

TK-1300 - CE-4200 - CE4250

PROGRAMMING MANUAL

How to use this manual . . .

This manual is designed to help make your programming chores simpler and easier. Programming procedures in this manual are represented using graphics that show you the keys you have to press or the data you need to input. Worksheets help you determine the programming codes you need to input to program the cash register. We recommend that you use the general procedure described below for programming.

General Programming Procedure

1. Determine the features and functions that you want to program to the cash register, and use the worksheets to determine the programming codes.
2. Initialize the cash register.
3. Allocate memory in accordance with the features and functions you are about to program.
4. Perform the programming procedures you need, inputting the programming code from the worksheets.

About the worksheets

Most of the worksheets require that you calculate a program code based on the functions you choose. The following shows an example 3-digit worksheet that is already filled out.

| Item | Description | Choice | Program Code | |
|------|---------------------|--|--------------|----|
| 10 | | | 0 | 10 |
| 9 | a | Operation in RF Mode Enable = 0 Disable = 1 | | 9 |
| | b | Operation in REG 2 Mode Enable = 0 Disable = 2 | | |
| | c | Operation in REG 1 Mode Enable = 0 Disable = 4 | | |
| 8 | Multiple validation | Allow = 0 Prohibit = 2 | | 8 |
| 7 | | | 0 | 7 |
| 6 | | | 0 | 6 |
| 5 | | | 0 | 5 |
| 4 | | | 0 | 4 |
| 3 | | | 0 | 3 |
| 2 | | | 0 | 2 |
| 1 | | | 0 | 1 |

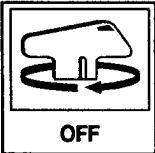
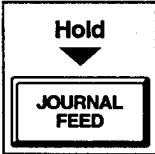
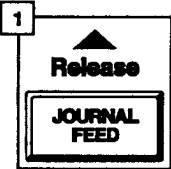
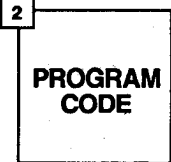

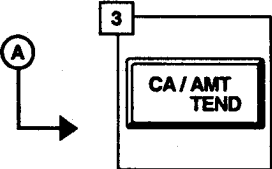

The above worksheet produces the programming code "0720000000".

- Digits 10, 7, 6, 5, 4, 3, 2 and 1 are always zero.
- For digit 9, the programmer disabled operation in the RF mode (1), the REG 2 Mode (2), and the REG 1 Mode (4), so the total for this digit is 7 (1 + 2 + 4).
- The number 2 is programmed for digit 8 to prohibit multiple validation.

With other worksheets, you just need to fill in the descriptors or other specific information you want to program.

About the procedures

Procedures are made up of graphic representations that indicate the operation you should perform for the programming. The following explains some representative examples of the graphics used in procedures and what each one means. You should be able to apply this information to any of the flows in this manual.

| Graphic | Description |
|---|---|
|  | This graphic indicates the Mode Switch position. |
|  | + This graphic indicates that you should hold down the Journal Feed key and, at the same time, perform the operation indicated by the next graphic. |
|  | This graphic indicates that you should release the Journal Feed key. Note the number 1 in the upper left corner of the graphic. It indicates that note number 1 below the flow explains this operation in detail. |
|  | This graphic indicates that you should input the program code from a worksheet. The number 2 in the upper left tells you that further information is available in note number 2 below the flow. |
|  | This graphic tells you to press the 1 key. The letter "A" in a circle indicates that the flow continues from the beginning of the next line, where you should find another letter "A" in a circle. |
|  | This graphic tells you to press the Cash Amount Tended key, and that you can find further information in note number 3, below the flow. The circled letter "A" tells you that the flow was continued from the line above. |
|  | This graphic indicates that you should enter the Program 5 mode. |

| Graphic | Description |
|---------|---|
| | <p>This graphic tells you to input a type code. The line below the graphic is a "loop," which indicates that you can jump to another part of the flow from here. In this case, the loop indicates that you can input more than one type code. The number 2 in the box indicates that you can find out more information about this loop in the notes below the flow.</p> |
| | <p>This graphic indicates that you can press either key A or B.</p> |
| | <p>This graphic indicates that you can press any function key.</p> |
| | <p>This graphic indicates operation of the Cash Amount Tendered key. The number 4 in the upper left corner indicates that you can find out more about this key operation in note 4 below the flow. The letter "A" in a circle indicates that this flow is continued from the line above. Below the graphic, you have a choice of three different loops. Loop 5 indicates that you can press the Cash Amount Tendered key again. With loops 6 and 7, you jump back to another location in the flow (the other end of the loop is indicated by the same number, 6 or 7). You can find out more information about these loops by consulting notes 5, 6, and 7, which are located below the flow.</p> |

Selecting a Program Mode

Many of the procedures in this manual require that you enter a specific program mode. Use the following procedure to enter the program mode you want.

Procedure



1. This operation is required only if you specified a program mode secret number during machine initialization.
2. Input the number of the program mode you want to enter.

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1

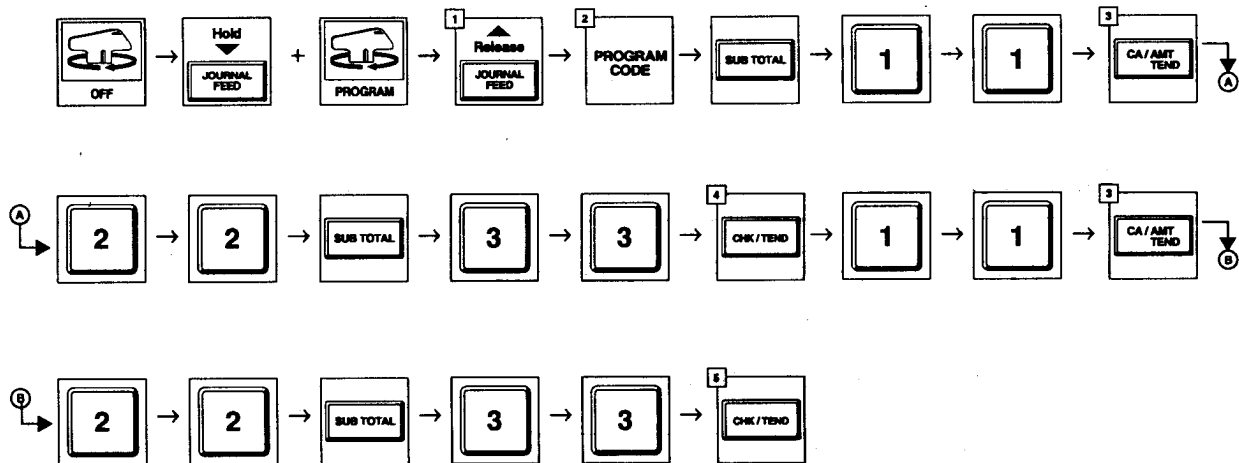
Machine Initialization

Initialize the cash register before using it for the first time. The initialization procedure clears all totalizers and programs currently contained in the preset memory, and reloads the standard program. Before you begin machine initialization, fill out Worksheet #1 on page 2 to determine the program data (up to 10 digits).

1-1 Full Initialization

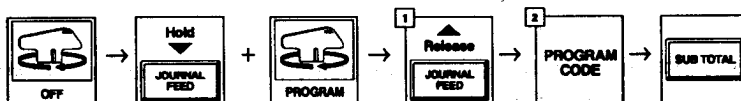
The following operation clears all totalizers and program data stored in memory. The initialization operation should be performed only when absolutely required.

Procedure — United States and Canada



1. If 10 zeros do not appear on the display or if another character appears on the display, immediately set the MODE switch to OFF and start again from the beginning of this procedure.
2. 10-digit program code from Worksheet #1 on page 2.
3. Cash Amount Tendered key on the standard keyboard.
4. Check Tendered key on the standard keyboard.
5. Check Tendered key on the standard keyboard. If there is any data stored in the fixed totalizers and journal memory, it is printed on the receipt at this point.

Procedure — Other Areas



1. If 10 zeros do not appear on the display or if another character appears on the display, immediately set the MODE switch to OFF and start again from the beginning of this procedure.
2. 10-digit program code from Worksheet #1 on page 2.

Worksheet #1

| Item | Description | Choice | Program Code |
|------|--|--|--------------|
| 10 | Mode secret code printing on receipt and journal following machine lock-up clear. | Print = 0 Do not print = 4 | 10 |
| 9 | Secret Code for Program 3, 4, 5, 6, 7 Modes. The secret code can be up to four digits long, and you must fill in unused leading digits with zeros. To set a secret code of "123," for example, input 0123. | | 9 |
| 8 | | | 8 |
| 7 | | | 7 |
| 6 | | | 6 |
| 5 | Country code and monetary system | United States/Canada = 2 Germany = 4 Other (0.00) = 1 Other (0.000) = 3 | 5 |
| 4 | Number of departments For the TK-1300, program 04 or 08. | | 4 |
| 3 | For the CE-4200/CE-4250, program 10 or 15. Inputting a value that does not specify the number of departments noted above results in an error. | | 3 |
| 2 | Clerk/cashier sign-in method*1. | Clerk buttons = 0 Secret numbers = 1 | 2 |
| 1 | Maximum number of characters for item descriptors. | 8 characters = 0 12 characters = 1 | 1 |

*1. You can program the register to allow clerk sign on using either clerk buttons or clerk secret numbers. You must program 1 (secret numbers) here if you program 2 (United States/Canada) for the country code in item 5.

1-2 Clearing a Machine Lock-Up

Mistakes in operation may cause the cash register to lock-up. Use the following procedure to clear the lock-up.

Procedure — United States and Canada



1. Use the OW key to set the Mode Switch to X1, or the PGM key to set the Mode Switch to PROGRAM.
2. If 10 F's do not appear on the display or if another character appears on the display, immediately set the MODE switch to OFF and start again from the beginning of this procedure.

Procedure — Other Areas



1. If 10 F's do not appear on the display or if another character appears on the display, immediately set the MODE switch to OFF and start again from the beginning of this procedure.

2

Memory Allocation

The memory allocation operation lets you allocate memory in accordance with the requirements of the application. The memory allocation procedure must be performed immediately following the machine initialization operation.

2-1 Memory Allocation

Perform the memory allocation procedure in the following sequence.

1. Initialize the machine.
2. Check Table #1 or #2 on page 4 or 5 to find out what the initial default memory allocation is.
3. Check Table #3 on page 6 to find out memory requirements for the filenames that are available.
4. Use Worksheet #2 on page 7 to decide the filenames, the number of records, the totalizers, and total memory required.
5. Determine the number of optional RAM chips required for the desired configuration and install the RAM chips. See "Memory Capacity and Optional RAM Chips" below for further information on RAM chips.
6. Initialize the machine again.
7. Allocate memory using the procedure described under "Performing Memory Allocation" later in this section.

Table #1 (TK-1300) Standard Set Up

| File No. | Filename | Number of Records | | | | | | | |
|-------------------|---|-------------------|----------------|---------------|----------------|---------------|----------------|---------------|----------------|
| | | 32 kbytes RAM | | | | 64 kbytes RAM | | | |
| | | 8 characters | | 12 characters | | 8 characters | | 12 characters | |
| | | Daily Sales | Periodic Sales | Daily Sales | Periodic Sales | Daily Sales | Periodic Sales | Daily Sales | Periodic Sales |
| Work Area (bytes) | | 16,384 | | 16,384 | | 16,384 | | 16,384 | |
| 01 | Fixed Totalizer | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 |
| 02 | Free Function | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 |
| 04 | Long PLU | 108 | 0 | 108 | 0 | *1 | *2 | *3 | *4 |
| 05 | Department | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 06 | Group | 8 | 0 | 8 | 0 | 99 | 99 | 99 | 99 |
| 07 | Clerk/Cashier Program | 4 | — | 4 | — | 15 | — | 15 | — |
| 09 | Hourly Sales | 24 | 0 | 24 | 0 | 24 | 0 | 24 | 0 |
| 10 | Monthly Sales | 32 | 0 | 32 | 0 | 32 | 0 | 32 | 0 |
| 11 | Clerk/Cashier Totalizer/Counter | 24 | 24 | 24 | 24 | 90 | 90 | 90 | 90 |
| 20 | Non-Resetable Grand Sales Total | 3 | — | 3 | — | 3 | — | 3 | — |
| 22 | General Program | 19 | — | 19 | — | 19 | — | 19 | — |
| 23 | Fixed Character | 31 | — | 31 | — | 31 | — | 31 | — |
| 24 | Report Header Message | 11 | — | 11 | — | 11 | — | 11 | — |
| 25 | Tax Table | 4 | — | 4 | — | 4 | — | 4 | — |
| 28 | Set Menu Table | 8 | — | 8 | — | 20 | — | 20 | — |
| 29 | Report Group (Batch X/Z File) | 3 | — | 3 | — | 3 | — | 3 | — |
| 30 | Clerk/Cashier Totalizer/Counter Link | 6 | — | 6 | — | 6 | — | 6 | — |
| 32 | Receipt Message | 8 | — | 8 | — | 8 | — | 8 | — |
| 36 | Post-Finalization Receipt Detail Buffer | 60 | — | 60 | — | 60 | — | 60 | — |
| 37 | Cancel Buffer File | 0 | — | 0 | — | 100 | — | 100 | — |
| 38 | Arrangement Key Table | 10 | — | 10 | — | 10 | — | 10 | — |
| 39 | Text Recall File | 0 | — | 0 | — | 10 | — | 10 | — |

*1. United States/Canada = 394
Other areas = 491

*2. United States/Canada = 0
Other areas = 491

*3. United States/Canada = 362
Other areas = 453

*4. United States/Canada = 0
Other areas = 453

Table #2 (CE-4200/CE-4250) Standard Set Up

| File No. | Filename | Number of Records | | | | | | | |
|-------------------|---|-------------------|----------------|---------------|----------------|---------------|----------------|---------------|----------------|
| | | 32 kbytes RAM | | | | 64 kbytes RAM | | | |
| | | 8 characters | | 12 characters | | 8 characters | | 12 characters | |
| | | Daily Sales | Periodic Sales | Daily Sales | Periodic Sales | Daily Sales | Periodic Sales | Daily Sales | Periodic Sales |
| Work Area (bytes) | | 16,384 | | 16,384 | | 16,384 | | 16,384 | |
| 01 | Fixed Totalizer | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 |
| 02 | Free Function | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 |
| 04 | Long PLU | 135 | 0 | 118 | 0 | 491 | 491 | 453 | 453 |
| 05 | Department | 10 or 15 | 10 or 15 | 10 or 15 | 10 or 15 | 10 or 15 | 10 or 15 | 10 or 15 | 10 or 15 |
| 06 | Group | 8 | 0 | 8 | 0 | 99 | 99 | 99 | 99 |
| 07 | Clerk/Cashier Program | 4 | — | 4 | — | 15 | — | 15 | — |
| 09 | Hourly Sales | 24 | 0 | 24 | 0 | 24 | 0 | 24 | 0 |
| 10 | Monthly Sales | 32 | 0 | 32 | 0 | 32 | 0 | 32 | 0 |
| 11 | Clerk/Cashier Totalizer/Counter | 24 | 24 | 24 | 24 | 90 | 90 | 90 | 90 |
| 20 | Non-Resettable Grand Sales Total | 3 | — | 3 | — | 3 | — | 3 | — |
| 22 | General Program | 19 | — | 19 | — | 19 | — | 19 | — |
| 23 | Fixed Character | 31 | — | 31 | — | 31 | — | 40 | 31 |
| 24 | Report Header Message | 11 | — | 11 | — | 11 | — | 15 | 11 |
| 25 | Tax Table | 4 | — | 4 | — | 4 | — | 2 | 4 |
| 28 | Set Menu Table | 8 | — | 8 | — | 20 | — | 20 | 0 |
| 29 | Report Group (Batch X/Z File) | 3 | — | 3 | — | 3 | — | 2 | 3 |
| 30 | Clerk/Cashier Totalizer/Counter Link | 6 | — | 6 | — | 6 | — | 6 | — |
| 32 | Receipt Message | 8 | — | 8 | — | 8 | — | 8 | — |
| 36 | Post-Finalization Receipt Detail Buffer | 60 | — | 60 | — | 60 | — | 60 | — |
| 37 | Cancel Buffer File | 0 | — | 0 | — | 100 | — | 100 | — |
| 38 | Arrangement Key Table | 10 | — | 10 | — | 10 | — | 10 | — |
| 39 | Text Recall File | 0 | — | 0 | — | 10 | — | 10 | — |

Table #3

| File No. | Filename | Maximum Number of Characters | Bytes Per Record | |
|----------|---|------------------------------|------------------|----------------|
| | | | Daily Sales | Periodic Sales |
| 01 | Fixed Totalizer | 8 | 18 | 10 |
| | | 12 | 22 | |
| 02 | Free Function | 8 | 27 | 10 |
| | | 12 | 31 | |
| 03 | Short PLU | 8 | 36 | 10 |
| | | 12 | 40 | |
| 04 | Long PLU | 8 | 54 | 15 |
| | | 12 | 58 | |
| 05 | Department | 8 | 36 | 10 |
| | | 12 | 40 | |
| 06 | Group | 8 | 18 | 10 |
| | | 12 | 22 | |
| 07 | Clerk/Cashier Program | 8 | 21 | — |
| | | 12 | 25 | |
| 09 | Hourly Sales | — | 10 | 10 |
| 10 | Monthly Sales | — | 20 | 20 |
| 11 | Clerk/Cashier Totalizer Counter | — | 10 | 10 |
| 20 | Non-Resettable Grand Sales Total | 8 | 16 | — |
| | | 12 | 20 | |
| 22 | General Program | — | 5 | — |
| 23 | Special Character | — | 12 | — |
| 24 | Report Header Message | — | 12 | — |
| 25 | Tax Table | — | 73 | — |
| 28 | Set Menu Table | — | 24 | — |
| 29 | Report Group (Batch X/Z File) | — | 11 | — |
| 30 | Clerk/Cashier Totalizer/Counter Link | — | 3 | — |
| 32 | Receipt Message | — | 21 | — |
| 36 | Post-Finalization Receipt Detail Buffer | — | 47 | — |
| 37 | Cancel Buffer File | — | 14 | — |
| 38 | Arrangement Key Table | — | 10 | — |
| 39 | Text Recall File | — | 21 | — |
| 55 | Gas Department | 8 | 59 | 20 |
| | | 12 | 63 | |

Worksheet #2

| File No. | Filename | Max. No. of Records | Max. No. of Descriptor Chrs. | Daily Sales | | | Periodic Sales ¹ | | Total Bytes ² |
|-----------------|---|---------------------|------------------------------|-----------------|------------------|-----------------------|-----------------------------|-----------------------|--------------------------|
| | | | | No. of Records | Bytes Per Record | Subtotal ³ | Bytes Per Record | Subtotal ⁴ | |
| 01 | Fixed Totalizer | 53 | 8 | 53 ⁵ | 18 | | 10 | | |
| | | | 12 | 53 ⁵ | 22 | | | | |
| 02 | Free Function | 227 | 8 | | 27 | | 10 | | |
| | | | 12 | | 31 | | | | |
| 03 | Short PLU | *6 | 8 | | 36 | | 10 | | |
| | | | *7 | 12 | 40 | | | | |
| 04 | Long PLU | *8 | 8 | | 54 | | 15 | | |
| | | | *9 | 12 | 58 | | | | |
| 05 | Department | 99 | 8 | | 36 | | 10 | | |
| | | | 12 | | 40 | | | | |
| 06 | Group | 99 | 8 | | 18 | | 10 | | |
| | | | 12 | | 22 | | | | |
| 07 | Clerk/Cashier Program | 99 | 8 | | 21 | | — | — | |
| | | | 12 | | 25 | | | | |
| 09 | Hourly Sales | 24 | — | | 10 | | 10 | | |
| 10 | Monthly Sales | 32 | — | *10 | 20 | | 20 | | |
| 11 | Clerk/Cashier Totalizer Counter | 99 | — | | 10 | *11 | 10 | *11 | |
| 20 ⁵ | Non-Resettable Grand Sales Total | 3 | 8 | 3 ⁵ | 16 | | — | — | |
| | | | 12 | 3 ⁵ | 20 | | | | |
| 22 ⁵ | General Program | 19 | — | 19 ⁵ | 5 | 95 ⁵ | — | — | 95 ⁵ |
| 23 ⁵ | Fixed Character | 31 | — | 31 ⁵ | 12 | 372 ⁵ | — | — | 372 ⁵ |
| 24 ⁵ | Report Header Message | 11 | — | 11 ⁵ | 12 | 132 ⁵ | — | — | 132 ⁵ |
| 25 | Tax Tabel | 4 | — | | 73 | | — | — | |
| 28 | Set Menu Table | 99 | — | | 24 | | — | — | |
| 29 | Report Group (Batch X/Z File) | 10 | — | | 11 | | — | — | |
| 30 ⁵ | Clerk/Cashier Totalizer/Counter Link | 6 | — | 6 ⁵ | 3 | 18 ⁵ | — | — | 18 ⁵ |
| 32 | Receipt Message | 12 | — | | 21 | | — | — | |
| 36 | Post-Finalization Receipt Detail Buffer | 200 | — | | 47 | | — | — | |
| 37 | Cancel Buffer File | 1000 | — | | 14 | | — | — | |
| 38 | Arrangement Key Table | 99 | — | | 10 | | — | — | |
| 39 | Text Recall File | 99 | — | | 21 | | — | — | |
| 55 | Gas Department | 99 | 8 | | 59 | | 20 | | |
| | | | 12 | | 63 | | | | |

*1. The number of records reserved for the periodic sales total are automatically adjusted to match the number of records reserved for the daily sales total.

*2. daily sales subtotal + periodic sales subtotal

*3. daily sales number of records × daily sales bytes per record

*4. daily sales number of records × periodic sales bytes per record

*5. These files and number of records are automatically reserved by the machine initialization operation, and cannot be changed.

*6. CE-4200/CE-4250: 999

TK-1300: 891

*7. CE-4200/CE-4250: 886

TK-1300: 792

*8. CE-4200/CE-4250: 645

TK-1300: 645

*9. CE-4200/CE-4250: 612

TK-1300: 655

*10. The number of records reserved should equal the number of days, plus one record for use as the totalization area.

32 records (maximum) = 31 records + 1 (totalizer)

*11. The number of bytes used can be calculated by the following formula:

number of records × bytes per record × 6

2-2 Memory Capacity and Optional RAM Chips

Memory capacity is limited by the size of RAM, which can be expanded from the standard 32 kilobytes to 64 kilobytes using optional RAM chips.

Optional RAM Chips

- RAM-410/420 32 kilobytes

The following optional RAM chip configuration can be used for memory expansion. This is the only configuration – no other RAM chip configuration is possible.

| RAM Chip | Quantity | Total Memory Capacity |
|-------------|----------|-----------------------|
| RAM-410/420 | 1 | 64 kilobytes |

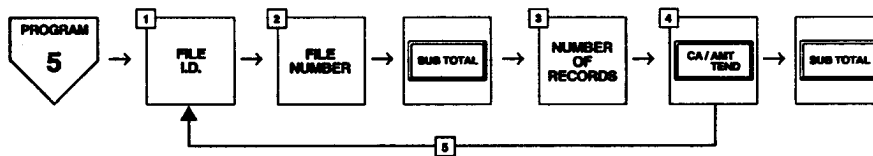
2-3 Memory Allocation Procedure

Use the following procedure to allocate memory and to specify the number of records for each file. In addition to the table shown below, you also need to fill out Worksheet #3 on page 9 before performing the procedure described in this section.

File Code

| Code | Definition |
|------|--|
| 0 | Reserve daily sales total area |
| 1 | Reserve daily sales total area and periodic sales total area |

Procedure



1. Input the value from the above table that defines the attributes you want to assign to the file.
2. Input a file number. See Table #3 on page 6 for available file numbers.
3. Input the number of records you want to allocate for the file. See Worksheet #2 on page 7 for details on calculating the number of records required.
4. Cash Amount Tendered key on the standard keyboard.
5. Loop if you want to input the next program code.

Worksheet #3

| Filename | Program Code | | Number of Records | | | | |
|---|--------------|-------------|-------------------|---|---|---|---|
| | File Code | File Number | | | | | |
| Fixed Totalizer | | 0 | 1 | 0 | 0 | 5 | 3 |
| Free Function | | 0 | 2 | 0 | | | |
| Short PLU | | 0 | 3 | | | | |
| Long PLU | | 0 | 4 | | | | |
| Department | | 0 | 5 | 0 | 0 | | |
| Group | | 0 | 6 | 0 | 0 | | |
| Clerk/Cashier Program | 0 | 0 | 7 | 0 | 0 | | |
| Hourly Sales | | 0 | 9 | 0 | 0 | | |
| Monthly Sales | | 1 | 0 | 0 | 0 | | |
| Tax Table | 0 | 2 | 5 | 0 | 0 | 0 | |
| Set Menu Table | 0 | 2 | 8 | 0 | 0 | | |
| Report Group (Batch X/Z File) | 0 | 2 | 9 | 0 | 0 | | |
| Receipt Message | 0 | 3 | 2 | 0 | 0 | | |
| Post-Finalization Receipt Detail Buffer | 0 | 3 | 6 | 0 | | | |
| Cancel Buffer File | 0 | 3 | 7 | | | | |
| Arrangement Key Table | 0 | 3 | 8 | 0 | 0 | | |
| Text Recall File | 0 | 3 | 9 | 0 | 0 | | |
| Gas Department | 0 | 5 | 5 | 0 | 0 | | |

Files other than those listed above are automatically reserved by the machine initialization operation, and cannot be changed.

3

Program Reading

You can read program data by specifying the corresponding type codes assigned to each file. Program data can be read using either of the two following methods.

- **Individual File Read**
This method reads the file you specify by inputting a type code. The cash register must be in the PROGRAM 6 mode to perform this operation.
- **Individual Mode Read**
This method reads all programming for a particular program mode. The cash register must be in the mode whose data is being read.

3-1 Individual File Read

This method reads the file you specify by inputting a type code. Most files are read in their entirety, but you can specify read ranges for the following three files.

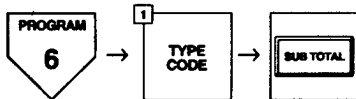
- Short PLU File (File 03)
- Long PLU File (File 04)
- Clerk fixed file (File 07)

Note that you can use individual file read to read data programmed in the Program 1, Program 2, and Program 3 modes only. Data programmed in the Program 4 and Program 5 modes can be read using the individual mode read procedure only.

To read an entire file

| Filename | Program Data Type | | |
|-------------------------------|-------------------|----------------|----------------|
| | Program 1 Data | Program 2 Data | Program 3 Data |
| Fixed Totalizer | — | 201 | — |
| Free Function | 102 | 202 | 302 |
| Department | 105 | 205 | 305 |
| Group | — | 206 | — |
| Clerk/Cashier Detail Link | — | — | 330 |
| General Program | — | — | 322 |
| Special Character | — | 223 | — |
| Report Header Message | — | 224 | — |
| Tax Table | — | — | 325 |
| Set Menu Table | — | — | 328 |
| Report Group (Batch X/Z File) | — | — | 329 |
| Receipt Message | — | 232 | — |
| Arrangement Key Table | — | — | 338 |
| Text Recall File | — | 239 | — |
| Gas department | 155 | 255 | 355 |

Procedure



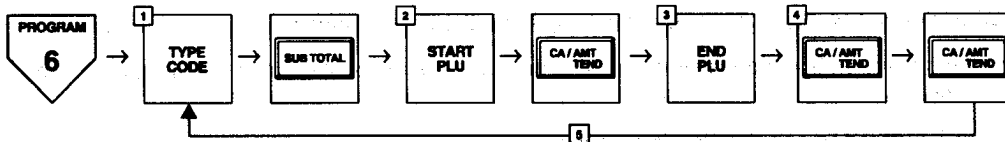
1. Input the 3-digit type code from the above table that identifies the file you want to read.

To read a part of a file

Short PLU File

| Filename | Program Data Type | | |
|-----------|-------------------|----------------|----------------|
| | Program 1 Data | Program 2 Data | Program 3 Data |
| Short PLU | 103 | 203 | 303 |

Procedure

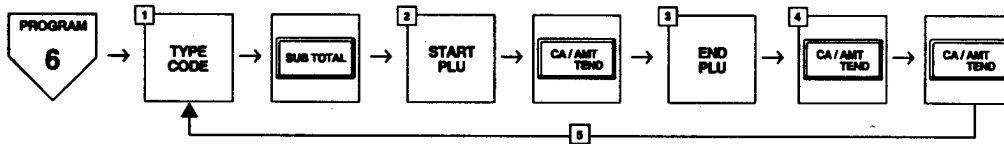


1. Input the 3-digit type code from the above table that identifies the file you want to read.
2. Range start PLU number. If you don't input anything here, the data is printed from PLU memory 1.
3. Range end PLU number. If you don't input anything here, the data is printed up to the last PLU memory number that exists in the file.
4. Cash Amount Tendered key on the standard keyboard.
5. Loop if you want to input the next type code.

Long PLU File

| Filename | Program Data Type | | |
|----------|-------------------|----------------|----------------|
| | Program 1 Data | Program 2 Data | Program 3 Data |
| Long PLU | 104 | 204 | 304 |

Procedure

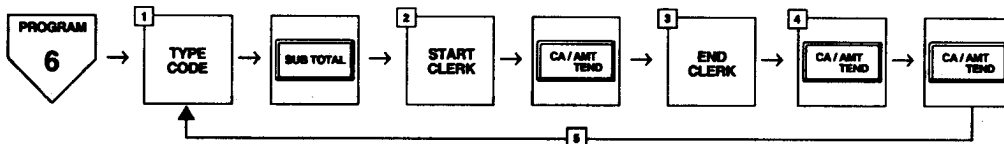


1. Input the 3-digit type code from the above table that identifies the file you want to read.
2. Range start PLU number or Random PLU code. If you don't input anything here, the data is printed from PLU memory 1.
3. Range end PLU number or Random PLU code. If you don't input anything here, the data is printed up to the last PLU memory number that exists in the file.
4. Cash Amount Tendered key on the standard keyboard.
5. Loop if you want to input the next type code.

Clerk Fixed File

| Filename | Program Data Type | | |
|-------------|-------------------|----------------|----------------|
| | Program 1 Data | Program 2 Data | Program 3 Data |
| Clerk Fixed | — | 207 | 307 |

Procedure

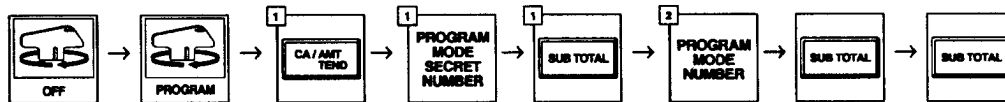


1. Input the 3-digit type code from the above table that identifies the file you want to read.
2. Range start clerk number. If you don't input anything here, the data is printed from clerk memory 1.
3. Range end clerk number. If you don't input anything here, the data is printed up to the last clerk memory number that exists in the file.
4. Cash Amount Tendered key on the standard keyboard.
5. Loop if you want to input the next type code.

3-2 Individual Mode Read

This method reads all programming for a particular program mode. The cash register must be in the mode whose data is being read. To read all programming for any mode, specify the mode you want to read and then press the **SUB TOTAL** key. You can read any program mode like this, except for Program 6.

Procedure



1. This operation is required only if you specified a program mode secret number during machine initialization.
2. Input the number of the program mode whose data you want to read.

4

Programming the Keyboard

Function keys can be freely assigned to the keyboard. Keys can then be assigned features, descriptors, prices, rates, etc. The following are the major steps involved in programming function keys:

- Assignment of numeric functions to the programmable numeric keys (page 15).
- Configuration of the keyboard by assigning key functions to the programmable keys (page 16).
- Assignment of features to each function key (page 19).
- Assignment of literal descriptors (page 40).
- Assignment of function key prices and rates (page 44).
- Other miscellaneous programming.

4-1 About the Keyboard

The keyboards for all of the Casio Cash Register models covered by this manual are illustrated below. They are programmable keyboards, designed to give you maximum freedom to create a configuration that best suits the needs of the application.

The keys marked with asterisks in the illustrations are fixed function keys, whose functions cannot be changed. The other keys are identified by their location, indicated by numbers or letters enclosed in circles. Once you assign a function to a key, that function is performed whenever the key is pressed.

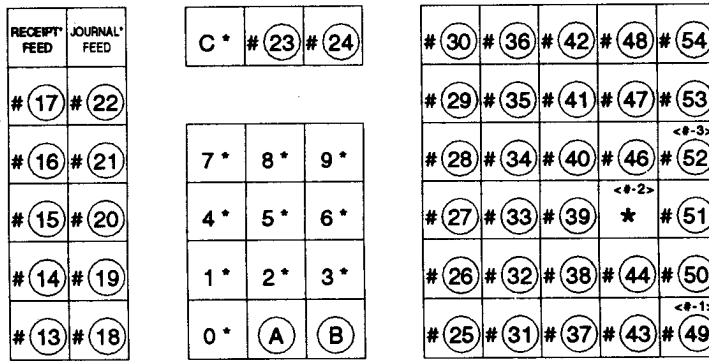
Note the two numeric keys marked "A" and "B" in the illustrations. These are numeric function keys that can be programmed to operate as double-zero, triple-zero, four-zero, or decimal point keys only. They cannot be programmed with any other function.

TK-1300

| | | | | |
|------------------|-----------------|--------|-------------------------------|-------------------------------|
| RECEIPT* FEED | JOURNAL FEED | # (24) | # (30) | # (37) |
| # (17) | # (20) | # (23) | # (29) | # (36) |
| # (16) | # (19) | # (22) | # (28) | # (35) |
| c * | # (18) | # (21) | # (27) | # (34) |
| 7 * | 8 * | 9 * | # (26) | # (33) |
| 4 * | 5 * | 6 * | # (25) | # (15) ^{<#-3>} |
| 1 * | 2 * | 3 * | * ^{<#-2>} | # (32) |
| 0 * | (A) | (B) | # (13) ^{<#-1>} | # (31) |

| | | | | | | | | | | | |
|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|
| # (48) | # (57) | # (66) | # (75) | # (84) | # (93) | # (102) | # (111) | # (120) | # (129) | # (138) | # (147) |
| 9 | 18 | 27 | 36 | 45 | 54 | 63 | 72 | 81 | 90 | 99 | 108 |
| # (47) | # (56) | # (65) | # (74) | # (83) | # (92) | # (101) | # (110) | # (119) | # (128) | # (137) | # (146) |
| 8 | 17 | 26 | 35 | 44 | 53 | 62 | 71 | 80 | 89 | 98 | 107 |
| # (46) | # (55) | # (64) | # (73) | # (82) | # (91) | # (100) | # (109) | # (118) | # (127) | # (136) | # (145) |
| 7 | 16 | 25 | 34 | 43 | 52 | 61 | 70 | 79 | 88 | 97 | 106 |
| # (45) | # (54) | # (63) | # (72) | # (81) | # (90) | # (99) | # (108) | # (117) | # (126) | # (135) | # (144) |
| 6 | 15 | 24 | 33 | 42 | 51 | 60 | 69 | 78 | 87 | 96 | 105 |
| # (44) | # (53) | # (62) | # (71) | # (80) | # (89) | # (98) | # (107) | # (116) | # (125) | # (134) | # (143) |
| 5 | 14 | 23 | 32 | 41 | 50 | 59 | 68 | 77 | 86 | 95 | 104 |
| # (43) | # (52) | # (61) | # (70) | # (79) | # (88) | # (97) | # (106) | # (115) | # (124) | # (133) | # (142) |
| 4 | 13 | 22 | 31 | 40 | 49 | 58 | 67 | 76 | 85 | 94 | 103 |
| # (42) | # (51) | # (60) | # (69) | # (78) | # (87) | # (96) | # (105) | # (114) | # (123) | # (132) | # (141) |
| 3 | 12 | 21 | 30 | 39 | 48 | 57 | 66 | 75 | 84 | 93 | 102 |
| # (41) | # (50) | # (59) | # (68) | # (77) | # (86) | # (95) | # (104) | # (113) | # (122) | # (131) | # (140) |
| 2 | 11 | 20 | 29 | 38 | 47 | 56 | 65 | 74 | 83 | 92 | 101 |
| # (40) | # (49) | # (58) | # (67) | # (76) | # (85) | # (94) | # (103) | # (112) | # (121) | # (130) | # (139) |
| 1 | 10 | 19 | 28 | 37 | 46 | 55 | 64 | 73 | 82 | 91 | 100 |

CE-4200/CE-4250

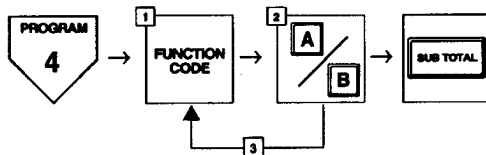


4-2 Assigning Numeric Functions

Use the procedure below to assign any of the numeric functions shown in the following table to the numeric function keys marked "A" and "B" on the keyboards illustrated above.

| Free Numeric Key | Function Code | |
|------------------------------|---------------|---|
| 00 — Double-zero key | 9 | 6 |
| 000 — Triple-zero key | 9 | 7 |
| 0000 — Four-zero key | 9 | 8 |
| . — Decimal point key | 9 | 9 |

Procedure



1. Input a function code from the above table to specify one of the numeric key functions.
2. Press the numeric key (either the "A" or "B" key) to which you want to assign the numeric function.
3. Loop if you want to input another function code and program the other numeric function key.

4-3 Assigning Key Functions

There are two different methods you can use to assign a key function to a key on the keyboard. With "direct programming," you input a function code that identifies the function you want and then press the key to which you want to assign the function.

"Memory number programming," on the other hand, is recommended for master/satellite systems, because it makes in-line control possible. With this method you input the memory number that you want to use for the key, followed by the key function code that identifies the function. You then press the key to which you want to assign the function. Both "direct programming" and "memory number programming" are described in detail below.

Before you start actual programming, you should note the following important points

- Decide the configuration of the keyboard before you start programming.
- Reset the daily and periodic totalizers and counter for any key to be assigned a key function. You cannot assign a key with a new function if its daily totalizer, periodic totalizer or counter is not reset to zero. Refer to the Operation Manual for details on the RESET procedure.
- You cannot assign Flat-Long PLU key functions outside the keyboard's Flat-Long PLU key area, which was created when the Machine Initialization procedure was performed.
- Functions can be assigned to department key and Flat-Long PLU key positions, and programmable function key positions can be programmed as department keys. Once a Flat-Long PLU key position is assigned a function, you can clear the function by entering the PROGRAM 4 mode and inputting "63" as the function code.
- When the cash register is programmed to perform clerk assignment using clerk secret numbers, you must assign a Clerk Number key to the keyboard. Otherwise, you will not be able to input clerk secret numbers and operation of the cash register will be impossible.

The following table shows all of the available key functions along with their function codes.

| Function | Key Cap | Function Code | |
|--------------------------|---------|---------------|---|
| Area/Date Time Key | | 8 | 4 |
| Arrangement Key | | 4 | 4 |
| Bottle Return Key | | 5 | 3 |
| Cancel Key | | 3 | 6 |
| Cash Amount Tendered Key | | 0 | 1 |
| Charge Key | | 0 | 2 |
| Check Tender Key | | 0 | 3 |
| Clerk Number Key | | 7 | 2 |
| Coupon Key | | 2 | 3 |
| Credit Key | | 0 | 4 |
| Currency Exchange Key | | 4 | 5 |
| Customer Number Key | | 4 | 3 |

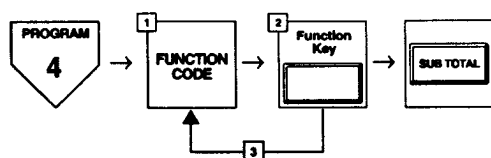
| Function | Key Cap | Function Code | |
|---|----------------|---------------|---|
| Department Key | DEPT | 5 | 1 |
| Deposit Key | DEPOSIT | 2 | 5 |
| Discount Key | %- | 2 | 8 |
| Discount Subtotal Key ^{*1} | DC/ST | 8 | 6 |
| Drawer Number Key | DRAWER NO. | 2 | 4 |
| EBT Tender Key ^{*1} | EBT/TEND | 0 | 7 |
| Error Correct Key | ERR CORR | 3 | 4 |
| Food Stamp Status Shift Key ^{*1} | F/S | 5 | 9 |
| Food Stamp Subtotal Key ^{*1} | FS/ST | 8 | 1 |
| Food Stamp Tender Key ^{*1} | FS/TEND | 0 | 5 |
| Gas department Key ^{*1} | GAS DEPT | 5 | 1 |
| Loan Key | LOAN | 1 | 9 |
| Lock out unused key | | 0 | 0 |
| Long PLU Key | PLU | 4 | 8 |
| Manual Tax Key ^{*1} | M-TAX | 3 | 2 |
| Menu Shift 1 Key ^{*2} | 1ST | 6 | 4 |
| Menu Shift 2 Key ^{*2} | 2ND | 6 | 5 |
| Menu Shift 3 Key ^{*2} | 3RD | 6 | 6 |
| Merchandise Subtotal Key | MD/ST | 8 | 0 |
| Minus Key | - | 2 | 7 |
| Multiplication/Date/Time Key | %/DATE TIME | 8 | 2 |
| New Balance Key ^{*2} | NB | 0 | 6 |
| Normal Receipt Key | NORMAL RECEIPT | 1 | 6 |
| No-Sale Key | NS | 4 | 2 |
| Non-Add Key | # | 4 | 0 |
| Non-Add/No-Sale Key | #NS | 4 | 1 |
| Open 2 Key | OPEN II | 6 | 8 |
| Open Key | OPEN | 6 | 7 |
| Paid Out Key | PO | 2 | 1 |
| Pick Up Key | PICK UP | 2 | 2 |
| Plus Key | + | 2 | 9 |

| Function | Key Cap | Function Code | |
|---|-------------------|---------------|---|
| Post-Finalization Receipt Key | RECEIPT | 3 | 8 |
| Premium Key | % + | 3 | 0 |
| Previous Balance Key ^{*2} | PB | 2 | 6 |
| Previous Balance Subtotal Key ^{*2} | PB / ST | 7 | 9 |
| Price Key | PRICE | 4 | 9 |
| Quantity for/Date/Time Key | X / FOR DATE TIME | 8 | 3 |
| Rate Tax Key | R-TAX | 3 | 1 |
| Received on Account Key | RC | 2 | 0 |
| Refund or Coupon 2 Key | RF | 3 | 3 |
| Short PLU Key | SHORT PLU | 5 | 0 |
| Subtotal Key | SUB TOTAL | 7 | 5 |
| Tax Exempt Key ^{*1} | TX / EX | 6 | 2 |
| Taxable Status Shift Key | T / S | 5 | 7 |
| Taxable Amount Subtotal Key | TA / ST | 7 | 7 |
| Text Print Key ^{*2} | TEXT PRINT | 1 | 1 |
| Text Recall Key | TEXT RECALL | 1 | 0 |
| Tip Key ^{*2} | TIP | 1 | 5 |
| Tray Total Key | TRAY TOTAL | 7 | 4 |
| Validation Key | VALID | 3 | 7 |
| VAT Key | VAT | 4 | 6 |
| Void Key | VOID | 3 | 5 |

*1. These items are used in the United States and Canada only.

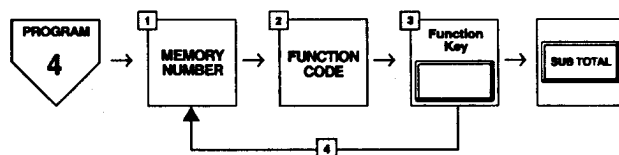
*2. These items are available with the TK-1300 only.

Direct Programming Procedure



1. Input the function code in the above table that corresponds to the key function you want to assign.
2. Press the function key to which you want to assign the key function.
3. Loop if you want to input another function code and program another function.

Memory Number Programming Procedure



1. Input the memory number that identifies the memory location where you want to store the key's function.
2. Input the function code in the above table that corresponds to the key function you want to assign.
3. Press the function key to which you want to assign the key function.
4. Loop if you want to input another function code and program another function key.

4-4 Key Features

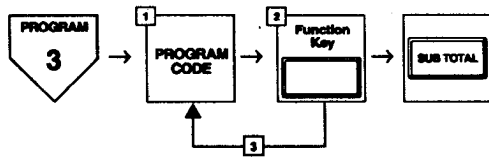
This procedure lets you program multiple features to each function key by inputting a 12-digit program code.

There are two different methods you can use to assign features to a key. With "direct programming," you input the program code and then press the key to which you want to assign the function. Note that you cannot use direct programming for programming of the Menu Shift 1, Menu Shift 2, and Menu Shift 3 keys. Always use memory number programming when programming these keys.

With "memory number programming" you input the memory number of the key you are programming and then input "02" (which is the file number for free function keys). You then input the program code. If you need to check the memory numbers you assigned to function keys, use the program read procedure described in section 3 of this manual to read the contents of PROGRAM 4.

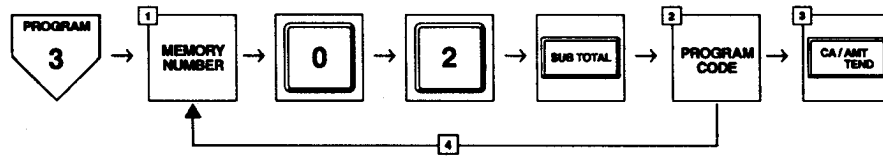
Use Worksheet #4 through Worksheet #34 to determine the program codes for both "direct programming" and "memory number programming".

Direct Programming Procedure



1. Input the program code from one of the worksheets, depending on the key you are programming.
2. Press the function key you want to program.
3. Loop if you want to input another program code and program another function key.

Memory Number Programming Procedure



1. Input the memory number that identifies the function key you want to program.
2. Input the program code from one of the worksheets, depending on the key you are programming.
3. Cash Amount Tendered key on the standard keyboard.
4. Loop if you want to input another memory number and program another function key.

Worksheet #4

Use this worksheet to program CA/AMT TEND, CH, CHW/TEND, and CREDIT.

| Item | Description | Choice | Program Code |
|------|--|--|--------------|
| 12 | Receipt type | Normal receipt = 0 No receipt = 1 | 12 |
| 11 | Allowable number of validation printings (0 = unlimited) ^{*1} | 0 to 9 | 11 |
| 10 | a Validation operation | Not compulsory = 0 Compulsory = 1 | 10 |
| | b Discount operation for gas department | Do not allow = 0 Allow = 2 | |
| | c Restriction (to 00, 25, 50, 75) on last two digits for amount tendered ^{*2} | Do not restrict = 0 Restrict = 4 | |
| 9 | a Operation in RF Mode | Enable = 0 Disable = 1 | 9 |
| | b Operation in REG 2 Mode | Enable = 0 Disable = 2 | |
| | c Operation in REG 1 Mode | Enable = 0 Disable = 4 | |
| 8 | | 0 | 8 |
| 7 | a Input of partial payment | Allow = 0 Prohibit = 1 | 7 |
| | b Input of amount tendered | Allow = 0 Prohibit = 2 | |
| | c Input of amount tendered | Not compulsory = 0 Compulsory = 4 | |
| 6 | a VAT breakdown | Do not print = 0 Print = 1 | 6 |
| | b Check cashing service charge (<input type="checkbox"/> CHW/TEND only) | Use an amount = 0 Use a rate = 2 | |
| | c Validation amount | Use subtotal amount = 0 Use amount tendered = 4 | |
| 5 | Rounding method for discounted gas department registration | Round off = 0 Cut off = 1 Round up = 2 | 5 |
| 4 | High Amount Limit (HAL) for subtotals and tendered amounts ^{*3} Programming "00" here clears the limitation. | Maximum value of leftmost digit (0 to 9) | 4 |
| 3 | To set a maximum of \$600.00, for example, program "64" | Number of zeros (0 to 9) | 3 |
| 2 | High Amount Limit (HAL) for change amount due Programming "00" here clears the limitation. | Maximum value of leftmost digit (0 to 9) | 2 |
| 1 | To set a maximum of \$9.00, for example, program "92" | Number of zeros (0 to 9) | 1 |

*1. When 10a is programmed as "Compulsory = 1," a validation compulsory error occurs whenever the number of validation printings specified here is not performed.

*2. Always program "Restrict = 4" here when you are using Denmark rounding.

*3. This limitation is applied to limit all subtotals for finalized transactions. It is also applied to partial tender amounts.

Worksheet #5

Use this worksheet to program **PG/TEND**, and **EST/TEND**.

| Item | Description | Choice | Program Code | |
|------|---|--|--------------|----|
| 12 | Receipt type | Normal receipt = 0 No receipt = 1 | | 12 |
| 11 | Allowable number of validation printings (0 = unlimited). | 0 to 9 | | 11 |
| 10 | Validation operation | Not compulsory = 0 Compulsory = 1 | | 10 |
| 9 | a Operation in RF Mode | Enable = 0 Disable = 1 | | 9 |
| | b Operation in REG 2 Mode | Enable = 0 Disable = 2 | | |
| | c Operation in REG 1 Mode | Enable = 0 Disable = 4 | | |
| 8 | Input of amount tendered that is greater than food stamp subtotal <input type="checkbox"/> EST/TEND key only) | Allow = 0 Prohibit = 4 | | 8 |
| 7 | | | 0 | 7 |
| 6 | a VAT breakdown | Do not print = 0 Print = 1 | | 6 |
| | b Validation amount | Use subtotal amount = 0 Use amount tendered = 4 | | |
| 5 | | | 0 | 5 |
| 4 | High Amount Limit (HAL) for tendered amounts Programming "00" here clears the limitation. | Maximum value of leftmost digit (0 to 9) | | 4 |
| 3 | To set a maximum of \$600.00, for example, program "64" | Number of zeros (0 to 9) | | 3 |
| 2 | | | 0 | 2 |
| 1 | | | 0 | 1 |

Worksheet #6

Use this worksheet to program .

| Item | Description | Choice | Program Code | |
|------|--|--------------------------------------|--------------|----|
| 12 | Receipt type | Normal receipt = 0 No receipt = 1 | | 12 |
| 11 | Validation printings (0 = unlimited) | 0 to 9 | | 11 |
| 10 | Validation operation | Not compulsory = 0 Compulsory = 1 | | 10 |
| 9 | a Operation in RF Mode | Enable = 0 Disable = 1 | | 9 |
| | b Operation in REG 2 Mode | Enable = 0 Disable = 2 | | |
| | c Operation in REG 1 Mode | Enable = 0 Disable = 4 | | |
| 8 | Drawer operation when <input type="text" value="M8"/> is pressed | Do not open = 0 Open = 2 | | 8 |
| 7 | | | 0 | 7 |
| 6 | a VAT breakdown | Do not print = 0 Print = 1 | | 6 |
| | b Temporary finalize (<input type="text" value="M8"/> key) service charge | Use amount = 0 Use rate = 2 | | |
| 5 | | | 0 | 5 |
| 4 | | | 0 | 4 |
| 3 | | | 0 | 3 |
| 2 | | | 0 | 2 |
| 1 | | | 0 | 1 |

Worksheet #7

Use this worksheet to program and .

| Item | Description | Choice | Program Code | |
|------|---|--|--------------|----|
| 12 | | | 0 | 12 |
| 11 | Allowable number of validation printings (0 = unlimited) ^{*1} | 0 to 9 | | 11 |
| 10 | Validation operation | Not compulsory = 0 Compulsory = 1 | | 10 |
| 9 | a Operation in RF Mode | Enable = 0 Disable = 1 | | 9 |
| | b Operation in REG 2 Mode | Enable = 0 Disable = 2 | | |
| | c Operation in REG 1 Mode | Enable = 0 Disable = 4 | | |
| 8 | | | 0 | 8 |
| 7 | | | 0 | 7 |
| 6 | | | 0 | 6 |
| 5 | | | 0 | 5 |
| 4 | High Amount Limit (HAL) for subtotals and tendered amounts Programming "00" here clears the limitation. To set a maximum of \$600.00, for example, program "64" | Maximum value of leftmost digit (0 to 9) | | 4 |
| 3 | | Number of zeros (0 to 9) | | 3 |
| 2 | | | 0 | 2 |
| 1 | | | 0 | 1 |

*1. When 10 is programmed as "Compulsory = 1," a validation compulsory error occurs whenever the number of validation printings specified here is not performed.

Worksheet #8

Use this worksheet to program and .

| Item | Description | Choice | Program Code | |
|------|--|--------------------------------------|--|--|
| 12 | | | 0 | 12 |
| 11 | Allowable number of validation printings (0 = unlimited) ^{*1} | 0 to 9 | | 11 |
| 10 | Validation operation ^{*2} | Not compulsory = 0 Compulsory = 1 | | 10 |
| 9 | a Operation in RF Mode | Enable = 0 Disable = 1 | | 9 |
| | b Operation in REG 2 Mode | Enable = 0 Disable = 2 | | |
| | c Operation in REG 1 Mode | Enable = 0 Disable = 4 | | |
| 8 | | | 0 | 8 |
| 7 | | | 0 | 7 |
| 6 | | | 0 | 6 |
| 5 | | | 0 | 5 |
| 4 | | | High Amount Limit (HAL) for subtotals and tendered amounts Programming "00" here clears the limitation. | Maximum value of leftmost digit (0 to 9) |
| 3 | To set a maximum of \$600.00, for example, program "64" | Number of zeros (0 to 9) | | 3 |
| 2 | | | 0 | 2 |
| 1 | | | 0 | 1 |

*1. When 10 is programmed as "Compulsory = 1," a validation compulsory error occurs whenever the number of validation printings specified here is not performed.

*2. This programming is valid only for total amount validation following a finalize operation. Item validation printing for Pick Up and Loan key operation cannot be performed.

Worksheet #9

Use this worksheet to program .

| Item | Description | Choice | Program Code | |
|------|---|--|--------------|----|
| 12 | Receipt type | Normal receipt = 0 No receipt = 1 Single receipt = 2 | | 12 |
| 11 | | | 0 | 11 |
| 10 | | | 0 | 10 |
| 9 | a Operation in RF Mode | Enable = 0 Disable = 1 | | 9 |
| | b Operation in REG 2 Mode | Enable = 0 Disable = 2 | | |
| | c Operation in REG 1 Mode | Enable = 0 Disable = 4 | | |
| 8 | | | 0 | 8 |
| 7 | | | 0 | 7 |
| 6 | a Replacement of previous number of customers with newly input number | Allow = 0 Prohibit = 1 | | 6 |
| | b Addition of newly input number of customers to previous number | Prohibit = 0 Allow = 2 | | |
| 5 | | | 0 | 5 |
| 4 | | | 0 | 4 |
| 3 | | | 0 | 3 |
| 2 | | | 0 | 2 |
| 1 | | | 0 | 1 |

Worksheet #10

Use this worksheet to program RECEIPT.

| Item | Description | Choice | Program Code | |
|------|---|-------------------------------|--------------|----|
| 12 | | | 0 | 12 |
| 11 | | | 0 | 11 |
| 10 | Allowable number of post-finalization receipt issuance operations | 1 to 9 | | 10 |
| 9 | a Operation in RF Mode | Enable = 0 Disable = 1 | | 9 |
| | b Operation in REG 2 Mode | Enable = 0 Disable = 2 | | |
| | c Operation in REG 1 Mode | Enable = 0 Disable = 4 | | |
| 8 | | | 0 | 8 |
| 7 | Content of post-finalization receipt*1 | Total only = 0 Details = 1 | | 7 |
| 6 | | | 0 | 6 |
| 5 | | | 0 | 5 |
| 4 | | | 0 | 4 |
| 3 | | | 0 | 3 |
| 2 | | | 0 | 2 |
| 1 | | | 0 | 1 |

*1. To use the detailed post-finalization receipt function, you must reserve a detailed post-finalization receipt detail buffer in the PROGRAM 5 Mode (memory allocation)

Worksheet #11

Use this worksheet to program RF and CPN 2.

| Item | Description | Choice | Program Code | |
|------|---------------------------|------------------------------------|--------------|----|
| 12 | | | 0 | 12 |
| 11 | | | 0 | 11 |
| 10 | | | 0 | 10 |
| 9 | a Operation in RF Mode | Enable = 0 Disable = 1 | | 9 |
| | b Operation in REG 2 Mode | Enable = 0 Disable = 2 | | |
| | c Operation in REG 1 Mode | Enable = 0 Disable = 4 | | |
| 8 | | | 0 | 8 |
| 7 | Key function*1 | Refund key = 0 Coupon 2 key = 4 | | 7 |
| 6 | | | 0 | 6 |
| 5 | | | 0 | 5 |
| 4 | | | 0 | 4 |
| 3 | | | 0 | 3 |
| 2 | | | 0 | 2 |
| 1 | | | 0 | 1 |

*1. With Coupon 2 registrations, the quantity is not added to the gross number of items.

Worksheet #12

Use this worksheet to program .

| Item | Description | Choice | Receipt type | |
|------|--|---|--------------|----|
| 12 | | | 0 | 12 |
| 11 | | | 0 | 11 |
| 10 | | | 0 | 10 |
| 9 | a Operation in RF Mode | Enable = 0 Disable = 1 | | 9 |
| | b Operation in REG 2 Mode | Enable = 0 Disable = 2 | | |
| | c Operation in REG 1 Mode | Enable = 0 Disable = 4 | | |
| 8 | | | 0 | 8 |
| 7 | | | 0 | 7 |
| 6 | | | 0 | 6 |
| 5 | | | 0 | 5 |
| 4 | | | 0 | 4 |
| 3 | <input type="text" value="ARG"/> key operation method ^{*1} | Linked data only = 0 Manual table number input = 1 | | 3 |
| 2 | Linked arrangement key table memory number ^{*2} | 0 to 9 | | 2 |
| 1 | To link table memory number 3 to the Arrangement key, for example, program "3" | 1 to 9 | | 1 |

*1. Programming "3" allows registration of data linked to the Arrangement key only. See section 8 of this manual for details.

*2. You must perform this programming whenever you program "3" for item in this worksheet.

Worksheet #13

Use this worksheet to program .

| Item | Description | Choice | Program Code | |
|------|---|--------------------------------------|--------------|----|
| 12 | Receipt type | Normal receipt = 0 No receipt = 1 | | 12 |
| 11 | | | 0 | 11 |
| 10 | Multiple validation | Allow = 0 Prohibit = 2 | | 10 |
| 9 | a Operation in RF Mode | Enable = 0 Disable = 1 | | 9 |
| | b Operation in REG 2 Mode | Enable = 0 Disable = 2 | | |
| | c Operation in REG 1 Mode | Enable = 0 Disable = 4 | | |
| 8 | | | 0 | 8 |
| 7 | | | 0 | 7 |
| 6 | | | 0 | 6 |
| 5 | | | 0 | 5 |
| 4 | | | 0 | 4 |
| 3 | High Digit Limit (HDL) for manually entered unit prices (0 clears the limitation) | 1 to 9 | | 3 |
| 2 | | | 0 | 2 |
| 1 | | | 0 | 1 |

Worksheet #14

Use this worksheet to program T/S₁, T/S₂, T/S₃, T/A₁/ST, T/A₂/ST, and T/A₃/ST (T/S₄ and T/A₄/ST for Canada).

| Item | Description | Choice | Program Code | |
|------|--|---|---------------------------|----|
| 12 | | | 0 | 12 |
| 11 | | | 0 | 11 |
| 10 | | | 0 | 10 |
| 9 | a | Operation in RF Mode | Enable = 0 Disable = 1 | 9 |
| | b | Operation in REG 2 Mode | Enable = 0 Disable = 2 | |
| | c | Operation in REG 1 Mode | Enable = 0 Disable = 4 | |
| 8 | Tax table specification for taxable status shift/taxable amount subtotal | United States = 1, 2, or 3 Other areas (including Canada) = 1, 2, 3, or 4 | | 8 |
| 7 | | | 0 | 7 |
| 6 | | | 0 | 6 |
| 5 | | | 0 | 5 |
| 4 | | | 0 | 4 |
| 3 | | | 0 | 3 |
| 2 | | | 0 | 2 |
| 1 | | | 0 | 1 |

Worksheet #15

Use this worksheet to program .

| Item | Description | Choice | Program Code | |
|------|---|---|--------------|----|
| 12 | | | 0 | 12 |
| 11 | | | 0 | 11 |
| 10 | | | 0 | 10 |
| 9 | a Operation in RF Mode | Enable = 0 Disable = 1 | | 9 |
| | b Operation in REG 2 Mode | Enable = 0 Disable = 2 | | |
| | c Operation in REG 1 Mode | Enable = 0 Disable = 4 | | |
| 8 | | | 0 | 8 |
| 7 | Monetary symbol following currency exchange operation | Local monetary symbol = 0 Monetary symbol 1 = 1 Monetary symbol 2 = 2 Monetary symbol 3 = 3 Monetary symbol 4 = 4 | | 7 |
| 6 | Cash-in-drawer and check-in-drawer totalizer linking | 1, 2, or 3 ^{*1} | | 6 |
| 5 | Rounding method | Round off = 0 Cut off = 1 Round up = 2 | | 5 |
| 4 | | | 0 | 4 |
| 3 | Monetary system code (decimal places) following currency exchange operation | None = 0 0.0 = 1 0.00 = 2 0.000 = 3 0.0000 = 4 0.00000 = 5 0.000000 = 6 0.0000000 = 7 0.00000000 = 8 0.000000000 = 9 | | 3 |
| 2 | Separator symbol following currency exchange operation | Point = 0 Comma = 2 | | 2 |
| 1 | Drawer specification for currency exchange operation ^{*2} | 1 or 2 | | 1 |

*1. The selection here specifies the current cash-in-drawer and check-in-drawer totalizers linked to the key.

- 1 = Link to foreign currency cash-in-drawer 1 totalizer and foreign currency check-in-drawer 1 totalizer
- 2 = Link to foreign currency cash-in-drawer 2 totalizer and foreign currency check-in-drawer 2 totalizer
- 3 = Link to foreign currency cash-in-drawer 3 totalizer and foreign currency check-in-drawer 3 totalizer

*2. This programming is available only when the register is equipped with the optional multi-drawer. When a value outside the range of 1 to 2 is programmed here, the drawer assigned to the clerk performing the registration opens.

Worksheet #16

Use this worksheet to program DATE TIME, FOR DATE TIME, and CX DATE TIME.

| Item | Description | Choice | Program Code | |
|------|--|--|--------------|----|
| 12 | | | 0 | 12 |
| 11 | | | 0 | 11 |
| 10 | | | 0 | 10 |
| 9 | a Operation in RF Mode | Enable = 0 Disable = 1 | | 9 |
| | b Operation in REG 2 Mode | Enable = 0 Disable = 2 | | |
| | c Operation in REG 1 Mode | Enable = 0 Disable = 4 | | |
| 8 | | | 0 | 8 |
| 7 | | | 0 | 7 |
| 6 | Input sequence for department key multiplication operations *1 | Quantity x Unit Price = 0 Unit Price x Quantity = 1 | | 6 |
| 5 | Result rounding | Round off = 0 Cut off = 1 Round up = 2 | | 5 |
| 4 | | | 0 | 4 |
| 3 | | | 0 | 3 |
| 2 | | | 0 | 2 |
| 1 | | | 0 | 1 |

*1. Programmable to the DATE TIME only. DATE TIME cannot be used to display the date or time when it is programmed with this function.

Worksheet #17

Use this worksheet to program NO ST, PR ST and SUB TOTAL.

| Item | Description | Choice | Program Code | |
|------|--|-------------------------------|--------------|----|
| 12 | | | 0 | 12 |
| 11 | | | 0 | 11 |
| 10 | Multiple validation | Allow = 0 Prohibit = 2 | | 10 |
| 9 | a Operation in RF Mode | Enable = 0 Disable = 1 | | 9 |
| | b Operation in REG 2 Mode | Enable = 0 Disable = 2 | | |
| | c Operation in REG 1 Mode | Enable = 0 Disable = 4 | | |
| 8 | | | 0 | 8 |
| 7 | | | 0 | 7 |
| 6 | Status of subtotal line when key is operated | Do not print = 0 Print = 4 | | 6 |
| 5 | | | 0 | 5 |
| 4 | | | 0 | 4 |
| 3 | | | 0 | 3 |
| 2 | | | 0 | 2 |
| 1 | | | 0 | 1 |

Worksheet #18

Use this worksheet to program and .

| Item | Description | Choice | Program Code | |
|------|---|---------------------------|--------------|----|
| 12 | | | 0 | 12 |
| 11 | | | 0 | 11 |
| 10 | | | 0 | 10 |
| 9 | a Operation in RF Mode | Enable = 0 Disable = 1 | | 9 |
| | b Operation in REG 2 Mode | Enable = 0 Disable = 2 | | |
| | c Operation in REG 1 Mode | Enable = 0 Disable = 4 | | |
| 8 | | | 0 | 8 |
| 7 | Mode switch change and clerk change when key is pressed as first input of transaction*1 | Allow = 0 Prohibit = 1 | | 7 |
| 6 | | | 0 | 6 |
| 5 | | | 0 | 5 |
| 4 | | | 0 | 4 |
| 3 | | | 0 | 3 |
| 2 | | | 0 | 2 |
| 1 | | | 0 | 1 |

*1. This program is valid only for the key non-add number and key operation.

Worksheet #19

Use this worksheet to program .

| Item | Description | Choice | Program Code | |
|------|--|--|--------------|----|
| 12 | | | 0 | 12 |
| 11 | Allowable number of validation printings (0 = unlimited)*1 | 0 to 9 | | 11 |
| 10 | Validation operation | Not compulsory = 0 Compulsory = 1 | | 10 |
| 9 | a Operation in RF Mode | Enable = 0 Disable = 1 | | 9 |
| | b Operation in REG 2 Mode | Enable = 0 Disable = 2 | | |
| | c Operation in REG 1 Mode | Enable = 0 Disable = 4 | | |
| 8 | | | 0 | 8 |
| 7 | | | 0 | 7 |
| 6 | a Add-on tax amount | Include in tray total = 0 Exclude from tray total = 1 | | 6 |
| | b Tray total status when key is operated | Do not print = 0 Print = 4 | | |
| 5 | | | 0 | 5 |
| 4 | | | 0 | 4 |
| 3 | | | 0 | 3 |
| 2 | | | 0 | 2 |
| 1 | | | 0 | 1 |

*1. When 10 is programmed as "Compulsory = 1," a validation compulsory error occurs whenever the number of validation printings specified here is not performed.

Worksheet #20

Use this worksheet to program .

| Item | Description | Choice | Program Code | |
|------|---------------------------|--|--------------|----|
| 12 | | | 0 | 12 |
| 11 | | | 0 | 11 |
| 10 | | | 0 | 10 |
| 9 | a Operation in RF Mode | Enable = 0 Disable = 1 | | 9 |
| | b Operation in REG 2 Mode | Enable = 0 Disable = 2 | | |
| | c Operation in REG 1 Mode | Enable = 0 Disable = 4 | | |
| 8 | | | 0 | 8 |
| 7 | Manual override | Allow = 0 Prohibit = 2 | | 7 |
| 6 | | | 0 | 6 |
| 5 | Rounding method | Round off = 0 Cut off = 1 Round up = 2 | | 5 |
| 4 | | | 0 | 4 |
| 3 | | | 0 | 3 |
| 2 | | | 0 | 2 |
| 1 | | | 0 | 1 |

Worksheet #21

Use this worksheet to program .

| Item | Description | Choice | Program Code | |
|------|---|---------------------------|--------------|----|
| 12 | | | 0 | 12 |
| 11 | | | 0 | 11 |
| 10 | Multiple validation | Allow = 0 Prohibit = 2 | | 10 |
| 9 | a Operation in RF Mode | Enable = 0 Disable = 1 | | 9 |
| | b Operation in REG 2 Mode | Enable = 0 Disable = 2 | | |
| | c Operation in REG 1 Mode | Enable = 0 Disable = 4 | | |
| 8 | | | 0 | 8 |
| 7 | | | 0 | 7 |
| 6 | | | 0 | 6 |
| 5 | | | 0 | 5 |
| 4 | | | 0 | 4 |
| 3 | High Digit Limit (HDL) for manually entered unit prices (0 clears the limitation) | 1 to 9 | | 3 |
| 2 | | | 0 | 2 |
| 1 | | | 0 | 1 |

Worksheet #22

Use this worksheet to program %+ and %-.

| Item | Description | Choice | Program Code | |
|------|--|--|--------------|----|
| 12 | Receipt type | Normal receipt = 0 No receipt = 1 | | 12 |
| 11 | | | 0 | 11 |
| 10 | Multiple validation | Allow = 0 Prohibit = 2 | | 10 |
| 9 | a Operation in RF Mode | Enable = 0 Disable = 1 | | 9 |
| | b Operation in REG 2 Mode | Enable = 0 Disable = 2 | | |
| | c Operation in REG 1 Mode | Enable = 0 Disable = 4 | | |
| 8 | Taxable Status | See below *1 | | 8 |
| 7 | Manual override | Allow = 0 Prohibit = 2 | | 7 |
| 6 | | | 0 | 6 |
| 5 | Rounding method | Round off = 0 Cut off = 1 Round up = 2 | | 5 |
| 4 | a <input type="checkbox"/> %+ / <input type="checkbox"/> %- key operation following <input type="checkbox"/> SUB TOTAL operation | Allow = 0 Prohibit = 1 | | 4 |
| | b <input type="checkbox"/> %+ / <input type="checkbox"/> %- key operation following <input type="checkbox"/> IND / ST operation | Allow = 0 Prohibit = 2 | | |
| | c <input type="checkbox"/> %+ / <input type="checkbox"/> %- key operation for last item registered | Allow = 0 Prohibit = 4 | | |
| 3 | | | 0 | 3 |
| 2 | | | 0 | 2 |
| 1 | | | 0 | 1 |

*1. United States

- Taxable Status 1 = 1
- Taxable Status 2 = 2
- Taxable Status 3 or Food Stamp Status = 4
- Non-taxable = 0

Use the sum of the program code to program more than one status. To program Taxable Status 1 and Taxable Status 2, program "3" (1 + 2).

Canada

- Taxable Status 1 = 1
- Taxable Status 2 = 2
- Taxable Status 3 = 3
- Taxable Status 4 = 4
- Taxable Status 1 & 2 = 5
- Taxable Status 1 & 3 = 6
- Taxable Status 1 & 4 = 7
- All Taxable = 8
- Non-taxable = 0

Other areas

- Taxable Status 1 = 1
- Taxable Status 2 = 2
- Taxable Status 3 = 3
- Taxable Status 4 = 4
- All taxable = 8
- Non-taxable = 0

Worksheet #23

Use this worksheet to program , , and .

| Item | Description | Choice | Program Code | |
|------|--|--------------------------------------|--------------|----|
| 12 | Receipt type | Normal receipt = 0 No receipt = 1 | | 12 |
| 11 | | | 0 | 11 |
| 10 | Multiple validation | Allow = 0 Prohibit = 2 | | 10 |
| 9 | a Operation in RF Mode | Enable = 0 Disable = 1 | | 9 |
| | b Operation in REG 2 Mode | Enable = 0 Disable = 2 | | |
| | c Operation in REG 1 Mode | Enable = 0 Disable = 4 | | |
| 8 | Taxable Status | See below *1 | | 8 |
| 7 | Credit balances for <input type="button" value="-"/> and <input type="button" value="CPN"/> keys | Prohibit = 0 Allow = 1 | | 7 |
| 6 | | | 0 | 6 |
| 5 | | | 0 | 5 |
| 4 | a <input type="button" value="-"/> , <input type="button" value="+"/> , or <input type="button" value="CPN"/> key operation following <input type="button" value="SUB TOTAL"/> operation | Allow = 0 Prohibit = 1 | | 4 |
| | b <input type="button" value="-"/> , <input type="button" value="+"/> , or <input type="button" value="CPN"/> key operation following <input type="button" value="MD/ST"/> operation | Allow = 0 Prohibit = 2 | | |
| | c <input type="button" value="-"/> , <input type="button" value="+"/> , or <input type="button" value="CPN"/> key operation for last item registered | Allow = 0 Prohibit = 4 | | |
| 3 | High Digit Limit (HDL) for manually entered unit prices (0 clears the limitation) | 1 to 9 | | 3 |
| 2 | | | 0 | 2 |
| 1 | | | 0 | 1 |

*1. United States

- Taxable Status 1 = 1
- Taxable Status 2 = 2
- Taxable Status 3 or Food Stamp Status = 4
- Non-taxable = 0

Use the sum of the program code to program more than one status. To program Taxable Status 1 and Taxable Status 2, program "3" (1 + 2).

Canada

- Taxable Status 1 = 1
- Taxable Status 2 = 2
- Taxable Status 3 = 3
- Taxable Status 4 = 4
- Taxable Status 1 & 2 = 5
- Taxable Status 1 & 3 = 6
- Taxable Status 1 & 4 = 7
- All Taxable = 8
- Non-taxable = 0

Other areas

- Taxable Status 1 = 1
- Taxable Status 2 = 2
- Taxable Status 3 = 3
- Taxable Status 4 = 4
- All taxable = 8
- Non-taxable = 0

Worksheet #24

Use this worksheet to program .

| Item | Description | Choice | Program Code |
|------|---|--|--------------|
| 12 | Receipt type | Normal receipt = 0 No receipt = 1 Single receipt = 2 | 12 |
| 11 | | | 0 11 |
| 10 | Multiple validation | Allow = 0 Prohibit = 2 | 10 |
| 9 | a Operation in RF Mode | Enable = 0 Disable = 1 | 9 |
| | b Operation in REG 2 Mode | Enable = 0 Disable = 2 | |
| | c Operation in REG 1 Mode | Enable = 0 Disable = 4 | |
| 8 | Taxable Status | See below*1 | 8 |
| 7 | <input type="checkbox"/> key function | <input type="checkbox"/> = 0 <input type="checkbox"/> = 1 | 7 |
| 6 | a Check digit for previous balance total amount | Do not provide = 0 Provide = 1 | 6 |
| | b Previous balance line printing when key is operated | Print = 0 Do not print = 4 | |
| 5 | | | 0 5 |
| 4 | | | 0 4 |
| 3 | High Digit Limit (HDL) for manually input unit prices (0 clears the limitation) | 1 to 9 | 3 |
| 2 | | | 0 2 |
| 1 | | | 0 1 |

*1. United States

- Taxable Status 1 = 1
- Taxable Status 2 = 2
- Taxable Status 3 or Food Stamp Status = 4
- Non-taxable = 0

Use the sum of the program code to program more than one status. To program Taxable Status 1 and Taxable Status 2, program "3" (1 + 2).

Canada

- Taxable Status 1 = 1
- Taxable Status 2 = 2
- Taxable Status 3 = 3
- Taxable Status 4 = 4
- Taxable Status 1 & 2 = 5
- Taxable Status 1 & 3 = 6
- Taxable Status 1 & 4 = 7
- Non-taxable = 0

Other areas

- Taxable Status 1 = 1
- Taxable Status 2 = 2
- Taxable Status 3 = 3
- Taxable Status 4 = 4
- All taxable = 8
- Non-taxable = 0

Worksheet #25

Use this worksheet to program .

| Item | Description | Choice | Program Code |
|------|---|---|--------------|
| 12 | Receipt type | Normal receipt = 0 No receipt = 1 | 12 |
| 11 | | | 0 11 |
| 10 | Multiple validation | Allow = 0 Prohibit = 2 | 10 |
| 9 | a Operation in RF Mode | Enable = 0 Disable = 1 | 9 |
| | b Operation in REG 2 Mode | Enable = 0 Disable = 2 | |
| | c Operation in REG 1 Mode | Enable = 0 Disable = 4 | |
| 8 | Taxable Status | See below *1 | 8 |
| 7 | a Credit balance *2 | Do not allow = 0 Allow = 1 | 7 |
| | b Key function *3 | Bottle Return key = 0 Linked Bottle Return key = 2 | |
| 6 | | | 0 6 |
| 5 | | | 0 5 |
| 4 | a Bottle Return key operation following <input type="checkbox"/> SUB TOTAL operation *2 | Allow = 0 Prohibit = 1 | 4 |
| | b Bottle Return key operation following <input type="checkbox"/> MD/ST operation *2 | Allow = 0 Prohibit = 2 | |
| | c Bottle Return key operation for last item registered *2 | Allow = 0 Prohibit = 4 | |
| 3 | High Digit Limit (HDL) for amount manually entered using the Bottle Return key *2 | 1 to 9 | 3 |
| 2 | | | 0 2 |
| 1 | | | 0 1 |

*1. United States

- Taxable Status 1 = 1
- Taxable Status 2 = 2
- Taxable Status 3 or Food Stamp Status = 4
- Non-taxable = 0

Use the sum of the program code to program more than one status. To program Taxable Status 1 and Taxable Status 2, program "3" (1 + 2).

Canada

- Taxable Status 1 = 1
- Taxable Status 2 = 2
- Taxable Status 3 = 3
- Taxable Status 4 = 4
- Taxable Status 1 & 2 = 5
- Taxable Status 1 & 3 = 6
- Taxable Status 1 & 4 = 7
- All Taxable = 8
- Non-taxable = 0

Other areas

- Taxable Status 1 = 1
- Taxable Status 2 = 2
- Taxable Status 3 = 3
- Taxable Status 4 = 4
- All taxable = 8
- Non-taxable = 0

*2. Programmable for Bottle Return key only.

*3. A Linked Bottle Return key declares that the next entry is a linked bottle return. You cannot use a Linked Bottle Return key for registration of a price. A Bottle Return key registers an amount for a bottle return.

Worksheet #26

Use this worksheet to program **TX** / **EX**.

| Item | Description | Choice | Program Code | |
|------|--|--|--------------|----|
| 12 | Receipt type | Normal receipt = 0 No receipt = 1 | | 12 |
| 11 | | | 0 | 11 |
| 10 | | | 0 | 10 |
| 9 | a Operation in RF Mode | Enable = 0 Disable = 1 | | 9 |
| | b Operation in REG 2 Mode | Enable = 0 Disable = 2 | | |
| | c Operation in REG 1 Mode | Enable = 0 Disable = 4 | | |
| 8 | Tax exemption control | See below *1 | | 8 |
| 7 | Taxable amounts exempted in a transaction by this key *2 | Up to <input type="checkbox"/> TX / <input type="checkbox"/> EX key operation = 0 All = 1 | | 7 |
| 6 | | | 0 | 6 |
| 5 | | | 0 | 5 |
| 4 | | | 0 | 4 |
| 3 | | | 0 | 3 |
| 2 | | | 0 | 2 |
| 1 | | | 0 | 1 |

*1. United States

- Exemption for Taxable Status 2 and 3 = 1
- Exemption for Taxable Status 1 and 3 = 2
- Exemption for Taxable Status 3 = 3
- Exemption for Taxable Status 1 and 2 = 4
- Exemption for Taxable Status 2 = 5
- Exemption for Taxable Status 1 = 6
- All taxable amounts exempt = 0

Canada

- Exemption for Taxable Status 1 and 3 = 6
- Exemption for Taxable Status 1 and 2 = 5
- Exemption for Taxable Status 3 = 3
- Exemption for Taxable Status 1 and 4 = 7
- Exemption for Taxable Status 2 = 2
- Exemption for Taxable Status 1 = 1
- Exemption for Taxable Status 4 = 4
- All taxable amounts exempt = 0

*2. If you program "0" here, only those taxable items that are registered in the transaction before **TX** / **EX** is pressed are exempted.
If you program "1", all taxable items in the transaction are exempted.

Worksheet #27

Use this worksheet to program .


| Item | Description | Choice | Program Code | |
|------|---|--|--------------|----|
| 12 | Receipt type | Normal receipt = 0 No receipt = 1 Single receipt = 2 | | 12 |
| 11 | | | 0 | 11 |
| 10 | Multiple validation | Allow = 0 Prohibit = 2 | | 10 |
| 9 | a Operation in RF Mode | Enable = 0 Disable = 1 | | 9 |
| | b Operation in REG 2 Mode | Enable = 0 Disable = 2 | | |
| | c Operation in REG 1 Mode | Enable = 0 Disable = 4 | | |
| 8 | | | 0 | 8 |
| 7 | Deposit key function | Deposit Plus = 0 Deposit Minus = 1 | | 7 |
| 6 | Drawer operation when key is operated | Remain closed = 0 Open = 2 | | 6 |
| 5 | Media specification | Cash = 0 Charge = 1 Check = 2 Credit = 3 | | 5 |
| 4 | High Amount Limit (HAL) for subtotals and tendered amounts Programming "00" here clears the limitation. To set a maximum of \$600.00, for example, program "64" | Maximum value of leftmost digit (0 to 9) | | 4 |
| 3 | | Number of zeros (0 to 9) | | 3 |
| 2 | | | 0 | 2 |
| 1 | | | 0 | 1 |

Worksheet #28


Use this worksheet to program OPEN
II.

| Item | Description | Choice | Program Code | |
|------|--|---|--------------|----|
| 12 | | | 0 | 12 |
| 11 | | | 0 | 11 |
| 10 | | | 0 | 10 |
| 9 | a | Operation in RF Mode Enable = 0 Disable = 1 | | 9 |
| | b | Operation in REG 2 Mode Enable = 0 Disable = 2 | | |
| | c | Operation in REG 1 Mode Enable = 0 Disable = 4 | | |
| 8 | | | 0 | 8 |
| 7 | Compulsory number of customers input for a clerk/cashier | Release = 0 Do not release = 1 | | 7 |
| 6 | a | Prohibited finalization when the subtotal amount is zero or less Release = 0 Do not release = 1 | | 6 |
| | b | Compulsory rate tax input before finalization Release = 0 Do not release = 2 | | |
| 5 | Compulsory validation | Release = 0 Do not release = 1 | | 5 |
| 4 | | | 0 | 4 |
| 3 | | | 0 | 3 |
| 2 | | | 0 | 2 |
| 1 | | | 0 | 1 |

Worksheet #29

Use this worksheet to program .

| Item | Description | Choice | Program Code | |
|------|--|--|--------------|----|
| 12 | | | 0 | 12 |
| 11 | | | 0 | 11 |
| 10 | Multiple validation | Allow = 0 Prohibit = 2 | | 10 |
| 9 | a Operation in the RF Mode | Enable = 0 Disable = 1 | | 9 |
| | b Operation in the REG 2 Mode | Enable = 0 Disable = 2 | | |
| | c Operation in the REG 1 Mode | Enable = 0 Disable = 4 | | |
| 8 | | | 0 | 8 |
| 7 | | | 0 | 7 |
| 6 | Status of discount subtotal line when key is operated | Do not print = 0 Print = 4 | | 6 |
| 5 | Rounding method for discounted gas department registration*1 | Round off = 0 Cut off = 1 Round up = 2 | | 5 |
| 4 | | | 0 | 4 |
| 3 | | | 0 | 3 |
| 2 | | | 0 | 2 |
| 1 | | | 0 | 1 |

*1. Each Discount Subtotal key corresponds to a particular finalize key. This means that the rounding system for the discount function performed by this key must match that programmed for the corresponding finalize key. If the two rounding specifications are different, the value produced (on the display and printouts) by a  key operation will differ from that produced by a finalize operation.

Worksheet #30

Use the following worksheet to program .

| Item | Description | Choice | Program Code | |
|------|--------------|--------------------------------------|--------------|----|
| 12 | Receipt type | Normal receipt = 0 No receipt = 1 | | 12 |
| 11 | | | 0 | 11 |
| 10 | | | 0 | 10 |
| 9 | | | 0 | 9 |
| 8 | | | 0 | 8 |
| 7 | | | 0 | 7 |
| 6 | | | 0 | 6 |
| 5 | | | 0 | 5 |
| 4 | | | 0 | 4 |
| 3 | | | 0 | 3 |
| 2 | | | 0 | 2 |
| 1 | | | 0 | 1 |

Worksheet #31

Use this worksheet to program , , , , , , , , , , , , , and .

| Item | Description | Choice | Receipt type | |
|------|-------------|-------------------------|---------------------------|----|
| 12 | | | 0 | 12 |
| 11 | | | 0 | 11 |
| 10 | | | 0 | 10 |
| 9 | a | Operation in RF Mode | Enable = 0 Disable = 1 | 9 |
| | b | Operation in REG 2 Mode | Enable = 0 Disable = 2 | |
| | c | Operation in REG 1 Mode | Enable = 0 Disable = 4 | |
| 8 | | | 0 | 8 |
| 7 | | | 0 | 7 |
| 6 | | | 0 | 6 |
| 5 | | | 0 | 5 |
| 4 | | | 0 | 4 |
| 3 | | | 0 | 3 |
| 2 | | | 0 | 2 |
| 1 | | | 0 | 1 |

4-5 Function Key Descriptors

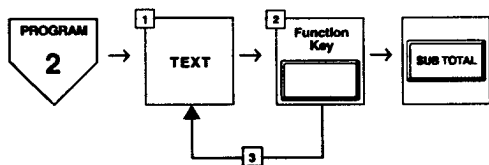
Use this procedure to assign literal descriptors to each function key. Each descriptor can be either 8 or 12 characters long, depending on the descriptor length specification that is made during the initialize operation.

Note that this section explains only the general procedure to use for programming descriptors. For details on actual character input procedures, see section 10 of this manual.

There are two different methods you can use to assign a descriptor to a key. With "direct programming," you input characters and then press the key to which you want to program the characters.

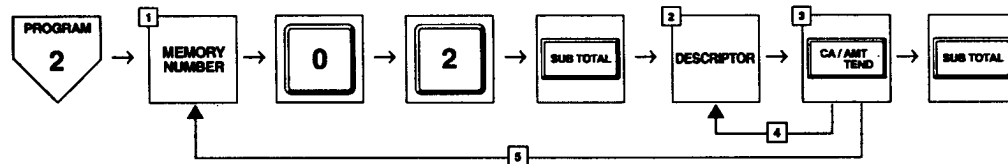
With "memory number programming" you input the memory number of the key you are programming and then input "02" (which is the file number for free function keys). You then input the characters you want to program.

Direct Programming Procedure



1. Input a descriptor from Worksheet #32 on page 42 using one of the procedures described in section 10 of this manual.
2. Press the function key you want to program.
3. Loop if you want to input a descriptor for the next Function Key.

Memory Number Programming Procedure



1. Input the memory number that identifies the function key you want to program.
2. Input a descriptor from Worksheet #32 on page 42 using one of the procedures described in section 10 of this manual.
3. Cash Amount Tendered key on the standard keyboard.
4. Loop if you want to input a descriptor for the next sequential memory number.
5. Loop if you want to input a different memory number.

Worksheet #32

| Memory Number | File Number | Function Key | Standard Descriptor | Programmed Descriptor | | | | | | | | | | | | | | | | |
|---------------|-------------|-----------------|---------------------|-----------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | 02 | CA / AMT / TEND | CA | | | | | | | | | | | | | | | | | |
| | 02 | CH | CH | | | | | | | | | | | | | | | | | |
| | 02 | CHK / TEND | CHK | | | | | | | | | | | | | | | | | |
| | 02 | CREDIT | CR | | | | | | | | | | | | | | | | | |
| | 02 | NB | NB | | | | | | | | | | | | | | | | | |
| | 02 | TEXT RECALL | CHAR | | | | | | | | | | | | | | | | | |
| | 02 | TIP | TIP | | | | | | | | | | | | | | | | | |
| | 02 | LOAN | LOAN | | | | | | | | | | | | | | | | | |
| | 02 | RC | RC | | | | | | | | | | | | | | | | | |
| | 02 | PD | PD | | | | | | | | | | | | | | | | | |
| | 02 | PICK UP | PUP | | | | | | | | | | | | | | | | | |
| | 02 | CPN | CPN | | | | | | | | | | | | | | | | | |
| | 02 | R-TAX | TAX | | | | | | | | | | | | | | | | | |
| | 02 | + | + | | | | | | | | | | | | | | | | | |
| | 02 | - | - | | | | | | | | | | | | | | | | | |
| | 02 | %+ | %+ | | | | | | | | | | | | | | | | | |
| | 02 | %- | %- | | | | | | | | | | | | | | | | | |
| | 02 | RF | RF | | | | | | | | | | | | | | | | | |
| | 02 | ERR CORR | CORR | | | | | | | | | | | | | | | | | |
| | 02 | VOID | VOID | | | | | | | | | | | | | | | | | |
| | 02 | VALID | VLD | | | | | | | | | | | | | | | | | |
| | 02 | RECEIPT | RCT | | | | | | | | | | | | | | | | | |
| | 02 | DRAWER NO. | DR-# | | | | | | | | | | | | | | | | | |
| | 02 | #/NS | #/NS | | | | | | | | | | | | | | | | | |
| | 02 | NS | NS | | | | | | | | | | | | | | | | | |
| | 02 | CUSTOMER | CT | | | | | | | | | | | | | | | | | |
| | 02 | # | # | | | | | | | | | | | | | | | | | |
| | 02 | ARG | ARG | | | | | | | | | | | | | | | | | |
| | 02 | CE | CE | | | | | | | | | | | | | | | | | |
| | 02 | PLU | L•PL | | | | | | | | | | | | | | | | | |

Worksheet #32 (Continued)

| Memory Number | File Number | Function Key | Standard Descriptor | Programmed Descriptor | | | | | | | | | | | | | | | | | | | |
|---------------|-------------|--------------|---------------------|-----------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | 02 | PRICE | PRC | | | | | | | | | | | | | | | | | | | | |
| | 02 | SHORT PLU | PLU | | | | | | | | | | | | | | | | | | | | |
| | 02 | BR | BR | | | | | | | | | | | | | | | | | | | | |
| | 02 | T/S | T/S | | | | | | | | | | | | | | | | | | | | |
| | 02 | OPEN | OPEN | | | | | | | | | | | | | | | | | | | | |
| | 02 | OPEN II | OPN2 | | | | | | | | | | | | | | | | | | | | |
| | 02 | TRAY TOTAL | TL | | | | | | | | | | | | | | | | | | | | |
| | 02 | TA/ST | TAST | | | | | | | | | | | | | | | | | | | | |
| | 02 | TEXT PRINT | PRT | | | | | | | | | | | | | | | | | | | | |
| | 02 | MD/ST | MDST | | | | | | | | | | | | | | | | | | | | |
| | 02 | CLERK # | CLK# | | | | | | | | | | | | | | | | | | | | |
| | 02 | DEPOSIT | DEPO | | | | | | | | | | | | | | | | | | | | |
| | 02 | PB | PB | | | | | | | | | | | | | | | | | | | | |
| | 02 | M-TAX | TAX | | | | | | | | | | | | | | | | | | | | |
| | 02 | CANCEL | CNCL | | | | | | | | | | | | | | | | | | | | |
| | 02 | VAT | VAT | | | | | | | | | | | | | | | | | | | | |
| | 02 | TX/EX | EX | | | | | | | | | | | | | | | | | | | | |
| | 02 | 1ST | 1ST | | | | | | | | | | | | | | | | | | | | |
| | 02 | 2ND | 2ND | | | | | | | | | | | | | | | | | | | | |
| | 02 | 3RD | 3RD | | | | | | | | | | | | | | | | | | | | |
| | 02 | PB/ST | PBST | | | | | | | | | | | | | | | | | | | | |

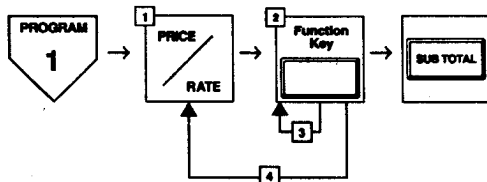
4-6 Function Key Prices and Rates

Use the following procedure to assign prices and rates to applicable function keys.

There are two different methods you can use to assign a price or rate to a key. With “direct programming” you input the price or rate from Worksheet #33 on page 45 and then press the key to which you want to program the price or rate.

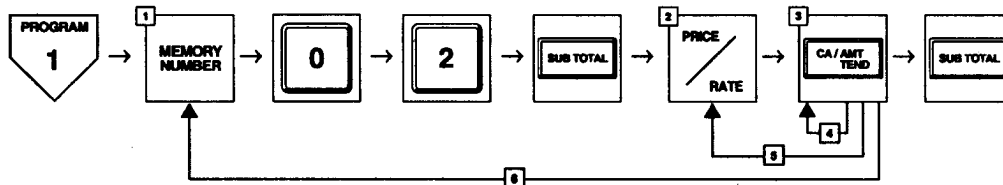
With “memory number programming” you input the memory number of the key you are programming and then input "02" (which is the file number for free function keys). You then input the price or rate from Worksheet #33 on page 45.

Direct Programming Procedure




1. Input the price or rate from Worksheet #33 on page 45.
2. Press the function key you want to program.
3. Loop if you want to assign the same price or rate to a different function key.
4. Loop if you want to input a different price or rate.

Memory Number Programming Procedure



1. Input the memory number that identifies the function key you want to program.
2. Input the price or rate from Worksheet #33 on page 45.
3. Cash Amount Tended key on the standard keyboard.
4. Loop if you want to assign the same price or rate to the next sequential memory number.
5. Loop if you want to input a different price or rate for the next sequential memory number.
6. Loop if you want to input a different memory number.

Worksheet #33

| Memory No. | File No. | Item | Program Code | | | | | Key |
|------------|----------|---|--------------|--|--|--|--|-------------|
| | 02 | Addition amount | | | | | | + |
| | 02 | Reduction amount | | | | | | - |
| | 02 | Premium rate (00.00) | | | | | | %+ |
| | 02 | Discount rate (00.00) | | | | | | %- |
| | 02 | Tax rate (00.00) | | | | | | R-TAX |
| | 02 | Coupon amount | | | | | | CPN |
| | 02 | Tip amount | | | | | | TIP |
| | 02 | Bottle return amount | | | | | | BR |
| | 02 | Check cashing handling fee (4-digit amount or 00.00 rate) | | | | | | CHK/TEND |
| | 02 | Temporary finalize operation ( key) handling fee (4-digit amount or 00.00 rate) | | | | | | MB |
| | 02 | Preset tender amount | | | | | | CA/AMT/TEND |

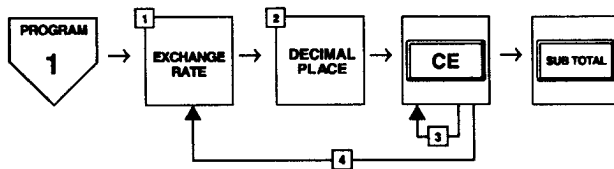
4-7 Exchange Rates for Currency Exchange Keys

Use the procedure described here to program exchange rates to currency exchange keys.

There are two different methods you can use to assign an exchange rate to a key. With “direct programming” you input the exchange rate and then press the Currency Exchange key to which you want to program the rate.

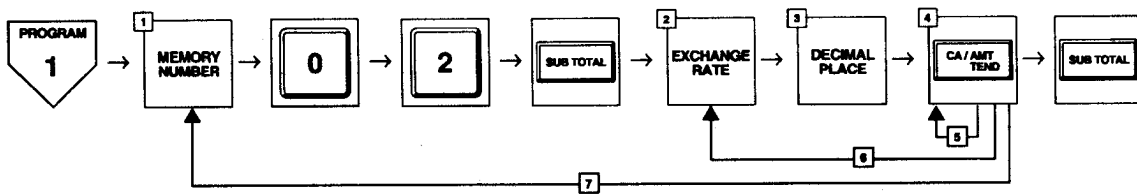
With “memory number programming” you input the memory number of the key you are programming and then input "02" (which is the file number for free function keys). You then input the exchange rate.

Direct Programming Procedure



1. Input a 5-digit value for the exchange rate you want to use. Input the values only, without inputting a decimal place. For an exchange rate of 149.00, input "14900". For an exchange rate of 0.67114, input "67114".
2. Input a 1-digit value that specifies the number of decimal places. For an exchange rate of 149.00, input "2". For an exchange rate of 0.67114, input "5". Input "0" if the exchange rate does not have a decimal point.
3. Loop if you want to assign the same exchange rate to a different currency exchange key.
4. Loop if you want to input a different exchange rate.

Memory Number Programming Procedure



1. Input the memory number that identifies the function key you want to program.
2. Input a 5-digit value for the exchange rate you want to use. Input the values only, without inputting a decimal place. For an exchange rate of 149.00, input "14900". For an exchange rate of 0.67114, input "67114".
3. Input a 1-digit value that specifies the number of decimal places. For an exchange rate of 149.00, input "2". For an exchange rate of 0.67114, input "5". Input "0" if the exchange rate does not have a decimal point.
4. Cash Amount Tendered key on the standard keyboard.
5. Loop if you want to assign the same exchange rate to the next sequential memory number.
6. Loop if you want to input a different exchange rate for the next sequential memory number.
7. Loop if you want to input a different memory number.

4-8 Gas Department Discount Key

You can assign certain function keys with gas department discount prices, which then makes it possible to register the discounted price with the touch of a key. Note that gas departments are used in the United States and Canada only.

Important

- ☞ You must program a Discount Subtotal key with the same discount price data for each of the finalize keys on the keyboard. If the discount price programmed to a finalize key differs from that programmed to the corresponding Discount Subtotal key, the amounts that appear on the display and printouts will be different. Because of this, we recommend that you program finalize keys and Discount Subtotal keys in pairs.

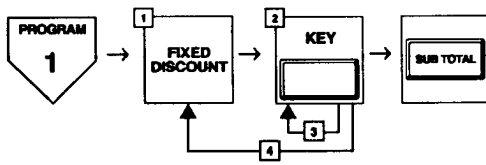
Of course, the above also means that a finalize key must always be operated in combination with its correct corresponding Discount Subtotal key to avoid discrepancies between displayed and printed values.

There are two different methods you can use to program gas department discount keys.

With "direct programming", you input the discount price, and then press the Discount Subtotal key or Finalize key to which you want to program the data.

With "memory number programming" you input the memory number of the key you are programming and then input "02" (which is the file number for free function keys). You then input the discount amount.

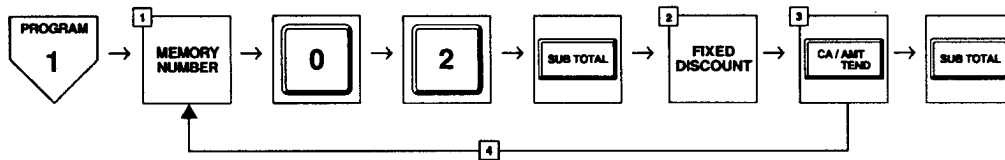
Direct Programming Procedure



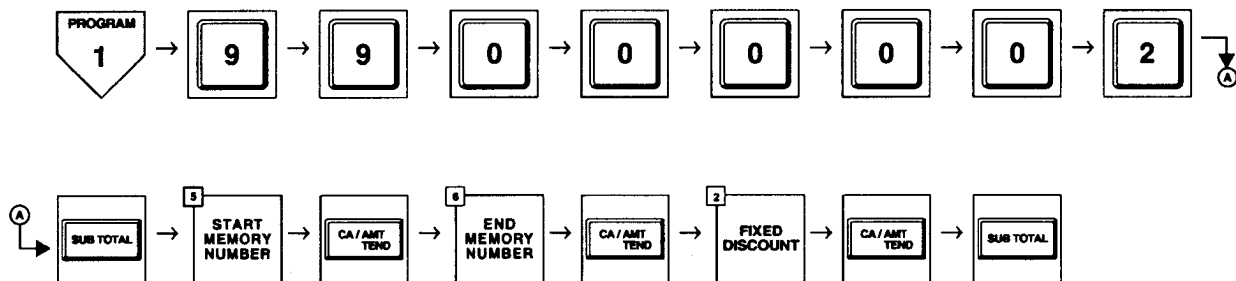
1. Input the fixed discount amount from Worksheet #34 on page 48. This can have three digits to the left of the decimal point (integer part) and three digits to the right of the decimal point (decimal places). You do not need to input all three digits for the integer part, but you must input values for all three decimal places.
2. Press the Discount Subtotal key or Finalize key you want to program.
3. Loop if you want to input the same data for the different Discount Subtotal Key or Finalize Key.
4. Loop if you want to input the different data.

Memory Number Programming Procedure

Procedure 1



Procedure 2 — Range Programming



1. Input the memory number that identifies the Discount Subtotal Key or Finalize Key you want to program.
2. Input the fixed discount amount from Worksheet #34 on page 48. This can have three digits to the left of the decimal point (integer part) and three digits to the right of the decimal point (decimal places). You do not need to input all three digits for the integer part, but you must input values for all three decimal places.
3. Cash Amount Tendered key on the standard keyboard.
4. Loop if you want to input a different memory number.
5. Range start memory number.
If you don't input anything here, the data is programmed from memory #1.
6. Range end memory number.
If you don't input anything here, the data is programmed up to the last memory number that exists in the file.

Worksheet #34

| Memory No. | | File No. | Item | Program Code | | | | | | Keys |
|------------|--|----------|---|--------------|--|--|--|--|--|-------------------------|
| | | 02 | Fixed discount amount (000.000) for discount gas department registrations | | | | | | | DC/ST CA/AMT TEND |
| | | 02 | | | | | | | | DC/ST CH |
| | | 02 | | | | | | | | DC/ST CHK/TEND |
| | | 02 | | | | | | | | DC/ST CREDIT |
| | | 02 | | | | | | | | DC/ST CREDIT |

5

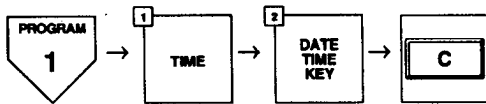
Machine Features

The programming described in this section can be used to program a wide variety of useful features that adapt the cash register to virtually any application imaginable.

5-1 Setting Time and Date

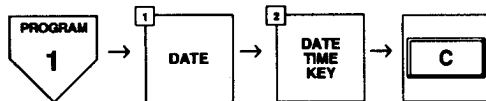
Once you set time and date, a built-in auto-calendar automatically makes adjustments for accurate printing on receipts, slips and reports.

Procedure — Time



1. 24-hour time format (4 digits)
Example: 8:30AM is entered as 0830
8:30PM is entered as 2030
2. Press any one of the following keys: DATE TIME, FOR DATE TIME, XX DATE TIME. The current time will appear on the display and be printed on the receipt. Seconds are not included in the printout.

Procedure — Date

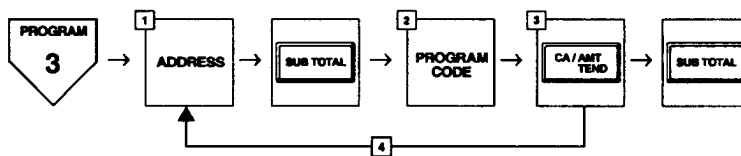


1. Date in year/month/day format (6 digits)
Example: March 5, 1993 is entered as 930305
2. Press any one of the following keys: DATE TIME, FOR DATE TIME, XX DATE TIME. The current date will appear on the display and be printed on the receipt.

5-2 General Machine Features

General machine feature programming lets you select the specific general machine features required for each application. The following table shows the worksheets you should use to create the required programming codes, along with the addresses you need to input during the programming procedure described below.

| Address | Worksheet |
|---------|--------------------------|
| 0322 | Worksheet #35 on page 50 |
| 0422 | Worksheet #36 on page 51 |
| 0522 | Worksheet #37 on page 52 |
| 0622 | Worksheet #38 on page 53 |
| 0822 | Worksheet #39 on page 54 |
| 0922 | Worksheet #40 on page 55 |
| 1722 | Worksheet #41 on page 56 |
| 1822 | Worksheet #42 on page 56 |
| 1922 | Worksheet #43 on page 57 |



1. Input one of the addresses from the table above. Make sure that the address you input is the correct one for the worksheet you are programming from.
2. Input the programming code from the worksheet you are programming from.
3. Cash Amount Tended key on the standard keyboard.
4. Loop to the next address.

Worksheet #35

Use this worksheet to program Address 0322.

| Item | Description | Choice | Receipt type | |
|------|--|--|--------------|----|
| 10 | | | 0 | 10 |
| 9 | | | 0 | 9 |
| 8 | Status of consecutive number following daily fixed totalizer report reset | Do not reset = 0 Reset to initial = 1 | | 8 |
| 7 | | | 0 | 7 |
| 6 | | | | 6 |
| 5 | | | | 5 |
| 4 | Initial value for consecutive number, minus one To set an initial value of 100, for example, program "000099" | | | 4 |
| 3 | To set an initial value of 1, program "000000" | | | 3 |
| 2 | | | | 2 |
| 1 | | | | 1 |

Worksheet #36

Use this worksheet to program Address 0422.

| Item | Description | Choice | Program Code | |
|------|--|--|--------------|----|
| 10 | a Singapore rounding | Do not use = 0 Use = 1 | | 10 |
| | b Taxable Status | Taxable Status 3 = 0 Food Stamp Status = 2 | | |
| | c Canadian tax system ^{*1} | Do not use = 0 Use = 4 | | |
| 9 | | | 0 | 9 |
| 8 | Receipt issuance control | Control by Receipt Switch = 0 Always issue ^{*2} = 1 Never issue ^{*2} = 2 | | 8 |
| 7 | Drawer open operation when validation compulsory is programmed for each finalize key | Open after finalization = 0 Open after validation printing = 4 | | 7 |
| 6 | Food stamp taxable status | All taxable = 0 Illinois Rule = 1 New Jersey Rule = 2 | | 6 |
| 5 | | | 0 | 5 |
| 4 | Money-in-drawer limit for alarm Programming "00" here clears the limitation. To set a limit of \$700.00, for example, program "74" | Maximum value of leftmost digit (0 to 9) | | 4 |
| 3 | | Number of zeros (0 to 9) | | 3 |
| 2 | | | 0 | 2 |
| 1 | | | 0 | 1 |

*1. Other areas must program "0" here.

*2. These settings cause the receipt to be printed or not printed, regardless of the receipt on/off switch setting.

Worksheet #37

Use this worksheet to program Address 0522.

| Item | Description | Choice | Program Code |
|------|--|--|--------------|
| 10 | a | Printing of subtotal for tender operation Print = 0 Do not print = 1 | 10 |
| | b | Time format for display and receipt/journal printing 24-hour format = 0 12-hour format = 2 | |
| | c | One linefeed after finalization Do not feed = 0 Feed = 4 | |
| 9 | Printing of taxable amount on receipts and journal Print = 0 Do not print = 1 | 9 | |
| 8 | a | Printing of item line on journal Print = 0 Skip = 1 | 8 |
| | b | Printing of zero total lines on clerk/cashier accountability READ/RESET reports Skip = 0 Print = 2 | |
| | c | Printing of detail items making up set menu items on receipt and journal Do not print = 0 Print = 4 | |
| 7 | a | Printing of zero total lines on department and transaction READ/RESET reports Skip = 0 Print = 1 | 7 |
| | b | Printing of zero total lines on PLU READ/RESET reports Skip = 0 Print = 2 | |
| | c | Printing of zero total lines on hourly sales READ/RESET reports Skip = 0 Print = 4 | |
| 6 | a | Printing of zero total lines on group READ/RESET reports Skip = 0 Print = 1 | 6 |
| | b | Printing of zero total lines on monthly sales READ/RESET reports Skip = 0 Print = 2 | |
| | c | Printing of PLU numbers on PLU reports Skip = 0 Print = 4 | |
| 5 | a | Printing of sales ratios on READ/RESET reports Skip = 0 Print = 1 | 5 |
| | b | Number of daily general control RESET reports One copy = 0 Two copies = 2 | |
| | c | Recalculation of taxable amounts/tax totals before issuance of general control report (Add-in tax system only) Do not recalculate = 0 Recalculate = 4 | |
| 4 | a | Printing of the number of sales items on receipts and journal Skip = 0 Print = 1 | 4 |
| | b | Printing of taxable status symbol Print = 0 Do not print = 2 | |
| | c | Printing of time and date on journal in REG 1 and REG 2 Modes Print = 0 Skip = 4 | |
| 3 | a | Separator for monetary amounts Comma = 0 Point = 1 | 3 |
| | b | Decimal point for values amounts Point = 0 Comma = 2 | |
| 2 | Printing of unit prices on the post-finalization receipts when multiplication operation is performed Print = 0 Do not print = 4 | 2 | |
| 1 | a | Printing of "CLEAR" on journal when <input type="button" value="C"/> key is pressed Do not print = 0 Print = 1 | 1 |
| | b | Printing of number of customers for post-finalization receipt Print = 0 Do not print = 2 | |
| | c | Printing of PLU numbers for REG 1, REG 2, and RF mode operations Do not print = 0 Print = 4 | |

Worksheet #38

Use this worksheet to program Address 0622.

| Item | Description | Choice | Program Code |
|------|---|--|--------------|
| 10 | a | Tax rate input before finalization Not compulsory = 0 Compulsory = 2 | 10 |
| | b | Money declaration in X1, Z1, and X2/Z2 Modes before allowing daily READ/RESET operation Not compulsory = 0 Compulsory = 4 | |
| 9 | a | <input type="button" value="SUB TOTAL"/> key operation before finalization Not compulsory = 0 Compulsory = 1 | 9 |
| | b | Finalization operation when subtotal amount is zero or less Allow = 0 Prohibit = 2 | |
| | c | Multiple refund operations after entering the RF Mode Enable = 0 Disable = 4 | |
| 8 | a | Department and PLU totalizing Gross totalizing = 0 Net totalizing = 1 | 8 |
| | b | Tax amounts in net amounts Include = 0 Exclude = 2 | |
| 7 | a | Maintenance of last menu shift until the next shift operation (TK-1300 only) Do not maintain = 0 Maintain = 1 | 7 |
| | b | Treatment of department key numeric inputs Treat as amount override = 0 Treat as quantity extensions = 4 | |
| 6 | a | Input confirmation tone On = 0 Off = 2 | 6 |
| | b | Post-finalization issuance when normal receipt is issued Prohibit = 0 Allow = 4 | |
| 5 | a | Program 1 programming in the Manager Control Mode (X1 Mode) Prohibit = 0 Allow = 1 | 5 |
| | b | Slit drawer connection (not available with CE-4200) Prohibit = 0 Allow = 4 | |
| 4 | RF Mode status RF Mode = 0 REG MINUS Mode = 1 | 4 | |
| 3 | a | Treatment of Flat-Long PLU key numeric inputs Treat as amount override = 0 Treat as quantity extensions = 2 | 3 |
| | b | Limit on the number of <input type="button" value="+"/> , <input type="button" value="--"/> , <input type="button" value="%-"/> , and <input type="button" value="%+"/> key operations per transaction No limit = 0 One operation only = 4 | |
| 2 | a | Rounding of discount (%-) and premium (%+) operation results*1 Do not round = 0 Round = 1 | 2 |
| | b | Display status of separator Display = 0 Do not display = 2 | |
| 1 | a | Numeric input when drawer is open (when compulsory drawer being used). Allow = 0 Prohibit = 1 | 1 |
| | b | PLUs used for Long PLU conversions Use sequential PLU numbers = 0 Use Random PLU codes = 4 | |

*1. The following shows the rounding applied for discount and premium calculation results.

| Final digit | Rounded to |
|-------------|------------|
| 0 to 2 | 0 |
| 3 to 7 | 5 |
| 8 to 9 | 10 |

Worksheet #39

Use this worksheet to program Address 0822.

| Item | Description | Choice | Program Code |
|------|---|---|--------------|
| 10 | a | Printing of gross sales total on reports Print = 0 Do not print = 1 | 10 |
| | b | Printing of net sales total on reports Print = 0 Do not print = 2 | |
| | c | Printing of cash-in-drawer total on reports Print = 0 Do not print = 4 | |
| 9 | Printing of charge-in-drawer total on reports | Print = 5 Do not print = 7 | 9 |
| 8 | a | Printing of checks-in-drawer total on reports Print = 0 Do not print = 1 | 8 |
| | b | Always 2 | |
| | c | Printing of credits-in-drawer total on reports Print = 0 Do not print = 4 | |
| 7 | a | Always 1 | 7 |
| | b | Printing of food stamps-in-drawer total on reports Print = 0 Do not print = 2 | |
| | c | Printing of food stamp cash change total on reports Print = 0 Do not print = 4 | |
| 6 | a | Printing of EBT-in-drawer total on reports Print = 0 Do not print = 1 | 6 |
| | b | Printing of EBT cash change total on reports Print = 0 Do not print = 2 | |
| | c | Printing of RF Mode total on reports Print = 0 Do not print = 4 | |
| 5 | a | Printing of the net number of customers on reports Print = 0 Do not print = 1 | 5 |
| | b | Printing of the average sales unit price per customer on reports Print = 0 Do not print = 2 | |
| 4 | a | Printing of check cashing handling fee total on reports Print = 0 Do not print = 1 | 4 |
| | b | Printing of temporary finalize service charge total on reports Print = 0 Do not print = 2 | |
| | c | Printing of New Balance total on reports Print = 0 Do not print = 4 | |
| 3 | Printing of foreign currency cash-in-drawer and check-in-drawer totals on reports | Print = 0 Do not print = 4 | 3 |
| 2 | a | Printing of <input type="text" value="-"/> key and <input type="text" value="%-"/> key operation net total on clerk accountability reports Print = 0 Do not print = 1 | 2 |
| | b | Printing of <input type="text" value="RF"/> key, <input type="text" value="VOID"/> key and RF mode operation net total on clerk accountability reports Print = 0 Do not print = 2 | |
| | c | Printing of total number of <input type="text" value="C"/> key operations on reports Print = 0 Do not print = 4 | |
| 1 | Printing of rounding total on reports | Print = 0 Do not print = 2 | 1 |

Worksheet #40

Use this worksheet to program Address 0922.

| Item | Description | Choice | Program Code | |
|------|-------------|--|--------------|----|
| 10 | a | Printing of Taxable Amount 1 total on reports Print = 0 Do not print = 1 | | 10 |
| | b | Printing of Tax 1 total on reports Print = 0 Do not print = 2 | | |
| | c | Printing of Tax Exempt 1 total on reports Print = 0 Do not print = 4 | | |
| 9 | a | Printing of Taxable Amount 2 total on reports Print = 0 Do not print = 1 | | 9 |
| | b | Printing of Tax 2 total on reports Print = 0 Do not print = 2 | | |
| | c | Printing of Tax Exempt 2 total on reports Print = 0 Do not print = 4 | | |
| 8 | a | Printing of Taxable Amount 3 total on reports Print = 0 Do not print = 1 | | 8 |
| | b | Printing of Tax 3 total on reports Print = 0 Do not print = 2 | | |
| | c | Printing of Tax Exempt 3 total on reports Print = 0 Do not print = 4 | | |
| 7 | a | Printing of Taxable Amount 4 total on reports Print = 0 Do not print = 1 | | 7 |
| | b | Printing of Tax 4 total on reports Print = 0 Do not print = 2 | | |
| | c | Printing of Tax Exempt 4 total on reports Print = 0 Do not print = 4 | | |
| 6 | a | Printing of Non-Resetable Grand Sales Total 1 total on the periodic fixed totalizer reports Print = 0 Do not print = 1 | | 6 |
| | b | Printing of Non-Resetable Grand Sales Total 2 total on the periodic fixed totalizer reports Print = 0 Do not print = 2 | | |
| | c | Printing of Non-Resetable Grand Sales Total 3 total on the periodic fixed totalizer reports Print = 0 Do not print = 4 | | |
| 5 | a | Printing of Non-Resetable Grand Sales Total 1 total on the fixed totalizer report Print = 0 Do not print = 1 | | 5 |
| | b | Printing of Non-Resetable Grand Sales Total 2 total on the fixed totalizer report Print = 0 Do not print = 2 | | |
| | c | Printing of Non-Resetable Grand Sales Total 3 total on the fixed totalizer report Print = 0 Do not print = 4 | | |
| 4 | | | 0 | 4 |
| 3 | | | 0 | 3 |
| 2 | | | 0 | 2 |
| 1 | a | Printing of average sales unit price (customers/item) on monthly reports Print = 0 Do not print = 1 | | 1 |
| | b | Printing of gas department discount amount and number of customers on the department report Print = 0 Do not print = 2 | | |

Worksheet #41

Use this worksheet to program Address 1722.

| Item | Description | Choice | Program Code | |
|------|--|---|--------------|----|
| 10 | | | 0 | 10 |
| 9 | | | 0 | 9 |
| 8 | | | 0 | 8 |
| 7 | | | 0 | 7 |
| 6 | | | 0 | 6 |
| 5 | Adjustment of decimal point for registered unit prices | Do not adjust = 0 Move two places to the right = 1 | | 5 |
| 4 | a Printing of dates on receipts | Print = 0 Do not print = 1 | | 4 |
| | b Printing of dates on the journal | Print = 0 Do not print = 2 | | |
| | c Printing of consecutive number on receipts and journal | Print = 0 Do not print = 4 | | |
| 3 | a Printing of times on receipts | Print = 0 Do not print = 1 | | 3 |
| | b Printing of times on the journal | Print = 0 Do not print = 2 | | |
| 2 | Printing of receipt header message | Print = 0 Do not print = 4 | | |
| 1 | a Printing of receipt commercial message | Do not print = 0 Print = 2 | | 1 |
| | b Printing of receipt bottom message | Do not print = 0 Print = 4 | | |

Worksheet #42

Use this worksheet to program Address 1822.

| Item | Description | Choice | Program Code | |
|------|--|---|--------------|----|
| 10 | | | 0 | 10 |
| 9 | Tax calculation and printing for temporary finalization using the <input type="checkbox"/> key | Do not calculate = 0 Calculate and print = 1 Calculate, print, and add to totalizer = 2 | | 9 |
| 8 | | | 0 | 8 |
| 7 | | | 0 | 7 |
| 6 | | | 0 | 6 |
| 5 | | | 0 | 5 |
| 4 | | | 0 | 4 |
| 3 | | | 0 | 3 |
| 2 | | | 0 | 2 |
| 1 | | | 0 | 1 |

Worksheet #43

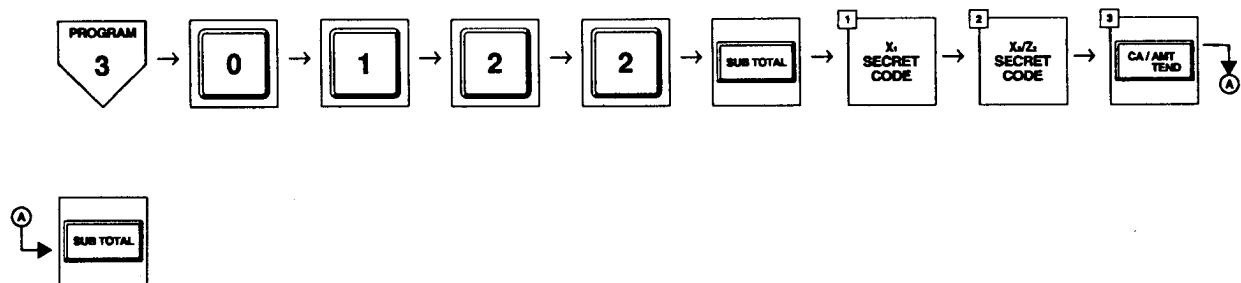
Use this worksheet to program Address 1922.

| Item | Description | Choice | Program Code | |
|------|-------------------------|-------------------------------|--------------|----|
| 10 | | | 0 | 10 |
| 9 | Ticket receipt issuance | Do not issue = 0 Issue = 1 | | 9 |
| 8 | | | 0 | 8 |
| 7 | | | 0 | 7 |
| 6 | | | 0 | 6 |
| 5 | | | 0 | 5 |
| 4 | | | 0 | 4 |
| 3 | | | 0 | 3 |
| 2 | | | 0 | 2 |
| 1 | | | 0 | 1 |

5-3 X1 Mode and X2/Z2 Mode Secret Codes

Programming secret codes for the X1 and X2/Z2 modes restricts access to operations in these modes. Once you program a secret code for the X2/Z2 mode, no operation is allowed after the MODE switch is set to X2/Z2 until the secret code is input by the operator. For the X1 mode, READ operations (DAILY SALES READ) can be performed without inputting the secret code, but the secret code you program here must be input by the operator before MANAGER CONTROL operations are allowed.

Procedure



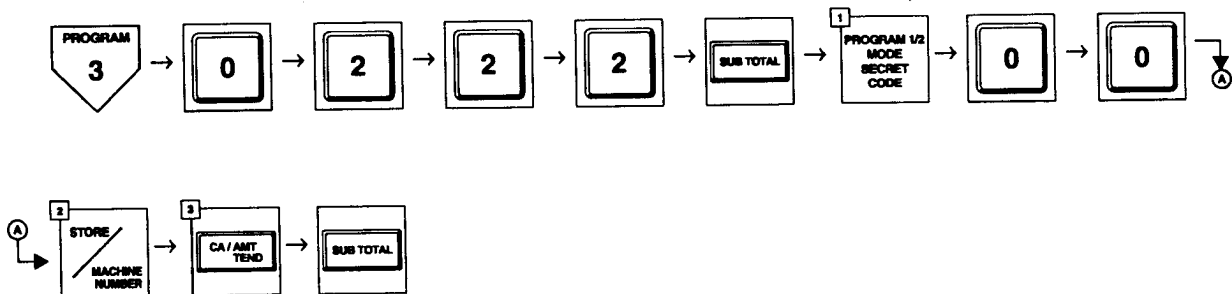
1. X1 Mode secret code. Input all four digits, within the range of 0001 to 9999. Inputting "0000" cancels the currently set secret code (removing restrictions from X1 Mode operations). You cannot use the following numbers as secret codes: 1111, 2222, 3333, 4444, 5555.
2. X2/Z2 Mode secret code. Input all four digits, within the range of 0001 to 9999. Inputting "0000" cancels the currently set secret code (removing restrictions from X2/Z2 Mode operations). You cannot use the following numbers as secret codes: 1111, 2222, 3333, 4444, 5555.
3. Cash Amount Tendered key on the standard keyboard.

5-4 PROGRAM 1 and 2 Mode Secret Code and Store/Machine Number

Programming secret codes for the PROGRAM 1 and 2 modes restricts access to operations in these modes. Once you program a secret code for the PROGRAM 1 and 2 mode, no operation is allowed after the PROGRAM MODE is set to PROGRAM 1 and 2 until the secret code is input by the operator.

You can program a 4-digit number to identify a specific store or ECR. Once you assign a number, it is printed on receipts, journal and reports.

Procedure



1. PROGRAM 1/2 Mode secret code. Input all four digits, within the range of 0001 to 9999. Inputting "0000" cancels the currently set secret code (removing restrictions from PROGRAM 1/2 Mode operations). You cannot use the following numbers as secret codes: 1111, 2222, 3333, 4444, and 5555.
2. Store/Machine number. Input all four digits, within the range of 0001 to 9999. Inputting "0000" clears the specification and nothing is printed as the Store/Machine number.
3. Cash Amount Tendered key on standard keyboard.

5-5 Tax Programming

There are two types of tax programming:

- United States and Canada tax programming
- V.A.T. programming

You can use one or the other type of tax calculation.

United States and Canada Tax Programming Procedures

You can program the cash register to automatically perform tax calculations according to a tax table, a combination of tax rate and tax table, or tax rate only. Before beginning actual programming, you must have the following information on hand.

- Whether the tax calculation should be a tax table without tax rate, tax table with tax rate, add-on tax rate, add-in tax rate, or Canadian tax-on-tax rate.
- Which taxable status the tax should be applied to.
- The type of rounding to be used.

- In the case of tax table programming, you need the following information:
Sum of a single cyclic pattern
Number of values in each cyclic pattern
Sum of values in the non-cyclic pattern
Actual non-cyclic values
One set of cyclic values
- With Canadian tax-on-tax rate taxation, you should know the starting point of the taxation.
The following explains each of the points in detail.

Type of Tax Calculation

The type of tax calculation you are programming determines the procedure you should use. The following list tells you what page of this manual has the programming procedure you need.

- Tax table without tax rate — page 64
- Tax table with tax rate — page 65
- Add-on tax rate — page 65
- Canadian tax-on-tax rate — page 66

Taxable Status

When you program a tax, you must assign it a memory number, which determines the taxable status to which the tax is applied. Then when you register an item, taxes are calculated using the tax data, in accordance with the taxable status of the item.

| Taxable Status | Address | Remarks |
|----------------|---------|-------------|
| Taxable I | 125 | |
| Taxable II | 225 | |
| Taxable III | 325 | |
| Taxable IV | 425 | Canada only |

Rounding

The following table shows the types of rounding available, along with the program code you should input to specify the one you want.

Rounding Specification

| Rounding | Program Code |
|---------------------------------|--------------|
| Round off to two decimal places | 50 |
| Round up to two decimal places | 90 |
| Cut off to two decimal places | 00 |

Tax Calculation Type

You can specify either add-on or add-in tax calculation. The following table shows the program codes that are used for this specification.

Tax System Specification

| Tax System | Program Code |
|---|------------------|
| Tax table without tax rate | 01 |
| Tax table with tax rate and add-on rate | 02 |
| Add-in tax rate | 03 |
| Canadian tax-on-tax rate | 04 ^{*1} |

*1. You cannot use this tax system with tax address 125.

Tax Table Program Data

The following illustrates how to find the data you need to program the cash register.

| TAX (6%) | PRICE RANGE | | Max. break points | | Difference | Pattern |
|----------|------------------|------------------|-------------------|-------|------------|-----------------|
| | Min. break point | Max. break point | Upper | Lower | | |
| \$.00 | \$.01 | \$.14 | 14 | 0 | 14 | Non-cyclic data |
| .01 | .15 | .44 | 44 | 14 | 30 | Cyclic data |
| .02 | .45 | .74 | 74 | 44 | 30 | |
| .03 | .75 | 1.14 | 114 | 74 | 40 | |
| .04 | 1.15 | 1.44 | 144 | 114 | 30 | Cyclic data |
| .05 | 1.45 | 1.74 | 174 | 144 | 30 | |
| .06 | 1.75 | 2.14 | 214 | 174 | 40 | |
| .07 | 2.15 | 2.44 | 244 | 214 | 30 | |

- Sum of a single cyclic pattern: $30 + 30 + 40 = 100$
- Number of values in each cyclic pattern: 3
- Sum of values in the non-cyclic pattern: 14
- Non-cyclic values and one set of cyclic values: 14, 30, 30, 40

Canadian Tax-On-Tax Starting Point

Use the following formula to calculate the program code required to specify the Canadian tax-on-tax starting point.

$$(\text{Starting Point} \times 100) - 1 = \text{Program Code}$$

Example:

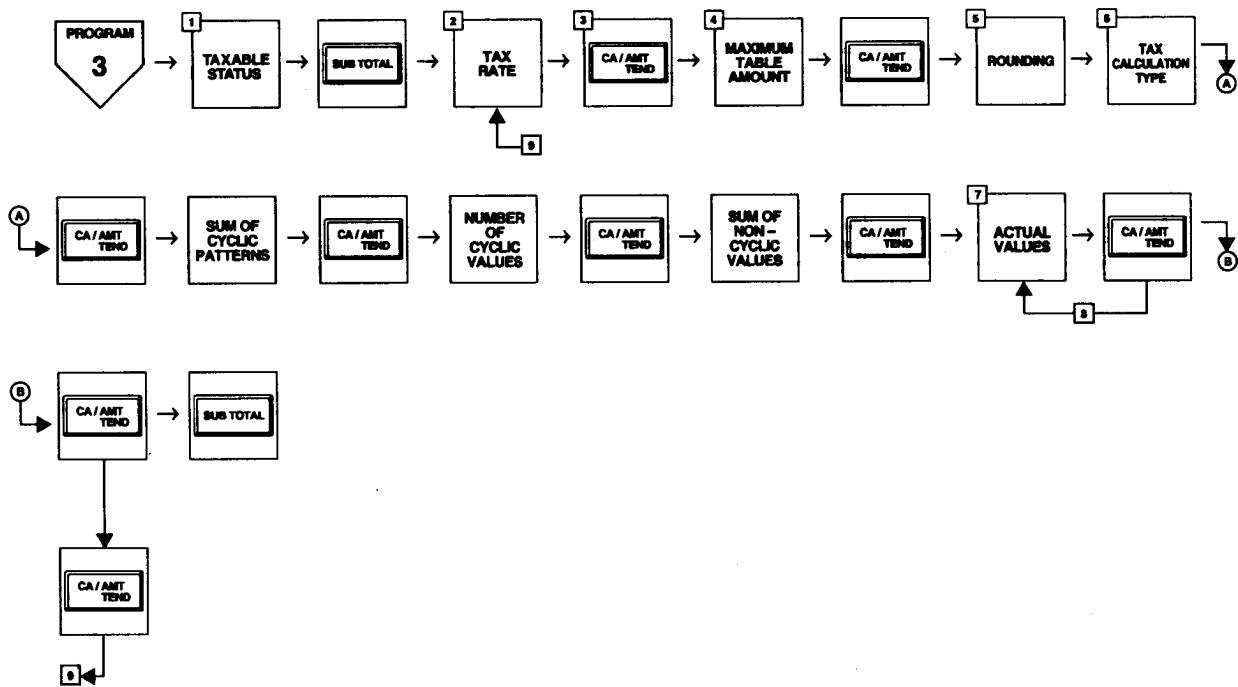
To specify a starting point of \$.50:

$$(.50 \times 100) = 50 - 1 = 49$$

49 is the program code to specify a starting point of 50

Tax Table Programming With and Without a Tax Rate

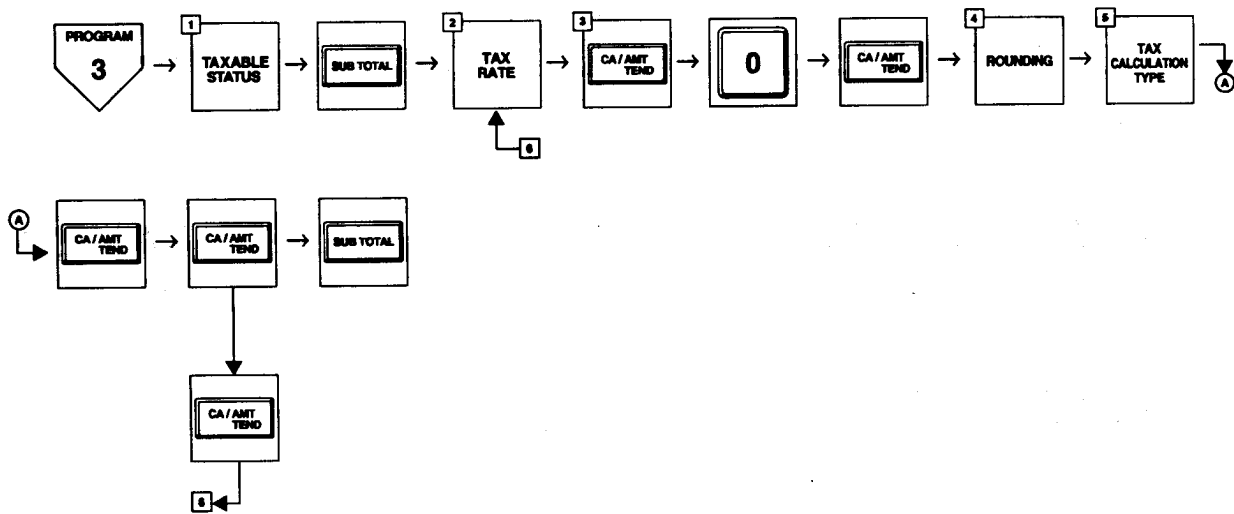
Procedure



1. 125, 225, 325, or 425 depending on the taxable status you want to assign.
2. 6 digits: 2-digit integer and a 4-place decimal value. Input zero here if you want a tax table with a tax rate.
3. Cash Amount Tendered key on standard keyboard.
4. Input zero here for no limit.
5. Input rounding specification using a 2-digit code from the table on page 59. Input 01 if you are programming a tax table without tax rate.
6. Input 02 for tax table with tax rate, or 01 for tax table without tax rate.
7. Input all non-cyclical values and one set of cyclical values. You must input these values in blocks of 4 digits each, pressing the Cash Amount Tendered key after each 4-digit block. If your last block has only 2 digits (such as 58), add 2 zeros to make it a 4-digit block (such as 5800).
8. Loop as many times as necessary to input all of the values.
9. Press the Cash Amount Tendered key again to loop to the next memory number. If you were inputting for memory number 125, for example, pressing the Cash Amount Tendered key here loops back to continue with input for memory number 225.

Add-On Tax Rate and Add-In Tax Rate Programming

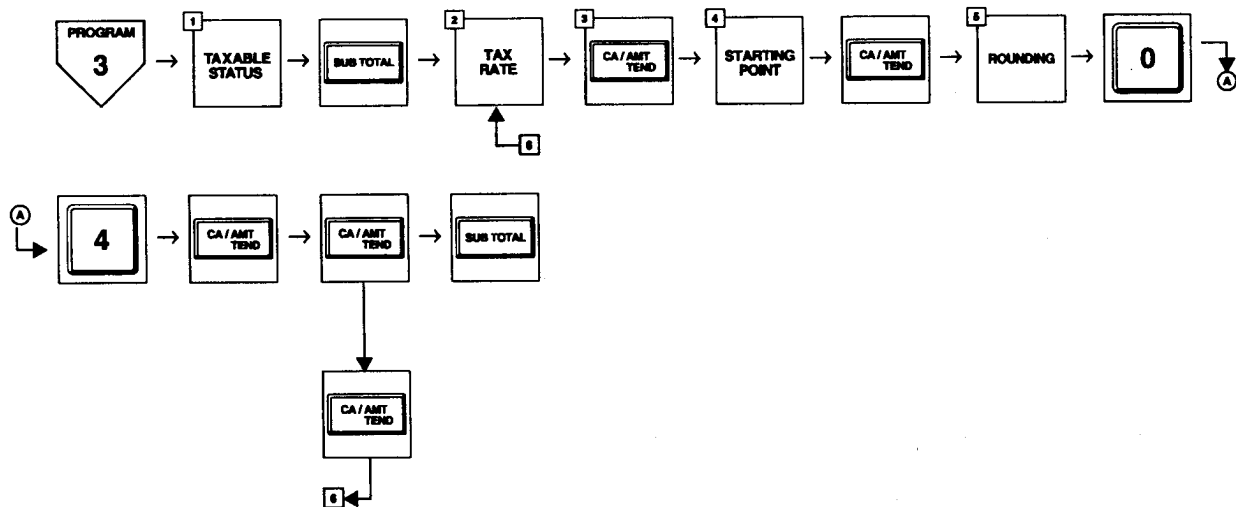
Procedure



1. 125, 225, 325, or 425 depending on the taxable status you want to assign.
2. 6 digits: 2-digit integer and a 4-place decimal value.
3. Cash Amount Tendered key on standard keyboard.
4. Input rounding specification using a 2-digit code from the table on page 59.
5. Input 02 for add-on tax rate, or 03 for add-in tax rate.
6. Press the #1 key again to loop to the next memory number. If you were inputting for memory number 125, for example, pressing the Cash Amount Tendered key here loops back to continue with input for memory number 225.

Canadian Tax-On-Tax Programming

Procedure



1. 225, 325, or 425 depending on the taxable status you want to assign.
2. 6 digits: 2-digit integer and a 4-place decimal value.
3. Cash Amount Tendered key on standard keyboard.
4. See page 60 for details on how to calculate the starting point specification. If you do not want to use a starting point, input zero here.
5. Input rounding specification using a 2-digit code from the table on page 59.
6. Press the Cash Amount Tendered key again to loop to the next memory number. If you were inputting for memory number 225, for example, pressing the Cash Amount Tendered key here loops back to continue with input for memory number 325.

United States and Canada Tax Programming Examples

The following are illustrative examples of actual programming procedures.

Tax Table Without a Tax Rate

| TAX (6%) | PRICE RANGE | | Max. break points | | Differ- ence | Pattern |
|-------------|------------------|------------------|-------------------|-------|-----------------|-----------------|
| | Min. break point | Max. break point | Upper | Lower | | |
| \$.00 | \$.01 | \$.10 | 10 | 0 | 10 | Non-cyclic data |
| .01 | .11 | .24 | 24 | 10 | 14 | Cyclic data |
| .02 | .25 | .41 | 41 | 24 | 17 | |
| .03 | .42 | .58 | 58 | 41 | 17 | Cyclic data |
| .04 | .59 | .74 | 74 | 58 | 16 | |
| .05 | .75 | .91 | 91 | 74 | 17 | Cyclic data |
| .06 | .92 | 1.08 | 108 | 91 | 17 | |
| .07 | 1.09 | 1.24 | 124 | 108 | 16 | |

- Sum of a single cyclic pattern: $17 + 17 + 16 = 50$
- Number of values in each cyclic pattern: 3
- Sum of values in the non-cyclic pattern: $10 + 14 = 24$
- Non-cyclic values and one set of cyclic values: 10, 14, 17, 17, 16
- Address: 125 (Taxable Status 1)
- Tax system: Taxable without rate tax

Procedure

(PROGRAM 3 Mode) 125 ^① 0 ^② 0 01 ^③ 50 3 24 1014
 1717 1600 ^④

1. Address
2. Zero indicates no tax rate.
3. Rounding is not required because a rate is not being used.
4. Two zeros added to fill out 4-digit block.

Tax Table With a Tax Rate

| TAX (6%) | PRICE RANGE | | Max. break points | | Difference | Pattern |
|----------|------------------|------------------|-------------------|-------|------------|-----------------|
| | Min. break point | Max. break point | Upper | Lower | | |
| \$.00 | \$.01 | \$.07 | 7 | 0 | 7 | Non-cyclic data |
| .01 | .08 | .21 | 21 | 7 | 14 | Cyclic data |
| .02 | .22 | .35 | 35 | 21 | 14 | |
| .03 | .36 | .49 | 49 | 35 | 14 | |
| .04 | .50 | .64 | 64 | 49 | 15 | |
| .05 | .65 | .78 | 78 | 64 | 14 | |
| .06 | .79 | .92 | 92 | 78 | 14 | |
| .07 | .93 | 1.07 | 107 | 92 | 15 | Cyclic data |
| .08 | 1.08 | 1.21 | 121 | 107 | 14 | |
| .09 | 1.22 | 1.35 | 135 | 121 | 14 | |
| .10 | 1.36 | 1.49 | 149 | 135 | 14 | |
| .11 | 1.50 | 1.64 | 164 | 149 | 15 | |
| .12 | 1.65 | 1.78 | 178 | 164 | 14 | |
| .13 | 1.79 | 1.92 | 192 | 178 | 14 | Cyclic data |
| .14 | 1.93 | 2.07 | 207 | 192 | 15 | |

| | | |
|------|-------|-------|
| 1.40 | 19.93 | 20.07 |
|------|-------|-------|

On all sales above \$20.07, compute the tax at a rate of 7%.

- Sum of a single cyclic pattern: $14 + 14 + 14 + 15 + 14 + 14 + 15 = 100$
- Number of values in each cyclic pattern: 7
- Number of values in non-cyclic pattern: 7
- Non-cyclic values and one set of cyclic values: 7, 14, 14, 14, 15, 14, 14, 15
- Maximum taxable amount: \$20.07
- Address: 225 (Taxable Status 2)
- Tax system: Tax table with add-on rate tax
- Tax rate: 7.0000%
- Rounding system: Cut off to two decimal places

Procedure

(PROGRAM 3 Mode) 225 ① 070000 ② 2007 ③ 0002 ④ 100 7 7
 0714 1414 1514 1415

1. Address
2. Tax rate of 7% applied to amounts that exceed the maximum tax table amount.
3. Maximum tax table amount.
4. Tax rate calculation results to be cut off to two decimal places.

Add-On Rate Tax

- Address: 125 (Taxable Status 1)
- Tax system: Add-on rate tax
- Tax rate: 8.25%
- Rounding system: Round off to two decimal places

Procedure

(PROGRAM 3 Mode) 125 ① 082500 ② 0 ③ 5002

1. Address
2. Tax rate.

Canadian Tax-On-Tax With Starting Point

- Address: 225 (Taxable Status 2)
- Tax system: Tax-on-tax rate
- Tax rate: 5%
- Rounding system: Round off to two decimal places
- Starting point: \$4.00
- Program code data for starting point: 399

Procedure

(PROGRAM 3 Mode) 225 ① 050000 ② 399 ③ 5004

1. Address
2. Tax rate.
3. Starting point specification.

Canadian Tax-On-Tax Without Starting Point

- Address: 325 (Taxable Status 3)
- Tax system: Tax-on-tax rate
- Tax rate: 7.35%
- Rounding system: Round off to two decimal places
- Starting point: None
- Program code data for starting point: 0

Procedure

(PROGRAM 3 Mode) 325 ① 073500 ② 0 ③ 5004

1. Address
2. Tax rate.
3. Zero indicates no starting point.

V.A.T. Programming

You can program the cash register to automatically perform V.A.T. calculations. Before beginning actual programming, you must have the following information on hand.

- What kind of rounding should be used.
- What taxable status the tax should apply to.
- Whether the tax should be add-on or add-in.

The following explains each of the points in detail.

Taxable Status

When you program a tax, you must assign it a memory number, which determines the taxable status to which the tax is applied. Then when you register an item, taxes are calculated using the tax data, in accordance with the taxable status of the item.

| Taxable Status | Address |
|----------------|---------|
| Taxable I | 125 |
| Taxable II | 225 |
| Taxable III | 325 |
| Taxable IV | 425 |

Tax Calculation Type

You can specify either add-on or add-in tax calculation. The following table shows the program codes that are used for this specification.

Tax System Specification

| Tax System | Program Code |
|---|--------------|
| Tax table with tax rate and add-on rate | 02 |
| Add-in tax rate | 03 |

Note that these two specifications apply for "normal rounding" only (see following section). When using "special rounding," use the program codes shown in the next sections under "Special Rounding Program Codes."

Rounding

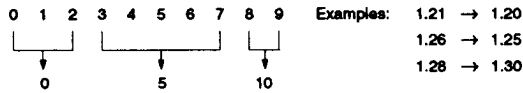
There are two types of rounding: "normal rounding" and "special rounding." The following table shows the types of normal rounding available, along with the program code you should input to specify the one you want.

Rounding Specification

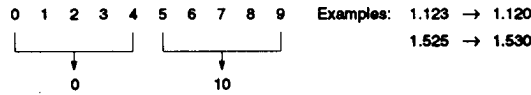
| Rounding | Program Code |
|---------------------------------|--------------|
| Round off to two decimal places | 50 |
| Round up to two decimal places | 90 |
| Cut off to two decimal places | 00 |

Four other "special rounding" methods are also available to meet the needs of various tax systems around the world. Be sure you use the one that is applicable in your area.

Special Rounding 1



Special Rounding 2



Special Rounding 3 (Denmark Rounding)

- Finalization without an amount tendered

The following shows the rounding applied to subtotals when a finalize operation is performed without registration of an amount tendered.

| Last (rightmost) 2 digits of subtotal | | Rounding result |
|---------------------------------------|---|-----------------|
| 00 to 12 | → | 00 |
| 13 to 37 | → | 25 |
| 38 to 62 | → | 50 |
| 63 to 87 | → | 75 |
| 88 to 99 | → | 100 |

- Finalization with an amount tendered

The following shows the rounding applied to the change amount due when a finalize operation is performed with registration of an amount tendered.

| Last (rightmost) 2 digits of change amount due | | Rounding result |
|--|---|-----------------|
| 00 to 12 | → | 00 |
| 13 to 37 | → | 25 |
| 38 to 62 | → | 50 |
| 63 to 87 | → | 75 |
| 88 to 99 | → | 100 |

- Partial tender

Neither the amount tendered nor the change amount due is rounded when a partial tender is registered.

Note

When Denmark Rounding is used, the Cash Amount Tendered Key, can be programmed to restrict amount tendered registrations to those in which the last (rightmost) two digits are 00, 25, 50, or 75.

Special Rounding 4

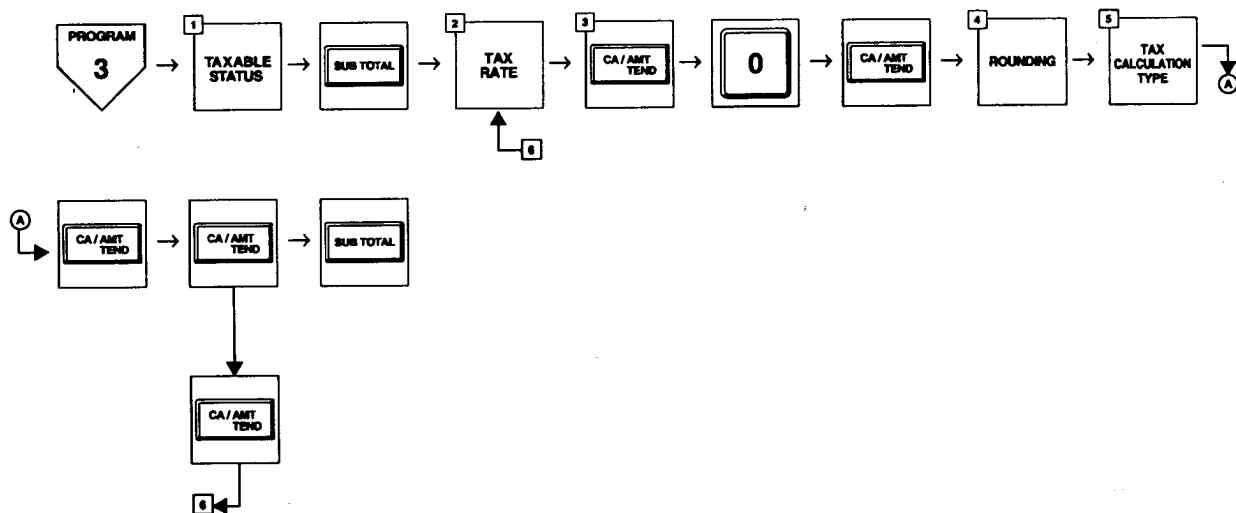
This type of rounding is used with the Singapore Tax System only.

Special Rounding Program Codes

The following table shows the program codes for the special rounding systems. Note that both the tax calculation type and the special rounding method are specified using only two digits. When using special rounding only, you should input "00" for the tax calculation type (page 67).

| Special Rounding System | Address | Code | Meaning |
|-------------------------|---------|------|-------------------------------------|
| 1 | 125 | 10 | No tax system, Special Rounding 1 |
| | | 12 | Add-on rate tax, Special Rounding 1 |
| | | 13 | Add-in rate tax, Special Rounding 1 |
| 2 | 125 | 20 | No tax system, Special Rounding 2 |
| | | 22 | Add-on rate tax, Special Rounding 2 |
| | | 23 | Add-in rate tax, Special Rounding 2 |
| 3 | 125 | 30 | No tax system, Special Rounding 3 |
| | | 32 | Add-on rate tax, Special Rounding 3 |
| | | 33 | Add-in rate tax, Special Rounding 3 |
| 4 | All | 42 | Add-on rate tax, Special Rounding 4 |

Procedure



1. 125, 225, 325, or 425 depending on the taxable status you want to assign.
2. 6 digits: 2-digit integer and a 4-place decimal value.
3. Cash Amount Tendered key on standard keyboard.
4. Input rounding specification using a 2-digit code from the above table.
5. Input 02 for add-on tax rate, or 03 for add-in tax rate.
6. Press the #1 again to loop to the next memory number. If you were inputting for memory number 125, for example, pressing the Cash Amount Tendered key here loops back to continue with input for memory number 225.

V.A.T. Programming Examples

The following are illustrative examples of actual programming procedures.

Add-On Rate Tax

- Address: 125 (Taxable Status 1)
- Tax system: Add-on rate tax
- Tax rate: 8.25%
- Rounding system: Round off to two decimal places

Procedure

(PROGRAM 3 Mode) 125 ① 082500 ② 0 5002

1. Address
2. Tax rate.

Add-In Rate Tax

- Address: 325 (Taxable Status 3)
- Tax system: Add-in (VAT)
- Tax rate: 6.75%
- Rounding system: Round off

Procedure

(PROGRAM 3 Mode) 325 ① 067500 ② 0 5003

1. Address
2. Tax rate.

Special Rounding

- Address: 125 (Taxable Status 1)
- Tax system: Add-in
- Tax rate: 5%
- Rounding system: Special Rounding 1, cut off

Procedure

(PROGRAM 3 Mode) 125 ① 050000 ② 0 0013

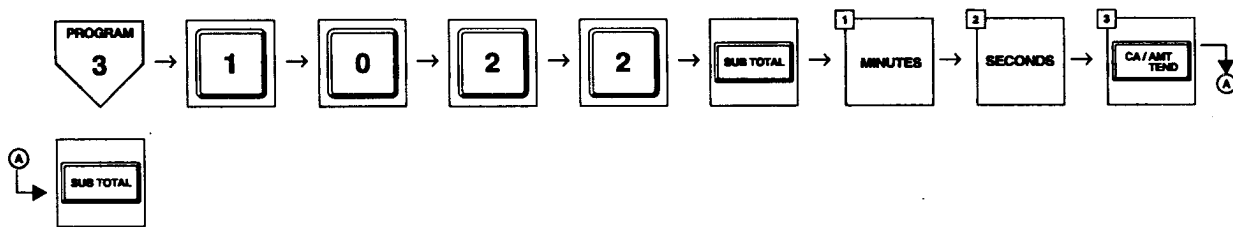
1. Address
2. Tax rate.

5-6 Drawer Open Alarm

When your cash register is equipped with a compulsory drawer, you can program an alarm to sound if the drawer is left open longer than a specific period. The drawer open alarm time can be preset within the range of 1 second to 99 minutes 59 seconds, with timing beginning whenever the drawer is opened. Programming the Drawer Open Alarm as "0000" disables the drawer open alarm.

Changing the position of the MODE switch from REG 1, REG 2, RF, X1, Z1, or X2/Z2 to OFF interrupts operation of the open drawer timer. Returning the MODE switch to any other position than OFF resumes operation of the timer from the point where it was stopped.

Procedure



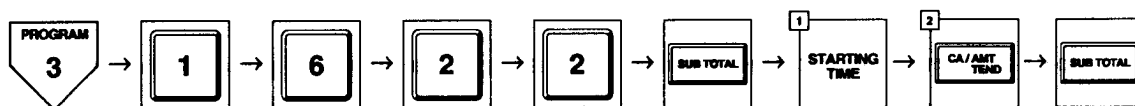
1. Input two digits in the range of 0 to 99 for the number of minutes.
2. Input two digits in the range of 0 to 59 for the number of seconds.
3. Cash Amount Tendered key on the standard keyboard.

5-7 Starting Time for Hourly Sales Report

Use this procedure to program the starting 1-hour period for printing of the Hourly Sales Report. Programming a period of 07:00 - 08:00 causes the Hourly Sales Report to start from the period 07:00 - 08:00 and end with the period 06:00 - 07:00.

Note that the program code has only two digits. If you input "07," the starting time is the period 07:00 - 08:00. Inputting "20" programs a starting period of 20:00 - 21:00.

Procedure



1. Input two digits in the range of 00 to 23 to specify a starting time.
2. Cash Amount Tendered key on the standard keyboard.

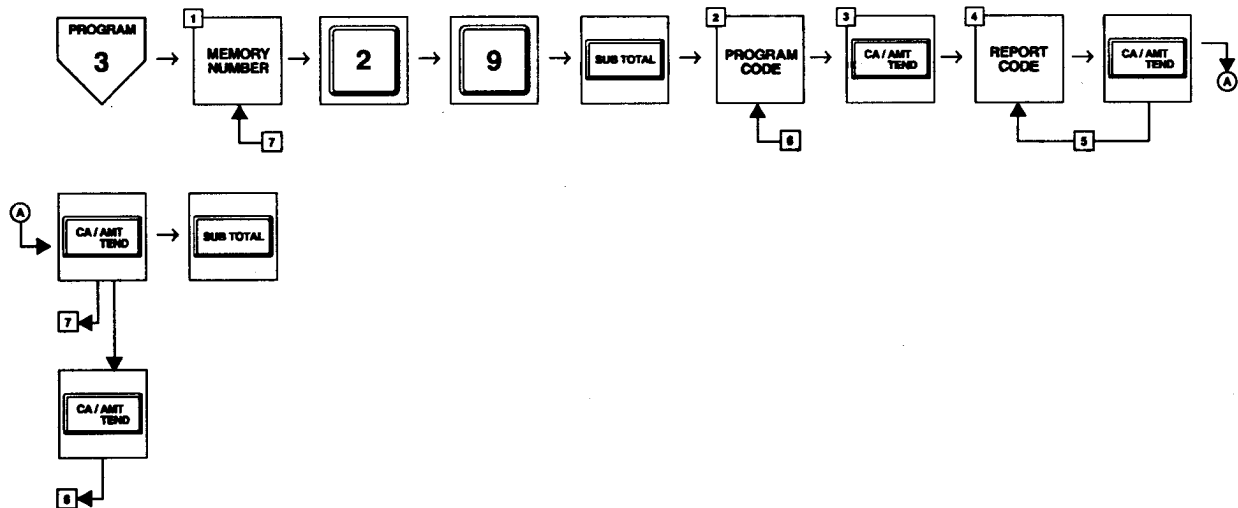
5-8 Report Groups for Batch READ/RESET Reports

Totalizer reports can be grouped under numbers, so that batch READ/RESET operations can be performed for an entire group by simply inputting the group number. To be able to perform this programming, you must use the memory allocation procedure (PROGRAM 5) to reserve a Report Group file (batch X/Z file). You can include up to 10 totalizer reports in a single group, and each group report can be programmed for issuance in a specific mode (X1, Z1, X2, or Z2). You can also specify issuance of a Periodic Sales READ Report (X2 mode) or a Periodic Sales RESET Report (Z2 mode).

Before beginning actual programming, you should have the following information on hand.

- Report group memory numbers that identify each group. These are 2-digit numbers you can find in Table #4 on page 73.
- Program codes that control the attributes of each group. These are 2-digit codes you create using Worksheet #44 on page 73.
- Totalizer type codes that identify each report type. These 2-digit codes are in a table that appears together with Table #4 on page 73.

Procedure



1. Input a 2-digit memory number (group number) in the range of 01 to 10, from Worksheet #45 on page 73.
2. Input a 2-digit program code from Worksheet #45 on page 73.
3. Cash Amount Tendered key on standard keyboard.
4. Input a 2-digit totalizer type report code from Table #4 on page 73, to identify a report you want to assign to this batch.
5. Input all the report codes you want to group under the memory number you input above, pressing the Cash Amount Tendered key after each one.
6. Press the Cash Amount Tendered key again to loop back and input a program code for the next sequential memory number.
7. Loop if you want to input the program code for a non-sequential memory number.

Worksheet #44*1

| Item | Description | Choices | Program Code |
|------|-------------------------|---|---------------------------|
| 2 | a | Operation in X1 (Daily Sales READ) Mode | Enable = 0 Disable = 1 |
| | b | Operation in Z1 (Daily Sales RESET) Mode | Enable = 0 Disable = 2 |
| | c | Operation in X2/Z2 (Periodic Sales READ/RESET) Mode | Enable = 0 Disable = 4 |
| 1 | Operation in X2/Z2 Mode | X2 (Period Sales READ Report) = 0 Z2 (Period Sales RESET Report) = 1 | 1 |

*1. Calculate program data for each to the batch report groups in Worksheet #45 .

Worksheet #45

| Report Group Memory No. | Program Code Worksheet #44 | Totalizer Report Code (from Table #4) | | | | | | | | | | | | | | | | | | |
|-------------------------|----------------------------|---------------------------------------|---|---|---|---|---|---|---|---|----|--|--|--|--|--|--|--|--|--|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | | | | | | | | |
| 0 | 1 | | | | | | | | | | | | | | | | | | | |
| 0 | 2 | | | | | | | | | | | | | | | | | | | |
| 0 | 3 | | | | | | | | | | | | | | | | | | | |
| 0 | 4 | | | | | | | | | | | | | | | | | | | |
| 0 | 5 | | | | | | | | | | | | | | | | | | | |
| 0 | 6 | | | | | | | | | | | | | | | | | | | |
| 0 | 7 | | | | | | | | | | | | | | | | | | | |
| 0 | 8 | | | | | | | | | | | | | | | | | | | |
| 0 | 9 | | | | | | | | | | | | | | | | | | | |
| 1 | 0 | | | | | | | | | | | | | | | | | | | |

Table #4

| Report Code | Totalizer Type |
|-------------|------------------------------|
| 11 | Fixed totalizer |
| 12 | Free function |
| 13 | Short PLU or Short PLU Group |
| 14 | Long PLU or Long PLU Group |
| 15 | Department |
| 16 | Group total |
| 17 | Clerk |
| 19 | Hourly sales |
| 20 | Monthly sales |

5-9 Messages and Descriptors

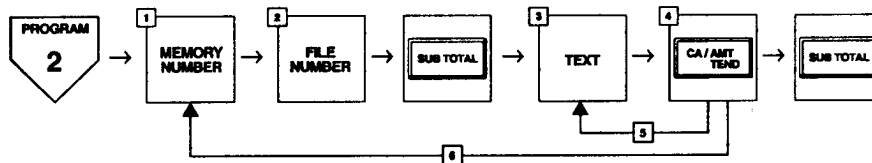
The following table shows the worksheets you should use to prepare for message and descriptor programming. When an asterisk is used in place of a value in the table, it means that the value depends on (and is equal to) the number of records reserved in the PROGRAM 5 memory allocation procedure.

| Memory No. | File No. | Item | Number of characters | Worksheet |
|------------|----------|---|----------------------|--|
| 1 to 53 | 01 | Fixed Totalizer | 8/12 | Worksheet #59 on page 77 |
| 1 to *1 | 06 | Group | 8/12 | Worksheet #58 on page 77 |
| 1 to 31 | 23 | Fixed Character | Up to 12 | Worksheet #46 on page 74 to Worksheet #57 on page 77 |
| 1 to 11 | 24 | Report Header Message | Up to 12 | Worksheet #60 on page 79 |
| 1 to 12 | 32 | Receipt Message/Commercial Message/ Bottom Message | Up to 21 | Worksheet #61 on page 79 |

*1. The number of memories depends on the number of records reserved by the memory allocation procedure (Program 5).

The procedure you should use for programming all of these descriptors is provided below.

Procedure



1. Input a memory number from the above table.
2. Input a 2-digit file number from the above table.
3. Input a descriptor or message using one of the procedures described in section 10 of this manual.
4. Cash Amount Tendered key on standard keyboard.
5. Loop if you want to input the messages or descriptor code for the next sequential memory number (same file number).
6. Loop if you want to input a descriptor or message for a non-sequential memory number or different file number.

Worksheet #46

| Memory No. | File No. | Character Descriptions | | | | | | | |
|---------------------|----------|------------------------|-------------------|--------------|---|---------------|--------|----|---|
| | | Monetary Symbol | Unit Price Symbol | No. Of Items | | Package Units | Filler | *1 | |
| 1 | 23 | | | | | | | | |
| Standard Descriptor | | (U.S./Canada) \$ | @ (U.S./Canada) | N | o | / | | | * |
| | | (Other areas) • | (Other areas) @ | | | | | | |

*1. Training Clerk/Cashier Registration Filler

Worksheet #47

| Memory No. | File No. | Character Descriptions ^{*1} | | | | | | | | | |
|---------------------|----------|--------------------------------------|---|----------------------|---|------------------------------------|-------|--------|-------|--------|---|
| | | No. of sales items | | Net No. of customers | | Filler | | Filler | | Filler | |
| 2 | 23 | | | | | SPACE | SPACE | SPACE | SPACE | | |
| Standard Descriptor | | N | o | C | T | @ (U.S./Canada) (Other areas) @ | | L | B | | * |

*1. All 10 characters (2 characters/item) are programmed at the same time.

Worksheet #48

| Memory No. | File No. | Character Descriptions | | | | | | | | | | |
|---------------------|----------|------------------------|---|---|---|---|--------|-------|-------|-------|-------|-------|
| | | Quantity | | | | | Filler | | | | | |
| 3 | 23 | | | | | | SPACE | SPACE | SPACE | SPACE | SPACE | SPACE |
| Standard Descriptor | | | I | T | E | M | S | | | | | |

Worksheet #49

| Memory No. | File No. | Character Descriptions | | | | | | | | | | | |
|---------------------|----------|------------------------|--------|------------------|---------|---------------------------------------|-----|------------------|---|----------------------|--|--|-----|
| | | Taxable Status 1 | | Taxable Status 2 | | Taxable Status 3 or Food Stamp Status | | Taxable Status 4 | | Taxable Status 1 & 2 | | Taxable Status 1 & 3 or Taxable Status 1 & Food Stamp Status | |
| 4 | 23 | | | | | | | | | | | | |
| Standard Descriptor | | U.S. | T I | | T II | | III | T | 4 | T III | | T I | III |
| | | Other areas | T | 1 | T | 2 | T | 3 | T | 4 | | | |

Worksheet #50

| Memory No. | File No. | Character Descriptions | | | | | | | | | |
|---------------------|----------|------------------------|--------|--|---------|--|----------|-----------------------------|---|-------------|--|
| | | Tax Status 1 & 4 | | Taxable Status 2 & 3 or Taxable Status 2 & Food Stamp Status | | Taxable Status 1, 2, & 3 or Taxable Status 1 & 2 & Food Stamp Status | | Taxable Status 1, 2, 3, & 4 | | Non-taxable | |
| 5 | 23 | | | | | | | | | | |
| Standard Descriptor | | U.S. | T I | 4 | T II | III | T III | III | | | |
| | | Other areas | | | | | | | T | 1 | |

Worksheet #51

| Memory No. | File No. | Character Descriptions | | | | | | | |
|---------------------|----------|---|--|---------------------|--|---------------------|--|---------------------|--|
| | | Monetary Symbol Following Currency Exchange Operation | | | | | | | |
| | | Currency Exchange 1 | | Currency Exchange 2 | | Currency Exchange 3 | | Currency Exchange 4 | |
| 6 | 23 | | | | | | | | |
| Standard Descriptor | | *1 | | *1 | | *1 | | *1 | |

1. All 8 characters (2 characters/item) are programmed at the same time. The standard descriptor for each item is "". Each CE key can be programmed to use only one of the monetary symbols specified above. For details on assignment of monetary symbols to Currency Exchange keys, see Worksheet #15 on page 28.

Worksheet #52

| Memory No. | File No. | Character Descriptions | | | | | | | | | | | |
|---------------------|----------|-------------------------------|---|---|--|----------------------|--|---|--|-----------------------------|--|--|---|
| | | REG 1/REG 2 Mode Print Symbol | | | | RF Mode Print Symbol | | | | REG Minus Mode Print Symbol | | | |
| 7 | 23 | | | | | | | | | | | | |
| Standard Descriptor | | R | E | G | | R | | F | | R | | | — |

Worksheet #53

| Memory No. | File No. | Character Descriptions | | | | | | | | | | | |
|---------------------|----------|---------------------------|--|-------|-------|-------------------------------|--|--|--|--------------------------------|--|--|--|
| | | Program Mode Print Symbol | | | | Daily Sales READ Print Symbol | | | | Daily Sales RESET Print Symbol | | | |
| 8 | 23 | | | SPACE | SPACE | | | | | | | | |
| Standard Descriptor | | P | | *1 | | X | | | | Z | | | |

*1. Program mode number 1 to 7 (fixed).

Worksheet #54

| Memory No. | File No. | Character Descriptions | | | | | | | |
|---------------------|----------|----------------------------------|--|---|--|-----------------------------------|--|---|--|
| | | Periodic Sales READ Print Symbol | | | | Periodic Sales RESET Print Symbol | | | |
| 9 | 23 | | | | | | | | |
| Standard Descriptor | | X | | 2 | | Z | | 2 | |

Worksheet #55

| Memory No. | File No. | Character Descriptions | | | | | | | |
|---------------------|----------|---|---|---|--|--------|--|--|--|
| | | Training Clerk/Cashier Sign On Print Symbol | | | | Filler | | | |
| 13 | 23 | | | | | | | | |
| Standard Descriptor | | T | R | G | | | | | |

Worksheet #56

| Memory No. | File No. | Character Descriptions | | | | | | | |
|---------------------|----------|--|---|---|--|----|---|--|---|
| | | AM/PM print and display symbols for 12-hour timekeeping format | | | | | | | |
| | | AM | | | | PM | | | |
| 16 | 23 | | | | | | | | |
| Standard Descriptor | | | A | M | | | P | | M |

Worksheet #57

| Item | Memory Number | File Number | Standard Descriptor | Programmed Descriptor | | | | | | | | | | | | | | | | | | | |
|--|---------------|-------------|---------------------|-----------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Subtotal for amount tendered operation | 17 | 23 | ST | | | | | | | | | | | | | | | | | | | | |
| Change | 18 | 23 | CG | | | | | | | | | | | | | | | | | | | | |
| Total amount on validation slips and post-finalization receipts, by partial tender operation | 19 | 23 | TL | | | | | | | | | | | | | | | | | | | | |
| Check cashing handling fee | 20 | 23 | — | | | | | | | | | | | | | | | | | | | | |
| Check amount due, less service charge | 21 | 23 | CACG | | | | | | | | | | | | | | | | | | | | |
| Non-resettable operation time recorder | 23 | 23 | GT TIME | | | | | | | | | | | | | | | | | | | | |
| Forced termination by DF-2 operation | 25 | 23 | **END** | | | | | | | | | | | | | | | | | | | | |
| DF-2 program saving | 26 | 23 | SEND BLOCK | | | | | | | | | | | | | | | | | | | | |
| DF-2 program loading | 27 | 23 | RCVD BLOCK | | | | | | | | | | | | | | | | | | | | |
| Gas department discount amount | 30 | 23 | — | | | | | | | | | | | | | | | | | | | | |
| Gas department number of customers | 31 | 23 | CUST | | | | | | | | | | | | | | | | | | | | |

Worksheet #58

| Group No. | Memory Number | File Number | Standard Descriptor | Programmed Descriptor | | | | | | | | | | | | | | | | | | | |
|-----------|---------------|-------------|---------------------|-----------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| 1 | | 06 | GP | | | | | | | | | | | | | | | | | | | | |
| 2 | | 06 | GP | | | | | | | | | | | | | | | | | | | | |
| 3 | | 06 | GP | | | | | | | | | | | | | | | | | | | | |
| 4 | | 06 | GP | | | | | | | | | | | | | | | | | | | | |
| 5 | | 06 | GP | | | | | | | | | | | | | | | | | | | | |
| 6 | | 06 | GP | | | | | | | | | | | | | | | | | | | | |
| 7 | | 06 | GP | | | | | | | | | | | | | | | | | | | | |
| 8 | | 06 | GP | | | | | | | | | | | | | | | | | | | | |
| 9 | | 06 | GP | | | | | | | | | | | | | | | | | | | | |
| 10 | | 06 | GP | | | | | | | | | | | | | | | | | | | | |

Worksheet #59

| Total Item | Memory Number | File Number | Standard Descriptor | Programmed Descriptor | | | | | | | | | | | | | | | | | | | |
|------------------------|---------------|-------------|---------------------|-----------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Gross sales total | 1 | 01 | GRS | | | | | | | | | | | | | | | | | | | | |
| Net sales total | 2 | 01 | NET | | | | | | | | | | | | | | | | | | | | |
| Cash in drawer | 3 | 01 | CAID | | | | | | | | | | | | | | | | | | | | |
| Charge in drawer | 7 | 01 | CHID | | | | | | | | | | | | | | | | | | | | |
| Check in drawer | 11 | 01 | CKID | | | | | | | | | | | | | | | | | | | | |
| Credit in drawer | 15 | 01 | CRID | | | | | | | | | | | | | | | | | | | | |
| Food stamps in drawer | 19 | 01 | FSID | | | | | | | | | | | | | | | | | | | | |
| Food stamp cash change | 20 | 01 | FSCACG | | | | | | | | | | | | | | | | | | | | |
| EBT in drawer | 21 | 01 | EBTTL | | | | | | | | | | | | | | | | | | | | |
| EBT cash change | 22 | 01 | EBTCACG | | | | | | | | | | | | | | | | | | | | |
| RF Mode total | 23 | 01 | RF | | | | | | | | | | | | | | | | | | | | |

Worksheet #59 (Continued)

| Total Item | Memory Number | File Number | Standard Descriptor | Programmed Descriptor | | | | | | | | | | | | | | | | | | | |
|---|---------------|-------------|---------------------|-----------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Number of customers | 24 | 01 | CUST | | | | | | | | | | | | | | | | | | | | |
| Average sales price per customer | 25 | 01 | AVRG | | | | | | | | | | | | | | | | | | | | |
| Check cashing handling fee | 26 | 01 | FEE | | | | | | | | | | | | | | | | | | | | |
| Service charge for temporary finalization (using <input type="button" value="NB"/> key) | 27 | 01 | + | | | | | | | | | | | | | | | | | | | | |
| New balance total | 28 | 01 | NB | | | | | | | | | | | | | | | | | | | | |
| Foreign currency cash in drawer total 1 | 31 | 01 | CECA1 | | | | | | | | | | | | | | | | | | | | |
| Foreign currency check in drawer total 1 | 32 | 01 | CECK1 | | | | | | | | | | | | | | | | | | | | |
| Foreign currency cash in drawer total 2 | 33 | 01 | CECA2 | | | | | | | | | | | | | | | | | | | | |
| Foreign currency check in drawer total 2 | 34 | 01 | CECK2 | | | | | | | | | | | | | | | | | | | | |
| Foreign currency cash in drawer total 3 | 35 | 01 | CECA3 | | | | | | | | | | | | | | | | | | | | |
| Foreign currency check in drawer total 3 | 36 | 01 | CECK3 | | | | | | | | | | | | | | | | | | | | |
| Grand total of <input type="button" value="-"/> key and <input type="button" value="%-"/> key operation totals | 37 | 01 | DC | | | | | | | | | | | | | | | | | | | | |
| Net grand total of <input type="button" value="RF"/> key, <input type="button" value="VOID"/> key, and RF mode operation totals | 38 | 01 | REF | | | | | | | | | | | | | | | | | | | | |
| Number of <input type="button" value="C"/> key operations | 39 | 01 | CLEAR | | | | | | | | | | | | | | | | | | | | |
| Rounding total | 41 | 01 | ROUND | | | | | | | | | | | | | | | | | | | | |
| Taxable amount 1 total | 42 | 01 | TA1 | | | | | | | | | | | | | | | | | | | | |
| Tax 1 total | 43 | 01 | TX1 | | | | | | | | | | | | | | | | | | | | |
| Tax 1 exempt total | 44 | 01 | EX1 | | | | | | | | | | | | | | | | | | | | |
| Taxable amount 2 total | 45 | 01 | TA2 | | | | | | | | | | | | | | | | | | | | |
| Tax 2 total | 46 | 01 | TX2 | | | | | | | | | | | | | | | | | | | | |
| Tax 2 exempt total | 47 | 01 | EX2 | | | | | | | | | | | | | | | | | | | | |
| Taxable amount 3 total | 48 | 01 | TA3 | | | | | | | | | | | | | | | | | | | | |
| Tax 3 total | 49 | 01 | TX3 | | | | | | | | | | | | | | | | | | | | |
| Tax 3 exempt total | 50 | 01 | EX3 | | | | | | | | | | | | | | | | | | | | |
| Taxable amount 4 total | 51 | 01 | TA4 | | | | | | | | | | | | | | | | | | | | |
| Tax 4 total | 52 | 01 | TX4 | | | | | | | | | | | | | | | | | | | | |
| Tax 4 exempt total | 53 | 01 | EX4 | | | | | | | | | | | | | | | | | | | | |

Worksheet #60

| Report*1 | Memory Number | File Number | Standard Descriptor | Programmed Descriptor | | | | | | | | | | | | | | | | | | | |
|-------------------------------------|---------------|-------------|---------------------|-----------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Fixed Totalizer Report | 1 | 24 | FIX | | | | | | | | | | | | | | | | | | | | |
| Free Function Report | 2 | 24 | TRANS | | | | | | | | | | | | | | | | | | | | |
| Department Report | 3 | 24 | DEPT | | | | | | | | | | | | | | | | | | | | |
| Long PLU or Long PLU Group Report | 4 | 24 | LONG PLU | | | | | | | | | | | | | | | | | | | | |
| Short PLU or Short PLU Group Report | 5 | 24 | PLU | | | | | | | | | | | | | | | | | | | | |
| Hourly Sales Report | 6 | 24 | HOURLY | | | | | | | | | | | | | | | | | | | | |
| Group Total Report | 7 | 24 | GROUP | | | | | | | | | | | | | | | | | | | | |
| Clerk Accountability Report | 8 | 24 | CASHIER | | | | | | | | | | | | | | | | | | | | |
| Financial Report | 10 | 24 | FLASH | | | | | | | | | | | | | | | | | | | | |
| Monthly Sales Report | 11 | 24 | MONTHLY | | | | | | | | | | | | | | | | | | | | |

*1. The report header message is programmable for each totalizer and not for each report code. This means that the same report header message is printed for the Daily Sales READ Report (X1 Mode), Daily Sales RESET Report (Z1 Mode), Periodic Sales READ Report (X2 Mode), Periodic Sales RESET Report (Z2 Mode), and Individual READ/RESET Report (X1 or Z1 Mode).

Worksheet #61

| Memory No. | File No. | Programmed Text | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|----------|-----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Logo message (Receipt) | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 32 | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 32 | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 32 | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 32 | | | | | | | | | | | | | | | | | | | | | | |
| Commercial Message (Receipt) | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 32 | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 32 | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 32 | | | | | | | | | | | | | | | | | | | | | | |
| 8 | 32 | | | | | | | | | | | | | | | | | | | | | | |
| Receipt Bottom Message | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | 32 | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 32 | | | | | | | | | | | | | | | | | | | | | | |
| 11 | 32 | | | | | | | | | | | | | | | | | | | | | | |
| 12 | 32 | | | | | | | | | | | | | | | | | | | | | | |

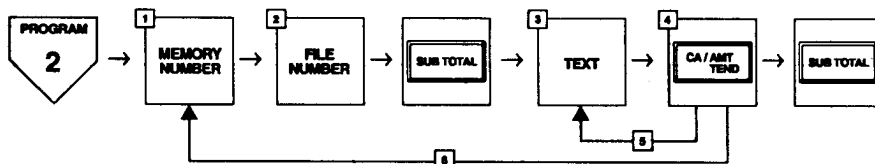
5-10 Text Recall

The following procedure should be used for programming text for text recall.

| Memory No. | File No. | Item | Number of Characters | Worksheet |
|------------|----------|------------------|----------------------|--------------------------|
| 1 to *1 | 39 | Test recall file | 21 | Worksheet #62 on page 80 |

*1. The number of memories depends on the number of records reserved by the memory allocation procedure (Program 5).

Procedure



1. Input a memory number from the above table.
2. Input the file number.
3. Input the descriptor from Worksheet #62 on page 80 using one of the procedures described in section 10 of this manual.
4. Cash Amount Tendered key on the standard keyboard.
5. Loop if you want to input more text for the next sequential memory number.
6. Loop if you want to input another memory number.

Worksheet #62

| Line | Memory No. | File No. | Text |
|------|------------|----------|------|
| | | 39 | |
| | | 39 | |
| | | 39 | |
| | | 39 | |
| | | 39 | |
| | | 39 | |
| | | 39 | |
| | | 39 | |
| | | 39 | |
| | | 39 | |
| | | 39 | |
| | | 39 | |

6

Department Key Programming

This part of the manual describes how to program department keys. Note that all of the procedures and programming shown in this section apply to both standard departments and gas departments unless specifically noted otherwise.

6-1 Department Key Features

There are two different methods you can use to assign features to department keys. With “batch feature programming,” you can use a single operation to assign multiple features.

“Individual feature programming,” on the other hand, lets you assign features one-by-one. This method is recommended for programming of special features to individual departments. Note that you must use individual feature programming to assign the following department key features.

- Links to groups
- Maximum amount limit (MAL)
- Kitchen order receipt issuance control

The following describes department key features in detail.

Single-Item-Sale (SIS)

Whenever an SIS department key is pressed as the first key operation in a transaction, the registration is automatically finalized.

The transaction is not finalized when you press the SIS department key following another (non-SIS) department key. In such a case, the transaction is finalized using one of the finalization keys.

Note that you cannot use SIS unless the keyboard has a Cash Amount Tendered key.

Example:

DEPT 1 : Non-SIS

DEPT 2 : SIS

DEPT 3 : Non-SIS

The key operation **DEPT 2** issues a receipt immediately.

The key operation **DEPT 1** **DEPT 2** **DEPT 3** **CA/AMT TEND** issues a receipt after the Cash Amount Tendered key is pressed.

Low Digit Limit (LDL)

The LDL is the minimum number of digits that the cash register allows for manual input. The LDL can be used to block manual input of an amount to override the price preset to the department.

Maximum Amount Limit (MAL)

The maximum amount limit (MAL) limits the maximum amount that can be manually input. You can also use the Maximum Amount Limit specification to prohibit manual input of an amount to override the preset unit price.

Ticket Receipts

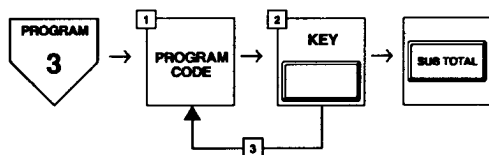
Ticket receipts can be issued for departments, Short PLUs, Long PLUs, and Flat-Long PLUs following issuance of the normal receipt. Separate ticket receipts are issued each department and PLU for which a ticket receipt issuance sequence is programmed. The first ticket receipt issued is the department or PLU with the lowest sequence number, the next issuance is for the item with the next lowest sequence number, etc.

No ticket receipts are issued for departments and PLUs that are not programmed with issuance sequences.

Batch Feature Programming

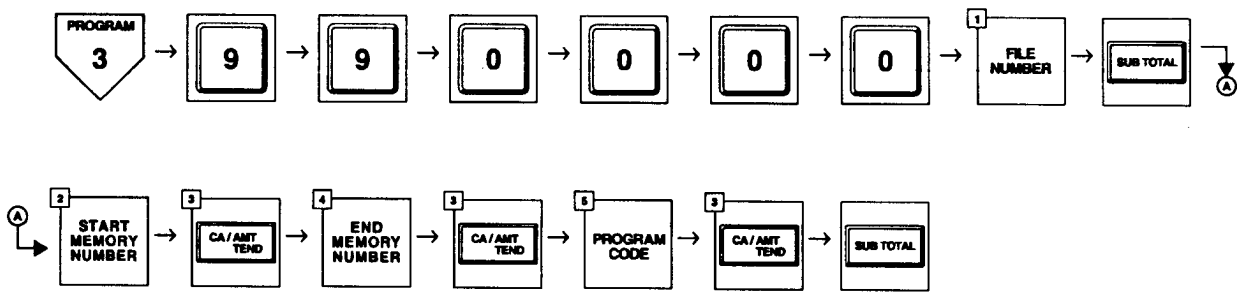
When using this procedure to assign multiple features to departments, use 12-digit codes that you create using Worksheet #63 (Standard department) or #64 (Gas department).

Procedure 1



1. Input the 12-digit program code from the applicable worksheet.
2. Press the department key or gas department key that you want to program with the features specified by the program code.
3. Loop if you want to input another program code for another department key or gas department key.

Procedure 2 — Range Programming



1. Input the file number.
05: Standard department
55: Gas department
2. Range start memory number.
If you don't input anything here, the data is programmed from memory #1.
3. Cash Amount Tendered key on the standard keyboard.
4. Range end memory number.
If you don't input anything here, the data is programmed up to the last memory number that exists in the file.
5. Input the 12-digit Program Code from the applicable worksheet.

Worksheet #63

| Item | Description | Choice | Program Code | |
|------|--|--|------------------------------|----|
| 12 | Receipt type/sales status | Normal receipt = 0 No receipt = 1 Single receipt = 2 Single-item sale = 3 | | 12 |
| 11 | | | 0 | 11 |
| 10 | Multiple validation | Allow = 0 Prohibit = 2 | | 10 |
| 9 | a | Operation in RF Mode | Enable = 0 Disable = 1 | 9 |
| | b | Operation in REG 2 Mode | Enable = 0 Disable = 2 | |
| | c | Operation in REG 1 Mode | Enable = 0 Disable = 4 | |
| 8 | Taxable Status | See below *1 | | 8 |
| 7 | | | 0 | 7 |
| 6 | a | Unit price status (zero unit price or non-zero unit price) | Non-zero = 0 Zero = 1 | 6 |
| | b | Unit price status (negative unit price or positive unit price) | Positive = 0 Negative = 2 | |
| | c | HASH item status (HASH item or non-HASH item) | Non-HASH = 0 HASH = 4 | |
| 5 | | | 0 | 5 |
| 4 | Low Digit Limit (LDL) for manually input unit prices (0 clears the limitation) | 1 to 9 | | 4 |
| 3 | | | 0 | 3 |
| 2 | | | 0 | 2 |
| 1 | | | 0 | 1 |

*1. United States

Taxable Status 1 = 1

Taxable Status 2 = 2

Taxable Status 3 or Food Stamp Status = 4

Non-taxable = 0

Use the sum of the program code to program more than one status. To program Taxable Status 1 and Taxable Status 2, program "3" (1 + 2).

Canada

Taxable Status 1 = 1

Taxable Status 2 = 2

Taxable Status 3 = 3

Taxable Status 4 = 4

Taxable Status 1 & 2 = 5

Taxable Status 1 & 3 = 6

Taxable Status 1 & 4 = 7

Non-taxable = 0

Other areas

Taxable Status 1 = 1

Taxable Status 2 = 2

Taxable Status 3 = 3

Taxable Status 4 = 4

Non-taxable = 0

Worksheet #64

| Item | Description | Choice | Program Code | |
|------|---|--|--------------|----|
| 12 | Receipt type/sales status | Normal receipt = 0 No receipt = 1 Single receipt = 2 Single-item sale = 3 | | 12 |
| 11 | | | 0 | 11 |
| 10 | Multiple validation | Allow = 0 Prohibit = 2 | | 10 |
| 9 | a Operation in RF Mode | Enable = 0 Disable = 1 | | 9 |
| | b Operation in REG 2 Mode | Enable = 0 Disable = 2 | | |
| | c Operation in REG 1 Mode | Enable = 0 Disable = 4 | | |
| 8 | Taxable Status | See below *1 | | 8 |
| 7 | | | 0 | 7 |
| 6 | HASH item status (HASH item or non-HASH item) | Non-HASH = 0 HASH = 4 | | 6 |
| 5 | Rounding method for gas department's amount of gas sold | Round off = 0 Cut off = 1 Round up = 2 | | 5 |
| 4 | Low Digit Limit (LDL) for manually input unit prices (0 clears the limitation) (8 or 9 prohibits manual input) | Specify 1 to 9 | | 4 |
| 3 | | | 0 | 3 |
| 2 | | | 0 | 2 |
| 1 | | | 0 | 1 |

*1. United States

- Taxable Status 1 = 1
- Taxable Status 2 = 2
- Taxable Status 3 = 4
- Non-taxable = 0

Use the sum of the program code to program more than one status. To program Taxable Status 1 and Taxable Status 2, program "3" (1 + 2).

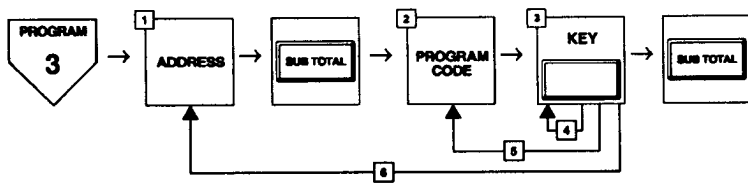
Individual Feature Programming

With this procedure, you can assign individual features to specific departments. The following table shows the features that can be programmed, and the worksheet you should use to calculate the required program code.

Address Table

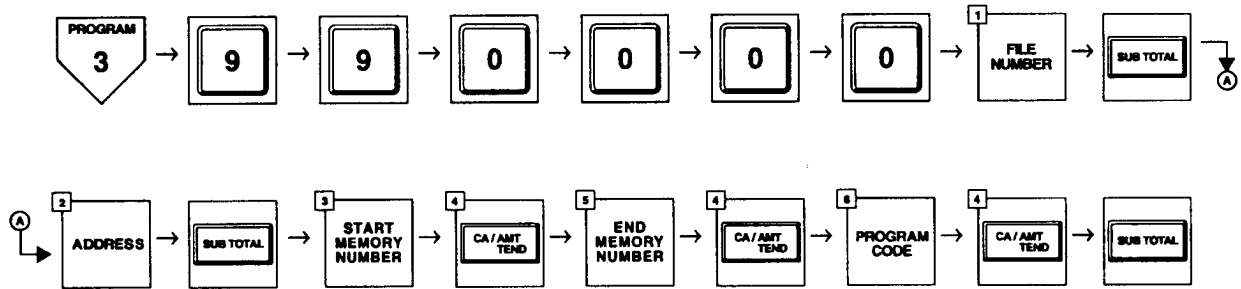
| Address | Feature | Department | Gas department | Worksheet |
|---------|---------------------------------|---------------|----------------|--------------------------|
| 0166 | Validation Status | Available | Available | Worksheet #65 on page 86 |
| 0266 | Mode Control | Available | Available | Worksheet #66 on page 87 |
| 0366 | Tax Status | Available | Available | Worksheet #67 on page 87 |
| 0566 | Registration Status | Available | Available | Worksheet #68 on page 87 |
| 0666 | Rounding Method for Gas Sold | Not Available | Available | Worksheet #69 on page 87 |
| 0766 | Low Digit Limit (LDL) | Available | Available | Worksheet #70 on page 88 |
| 1166 | Links to Groups | Available | Available | Worksheet #71 on page 88 |
| 1566 | Maximum Amount Limit (MAL) | Available | Available | Worksheet #72 on page 88 |
| 1666 | Ticket Receipt Issuance Control | Available | Not available | Worksheet #73 on page 88 |

Procedure 1



1. Input the 4-digit address from the above table to identify the feature you want to program.
2. Input the program code from the applicable worksheet (see table above).
3. Press the department key or gas department key you want to program with the features specified by the program code.
4. Loop if you want to program another department key or gas department key with the same program code.
5. Loop if you want to program another department key or gas department key with a different program code, but the same address.
6. Loop if you want to program another department key or gas department key with a different program code, and different address.

Procedure 2 — Range Programming



1. Input the file number.
05: Standard department
55: Gas department
2. Input the 4-digit address from the Address Table page 85.
3. Range start memory number.
If you don't input anything here, the data is programmed from memory #1.
4. Cash Amount Tendered key on the standard keyboard.
5. Range end memory number.
If you don't input anything here, the data is programmed up to the last memory number that exists in the file.
6. Input the Program Code from the applicable worksheet.

Worksheet #65

Use this worksheet to program Address 0166.

| Item | Description | Choice | Program Code |
|------|---------------------|---------------------------|--------------|
| 1 | Multiple validation | Allow = 0 Prohibit = 2 | 1 |

Worksheet #66

Use this worksheet to program Address 0266.

| Item | Description | Choice | Program Code |
|------|---------------------------|---------------------------|--------------|
| 1 | a Operation in RF Mode | Enable = 0 Disable = 1 | 1 |
| | b Operation in REG 2 Mode | Enable = 0 Disable = 2 | |
| | c Operation in REG 1 Mode | Enable = 0 Disable = 4 | |

Worksheet #67

Use this worksheet to program Address 0366.

| Item | Description | Choice | Program Code |
|------|----------------|-------------|--------------|
| 1 | Taxable Status | See below*1 | 1 |

***1. United States**

- Taxable Status 1 = 1
- Taxable Status 2 = 2
- Taxable Status 3 or Food Stamp Status = 4
- Non-taxable = 0

Use the sum of the program code to program more than one status. To program Taxable Status 1 and Taxable Status 2, program "3" (1 + 2).

Canada

- Taxable Status 1 = 1
- Taxable Status 2 = 2
- Taxable Status 3 = 3
- Taxable Status 4 = 4
- Taxable Status 1 & 2 = 5
- Taxable Status 1 & 3 = 6
- Taxable Status 1 & 4 = 7
- Non-taxable = 0

Other areas

- Taxable Status 1 = 1
- Taxable Status 2 = 2
- Taxable Status 3 = 3
- Taxable Status 4 = 4
- Non-taxable = 0

Worksheet #68

Use this worksheet to program Address 0566.

| Item | Description | Choice | Program Code |
|------|--|------------------------------|--------------|
| 1 | a Unit price status (zero unit price or non-zero unit price)*1 | Non-zero = 0 Zero = 1 | 1 |
| | b Unit price status (negative unit price or positive unit price)*1 | Positive = 0 Negative = 2 | |
| | c HASH item status (HASH item or non-HASH item) | Non-HASH = 0 HASH = 4 | |

*1. Cannot be programmed for a gas department.

Worksheet #69

Use this worksheet to program Address 0666.

| Item | Description | Choice | Program Code |
|------|---|--|--------------|
| 1 | Rounding method for gas department's amount of gas sold*1 | Round off = 0 Cut off = 1 Round up = 2 | 1 |

*1. Programmable for a gas department only.

Worksheet #70

Use this worksheet to program Address 0766.

| Item | Description | Choice | Program Code |
|------|--|--------|--------------|
| 1 | Low Digit Limit (LDL) for manually input unit prices (0 clears the limitation) | 1 to 9 | 1 |

Worksheet #71

Use this worksheet to program Address 1166.

| Item | Description | Program Code |
|------|---|--------------|
| 2 | Group number to link to "00" clears an existing link. Input of a leading zero is not required. | 2 |
| 1 | | 1 |

Worksheet #72

Use this worksheet to program Address 1566.

| Item | Description | Program Code |
|------|---|--------------|
| 6 | Maximum amount limit. Input four digits to the left of the decimal (integer part) and two digits to the right of the decimal (decimal part). No input of a decimal point is required. Inputting "0" here clears an existing limitation. | 6 |
| 5 | | 5 |
| 4 | | 4 |
| 3 | | 3 |
| 2 | | 2 |
| 1 | | 1 |

Worksheet #73

Use this worksheet to program Address 1666.

| Item | Description | Program Code |
|------|---|--------------|
| 2 | Ticket receipt issuance sequence*1 1 = First; 10 = 10th; 30 = 30th etc. Leading zero is not required. | 2 |
| 1 | | 1 |

*1. Cannot be programmed for a Gas department.

6-2 Department Key Descriptors

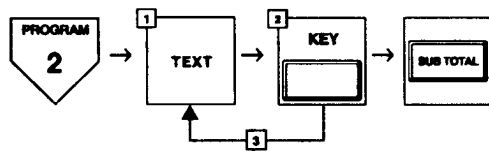
Use this procedure to assign literal descriptors to each department. Each descriptor can be either 8 or 12 characters long, depending on the descriptor length specification that is made during the initialize operation.

Note that this section explains only the general procedure to use for programming descriptors. For details on actual character input procedures, see section 10 of this manual.

There are two different methods you can use to assign a descriptor to a key. With "direct programming", you input the characters and then press the Department Key or Gas Department Key to which you want to program the characters.

With "memory number programming" you input the memory number of the key you are programming and then input "05" (which is the file number for departments) or "55" (which is the file number for gas departments). You then input the characters you want to program.

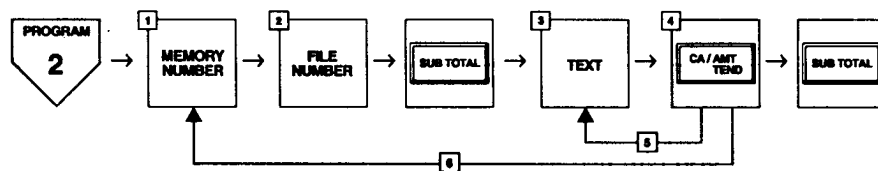
Direct Programming Procedure



1. Input the descriptor from Worksheet #74 on page 90 using one of the procedures described in section 10 of this manual.
2. Press the department key or gas department key you want to program.
3. Loop if you want to input a different department key or gas department key.

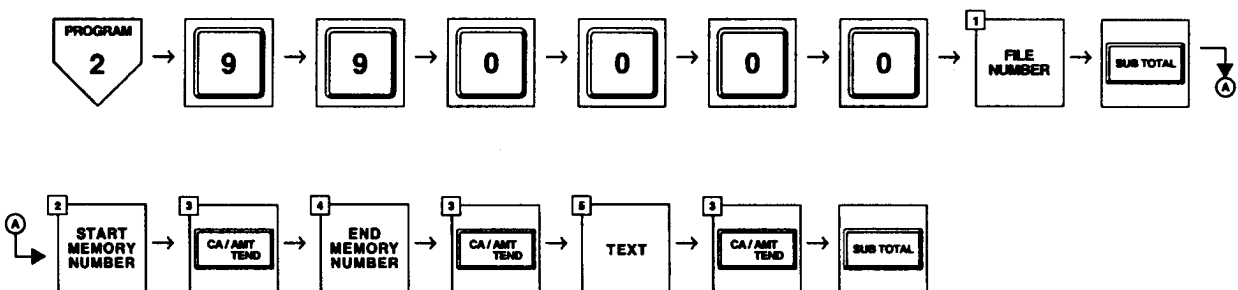
Memory Number Programming Procedure

Procedure 1



1. Input the memory number that identifies the department key you want to program.
2. Input "05" if you are programming a standard department key, or "55" if you are programming a gas department key.
3. Input the descriptor from Worksheet #74 using one of the procedures described in section 10 of this manual.
4. Cash Amount Tendered key on the standard keyboard.
5. Loop if you want to input a descriptor for the next sequential memory number.
6. Loop if you want to input a different memory number.

Procedure 2 — Range Programming



1. Input the file number.
05: Standard department
55: Gas department
2. Range start memory number.
If you don't input anything here, the text is programmed from memory #1.
3. Cash Amount Tendered key on the standard keyboard.
4. Range end memory number.
If you don't input anything here, the text is programmed up to the last memory number that exists in the file.
5. Input the Text from the applicable worksheet.

Worksheet #74

| Department Key | Memory Number | File Number | Standard Descriptor | Programmed Descriptor | | | | | | | | | | | | | | | | | | | |
|----------------|---------------|-------------|---------------------|-----------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | | 05/55 | DEPT/GDPT | | | | | | | | | | | | | | | | | | | | |
| | | 05/55 | DEPT/GDPT | | | | | | | | | | | | | | | | | | | | |
| | | 05/55 | DEPT/GDPT | | | | | | | | | | | | | | | | | | | | |
| | | 05/55 | DEPT/GDPT | | | | | | | | | | | | | | | | | | | | |
| | | 05/55 | DEPT/GDPT | | | | | | | | | | | | | | | | | | | | |
| | | 05/55 | DEPT/GDPT | | | | | | | | | | | | | | | | | | | | |
| | | 05/55 | DEPT/GDPT | | | | | | | | | | | | | | | | | | | | |
| | | 05/55 | DEPT/GDPT | | | | | | | | | | | | | | | | | | | | |
| | | 05/55 | DEPT/GDPT | | | | | | | | | | | | | | | | | | | | |
| | | 05/55 | DEPT/GDPT | | | | | | | | | | | | | | | | | | | | |

6-3 Department Unit Prices

You can program each standard department with a unit price.

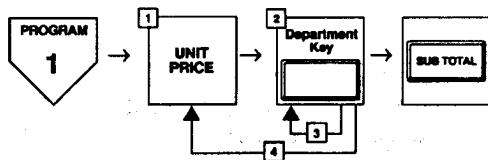
There are two different methods you can use to program the unit price to a key.

With “direct programming”, you input the unit price and then press the Department Key to which you want to program the data.

With “memory number programming” you input the memory number of the key you are programming and then input "05" (which is the file number for standard departments). You then input the applicable program code.

You use the same procedure for programming for both of the configurations noted above.

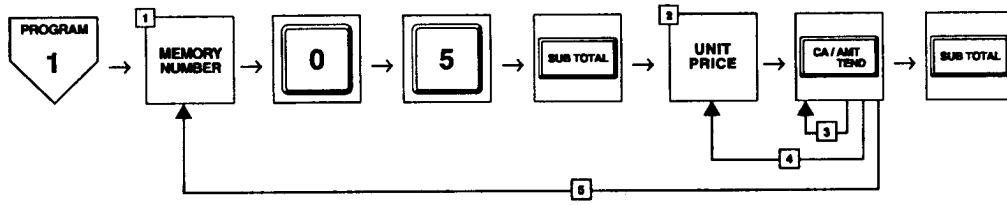
Direct Programming Procedure



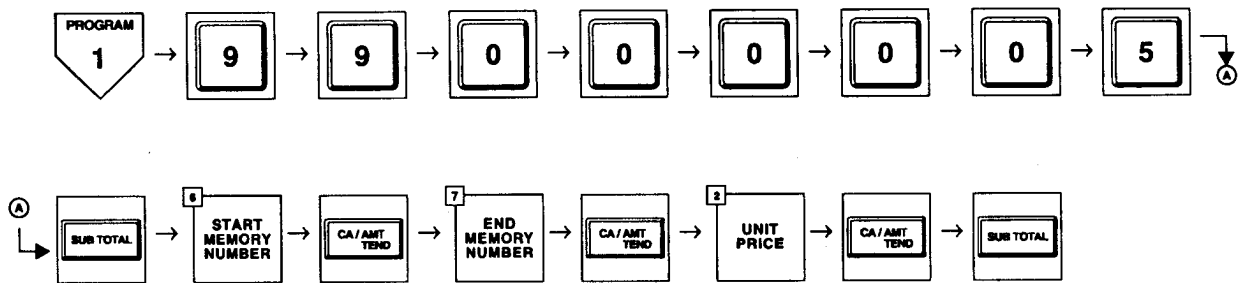
1. Input a value for the unit price from the worksheet (Worksheet #75).
2. Press the department key you want to program.
3. Loop if you want to input the same data for the different department key.
4. Loop if you want to input the different data.

Memory Number Programming Procedure

Procedure 1



Procedure 2 — Range Programming



1. Input the memory number that identifies the department key you want to program.
2. Input a value for the unit price from the worksheet (Worksheet #75).
3. Loop if you want to input the same data for the next sequential memory number.
4. Loop if you want to input different data for the next sequential memory number.
5. Loop if you want to input different data for a non-sequential memory number.
6. Range start memory number.
If you don't input anything here, the data is programmed from memory #1.
7. Range end memory number.
If you don't input anything here, the data is programmed up to the last memory number that exists in the file.

Worksheet #75

| Memory Number | File Number | Program Code | | | | | |
|---------------|-------------|--------------|--|--|--|--|--|
| | | Unit Price | | | | | |
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6-4 Gas Department Unit Prices

Gas departments (which are used in the United States and Canada only) can be assigned prices, just like normal departments. Gas departments, however, are provided with a third decimal place to meet the needs of gasoline unit pricing.

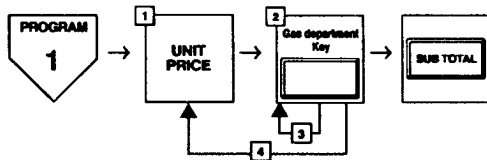
There are two different methods you can use to assign a unit price to a gas department.

With “direct programming”, you input the unit price, and then press the Gas Department Key to which you want to program the data.

With “memory number programming” you input the memory number of the key you are programming and then input “55” (which is the file number for gas departments). You then input the applicable program code (unit price).

You use the same procedure for programming for both of the configurations noted above.

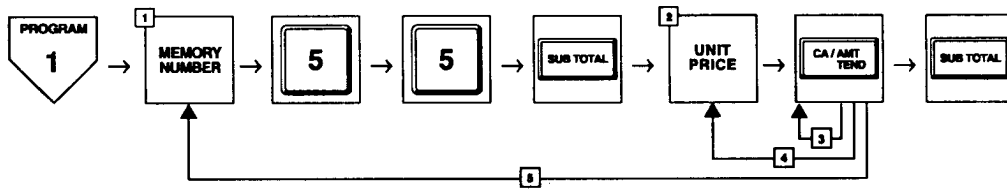
Direct Programming Procedure



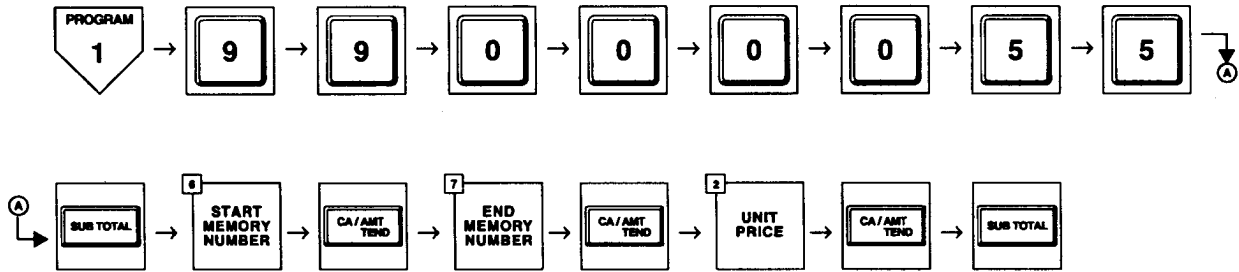
1. Input a value for the unit price. A unit price is a value that can have three digits to the left of the decimal point (integer part) and three digits to the right of the decimal point (decimal places). You do not need to input all three digits for the integer part, but you must input values for all three decimal places.
2. Press the Gas department key you want to program.
3. Loop if you want to input the same data for the different Gas department key.
4. Loop if you want to input the different data.

Memory Number Programming Procedure

Procedure 1



Procedure 2 — Range Programming



1. Input the memory number that identifies the department key you want to program.
2. Input a value for the unit price. A unit price is a value that can have three digits to the left of the decimal point (integer part) and three digits to the right of the decimal point (decimal places). You do not need to input all three digits for the integer part, but you must input values for all three decimal places.
3. Loop if you want to input the same unit price for the next sequential memory number.
4. Loop if you want to input a different unit price for the next sequential memory number.
5. Loop if you want to input a different unit price for a non-sequential memory number.
6. Range start memory number.
If you don't input anything here, the data is programmed from memory #1.
7. Range end memory number.
If you don't input anything here, the data is programmed up to the last memory number that exists in the file.

7

PLU Programming

This part of the manual describes how to program PLUs. Note that all of the procedures and programming shown in this section apply to Short PLUs, Long PLUs, and Flat-PLUs.

7-1 PLU Features

There are two different methods you can use to assign features to PLUs. With “batch feature programming,” you can use a single operation to assign multiple features.

“Individual feature programming,” on the other hand, lets you assign features one-by-one. This method is recommended for programming of special features to individual PLUs. Note that you must use individual feature programming to assign the following PLU features.

- Links to departments and groups
- Random PLU codes
- Links to Long PLUs (bottle links)
- Maximum amount limit (MAL)
- Kitchen Order Receipt issuance control

The following describes PLU features in detail.

Single-Item-Sale (SIS)

Whenever an SIS PLU is registered as the first key operation in a transaction, the registration is automatically finalized. The transaction is not finalized when you register the SIS PLU following another (non-SIS) PLU. In such a case, the transaction is finalized using one of the finalization keys.

Note that you cannot use SIS unless the keyboard has a Cash Amount Tendered key.

Example:

1 : Non-SIS

2 : SIS

3 : Non-SIS

The key operation issues a receipt immediately.

The key operation issues a receipt after the Cash Amount Tendered key is pressed.

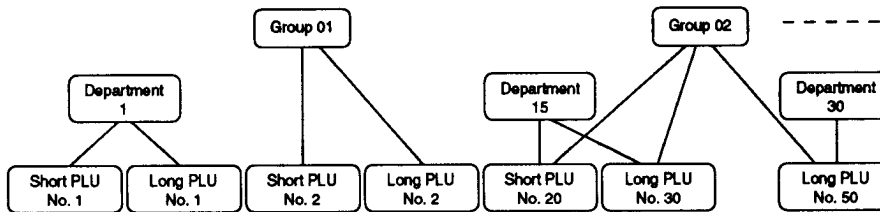
Low Digit Limit (LDL)

The LDL is the minimum number of digits that the cash register allows for manual input. The LDL can be used to block manual input of an amount to override the price preset to the PLU.

Note that an LDL can be programmed to limit the manual input of a price to override a Flat-Long PLU preset price, or to limit input for short PLUs and Long PLUs that are sub-departments.

Links to Departments and Groups

You can individually link Short PLUs and Long PLUs to departments and groups for accumulation of linked sales totals.

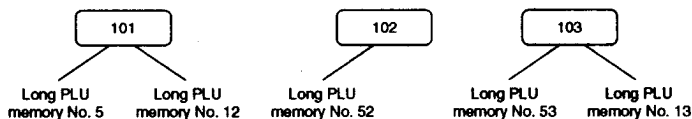


Random PLU Codes (Long PLUs)

You can tailor PLU numbers to match an existing inventory or other record-keeping system by programming 6-digit Random PLU codes for Long PLUs. Immediately following machine initialization, all PLU numbers are assigned to Long PLU memory sequentially. You can use the procedure described in this section to change the PLU numbers to any 6-digit values you want. The Random PLU codes you assign are then used for all registration and programming for the applicable PLUs. If you do not program Random PLUs, use the standard (sequential) PLU numbers for registration and programming.

PLU Links to Long PLUs

You can link Short PLUs or Long PLUs (child PLUs) to Long PLUs (parent PLUs) for simultaneous registration of two different items (child PLU is registered automatically whenever its parent is registered). Use this feature to separate the price of a bottle's contents and the bottle deposit, to separate rent payment from the security deposit, or other such applications.



Important

☞ As in the above example, a single child PLU can have multiple parents. Note that Short PLUs can act as child PLUs only.

Maximum Amount Limit (MAL)

The maximum amount limit (MAL) limits the maximum amount that can be manually input. You can also use the Maximum Amount Limit specification to prohibit manual input of an amount to override the preset unit price.

Note that an MAL can be programmed to limit the manual input of a price to override a Flat-Long PLU preset price, or to limit input for short PLUs and Long PLUs that are sub-departments.

Ticket Receipts

Ticket receipts can be issued for departments, Short PLUs, Long PLUs, and Flat-Long PLUs following issuance of the normal receipt. Separate ticket receipts are issued each department and PLU for which a ticket receipt issuance sequence is programmed. The first ticket receipt issued is the department or PLU with the lowest sequence number, the next issuance is for the item with the next lowest sequence number, etc.

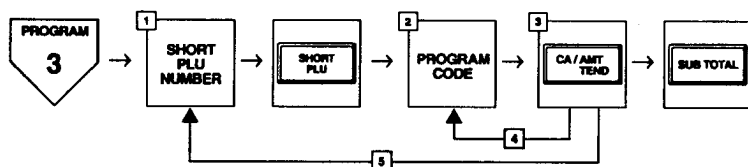
No ticket receipts are issued for departments and PLUs that are not programmed with issuance sequences.

Batch Feature Programming

When using this procedure to assign multiple features to PLUs, use 12-digit codes that you create using Worksheet #76 on page 98.

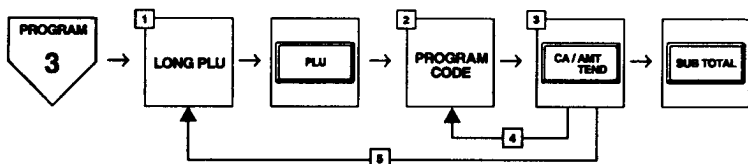
Procedure 1

Short PLU Procedure



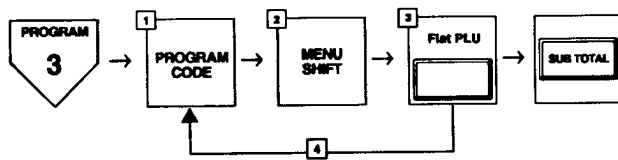
1. Input the number of the Short PLU that you want to program with the features specified by the program code.
2. Input the 12-digit program code from Worksheet #76 on page 98.
3. Cash Amount Tendered key on the standard keyboard.
4. Loop if you want to input another program code for the next sequential Short PLU.
5. Loop if you want to specify another (non-sequential) Short PLU.

Long PLU Procedure



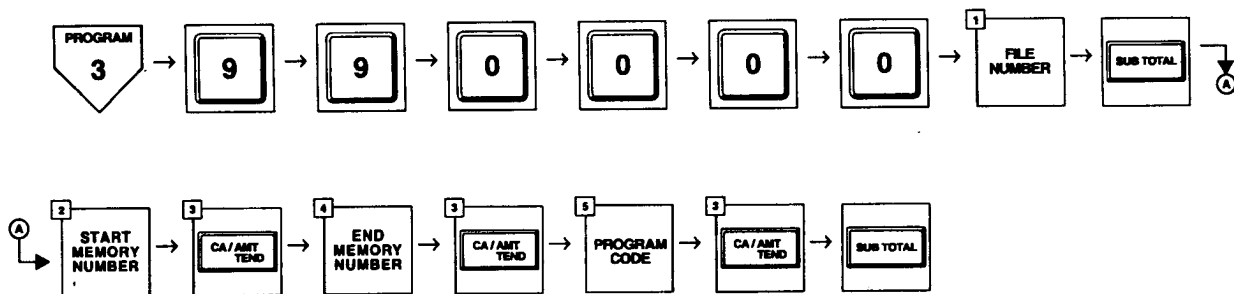
1. Input the number or Random PLU code of the Long PLU that you want to program with the features specified by the program code.
2. Input the 12-digit program code from Worksheet #76 on page 98.
3. Cash Amount Tendered key on the standard keyboard.
4. Loop if you want to input another program code for the next sequential Long PLU.
5. Loop if you want to specify another (non-sequential) Long PLU.

Flat-Long PLU Procedure



1. Input the 12-digit program code from Worksheet #76 on page 98.
2. You can skip this step if the key you want to program is already in the current menu.
3. Press the Flat-Long PLU key that you want to program with the features specified by the program code.
4. Loop if you want to input another program code and program another Flat-Long PLU.

Procedure 2 — Range Programming



1. Input one of the following file numbers.
 Short PLU file number: 03
 Long PLU file number: 04
2. Range start memory number.
 If you don't input anything here, the data is programmed from memory #1.
3. Cash Amount Tendered key on the standard keyboard.
4. Range end memory number.
 If you don't input anything here, the data is programmed up to the last memory number that exists in the file.
5. Input the 12-digit program code from the applicable worksheet.

Worksheet #76

| Item | Description | Choice | Program Code |
|------|--|--|--------------|
| 12 | Receipt type/sales status | Normal receipt = 0 No receipt = 1 Single receipt = 2 Single-item sale = 3 | 12 |
| 11 | | | 0 11 |
| 10 | Multiple validation | Allow = 0 Prohibit = 2 | 10 |
| 9 | a Operation in RF Mode | Enable = 0 Disable = 1 | 9 |
| | b Operation in REG 2 Mode | Enable = 0 Disable = 2 | |
| | c Operation in REG 1 Mode | Enable = 0 Disable = 4 | |
| 8 | Taxable Status | See below *1 | 8 |
| 7 | Sub-department/PLU status | Treat as PLU = 0 Treat as sub-department = 4 | 7 |
| 6 | a Unit price status (zero unit price or non-zero unit price) | Non-zero = 0 Zero = 1 | 6 |
| | b Unit price status (negative unit price or positive unit price) | Positive = 0 Negative = 2 | |
| | c HASH item status (HASH item or non-HASH item) | Non-HASH = 0 HASH = 4 | |
| 5 | | | 0 5 |
| 4 | Low Digit Limit (LDL) for manually input unit prices (0 clears the limitation) (Programmable for Flat-long PLUs and sub-departments only) | 1 to 9 | 4 |
| 3 | | | 0 3 |
| 2 | | | 0 2 |
| 1 | | | 0 1 |

*1. United States

Taxable Status 1 = 1
 Taxable Status 2 = 2
 Taxable Status 3 or Food Stamp Status = 4
 Non-taxable = 0

Use the sum of the program code to program more than one status. To program Taxable Status 1 and Taxable Status 2, program "3" (1 + 2).

Canada

Taxable Status 1 = 1
 Taxable Status 2 = 2
 Taxable Status 3 = 3
 Taxable Status 4 = 4
 Taxable Status 1 & 2 = 5
 Taxable Status 1 & 3 = 6
 Taxable Status 1 & 4 = 7
 Non-taxable = 0

Other areas

Taxable Status 1 = 1
 Taxable Status 2 = 2
 Taxable Status 3 = 3
 Taxable Status 4 = 4
 Non-taxable = 0

Individual Feature Programming

With this procedure, you can assign individual features to specific PLUs. The following table shows the features that can be programmed, and the worksheet you should use to calculate the required program code.

Address Table

| Address | Feature | Short PLU | Long-PLU | Worksheet |
|---------|---------------------------------|---------------|-----------|---------------------------|
| 0166 | Validation Status | Available | Available | Worksheet #77 on page 99 |
| 0266 | Mode Control | Available | Available | Worksheet #78 on page 99 |
| 0366 | Taxable Status | Available | Available | Worksheet #79 on page 100 |
| 0466 | Sales Status | Available | Available | Worksheet #80 on page 100 |
| 0566 | Registration Status | Available | Available | Worksheet #81 on page 100 |
| 0766 | Low Digit Limit (LDL) | Available | Available | Worksheet #82 on page 100 |
| 1166 | Links to Departments/Groups | Available | Available | Worksheet #83 on page 100 |
| 1266 | Random PLU Code | Not Available | Available | Worksheet #84 on page 101 |
| 1366 | Links to Long PLU (Bottle Link) | Not Available | Available | Worksheet #85 on page 101 |
| 1566 | Maximum Amount Limit (MAL) | Available | Available | Worksheet #86 on page 101 |
| 1666 | Ticket Receipt Issuance Control | Available | Available | Worksheet #87 on page 101 |

Note that an LDL or MAL can be programmed to limit the manual input of a price to override a Flat-Long PLU preset price, or to limit input for short PLUs and Long PLUs that are sub-departments.

Worksheet #77

Use this worksheet to program Address 0166.

| Item | Description | Choice | Program Code |
|------|---------------------|---------------------------|--------------|
| 1 | Multiple validation | Allow = 0 Prohibit = 2 | 1 |

Worksheet #78

Use this worksheet to program Address 0266.

| Item | Description | Choice | Program Code |
|------|---------------------------|---------------------------|--------------|
| 1 | a Operation in RF Mode | Enable = 0 Disable = 1 | 1 |
| | b Operation in REG 2 Mode | Enable = 0 Disable = 2 | |
| | c Operation in REG 1 Mode | Enable = 0 Disable = 4 | |

Worksheet #79

Use this worksheet to program Address 0366.

| Item | Description | Choice | Program Code |
|------|----------------|-------------|--------------|
| 1 | Taxable Status | See below*1 | 1 |

***1. United States**

Taxable Status 1 = 1

Taxable Status 2 = 2

Taxable Status 3 or Food Stamp Status = 4

Non-taxable = 0

Use the sum of the program code to program more than one status. To program Taxable Status 1 and Taxable Status 2, program "3" (1 + 2).

Canada

Taxable Status 1 = 1

Taxable Status 2 = 2

Taxable Status 3 = 3

Taxable Status 4 = 4

Taxable Status 1 & 2 = 5

Taxable Status 1 & 3 = 6

Taxable Status 1 & 4 = 7

Non-taxable = 0

Other areas

Taxable Status 1 = 1

Taxable Status 2 = 2

Taxable Status 3 = 3

Taxable Status 4 = 4

Non-taxable = 0

Worksheet #80

Use this worksheet to program Address 0466.

| Item | Description | Choice | Program Code |
|------|---------------------------|---|--------------|
| 1 | Sub-department/PLU status | Treat as PLU = 0 Treat as sub-department = 4 | 1 |

Worksheet #81

Use this worksheet to program Address 0566.

| Item | Description | Choice | Program Code |
|------|--|------------------------------|--------------|
| 1 | a Unit price status (zero unit price or non-zero unit price) | Non-zero = 0 Zero = 1 | 1 |
| | b Unit price status (negative unit price or positive unit price) | Positive = 0 Negative = 2 | |
| | c HASH item status (HASH item or non-HASH item) | Non-HASH = 0 HASH = 4 | |

Worksheet #82

Use this worksheet to program Address 0766.

| Item | Description | Choice | Program Code |
|------|--|--------|--------------|
| 1 | Low Digit Limit (LDL) for manually input unit prices (0 clears the limitation) | 1 to 9 | 1 |

Worksheet #83

Use this worksheet to program Address 1166.

| Item | Description | Program Code |
|------|---|--------------|
| 4 | Department number to link to "00" clears an existing link. | 4 |
| 3 | If department linking is not being used, no input is necessary here (even double zeros can be skipped). | 3 |
| 2 | Group number to link to. | 2 |
| 1 | Both digits must be input for a group number. You must input "00" if group linking is not being used. | 1 |

Worksheet #84

Use this worksheet to program Address 1266.

| Long PLU Memory Number | Random PLU Code (6 digits) | | | | | | Item |
|------------------------|----------------------------|--|--|--|--|--|------|
| | | | | | | | |
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Worksheet #85

Use this worksheet to program Address 1366.

| Item | Description | Program Code | |
|------|--|--------------|---|
| 6 | Child PLU number assignment when the Child PLU is a Long PLU. Be sure to always input six digits, regardless of whether PLU number or random PLU codes are being used. Fill in any unused digits with zeros. | | 6 |
| 5 | | | 5 |
| 4 | | | 4 |
| 3 | | | 3 |
| 2 | | | 2 |
| 1 | | | 1 |

Worksheet #86

Use this worksheet to program Address 1566.

| Item | Description | Program Code | |
|------|---|--------------|---|
| 6 | Maximum amount limit. Input four digits to the left of the decimal (integer part) and two digits to the right of the decimal (decimal part). No input of a decimal point is required. Inputting "0" here clears an existing limitation. | | 6 |
| 5 | | | 5 |
| 4 | | | 4 |
| 3 | | | 3 |
| 2 | | | 2 |
| 1 | | | 1 |

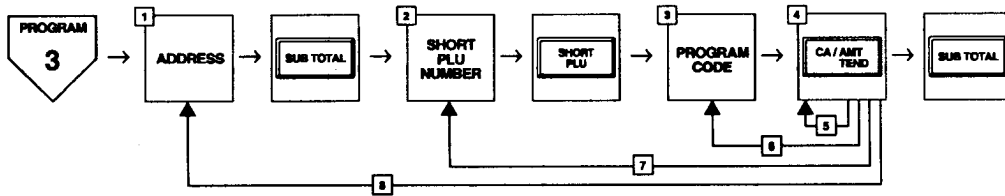
Worksheet #87

Use this worksheet to program Address 1666.

| Item | Description | Program Code | |
|------|---|--------------|---|
| 2 | Ticket receipt issuance sequence 1 = First; 10 = 10th; 30 = 30th etc. Leading zero is not required. | | 2 |
| 1 | | | 1 |

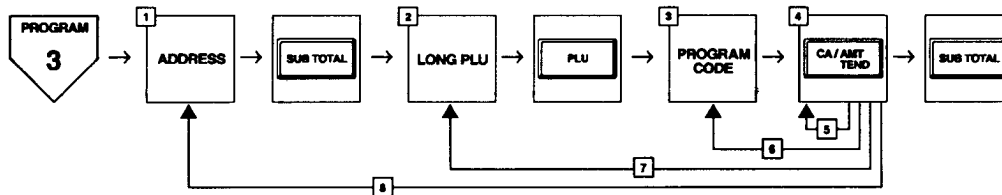
Procedure 1

Short PLU Procedure



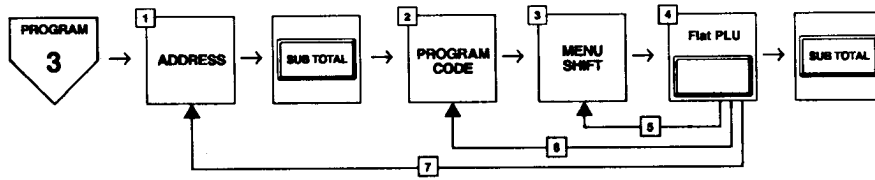
1. Input the 4-digit address from the above table to identify the feature you want to program.
2. Input the number of the Short PLU that you want to program with the features specified by the program code.
3. Input the program code from the applicable worksheet (see table above).
4. Cash Amount Tendered key on the standard keyboard.
5. Loop if you want to program the next sequential Short PLU with the same program code.
6. Loop if you want to program the next sequential Short PLU with a different program code, but the same address.
7. Loop if you want to program a non-sequential Short PLU with a different program code, but the same address.
8. Loop if you want to program another Short PLU with a different program code, and different address.

Long PLU Procedure



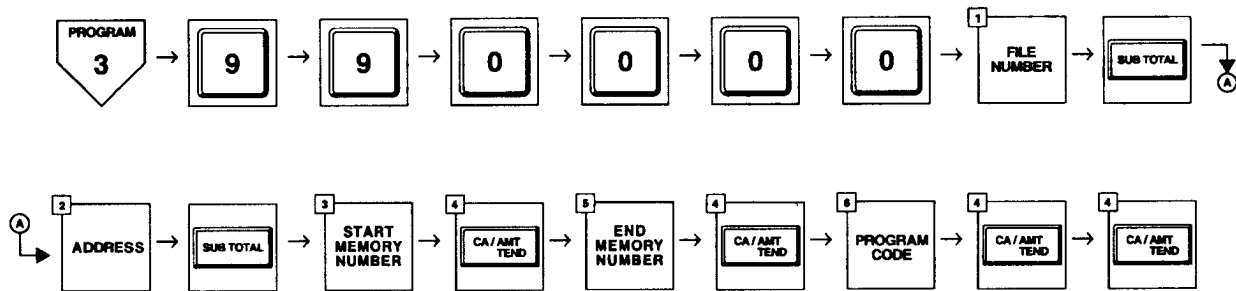
1. Input the 4-digit address from the above table to identify the feature you want to program.
2. Input the number or Random PLU Code of the Long PLU that you want to program with the features specified by the program code.
3. Input the program code from the applicable worksheet (see table above).
4. Cash Amount Tendered key on the standard keyboard.
5. Loop if you want to program the next sequential Long PLU with the same program code. You cannot use this loop if you are programming Random PLU Codes (Address 1266).
6. Loop if you want to program the next sequential Long PLU with a different program code, but the same address.
7. Loop if you want to program a non-sequential Long PLU with a different program code, but the same address.
8. Loop if you want to program another Long PLU with a different program code, and different address.

Flat-Long PLU Procedure



1. Input the 4-digit address from the above table to identify the feature you want to program.
2. Input the program code from the applicable worksheet (see table above).
3. You can skip this step if the key you want to program is already in the current menu.
4. Press the Flat-Long PLU key that you want to program with the features specified by the program code.
5. Loop if you want to program another Flat-Long PLU with the same program code. You cannot use this loop if you are programming Random PLU Codes (Address 1266).
6. Loop if you want to program another Flat-Long PLU with a different program code, but the same address.
7. Loop if you want to program another Flat-Long PLU with a different program code, and different address.

Procedure 2 — Range Programming



1. Input one of the following file numbers.
Short PLU file number: 03
Long PLU file number: 04
2. Input the 4-digit address from the above table.
3. Range start memory number.
If you don't input anything here, the data is programmed from memory #1.
4. Cash Amount Tendered key on the standard keyboard.
5. Range end memory number.
If you don't input anything here, the data is programmed up to the last memory number that exists in the file.
6. Input the Program code from the applicable worksheet.

7-2 PLU Descriptors

Use this procedure to assign literal descriptors to each PLU, and to each Long PLU second unit price. Each descriptor can be either 8 or 12 characters long, depending on the descriptor length specification that is made during the initialization operation.

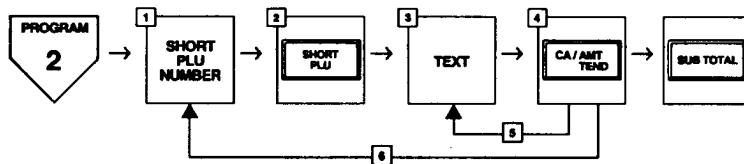
Note that this section explains only the general procedure to use for programming descriptors. For details on actual character input procedures, see section 10 of this manual.

There are two different methods you can use to assign a descriptor to a PLU. With “direct programming” the procedure you use depends on whether you are programming a Short PLU, Long PLU, or Flat-Long PLU.

With “memory number programming” you input the memory number of the key you are programming and then input "03" (which is the file number for Short PLUs), "04" (the file number for Long and Flat-Long PLUs), or "54" (the file number for Long PLU second unit prices). You then input the characters you want to program.

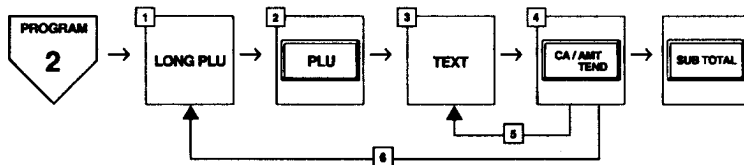
Direct Programming Procedure

Short PLU Procedure



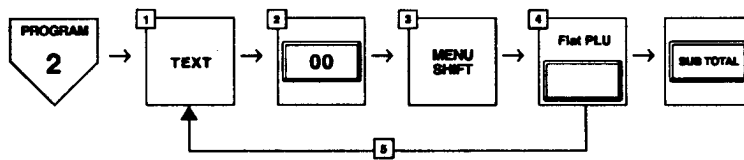
1. Input the number of the Short PLU that you want to program.
2. You cannot use a key assigned to the Flat-Long PLU keyboard here.
3. Input the descriptor from Worksheet #88 on page 106 using one of the procedures described in section 10 of this manual.
4. Cash Amount Tendered key on the standard keyboard.
5. Loop if you want to input different text for the next sequential Short PLU.
6. Loop if you want to specify another (non-sequential) Short PLU.

Long PLU Procedure



1. Input the number or Random PLU code of the Long PLU that you want to program.
2. You cannot use a key assigned to the Flat-Long PLU keyboard here.
3. Input the descriptor from Worksheet #89 on page 106 using one of the procedures described in section 10 of this manual.
4. Cash Amount Tendered key on the standard keyboard.
5. Loop if you want to input different text for the next sequential Long PLU.
6. Loop if you want to specify another (non-sequential) Long PLU.

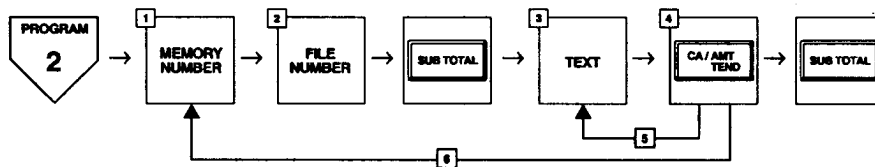
Flat-Long PLU Procedure



1. Input the descriptor from the Worksheet #89 on page 106 using one of the procedures described in section 10 of this manual.
2. After you input text, be sure to press **00** on the standard keyboard.
3. You can skip this step if the key you want to program is already in the current menu.
4. Press the Flat-Long PLU key that you want to program.
5. Loop if you want to input different text and program another Flat-Long PLU.

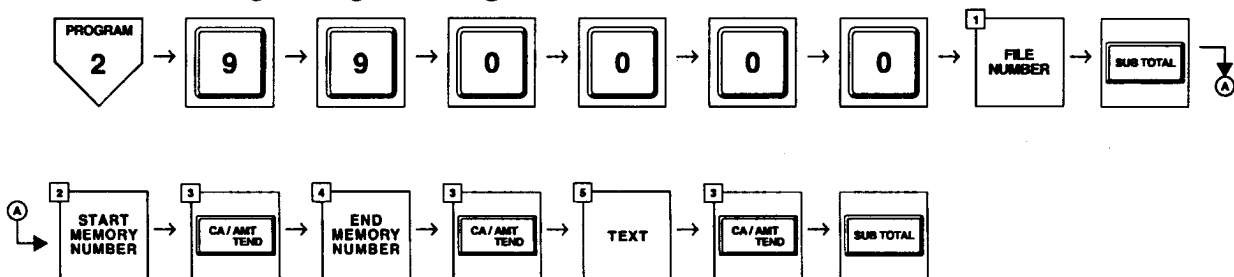
Memory Number Programming Procedure

Procedure 1



1. Input the memory number that identifies the PLU you want to program.
2. Input "03" if you are programming a Short PLU, "04" if you are programming a Long or Flat-Long PLU.
3. Input the descriptor from Worksheet #88 on page 106 (Short PLU) or Worksheet #89 on page 106 (Long PLU) using one of the procedures described in section 10 of this manual.
4. Cash Amount Tendered key on the standard keyboard.
5. Loop if you want to input a descriptor for the next sequential memory number.
6. Loop if you want to input a different memory number.

Procedure 2 — Range Programming



1. Input one of the following file numbers.
Short PLU file number: 03
Long PLU file number: 04
2. Range start memory number.
If you don't input anything here, the text is programmed from memory #1.
3. Cash Amount Tendered key on the standard keyboard.
4. Range end memory number.
If you don't input anything here, the text is programmed up to the last memory number that exists in the file.
5. Input the Text from the applicable worksheet.

Worksheet #88

| PLU No. | Memory Number | File Number | Standard Descriptor | Programmed Descriptor | | | | | | | | | | | | | | | | | | | |
|---------|---------------|-------------|---------------------|-----------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | | 03 | PLU | | | | | | | | | | | | | | | | | | | | |
| | | 03 | PLU | | | | | | | | | | | | | | | | | | | | |
| | | 03 | PLU | | | | | | | | | | | | | | | | | | | | |
| | | 03 | PLU | | | | | | | | | | | | | | | | | | | | |
| | | 03 | PLU | | | | | | | | | | | | | | | | | | | | |
| | | 03 | PLU | | | | | | | | | | | | | | | | | | | | |
| | | 03 | PLU | | | | | | | | | | | | | | | | | | | | |
| | | 03 | PLU | | | | | | | | | | | | | | | | | | | | |
| | | 03 | PLU | | | | | | | | | | | | | | | | | | | | |
| | | 03 | PLU | | | | | | | | | | | | | | | | | | | | |

Worksheet #89

| Flat-Long PLU No. | Long PLU No. | Memory Number | File Number | Standard Descriptor | Programmed Descriptor | | | | | | | | | | | | | | | | | | |
|-------------------|--------------|---------------|-------------|---------------------|-----------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | | | 04 | LPLU | | | | | | | | | | | | | | | | | | | |
| | | | 04 | LPLU | | | | | | | | | | | | | | | | | | | |
| | | | 04 | LPLU | | | | | | | | | | | | | | | | | | | |
| | | | 04 | LPLU | | | | | | | | | | | | | | | | | | | |
| | | | 04 | LPLU | | | | | | | | | | | | | | | | | | | |
| | | | 04 | LPLU | | | | | | | | | | | | | | | | | | | |
| | | | 04 | LPLU | | | | | | | | | | | | | | | | | | | |
| | | | 04 | LPLU | | | | | | | | | | | | | | | | | | | |
| | | | 04 | LPLU | | | | | | | | | | | | | | | | | | | |
| | | | 04 | LPLU | | | | | | | | | | | | | | | | | | | |
| | | | 04 | LPLU | | | | | | | | | | | | | | | | | | | |

7-3 Unit Prices

You can program each PLU with a unit price:

There are two different methods you can use to program a unit price to a PLU.

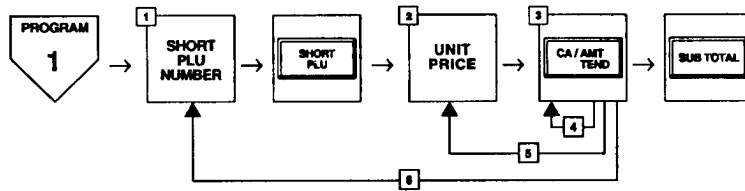
With “direct programming” the procedure you use depends on whether you are programming a Short PLU, a Long PLU, or a Flat-Long PLU.

With “memory number programming” you input the memory number of the PLU you are programming and then input "03" (which is the file number for Short PLUs) or "04" (the file number for Long PLUs and Flat-Long PLUs) You then input the applicable program code.

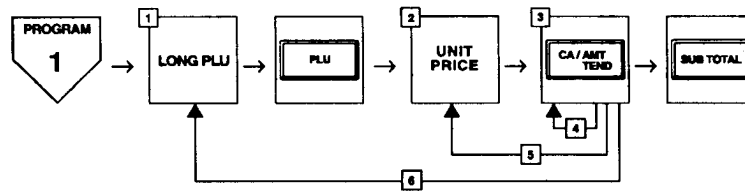
You use the same procedure for programming for both of the configurations noted above.

Direct Programming Procedures

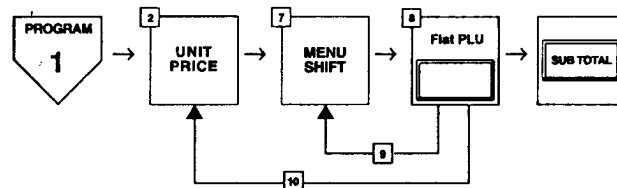
Short PLU Procedure



Long PLU Procedure



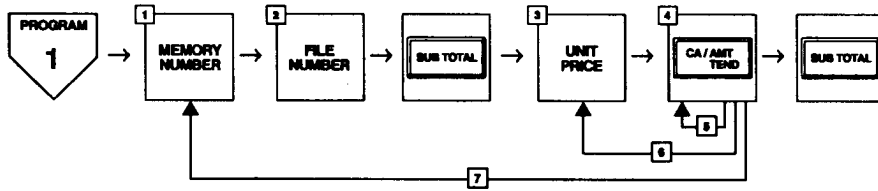
Flat-Long PLU Procedure



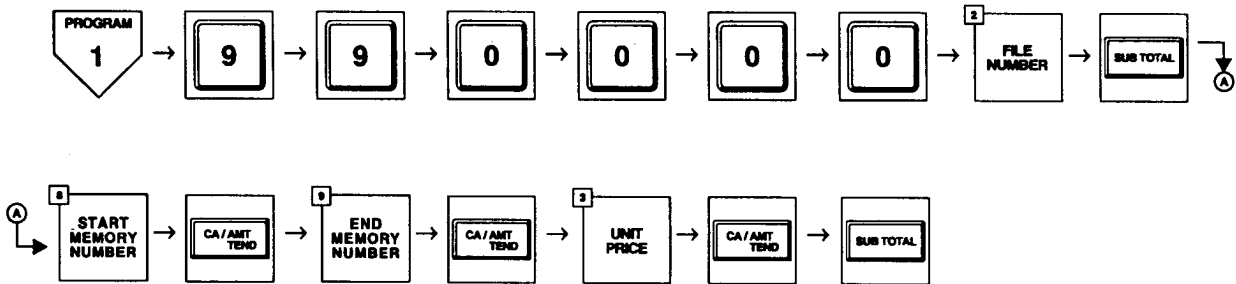
1. Input the number of the Short PLU that you want to program.
Input the number or Random PLU code of the Long PLU that you want to program.
2. Input a value for the unit price from the worksheet (Worksheet #90).
3. Cash Amount Tendered key on the standard keyboard.
4. Loop if you want to input the same data for the next sequential memory number.
5. Loop if you want to input different data for the next sequential memory number.
6. Loop if you want to input different data for a non-sequential memory number.
7. You can skip this step if the key you want to program is already in the current menu.
8. Press the Flat-Long PLU key that you want to program.
9. Loop if you want to input the same data for the different Flat-Long PLU.
10. Loop if you want to input another program code and program another Flat-Long PLU.

Memory Number Programming Procedure

Procedure 1



Procedure 2 — Range Programming



1. Input the memory number that identifies the PLU you want to program.
2. Input "03" (file number for Short PLUs) or "04" (file number for Long PLUs).
3. Input a value for the unit price from the worksheet (Worksheet #90).
4. Cash Amount Tendered key on the standard keyboard.
5. Loop if you want to input the same data for the next sequential memory number.
6. Loop if you want to input different data for the next sequential memory number.
7. Loop if you want to input different data for a non-sequential memory number.
8. Range start memory number.
If you don't input anything here, the data is programmed from memory #1.
9. Range end memory number.
If you don't input anything here, the data is programmed up to the last memory number that exists in the file.

Worksheet #90

| Memory Number | File Number | Program Code | | | | | |
|---------------|-------------|--------------|--|--|--|--|--|
| | | Unit Price | | | | | |
| | | | | | | | |
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7-4 Set Menu

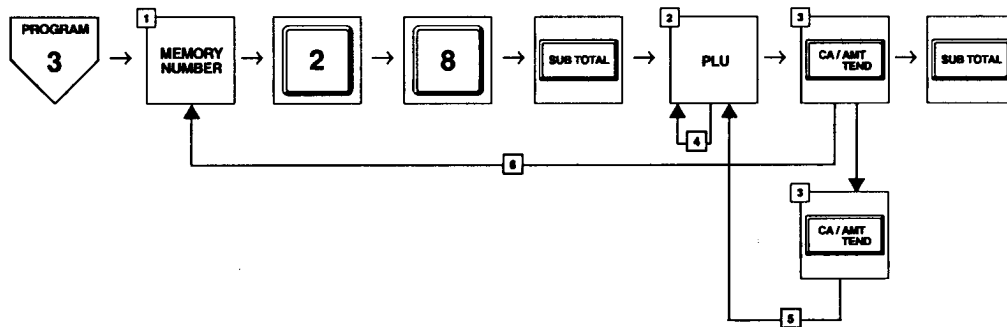
You can program each set menu table with up to eight PLUs. A set menu can be assigned to any of the Long PLUs, which in effect makes the Long PLU a set menu number.

Assigning PLUs to Set Menu Tables

The following procedure describes how to assign PLUs to set menus. Note that the procedure you use to identify the PLU you are assigning depends on its type.

- To assign a Short PLU
Input the Short PLU number you want to assign and press the Short PLU key.
- To assign a Long PLU
Input the Long PLU number or Random PLU Code you want to assign and press the PLU key.
- To assign a Flat-Long PLU
Press the Flat-Long PLU key you want to assign.

Procedure



1. Input the memory number that identifies the set menu you want to assign the PLUs to.
2. Specify the PLU from Worksheet #91 you want to assign to the set menu.
3. Cash Amount Tendered key on the standard keyboard.
4. Loop if you want to specify another PLU for the same set menu table memory number.
5. Press the #1 key and loop if you want to specify another PLU for the next sequential set menu table memory number.
6. Loop if you want to input a different non-sequential set menu table memory number.

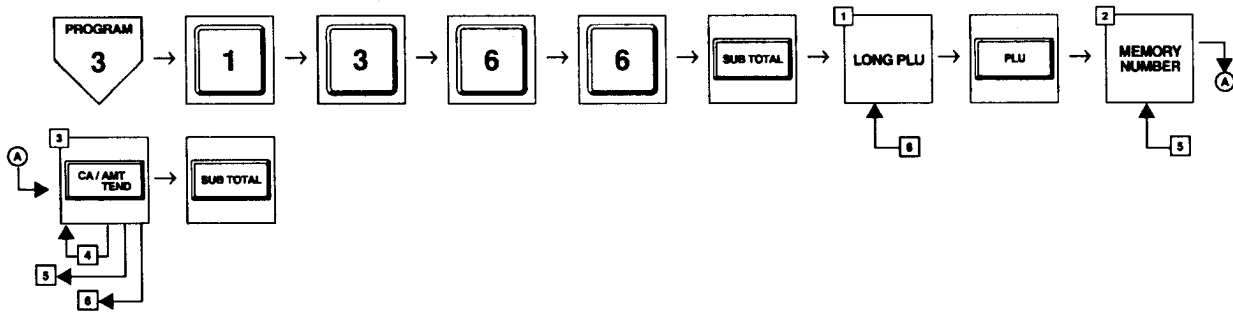
Worksheet #91

| Set Menu Table Memory Number | Set Menu Table File Number | Up to 8 Items (Short PLU or Long PLU) | | | | | | | |
|------------------------------|----------------------------|---------------------------------------|--|--|--|--|--|--|--|
| | 28 | | | | | | | | |
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Assigning Set Menu Tables to Long PLUs

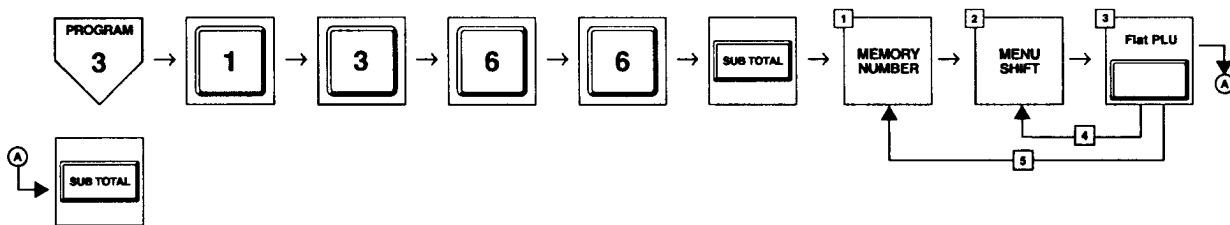
The following procedure describes how to assign set menu tables created with the procedure described in the previous section to Long PLUs or Flat-Long PLUs. Note that you cannot assign set menu tables to Short PLUs.

Procedure for Long PLUs



1. Input the PLU number or Random PLU Code that identifies the Long PLU you want to assign the set menu table to.
2. Input the set menu table memory number.
3. Cash Amount Tendered key on the standard keyboard.
4. Loop if you want to program the same set menu table memory number to the next sequential PLU number.
5. Loop if you want to program a different set menu table memory number to the next sequential PLU number.
6. Loop if you want to input a different non-sequential PLU number.

Procedure for Flat-Long PLUs



1. Input the set menu table memory number.
2. You can skip this step if the key you want to program is already in the current menu.
3. Press the Flat-Long PLU key you want to assign the set menu table to.
4. Loop if you want to program the same set menu table memory number to another Flat-Long PLU.
5. Loop if you want to program a different set menu table memory number to Flat-Long PLU.

8

Arrangement Key Table

You can assign up to 10 key operations to each Arrangement key table memory. Doing so makes it possible to perform multiple key operations with the touch of a single key. Either of the following two procedures can be used to perform registrations using the Arrangement key.

- Manual input of an Arrangement key table memory number (address) followed by operation of the Arrangement key. All key operations assigned to the Arrangement key table memory specified by the number are recalled and registered.
- Operation of an Arrangement key that has been linked to an Arrangement key table memory number. This recalls and registers the key operations assigned to the Arrangement key table specified by the number linked to the Arrangement key pressed.

See Worksheet #12 on page 26 for details on linking Arrangement key tables to each Arrangement key.

If the cash register is set up (by the initialization operation) to use clerk secret numbers, you can assign clerk sign on operations to an Arrangement key. Pressing the applicable Arrangement key signs on the clerk and then performs any other registration operations assigned to the Arrangement key.

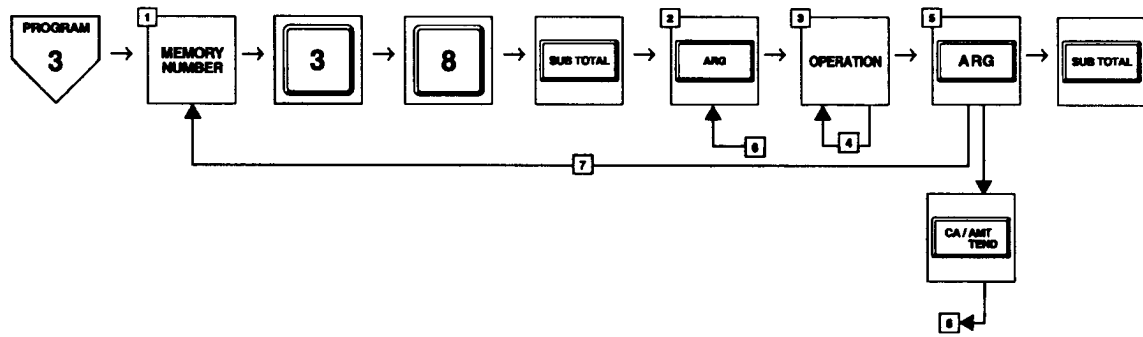
If an Arrangement key does not include a clerk sign on procedure on a machine that is set up to use clerk secret numbers, pressing it while no clerk is signed on causes an error message to appear on the display, indicating that a clerk secret number was not entered. This means that if you want the Arrangement key to be operational while no clerk is signed on, you must include the sign on procedure in the sequence assigned to the Arrangement key.

8-1 Arrangement Key Programming

Use the procedure shown below to assign key to the Arrangement key table memory. Note that different operations must be used depending on the type of operation being assigned.

- To assign a department, function key, or value
Press the department, function, or number key you want to assign.
- To assign a Short PLU
Input the Short PLU number you want to assign and press the Short PLU key.
- To assign a Long PLU
Input the Long PLU number or Random PLU Code you want to assign and press the PLU key.
- To assign a Flat-Long PLU
Press the Flat-Long PLU key you want to assign.

Procedure



1. Input the memory number of the Arrangement key table memory you want to program.
2. Be sure to press the Arrangement key to which you want to assign the following operations.
3. Perform one of the operations described above to assign a department, function key, value or PLU. Use Worksheet #92 on page 112 to prepare the data.
4. Loop if you want to input another key operation and assign it to the same Arrangement key. Remember that you can assign only 10 operations for each Arrangement key. If you try to assign too many operations, an error will occur.
5. Be sure to press the same Arrangement key that you pressed before you started assigning operations.
6. Press the #1 key and loop if you want to assign more operations to the next sequential Arrangement key table memory number.
7. Loop if you want to specify another (non-sequential) Arrangement key table memory number.

Worksheet #92

| Arrangement Key Table Memory No. | Arrangement Key Table File No. | Up to 10 Keys | | | | | | | | | |
|----------------------------------|--------------------------------|---------------|--|--|--|--|--|--|--|--|--|
| | 38 | | | | | | | | | | |
| | 38 | | | | | | | | | | |
| | 38 | | | | | | | | | | |
| | 38 | | | | | | | | | | |
| | 38 | | | | | | | | | | |
| | 38 | | | | | | | | | | |
| | 38 | | | | | | | | | | |
| | 38 | | | | | | | | | | |
| | 38 | | | | | | | | | | |
| | 38 | | | | | | | | | | |
| | 38 | | | | | | | | | | |

Programming Example

Programming Sequence



Arrangement Key Registration Sequence



9

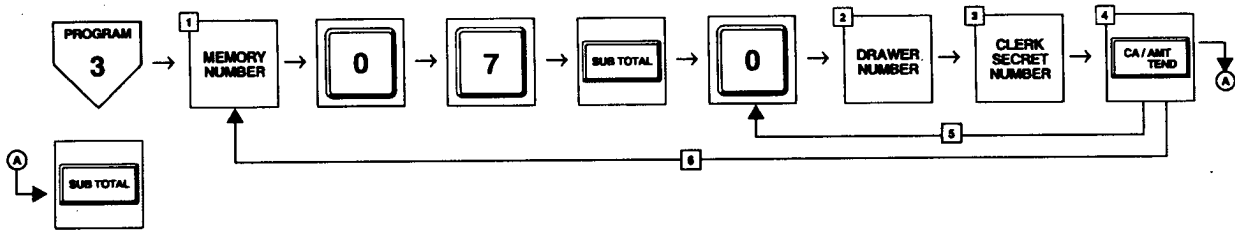
Clerk Features

The programming described in this section provides wide-ranging clerk control capabilities.

9-1 Drawer Numbers and Clerk Secret Numbers

You can assign clerk secret numbers, and also specify numbers that identify the drawer that each clerk is allowed to use. Note that drawer numbers can be specified only for cash registers that are using the optional multi-drawer system, which lets you connect up to two drawers. Use Worksheet #93 on page 113 to prepare your program data.

Procedure



1. Input the memory number.
2. Input the drawer number that you want to assign to the clerk program file. Input zero if the multi-drawer system is not being used.
3. Input a 4-digit clerk secret number. Note that you must input all four digits. To clear a clerk secret number that was previously assigned, input "0000" here. Also input "0000" here if the cash register is not set up to use the clerk secret number system.
4. Cash Amount Tendered key on the standard keyboard.
5. Loop if you want to input another drawer number and clerk secret number to the next sequential memory number.
6. Loop if you want to specify another (non-sequential) memory number.

Worksheet #93

| Clerk Memory Number | Clerk File Number | Program Code | | | | Clerk |
|---------------------|-------------------|--------------|------------------|--|--|-------|
| | | Drawer No. | Clerk Secret No. | | | |
| | 07 | | | | | |
| | 07 | | | | | |
| | 07 | | | | | |
| | 07 | | | | | |
| | 07 | | | | | |
| | 07 | | | | | |
| | 07 | | | | | |
| | 07 | | | | | |
| | 07 | | | | | |
| | 07 | | | | | |
| | 07 | | | | | |
| | 07 | | | | | |
| | 07 | | | | | |
| | 07 | | | | | |

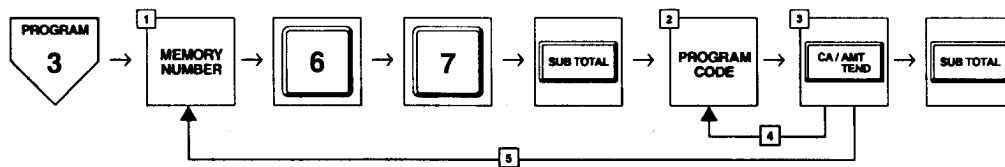
9-2 Clerk Control Functions

The procedure described here can be used to make certain operations compulsory, to define the clerk type (clerk, cashier, or training clerk/cashier), and to define the required timing for the sign off operation.

Difference between “Clerk” and “Cashier”

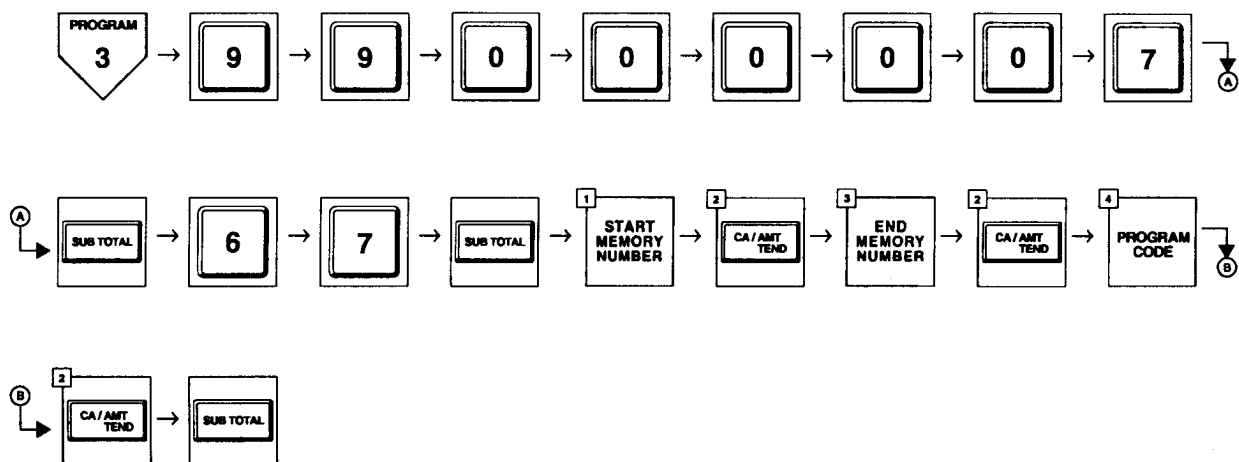
This cash register distinguishes between a clerk and a cashier only for determining the print sequence for the Clerk/Cashier Accountability Report. All cashiers are printed first, followed by all clerks. Both clerks and cashiers have the same totalizers and counters, and all operations clerks and cashiers are identical.

Procedure 1



1. Input the clerk memory number.
2. Input the 10-digit program code from Worksheet #94 on page 115.
3. Cash Amount Tendered key on the standard keyboard.
4. Loop if you want to input another program code for the next sequential clerk memory number.
5. Loop if you want to specify another (non-sequential) clerk memory number.

Procedure 2 — Range Programming



1. Range start memory number.
If you don't input anything here, the data is programmed from memory #1.
2. Cash Amount Tendered key on the standard keyboard.
3. Range end memory number.
If you don't input anything here, the data is programmed up to the last memory number that exists in the file.
4. Input the 10-digit Program code from the applicable worksheet.

Worksheet #94

| Item | Description | Choice | Program Code | |
|------|---|---|--------------|----|
| 10 | | | 0 | 10 |
| 9 | Number of customer input | Not Compulsory = 0 Compulsory = 2 | | 9 |
| 8 | a Report issuance operation except Batch READ/RESET report and individual report issuance | Allow = 0 Prohibit = 1 | | 8 |
| | b Batch READ/RESET report issuance operation except individual report issuance | Allow = 0 Prohibit = 2 | | |
| 7 | a Operator treatment *1 | Treat as cashier = 0 Treat as clerk = 1 | | 7 |
| | b Clerk/cashier training status *2 | Treat as normal = 0 Treat as trainee = 2 | | |
| | c Clerk/cashier sign off when receipt is issued *3 | No auto sign off = 0 Auto sign off = 4 | | |
| 6 | | | 0 | 6 |
| 5 | | | 0 | 5 |
| 4 | | | 0 | 4 |
| 3 | | | 0 | 3 |
| 2 | | | 0 | 2 |
| 1 | | | 0 | 1 |

**

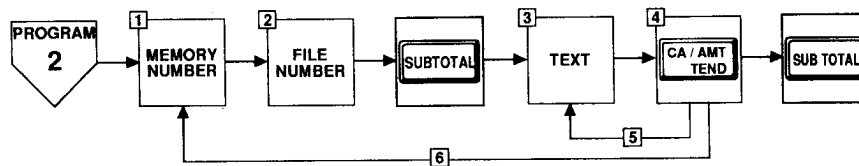
- *1 Selecting clerk or cashier here has no effect on available functions or operations. A distinction is made between clerks and cashiers only when determining the printing sequence for the Clerk/Cashier Accountability Report. All cashier data is printed first, followed by all clerk data.
- *2 When a clerk/cashier who is specified as a training clerk/cashier signs onto the register, the register automatically enters the Training Mode. The register automatically exits the Training Mode when the training clerk/cashier signs off.
- *3 This programming is applied only when "Secret numbers = 1" is programmed for Item 9 in Worksheet #1 on page 2 (Machine Initialization).

9-3 Clerk Descriptors

Use this procedure to assign literal descriptors for each clerk. Each descriptors can be either 8 or 12 characters long, depending on the descriptor length specification that is made during the initialize operation.

Note that this section explains only the general procedure to use for programming descriptors. For details on actual character input procedures, see section 10 of this manual.

Procedure



1. Input the memory number that identifies the clerk you want to program.
2. Input "07" (clerk program file number).
3. Input a descriptor from Worksheet #95 on page 116 using one of the procedures described in section 10 of this manual.
4. Cash Amount Tendered key on standard keyboard.
5. Loop if you want to input a descriptor for the next sequential memory number.
6. Loop if you want to input a different memory number.

** Revised

Worksheet #95

| Clerk Number | Memory Number | File Number | Standard Descriptor | Programmed Descriptor | | | | | | | | | | | | | | | | | | | |
|--------------|---------------|-------------|---------------------|-----------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | | 07 | C | | | | | | | | | | | | | | | | | | | | |
| | | 07 | C | | | | | | | | | | | | | | | | | | | | |
| | | 07 | C | | | | | | | | | | | | | | | | | | | | |
| | | 07 | C | | | | | | | | | | | | | | | | | | | | |
| | | 07 | C | | | | | | | | | | | | | | | | | | | | |
| | | 07 | C | | | | | | | | | | | | | | | | | | | | |
| | | 07 | C | | | | | | | | | | | | | | | | | | | | |
| | | 07 | C | | | | | | | | | | | | | | | | | | | | |
| | | 07 | C | | | | | | | | | | | | | | | | | | | | |
| | | 07 | C | | | | | | | | | | | | | | | | | | | | |
| | | 07 | C | | | | | | | | | | | | | | | | | | | | |

10

Character Programming

There are two basic methods you can use to input characters: using a character programming keyboard for direct input, or using character codes to specify the characters. The methods available to you depend on the cash register mode you are programming.

10-1 TK-1300

Whenever you enter the Program 2 Mode, the Flat micro-touch keyboard becomes a character programming keyboard. You can insert the character sheet under the rubber cover of the keyboard to help you see the character or function assigned to each key.

| | | | | | | | | | | | |
|--------|--------|--------|--------|--------|--------|---------|----------|--------|---------|----------|---------|
| â | ô | û | î | ê | Γ I | Π II | Δ III | Λ I | Ξ II | Σ III | Φ FS |
| á | ó | ú | í | é | ø | Æ | Ç | À | Ã | Ψ I | Ω II |
| à | ò | ù | | è | Ä | Ö | Ü | ß | Ñ | Θ III | |
| ! | | # | \$ | % | & | , | (|) | * | £ | ¥ |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | — | lb |
| Q q | W w | E e | R r | T t | Y y | U u | I i | O o | P p | @ | . |
| A a | S s | D d | F f | G g | H h | J j | K k | L l | + | : | * |
| | Z z | X x | C c | V v | B b | N n | M m | , | . | / | |
| CAP. | SHIFT | SPACE | SPACE | SPACE | SPACE | SPACE | SPACE | ← | → | ? | DBL |

The character programming keyboard has an uppercase “CAP” setting and a “SHIFT” setting. Its initial setting is the CAP setting, which remains in effect until you press the [SHIFT] key. After you press [SHIFT], the shift setting remains in effect until you press the uppercase [CAP] key again.

Note that neither the [SHIFT] nor [CAP] key operation is counted as a character during programming.

Press the [DBL] (double) key to specify that the next character you input is a double-size character. You must press [DBL] before each double-size character. Each double-size character counts as two normal size characters.

Use the [B] key ([.] key on the standard keyboard) to delete the most recently input character, much like a backspace key.

Important

- ☞ When using direct programming to program descriptors to department keys and function keys assigned to the Flat-Long PLU keyboard, be sure to press **00** on the standard keyboard after inputting the text. After pressing **00**, you can press the department key or function key to which you are programming the text.

10-2 CE-4200/CE-4250

With the CE-4200/CE-4250, you can use either the optional KB-1 Character Programming Keyboard or you can use character codes to input text.

Optional KB-1 Keyboard

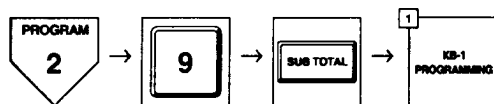
The optional KB-1 Character Programming Keyboard lets you see the text on its built-in alpha-numeric display as you input it.

To connect the KB-1

1. Set the cash register's Mode switch to OFF.
2. Remove the DF-2/KB-1 interface cover from the CE-4200/CE-4250.
There are two interface connectors. The round connector on top is the KB-1 interface connector, which the square connector on the bottom is for connection of the DF-2 Program Loader (via a PRL-CB-1 Cable).
3. Plug the KB-1 connector cable into the round KB-1 interface connector.

Before using the KB-1 for programming

Be sure to perform the following operation after connecting the KB-1 Keyboard to the cash register. You should also perform this procedure if the KB-1's alpha-numeric display goes blank.

Procedure

1. The message "READY" should appear on the display of the KB-1, followed by a flashing cursor. This indicates that the keyboard is ready for input. The cash register remains in the KB-1 character input mode until you press the **SUB TOTAL** key to complete the procedure and issue a receipt.

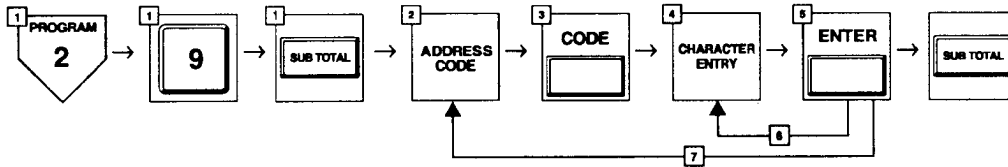
Important

- ☞ The register will not enter the KB-1 character input mode and the display of the KB-1 will remain blank if the register is not in the PROGRAM 2 Mode or if the Mode switch of the register is not in the PROGRAM position.
- ☞ The register remains in the KB-1 character input mode from the point that the cursor appears on the display of the KB-1 until the register's **SUB TOTAL** key is pressed to finalize the procedure and issue a receipt. At this point, the KB-1's display goes blank.
- ☞ If a power failure occurs while you are using the KB-1, its display will be blank after power is restored. Perform the above operation to start again.
- ☞ An error occurs if connections are not proper when you perform the above operation. For details on the function of each KB-1 key, see the manual that comes with it.

To program a descriptor with the KB-1

Use the following procedure to program text with the KB-1.

Procedure

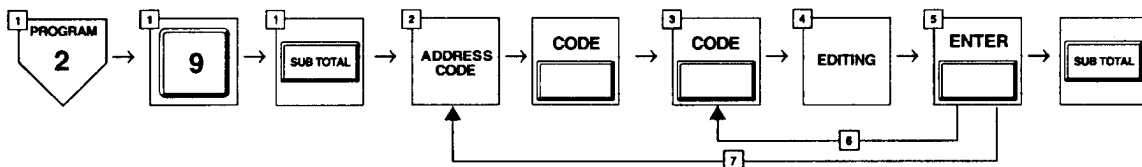


1. Prepares the KB-1 for programming.
2. Input a memory number and file number on the KB-1. This identifies the item whose descriptor you want to program.
3. Press this key on the KB-1.
4. Input the text on the KB-1
5. Press the [ENTER] key on the KB-1.
6. Loop if you want to input text for the next sequential memory number.
7. Loop if you want to input another memory number.

To edit a descriptor with the KB-1

Use the following procedure to edit text that is already programmed.

Procedure



1. Prepares the KB-1 for programming.
2. Input a memory number and file number on the KB-1. This identifies the item whose descriptor you want to edit.
3. Press the [CODE] key on the KB-1 twice to recall the existing descriptor.
4. Edit the descriptor.
5. Press the [ENTER] key on the KB-1.
6. Loop if you want to edit text for the next sequential memory number.
7. Loop if you want to input another memory number.

Character Code Programming

You can also program text by inputting codes that correspond to the characters you want to input. A list of character codes are given in the table below. You also use the [B] key on the 10-key pad during character code programming.

| | | |
|---|---|---|
| 7 | 8 | 9 |
| 4 | 5 | 6 |
| 1 | 2 | 3 |
| 0 | A | B |

(■) (□)

[B] Key

Press this key after inputting a 4-digit character code to register the code. Pressing this key without inputting anything clears the last code registered, much like a backspace key. Each press of this key backspaces one code.

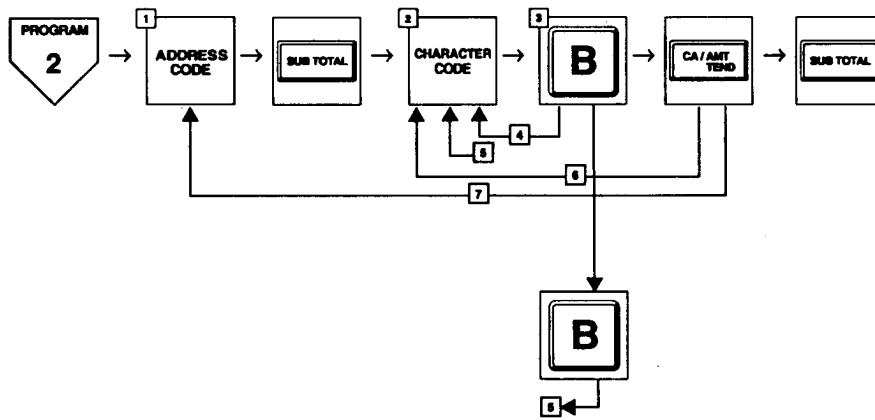
Character Code Table

Note that you can input a space by inputting the character code 0000.

Character code 1515 is the double-width specification, which must be input before each double-width character. Each double-width character is counted as two normal-size characters.

| | | | | | | | | | |
|---|------|---|------|---|------|---|------|-------------|------|
| A | 0110 | a | 0308 | 0 | 0100 | ê | 0604 | ⊕ | 1009 |
| B | 0111 | b | 0309 | 1 | 0101 | í | 0512 | Á | 0611 |
| C | 0112 | c | 0310 | 2 | 0102 | ú | 0511 | Æ | 0609 |
| D | 0113 | d | 0311 | 3 | 0103 | ó | 0510 | ø | 0608 |
| E | 0114 | e | 0312 | 4 | 0104 | á | 0509 | I | 0007 |
| F | 0115 | f | 0313 | 5 | 0105 | à | 0601 | II | 0008 |
| G | 0200 | g | 0314 | 6 | 0106 | : | 0706 | III | 0009 |
| H | 0201 | h | 0315 | 7 | 0107 | é | 0513 | † | 0010 |
| I | 0202 | i | 0400 | 8 | 0108 | è | 0600 | ‡ | 0011 |
| J | 0203 | j | 0401 | 9 | 0109 | ù | 0603 | ‡ | 0012 |
| K | 0204 | k | 0402 | ' | 0002 | @ | 0702 | ¶ | 0013 |
| L | 0205 | l | 0403 | , | 0307 | (| 0613 | ¶ | 0014 |
| M | 0206 | m | 0404 | / | 0001 |) | 0614 | ¶ | 0015 |
| N | 0207 | n | 0405 | ? | 0304 | → | 0704 | Fs | 0006 |
| O | 0100 | o | 0406 | ! | 0305 | ← | 0705 | Ã | 0612 |
| P | 0208 | p | 0407 | . | 0306 | â | 0606 | lb | 0303 |
| Q | 0209 | q | 0408 | + | 0502 | ô | 0605 | * | 0703 |
| R | 0210 | r | 0409 | - | 0503 | û | 0505 | ¥ | 0701 |
| S | 0211 | s | 0410 | î | 0607 | Γ | 1000 | \$ | 0615 |
| T | 0212 | t | 0411 | ç | 0610 | Δ | 1001 | £ | 0700 |
| U | 0213 | u | 0412 | Ñ | 0515 | Λ | 1002 | & | 0004 |
| V | 0214 | v | 0413 | . | 0003 | Ξ | 1003 | % | 0504 |
| W | 0215 | w | 0414 | Ä | 0506 | Π | 1004 | ò | 0602 |
| X | 0300 | x | 0415 | Ö | 0507 | Σ | 1005 | SPACE | 0000 |
| Y | 0301 | y | 0500 | Û | 0508 | Φ | 1006 | DOUBLE SIZE | 1515 |
| Z | 0302 | z | 0501 | # | 0005 | Ψ | 1007 | | |
| | | | | β | 0514 | Ω | 1008 | | |

Procedure



1. Input a memory number and file number. This identifies the item whose descriptor you want to program.
2. Input a 4-digit character code.
3. Registers the character code.
4. Loop if you want to input another character code for the same descriptor.
5. Press [B] and loop if you need to delete the last character code you input.
6. Loop if you want to input text for the next sequential memory number.
7. Loop if you want to input another memory number.

11

Program Data Save and Load

You can use the optional DF-2 Program Loader for program data save and load operations.

11-1 DF-2

All program data can be saved to a floppy disk using the optional DF-2 Program Loader. Program data can also be loaded from a floppy disk to the cash register using the DF-2. This capability lets you save program data during machine maintenance, and it allows you transfer data from one machine to another.

Important

- ☞ Use only 3.5-inch, double sided, high density disks.
- ☞ Before you use a new disk, you must format it first.
- ☞ When loading data from a disk, you must load all data. Therefore, we recommend that you save each file on a separate disk.

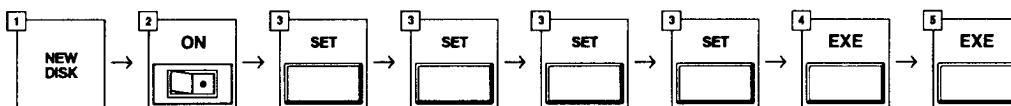
Connecting the DF-2 to the register

1. Set the Mode switch of the cash register to the OFF position.
 2. Remove the DF-2 interface cover from the cash register.
 3. Connect the optional CASIO PRL-CB-1 connector cable to the DF-2 interface of the cash register. Connect the other end to the DF-2 port of the DF-2.
- Use the CASIO PRL-CB-1 connector cable *only*.

Formatting a new disk

Be sure to use the following procedure to format a new disk before using it for the first time.

Procedure



1. Load the disk into the DF-2.
2. Switch DF-2 power on. Its display should show the message "IN" and then change to "--"
3. Press the SET button four times, and the display should show "F -"
4. Press the EXE button until the display changes to "F0". "F0" flashes on the display while the disk is being formatted. The display changes to "OK" after the formatting operation is complete.
5. Press the EXE button again to eject the disk.

11-2 Saving Program Data

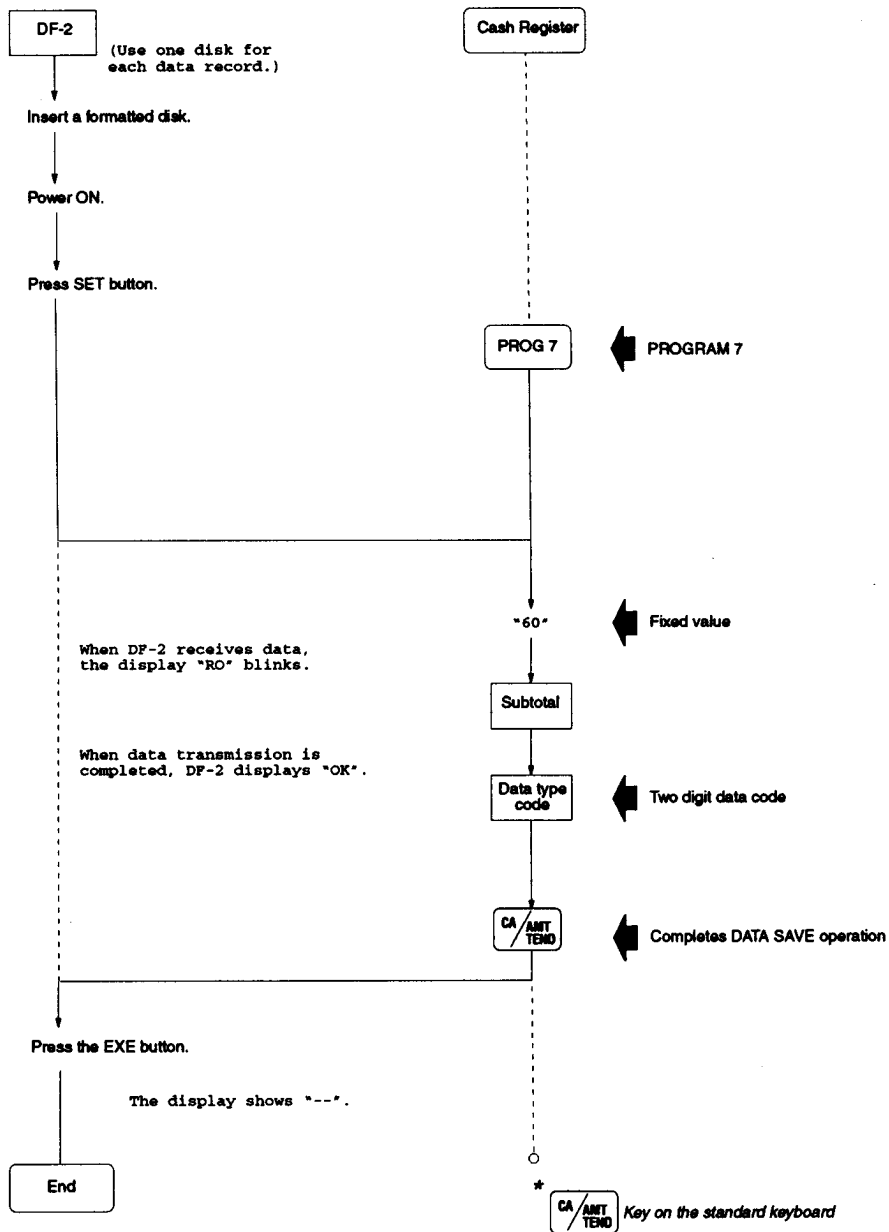
You can save data either by designating specific data or by saving all data. Use the codes in the following table to specify all data or specific data.

Memory Number Table

| File No. | Meaning |
|------------------|--|
| 01 | Fixed totalizer data |
| 02 | Free function data |
| 03 | Short PLU data |
| 04 | Long PLU data |
| 05 | Department key data |
| 06 | Group character data |
| 07 | Clerk program data |
| 13 | Short PLU unit price data |
| 14 | Long PLU unit price data |
| 22 | General program data (except PROGRAM, X1, and X2/Z2 mode secret number and machine number) |
| 23 | Fixed character data |
| 24 | Report header message |
| 25 | Tax table data |
| 28 | Set menu table data |
| 29 | Report group data (batch X/Z file data) |
| 30 | Clerk/cashier totalizer/counter link data |
| 32 | Receipt message |
| 38 | Arrangement key table data |
| 39 | Text recall file |
| 90 ^{*1} | All data except date and time |
| 92 | All program data (except PROGRAM, X1, and X2/Z2 mode secret number and machine number) |
| 93 ^{*1} | Function key assignment and function key data |

*1. This data cannot be transferred between the CE-4200, CE-4250 and the TK-1300. All other data can be exchanged between the CE-4200, CE4250 and the TK-1300.

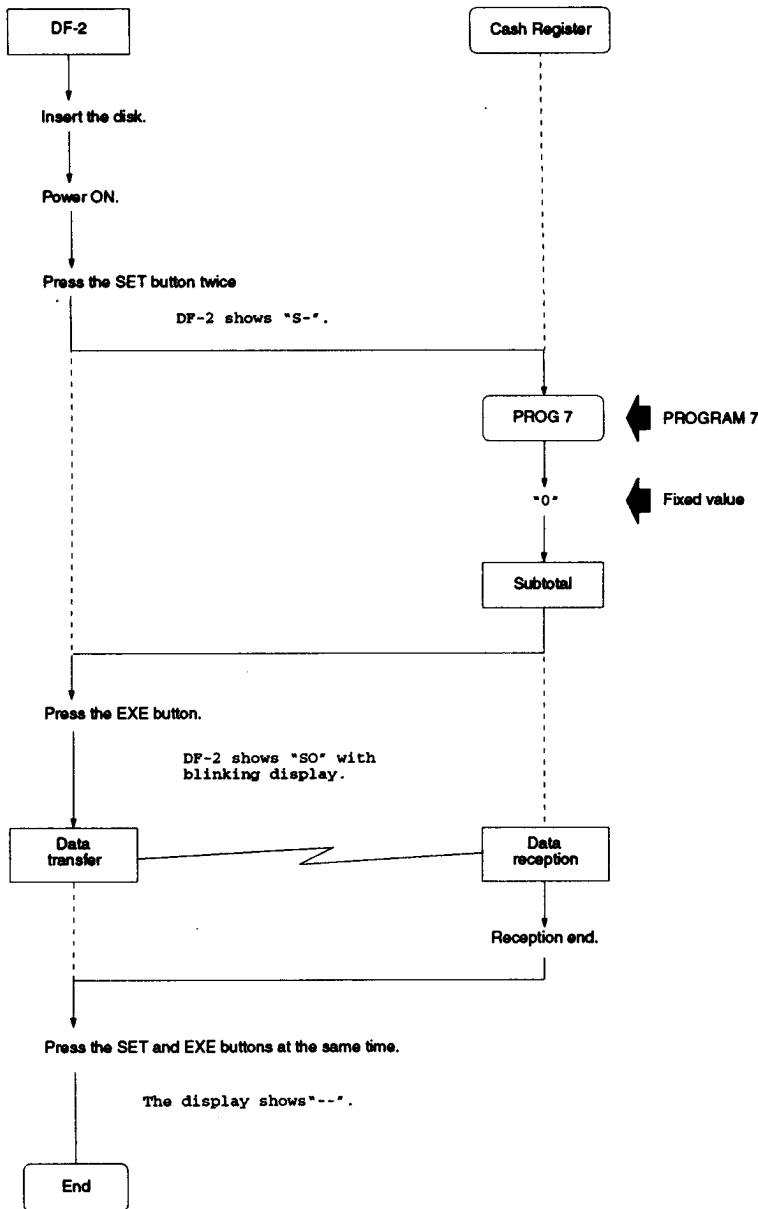
Procedure



11-3 Loading Program Data

Use the following procedure to load data from a disk.

Procedure

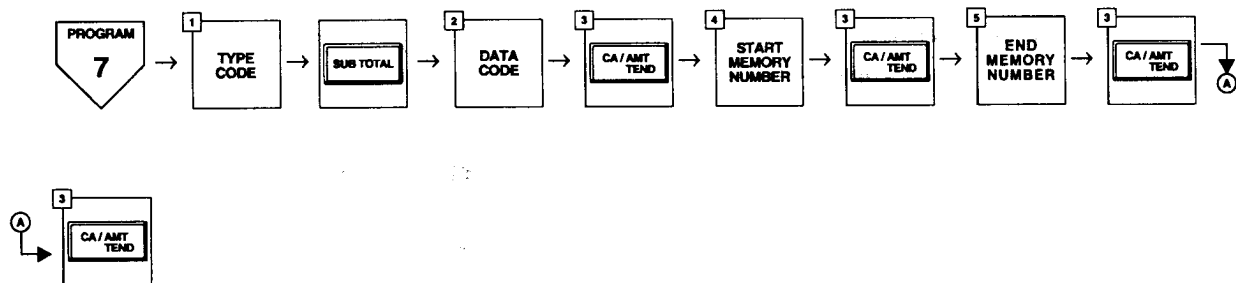


11-4 Data Range Load/Save

The following procedure lets you save and load a specific range of data. You can use this procedure with the DF-2 Data Loader. The following table shows the codes you should use to specify data.

| Data | Code |
|----------------------|------|
| Short PLU data | 63 |
| Long PLU data | 64 |
| Short PLU unit price | 73 |
| Long PLU unit price | 74 |

Procedure



1. Input the type code that describes the type of operation you are about to perform. To specify a DF-2 operation, input 60.
2. Input a 2-digit data code from the above table.
3. Cash Amount Tendered key on the standard keyboard.
4. Range start memory number.
If you don't input anything here, the data is loaded or saved starting from memory number 1.
5. Range end memory number.
If you don't input anything here, the data is loaded or saved up to the last memory number that exists in the file.

11-5 Program Data Error Codes

The following table shows the error codes that are printed on the receipt and journal whenever an error occurs while using the DF-2.

| Code | Error | Meaning |
|------|-----------------------|---|
| 48 | POWER DOWN | Cash register power outage during load operation. |
| 49 | BUFFER OVER | Block data length exceeds 128 bytes during load operation. |
| 50 | TIME OVER | Data not sent from DF-2 during load operation (bad connection, abnormal DF-2 operation, etc.) |
| 51 | BLOCK COUNTER ERROR | Non-consecutive block counter value during load operation. |
| 52 | LRC ERROR | Abnormal data in block during load operation. |
| 53 | PARITY ERROR | Abnormal parity for one byte during load operation. |
| 54 | OVERRUN/FRAMING ERROR | Abnormal receipt of one byte during load operation. |