

TEC

TEC Electronic Cash Register

MA-79 (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.

TABLE OF CONTENTS

	Page
1. TO OUR CUSTOMERS	1
2. PRECAUTIONS	1
3. APPEARANCE AND NOMENCLATURE	2
4. MODE LOCK AND MODE SELECTOR KEYS	2
5. DISPLAY	3
6. KEYBOARD LAYOUT	5
7. FUNCTIONS OF EACH KEY	5
8. REGISTERING PROCEDURE FOR SALES AND OPERATION SAMPLES	14
9. READ (X) AND RESET (Z) REPORTS	37
10. PROGRAMMING OPERATIONS	42
11. VERIFICATION OF PROGRAMMED DATA	59
12. MAINTENANCE	62
13. SPECIFICATIONS	68

1. TO OUR CUSTOMERS

Thank you for choosing the TEC electronic cash register MA-79 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.

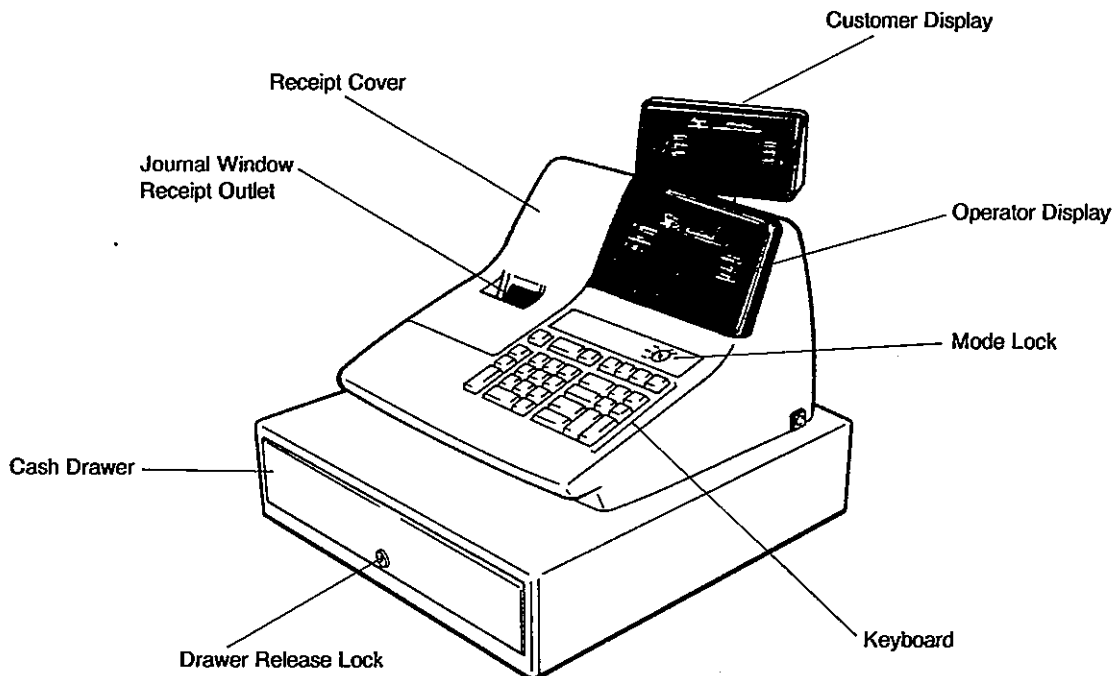
REMARKS ON THE LOCATION

- 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

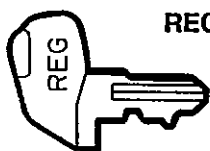


4. MODE LOCK AND MODE SELECTOR KEYS

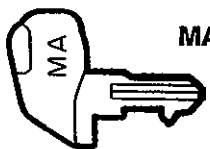
■ MODE LOCK

	(POSITION)	(FUNCTION)
<p>The diagram shows a circular knob with five positions: REG, OFF, SET, X, and Z. To the right of the knob is a vertical scale with three main sections: 'SET Key' at the top, 'REG Key' in the middle, and 'MA Key' at the bottom. Arrows indicate the relative positions of the knob's settings to these keys.</p>	SET	In this position, the register will allow programming operations.
	OFF . . .	The power of the register is turned off in this position. The displayed data disappears and the register operations are locked.
	REG . . .	Normal cash register operations are carried out in this mode. The current time is displayed when the Mode Lock is turned to this position from any other.
	X	The sale totals can be read and the programmed data can be verified in this position.
	Z	All the resettable totals and their counters are read <u>and</u> reset in this position.

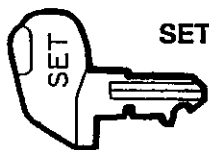
■ MODE SELECTOR KEYS



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 printing of transactions recorded by the register. This key can access the positions of **OFF**, **REG**, **X**, and **Z**.

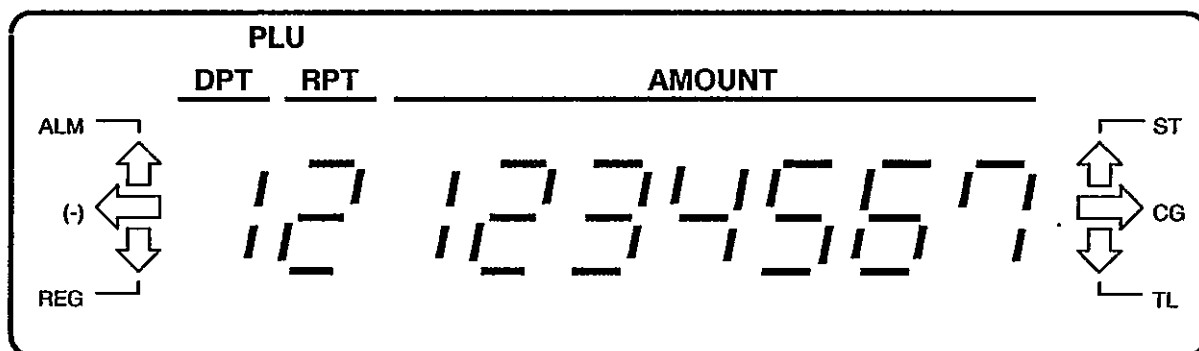


SET Key: The SET Key is used by the programmer or the store manager who will change the program data on a daily, weekly, or monthly basis. This key can access the positions of **OFF** and **SET**.

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

5. DISPLAY

The Operator Display (front display) is located at the top of the register just above the keyboard. The Customer Display can be fixed as a rear display or moved to form a remote display. It can be moved up, down, to the right, and to the left and thus is fully adjustable according to the position of the customer.



■ 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.
- PLU (2 digits; sharing the common digits with RPT and DPT):**
Displays the PLU Code of the PLU that has been entered.

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 Dollar 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 a short-tendered amount has been entered, indicating that the displayed amount is the balance due.
It also lights up when the [TAX] key is depressed without a prior amount entry, indicating that the displayed amount is the non-taxable portion total of the sale.
- 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. (The time will not be displayed if so programmed.)

TIME DISPLAY FORMAT

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

6. KEYBOARD LAYOUT

The following is the keyboard layout of the MA-79 series.

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

7. FUNCTIONS OF EACH KEY

FEED

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.

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 inbetween, the item-correct will not function.

The [ITEM CORR] key can function to correct any last item entered through a department, PLU, [DOLL DISC], [TAX], or [%] key. But a department or PLU item entered with the [RTN MDSE] key, a negative department item, a Non-add Number, an [EX] key entry, nor any 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.

**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 or PLU entry sequence; it must be depressed before the last key of the sequence (i.e. the Department Key or the [PLU] key). Then the item is registered as a returned item.

@/FOR

AT/FOR (Quantity Extension and Split Package Pricing) KEY ([@/FOR])

This key is used to multiply a department or PLU 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.

This key is also used to enter a purchased quantity when a Split Package Pricing entry is operated through a department.

PLU

PLU (Price-Look-Up) KEY ([PLU])

A PLU (Price-Look-Up) is an item programmed with a code (1 to 99), a preset unit price (max. 6 digits), and its linked department. A maximum of 99 PLUs may be programmed on this register.

Instead of entering a sale item through a department key, entering it through a specific PLU will automatically recall its preset price and register the item. The sale of the item will be processed into that specific PLU memory as well as its linked department memory. Thus, in read or reset reports, you can read the sale total of the individual PLU item, as well as the sale total of the department to which the PLU is linked. The taxable/non-taxable status of a PLU is determined by that of the department to which the PLU is linked.

To operate, enter the PLU Code (1 to 99) assigned to the item, and depress the [PLU] key.

#/NS

NON-ADD NUMBER PRINT / NO-SALE KEY ([#/NS])

This is a dual-function key.

1. NON-ADD NUMBER PRINT FUNCTION

When any number is entered before depressing this key, it functions as the Non-add Number Print Key. A non-add number is a number or code used for future reference such as Customer No., Check No., 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 [#NS] 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 (by depressing [#NS] again without a prior number entry) will not be accepted.

2. NO-SALE FUNCTION

When the register is outside a sale and this key is depressed without any prior numeric entry, it functions as a No-sale Key for opening 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 a no-sale transaction, and the drawer opens.

This key can also be used, when the Mode Lock is in the "X" position, to issue a Cash-in-drawer Read Report.

TX/M

TAX MODIFIER KEY ([TX/M])

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

C

CLEAR KEY ([C])

This key is used to correct a numeric, [RTN MDSE], or [TX/M] key entry 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 or the [PLU] key in a quantity extension or split package pricing sequence, all of the quantity, [@/FOR] 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-tendered is entered with the balance due displayed, the balance due is again displayed.

If the [C] key is depressed after the [EX] key is once depressed to obtain the post-tax-exempted sale total due, the post-tax-exempted total is again displayed.

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

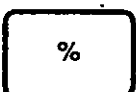
7	8	9
4	5	6
1	2	3
0	00	

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. However, amount entries through departments or tender media keys may be limited by the Listing Capacity setting for each 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 or PLU item, the discount is calculated on the preset or manually entered rate and subtracted from the department or PLU 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 or PLU 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 department or 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.

**DOLL
DISC****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.

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 business, such as change reserve into the drawer, payments received from a customer for a charge sale account made in the past, etc. The amount entered is thus included in the "Cash-in-drawer" 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, money collection for banking purposes (Pick Up), 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 of [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.

to

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

These are department keys through which sales 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 into 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 in 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 [@/FOR] key prior to the department entry sequence.

Split Package Pricing entries are also allowed through department keys. Enter the PURCHASED QUANTITY first through [@/FOR], enter the WHOLE PACKAGE QUANTITY next through [@/FOR], and then the normal department entry sequence. In this case, the manually-entered or preset price entered with the department-key is regarded as the WHOLE PACKAGE PRICE.

Each department key can be programmed to be a positive or negative department. A negative department cannot be operated with the [RTN MDSE] key, nor will an open and negative department allow repeat entries.

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], [CHK TND], or [Chg]) 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, Dollar 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 "T" symbol is printed to the right of the department item. However, the symbol will not be printed when the item is entered as Returned Merchandise or Item Correct.

TAX

MANUAL TAX KEY ([TAX])

This is a dual-function key.

MANUAL TAX ENTRY

When an amount is entered and this key is depressed, the amount is added to the sale as manual tax and printed with the "TX" symbol. The Manual Tax entry is used to enter an irregular tax amount that cannot be handled with the auto-tax table (pre-programmed tax breaks or rate auto-calculated and added in the sale finalization).

NON-TAXABLE SALE PORTION AMOUNT READ

When the [TAX] key is depressed without a prior amount entry during a sale, the non-taxable portion amount of the sale (i.e. the total of the sale portion not subject to the auto-tax addition) is read in the display with the "ST" arrow lamp lit.

This function may be used to read the non-taxable portion amount, before actually entering a manual tax amount using the other function of the [TAX] key described above.

This key will not be used in areas where no irregular tax entries are necessary.

EX

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. The manual tax (amount entered through [TAX]), if any, will not be exempted in this case.

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.

ST

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 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], [CHK TND], 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.

CHK
TND

CHECK TENDER KEY ([CHK TND])

This key is used to finalize a sale as a check payment, as an alternative method of payment instead of cash.

Since this is a TENDER KEY, a tendered amount entry is always required prior to depressing this key. The operation will be the same as described in "1. TENDER KEY" of the [AT/TL] key, except that a negative-balance sale cannot be finalized by this key (in which case, use [AT/TL] to refund the balance in cash or [Chg] to process the balance as a charge account).

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 and individual PLUs) may be different from those programmed for your store.

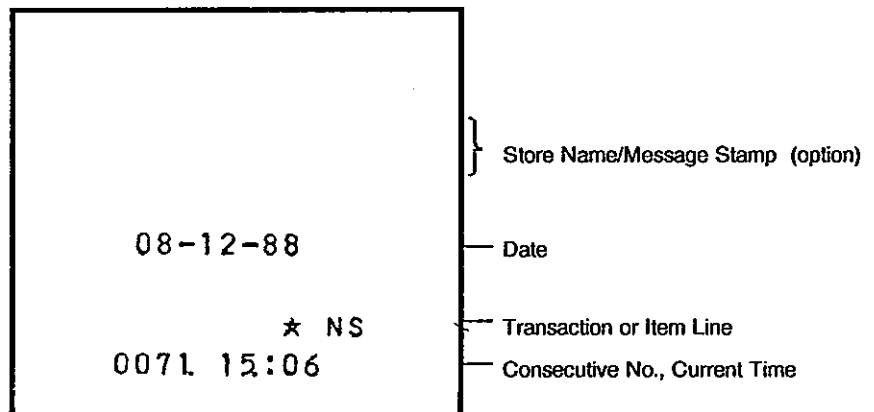
For registering operations, be certain to turn the Mode Lock to the “REG” position.

NO-SALE (must be operated outside a sale)

[#/NS]

SAMPLE OPERATION CONTENTS	KEY OPERATION Mode Lock: REG	DISPLAY				
		PLU	A M O U N T			
You want to test the printer condition before starting operations for the day. Or a customer requests to break a bill.	[#/NS]					0.00
	The drawer opens.					

(Print Sample With Receipt-format Option)



(When the Journal-format Option is selected, the Store Name Stamp and the date will not be printed.)

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

| Amount of Payment Received | [R/A]

SAMPLE OPERATION CONTENTS	KEY OPERATION Made Lock: REG	DISPLAY			
		PEU	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 pays his account of the sale made on a different day (finalized as a charge sale). The Customer's Account No. is 1001, and the amount of payment is \$5.00.	1001				1 0 0 1
	[#/NS]				1 0 0 1
	500				5 0 0
	[R/A]				5 0 0

08-12-88
 *1000 RA
 0072 15:06

08-12-88
 #1001
 *500 RA
 0073 15:06

PAID-OUT (must be operated outside a sale)

| Amount to be paid out | [PO]

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

08-12-88

#2003

 ★800 PO

0074 15:07

08-12-88

 ★1500 PO

0075 15:07

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			
		PLU DP REP	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				1. 2 3
	[DEPT 1]	REG 1			1. 2 3
1 *1.23 T					
Preset Dept (Itemized) An item of Dept.2 which is preset with a price \$2.50 (The sale is not finalized until a media key is operated.)	[DEPT 2]	REG 2			2. 5 0
	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				1. 4 0
	[DEPT 3]	REG 3			1. 4 0 TL
08-12-88 3 *1.40 T *014 TX *1.54 CA 0077 15:08					

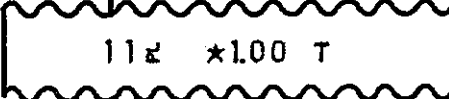
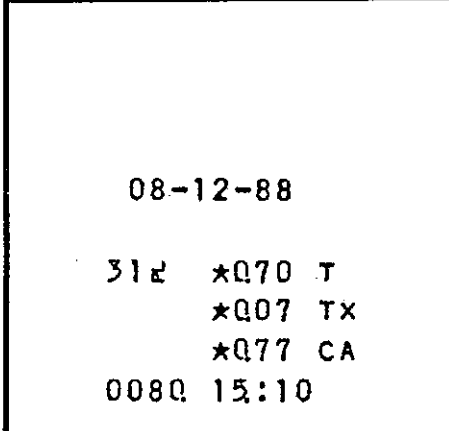
PLU ENTRY

Itemized PLU

(--- →) | PLU Code | [PLU] → ---

Single-item PLU

A PLU linked to a Single-item Department will automatically function as a Single-item PLU, and immediately finalizes the sale as cash on an entry when operated outside a sale.

SAMPLE OPERATION CONTENTS	KEY OPERATION Mode Lock: REG	DISPLAY				
		PLU	A M O U N T			
		←	DEPT	PLU		→
Itemized PLU An item of PLU No.11 (preset price \$1.00) (The sale is not finalized until a media key is operated.)	11				0.11	
	[PLU]	REG	1	1	1.00	
						
Single-item PLU An item of PLU No.31 (preset price \$0.70) which is linked to Dept.3 (Single-item Dept.) (The sale is immediately finalized as cash if it is operated outside a sale.)	31				0.31	
	[PLU]		3	1	0.77	TL
						
08-12-88 31 1 *070 T *007 TX *077 CA 0080 15:10						

REPEAT ENTRY OF DEPARTMENT OR PLU ITEM (for Itemized Dept or PLU only)

Open Dept Repeat

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

Preset Dept Repeat

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

PLU Repeat

(--- →) | PLU Code | [PLU] [PLU] ... → ---

Depress the last key of the sequence ([DEPT] or [PLU]) as many times as the desired count.
(Watch the count displayed in the "RPT" digit of the display.)

SAMPLE OPERATION CONTENTS	KEY OPERATION Mode Lock REG	DISPLAY																														
		PLU OF 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 [DEPT 1] [DEPT 1] [DEPT 1]	REG 1 REG 1 2 REG 1 3			1. 2 0 1. 2 0 1. 2 0																											
2 items of Dept.2 (preset dept), preset price \$2.50	[DEPT 2] [DEPT 2]	REG 2 REG 2 2			2. 5 0 2. 5 0																											
4 items of PLU No.22 (preset price \$3.00)	22 [PLU] [PLU] [PLU] [PLU]	REG REG 2 2 REG 2 REG 3 REG 4			0. 2 2 3. 0 0 3. 0 0 3. 0 0 3. 0 0																											
<div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <table style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 10%;">1</td><td style="width: 40%;">★1.20</td><td style="width: 10%;">T</td></tr> <tr><td>1</td><td>★1.20</td><td>T</td></tr> <tr><td>1</td><td>★1.20</td><td>T</td></tr> <tr><td>2</td><td>★250</td><td></td></tr> <tr><td>2</td><td>★250</td><td></td></tr> <tr><td>22</td><td>★300</td><td></td></tr> <tr><td>22</td><td>★300</td><td></td></tr> <tr><td>22</td><td>★300</td><td></td></tr> <tr><td>22</td><td>★300</td><td></td></tr> </table> </div>		1	★1.20	T	1	★1.20	T	1	★1.20	T	2	★250		2	★250		22	★300		22	★300		22	★300		22	★300					
1	★1.20	T																														
1	★1.20	T																														
1	★1.20	T																														
2	★250																															
2	★250																															
22	★300																															
22	★300																															
22	★300																															
22	★300																															

QUANTITY EXTENSION (MULTIPLICATION OF DEPARTMENT OR PLU ITEM)

Open Dept : (-- →) | Quantity | [@/FOR] | Unit Price | [Open DEPT] → --

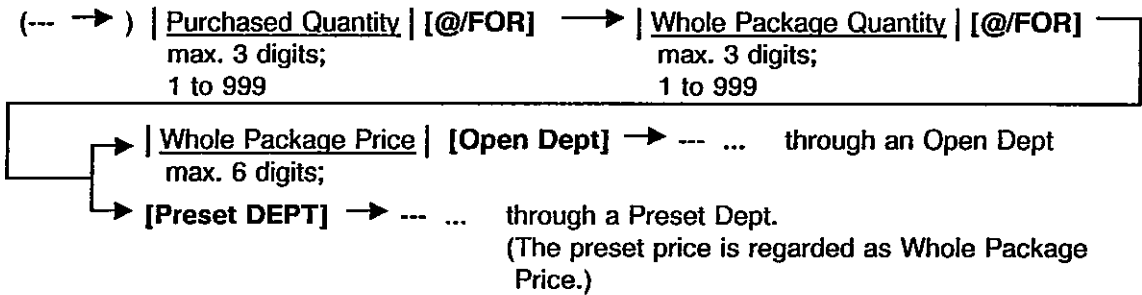
Preset Dept : (-- →) | Quantity | [@/FOR] [Preset DEPT] → --

PLU : (-- →) | Quantity | [@/FOR] | PLU Code | [PLU] → --

Single-Item Dept or PLU : 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			
		PLU	A M O U N T		
		DF	RPT		
To enter the following items: 5 items of Dept.1 (open dept), unit price \$1.20 6 items of Dept.2 (preset dept), preset price \$2.50 8 items of PLU No.11 (preset price \$1.00)	5				0 0 5
	[@/FOR]				0 0 5
	120				1 2 0
	[DEPT 1]	REG 1			6 0 0
	6	REG			0 0 6
	[@/FOR]	REG			0 0 6
	[DEPT 2]	REG 2	1		5 0 0
	8	REG			0 0 8
	[@/FOR]	REG			0 0 8
	11	REG			0 1 1
	[PLU]	REG 1 1			8 0 0
	<pre> 5 x 1.20 @ 1 *600 T 6 x 2.50 @ 2 *1500 8 x 1.00 @ 11 x *800 T </pre>				

SPLIT PACKAGE PRICING



NOTE: PLUs cannot be used for Split Package Pricing entries.

SAMPLE OPERATION CONTENTS	KEY OPERATION Mode Lock: REG	DISPLAY				
		PLU OP RPT	A M O U N T			
<p>To enter the following items:</p> <p>3 items are purchased out of Whole Package Quantity 5 of Dept.1 (open dept). The Whole Package Price is \$2.00</p> <p>2 items are purchased out of Whole Package Quantity 3 of Dept.2 (preset dept). The preset Whole Package Price is \$2.50</p>	3			0	0	3
	[@/FOR]			0	0	3
	5			0	0	5
	[@/FOR]			0	0	5
	200			2	0	0
	[DEPT 1]	REG 1		1	2	0
	2	REG		0	0	2
	[@/FOR]	REG		0	0	2
	3	REG		0	0	3
	[@/FOR]	REG		0	0	3
[DEPT 2]	REG 2		1	6	7	
<p>5 * 2.00 0</p> <p>3 x</p> <p>1 * 1.20 T</p> <p>3 * 2.50 0</p> <p>2 x</p> <p>2 * 1.67</p>						

NEGATIVE DEPARTMENT ENTRY

Operates the same as positive departments. However, the [RTN MDSE] key cannot be used with a negative department, nor is a Repeat Entry possible for a negative item entry. A negative department item cannot be deleted by the [ITEM CORR] key.

An entry through a negative department will subtract the amount from the sale total. It may be used for bottle return amount, coupon amount entries, etc., during a sale.

SAMPLE OPERATION CONTENTS	KEY OPERATION Mode Lock: REG	DISPLAY				
		PLU DP RPT	A M O U N T			
Bottle Return Entry A bottle return amount of \$0.50 is entered during a sale. (Dept.4 is programmed as a negative department.)	50	REG		0	5	0
	[DEPT 4]	REG (-)	4	0	5	0
	4 -Q50					
Coupon Entry During a sale, the customer says he wants to pay part of the sale with a vendor coupon of amount \$0.60	Sale items have been entered.					
	60	REG		0	6	0
	[DEPT 4]	REG (-)	4	0	6	0
	4 -Q60					

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] or [PLU]) of the sequence:

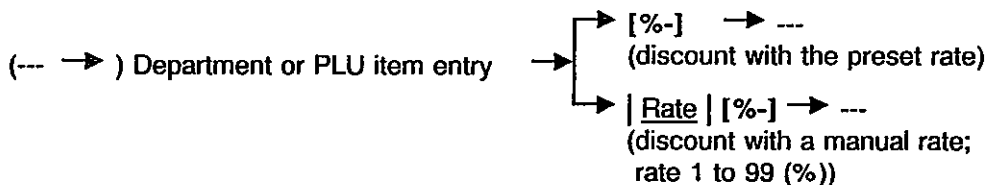
- DEPARTMENT ENTRY (page 17)
- PLU ENTRY (page 18)
- QUANTITY EXTENSION (page 20)
- SPLIT PACKAGE PRICING (Page 21)

SAMPLE OPERATION CONTENTS	KEY OPERATION Mode Lock: REG	DISPLAY				
		PLU OP RET	A M O U N T			
<p>Return Entry Outside a Sale</p> <p>A customer comes up to return a \$5.00 item of Dept.1. No other sale items at this time.</p> <p>The sale total is now negative, therefore the total amount displayed must be paid back to the customer in cash.</p>	<p>[RTN MDSE]</p> <p>500</p> <p>[DEPT 1]</p> <p>[AT/TL]</p>	REG			0 0 0	
	<p>08-12-88</p> <p>1 *500 RT</p> <p>-050 TX</p> <p>-550 CA</p> <p>0085 15:12</p>	REG (-) 1			5 0 0	
<p>Return or Designated Line Void Inside a Sale</p> <p>A customer, during a sale, returns an item already registered in this sale or in some other sale in the past. The returned item is PLU No.12.</p> <p>Other sale item entries or sale finalization will follow.</p>	<p>Some sale items have already been entered.</p> <p>[RTN MDSE]</p> <p>12</p> <p>[PLU]</p>	REG			0 0 0	
	<p>12 *240 RT</p>	REG (-) 1 2			0 1 2	
					2 4 0	TL

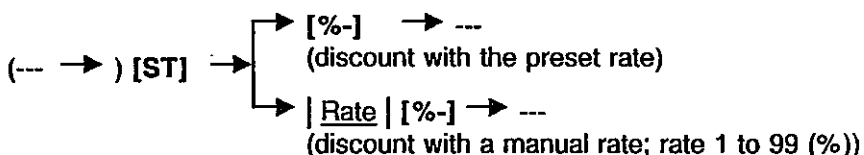
PERCENT DISCOUNT

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

Discount from a Department or PLU item :



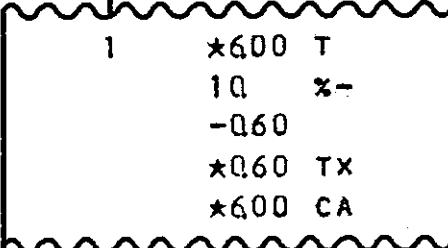
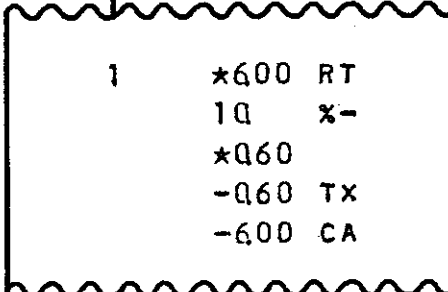
Discount from the Entire Sale Total :



SAMPLE OPERATION CONTENTS	KEY OPERATION Mode Lock REG	DISPLAY				
		PLU 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. ...	200					2.00
	[DEPT 1]	REG 1				2.00
	[%-] (if 5% preset)	REG (-)				0.10
	1 *200 T 5 %- -010					
Percent Discount from a Sale Total 10% is subtracted from entire sale total. ...	Sale items have been entered.					
	[ST]	REG				5.50 ST
	10 (Manual % Rate)	REG				0.10
	[%-]	REG (-)				0.50
*500 ST 10 %- -050						

Percent Discount (or Percent Charge) on a Returned Item

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

SAMPLE OPERATION CONTENTS	KEY OPERATION Mode Lock REG	DISPLAY				
		PLU DE 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				6.00	
	[DEPT 1]	REG 1			6.00	
	10	REG			0.10	
	[%-]	REG (-)			0.60	
	[AT/TL]				6.00	TL
						
<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 purchase.</p> <p>The obtained total is negative, therefore the amount must be paid back to the customer in cash.</p>	[RTN MDSE]				0.00	
	600	REG 1			6.00	
	[DEPT 1]	REG (-)			6.00	
	10	REG			0.10	
	[%-]	REG (-)			0.60	
[AT/TL]				6.00	TL	
						

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.)

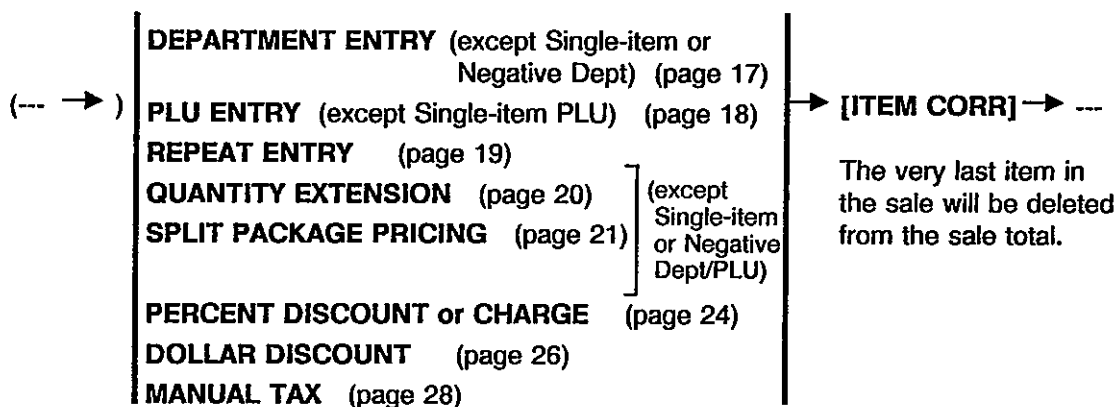
SAMPLE OPERATION CONTENTS	KEY OPERATION Mode Lock: REG	DISPLAY				
		PLU DP HPT	A M O U N T			
During a sale, an amount of \$0.50 is discounted from the sale. ⋮	Sale items have been entered.					
	50	REG			0. 5 0	
	[DOLL DISC]	REG (-)			0. 5 0	
	-050					

NON-ADD NUMBER PRINT

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

- Operation Samples in :
- RECEIVED-ON-ACCOUNT (page 15)
 - PAID-OUT (page 16)
 - CHARGE SALE TOTAL (page 33)

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**, or **SPLIT PACKAGE PRICING**, the entire product (the result of multiplication) is deleted.

SAMPLE OPERATION CONTENTS	KEY OPERATION Mode Lock: REG	DISPLAY			
		PLU 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			2.50
	[ITEM CORR]	REG 2 0			2.50
	2 *250	(-)			
	2 *250 VD				
5 x Dept.1 item of unit price \$1.30 is entered, but you immediately notice that the entry is wrong. ...	5				0.05
	[@/FOR]				0.05
	130				1.30
	[DEPT 1]	REG 1			6.50
	[ITEM CORR]	REG 1 0			6.50
	5 X	(-)			
130 B					
1 *650 T					
1 *650 VD					

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] or [PLU]) of the sequence.

DEPARTMENT ENTRY (page 17)
 PLU ENTRY (page 18)
 REPEAT ENTRY (page 19)
 QUANTITY EXTENSION (page 19)
 SPLIT PACKAGE PRICING (page 21)
 NEGATIVE DEPARTMENT ENTRY (page 22)
 RETURNED MERCHANDISE (page 23)

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 "T" 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.

NON-TAXABLE PORTION READ

--- → [TAX] → ---

The non-taxable portion of the sale (i.e. the total of the sale portion not subject to the auto-tax addition) is displayed with the "ST" arrow lamp lit.

See the operation sample on the next page.

MANUAL TAX

--- → | Tax amount to be added to the sale | [TAX] → ---

This operation applies only to areas where irregular tax additions (besides the tax auto-calculated by the preprogrammed tax table) are necessary.

See the operation sample on the next page.

NON-TAXABLE PORTION READ and MANUAL TAX operation sample:

In the following, the tax rate of 10% is preprogrammed as Tax Table.

SAMPLE OPERATION CONTENTS	KEY OPERATION Mode Lock: REG	DISPLAY				
		REG	GF	REP	A M O U N T	
Sale items:	100				1.00	0
Dept.1 \$1.00 (open, taxable dept)	[DEPT 1]	REG 1			1.00	0
2 x Dept.2 (preset price \$2.50, non-taxable dept)	2 [@/FOR]	REG			0.02	
	[DEPT 2]	REG 2			5.00	0
You want to read the non-taxable portion.	[TAX]	REG			5.00	0 ST
You want to add a manual tax amount of \$0.25 to this non-taxable portion (5%).	25 [TAX]	REG			0.25	
The sale is finalized as cash.	[AT/TL]				6.35	5 TL
<p>08-12-88</p> <p>1 *1.00 T.</p> <p>2 X</p> <p>250</p> <p>2 *5.00</p> <p>*0.25 TX</p> <p>*0.10 TX</p> <p>*6.35 CA</p> <p>0095 15:33</p>						

SUBTOTAL

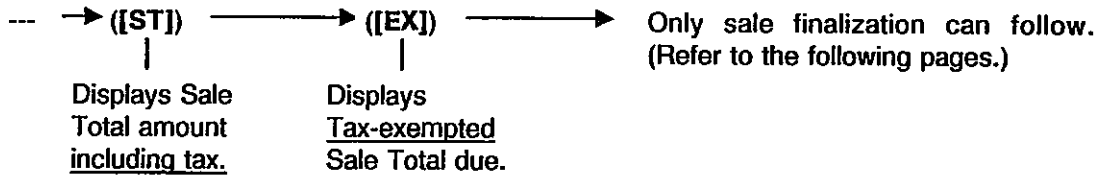
--- → [ST] → --- ...

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					
		←	PLU UP RPT	A M O U N T			→
Sale items:							
Dept.1 \$1.50 (taxable)	150					1.50	
	[DEPT 1]	REG	1			1.50	
Dept.2 (preset: \$2.50, non-taxable)	[DEPT 2]	REG	2			2.50	
PLU No.22 (preset: \$3.00, non-taxable)	22	REG				0.22	
	[PLU]	REG	2	2		3.00	
You want to know the subtotal here.	[ST]	REG				7.15	ST
Then, additional items:							
PLU No.11 (preset: \$1.00, taxable)	11	REG				0.11	
	[PLU]	REG	1	1		1.00	
Now you want to know the new subtotal.	[ST]	REG				8.25	ST

1	*1.50	T
2	*250	
22	*300	
	*7.00	ST
11	*1.00	T
	*800	ST

TAX EXEMPT



SAMPLE OPERATION CONTENTS	KEY OPERATION Mode Lock REG	DISPLAY			
		FLU DE CRT	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
<div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> *500 ST *500 EX *500 TL *1000 AT *500 CG 0097 15:37 </div>					

CASH SALE TOTAL, CASH TENDER

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

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

SAMPLE OPERATION CONTENTS	KEY OPERATION Mode Lock REG	DISPLAY							
		PLU	DE	APP	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
<p style="text-align: center;">*500 ST *050 TX *550 CA 0098 15:38</p>									
<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 \$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
<p style="text-align: center;">*500 ST *050 TX *550 TL *1000 AT *450 CG 0099 15:38</p>									

CHECK TENDER

-- → ([ST]) → | Check Amount Tendered | [CHK TND]

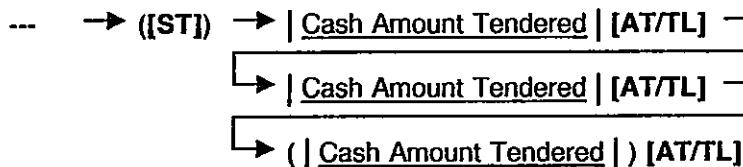
CHARGE SALE TOTAL

-- → ([ST]) → [Chg]

SAMPLE OPERATION CONTENTS	KEY OPERATION Mode Lock REG	DISPLAY					
		←	PLU DE RPT	A M O U N T			→
Check Tender Sale items have been entered. The customer pays with a check in the amount of \$10.00 The change \$4.50 is displayed, which should be given to the customer in cash.	[ST]	REG				5 5 0	ST
	1000	REG			1 0 0 0		
	[CHK TND]					4 5 0	CG
*500 ST *050 TX *550 TL *1000 CK *450 CG 0100 15:39							
Charge Sale Total Sale items have been entered. The customer wants to put it on his charge account. You enter his Customer Account No. 1001 as reference.	[ST]	REG				5 5 0	ST
	1001 [#NS]	REG			1 0 0 1		
	[Chg]					5 5 0	TL
*500 ST #1001 *050 TX *550 CH 0101 15:39							

MULTI-TENDER

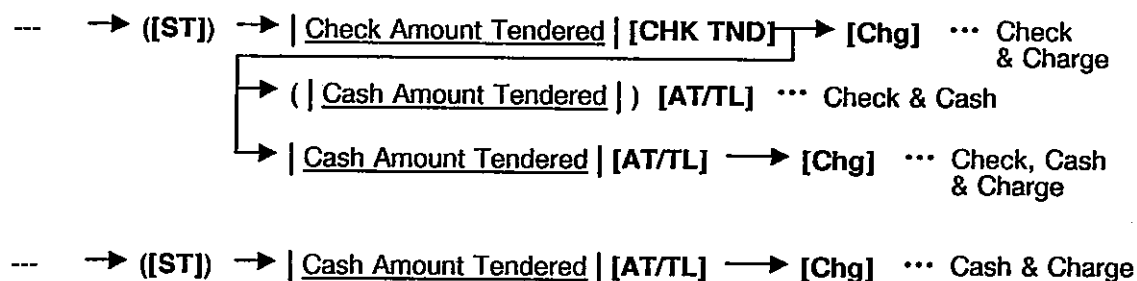
(Short-tender repeated multiple times by the same media)



(The [AT/TL] may be replaced by [CHK TND] if a check is tendered. Also refer to SPLIT-TENDER on the next page.)

SAMPLE OPERATION CONTENTS	KEY OPERATION Mode Lock: REG	DISPLAY				
		REG	DP	OFF	A M O U N T	
<p>Sale items have been entered.</p> <p>The customer first tenders \$5.00 cash, which is still short. (The balance still due is displayed with "ST")</p> <p>The customer pays for the balance due \$2.70 with an exact amount in cash.</p>	500	REG			5.00	
	[AT/TL]	REG			2.70	ST
	[AT/TL]				2.70	TL
<p style="text-align: center;"> *770 TL *500 AT *270 CA 0102 15:39 </p>						
<p>Sale items have been entered.</p> <p>The customer first tenders a check of \$5.00, which is still short. (The balance still due is displayed with "ST".)</p> <p>The customer pays for the balance with another check of \$2.70</p>	500	REG			5.00	
	[CHK TND]	REG			2.70	ST
	270	REG			2.70	
	[CHK TND]				0.00	CG
<p style="text-align: center;"> *770 TL *500 CK *270 CK *000 CG 0103 15:41 </p>						

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



- NOTES:**
- 1) In both MULTI-TENDER and SPLIT-TENDER operations, the sale is finalized and the drawer opens on reaching the sale total amount.
 - 2) If [AT/TL] is programmed to allow TOTAL function only, neither MULTI-TENDER nor SPLIT-TENDER can be operated by [AT/TL]. If [Chg] or TOTAL-only [AT/TL] 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			
		PLU	A M O U N T		
Sale items have been entered.					
The customer first tenders a check of \$5.00, which is still short. (The balance due is displayed as "ST")	500 [CHK TND]	REG REG		5. 0 0 2. 7 0	ST
The customer then tenders \$5.00 in cash.	500	REG		5. 0 0	
The change \$2.30 is displayed, which should be paid back to the customer in cash.	[AT/TL]			2. 3 0	CG
★770 TL ★500 CK ★500 AT ★230 CG 0104 15:41					

POWER FAILURE DURING OPERATIONS

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

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

↓
Power fails.

↓
Power is recovered.

↓
Time is displayed (or 0.00 is displayed when the option "Time Displayed" is not selected), i.e. the numerics and/or declaration key entry has been cleared. Do the operation from the numerics and/or declaration key entry over again.

Case 2: Numerics, [TX/M], 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 or PLU item is being printed.

↓
Power fails.

↓
Power is recovered.

↓
The department or PLU 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 or PLU 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 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	[#/NS] (Drawer opens.)
PLU Read PLU Reset (NOTE 1)	X Z] [PLU] (Drawer does not open.)
Daily Read Daily Reset (NOTE 2)	X Z] [AT/TL] (Drawer opens.)
GT Read GT Reset (NOTE 3)	X Z] 20 [AT/TL] (Drawer opens.)

NOTES: 1) PLUs with zero sales data will be skipped in reports.

2) Print Contents: Departments
 ↓
 Financial
 ↓
 Hourly Ranges

3) Print Contents: Departments
 ↓
 Financial

Refer to the report print samples on the following pages.

	page
Cash-in-drawer Read Report	38
PLU Read or Reset Report	38
Daily Read or Reset Report	39
GT Read or Reset Report	41

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

Cash-in-drawer Read Report (Read only)

Mode Lock: X, depress [#/NS].

```

08-12-88

  X
*8994 ID
   4  CK
*2270 ID
0105 15:43

```

Date

Read Report Symbol

Cash-in-drawer Amount

Check-in-drawer Count
" Amount

PLU Read or Reset Report

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

] depress [PLU].

```

08-12-88

  Z
11Z 10
   *1000
12Z -1
   -240
22Z 5
   *1500
31Z 1
   *070
  0001Z
0109 15:44

```

Reset Report Sample

Reset Report Symbol

PLU Code, Sales Item Count] of one PLU
" " Amount

Reset Report Count (printed only in Reset Reports)

Daily Read or Reset Report

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

depress [AT/TL].

08-12-88	
	Z
	*15308 GT
	66
	*15308 GS
1	36
	*7333
2	19
	*4667
3	2
	*210
4	2
	-110
1	
	*699 TX
2	
	*025 TX
	57
	*12824 NS
	4
	*060 %-
	3
	*150 -

Reset Report Sample

Reset Report Symbol

Grand Total (non-resettable)

Gross Sale Item Count

" " Amount

Dept.1 Item Count

" Amount

Dept.2

Dept.3

Dept.4

(Percent Charge Count and Amount; if [%] key is programmed as [% +])

Tax Amount (of the auto-tax)

Manual Tax Amount (through [TAX])

Net Sale with Tax, Item Count

" " " " Amount

Percent Discount Count

" " Amount

Dollar Discount Count

" " Amount

-- continued --

Daily Read or Reset Report

-- Continued --

28
*12614 TL
25
*10244 CA
2
*1820 CK
1
*550 CH
2
*1500 RA
2
*2300 PO
*8994 ID
4 CK
*2270 ID
2
*900 VD
2
-110
3
*1474 RT
1
*500 EX
**
08-00
12-00
13-00
15-00
28
*12824
18-00
00012
0110 15:44

All Media Sales, Customer Count
" " " Amount
Cash Sales Customer Count
" " Amount
Check Sales Customer Count
" " Amount
Charge Sales Customer Count
" " Amount
Received-on-Account Count
" Amount
Paid-Out Count
" Amount
Cash-in-drawer Amount
Check -in-drawer Count
" Amount
Item Correct Count
" " Amount
Negative Departments Item Count
" " Amount
Returned Merchandise Item Count
" " Amount
Tax-exempted Customer Count
" Sales Amount
HOURLY RANGE SALES DATA:
Up to 8:00 . . . no sales data recorded
<input type="checkbox"/> 8:00 to 12:00 . . . no sales data recorded
<input type="checkbox"/> 12:00 to 13:00 . . . no sales data recorded
<input type="checkbox"/> 13:00 to 15:00 . . . no sales data recorded
15:00 to 18:00
_____ Sales Item Count
" Amount
<input type="checkbox"/> 18:00 to 8:00
Daily Reset Report Count (prior on Reset Reports only)

GT Read or Reset Report

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

enter 20, depress
 [AT/TL]

08-12-88

 *15308 GT

66

*15308 GS

1 36

*7333

2 19

*4667

3 2

*210

4 2

-110

1

2

*1820 CK

1

*550 CH

2

*1500 RA

2

*2300 PO

*8994 ID

4

*2270 ID

2

*900 VD

2

-110

3

*1474 RT

1

*500 EX

0108 15:44

Read Report Sample

The print items are the same as in the Daily Read or Reset, except that no data for Hourly Ranges Sales will be printed in a GT Read or Reset Report.

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	43
DEPARTMENT STATUS SETTING OR CHANGING	44
PLU TABLE SETTING OR CHANGING	46
TIME SETTING OR ADJUSTMENT	47
DATE SETTING OR ADJUSTMENT	47
HOURLY RANGE SETTING OR CHANGING	48
DEPARTMENT LISTING CAPACITY SETTING OR CHANGING	49
SETTING LONG-FEED OPTION (for RECEIPT USE) or JOURNAL-FEED OPTION	50
DEPARTMENT PRESET PRICE SETTING OR CHANGING	51
MEDIA TENDER LISTING CAPACITY SETTING OR CHANGING	52
%- (or % +) PRESET RATE SETTING OR CHANGING	53
PLU PRESET PRICE CHANGING	54
PLU TABLE DELETION	55
TAX TABLE SETTING	56

SETTING BASIC REGISTER REQUIREMENTS BY 7-DIGIT CODE ENTRY

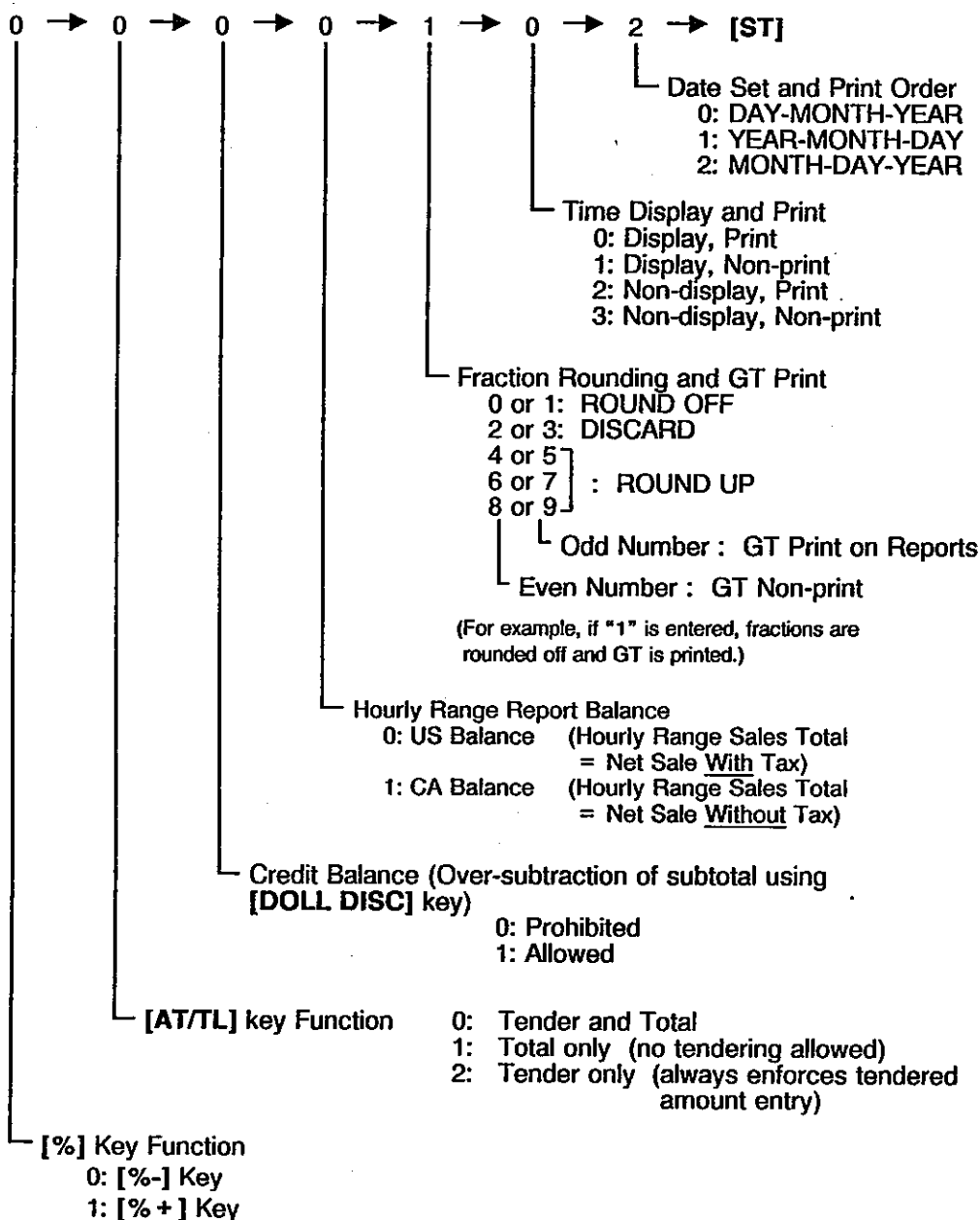
This determines basic register functions and specifications for the market and for your store.

CONDITION After Daily Reset, GT Reset, and PLU Reset

OPERATION Mode Lock : **SET**

Enter a 7-digit code, depress [ST]

ex.)



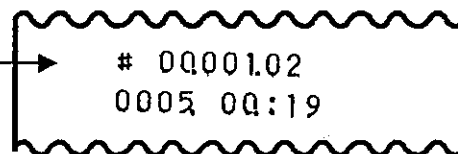
- NOTES:**
- 1) Initial zeros may be omitted. For example only "102" may be entered instead of "0000102".
 - 2) When a numeric value larger than those specified is entered, it will result in the same as the maximum numeric value of those specified.

SAMPLE OPERATION To set the following requirements:

- [%] Function -- [%-] : 0
- [AT/TL] Function -- Tender & Total: 0
- Credit Balance -- Prohibited: 0
- Hourly Range Sales Total -- US Balance: 0
- Fraction -- ROUND OFF] : 1
- GT -- Print] : 1
- Time -- Display & Print: 0
- Date -- MONTH-DAY-YEAR: 2

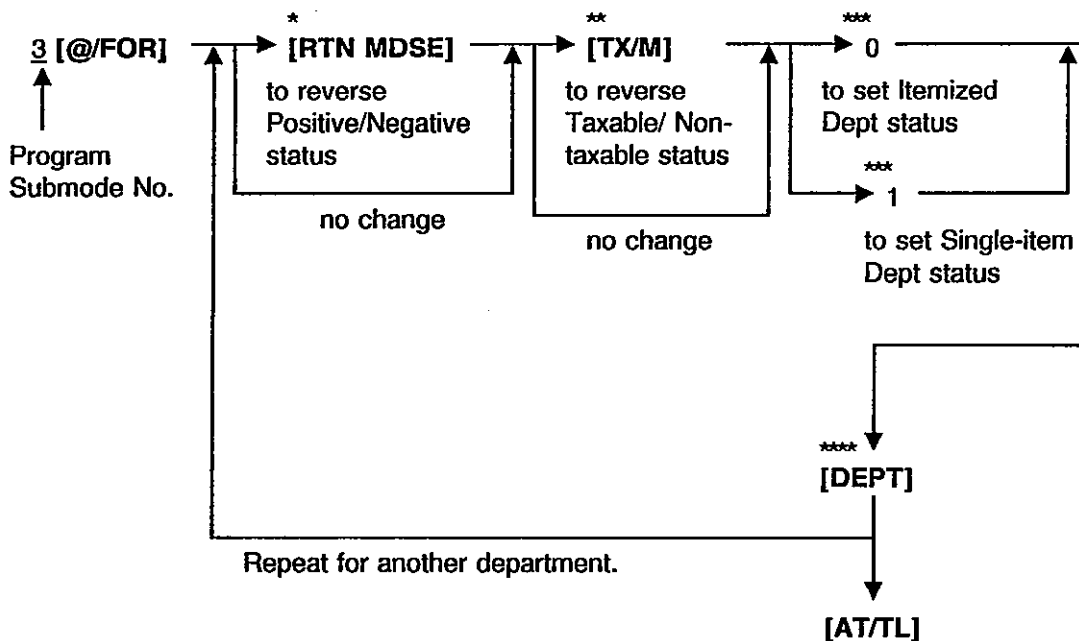
Mode Lock to "SET".

Enter 0000102 (or 102), depress [ST].



DEPARTMENT STATUS SETTING OR CHANGING (Submode No. 3)

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



- * : Depressing [RTN MDSE] will reverse the positive/negative status of the department. When the department is set to be negative, the arrow lamp "(-)" will be lit on depressing the [DEPT] key. If the lamp remains unlit when the [DEPT] key is depressed, the department is positive.
- ** : 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 (of 1 to 4) 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 "*" to "****" may be changed interchangeably as long as they are operated before depressing the [DEPT] key.
 - 3) No other keys than [RTN MDSE], [TX/M], [0], and [1] can be entered before the [DEPT] key.

SAMPLE OPERATION To set each department with the following status:

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

Mode Lock to "SET".

Enter 3, depress [@/FOR].

(Under the condition that all the departments are set to be positive and non-taxable before this sample operation)

[TX/M] 0 [DEPT 1] (Displays 0.00)
 0 [DEPT 2] (Displays 0.00)
 [TX/M] 1 [DEPT 3] (Displays 0.01)
 [RTN MDSE] 0 [DEPT 4] (Displays 0.00, and Arrow Lamp "(-)" lights.)

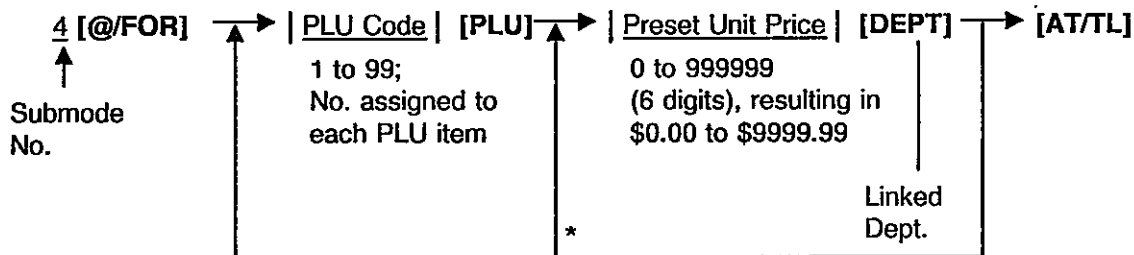
#-03
1* 0T
2* 0
3* 1T
4* 0 -
0008 00:25

[AT/TL] to end this submode.

PLU TABLE SETTING OR CHANGING (Submode No.4)

This submode allows programming or changing PLUs (Price-Look-Ups) linked to a department. When a PLU is entered as a sale item in the "REG" mode, the sale item count is processed into that particular PLU item memory as well as into its linked department memory. Thus you can read in the "X" or "Z" reports the sales data of the individual item as well as the sales total data of the department to which the individual item is linked.

- CONDITION** After PLU Reset to change PLU table data once programmed, or any time outside a sale to program new PLUs.
- OPERATION** Mode Lock : **SET**



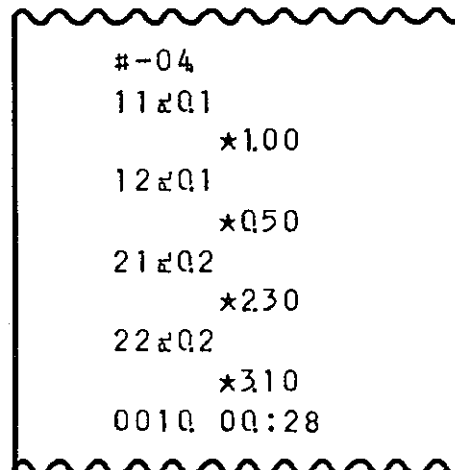
Repeat for another PLU.

(* : Repeatable from here if the PLU Code is sequential from that of the previous PLU. If the sequence "| PLU Code | [PLU]" is omitted after the submode No. entry (i.e. 4 [AT/TL]), PLU Code No.1 is automatically be assigned.)

- NOTES:**
- 1) A maximum of 99 PLUs may be programmed.
 - 2) A zero price may be preset if "0" is entered as "Preset Unit Price". The Preset Price entry is compulsory on this register; no open-price PLUs may be programmed.
 - 3) When the linked department is a Single-item Department, the PLU will also function as a Single-item PLU. The Tax Status of the PLU is determined by its linked Department status. When the linked department is a negative department, no errors result in this programming operation but no entries through that PLU are possible in the "REG" mode.

ex.) To set the following new PLUs:

PLU Table			Key Operation	
PLU Code	Preset Price	Linked Dept.	Mode Lock to "SET", enter 4, depress [AT/TL].	
11	\$1.00	Dept.1	11 [PLU]	100 [DEPT 1]
12	\$0.50	Dept.1	(12 [PLU])	50 [DEPT 1]
21	\$2.30	Dept.2	21 [PLU]	230 [DEPT 2]
22	\$3.10	Dept.2	(22 [PLU])	310 [DEPT 2]
			[AT/TL]	

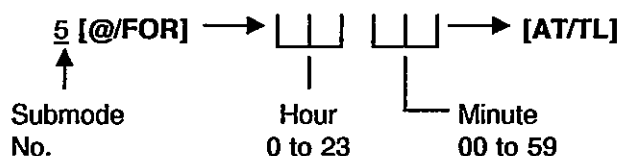


TIME SETTING OR ADJUSTMENT (Submode No.5)

A standard calendar and a TOD (TIME-OF-DAY) clock circuit are installed in the series MA-79 model. Therefore, once the date and the time are set, seldom is adjustment necessary. The extra day in a leap year is also counted automatically in the circuit.

CONDITION Any time outside a sale

OPERATION Mode Lock : SET



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.

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

Mode Lock to "SET", enter 5, depress [**@/FOR**].

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

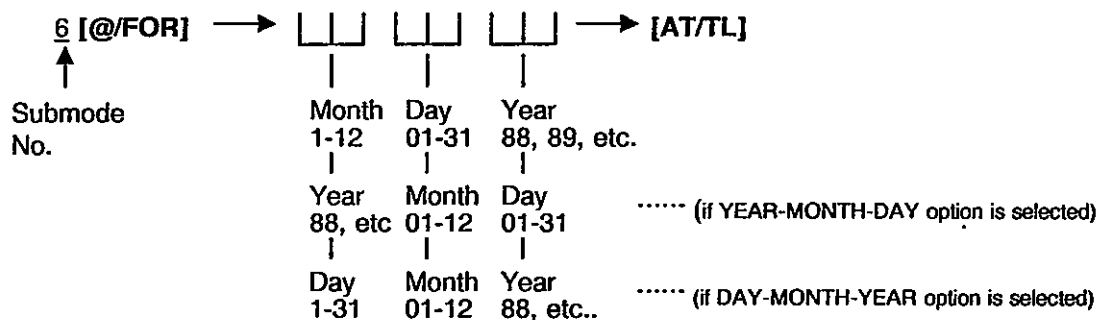
```

#-05
      13:51
0012 13:51
  
```

DATE SETTING OR ADJUSTMENT (Submode No.6)

CONDITION Any time outside a sale

OPERATION Mode Lock : SET



ex.) To set the date to
"August 12, 1988":

Mode Lock to "SET", enter 6, depress [**@/FOR**].

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

```

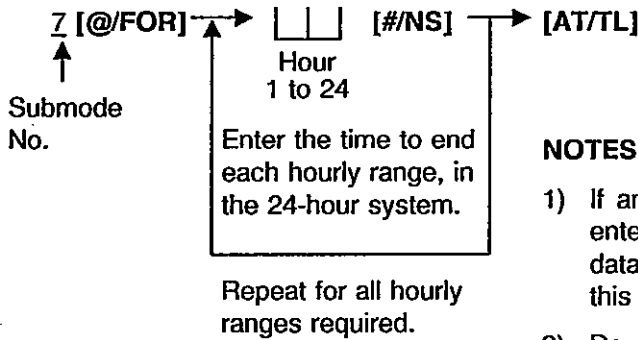
#-06
      08-12-88
0014 13:52
  
```

HOURLY RANGE SETTING OR CHANGING (Submode No. 7) (for report purposes)

A maximum of 24 hourly ranges may be set in order to read sales data in each hourly range as part of the Daily X or Z reports.

CONDITION After Daily Reset

OPERATION Mode Lock : SET



NOTES:

- 1) If an hour value "0" or more than 24 is entered, no error results. But the sales data will not be processed correctly in this case.
- 2) Do not set an hourly range across 24:00, such as "from 23:00 to 1:00".
- 3) To change the table of hourly ranges once set, partially or entirely, do the entire setting operation over again. The old table will then be cleared.
- 4) To reset the hourly range table:
 Mode Lock : SET,
 7 [@/FOR] 0 [#/NS] [AT/TL]
 Then no hourly range sales data will be outputted on the reports.

ex.) To set the following table of hourly ranges:

Table	Key Operation
	Mode Lock to "SET".
up to 8:00	7 [@/FOR]
8:00 to 12:00	8 [#/NS]
12:00 to 13:00	12 [#/NS]
13:00 to 15:00	13 [#/NS]
15:00 to 18:00	15 [#/NS]
	18 [#/NS]
	[AT/TL]

```

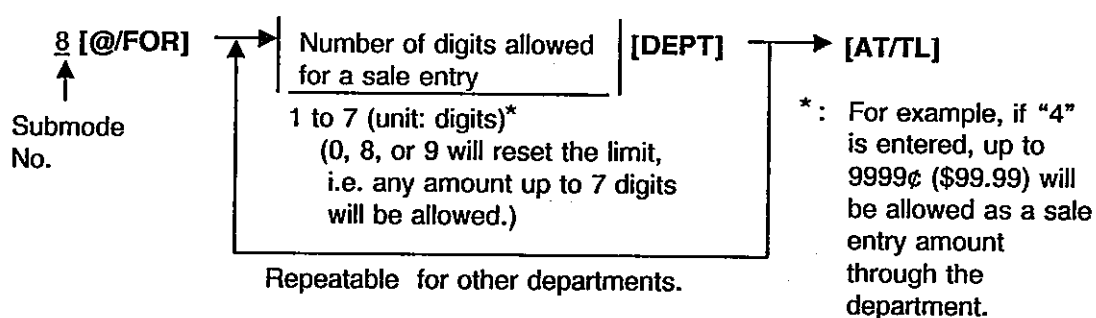
#-07
08-00
12-00
13-00
15-00
18-00
0016 13:54
  
```

DEPARTMENT LISTING CAPACITY SETTING OR CHANGING (Submode No. 8)

Each department may be set with 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:

	<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 [@/FOR]

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 submode.

```

#-08
1*      5
2*      4
3*      3
4*      2
0018 14:14
  
```

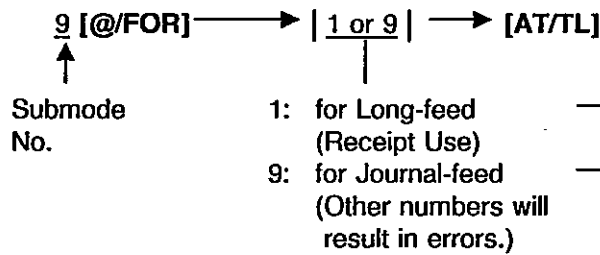
NOTE: Since the Listing Capacity is provided to check the amounts entered in the "REG" mode, it will be disregarded when a preset price is set on a department (in a separate operation described later).

SETTING LONG-FEED OPTION (for RECEIPT USE) or JOURNAL-FEED OPTION (Submode No. 9)

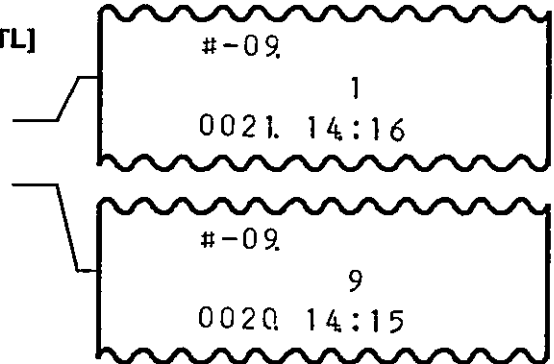
The printer of the MA-79 series can be programmed to be used for Receipt Issuance or Journal Printing, according to the store's requirement.

CONDITION Any time outside a sale

OPERATION Mode Lock : SET

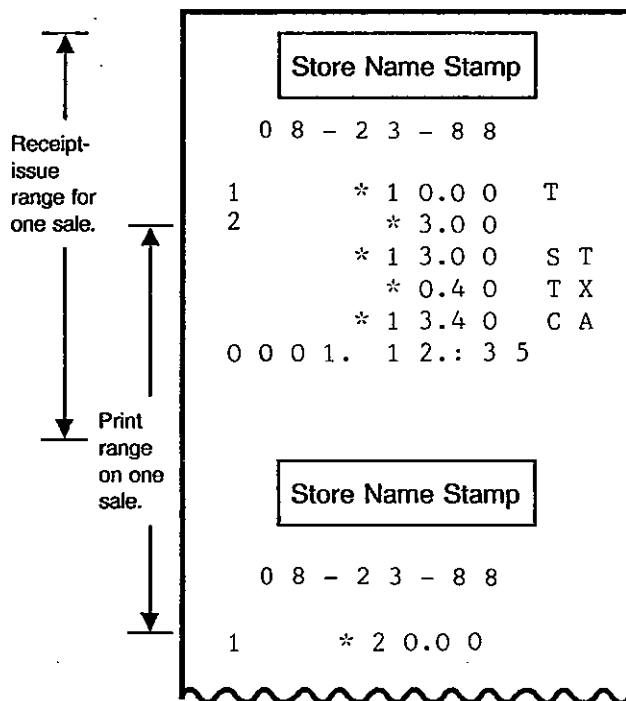


NOTE: When the long-feed Option is selected, the Store Name Stamp print action will be executed and the date will be printed on every receipt.

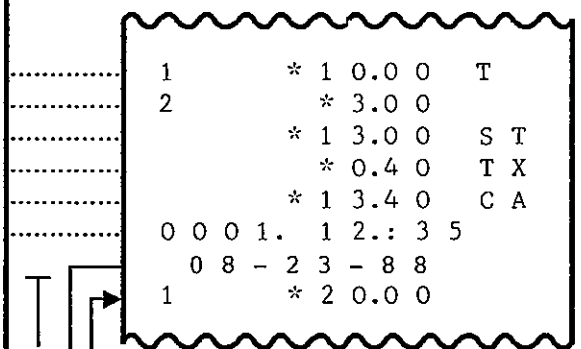


PRINT FORMATS

Long-feed Option



Journal-feed Option



NOTE: The date will be printed on X and Z reports only, when the Journal-feed Option is selected.

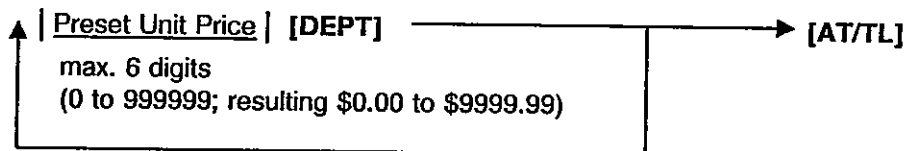
Start Print Line of the next sale

DEPARTMENT PRESET PRICE SETTING OR CHANGING

Each department may be set with 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.

```

#
2*   *2.50
3*   *1.40
0024 14:20
  
```

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.

```

#
3*
0026 14:22
  
```

MEDIA TENDER LISTING CAPACITY SETTING OR CHANGING

A listing capacity (limit digit) may also be set for each media tendering of cash or check.

CONDITION After Daily Reset

OPERATION Mode Lock : **SET**

Number of digits for cash
amount tendered to be allowed.

1 to 7 (same as Dept. LC)

→ **[AT/TL]**

(This setting is effective
only when the **[AT/TL]** key
is set as Tender-only key
or Tender-and-Total key.)

Number of digits for check
amount tendered to be allowed.

→ **[CHK TND]**

(Since **[Chg]** is always a Total-only key, this setting operation is
not applicable to the key.)

ex.) To set the following media tender LC's:

7 digits for **[AT/TL]** (Cash)

6 digits for **[CHK TND]** (Check)

Mode Lock to "SET".

Enter 7, depress **[AT/TL]**.

7 AT
0029 14:23

Enter 6, depress **[CHK TND]**.

6 CK
0030 14:24

PLU PRESET PRICE CHANGING

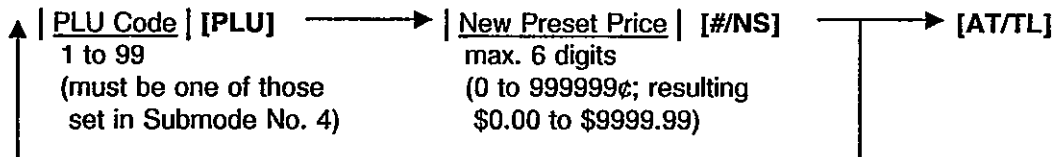
To newly set PLUs or change programmed data already set, Submode No.4 should be used. However, only to change the preset prices of PLUs, it is easier to use the operation introduced here.

CONDITION

Any time outside a sale

OPERATION

Mode Lock : **SET**



Repeatable for other PLUs' price changes.

NOTE: To change each PLU's linked department, the Submode No. 4 operation must be used. To delete a PLU once programmed, a PLU DELETION must be operated (which is described on the next page).

ex.) To change the following PLUs' preset prices:

<u>PLU Code</u>	<u>Old Price</u>	<u>New Preset Price</u>
12	\$2.30	\$2.40
22	\$3.10	\$3.00

Mode Lock to "SET".

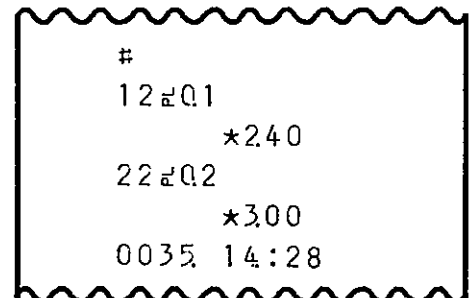
Enter 12, depress [PLU].

Enter 240, depress [#NS].

Enter 22, depress [PLU].

Enter 300, depress [#NS].

[AT/TL] to end.

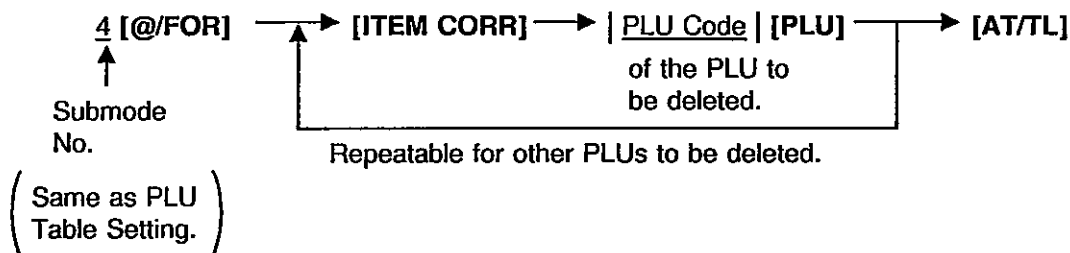


PLU TABLE DELETION (Submode No. 4)

Unnecessary PLUs may be deleted from the PLU program table file.

CONDITION After PLU Reset

OPERATION Mode Lock : SET



- NOTES:**
- 1) The PLU Code entered in the above operation is one of those set in the PLU TABLE SETTING OR CHANGING operation.
 - 2) Deletion is performed for one PLU after another. No operation to delete all the PLUs at once is provided.
 - 3) The above operation will result in an error if operated during another setting operation.

ex.) To delete PLU No. 21:

Mode Lock to "SET", enter 4, depress [@/FOR].

[ITEM CORR] 21 [PLU].

[AT/TL] to end.

```

#-04
21
-----VD
0038 14:31
  
```

TAX TABLE SETTING

The MA-79 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:

<u>Tax table</u>			<u>Key Operation</u>	
Non-cyclic Breaks			Mode Lock to SET.	
(from)	(to)	(tax)	(Enter)	(Depress)
0¢	12¢	0¢	12	[TX/M]
13	34	1	34	[TX/M]
35	59	2	59	[TX/M]
60	87	3	87	[TX/M]
Cyclic Breaks				[ST]
88	112	4	112	[TX/M]
113	137	5	137	[TX/M]
138	162	6	162	[TX/M]
163	187	7	187	[TX/M]
188	212	8		[AT/TL]
⋮	⋮	⋮		

#	*012	TX
	*034	TX
	*059	TX
	*087	TX
	*087	ST
	*112	TX
	*137	TX
	*162	TX
	*187	TX
	*187	TL
	0043	14:37

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]

#	
	*012 TX
	*034 TX
	*059 TX
	*087 TX
	*087 ST
	5.000%
0046	14:41

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]

#
*0.00 TX
*0.00 ST
10.000%
0048 14:43

- 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>
1. DEPARTMENT PRESET PRICE READ	1 [ST]	59
2. DEPARTMENT LC AND STATUS READ	2 [ST]	60
3. PLU TABLE READ	3 [ST]	60
4. OTHER PROGRAMMED DATA READ	4 [ST]	61
5. TAX CALCULATION TEST	<u>Amount</u> [TX/M]	61

1. DEPARTMENT PRESET PRICE READ

OPERATION

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

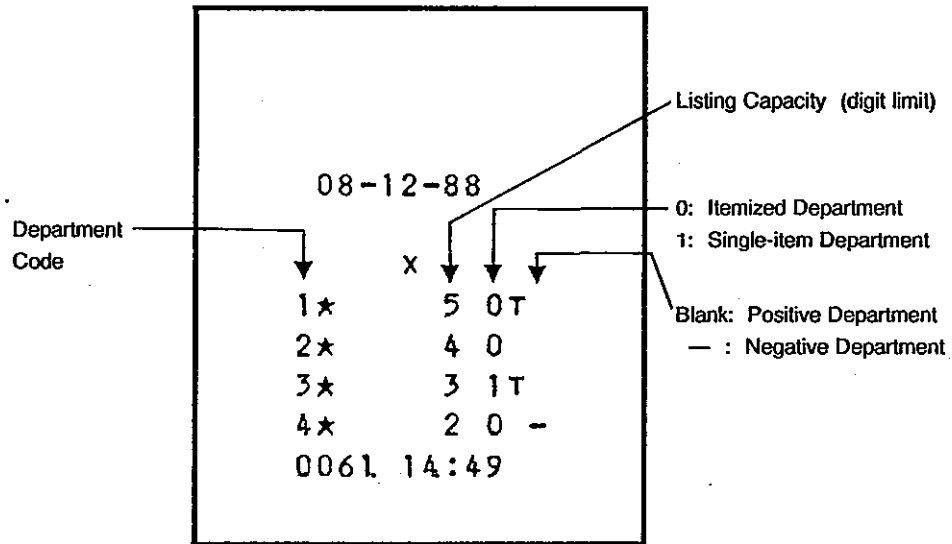
	08-12-88		
Department Code	↓	X ↓	Preset Price
	1★	0	(Blank indicates that the department is an open department.)
	2★	*2.50 0	
	3★	0	
	4★	0	
	0059. 14:49		

(Print Format With Receipt-feed Option)

2. DEPARTMENT LC AND STATUS READ

OPERATION

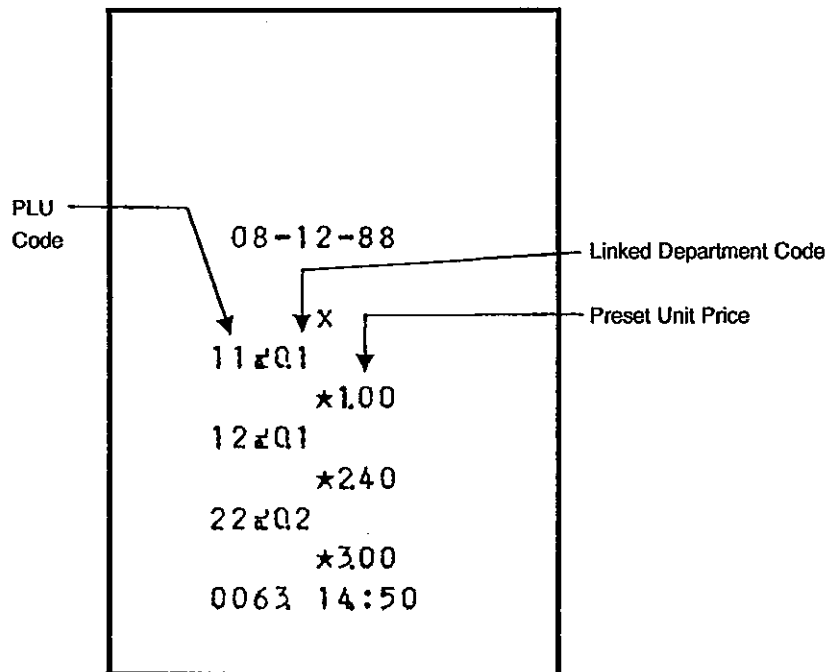
Mode Lock : X, enter 2, depress [ST].



3. PLU TABLE READ

OPERATION

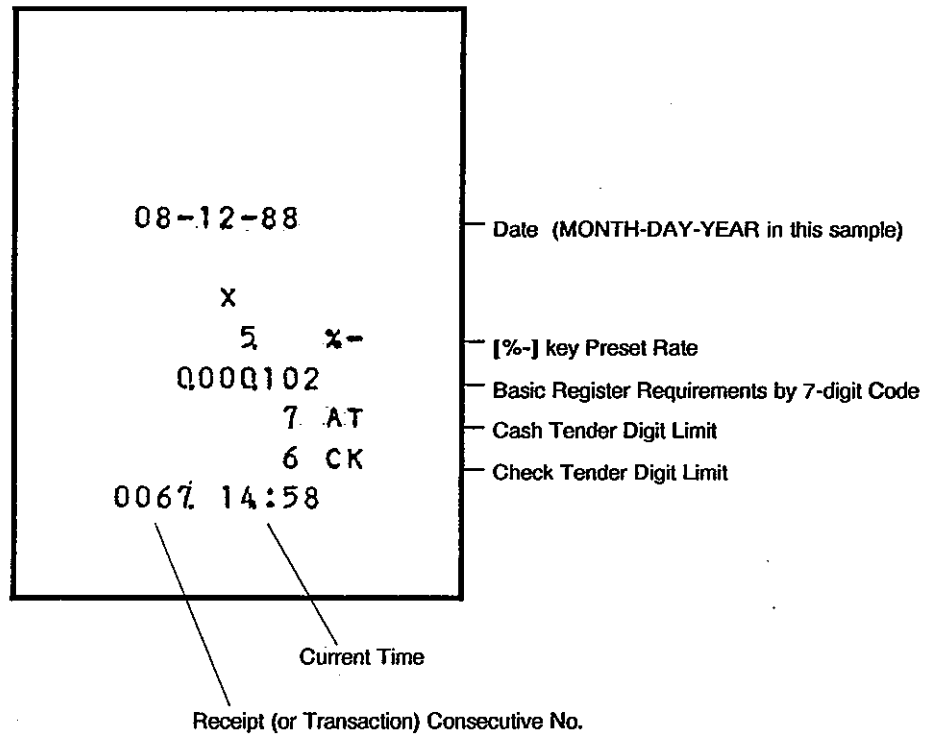
Mode Lock : X, enter 3, depress [ST].



4. OTHER PROGRAMMED DATA READ

OPERATION

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



5. 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

PAPER SETTING

On Model MA-79, the printer may be used for journal-format print or receipt-format print. If used for receipt-format print, double-sheeted non-carbon copy rolls (which are specified on the last page of this manual) can be used, which enables issuing the original copy (the upper sheet) as receipt and keeping the other (the bottom sheet) as journal record. The following shows the procedure for setting a double-sheeted roll.

- 1) Remove the Receipt Cover. (Fig. 1)
- 2) Place the paper roll into the paper pocket. (Fig. 2)
- 3) Insert the paper ends into the paper inlet located on the rear side of the printer, and press the [FEED] key on the keyboard until the paper ends come out of the outlet. (Fig. 3)

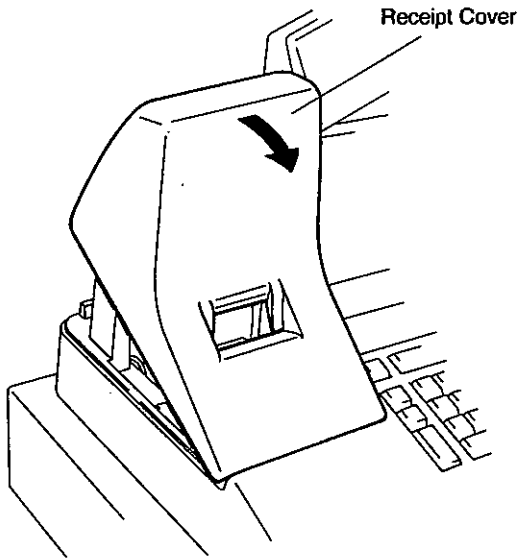


Fig. 1

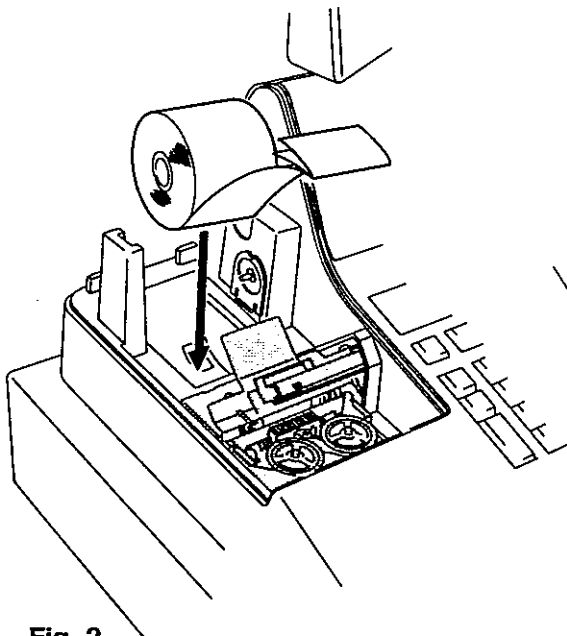


Fig. 2

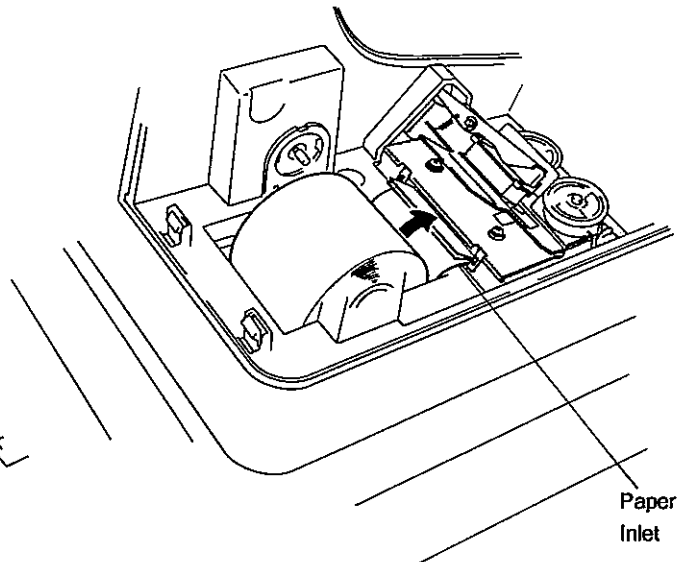


Fig. 3

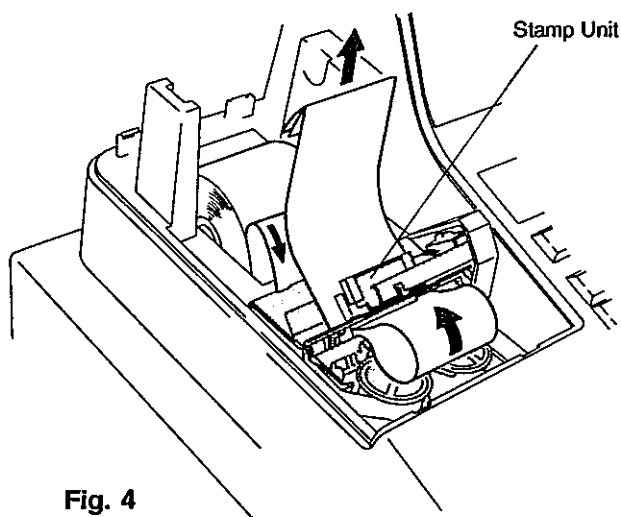


Fig. 4

4) Then insert the paper ends into the Stamp Unit located on the upper side of the printer, and pull up the paper a little so that the paper may correctly be tensed. (Fig. 4)

5) Wind the paper end of the journal sheet (the bottom sheet) around the Journal Winding Reel two or three times, set the reel to the holder, and press the [FEED] key for a while to tense the journal paper. (Fig. 5)

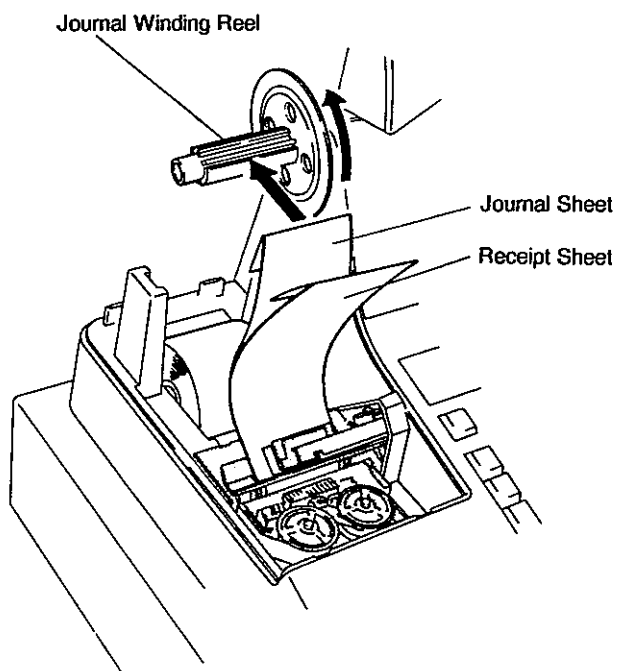


Fig. 5

6) Attach the Receipt Cover with the paper end of the receipt sheet (the upper sheet) coming out of the Receipt Outlet located on the Receipt Cover. (Fig. 6)

For a single-sheeted roll, simply attach the Receipt Cover. The Receipt Outlet is used as a Journal Window.

7) When replacing the roll, first tear off the paper of the old roll anywhere between the roll and the paper inlet. Then press the [FEED] key to remove the remaining paper piece from the printer, but do not pull it forcibly by hand.

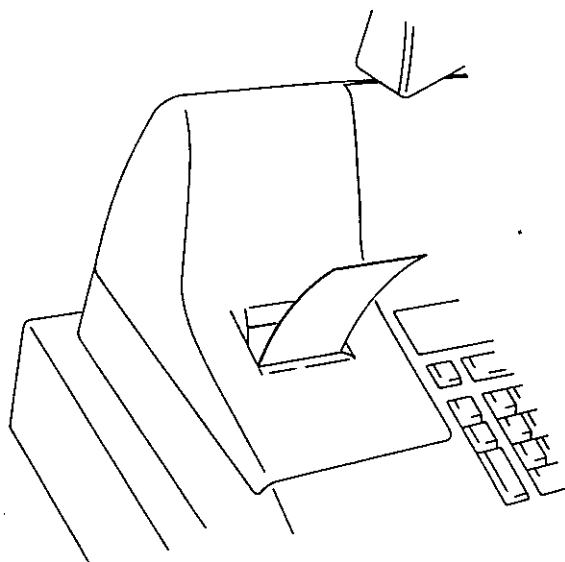


Fig. 6

REPLENISHING THE STORE NAME STAMP WITH INK

When the store name is printed too lightly, replenish ink in the following manner.

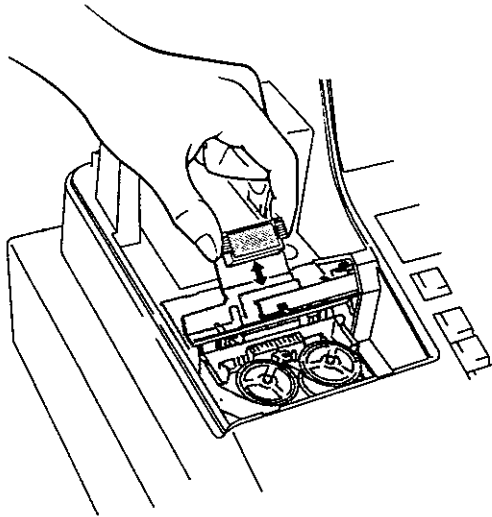


Fig. 7

- 1) Turn off the power of the register (or turn the Mode Lock to the "OFF" position).
- 2) Remove the Receipt Cover.
- 3) Remove the Stamp from the Stamp Print Unit by pulling out toward the rear of the register with your fingers on the notches of both sides as shown in the figure. (Fig. 7)
- 4) Apply ink to the pad on the rear side of the Stamp. The amount of the refilling should be adjusted according to the density of the printed message, but the limit of 2 cc should not be exceeded. (The ink bottle supplied contains 5 cc of ink.) (Fig. 8)

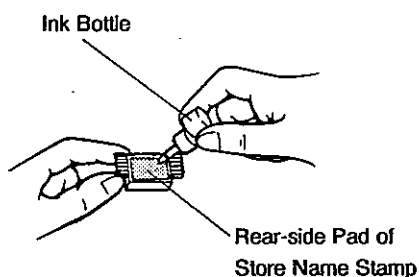


Fig. 8

- NOTES:**
- 1) Replenish the ink drop by drop several times until the pad will not absorb any more.
 - 2) Use TEC genuine ink for replenishment.
5. Reassembly is the reverse procedure.

RIBBON EXCHANGE

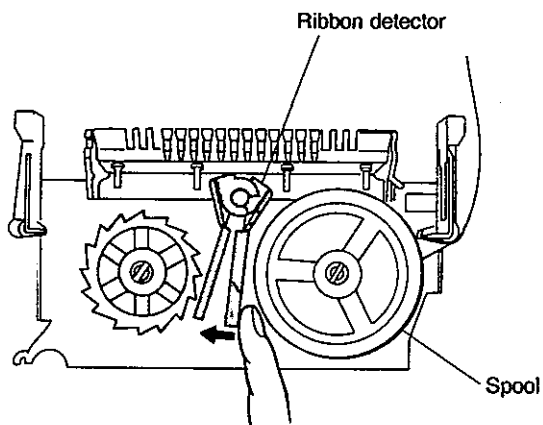


Fig. 9

1) Install one of the ribbon spools as shown in Fig. 9, while moving the ribbon detector so that the ribbon is not caught.

2) Thread the ribbon through the ribbon buffer, and then install the other ribbon spool while moving the ribbon detector so that it does not catch, as shown in Fig. 10.

3) Turn the ribbon spools a few times to remove the slack in the ribbon.

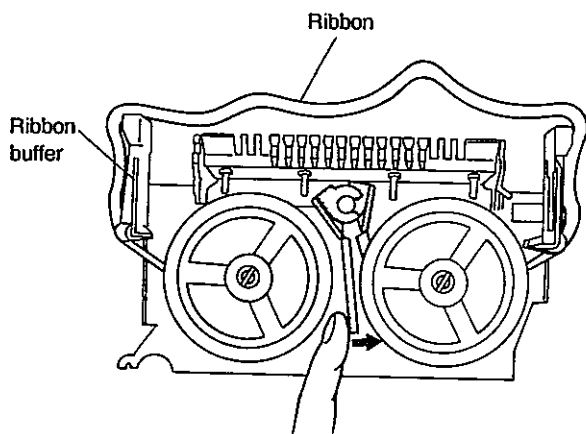
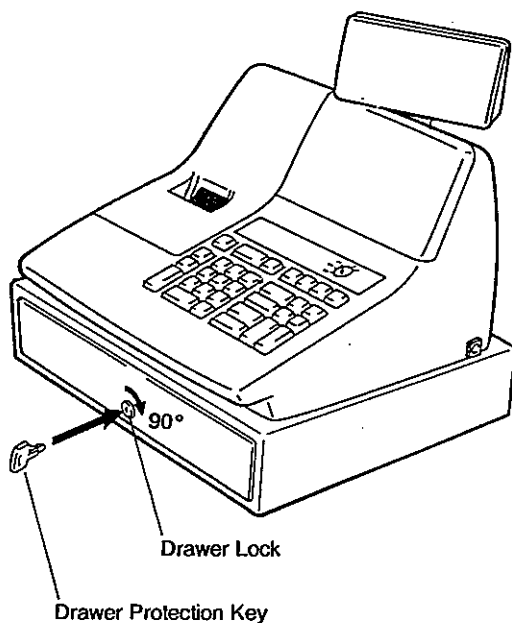


Fig. 10



LOCKING THE CASH DRAWER (for MINI DRAWER)

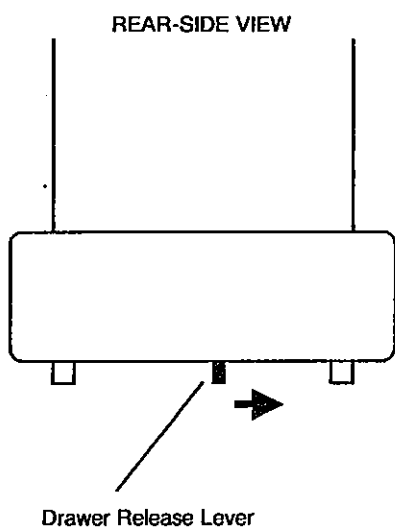
The cash drawer is locked by inserting the Drawer Protection Key into the Drawer Lock and turning the key by 90 degrees clockwise. The key may be removed then. The reverse operation will unlock the drawer.

MANUAL DRAWER RELEASE AND LOCK (for MINI DRAWER)

- Releasing

Usually the drawer is released automatically. However, in an emergency the drawer can be released manually.

Push the Drawer Release Lever located on the rear bottom, and the drawer will open. However, if the Drawer Lock is locked by the Drawer Protection Key, the drawer will not open by the lever operation.



- Removing the Drawer

Lift up the drawer and pull it out.

To install the drawer, fit the rollers of the drawer onto the rails of the register and push it all the way in.

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.

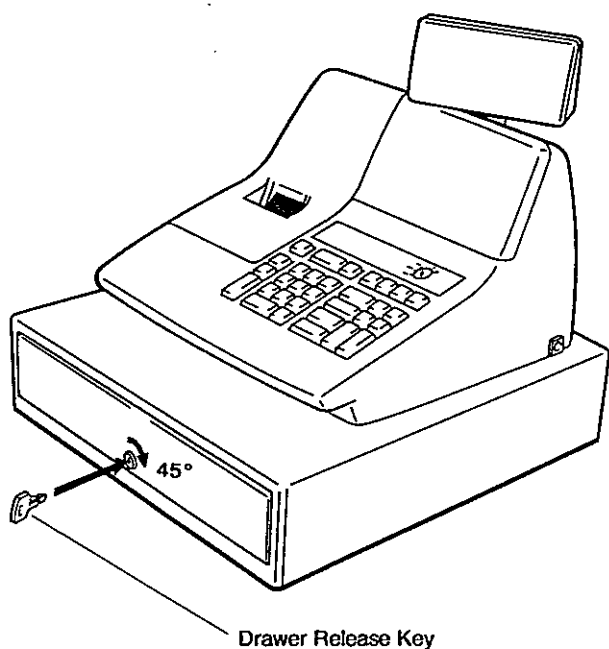


Fig. 1

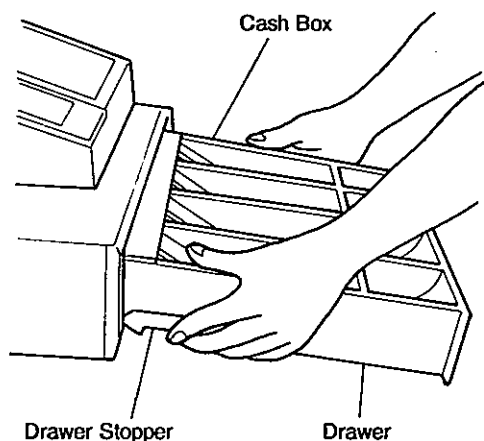


Fig. 2

- **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)

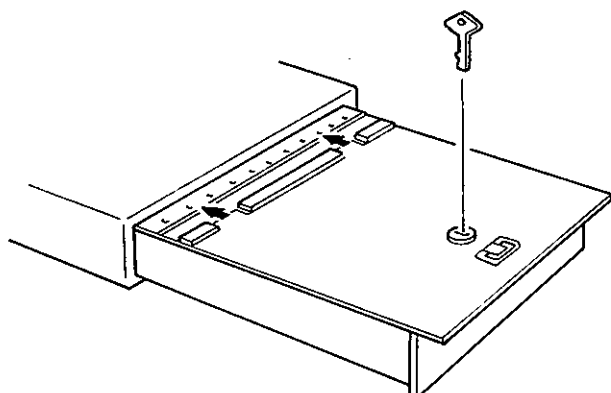


Fig. 3

- **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 key-hole on the cover, and turn clockwise. Now the cover is locked.

- **Opening**

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

FOR MIDI DRAWER (Fig. 4)

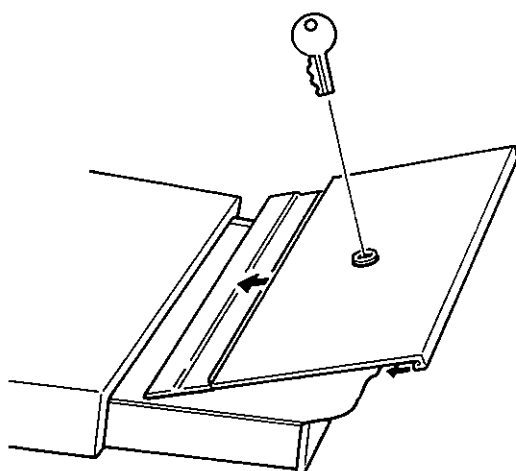


Fig. 4

- **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 key-hole 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 320mm (height) with a MIDI DRAWER
WEIGHT	11kg
POWER REQUIRED	AC 100V, 110V, 117V, 220V, 240V; 50/60HZ (The voltage varies depending on the destination of the product.)
POWER CONSUMED	13W (operating), 6W (standby) 0.2A (operating), 0.07A (Stand-by) at 117V
AMBIENT TEMPERATURE	0°C to 40°C, 10% to 90% (relative humidity)

SIZE AND SPECIFICATION OF RECEIPT / JOURNAL TAPE

	Ordinary Paper (Single-sheet Roll)	Non-carbon Copy Paper (Double-sheet Roll)
Width	58mm	58mm
Diameter	Max. 80mm	Max. 80mm
Recommended Quality and Product	High-quality Paper 45kg	Receipt Sheet: High-quality Paper 45kg Journal Sheet: Mitsubishi NCR Paper DIA SELF N40 Paper Color: white Copy Print Color: blue (or the equivalent)

4



TEC

TOKYO ELECTRIC CO., LTD.

 PRINTED IN JAPAN
E1-01397 88092000 © D