selling these items for cash

Dept./PLU no.	Unit price
Dept. 3	\$12.00
Dept. 5	(\$5.00)
Dept. 12	(\$2.00)
Dept. 13	\$10.00
PLU no. 2	(\$1.50)
PLU no. 10	\$12.00

Key operation

1200 [3]
 [5]
 12 [DEPT#]
 13 [DEPT#] 1000 [DEPT#]
 2 [PLU/SUB]
 10 [PLU/SUB] 1200 [PLU/SUB]
 [CAAT]

Print

08-26-97
 03 *12•00
 05 *5•00
 12 *2•00
 13 *10•00
 PL002*1•50
 PL010
 *12•00

*42•50 M

123-1180
 2-37P

■ Repeat entries

You can use this function for entering a sale of two or more same items.

Example

Selling these items for cash

Dept./PLU no.	Unit price	Q'ty
Dept. 5	\$2.00	3
Dept. 13	\$7.15	2
PLU no. 51	(\$2.85)	2
PLU no. 6 (Subdept.)	\$5.00	2

Key operation

Repeated dept. entry (direct) { 200 [5]
 [5]
 [5]
 Repeated dept. entry (indirect) { 13 [DEPT#]
 715 [DEPT#]
 [DEPTH]
 Repeated PLU entry { 51 [PLU/SUB]
 [PLU/SUB]
 Repeated subdept. entry { 6 [PLU/SUB]
 500 [PLU/SUB]
 [PLU/SUB]
 [CAAT]

Print

05 *2•00
 05 *2•00
 05 *2•00
 13 *7•15
 13 *7•15
 PL051*2•85
 PL051*2•85
 PL006*5•00
 PL006*5•00

*36•00 M

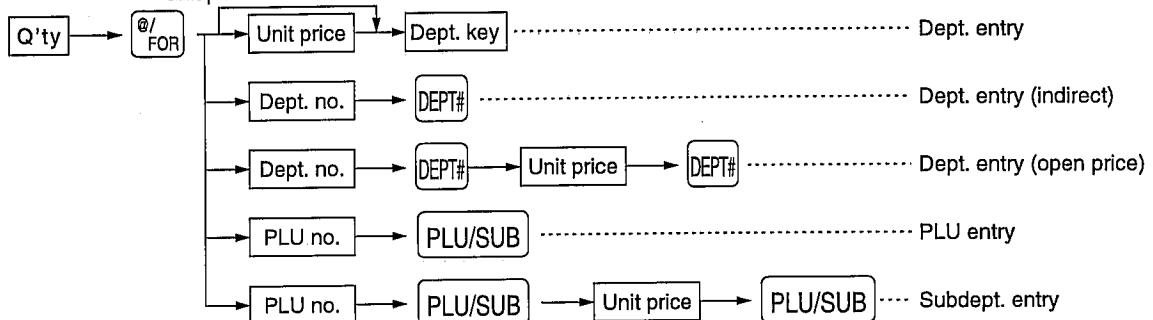
■ Multiplication entries

Use this feature when you need to enter two or more same items.

This feature helps when you sell a large quantity of items or need to enter quantities that contain decimals.

Procedure

When using a programmed unit price



- Q'ty: Up to six digits (integer + decimal)
- Unit price: Less than a programmed upper limit
- Q'ty x unit price: Up to eight digits

Example

Selling these items for cash

Dept./PLU no.	Unit price	Q'ty
Dept. 3	\$1.65	7.5
Dept. 14	(\$3.00)	8.25
PLU no. 13	(\$2.10)	15
PLU no. 60 (Subdept.)	\$1.00	3

Key operation

```

7 • 5 @/FOR
165 3
8 • 25 @/FOR
14 DEPT#
15 @/FOR
13 PLU/SUB
3 @/FOR
60 PLU/SUB
100 PLU/SUB
CA/AT
    
```

Print

```

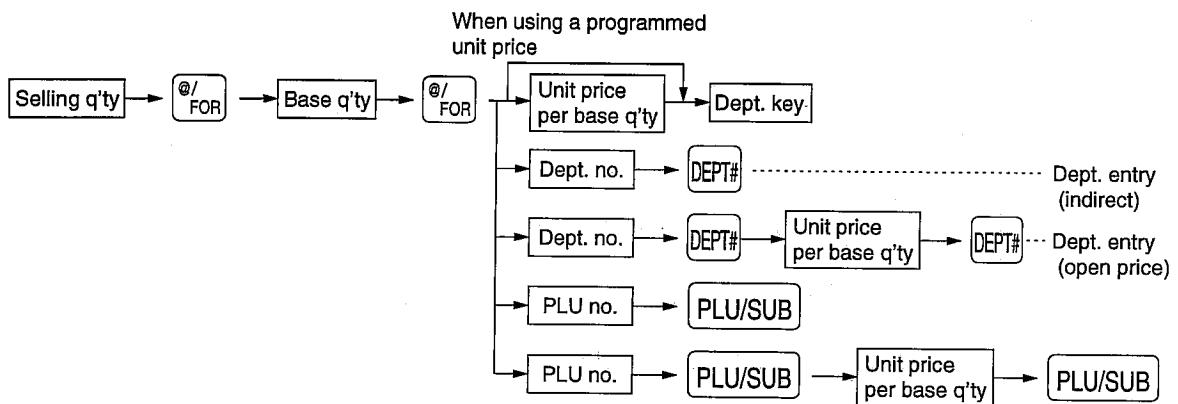
7 • 5 Q
1 • 65 @
03 * 12 • 38
8 • 25 Q
3 • 00 @
14 * 24 • 75
15 Q
2 • 10 @
PL013
* 31 • 50
3 Q
1 • 00 @
PL060 * 3 • 00
    
```

* 71 • 63 Q

■ Split-pricing entries

You will use this function when your customer wants to purchase more or less than the base quantity of a loose item.

Procedure



- Selling quantity: Up to six digits (integer + decimal)
- Base quantity: Up to two digits (integer)

Example

Selling these items for cash

Dept./PLU no.
Dept. 3
PLU no. 17

Base q'ty, unit price per base q'ty
Ten pieces, \$6.00
Five pieces, \$3.00 (programmed)

Selling q'ty
7 pieces
8 pieces

Key operation

7
10
600
8
5
17
PLU/SUB
C/A/T

Print

7	7 Q
10	10
600	6 • 00 @
8	03 * 4 • 20
5	8 Q
17	5
	3 • 00 @
	PL017 * 4 • 80
	★ 9 • 00 M

■ Single item cash sale (SICS) entries

- This function is useful when a sale is for only one item and is for cash; such as a pack of cigarettes. This function is applicable only to those departments that have been programmed for SICS or to PLUs or subdepartments associated with them.
- The transaction is finalized and the drawer opens as soon as you press a department key, **DEPT#** key or **PLU/SUB** key.

Example

Selling a \$2.50 item (department 2, programmed for SICS) for cash

Key operation

250
For finishing
the transaction → **2**

Print

02 *2•50

*2•50 CA

Note

If a ring-up to a department or PLU/subdepartment programmed for SICS follows the ones to departments or PLUs/subdepartments not programmed for SICS, it does not finalize and results in a normal sale.

2 Display of subtotals

Your register provides these three types of subtotals:

■ Merchandise subtotal

Press the **MODE SHIFT** key at any point during a transaction. The net sale subtotal - not including tax - will appear in the display.

■ Taxable subtotal

Taxable 1 subtotal

Press the **TAX1 SHIFT** and **#/TM/SBTL** keys in this order at any point during a transaction. The sale subtotal of taxable 1 items will appear in the display.

Taxable 2 subtotal

Press the **TAX2 SHIFT** and **#/TM/SBTL** keys in this order at any point during a transaction. The sale subtotal of taxable 2 items will appear in the display.

Taxable 3 subtotal

Press the **TAX3 SHIFT** and **#/TM/SBTL** keys in this order at any point during a transaction. The sale subtotal of taxable 3 items will appear in the display.

Taxable 4 subtotal

Press the **TAX4 SHIFT** and **#/TM/SBTL** keys in this order at any point during a transaction. The sale subtotal of taxable 4 items will appear in the display.

■ Including-tax subtotal (full subtotal)

Press the **#/TM/SBTL** key at any point during a transaction. The sale subtotal including tax and the symbol "□" will appear in the display.

3 Finalization of transaction

■ Cash or check tendering

Press the **#/TM/SBTL** key to get an including-tax subtotal, enter the amount tendered by your customer, then press the **CA1/AT** or **CA2** key if it is a cash tender or press the **CHK** key if it is a check tender. When the amount tendered is greater than the amount of the sale, your register will show the change due amount and the symbol “**L**” will light up. Otherwise your register will show a deficit and the symbol “**D**” will light up.

Example Your customer pays \$10.00 for an including-tax subtotal of \$7.35.

Cash tendering

Key operation

7
#/TM/SBTL
1000 CA1/AT

Print

* 7 • 35 TL
* 10 • 00 CA
* 2 • 65 CG

Check tendering

Key operation

7
#/TM/SBTL
1000 CHK

Print

* 7 • 35 TL
* 10 • 00 CK TD
* 2 • 65 CG

■ Mixed tendering (check + cash)

Example Your customer pays \$10.00 by check and \$5.00 in cash for an including-tax subtotal of \$14.56.

Key operation

7
#/TM/SBTL
1000 CHK
500 CA1/AT

Print

* 14 • 56 TL
* 10 • 00 CK TD
* 5 • 00 CA
* 0 • 44 CG

■ Cash or check sale that does not need any tender entry

Enter items and press the **CA1AT** or **CA2** key if it is a cash sale or press the **CHK** key if it is a check sale. Your register will display the total sale amount and the symbol "F."

Example Selling a \$3.00 item (department 5) and another \$7.15 item (PLU no. 10) for cash

Key operation

300 5
10 PLU/SUB
CA1AT

Print

05 *3•00
PL010*7•15
*10•15 CM

In the case of check sale

*10•15 CK

■ Charge (credit) sale

Enter items and press the corresponding charge keys (**CH** and **CH2**).

Example Selling a \$32.50 item (department 3) and accepting the payment by charge 1 account

Key operation

3250 3
CH

Print

03 *32•50
*32•50 CH1

Amount tendering operations (i.e., change calculations) can be achieved by the **CH** or **CH2** key when your register has been programmed to allow for it.

■ Mixed-tender sale (cash or check tendering + charge tendering)

Example Your customer pays \$9.50 in cash and \$40.00 by charge 2 for an including-tax subtotal of \$49.50.

Key operation

7
#/TM/SBTL
950 CA1AT
CH2

Print

*49•50 TL
*9•50 CM
*40•00 CH2

Note

Press the **CHK** key, the **CH** or **CH2** key in place of the **CA1AT** key when your customer makes payment by checks or by charge account.

4 Tax calculations

■ Automatic tax

When your register is programmed with a tax table (or tax rate) and the tax status of an individual department and PLU is programmed for taxable, it computes the automatic tax on any item that is entered directly into the department or indirectly via a related PLU.

Example Selling five \$6.70 items (department 1, taxable 2) and one \$7.15 item (PLU no. 8, taxable 1) for cash

Key operation	Print
5 <small>8/</small> 670 1 8 PLU/SUB CA/AT	5 Q 6 • 70 @ 01 *33•50 TX2 PL008*7•15 TX1 *40•65 ST *0•43 TX1 *1•34 TX2 *42•42 CA

■ Manual tax

Your machine allows you to enter tax manually after an item entry.

Example Selling an \$8.00 item (department 3) for cash with 50 cents as tax

Key operation	Print
800 3 50 TAX CA/AT	03 *8•00 *0•50 TX *8•50 CA

■ Automatic-tax delete

You can delete the automatic tax on the taxable 1, taxable 2, taxable 3 and taxable 4 subtotal of each transaction by pressing the **TAX** key after the subtotal is displayed.

Example Selling a \$7.25 item (department 1, taxable 2) and another \$5.15 item (department 4, taxable 1) for cash and entering the sale as a non-taxable one

Key operation	Print
725 1 515 4 TAX SHIFT #/TM/SBTL TAX TAX2 SHIFT #/TM/SBTL TAX CA/AT	01 *7•25 TX2 04 *5•15 TX1 *0•00 TX1 *0•00 TX2 *12•40 CA

■ Tax status shift

Your machine allows you to shift the programmed tax status of each department, $\textcircled{1}$ and $\textcircled{2}$, percent key, or the **PLU/SUB** key by pressing the **TAX1 SHIFT**, **TAX2 SHIFT**, **TAX3 SHIFT**, and/or **TAX4 SHIFT** keys before those keys. After each entry is completed, the programmed tax status of each key is resumed.

Example

Selling the following items for cash with their programmed tax status reversed :

- One \$13.45 item of department 5 (non-taxable) as a taxable 1 item
- One \$7.00 item of PLU no. 25 (non-taxable) as a taxable 1 and 2 item
- One \$4.00 item of department 1 (taxable 2) as a non-taxable item
- Two \$10.50 items of department 4 (taxable 1) as taxable 2 items

Key operation

1345	TAX1 SHIFT	5	
25	TAX1 SHIFT	TAX2 SHIFT	PLU/SUB
400	TAX1 SHIFT	TAX2 SHIFT	2
1050	TAX1 SHIFT	TAX2 SHIFT	4
			4
			CACAT

Print

05	*13•45	TX 1
1025	*7•00	TX 1/2
02	*4•00	TX 2
04	*10•50	TX 2
04	*10•50	TX 2
	*45•45	ST
	*1•23	TX 1
	*1•28	TX 2
*47•96 C		

Note

The entry of a multi-taxable item for PST or GST will be prohibited as follows (for Canada).

In case of; Tax 1: PST, Tax 2: PST,
Tax 3: PST, Tax 4: GST
Taxable 1 and 2 item prohibited
Taxable 1 and 3 item prohibited
Taxable 2 and 3 item prohibited
Taxable 1 and 4 item allowed
Taxable 2 and 4 item allowed
Taxable 3 and 4 item allowed

In case of; Tax 1: PST, Tax 2: PST,
Tax 3: GST, Tax 4: GST
Taxable 1 and 2 item prohibited
Taxable 1 and 3 item allowed
Taxable 2 and 3 item allowed
Taxable 1 and 4 item allowed
Taxable 2 and 4 item allowed
Taxable 3 and 4 item prohibited

5

Auxiliary entries

■ Percent calculations (premium or discount)

- Your register provides the percent calculation for the merchandise subtotal or each item entry.
- Percent rate: 0.01 to 99.99%

Percent calculation for the merchandise subtotal

Example

Selling four \$1.40 items of department 5 and two \$2.25 items of department 3; all these items are sold for cash at a premium of 10%
(This example presupposes that a premium of 10% has been programmed for the **%** key.)

Key operation

4
140
225
3
3
MODE
SBTL
%
CA/AT

Print

4 Q
1 • 40 @
05 * 5 • 60
03 * 2 • 25
.03 * 2 • 25
* 10 • 10 ST
10 • 00 % 1
* 1 • 01
* 11 • 11 CA

Percent calculation for item entries

Example

Selling for cash an \$8.00 item of department 3 at a discount of 15% and another \$5.00 item of PLU no. 50 at a discount of 7.5%

(This example presupposes that a discount of 15% has been programmed for the E2 key.)

Key operation

800 3
50 PLU/SUB
7 • 5 % 2
CA/AT

Print

03 * 8 • 00
- 15 • 00 % 2
- 1 • 20
R 050 * 5 • 00
- 7 • 5 % 2
- 0 • 38
* 11 • 42 CA

■ Discount entries

For discount or coupon tenderings, you may use the E1 or E2 key.

Discount for the merchandise subtotal

Example

Selling a \$5.75 item of department 3 and another \$7.50 item of PLU no. 51 for cash after subtracting the discount amount \$1.00 from the total sale amount

Key operation

575 3
51 PLU/SUB
100 E2
CA/AT

Print

03 * 5 • 75
R 051 * 7 • 50
* 13 • 25 ST
- 1 • 00 E2
* 12 • 25 CA

Discount for item entries

Example Selling a \$6.75 item of department 5 for cash after subtracting the coupon amount 75¢

Key operation	Print
675 5 75 - CART	05 * 6 • 75 - 0 • 75 0 1 * 6 • 00 M

■ Refund entries

If a refund item is to be entered into a department, enter the amount of the refund, then press the **RFND** key and the corresponding department key, or enter the corresponding department number then press the **RFND** and **DEPT#** keys, in this order. If an item entered into a PLU is returned, enter the corresponding PLU number, then press the **RFND** and **PLU/SUB** keys, in this order.

Example Receiving the following items returned:

One \$2.50 item of department 3 and seven \$2.10 items of PLU no.13

Key operation	Print
250 RFND 3 7 0/FOR 13 RFND PLU/SUB CART	03 - 2 • 50 RF - 7 Q 2 • 10 @ M013 - 14 • 70 RF * 17 • 20 CG

■ Printing of non-add code numbers

Enter a non-add code number such as a customer's code number and credit card number within a maximum of 7 digits and press the **#TWSBT** key at any point during the entry of a sale. Your register will print it at once.

Example Selling a \$15.00 item of department 6 by charge account to a customer whose code number is 1230

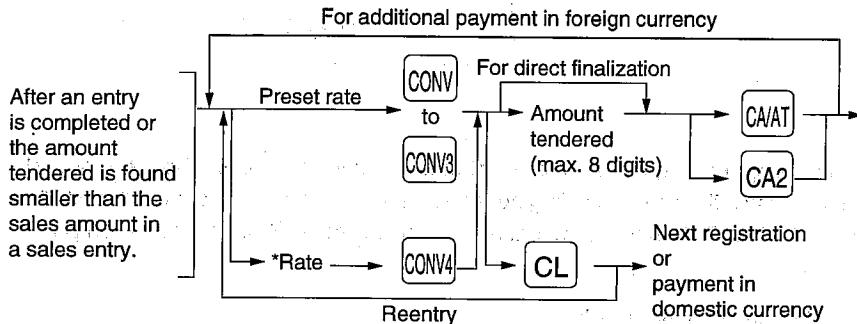
Key operation	Print
1230 #TWSBT 1500 6 CH2	0001230# 06 * 15 • 00 * 15 • 00 M2

6 Payment treatment

Currency conversion

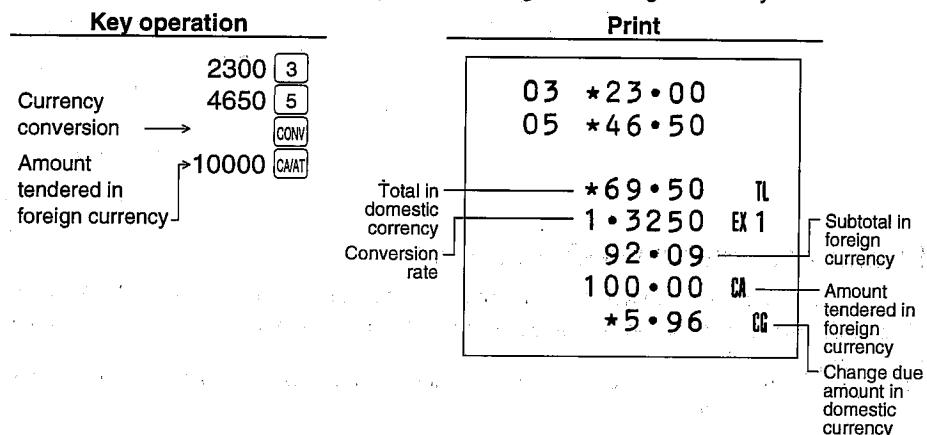
Your register allows payment entries of foreign currency. Pressing the **CONV** key creates a subtotal in foreign currency. Cash alone can be handled after currency conversion.

Procedure



Note When the amount tendered is short, the deficit is shown in domestic currency.

Example To convert the amount owed (\$69.50) into the designated foreign currency

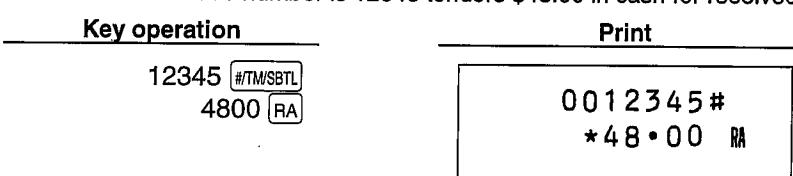


Received on account entries

Procedure

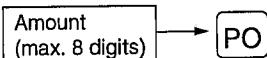


Example A customer whose code number is 12345 tenders \$48.00 in cash for received on account.



■ Paid out entries

Procedure



Example

You pay \$30.00 in cash to a vendor whose code number is 6789.

Key operation

6789 #ITM/SBT
3000 PO

Print

0006789#
*30•00 PO

■ No sale (exchange)

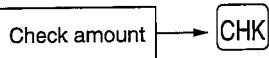
Simply press the **NS** key without any entry. The drawer will open and the printer will print the "NS" on both the journal and the receipt. If you let your machine print a non-add code number before pressing the **NS** key, a no sale entry is achieved with a non-add code number printed.

Print

NS

■ Cashing a check

Procedure



Example

Cashing a check of \$30.00 amount

Key operation

3000 CHK

Print

*30•00 CH

7 Automatic sequencing key (AUTO) entries

You can achieve a programmed transaction simply by pressing a corresponding automatic sequencing key.

Example

Performing the transaction "Selling a \$5.00 item (department 7) for cash" programmed for the

AUTO₂ AUTO₂ = 500 7 CASH

Key operation

AUTO₂

Print

07 *5•00

*5•00 CASH

CALCULATION MODE

You can use your register as a calculator machine in the calculation mode. To go into the calculation mode, press the **CAL** key while the mode switch is in the REG, MGR, or VOID position. In the calculation mode, you can use only keys on which a calculation mark such as **+** and **-** is placed.

■ Basic calculations

The following examples show basic calculation operations:

Example

- $45+32-18=$ 45 **+** 32 **-** 18 **=**
- $(63-57) \times 16=$ 63 **-** 57 **x** 16 **=**
- $(126 \div 3-37) \times 24-9=$ 126 **÷** 3 **-** 37 **x** 24 **-** 9 **=**

■ Using the memory key

You can store or recall a value to or from the calculation memory using the **FM** key in the calculation mode.

Example

Storing "26" to the memory Recalling "26" from the memory

• $26 \times (13+23)=$ 26 **FM** 13 **+** 23 **x** **FM** **=**

Pressing the **FM** key twice will clear the memory.

Recalling a value made in another mode

After going into the calculation mode, pressing the **FM** key recalls the subtotal from the transaction in the registration mode. And after going back to the registration mode, pressing the **FM** key recalls the total made in the calculation mode.

Example

Selling items whose subtotal is \$26.75 and dividing the price by three

Mode	Key operation	Display
(Registration)	Displaying a subtotal	#TM/STBL 2400
↓ (Calculation)	Going into the calculation mode	CAL 0
	Recalling the subtotal	FM 2400
	Dividing the subtotal by three	÷ 3 = 800
↓ (Registration)	Going back to the registration mode and displaying the subtotal	CAL 2400
	Making amount tendered operation for two persons	FM CAT 1600
	Receiving the rest from the third person	FM CAT 800
		CAT 800

CORRECTION

1 Correction of the last entry (direct void)

If you make an incorrect entry relating to a department, PLU/subdepartment, percentage (% or %2), discount (⊖ or ⊖2) or manual tax, you can void this entry immediately by pressing the **VOID** key.

Example

Key operation	Print
1250 6 VOID 2 PLU/SUB %2 VOID 520 8 40 TAX VOID CA/AT	06 *12•50 06 -12•50 VD PL002*1•50 -5•00 %2 -0•08 *0•08 VD 08 *5•20 *0•40 TX -0•40 VD TX *6•70 □

2 Correction of the next-to-last or earlier entries (indirect void)

With the **VOID** key, you can void any incorrect positive department or PLU/subdepartment entry made during a transaction if you discover it before finalizing the transaction (e.g. pressing the **CA/AT** key). This function is applicable to plus department and PLU/subdepartment entries only.

Example

Key operation	Print
Correction of a department entry → 1310 6 1755 7 58 PLU/SUB → 1310 6 Correction of a PLU entry → 58 VOID PLU/SUB CA/AT	06 *13•10 07 *17•55 PL058*3•00 06 -13•10 VD PL058-3•00 VD *17•55 □

Note

To void entries that include a tax status shift, press the **TAX1 SHIFT**, **TAX2 SHIFT**, **TAX3 SHIFT**, and/or **TAX4 SHIFT** keys prior to the **VOID** key.

3 Subtotal void

You can void an entire transaction. Once subtotal void is executed, the transaction is aborted and the register issues a receipt.

Example

	Key operation	Print
Subtotal void	1310 1 35 PLU/SUB #TM/SBTL VOID #TM/BSBT	01 *13•10 M035*3•00 *16•10 ST -16•10 W *0•00 TL

4 Correction of incorrect entries not handled by the direct or indirect void function

Any errors found after the entry of a transaction has been completed or during an amount tendered entry cannot be voided. These errors must be handled by the manager.

CORRECTION AFTER FINALIZING A TRANSACTION

When you need to void incorrect entries that cashiers cannot correct (incorrect entries that are found after finalizing a transaction or cannot be corrected by direct or indirect void), follow this procedure.

1. Turn the mode switch to the **VOID** position using the manager key (MA).
2. Repeat the entries that are recorded on an incorrect receipt. (All data for the incorrect receipt are removed from register memory; the voided amounts are added to the void register totalizer.)

Print

08-26-97

PL001 * 1 • 25
02 * 5 • 00

* 6 • 25 **CA**

123-1259 **WD** ————— Cancellation symbol
1-47P

OVERRIDE ENTRIES

The register allows you to override programmed limit for functions (such as for maximum amounts) in the MGR mode. Turn the mode switch to the MGR position and make an override entry using the manager key (MA).

Example

Selling a \$15.00 item (department 2) for cash and subtracting the coupon amount \$2.50 from the sale amount. (This example presumes that the register has been programmed not to allow coupon entries over \$2.00.)

Key operation

REG-mode entries
1500 **2**
Error..... 250 **②**
CL

Turn the mode switch
to the MGR position.

250 **②**

Return the mode
switch to the REG
position.

CA/AT

Print

02 * 15 • 00
-2 • 50 ②

* 12 • 50 **CA**

SPECIAL PRINTING FUNCTIONS

1 Receipt issuance after finalization

If your customer wants a receipt after you have finalized a transaction with the receipting function being in the "OFF" status (no receipting), press the **RCPT** key. This will produce a receipt.

Note Pressing the **RCPT** key in the OP X/Z mode before registration toggles the status "ON" and "OFF."

Example

Printing a receipt after making the entries shown below with the receipting function being in the "OFF" status

Key operation

850 **2**
CA/AT

Print

(Journal)
08-26-97
02 *8•50
*8•50 CA
123-1251
1-30P

(Receipt)

For receipting→ **RCPT**

08-26-97
02 *8•50
*8•50 CA
123-1251
1-30P

2 Validation printing function

Your register can print a validation on checks, coupons, refunds, etc.

■ Validation slip setting and printing

Insert a validation slip into the printer with its printing side downward (see the figure at right), then press the **PRINT** key.

Note

To insure proper validation, insert the slip securely until it stops.



■ Validation printing examples

Validation printing of item entries

- Department entry

08-26-97	01 *13•50	(Selected by programming)
Date	Amount	
Register no. Consecutive no.		
123-1280	01 *13•50	

- PLU entry

08-26-97	PL002*1•50
----------	------------

- Discount entry (⊖1 and ⊖2)

08-26-97	-7•00 ⊖2
----------	----------

- Refund entry

08-26-97	06 -12•36
----------	-----------

- Void entry

08-26-97	01 -15•00
----------	-----------

Validation printing after the finalization of a transaction

08-26-97	*25•00	TL
	Amount	Transaction symbol

or key

- When an amount tendered entry is made
- When no amount tendered entry is made

Transaction symbol

TL

Amount

Sales amount

Sales amount

key

- When an amount tendered entry is made
- When no amount tendered entry is made
- When a check cashing operation is made

CKTD or TL

CK

CK

Amount tendered (depending upon setup)

Sales amount

Amount for check cashing

or key

key

key

CH1 or CH2

RA

PO

Sales amount

Amount received on account

Amount paid out

Validation printing of the training mode

08-26-97 TR

*2000

Training mode symbol

Note

- When you make an entry for which compulsory validation printing has been programmed, the "U" will light up in the display. Carry out the validation printing. You cannot proceed to any further entry unless this printing is completed.
- Programmed compulsory validation printing can be overridden by performing the following operation.

1. Turn the mode switch to the "MGR" position.

2.  

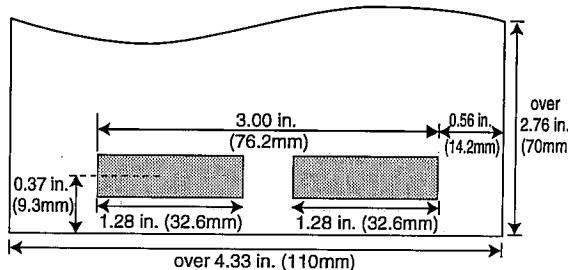
■ Validation slip specification

Make validation slips according to the following specification. The use of any slips other than specified causes the printer to malfunction.

Thickness and weight:

Plain paper: 0.0024 to 0.0035 in. (0.06 to 0.09 mm) thickness
0.12 to 0.14 lbs. (52.3 to 64 g/m²) in weight

Printing position



3 Printing of the employee arrival and departure times

Your register allows the cashier to print the employee arrival and departure times, etc. using the validation printing function.

- Turn the mode switch to the "OP X/Z" position.
- Put a card into the paper chute and perform the following key operation.
 - Arrival time : Numeric key 1 → 
 - Departure time : Numeric key 2 → 
- Sample printout

08-26-97	8-40 1
Arrival time	Departure time
08-26-97	5-10P 2

PROGRAMMING

This chapter illustrates how to program your cash register.

Before you start programming, turn the mode switch to the **PGM position** using the manager key (MA).

■ Direct Programming

1 Setting the date, time, and consecutive number

■ Date

Enter the month (one or two digits), day (two digits), and year (two digits) in this sequence.

Procedure

XXXXXX → #/TM/SBTL
Date (five or six digits)

Example

Aug. 26, 1997

Key operation

082697 #/TM/SBTL

Print

01-01-00

08-26-97

Date

000-0001

12-00P

■ Time

Set the time using the military time (24-hour) system. For example, when the time is set to 2:30 AM, enter 230; and when it is set to 2:30 PM, enter 1430. The time will be printed and displayed on the real-time system. Once you set the time, the internal clock unit will continue to run as long as the built-in battery is alive and update the date (day, month, year) properly.

Procedure

XXXX → #/TM/SBTL
Time (max. four digits)

Example

Setting the time as 2:30 PM (14:30)

Key operation

1430 #/TM/SBTL

Print

08-26-97

2-30P

Time

000-0002

2-30P

■ Consecutive number

The consecutive number is increased by one each time a receipt is issued.

Enter a number (one to four digits) that is one less than the desired starting number.

Procedure

A number (one to four digits) that is one less than the desired starting number → **④ FOR** → **#/TM/SBTL**

Example Setting the count start number as "1001"

Key operation

1000 **④ FOR** **#/TM/SBTL**

Print

08-26-97
1000
000-1000
2-30P

Consecutive number

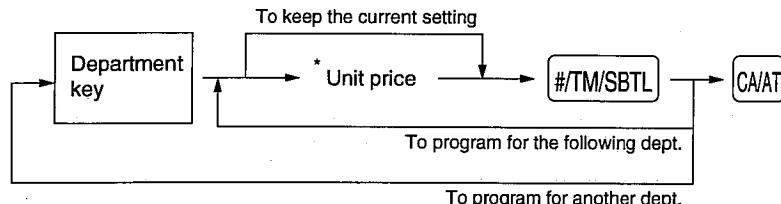
2 Programming for departments

Your machine is equipped with 8 standard departments and up to 30 optional departments.

Your machine allows you to perform the following programming for each department:

■ Unit price

Procedure



* Unit price: max. seven digits (\$999999.99)

Note You may enter a department number and press the **DEPT#** key instead of pressing the actual department key.

Example Programming the unit price \$10.00 for department 1

1. Press the department 1 key.

1

0 1 0 . 0 0

• The current unit price will be displayed.

2. Enter the unit price "1000."

1000

0 1 1 0 0 0

3. Press the **#/TM/SBTL** key to program this setting.

#/TM/SBTL

0 2 0 . 0 0

4. Press the **CA/AT** key to finalize the programming and generate a programming report.

CA/AT

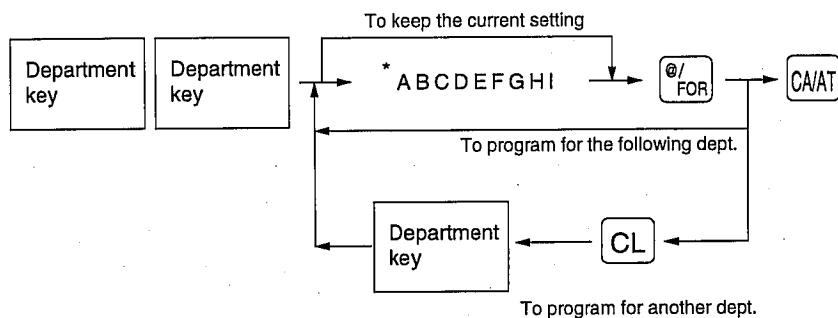
0 . 0 0

Print

01	0003	Dept. no.
00000	IX	
17		
0#		
10.00	Unit price	

■ Functional selection

Procedure



Note

You may enter a department number and press the **DEPT#** key twice instead of pressing the actual department key twice.

* Item	Selection	Entry
A Sign (plus/minus)	Plus	0
	Minus	1
B Always enter 0.		0
C Tax 4 status	Non-taxable	0
	Taxable	1
D Tax 3 status	Non-taxable	0
	Taxable	1
E Tax 2 status	Non-taxable	0
	Taxable	1
F Tax 1 status	Non-taxable	0
	Taxable	1
G Normal/SICS (Single Item Cash Sale)	Normal	0
	SICS	1
H Significant digit for HALO		1 thru 9
I Number of zeros to follow the significant digit for HALO		0 thru 7

Note

Sign (plus/minus)

- Assign a plus sign to departments for normal sales transactions.
- Assign a minus sign to departments for minus transactions.

Tax status (taxable 1 thru 4 / non-taxable)

- When an entry of a taxable department is made in a transaction, tax is automatically computed according to the associated tax table or rate.

Normal department/SICS (Single Item Cash Sale)

- If an entry of a department programmed for SICS is made first, the sale will be finalized as soon as the department key is pressed. If the entry is made after entering a department not programmed for SICS, the sale will not be finalized until the **CA/AT** key is pressed.

HALO (High Amount Lockout)

- You can set an upper limit amount (HALO) for each department. The limit is effective for the REG-mode operations and can be overridden in the MGR mode.

- $H1$ is the same as $H \times 10^1$.

For example, presetting 14 (\$100.00) here means that amount entries of up to \$100.00 are allowed in the REG mode. When you preset 17, however, the upper limit amount is 99999.99.

Example

Programming for department 4 as follows: A=0, B=0, C=0, D=0, E=0, F=1, G=0, H=9, and I=5.

1. Press the department 4 key twice.

4 4

A	B	C	D	E	F	G	H	I
0	0	0	0	0	0	0	1	7

- The current parameter setting will be displayed.

2. Set the parameters as follows:

- You can change the value at the blinker.

Go to the desired position with the following keys:

-Moves the blinker to the right.

0000000017	→	000000017
------------	---	-----------

-Moves the blinker to the left.

000000017	→	000000017
-----------	---	-----------

- Enter the figure.

000001095	→	000001095
-----------	---	-----------

3. Press the **FOR** key to program this setting.

FOR

000000017

4. Press the **CA/AT** key to finalize the programming and generate a programming report.

CA/AT

0 . 0 0

Print

04	0001	Normal dept.
00001	TX	Taxable 1
95		HALO limit
0 #		
0 • 00		Plus dept.

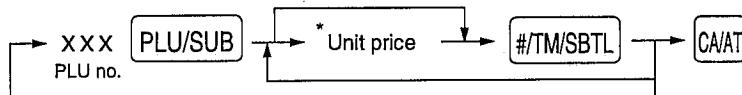
3 Price lookup (PLU) programming

This register can have a maximum of 500 PLUs.

A PLU number can be up to three digits (free code).

■ Unit price

Procedure



*Unit price: max. seven digits (\$99999.99)

Note

The preset amount will work as the unit price for PLUs and as the HALO amount for subdepartments. In the case of subdepartments, a zero preset prevents any amount entry and a 99999.99 preset means no limitation. In the case of PLUs, zero and 99999.99 presets have no special meaning. (i.e. a 0 amount preset is available.)

Example

Programming the unit price \$1.25 for PLU no. 1

1. Enter the PLU number "1" and press the **PLU/SUB** key. 1 **PLU/SUB**
2. Enter the unit price "125." 125
3. Press the **#/TM/SBTL** key to program this setting. **#/TM/SBTL**
4. Press the **CA/AT** key to finalize the programming and generate a programming report. **CA/AT**

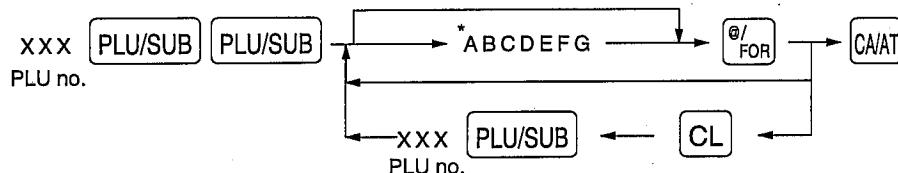
0 0 1	0 . 0 0
0 0 1	1 2 5
0 0 2	0 . 0 0
0 . 0 0	

Print

PLU no.	001	01	00000	TX	2	1.25	Unit price
---------	-----	----	-------	----	---	------	------------

■ Functional selection

Procedure



Item	Selection	Entry
A Sign (plus/minus)	Plus	0
	Minus	1
B Always enter 0.		0
		1
C Tax 4 status	Non-taxable	0
	Taxable	1
D Tax 3 status	Non-taxable	0
	Taxable	1
E Tax 2 status	Non-taxable	0
	Taxable	1
F Tax 1 status	Non-taxable	0
	Taxable	1
G Mode	Prohibit mode	0
	Subdepartment mode	1
	PLU mode	2
	PLU/subdepartment mode	3
	Delete mode	4

Note

Sign (plus/minus)

The function of every PLU/subdepartment varies according to the combination of its sign and the sign of its associated department as follows:

Department	Sign	Function of PLU/subdepartment
	PLU/ subdepartment	
+	+	Serves as a normal plus PLU/subdepartment
-	-	Serves as a normal minus PLU/subdepartment
+	-	Accepts store coupon entries, but not split-pricing entries
-	+	Not valid; not accepted

Tax status (taxable 1 thru 4/non-taxable)

- A PLU not programmed for any of Tax 1 thru Tax 4 is registered depending on the tax status of the department which the PLU belongs to.

Mode parameter

- PLU mode:** Allows a PLU entry to be made by entering an assigned PLU number and depressing the **PLU/SUB** key.
- Subdepartment mode:** Allows a subdepartment entry to be made by entering a unit price and assigned PLU number and then pressing the **PLU/SUB** key.
- PLU/subdepartment mode:** Allows PLU entries to be made in both the PLU and subdepartment modes.
- Delete mode:** Deletes data programmed for each PLU.
- Prohibit mode:** Prohibits the entry of any assigned PLU number and clears no PLU/subdepartment program data.

Example Programming for PLU no. 1 as follows: A=0, B=0, C=0, D=0, E=0, F=1, and G=2.

1. Enter the PLU number "1" and press the **PLU/SUB** key twice.

1 **PLU/SUB** **PLU/SUB**

A B C D E F G

P 0 0 0 0 0 0 2

2. Set the parameters A to G.

0000012

P 0 0 0 0 0 1 2

• You can go to the desired position with the **00** or **•** key.

3. Press the **0/FOR** key to program this setting.

0/FOR

P 0 0 0 0 0 0 2

4. Press the **CA/AT** key to finalize the programming and generate a programming report.

CA/AT

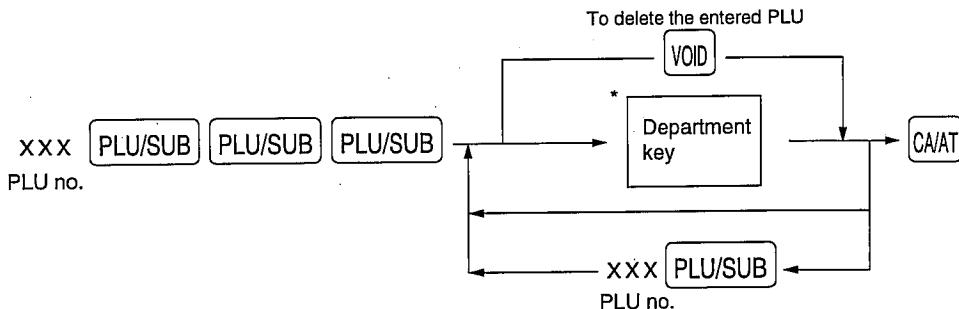
0 . 0 0

Print

PL001	01	Taxable 1
00001	TX	
2		PLU mode
1 • 25		

■ PLU assignment to departments

Procedure



*Department key to be associated with the entered PLU

Note

- You may enter a department number and press the **DEPT#** key instead of pressing the actual department key.
- The following functions of the PLU depend on the programming for its associated department:
 - Type (Hash/Normal)
 - SICS (Single item cash sale)/Normal
 - Item validation print compulsory/non-compulsory

Example

Assigning PLU nos. 1 and 2 to department 2

1. Enter the PLU number "1" and press the **PLU/SUB** key three times.

1 **PLU/SUB** **PLU/SUB** **PLU/SUB**

0 0 1

2. Press the the department 2 key to assign PLU no. 1 to department 2.

2

0 0 2

3. Press the department 2 key to assign PLU no. 2 to department 2.

2

0 0 3 0 1

4. Press the **CA/AT** key to finalize the programming and generate a programming report.

CA/AT

0 . 0 0

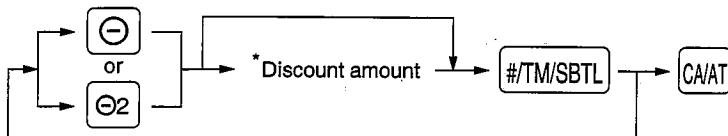
Print

PL001	02	Associated dept.
10001	TX	
2		
1 . 25		
PL002	02	
00000	TX	
2		
0 . 00		

4 Programming for discount keys

■ Discount amount (⊖)

Procedure



*Discount amount: 0 - 9999999

Example Assigning \$10.00 to the ⊖ key

1. Press the ⊖ key.

⊖

0 1 0 . 0 0

2. Enter the discount amount "1000."

1000

0 1 1 0 0 0

3. Press the **#/TM/SBTL** key to program this setting.

#/TM/SBTL

0 1 1 0 . 0 0

4. Press the **CA/AT** key to finalize the programming and generate a programming report.

CA/AT

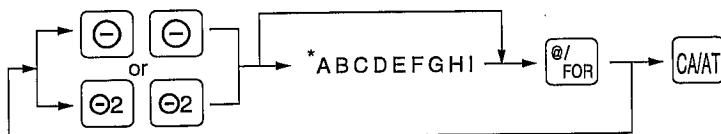
0 . 0 0

Print

-10 . 00	⊖1	Discount amount
00000		
17		

■ High amount lockout (HALO) and tax status (⊖)

Procedure



* Item	Selection	Entry	
A	Always enter 1.	1	
B	Always enter 0.	0	
C	Tax 4 status	Non-taxable Taxable	0 1
D	Tax 3 status	Non-taxable Taxable	0 1
E	Tax 2 status	Non-taxable Taxable	0 1
F	Tax 1 status	Non-taxable Taxable	0 1
G	Always enter 0.	0	
H	Significant digit for HALO	1 thru 9	
I	Number of zeros to follow the significant digit for HALO	0 thru 7	

Note HALO (High Amount Lockout)

Hi is the same as $H \times 10^i$.

For example, presetting 14 (\$100.00) here means that amount entries of up to \$100.00 are allowed in the REG mode. When you preset 17, however, the upper limit amount is 99999.99.

Example Programming for the ⊖ key as follows: A=1, B=0, C=0, D=0, E=0, F=1, G=0, H=1, and I=3.

A B C D E F G H I

1. Press the ⊖ key twice.

⊖ ⊖

1 0 0 0 0 0 0 1 7

2. Set the parameters A to I.

100001013

1 0 0 0 0 1 0 1 3

• You can go to the desired position with the 00 or ▶ key.

3. Press the @/FOR key to program this setting.

@/FOR

1 0 0 0 0 1 0 1 3

4. Press the CA/AT key to finalize the programming and generate a programming report.

CA/AT

0 . 0 0

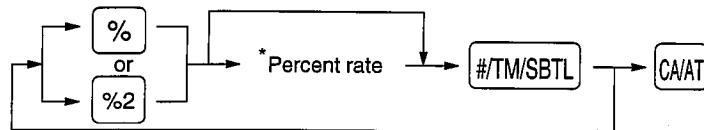
Print

-10.00	⊖1
00001	Taxable 1
13	HALO limit

5 Programming for percent keys

Percent rate (%)

Procedure



* Percent rate: 0.00 - 100.00

Example Assigning 10.25% to the % key

Key operation

% 1025 #/TM/SBTL
CA/AT

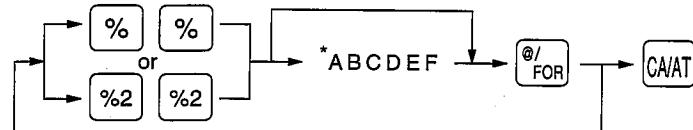
Print

-10.25 %1
00000

Percent rate

Sign (+/-) and tax status (%)

Procedure



* Item

Selection

Entry

A	Sign (plus/minus)	Plus (premium)	0
		Minus (discount)	1
B	Always enter 0.		0
C	Tax 4 status	Non-taxable	0
		Taxable	1
D	Tax 3 status	Non-taxable	0
		Taxable	1
E	Tax 2 status	Non-taxable	0
		Taxable	1
F	Tax 1 status	Non-taxable	0
		Taxable	1

Example

Programming for the % key as follows: A=1, B=0, C=0, D=0, E=1, and F=0.

Key operation

% % 100010 @/ FOR
CA/AT

Print

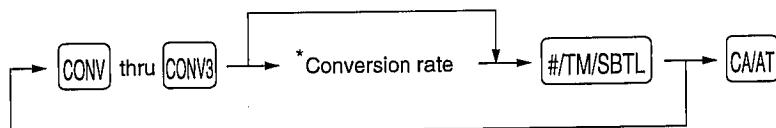
-10.25 %1
00010

Discount
Taxable 2

6 Programming for conversion keys

■ Currency conversion rate (CONV)

Procedure



* Currency conversion rate: 0.0000 - 9999.9999

Example Assigning 1.325 to the CONV key

Key operation

CONV 13250 #TM/SBTL
CA/AT

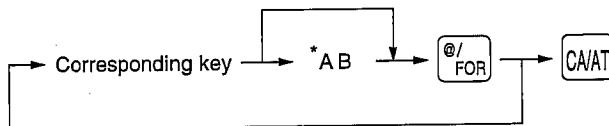
Print

1 • 3 2 5 0 EX 1 Conversion rate

7 Programming for the CA2, RA, PO, CH, CHK, and TAX keys

■ High amount lockout (HALO) (CA2, RA, PO, CH, CHK, and TAX)

Procedure



* AB is the same as A x 10^B

A: Significant digit (1 thru 9)

B: Number of zeros to follow the significant digit (0 thru 8)

Example

Programming a HALO limit of \$1000.00 (15) for the CH2 key

Key operation

CH2 15 @/FOR
CA/AT

Print

15 CH 2 HALO limit
00000000

Job-Code-Based Programming

This section illustrates how to program items using job codes. Using job codes allows you to program a wide variety of items.

Start this programming by entering a corresponding job code as shown below.

2110 →  →  →

All the items which can be programmed by the job-code-based programming are listed on this page and the following, and those which can also be programmed by the direct programming are marked with the symbol “**Direct**” that follows job codes.

1 Setting the date and time

■ Date 2610

Procedure

2610 →  →  → * Date (five or six digits) → 

* Date: Enter the month, day, and year in this order.

■ Time 2611

Procedure

2611 →  →  → * Time (max. four digits) → 

*Time: Enter the hour and minute in this order.

2 Setting the register and consecutive numbers

■ Register number 2612

When your store has two or more registers, it is practical to set unique register numbers for their identification.

Procedure

2612 →  →  → To set the register number “0”
Register number (one to three digits) → 

■ Consecutive number 2613

Procedure

2613 →  →  → To begin the count from 0001
A number (one to four digits) that is one less than the desired starting number → 

3 Programming for the automatic tax calculation function

■ Tax table (applicable to the add-on tax) 2710

Sample tax table (6%)

Taxes	Range of sales amount		
	Minimum breakpoint		Maximum breakpoint
.00	.01	to	.10
.01 → T	.11 → Q	to	.22
.02	.23	to	.38
.03	.39	to	.56
.04	.57	to	.72
.05	.73	to	.88
.06	.89	to	1.10
.07	.111 → M1	to	1.22
.08	1.23	to	1.38
.09	1.39	to	1.56
.10	1.57	to	1.72
.11	1.73	to	1.88
.12	1.89	to	2.10
.13	2.11 → M2	to	2.22

A: Difference between the minimum breakpoint and the next one (¢)	
—	↓ B: Non-cyclic
10 (0.11 - 0.01)	↑
12 (0.23 - 0.11)	↓ C: Cyclic 1
16 (0.39 - 0.23)	↑
18 (0.57 - 0.39)	↓ D: Cyclic 2
16 (0.73 - 0.57)	↑
16 (0.89 - 0.73)	↓
22 (1.11 - 0.89)	↑
12 (1.23 - 1.11)	↓
16 (1.39 - 1.23)	↑
18 (1.57 - 1.39)	↓
16 (1.73 - 1.57)	↑
16 (1.89 - 1.73)	↓
22 (2.11 - 1.89)	↑

T: The tax amount collected on the minimum taxable amount (Q)

Q: The minimum taxable amount

M1: The maximum value of the minimum breakpoint on a regular cycle (C)

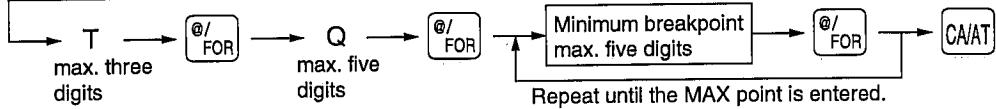
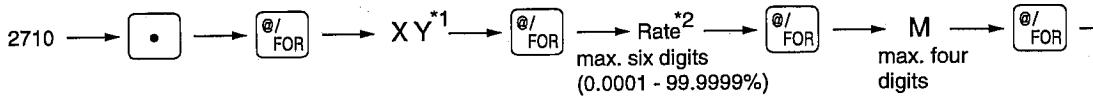
We call this point "MAX point."

M2: The maximum value of the minimum breakpoint on another regular cycle (D)

We call this point "MAX point."

M: Range of the minimum breakpoint on a regular cycle: difference between Q and M1 or between M1 and M2

Procedure



*1 X: Enter "1" when the difference between the minimum breakpoint and the preceding minimum breakpoint is \$1.00 or more. Enter "0" or nothing when the difference is 99¢ or less.

Y: Enter the tax table number. For example, when your tax table is to be programmed as tax table 1, enter "1" and when it is to be programmed as tax table 4, enter "4".

*2 If the rate is fractional (e.g. 4-3/8%), convert the fractional portion (3/8%) to its decimal equivalent (0.378), then enter the resulting rate (4.378). Note that the nominal rate (R) is generally indicated on the tax table.

• If the tax is not provided for every cent, modify the tax table by setting the tax for every cent in the following way.

When setting the tax, consider the minimum breakpoint corresponding to unprovided tax to be the same as the one corresponding to the tax provided on a large amount.

Sample tax table (8%)

Tax	Minimum breakpoint
.00	.01
.01	.11
.02	.26
.03	.47
.04	.68
.06	.89
.09	1.11
.10	1.26
.11	1.47
.12	1.68
.14	1.89
.17	2.11

Modification of the left tax table

Tax	Minimum breakpoint
.00	.01
.01	.11
.02	.26
.03	.47
.04	.68
.06	.89
.09	1.11
.10	1.26
.11	1.47
.12	1.68
.14	1.89
.17	2.11



Breakpoint difference (¢)	
1	↓
10 (0.11-0.01)	B: Non-cyclic ↑
15 (0.26-0.11)	
21 (0.47-0.26)	
21 (0.68-0.47)	
21 (0.89-0.68)	
0 (0.89-0.89)	
22 (1.11-0.89)	↓
0 (1.11-1.11)	C: Cyclic 1 ↑
0 (1.11-1.11)	
15 (1.26-1.11)	
21 (1.47-1.26)	
21 (1.68-1.47)	
21 (1.89-1.68)	
0 (1.89-1.89)	
22 (2.11-1.89)	D: Cyclic 2 ↑
0 (2.11-2.11)	
0 (2.11-2.11)	

From the modified tax table above:

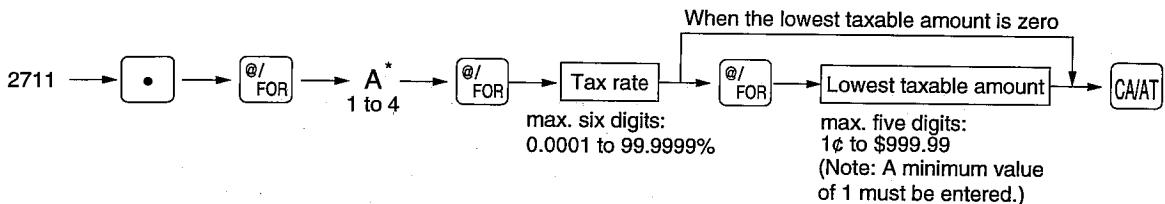
Rate = 8(%), T = \$0.01 = 1¢, Q = \$0.11 = 11¢, M1 = 1.11, M2 = 2.11, M = 100

Note

- A maximum of 72 breakpoints can be entered for each tax table. However, when the breakpoint difference is \$1.00 or more, 36 breakpoints can be entered. If number of breakpoints exceeds its capacity, use the manual entry approach.
- If you make an incorrect entry before entering the M in programming a tax table, cancel it with the **CL** key; and if you make an error after entering the M, cancel it with the **#TMSBTL** key. Then program again from the beginning.

■ Tax rate 2711

Procedure



*A: When you program a tax rate as tax rate 1, enter "1"; when you program it as tax rate 2, enter "2"; when you program it as tax rate 3, enter "3"; and when you program it as tax rate 4, enter "4."

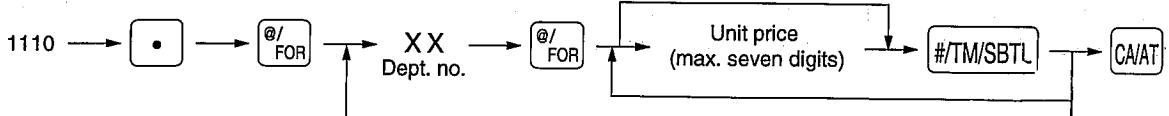
Note

If you make an incorrect entry before pressing the third **@/FOR** key in programming a tax rate, cancel it with the **CL** key; and if you make an error after pressing the third **@/FOR** key, cancel it with the **#TMSBTL** key. Then program again from the beginning.

4 Programming for departments

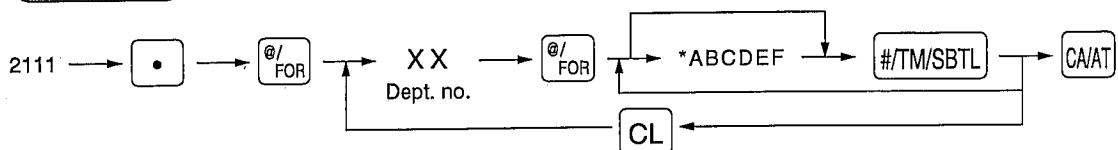
■ Unit price 1110 Direct

Procedure



■ Functional selection 1 2111 Direct

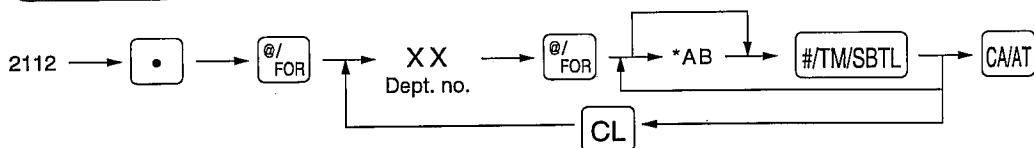
Procedure



* Item	Selection	Entry
A Sign (plus/minus)	Plus	0
	Minus	1
B Always enter 0.		0
C Tax 4 status	Non-taxable	0
	Taxable	1
D Tax 3 status	Non-taxable	0
	Taxable	1
E Tax 2 status	Non-taxable	0
	Taxable	1
F Tax 1 status	Non-taxable	0
	Taxable	1

■ Limit amount (HALO) 2112 Direct

Procedure



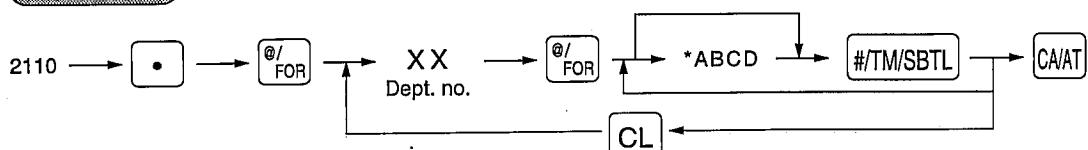
* AB is the same as $A \times 10^B$.

A: Significant digit (1 thru 9)

B: Number of zeros to follow the significant digit (0 thru 7)

■ Functional selection 2 2110

Procedure



* Item	Selection	Entry
A Item validation print	Compulsory	1
	Non-compulsory	0
B SICS (Single item cash sale)/Normal	SICS	1
	Normal	0
C Hash/Normal	Normal	0
	Hash	1
D Type of unit price entry	Open and preset	3
	Preset only	2
	Open only	1
	Inhibit department key	0

Note**Item validation print**

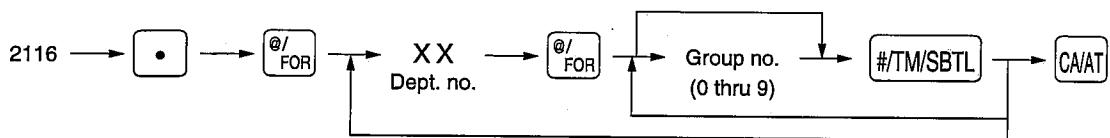
If item entries must be validated, program corresponding departments for compulsory item validation print.

SICS (Single item cash sale) / Normal department Direct**Hash / Normal**

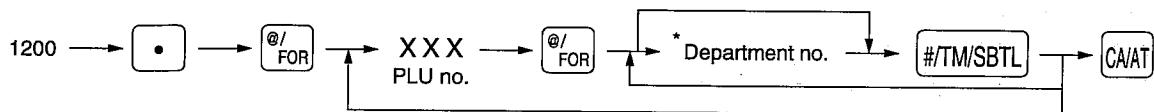
- A hash department is used to enter the amount of a special "sale", such as a gift certificate sale or for the receipt of payment for utility bills, theatre tickets, etc., i.e. "non-sales" registrations. Any amounts entered in this department are not added to the grand total except tax amounts.
- If your register is programmed for "Hash dept. not programmable" by your dealer, you cannot program the department for those operations. So contact your dealer if you need them.

■ Group number 2116

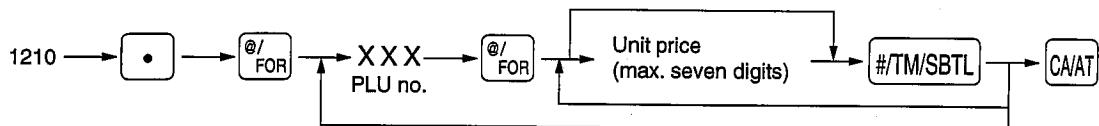
You can assign departments to a maximum of nine groups (1 thru 9). Assign desired departments to any of the nine groups. This programming enables you to take group sales reports.

Procedure**Note**

If you assign the group no. 0, the department does not belong to any group.

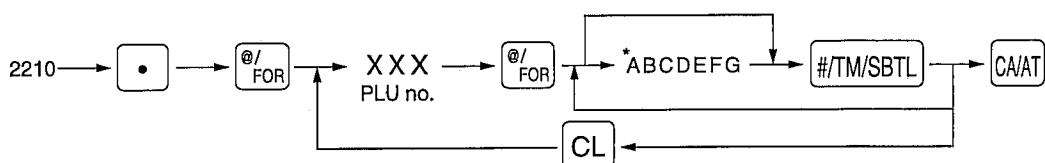
5 Price lookup (PLU) programming**■ PLU assignment to departments** 1200 Direct**Procedure**

* Department number to be associated with the entered PLU

■ Unit price 1210 Direct**Procedure**

■ Functional selection 2210 Direct

Procedure



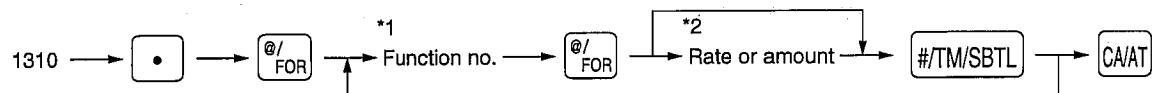
* Item	Selection	Entry
A Sign (plus/minus)	Plus	0
	Minus	1
B Always enter 0.		0
C Tax 4 status	Non-taxable	0
	Taxable	1
D Tax 3 status	Non-taxable	0
	Taxable	1
E Tax 2 status	Non-taxable	0
	Taxable	1
F Tax 1 status	Non-taxable	0
	Taxable	1
G Mode	Prohibit mode	0
	Subdepartment mode	1
	PLU mode	2
	PLU/subdepartment mode	3
	Delete mode	4

Note A PLU not programmed for any of Tax 1 thru Tax 4 is registered depending on the tax status of the department which the PLU belongs to.

6 Programming for miscellaneous keys

■ Rate and discount amount (%, CONV, and ⊖) 1310 Direct

Procedure



*1: Function no.

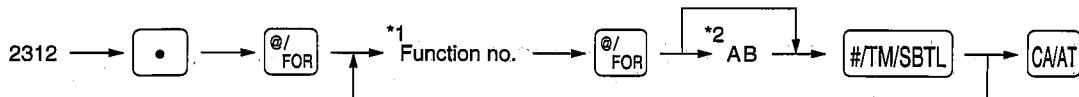
- 1: For the ⊖ key
- 2: For the 02 key
- 3: For the % key
- 4: For the %2 key

*2: Rate or amount

- 0 — 9999999 (Discount amount)
- 0.00 — 100.00 (Percent rate)
- 0.0000 — 9999.9999 (Currency conversion rate)

■ Limit amount (HALO) (⊖, TAX, RA, and PO) 2312 Direct

Procedure



*1: Function no.

1: For the **⊖** key
2: For the **⊖2** key
9: For the **TAX** key

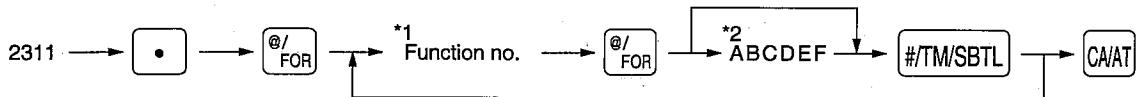
10: For the **RA** key
11: For the **PO** key

*2: AB is the same as $A \times 10^B$.

A: Significant digit (0 thru 9)
B: Number of zeros to follow the significant digit
0 thru 7 (for the **⊖**, **⊖2**, and **TAX** keys)
0 thru 8 (for the **RA** and **PO** keys)

■ Sign (+/-) and tax status (%, ⊖) 2311 Direct

Procedure



*1: Function no.

1: For the **⊖** key

2: For the **⊖2** key

5: For the **%** key

6: For the **%2** key

*2:

Item	Selection	Entry
A Sign (plus/minus)	Plus (premium)	0
	Minus (discount)	1
B Always enter 0.		0
C Tax 4 status	Non-taxable	0
	Taxable	1
D Tax 3 status	Non-taxable	0
	Taxable	1
E Tax 2 status	Non-taxable	0
	Taxable	1
F Tax 1 status	Non-taxable	0
	Taxable	1

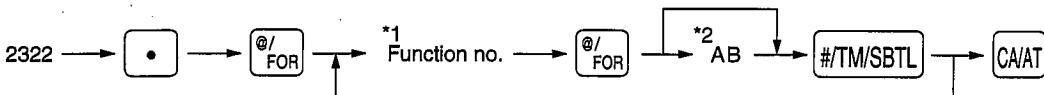
Note

- You cannot assign the "+" sign to the **⊖** keys. So always program "1" for the parameter A.
- Assigning of the "+" or "-" sign is available only for percent keys.

7 Programming for the media keys

■ High amount lockout (HALO) for media keys 2322 Direct

Procedure



*1: Function no.

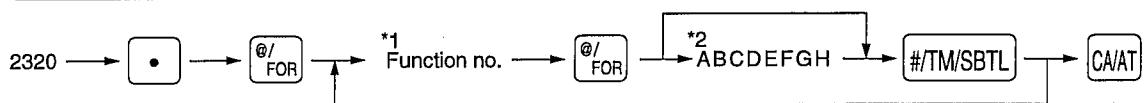
13: For the **CA2** key
14: For the **CHK** key
15: For the **CH** key
16: For the **CH2** key

*2: AB is the same as $A \times 10^B$.

A: Significant digit (1 thru 9)
B: Number of zeros to follow the significant digit (0 thru 8)
You can set up AB = 18 for no limitation.

■ Functional selection 2320

Procedure



*1: Function no.

12: For the CA/AT key
13: For the CA2 key

14: For the CHK key
15: For the CH key

16: For the CH2 key

*2: Item

		Selection	Entry
A	Change (Over-tender)	Disable	1
		Enable	0
B	Validation print	Compulsory	1
		Non-compulsory	0
C to G	Always enter 0.		0
H	Amount tendered	Compulsory	1
		Non-compulsory for the CA/AT, CA2, or CHK key	0
		Inhibited for the CH and CH2 keys	0

Note

Change (over-tender)

Either change enable or disable can be selected for the CHK, CH, or CH2 key.

Validation print

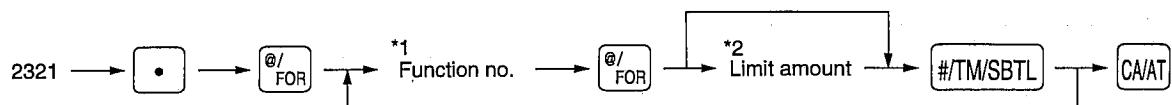
If media entries must be validated, program the corresponding media for compulsory validation print.

Amount tendered

You may select amount tendered compulsory or non-compulsory for the CA/AT, CA2, and CHK keys.
You may select amount tendered compulsory or inhibited for the CH and CH2 keys.

■ High amount lockout (HALO) for check change, check cashing, and cash in drawer 2321

Procedure



*1: Function no.

17: For check cashing
18: For check change
19: For cash in drawer (Sentinel)

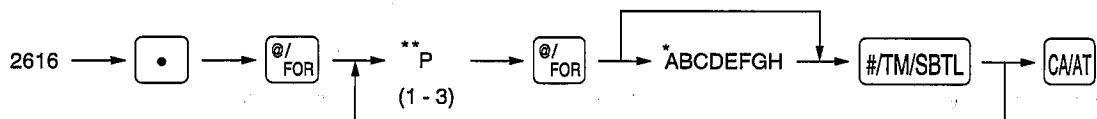
*2: Limit amount

0 thru 999999.99 (Check change and check cashing)
0 thru 9999999.99 (Cash in drawer)

8 Programming various functions

■ Optional feature selection 2616

Procedure



**P: 1

* Item		Selection	Entry
A	OP X/Z mode	Enable	0
		Disable	1
B and C	Always enter 0.		0
D	Refund in the REG-mode	Enable	0
		Disable	1
E	Direct void in the REG-mode	Enable	0
		Disable	1
F	Indirect void in the REG-mode	Enable	0
		Disable	1
G	Subtotal void in the REG-mode	Enable	0
		Disable	1
H	Always enter 0.		0

Note OP X/Z mode

This programming determines whether a cashier is allowed to use this mode. You can take cashier X and Z reports in the X1/Z1 mode regardless of the above programming.

**P: 2

* Item		Selection	Entry
A to C	Always enter 0.		0
D	Printing of the number of purchased items	No	0
		Yes	1
E	Time print	No	1
		Yes	0
F	Journal print form	Detailed	0
		Limited	1
G and H	Always enter 0.		0

Note Journal print form

- Detailed journal print that shows the details of all entries - the same information as printed on the receipt.
- Limited journal print that shows information about all entries other than normal department entries (entries into "+" departments and their associated "+" PLUs).

**P:3

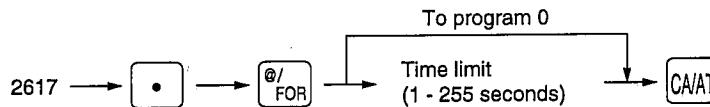
* Item

		Selection	Entry
A and C	Always enter 0.		0
D	Zero skip in transaction report	Yes	0
		No	1
E	Zero skip in department report	Yes	0
		No	1
F	Zero skip in PLU report	Yes	0
		No	1
G	Zero skip in hourly report	Yes	0
		No	1
H	Zero skip in daily net report	Yes	0
		No	1

■ Setting the time limit for THE TILL TIMER™ 2617

The machine counts the number of times the drawer is left open for longer than a programmed time limit. The counter will be incremented by one each time a programmed time limit is reached. The time limit for THE TILL TIMER™ can be preset for 0 to 255 seconds. The count is printed on the full report and transaction report.

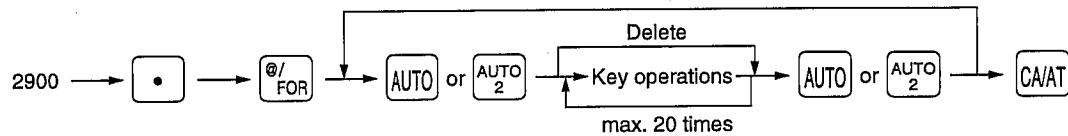
Procedure



■ Setting the AUTO key — Automatic sequencing key — 2900

If you program frequently performed key operations for the AUTO keys, you can enter those key operations simply by pressing the corresponding AUTO keys in key operations. This programming can be done when your machine is in the **X2/Z2 mode**.

Procedure



Note

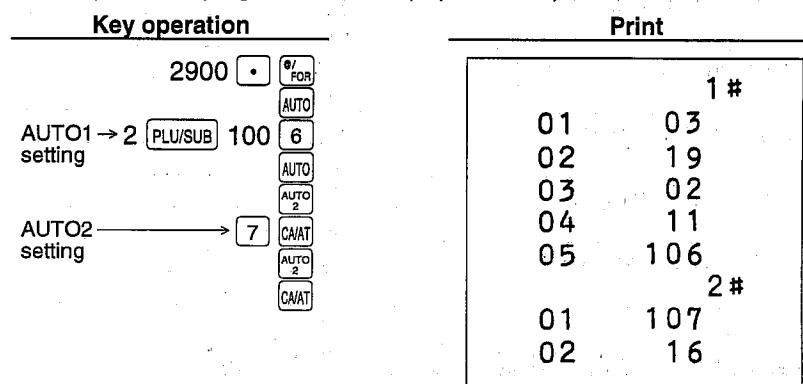
Only valid key operations in the OP X/Z, REG, MGR, VOID, X1/Z1 and X2/Z2 modes can be performed. Otherwise the result will be an entry error upon entry after programming.

Example

Programming for the **AUTO** and **AUTO₂** keys as follows:

AUTO; entering a \$1.50 item (PLU no. 2) and a \$1.00 item (department 6)

AUTO₂; selling a \$5.00 -programmed- item (department 7) in cash

**Key reference list**

The numbers at the left side of the receipt show the order in which the corresponding key will be registered. The numbers at the right side show the corresponding key numbers. Each key has a corresponding key number as shown below:

Keys:	Nos.:	Keys:	Nos.:	Keys:	Nos.:	Keys:	Nos.:
0 key	1	•	12	VOID	27	CONV2	42
1 key	2	CL	13	RRND	28	CONV3	43
2 key	3	0/FOR	14	%	29	CONV4	44
3 key	4	#/TM/SBTL	15	%2	30	RA	46
4 key	5	CAVAT	16	①	31	PO	47
5 key	6	CA2	17	②	32	DEPT	49
6 key	7	ADRS SBTL	18	TAX	33	NS	50
7 key	8	PLU/SUB	19	AUTO	34	ESC	51
8 key	9	TAX1 SHIFT	20	AUTO₂	35	Dept. 1 key	101
9 key	10	TAX2 SHIFT	21	CHK	38	Dept. 2 key	102
00 key	11	TAX3 SHIFT	22	CH	39	:	:
		TAX4 SHIFT	23	CH2	40	:	:
		PRINT	25	CONV	41	Dept. 30 key	130
		RCPT	26				

9 Activating and deactivating the TRAINING mode

You will use the TRAINING mode if you need to train someone in register operations without any change in register's memory. Reports are not available. When the training is completed, cancel this mode and thus put your machine back into the normal mode of operation.

■ TRAINING-mode activation/deactivation **2910** **2911**

For activation

Procedure

2910 → **•** → **0/FOR** → **CAVAT**

Print

2910 #

For deactivation

Procedure

2911 → **•** → **0/FOR** → **CAVAT**

Print

2911 #

■ TRAINING-mode operations

- Practice entries are allowed only when the mode switch is in the REG position or the MGR position.
- In order to identify training entries from actual ones, your register prints "TR" on the receipt and journal.
- These entries do not affect any totalizers or counters except the training GT.
- The consecutive number is increased by one each time a receipt is published.

10 Reading stored programs

Your machine allows you to read every program stored in the PGM mode.

■ Program details and procedures for their reading

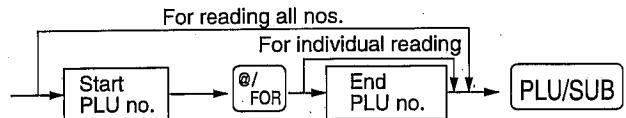
Program for:		Procedure	Related job codes
1	Departments	<p>For reading all nos.</p>	1110, 2110, 2111, 2112, 2116
2	PLUs/subdepartments	<p>For reading all nos.</p>	1200, 1210, 2210
3	Function preset		1310, 2311, 2312, 2320, 2321, 2322, 2616, 2617
4	Tax tables and rates		2710, 2711
5	Auto keys		2900

You can also read the program in the following procedure:

Departments, function preset,
and tax tables and rates

CA/AT

PLUs/subdepartments



■ Sample printouts

1 Departments

01	0003	Dept. no.
	00000 TX	Tax status
	17	HALO limit
	1#	Group no.
	10.00	Unit price
02	0003	Function programming
	00001 TX	
	17	
	0#	
	23.00	
08	0001	
	00000 TX	
	17	
	0#	
	-0.00	Minus dept.

2 PLUs/subdepartments

M001	02	PLU no.
	00001 TX	Associated dept. no.
	2	Tax status
	1.25	Mode parameter
M002	02	Unit price
	00000 TX	
	2	
	17.00	
M020	01	
	00000 TX	
	2	
	-0.00	Coupon PLU

3 Function preset

-10.00	⊖ 1	Discount amount
00001		Tax status for ⊖ key
13		HALO for ⊖ key
-0.00	⊖ 2	
00000		
17		
-10.25	% 1	Percent rate
00010		Tax status for % key
-0.00	% 2	Minus sign
00000		
1.3250	EX 1	Conversion rate
0.0000	EX 2	
0.0000	EX 3	
17 TX		HALO for manual tax
18 RA		
18 PO		
00000000 CA		
18 CK		
00000000	CHK 1	Functional programming for CHK key
00000000	CHK 2	
15	CHK 2	
00000000		
99.99 CK		HALO for check cashing
99999.99 CK		HALO for check change
9		
999999.99		HALO for CID
2616#		Optional feature
1		
00000000		
2		
00000000		
3		
00000000		
4		
00000000		
2617#		TILL TIMER
30		

4 Tax tables and rates

TX 1	
001	6 • 0000
002	1 • 00
003	0 • 11
004	0 • 23
005	0 • 39
006	0 • 57
007	0 • 73
008	0 • 89
009	1 • 11

TX 2	
01	4 • 0000
02	0 • 12

TX 3	
01	— — —
02	— — —

TX 4	
01	— — —
02	— — —

5 Auto keys

1 #		AUTO1 key
01	03	Key no.
02	19	
03	02	
04	11	
05	106	
06	• •	Unused step
07	• •	
08	• •	

2 #		AUTO2 key
19	• •	
20	• •	
01	107	
02	16	
03	• •	

3 #		AUTO3 key
18	• •	
19	• •	
20	• •	

READING (X) AND RESETTING (Z) OF SALES TOTALS

- Use the reading function (X) when you need to take a reading of sales information entered since the last resetting. You can take this reading any number of times. It does not affect the register's memory.
- Use the resetting function (Z) when you need to clear the register's memory. Resetting prints all sales information and clears the entire memory except for the GT1 thru GT3, reset count, and consecutive number.

1 Summary of reading (X) and resetting (Z) reports and the key operations to obtain the reports

X1 and Z1 reports: Daily sales reports

X2 and Z2 reports: Periodic (monthly) consolidation reports

Item	Mode switch position		Key operation
	X1/Z1	X2/Z2	
Full report	X1, Z1	X2, Z2	
Hourly sales report	X1, Z1		
Full department report	X1	X2	
Individual group report	X1	X2	
PLU report	X1, Z1	X2, Z2	
PLU report by associated dept.	X1	X2	
Transaction report	X1	X2	
Daily net total report		X2, Z2	

Flash reports (OP X/Z mode)

Your machine can display the total amount (flash report) without printing out the report. To take the flash report, do the following in the OP X/Z mode.

Sales total

Individual department total amount

Department key or Department no. →

Department group total amount

Group no. →

Cash in drawer

Hourly sales total

Time (two digits) →

Note

To clear the display, press the

2 Daily sales totals

Full report

0001Z 1	Reset symbol
	Reset counter
GT*00000 1	Net grand total (GT2 - GT3)
001044•52	
GT*00000 2	Grand total of plus registration
001113•05	
GT-00000 3	Grand total of minus registration
000068•53	
GT*00000TR	Grand total of training mode registration
000018•00	
01	Dept. no.
36•00Q	Sales q'ty
*290•80	Sales amount
27•96 %	Ratio of dept. 1 sales amount to "+" dept. total
02	
6•00Q	
*284•76	
27•38 %	
03	
5•00Q	
*15•88	
1•53 %	
05	
17•00Q	
*199•00	
19•13 %	

100•00Q	"+" dept. counter and total
*1040•09+ TL	
100•00 %	
06	
4•00Q	
-16•00	

4•00Q	"-" dept. counter and total
-16•00- TL	
07	
5•00Q	
*12•50	

5•00Q	"+" hash dept. counter and total
*12•50+*1L	
08	
4•00Q	
-12•00	

4•00Q	"-" hash dept. counter and total
-12•00-*1L	
1Q	
-0•50 e1	
1Q	
-1•00 e2	
1Q	Subtotal \ominus counter and total
-0•12 %1	
2Q	
-1•55 %2	
*1020•92 ST	Net sales total

To be continued on the next page

Note

On the X report, "X1" is printed instead of the reset counter and symbol "Z1."

TX 1	
*210•30	TX ST Net taxable 1 total
*4•33	TX Gross tax 1 total
-0•12	REF Refund tax 1 total
*4•21	TX Net tax 1 total
TX 3	
*169•00	TX ST
*6•76	TX
-0•28	REF TX
*6•48	TX
*1•00	TX Gross manual tax total
-0•30	REF TX Refund manual tax total
*0•70	TX Net manual tax total
*23•60	TX TL Tax total
TX 1	
*175•30	TX ST
*3•63	TX
-0•12	REF TX
*3•51	TX
TX 4	
*129•00	TX ST
*3•93	TX
-0•06	REF TX
*3•87	TX
*1•00	TX Manual tax
-0•30	REF TX
*0•70	TX
*634•30	TX TL Exempt total from GST
*17•97	TX TL PST total
*3•87	TX TL GST total
*22•54	TX TL

*1044•52 ST Sales total including tax

1Q Item ⊖ counter and total

-0•50 e1

2Q

-2•00 e2

2Q Item percent counter and total

-0•36 %1

1Q

-0•35 %2

2Q Coupon-like PLU counter and total

-4•00 e

6Q

*24•00 REF Refund counter and total

3Q

*5•30 ID 1 REG-mode item void counter and total

1Q

*12•00 ID 2 VOID-mode item void counter and total

1Q

*12•00 ID 3 VOID-mode transaction counter and total

1Q

*4•00 ID 4 Subtotal void counter and total

2Q

*5•00 REF * Hash refund counter and total

3Q

*8•50 ID * Hash void counter and total

2Q Validation print counter

3 NS No-sale (exchange) counter

105Q Customer counter

*1045•02 TL Sales total (including hash dept. total)

25Q TILL TIMER counter

1Q Received on account counter and total

*20•00 M

1Q

*15•00 M Paid out counter and total

1Q

*30•00 CK Check cashing counter and total

To be continued on the next page

Note

When the Canadian tax system is selected, ② is printed instead of ①.

■ Hourly report

97Q	
*903•64	CA
1Q	
*15•00	CA 2
4Q	
*41•08	CX
2Q	
*45•30	CH 1
1Q	
*42•00	CH 2
1Q	
23•85	EX 1
1Q	
3•60	EX 4
*864•64	CA TL
*71•08	CX TL
*935•72	TL
*2•00	CX CG

} Cash counter and
 total
 } Cash 2 counter and
 total
 } Check sale and
 tendering counter
 and total
 } Charge 1 sales and
 tendering counter
 and total
 }
 } Currency
 conversion 1 total
 (by programmed rate)
 } Currency
 conversion 4 total
 (by manual rate)
 }
 }
 } Cash in drawer
 } Check in drawer
 } Cash + check in
 drawer
 }
 } Cash change total
 for check and
 charge 1 - 2
 tendering

Z 1	
10-00	Time
17Q	Customer counter
*234•64	Sales total
11-00	
20Q	
*254•34	
9-00P	
23Q	
*268•98	

Note On the X report, "X1" is printed instead of the reset symbol "Z1."

■ Full department report

X 1	
01	
36•00Q	
*290•80	
1#	Group no.
36•00Q	
*290•80	
06	
9•00Q	
*18•00	
2#	
9•00Q	
*18•00	
04	
19•00Q	
*215•65	
9#	
19•00Q	
*215•65	

■ Individual group report

X 1	
03	
	5•00Q
	*15•88
05	
	8•00Q
	*16•00
	3#
	13•00Q
	*31•88

} Group 3 sales q'ty and total

■ PLU by associated department report

X 1	
01	Associated dept. no.
M001	
	5•00Q
	*15•00
M010	
	5•00Q
	*25•00

} Sales q'ty and total

■ PLU report

Z 1	
M001	PLU no.
	5•00Q
	*15•00
M002	
	2•00Q
	*4•00
M010	
	5•00Q
	*25•00

} Sales q'ty and total

Note

On the X report, "X1" is printed instead of the reset symbol "Z1."

■ Transaction report

X 1	
- - - - -	
	100•00Q
	*1040•09+ 1L
	100•00 %
- - - - -	
	4•00Q
	-16•00- 1L
- - - - -	
	5•00Q
	*12•50+*1L
- - - - -	
	4•00Q
	-12•00-*1L

In this report, the same transaction data as those printed in the full report are printed.

3 Periodic consolidation

■ Full report

0002Z	1	Reset symbol
0001Z	2	Reset counter of daily total
		Reset counter of periodic consolidation
11*00000	1	
001259•07		
11*00000	2	
001332•05		
11-00000	3	
000072•98		
11*00000		
000018•00		

Reset symbol
Reset counter of daily total
Reset counter of periodic consolidation
Grand total

■ Daily net report

Z 2		
08-01	21Q	Date
*240•80	IL	Customer counter
08-02	17Q	Sales total
*191•30	IL	
08-31		
20Q		
*213•00	IL	

Note On the X report, the "X2" is printed instead of the "Z2."

- The subsequent printout occurs in the same format as in the X/Z report for daily total.
- On the X report, the "X2" is printed instead of the "Z2."

MAINTENANCE

1 Battery replacement

If the low battery symbol “L” appears on the far left of the display, there may be the following causes:

- Less than three batteries are installed in your register.
- The voltage of the batteries is less than the required level.
- The batteries are dead.

Check the batteries and replace new ones within two days as the following steps:

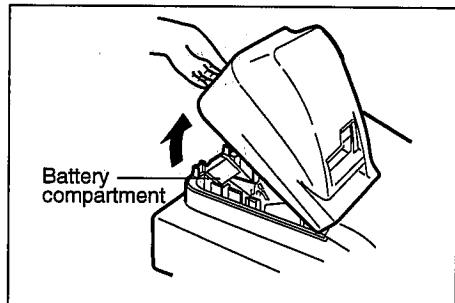
Replacing the batteries

Caution *If the AC power cord is disconnected or a power failure occurs when the batteries are dead or not installed, all the programmed settings will be reset to the default settings and any data stored in memory will be cleared. If the symbol “L” appears during a transaction, complete it before replacing batteries.*

1. Make sure that the register is plugged in.

2. Turn the mode switch to the REG position.

3. Remove the printer cover.

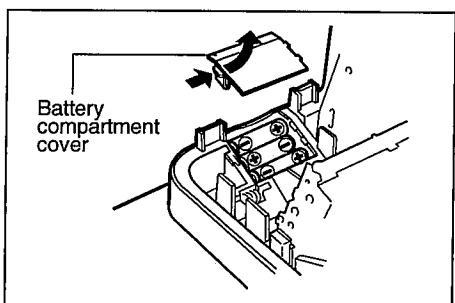


4. Open the battery compartment cover and remove the old batteries.

5. Install three new AA batteries in the battery compartment and check that the “L” symbol has disappeared.

6. Close the battery compartment cover.

7. Replace the printer cover.



2 In case of power failure

When power is lost, the machine retains its memory contents and all information on sales entries when the batteries are in the proper state of charge.

- When power failure is encountered in register idle state or during an entry, the machine returned to the normal state of operation after power recovery.
- When power failure is encountered during a printing cycle, the register prints “*****” and then carries out the correct printing procedure.

3 In case of printer's motor locking

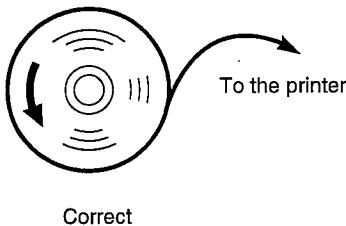
If the printer's motor happens to lock, the printing stalls, the register will continuously start an intermittent bleeping tone. If this occurs, please follow the procedure below.

1. Unplug the power cord from the outlet.
2. Insure the printer is clear of any obstructions (e.g. paper jams, etc.).
3. Plug the power cord into the outlet.
4. Insure that the receipt and journal paper is positioned properly.
5. Press the **CL** key.
6. The register prints "*****" and continues printing.

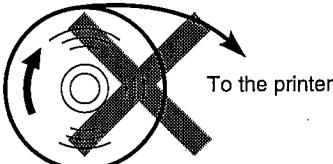
4 Installing and removing the paper roll

Install the paper roll in the printer. Be careful then to set the roll and cut the paper end correctly.

(How to set the paper roll)

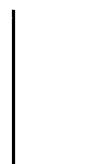


Correct

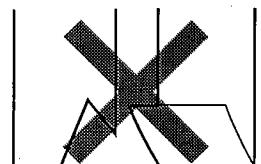


Incorrect

(How to cut the paper end)



Correct

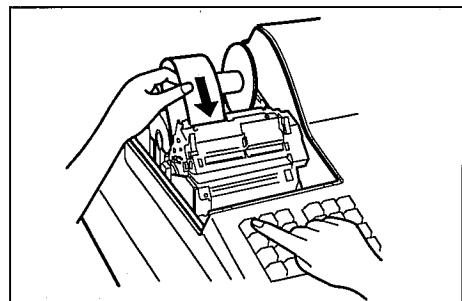


Incorrect

■ Installing the paper roll

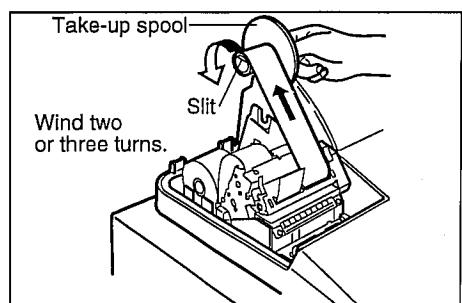
Installing the receipt paper roll

1. Turn the mode switch to the "REG" position with the AC cord connected.
2. Remove the printer cover.
3. Set the paper roll correctly and drop it into the printer.
4. Insert the paper end into the paper chute.
5. Press the receipt paper feed key to advance the paper by a required length.
6. Replace the printer cover.



Installing the journal paper roll

1. Turn the mode switch to the "REG" position with the AC cord connected.
2. Remove the printer cover.
3. Set the paper roll correctly and drop it into the printer.
4. Insert the paper end into the paper chute.
5. Press the journal paper feed key to advance the paper by a required length.
6. Insert the paper end into the slit of the paper take-up spool and wind it two or three turns around the spool shaft.
7. Set the spool on the bearing.
8. Replace the printer cover.

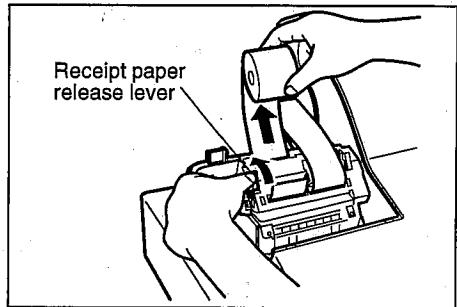


■ Removing the paper roll

When a dye appears on the paper roll, it is time to replace the existing paper roll. Replace the paper roll with a new one.

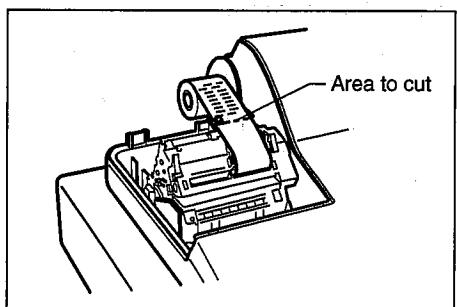
Removing the receipt paper roll

1. Remove the printer cover.
2. Press and hold the receipt paper release lever and pull the unused paper roll in the direction of the arrow.

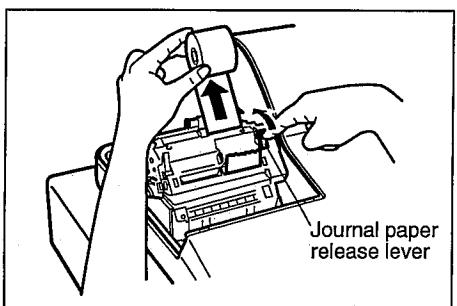


Removing the journal paper roll

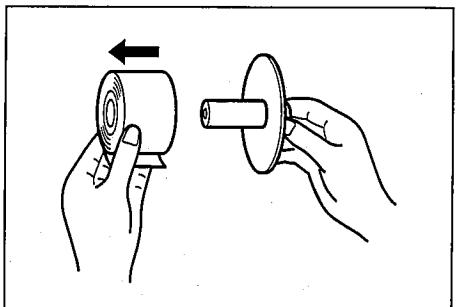
1. Remove the printer cover.
2. Press the journal paper feed key to advance the paper by several lines and then cut it.



3. Press and hold the journal paper release lever and pull the unused paper roll in the direction of the arrow.

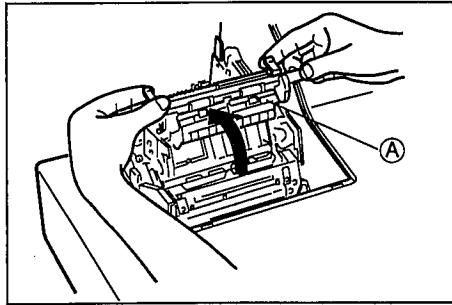
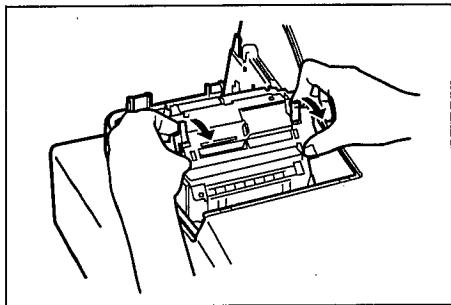


4. Remove the paper roll from the take-up spool.



■ Removing a paper jam

1. Remove the printer cover.
2. Pulling the receipt and journal paper release levers at the same time, lift part **(A)** up. (See the drawing below.)
3. Remove the paper jam.
4. Replace part **(A)** gently.
5. Reset the paper roll correctly following the steps shown in "Installing the paper roll."
6. Replace the printer cover.



■ Recording paper specifications

Be sure to use paper rolls specified by SHARP.

The use of any other paper rolls than specified could cause paper jamming, resulting in register malfunction.

Paper specification

Paper width:	1.75 ± 0.02 in.(44.5 ± 0.5 mm)
Max. outside diameter:	3.27 in.(80 mm)
Weight:	52.3 — 64.0 g/m ²
Quality:	bond paper
Paper tube:	0.71 in.(18 mm)

- Be sure to set paper roll(s) prior to using your machine, otherwise it could malfunction.

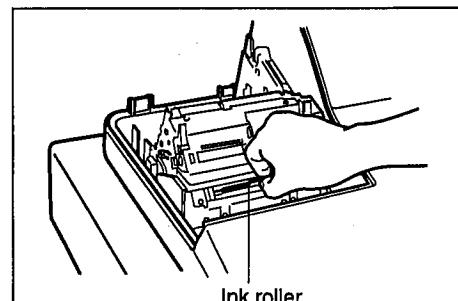
5 Replacing the ink roller

When printing becomes faint, replace the ink roller with a new one.

Precautions:

- Be sure to use an ink roller specified by SHARP. The use of any ink rollers other than specified could cause troubles in the printer.
- After opening the parcel, be careful not to make the surface of the ink ribbon dirty, and install it soon.
- Do not pour ink to the ink roller.
- If you preserve the ink roller for a long time, the ink will be dry and its life will be shortened. Please use it soon. If you do not use it soon, put it in an airtight receptacle and preserve it in a cool and dark place. Do not leave it in a location that is subject to high humidity and direct radiation.

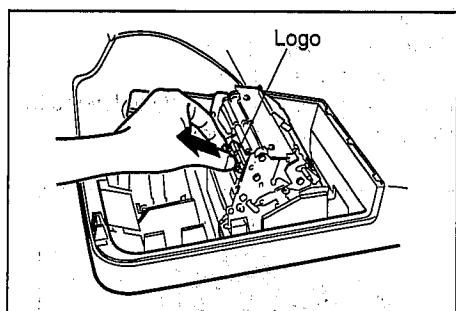
1. Remove the printer cover.
2. Pull the ink roller handle to remove the roller.
3. Install a new one.
4. Replace the printer cover.



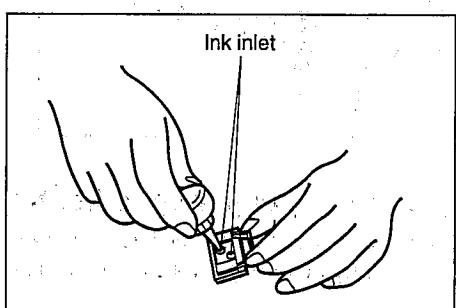
6 Ink refill

If the logo becomes too light, refill it with the supplied logo ink following the procedure given below.

1. Remove the printer cover.
2. Remove the store name logo by pulling it in the direction of the arrow.



3. Apply two or three drops of logo ink through the ink inlet situated on the back of the logo.
4. Replace the logo by the reverse procedure of removing.
5. Replace the printer cover.



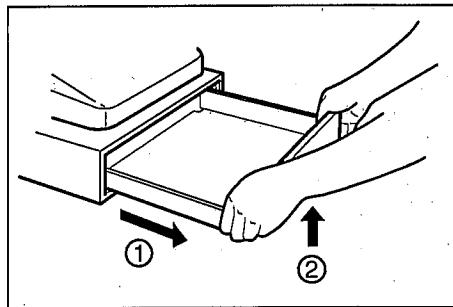
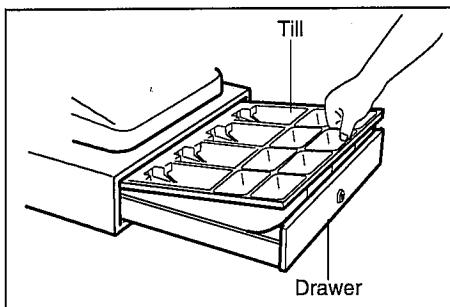
Precautions

- The logo ink first gives a clear print 10 to 15 hours after being applied into the logo. Therefore, refilling at the end of daily business is most effective.
- Overinking should be avoided. This will create a blurry print.
- The ink is exclusively used for the logo. Do not apply the ink onto the ink roller.

When the supplied ink is exhausted, purchase the logo ink specified by SHARP through your dealer.

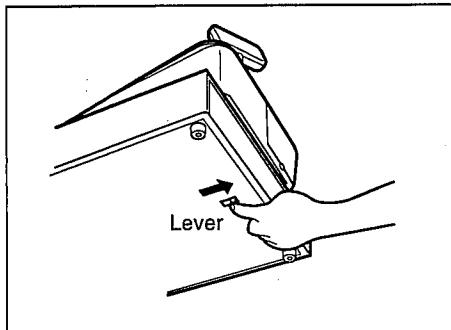
7 Removing the till and the drawer

The till in the register is detachable. After closing your business for the day, remove the till from the drawer and keep the drawer open. To detach the drawer, pull it forward fully with the till removed, and remove it by lifting it up.



8 Opening the drawer by hand

The drawer automatically opens in the usual way, however, when power failure is encountered or the machine becomes out of order, slide the lever located on the machine bottom toward the rear. (See the figure below.) The drawer will not open if it is locked with a drawer lock key.



9 Before calling for service

The malfunctions shown in the left-hand column below, labeled "Fault," do not necessarily indicate functional faults of the machine. It is therefore advisable to refer to the "Checking" shown in the right-hand column before calling for service.

Fault	Checking
(1) The display won't be illuminated even when the mode switch is turned to any other position than "OFF."	<ul style="list-style-type: none">• Is power supplied to the electric outlet?• Is the power cord plug out or loosely connected to the electrical outlet?
(2) The display is illuminated, but the whole machine refuses registrations.	<ul style="list-style-type: none">• Is the cashier number assigned to the register?• Is the mode switch set properly at the "REG" position?
(3) No receipt is issued.	<ul style="list-style-type: none">• Is the receipt paper roll properly installed?• Is there a paper jam?• Is the receipting function in the "OFF" status?
(4) No journal paper is taken up.	<ul style="list-style-type: none">• Is the take-up spool installed on the bearing properly?• Is there a paper jam?
(5) Printing is unusual.	<ul style="list-style-type: none">• Is the ink roller installed properly?• Is the ink roller's life completed?

LIST OF OPTIONS

For your register, the following options are available. For details, contact your dealer.

- Till model ER-48CC2
- Remote drawer model ER-04DW
- Key kit models

By using the following key kits, you can change the keyboard layout of your register including the expansion of the number of departments.

ER-11KT7: 30 regular size key kits

ER-12KT7: 30 1 x 2 size key kits

ER-22KT7: 10 2 x 2 size key kits

ER-11DK7: 30 regular size dummy key kits

ER-51DK7: 10 5 x 1 size dummy key kits

SPECIFICATIONS

Model:	ER-A310																							
Dimensions (W x D x H):	16.5 x 16.7 x 12.0 in. (420 x 423 x 304 mm)																							
Weight:	29.1 lbs. (13.2 kg)																							
Power source:	Local voltage \pm 10% AC, 50/60 Hz																							
Power consumption:	Stand-by 10W Operating 31W (max.)																							
Working temperature:	32 °F to 104 °F (0 °C to 40 °C)																							
Electronics:	LSI (CPU), etc.																							
Display:	Operator display :	7-segment display (10 positions)																						
	Customer display:	7-segment display (7 positions)																						
Printer:	Type:	Inner hammer, rubber character selection type																						
	Printing speed:	Max. 3.0 lines/second																						
	Printing capacity:	12 digits each for receipt and journal paper																						
	Other functions:																							
	<ul style="list-style-type: none">Receipt ON-OFF function, journal selective functionReceipt and journal independent paper feed functionValidation printing function																							
Ink roller:	Color:	Purple (single color)																						
	Life:	0.4 millions of lines																						
Logo:	Dimensions of the printing face (W x H): 1.18 x 0.79 in. (30 x 20 mm)																							
Paper roll:	Width:	1.75 \pm 0.02 in. (44.5 \pm 0.5 mm)																						
	Max. diam.:	3.27 in. (80 mm)																						
	Weight:	0.12 - 0.14 lbs. (52.3 - 64.0 g/m ²) (bond paper)																						
Cash drawer:	4 slots for bill and 8 for coin denominations																							
Accessories:	<table><tr><td>Manager key</td><td>2</td></tr><tr><td>Operator key</td><td>2</td></tr><tr><td>Drawer lock key</td><td>2</td></tr><tr><td>Bill separator</td><td>1</td></tr><tr><td>Ink roller</td><td>1 (mounted on the main body)</td></tr><tr><td>Standard logo</td><td>1</td></tr><tr><td>Logo ink</td><td>1 (5 cc)</td></tr><tr><td>Paper roll</td><td>2</td></tr><tr><td>Spool</td><td>1</td></tr><tr><td>Instruction manual</td><td>1 copy</td></tr><tr><td>Battery caution label</td><td>1</td></tr></table>		Manager key	2	Operator key	2	Drawer lock key	2	Bill separator	1	Ink roller	1 (mounted on the main body)	Standard logo	1	Logo ink	1 (5 cc)	Paper roll	2	Spool	1	Instruction manual	1 copy	Battery caution label	1
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* Specifications and appearance subject to change without notice for improvement.

