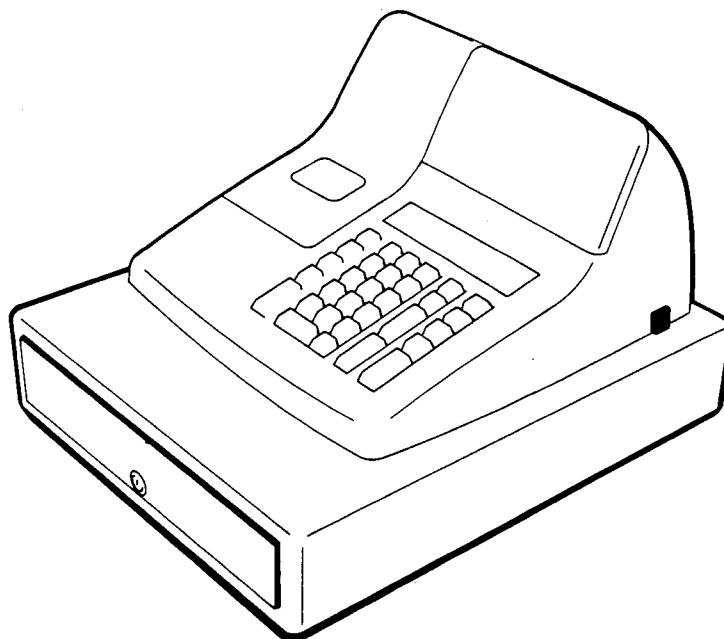


TEC

TEC Electronic Cash Register

MA-71 (US & CA VERSION)

Owner's Manual



TOKYO ELECTRIC CO., LTD.

WARNING

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

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1. TO OUR CUSTOMERS

Thank you for choosing the TEC electronic cash register MA-71 series. This instruction manual provides a description of the functions and handling of this register and should be read carefully to ensure optimum performance. Since every consideration has been given to safety and reliability, there is no danger of damaging the machine by incorrect operation.

Please refer to this manual whenever you have any questions concerning the machine. This machine has been manufactured under strict quality control and should give you full satisfaction. However, if the machine is damaged during transit, or there are any unclear points in this manual, please contact your local TEC representative.

- The specifications described in this manual may be modified by TEC, if necessary.
- Be sure to keep this manual for future reference.

2. PRECAUTIONS

The ECR is a precision machine. Please handle it carefully considering the following guidelines.

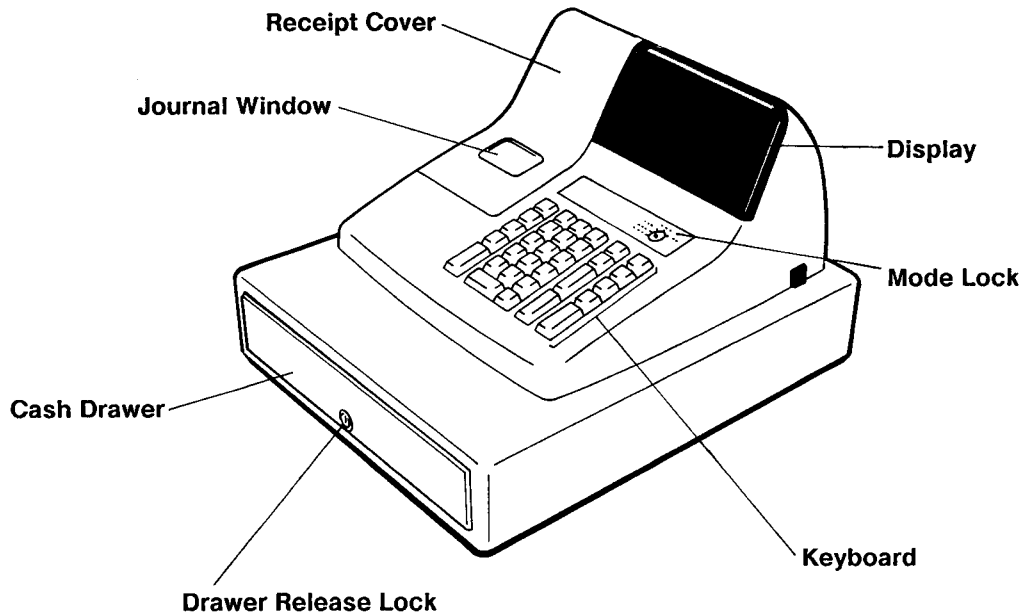
REMARKS ON THE LOCATION

- Place it where no unusual temperature changes are expected.
- Place it on a flat and level surface with little dust, humidity, vibration, etc.
- Keep it away from water sources.
- Do not use it in direct sunlight for a long time.
- Ensure proper ventilation so that the machine is not exposed to excessive heat.
- Be certain to connect a grounding wire to prevent the generation of static electricity and noise troubles. Never share the same power outlet with many other electric appliances.

REMARKS ON OPERATING THE ECR

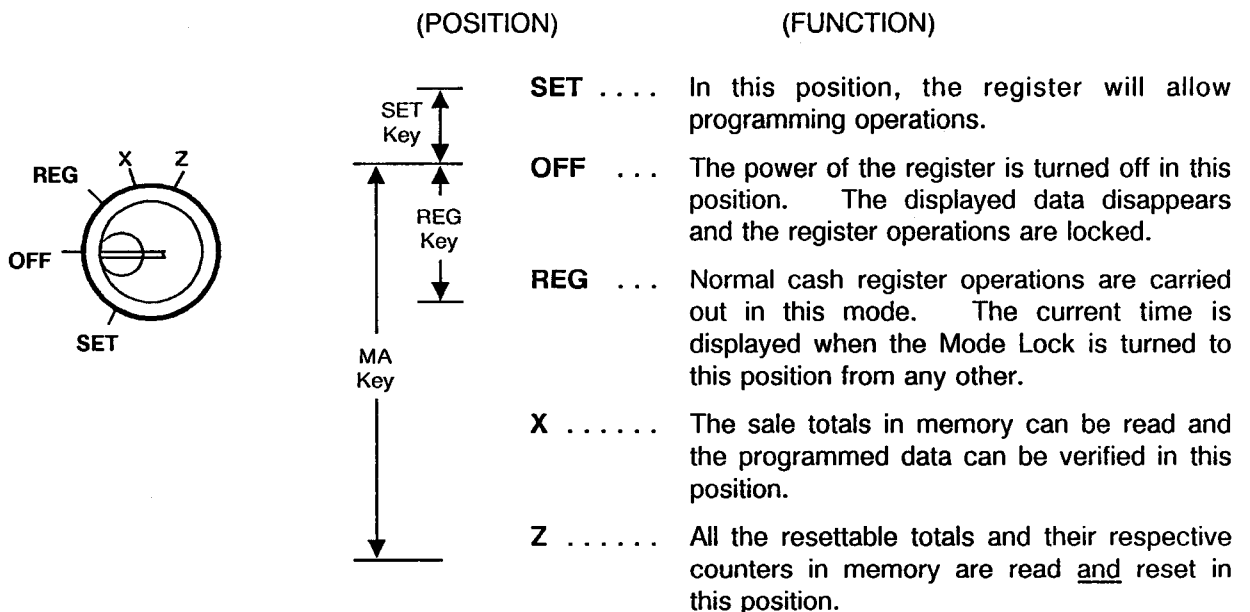
- The keys on the keyboard function with a light touch. Avoid pressing the keys too hard.
- Do not handle the machine with wet hands, since this may cause electrical malfunctions and corrosion of parts.
- Do not apply thinner, benzine, or other volatile materials to the cabinet or other plastic parts. Such liquids will cause discoloration or deterioration of the cover. If dirty, wipe off with a piece of cloth soaked in a neutral detergent and wrung out thoroughly.
- Turn off the power switch when the operations are over for the day.
- Ask your TEC representative to provide periodical maintenance to ensure the optimum performance of the machine.
- As for other operations, follow the instructions in this manual.

3. APPEARANCE AND NOMENCLATURE

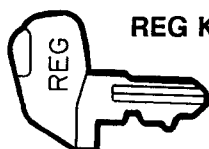


4. MODE LOCK AND MODE SELECTOR KEYS

■ MODE LOCK

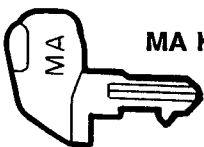


■ MODE SELECTOR KEYS



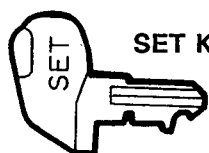
REG Key:

The REG Key is used by the cashier who operates the register. This key can access the positions of **OFF** and **REG**.



MA Key:

The MA Key is used by the store manager who will daily supervise the collection of money and the printout of transactions recorded by the register. This key can access the positions of **OFF**, **REG**, **X**, and **Z**.



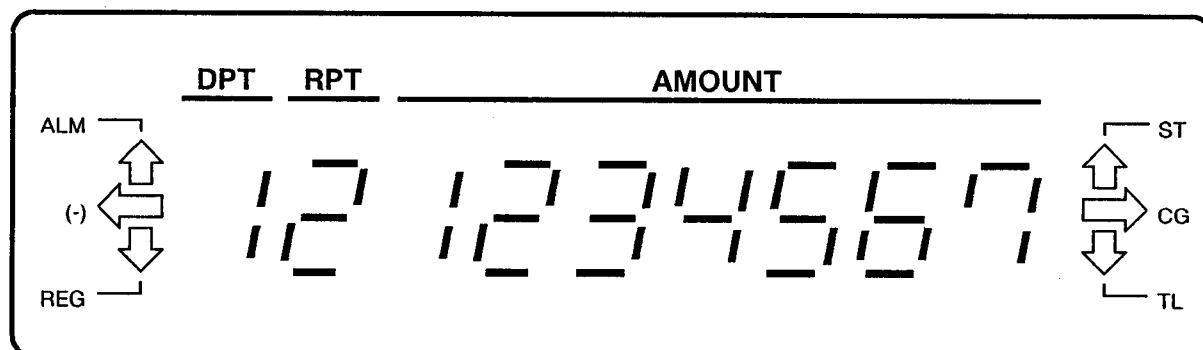
SET Key:

The SET Key is used by the programmer or the store manager who will change the program data on a daily, weekly, or monthly basis. This key can access the positions of **OFF** and **SET**.

All the keys can be removed at the "OFF" or "REG" position.

5. DISPLAY

The Display is located at the top of the register just above the keyboard.



■ DISPLAY CONTENT

Numeric Display

- AMOUNT** (7 digits): Displays numeric data, such as amount, quantity, time, etc. When the amount obtained by a subtotal, total, or % operation results in 8 digits, the 8th digit will be displayed in the "RPT" portion.
- RPT** (1 digit): Displays the repeat count. It indicates nothing on the first item entry, showing 2, 3, 4, etc., from the second item entry on. Since it has only one digit, 0 will be displayed for count 10, 1 for 11, etc.
- DPT** (1 digit): Displays the code which represents each Department Key.

Arrow Mark Descriptor Lamps

- ALM:** Lights up when an error has occurred.
- (-):** Lights up when a negative item has been entered, such as Item Correct, Returned Merchandise, %-, or Discount.
- It also lights up when the obtained subtotal or total balance is negative.
- REG:** Lights up when a sale item has been entered, and goes out when the sale has been finalized.
- ST:** Lights up when the amount being displayed is the subtotal including tax. It also lights up when the [EX] key is depressed without a prior amount entry, indicating that the displayed amount is the tax-exempted sale total. It also lights up when a short tendered amount has been entered, indicating that the displayed amount is the balance due.
- CG:** Lights up when an over-tendered amount has been entered, indicating that the displayed amount is the change due.
- TL:** Lights up when the sale has been finalized without an amount tendered, indicating that the displayed amount is the sale total.

■ TIME DISPLAY

The current time is displayed in the AMOUNT portion when the Mode Lock is turned to the "REG" from any other position.

The time being displayed will disappear when any key-in operation is started.

TIME DISPLAY FORMAT

Example: 1:24 p.m.
(13:24)

6. KEYBOARD LAYOUT

The following is the keyboard layout of the MA-71 series.

FEED	ITEM CORR	RTN MDSE	R/A	1	#
DOLL DISC	NS	TX/M	PO	2	EX
%	7	8	9	3	ST
X	4	5	6		Chg
C	1	2	3	4	AT/TL
	0		00		

7. FUNCTIONS OF EACH KEY



PAPER FEED KEY ([FEED])

This key is used to feed the paper. As long as this key is depressed, the paper keeps on feeding. This key will function in any position of the Mode Lock except in the "OFF" position.

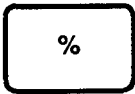


DOLLAR DISCOUNT KEY ([DOLL DISC])

This key is used to subtract an amount from the sale total, such as a discount during a sale. An amount exceeding the sale total cannot normally be entered. However, if the "Credit Balance Allowed" option is selected, over-subtraction of the sale is allowed through this key.

To operate, enter the discount amount on the numeric keys, and then depress the [DOLL DISC] key.

This key is fixed with the non-taxable status, i.e. the amount subtracted through this key is always not with tax. However, when a dollar-discounting is required with tax-subtraction (i.e. when the [DOLL DISC] key should be reversed to the taxable status temporarily), depress the [TX/M] key prior to the [DOLL DISC] key.



PERCENT KEY ([%])

This key is programmed as a [%-] (Percent Discount) or [% +] (Percent Charge) key according to the store's requirement.

Percent Discount Key ([%-])

This key is used to enter a discount calculated on a percent rate. When this key is depressed after a department item, the discount is calculated on the preset or manually entered rate and subtracted from the department item amount. This key can also be operated in the same way after depressing the [ST] key if the percent discounting is performed for the entire sale total.

A percent rate can be preset on this key; however, if another rate is entered through the numeric keyboard prior to the depression of the [%-] key, the entered rate prevails. The preset rate will be applied by a simple depression of the [%-] key.

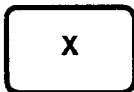
The percent discount is effective only once for each department item and any number of times for the subtotal.

A percent discounting is allowed even on a returned merchandise item entry, but not on a negative subtotal entry.

The [%-] (or [% +]) key is fixed with the non-taxable status, i.e. the amount subject to the % calculation is the pre-taxed amount. However, when the [%-] key must function with the taxable status (i.e. when the amount subject to the % calculation must be post-taxed amount), depress the [TX/M] key prior to the [%-] key depression. Then the status of the [%-] key is reversed from non-taxable to taxable for one entry only.

Percent Charge Key ([% +])

This key operates the same as the [%-] key, except that the [% +] key will add the calculated amount to instead of subtracting from the item or the subtotal.



QUANTITY EXTENSION (MULTIPLICATION) KEY ([X])

This key is used to multiply a department entry by a quantity.

The multiplication order is:

QUANTITY X UNIT PRICE

A maximum of 3 digits for the QUANTITY and a maximum of 6 digits for the UNIT PRICE are allowed. The product must not exceed 7 digits.

C

CLEAR KEY ([C])

This key is used to correct a numeric or **[RTN MDSE]** or **[TX/M]** key error if prior to depressing any other function key that activates printing, or to correct any error condition and cancel the error alarm buzzer.

If this key is depressed before depressing a Department Key in a quantity extension sequence, all of the quantity, **[X]** key, and unit price entries are cleared.

If the **[C]** key is depressed after a subtotal is obtained, the subtotal amount is then displayed. If depressed after a short-tender is entered with the balance due displayed, the balance due is again displayed.

The **[C]** key may be operated regardless of any Mode Lock position except "OFF".

ITEM
CORR**ITEM CORRECT KEY ([ITEM CORR]) -- LAST LINE VOID KEY**

This key is used to delete the last item within a transaction. Depressing this key once will remove the last line from the bill, printing the same item symbol and amount with the "VD" added below the last item print line.

The item-correct function is effective even when a numeric entry and a **[C]** key depression are performed between the item entry to be corrected and the **[ITEM CORR]** key depression. However, if any other key-in operation including an error-and-clear sequence comes in between, the item-correct will not function.

The **[ITEM CORR]** key may function to correct any last item entered through a department, **[DOLL DISC]**, or **[%]** key. But no department item entered with the **[RTN MDSE]** key, an **[EX]** key entry, Non-add Number, nor media tender amount can be item-corrected. Neither can any item entered through the **[R/A]** or **[PO]** key be item-corrected.

When this key is operated to delete the last item, the "(-)" arrow lamp lights.

NS

NON-SALE KEY ([NS])

This key is used to open the cash drawer without relating to any sales, such as giving change, testing the register print condition, etc.

To operate, simply depress this key with the Mode Lock positioned to "REG" in an out-of-sale condition. The "NS" symbol is printed to indicate "no-sale", and the drawer opens.

RTN
MDSE**RETURNED MERCHANDISE KEY ([RTN MDSE])**

This key is used to make a subtracting entry for a returned item. This key is also used to invalidate an item entered before the last item within a transaction, in which case the **[ITEM CORR]** key cannot invalidate the designated item any longer.

To operate, depress the [RTN MDSE] key before or during a department entry sequence; it must be depressed before the last key of the sequence (i.e. the Department Key). Then the item is registered as a returned item.

TX/M

TAX MODIFIER KEY ([TX/M])

This key is used to reverse the tax status (taxable/non-taxable) of a department for one entry only. If a department is programmed with taxable status, depressing the [TX/M] key prior to the [DEPT] key will enter the item as non-taxable. Depressing the [TX/M] key during a non-taxable department item entry will reverse the status into taxable.

R/A

RECEIVED-ON-ACCOUNT KEY ([R/A])

A received-on-account transaction is used to identify money which is in the drawer but not due to business, such as change reserve in the drawer, payments received from a customer for a credit sale account made in the past, etc. The amount entered is thus included in the "Cash-indrawer" memory but not in the sales totals.

To operate, enter an amount of payment and then depress the [R/A] key whilst the register is in an out-of-sale condition. The drawer immediately opens. No entries with a zero amount are allowed through this key.

PO

PAID-OUT KEY ([PO])

A paid-out transaction is used when an amount of money is removed from the cash drawer without relating to a sale, such as paying for merchandise to a wholesaler, etc. When the [PO] key is used, the amount entered is subtracted from the "Cash-in-drawer" memory but does not affect the sale totals (reverse process to [R/A]).

To operate, enter the cash amount taken from the drawer and depress the [PO] key whilst the register is in an out-of-sale condition. The drawer immediately opens to enable cash payout. No entries with a zero amount are allowed through this key.

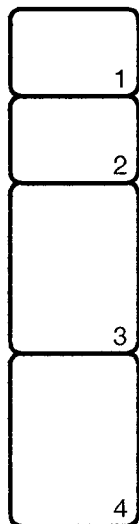
7	8	9
4	5	6
1	2	3
0	00	

NUMERIC KEYS (| _____ |)

These keys are used to enter numeric values such as amount, quantity, and non-add numbers.

Depressing the [00] key once is the same as depressing the [0] key twice consecutively.

The maximum listing capacity for numeric entry is 7 digits.



DEPARTMENT KEYS ([DEPT], or [DEPT 1] to [DEPT 4])

These are department keys through which sale items are registered. These keys may be programmed as either 'PRESET' keys or 'OPEN' keys.

OPEN DEPARTMENT KEY ([Open DEPT])

A key which has no preset price programmed is an 'OPEN' key and must have a price entered for it manually. The price is rung up on the numeric keyboard and then the appropriate department key is depressed. The price is then displayed and printed.

When the same department key is depressed more than once after a price entry, the price entered is repeated as many times as it is depressed. A 0 (zero) amount cannot be entered.

PRESET DEPARTMENT KEY ([Preset DEPT])

A preset key is a key which already has a price programmed for it. It is therefore unnecessary to enter the price of an item: simply depress the key to register the sale of one item.

Quantity extension (multiplication) is possible through a department key by entering a quantity and depressing the [X] key prior to the department entry sequence.

Each department key can also be programmed as an Itemized Department or Single-item Department.

Itemized Department Key

An amount entered through this key will not be finalized until a media key ([AT/TL], or [CRT]) is operated. That is, more than one item of different departments or with different amounts may be entered in a sale.

Single-item Department Key

When an amount is entered through this key and when no other sale items have been entered within the sale, the sale is immediately finalized as cash without operating the [AT/TL] key. Quantity extension and Returned Merchandise operations are also possible with this key, but Percent Discount/Charge, Amount Discount, or Repeat Entries are not possible for the item entered as Single-item. Nor will the [ITEM CORR] key be effective to delete a Single-item entry.

However, when this key is used inside a sale, (i.e. when any other sale items have already been entered in the sale), the key functions just as an Itemized Department Key.

Each department is programmed with taxable or non-taxable status. If taxable, the "X" symbol is printed to the right side of the department item.



NON-ADD NUMBER PRINT ([#])

This key is used to print a non-add number, such as Customer No., and Account No., etc. A maximum of 7 digits may be entered and printed as a non-add number.

To operate, enter the required number and depress the [#] key. It may be operated as the first line of the sale, between two line items, or after the subtotal amount if before finalizing the sale. However, when a non-add number is entered, a no-sale transaction will not be accepted..

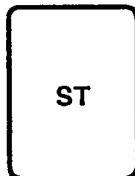


TAX EXEMPT KEY ([EX])

This key is used to exempt tax from the sale.

After all the sale items have been entered, depressing the [EX] key declares tax exemption, which displays the sale total (the displayed amount is already tax-exempt) with the "ST" arrow lamp lit and prints the tax-exempted total of the taxable item portion of the sale.

After operating the [EX] key, no other operations than sale finalization will be accepted. When the [C] key is depressed to clear a numeric entry, an error, etc., after the [EX] key is operated, the tax-exempted sale total will again be displayed.



SUBTOTAL KEY ([ST])

This key is used to obtain the subtotal amount during a sale, printing the amount without tax, and displaying the amount with tax of the items so far entered. But the sale is not finalized, and additional items may be entered if necessary. At the same time the "ST" arrow lamp lights. When the displayed subtotal amount is negative, the "(-)" arrow lamp lights along with the "ST" lamp.

If the [ST] key is depressed more than once consecutively, the first depression only will print and display the subtotal; further depression will only display but not print the subtotal amount.

AT/TL

CASH AMOUNT TENDER / TOTAL KEY ([AT/TL])

This key is used to finalize a cash sale.

This key can be programmed to be used as one of the following three types:

1. AMOUNT TENDER KEY

If so programmed, this key requires a tendered amount entry prior to depressing this key. Tax is calculated and printed with the "TX" symbol. The sale total with tax with the "TL" symbol (if [ST] has not been depressed), cash tendered amount with the "AT" symbol, and the change due with the "CG" symbol are each printed on separate lines. Meanwhile, the display shows the amount of change due.

When the tendered amount is less than the sale total, all the printing sequence above will be the same except that the balance due is displayed (not printed) instead of the change due. In this case, the sale is not yet finalized and another media tendering or totalling using [AT/TL], or [Chg] will be required.

When the sale total is negative, as in some cases with returned merchandise entries, the [AT/TL] key must be depressed without a prior amount entry, as described in "2. TOTAL KEY" below.

2. TOTAL KEY

If so programmed, this key can be depressed without a prior amount entry for sale finalization. Tax is calculated and printed with the "TX" symbol. The sale total is printed with the "CA" symbol.

When the sale total is negative, the sale total is printed with the "-" as well as the "CA" symbol. The display shows the sale total amount with the "TL" and "(-)" arrow lamps lit. In this case, the operator must refund the amount in cash to the customer.

3. AMOUNT TENDER / TOTAL KEY

If so programmed, this key will function as TENDER KEY (as described in 1 above) when any prior amount is entered, and will function as TOTAL KEY (as described in 2 above) when depressed without an amount entry.

Chg

CHARGE TOTAL KEY ([Chg])

This key is used as an alternative method of payment for a charge sale.

Since this is the TOTAL KEY, operate the same as described in "2. TOTAL KEY" of the [AT/TL] key. A negative-balance sale may also be finalized by this key.

8. REGISTERING PROCEDURE FOR SALES AND OPERATION SAMPLES

The following are registering operation patterns and actual operation samples. In the patterns, “[]” indicates an input through the numeric keys, “[]” indicates a depression of the transaction key, and “ --- ” indicates other registering and/or finalizing operations. In referring to the sample operations, please note that the programmed data on some keys or items (such as Department keys may be different from those programmed for your store.

For registering operations, be certain to turn the Mode Lock to the “REG” position.

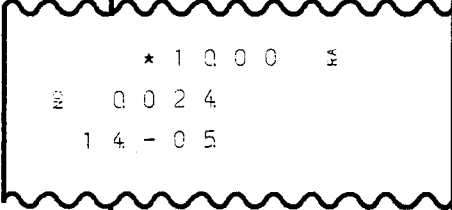
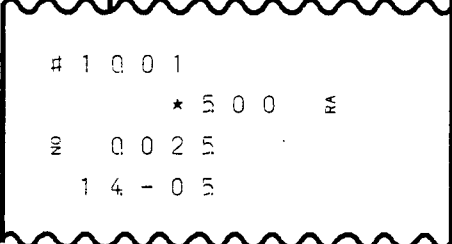
NO-SALE (must be operated outside a sale)

[NS]

SAMPLE OPERATION CONTENTS	KEY OPERATION Mode Lock: REG	DISPLAY					
		DP	RPT	A	M	O	U
<p>You want to test the printer condition before starting operations for the day.</p> <p>Or a customer requests to break a bill,</p>	<p>[NS]</p> <p>The drawer opens.</p>	0 0 0					

RECEIVED-ON-ACCOUNT (must be operated outside a sale)

| Amount of Payment Received | [R/A]

SAMPLE OPERATION CONTENTS	KEY OPERATION Mode Lock: REG	DISPLAY			
		DP	RPT	A M O U N T	
Loan Entry (Change reserve into the drawer before starting the day) Cash Amount \$10.00 is entered into the drawer as change reserve.	1000			1 0 . 0 0	
	[R/A]			1 0 . 0 0	
					
Payment Receiving A customer comes and settles his account for a sale made on a different day (finalized as a credit sale). The Customer's Account No. is 1001, and the amount of payment is \$5.00.	1001			1 0 . 0 1	
	[#]			1 0 . 0 1	
	500			5 . 0 0	
	[R/A]			5 . 0 0	
					

PAID-OUT (must be operated outside a sale)

| Amount to be paid out | [PO]

SAMPLE OPERATION CONTENTS	KEY OPERATION Mode Lock: REG	DISPLAY			
		DP	RPT	A M O U N T	
<p>Payout to a wholesaler</p> <p>You must pay for merchandise the store has purchased. The amount is \$8.00. You assign Code No. 2003 to this wholesaler for future reference.</p>	2003			2 0 . 0 3	
	[#]			2 0 . 0 3	
	800			8 . 0 0	
	[PO]			8 . 0 0	
<p># 2 0 0 3 * 8 0 0 PO NO 0 0 2 6 1 4 - 0 5</p>					
<p>Pick Up (Collection of money from the drawer during the day for banking purposes, etc.)</p> <p>You collect a cash amount of \$15.00 during business hours for banking purposes.</p>	1500			1 5 . 0 0	
	[PO]			1 5 . 0 0	
<p>* 1 5 0 0 PO NO 0 0 2 7 1 4 - 0 5</p>					

DEPARTMENT ENTRY

Open Department (Itemized Dept)

(--- →) | Price | [Open DEPT] → ---

Preset Department (Itemized Dept)

(--- →) [Preset DEPT] → ---

Single-item Department

Operates the same as Itemized Departments, except that the sale is finalized as cash in case a Single-item Department is entered when operated outside a sale.

SAMPLE OPERATION CONTENTS	KEY OPERATION Mode Lock: REG	DISPLAY			
		←	DP RPT A M O U N T	→	
Open Dept (Itemized) A Dept.1 item of \$1.23 (Dept.1 is programmed as an Open, Itemized dept) (The sale is not finalized until a media key is operated.)	123 [DEPT 1]			1.23	
		REG 1		1.23	
Preset Dept (Itemized) A Dept.2 item which is preset with a price of \$2.50. (The sale is not finalized until a media key is operated.)	[DEPT 2]	REG 2		2.50	
Single-item Dept -- outside a sale -- A Dept.3 item of \$1.40 (Dept.3 is programmed as an Open, Single-item dept) (The sale is immediately finalized as cash.)	140 [DEPT 3]	REG 3		1.40	
					TL

REPEAT ENTRY (for Itemized Dept only)

Open Dept Repeat

(--- →) | Price | [Open DEPT] [Same DEPT] ... → ---

Preset Dept Repeat

(--- →) [Preset DEPT] [Same DEPT] ... → ---

Depress the last key of the sequence ([DEPT]) as many times as the desired count.

SAMPLE OPERATION CONTENTS	KEY OPERATION Mode Lock: REG	DISPLAY																								
		←	DP	RPT	A M O U N T	→																				
To enter the following item within a sale:																										
3 items of Dept.1 (open dept), unit price \$1.20	120					1. 2 0																				
	[DEPT 1]	REG	1			1. 2 0																				
	[DEPT 1]	REG	1 2			1. 2 0																				
	[DEPT 1]	REG	1 3			1. 2 0																				
2 items of Dept.2 (preset dept), preset price \$2.50	[DEPT 2]	REG	2			2. 5 0																				
	[DEPT 2]	REG	2 2			2. 5 0																				
<div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <table style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 5%;">1</td><td style="width: 15%;">★</td><td style="width: 40%;">1. 2 0</td><td style="width: 40%;">★</td></tr> <tr><td>1</td><td>★</td><td>1. 2 0</td><td>★</td></tr> <tr><td>1</td><td>★</td><td>1. 2 0</td><td>★</td></tr> <tr><td>2</td><td>★</td><td>2. 5 0</td><td></td></tr> <tr><td>2</td><td>★</td><td>2. 5 0</td><td></td></tr> </table> </div>		1	★	1. 2 0	★	1	★	1. 2 0	★	1	★	1. 2 0	★	2	★	2. 5 0		2	★	2. 5 0						
1	★	1. 2 0	★																							
1	★	1. 2 0	★																							
1	★	1. 2 0	★																							
2	★	2. 5 0																								
2	★	2. 5 0																								

QUANTITY EXTENSION (MULTIPLICATION OF DEPARTMENT)

Open Dept : (--- →) | Quantity | [X] | Unit Price | [Open DEPT] → ---

Preset Dept : (--- →) | Quantity | [X] | [Preset DEPT] → ---

Single-item Dept : Operates the same as above, except that the sale is immediately finalized as cash if operated outside a sale.

SAMPLE OPERATION CONTENTS	KEY OPERATION Mode Lock: REG	DISPLAY									
		←	DP	RPT	A	M	O	U	N	T	→
To enter the following items:											
5 items of Dept.1 (open dept), unit price \$1.20	5 [X] 120 [DEPT 1]										0.05
											0.05
											1.20
		REG 1									6.00
6 items of Dept.2 (preset dept), preset price \$2.50	6 [X] [DEPT 2]	REG									0.06
		REG									0.06
		REG 2									15.00
<pre> 5 X 1.20 @ 1 * 6.00 * 6 X 2.50 @ 2 * 15.00 </pre>											

RETURNED MERCHANDISE or DESIGNATED LINE VOID

Depress **[RTN MDSE]** before or any time during any of the following operation patterns but it must be depressed before the final key (i.e. **[DEPT]**) of the sequence:

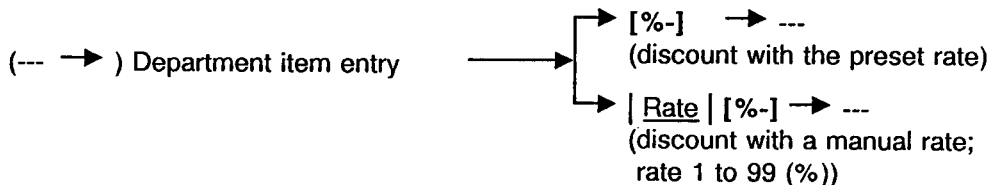
DEPARTMENT ENTRY (page 14)
 QUANTITY EXTENSION (page 16)

SAMPLE OPERATION CONTENTS	KEY OPERATION Mode Lock: REG	DISPLAY				
		←	DP RPT A M O U N T	→	←	→
Return Entry Outside a Sale A customer comes up to return a \$5.00 item of Dept.1. No other sale items at this time. The sale total is now negative, therefore the total amount displayed must be paid back to the customer in cash.	[RTN MDSE]				0.00	
	500				5.00	
	[DEPT 1]	REG 1			5.00	
	[AT/TL]	(-)			5.50	TL
		(-)				

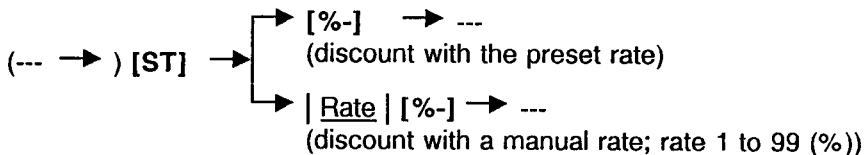
PERCENT DISCOUNT

(PERCENT CHARGE operates the same with [% +] instead of [%-])

Discount from a Department :



Discount from the entire sale total :



SAMPLE OPERATION CONTENTS	KEY OPERATION Mode Lock: REG	DISPLAY			
		←	DP RPT A M O U N T	→	
Percent Discount from a Department Item A Dept.1 item of \$2.00 is entered. 5% is discounted from the above item. <div style="border: 1px dashed black; padding: 5px; width: fit-content; margin: 10px auto;"> 1 * 2 0 0 * 5 % - - 0 1 0 </div>	200 [DEPT 1] [%-] (if 5% is preset)	REG	1	2. 0 0	
			REG	(-)	0. 1 0
Percent Discount from a Sale Total 10% is subtracted from entire sale total. <div style="border: 1px dashed black; padding: 5px; width: fit-content; margin: 10px auto;"> * 5 0 0 ST 1 0 % - - 0 5 0 </div>	Sale items have been entered [ST] 10 (Manual % Rate) [%-]	REG		5. 5 0	ST
			REG		0. 1 0
		REG	(-)	0. 5 0	

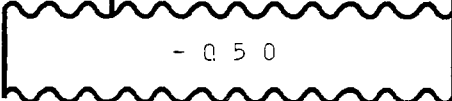
Percent Discount (or Percent Charge) on a Returned Item

When a Percent Discount/Charge is operated after a returned Department item, the percent rate is discounted from (or added to) the returned item amount, i.e. a set of a Department item and a %- (or % +) is returned.

SAMPLE OPERATION CONTENTS	KEY OPERATION Mode Lock: REG	DISPLAY				
		DP	RPT	A	M	O U N T
<p>A customer purchases a Dept.1 item of \$6.00 with a 10% discount.</p> <p>The sale is made in cash.</p>	600				6.000	
	[DEPT 1]	REG	1			6.000
	10	REG			0.100	
	[%-]	REG	(-)		0.600	
	[AT/TL]				6.000	TL
<div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <pre> 1 * 6 0 0 * 1 0 % - - 0 6 0 * 0 6 0 TX * 6 0 0 CA NO 0 0 3 6 1 4 - 5 0 </pre> </div>						
<p>The above customer comes up later to return the item purchased in the above sale.</p> <p>Except [RTN MDSE], the operation is the same as in the sale of the item.</p> <p>The obtained total is negative, therefore the amount must be paid back to the customer in cash.</p>	[RTN MDSE]				0.000	
	600	REG	(-)		6.000	
	[DEPT 1]	REG			0.100	
	10	REG			0.600	
	[%-]	REG	(-)		6.000	TL
	[AT/TL]					
<div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <pre> 1 * 6 0 0 RT * 1 0 % - * 0 6 0 - 0 6 0 TX - 6 0 0 CA NO 0 0 3 7 1 4 - 5 1 </pre> </div>						

DOLLAR DISCOUNT

(--- →) | Amount to be discounted | [DOLL DISC] → --- (An amount exceeding the subtotal cannot be entered through the [DOLL DISC] key unless the option "Credit Balance Allowed" is selected.)

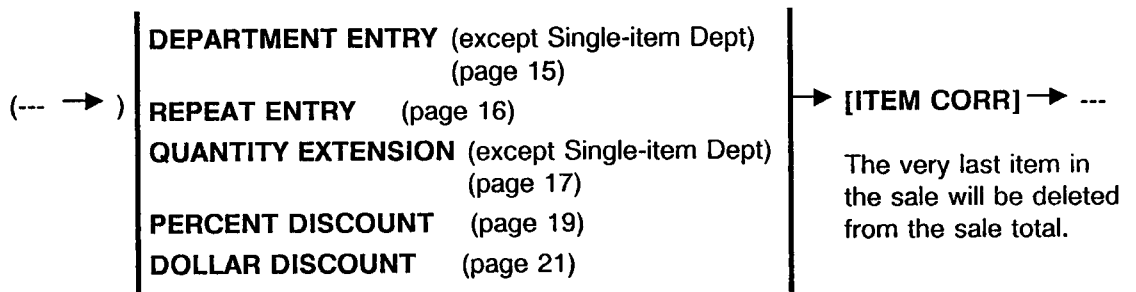
SAMPLE OPERATION CONTENTS	KEY OPERATION Mode Lock: REG	DISPLAY			
		DP	RPT	A M O U N T	
During a sale an amount of \$0.50 is discounted from the sale. : : : 	Sale items have been entered.				
	50	REG		0 . 5 0	
	[DOLL DISC]	REG (-)		0 . 5 0	
	- 0 5 0				

NON-ADD NUMBER PRINT

(--- →) | Number to be printed as reference | [#] → ---
 max. 7 digits; 1 to 9999999

- Operation Samples in :
- RECEIVED-ON-ACCOUNT (page 13)
 - PAID-OUT (page 14)
 - CHARGE SALE TOTAL (page 27)

ITEM CORRECT (Last Line Voiding)



- NOTES:**
- 1) When [ITEM CORR] is operated after a REPEAT ENTRY, only the last item of the repeated entries is deleted.
 - 2) When [ITEM CORR] is operated after a QUANTITY EXTENSION, the entire product (the result of multiplication) is deleted.

SAMPLE OPERATION CONTENTS	KEY OPERATION Mode Lock: REG	DISPLAY			
		←	DP RPT A M O U N T	→	↕
A Dept.2 item (preset price \$2.50) is entered, but you immediately notice that the entry is wrong. ...	[DEPT 2]	REG 2	2	5	0
	[ITEM CORR]	REG 2 (-)	2 0	2	5 0
5 x Dept.1 item of unit price \$1.30 is entered, but you immediately notice that the entry is wrong. ...	5			0	0 5
	[X]			0	0 5
	130			1	3 0
	[DEPT 1]	REG 1		6	5 0
	[ITEM CORR]	REG 1 (-)	1 0	6	5 0

TAX STATUS MODIFICATION

Depress **[TX/M]** before or any time during any of the following operation patterns but it must be depressed before the final key (i.e. **[DEPT]**) of the sequence.

DEPARTMENT ENTRY (page 15)
REPEAT ENTRY (page 16)
QUANTITY EXTENSION (page 17)
RETURNED MERCHANDISE (page 18)

Then a taxable item is reversed to non-taxable, and a non-taxable item is reversed to taxable. No display indication appears by operating **[TX/M]**. But in print, the taxable symbol “ \times ” is attached to an item indicated as taxable, and nothing is attached to an item indicated as non-taxable.

The **[TX/M]** key can be depressed prior to the **[%-]** (or **[% +]**) or **[DOLL DISC]** key. In this case the non-taxable status (fixed status) of the key will reversed to taxable.

SUBTOTAL

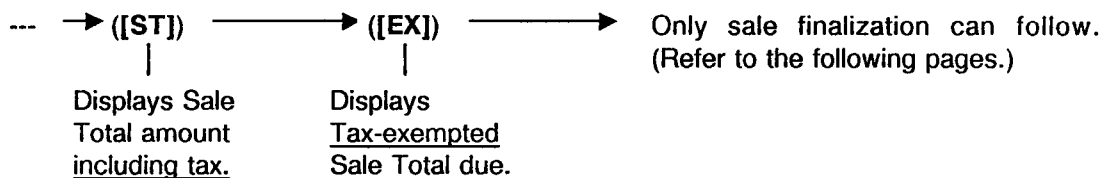
--- → [ST] → --- ...

The sale total of the items so far entered is displayed and printed. The sale is not finalized yet, and additional items may be entered if necessary. The displayed amount includes tax, while the printed amount does not include tax.

SAMPLE OPERATION CONTENTS	KEY OPERATION Mode Lock: REG	DISPLAY				
		DP	RPT	A	M O U N T	
Sale items:						
Dept.1 \$1.50	150				1.50	
	[DEPT 1]	REG	1		1.50	
Dept.2 (preset: \$2.50)	[DEPT 2]	REG	2		2.50	
You want to know the subtotal here.	[ST]	REG			4.15	ST
Then, additional items:	115	REG			1.15	
Dept.3 \$1.15	[DEPT 3]	REG	3		1.15	
5% is discounted from the above item.	[%-] (if 5% is preset)	REG	(-)		0.06	
Now you want to know the subtotal again.	[ST]	REG			5.36	ST
⋮						

1	* 1.50	*
2	* 2.50	
	* 4.00	\$
3	* 1.15	*
	5	% -
	- 0.06	
	* 5.09	\$

TAX EXEMPT



SAMPLE OPERATION CONTENTS	KEY OPERATION Mode Lock: REG	DISPLAY			
		PLU DP HT	A M O U N T		
Sale items have been entered.					
You want to know the sale total including tax.	[ST]	REG		5 5 0	ST
You must exempt tax from this sale for some reason.	[EX]	REG		5 0 0	ST
The customer tenders \$10.00 cash and the sale is finalized.	1000	REG		1 0 0 0	
The change amount \$5.00 is displayed, which must be paid back to the customer in cash.	[AT/TL]			5 0 0	CG


```

      * 5 0 0      ST
      * 5 0 0 *
      * 5 0 0      TL
      * 1 0 0 0    AT
      * 5 0 0      CG
NO  0 0 4 0
1 4 - 5 5
  
```

CASH SALE TOTAL, CASH TENDER

Cash Sale Total : (--- →) ([ST]) → [AT/TL]

Cash Tender : (--- →) ([ST]) → | Cash Amount Tended | [AT/TL]

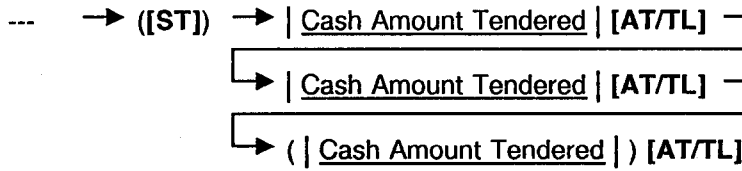
SAMPLE OPERATION CONTENTS	KEY OPERATION Mode Lock: REG	DISPLAY			
		DP	RPT	A M O U N T	
<p>Sale items have been entered.</p> <p>The customer wants to know the sale total.</p> <p>The customer pays with the exact amount of cash.</p>	<p>[ST]</p> <p>[AT/TL]</p>	REG		5. 5 0	ST
				5. 5 0	TL
<pre> * 5 0 0 ST * 0 5 0 TX * 5 5 0 CA NO 0 0 1 3 </pre>					
<p>Sale items have been entered.</p> <p>The customer wants to know the sale total.</p> <p>The customer tenders \$10.00 cash.</p> <p>The change of \$4.50 is displayed. Pay it back to the customer in cash.</p>	<p>[ST]</p> <p>1000</p> <p>[AT/TL]</p>	REG		5. 5 0	ST
		REG		1 0. 0 0	
				4. 5 0	CG
<pre> * 0 5 0 TX * 5 5 0 TL * 1 0 0 0 AT * 4 5 0 CG NO 0 0 4 1 1 4 - 5 5 </pre>					

CHARGE SALE TOTAL

--- → ([ST]) → [Chg]

SAMPLE OPERATION CONTENTS	KEY OPERATION Mode Lock: REG	DISPLAY			
		←	DP RPT A M O U N T	→	
<p>Charge Sale Total</p> <p>Sale items have been entered.</p> <p>The customer wants to use his credit account. You enter his Customer Account No. 1001 as reference.</p>	[ST]	REG		5. 5 0	ST
	1001 [#]	REG		1 0. 0 1	
	[Chg]			5. 5 0	TL
<pre> * 5 0 0 ST # 1 0 0 1 * 0 5 0 TX * 5 5 0 CH 0042 14-56 </pre>					

MULTI-TENDER (Short-tender repeated by the same media)



NOTE: In MULTI-TENDER operation, the sale is finalized and the drawer opens on reaching the sale total amount.

SAMPLE OPERATION CONTENTS	KEY OPERATION Mode Lock: REG	DISPLAY								
		DP	RPT	A	M	O	U	N	T	
Sale items have been entered.										
The customer first tenders \$5.00 cash, which is short. (The balance still due is displayed with "ST")	500 [AT/TL]	REG					5	0	0	
The customer pays the balance due of \$3.25 with an exact amount in cash.	[AT/TL]	REG					3	2	5	ST
	[AT/TL]						3	2	5	TL
<pre> * 0 7 5 TX * 5 0 0 AT TL * 3 2 5 CA NO 0 0 4 3 1 5 - 0 2 </pre>										

SPLIT-TENDER (Short-tender repeated by different media)

--- → ([ST]) → | Cash Amount Tendered | [AT/TL] → [Chg] ... Cash & Charge

NOTE: If [Chg] key is used in SPLIT-TENDER, it should be used as the last key. The TOTAL media key immediately finalizes the sale on its depression.

SAMPLE OPERATION CONTENTS	KEY OPERATION Mode Lock: REG	DISPLAY									
		←	DP	RPT	A	M	O	U	N	T	→
Sale items have been entered. The customer first tenders \$10.00, which is short. (The balance due is displayed as "ST") The customer asks to make the rest balance as his charge account.	1000	REG				1	0	0	0		
	[AT/TL]	REG				2	5	0		ST	
	[Chg]					2	5	0		TL	

POWER FAILURE DURING OPERATIONS

If a power failure occurs, the sales memory is protected by the back-up battery and registration and printing will normally be performed on regaining the power. However, please note the following cases:

Case 1: Numerics and/or [RTN MDSE] have been entered outside a sale.

↓
 Power fails.
 ↓
 Power is recovered.
 ↓
 Do the operation from the numerics and/or [RTN MDSE] entry over again.

Case 2: Numerics and/or [RTN MDSE] have been entered inside a sale.

↓
 Power fails.
 ↓
 Power is recovered.
 ↓
 The display regains the original content before the power failed. Operations may normally be continued.

Case 3: A department item is being printed.

↓
 Power fails.
 ↓
 Power is recovered.
 ↓
 The department item may not be printed correctly depending on the power failure timing. In this case, the subtotal amount is displayed along with the "ST" arrow lamp lit. Also, the power-fail symbol _ * _ * _ * _ * _ is printed below the incomplete line, to indicate that the incomplete line was printed due to a power failure. And then the subtotal amount with the "ST" symbol is automatically printed, in which amount the incomplete-print line amount is included correctly. Operations may normally be continued.

Case 4: Other items than department are being printed.

↓
 Power fails.
 ↓
 Power is recovered.
 ↓
 The item may not be printed correctly depending on the power failure timing and the power-fail symbol, as in Case 3, is printed below the incomplete print line. However, in this case, the incomplete line is correctly reprinted after the power-fail symbol line. Operations may normally be continued.

If a power failure occurs, it is recommended to check the print content before finalizing the sale or giving the change to the customer.

9. READ (X) AND RESET (Z) REPORTS

The following table shows available reports and the key operations to issue those respective reports. The contents of the X and Z reports are the same if both are available, except that:

1. Symbol X for X (Read) reports, and Z for Z (Reset) reports are printed as the header.
2. A reset count is printed near the end of a Z report (but not on X reports).
3. All the resettable counters and totals will be reset on a Z report issuance, while they will not be reset on an X report issuance. Therefore, X reports may be taken at any time and any number of times during the day or at the end of the day. But the Z report is expected to be taken only once a day and usually at the end of the day.

TABLE OF X AND Z REPORTS

REPORT NAME	MODE LOCK	KEY OPERATION
Cash-in-drawer Read (Read only)	X	[#]
Daily Read Daily Reset	X Z] [AT/TL]
GT Read GT Reset	X Z] 20 [AT/TL]

Refer to the report print samples on the following pages.

	page
Cash-in-drawer Read Report	31
Daily Read or Reset Report	32
GT Read or Reset Report	33

(The program verification printings, which are available in the "X" position of the Mode Lock, are located in the chapter VERIFICATION OF PROGRAMMED DATA.)

Cash-in-drawer Read Report (Read only)

Mode Lock: X, depress [#].

X
★ 7 2 9 5 5 9
0 0 4 6
1 5 - 0 7
1 2 - 2 4 - 8 8

Read Report Symbol
Cash-in-drawer Amount
Consecutive No.
Date

Daily Read or Reset Report

Mode Lock: X for Read
 Mode Lock: Z for Reset

depress [AT/TL].

Reset Report Sample

```

                                Z
    * 1 4 1. 2 1    5
      4 7
    * 1 4 1. 2 1    5
1     2 0
    * 4 4 3 3
2     1 5
    * 3 7 5 0
3     3
    * 3 9 5
4     0
    * 0 0 0
    * 4 3 3    TX
      3 8
    * 9 0 1 1    NS
      5
    * 0 6 6    % -
      1
    * 0 5 0    -
      1 8
    * 8 8 9 5    TL
      1 6
    * 8 0 9 5    CA
      2
    * 8 0 0    CH
      2
    * 1 5 0 0    RA
      2
    * 2 3 0 0    PO
    * 7 2 9 5    CA R
      3
    * 3 9 0 0    VO
      2
    * 1 2 1 0    RT
      1
    * 5 0 0 *
      0 0 0 1    Z
RD  0 0 4 7
    1 5 - 0 8
    1 2 - 2 4 - 8 8
    
```

Reset Report Symbol
 Grand Total (non-resettable)
 Gross Sale Item Count
 " " Amount
 Dept.1 Sale Item Count
 " " Amount
 Dept.2
 Dept.3
 Dept.4
 (Percent Charge Count and Amount :
 if [%]key is programmed as[% + I])
 Tax Amount
 Net Sale with Tax Item Count
 " " Amount
 Percent Discount Operation Count
 " " Amount
 Dollar Discount Operation Count
 " " Amount
 All Media Sales Customer Count
 " " Amount
 Cash Sales Customer Count
 " " Amount
 Charge Sales Customer Count
 " " Amount
 Received-on-Account Operation Count
 " Amount
 Paid-Out Operation Count
 " Amount
 Cash-in-drawer Amount
 Item Correct (Last Line Void) Operation Count
 " " Amount
 Returned Merchandise Item Count
 " " Amount
 Tax-exempted Customer Count
 " " Sales Amount
 Reset Report Count (printed only in Reset Reports)
 Consecutive No.
 Current Time
 Date

GT Read or Reset Report

Mode Lock: X for Read
 Mode Lock: Z for Reset

enter 20, depress
 [AT/TL].

GT Read Report Sample

		* * X	
	* 1 4 1. 2 1	5	
	4 7		
	* 1 4 1. 2 1	3	
1	2 0		
	* 4 4 3 3		
2	1 5		
	* 3 7 5 0		
3	3		
	* 3 9 5		
4	0		
	* 0 0 0		
	* 4 3 3	X	
	3 8		
	* 9 0 1 1	NS	
	5		
	* 0 6 6	% -	
	1.		
	* 0 5 0	-	
	1 2		
	* 8 8 9 5	TL	
	1 6		
	* 8 0 9 5	CA	
	2		
	* 8 0 0	CH	
	2		
	* 1 5 0 0	RA	
	2		
	* 2 3 0 0	PO	
	* 7 2 9 5	CA ID	
	3		
	* 3 9 0 0	VD	
	2		
	* 1 2 1 0	RT	
	1.		
	* 5 0 0 *		
NG	0 0 4 8		
	1 5 - 0 9		
	1 2 - 2 4 - 8 8		

GT Read Report Symbol

The print items are the same as in the Daily Read or Reset.

Please note that in GT reports, the sales data are not totals for one day but are accumulated for a certain period (weekly, monthly, etc., depending on the store's designated period for GT Reset Report taking).

When a GT Reset Report has been taken, all the counters and totals (except GT) will be reset (cleared) to zero. Therefore, for example, if the store wants monthly sales data from GT Read or Reset Reports, take a GT Reset Report once a month on a certain date (on the 1st of every month, etc.). GT Read Reports may be taken any number of times at any time, and sales data accumulated from the last time a GT Reset Report was taken up to then will be read, and the sales counters and memories will not be cleared.

10. PROGRAMMING OPERATIONS

TABLE OF CONTENTS

	page
SETTING BASIC REGISTER REQUIREMENTS BY 7-DIGIT CODE ENTRY	35
DEPARTMENT STATUS SETTING OR CHANGING	36
TIME SETTING OR ADJUSTMENT	38
DATE SETTING OR ADJUSTMENT	38
DEPARTMENT LISTING CAPACITY SETTING OR CHANGING	39
DEPARTMENT PRESET PRICE SETTING OR CHANGING	40
%- (or % +) PRESET RATE SETTING OR CHANGING	41
TAX TABLE SETTING	42

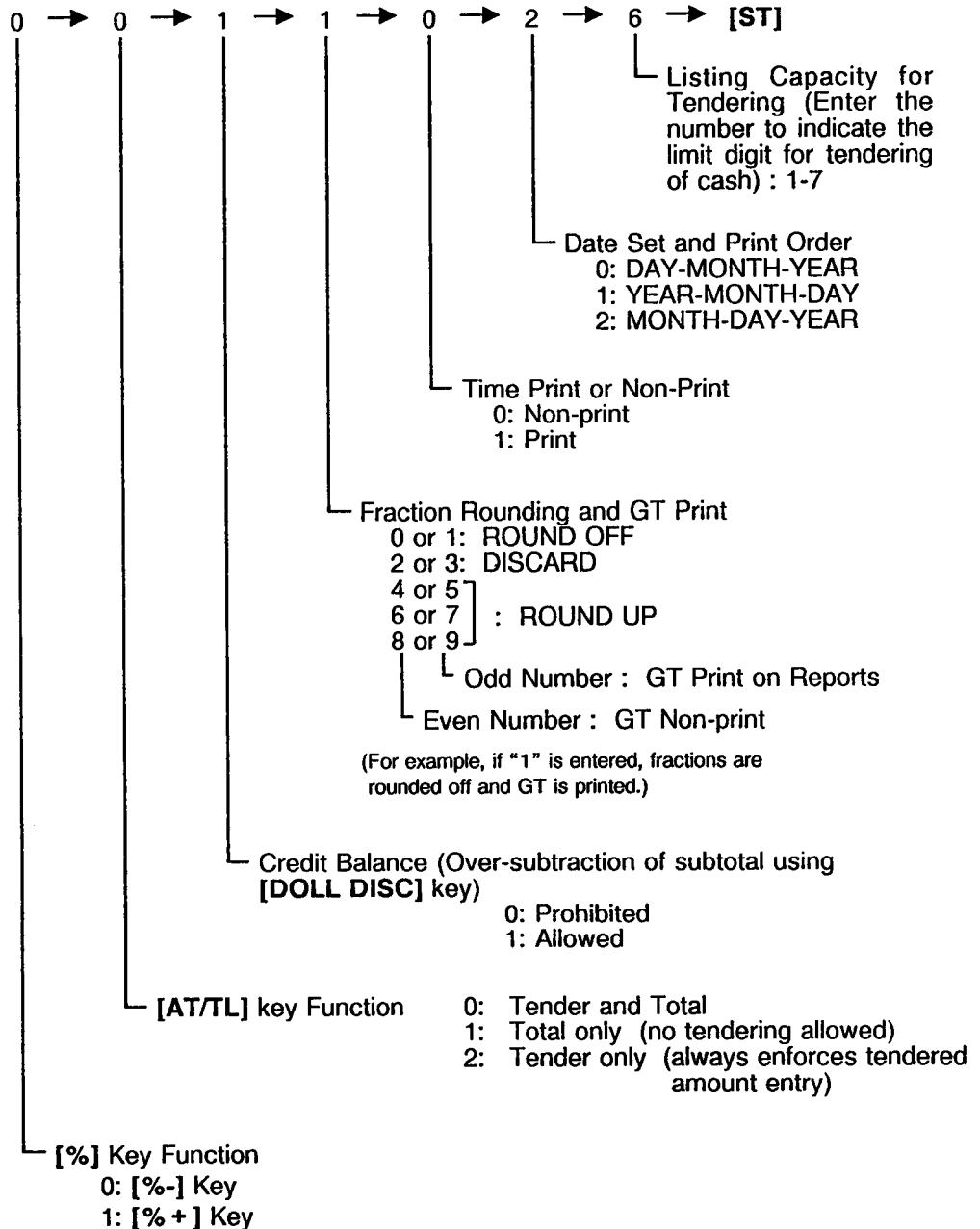
SETTING BASIC REGISTER REQUIREMENTS BY 7-DIGIT CODE ENTRY

This determines basic register functions and specifications for the market and for your store.

- CONDITION** After Daily Reset, GT Reset
- OPERATION** Mode Lock : **SET**

Enter a 7-digit code, depress [ST]

ex.)



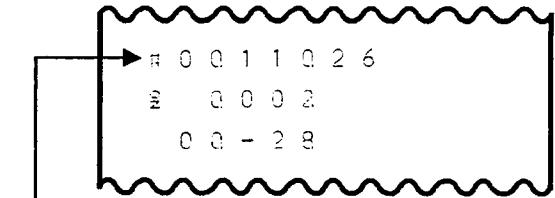
- NOTES:** 1) Initial zeros may be omitted. For example only "11026" may be entered instead of "0011026".
- 2) When a numeric value larger than those specified is entered, it will result in the same as the maximum numeric value of those specified.

SAMPLE OPERATION To set the following requirements:

- [%] Function -- [%-] : 0
- [AT/TL] Function -- Tender & Total: 0
- Credit Balance -- Allowed: 1
- Fraction -- ROUND OFF] : 1
- GT -- Print
- Time -- Non-print: 0
- Date -- MONTH-DAY-YEAR: 2
- Listing Capacity -- 6 digits: 6

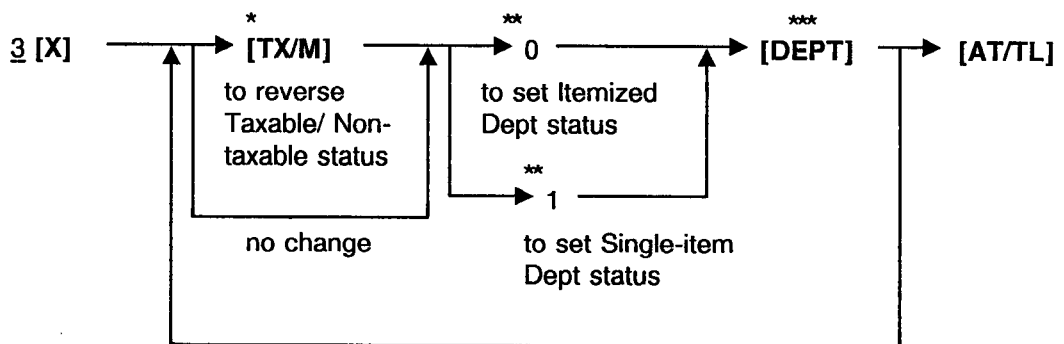
Mode Lock to "SET".

Enter 0011026 (or 11026), depress [ST].



DEPARTMENT STATUS SETTING OR CHANGING

- CONDITION** After Daily Reset, GT Reset
- OPERATION** Mode Lock : SET



Repeat for another department.

- * : Depressing **[TX/M]** will reverse the current tax status of the department. When the department is taxable, it will reverse the department into non-taxable. When non-taxable, it will reverse into taxable. You can only verify the resulting status on the program receipt.
- ** : Enter "0" to obtain Itemized Dept status.] regardless of the
 Enter "1" to obtain Single-item Dept status.] preprogrammed status.
- *** : Depress the Department Key whose status is now being programmed.

- NOTES:**
- 1) Even when the status of a department is changed, the preset price (if set) will not be cleared. Neither will the Listing Capacity of the department be cleared.
 - 2) The procedure of the key-in sequences marked with "***" may come before the sequente marked with "**" as long as they are operated before depressing the **[DEPT]** key.
 - 3) No other keys than **[TX/M]**, **[0]**, and **[1]** can be entered before the **[DEPT]** key.

SAMPLE OPERATION To set each department with the following status:

- Dept. 1 Taxable, Itemized
- Dept. 2 Non-taxable, Itemized
- Dept. 3 Taxable, Single-item
- Dept. 4 Non-taxable, Itemized

Mode Lock to "SET".

Enter 3, depress **[X]**.

[TX/M] 0 [DEPT 1] (Displays 0.00)
0 [DEPT 2] (Displays 0.00)
[TX/M] 1 [DEPT 3] (Displays 0.01)
0 [DEPT 4] (Displays 0.00)

```

# - 0 3
1 *           0 *
2 *           0
3 *           1 *
4 *           0
% 0 0 0 3
0 0 - 2 9

```

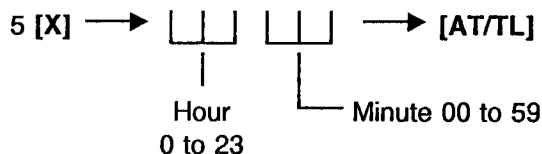
[AT/TL] to end this program.

TIME SETTING OR ADJUSTMENT

A standard calendar and a TOD (TIME-OF-DAY) clock circuit are installed in the series MA-71 models. Therefore, once the date and the time are set, seldom is adjustment necessary.

CONDITION Any time outside a sale

OPERATION Mode Lock : **SET**



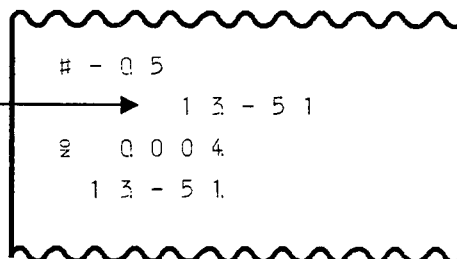
ex.) To set the time to "13:51"
(1:51 p.m.) :

Mode Lock to "SET", enter 5, depress [X].

Enter 1 3 5 1 , depress [AT/TL].

NOTES:

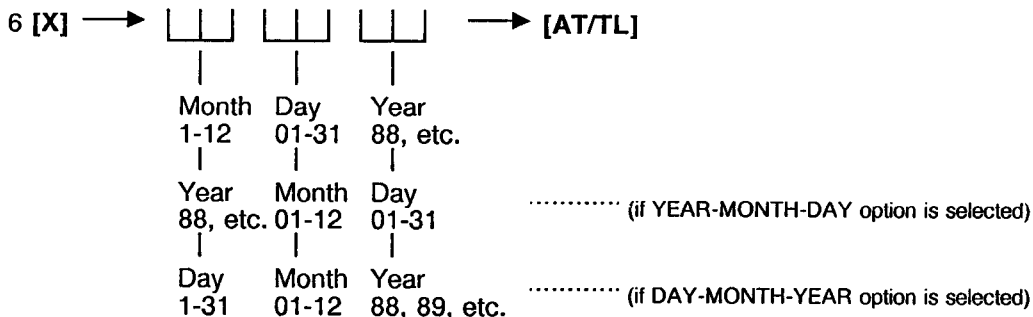
- 1) If an hour value of more than 23 or a minute value of more than 59 is entered, no errors will result. However, in this case, set the time again with correct values.
- 2) The date will not be changed by setting or adjusting the time.



DATE SETTING OR ADJUSTMENT

CONDITION Any time outside a sale

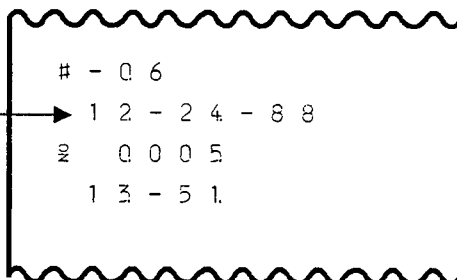
OPERATION Mode Lock : **SET**



ex.) To set the date to
"December 24 1988":

Mode Lock to "SET", enter 6, depress [X].

Enter 1 2 2 4 8 8 , depress [AT/TL].



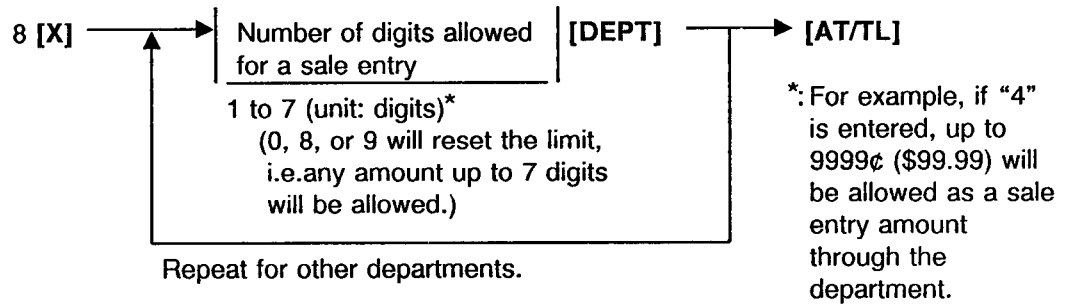
NOTE: Since a leap year cannot be judged, the date must be reprogrammed in such a case.

DEPARTMENT LISTING CAPACITY SETTING OR CHANGING

Each department may be assigned a listing capacity (a digit limit for amount entries at the time of sales). By setting a listing capacity, an excessive amount entry (due perhaps to a mistake by the operator) will be prevented at the earliest stage (i.e. an error will result on entering an excessive amount through the department key).

CONDITION After Daily Reset

OPERATION Mode Lock : SET



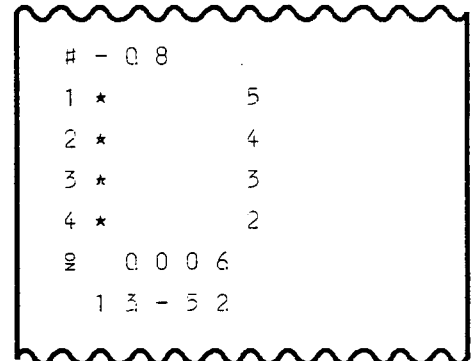
ex.) To set each department with the following Listing Capacity (4 Dept. type):

	<u>LC (digit limit)</u>
Dept.1	5 digits (\$999.99)
Dept.2	4 digits (\$99.99)
Dept.3	3 digits (\$9.99)
Dept.4	2 digits (\$0.99)

Mode Lock to "SET", enter 8, depress [X].

Enter 5, depress [DEPT 1].
 Enter 4, depress [DEPT 2].
 Enter 3, depress [DEPT 3].
 Enter 2, depress [DEPT 4].

[AT/TL] to end this program.



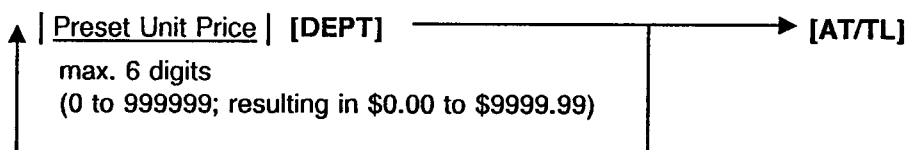
NOTE: Since the Listing Capacity is provided to check the amounts entered in the "REG" mode, it will be disregarded when a preset price is set on a department (in a separate operation described later).

DEPARTMENT PRESET PRICE SETTING OR CHANGING

Each department may be assigned a preset price or remain as an open-price department.

CONDITION Any time outside a sale

OPERATION Mode Lock : **SET**



Repeatable for other departments.

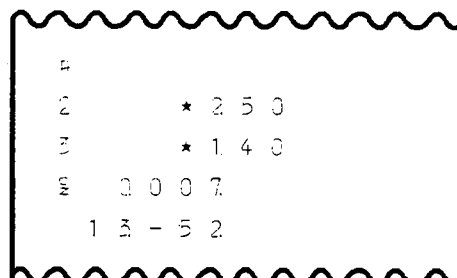
NOTE: When the “Preset Unit Price” is skipped and only the [DEPT] key is depressed in the above operation sequence, the department will be an open-price department (i.e. an amount entry is always required before the [DEPT] key in the “REG” mode).

ex.) To set Preset Unit Price \$2.50 to Dept. 2, and \$1.40 to Dept. 3:

Mode Lock to “SET”.

Enter 250, depress [DEPT 2].
Enter 140, depress [DEPT 3].

[AT/TL] to end.

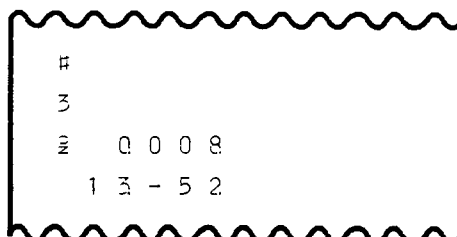


ex.) To reset the Preset Unit Price (\$1.40) of Dept.3 that was once set (i.e. to change it into an open-price department):

Mode Lock to “SET”.

Simply depress [DEPT 3].

[AT/TL] to end.



%- (or % +) PRESET RATE SETTING OR CHANGING

A preset rate may be set to the [%-] (or [% +]) keys. If a rate is once preset on a % key, the preset rate will be applied by simply depressing the % key in a sale entry. When a rate different from the preset one is required in a sale entry, enter the required rate value before depressing the % key. The manually entered rate will be applied then.

CONDITION Any time outside a sale

OPERATION Mode Lock : **SET**

| Rate | → [%-] (for preset rate of %-)
(or [% +]) (for preset rate of % +)

(Rate : max. 2 digits; 1 to 99 (%))

To clear the rate once set, operate:

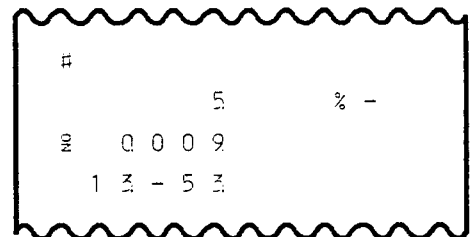
0 → [%-] (to clear %- preset rate)
(or [% +]) (to clear % + preset rate)

(In this case, the % key will always require a manual rate before use in a sale entry.)

ex.) To set "5%" on the [%-] key:

Mode Lock to "SET".

Enter 5, depress [%-].



TAX TABLE SETTING

The MA-71 model can automatically calculate tax using one of the following three methods.

1. FULL-BREAK METHOD (Combination of Non-Cyclic Breaks and Cyclic Breaks; maximum 32 breaks programmable)
2. COMBINATION OF NON-CYCLIC BREAKS AND % RATE (maximum 32 breaks programmable)
3. % RATE ONLY

CONDITION After Daily Reset

OPERATION Mode Lock : **SET**

1. FULL-BREAK METHOD

Non-cyclic Breaks

- 1) Enter the first break point of price that is the non-taxable limit, and depress **[TX/M]**.
- 2) Enter the next break point of price that is the limit to collect the tax amount of 1¢, and depress **[TX/M]**.
- 3) Repeat Step 2) above, with alternating each limit price for collecting tax amount of 2¢, 3¢, 4¢, . . . until the non-cyclic breaks are all entered.
- 4) Depress **[ST]** to end the non-cyclic break entries.

Cyclic Breaks

- 5) Do the same operation as Step 3) above, entering each limit price for each tax amount that increases by 1¢, following by the **[TX/M]** key. Enter the last price so that the difference between the last non-cyclic break price already entered and the last cyclic one will be a multiple of one dollar (\$9.00 maximum). Otherwise, the tax calculation will not correctly function.
- 6) Depress **[AT/TL]** to complete the cyclic break entries and the entire tax program.

SAMPLE OPERATION

To program the following tax table:

Tax table

Non-cyclic Breaks

(from)	(to)	(tax)
0¢	12¢	0¢
13	34	1
35	59	2
60	87	3

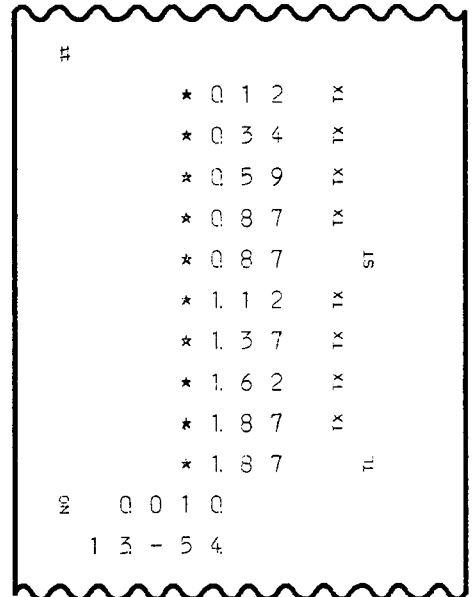
Cyclic Breaks

88	112	4
113	137	5
138	162	6
163	187	7
188	212	8
⋮	⋮	⋮

Key Operation

Mode Lock to SET.

(Enter)	→	(Depress)
12		[TX/M]
34		[TX/M]
59		[TX/M]
87		[TX/M]
		[ST]
112		[TX/M]
137		[TX/M]
162		[TX/M]
187		[TX/M]
		[AT/TL]



2. COMBINATION OF NON-CYCLIC BREAKS AND % RATE

Non-cyclic Breaks

- 1) Enter all the non-cyclic breaks following Steps 1) through 4) of Method 1 (FULL-BREAK METHOD) on the previous page (up to the [ST] key depression).

% Rate

- 5) Enter the tax percent rate applied to any amount exceeding the last non-cyclic breaks. (The rate is entered in maximum 5 digits; 2 integral and 3 decimal digits. For example, to set 4%, enter 4000. The 3 decimal digits must be entered.)
- 6) Depress [AT/TL] to complete the percent rate entry and the entire tax program.

SAMPLE OPERATION

To program the following tax table:

Tax table

Non-cyclic Breaks

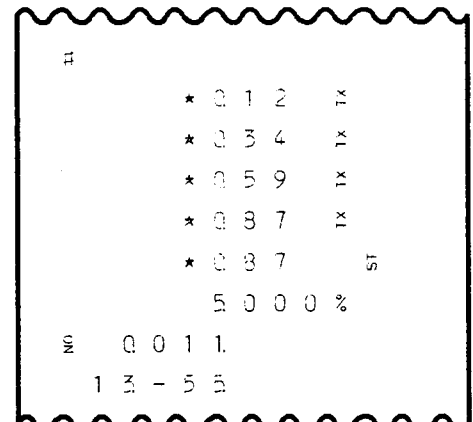
(from)	(to)	(tax)
0¢	12¢	0¢
13	34	1
35	59	2
60	87	3

5% is applied to any amount exceeding 87¢.

Key Operation

Mode Lock to SET.

(Enter)	→	(Depress)
12		[TX/M]
34		[TX/M]
59		[TX/M]
87		[TX/M]
		[ST]
5000		[AT/TL]



3. % RATE ONLY

- 1) Enter "0" (zero), depress [TX/M], and depress [ST].
- 2) Enter the percent rate in the same manner as in Step 5) of Method 2 on the previous page.
- 3) Depress [AT/TL] to end the percent rate entry and the entire tax program.

SAMPLE OPERATION

To program the following tax table:

Tax table

10% is applied to
any amount.

Key Operation
Mode Lock to SET.

0 [TX/M]
[ST]
10000 [AT/TL]

#					
	*	0	0	0	TX
	*	0	0	0	ST
	1	0	0	0	0 %
NO	0	0	1	6	
	1	4	-	0	0

- NOTES:**
- 1) A maximum of a 3-digit value is entered for each break (999¢ i.e. \$9.99). It will result in an error with a 4-digit value or more.
 - 2) If an incorrect value has been entered through [TX/M], first complete the entire tax table program (up to the [AT/TL] key operation), and do the correct tax table program entry over again from the first step.

11. VERIFICATION OF PROGRAMMED DATA

TABLE OF PROGRAM VERIFYING OPERATIONS

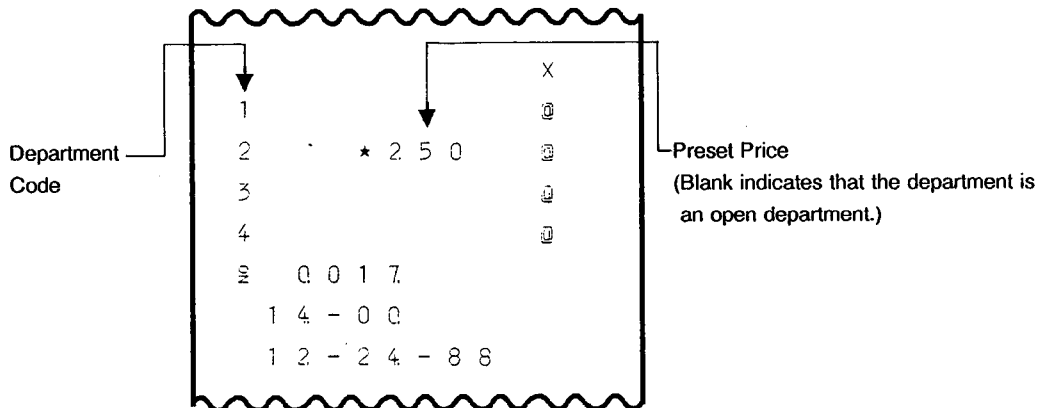
Mode Lock : X

	<u>operation</u>	<u>page</u>
DEPARTMENT PRESET PRICE READ	1 [ST]	45
DEPARTMENT LC AND STATUS READ	2 [ST]	46
OTHER PROGRAMMED DATA READ	4 [ST]	46
TAX CALCULATION TEST	<u>Amount</u> [TX/M]	47

DEPARTMENT PRESET PRICE READ

OPERATION

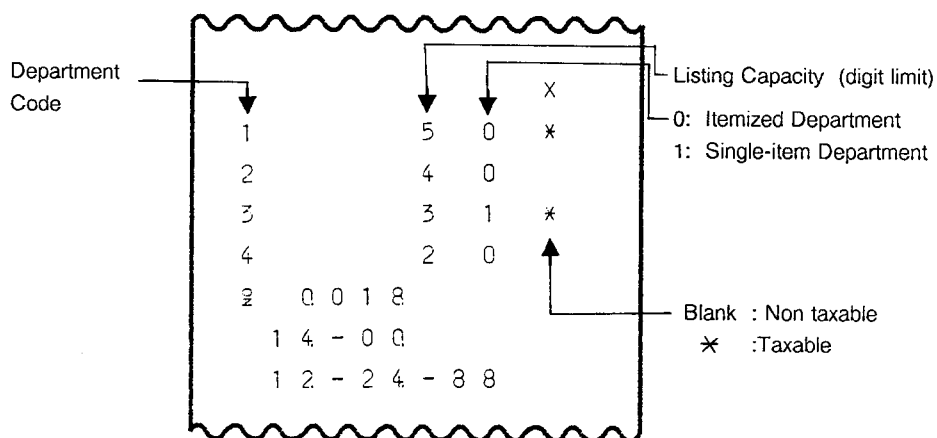
Mode Lock : X, enter 1, depress [ST].



DEPARTMENT LC AND STATUS READ

OPERATION

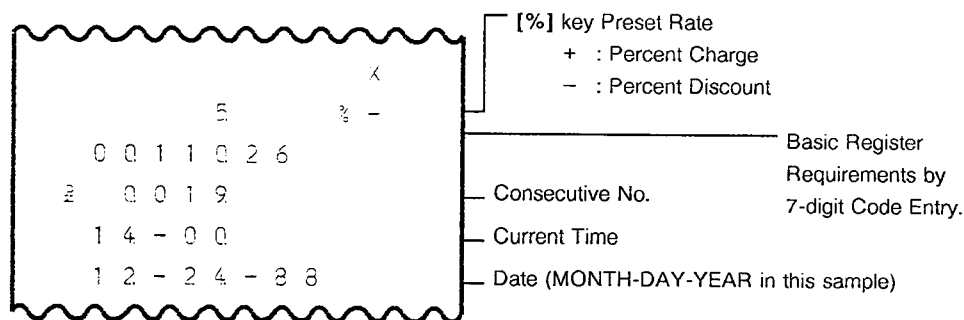
Mode Lock : X, enter 2, depress [ST].



OTHER PROGRAMMED DATA READ

OPERATION

Mode Lock : X, enter 4, depress [ST].



TAX CALCULATION TEST

OPERATION

Mode Lock : X

Enter any amount, then depress [TX/M].

Displays the
entered amount.

Displays
the tax due.

This operation may be repeated any number of times with any amount.
No printing will occur.

12. MAINTENANCE

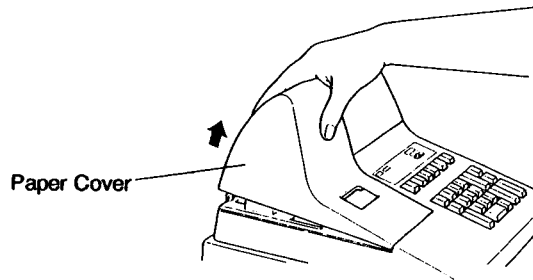


Fig. 1

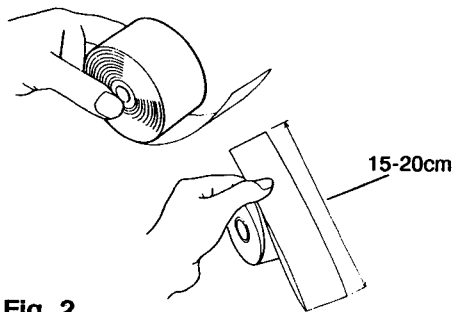


Fig. 2

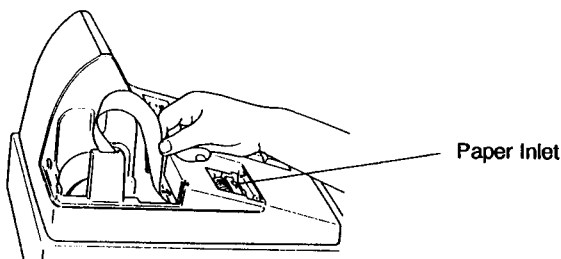


Fig. 3

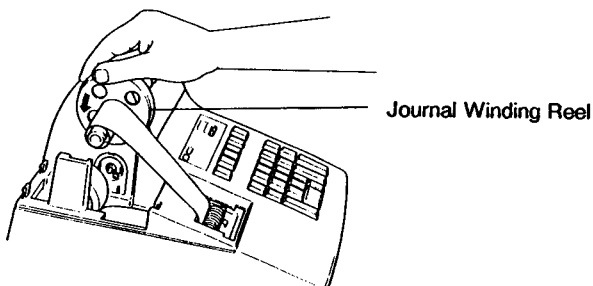


Fig. 4

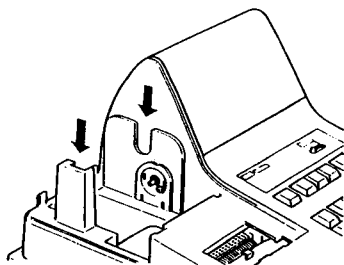


Fig. 5

INSTALLING A NEW JOURNAL ROLL

1. Remove the Paper Cover. (Fig. 1)
2. Fold the paper roll at the tip for 15 to 20cm so that the paper may easily be inserted. Hold the paper roll in the direction as shown in the figure. (Fig. 2)
3. Place the paper roll in the paper holder. Insert the paper end into the Paper Inlet located on the rear side of the printer, and press the [FEED] key on the keyboard until the paper end comes out of the outlet. Meanwhile, the Mode Lock should be set to the "REG" position. (Fig. 3)
4. Wind up the paper end on the Journal Winding Reel two or three times. (Fig. 4)
5. Set the reel to the reel holder, and then attach the Paper Cover. (Fig. 5)

REMOVING THE RECORDED JOURNAL ROLL

1. Remove the Paper Cover. (Fig. 1)
2. Remove the Journal Winding Reel from the holder. Tear off the recorded portion of the paper, and draw it out from the reel in the direction as shown in the figure. (Fig. 6)

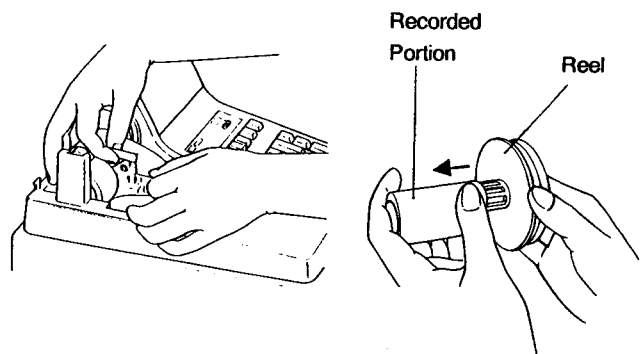


Fig. 6

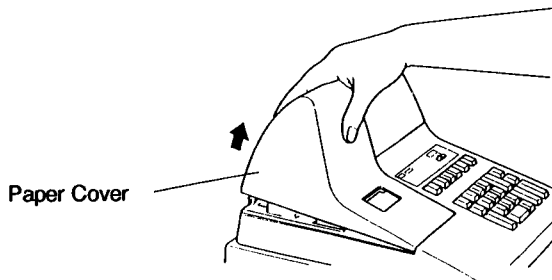


Fig. 1

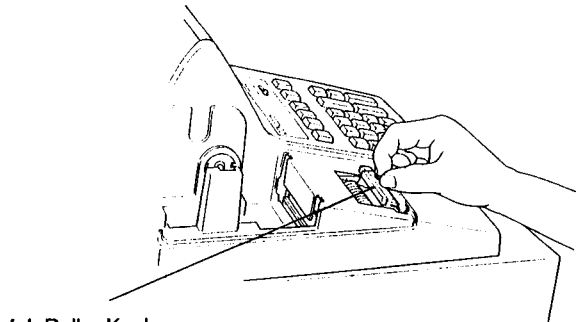


Fig. 2

REPLACING THE INK ROLLER

When the journal print becomes too light to read, replace the ink roller with a new one in the following manner:

1. Open the Paper Cover. (Fig. 1)
2. Pinch the Ink Roller Knob with your fingers, pull it towards you and lift it up. (Fig. 2)
3. Install a new Ink Roller, and attach the Paper Cover.

MANUAL DRAWER RELEASE AND LOCK (for SP or MIDI DRAWER)

• Releasing

The drawer opens automatically when a registration is made. In the event of a power failure or other troubles, the drawer can be opened in the following manner.

- 1) Insert the Drawer Release Key into the drawer release lock and turn the key 45 degrees clockwise. The drawer will now open. (Fig. 1)
- 2) The Drawer Release Key can be taken out by returning it to the original position.
- 3) When the drawer is closed, it is automatically locked and will not open without the Drawer Release Key.

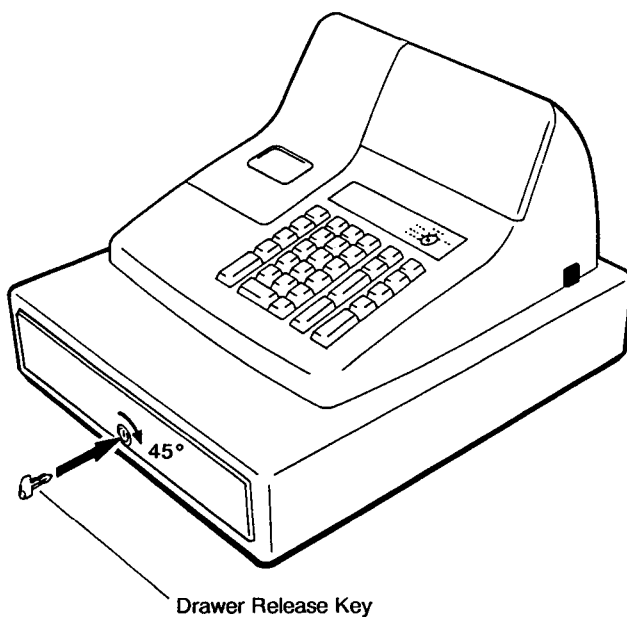


Fig. 1

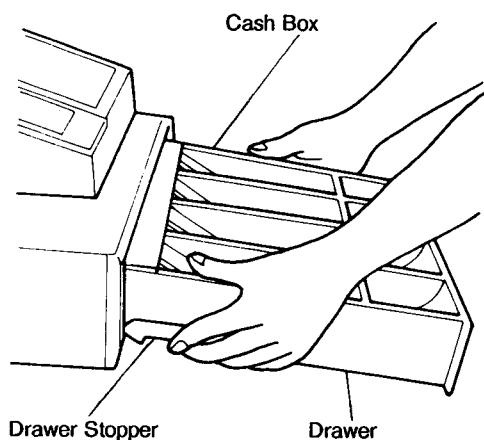


Fig. 2

- **Removing the Drawer**

- 1) To remove the drawer, lift it up by the stoppers attached on both sides and pull it out. (Fig. 2)
- 2) When installing the drawer, fit its rollers onto the rails of the register and push it all the way in. (Fig. 2) The coin case can be removed from the drawer, by lifting it up at the front.

CDC (Cash Drawer Cover) LOCK

FOR SP DRAWER (Fig. 3)

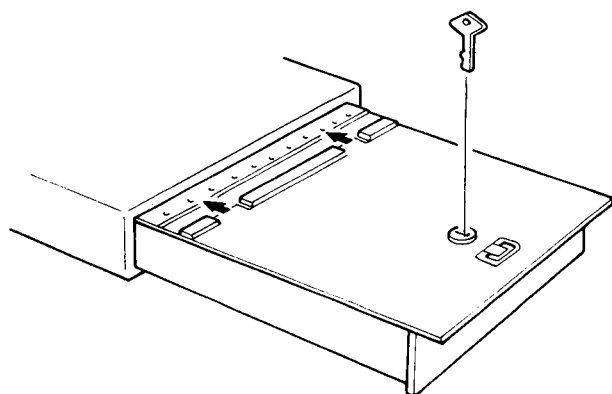


Fig. 3

- **Locking**

Push the Cash Drawer Cover to the drawer-end plate so that the parts at the end of the cover indicated by arrow go under and the remaining parts go over the plate. (Fig. 3)

Press the cover lightly, insert the key into the keyhole on the cover, and turn clockwise. Now the cover is locked.

- **Opening**

Unlock the cover using the key, and lift it up at the front end.

FOR MIDI DRAWER (Fig. 4)

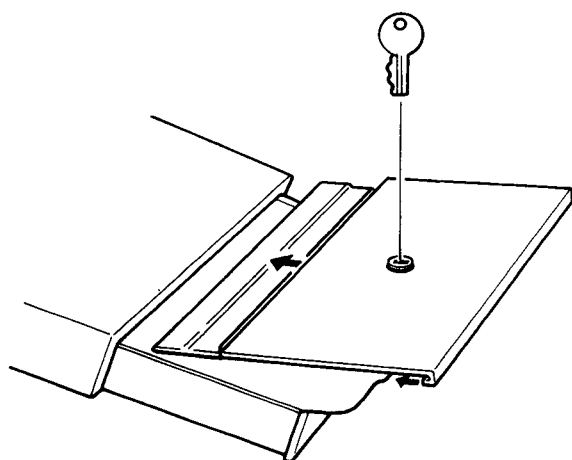


Fig. 4

- **Locking**

Keep the end of the money case lifted up while in the drawer.

Close the cover so that the part of the case indicated by arrow goes under the corresponding part of the money case.

Insert the key (the same key for locking the Drawer) into the keyhole on the cover, and turn clockwise. The cover is now locked.

- **Opening**

Unlock the cover using the key, lift it up with the money case, and pull out frontward while lifting it up.

13. SPECIFICATIONS

SIZE	397mm (width) x 423mm (depth) x 276mm (height) with a MIDI DRAWER
WEIGHT	10kg with a MIDI DRAWER
POWER REQUIRED	AC 100V, 110V, 117V, 220V, 240V; 50/60HZ (The voltage varies depending on the destination of the product.)
POWER CONSUMED	0.16A (max.)
AMBIENT TEMPERATURE	0°C to 40°C, 10% to 90% (relative humidity)
JOURNAL PAPER ROLL SIZE	58mm (width) x 60mm (diameter)



TEC

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