SHARP®

ELECTRONIC CASH REGISTER

MODEL

ER-A410
ER-A420

INSTRUCTION MANUAL

The above illustration shows the model ER-A410.

Ⓝ

WARNING

FCC Regulations state that any unauthorized changes or modifications to this equipment not expressly approved by the manufacturer could void the user's authority to operate this equipment.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CAUTION

The AC outlet shall be installed near the equipment and shall be easily accessible.

FOR YOUR RECORDS

Please record below the model number and serial number, for easy reference, in case of loss or theft. These numbers are located on the right side of the unit. Space is provided for further pertinent data.

Model Number_____

Serial Number _____

Date of Purchase _____

Place of Purchase _____

INTRODUCTION

Thank you very much for your purchase of the SHARP Electronic Cash Register, Model ER-A410/A420.
Please read this manual carefully before operating your machine to gain a thorough understanding of the functions and features offered by this model ECR.
Please keep this manual for future reference, it may help you if you encounter operational problems.

IMPORTANT

- **Install your register in a location that is not subject to direct radiation, unusual temperature changes, high humidity or exposed to water sources.**
  Installation in such locations could cause damage to the cabinet and the electrical components.
- **The register should not be operated by an individual with wet hands.**
  The water could seep into the interior of the register and cause component failure.
- **When cleaning your register, use a dry, soft cloth. Never use solvents, such as benzine and/or thinner.**
  The use of such chemicals will lead to discoloration or deterioration of the cabinet.
- **The register plugs into any standard wall outlet (120V ±10% AC) which utilizes a dedicated ground circuit.**
  Please note that other electrical devices on the same electrical circuit could cause the register to malfunction.
- **If the register malfunctions, call your local dealer for service - do not try to repair the register yourself.**
- **For a complete electrical disconnection, the AC power cord must be removed from the wall outlet.**
- **Never disconnect the peripheral while the register remains plugged into the AC outlet.**

PRECAUTION

This Electronic Cash Register has a built-in memory protection circuit which is supported by rechargeable batteries.
It is important to know that all batteries will, in time, dissipate their charge even if not used. Therefore to insure an adequate charge in the protection circuit, and to prevent any possible loss of memory during or after installation, it is recommended that each unit be allowed to recharge for a period of 24 to 48 hours prior to and during use by the customer.
In order to charge the batteries, the machine must be plugged in. This recharging precaution can prevent unnecessary equipment malfunctions or service calls.

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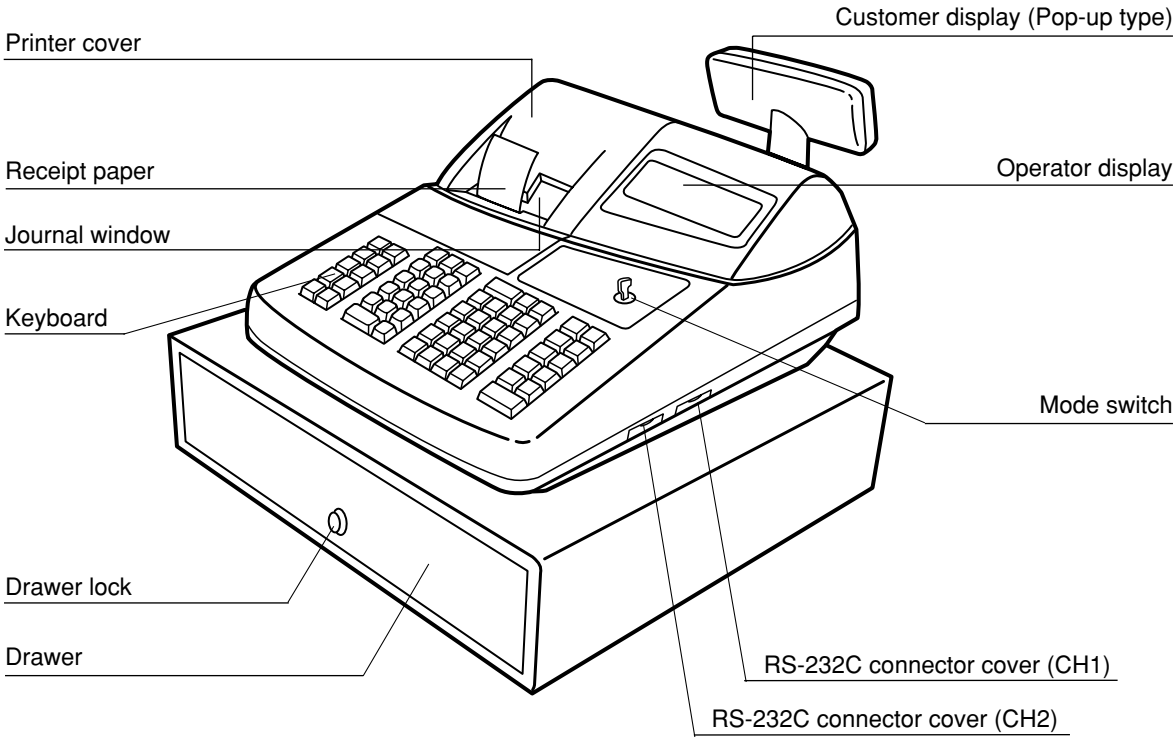
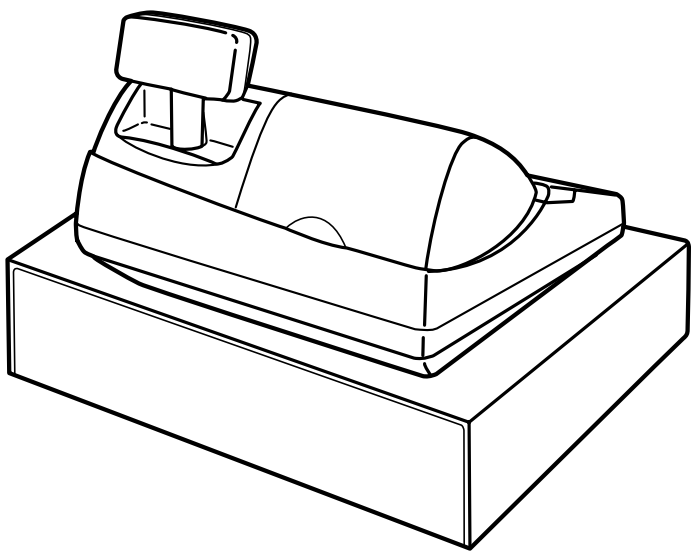
EXTERNAL VIEW OF THE ER-A410

■ Front view

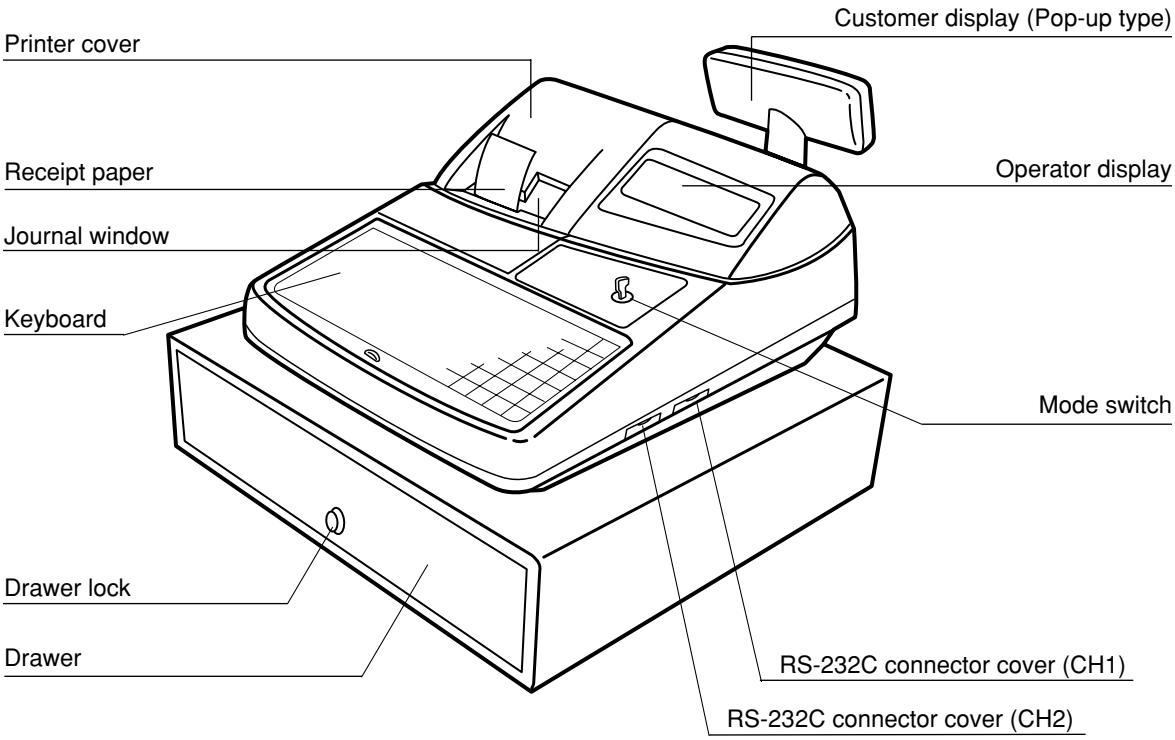


■ Rear view

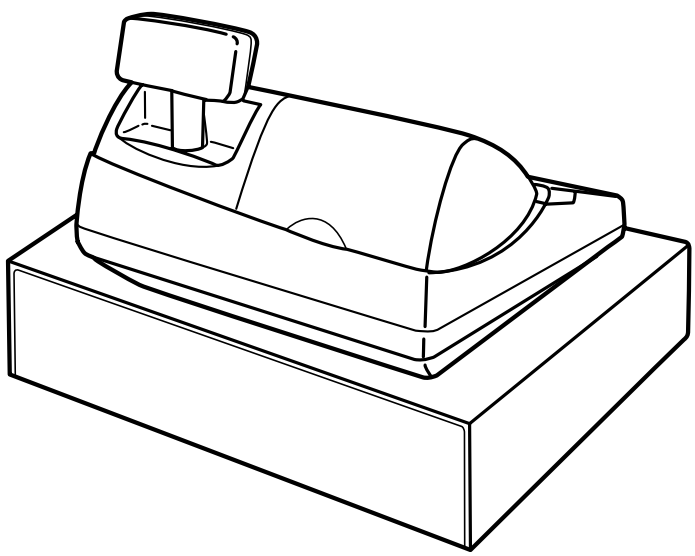


EXTERNAL VIEW OF THE ER-A420

■ Front view



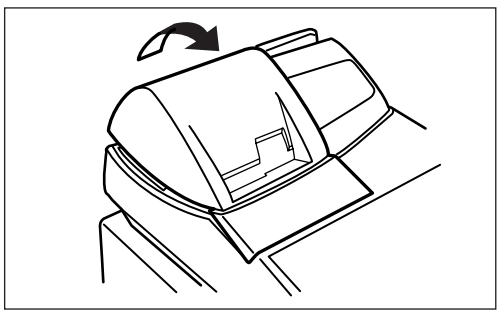
■ Rear view



PRINTER

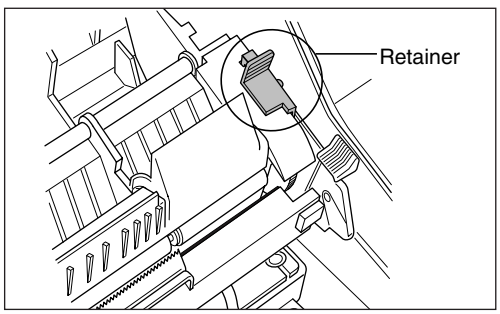
The printer is a receipt/journal dual station type thermal printer, that does not require an ink ribbon or cartridge. The average life of the printer is approximately 5 million lines.

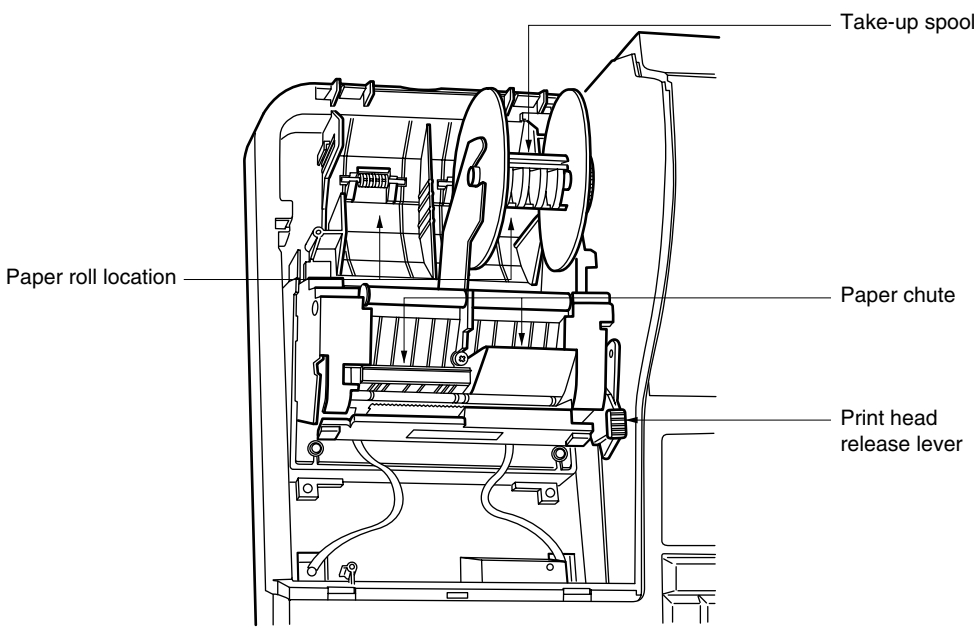
When removing the printer cover, lift it from the rear as shown.
When installing the printer cover, hook it on the pawls on the cabinet and shut it.



Caution: The paper cutter is mounted on the printer (receipt side). Be careful not to cut yourself.

Your register is shipped with the print head release lever held in the lifted up position by a white retainer. Be sure to remove this retainer (see the figure at the right) and push down the print head release lever before you use the register.





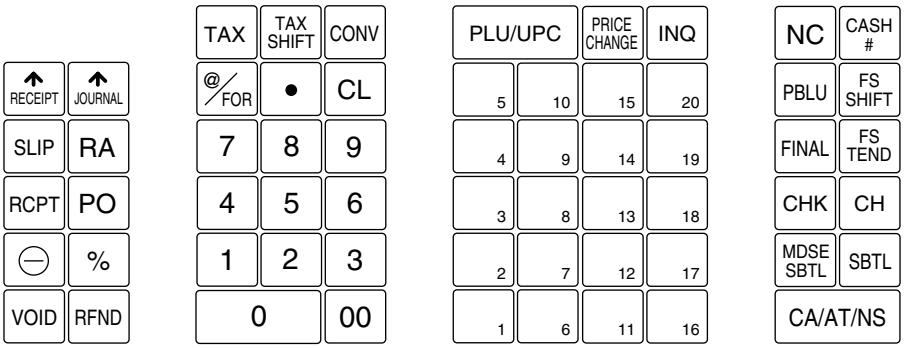
Print head release lever

The print head can be lifted by the green lever on the right side of the printer. Pulling the lever forward, lifts the print head up. If the paper becomes jammed and you need to move the print head farther forward, you can pull the lever even further toward you and proceed with the removal of the jammed paper.

Note *Do not attempt to remove the paper roll with the head in the down position. This may result in damage to the printer and print head.*

KEYBOARD

1 ER-A410 standard keyboard layout



Note *All the keys but the receipt paper feed and journal paper feed keys can be re-positioned. If you want to change the layout, please consult your dealer.*

- RECEIPT — Receipt paper feed key
- JOURNAL — Journal paper feed key
- 0 ~ 9, 00 — Numeric keys
- • — Decimal point key
- @/FOR — Multiplication key
- CL — Clear key
- 1 ~ 20 — Department keys
- PLU/UPC — PLU/UPC key
- INQ — PLU/UPC inquiry key
- PRICE CHANGE — UPC price change key
- CASH # — Cashier code entry key
- ⊖ — Discount 1 key
- % — Percent 1 key
- TAX — Tax key
- TAX SHIFT — Tax 1 shift key
- FS SHIFT — Food stamp shift key
- FS TEND — Food stamp tendered key
- CHK — Check 1 key
- CH — Charge 1 key
- SBTL — Subtotal key
- CA/AT/NS — Cash/Amount tendered and No-sale key
- VOID — Void key
- RFND — Refund key
- RA — Received-on-account 1 key
- PO — Paid-out 1 key
- MDSE SBTL — Merchandise subtotal key
- RCPT — Receipt print key
- NC — New charge account balance key
- PBLU — Previous balance key
- FINAL — Final key
- CONV — Conversion 1 key (for currency conversion)
- SLIP — Slip print key

Optional keys

- SRVC — Service key
- %2 / ≀ / %4 — Percent 2 thru 4 keys
- AUTO / ≀ / AUTO 5 — Automatic sequencing 1 thru 5 keys
- CA2 — Cash total 2 key
- BIRTH — Birthday date entry key
- DEPT # — Department code entry key
- RA2 — Received-on-account 2 key
- PO2 — Paid-out 2 key
- # — Non-add code key
- SCALE — Scale key
- OPEN TARE — Open tare key
- CONV 2 / ≀ / CONV 4 — Conversion 2 thru 4 keys
- CH2 / ≀ / CH5 — Charge 2 thru 5 keys
- CHK2 — Check 2 key
- DEPO — Deposit entry key
- DEPO RFND — Deposit refund key
- TRAY SBTL — Tray subtotal key
- RFND SALE — Refund sale key
- PRINT — Validation print key
- REPEAT — Repeat entry key
- AMT — Amount entry key
- L1 / ≀ / L3 — PLU level shift 1 thru 3 keys
- PRICE SHIFT — Price level shift key
- ⊖2 / ≀ / ⊖4 — Discount 2 thru 4 keys
- 000 — Triple zero entry key
- TAX2 SHIFT / ≀ / TAX4 SHIFT — Tax 2 thru 4 shift keys
- NS — No sale key
- NON DELETE — Non delete key
- RP SEND — Remote printer send key

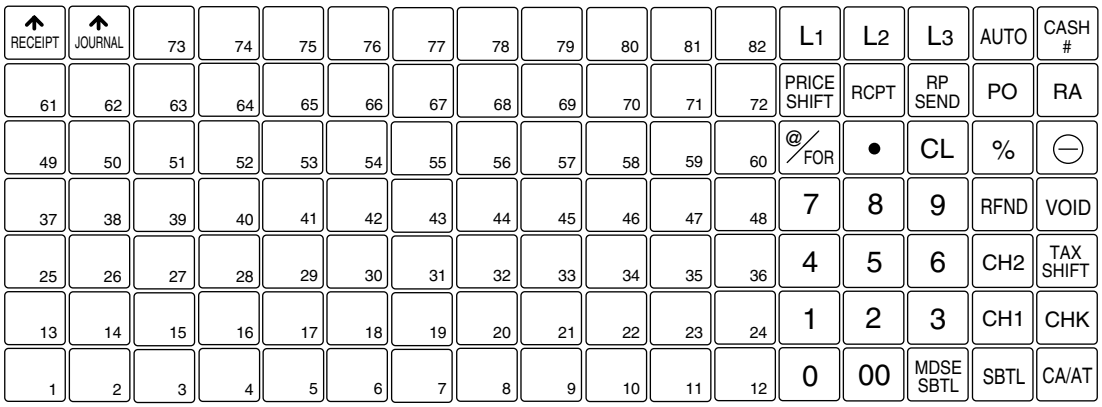
Attention

- *The [CA/AT/NS] is a double-function key ([Cash/Amount tendered function] and [No Sale function]). Press the [CA/AT/NS] key replaces the [CA/AT] and [NS] key in the following descriptions for operations.*

Note

The department and direct PLU keys can be expanded, if you require expansion of the department or direct PLU keys, please contact your dealer.

2 ER-A420 standard keyboard layout



Note *All the keys but the receipt paper feed and journal paper feed keys can be re-positioned. If you want to change the keyboard layout, please consult your dealer.*

- RECEIPT — Receipt paper feed key
- JOURNAL — Journal paper feed key
- 0 ~ 9, 00 — Numeric keys
- • — Decimal point key
- @/FOR — Multiplication key
- CL — Clear key
- RP SEND — Remote printer send key
- TAX SHIFT — Tax 1 shift key
- CA/AT — Cash/Amount tendered key
- SBTL — Subtotal key
- MDSE SBTL — Merchandise subtotal key
- CASH # — Cashier code entry key
- ⊖ — Discount 1 key
- RCPT — Receipt print key
- % — Percent 1 key
- L1 ~ L3 — PLU level shift 1 thru 3 keys
- CH1, CH2 — Charge 1 and 2 keys
- CHK — Check 1 key
- VOID — Void key
- RFND — Refund key
- RA — Received-on-account 1 key
- PO — Paid-out 1 key
- PRICE SHIFT — Price level shift key
- AUTO — Automatic sequencing 1 key
- 1 ~ 82 — Direct price lookup keys

Optional keys

- # — Non-add code key
- SCALE — Scale key
- NON DELETE — Non delete key
- AMT — Amount entry key
- INQ — PLU/UPC inquiry key
- REPEAT — Repeat entry key
- PRICE CHANGE — UPC price change key

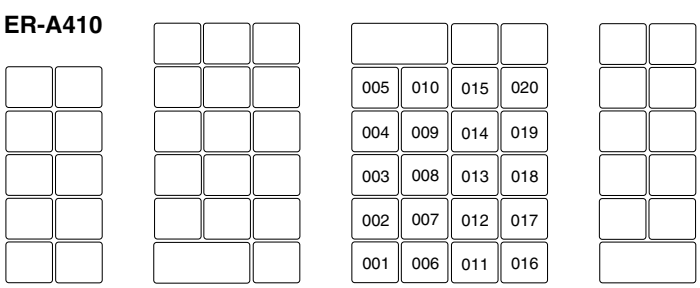
SRVC	Service key
%2 ~ %4	Percent 2 thru 4 keys
AUTO 2 ~ AUTO 5	Automatic sequencing 2 thru 5 keys
CA2	Cash total 2 key
BIRTH	Birthday date entry key
DEPT #	Department code entry key
RA2	Received-on-account 2 key
PO2	Paid-out 2 key
NS	No sale key
OPEN TARE	Open tare key
CONV ~ CONV 4	Conversion 1 thru 4 keys
CH3 ~ CH5	Charge 3 thru 5 keys
CHK2	Check 2 key
DEPO	Deposit entry key
DEPO RFND	Deposit refund key
TRAY SBTL	Tray subtotal key
RFND SALE	Refund sale key
PRINT	Validation print key
PLU/UPC	PLU/UPC key
FINAL	Final key
SLIP	Slip print key
TAX	Tax key
FS SHIFT	Food stamp shift key
FS TEND	Food stamp tendered key
⊖2 ~ ⊖4	Discount 2 thru 4 keys
000	Triple zero entry key
TAX2 SHIFT ~ TAX4 SHIFT	Tax 2 thru 4 shift keys
PBLU	Previous balance key
NC	New charge account balance key

Note *The department and direct PLU keys can be expanded, if you require expansion of the department or direct PLU keys, please contact your dealer.*

3 Standard key number layout

These key numbers are used for positioning of department keys and direct PLU keys. Refer to pages 93 and 107. This layout can be changed by your dealer.

For ER-A410

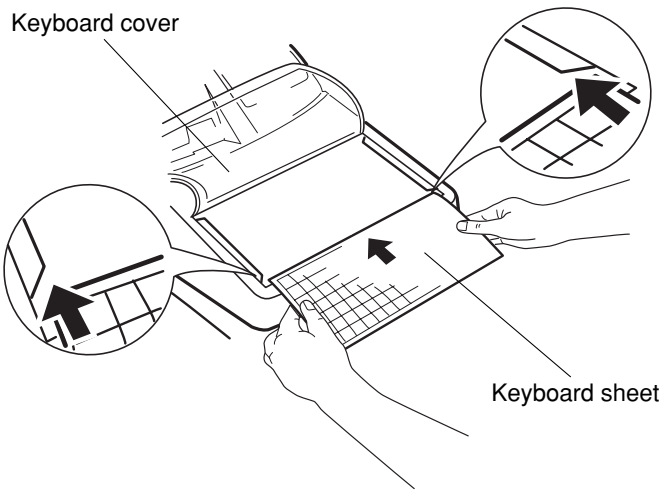


For ER-A420

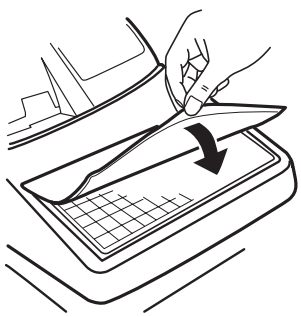
		093	094	095	096	097	098	099	100	101	102					
081	082	083	084	085	086	087	088	089	090	091	092					
069	070	071	072	073	074	075	076	077	078	079	080					
057	058	059	060	061	062	063	064	065	066	067	068					
045	046	047	048	049	050	051	052	053	054	055	056					
033	034	035	036	037	038	039	040	041	042	043	044					
021	022	023	024	025	026	027	028	029	030	031	032					

4 Installing the keyboard sheet (ER-A420)

Insert the keyboard sheet between the keyboard cover and the cabinet as illustrated below.



① Turn over the keyboard cover.
② Insert the keyboard sheet into a slit.



③ Close the keyboard cover.

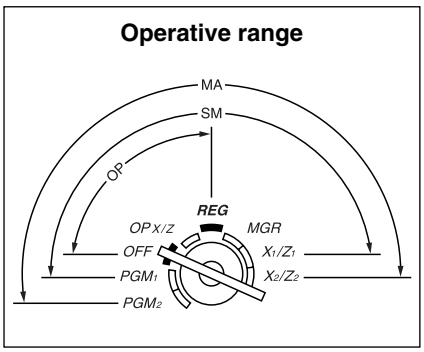
Note

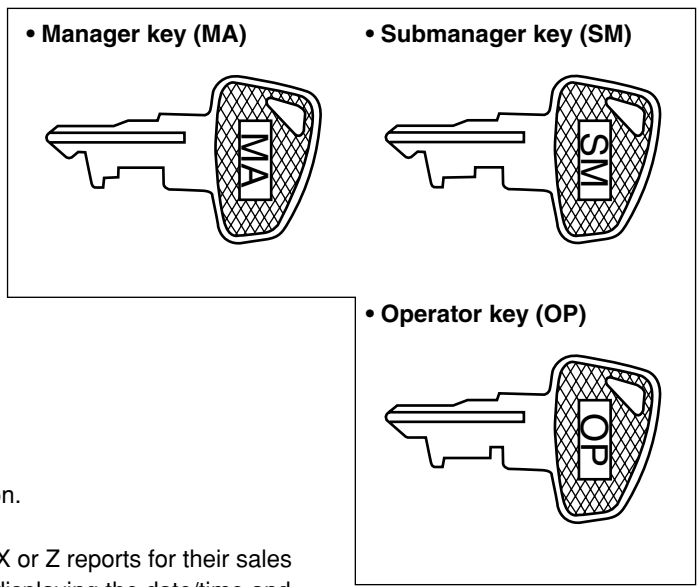
- *Do not spread the keyboard cover too far as it might tear the tabs.*
- *Replace the keyboard sheet with a new one if by chance it gets wet. Use of a wet keyboard sheet may cause problems.*
- *Be sure to use only SHARP-supplied keyboard sheets. Thick or hard sheets can make key operations difficult.*
- *Place the keyboard sheet evenly under the keyboard cover.*
- *If you require a new keyboard sheet, please contact your dealer.*
- *The keyboard cover will eventually wear out. If your keyboard cover is dirty or broken, replace the cover with a new one. For details, contact your authorized SHARP dealer.*

KEYS AND SWITCHES

1 Mode switch and mode keys

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





The mode switch has these settings:

OFF: This mode locks all register operation.
No change occurs to register data.

OP X/Z: This setting allows cashiers to take X or Z reports for their sales information. It can also be used for displaying the date/time and printing the employee's arrival/departure times. And it can be used to toggle receipt state "ON" and "OFF" by pressing the RCPT key. (This setting may be used only when your register has been programmed for "OP X/Z mode available" in the PGM2 mode.)

REG: For entering sales

PGM1: To program those items that need to be changed often: e.g., unit prices of departments, PLUs or UPCs, and percentages.

PGM2: To program all PGM1 programs and those items that do not require frequent changes: e.g., date, time, or a variety of register functions.

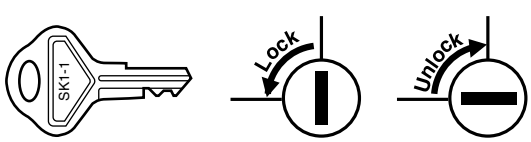
MGR: For manager's and submanager's entries
The manager can use this mode to make entries that are not permitted to be made by cashiers – for example, after-transaction voiding and override entries.

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

X2/Z2: To take the X/Z report for various periodic (weekly or monthly) consolidation of totals.

2 Drawer lock key

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

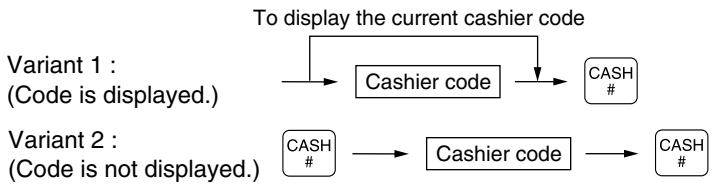


3 Cashier code entry key

Cashier codes are available in two variants: Variant 1, in which they are displayed (“0000” to “9999”), and Variant 2, in which they are not displayed (always “✱✱✱✱”).
When the cashier code is assigned by the following procedure, the register prints the four-digit cashier code (variant 2: “✱✱✱✱”) and the cashier name both on the receipt and journal for every transaction.

Procedure

■ Sign-on



■ Sign-off

Variant 1 / Variant 2 :

Note *All of these settings depend on how the register has been programmed. For the selection of these settings, consult your local dealer.*

4 Receipt ON/OFF function

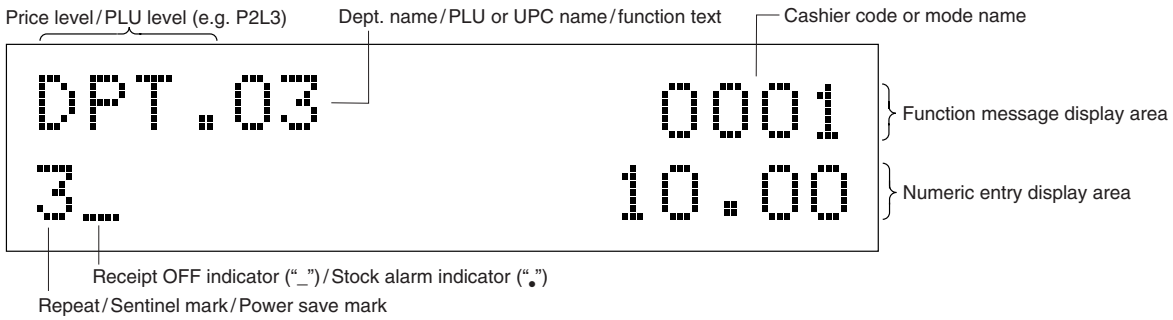
You can disable receipt printing in the REG mode to save paper using the receipt function. To disable receipt printing, press the RCPT key in the OP X/Z position. This key toggles the receipt printing status ON and OFF. To check the receipt printing status, turn the mode switch to the OP X/Z position or press the CL key in the REG mode. When the function is in the OFF status, the receipt off indicator “_” illuminates.

Note *Your register will print reports regardless of the receipt status. This means that the receipt roll must be installed even when the receipt state is “OFF” when taking reports.*

DISPLAYS

1 Operator display

The operator display consists of a two-line dot-matrix display (16 characters/line).



- **Cashier code or mode name**
  The mode you are in is displayed. When a cashier is assigned, the cashier code is displayed in the REG or OP X/Z mode. For example, "0001" is displayed when cashier 0001 is assigned.
- **Repeat**
  The number of repeats is displayed, starting at "2" and incremental with each repeat. When you have registered ten times, the display will show "0". (2 → 3 .....9 → 0 → 1 → 2...)
- **Sentinel mark**
  When amounts in the drawer reaches the amount you preprogrammed, the sentinel mark "X" is displayed to advice you to remove the money to a safe place.
- **Power save mark**
  When the cash register goes into the power save mode, the power save mark (decimal point) is displayed.
- **Stock alarm indicator**
  When the stock of the PLU or UPC which you entered is zero or negative, the alarm indicator (decimal point) is displayed.
- **Function message display area**
  Item labels of departments and PLU/subdepartments/UPC and function text you use, such as %1, (–) and CASH are displayed here. For the details of function texts, please refer to pages 120 and 121. When an amount is to be entered or entered, "AMOUNT" is displayed: When an amount is to be entered, – – – – – – – is displayed in the numeric entry display area with "AMOUNT". When a preset price has been set, the price is displayed in the numeric entry display area with "AMOUNT".
- **Numeric entry display area**
  Numbers entered using numeric keys are displayed here.

Date and time display

Date and time appear on the display in the OP X/Z, REG, or MGR mode. In the REG or MGR mode, press the [#] key to display the date and time.

Error messages

When an error occurs, the corresponding error message is displayed in the function message display area. For the details of error messages, please refer to the "Error message table" on page 184.

2 Customer display (Pop-up type)

$ ———— (• : Appears right below the seventh place when the item amount is displayed at scale entry.)

PRIOR TO ENTRIES

1 Preparations for entries

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

■ Receipt and journal paper rolls

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

■ Receipt ON/OFF function

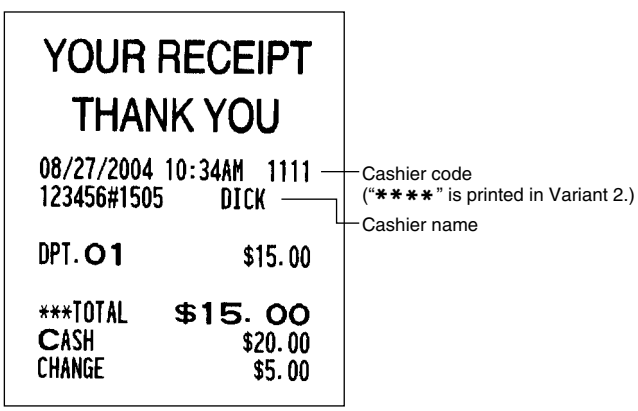
You can disable receipt printing in the REG mode to save paper using the receipt function. To disable receipt printing, press the [RCPT] key in the OP X/Z position. This key toggles the receipt printing status ON and OFF.
To check the receipt printing status, turn the mode switch to the OP X/Z position or press the [CL] key in the REG mode. When the function is in the OFF status, the receipt off indicator “_” illuminates.

Note *Your register will print reports regardless of the receipt state. This means that the receipt roll must be installed even when the receipt state is “OFF” when taking reports.*

■ Cashier assignment

Prior to any item entries, cashiers must enter their cashier code into the register. The code entry may not be necessary when the same cashier code is used in the next transaction.
Cashier codes are available in two variants: Variant 1, in which they are displayed (“0000” to “9999”), and Variant 2, in which they are not displayed (always “✱✱✱✱”).
When the cashier code is assigned by the following procedure, the register prints the four-digit cashier code (variant 2: “✱✱✱✱”) and the cashier name both on the receipt and journal for every transaction.

Note *The operation entries depend on how the register has been programmed. To determine which selections should be considered, please consult your local dealer.*

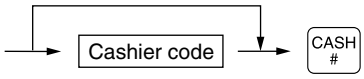


Procedure

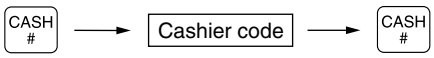
■ Sign-on

To display the current cashier code

Variant 1 :
(Code is displayed.)



Variant 2 :
(Code is not displayed.)



■ Sign-off

Variant 1 / Variant 2 :

Note

- *If you want to enter a cashier code before every transaction, please consult your dealer.*
- *For the display type selection of the cashier code, "Variant 1" has been preset. For the selection of the "Variant 2", consult your dealer.*
- *The cashier can be changed during a transaction. Please consult our dealer.*

2 Power saving mode

The register will enter into the power saving mode when no entries are performed based on the pre-programmed time limit (by default, 30 minutes).
When the register goes to the power save mode, all display lights will turn off. This will be indicated by a decimal point at the left most position of the lower line. The register will return to normal operation mode when any key is pressed or a mode is changed with the mode key. Please note when the register is recovered by any key entry and the initial key entry is ignored. After the recovery, you may start the key entries from the beginning.

3 Error warning

In the following examples, your register will go into an error state accompanied with a warning beep and a corresponding error message. Clear the error state by pressing the CL key and take proper action.
Please refer to the error message table on page 184.

- When you enter an over 32-digit number (entry limit overflow): Cancel the entry and re-enter a valid number.
- When you make an error in key operation: Clear the error and continue entries.
- When you make an entry beyond a programmed amount entry limit: Check to see if the entered amount is correct. If it is correct, it be possible to make the entry in the MGR mode. Contact your manager.
- When an including-tax subtotal exceeds eight digits: Clear the subtotal by pressing the CL key and press the CA/AT, CA2, CHK, CHK2, or CH thru CH5 key to finalize the transaction.

ENTRIES

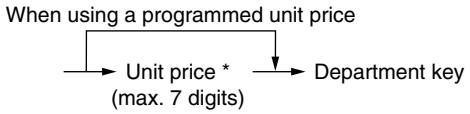
1 Item entries

■ Single item entries

Procedure

Department entries (direct department entries)

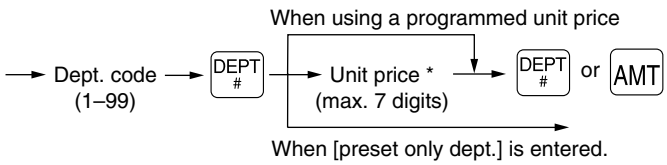
Enter a unit price and press a department key. If you use a programmed unit price, press a department key only.



*Less than the programmed upper limit amounts

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

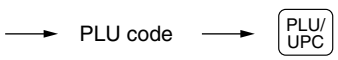
Department entries (indirect department entries)



*Less than the programmed upper limit amounts

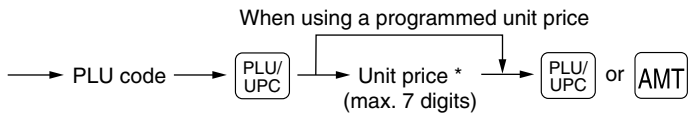
PLU entries (indirect PLU entries)

Enter a PLU code and press the PLU/UPC key.



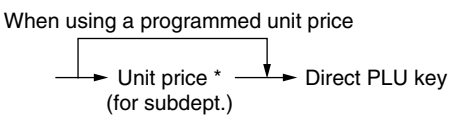
Note *When those PLU's for which the unit price has been programmed as zero (0) are entered, only the sales quantity is added.*

Subdepartment (open PLU, open and preset PLU) entries

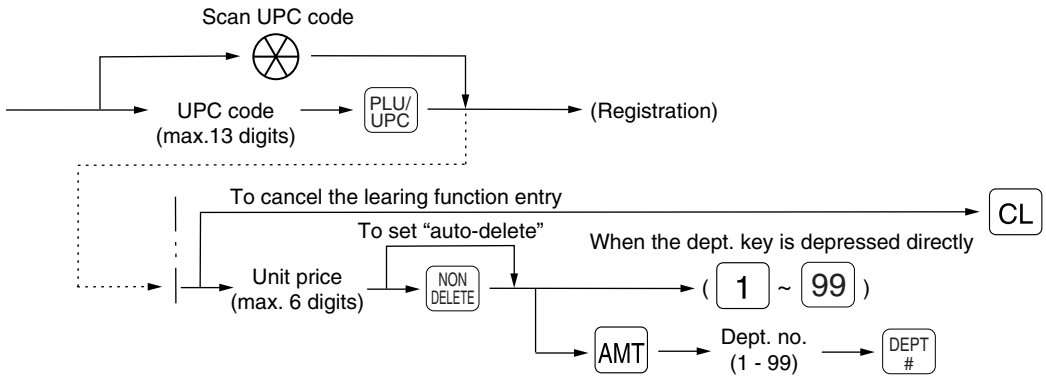


*Less than the programmed upper limit amounts

PLU entries (direct PLU entries)



UPC entries



Example

Key operation

1200 3
5
8 DEPT #
5 DEPT # 680 DEPT #
2 PLU/UPC
11 PLU/UPC 1200 PLU/UPC
8
5012345678900 PLU/UPC
CA/AT

Print

DPT.03	$12.00
DPT.05	$5.00
DPT.08	$2.00
DPT.05	$6.80
PLU00002	$1.50
PLU00011	$12.00
PLU00008	$3.50
5012345678900#	
APPLE	$2.50
CASH	$45.30

■ Repeat entries

You can use this function for entering a sale of two or more same items.
You can use the REPEAT key to repeat entry instead of department, AMT, direct PLU or PLU/UPC key.

Example

Key operation

Repeated department entry (direct)	200 8 8 8
Repeated department entry (indirect)	5 DEPT # 680 DEPT # DEPT #
Repeated PLU entry (indirect)	10 PLU/UPC PLU/UPC PLU/UPC
Repeated PLU entry (direct)	51 51
Repeated subdepartment entry	60 PLU/UPC 500 PLU/UPC PLU/UPC
Repeated UPC entry	5012345678900 PLU/UPC PLU/UPC
Repeated department entry (direct) using the repeat key	600 2 REPEAT REPEAT CA/AT

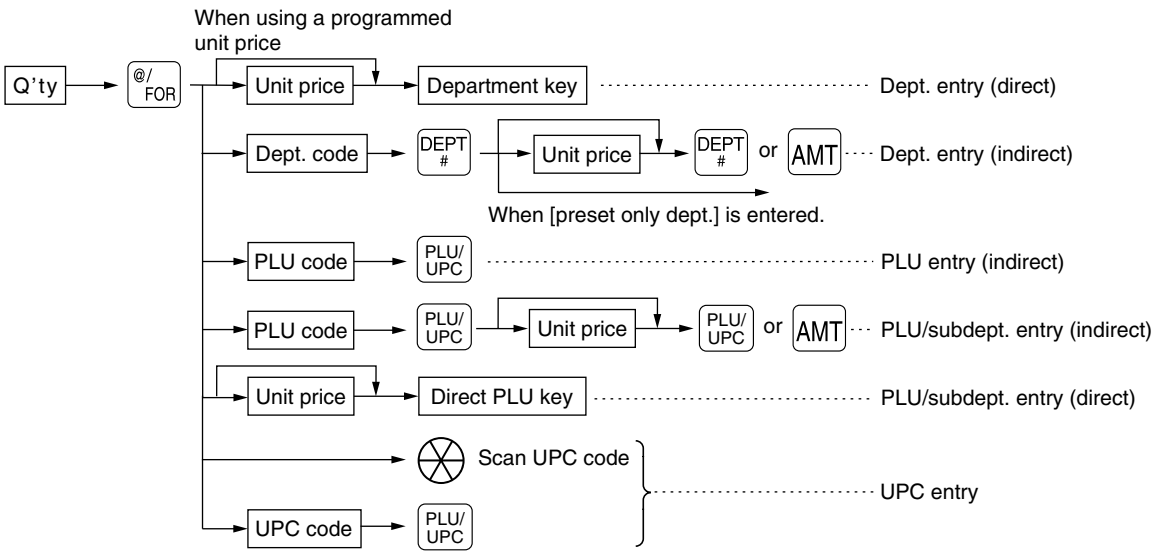
Print

DPT.08	$2.00
DPT.08	$2.00
DPT.08	$2.00
DPT.05	$6.80
DPT.05	$6.80
PLU00010	$7.15
PLU00010	$7.15
PLU00010	$7.15
PLU00051	$2.85
PLU00051	$2.85
PLU00060	$5.00
PLU00060	$5.00
5012345678900#	
APPLE	$2.50
5012345678900#	
APPLE	$2.50
DPT.02	$6.00
DPT.02	$6.00
DPT.02	$6.00
CASH	$79.75

■ Multiplication entries

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

Procedure



- After scanning a UPC code or pressing the [PLU/UPC] key, when the item does not exist in the file, the display will show "NO RECORD". Enter the unit price using the [AMT] key and department no. with the [DEPT #] key.
- Q'ty: Up to four digits integer + three digits decimal
- Unit price: Less than a programmed upper limit
- Q'ty × unit price: Up to seven digits

Example

	Key operation
Department entry (direct)	7 [•] 500 [@/FOR]
	165 [8]
Department entry (indirect)	2 [@/FOR]
	5 [DEPT #]
	250 [DEPT #]
PLU entry (indirect)	15 [@/FOR]
	13 [PLU/UPC]
PLU entry (direct)	8 [•] 250 [@/FOR]
	[58]
Subdepartment entry	3 [@/FOR]
	60 [PLU/UPC]
	100 [PLU/UPC]
UPC entry	5 [@/FOR]
	5012345678900 [PLU/UPC]
	[CA/AT]

Print

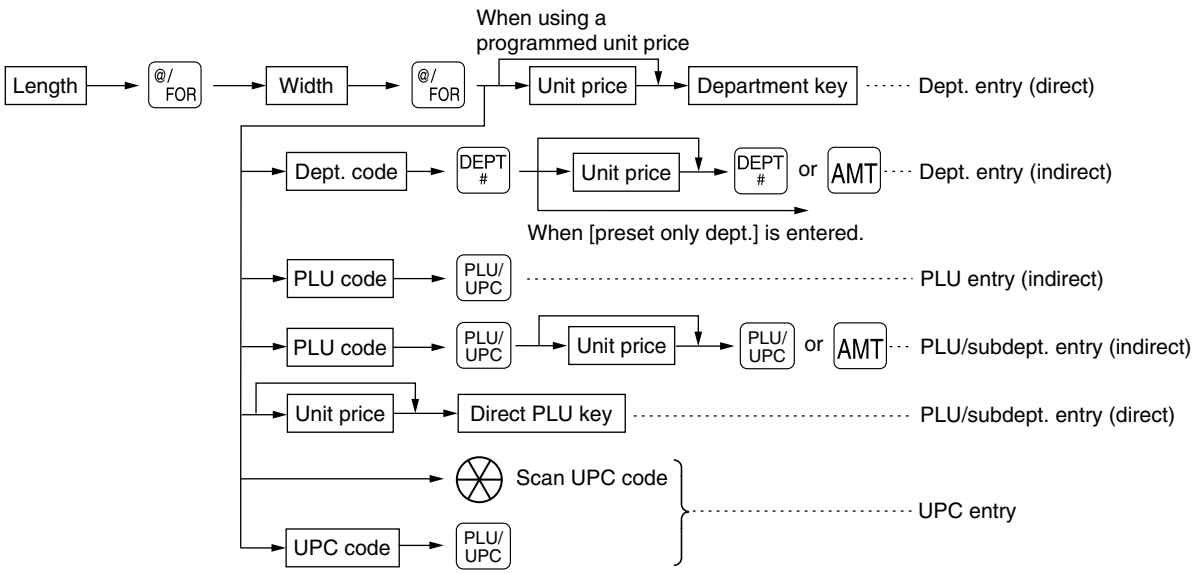
```
                7.500 @ $1.65
DPT.08                $12.38
                2 @ $2.50
DPT.05                 $5.00
               15 @ $2.10
PLU00013              $31.50
              8.250 @ $3.00
PLU00058              $24.75
               3 @ $1.00
PLU00060               $3.00
               5 @ $2.50
5012345678900#
APPLE                 $12.50

CASH                $89.13
```

Note *You must use a decimal point ([•]) key when entering quantities that are fractional.*

■ Successive multiplication entries

This function may be desired when you enter a sale of items sold by area (square feet).

Procedure



- After scanning a UPC code or pressing the [PLU/UPC] key, when the item does not exist in the file, the display will show "NO RECORD". Enter the unit price using the [AMT] key and department no. with the [DEPT #] key.
- Length or width: Up to seven digits (4-digit integer + 3-digit decimal)
- Unit price: Less than a programmed upper limit
- Length × Width × Unit price: Up to seven digits

Note

- *For actual use of this function, please consult your dealer.*
- *You must use a decimal point ([•]) key when entering quantities that are fractional.*

Example

Key operation

Department entry	3 [@/FOR]
	4 [@/FOR]
	400 [5]
PLU entry	1 [•] 500 [@/FOR]
	2 [•] 500 [@/FOR]
	8 [PLU/UPC]
Subdepartment entry	1 [•] 750 [@/FOR]
	1 [•] 750 [@/FOR]
	6 [PLU/UPC]
	600 [PLU/UPC]
UPC entry	4 [@/FOR]
	5 [@/FOR]
	5099887654302 [PLU/UPC]
	[CA/AT]

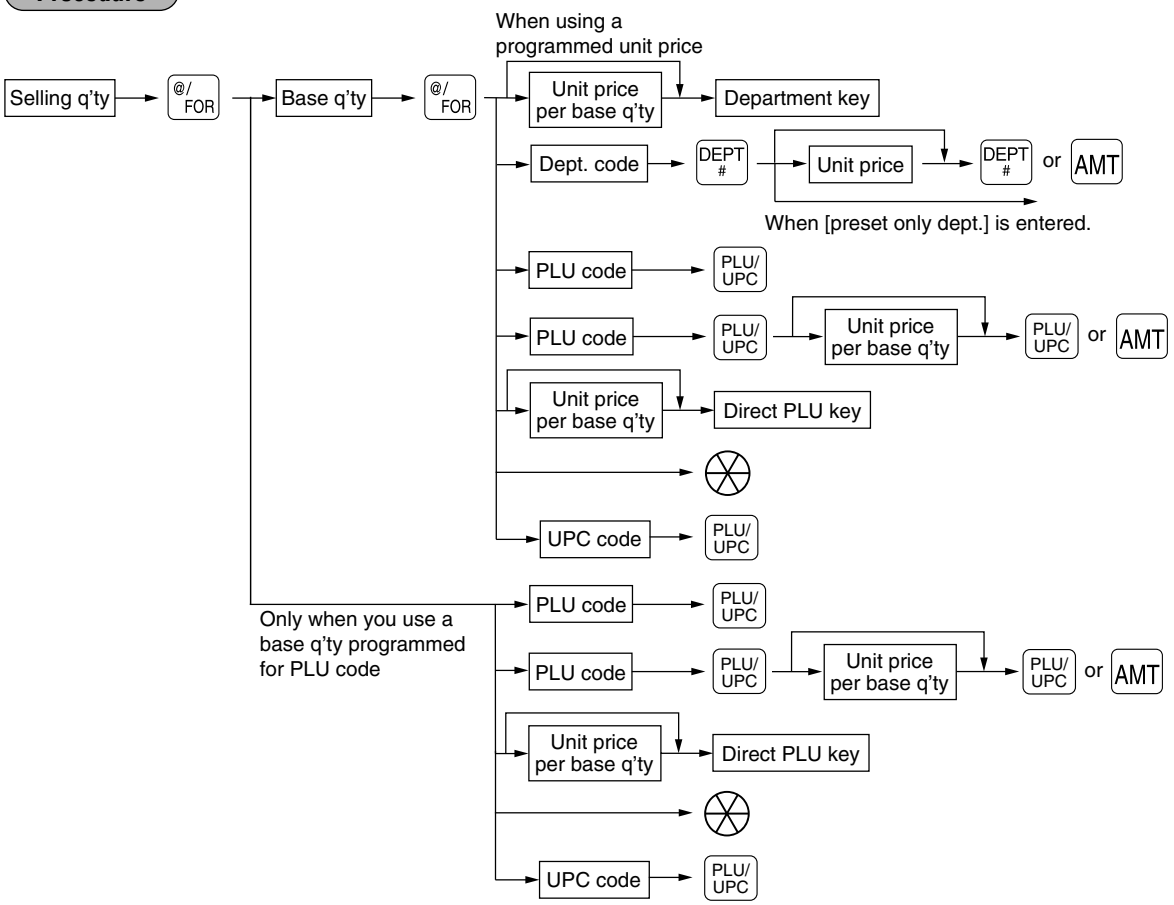
Print

```
                3 @ 4 @ $4.00
DPT.05                  $48.00
  1.500 @ 2.500 @ $3.00
PLU00008                $11.25
  1.750 @ 1.750 @ $6.00
PLU00006                $18.38
                4 @ 5 @ $5.00
5099887654302#
CLOTH                  $100.00

CASH                   $177.63
```

■ Split-pricing entries

You may use this function when your customer wants to purchase items normally sold in bulk.

Procedure



- After scanning a UPC code or pressing the [PLU/UPC] key, when the item does not exist in the file, the display will show "NO RECORD". Enter the unit price using the [AMT] key and department no. with the [DEPT #] key.
- Selling quantity: Up to four digits integer + three digits decimal
- Base quantity: Up to two digits (integer)

Example

	Key operation	Print
Department entry	7 [@/FOR] 10 [@/FOR] 600 [7]	
PLU entry	8 [@/FOR] 5 [@/FOR] 35 [PLU/UPC]	
UPC entry	5 [@/FOR] 6 [@/FOR] 5045678912304 [PLU/UPC]	
	[CA/AT]	

```
          7 @ 10/ $6.00
DPT.07              $4.20
          8 @ 5/ $3.00
PLU00035            $4.80
          5 @ 6/ $2.50
5045678912304#
CUP-A               $2.09

CASH              $11.09
```

Note *You must use the decimal point ([•]) key when entering selling quantities that are fractional.*

■ Single item cash sale (SICS)/single item finalize (SIF) entries

SICS entries

- This function is useful when a sale is for only one item and is for cash; such as a pack of cigarettes. This function is applicable only to those departments that have been set for SICS or to their associated PLUs, subdepartments or UPCs.
- The transaction is finalized and the drawer opens as soon as you press the department key, [AMT] key, [PLU/UPC] key, the direct PLU key or scanning a UPC code.

Example

Key operation	Print
250 For finishing the transaction → [9]	DPT. 09 $2.50 CASH $2.50

Note *If an entry to a department, PLU/subdepartment or UPC set for SICS follows entries to departments, PLUs/subdepartments or UPC not set for SICS, it does not finalize and results in a normal sale.*

SIF entries

- If an entry to a department, PLU/subdepartment or UPC set for SIF follows entries to departments, PLUs/subdepartments or UPC not set for SIF, the transaction is finalized immediately as a cash sale.
- Like the SICS function, this function is available for single-item cash settlement.

Example

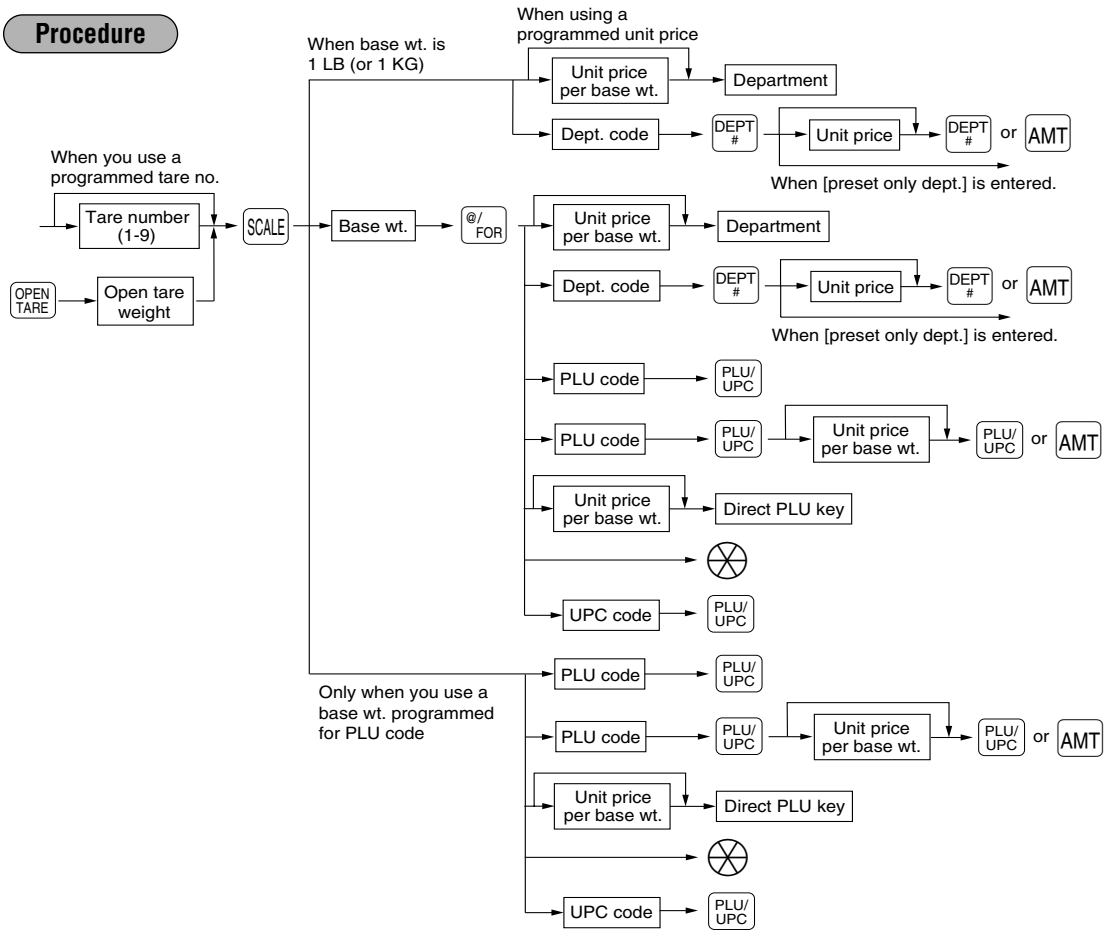
Key operation	Print
1745 [8] 1500 For finishing the transaction → [9]	DPT. 08 $17.45 DPT. 09 $15.00 CASH $32.45

■ Scale entries

For making entries for weighed items, a scale must be connected where by the weight is automatically read from the scale. To make refund entries, the weight is entered manually while the scale platter is empty and reads zero.

i) Auto scale entries

Procedure



- Open tare weight: Up to 5 digits (integer + decimal)
- Net weight: Up to 5 digits (integer + decimal)
- Base weight: Up to 2 digits (integer)

Note

- *The register can be programmed with up to nine tare tables and allows different tares to be assigned to them.*
- *When the SCALE key is pressed, the weight is automatically read from the connected scale (option) and the net weight appears in the register display.*
- *When the item is programmed for "Scale compulsory", it is not necessary to press the SCALE key.*

Example

Key operation

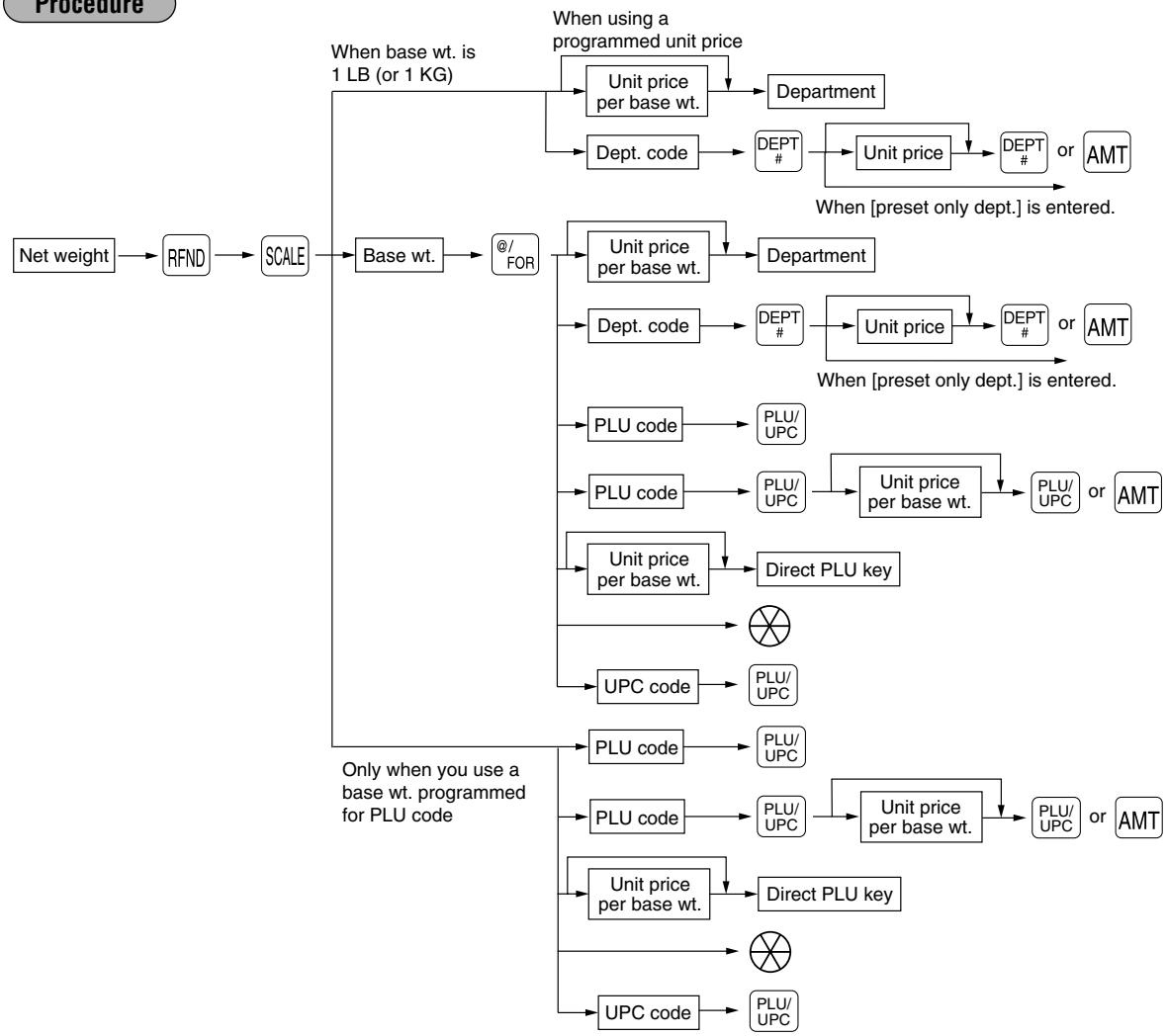
SCALE 200 1
SCALE 1 PLU/UPC
CA/AT

Print

```
  32.45 lb
       @ $2.00/lb
DPT.01          $64.90
  32.45 lb
     @ 15/ $7.15/lb
PLU00001        $15.47

CASH          $80.37
```

ii) Manual scale entries of refunded items

Procedure



- Net weight: Up to 5 digits (integer + decimal) which is from the customer's receipt.
- Base weight: Up to 2 digits (integer)

Example

Key operation	Print
32 [•] 45 [RFND] [SCALE] 200 [1] 32 [•] 45 [RFND] [SCALE] 1 [PLU/UPC] [CA/AT]	MAN WT 32.45 lb @ $2.00/lb DPT.01 R-64.90 "RETURNED FOR CREDIT" MAN WT 32.45 lb @ 15/ $7.15/lb PLU00001 R-15.47 "RETURNED FOR CREDIT" CHANGE $80.37

■ PLU level shift (for direct PLU)

This shift can double or triple the number of PLUs on your register without adding additional direct PLU keys. You can use direct PLUs in three levels by utilizing shift keys [L1], [L2], and [L3]. These keys have the following functions.

[L1]: Shifts the PLU level from level 2 or 3 to level 1 (ordinary level).
[L2]: Shifts the PLU level from level 1 or 3 to level 2.
[L3]: Shifts the PLU level from level 1 or 2 to level 3.

You must program your machine in the PGM2 mode to select one of the two PLU level shift modes — automatic return mode* and lock shift mode** — and decide whether to allow PLU level shift in both the REG and MGR modes or in the MGR mode alone.

* The automatic return mode automatically shifts the PLU level back to level 1 after a direct PLU key is pressed. You can select whether the PLU level should return each time you enter one item or each time you finalize one transaction.

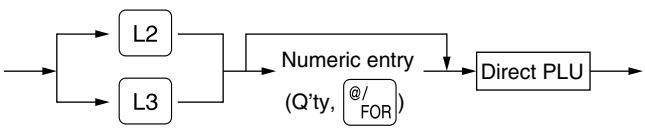
** The lock shift mode holds the current PLU level until a PLU level shift key is pressed.

Automatic return mode

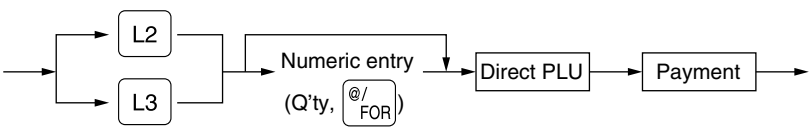
If you shift the PLU level while in the automatic return mode, press the desired PLU level shift key before numeric entries.

Procedure

• each item



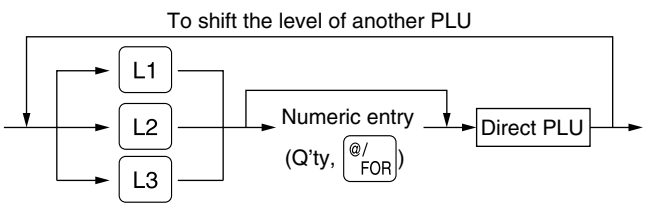
• each transaction



Lock shift mode

If you shift the PLU level while in the lock shift mode, press the desired PLU level shift key before numeric entries.

Procedure



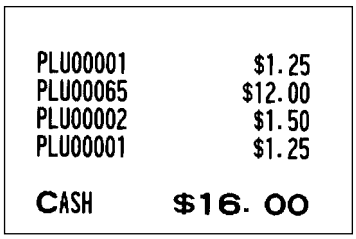
Note *If you select the automatic return mode, it is not necessary to use the [L1] key on the keyboard, but if you select the lock shift mode, it is necessary to use the key.*

Example Direct PLU1: PLU code 1 (PLU level 1), PLU code 65 (PLU level 2)
Direct PLU2: PLU code 2 (PLU level 1), PLU code 66 (PLU level 2)

• When your machine has been programmed for the automatic return mode:

Key operation

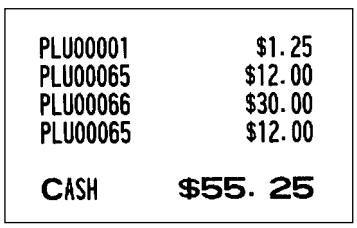
Print



• When your machine has been programmed for the lock shift mode:

Key operation

Print



■ PLU/UPC price level shift

Two different price levels can be programmed for each PLU or UPC.
The price levels can be changed for PLU or UPC registrations.
You can shift the PLU/UPC price level (level 1 or 2) by utilizing the price level shift key (PRICE SHIFT).
You must program a price level shift mode (i.e. automatic return mode* or lock shift mode**) and the operating mode to be used for the price level shift (i.e. both REG/MGR modes or MGR mode alone).

* The automatic return mode automatically shifts the PLU/UPC price level back to level 1 after a PLU/UPC shift entry. You can select whether the price level should return each time you enter one item or each time you finalize one transaction.

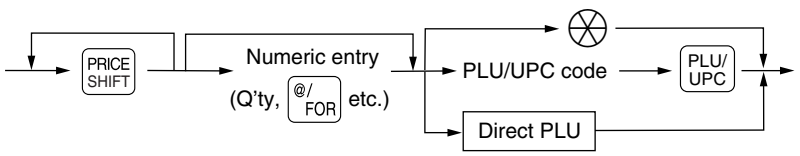
** The lock shift mode holds the current PLU/UPC price level until pressing the price level shift key.

Automatic return mode (for price level)

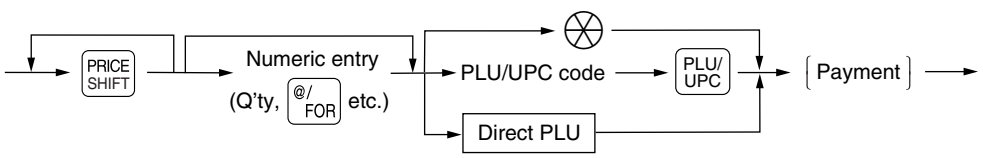
If your register has been programmed for the price level shift in the automatic return mode, press the price level shift key before a numeric entry.

Procedure

(each item)



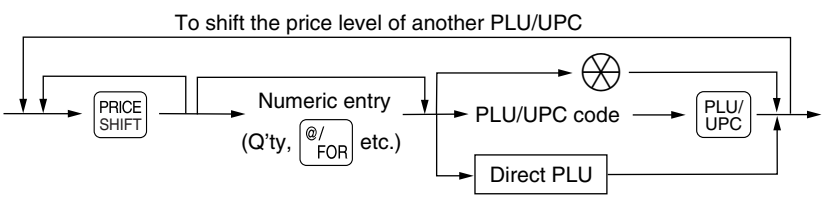
(each transaction)



Lock shift mode (for price level)

If your register has been programmed for the price level shift in the lock shift mode, press the price level shift key before a numeric entry.

Procedure



Note *You can program "printing of the price level text (LEVEL 1/LEVEL 2)". Please refer to "Programming for optional feature selection" described in the "PROGRAMMING" section of this manual.*

Example PLU price level 1: PLU 1 ($1.91), PLU 2 ($0.79)
PLU price level 2: PLU 1 ($2.00), PLU 2 ($0.99)

- When your register has been programmed for the automatic return mode (by one item):

Key operation	Print
1 [PLU/UPC] [PRICE SHIFT] 1 [PLU/UPC] 2 [PLU/UPC] [CA/AT]	LEVEL 1 PLU00001 $1.91 LEVEL 2 PLU00001 $2.00 LEVEL 1 PLU00002 $0.79 CASH $4.70

- When your register has been programmed for the lock shift mode:

Key operation	Print
1 [PLU/UPC] [PRICE SHIFT] 1 [PLU/UPC] 2 [PLU/UPC] [CA/AT]	LEVEL 1 PLU00001 $1.91 LEVEL 2 PLU00001 $2.00 LEVEL 2 PLU00002 $0.99 CASH $4.90

■ Set PLU entries

Operations are the same as normal PLU's.
When a set PLU is entered, an entered or preset amount is printed as the unit price and then those PLUs linked to the set PLU are printed automatically.

Example

Key operation	Print
[20] [CA/AT]	PLU00020 $2.50 PLU00201 PLU00202 CASH $2.50

Note *The unit price of the set PLU (ex. PLU 20) is the registered amount of the set PLU. The tied PLU's memory is updated only by the entered quantity.*

■ Link PLU/UPC entries

The operation is the same as normal PLU's/UPC's. When this PLU/UPC is entered, the linked PLU's amount is included and the linked PLU's label is printed automatically. Only the 1st PLU is affected by the status shift keys ([TAX SHIFT], [TAX2 SHIFT], [TAX3 SHIFT], [TAX4 SHIFT] or [FS SHIFT] key). The percent calculation is in effect for the amount of the 1st ranking PLU.

Example When PLU 21 is linking PLU 25,26,27 as follows

Key operation	Print
21 [PLU/UPC] [CA/AT]	PLU00021 $3.50 PLU00025 $3.00 PLU00026 $2.00 PLU00027 $8.00 CASH $16.50

■ Age verification (Birthday entry)

The age verification function is used for prohibiting the sale of goods (departments, PLUs or UPCs) for certain aged persons based on a registered birthday.
When a department/PLU/UPC for which a figure other than zero (01 to 99) has been programmed as the age limitation is entered, a birthday entry must be completed.

Procedure

→ XXXXXX → [BIRTH]

Birthday (five or six digits)

Note

- *A birthday entry can be performed two or more times at any point during a transaction, however the last entered birthday remains in effect.*
- *You can enter the date as far back as 98 years.*
  [Ex.] When the current year is 2005 : you can enter the year 1907-2005.

Example Oct. 2, 1985 (When dept. 17 is programmed as the age limitation "17".)

Key operation	Print
100285 [BIRTH] 300 [17] [CA/AT]	#10/02/85 DPT. 17 $3.00 CASH $3.00

When the preset option for "Birthday print availability (#2616)" is programmed as "Allow", the birthday date is printed.

■ Mix-and-match entries

This function is convenient for matching several PLU/UPC items and selling them in a lump (e.g. bundle sale, multi-packed sale, etc.). The matching q'ty and adjusted amount are assigned to a mix-and-match table. All items that are programmed into the same table are treated as if they belong to one group.

Example

Selling on a mix-and-match basis the following items in table no. 1 to which the matching q'ty "3" and the adjusted amount "$10.00" are assigned:

- PLU 40 (Unit price: $5.00)
- PLU 41 (Unit price: $3.00)
- PLU 42 (Unit price: $2.50)

Key operation

Treated as $5.00 item → 40
Treated as $3.00 item → 41
Treated as $2.00 item → 42
CA/AT

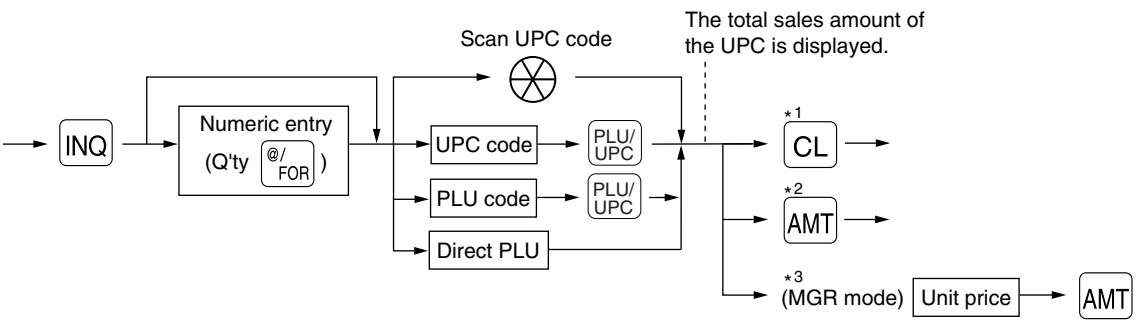
Print

```
PLU00040          $5.00
PLU00041          $3.00
PLU00042          $2.00

CASH             $10.00
```

■ Price inquiry (view) function (for PLU/UPCs)

You can use this function when you want to know the unit price of the PLU/UPC item during transaction in the REG/MGR mode.

Procedure



*1: Press the CL key to cancel the inquiring (view) mode.
*2: Press the AMT key when you want to register the unit price of the PLU/UPC displayed.
*3: You can change the unit price temporarily in the MGR mode. The unit price which is programmed in PGM mode is not changed (Price override entry).

Note *For the repeat entry, use the REPEAT key.*

Example

Key operation

5 PLU/UPC
INQ
Price is displayed. → 5089123456708 PLU/UPC
AMT
CA/AT

Print

```
PLU00005          $2.00
5089123456708#
GRAPE             $5.20

CASH              $7.20
```

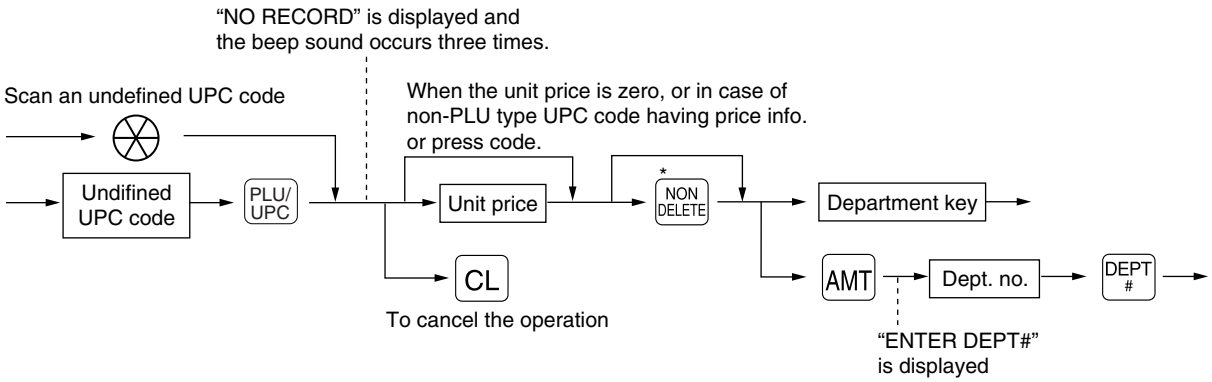
■ UPC learning function

When you enter or scan an undefined code, you are required to enter the unit price "amount" and the associated department. The UPC code, unit price and the department entered are stored in the UPC file and is used for future sales entries.

Note

- *When there is no capacity remaining in the file, the data is not stored in the file.*
- *The text of the entered department is applied to the entered UPC code.*
- *You can use the UPC learning function in the training mode. This may be convenient to practice when installing the scanning system.*

Procedure



* Press the NON DELETE key when you want to exempt the UPC code entered from the non-accessed UPC delete function (deletion occurs by executing #105 in Z1 mode).

Note *For the repeat entry, use the REPEAT key.*

Example

	Key operation	Print
"NO RECORD" is displayed. →	5056789123404 PLU/UPC 750 5 CA/AT	5056789123404# DPT. 05 $7.50 CASH $7. 50

■ Price change function (for UPCs)

You can use this function when you need to change the unit price or associated department of a UPC item in REG/MGR mode.

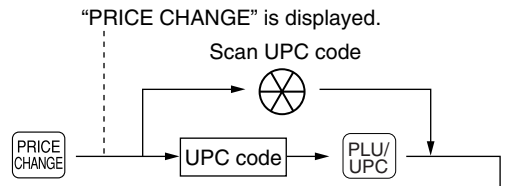
There are two methods for price changes:

1. Price change mode
   You can change the preset price and/or the associated department of a UPC item without entering PGM mode.
2. Changing a price during a transaction
   When a wrong UPC price and/or associated department is found during transaction, you can correct them at the time of the transaction. With the entry of a new price and/or associated department, the preset price and/or associated department is automatically changed to the new price and/or associated department.

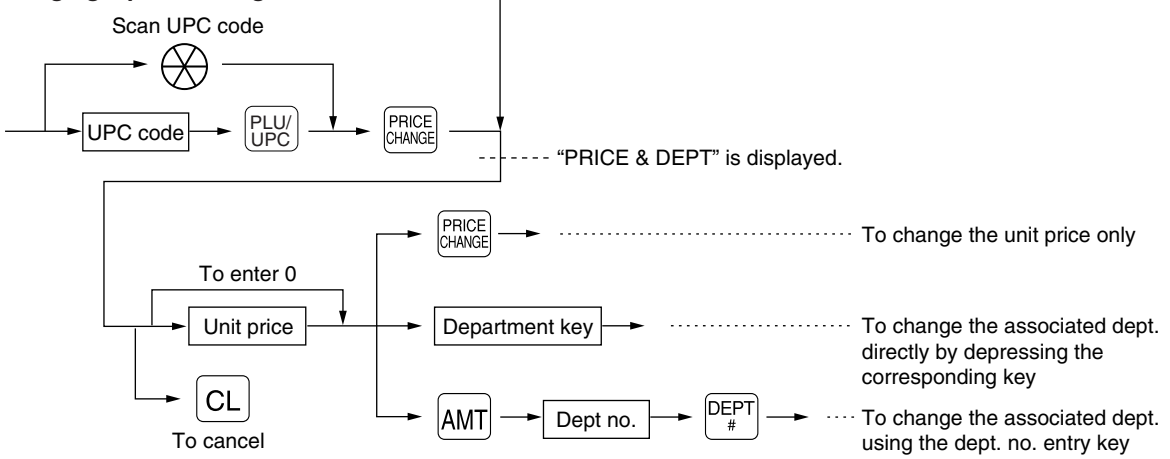
Note *For the Non-PLU type price embedded UPC-A codes and press codes, the prices in the codes have the priority over the preset prices. So, for these codes, a changed price is valid only when the price change is executed.*

Procedure

Price change mode



Changing a price during a transaction



Example

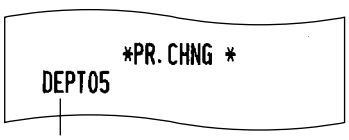
• Price change mode

Key operation	Print
PRICE CHANGE 5087654321106 PLU/UPC 600 PRICE CHANGE	*PR. CHNG * DEPT05 5087654321106# ORANGE $6.00

• Changing a price during a transaction

Key operation	Print
5087654321106 PLU/UPC PRICE CHANGE 600 PRICE CHANGE CA/AT	5087654321106# ORANGE $5.30 5087654321106# ORANGE V-5.30 5087654321106# ORANGE $6.00 CASH $6.00

The journal printer prints the following format in this position.



Associated dept. no.

Note

- *When an undefined code is entered in the price change mode, the register results in an error.*
- *When you press the PRICE CHANGE key during a transaction, the UPC entry is voided upon the 1st depression of the PRICE CHANGE key, then you are allowed to enter a correct price and/or associated department.*
- *When an associated department is changed, the item label for the department will be also changed automatically to the item label of new associated department entered.*
- *For the repeat entry, use the REPEAT key.*

2 Displaying and printing subtotals

Your register provides these five types of subtotals:

■ Merchandise subtotal

Press the [MDSE SBTL] key at any point during a transaction. The net sale subtotal - not including tax - will appear in the display.

■ Taxable subtotal

Taxable 1 subtotal

Press the [TAX SHIFT] and [SBTL] keys in this order at any point during a transaction. The sale subtotal of taxable 1 items will appear in the display.

Taxable 2 subtotal

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

Taxable 3 subtotal

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

Taxable 4 subtotal

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

■ Including-tax subtotal (full subtotal)

Press the [SBTL] key at any point during a transaction. The sale subtotal including tax will appear in the display.

■ Food stamp-eligible subtotal

Press the [FS TEND] key at any point during a transaction. The sale subtotal of items eligible for food stamp payment will appear in the display.

■ Tray subtotal

Press the [TRAY SBTL] key during a transaction in the REG or MGR mode.
The contents of the tray total itemizer which include tax are printed and displayed.

3 Finalization of transaction

■ Cash or Check tendering

Press the [SBTL] key to get an including-tax subtotal, enter the amount tendered by your customer, then press the [CA/AT] or [CA2] key if it is a cash tender or press the [CHK] or [CHK2] key if it is a check tender. When the amount tendered is greater than the amount of the sale, your register will show the change due amount and the text "CHANGE". Otherwise your register will show the text "DUE" and a deficit. Make a correct tender entry.

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

Cash tendering

Key operation	Print
[SBTL] 1000 [CA/AT]	***TOTAL $7.35 CASH $10.00 CHANGE $2.65

Check tendering

Key operation	Print
[SBTL] 1000 [CHK]	***TOTAL $7.35 CHECK1 $10.00 CHANGE $2.65

■ Mixed tendering (check + cash)

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

Key operation	Print
[SBTL] 1000 [CHK] 500 [CA/AT]	***TOTAL $14.56 CHECK1 $10.00 CASH $5.00 CHANGE $0.44

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

Enter items and press the [CA/AT] or [CA2] key if it is a cash sale or press the [CHK] or [CHK2] key if it is a check sale. Your register will display the total sale amount.

Example Selling a $3.00 item (dept. 6) and another $7.15 item (PLU 10) for cash

Key operation	Print
300 [6] 10 [PLU/UPC] [CA/AT]	DPT.06 $3.00 PLU00010 $7.15 CASH $10.15 In the case of check sale CHECK1 $10.15

■ Charge (credit) sale

Enter items and press the corresponding charge keys ([CH] thru [CH5]).

Example Selling a $25.00 item (dept. 6) and a $32.50 item (dept. 7) and accepting the payment by charge account

Key operation	Print
2500 [6] 3250 [7] [CH]	DPT.06 $25.00 DPT.07 $32.50 CHARGE1 $57.50

Amount tendering operations (i.e., change calculations) can be achieved by the [CH] thru [CH5] key when it has been preset in PGM2 job #2320.

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

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

Key operation	Print
[SBTL] 950 [CA/AT] [CH]	***TOTAL $49.50 CASH $9.50 CHARGE1 $40.00

Note *Press the [CHK] or [CHK2] key or the [CH] thru [CH5] keys in place of the [CA/AT] key when your customer makes payment by checks or by charge cards.*

4 Food stamp calculations

■ Food stamp tendering

If your customer makes payment (or tendering) in food stamps, obtain the food stamp-eligible subtotal* by pressing the [FS TEND] key and make a food stamp tender entry before entering a cash or check tender.

Note *The food stamp-eligible subtotal* depends upon how your register is programmed based on the food stamp-eligibility of the automatic tax on a sale of items eligible for food stamp payment, or whether your register is programmed to allow the automatic tax to be paid with food stamps or not or to exempt taxation. The example below presupposes that your register has been programmed to exempt taxation.*

When the amount tendered in food stamps is greater than the food stamp-eligible subtotal:
Your register shows two change due amounts in its display.
The food stamp change due appears at the left of the display in dollars and the cash change at the right in cents.

• When you sell only items eligible for food stamp payment.

Example Your customer purchases a $4.25 item (dept.4, taxable 1, eligible for food stamp payment) and another $4.00 item (PLU 34, taxable 2, eligible for food stamp payment) and tenders $10.00 food stamps for them.

Key operation

425 [4]
34 [PLU/UPC]
To display the food stamp-eligible subtotal → [FS TEND]
1000 [FS TEND]

Display shows:

FS CG	1111
1.00	0.75

Food stamp change — Cash change

Print

DPT.04	T_1 $4.25
PLU00034	T_2 $4.00
***TOTAL	$8.25
FS ST	$8.25
FS TEND	$10.00
FS CG	$1.00 — Food stamp change due
CHANGE	$0.75 — Cash change due

• Mixed sale of an item eligible for food stamps and another item not eligible for food stamps

Example Your customer purchases a $2.48 item (dept. 5, taxable 1, eligible for food stamps) and another $5.42 item (dept. 8, nontaxable, ineligible for food stamps) and pays $5.00 in food stamps and $5.00 in cash.

Key operation

248 [5]
542 [8]
[FS TEND]
500 [FS TEND]
500 [CA/AT]

Display shows:

FS CG	1111
2.00	0.10

Food stamp change — Cash change

Print

DPT.05	T_1 $2.48
DPT.08	$5.42
***TOTAL	$7.90
FS ST	$2.48
FS TEND	$5.00
FS CG	$2.00 — Food stamp change due
CASH	$5.00
CHANGE	$0.10 — Cash change due

When the food stamp tender is smaller than the food stamp-eligible subtotal:

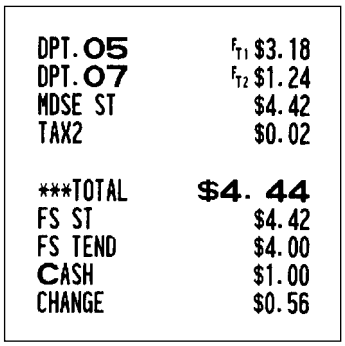
- Accept the remainder in food stamps or in cash or check. If your register is programmed to exempt taxation, additional food stamp tender is not allowed.

Example Your customer buys a $3.18 item (dept. 5, taxable 1, eligible for food stamps) and another $1.24 item (dept.7, taxable 2, eligible for food stamps) and pays $4.00 in food stamps and the remainder - $1.00 in cash.

Key operation

318 [5]
124 [7]
[FS TEND]
400 [FS TEND]
To enter the cash tendering of the remainder → 100 [CA/AT]

Print



■ Food stamp status shift

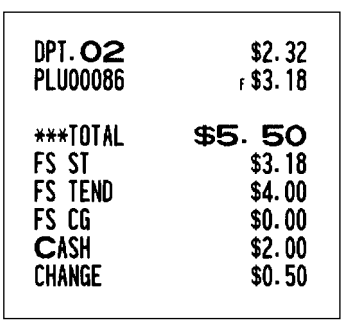
Your machine allows you to shift the programmed food-stamp status of each department, [⊖] thru [⊖4], percent key or the PLU key by pressing the [FS SHIFT] key prior to those keys. After each entry is completed, the programmed food stamp status is resumed.

Example You sell a $2.32 item of dept. 2 (food-stamp eligible) as a food-stamp ineligible item and another $3.18 item of PLU 86 (food-stamp ineligible) as a food-stamp eligible item and accept $4.00 in food stamps and $2.00 in cash.

Key operation

232 [FS SHIFT] [2]
86 [FS SHIFT] [PLU/UPC]
[FS TEND]
400 [FS TEND]
200 [CA/AT]

Print



5 Tax calculations

■ Automatic tax

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

Example Selling five $6.70 items (dept. 1, taxable 1) and one $7.15 item (PLU 85, taxable 2) for cash

Key operation	Print
5 [@/FOR]	5 @ $6.70
670 [1]	DPT.01 T1 $33.50
85 [PLU/UPC]	PLU00085 T2 $7.15
[CA/AT]	MDSE ST $40.65
	TAX1 $2.01
	TAX2 $0.29
	CASH $42.95

■ Manual tax

Your machine allows you to enter tax manually after item entries.

Example Selling an $8.00 item (dept. 7) for cash with 50 cents as tax

Key operation	Print
800 [7]	DPT.07 $8.00
50 [TAX]	M-TAX $0.50
[CA/AT]	CASH $8.50

■ Automatic-tax delete

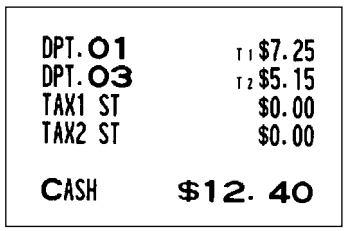
You can delete the automatic tax on the taxable 1, taxable 2, taxable 3 and taxable 4 subtotal of each transaction by pressing the [TAX] key after the subtotal is displayed.

Example Selling a $7.25 item (dept. 1, taxable 1) and another $5.15 item (dept. 3, taxable 2) for cash and entering the sale as a non-taxable one

Key operation

725 [1]
515 [3]
[TAX SHIFT] [SBTL]
[TAX]
[TAX2 SHIFT] [SBTL]
[TAX]
[CA/AT]

Print



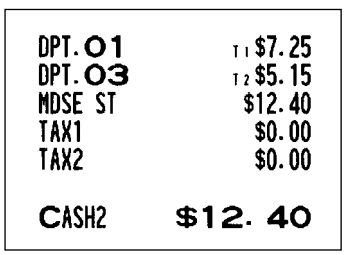
If any of the media keys (i.e. cash, check or charge 1 thru charge 5) are programmed as tax delete in PGM2 mode, the tax can be deleted without using the procedures above. In this case, depressing a corresponding media key alone will always cause the programmed tax to be deleted.

Example When the [CA2] key is programmed as tax delete for the same case with the above example

Key operation

725 [1]
515 [3]
[CA2]

Print



■ Tax status shift

Your machine allows you to shift the programmed tax status of each department, ⊖ thru ⊖4, percent key or the PLU key by pressing the TAX SHIFT, TAX2 SHIFT, TAX3 SHIFT and/or TAX4 SHIFT keys before those keys. After each entry is completed, the programmed tax status of each key is resumed.

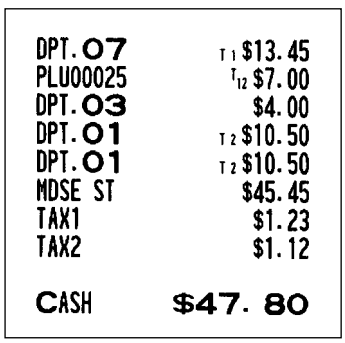
Example Selling the following items for cash with their programmed tax status reversed

- One $13.45 item of dept. 7 (non-taxable) as a taxable 1 item
- One $7.00 item of PLU 25 (non-taxable) as a taxable 1 and 2 item
- One $4.00 item of dept. 3 (taxable 2) as a non-taxable item
- Two $10.50 items of dept. 1 (taxable 1) as taxable 2 items

Key operation

1345 TAX SHIFT 7
25 TAX SHIFT TAX2 SHIFT PLU/UPC
400 TAX2 SHIFT 3
1050 TAX SHIFT TAX2 SHIFT 1
1
CA/AT

Print



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

In case of; Tax 1: PST, Tax 2: PST, Tax 3: PST, Tax 4: GST

Taxable 1 and 2 item	prohibited
Taxable 1 and 3 item	prohibited
Taxable 2 and 3 item	prohibited
Taxable 1 and 4 item	allowed
Taxable 2 and 4 item	allowed
Taxable 3 and 4 item	allowed

In case of; Tax 1: PST, Tax 2: PST, Tax 3: GST, Tax 4: GST

Taxable 1 and 2 item	prohibited
Taxable 1 and 3 item	allowed
Taxable 2 and 3 item	allowed
Taxable 1 and 4 item	allowed
Taxable 2 and 4 item	allowed
Taxable 3 and 4 item	prohibited

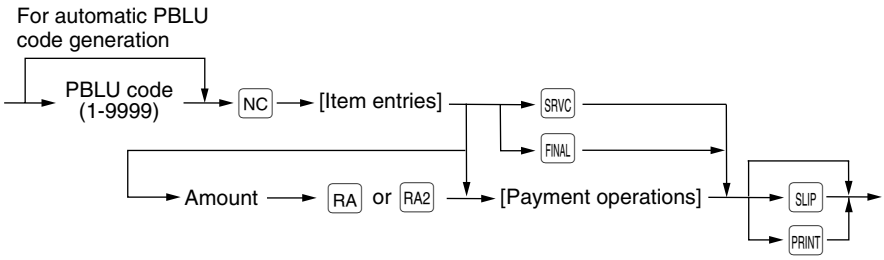
6 Guest Check (PBLU)

This feature is used to store and recall previous or credit balances of an open charge account when a previous balance lookup (PBLU) code is entered. The PBLU code can be 1 to 9999.

■ New charge accounts

For a new customer, open a new charge account by assigning a PBLU code.

Procedure



Note

- *The PBLU code refers to a code that will be used whenever the guest check must be accessed for re-ordering or final payment.*
- *Your register can be programmed to generate PBLU codes in a sequential fashion. If your register has not been programmed to do so, each PBLU code can be entered manually.*
- *When the SRVC key is pressed, the tax is not calculated.*
- *You can temporarily finalize a guest check by pressing the FINAL key. This print out of the guest check will show the current balance, including tax. The guest check, however, is still "open". This means you can still make additional orders to it.*

Example

Key operation

111 NC
3500 2
2700 3
FINAL

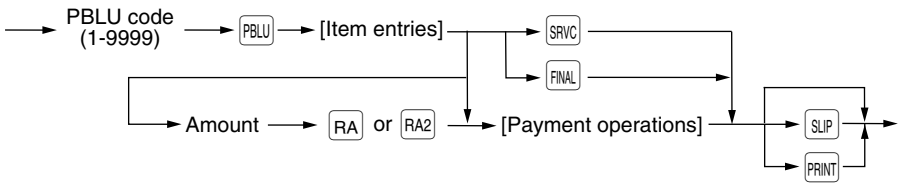
Print

```
                #0111
***PBAL        $0.00
DPT.02      T1 $35.00
DPT.03         $27.00
BAL FWD        $62.00
MDSE ST        $62.00
TAX1            $2.10

***TOTAL      $64.10
```

■ Additional item entries

For making additional guest check entries, enter the PBLU code first for automatic PB lookup.

Procedure



Example

Key operation

111 PBLU
1400 5
1600 6
FINAL

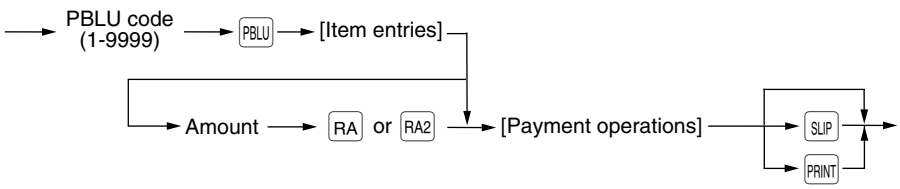
Print

```
                #0111
***PBAL        $64.10
DPT.05         $14.00
DPT.06         $16.00
BAL FWD        $30.00

***TOTAL      $94.10
```

■ Settlement

Use the following procedure:

Procedure



Example

Key operation

111 PBLU
9410 RA
8000 CHK
1410 CA/AT

Print

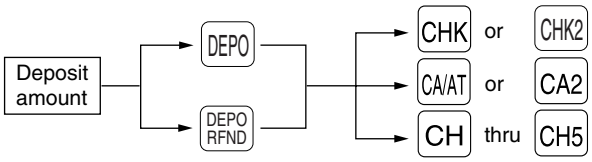
```
                #0111
***PBAL        $94.10
BAL FWD         $0.00

***TOTAL      $94.10
***RA          $94.10
CHECK1         $80.00
CASH           $14.10
CHANGE          $0.00
***TOTAL       $0.00
```

■ Deposit entries

Deposit refers to a payment on a charge account. It can be received in cash, check or by charge. You can make the deposit entry only while in a guest check transaction. It cannot be done during handling of a tendered amount.

A received deposit can be refunded by pressing the DEPO RFND key. You cannot attempt to refund an amount larger than the deposit balance.

Procedure



Example To record a $50.00 deposit in cash made by a customer with PBLU code 111

Key operation

111 PBLU
5000 DEPO
CA2
SRVC

Print

```
                #0111
***PBAL         $0.00
CASH2
DEPOSIT        $50.00
BAL FWD         $0.00
SERVICE        -50.00
```

Example To refund a $50.00 deposit made by a customer with PBLU code 111

Key operation

111 PBLU
5000 DEPO RFND
CA2
SRVC

Print

```
                #0111
***PBAL        -50.00
CASH2
DPST RF        -50.00
BAL FWD         $0.00
SERVICE         $0.00
```

7 Auxiliary entries

■ Percent calculations (premium or discount)

- Your register provides the percent calculation for the merchandise subtotal and item entries. You need to specify in advance whether the register should perform the percent calculation based on the merchandise subtotal or each item entered.
- Percentage: 0.01 to 99.99%

Percent calculation for the merchandise subtotal

Example Selling four $1.40 items of dept. 5 and two $2.25 items of dept. 7; all these items are sold for cash at a premium of 10%
(This example presumes that a premium of 10% has been programmed for the [%] key.)

Key operation	Print
4 [@/FOR]	4 @ $1.40
140 [5]	DPT.05 $5.60
225 [7]	DPT.07 $2.25
[7]	DPT.07 $2.25
[MDSE SBTL]	MDSE ST $10.10
[%]	10.00%
[CA/AT]	%1 $1.01
	CASH $11.11

Percent calculation for item entries

Example Selling for cash an $8.00 item of dept. 6 at a discount of 15% and another $5.00 item of PLU 90 at a discount of 7.5%
(This example presumes that a discount of 15% has been programmed for the [%2] key.)

Key operation	Print
800 [6]	DPT.06 $8.00
[%2]	-15.00%
90 [PLU/UPC]	%2 -1.20
7 [•] 5 [%2]	PLU00090 $5.00
[CA/AT]	-7.5%
	%2 -0.38
	CASH $11.42

■ Discount entries

For discount or coupon tenderings, you may use the ⊖ thru ⊖4 key.
If the discount or tendered coupon is the one applicable to sales, use the vendor coupon or if it is applicable to each department key, use the store coupon.

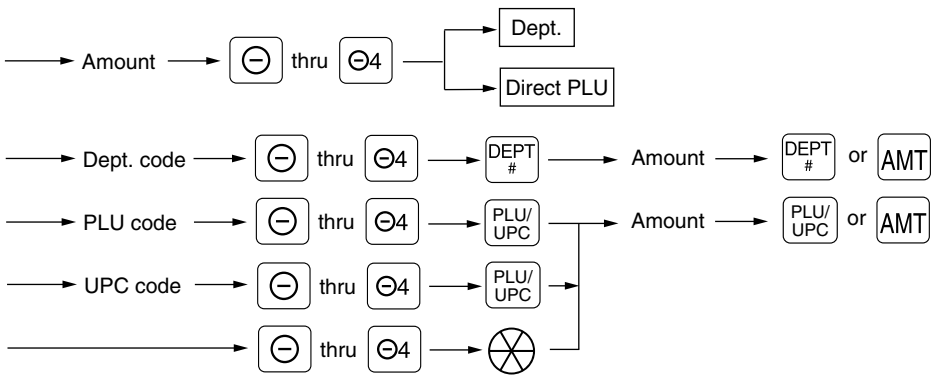
Discount for the merchandise subtotal

Example Selling a $5.75 item of dept. 6 and another $7.50 item of PLU 80 for cash after subtracting the discount amount $1.00 from the total sale amount
(This example presumes that the vendor coupon has been programmed for the ⊖2 key.)

Key operation	Print
575 [6] 80 [PLU/UPC] 100 [⊖2] [CA/AT]	DPT.06 $5.75 PLU00080 $7.50 (−) 2 -1.00 CASH $12.25

Discount for item entries

Procedure



Example Selling a $6.75 item of dept. 7 for cash after subtracting the coupon amount 75¢
(This example presumes that the store coupon has been programmed for the ⊖ key.)

Key operation	Print
675 [7] * { 75 [⊖] [7] } [CA/AT]	DPT.07 $6.75 (−) 1 DPT.07 -0.75 CASH $6.00

Note * *The ⊖ is entered as a modifier for the department which will be netted by the coupon amount. Such item netting coupon entries may generally be entered at any point within a transaction. Two lines are printed for each entry: The first is the label programmed for the ⊖ function and the second is related department and ⊖ amount.*

■ Refund entries

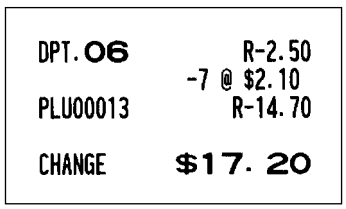
If a refund item is the one entered into a department, enter the amount of the refund, then press the [RFND] key and the corresponding department key in this order; and if an item entered into a PLU (or UPC) is returned, enter the corresponding PLU (or UPC) code, then press the [RFND] and [PLU/UPC] keys, or press the [RFND] and direct PLU keys without entry of PLU code, in this order.

Example Receiving the following items returned:
One $2.50 item of dept.6 and seven $2.10 items of PLU 13

Key operation

250 [RFND] [6]
7 [@/FOR]
13 [RFND] [PLU/UPC]
[CA/AT]

Print



■ Refund sales mode

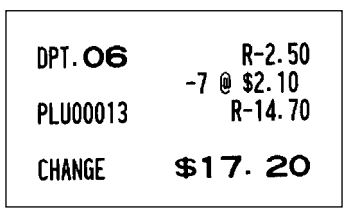
This function is used for those item return entries relating to departments, PLUs/subdepartments and UPCs. Pressing the [RFND SALE] key at the beginning of a transaction causes the register to enter the REFUND SALES mode. All of the REFUND SALES mode entries are automatically handled as refund entries. This mode cannot be finalized by check payment entry.

Example Receiving the following items returned:
One $2.50 item of dept.6 and seven $2.10 items of PLU 13

Key operation

[RFND SALE]
250 [6]
7 [@/FOR]
13 [PLU/UPC]
[CA/AT]

Print



■ Printing of non-add code numbers

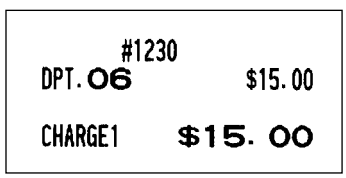
Enter a non-add code number such as a customer's reference number within a maximum of 16 digits and press the [#] key at any point during the entry of a sale. Your register will print it at the time of entry.

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

Key operation

1230 [#]
1500 [6]
[CH]

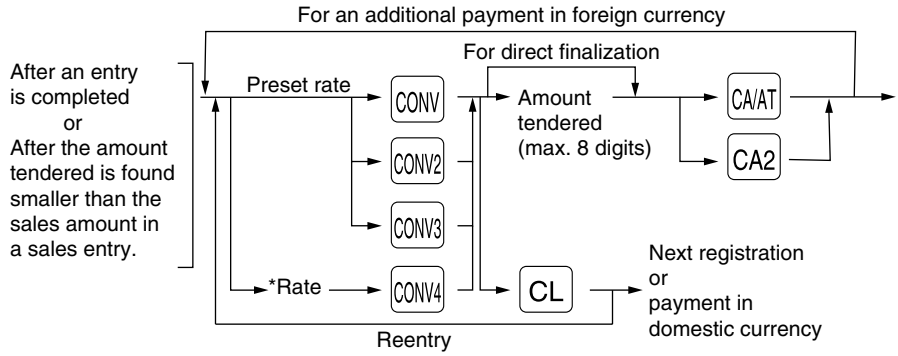
Print



■ Currency conversion

Your register allows payment entries of foreign currency. Pressing the CONV thru CONV4 key creates a subtotal in foreign currency. Cash payment is the only media that can be handled after currency conversion.

Procedure



*Rate: 0.000000 to 999.999999

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

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

Preset rate (1.325) - CONV 1

Key operation

Currency conversion →
2300 6
4650 7
CONV

Amount tendered in foreign currency →
10000 CA/AT

Print

```
DPT.06          $23.00
DPT.07          $46.50

***TOTAL        $69.50   ← Domestic currency
CONV 1           1.3250  ← Conversion rate
                92.09    ← Foreign currency
CASH           100.00    ← Foreign currency
CHANGE           $5.96   ← Domestic currency
```

Manual rate - CONV 4 (The CONV4 key can be used only for the manual entry.)

Key operation

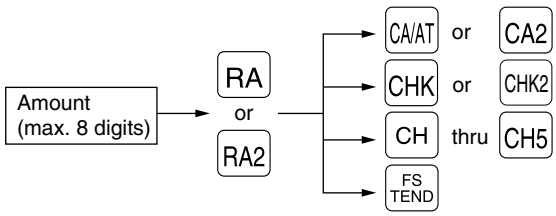
2300 6
4650 7
1 • 275 CONV4
10000 CA/AT

Print

```
DPT.06          $23.00
DPT.07          $46.50

***TOTAL        $69.50
CONV 4           1.275   ← Conversion rate
                88.62
CASH           100.00
CHANGE           $8.92
```

■ Received on account entries

Procedure

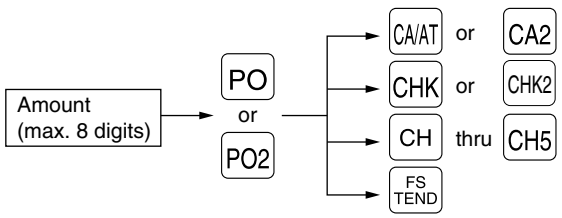


Example A customer whose reference number is 12345 tenders $48.00 by check for received on account.

Key operation	Print
12345 #	#12345
4800 RA	CHECK1
CHK	***RA $48.00

■ Paid out entries

Procedure



Example You pay $30.00 by check to a vendor whose code number is 6789.

Key operation	Print
6789 #	#6789
3000 PO	CHECK1
CHK	***PO $30.00

■ No sale (exchange)

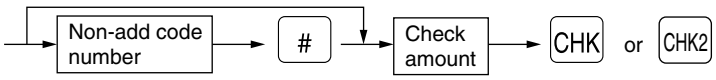
Simply press the NS key without any entry. The drawer will open and the printer will print “NO SALE” on both the journal and the receipt. If your machine is preset to print a non-add code number before pressing the NS key, a no sale entry is achieved with a non-add code number printed.

```
#45678
NO SALE
```

■ Cashing a Check

Enter the check amount, then press the CHK or CHK2 key.

Procedure



Example Cashing a check of a $30.00 amount

Key operation	Print
6789 # 3000 CHK	#6789 CA/CHK $30.00

■ Bottle return

This function is used to handle the payment (paid out) for returned empty bottles or cans.

Example You pay for ten 15¢ returned empty bottles. (This example presupposes that dept. 11 has been programmed as bottle return department.)

Key operation	Print
10 @/FOR 15 11 CA/AT	10 @ -0.15 DPT. 11 -1.50 CHANGE $1.50

9 Automatic sequencing key (AUTO key) entries

You can achieve many different key sequences automatically with a single key depression by using the Auto function key.

Example Performing the transaction “Selling a $5.00 item (dept. 7) for cash” programmed for the AUTO 2 (AUTO 2 = 500 7 CA/AT)

Key operation	Print
AUTO 2	DPT. 07 $5.00 CASH $5.00

CORRECTION

1 Correction of the last entry (direct void)

If you make an incorrect entry relating to a department, PLU/subdepartment, UPC, percentage ([%] through [%4]), deduction ([⊖] through [⊖4]) or refund, you can correct this entry by pressing the [VOID] key immediately after the incorrect entry.

Example

Key operation

1250 [6]
[VOID]
2 [PLU/UPC]
[VOID]
5012345678900 [PLU/UPC]
[VOID]
600 [8]
[%2]
[VOID]
328 [9]
28 [⊖] [9]
[VOID]
250 [RFND] [8]
[VOID]
[CA/AT]

Print

```
DPT.06          $12.50
DPT.06          V-12.50
PLU00002         $1.50
PLU00002         V-1.50
5012345678900#
APPLE            $2.50
5012345678900#
APPLE            V-2.50
DPT.08           $6.00
                -15.00%
%2               -0.90
%2               V$0.90
DPT.09           $3.28
 (-) 1
DPT.09           -0.28
DPT.09           V$0.28
DPT.08           R-2.50
DPT.08          RV$2.50

CASH            $9.28
```

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

With the [VOID] key, you can void any incorrect department, PLU/subdepartment, UPC or item refund entry made during a transaction if you find it before finalizing the transaction (e.g. pressing the [CA/AT] key). This function is applicable to department, PLU/subdepartment, UPC and item refund entries only.
For the operation, press the [VOID] key just before you press a department key, [DEPT#] key, direct PLU key, [PLU/UPC] key or just before you scan a UPC code. For the refund indirect void, press the [VOID] key after you press the [RFND] key.

Example

Key operation

1310 [6]
1755 [7]
10 [PLU/UPC]
[.00]
58 [PLU/UPC]
825 [7]
5012345678900 [PLU/UPC]
1310 [VOID] [6]
[VOID] [.00]
58 [VOID] [PLU/UPC]
5012345678900 [VOID] [PLU/UPC]
[CA/AT]

Print

```
DPT.06          $13.10
DPT.07          $17.55
PLU00010         $7.15
PLU00008         $3.00
PLU00058         $3.00
DPT.07           $8.25
5012345678900#
APPLE            $2.50
DPT.06          V-13.10
PLU00008         V-3.00
PLU00058         V-3.00
5012345678900#
APPLE            V-2.50

CASH            $32.95
```

3 Subtotal void

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

Example

Key operation	Print
1310 [1] 1755 [6] 10 [PLU/UPC] 35 [PLU/UPC] Subtotal void { [SBTL] [VOID] [SBTL]	DPT.01 $13.10 DPT.06 $17.55 PLU00010 $7.15 PLU00035 $3.00 MDSE ST $40.80 SBTL VD -40.80 ***TOTAL $0.00

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

Any errors found after the entry of a transaction has been completed or during an amount tendered entry, cannot be voided. These errors must be handled by the manager.
The following steps should be observed:

1. If you are in the middle of making an amount tendered entry, you must first finalize the transaction before making corrections.
2. Try to make correct entries from the beginning.
3. Hand the incorrect receipt to your manager for its cancellation.

CORRECTION AFTER FINALIZING A TRANSACTION (AFTER GENERATING A RECEIPT)

When you need to void incorrect entries that are found after finalizing a transaction or cannot be corrected by direct or indirect void, follow this procedure in the MGR mode.

1. Turn the mode switch to the MGR position.
2. Press the [VOID] key to put your register in the VOID mode.
3. Repeat the entries that are recorded on an incorrect receipt. (All data for the incorrect receipt are removed from register memory; the voided amounts are added to the void register totalizer.)

Incorrect receipt

```
08/27/2004 11:10PM  1111
123456#1633     DICK

PLU00001          $1.25
DPT.02            $5.00

CASH             $6.25
```

Cancellation receipt

```
08/27/2004 11:10PM  1111
123456#1634     DICK

        *VOID*
PLU00001          $1.25
DPT.02            $5.00

CASH             $6.25
```

Note *Your machine leaves the VOID mode whenever a transaction is canceled (i.e. finalized in the VOID mode.) To void additional transactions repeat steps **2.** and **3.** above.*

OVERRIDE ENTRIES

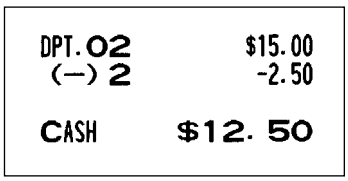
Programmed limits (such as maximum amounts) for functions can be overridden by making the entry in the MGR mode.

Procedure

1. Turn the mode switch to the MGR position.
2. Make the override entry.

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

Key operation		Print
	1500 [2]	
REG-mode entries	250 [⊖2] ...Error	
	[CL]	
Turn the mode switch to the MGR position.		
	250 [⊖2]	
Return the mode switch to the REG position.		
	[CA/AT]	



OVERLAPPED CASHIER ENTRY

This function allows you to switch from one cashier to another interrupting the first cashier's entry. The second cashier can make a sales entry, then the first cashier may continue.

Example

Cashier 1: Entry started
Cashier 2: Cashier change (1 to 2), interruption initiated
Cashier 2: Transaction finished (2)
Cashier 1: Cashier change (2 to 1), entry restart

Note

- *The overlapped cashier entry is not available while the tendering sale.*
- *If any cashier is still making an entry (or has not finalized the transaction yet), the machine does not run in any mode other than REG and MGR and X/Z reports can not be performed. The error message "CASHIER ERR." and the corresponding cashier code(s) are displayed at this time.*

Key operation	Comments
1. Cashier 1 is assigned.	The entry by cashier 1 is started.
(1 [CASH #])	
100 [1]	
360 [3]	
[3]	
2. Cashier 2 is assigned.	The entry by cashier 2 is started.
2 [CASH #]	(The entry by cashier 1 is interrupted.)
3 [@/ FOR]	
150 [2]	
[CA/AT]	The transaction by cashier 2 is finalized.
3. Cashier 1 is assigned.	
1 [CASH #]	The entry by cashier 1 is restarted.
100 [1]	
360 [3]	
[CA/AT]	The transaction by cashier 1 is finalized.

SPECIAL PRINTING FUNCTIONS

1 Copy receipt printing

If your customer wants a receipt after you have finalized a transaction with the receipt ON-OFF function in the "OFF" status (no receipting), press the [RCPT] key. This will make a copy receipt. Your register can also print a copy receipt when the receipt ON-OFF function is in the "ON" status.

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

Example Printing a copy receipt after making the entries shown below with the receipt ON-OFF function in the "OFF" status

Key operation

850 [2]
3 [@/FOR]
150 [1]
[CA/AT]

Print

Print on the journal

```
08/27/2004 11:16PM  1111
123456#1635      DICK
DPT.02              $8.50
                3 @ $1.50
DPT.01              $4.50
CASH               $13.00
```

For receipting→ [RCPT]

Print on the receipt

```
08/27/2004 11:16PM  1111
123456#1635      DICK

DPT.02              $8.50
                3 @ $1.50
DPT.01              $4.50

CASH               $13.00
```

When the receipt ON-OFF function is in the "ON" status and you press the [RCPT] key to make a second copy

```
08/27/2004 11:16PM  1111
123456#1635      DICK

      *COPY*
DPT.02              $8.50
                3 @ $1.50
DPT.01              $4.50

CASH               $13.00
```

When the receipt ON-OFF function is in the "ON" status, the "*COPY*" symbol will be printed on the receipt.

2 Validation printing function (Slip printer)

Your register can perform validation printing when it is connected with the slip printer. For the details about the slip printer, contact your authorized SHARP dealer.

1. Set a validation slip to the slip printer.
2. Press the PRINT key. The validation printing will start.

Note *When you make an entry for which compulsory validation printing can be overridden by performing the following operation. If you need this function, Contact your authorized SHARP dealer.*

1. *Move the mode key to the MGR position.*

2. → [•] → [PRINT]

3 Printing of the employee's arrival and departure times (Slip printer)

Your register can print the employee's arrival and departure time when it is connected with the slip printer.
For the details for connecting a slip printer, please contact your authorized SHARP dealer.
For printing of the arrival and departure times, you must be in the OP X/Z mode.

Printing of arrival time

→ 1 → [PRINT]

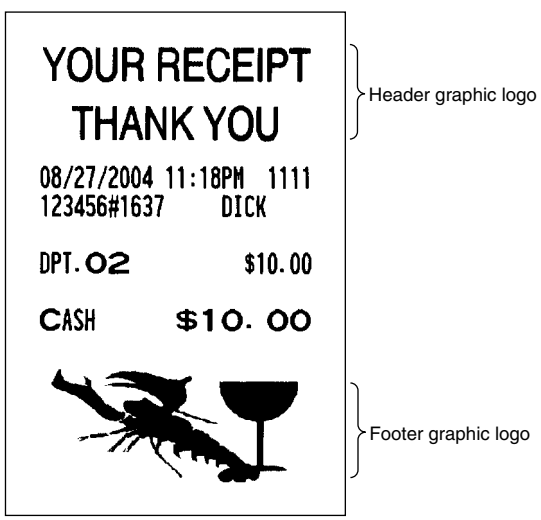
Printing of departure time

→ 2 → [PRINT]

4 Printing of header and footer graphic logos

As an optional setting, your register can print a graphic logo on the top of each receipt (header graphic logo). If preset to do so, a graphic logo can be printed on the bottom of each receipt (footer graphic logo) with the job code #2616. You can also print the graphic logos with the combination of 3-line header logo message or 3-line footer logo message. Printing only logo messages without the graphic logo is possible. Please consult your dealer when you want to change the setting.

• Sample receipt with a header graphic logo and a footer graphic logo



5 Remote printer send function

This function enables a partial order to be sent to the kitchen for preparation while the remaining order is still being placed.

Example

Item entry → [RP SEND] → Data transfer to the remote printer

Remaining items will be sent to the remote printer when the transaction is finalized.

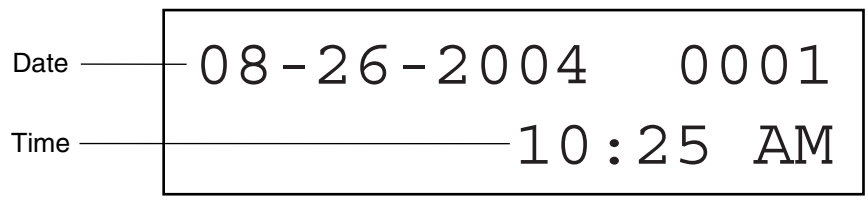
When this function is used, the subtotal void operation is not allowed.

TIME DISPLAY AND AUTOMATIC UPDATING OF THE DATE

1 Time display

When you need the time displayed, turn the mode switch to the OP X/Z position after the preceding transaction or operation is finalized.
You can also display the time by pressing the [#] key in the REG or MGR mode.
The time display disappears as soon as you press the [CL] key in the REG or MGR mode or begin the subsequent entry.

Sample display of 10:25 AM



2 Automatic updating of the date

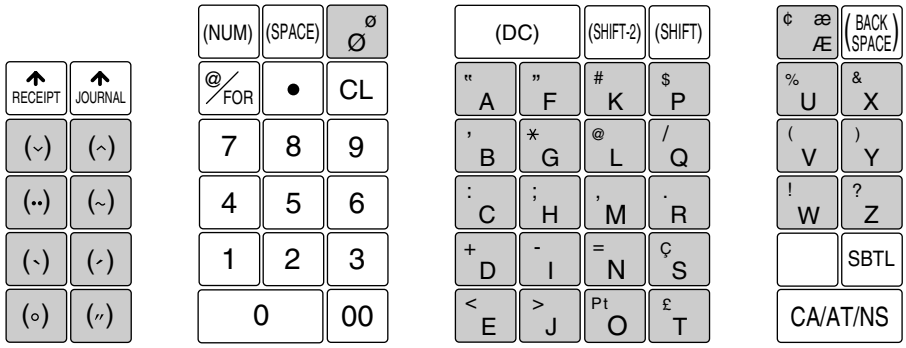
Once the internal clock unit is started at the correct time, it continues to run as long as the built-in battery is charged, and updates the date (month, day, year) automatically.

PRIOR TO PROGRAMMING

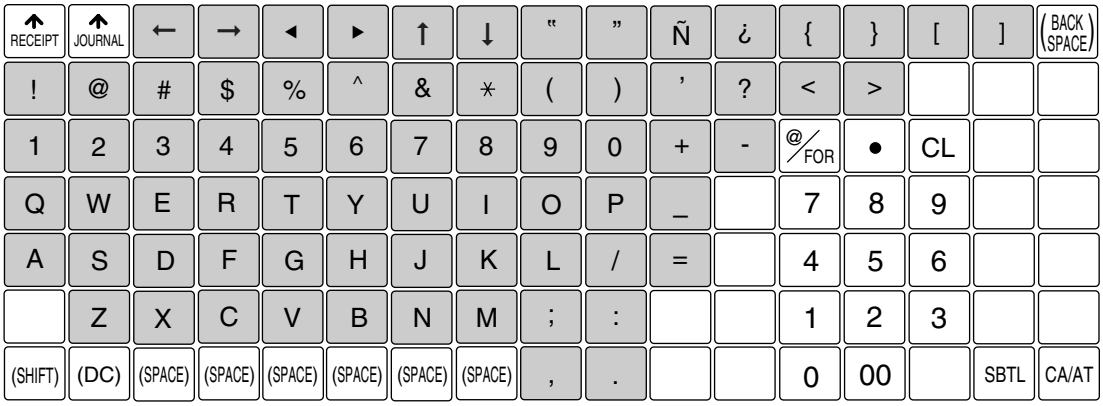
1 Programming keyboard layout

When you are in the PGM1 or PGM2 mode, the keyboard layout will be set to one of the programming layouts as shown below.

For ER-A410



For ER-A420



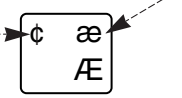
Note

- *The programming keyboard sheet is transparent, allowing placement over the standard keyboard sheet.*
- *The shaded area contains the character keys which are used for programming characters.*

(DC) : Used to enter the double-size character.

(SHIFT) : Used to change a lower-case letter/upper-case letter.

(SHIFT-2) : Used to select a symbol.



To enter the letter " ¢ ¢ ", press (SHIFT-2) ¢ æ Æ (SHIFT-2) ¢ æ Æ

To enter the upper-case letter "Æ Æ", press ¢ æ Æ ¢ æ Æ

To enter the lower-case letter "æ æ", press (SHIFT) ¢ æ Æ ¢ æ Æ (SHIFT)

(BACK SPACE) : Used to back up the cursor for deleting.

(SPACE) : Used to enter a space.

(NUM) : Used to enter a numeric character.

2 How to program alphanumeric characters

You can program alphanumeric characters for departments, PLUs, UPCs, functions, etc. while in the character entry mode.
There are two ways for programming characters: using character keys on the keyboard and entering character codes with the numeric keys on the keyboard.

■ Using character keys on the keyboard

Enter a character according to the position in the programming keyboard layout.

Entering alphanumeric characters

To enter a character, simply press a corresponding character key.
To enter a numeric character, press (NUM) key and enter a number by ten keys (0 – 9).

[Ex.] Entering the character "135" : (NUM) ⟶ 135 ⟶ (NUM)

To enter a space, press the (SPACE) key.

Entering double-size characters

(DC) : This key toggles the double-size character mode and normal-size character mode. The default is the normal-size character mode. The double-size character is displayed with the letter "=" (ex. =S).

[Ex.] To program the name "SHARP" in double size : (DC) ⟶ SHARP ⟶ (DC)

Entering lower-case letters

(SHIFT) : You can enter a lower-case letter by using this key. Press (SHIFT) key just before you enter the lower-case letter. This key also allows you to enter the characters/symbols shown at the upper right of keys.

[Ex.] To program the name "Sharp" : ⟶ S ⟶ (SHIFT) ⟶ harp ⟶ (SHIFT)

Entering symbols shown at the upper left of keys

(SHIFT-2) : You can enter symbols by using this key. Press (SHIFT-2) key just before you enter the symbol.

[Ex.] To program the symbol " ¢ ¢ " : ⟶ (SHIFT-2) ⟶ ¢ ⟶ (SHIFT-2) ⟶ ¢

"(˘)", "(ˆ)", "(¨)", " (ˋ)", "(´)", "(˝)", "(˚)", and "(˜)" keys are used only in combination with a character key. If the combination is unavailable, only a character key is entered. [Ex.] "Å" : ⟶ (˚) ⟶ A

Editing text

You can edit the text you have entered by deleting characters.

(BACK SPACE) : Backs up the cursor for deleting the character or figure at the left of the cursor.

■ Entering character codes

Numerals, letters and symbols are programmable by entering the 00 key and character codes. See the "Alphanumeric character code table" on the next page. In this way, you can program characters other than the characters shown in the programming keyboard layout.

XXX ⟶ 00 XXX: Character code (3 digits)

Note

- *Double-size characters can be made by entering the character code 253.*
  [Ex.] To program the name "SHARP" in double size

253	00	*083*	00	*072*	00	*065*	00	*082*	00	*080*	00
(DC)		*S*		*H*		*A*		*R*		*P*	

Alphanumeric character code table

Code	Character
001	á
002	â
003	ê
004	î
005	ì
006	í
007	ô
008	ó
009	û
010	ú
011	œ
012	ű
013	ú
014	ő
015	ó
016	Λ
017	Ψ
018	Γ
019	¨
020	Ω
021	Δ
022	Θ
023	Ξ
024	Π
025	Σ
026	Υ
027	Φ
028	Ű
029	Ú
030	Ő
031	Ó
032	(space)
033	!
034	”
035	#
036	$
037	%
038	&
039	’
040	(
041	)
042	*
043	+
044	,
045	-

Code	Character
046	.
047	/
048	0
049	1
050	2
051	3
052	4
053	5
054	6
055	7
056	8
057	9
058	:
059	;
060	<
061	=
062	>
063	?
064	@
065	A
066	B
067	C
068	D
069	E
070	F
071	G
072	H
073	I
074	J
075	K
076	L
077	M
078	N
079	O
080	P
081	Q
082	R
083	S
084	T
085	U
086	V
087	W
088	X
089	Y
090	Z

Code	Character
091	Ä
092	Ö
093	Ü
094	^
095	_
096	‘
097	a
098	b
099	c
100	d
101	e
102	f
103	g
104	h
105	i
106	j
107	k
108	l
109	m
110	n
111	o
112	p
113	q
114	r
115	s
116	t
117	u
118	v
119	w
120	x
121	y
122	z
123	{
124	|
125	}
126	ß
127	¢
128	!!
129	$_1$
130	$_2$
131	$_3$
132	$_4$
133	1/2
134	F/T
135	←

Code	Character
136	→
137	↖
138	↗
139	◀
140	▶
141	F
142	T
143	↓
144	ç
145	°
146	¿
147	Ù
148	à
149	Æ
150	ø
151	Å
152	Ø
153	é
154	è
155	Pt
156	ì
157	Ñ
158	ò
159	£
160	¥
161	₀
162	⌜
163	⌟
164	ˎ
165	·
177	Á
178	Í
180	Ā
181	ā
182	Ē
183	ē
184	Ī
185	ī
186	Ū
187	ū
188	Ṇ
189	ṇ
190	Č
191	Š
192	Ç

Code	Character
193	ị
194	Ġ
195	Ṣ
196	Ġ
197	ġ
198	Ḳ
199	ḳ
200	Ḷ
201	ḷ
202	Ž
203	Đ
204	đ
205	Ć
206	ć
207	€
208	Þ
209	ˋ
210	ě
211	š
212	č
213	ž
214	ý
215	ụ
216	ň
217	ˇ
218	ˊ
219	ř
224	*
225	§
226	Ø
227	ˆ
228	↑
229	]
230	[
231	‟
232	ä
233	ö
234	ü
235	æ
236	å
237	É
238	ñ
253	*(DC)

*(DC) : Double-size character code

: The shaded character cannot be displayed (will be displayed as space).

Note *The character “!!” (code: 128) is displayed as “!”.*

PROGRAMMING

This chapter illustrates how to program your cash register.

■ Basic instructions

All the programming items can be programmed by the **Job-Code-Based Programming** described later. However, your machine allows you to program some items using the **Direct Programming**, which does not require you to enter the job code.

Job-Code-Based Programming

Simplified procedure : XXX (Job code) → [•] → [@/FOR] → [Data entry] → [CA/AT]

Direct Programming

Sample procedure : → [Data entry] → [⊖2] → [CA/AT]
(Object key)

■ Preparations for programming

1. Plug your machine into a standard grounded AC outlet.
2. Turn the mode switch to the PGM1 or PGM2 position.
   To set the mode switch to the PGM1 position, use the manager or submanager key; and to set it to the PGM2 position, use the manager key.
3. Check to see whether both journal and receipt rolls are present in the machine. If they are missing, install journal and receipt paper rolls correctly referring to the procedure in "4. Installing and removing the paper roll" under "OPERATOR MAINTENANCE".
4. Program the necessary items into your machine.

■ Direct Programming

1 Setting the date and time

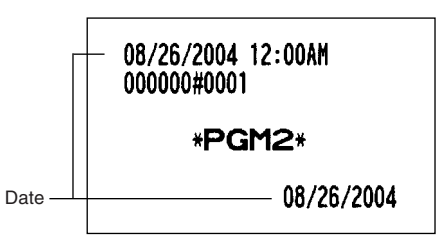
■ Date PGM 2

Enter the month (one or two digits), day (two digits), and year (four digits : 2000 – 2099) in this sequence.

Procedure

XXXXXXXX (Date (seven or eight digits)) → [#]

Example

Key operation	Print
08262004 [#]	

■ Time PGM 2

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

Procedure

XXXX → [#]
Time (max. four digits)

Example

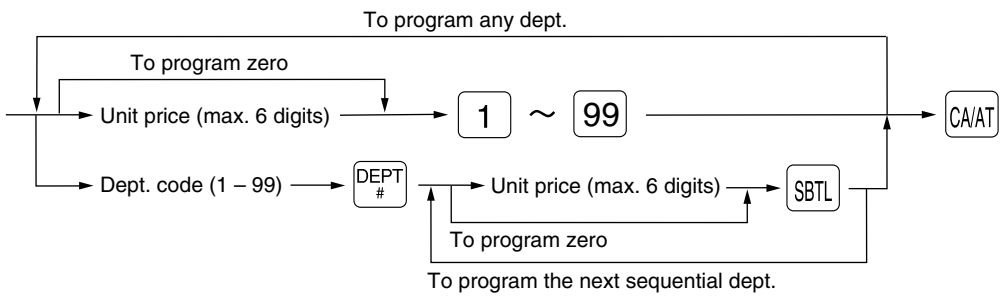
Key operation	Print
1430 [#]	08/26/2004 2:30PM 000000#0002 *PGM2* 2:30PM ← Time

2 Programming for departments

Your machine is equipped with 20 (ER-A410)/10 (ER-A420) standard departments and a maximum of 99 departments. Your machine allows you to perform the following programming for each department.

■ Unit price PGM 1 PGM 2

Procedure

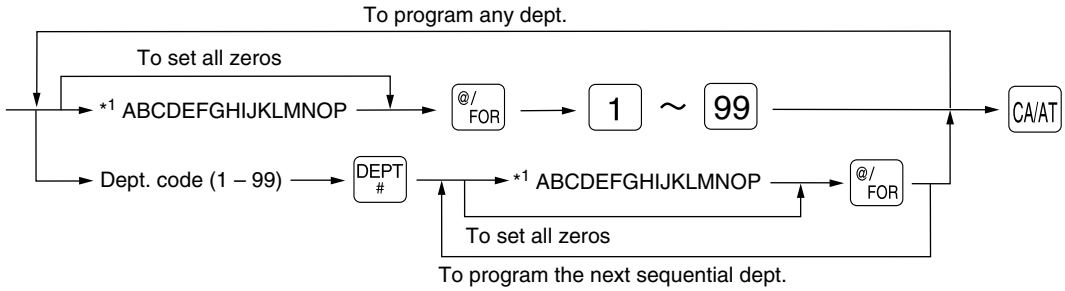


Example

Key operation	Print
1000 [1] [CA/AT]	*PGM2* D01 10.00 ← Unit price DPT.01 G00 000003 KP000 A00 COL17

■ Functional selection PGM 2

Procedure



*1 Item:		Selection:	Entry:
A	Group number		0 thru 9
B	Commission group number		0 thru 9
C	Sign (plus/minus)	Plus	0
		Minus	1
D	Food stamp status	Ineligible	0
		Eligible	1
E	Tax 4 status	Non-taxable	0
		Taxable	1
F	Tax 3 status	Non-taxable	0
		Taxable	1
G	Tax 2 status	Non-taxable	0
		Taxable	1
H	Tax 1 status	Non-taxable	0
		Taxable	1
I	Item validation printing	Non-compulsory	0
		Compulsory	1
J	Tare table number		1 thru 9
K	Scale entry	Inhibit	0
		Enable	1
		Compulsory	2
L	Registration type	Normal	0
		SICS (Single Item Cash Sale)	1
		SIF (Single Item Finalization)	2
M	Department type	Normal department	0
		Hash department	1
		Bottle return department	2
N	Type of unit price entry	Inhibit department key	0
		Open only	1
		Preset only	2
		Open and preset	3
O	Significant digit for HALO		1 thru 9
P	Number of zeros to follow the significant digit for HALO		0 thru 7

Note

Group number

You can assign a department to a maximum of nine groups. This programming enables you to take group sales reports.

Commission group number

A commission group number (0–9, 0: non commission) can be assigned to each department.

Sign (plus/minus)

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

Food stamp status

- *Assign a food stamp status (food stamp eligible or food stamp ineligible) to each department.*

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

- *When an entry of a taxable department is made in a transaction, tax is automatically computed according to the associated tax table or rate.*
- *Tax 4 is prohibited if you use the food stamp function.*

Item validation printing

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

Tare table number

Tare table number associated with scale entry (1 thru 9).

Scale entry

Program a department for scale entry when your store requires items to be sold by weight and are placed on a scale connected to the register.

Registration type

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

Department type

You may program each department as one of the following three types.

- *Bottle Return (BR)*
- *Hash department*
  A hash department is used to enter the amount of a special "sale", such as a gift certificate sale or for the receipt of payment for utility bills, theatre tickets, etc., i.e. "non-sales" registrations. Any amounts entered in this department are not added to the grand total except tax amounts.
- *Normal department.*

Type of unit price entry

You may select one of the following four types of unit price entry for each department.

- *Open and preset*
- *Preset only*
- *Open only*
- *Inhibit department key*

HALO (High Amount Lockout)

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

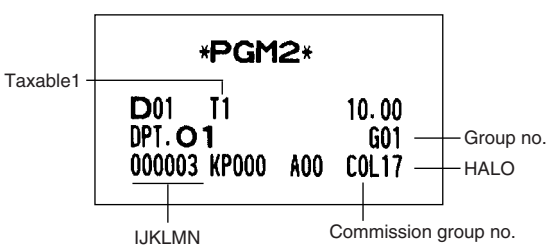
- *"**OP**" is the same as **O** × 10^{P}*
  For example, presetting 14 ($100.00) here means that amount entries of up to $100.00 are allowed in the REG mode. When you preset 17, the upper limit amount is 99999.99.

Example

Key operation

1000000100000317 [@/FOR] [1] [CA/AT]

Print



3 PLU/UPC programming

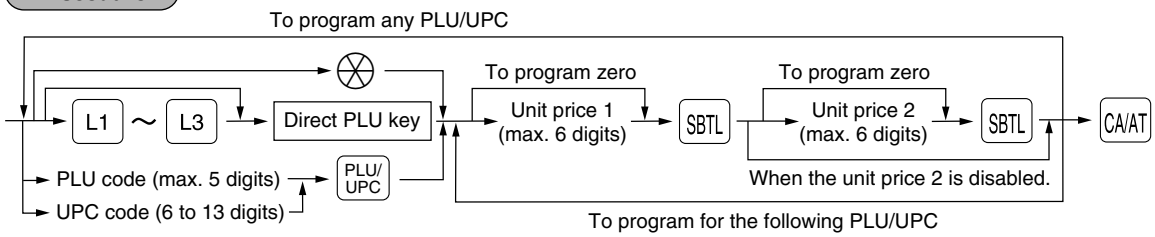
Your machine is equipped with 500 standard PLUs/UPCs. Your machine allows you to perform the following programming for each PLU/UPC.

Note

- *In this manual, the word "UPC" represents UPC (Universal Product Code) and the word "EAN" represents EAN (European Article Number).*
- *To review the UPC codes available to this register, please refer to the chapter 13 in "Job-Code-Based programming".*

■ Unit price PGM 1 PGM 2

Procedure

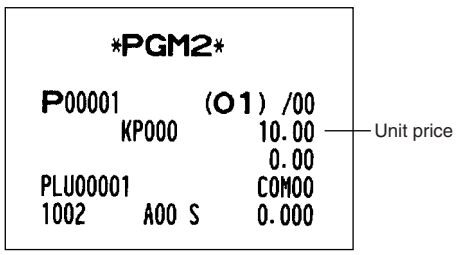


Example

Key operation

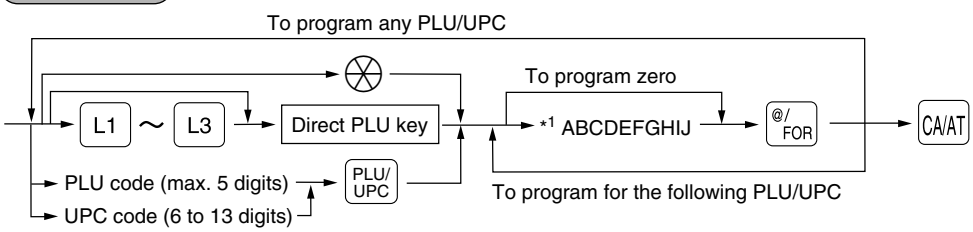
(When the price level 2 is enabled.) → 1 PLU/UPC 1000 SBTL SBTL CA/AT

Print



■ Functional selection PGM 2

Procedure



*1 Item:		Selection:	Entry:
A	Commission group number		0 thru 9
B	Sign (plus/minus)	Plus	0
		Minus	1
C	Food stamp status	Ineligible	0
		Eligible	1
D	Tax 4 status	Non-taxable	0
		Taxable	1
E	Tax 3 status	Non-taxable	0
		Taxable	1
F	Tax 2 status	Non-taxable	0
		Taxable	1

(To be continued on the next page)

*1 Item:		Selection:	Entry:
G	Tax 1 status	Non-taxable	0
		Taxable	1
H	Tare table number		1 thru 9
I	Scale entry	Inhibit	0
		Enable	1
		Compulsory	2
J	Type of unit price entry	Prohibit mode	0
		Open price only	1
		Preset price only	2
		Open price and preset price	3
		Delete mode	4

Note

Commission group number

A commission group number (0–9, 0: non commission) can be assigned to each department.

Sign (plus/minus)

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

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

Food stamp status

- *Assign a food stamp status (food stamp eligible or food stamp ineligible) to each PLU/UPC.*

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

- *When an entry of a taxable PLU/UPC is made in a transaction, tax is automatically computed according to the associated tax table or rate.*
- *Tax 4 is prohibited if you use the food stamp function.*

Tare table number

Tare table number associated with scale entry (1 thru 9).

Scale entry

Program a PLU/UPC for scale entry when your store requires items to be sold by weight and are placed on a scale connected to the register.

Type of unit price entry

You may select one of the following four types of unit price entry for each PLU/UPC.

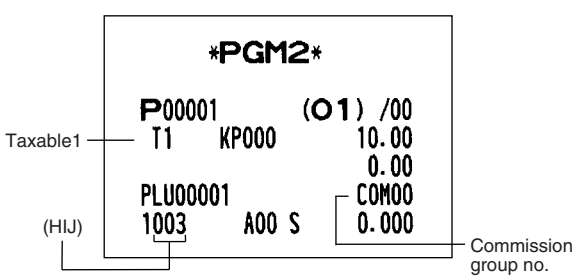
- *Open price and preset price (for only PLU)*
- *Preset price only*
- *Open price only (for only PLU)*
- *Prohibit mode: Prohibits the entry of any assigned PLU/UPC code.*
- *Delete mode: Deletes data programmed for each PLU/UPC.*

Example

Key operation

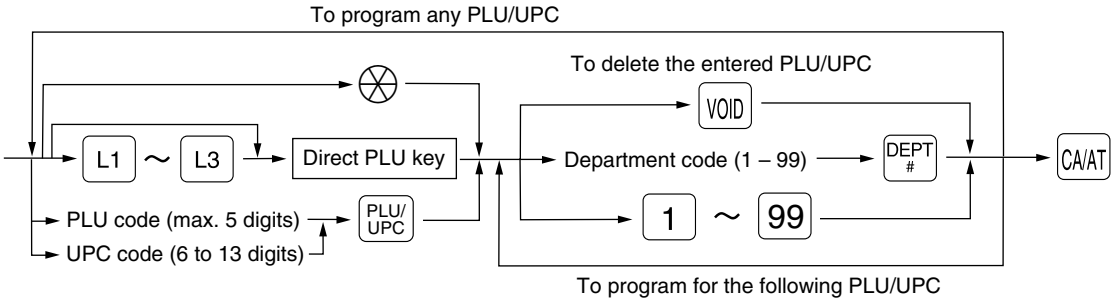
1 [PLU/UPC] 0000001003 [@/FOR] [CA/AT]

Print



■ PLU/UPC assignment to department PGM 1 PGM 2

Procedure

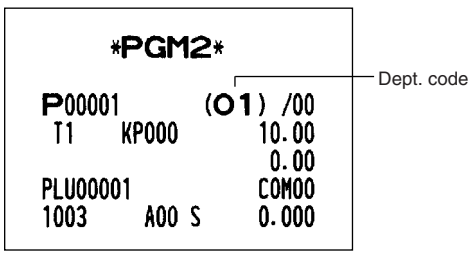


Example

Key operation

1 PLU/UPC 1 CA/AT

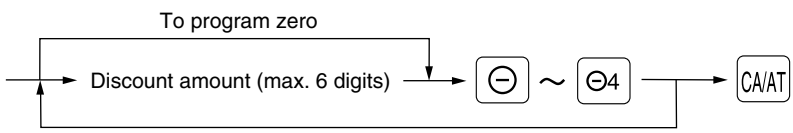
Print



4 Programming for discount keys (⊖)

■ Discount amount PGM 1 PGM 2

Procedure

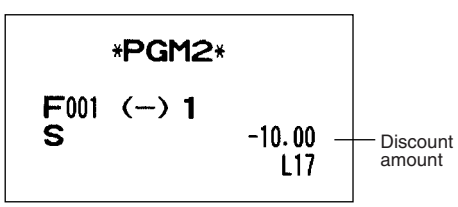


Example

Key operation

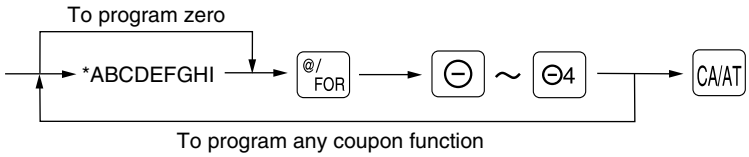
1000 ⊖ CA/AT

Print



■ High amount lockout (HALO), sign (+/-), vendor/store coupon selection, food stamp status and tax status PGM 2

Procedure



*	Item:		Selection:	Entry:
	A	Food stamp status	Ineligible	0
			Eligible	1
	B	Tax 4 status	Non-taxable	0
			Taxable	1
	C	Tax 3 status	Non-taxable	0
			Taxable	1
	D	Tax 2 status	Non-taxable	0
			Taxable	1
	E	Tax 1 status	Non-taxable	0
			Taxable	1
	F	Sign (+/-)	Plus	0
			Minus	1
	G	Vendor/store coupon selection	Vendor coupon (subtotal ⊖)	0
			Store coupon (item ⊖)	1
	H	Significant digit for HALO		1 thru 9
	I	Number of zeros to follow the significant digit for HALO		0 thru 7

Note

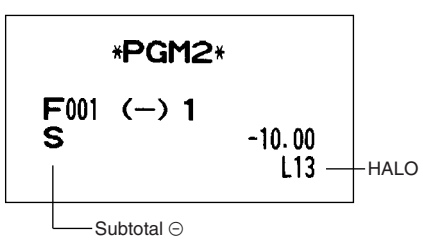
Tax status (taxable 1 thru 4/non-taxable)
Tax 4 is prohibited if you use the food stamp function.
HALO (High amount lockout)
*"**HI**" is the same as **H** x 10^{I}.*
For example, presetting 14 ($100.00) here means that amount entries of up to $100.00 are allowed in the REG mode. When you preset 17, however, the upper limit amount is 99999.99.
When you preset 00, the open amount entry is prohibited.

Example

Key operation

000001013 @/FOR ⊖ CA/AT

Print



5 Programming for percent keys (%)

■ Percent rate PGM 1 PGM 2

Procedure

* Rate: Percent rate: 0.00 – 100.00

Note *You must use a decimal point key when setting percentage rates that are fractional.*

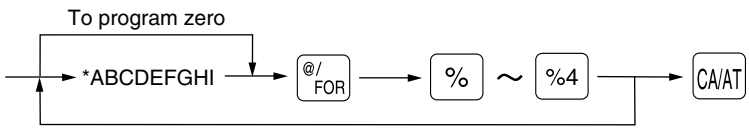
Example

Key operation	Print
10 • 25 % CA/AT	*PGM2* F005 %1 S 3 -10.25% L100.00% (Percent rate)

■ Sign (+/-), %item/%subtotal selection, food stamp status and tax status

PGM 2

Procedure



*	Item:		Selection:	Entry:
	A	Food stamp status	Ineligible	0
			Eligible	1
	B	Tax 4 status	Non-taxable	0
			Taxable	1
	C	Tax 3 status	Non-taxable	0
			Taxable	1
	D	Tax 2 status	Non-taxable	0
			Taxable	1
	E	Tax 1 status	Non-taxable	0
			Taxable	1
	F	Sign (+/-)	Plus	0
			Minus	1
	G	%item/%subtotal selection	% for subtotal	0
			% for item	1
	H	Always enter 0.		0
	I	Always enter 0.		0

Note ***Tax status (taxable 1 thru 4/non-taxable)***
Tax 4 is prohibited if you use the food stamp function.

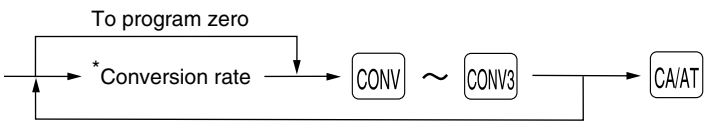
Example

Key operation	Print
000001000 [@/FOR] [%] [CA/AT]	*PGM2* F005 %1 S 3 -10.25% L100.00% Subtotal %

6 Programming for conversion keys ([CONV])

■ Currency conversion rate PGM 1 PGM 2

Procedure



* Conversion rate: 0.0000 – 9999.9999

Note *You must use a decimal point key when setting conversion rates that are fractional.*

Example

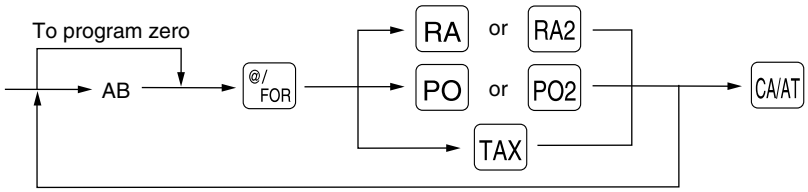
Key operation	Print
1 [•] 3250 [CONV] [CA/AT]	*PGM2* F071 CONV 1 1.3250

7 Programming for the RA, PO, and TAX keys

■ High amount lockout (HALO) PGM 2

The HALO limit effects REG mode operations but can be overridden in the MGR mode.
The HALO limit is represented by two figures as follows:

Procedure



"AB" is the same as $\mathbf{A} \times 10^{\mathbf{B}}$.
A: Significant digit (0 through 9)
B: Number of zeros to follow significant digit: (for RA or PO: 0 thru 9), (for manual tax: 0 thru 7)

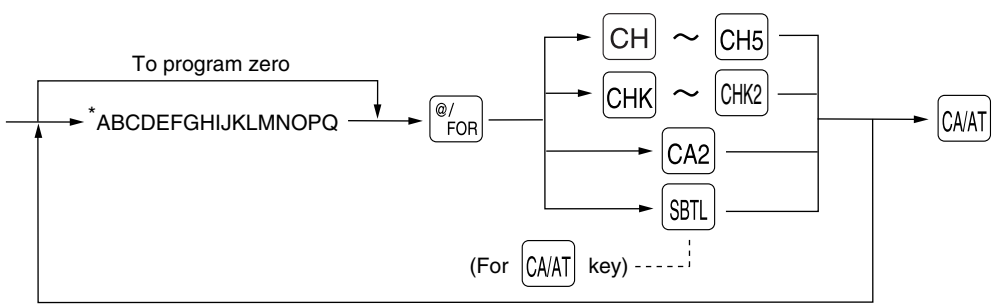
Example

Key operation	Print
13 @/FOR RA CA/AT	*PGM2* F064 ***RA L13

8 Programming for the CA/AT, CA2, CH, and CHK keys

■ High amount lockout (HALO) and functional selection PGM 2

Procedure



*	Item:		Selection:	Entry:
	A	CAT transaction	Non-compulsory	0
			Compulsory	1
	B	CAT action	POST-AUTH	0
			DIAL	1
	C	CAT type	CREDIT	0
			DEBIT	1
			CHECK	2
	D	Card number printing	Yes	0
			No	1
	E	Card number print format	Partial (printing only part of the card number)	0
			Full (printing the entire card number)	1
	F	CAT signature line print	Yes	0
			No	1
	G	CAT expiration printing	Yes	0
			No	1
	H	Number of CAT authorization receipt		0 thru 9
	I	Bill (slip) printing	Non-compulsory	0
			Compulsory	1
	J	Footer printing on receipt	No	0
			Yes	1
	K	Non-add code entry	Non-compulsory	0
			Compulsory	1
	L	Change enable (over tender enable)	Enable	0
			Disable	1
	M	Validation printing	Non-compulsory	0
			Compulsory	1
	N	Drawer opening	Yes	0
			No	1
	O	Amount tendered operation	Optional amount tendered for cash or check	0
			Inhibit amount tendered for charge	0
			Compulsory amount tendered	1
	P	Significant digit for HALO		0 thru 9
	Q	Number of zeros to follow the significant digit for HALO		0 thru 8

Note

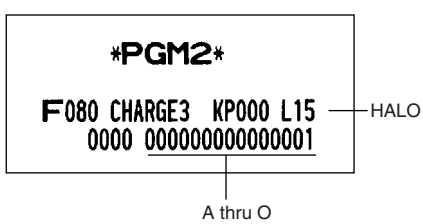
HALO (High amount lockout)
*"**PQ**" is the same as **P** × 10^Q.*
For example, presetting 13 ($10.00) here means that amount entries of up to $10.00 are allowed in the REG mode. When you preset 18, however, the upper limit amount is 999999.99.

Example

Key operation

00000000000000115 [@/FOR] [CH3] [CA/AT]

Print



9 Programming for the automatic tax calculation function

Your machine has an automatic tax calculation feature which allows you to program four tax tables to avoid calculating incorrect tax amounts.
Automatic tax calculations require you to program, in addition to the tax table, the tax status of each pertinent department, PLU, and function key.

■ The tax table (applicable to the add-on tax) PGM 2

Sample tax table

New Jersey tax table: 6%

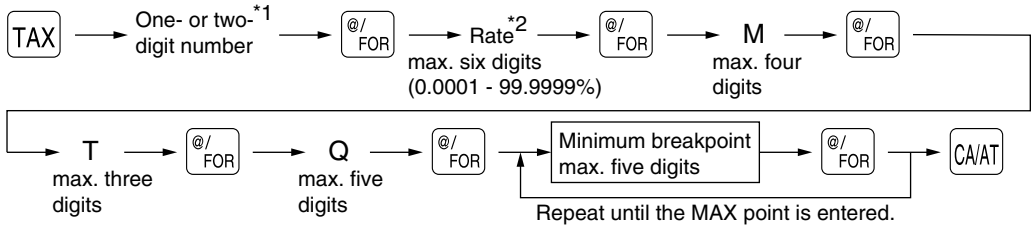
	Range of sales amount		
Taxes	**Minimum breakpoint**		**Maximum breakpoint**
.00	.01	to	.10
.01 ← T	.11 ← Q	to	.22
.02	.23	to	.38
.03	.39	to	.56
.04	.57	to	.72
.05	.73	to	.88
.06	.89	to	1.10
.07	1.11 ← M1	to	1.22
.08	1.23	to	1.38
.09	1.39	to	1.56
.10	1.57	to	1.72
.11	1.73	to	1.88
.12	1.89	to	2.10
.13	2.11 ← M2	to	2.22

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

To program a tax table, first make a table like the right table shown above.
From the tax table, calculate the differences between a minimum break point and the next one (A). Then, from the differences, find irregular cycles (B) and regular cycles (C and D). These cycles will show you the following items necessary to program the tax table:

T: The tax amount collected on the minimum taxable amount (Q)
Q: The minimum taxable amount
M1: The maximum value of the minimum breakpoint on a regular cycle (C).
We call this point “MAX point.”
M2: The maximum value of the minimum breakpoint on a regular cycle (D).
We call this point “MAX point.”
M: Range of the minimum breakpoint on a regular cycle: difference between Q and M1 or between M1 and M2

Procedure



*1 **First figure:** The first figure to be entered depends upon whether the difference between a minimum breakpoint to be entered and the preceding minimum breakpoint is not less than $1.00 or more than 99¢. When the difference is not less than $1.00, enter "1," and when it is not more than 99¢, enter "0" or nothing.

Second figure: The second figure depends upon whether your tax table is to be programmed as tax table 1, 2, 3 or 4. When your tax table is to be programmed as tax table 1, enter "1"; when it is to be programmed as tax table 2, enter "2"; when it is to be programmed as tax table 3, enter "3"; and when it is to be programmed as tax table 4, enter "4".

*2 If the rate is fractional (e.g. 4-3/8%), then the fractional portion (3/8) would be converted to its decimal equivalent (i.e. .375) and the resulting rate of 4.375 would be entered. Note that the nominal rate (R) is generally indicated on the tax table.

Note *If you make an incorrect entry before entering the M in programming a tax table, cancel it with the* [CL] *key; and if you make an error after entering the M, cancel it with the* [SBTL] *key. Then program again from the beginning correctly.*

• **Limitations to the entry of minimum breakpoints**

Your register can support a tax table consisting of no more than 72 breakpoints. (The number of breakpoints is 36 maximum when the breakpoint difference is $1.00 or more.) If the number of breakpoints exceeds the register's table capacity, then the manual entry approach should be used.

Example Programming the sample tax table shown on the previous page as tax table 1

Key operation

		[TAX]
	1	[@/FOR]
Tax rate →	6	[@/FOR]
M →	100	[@/FOR]
T →	1	[@/FOR]
Q →	11	[@/FOR]
The first cyclic portion	23	[@/FOR]
	39	[@/FOR]
	57	[@/FOR]
	73	[@/FOR]
M1 (MAX point)→	89	[@/FOR]
	111	[@/FOR]
		[CA/AT]

Print

```
*PGM2*

TAX1          6.0000%
             / 1.00
        1      0.11
        2      0.23
        3      0.39
        4      0.57
        5      0.73
        6      0.89
        7      1.11
```

Note *You do not need to enter the trailing zeros of the tax rate (after the decimal point) but you do need to enter the decimal point for fractions.*

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

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

Sample tax table

Example 8%

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

Modification of the left tax table

Tax	Minimum breakpoint
.00	.01
.01 ← T	.11 ← Q
.02	.26
.03	.47
.04	.68
.05	.89
.06	.89
.07	1.11 ← M1
.08	1.11
.09	1.11
.10	1.26
.11	1.47
.12	1.68
.13	1.89
.14	1.89
.15	2.11 ← M2
.16	2.11
.17	2.11

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

From the modified tax table above;
Rate = 8(%), T = $0.01 = 1¢, Q = $0.11 = 11¢, M1 = 1.11, M2 = 2.11, M = 100

Job-Code-Based Programming

This section illustrates how to program items using job codes. Using job codes allows you to program a wide variety of items in comparison with direct programming.

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

2110 → [•] → [@/FOR] →

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

1 Setting the date and time

■ Setting the date PGM 2 2610 Direct

Enter the month (one or two digits), day (two digits), and year (four digits: 2000 – 2099) in this sequence.

Procedure

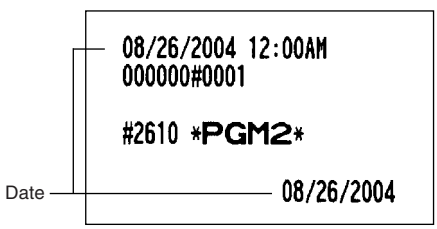
2610 → [•] → [@/FOR] → Date (seven or eight digits) → [CA/AT]

Example

Key operation

2610 [•] [@/FOR]
08262004 [CA/AT]

Print



■ Setting the time PGM 2 2611 Direct

Set the time using the military time (24-hour) system. For example, when the time is set to 2:30 AM, enter 230; and when it is set to 2:30 PM, enter 1430. The time is printed and displayed on the real time system.

Procedure

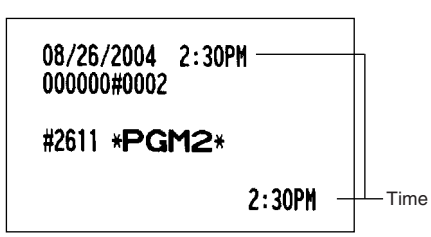
2611 → [•] → [@/FOR] → Time (max. four digits) → [CA/AT]

Example

Key operation

2611 [•] [@/FOR]
1430 [CA/AT]

Print

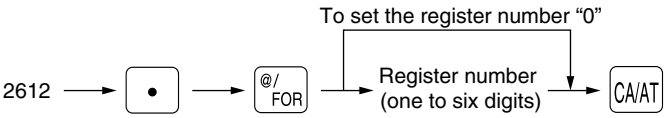


2 Setting the register and consecutive numbers

■ Setting the register number PGM 2 2612

When your store has two or more registers, it is practical to set separate register numbers for their identification. You may set them with a maximum of six digits.

Procedure



Example To set the register number as “123456”

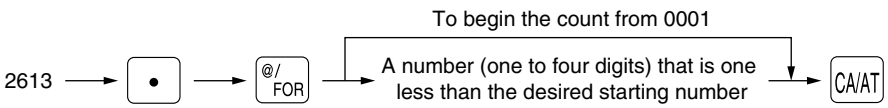
Key operation	Print
2612 • @/FOR 123456 CA/AT	08/26/2004 2:30PM 123456#0003 #2612 *PGM2* 123456

Register number

■ Setting the consecutive number PGM 2 2613

The consecutive number is increased by one each time a receipt is issued.
Enter a number (one to four digits) that is one less than the desired starting number.

Procedure



Example Setting the count start number as “1001”

Key operation	Print
2613 • @/FOR 1000 CA/AT	08/26/2004 2:30PM 123456#1000 #2613 *PGM2* 1000

Consecutive number

3 Programming for the automatic tax calculation function

Your machine has an automatic tax calculation feature which allows you to program four tax tables or rates to avoid calculating incorrect tax amounts.
Automatic tax calculations require you to program, in addition to the tax table and rate, the tax status of each pertinent department, PLU, and function key.

■ The tax table (applicable to the add-on tax) PGM 2 2710 Direct

Sample tax table

New Jersey tax table: 6%

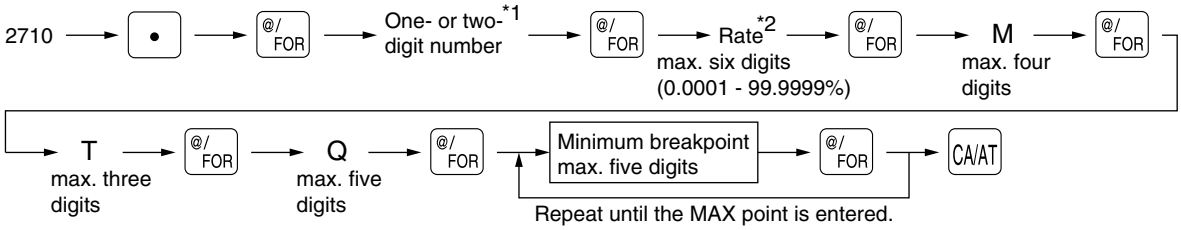
	Range of sales amount		
Taxes	**Minimum breakpoint**		**Maximum breakpoint**
.00	.01	to	.10
.01 ← T	.11 ← Q	to	.22
.02	.23	to	.38
.03	.39	to	.56
.04	.57	to	.72
.05	.73	to	.88
.06	.89	to	1.10
.07	1.11 ← M1	to	1.22
.08	1.23	to	1.38
.09	1.39	to	1.56
.10	1.57	to	1.72
.11	1.73	to	1.88
.12	1.89	to	2.10
.13	2.11 ← M2	to	2.22

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

To program a tax table, first make a table like the right table shown above.
From the tax table, calculate the differences between a minimum break point and the next one (A). Then, from the differences, find irregular cycles (B) and regular cycles (C and D). These cycles will show you the following items necessary to program the tax table:

T: The tax amount collected on the minimum taxable amount (Q)
Q: The minimum taxable amount
M1: The maximum value of the minimum breakpoint on a regular cycle (C).
We call this point “MAX point.”
M2: The maximum value of the minimum breakpoint on a regular cycle (D).
We call this point “MAX point.”
M: Range of the minimum breakpoint on a regular cycle: difference between Q and M1 or between M1 and M2

Procedure



*1 **First figure:** The first figure to be entered depends upon whether the difference between a minimum breakpoint to be entered and the preceding minimum breakpoint is not less than $1.00 or more than 99¢. When the difference is not less than $1.00, enter "1," and when it is not more than 99¢, enter "0" or nothing.

Second figure: The second figure depends upon whether your tax table is to be programmed as tax table 1, 2, 3 or 4. When your tax table is to be programmed as tax table 1, enter "1"; when it is to be programmed as tax table 2, enter "2"; when it is to be programmed as tax table 3, enter "3"; and when it is to be programmed as tax table 4, enter "4".

*2 If the rate is fractional (e.g. 4-3/8%), then the fractional portion (3/8) would be converted to its decimal equivalent (i.e. .375) and the resulting rate of 4.375 would be entered. Note that the nominal rate (R) is generally indicated on the tax table.

Note *If you make an incorrect entry before entering the M in programming a tax table, cancel it with the* [CL] *key; and if you make an error after entering the M, cancel it with the* [SBTL] *key. Then program again from the beginning correctly.*

• Limitations to the entry of minimum breakpoints

Your register can support a tax table consisting of no more than 72 breakpoints. (The number of breakpoints is 36 maximum when the breakpoint difference is $1.00 or more.) If the number of breakpoints exceeds the register's table capacity, then the manual entry approach should be used.

Example Programming the sample tax table shown on the previous page as tax table 1

Key operation

	2710 [•]	[@/FOR]
	1	[@/FOR]
Tax rate →	6	[@/FOR]
M →	100	[@/FOR]
T →	1	[@/FOR]
Q →	11	[@/FOR]
The first cyclic portion	23	[@/FOR]
	39	[@/FOR]
	57	[@/FOR]
	73	[@/FOR]
M1 (MAX point)→	89	[@/FOR]
	111	[@/FOR]
		[CA/AT]

Print

```
#2710 *PGM2*

TAX1              6.0000%
                  / 1.00
          1         0.11
          2         0.23
          3         0.39
          4         0.57
          5         0.73
          6         0.89
          7         1.11
```

Note *You do not need to enter the trailing zeros of the tax rate (after the decimal point) but you do need to enter the decimal point for fractions.*

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

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

Sample tax table
Example 8%

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

Modification of the left tax table

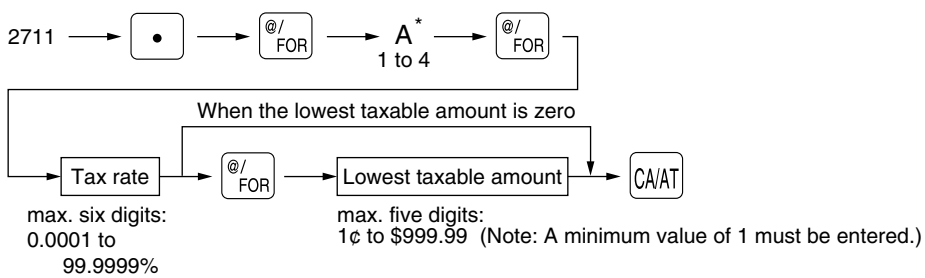
Tax	Minimum breakpoint
.00	.01
.01 ← T	.11 ← Q
.02	.26
.03	.47
.04	.68
.05	.89
.06	.89
.07	1.11 ← M1
.08	1.11
.09	1.11
.10	1.26
.11	1.47
.12	1.68
.13	1.89
.14	1.89
.15	2.11 ← M2
.16	2.11
.17	2.11

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

From the modified tax table above;
Rate = 8(%), T = $0.01 = 1¢, Q = $0.11 = 11¢, M1 = 1.11, M2 = 2.11, M = 100

■ The tax rate PGM 2 2711

Procedure



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

Example Programming the tax rate 4% as tax rate 2 with tax exempt as 12¢

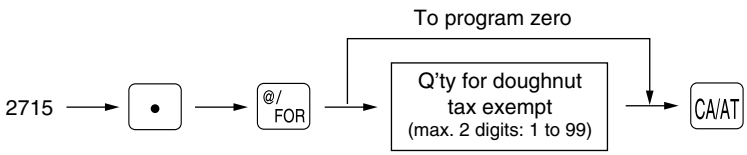
Key operation	Print
2711 [•] [@/FOR] 2 [@/FOR] 4 [@/FOR] 12 [CA/AT]	#2711 *PGM2* TAX2 4.0000% 0.12

Note

- *If you make an incorrect entry before pressing the third [@/FOR] key in programming a tax rate, cancel it with the [CL] key; and if you make an error after pressing the third [@/FOR] key, cancel it with the [SBTL] key. Then program again from the beginning correctly.*
- *You do not need to enter the trailing zeros of the tax rate (after the decimal point), but you do need to enter the decimal for fractions.*

■ Doughnut tax exempt (for the Canadian tax system) PGM 2 2715

Procedure



Note *This option is available only when your register has been set up with the Canadian tax system.*

Example To program the q'ty "6"

Key operation	Print
2715 [•] [@/FOR] 6 [CA/AT]	#2715 *PGM2* EXPT COUNT 6

4 Programming for departments

Your machine is equipped with 20 (ER-A410)/10 (ER-A420) standard departments and a maximum of 99 departments. Your machine allows you to perform the following programming for each department.

■ Functional programming 1 PGM 2 2110 Direct

You can set each department for:

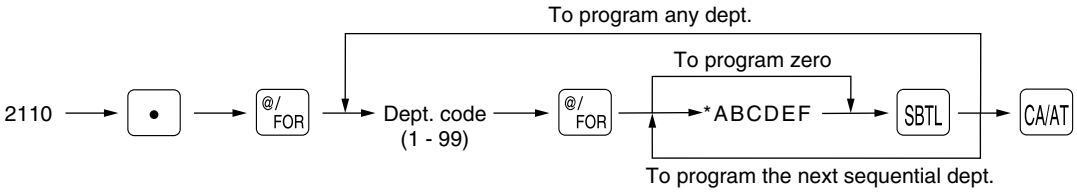
Item validation printing
If item entries must be validated, program corresponding departments for compulsory validation printing.
Tare table number
Tare table number associated with scale entry (1 thru 9)
Scale entry
Program a department for scale entry allowed when your store needs automatic scale entries.
Registration type
- If an entry of a department programmed for SICS is made first, the scale will be finalized as soon as the department key is pressed. If the entry is made after entering a department not programmed for SICS, the sale will not be finalized until the CA/AT key is pressed.
- Whenever a sale is made to a department programmed for SIF, the sale is finalized as soon as the department key is pressed.

Department type
You may program each department as one of the following three types.
- Bottle Return (BR)
- Hash department
  A hash department is used to enter the amount of a special “sale”, such as a gift certificate sale or for the receipt of payment for utility bills, theatre tickets, etc., i.e. “non-sales” registrations. Any amounts entered in this department are not added to the grand total except tax amounts.
- Normal department

Note *If your register has been set for “Bottle return and Hash dept.” by your dealer, you cannot program the department for those operations. So contact your dealer if you need them.*

Type of unit price entry
You may select one of the following four types of unit price entry for each department.
- Open and preset
- Preset only
- Open only
- Inhibit department key

Procedure



*1 Item:		Selection:	Entry:
A	Item validation printing	Non-compulsory	0
		Compulsory	1
B	Tare table number		1 thru 9
C	Scale entry	Inhibit	0
		Enable	1
		Compulsory	2
D	Registration type	Normal	0
		SICS (Single Item Cash Sale)	1
		SIF (Single Item Finalization)	2
E	Department type	Normal department	0
		Hash department	1
		Bottle return department	2
F	Type of unit price entry	Inhibit department key	0
		Open only	1
		Preset only	2
		Open and preset	3

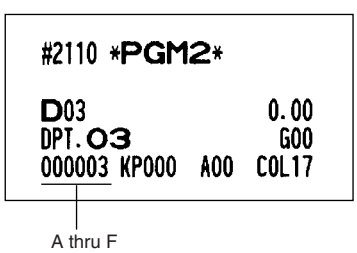
Example

Programming for department 3
Enter ABCDEF=000003 for department 3.

Key operation

2110 [•] [@/FOR]
3 [@/FOR] 000003 [SBTL]
[CA/AT]

Print



■ Functional programming 2 PGM 2 2111 Direct

Sign (plus/minus)

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

Food stamp status

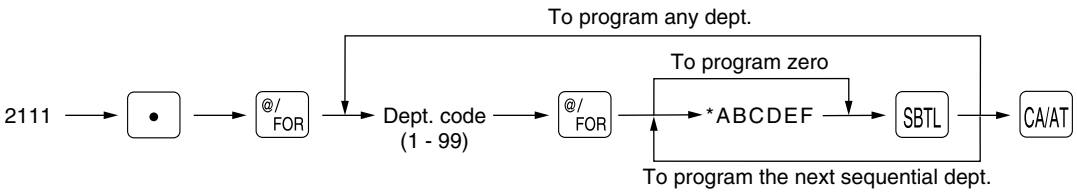
- Assign a food stamp status (food stamp eligible or food stamp ineligible) to each department.

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

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

Note *Tax 4 is prohibited if you use the food stamp function.*

Procedure



*	Item:		Selection:	Entry:
	A	Sign (+/-)	Plus	0
			Minus	1
	B	Food stamp status	Ineligible	0
			Eligible	1
	C	Tax 4 status	Non-taxable	0
			Taxable	1
	D	Tax 3 status	Non-taxable	0
			Taxable	1
	E	Tax 2 status	Non-taxable	0
			Taxable	1
	F	Tax 1 status	Non-taxable	0
			Taxable	1

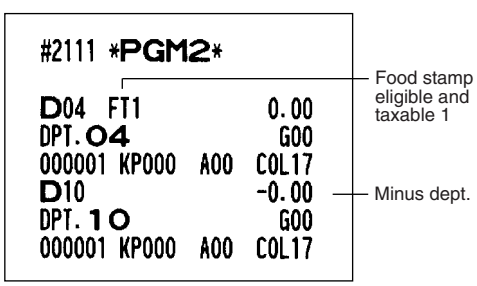
Example

Programming for department 4 and 10
Enter ABCDEF=010001 for department 4.
Enter ABCDEF=100000 for department 10.

Key operation

2111 • @/FOR
4 @/FOR 010001 SBTL
10 @/FOR 100000 SBTL
CA/AT

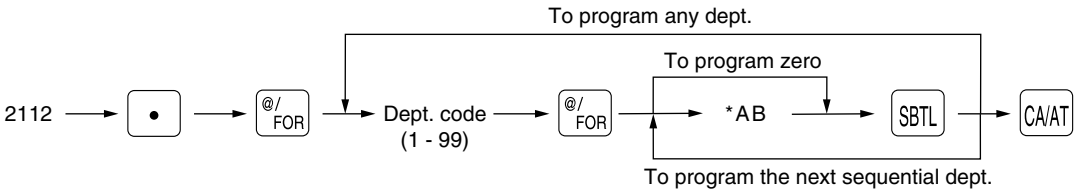
Print



■ A limit amount (HALO) of entry PGM 2 2112 Direct

You can set amounts (HALO: High Amount Lockout) for each department. The limit is effective for the REG mode operations and can be overridden in the MGR mode. The HALO limit is represented by two figures as follows:

Procedure



"**AB**" is the same as **A** × 10^{B}.

A: Significant digit (0 through 9)

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

For example, presetting 13 ($10.00) here means that amount entries of up to $10.00 are allowed in the REG mode. When you preset 17, however, the upper limit amount is 99999.99.

Example Programming HALO limit of 9000.00 (95) for dept. 1

Key operation

2112 [•] [@/FOR]
1 [@/FOR] 95 [SBTL]
[CA/AT]

Print

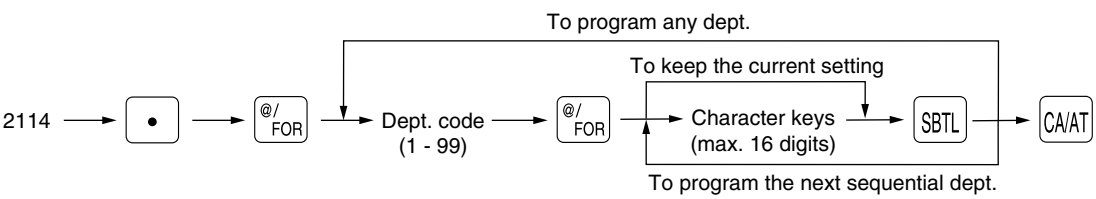
```
#2112 *PGM2*

D01                 0.00
DPT.01               G00
000001 KP000  A00  COL95
```

HALO

■ Alphanumeric characters PGM 2 2114

You can program a maximum of 16 characters (item label) for each department.
Select the characters you want to program, referring to section "2 How to program alphanumeric characters" in chapter "PRIOR TO PROGRAMMING".

Procedure



Example Programming STEAK (steak) for dept. 1

Key operation

2114 [•] [@/FOR]
1 [@/FOR] STEAK [SBTL]
[CA/AT]

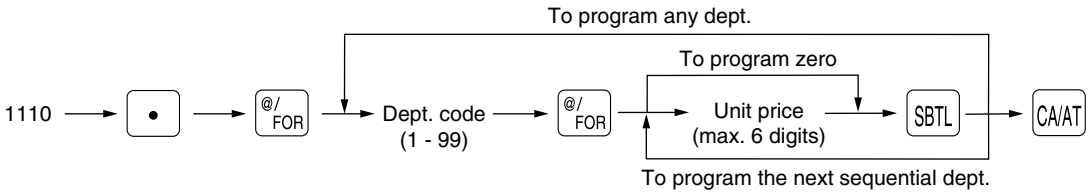
Print

```
#2114 *PGM2*

D01                 0.00
STEAK                G00
000001 KP000  A00  COL95
```

■ Unit price PGM 1 PGM 2 1110 Direct

You can program unit prices up to a maximum of six digits ($9999.99). Even if a department is not programmed to allow the entry of preset unit prices in functional programming 1 (job #2110), the department is automatically changed to allow the entry of preset unit prices by this programming entry.

Procedure

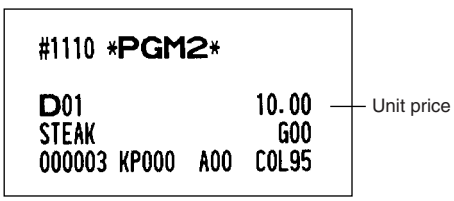


Example Programming $10.00 for dept. 1

Key operation

1110 • @/FOR
1 @/FOR 1000 SBTL
CA/AT

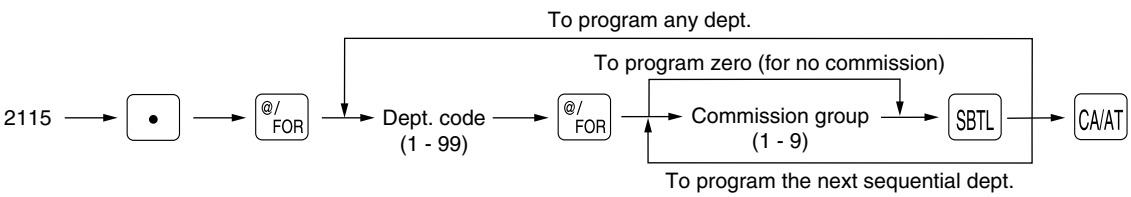
Print



■ Commission group assignment PGM 2 2115 Direct

Your machine allows you to assign a commission group (1 – 9) to each department.

Procedure

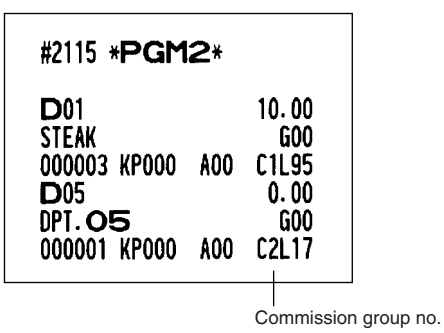


Example Programming commission group 1 for dept. 1 and commission group 2 for dept. 5

Key operation

2115 • @/FOR
1 @/FOR 1 SBTL
5 @/FOR 2 SBTL
CA/AT

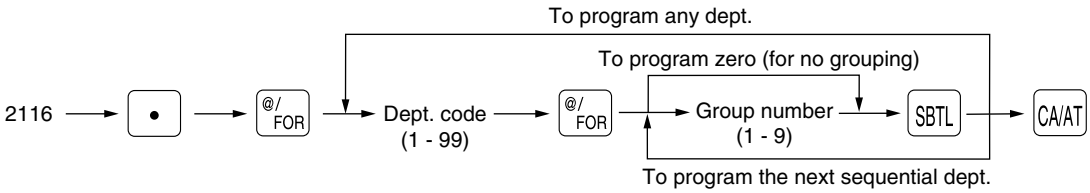
Print



■ Group number PGM 2 2116 Direct

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

Procedure

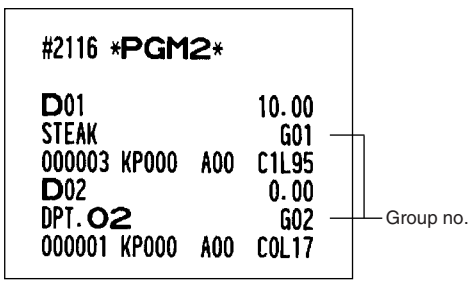


Example Programming the group number 1 for dept. 1 and the group number 2 for dept. 2

Key operation

2116 • @/FOR
1 @/FOR 1 SBTL
2 SBTL
CA/AT

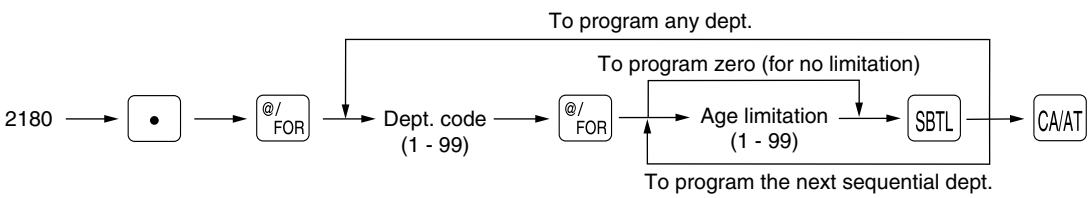
Print



■ Age limitation PGM 2 2180

If an item sold is not allowed to be sold to certain aged persons by law, program the age limitation for the corresponding department.

Procedure



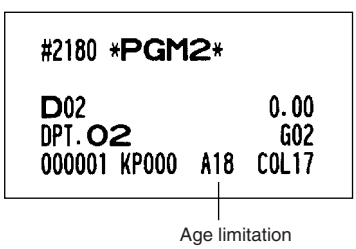
Note *When a department for which a setting other than zero (1 to 99) has been programmed as the age limitation is entered, the birthday entry will be enforced.*

Example Programming the age limitation “18” for dept. 2

Key operation

2180 • @/FOR
2 @/FOR 18 SBTL
CA/AT

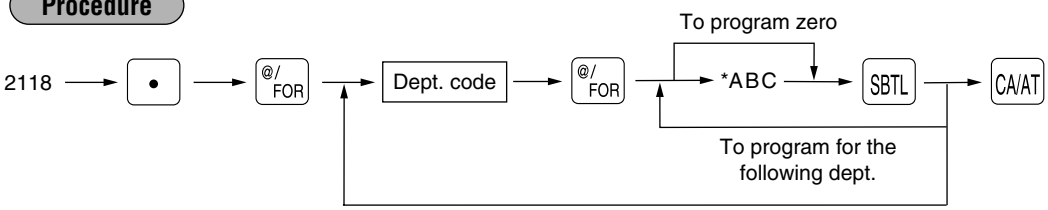
Print



■ Print station assignment PGM 2 2118

When you use a remote printer, please consult your dealer.

Procedure



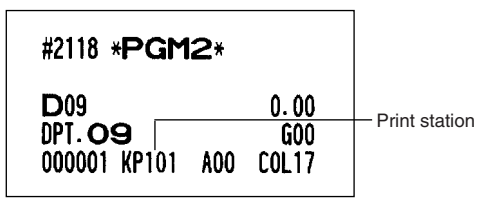
*	Item:		Selection:	Entry:
	A	Remote printer 1 output	Output	1
			Not output	0
	B	Remote printer 2 output	Output	1
			Not output	0
	C	Printing on the chit receipt	Yes	1
			No	0

Example

Key operation

2118 • @/FOR
9 @/FOR 101 SBTL
CA/AT

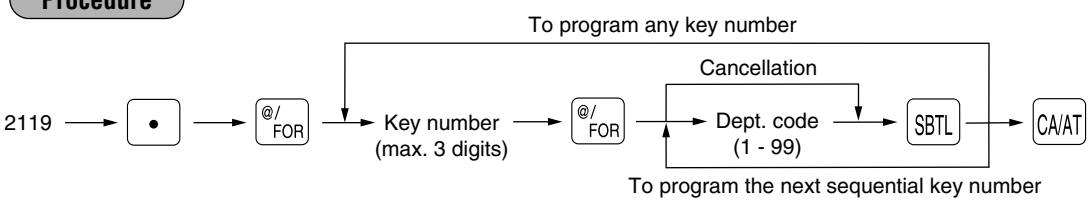
Print



■ Department key positioning PGM 2 2119

You can assign a department code to each key position. Each key position has a corresponding key number.
Departments may be freely selected for the number of department keys and their positions.
To assign the department to a key position, select the key number of the position.
For key number positions, refer to section “3 Standard key number layout” in chapter “KEYBOARD”.

Procedure



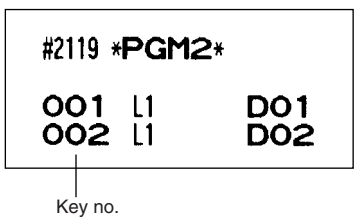
Note *The key number placement is determined by your local authorized SHARP dealer.*

Example

Key operation

2119 • @/FOR
1 @/FOR 1 SBTL
2 SBTL
CA/AT

Print



5 PLU/UPC programming

Your machine has two kinds of PLU registration methods.
Direct PLU registration: Accomplished by pressing item key (direct PLU key) directly.
Indirect PLU registration: Accomplished by making an entry of PLU code and pressing the [PLU/UPC] key.
In this manual, the word "UPC" represents UPC (Universal Product Code) and the word "EAN" represents EAN (European Article Number).
With regard to the UPC codes available to this register, please refer to the chapter 13 in "Job-Code-Based programming".
Each PLU/UPC requires you to program the following:

PLU/UPC code (PLU: max. 5 digits, UPC: 6 to 13 digits)
Associated department
When a PLU/UPC is associated with a department, the following functions of the PLU/UPC depend on the programming for the corresponding department.
- Type (Bottle return/Hash/Normal)
- Single item cash sale/Single item finalization
- HALO (for "Open" type)
- Item validation print compulsory/non-compulsory

Unit price (max. six digits)
You will usually have unit prices programmed for individual PLUs/UPCs as PLU/UPC unit prices.
If you program unit price "0.00" for a PLU/UPC, you can enter only the selling quantity into the PLU/UPC, i.e. the PLU/UPC can be used only as a counter.
Base quantity for split-pricing entries – two digits
Program a base quantity for each PLU/UPC dedicated to split-pricing entries.
Type of unit price entry
- If "Preset only" is selected, individual PLU/UPC entries can be made by entering the assigned code and pressing the [PLU/UPC] key (or by pressing a direct PLU key without any PLU code entry, or by scanning the UPC code).
- If "Open only" is selected, the [PLU/UPC] key must be pressed after the price entry followed by the PLU code and the [PLU/UPC] entry (, or the unit price must be entered before pressing a direct PLU key).
- If "Open and preset" is selected, the entries in both "Preset" and "Open" types are available.
- If the delete mode is selected, the corresponding program data for each PLU/UPC is deleted.
- If the prohibit mode is selected, the PLU/UPC code cannot be entered. This mode does not clear the PLU/UPC program data.

Sign (+/-)
The function of every PLU/UPC varies according to the combination of its sign and its associate department's sign as follows:

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

Food stamp status and tax status (taxable 1, 2, 3 and/or 4, non-taxable)
Item label (max. 16 characters)
Tare table number and scale entry
Age limitation
Commission group (1 to 9)
Mix-and-match table (max. 10 tables)
Set PLU (for only PLU)
You can link a maximum of 10 PLUs to a particular PLU.
Link PLU/UPC link
A PLU/UPC is able to link to any other PLU (e.g. bottle deposit). However, the number of links is a maximum of 5. Even if more than 5 PLUs are linked, the sixth or higher link is not actualized (ignored).
Print station

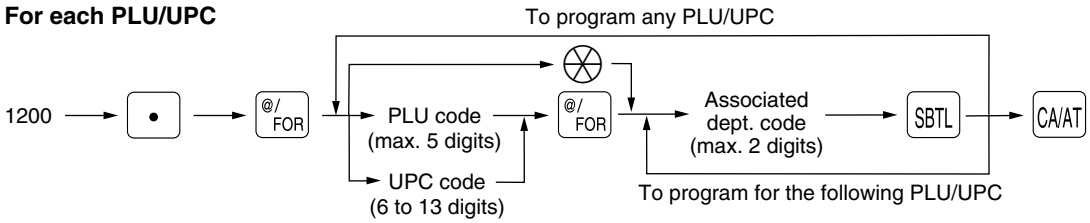
Delete period for non-accessed UPC codes
Non-PLU code format
PLU level assignment and direct PLU key positioning
Stock quantity

Note *For some items, you can program in two ways: programming an individual PLU code and for a range of sequential PLU codes. The procedure marked "For each PLU" shows individual PLU programming. The procedure marked "For a range of PLUs" shows sequential range PLU programming.*

■ Department assignment PGM 1 PGM 2 1200 2230 Direct

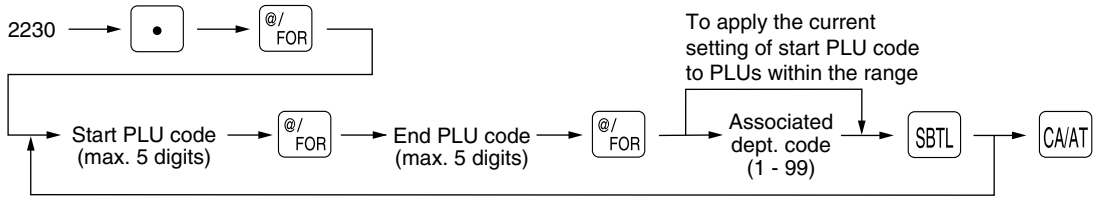
Procedure

For each PLU/UPC



Note *As soon as the programming is completed for one PLU/UPC, the next code appears in the display.*

For a range of PLUs



Example Programming for PLU 1 and UPC 5012345678900 for "Associate department 2"

For each PLU/UPC

Key operation	Print
1200 • @/FOR 1 @/FOR 2 SBTL 5012345678900 @/FOR 2 SBTL CA/AT	#1200 *PGM2* P00001 (02) /00 KP000 0.00 0.00 PLU00001 COM00 1002 A00 S 0.000 5012345678900#(02) /00 KP000 0.00 0.00 COM00 0002 A00 S 0.000

Dept. code

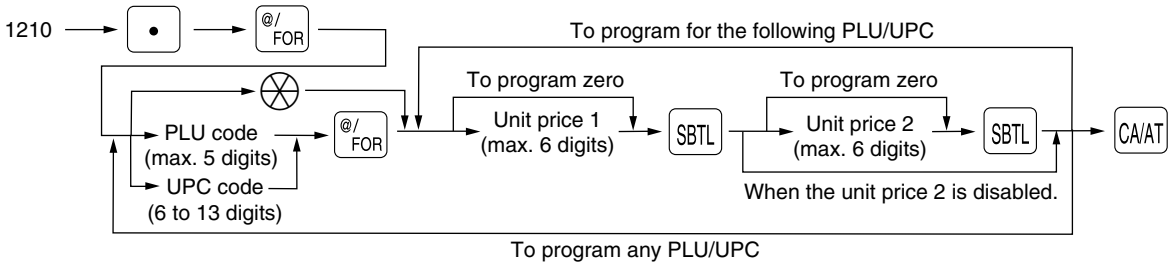
Programming the PLU 11 thru 20 for "Associate department 3"

For a range of PLUs

Key operation	Print
2230 • @/FOR 11 @/FOR 20 @/FOR 3 SBTL CA/AT	#2230 *PGM2* 00011- 00020 (03)

■ Unit prices PGM 1 PGM 2 1210 Direct

Procedure



Note *The preset amount will work as the unit price for the "Preset" type and as the HALO amount for the "Open" type. In the case of the "Open" type, zero preset prevents amount entry and a 9999.99 preset is the maximum limitation. In the case of the "Preset" type zero and 9999.99 preset have no special meaning. (i.e. 0 amount preset is available.)*

Example Programming "$1.25" for PLU 1

Key operation

1210 • @/FOR
1 @/FOR 125 SBTL
(When the price level 2 is enabled.) → SBTL
CA/AT

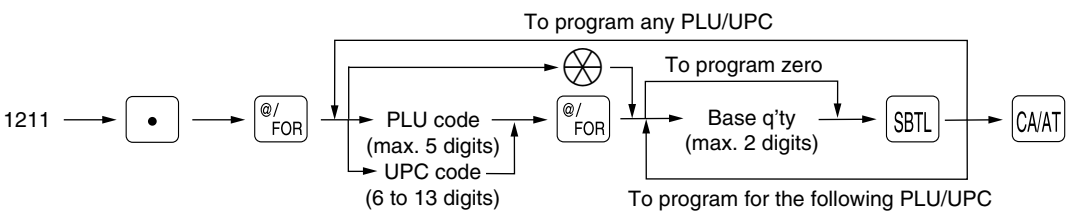
Print

```
#1210 *PGM2*

P00001        (02) /00
      KP000         1.25
                    0.00
PLU00001          COM00
1002     A00 S      0.000
```

Unit price

■ Base quantity PGM 1 PGM 2 1211 Direct

Procedure



Example Programming "12" for PLU 2

Key operation

1211 • @/FOR
2 @/FOR 12 SBTL
CA/AT

Print

```
#1211 *PGM2*

P00002        (01) /12
      KP000         0.00
                    0.00
PLU00002          COM00
1002     A00 S      0.000
```

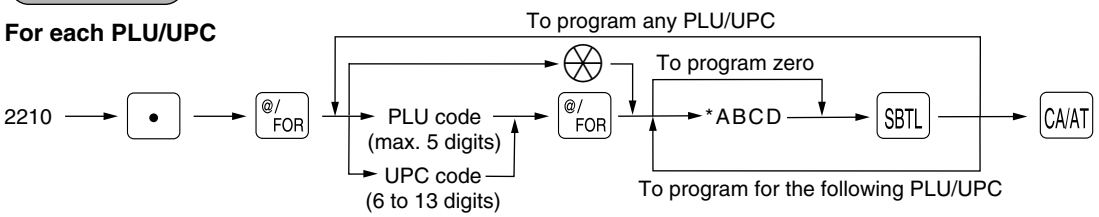
Base q'ty

■ Type of unit price entry, delete method, tare table no. and scale entry PGM 2

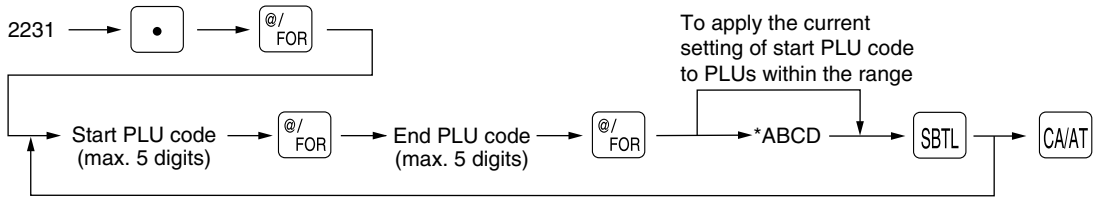
2210 **2231** **Direct**

Procedure

For each PLU/UPC



For a range of PLUs



*	Item:		Selection:	Entry:
	A	Delete method (for only UPC) (for PLU: fixed 1)	Inhibit to delete in non-accessed UPC deleting job (#105 in Z1 mode)	1
			Delete in non-accessed UPC deleting job (#105 in Z1 mode)	0
	B	Tare table number		1 thru 9
	C	Scale entry	Inhibit	0
			Enable	1
			Compulsory	2
	D	Type of unit price entry	Prohibit mode	0
			Open price only (for only PLU)	1
			Preset price only	2
			Open price and preset price (for only PLU)	3
			Delete mode	4

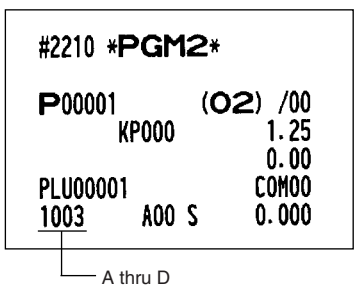
Example To program BCD=003 for PLU1

For each PLU/UPC

Key operation

2210 • @/FOR
1 @/FOR 003 SBTL
CA/AT

Print



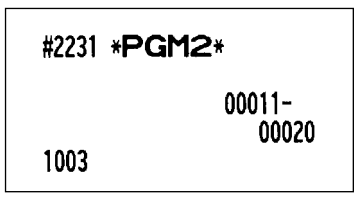
Programming the PLU 11 thru 20 for “Open and preset price”

For a range of PLUs

Key operation

2231 • @/FOR
11 @/FOR 20 @/FOR
003 SBTL
CA/AT

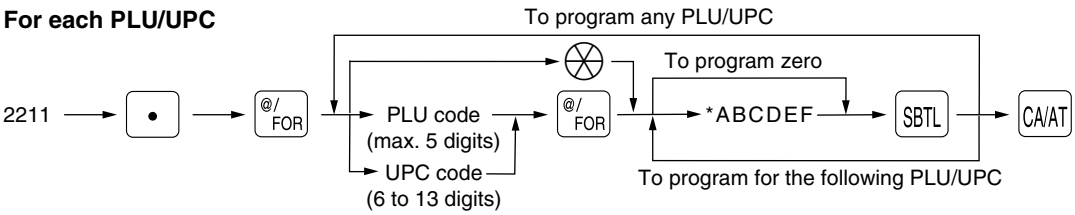
Print



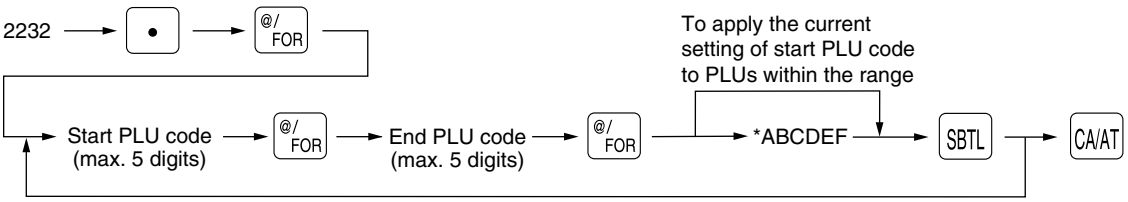
■ Sign (+/-), food stamp status, and tax status PGM 2 2211 2232 Direct

Procedure

For each PLU/UPC



For a range of PLUs



*	Item:		Selection:	Entry:
	A	Sign (+/-)	Plus	0
			Minus	1
	B	Food stamp status	Ineligible	0
			Eligible	1
	C	Tax 4 status	Non-taxable	0
			Taxable	1
	D	Tax 3 status	Non-taxable	0
			Taxable	1
	E	Tax 2 status	Non-taxable	0
			Taxable	1
	F	Tax 1 status	Non-taxable	0
			Taxable	1

Note

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

Tax 4 is prohibited if you use the food stamp function.

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

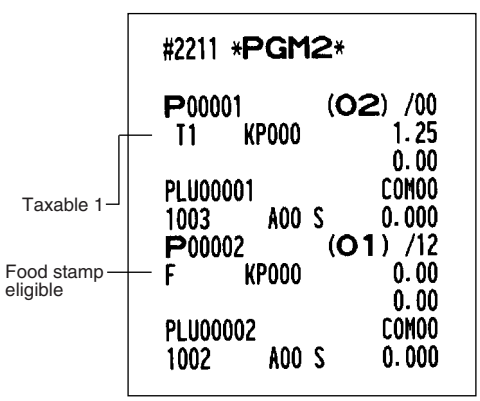
Example Programming ABCDEF=000001 for PLU 1 and ABCDEF=010000 for PLU 2

For each PLU/UPC

Key operation

2211 • @/FOR
1 @/FOR 000001 SBTL
010000 SBTL
CA/AT

Print



Programming the range PLU 11 thru 20 for ABCDEF=000001

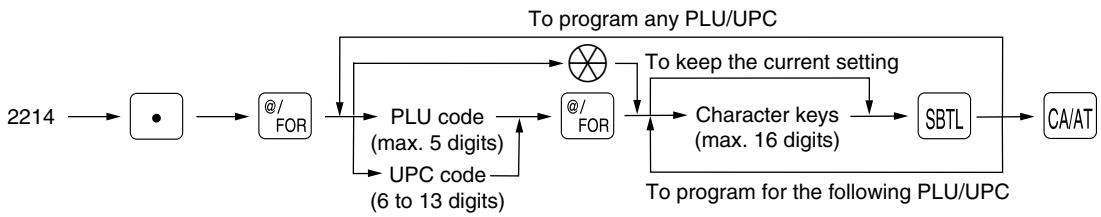
For a range of PLUs

Key operation	Print
2232 [•] [@/FOR] 11 [@/FOR] 20 [@/FOR] 000001 [SBTL] [CA/AT]	#2232 *PGM2* 00011- 00020 T1

■ Alphanumeric characters PGM 2 2214

You can program a maximum of 16 characters (item label) for each PLU/UPC.
Select the characters you want to program, referring to section “2 How to program alphanumeric characters” in chapter “PRIOR TO PROGRAMMING”.

Procedure



Example Programming MILK (milk) for PLU 1

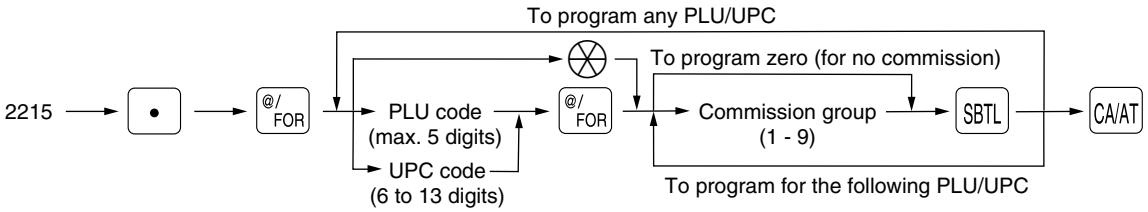
Key operation	Print
2214 [•] [@/FOR] 1 [@/FOR] MILK [SBTL] [CA/AT]	#2214 *PGM2* P00001 (02) /00 T1 KP000 1.25 0.00 MILK COM00 1003 A00 S 0.000

■ Assigning of PLUs/UPCs to commission groups PGM 2 2215 2235 Direct

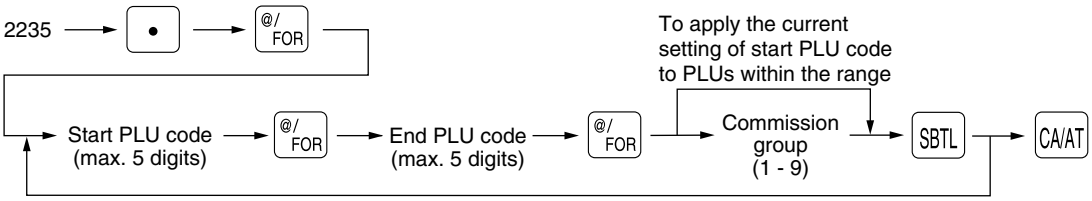
You can assign PLUs/UPCs to commission groups.

Procedure

For each PLU/UPC



For a range of PLUs



Example Programming the commission group 1 for PLU 1

For each PLU/UPC

Key operation

2215 • @/FOR
1 @/FOR 1 SBTL
CA/AT

Print

```
#2215 *PGM2*

P00001        (02) /00
 T1    KP000      1.25
                  0.00
MILK              C1M00
1003     A00 S    0.000
```

Commission group no.

Programming all of PLU 11 thru 20 for the commission group 1

For a range of PLUs

Key operation

2235 • @/FOR
11 @/FOR 20 @/FOR
1 SBTL
CA/AT

Print

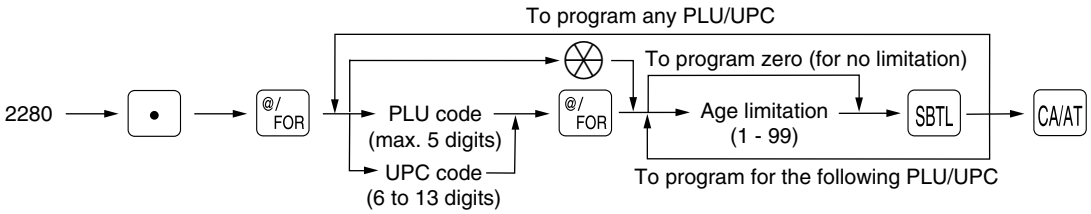
```
#2235 *PGM2*

              00011-
                00020
                C1
```

■ Age limitation PGM 1 PGM 2 2280 2236

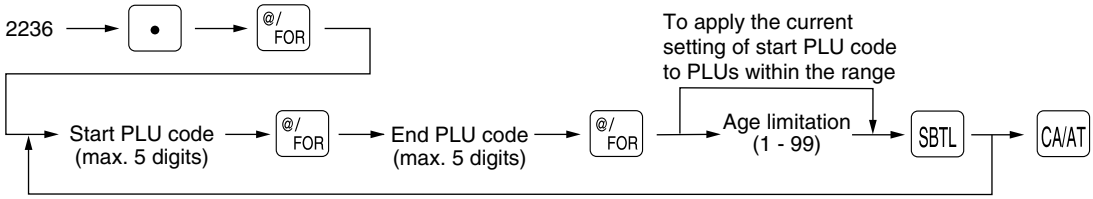
If an item sold is not allowed to be sold to certain aged persons by law, program the age limitation for the corresponding PLU/UPC.

Procedure

For each PLU/UPC



For a range of PLUs



Note *When a PLU/UPC for which a setting other than zero (1 to 99) has been programmed as the age limitation is entered, the birthday entry will be enforced.*

Example Programming the age limitation “18” for PLU 2

For each PLU/UPC

Key operation

2280 • @/FOR
2 @/FOR 18 SBTL
CA/AT

Print

```
#2280 *PGM2*

P00002          (01) /12
F      KP000          0.00
                      0.00
PLU00002             COM00
1002      A18 S      0.000
```

Age limitation

Programming the PLU 11 thru 20 for the age limitation “18”

For a range of PLUs

Key operation

2236 • @/FOR
11 @/FOR 20 @/FOR
18 SBTL
CA/AT

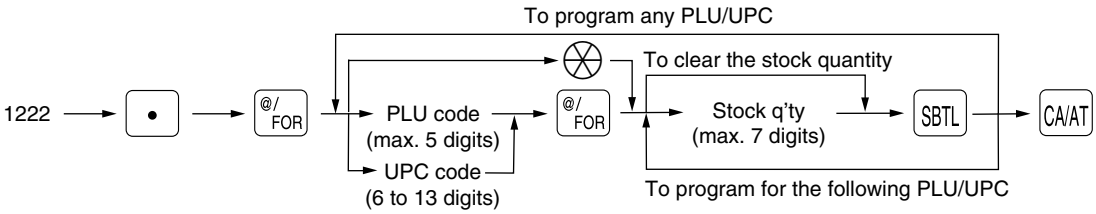
Print

```
#2236 *PGM2*

                  00011-
                    00020
          A18
```

■ Stock quantity PGM 1 PGM 2 1222 1220 1221

You can assign a stock quantity to each PLU/UPC code. (If you want to control a stock quantity, please consult your dealer.) When you assign it for the first time, follow the below procedure:

Procedure

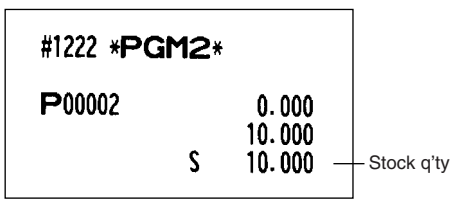


Example To program the stock quantity "10" for PLU 2

Key operation

1222 • @/FOR
2 @/FOR 10 SBTL
CA/AT

Print

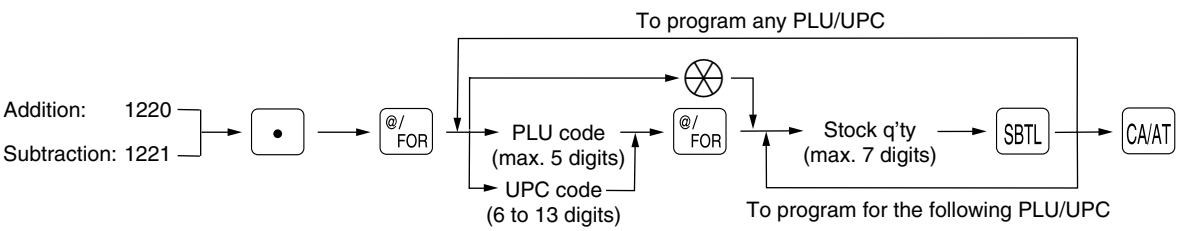


Note

- *If you assign another stock quantity to the PLU/UPC code which you have assigned a stock quantity to, it will be overridden.*
- *You must use a decimal point (•) key when setting quantities that are fractional.*

If you need to add or subtract a stock quantity, follow the below procedure:

Procedure



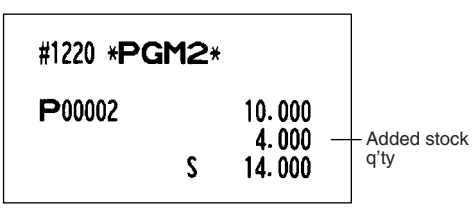
Adding the stock quantity

Example To add the stock quantity "4" to the current stock quantity "10" of PLU2

Key operation

1220 • @/FOR
2 @/FOR 4 SBTL
CA/AT

Print



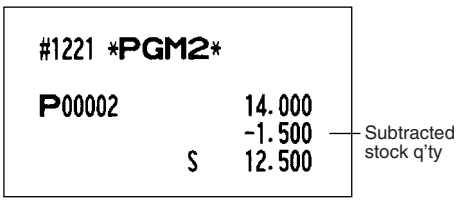
Subtracting the stock quantity

Example To subtract the stock quantity “1.5” from the current stock quantity “14” of PLU 2

Key operation

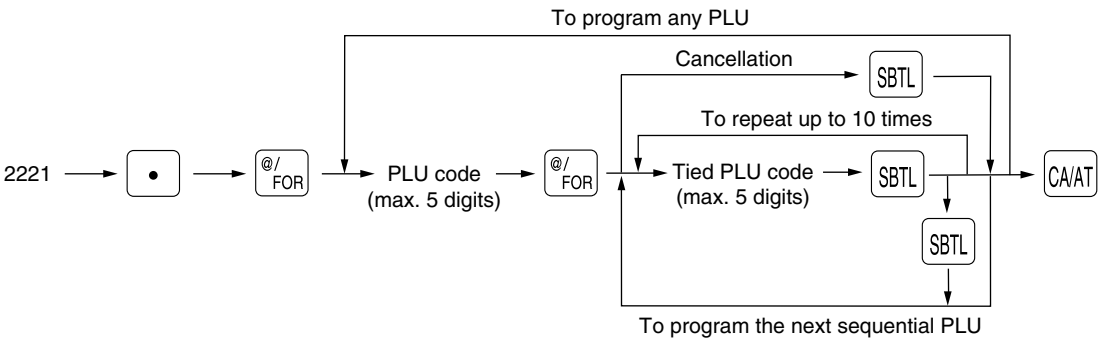
1221 [•] [@/FOR]
2 [@/FOR] 1 [•] 5 [SBTL]
[CA/AT]

Print



■ Set PLU PGM 2 2221

Procedure



Note

PLU codes must have already been defined.
You can program a maximum of 15 set PLUs. A set PLU can be tied to a maximum of 10 PLUs.

Example Programming the set PLU 20 (tied PLUs: PLU 201 and PLU 202)

Key operation

2221 [•] [@/FOR]
20 [@/FOR] 201 [SBTL]
202 [SBTL]
[CA/AT]

Print

■ Mix-and-match table PGM 2 2217 2225

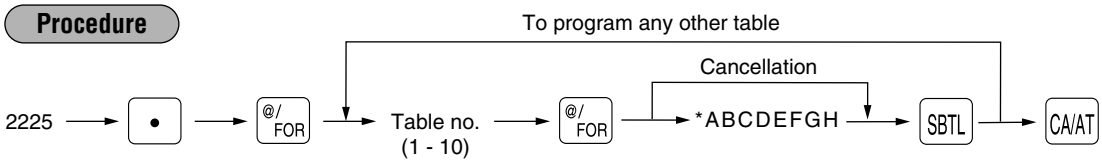
The mix-and-match table consists of the adjustment amount and the matching count for discount (satisfying the count of entered items). You can program a maximum of 10 mix-and-match tables. One table can be assigned maximum of 5 kind of items.

[Ex.] Mix-and-match table no. 1: matching count=3, adjustment amount $7.00
Mix-and-match items of table no. 1: Item-A ($2.30), Item-B ($3.10), Item-C ($2.50)

<Sale 1>		<Sale 2>		<Sale 3>	
Item-A	$2.30	Item-C	$2.50	Item-A	$2.30
Item-A	$2.30	Item-C	$2.50	Item-B	$3.10
Item-B	$3.10	Item-C	$2.50	Item-C	$2.50
Subtotal	$7.70	Subtotal	$7.50	Subtotal	$7.90
(Discount	$0.70)	(Discount	$0.50)	(Discount	$0.90)
Total	$7.00	Total	$7.00	Total	$7.00

Programming of matching count and adjustment amount

Procedure



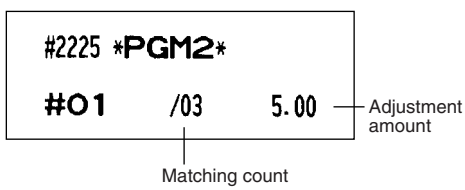
* AB: Matching count (1 - 99)
CDEFGH: Adjustment amount (max. 6 digits)

Example Programming mix-and-match table no.1 (matching count=3, adjustment amount $5.00)

Key operation

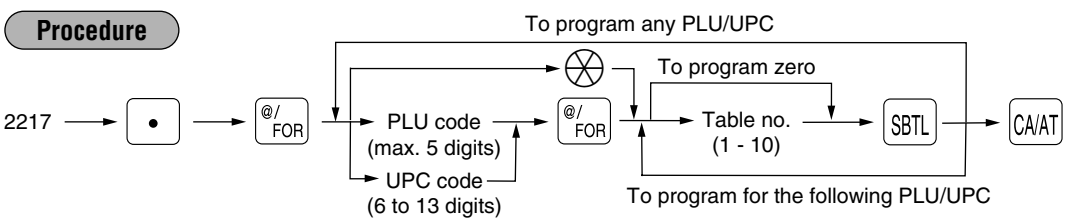
2225 • @/FOR
1 @/FOR 03000500 SBTL
CA/AT

Print



Assigning items to the mix-and-match tables

Procedure

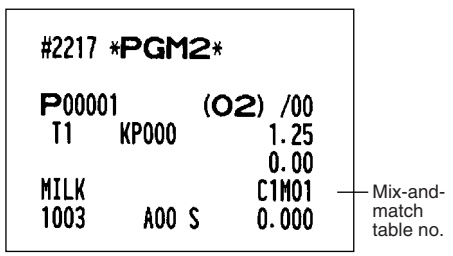


Example Programming mix-and-match table no.1 for PLU 1

Key operation

2217 • @/FOR
1 @/FOR 1 SBTL
CA/AT

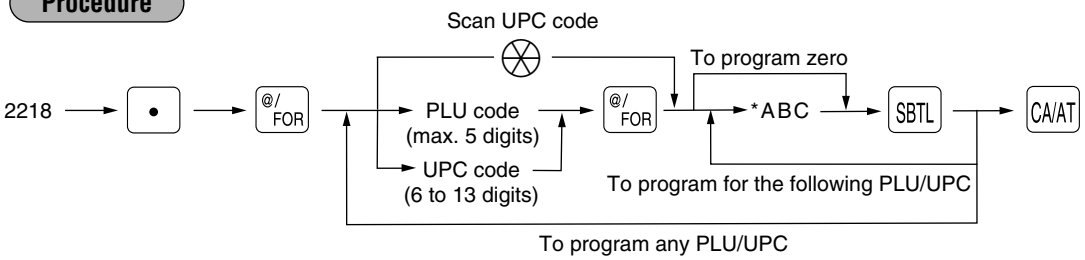
Print



■ Print station to PLU/UPC assignment PGM 2 2218

When you use a remote printer, consult your dealer.

Procedure



*	Item:		Selection:	Entry:
	A	Remote printer 1 output	Output	1
			Not output	0
	B	Remote printer 2 output	Output	1
			Not output	0
	C	Printing on the chit receipt	Yes	1
			No	0

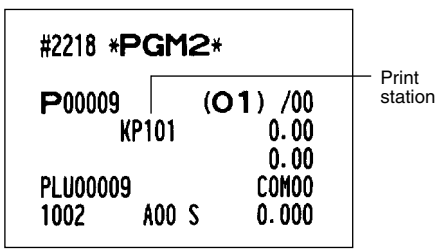
Note *PLU/UPC code must have been already defined.*

Example

Key operation

2218 • @/FOR
9 @/FOR
101 SBTL
CA/AT

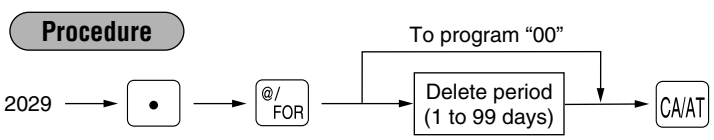
Print



■ Delete period for non-accessed UPC codes PGM 2 2029

You can delete the UPC codes which have not been accessed during the period you set in this program when you execute the job #105 in Z1 mode when you set “Delete in non-accessed UPC deleting job” in the UPC delete method (#2210).

Procedure



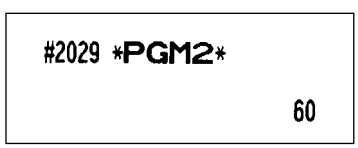
* When you select “00” for the period, no UPC code is deleted by the non-accessed UPC deleting job.

Example

Key operation

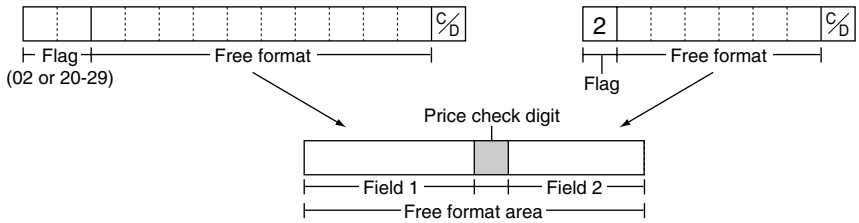
2029 • @/FOR
60 CA/AT

Print

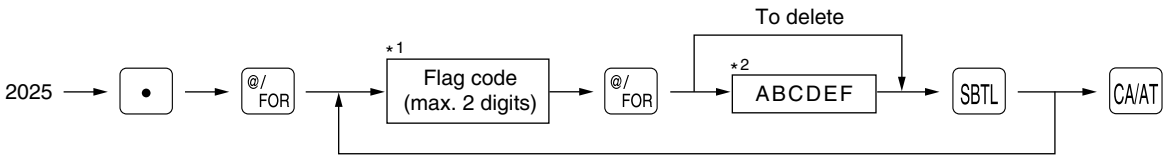


■ Programming Non-PLU code format PGM 2 2025

The register allows you to specify the Non-PLU code format (flag code: 2, 02, 20 -29).
The format data is as follows:



Procedure



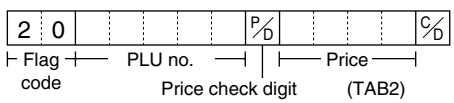
*1 Flag code: 2, 02, 20 - 29

*2

Item:		Selection:	Entry:
A	Length of field 1 (number of digits)		0 - 9
B	Length of field 2 (number of digits)		0 - 9
C	Always enter 0.	(Fixed position)	0
D	Meaning of field 2*3	Quantity	2
		Price	0
E	Price check digit used	Yes	1
		No	0
F	TAB or decimal point of field 2 (0, 1, 2, 3)		0 - 3

*3: When you preset a quantity, the sales amount is calculated as follows: quantity x unit price programmed in #1210.

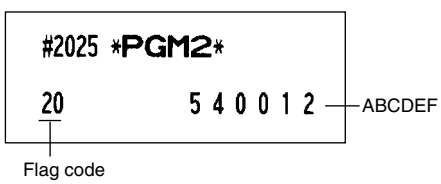
Example



Key operation

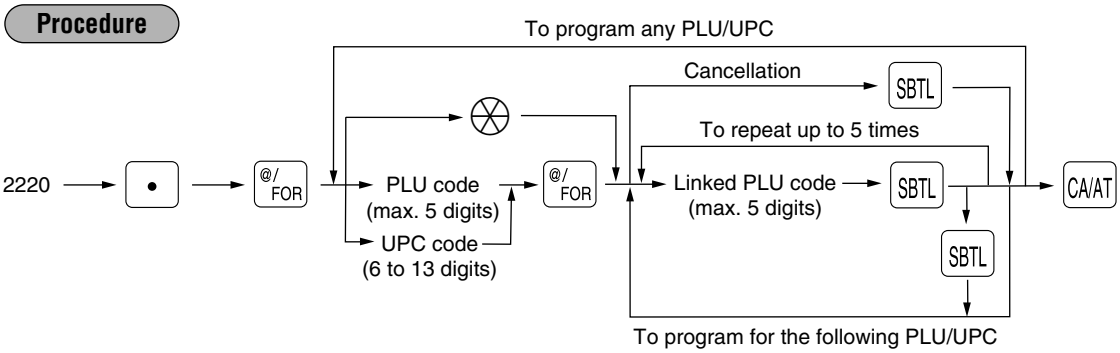
2025 • @/FOR
20 @/FOR
540012 SBTL
CA/AT

Print



■ Link PLU/UPC link PGM 2 2220

Procedure



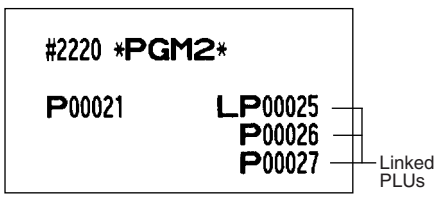
Note *PLU/UPC codes must have already been defined.*
You can program a maximum of 15 link PLUs/UPCs. A link PLU/UPC can be linked to a maximum of 5 PLUs.

Example Programming so that PLU 25, 26 and 27 are linked to PLU 21

Key operation

2220 • @/FOR
21 @/FOR 25 SBTL
26 SBTL
27 SBTL
CA/AT

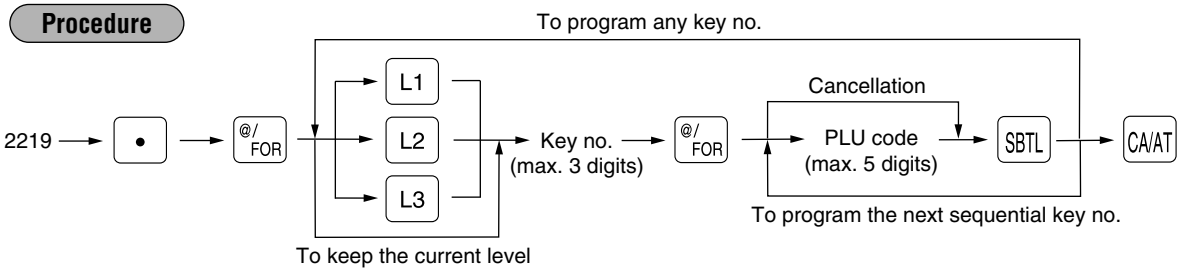
Print



■ Programming of PLU levels and direct PLU keys PGM 2 2219

You can assign PLU codes to fixed keys in each PLU level and use those keys as direct PLU key.
For assigning a PLU level, press the L1, L2 or L3 key. For example, if you want to assign PLU level 1 and key no. 1 to a PLU code, press the L1 key and enter 1 before entering the PLU code.
For key no. position, refer to section "3 Standard key number layout" in chapter "KEYBOARD".

Procedure



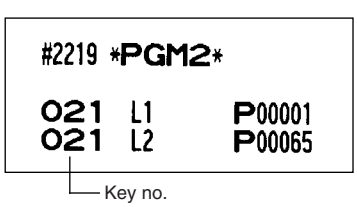
Note *The key number placement is determined by your local Authorized SHARP Dealer.*

Example Programming of PLU 1 (level 1) and PLU 65 (level 2) are assigned to key no. 21

Key operation

2219 • @/FOR
L1 21 @/FOR 1 SBTL
L2 21 @/FOR 65 SBTL
CA/AT

Print



6 Programming for miscellaneous keys

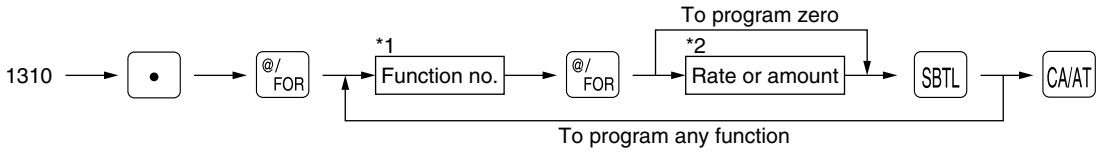
Only function keys which you have programmed on the keyboard will allow this programming.

■ Programming the rate ([%], [CONV], commission) and the discount ([⊖]) PGM 1

PGM 2 **1310** Direct

You can program percent rates, currency conversion rates, commission rate, and discount amount.

Procedure



*1: Function no.

1: For the [⊖] key	7: For the [%3] key	109: For the commission sale 1	115: For the commission sale 7
2: For the [⊖2] key	8: For the [%4] key	110: For the commission sale 2	116: For the commission sale 8
3: For the [⊖3] key	71: For the [CONV] key	111: For the commission sale 3	117: For the commission sale 9
4: For the [⊖4] key	72: For the [CONV2] key	112: For the commission sale 4	
5: For the [%] key	73: For the [CONV3] key	113: For the commission sale 5	
6: For the [%2] key		114: For the commission sale 6	

*2: Rate or amount

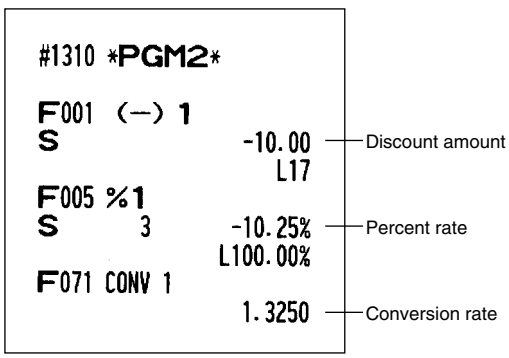
0 — 999999 (Discount amount)
0.00 — 100.00 (% rate)
0.0000 — 9999.9999 (Currency conversion rate)
0.00 — 999.99 (Commission rate)

Example Assigning $10.00 to the [⊖] key, 10.25% to the [%] key, and 1.325 to the [CONV] key.

Key operation

1310 [•] [@/FOR]
1 [@/FOR] 1000 [SBTL]
5 [@/FOR] 10 [•] 25 [SBTL]
71 [@/FOR] 1 [•] 325 [SBTL]
[CA/AT]

Print

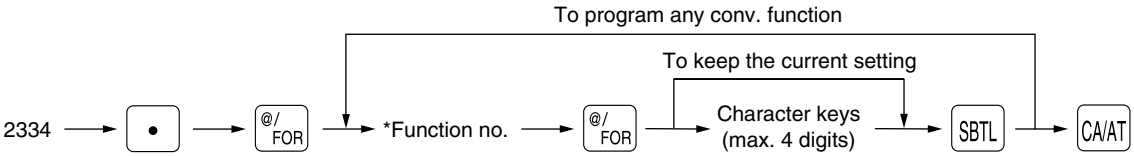


Note *You must use a decimal point when setting percentage rates that are fractional.*

■ Currency description text programming (CONV) PGM 2 2334

You can program a maximum of 4 characters for each of the CONV thru CONV4 keys.

Procedure



*: Function no.

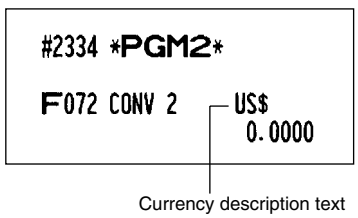
71: For the CONV key
72: For the CONV2 key
73: For the CONV3 key
74: For the CONV4 key

Example Programming “US$” for the CONV2 key

Key operation

2334 • @/FOR
72 @/FOR SPACE US$ SBTL
CA/AT

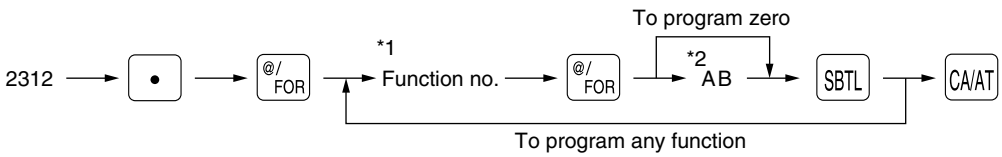
Print



■ A limit amount (HALO) of entry (⊖, TAX, RA, PO) PGM 2 2312 Direct

The HALO limit is in effect for the REG-mode operations but can be overridden in the MGR mode. The HALO limit is represented by two figures as follows:

Procedure



*1: Function no.

1: For the ⊖ key	64: For the RA key
2: For the ⊖2 key	65: For the RA2 key
3: For the ⊖3 key	66: For the PO key
4: For the ⊖4 key	67: For the PO2 key
32: For the TAX key	

*2: AB is the same as A x 10^B.
A: Significant digit (0 through 9)
B: Number of zeros to follow significant digit
0 through 7 (for the ⊖ thru ⊖4, and TAX keys)
0 through 8 (for the RA, RA2, PO, and PO2 keys)

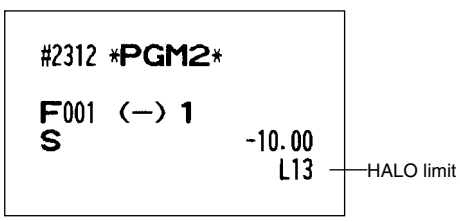
For example, presetting 13 ($10.00) here means that amount entries of up to $10.00 are allowed in the REG mode.
You can set up AB = 17 for no limitation (for the ⊖ thru ⊖4, and TAX keys).
You can set up AB = 18 for no limitation (for the RA, RA2, PO, and PO2 keys).

Example Programming 13 for the ⊖ key.

Key operation

2312 • @/FOR
1 @/FOR 13 SBTL
CA/AT

Print

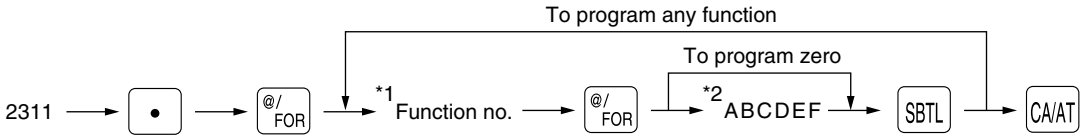


■ +/- sign, food stamp status, and tax status (%, ⊖) PGM 2 2311 Direct

+/- sign: Programming of the +/- sign assigns the premium or discount function for each key.
Food stamp status: Programming of the food stamp status decides whether a premium or discount should be dealt with as a food stamp-eligible amount or not.
Tax status: Programming of the tax status decides whether a premium or discount should be dealt with as a taxable (taxable 1/2/3/4) or non-taxable amount.

Note *Tax 4 is prohibited if you use the food stamp function.*

Procedure



*1: Function no.

1: For the ⊖ key
2: For the ⊖2 key
3: For the ⊖3 key
4: For the ⊖4 key
5: For the % key
6: For the %2 key
7: For the %3 key
8: For the %4 key

*2:

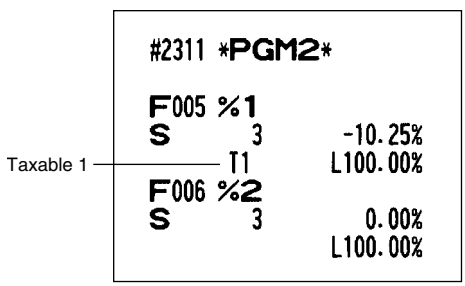
Item:		Selection:	Entry:
A	(+/-) sign	Plus	0
		Minus	1
B	Food stamp status	Ineligible	0
		Eligible	1
C	Tax 4 status	Non-taxable	0
		Taxable	1
D	Tax 3 status	Non-taxable	0
		Taxable	1
E	Tax 2 status	Non-taxable	0
		Taxable	1
F	Tax 1 status	Non-taxable	0
		Taxable	1

Example Programming ABCDEF=100001 for the % key and ABCDEF=000000 for the %2 key

Key operation

2311 • @/FOR
5 @/FOR 100001 SBTL
6 @/FOR 000000 SBTL
CA/AT

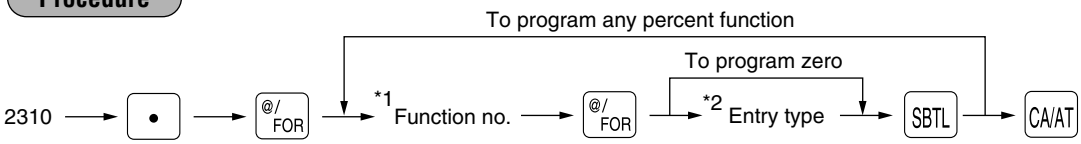
Print



■ Percent entry type (%) PGM 2 2310

You can program the entry type of rates for percent entries.

Procedure



*1: Function no.
- 5: For the % key
- 6: For the %2 key
- 7: For the %3 key
- 8: For the %4 key

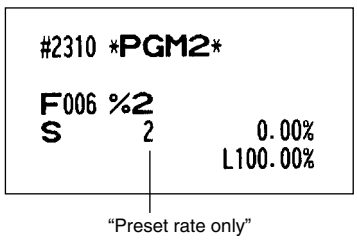
*2: Entry type
- 0: Inhibited entry
- 1: Open rate only
- 2: Preset rate only
- 3: Open rate and preset rate

Example Programming "Preset rate only" for the %2 key

Key operation

2310 • @/FOR
6 @/FOR 2 SBTL
CA/AT

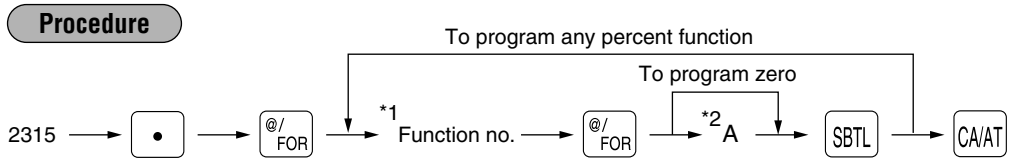
Print



■ Item% or subtotal% selection (%) PGM 2 2315 Direct

Item%: Select this when a percent calculation is desired for the individual department and PLU.
Subtotal%: Select this when a percent calculation is desired for merchandise subtotals.

Procedure



*1: Function no.
- 5: For the % key
- 6: For the %2 key
- 7: For the %3 key
- 8: For the %4 key

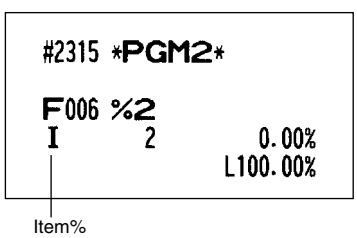
*2: A
- 0: Subtotal%
- 1: Item%

Example Programming "Item%" for the %2 key

Key operation

2315 • @/FOR
6 @/FOR 1 SBTL
CA/AT

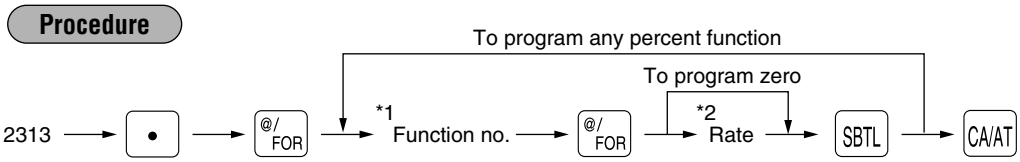
Print



■ Percent rate limitation (%) PGM 2 2313

You can program the upper limit of percent rates for percent entries.
Percent entries that use the upper limit may be overridden in the MGR mode.

Procedure



*1: Function no.
5: For the % key 7: For the %3 key
6: For the %2 key 8: For the %4 key

*2: Rate
0.00 – 100.00 (Entering 0.00 inhibits the open percent rate entry)

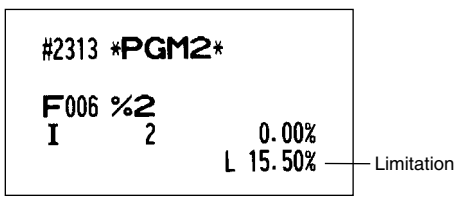
Note *The • key is needed only for fractional entry.*

Example Programming the limit to 15.5% for the %2 key

Key operation

2313 • @/FOR
6 @/FOR 15 • 5 SBTL
CA/AT

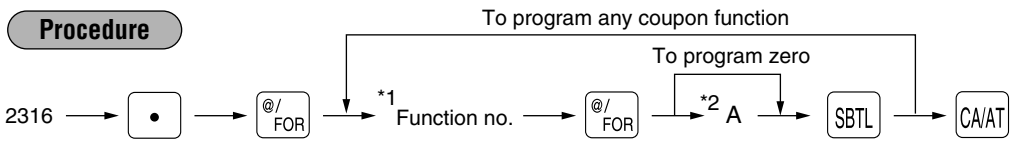
Print



■ Vendor or store coupon selection (⊖) PGM 2 2316 Direct

Vendor coupon: Select this when the coupon is to be applied to the total sales amount.
Store coupon: Select this when the coupon is to be applied to an individual department or PLU.

Procedure



*1: Function no.
1: For the ⊖ key 3: For the ⊖3 key
2: For the ⊖2 key 4: For the ⊖4 key

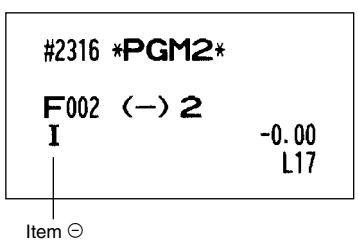
*2: A
0: Vendor coupon (subtotal ⊖)
1: Store coupon (item ⊖)

Example Programming the "Store coupon" for the ⊖2 key.

Key operation

2316 • @/FOR
2 @/FOR 1 SBTL
CA/AT

Print



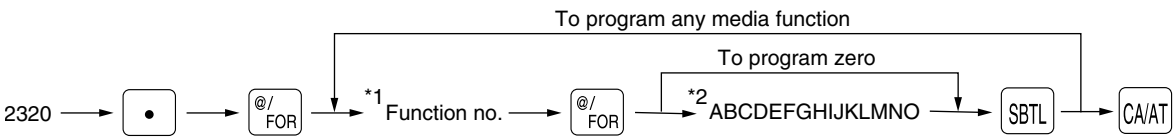
7 Programming for the [CA/AT], [CA2], [CHK], [CHK2], and [CH] thru [CH5] keys

■ Functional programming PGM 2 2320 Direct

You can set each media for:

CAT transaction is compulsory
CAT action (POST-AUTH/DIAL)
CAT type (CREDIT/DEBIT/CHECK)
Card number printing selection
Card number print format (partial/full)
CAT signature line print selection
CAT expiration printing selection
Number of CAT authorization receipts (0 - 9)
Bill (slip) print compulsory
Footer printing on receipt
This programming decides whether or not your machine should print a message at the foot of a receipt when a specified media key is used.
Non-add code compulsory
You can enforce the non-add code entry when a media entry is accepted.
Change enable (over tender enable)
Either change enable or disable can be selected for a corresponding media key.
Validation printing compulsory
If media entries must be validated, set the corresponding media for compulsory validation print.
Drawer opening
You can program each media key to or not to open the drawer.
Amount tendered compulsory
You may select amount tendered compulsory or optional for the [CA/AT], [CA2], [CHK], and [CHK2] keys.
You may select amount tendered compulsory or inhibited for the [CH] thru [CH5] keys.

Procedure



*1: Function no.

61: For the [CA/AT] key	80: For the [CH3] key	87: For the [CHK2] key
62: For the [CA2] key	82: For the [CH4] key	56: For the [SRVC] key
76: For the [CH] key	84: For the [CH5] key	63: For the [FS TEND] key
78: For the [CH2] key	86: For the [CHK] key	159: For the [FINAL] key

*2:	Item:		Selection:	Entry:
	A	CAT transaction	Non-compulsory	0
			Compulsory	1
	B	CAT action	POST-AUTH	0
			DIAL	1
	C	CAT type	CREDIT	0
			DEBIT	1
			CHECK	2
	D	Card number printing	Yes	0
			No	1
	E	Card number print format	Partial (printing only part of the card number)	0
			Full (printing the entire card number)	1
	F	CAT signature line print	Yes	0
			No	1
	G	CAT expiration printing	Yes	0
			No	1
	H	Number of CAT authorization receipts		0 thru 9
	I	Bill (slip) printing	Non-compulsory	0
			Compulsory	1
	J	Footer printing on receipt	No	0
			Yes	1
	K	Non-add code entry	Non-compulsory	0
			Compulsory	1
	L	Change enable (over tender enable)	Enable	0
			Disable	1
	M	Validation printing	Non-compulsory	0
			Compulsory	1
	N	Drawer opening	Yes	0
			No	1
	O	Amount tendered operation	Optional amount tendered for cash or check	0
			Inhibit amount tendered for charge	0
			Compulsory amount tendered	1

Note

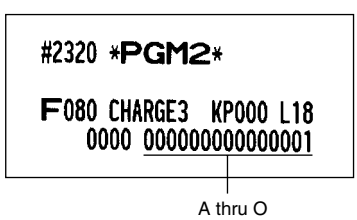
- *For the [SRVC] or [FINAL] key; always enter 0 as A thru H and J thru O.*
- *For the [FS TEND] key, always enter 0 as A thru H, K, L, and O.*

Example Programming of the [CH3] key for selecting only to have compulsory amount tendered

Key operation

2320 [•] [@/FOR]
80 [@/FOR]
000000000000001 [SBTL]
[CA/AT]

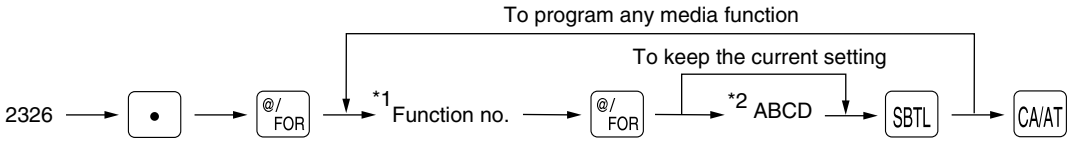
Print



■ Tax delete PGM 2 2326

You can program each media key to delete tax (i.e. tax 1, tax 2, tax 3, tax 4) when it is pressed.

Procedure



*1: Function no.

61: For the CA/AT key	82: For the CH4 key
62: For the CA2 key	84: For the CH5 key
76: For the CH key	86: For the CHK key
78: For the CH2 key	87: For the CHK2 key
80: For the CH3 key	

*2:

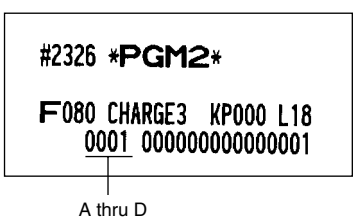
Item:		Selection:	Entry:
A	Tax 4 calculation status	calculate tax 4	0
		delete tax 4	1
B	Tax 3 calculation status	calculate tax 3	0
		delete tax 3	1
C	Tax 2 calculation status	calculate tax 2	0
		delete tax 2	1
D	Tax 1 calculation status	calculate tax 1	0
		delete tax 1	1

Example Programming the CH3 key to delete tax 1

Key operation

2326 • @/FOR
80 @/FOR 0001 SBTL
CA/AT

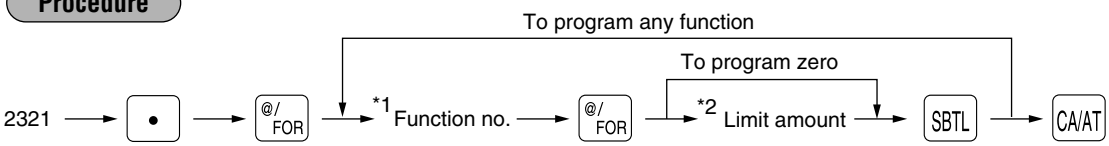
Print



■ High amount lockout (HALO) for check cashing, check change, and cash in drawer PGM 2 2321

You can program the upper limit amounts for check cashing, check change, and cash in drawer.

Procedure



*1: Function no.
68: For check cashing
69: For check change
89: For cash in drawer (sentinel)

*2: Limit amount
0 thru 999999.99 (check cashing and check change)
0 thru 9999999.99 (cash in drawer)

Example Setting the limit to $99.99 for check cashing.

Key operation

2321 • @/FOR
68 @/FOR 9999 SBTL
CA/AT

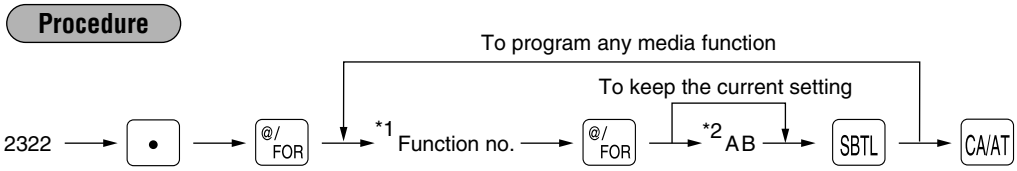
Print

```
#2321 *PGM2*
F068 CA/CHK
                99.99
```

■ High amount lockout (HALO) of entry for media keys PGM 2 2322 Direct

The HALO limit is in effect for REG mode operations but can be overridden in the MGR mode. The HALO limit is represented by two figures as follows:

Procedure



*1: Function no.
61: For the CA/AT key
62: For the CA2 key
76: For the CH key
78: For the CH2 key
80: For the CH3 key
82: For the CH4 key
84: For the CH5 key
86: For the CHK key
87: For the CHK2 key

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

Example Setting the HALO limit to $1000.00 (15) for the CH3 key

Key operation

2322 • @/FOR
80 @/FOR 15 SBTL
CA/AT

Print

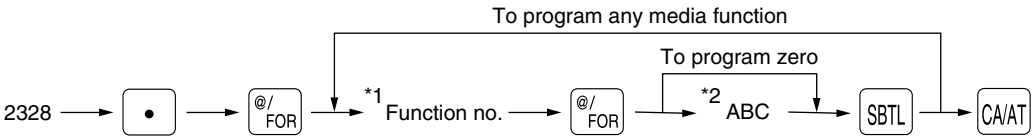
```
#2322 *PGM2*
F080 CHARGE3  KP000 L15
   0001 000000000000001
```

HALO

■ Print station assignment PGM 2 2328

When you use a remote printer, consult your dealer.

Procedure



*1: Function no.

61: For the CA/AT key	80: For the CH3 key	87: For the CHK2 key
62: For the CA2 key	82: For the CH4 key	56: For the SRVC key
76: For the CH key	84: For the CH5 key	63: For the FS TEND key
78: For the CH2 key	86: For the CHK key	159: For the FINAL key

*2:

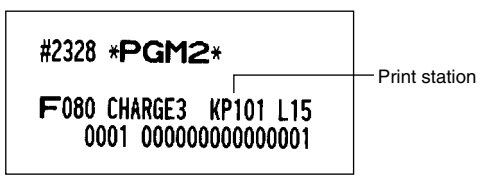
Item:		Selection:	Entry:
A	Remote printer 1 output	Output	1
		Not output	0
B	Remote printer 2 output	Output	1
		Not output	0
C	Printing on the chit receipt	Yes	1
		No	0

Example Programming of the CH3 key for selecting “remote printer 1 output/remote printer 2 not output/printing on chit receipt”

Key operation

2328 • @/FOR
80 @/FOR
101 SBTL
CA/AT

Print

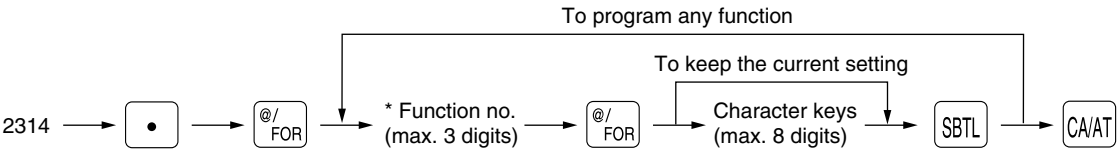


8 Programming of function text

■ Programming PGM 2 2314

You can program a maximum of 8 characters for each function key and other functions using the table on the following pages. Select the characters you want to program referring to section “2 How to program alphanumeric characters” in chapter “PRIOR TO PROGRAMMING”.

Procedure



* Function no.: See “List of function texts” on the following pages.

Example Programming VISA for CH3 key

Key operation

2314 • @/FOR
80 @/FOR VISA SPACE SPACE SPACE SBTL
CA/AT

Print

```
#2314 *PGM2*

F080 VISA      KP101 L15
     0001 000000000000001
```

■ List of function texts

Function no.	Key or function	In default of proramming
1	⊖1	**(–) 1**
2	⊖2	**(–) 2**
3	⊖3	**(–) 3**
4	⊖4	**(–) 4**
5	%1	**% 1**
6	%2	**% 2**
7	%3	**% 3**
8	%4	**% 4**
9	Net sales total	**N E T 1**
10	Net taxable 1 subtotal	TAX1 ST
11	Gross tax 1 total	GRS TAX1
12	Tax 1 total of refund entries	RFD TAX1
13	Net tax 1 total	TAX1
14	Exempt tax 1	TX1 EXPT
15	Net taxable 2 subtotal	TAX2 ST
16	Gross tax 2 total	GRS TAX2
17	Tax 2 total of refund entries	RFD TAX2
18	Net tax 2 total	TAX2
19	Exempt tax 2	TX2 EXPT
20	Net taxable 3 subtotal	TAX3 ST
21	Gross tax 3 total	GRS TAX3
22	Tax 3 total of refund entries	RFD TAX3
23	Net tax 3 total	TAX3
24	Exempt tax 3	TX3 EXPT
25	Net taxable 4 subtotal	TAX4 ST
26	Gross tax 4 total	GRS TAX4
27	Tax 4 total of refund entries	RFD TAX4
28	Net tax 4 total	TAX4
29	Exempt tax 4	TX4 EXPT
30	Gross manual tax total	GRS MTAX
31	Refund manual tax total	RFD MTAX
32	Net manual tax total	M–TAX
*33	Exempt total from GST	GST EXPT
*34	PST total	PST TTL
*35	GST total	GST TTL
36	FS1 forgive	FS TX1
37	FS2 forgive	FS TX2
38	FS3 forgive	FS TX3
39	Tax total	TTL TAX
40	Net	**N E T**
41	Sales total including tax total	**N E T 2**
42	Coupon-like PLU	CP PLU
43	Item void	VOID
44	Subtotal void	SBTL VD
45	Manager void	MGR VD
46	Void mode	**V O I D**
47	Refund	REFUND

Function no.	Key or function	In default of proramming
48	Hash item void	HASH VD
49	Hash item refund	HASH RF
50	No sale	NO SALE
51	Validation print counter	VP CNT
52	Bill (slip) counter	BILL CNT
53	Drawer counter	DRW CNT
54	Tray subtotal	TRAY TL
55	PBAL	✳✳✳PBAL
56	Service	SERVICE
57	Deposit	DEPOSIT
58	Deposit refund	DPST RF
59	Customer counter	TRANS CT
60	Sales total	**N E T 3**
61	Cash	**C** ASH
62	Cash2	**C** ASH2
63	Food stamp sales	FSSALE
64	RA	✳✳✳RA
65	RA2	✳✳✳RA2
66	PO	✳✳✳PO
67	PO2	✳✳✳PO2
68	Check cashing	CA/CHK
69	Check change	CHK/CG
70	Food stamp change	FS/CG
71	Currency conversion1	CONV 1
72	Currency conversion2	CONV 2
73	Currency conversion3	CONV 3
74	Currency conversion4	CONV 4
75	Food stamp in drawer	FS/ID
76	Gross charge1	CHARGE1
77	Refund charge1	CHARGE1–
78	Gross charge2	CHARGE2
79	Refund charge2	CHARGE2–
80	Gross charge3	CHARGE3
81	Refund charge3	CHARGE3–
82	Gross charge4	CHARGE4
83	Refund charge4	CHARGE4–
84	Gross charge5	CHARGE5
85	Refund charge5	CHARGE5–
86	Check	CHECK1
87	Check2	CHECK2
88	Cash + check in drawer	CA/CH ID
89	Cash in drawer	✳✳✳✳CID
*90	Exempt VAT	VAT EXPT
91	Sales average	AVE.
92	Group 1	**G** ROUP01
93	Group 2	**G** ROUP02
94	Group 3	**G** ROUP03

Function no.	Key or function	In default of proramming
95	Group 4	**G** ROUP04
96	Group 5	**G** ROUP05
97	Group 6	**G** ROUP06
98	Group 7	**G** ROUP07
99	Group 8	**G** ROUP08
100	Group 9	**G** ROUP09
101	Price level 1 for PLU	LEVEL 1
102	Price level 2 for PLU	LEVEL 2
103	(+)Dept. total	✳DEPT TL
104	(–)Dept. total	DEPT(–)
105	Hash (+)dept. total	✳HASH TL
106	Hash (–)dept. total	HASH(–)
107	(+)Bottle return total	✳BTTL TL
108	(–)Bottle return total	BTTL(–)
109	Commission sale 1	COM.SAL1
110	Commission sale 2	COM.SAL2
111	Commission sale 3	COM.SAL3
112	Commission sale 4	COM.SAL4
113	Commission sale 5	COM.SAL5
114	Commission sale 6	COM.SAL6
115	Commission sale 7	COM.SAL7
116	Commission sale 8	COM.SAL8
117	Commission sale 9	COM.SAL9
118	Non commission sale	NON COM.
119	Commission amount 1	COM.AMT1
120	Commission amount 2	COM.AMT2
121	Commission amount 3	COM.AMT3
122	Commission amount 4	COM.AMT4
123	Commission amount 5	COM.AMT5
124	Commission amount 6	COM.AMT6
125	Commission amount 7	COM.AMT7
126	Commission amount 8	COM.AMT8
127	Commission amount 9	COM.AMT9
128	Commission amount total	COM.TTL
129	Cash/check is	CA/CH IS
130	Conversion1 is	CONV1 IS
131	Conversion2 is	CONV2 IS
132	Conversion3 is	CONV3 IS
133	CCD differ	CCD DIF.

Function no.	Key or function	In default of proramming
134	CCD differ total	DIF. TL
135	Subtotal	SUBTOTAL
136	Merchandise subtotal	MDSE ST
137	Total	✳✳✳TOTAL
138	Change	CHANGE
139	Food stamp subtotal	FS ST
140	Food stamp tender	FS TEND
141	Food stamp change	FS CG
142	Items	ITEMS
143	Copy receipt title	**D E P T**
144	Group report title	GROUP
145	PLU/UPC report title	PLU/UPC
146	Stock report title	STOCK
147	Zero sales report title	ZERO SAL
148	Category report title	CATEGORY
149	Transaction report title	TRANS.
150	Cash in drawer report title	**C I D**
151	Commission sales report title	SALES
152	CCD report title	**C C D**
153	Cashier report title	CASHIER
154	Hourly report title	HORLY
155	Daily net report title	DAILY
156	PBLU report title	**P B L U**
157	Non-add code text	#
158	Copy receipt title	**C O P Y**
159	Final (used only for PGM mode)	FINAL
160	Balance	BALANCE
161	Slip print message on journal	SLIP PR.
162	Slip next page	NEXT P.
163	Balance forward	BAL FWD
164	Tare weight	TARE WT.
165	DUE (text on display)	DUE
166	TAX ST (text on display)	TAX ST
167	AMOUNT (text on display)	AMOUNT
168	WEIGHT (text on display)	WEIGHT
169	Refund type of sales (text on display)	RF SALE
170	Vender coupon UPC	V. CP UPC
171	Non-accessed UPC report title	NO ACCES
172	Price change title	PR. CHNG

Note

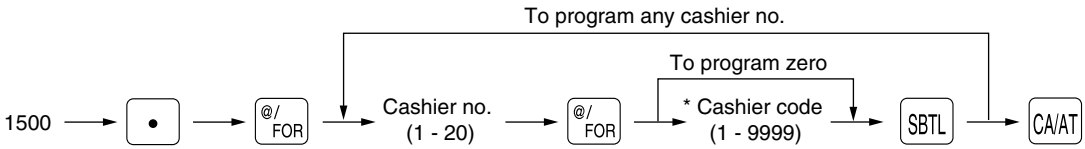
- *The items marked with " * " are for Canada only.*
- *The function no. 90 "Exempt VAT" is only effective for the Canadian tax system (2 GST, VAT type).*

9 Cashier programming

■ Cashier code PGM 1 PGM 2 1500

You can assign a cashier code to each cashier. For more details, please contact your local dealer.

Procedure



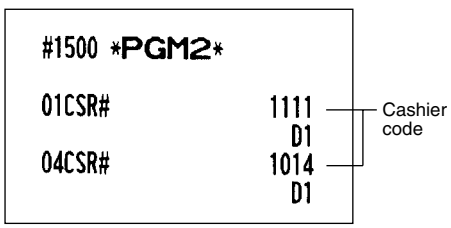
* Programming cashier code “0” inhibits entries of the cashier code.

Example To program 1111 for cashier no.1 and 1014 for cashier no. 4

Key operation

1500 • @/FOR
1 @/FOR 1111 SBTL
4 @/FOR 1014 SBTL
CA/AT

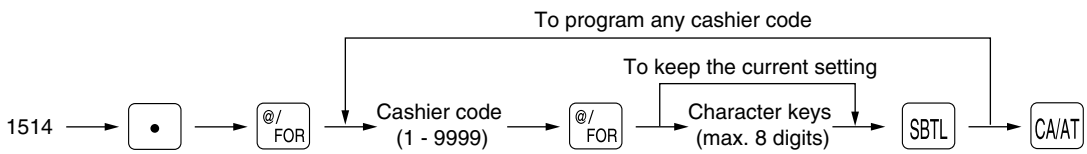
Print



■ Cashier name PGM 1 PGM 2 1514

You can program a maximum of 8 characters (cashier name) for each cashier. Select the characters you want to program referring to section “2 How to program alphanumeric characters” in chapter “PRIOR TO PROGRAMMING”.

Procedure



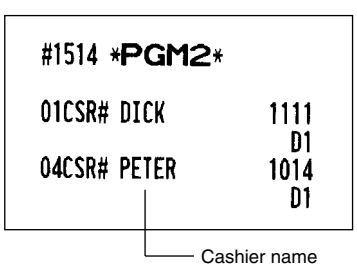
Note *The cashier code must be programmed for the cashier by job #1500 prior to assigning text.*

Example To program "DICK" for cashier code 1111 and “PETER” for cashier code 1014

Key operation

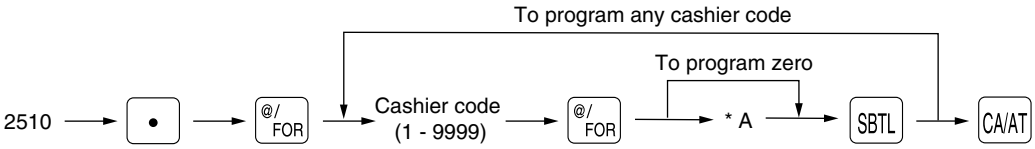
1514 • @/FOR
1111 @/FOR DICK SBTL
1014 @/FOR PETER SBTL
CA/AT

Print



■ Assigning cashiers to drawers PGM 2 2510

Procedure



Note *The cashier code must be programmed for the cashier by job #1500 prior to assigning drawer no.*

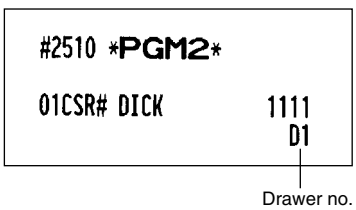
* Item:		Selection:	Entry:
A	Drawer no.	Use no drawer	0
		Set the drawer no. 1 or 2	1 or 2

Example Assigning cashier code 1111 to drawer no. 1

Key operation

2510 • @/FOR
1111 @/FOR 1 SBTL
CA/AT

Print



10 Programming various functions

■ Programming for optional feature selection PGM 2 2616

Your register enables you to select the following options:

OP X/Z mode availability

When a cashier needs to take the cashier X/Z report, he or she will use the OP X/Z mode. This programming determines whether he or she will be allowed to use this mode.

Note *You can take the cashier X and Z reports in the X1/Z1 mode regardless of the above programming.*

Paid-out in the REG mode
Refund type of sale in the REG mode
Refund in the REG mode
Direct void in the REG mode
Indirect void in the REG mode
Subtotal void in the REG mode
Validation printing in a refund entry
First item direct void
PLU level shift mode

- Automatic return mode: This mode automatically shift the PLU level back to level 1 (ordinary level) after a direct PLU entry.
- Lock shift mode: This mode holds the current PLU level until making a level shift operation (pressing a level shift key).

Available mode for PLU level shift
Printing of the number of purchased items
Time printing on the receipt/journal

Journal print form

You may choose either of the following forms.

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

Availability of the item validation printing
Validation printing in a discount (⊖) entry
Zero skip for various reports
Automatic return mode for PLU level

- By one receipt: Returns the PLU level to level 1 after each receipt.
- By one item: Returns the PLU level to level 1 after each item entry.

Available mode for PLU/UPC price shift
PLU/UPC price shift mode

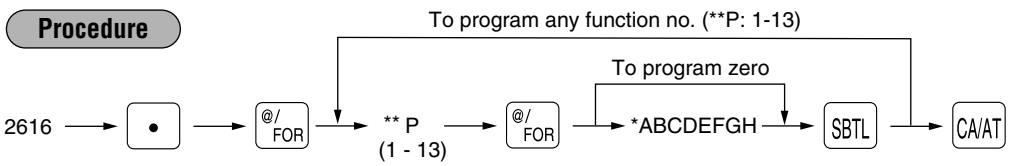
- Automatic return mode: This mode automatically shifts the price level back to price 1 (ordinary level) after the entry.
- Lock shift mode: This mode holds the current price level until making a price shift selection (pressing the price shift key).

Automatic return mode for PLU/UPC price level

- By one receipt: Returns the price level to price 1 after each receipt.
- By one item: Returns the price level to price 1 after each item entry.

No sale in REG mode
Finalization when the subtotal amount is zero in the REG mode
Item printing in PBLU transactions on the slip
Usability of the RA entry
Validation printing in a check cashing entry
Validation printing in a RA entry
Validation printing in a PO entry
Birthday date printing for the age limitation
Footer graphic logo printing
Learning function of UPC entry
Price change function in REG mode
Printing of the price shift text on the receipt/journal
Treating the EAN8 code (200XXXXC/D)
Price entry after ISBN/ISSN code entry

Procedure



**P: 1

*	Item:		Selection:	Entry:
	A	OP X/Z mode	Enable	0
			Disable	1
	B	Paid-out in REG mode	Enable	0
			Disable	1
	C	Refund type of sale in the REG mode	Enable	0
			Disable	1
	D	Refund in the REG mode	Enable	0
			Disable	1
	E	Direct void in REG mode	Enable	0
			Disable	1
	F	Indirect void in the REG mode	Enable	0
			Disable	1

 (To be continued on the next page)

*	Item:		Selection:	Entry:
	G	Subtotal void in REG mode	Enable	0
			Disable	1
	H	Validation printing in a refund entry	Non-compulsory	0
			Compulsory	1

**P: 2

*	Item:		Selection:	Entry:
	A	The first item direct void	Enable	0
			Disable	1
	B	PLU level shift mode	Automatic return mode	0
			Lock shift mode	1
	C	Available mode for PLU level shift	REG and MGR modes	0
			MGR mode only	1
	D	Printing of the number of purchased items	No	0
			Yes	1
	E	Time printing on the receipt/journal	Yes	0
			No	1
	F	Journal print form	Detailed	0
			Limited	1
	G	Availability of the item validation printing	Enable	0
			Disable	1
	H	Validation printing in a discount (⊖) entry	Non-compulsory	0
			Compulsory	1

**P: 3

*	Item:		Selection:	Entry:
	A	Always enter 0.		0
	B	Always enter 0.		0
	C	Zero skip in cashier report	Yes	0
			No	1
	D	Zero skip in transaction report	Yes	0
			No	1
	E	Zero skip in department report	Yes	0
			No	1
	F	Zero skip in PLU/UPC report	Yes	0
			No	1
	G	Zero skip in hourly report	Yes	0
			No	1
	H	Zero skip in daily net report	Yes	0
			No	1

**P: 4

*	Item:		Selection:	Entry:
	A	Always enter 0.		0
	B	Always enter 0.		0
	C	Always enter 0.		0
	D	Always enter 0.		0
	E	Always enter 0.		0
	F	Always enter 0.		0
	G	Always enter 0.		0
	H	Automatic return mode for PLU level	After each item	0
			After each receipt	1

**P: 5

*	Item:	Selection:	Entry:
A	Always enter 0.		0
B	Always enter 0.		0
C	Always enter 0.		0
D	Always enter 0.		0
E	Always enter 0.		0
F	Available mode for PLU/UPC price shift	REG and MGR modes	0
		MGR mode only	1
G	PLU/UPC price shift mode	Automatic return mode	0
		Lock shift mode	1
H	Automatic return mode for PLU/UPC price level	After each item	0
		After each receipt	1

**P: 6 (ABCDEFGH: Always enter 0.)

**P: 7

*	Item:	Selection:	Entry:
A	Always enter 0.		0
B	Always enter 0.		0
C	No sale in REG mode	Enable	0
		Disable	1
D	Finalization when the subtotal amount is zero in the REG mode	Enable	0
		Disable	1
E	Item printing in PBLU transaction on the slip	Yes	0
		No	1
F	Always enter 0.		0
G	Always enter 0.		0
H	Always enter 0.		0

**P: 8

*	Item:	Selection:	Entry:
A	Always enter 0.		0
B	Always enter 0.		0
C	Always enter 0.		0
D	Usability of the RA entry	Without limitation	0
		Only for PBLU transaction	1
E	Validation printing in a check cashing	Non-compulsorly	0
		Compulsory	1
F	Validation printing in a RA entry	Non-compulsorly	0
		Compulsory	1
G	Validation printing in a PO entry	Non-compulsorly	0
		Compulsory	1
H	Always enter 0.		0

**P: 9

*	Item:	Selection:	Entry:
A	Always enter 0.		0
B	Always enter 0.		0
C	Birthday date printing for the age limitation	Yes	0
		No	1
D	Always enter 0.		0
E	Always enter 0.		0
F	Always enter 0.		0
G	Always enter 0.		0
H	Footer graphic logo printing	No	0
		Yes	1

**P: 10

*	Item:	Selection:	Entry:
A and **B**	Always enter 0.		0
C	Learning function of UPC entry	Yes	0
		No	1
D to **H**	Always enter 0.	(Fixed position)	0

**P: 11 (ABCDEFGH: Always enter 0.)

**P: 12

*	Item:	Selection:	Entry:
A to **G**	Always enter 0.		0
H	Price change function in REG mode	Enable	0
		Disable	1

**P: 13

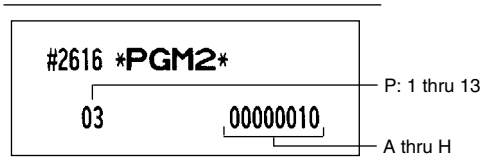
*	Item:	Selection:	Entry:
A to **C**	Always enter 0.		0
D	Printing of the price shift text on the receipt/journal	Yes	0
		No	1
E	Always enter 0.		0
F	Treating the EAN8 code (200XXXXC/D)	Yes	0
		No	1
G	Always enter 0.		0
H	Price entry after ISBN/ISSN code entry	Compulsory	0
		Inhibited	1

Example Programming to select zero suppression for the cashier report, transaction report, dept. report, PLU/UPC report and daily net report, and to select non-skip printing for an hourly report.

Key operation

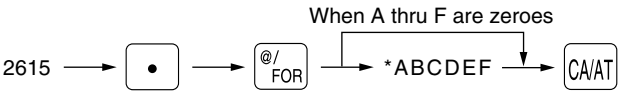
2616 [•] [@/FOR]
3 [@/FOR] 00000010 [SBTL]
[CA/AT]

Print



■ Programming the parameter of the slip printer PGM 2 2615

Procedure



* AB: Initial slip feed line (0 to 64)
CD: Slip print max. line no. (0 to 99)
E: Validation printing counter (1 thru 9 times)
To inhibit validation printing, enter 0.
F: Feed lines after printing of a tray subtotal (0 thru 9 lines)

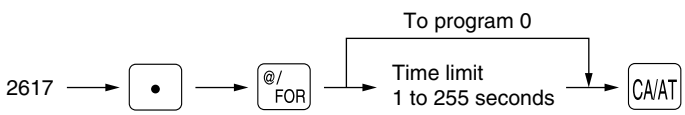
Example Entering 009910 to ABCDEF

Key operation	Print
2615 • @/FOR 009910 CA/AT	#2615 *PGM2* 00 99 1 0

■ Setting the time limit for THE TILL TIMER™ PGM 2 2617

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

Procedure



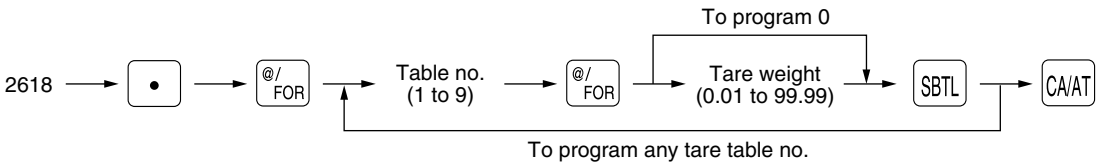
Example Setting the time limit as 30 (seconds).

Key operation	Print
2617 • @/FOR 30 CA/AT	#2617 *PGM2* 030

■ Scale tare table PGM 2 2618

The register can be programmed with up to nine tare tables and allows different tares to be assigned to them (for auto scale entries).

Procedure

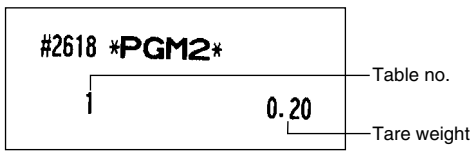


Example To assign the tare weight 0.20 lbs to tare table no. 1

Key operation

2618 • @/FOR
1 @/FOR 20 SBTL
CA/AT

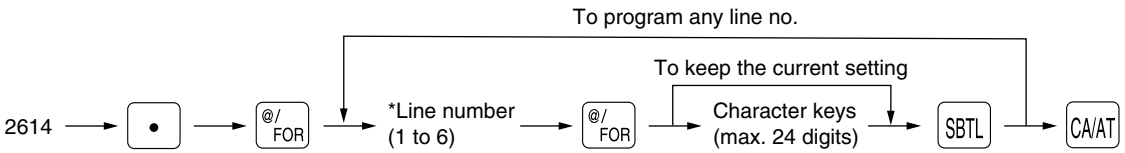
Print



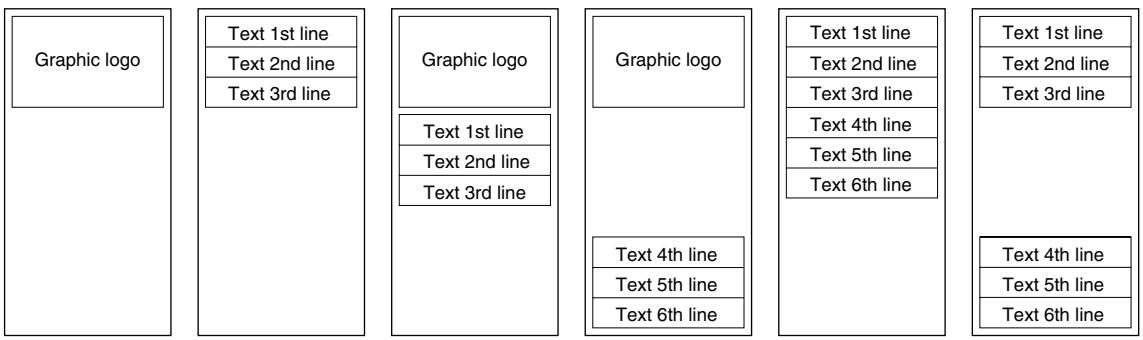
■ Programming of logo messages PGM 2 2614

Your register can print programmed messages for customers on every receipt. On the standard model, the ER-A410 prints a graphic logo/the ER-A420 is set to print a header 3-line message on the receipt. (If you want a graphic logo customerized for your store, please consult your dealer.)
If you want to print logo message, please consult your dealer too. You have five options described below.
Select the characters you want to program, referring to section "2 How to program alphanumeric characters" in chapter "PRIOR TO PROGRAMMING."

Procedure



* "Header 3-line message" type: 1 to 3
"Footer 3-line message" type : 4 to 6
"Header 6-line message" type: 1 to 6
"Header 3-line and footer 3-line message" type: 1 to 6 (1 to 3 as header, 4 to 6 as footer)



Graphic logo only | Header 3-line message | Footer 3-line message | Header 6-line message | Header 3-line message and footer 3-line messages

Example To program the following logo message by using 3 lines:

YOUR
STORE
MESSAGE

Key operation

2614 • @/FOR
1 @/FOR (SPACE) (SPACE) (SPACE) (SPACE) (SPACE) (SPACE) (SPACE)
(DC) Y O U R (DC)
(SPACE) (SPACE) (SPACE) (SPACE) SBTL
2 @/FOR (SPACE) (SPACE) (SPACE) (SPACE) (SPACE) (SPACE)
(DC) S T O R E (DC)
(SPACE) (SPACE) (SPACE) SBTL
3 @/FOR (SPACE) (SPACE) (SPACE) (SPACE)
(DC) M E S S A G E (DC)
SBTL
CA/AT

((SPACE):Space key)

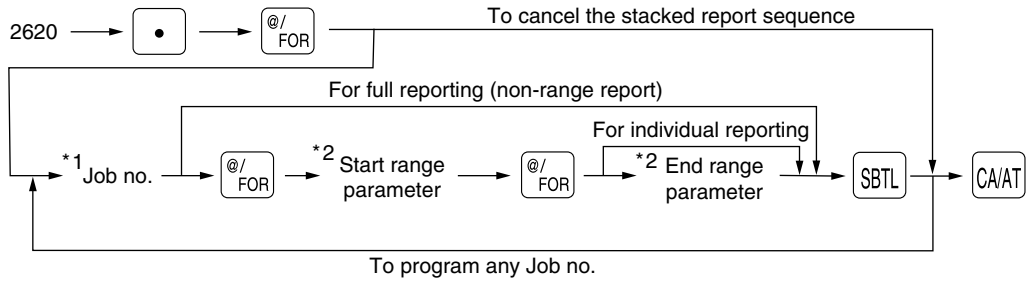
Print

#2614 *PGM2*
YOUR
STORE
MESSAGE

■ Selection of X1/Z1 and X2/Z2 reports to be printed in the stacked report sequence PGM 2 2620

Your register is equipped with the stacked report printing function that enables multiple X/Z reports to be printed in sequence with only a single request.

Procedure



Note

- *A maximum of 70 steps are programmable. "1 step" means the memory size used for one no-range type job no. The range type job no. needs "8 steps".*
- *When the Z of stacked report is initiated, X only reports will be skipped.*

Job code numbers to be used are as follows.

*1: Job no.	Report name	*2: Start/End range parameter	Note
00	General		
10	Full department		
13	Full department group		
20	PLU/UPC	*3 Start code/End code (max. 5/13 digits)	
24	PLU/UPC stock	*3 Start code/End code (max. 5/13 digits)	
27	PLU/UPC zero sales		
29	PLU/UPC price category	*3 Start price amount/End price amount	
30	Transaction		
31	Cash in drawer		
32	Commission sale		
50	Full cashier		
60	Hourly sales information	*3 Start time/End time (0 thru 2330)	Range report is available only in the X1 mode.
70	Daily net report		
80	PBLU report	*3 Start PBLU code/End PBLU code (1 thru 9999)	

*3: Both range setting and full setting are allowed.

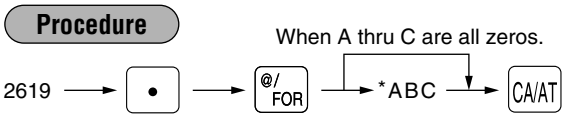
Example To print reports 10 and 13 as a stacked report.

Key operation	Print
2620 • @/FOR 10 SBTL 13 SBTL CA/AT	#2620 *PGM2* 10 13

■ Setting the time range for hourly reports PGM 2 2619

You can set the time range for the hourly report.

Procedure



*A: Time range
To set the time range to 30 minutes (in the 24-hour system), enter 0.
To set the time range to 60 minutes (in the 24-hour system), enter 1.
BC: Starting time (hour = 00 to 23)

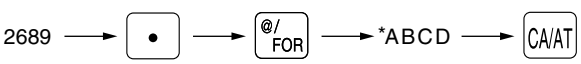
Example Setting the time range to 60 minutes with the starting time being set at 7:00

Key operation	Print
2619 • @/FOR 107 CA/AT	#2619 *PGM2* 1 07

Note *To change this setting, an hourly Z report (#160) must be taken prior to the changes.*

■ Programming of power saving mode PGM 2 2689

Procedure



*	Item:		Selection:	Entry:
	A	Entering power save mode when time is displayed.	Enable	0
			Disable	1
	BCD	Time (min.) to entering power save mode since no operation is made.		1 through 254 (min.) (999: The power save mode is inhibited.)

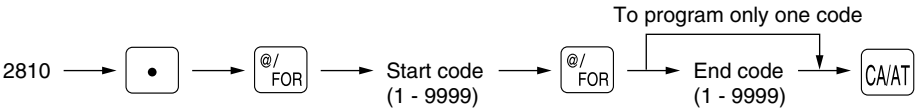
Example

Key operation	Print
2689 • @/FOR 0030 CA/AT	#2689 *PGM2* 0 030

■ PBLU code programming PGM 2 2810

You can specify the range of PBLU codes available for the register.

Procedure



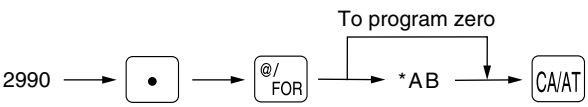
Example Programming 1 for start code and 1000 for end code

Key operation	Print
2810 • @/FOR 1 @/FOR 1000 CA/AT	#2810 *PGM2* 0001-1000

■ Functional programming for the printer PGM 2 2990

You can program the printing density of the receipt/journal printer.

Procedure



*AB: Printing density (00 – 99)
00 = 80% for standard density
50 = 90% for standard density
99 = 100% for standard density

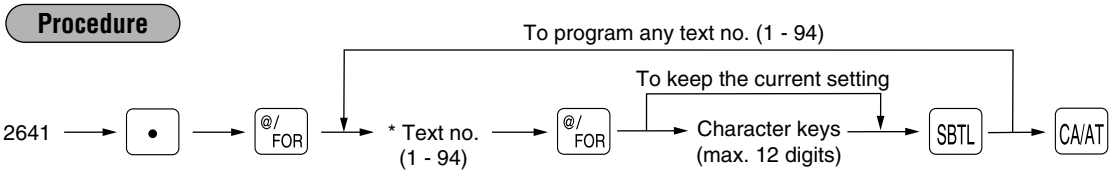
Example Programming “90% for standard density”

Key operation	Print
2990 • @/FOR 50 CA/AT	#2990 *PGM2* 50

■ Programming of error messages PGM 2 2641

Your register has standard error messages as indicated in the following list. For more information about the alphanumeric characters programming, see section “2 How to program alphanumeric characters” under the chapter “PRIOR TO PROGRAMMING”.

Procedure



* Text no.: See “LIST OF ERROR MESSAGES” shown below.

Example Programming “ENTRY ERROR” for text no. 1

Key operation

2641 • @/FOR
1 @/FOR
ENTRY SPACE ERROR SBTL
CA/AT

Print

```
#2641 *PGM2*
01        ENTRY ERROR
```

■ LIST OF ERROR MESSAGES

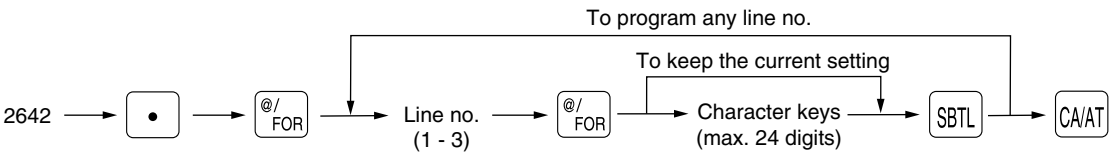
Text no.	Description	In default of programming
1	Registration error	ENTRY ERROR
2	Misoperation error	MISOPERATION
3	Desired code is not programmed yet.	NO RECORD
4	(Reserved)	
5	Secret code error	SECRET CODE
6	Code is not free	NOT FREE
7	Memory is full.	MEMORY FULL
8	Insert slip paper.	INSERT SLIP
9	The entered cashier’s code is not authorized.	NO AUTHORITY
10	Stock is empty.	OUT OF STOCK
11	Compulsory pushing the subtotal key	SBTL COMPUL.
12	Compulsory tendering	TEND COMPUL.
13	Compulsory PBLU entry	PB COMPUL.
14-19	(Reserved)	
20	Remote printer off line	OFF LINE
21	(Reserved)	
22	Overlapped cashier error	CASHIER ERR.
23-26	(Reserved)	
27	Power off	POWER OFF
28-30	(Reserved)	
31	Compulsory non-add code	# COMPULSORY
32	The cashier is not assigned.	NOT ASSIGNED
33	(Reserved)	
34	Overflow limitation	OVER LIMIT.
35	The open price entry is inhibited.	INH. OPEN PR
36	The unit price entry is inhibited.	INH. UNIT PR
37	The direct non-tendering finalization after previous tender entry is inhibited.	NOT NON-TEND
38	Read error of scale data	SCALE ERROR

Text no.	Description	In default of programming
39-50	(Reserved)	
51	Weight on scale	WEIGHT
52-53	(Reserved)	
54	Entry of tare weight	ENTR TARE WT
55-60	(Reserved)	
61	Desired code is not programmed yet. (learning function)	NO RECORD
62	Enter price and dept. no.	PRICE → DEPT
63	Enter price and dept. no.	PRICE & DEPT
64	Enter dept. no.	ENTER DEPT#
65-66	(Reserved)	
67	REG buffer is full.	BUFFER FULL
68-69	(Reserved)	
70	Price entry at UPC refund	ENTER PRICE
71-73	(Reserved)	
74	Non-accessed UPC delete job	**D E L E T E**
75	(Reserved)	
76	Closing the drawer is compulsory.	CLOSE DRAWER
77-78	(Reserved)	
79	Reading of undefined vender coupon UPC	OP ENTER
80	(Reserved)	
81	Message for prompting entry of secret code	ENTR SECRET#
82-83	(Reserved)	
84	Data backup send success	SEND OK
85	Data backup receive success	RECEIVE OK
86	Data backup communication error	COM. ERROR
87	Backup data format error	DATA ERROR
88	Data backup time out error	TIME OUT
89-93	(Reserved)	
94	Age limitation error	AGE ERROR

■ Check validation message PGM 2 2642

You can program the text (3 lines) to be printed on validation slip. Up to 24 characters can be programmed per line.

Procedure



Example Programming “FOR DEPOSIT ONLY” for the check validation message

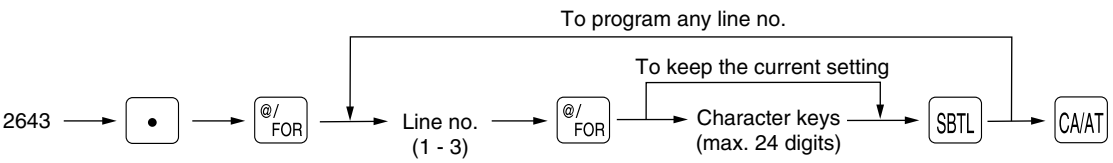
Key operation	Print
2642 • @/FOR 3 @/FOR FOR SPACE DEPOSIT SPACE ONLY SBTL CA/AT	#2642 *PGM2* FOR DEPOSIT ONLY

Note *The PRINT key must be placed on the keyboard.*

■ Slip printer’s logo message PGM 2 2643

You can program the text (3 lines) to be printed on slip. Up to 24 characters can be programmed per line.

Procedure



Example Programming “TEXT1” for the slip printer’s logo message

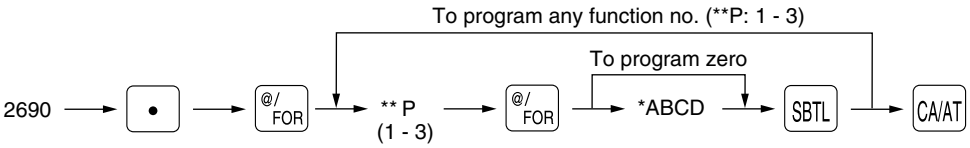
Key operation	Print
2643 • @/FOR 1 @/FOR TEXT1 SBTL CA/AT	#2643 *PGM2* TEXT1

Note *The SLIP key must be placed on the keyboard.*

■ RS-232C channel assignment PGM 2 2690

Your register is equipped with two RS-232C interfaces. If you use the communication functions, the channel number of each RS-232C interface must be programmed by using the following procedure.
To activate the communication functions, please consult your dealer.

Procedure



** P: 1

*	Item:		Selection:	Entry:
	A	Channel no. for the ON-LINE communication or sending the print data	Not connected	0
			Standard channel 1	1
			Standard channel 2	2
	B	Always enter 0.		0
	C	Channel no. for the scale	Not connected	0
			Standard channel 1	1
			Standard channel 2	2
	D	Channel no. for the coin dispenser	Not connected	0
			Standard channel 1	1
			Standard channel 2	2

** P: 2

*	Item:		Selection:	Entry:
	A	Channel no. for the barcode reader	Not connected	0
			Standard channel 1	1
			Standard channel 2	2
	B	Channel no. for the remote printer 1	Not connected	0
			Standard channel 1	1
			Standard channel 2	2
	C	Channel no. for the remote printer 2	Not connected	0
			Standard channel 1	1
			Standard channel 2	2
	D	Always enter 0.		0

Note *For the barcode reader, when you use the model ER-A6HS1, always select the standard channel 1.*

** P: 3

*	Item:		Selection:	Entry:
	A	Always enter 0.		0
	B	Channel no. for the slip printer	Not connected	0
			Standard channel 1	1
			Standard channel 2	2
	C	Always enter 0.		0
	D	Channel no. for CAT	Not connected	0
			Standard channel 1	1
			Standard channel 2	2

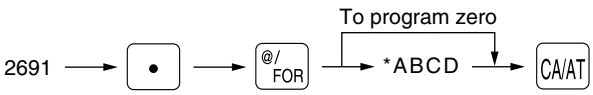
Note
- *Never enter any number other than 0, 1 and 2.*
- *The data backup function always uses standard channel 1.*

Example Assigning channel 1 to the slip printer

Key operation	Print
2690 [•] [@/FOR] 3 [@/FOR] 0100 [SBTL] [CA/AT]	#2690 *PGM2* 3 0100

■ Barcode reader programming PGM 2 2691

Procedure



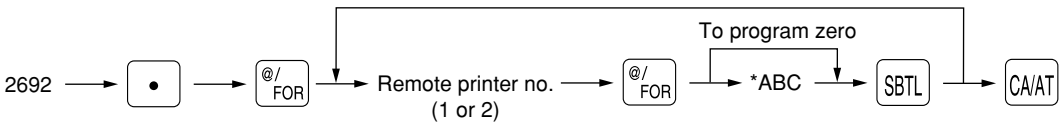
*	Item:		Selection:	Entry:
	A	Data bit	7 bits	1
			8 bits	0
	B	Parity bit	Non parity	2
			Odd parity	1
			Even parity	0
	C	Stop bit	1 bit	1
			2 bits	0
	D	Transmission speed	19200 bps	2
			9600 bps	1
			4800 bps	0

Example

Key operation	Print
2691 [•] [@/FOR] 1110 [CA/AT]	#2691 *PGM2* 1110 — ABCD

■ Remote printer programming PGM 2 2692

Procedure



*	Item:		Selection:	Entry:
	A	Logo text printing	Not print	0
			Print	1
	B	Auto cutter function	Disable	0
			Enable	1
	C	Type of the printer	TM-U200	0
			TM-U230	1
			TM-T88(3)	2
			TM-T88(3)+Logo	3

Example

Key operation

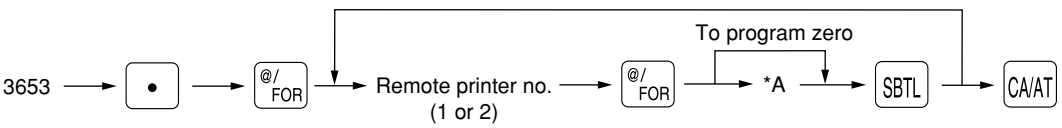
2692 • @/FOR
1 @/FOR 100 SBTL
CA/AT

Print

#2692 *PGM2*
1 100

■ Second remote printer programming PGM 2 3653

Procedure



*	Item:		Selection:	Entry:
	A	Second remote printer	Nothing	0
			Remote printer 1	1
			Remote printer 2	2

Example

Key operation

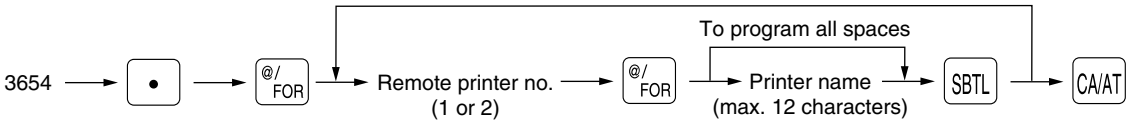
3653 • @/FOR
1 @/FOR 2 SBTL
CA/AT

Print

#3653 *PGM2*
KP1 00000
KP-2

■ Remote printer name programming PGM 2 3654

Procedure

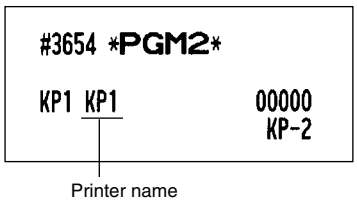


Example

Key operation

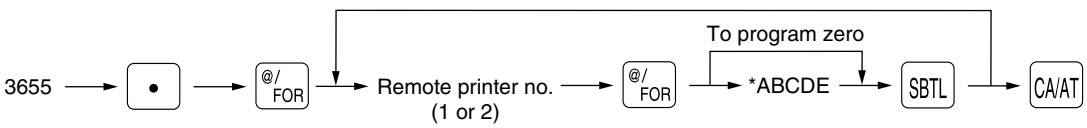
3654 • @/FOR
1 @/FOR KP1 SBTL
CA/AT

Print



■ Print format for remote printer PGM 2 3655

Procedure



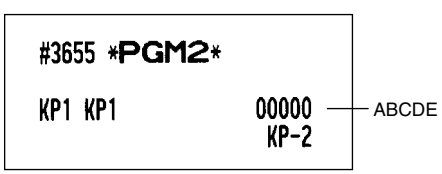
*	Item:		Selection:	Entry:
	A	Taxable status print	Not print	0
			Print	1
	B	Q'ty print when q'ty is "1".	Not print	0
			Print	1
	C	Dept./PLU/UPC code print	Not print	0
			Print	1
	D	Unit price print	Not print	0
			Print	1
	E	Amount print	Not print	0
			Print	1

Example

Key operation

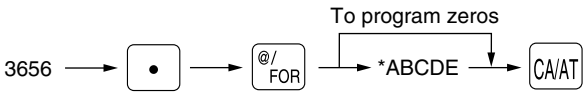
3655 • @/FOR
1 @/FOR 00000 SBTL
CA/AT

Print



■ Chit receipt format PGM 2 3656

Procedure



*	Item:		Selection:	Entry:
	A	Taxable status print	Not print	0
			Print	1
	B	Q'ty print when q'ty is "1".	Not print	0
			Print	1
	C	Dept./PLU/UPC code print	Not print	0
			Print	1
	D	Unit price print	Not print	0
			Print	1
	E	Amount print	Not print	0
			Print	1

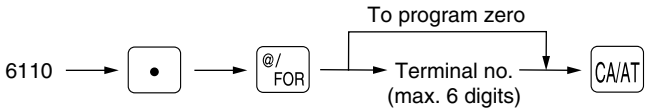
Example

Key operation	Print
3656 • @/FOR 00000 CA/AT	#3656 *PGM2* CHIT FORMAT 00000

■ Programming of RS-232C interface PGM 2 6110 6111 6112 6113 6115 6220

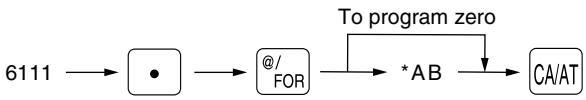
Online terminal number

Procedure



Transmission line form system

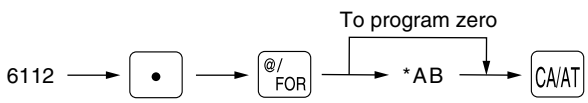
Procedure



*	Item:		Selection:	Entry:
	A	Sensing of the CI signal	No	0
			Sensing	1
	B	Line form	Full duplex system	0
			Half duplex system	1

Functional programming

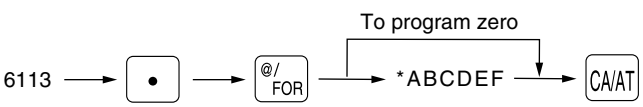
Procedure



*	Item:		Selection:	Entry:
	A	Selection of print data send/data download and upload	Data download and upload	0
			Print data send	1
	B	Baud rate (38400/19200/9600/4800 bps) The selected baud rate is used for on-line communications and print data sending. It is not used for the data backup function.	4800 bps	4
			9600 bps	5
			19200 bps	6
			38400 bps	7

Start code and end code

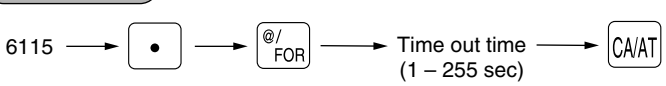
Procedure



* ABC: Start code (000 – 127)
  DEF: End code (000 – 127)

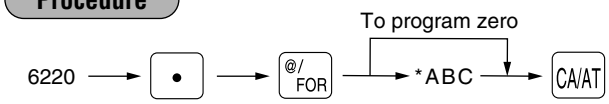
Time out setting

Procedure



Programming for print data sending

Procedure

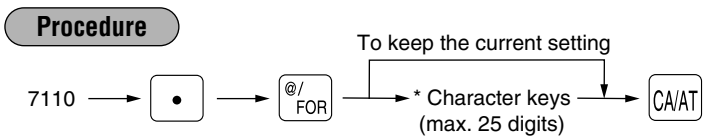


*	Item:		Selection:	Entry:
	A	Sensing of DR signal	Yes	0
			No	1
	B	Sensing of CS signal	Yes	0
			No	1
	C	Sending of all print data	Disable	0
			Enable	1

■ Programming the CAT interface PGM 2 7110 7111 7112 7113 7114 7115

Phone number for dial out

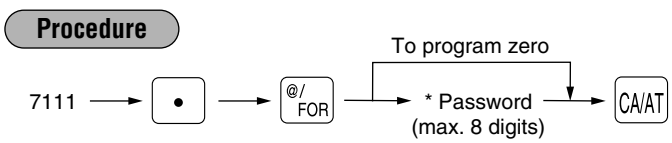
Procedure



* The valid characters for dialing are “0 – 9”, “W” and “,”.

Password for dial out

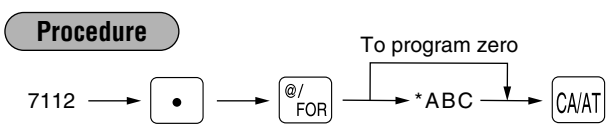
Procedure



* The password can be programmed with zero suppression, however it is used without zero suppression (00000000 - 99999999) for dialing.

Functional programming

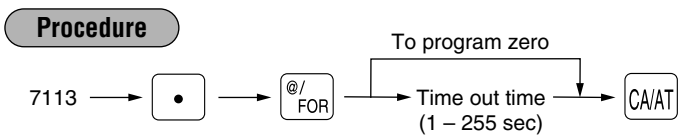
Procedure



*	Item:		Selection:	Entry:
	A	PIN PAD on CAT for DEBIT CARD	Yes	0
			No	1
	B	Key type for PIN PAD	STATIC	0
			DUKPT	1
			INDEX	2
	C	Dial mode for dial out	Tone	0
			Pulse	1

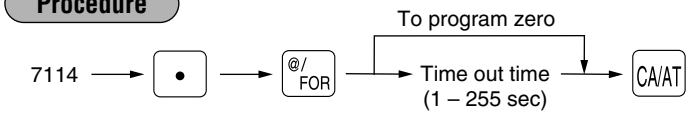
Time out setting for time 1 (reading the card)

Procedure



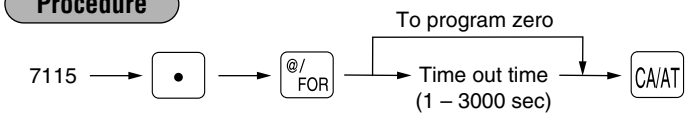
Time out setting for time 2 (response of authorization)

Procedure



Time out setting for time 3 (reading of dial in/out)

Procedure

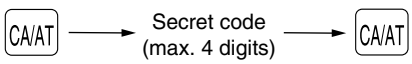


■ Secret codes to control access to the PGM1 mode, X1/Z1 mode and X2/Z2 mode PGM 2 2630 2631 2632

When a secret code has been set for that specific mode operation, before performing any PGM1 mode, X1/Z1 mode or X2/Z2 mode operation, you must enter a secret code according to the following procedure.

Operating

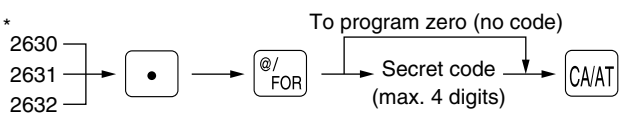
Procedure



Note *Once a secret code is entered, it does not need to be entered again unless the mode switch setting is changed or an operation is performed.*

Programming

Procedure



* 2630 for the PGM1 mode
2631 for the X1/Z1 mode
2632 for the X2/Z2 mode

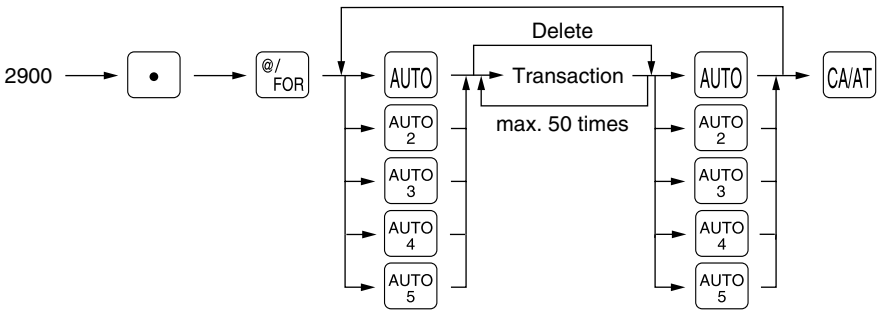
Example Programming secret code 1234 for X1/Z1 mode

Key operation	Print
2631 • @/FOR 1234 CA/AT	#2631 *PGM2* 1234

■ Setting the AUTO key — Automatic sequencing key — X2/Z2 2900

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

Procedure



Example

Programming for the AUTO key and AUTO 2 key as follows:
AUTO; entering a $1.50 item (PLU2) and a $1.00 item (dept. 3)
AUTO 2; selling a $5.00 -programmed- item (dept. 2) for cash

Key operation

2900 • @/FOR
AUTO1 setting → 2 PLU/UPC 100 3 AUTO
AUTO2 setting → 2 AUTO 2 CA/AT
AUTO 2 CA/AT

Print

```
#2900 *PGM2*
#1
          2  KEY
          PLU/UPC
          1  KEY
          0  KEY
          0  KEY
     L1     DO3
#2
     L1     DO2
          CA/AT
```

Note

- *When the AUTO key has been programmed to execute a report job function etc., the mode switch must be in the corresponding position.*
- *The AUTO sequence key can not be preset to another AUTO sequence key.*

11 TRAINING mode

The training mode is used when the operator or the manager practices register operations.

When a training cashier has been selected, the machine automatically enters the training mode. When a training cashier has not been selected, the register automatically enters the ordinary REG mode. (For programming of a training cashier, please consult your local dealer.)

The training operations are valid only in REG, MGR, and VOID mode.
The training cashier memory is updated in the training mode. Other memories are not updated.

Example

Key operation

1000 [1]
3 [@/FOR] [2]
[CA/AT]

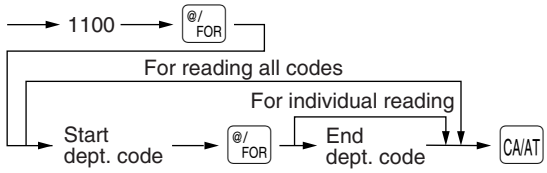
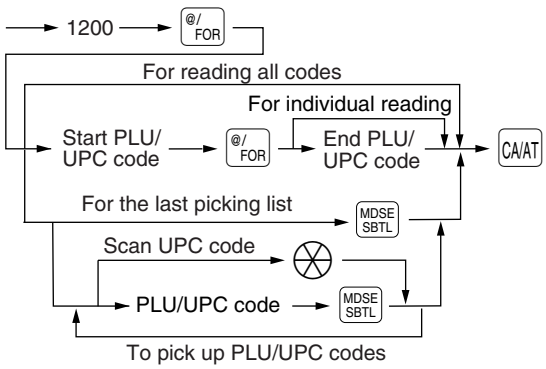
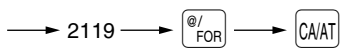
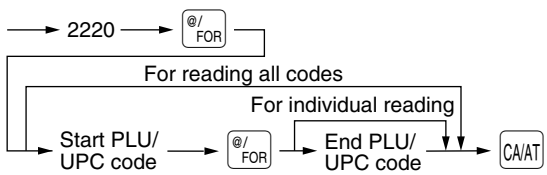
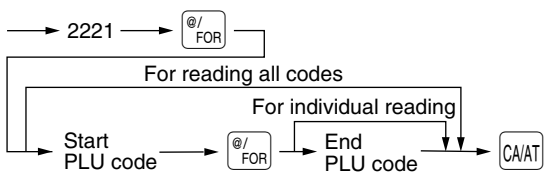
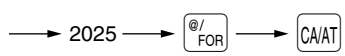
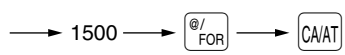
Print

```
08/31/2004  8:38PM  1014
123456#5016      PETER

**TRAINING**
DPT.01          T1 $10.00
                3 @ $1.50
DPT.02          T1 $4.50
MDSE ST          $14.50
TAX1              $0.87

CASH            $15.37
```

12 Reading stored programs

Your machine allows you to read every program stored in the PGM1 and PGM2 modes.

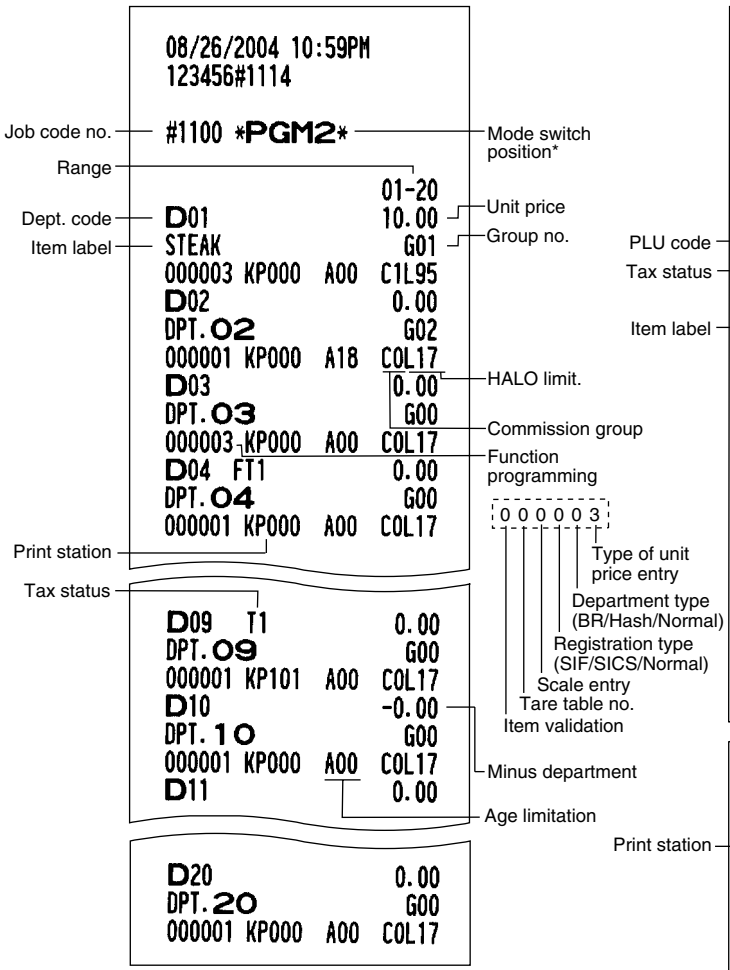
■ Program details and procedures for their reading

Program for:		Mode switch position	Job code no.	Procedure	Related job code nos.
1	Departments	PGM2 or PGM1	1100		1110, 2110, 2111, 2112, 2114, 2115, 2116, 2180, 2118
2	PLUs/UPCs	PGM2 or PGM1	1200		1200, 1210, 1211, 2210, 2211, 2214, 2215, 2230, 2231, 2232, 2235, 2236, 2280, 2218
3	Key nos. for departments and PLUs	PGM2	2119		2119, 2219
4	Link PLUs/UPC link	PGM2	2220		2220
5	Set PLUs	PGM2	2221		2221
6	Mix-and-match table	PGM2	2225		2217, 2225
7	UPC's function	PGM2	2025		2025, 2029
8	Cashiers	PGM2 or PGM1	1500		1500, 1514, 2510
9	PBLU code	PGM2	2800		2810

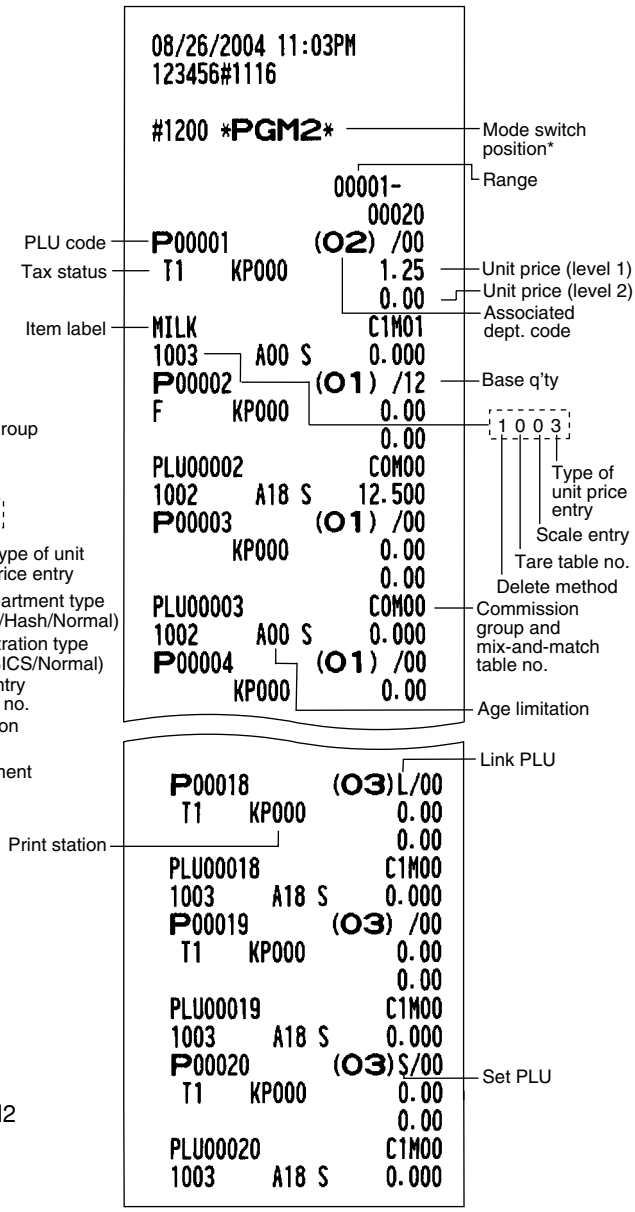
Program for:		Mode switch position	Job code no.	Procedure	Related job code nos.
10	Function preset 1	PGM2 or PGM1	1300	→ 1300 → [@/FOR] → [CA/AT]	1310, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2320, 2321, 2322, 2326, 2334, 2328
11	Function preset 2	PGM2	2600	→ 2600 → [@/FOR] → [CA/AT]	2614, 2615, 2616, 2617, 2618, 2619, 2620, 2630, 2631, 2632, 2689, 2690, 2691, 2692
12	Messages	PGM2	2640	→ 2640 → [@/FOR] → [CA/AT]	2641, 2642, 2643
13	Tax tables and rates	PGM2 or PGM1	2700	→ 2700 → [@/FOR] → [CA/AT]	2710, 2711, 2715
14	Auto keys	PGM2	2900	→ 2900 → [@/FOR] → [CA/AT]	2900
15	Thermal printer	PGM2	2990	→ 2990 → [@/FOR] → [CA/AT]	2990
16	Remote printer	PGM2	3650	→ 3650 → [@/FOR] → [CA/AT]	3653, 3654, 3655, 3656
17	On-line preset	PGM2 or PGM1	6110	→ 6110 → [@/FOR] → [CA/AT]	6110, 6111, 6112, 6113, 6115, 6220
18	CAT preset	PGM2	7110	→ 7110 → [@/FOR] → [CA/AT]	7110, 7111, 7112, 7113, 7114, 7115

■ Sample printouts

1 Reading of programmed items for departments (Reading in the PGM1 and PGM2 modes)

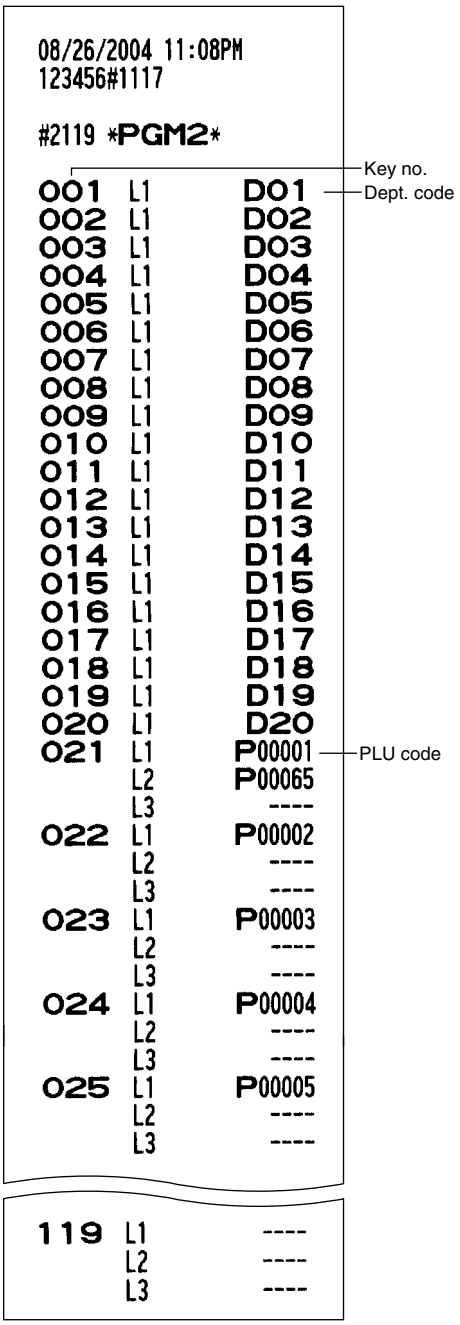


2 Reading of programmed items for PLUs/UPCs (Reading in the PGM1 and PGM2 modes)

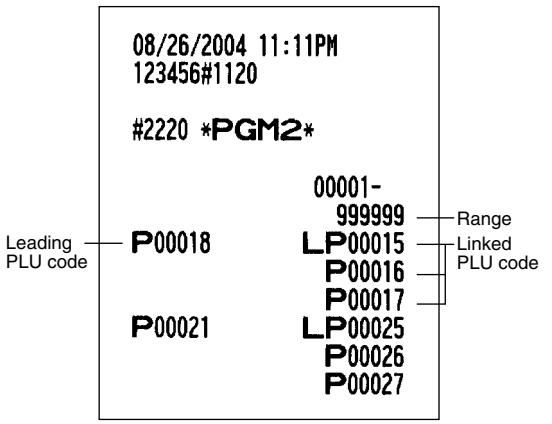


* When you take this report in the PGM1 mode, the PGM2 indication is replaced by "PGM1".

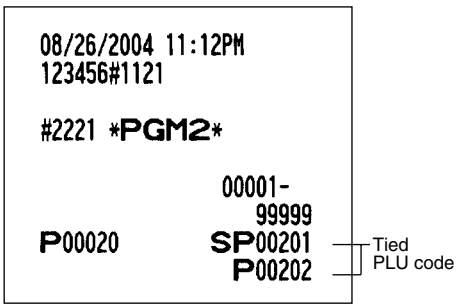
3 Reading of programmed key nos. for departments and PLUs (Reading in the PGM2 mode)



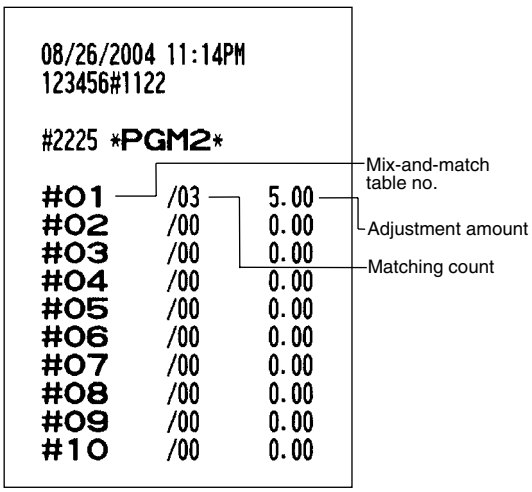
4 Reading of programmed items for link PLUs (Reading in the PGM2 mode)



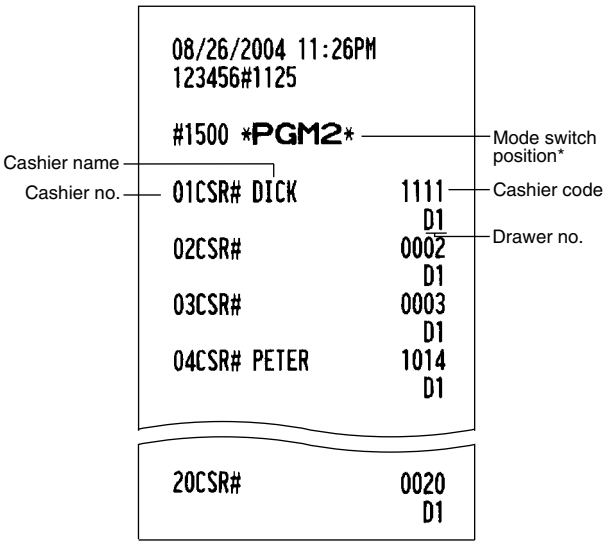
5 Reading of programmed set PLUs (Reading in the PGM2 mode)



6 Reading of mix-and-match table (Reading in the PGM2 mode)

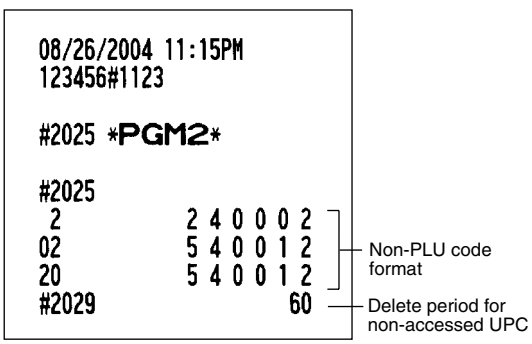


8 Reading of programmed items for cashiers (Reading in the PGM1 and PGM2 modes)

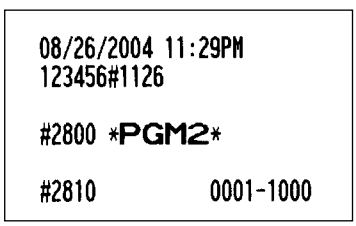


* When you take this report in the PGM1 mode, the PGM2 indication is replaced by “PGM1”.

7 Reading of programmed UPC’s function (Reading in the PGM2 mode)



9 Reading of programmed PBLU code (Reading in the PGM2 modes)



10 Reading of programmed items for functions - 1
(Reading in the PGM1 and PGM2 modes)

```
08/26/2004 11:33PM
123456#1130

#1300 *PGM2*

F001 (-) 1
S                -10.00
                   L13
F002 (-) 2
I                 -0.00
                   L17
F003 (-) 3
S                 -0.00
                   L17
F004 (-) 4
S                 -0.00
                   L17
F005 %1
S       3        -10.25%
       T1       L100.00%
F006 %2
I       2          0.00%
                 L 15.50%
F007 %3
S       3         -0.00%
                 L100.00%
F008 %4
S       3         -0.00%
                 L100.00%
F009 NET1
F010 TAX1 ST
F011 GRS TAX1
F012 RFD TAX1
F013 TAX1
F014 TX1 EXPT
F015 TAX2 ST
F016 GRS TAX2
F017 RFD TAX2
F018 TAX2
F019 TX2 EXPT
F020 TAX3 ST
F021 GRS TAX3
F022 RFD TAX3
F023 TAX3
F024 TX3 EXPT
F025 TAX4 ST
F026 GRS TAX4
F027 RFD TAX4
F028 TAX4
F029 TX4 EXPT
F030 GRS MTAX
F031 RFD MTAX
F032 M-TAX          L17
```

```
F033 GST EXPT
F034 PST TTL
F035 GST TTL
F036 FS TX1
F037 FS TX2
F038 FS TX3
F039 TTL TAX
F040 NET
F041 NET2
F042 CP PLU
F043 VOID
F044 SBTL VD
F045 MGR VD
F046 VOID
F047 REFUND
F048 HASH VD
F049 HASH RF
F050 NO SALE
F051 VP CNT
F052 BILL CNT
F053 DRW CNT
F054 TRAY TL
F055 ***PBAL
F056 SERVICE  KP000
       000000000000000
F057 DEPOSIT
F058 DPST RF
F059 TRANS CT
F060 NET3
F061 CASH    KP000 L18
   0000 000000000000000
F062 CASH2   KP000 L18
   0000 000000000000000
F063 FSSALE   KP000
       000000000000000
F064 ***RA          L18
F065 ***RA2         L18
F066 ***PO          L18
F067 ***PO2         L18
F068 CA/CHK
                   99.99
F069 CHK/CG
                999999.99
F070 FS/CG
F071 CONV 1
                  1.3250
F072 CONV 2      US$
                  0.0000
F073 CONV 3
                  0.0000
F074 CONV 4
F075 FS/ID
```

```
F076 CHARGE1  KP000 L18
   0000 000000000000000
F077 CHARGE1-
F078 CHARGE2  KP000 L18
   0000 000000000000000
F079 CHARGE2-
F080 VISA     KP101 L15
   0001 000000000000001
F081 CHARGE3-
F082 CHARGE4  KP000 L18
   0000 000000000000000
F083 CHARGE4-
F084 CHARGE5  KP000 L18
   0000 000000000000000
F085 CHARGE5-
F086 CHECK1   KP000 L18
   0000 000000000000000
F087 CHECK2   KP000 L18
   0000 000000000000000
F088 CA/CH ID
F089 ****CID
            9999999.99
F090 VAT EXPT
F091 AVE.
F092 GROUP01
F093 GROUP02
F094 GROUP03
F095 GROUP04
F096 GROUP05
F097 GROUP06
F098 GROUP07
F099 GROUP08
F100 GROUP09
F101 LEVEL 1
F102 LEVEL 2
F103 *DEPT TL
F104 DEPT(-)
F105 *HASH TL
F106 HASH(-)
F107 *BTTL TL
F108 BTTL(-)
F109 COM.SAL1
                   0.00%
F110 COM.SAL2
                   0.00%
F111 COM.SAL3
                   0.00%
F112 COM.SAL4
                   0.00%
F113 COM.SAL5
                   0.00%
F114 COM.SAL6
                   0.00%
F115 COM.SAL7
                   0.00%
```

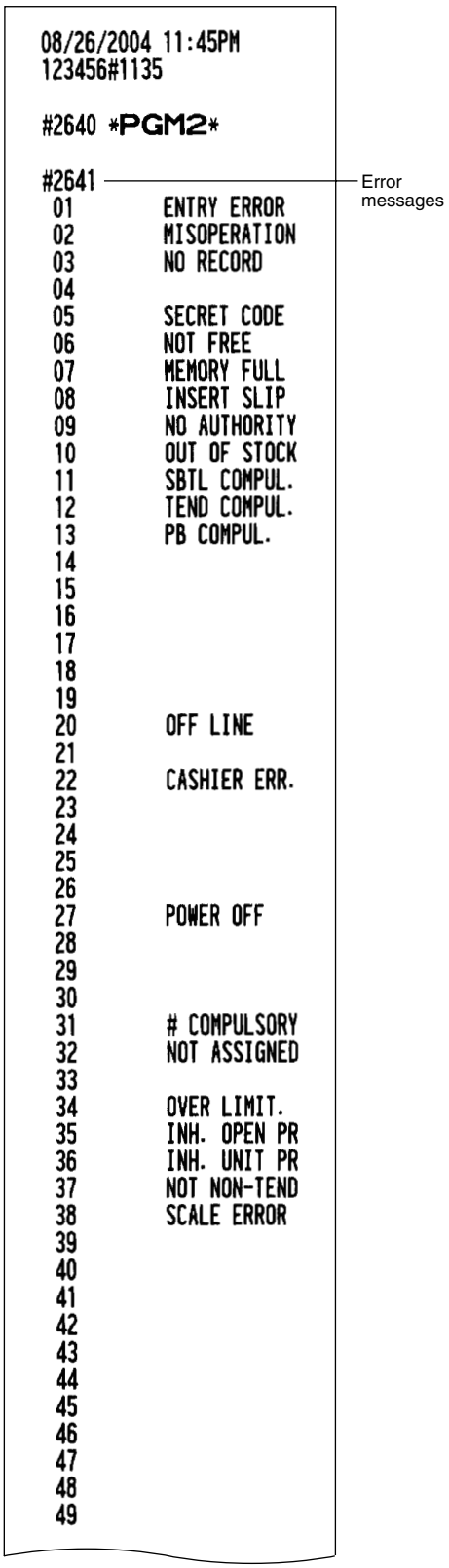
* When you take this report in the PGM1 mode, the PGM2 indication is replaced by “PGM1”.

To be continued on the next page

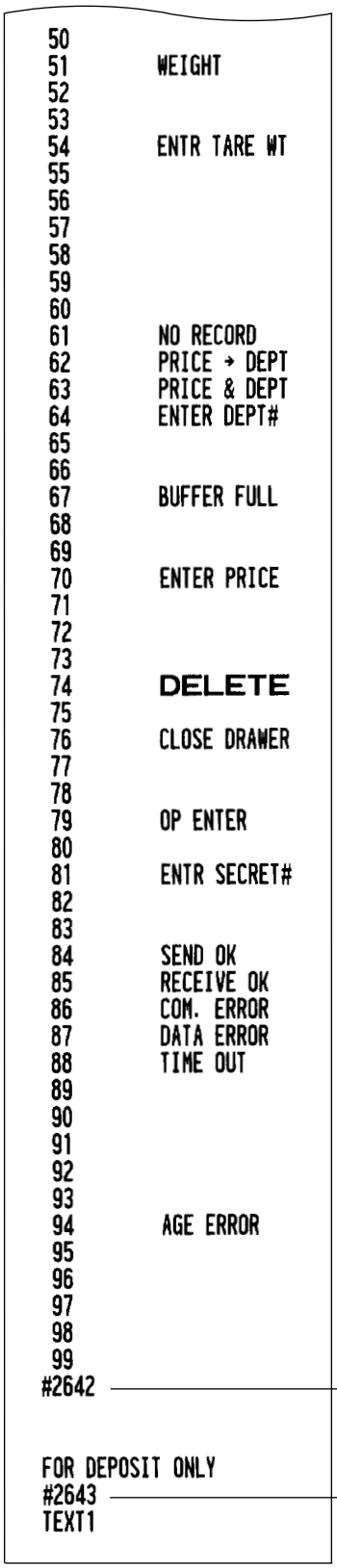
```
F116 COM.SAL8
                    0.00%
F117 COM.SAL9
                    0.00%
F118 NON COM.
F119 COM.AMT1
F120 COM.AMT2
F121 COM.AMT3
F122 COM.AMT4
F123 COM.AMT5
F124 COM.AMT6
F125 COM.AMT7
F126 COM.AMT8
F127 COM.AMT9
F128 COM.TTL
F129 CA/CH IS
F130 CONV1 IS
F131 CONV2 IS
F132 CONV3 IS
F133 CCD DIF.
F134 DIF. TL
F135 SUBTOTAL
F136 MDSE ST
F137 ***TOTAL
F138 CHANGE
F139 FS ST
F140 FS TEND
F141 FS CG
F142 ITEMS
F143 DEPT
F144  GROUP
F145 PLU/UPC
F146  STOCK
F147 ZERO SAL
F148 CATEGORY
F149  TRANS.
F150  CID
F151  SALES
F152  CCD
F153 CASHIER
F154  HOURLY
F155  DAILY
F156 PBLU
F157        #
F158 COPY
F159 FINAL    KP000
        000000000000000
F160 BALANCE
F161 SLIP PR.
F162 NEXT P.
F163 BAL FWD
F164 TARE WT.
F165 DUE
F166 TAX ST
F167 AMOUNT
F168 WEIGHT
F169 RF SALE
F170 V.CP UPC
F171 NO ACCES
F172 PR.CHNG
```

11 Reading of programmed items for functions - 2 (Reading in the PGM2 mode)

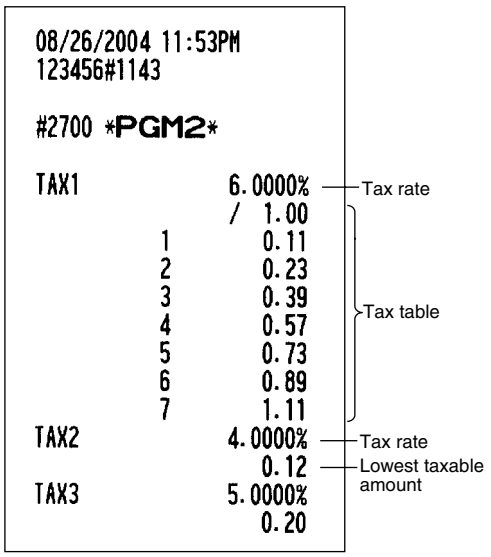
```
08/26/2004 11:39PM
123456#1131

#2600 *PGM2*

#2614                                  Logo message
      YOUR
     STORE
    MESSAGE
#2615          00 99 1 0
#2616                                  Line feed for tray subtotal
   01          00000000
   02          00000000
   03          00000010
   04          00000000
   05          00000000
   06          00000000
   07          00000000                Optional feature selection
   08          00000000
   09          00000000
   10          00000000
   11          00000000
   12          00000000
   13          00000000
#2617               030                Drawer open alarm time
#2618
    1              0.20
    2              0.00
    3              0.00
    4              0.00
    5              0.00                Scale tare tables
    6              0.00
    7              0.00
    8              0.00
    9              0.00
#2619              1 07                Hourly report format/start hour
#2620
                     10
                     13                Stacked report
#2630              0000
#2631              1234                Secret code
#2632              0000
#2689            0 030                 Power saving mode
#2690
    1              0000
    2              0000                RS-232C channel data
    3              0100
#2691              1110                Barcode reader data
#2692
    1               100
    2               000                Remote printer data
```



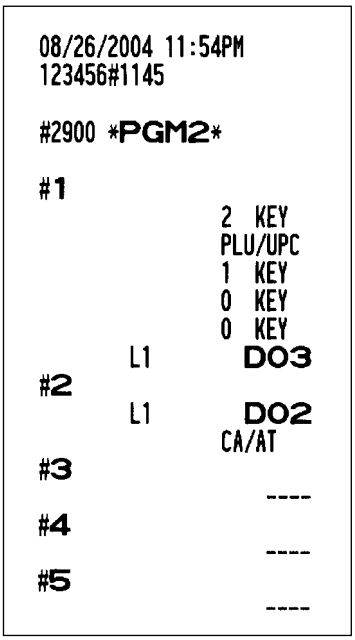
To be continued



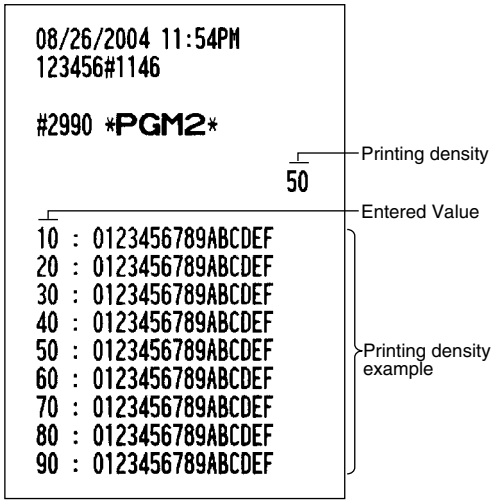
13 Reading of programmed tax tables and rates (Reading in the PGM2 mode)



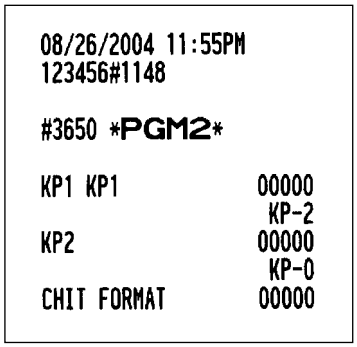
14 Reading of programmed items for auto keys (Reading in the PGM2 mode)



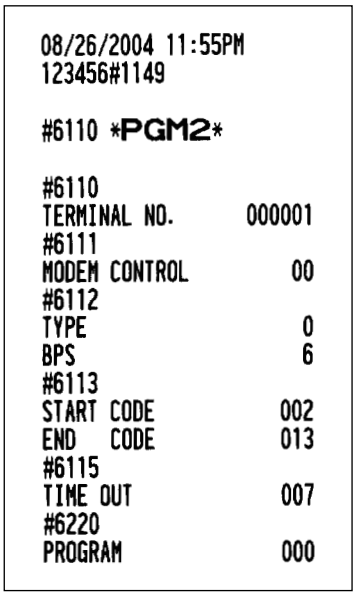
15 Reading of programmed items for the thermal printer (Reading in the PGM2 mode)



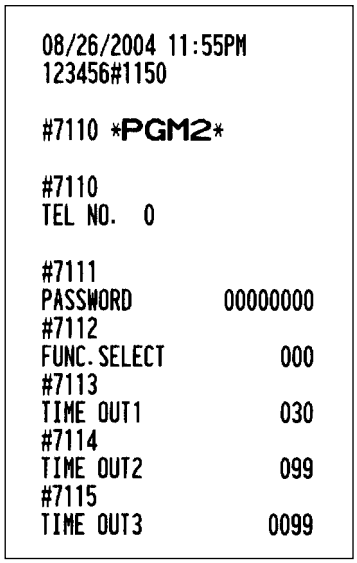
16 Reading of remote printer preset (Reading in the PGM2 mode)



17 Reading of ON-LINE preset (Reading in the PGM2 mode)



18 Reading of CAT preset (Reading in the PGM2 mode)



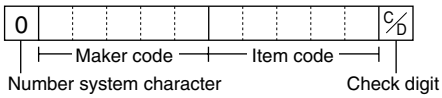
■ UPC or EAN code

Your machine can support the following codes:
- UPC-A (Number system character: 0, 2, 3, 4)
- UPC-E
- EAN-8
- EAN-13
- Internal code EAN-8/EAN-13

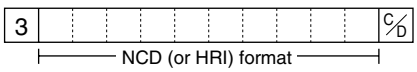
For the codes used in-store marking, there are two types of PLU type (treated as a code like PLU no.) and Non-PLU type (price/quantity information is included in the code).
When a code is non-PLU type, the price/quantity in the code is read for sales entry (in case of quantity, “quantity multiplys preset unit price” is processed to obtain price.)

UPC-A

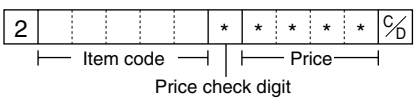
- Number system character: 0 <used in the source marking>
- Number system character: 3 <used as NDC or HRI>

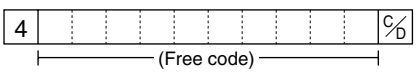


For entry, a full 12 digit number or 11 digit number (omitting the check digits) must be entered.



- Number system character: 2 <In-store marking Non-PLU type>
  You can program the format by the job #2025.
- Number system character: 4 <In-store marking PLU type>

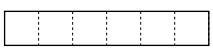




For entry, a full 12 digit number, 11 digit number (omitting the check digit), or a leading zero plus 12 digit number must be entered.(Any numbers are allowed for the digits marked with *, and on the receipt/journal, non-PLU type code is printed like 2020008**** (****: price information).)

UPC-E

- UPC-E is a zero-suppressed version of UPC-A that conforms to the UPC-E Standards. This code is used for marking small packages.

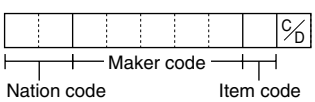


For entry, a 6 digit number or a leading zero plus 6 digits number must be entered.

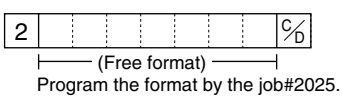
EAN 8

- Ordinary EAN-8 code (flag: neither 0 nor 2) <used in the source marking>

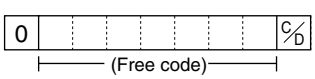
For entry, a full 8 digit number must be entered.



- Internal code (flag 2) <in-store marking non-PLU short type>
  Program the format by the job #2025.
- Internal code (flag 0) <in-store marking PLU short type>

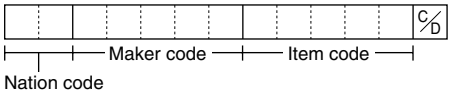


For entry, a full 8 digit number must be entered. On the receipt/journal, non-PLU type code is printed like 208**** (****: price/quantity information)



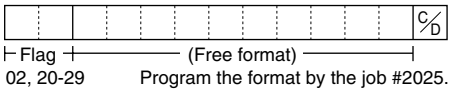
EAN-13

- Ordinary EAN-13 code (used in the source marking)
- Specific EAN-13 code (flag 977, 978, 979) (used in the source marking: ISBM, ISSN)



For entry, you must enter a full of 13 digits number.

- Internal code (used in the in-store marking, the flag character number: 20 through 29 and 02)
  Program the format by the job# 2025.



■ Add-on code

UPC-A and EAN-13 may be followed by a two digits number or a five digits number as add-on code, excepting UPC-A without a check digit plus two or five digits add-on code.
Therefore, the total number of digits enterable for sales entries are as shown below:

Code entry	No add-on code	2-digit add-on code	5-digit add-on code
UPC-A	12	14	17
UPC-A w/leading zero	13	15	18
UPC-A w/o check digit	11	–	–
UPC-E	6	–	–
EAN-8	8	–	–
EAN-13	13	15	18

Note *Your register automatically judges the add-on code in an UPC/EAN code entered from the total number of digits and the flag.*

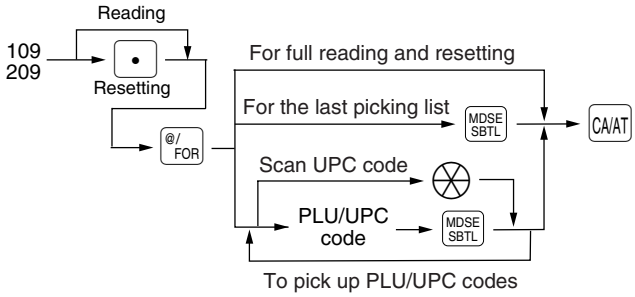
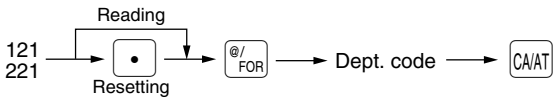
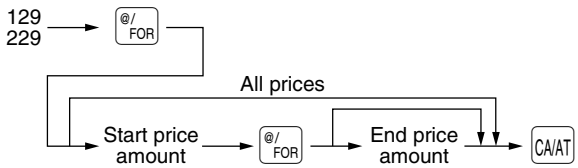
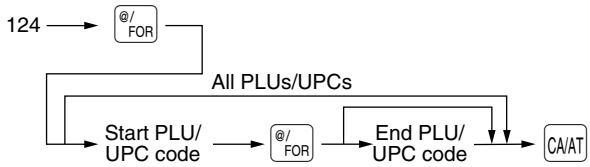
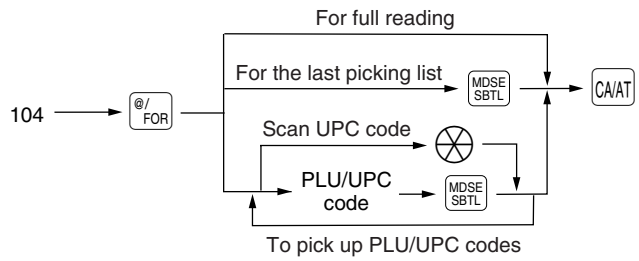
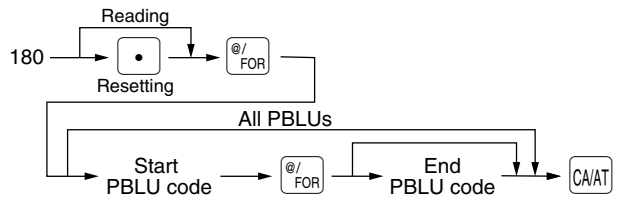
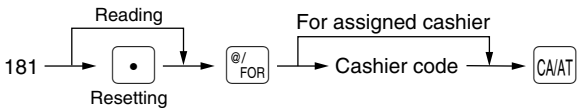
READING (X) AND RESETTING (Z) OF SALES TOTALS

- Use the reading function (X) when you need to take a reading of sales information entered since the last resetting. You can take this reading any number of times. It does not affect the register's memory.
- Use the resetting function (Z) when you need to clear the register's memory. Resetting prints all sales information and clears the entire memory except for the GT1 thru GT3 and training GT, reset count, and consecutive number.
- If you want to stop the printing report, turn the mode switch to the MGR position. The symbol ("＊＊＊＊＊＊") is printed.

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

X1 and Z1 reports: Daily sales reports
X2 and Z2 reports: Periodic (monthly) consolidation reports

Item	Mode switch position		Job code	Key operation
	X1/Z1	X2/Z2		
Flash report: (Only display) To clear the display, press the CL key or turn the mode switch to another position.	X1	—	—	Dept. key (1 to 99) Dept. code → DEPT # : Department total amount
				@/FOR key: Amount of cash in drawer
				SBTL key: Paid total
General report	X1, Z1	X1, Z1	100	100 / 200 → • (Reading / Resetting) → @/FOR → CA/AT
		X2, Z2	200	
Individual cashier report	X1, Z1	X1, Z1	151	151 / 251 → • (Reading / Resetting) → @/FOR → For assigned cashier: Cashier code → CA/AT
		X2, Z2	251	
	<OP X/Z> X, Z		51	51 → • (Reading / Resetting) → @/FOR → CA/AT
Full cashier report	X1, Z1	X1, Z1	150	150 / 250 → • (Reading / Resetting) → @/FOR → CA/AT
		X2, Z2	250	
Full department report	X1	X1	110	110 / 210 → @/FOR → CA/AT
		X2	210	
Individual group total report on department	X1	X1	112	112 / 212 → @/FOR → Group number → CA/AT
		X2	212	
Full group total report on department	X1	X1	113	113 / 213 → @/FOR → CA/AT
		X2	213	
PLU/UPC report by designated range	X1, Z1	X1, Z1	120	120 / 220 → • (Reading / Resetting) → @/FOR → All PLUs/UPCs: Start PLU/UPC code → @/FOR → End PLU/UPC code → CA/AT
		X2, Z2	220	

Item	Mode switch position		Job code	Key operation
	X1/Z1	X2/Z2		
PLU/UPC report by pick up list	X1, Z1	X1, Z1	109	
		X2, Z2	209	
PLU/UPC report by associated department	X1, Z1	X1, Z1	121	
		X2, Z2	221	
PLU/UPC zero sales report	X1, Z1	X1, Z1	127	
		X2	227	
PLU/UPC price category report	X1	X1	129	
		X2	229	
PLU/UPC stock report	X1		124	
PLU/UPC stock report by pick up list	X1		104	
PBLU report	X1, Z1		180	
PBLU report by cashier	X1, Z1		181	
Commission sales report	X1	X1	132	
		X2	232	

Item	Mode switch position		Job code	Key operation
	X1/Z1	X2/Z2		
Transaction report	X1	X1	130	130 / 230 → @/FOR → CA/AT
		X2	230	
Cash in drawer report	X1	X1	131	131 / 231 → @/FOR → CA/AT
		X2	231	
Hourly report	X1		160	Reading: (For individual time range) 160 → @/FOR → Start* time → @/FOR → End* time → CA/AT * Enter the time in the 24-hour system. Reading and Resetting: 160 → Reading • Resetting → @/FOR → CA/AT
	X1, Z1			
Stacked report	X1, Z1	X1, Z1	190	190 / 290 → Reading • Resetting → @/FOR → CA/AT When Z of stacked report is initiated, X only reports will be skipped.
		X2, Z2	290	
Daily net report		X2, Z2	270	270 → Reading • Resetting → @/FOR → CA/AT

Non-accessed UPC deleting

Item	Mode switch position		Job code	Key operation
	X1/Z1	X2/Z2		
Reading of non-accessed UPCs	X1		105	105 → @/FOR → CA/AT
Deleting of non-accessed UPCs	Z1		105	105 → • → @/FOR → For full deleting / For the last UPC picking list → MDSE SBTL → CA/AT / Scan UPC code → ⊗ / UPC code → MDSE SBTL / To pick up UPC codes

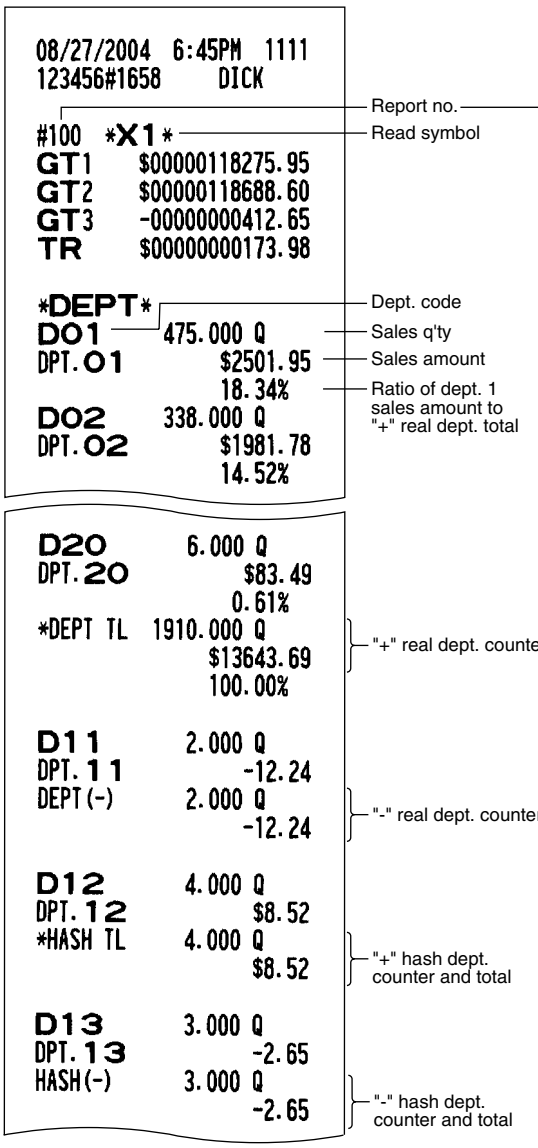
Note *When you execute the job #105 in Z1 mode, not only the sales data, but also the UPC code(s) (the related data files) themselves will be deleted.*

2 Daily sales totals

■ General report

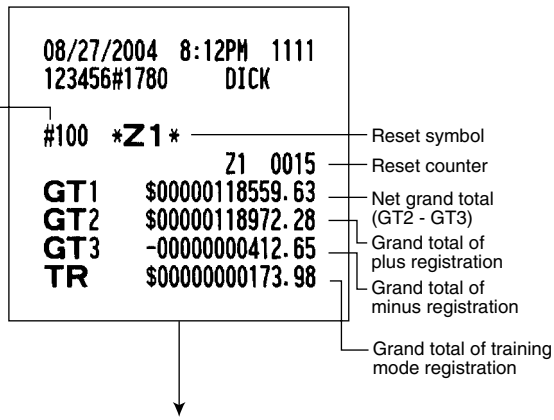
You can take X and Z reports in the X1/Z1 mode. The use of the decimal (•) key determines when the report will actually reset the totals.

• Sample X report



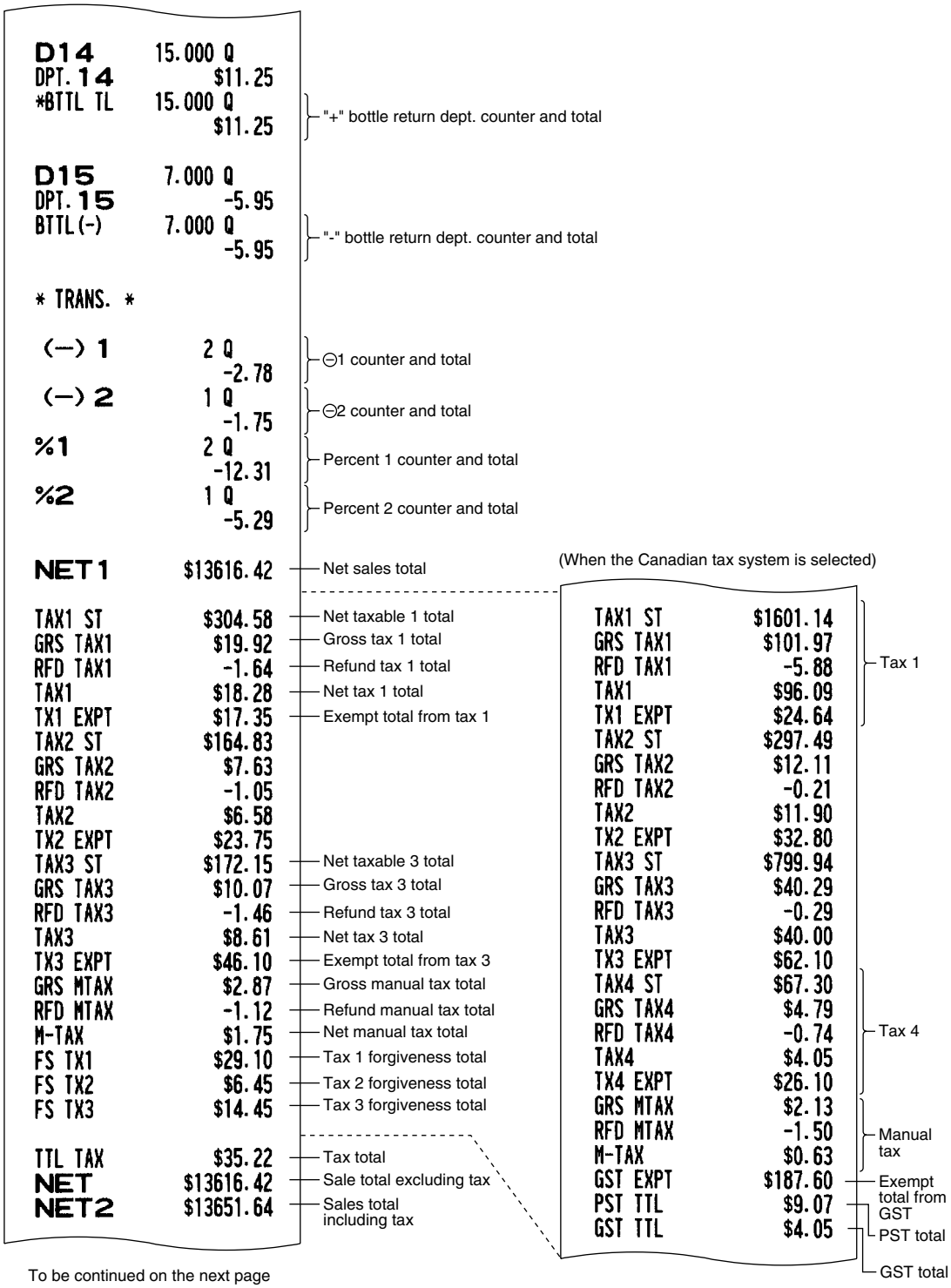
To be continued on the next page

• Sample Z report

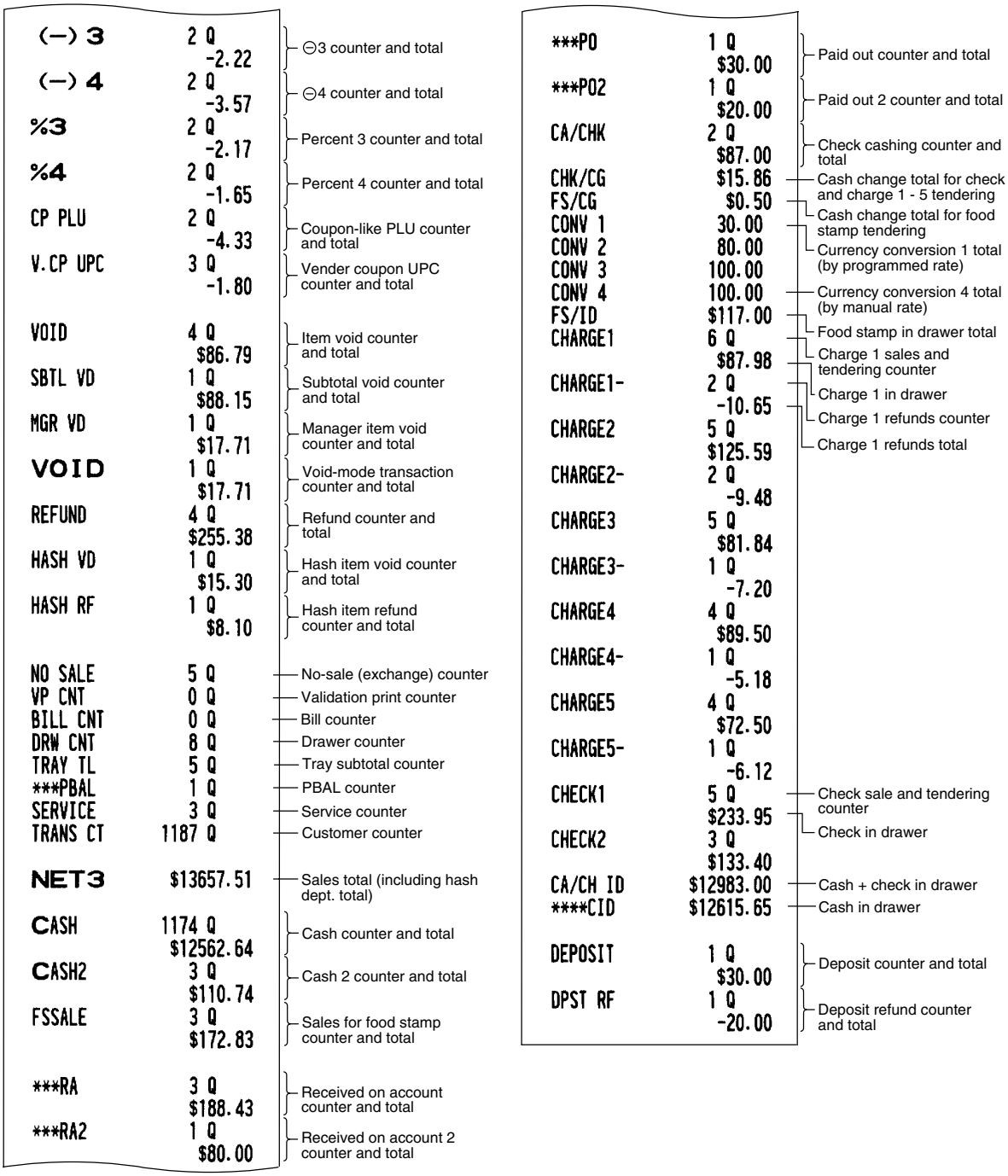


The subsequent printout occurs in the same format as in the X report.

Note *Not all reports provide the resetting capability. Please refer to the chart on pages 157–159.*



To be continued on the next page


(−) 3 2 Q -2.22
⊖3 counter and total
(−) 4 2 Q -3.57
⊖4 counter and total
%3 2 Q -2.17
Percent 3 counter and total
%4 2 Q -1.65
Percent 4 counter and total
CP PLU 2 Q -4.33
Coupon-like PLU counter and total
V.CP UPC 3 Q -1.80
Vender coupon UPC counter and total
VOID 4 Q $86.79
Item void counter and total
SBTL VD 1 Q $88.15
Subtotal void counter and total
MGR VD 1 Q $17.71
Manager item void counter and total
VOID 1 Q $17.71
Void-mode transaction counter and total
REFUND 4 Q $255.38
Refund counter and total
HASH VD 1 Q $15.30
Hash item void counter and total
HASH RF 1 Q $8.10
Hash item refund counter and total
NO SALE 5 Q
No-sale (exchange) counter
VP CNT 0 Q
Validation print counter
BILL CNT 0 Q
Bill counter
DRW CNT 8 Q
Drawer counter
TRAY TL 5 Q
Tray subtotal counter
***PBAL 1 Q
PBAL counter
SERVICE 3 Q
Service counter
TRANS CT 1187 Q
Customer counter
NET3 $13657.51
Sales total (including hash dept. total)
CASH 1174 Q $12562.64
Cash counter and total
CASH2 3 Q $110.74
Cash 2 counter and total
FSSALE 3 Q $172.83
Sales for food stamp counter and total
***RA 3 Q $188.43
Received on account counter and total
***RA2 1 Q $80.00
Received on account 2 counter and total
***PO 1 Q $30.00
Paid out counter and total
***PO2 1 Q $20.00
Paid out 2 counter and total
CA/CHK 2 Q $87.00
Check cashing counter and total
CHK/CG $15.86
Cash change total for check and charge 1 - 5 tendering
FS/CG $0.50
Cash change total for food stamp tendering
CONV 1 30.00
Currency conversion 1 total (by programmed rate)
CONV 2 80.00
CONV 3 100.00
CONV 4 100.00
Currency conversion 4 total (by manual rate)
FS/ID $117.00
Food stamp in drawer total
CHARGE1 6 Q $87.98
Charge 1 sales and tendering counter
CHARGE1- 2 Q -10.65
Charge 1 in drawer
CHARGE2 5 Q $125.59
Charge 1 refunds counter
CHARGE2- 2 Q -9.48
Charge 1 refunds total
CHARGE3 5 Q $81.84
CHARGE3- 1 Q -7.20
CHARGE4 4 Q $89.50
CHARGE4- 1 Q -5.18
CHARGE5 4 Q $72.50
CHARGE5- 1 Q -6.12
CHECK1 5 Q $233.95
Check sale and tendering counter
CHECK2 3 Q $133.40
Check in drawer
CA/CH ID $12983.00
Cash + check in drawer
****CID $12615.65
Cash in drawer
DEPOSIT 1 Q $30.00
Deposit counter and total
DPST RF 1 Q -20.00
Deposit refund counter and total

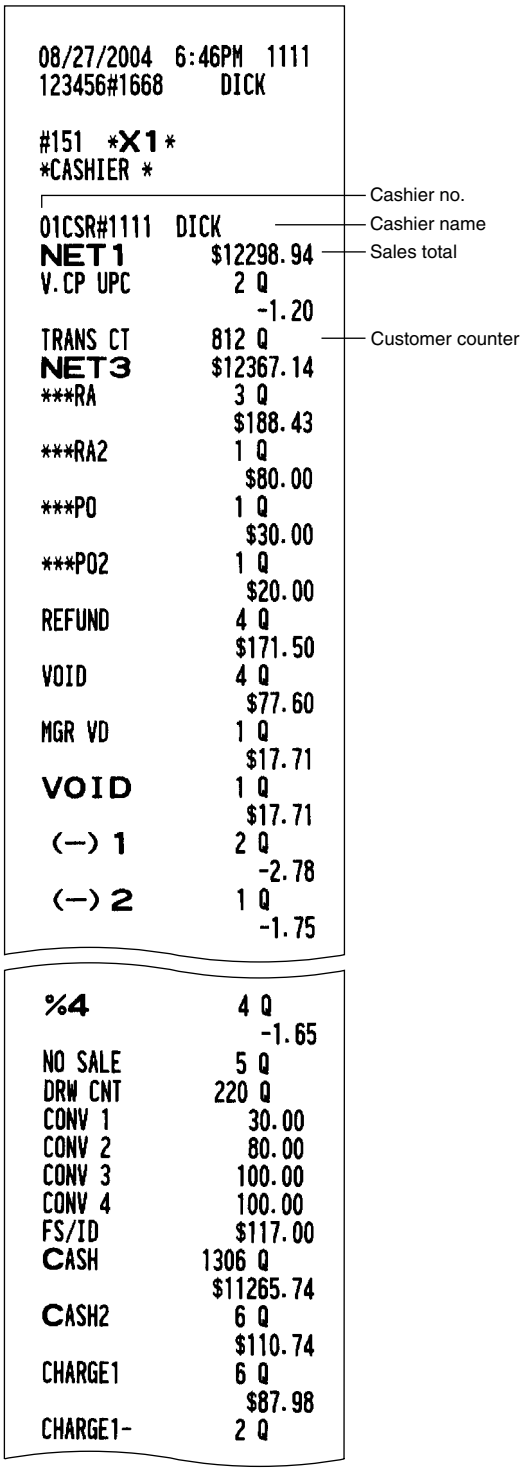
■ Cashier report

Using this function, you can take X and Z reports for individual cashiers or all cashiers.

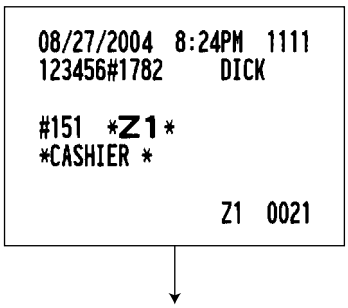
Individual cashier reading and resetting

Note *The OP X/Z-mode reading and resetting is allowed only when your machine has been programmed for "OP X/Z mode available" in the PGM2 mode.*

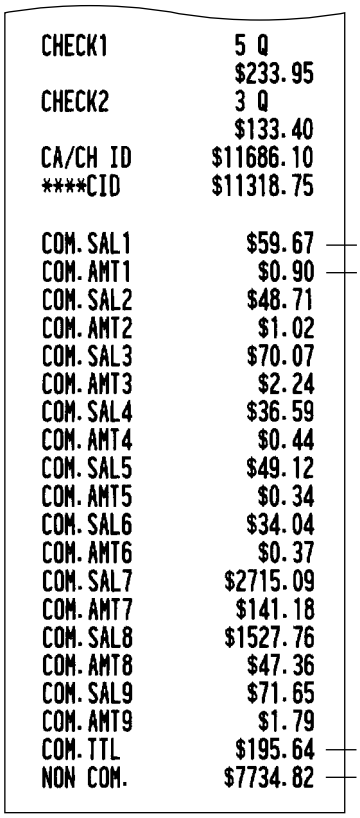
• Sample X report



• Sample Z report

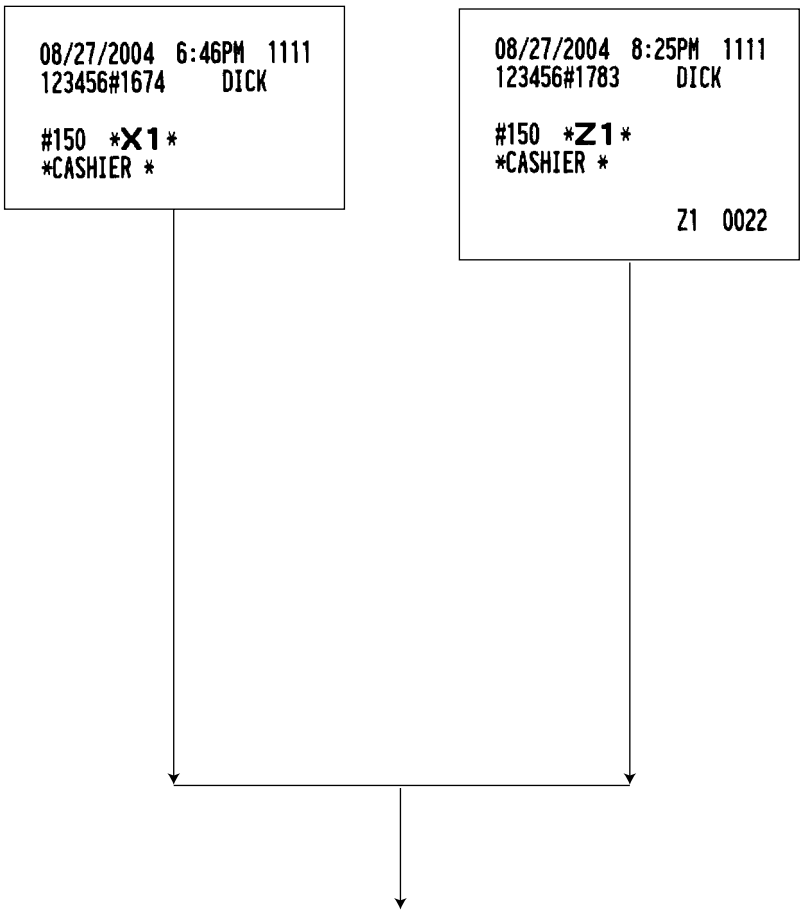


The subsequent printout occurs in the same format as in the sample X report.



* When you take these reports in the OP X/Z mode, the X report shows an “OP X” and the Z report shows an “OP Z”.

Full cashier reading and resetting

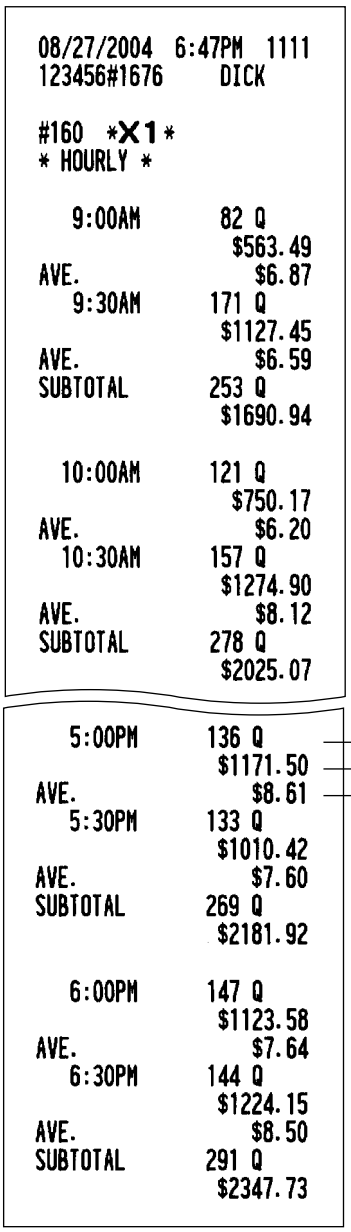


The subsequent printout occurs in the same format as in the sample report shown in the previous page: and sales data for cashiers print in this sequence.

■ Hourly report

You can take X and Z reports for sales totals and transaction (customer) counters for 48 half hours, or 24 hours. If both quantity and amount are zero, their print is skipped.

• Sample X report

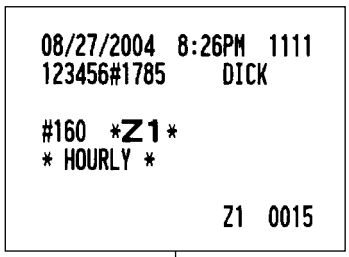


Customer counter

Sales total

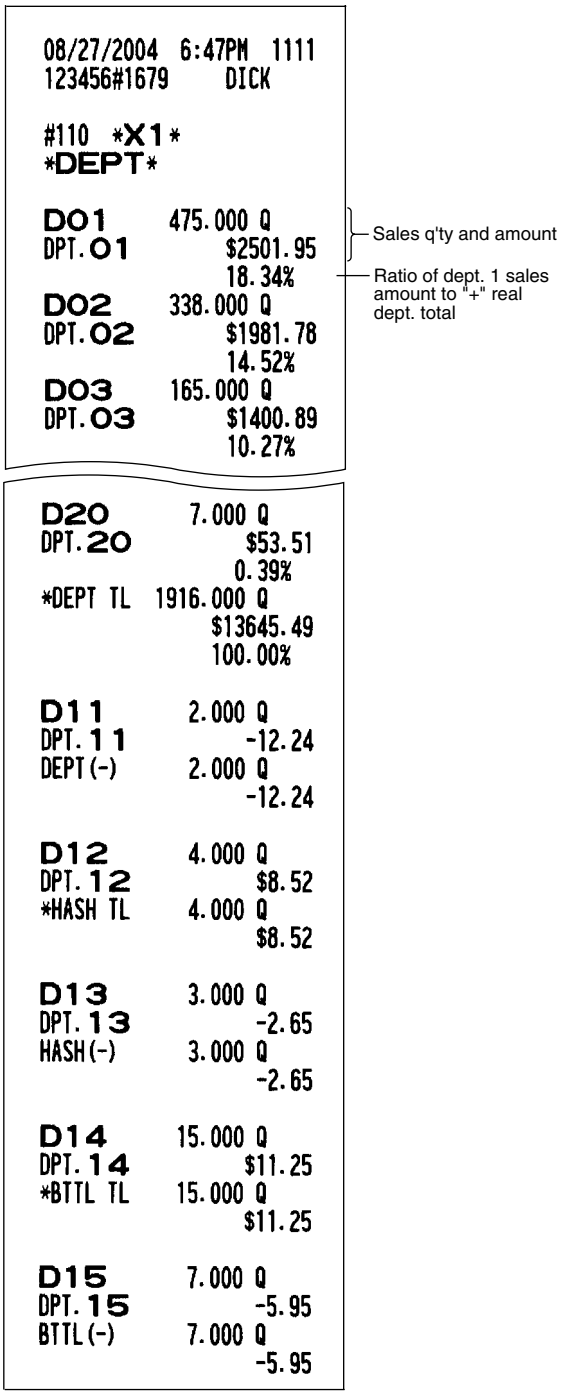
Average sales amount per customer (sales total ÷ customer counter)

• Sample Z report

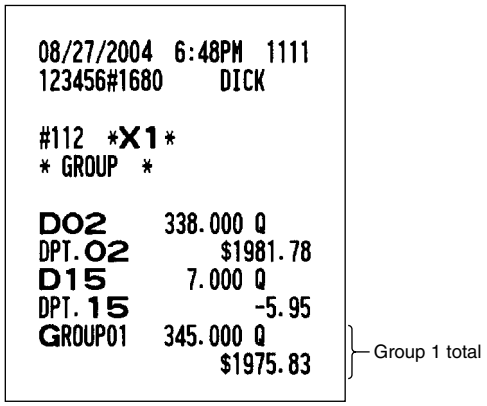


The subsequent printout occurs in the same format as in the sample X report.

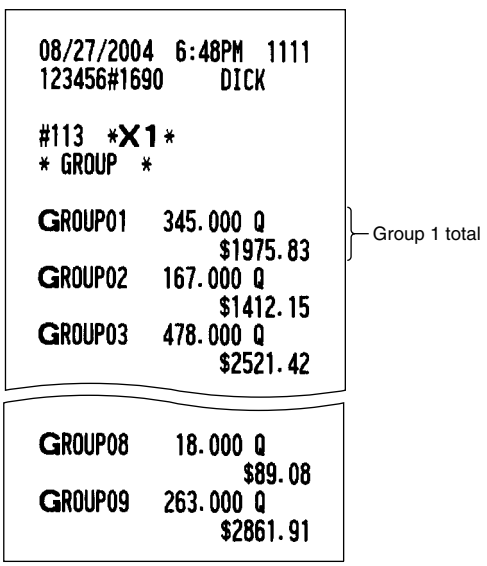
■ Full department report



■ Individual group total report on department



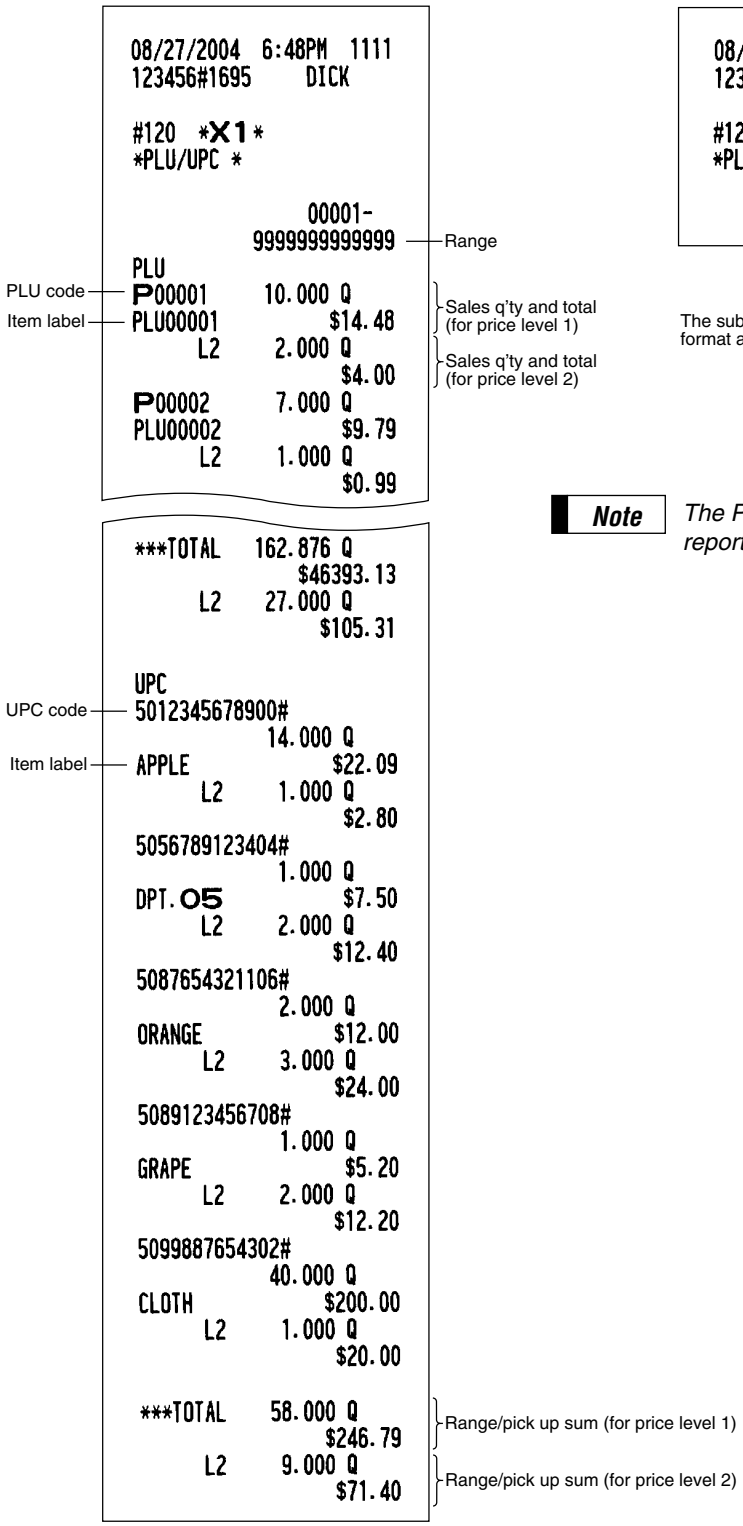
■ Full group total report on department



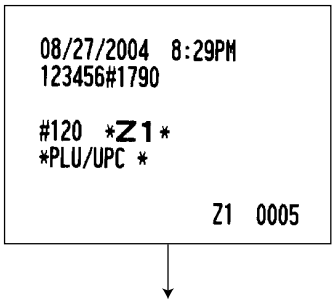
■ PLU/UPC report (by designated range or pick up list)

This function provides you with X and Z reports for sales information of PLUs/UPCs.
You can select either of the designated range operation or pick up list operation. The range may represent all or part of the PLUs/UPCs in your register.

• Sample X report



• Sample Z report

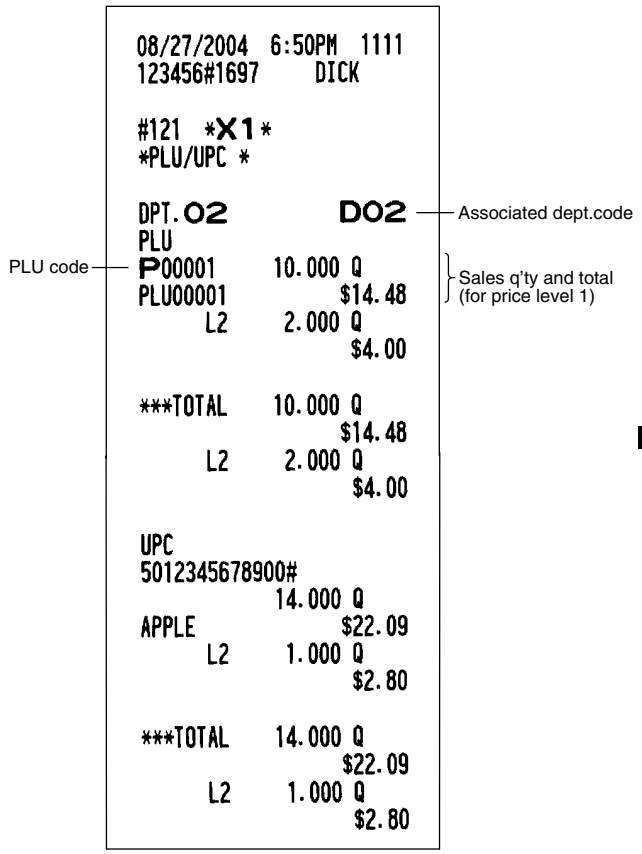


The subsequent printout occurs in the same format as in the sample X report.

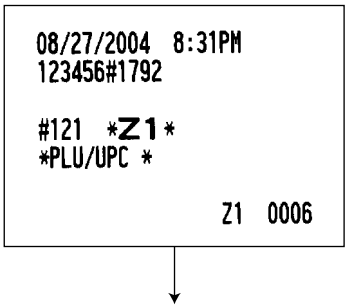
Note *The PLU/UPC range is not printed in pick up report (#109).*

■ PLU/UPC report by associated department

• Sample X report

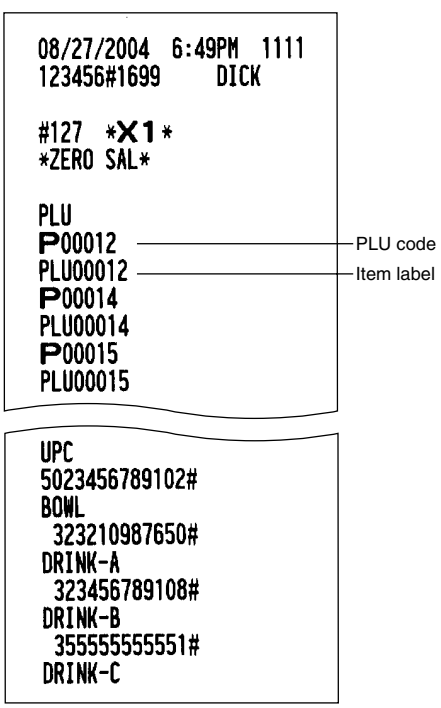


• Sample Z report

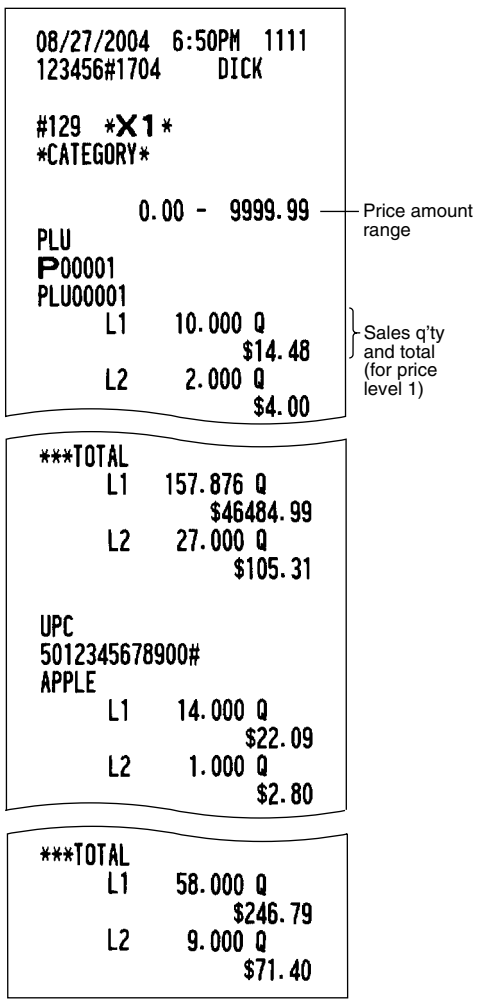


The subsequent printout occurs in the same format as in the sample X report.

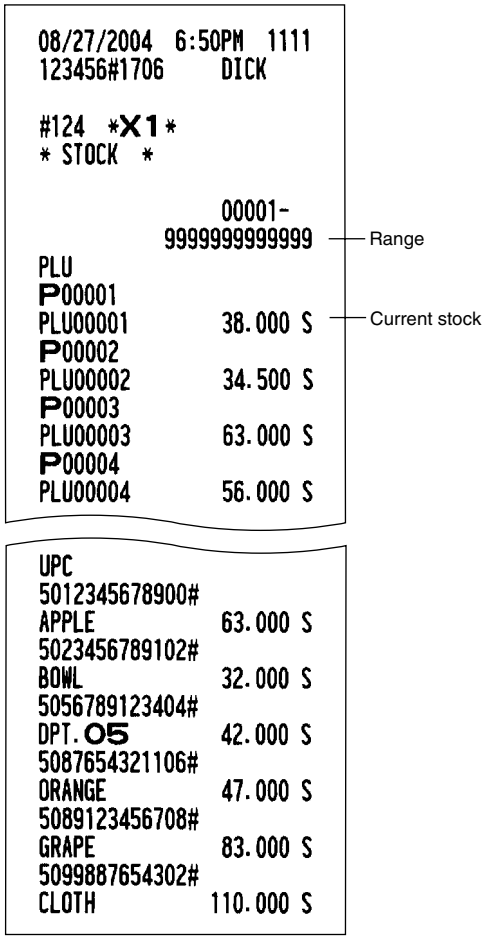
■ PLU/UPC zero sales report



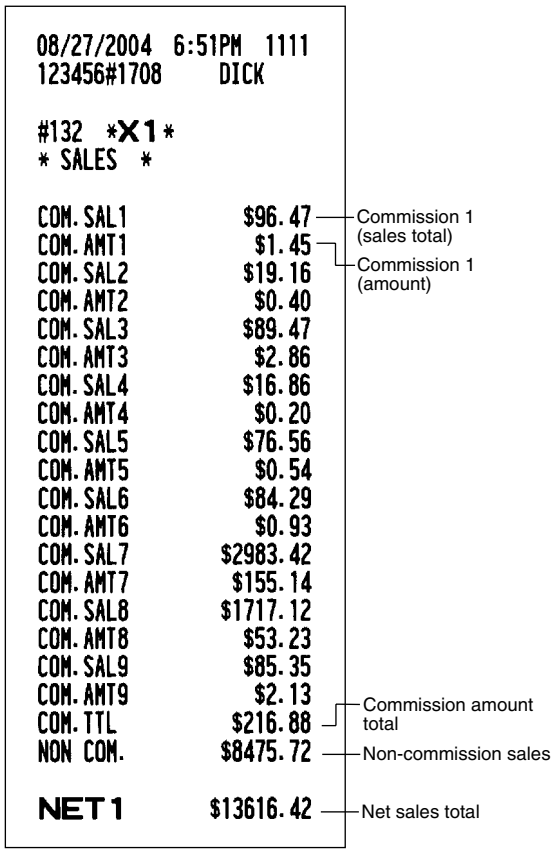
■ PLU/UPC price category report



■ PLU/UPC stock report (by designated range or pick up list)



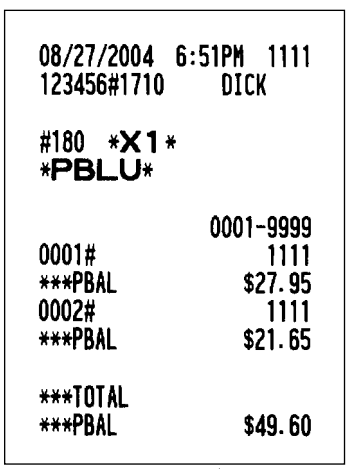
■ Commission sales report



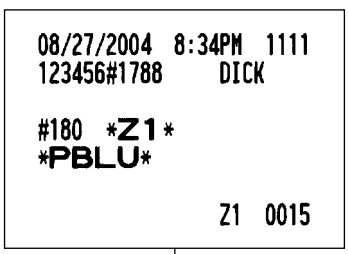
Note *The PLU/UPC range is not printed in pick up report (#104).*

■ PBLU report

• Sample X report



• Sample Z report



The subsequent printout occurs in the same format as in the sample X report.

■ PBLU report by cashier

• Sample X report

```
08/27/2004  6:51PM  1111
123456#1711     DICK

#181  *X1*
*PBLU*

01CSR#1111  DICK
0001#
***PBAL            $27.95
0002#
***PBAL            $21.65

***TOTAL
***PBAL            $49.60
```

• Sample Z report

```
08/27/2004  8:35PM  1111
123456#1789     DICK

#181  *Z1*
*PBLU*

                Z1  0016
```

The subsequent printout occurs in the same format as in the sample X report.

■ Transaction report

```
08/27/2004  6:52PM  1111
123456#1713     DICK

#130  *X1*
* TRANS. *
```

In this report the same transaction data as those printed when general reading is taken are printed except department sales totals.

■ Cash in drawer report

You can take full cashier X reports for cash in drawer.

```
08/27/2004  7:16PM  1111
123456#1775     DICK

#131  *X1*
* CID *

01CSR1111  DICK
TRANS CT      1354 Q
NET3         $12360.61
****CID      $11318.75

02CSR0002  CASHIER2
TRANS CT       53 Q
NET3          $283.68
****CID       $283.68
```

Cashier no.
Cashier name
Customer counter
Sales total
Cash in drawer

```
***TOTAL
TRANS CT      1552 Q
NET3         $13941.19
****CID      $12899.33
```

■ X1/Z1 stacked report

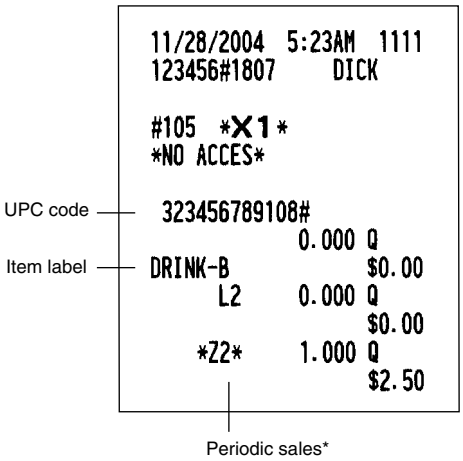
You can print multiple X1/Z1 reports in sequence at a single time. In this case, you need to program in advance what X1/Z1 reports should be printed in the stacked report sequence.

Note

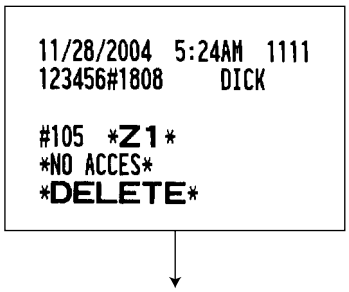
The following job code numbers (only) can be used for stacked report printing.
Job code number: 100, 110, 113, 120, 124, 127, 129, 130, 131, 132, 150, 160, 180
Refer to "Selection of X1/Z1 and X2/Z2 reports to be printed in the stacked report sequence" for further details.

■ Deleting of non-accessed UPCs

• Sample X report (Reading)



• Sample Z report (Deleting)



The subsequent printout occurs in the same format as in the sample X report.

*: When there is any sales data of the UPC for #209 report, the data in printed here.
When you delete the UPC in Z1 mode under the this situation, the data for #209 is also deleted.

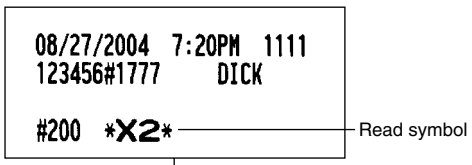
3 Periodic consolidation

Your register allows you to take consolidation X and Z reports of a chosen period (normally one week or a month).

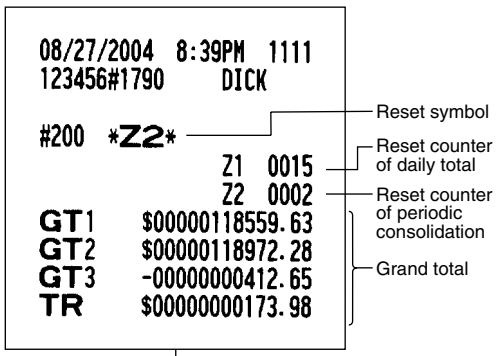
■ General Overview

The periodic reading or resetting reports are the same in format as those in the X1/Z1 report for daily total except job code no. (#2xx) and mode indication (“X2” or “Z2”.)

• Sample X report



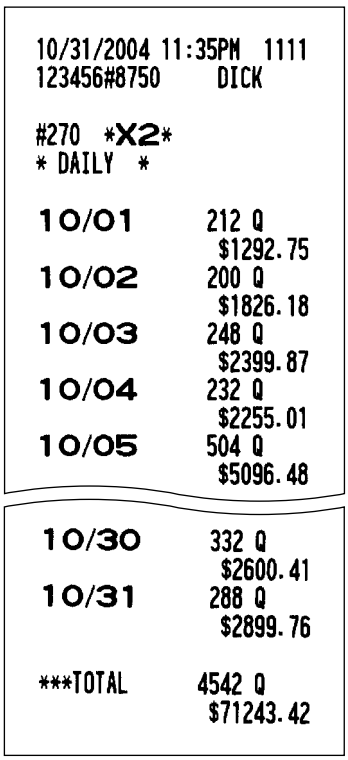
• Sample Z report



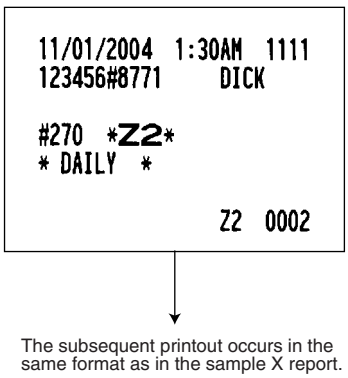
The subsequent printouts are the same in format as those in the X/Z report for daily total.

■ Daily net report

• Sample X report



• Sample Z report



The subsequent printout occurs in the same format as in the sample X report.

■ X2/Z2 stacked report

You can print multiple X2/Z2 reports in sequence at a single time. In this case, you need to program in advance what X2/Z2 reports should be printed in the stacked report sequence.

Note

The following job code numbers (only) can be used for stacked report printing.
Job code number: 200, 210, 213, 220, 227, 229, 230, 231, 232, 250, 270
Refer to "Selection of X1/Z1 and X2/Z2 reports to be printed in the stacked report sequence" for further details.

COMPULSORY CASH/CHECK DECLARATION

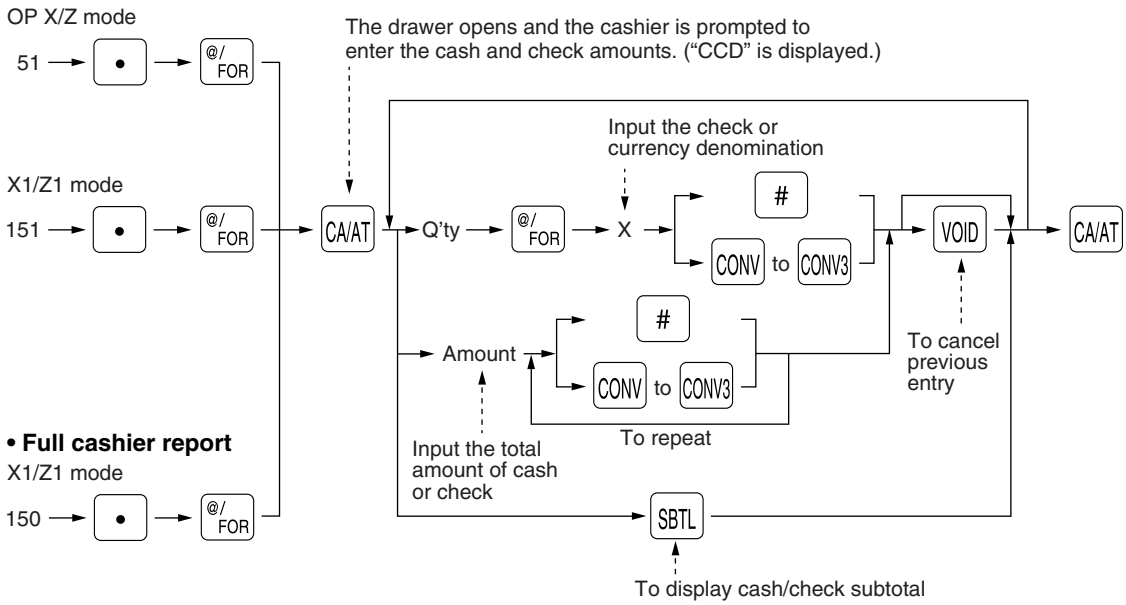
If you want to make the declaration of the cash and check amount in the drawer mandatory before performing cashier Z reports, please consult your dealer and have your register programmed for compulsory cash/check declaration.
If your register is programmed for compulsory cash/check declaration (CCD), a cashier must first count and declare the cash and check amounts (of domestic and foreign currency) in the drawer, before he or she can performing a cashier report. The procedure for outputting a CCD report is shown below.

Types of compulsory cash/check declarations
- Compulsory declaration prior to individual cashier resetting
- Compulsory declaration prior to full cashier resetting

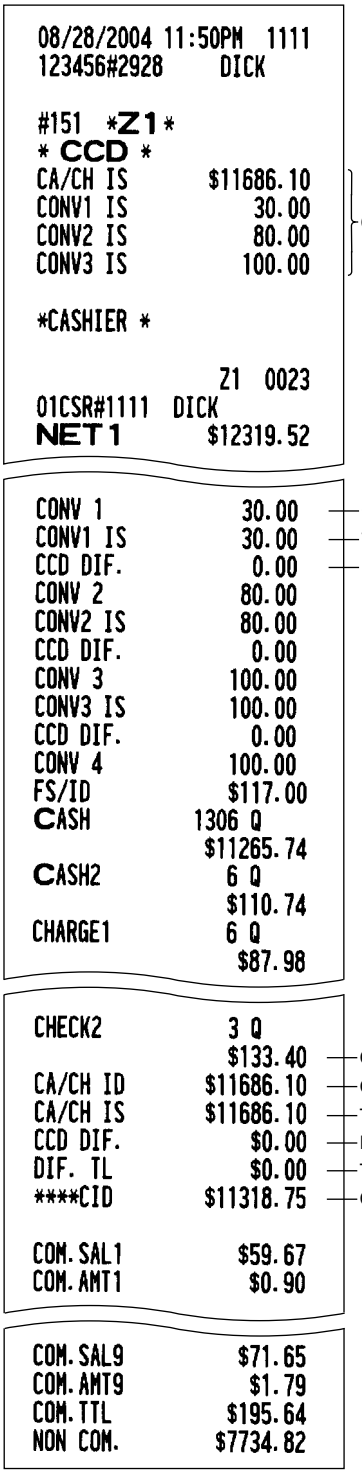
Note
- *Compulsory cash/check declaration is available in the above two types. You can choose either of these. Please consult your dealer for further details.*
- *When the cash/check declaration is compulsory, flash reports are not available.*

Key operation
After the CA/AT key is pressed, the register prompts the cashier to input the cash and check accounts for both domestic and foreign currency. The cashier can simply input the total amounts of each currency unit, or the number of bills or coins of each denomination of each currency unit.

• Individual cashier report



: When inputting the cash or check amount (domestic currency) in the drawer
CONV to CONV3 : When inputting the amount of a foreign currency in the drawer



CCD entry amount

Currency conversion 1 in drawer to be obtained

Total of entered (declared) conversion 1 in drawer

Difference

Check 2 (in domestic currency) in drawer to be obtained

Cash/check in drawer to be obtained

Total of entered (declared) cash/check in drawer

Difference

Total of difference

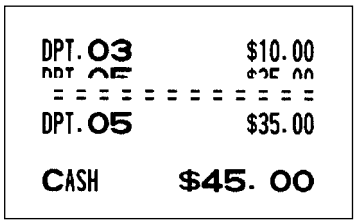
Cash in drawer to be obtained

OPERATOR MAINTENANCE

1 In case of power failure

When power is lost, the machine retains its memory contents and all information on sales entries.

- When a power failure is encountered in register idle state or during an entry, the machine returns to the normal state of operation after power recovery.
- When a power failure is encountered during a printing cycle, the register prints "========" and then carries out the correct printing procedure after power recovery. (See the sample print.)



2 In case of printer error

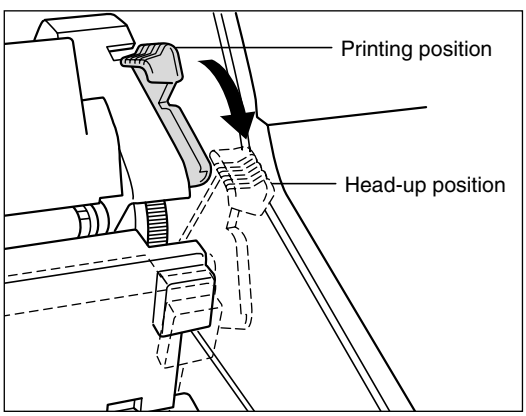
If the printer runs out of paper, the printer will hault, "PAPER EMPTY" error will appear on the display, and the register will start to continuously produce an intermittent beeping tone. Key entries will not be accepted. Referring to "4. Installing and removing the paper roll" in this chapter, install a new roll paper in the proper position, then press the CL key. The printer will print the power failure symbol and resume printing.

If the print head is up, the printer haults, "HEAD UP" error will appear on the display, and the register will start to continuously produce an intermittent beeping tone. Key entries will not be accepted. Bring the print head to the correct position, then press the CL key. The printer will print the power failure symbol and resume printing.

3 Thermal printing

Your register prints by means of thermal printing. The print head applies heat to thermal paper which is chemically treated to change color when heated to a certain level. This creates the printed text.

■ Cautions in handling the printer



- If you are not going to use the register for an extended period of time, pull the print head release lever toward you so that the print head is set apart from the plate.

- Avoid the following environments:
  Dusty and humid places
  Direct sunlight
  Iron powder (A permanent magnet and electromagnet are used in this machine.)
- Use the print head release lever only when necessary.
- Never pull the paper when it is in contact with the print head. First release the head with the print head release lever, and then remove the paper.
- Never touch the surface of the print head.
- Never touch around the print head and the motor during printing or before they have had sufficient time to cool.

■ Cautions in handling the recording paper (thermal paper)

- Use only the paper specified by SHARP.
- Do not unpack the thermal paper until you are ready to use it.
- Avoid heat. The paper will color at around 70°C.
- Avoid dusty and humid places for storage. Avoid direct sunlight.
- The printed text on the paper can discolor under the following conditions:
  Exposure to high humidity and temperature
  Exposure to the direct sunlight
  Contact with glue, thinner or a freshly copied blueprint
  Heat caused by friction from scratching or other such means
  Contact with a rubber eraser or adhesive tape
- Be very careful when handling the thermal paper. If you want to keep a permanent record, copy the printed text with a photocopier.

4 Installing and removing the paper roll

■ Recording paper specifications

Be sure to use paper rolls specified by SHARP.
The use of any other paper rolls than specified could cause paper jamming, resulting in register malfunction.

Paper specification

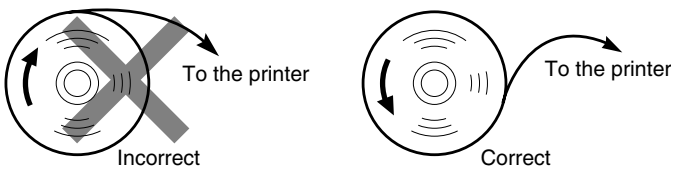
Paper width:	1.75 ± 0.02 in. (44.5 ± 0.5 mm)
Max. outside diameter:	3.15 in. (80 mm)
Quality:	Thermal paper
Paper tube:	0.71 in. (18 mm)

• Be sure to set paper roll(s) prior to using your machine, otherwise it may cause a malfunction.

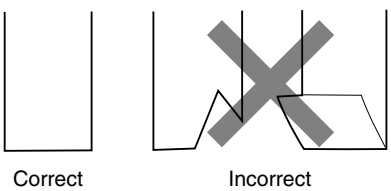
Install the paper roll in the printer. Be careful then to set the roll and cut the paper end correctly.

Note *If the top end of the paper roll is fixed with paste or tape, the paper may lose its color development ability in the pasted or taped area due to the deterioration of the heat-sensitive color development component of the paper surface. This may result in nothing appearing at this location when printing is performed. Therefore, when setting a new paper roll in the machine, be sure to cut off approximately one revolution (approx. 25 cm long).*

(How to set the paper roll)

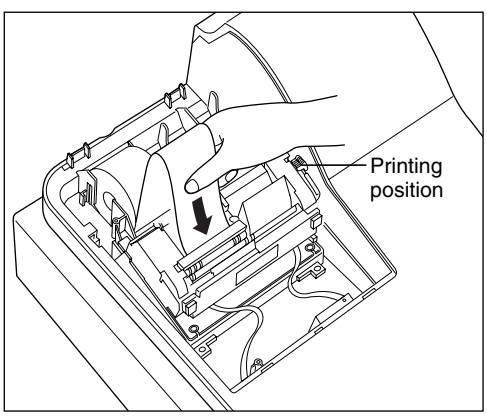


(How to cut the paper end)



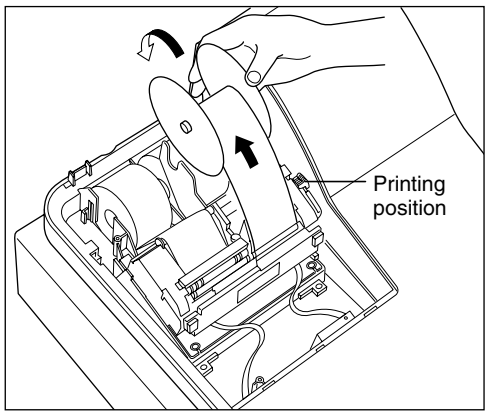
■ Installing the paper roll

Installing the receipt paper roll



1. Turn the mode switch to the “REG” position with the AC cord connected.
2. Remove the printer cover.
3. Check that the print head release lever is in its printing position.
4. Set the paper correctly as illustrated above in the receipt side of the printer.
5. Insert the end of the paper into the paper chute as shown on the left. It will automatically be fed through the printer.
6. Cut off the excess paper that comes out of the printer with the manual cutter.
7. Replace the printer cover.

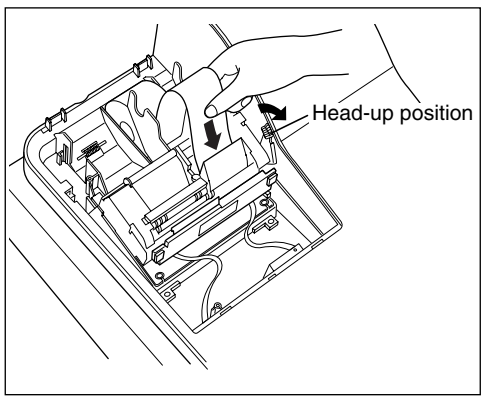
Installing the journal paper roll



1. Turn the mode switch to the “REG” position with the AC cord connected.
2. Remove the printer cover.
3. Check that the print head release lever is in its printing position.
4. Set the paper correctly as illustrated on the previous page in the journal side of the printer.
5. Insert the end of the paper into the paper chute as shown on the left. It will automatically be fed through the printer.
6. Insert the end of the paper into the slit in the paper take-up spool. (Press the [JOURNAL] key to feed more paper through if required.)
7. Wind the paper two or three turns around the spool shaft.
8. Set the spool on the bearing.
9. Replace the printer cover.

Note

• When it is difficult to insert paper into the paper chute, try inserting it again by following the steps described below.



In case of inserting the journal paper roll

1. Cut off the end of paper in a single straight cut.
2. Pull the print head release lever toward you to lift up the print head.
3. Insert the end of paper into the paper chute, while pressing the corresponding paper feed key ([JOURNAL] key or [RECEIPT] key).
4. When the end of paper comes out of the printer, release the feed key and return the print head release lever to its original position.
5. Press the feed key to feed more paper.

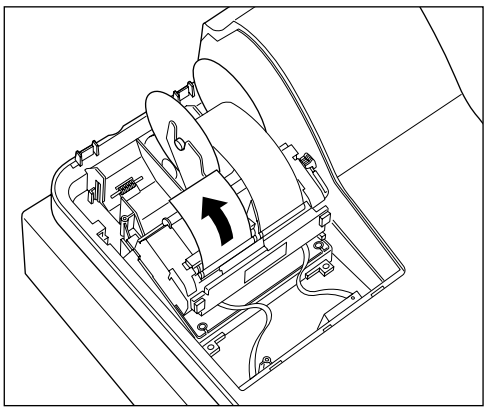
• When you want to manually install a new roll of paper while your machine is turned off, follow the steps shown below:

1. Pull the print head release lever toward you to lift up the print head.
2. Correctly place the new paper roll into the receipt/journal paper roll location.
3. Insert the paper end into the paper chute until it comes out of the printer.
4. Cut or roll the paper onto the take-up spool as described for automatic installation.
5. Return the print head release lever to its original position.

■ Removing the paper roll

When a colored dye appears on the paper roll, it is time to replace the existing paper roll. Replace the paper roll with a new one. If you plan not to use your register for an extended period of time, remove the paper roll, and store it in the appropriate place.

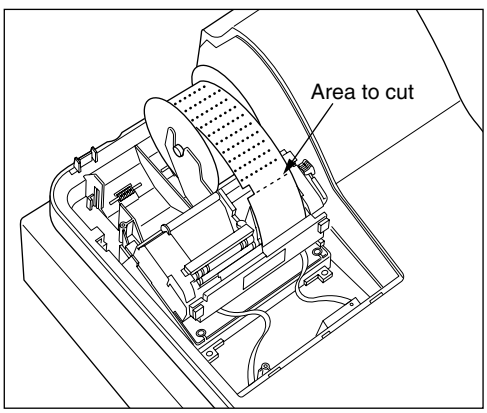
Removing the receipt paper roll



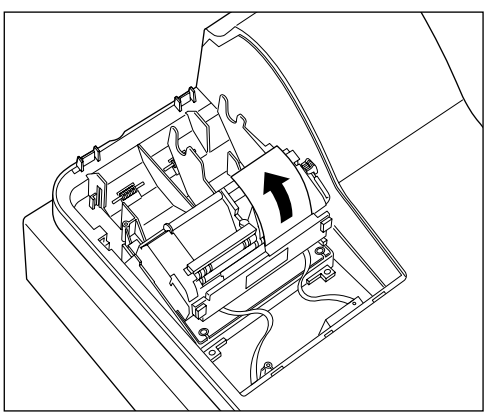
1. Remove the printer cover.
2. Cut the paper behind the printer and near the paper roll.
3. Press the [RECEIPT] key until the paper remaining in the printer comes out completely.
4. Remove the paper roll from the back of the printer.

Note *Do not pull the paper through the printer.*

Removing the journal paper roll

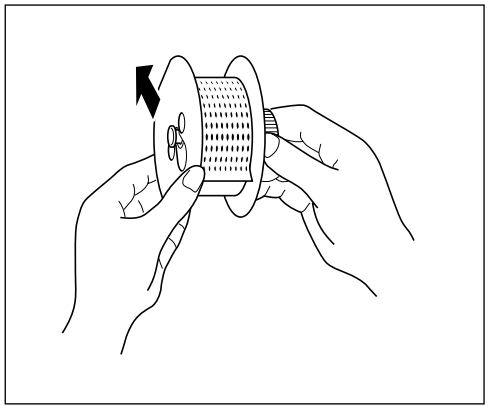


1. Remove the printer cover.
2. Press the [JOURNAL] key to advance the journal paper until its printed part is out of the way.
3. Cut the paper and remove the take-up spool.

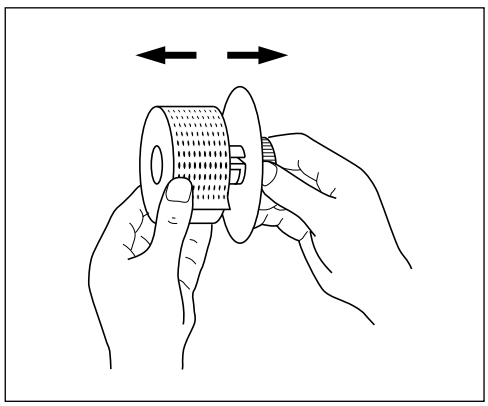


4. Cut the paper behind the printer and near the paper roll.
5. Press the [JOURNAL] key until the paper remaining in the printer comes out completely.
6. Remove the paper roll from the back of the printer.

Note *Do not pull the paper through the printer.*



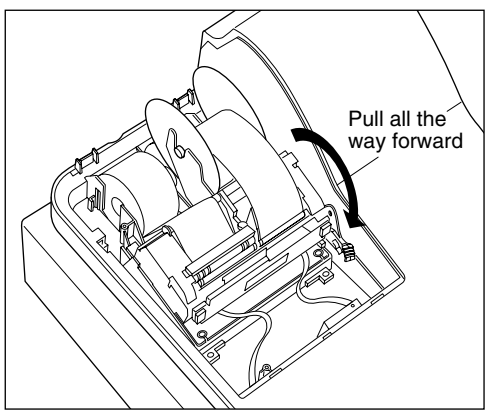
7. Remove the outer side of the take-up spool as shown on the left.



8. Remove the printed journal roll from the take-up spool.

■ Removing a paper jam

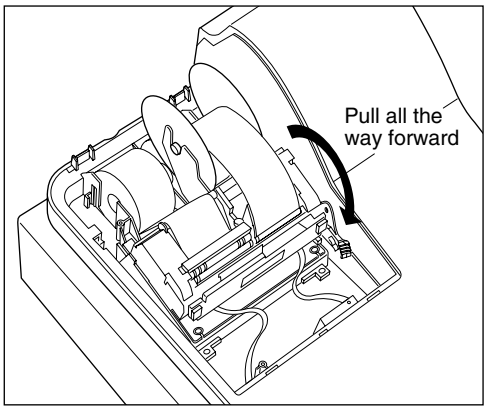
Precaution: Be very careful with the manual paper cutter, so as not to cut yourself. Never touch the print head immediately after printing, because the head may still be hot.



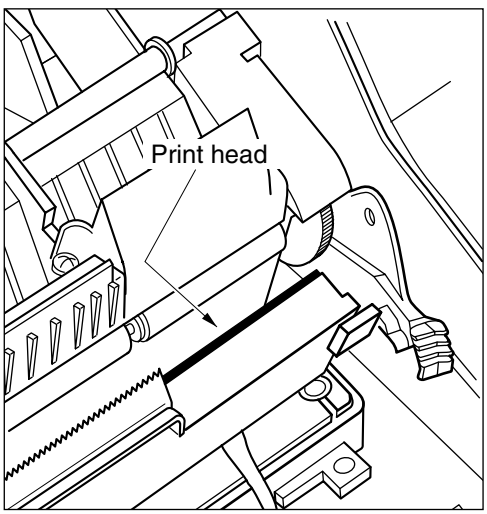
1. Remove the printer cover.
2. Pull the print head release lever all the way forward (after it stops at one position, continue pulling forward until it stops again and cannot be pulled forward any further).
3. Remove the paper jam. Check for and remove any shreds of paper that may remain in the printer.
4. Reset the paper roll correctly by following the steps in “Installing the paper roll”.
5. Return the print head release lever to its original position.
6. Replace the printer cover.

5 Cleaning the print head

When the printed text is getting dark or faint, paper dust may be stuck to the print head. Clean the print head as follows:



1. Turn the mode switch to the "OFF" position.
2. Remove the printer cover.
3. Pull the print head release lever all the way forward (after it stops at one position, continue pulling forward until it stops again and cannot be pulled forward any further).



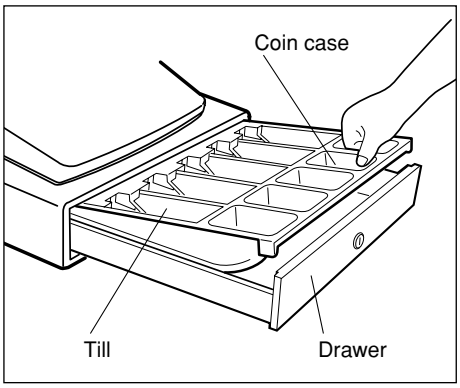
4. Clean the print head with a soft rag moist with ethyl alcohol or isopropyl alcohol.
5. Return the print head release lever to its original position immediately after cleaning.
6. Replace the printer cover.

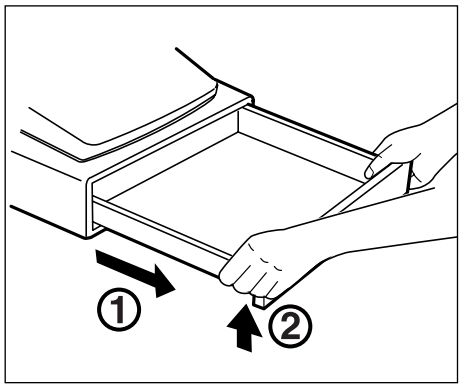
Caution:

- **Never touch the print head with a tool or anything hard as it may damage the head.**
- **The paper cutter is mounted on the printer (receipt side). Be careful not to cut yourself.**

6 Removing the till and the drawer

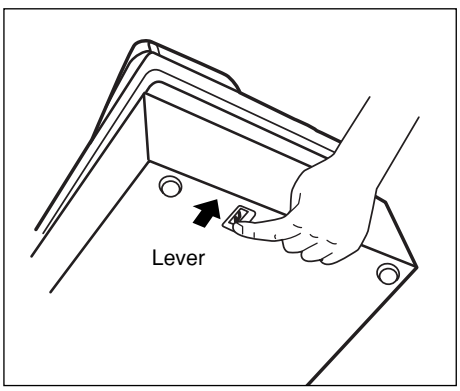
The till in the register is detachable. After closing your business for the day, remove the till from the drawer and keep the drawer open. To detach the drawer, pull it forward fully with the till removed, and remove it by lifting it up.





7 Opening the drawer by hand

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



8 Before calling for service

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

Fault	Checking
(1) The display won’t be illuminated even when the mode switch is turned to any other position than “OFF”.	• Is power supplied to the electrical outlet? • Is the power cord plug out or loosely connected to the electrical outlet?
(2) The display is illuminated, but the whole machine refuses registrations.	• Is a cashier code assigned to the register? • Is the mode switch set properly at the “REG” position?
(3) No receipt is issued.	• Is the receipt paper roll properly installed? • Is there a paper jam? • Is the receipt function in the “OFF” status? • Is the print head release lever at the printing position?
(4) No journal paper is taken up.	• Is the take-up spool installed on the bearing properly? • Is there a paper jam?
(5) Printing is unusual.	• Is the print head release lever at the printing position? • Is the paper roll properly installed?

■ Error message table

Text no.	Description	In default of programming
1	Registration error	ENTRY ERROR
2	Misoperation error	MISOPERATION
3	Desired code is not programmed yet.	NO RECORD
4	(Reserved)	
5	Secret code error	SECRET CODE
6	Code is not free	NOT FREE
7	Memory is full.	MEMORY FULL
8	Insert slip paper.	INSERT SLIP
9	The entered cashier’s code is not authorized.	NO AUTHORITY
10	Stock is empty.	OUT OF STOCK
11	Compulsory pushing the subtotal key	SBTL COMPUL.
12	Compulsory tendering	TEND COMPUL.
13	Compulsory PBLU entry	PB COMPUL.
14-19	(Reserved)	
20	Remote printer off line	OFF LINE
21	(Reserved)	
22	Overlapped cashier error	CASHIER ERR.
23-26	(Reserved)	
27	Power off	POWER OFF
28-30	(Reserved)	
31	Compulsory non-add code	# COMPULSORY
32	The cashier is not assigned.	NOT ASSIGNED
33	(Reserved)	
34	Overflow limitation	OVER LIMIT.
35	The open price entry is inhibited.	INH. OPEN PR
36	The unit price entry is inhibited.	INH. UNIT PR
37	The direct non-tendering finalization after previous tender entry is inhibited.	NOT NON-TEND
38	Read error of scale data	SCALE ERROR

Text no.	Description	In default of programming
39-50	(Reserved)	
51	Weight on scale	WEIGHT
52-53	(Reserved)	
54	Entry of tare weight	ENTR TARE WT
55-60	(Reserved)	
61	Desired code is not programmed yet. (learning function)	NO RECORD
62	Enter price and dept. no.	PRICE → DEPT
63	Enter price and dept. no.	PRICE & DEPT
64	Enter dept. no.	ENTER DEPT#
65-66	(Reserved)	
67	REG buffer is full.	BUFFER FULL
68-69	(Reserved)	
70	Price entry at UPC refund	ENTER PRICE
71-73	(Reserved)	
74	Non-accessed UPC delete job	**D E L E T E**
75	(Reserved)	
76	Closing the drawer is compulsory.	CLOSE DRAWER
77-78	(Reserved)	
79	Reading of undefined vender coupon UPC	OP ENTER
80	(Reserved)	
81	Message for prompting entry of secret code	ENTR SECRET#
82-83	(Reserved)	
84	Data backup send success	SEND OK
85	Data backup receive success	RECEIVE OK
86	Data backup communication error	COM. ERROR
87	Backup data format error	DATA ERROR
88	Data backup time out error	TIME OUT
89-93	(Reserved)	
94	Age limitation error	AGE ERROR

LIST OF OPTIONS

For your register, the following Sharp options are available.
For further details on additional options that may be considered, please contact your dealer.

•Remote drawer model ER-04DW
•Till model ER-55CC2
•Key kit models

By using the following key kits, the keyboard layout can be changed on your register including the expansion of the number of departments.

ER-11KT7: 30 regular size key kits
ER-12KT7: 30 1 x 2 size key kits
ER-22KT7: 10 2 x 2 size key kits
ER-11DK7G: 30 regular size dummy key kits
ER-51DK7G: 10 5 x 1 size dummy key kits

} for ER-A410 only

•Barcode reader model ER-A6HS1 (only for the standard channel 1)

SPECIFICATIONS

Model:	ER-A410/A420		
Dimensions:	16.5 (W) x 16.8 (D) x 11.7 (H) in. (420 (W) x 427 (D) x 297 (H) mm)		
Weight:	29.1 lbs (13.2 kg)		
Power source:	120V ± 10% AC, 60Hz		
Power consumption:	Stand-by 9 W		
	Operating 46.5 W (max.)		
Working temperature:	32 to 104°F (0 to 40°C)		
Electronics:	LSI (CPU) etc.		
Built-in battery:	Rechargeable battery, memory holding time about 1 month		
	(with fully charged built-in battery, at room temperature)		
Display:			
Operator display:	LCD dot-matrix display (16 positions x 2 lines)		
Customer display:	7-segment display (7 positions)		
Printer:			
Type:	2-station thermal printer		
Printing speed:	Approx. 13.3 lines/second		
Printing capacity:	24 digits each for receipt and journal paper		
Other functions:	• Graphic logo printing function		
	• Logo text printing function		
	• Receipt (ON-OFF) function, journal selective function		
	• Receipt and journal independent paper feed function		
Paper roll:	Width: 1.75 ± 0.02 in. (44.5 ± 0.5 mm)		
	Max. diam.: 3.15 in. (80 mm)		
	Quality: High quality (0.06 to 0.08 mm thickness)		
Cash drawer:	5 slots for bill and 5 for coin denominations		
Accessories:	Manager key	2	
	Submanager key	2	
	Operator key	2	
	Drawer lock key	2	
	Paper roll	2	
	Take-up spool	1	
	Standard key sheet	1 (mounted on the keyboard)	for ER-A420 only
	Programming key sheet	1 (mounted on the keyboard)	for ER-A420 only
	Instruction manual	1 copy	

* Specifications and appearance subject to change without notice for improvement.

NOTICE

BE SURE TO ASK YOUR AUTHORIZED SHARP DEALER ABOUT THE WARRANTY THAT YOUR SELLING DEALER EXTENDS TO YOU. In order to assure you, the end-user, of warranty protection, Sharp extends a limited warranty to each of its authorized dealers, and in turn requires each of its authorized dealers to extend its own warranty to you on terms that are no less favorable than those given to the dealer by Sharp. You should be aware, however, that Sharp does not itself extend any warranties, either express or implied, directly to you, the end-user, and no one is authorized to make any representations or warranties on behalf of Sharp. Specifically, SHARP DOES NOT EXTEND TO YOU, THE END-USER, ANY EXPRESS WARRANTY OR ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR USE OR FITNESS FOR ANY PARTICULAR PURPOSE IN CONNECTION WITH THE HARDWARE, SOFTWARE, OR FIRMWARE EMBODIED IN OR USED IN CONJUNCTION WITH THIS PRODUCT. Sharp is not responsible for any damages or loss, either direct, incidental or consequential, which you, the end-user, may experience as a result of your purchase or use of the hardware, software or firmware embodied in or used in conjunction with this product. Your sole remedy in the event that you encounter any difficulties with the product is against the authorized dealer from which you purchased the product. In the event that this authorized dealer does not honor its warranty commitments, please contact the General Manager of Sales, Retail and Financial System Division, ISG, Sharp Electronics Corporation, Sharp Plaza, P.O. Box 650, Mahwah, NJ 07430-2135 so that Sharp can try to help you to assure complete satisfaction of all the warranty rights to which you are entitled from the authorized dealer.

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