

1. REFERENCE DOCUMENTS

- 1) PRINTER CP-727CR SERVICE MANUAL (00ZCP727CRSME)
- 2) CASH REGISTER BASIC MANUAL

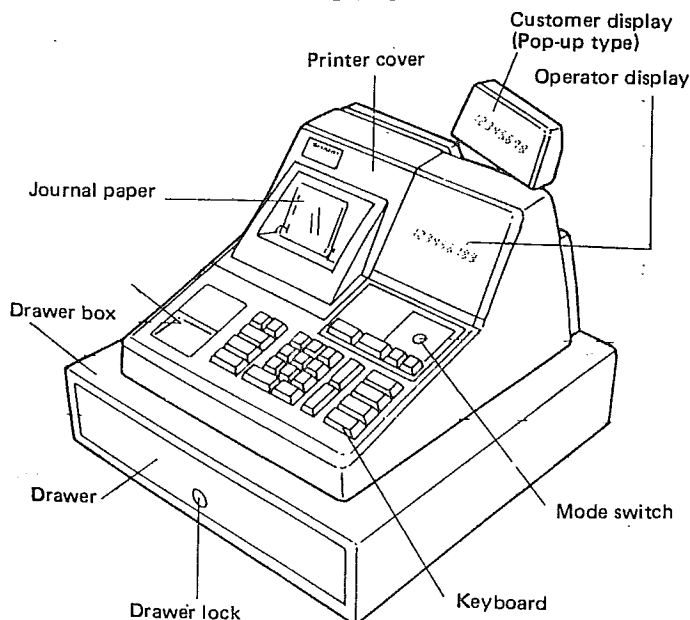
2. OPTIONS

- 1) ER10DT
Expansion key kit for 4 Department keys. Refer to page 20.
- 2) Stamp unit
Service option. Refer to page 21.
- 3) Drawer compulsion
Service option Refer to page 22.
- 4) Waterproof Key Cover
Service part (GCOVB6862RCZZ)

3. OUTLINE OF FUNCTIONS

1. Two departments standard =option for 4 departments max.
2. % key.
3. Multiplication and Repeat.
4. Paid out key and Received on account key.
5. Cash, Check and Charge tendering.
6. Tax table (49 break points).
7. Void key and Void mode.
8. Non add code key.
9. No sale.
10. 2 ply paper available.
11. Minus (discount)
12. Stamp option = Service option
13. Currency Conversion (other than U.S.A.)

4. SPECIFICATIONS



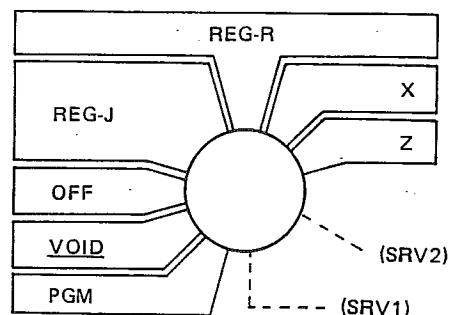
4-1. Rating

- 1) Power source: U.S.A., CANADA, PANAMA
AC 120V $\pm 10\%$, 60Hz
SOUTH AFRICA
AC 220V $\pm 10\%$, 50/60Hz
- 2) Power consumption: Stand-by 4.5W,
Operating 14.2W (max.)
- 3) Working temperature: 0 to 40 Degree C
(32 to 104 Degree F)
- 4) Built-in battery: Nickel-cadmium rechargeable battery
Memory holding time: (Approximately) one month (with built-in battery recharged completely at room temperature.)

4-2. Keyboard

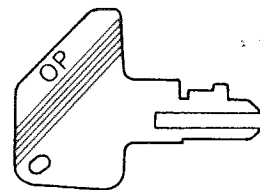
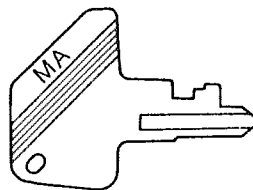
SRV key parts Code: LKGIM7087RCZZ

ER-1565 MODE SWITCH

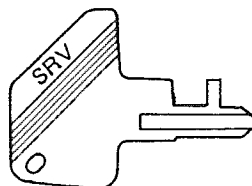


• Master key (MA)

• Operator key (OP.)



• Service key (SRV)



MODE SWITCH

	POSITION	OP KEY	MA KEY	SRV KEY
	SRV2			+
	SRV1			+
	PGM		+	+
	VOID		+	+
	OFF	++	++	++
	REG-journal (REG-J)	++	++	++
	REG-receipt (REG-R)	++	++	++
	X	+	+	+
	Z		+	+

+ = Position available.

++ = Position available to remove/insert key

REG-J: Permits transaction registrations. (Journal)

REG-R: Permits transaction registrations. (Receipt)

X: Permits reading of sales.

Z: Permits reading and resetting of sales.

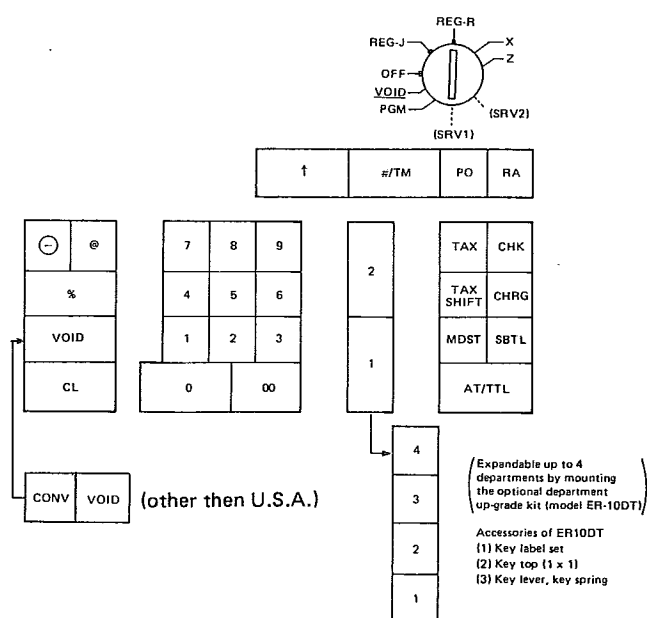
PGM: Permits machine programming.

VOID: Allows for the reversal of complete transaction entries.

OFF: Turns the machine off. The machine's display is cleared and no machine operation is allowed. The machine's memory contents, however, are retained.

ER-1565

KEY BOARD LAYOUT



↑: Paper-feed key

#/TM: Non add/Time display key

PO: Paid-Out key

RA: Received on account key

⊖: Minus key

@: Multiplication key

%: Percent key

VOID: Void key

CL: Clear key

0, 00, 1 ~ 9: Numeric key

1, 2: Department key

(1 ~ 4): Department key option (ER-10DT)

TAX: Tax key

CHK: Check key

TAX SHIFT: Tax shift key

CHRG: Charge sale key

MDST: Merchandise Sub total key

SBTL: Sub total key

AT/TTL: Amount-tendered/Total/No-sale key

CONV: Currency Conversion

(other than U.S.A.)

4-3. Display

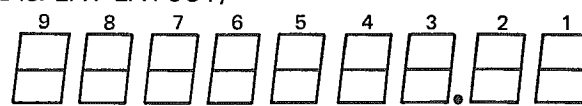
1. Front display (Operator display)

(DISPLAY DEVICE):

9 digit, 7-segmented type. (Blue color)

Letter size: 7.4mm (H); 5.5mm (W)

(DISPLAY LAYOUT)

Amount, code, time
(a maximum of 7 digits)

Repeat counter, Minus

Department, total (F),

Change (L), sub-total (L),

error (L), program (P)

The following symbols can appear in the operator display.

1. "E" in the 9th position: Error condition
2. "-" in the 8th position (fixed position): Minus symbol*
3. "P" in the 9th position: Program mode
4. "L" in the 9th position: Sub-total
5. "F" in the 9th position: Finalization
6. "L" in the 9th position: Change

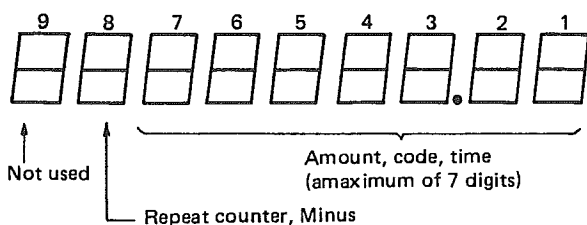
(*) The minus symbol light up when the amount entered is negative by using the void or minus key.

The number of repeats is displayed for "2" and counted up with each repeat. When ten times registrations are done, the display shows "0".

Example: (2 → 3 → 4 9 → 0 → 1 → 2)

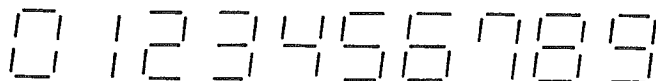
2. Rear display (Customer display [POP up type])

The same device is used for the customer display as operator display.

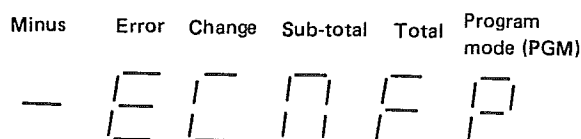


3. Display type and capacity

- 1) Type: 7-segment type green fluorescent display
- 2) Amount, code: Max 7 digits, Dept: 1 digit, Repeat: 1 digit
- 3) Figure



4) Symbol



- 5) Repeat counter: Incrementing counter, starts from 2.

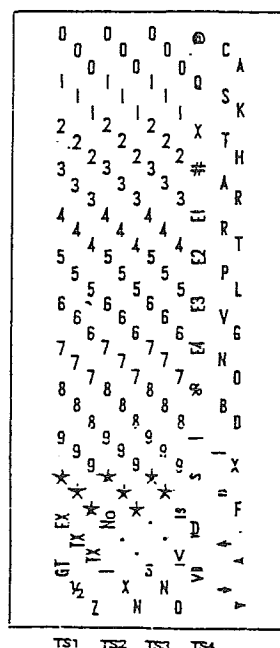
4-4. Printer

(1) Overview of the printer

[Type: CP-727CR]

- 1) Printing system: 1-station flying drum type printer.
- 2) Printing capacity: 12 digits. — amount: 9 digits (columns 4 to 12), symbol: 3 digits (columns 1, 2 and 3)
- 3) Dimension of printed character: Figure: Approx. 2.8(H) x 1.6(W) mm, Spacing: Approx. 2.8mm between characters, 5.2mm between lines.
- 4) Printing speed: about 3.5 lines/sec.
- 5) Functions: Stamp option
Two-ply paper rolls can be used.
- 6) Roll Paper width: 57.5 ± 0.5mm (2-1/4 in b1/64 in.)
Max. roll diameter: 80 mm.
(3-5/32 in.)
- 7) Paper quality: Bond paper (Approx, 0.07 mm in thickness, 52.3 g/m² in weight)
- 8) Color of print: Purple (Single color)
(ink ribbon) Width: 33/64 in. (13mm)
Length: 13 feet 1-15/32 (4m)

(2) PRINTING WHEEL LAYOUT (Print wheel pattern)



Print wheel part code: 00CN7014-35//

Price rank: BD

4-5. REG-J and REG-R MODES PRINTING SAMPLE

RECEIPT TYPE (REG-R mode registrations)

11-27.85		* DATA (MM/DD/YY)
1TX *7.00		* ITEM REGISTRATION
*4.00 -		MINUS KEY
2 *13.45		
10.00%		
*1.35		10% PREMIUM FOR 2 DEPT.
1TX *10.50		REPEAT (TAXABLE ITEM)
1TX *10.50		VOID
1TX *10.50		Quantity
1TX *10.50		MULTIPLICATION, Unit price
7Q		
1.65@		
1 *11.55		Merchandise sub total
*50.35 ST		AUTO TAX
*1.02 TX		
*51.37 TL		* TOTAL
*60.00 AT		AMOUNT-TENDERED
*8.63 CG		CHANGE AMOUNT
12301234		* MACHINE No./ CONSECUTIVE No.
11-50		TIME

The journal type printing (i.e printing of REG-J mode registrations) has no stamp, date printing and the *-marked space lines with the same contents of the receipt type. The date has actually been printed at the end of the prior transaction.

The numerical value on this sample may be incorrect.

4-6. Reading, Resetting Reports

REPORT EXAMPLE

09-15-86

Date (MM/DD/YY)

Z00014

Z-counter

5***12345

GT (12 digits)

14127-67

1 01237

Dept. 1 (with counter)

*434-23

2 00046

Dept. 2 (with counter)

*101-58

*535-81 TL

Sum of Dept. 1 and 2

*1-78 -
% ST

Discount or Coupon

*0-66

% for SBTL

*534-69 NT

Net

%

*0-56

% for DEPT

*4-73 TX

Tax

*4-56 VD

Void

*VD

*22-33

Void mode total

*20-00 RA

Received on account

*15-00 PO

Paid out

*2-01 CK

Check sale

*12-96 CH

Charge sale

*524-45 CA

Cash sale

00004 Q

*529-45 TL

0560482

9-21

4-7. Memories

TOTALIZERS, COUNTERS AND PRESETS

ITEM	TOTALIZER	COUNTER	PRESET	NOTE
GT (GRAND TOTAL)	12Dgx1S			
Z counter		4Dgx1		
DEPT. STANDARD: 2 DEPTS OPTION: 4 DEPTS	7Dgx2(4) S	4Dgx2(4) S	TAX SORT +/- 5Dgx2(4) HALO SIS	Sign Unit price Digit HALO Single item sale
DEPT. TTL	7Dgx1 S			Calculated amount*
Minus (-)	7Dgx1 S		TAX SORT 5Dgx1 HALO SIS	Unit price Digit HALO Single item sale
SBTL%	7Dgx1 S		% presets	% rate, +/-, TAX SORT
NET	7Dgx1 S			Calculated amount*
ITEM%	7Dgx1 S		% presets	% rate, +/-, TAX SORT
TAX	7Dgx1 S		49 Breakpoint Maximum tax table or 6 digits straight or Manual (digit HALO) TAX.	
VOID	7Dgx1		Last and Past item void total	
VOID MODE	7Dgx1			Void mode total
P/O	7Dgx1 S			
R/A	7Dgx1 S			
CASH SALE	7Dgx1 S			
CHARGE	7Dgx1 S			
CHECK	7Dgx1 S		HALO	Digit HALO
CID	7Dgx1 S			
customer		4Dgx1 S		
consecutive		4Dgx1		
machine #			3Dgx1	

Dg: Digit (S): Sign (+/-)

GRAND TOTAL (GT) FORMULA

The non-resettable GT figure which appears on the Z report satisfies the following formula.

$$\begin{aligned} \text{Current GT} = & \text{Old GT (i.e. from the previous Z report)} \\ & + \text{IDEPT 1I} + \text{IDEPT 2I} + \text{I (-) I} \\ & + \text{ISBTL \%I} + \text{ITAXI} + \text{I VOID I} \end{aligned}$$

(Note) The symbol of I I stands for absolute value.

(NOTE)

* The amount is calculated from the related totalizers (i.e. no actual totalizer exists).

ABBREVIATIONS

-----	x	-----
MEMORY		QUANTITY
SIZE		OF
OF		MEMORY BLOCKS
A BLOCK		

"S" means "with +/- sign".

4-8. Drawer

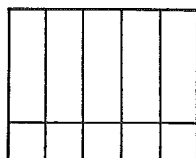
1) Type: Metallic drawer

- (1) — The till and drawer are made of plastics and are integral with each other (The till is not detachable from the drawer).
- (2) — Manual opening lever provided (in the drawer bottom)
- (3) — No drawer bell

2) Compartment

- (1) U.S.A: 5 Bills/5 Coins
- (2) CANADA: 4 Bills/5 Coins
- (3) SOUTH AFRICA: 4 Bills/5 Coins, with bill separator and sub-coin case
- (4) Bardados: 4 Bills/5 Coins

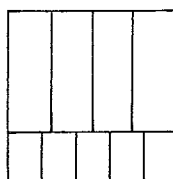
(1)



U.S.A.

(2)

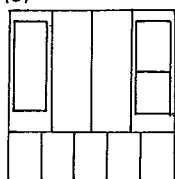
4B/5C



CANADA

(3)

4B/5C



SOUTH AFRICA

3) LOCKS

LOCK: 180° counter clockwise
 UNLOCK: 180° clockwise

4-9. Clock Function

Time Display

- 1) By depressing **[#/TM]** key, hours and minutes will be displayed in REG and VOID modes.
- 2) 12-hour format or 24-hour format can be selected in the SRV mode.
- 3) Dual display (Front/Rear Display)
- 4) Pressing any other key causes the time display to disappear.
- 5) Time can be set in the PGM mode.

4-10. Error Processing

All error are treated as a "lock error" except **[CL]** key operation, when "All lock error" is selected in the SRV mode. (SRV JOB #1 item B)

The "lock error" condition occurs if,

1. The wrong key operation is used.
2. The input number exceeds 7 digits,
3. The subtotal exceeds 6 digits (also in the case where the additional calculation caused the subtotal to exceed 7 digits).

In either case, the error mark "E" is displayed and the error (continuous) sound occurs. Depressing the **[CL]** key cancels the error condition.

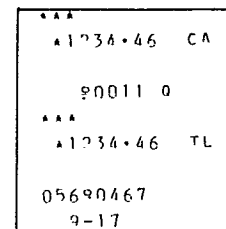
4-11. Power Failure Mark (*** No.)**

- 1) Power failure while waiting or operating: the sequence at power fail will be completed.
- 2) Power failure while printing: the printing is started again after printing "***** No."
- 3) Power failure during X/Z printing: the printing is started again after printing "***** No."

NOTE: When printing multiple lines, the printing will be started from the first line.

4-12. Overflow Processing

- 1) When the totalizer (7 digits) overflows, an overflow message is printed on the X/Z report.
- 2) Print format

**5. SERVICE (SRV) MODE**

For setting the SRV (1, 2) mode, use the service key (the letters SRV engraved on it).

5-1. Program Reset (Program Loop Reset)

[Display: ³ ² ¹]

This operation resets the program to the key halt condition if the machine does not operate normally. Use this manual reset operation first to clear problems.

- Operation: (1) Turn the mode switch to SRV2 position.
 (2) Turn the mode switch from SRV2 position to SRV1 position.

5-2. All-Memories Clear (Master Reset)

[Display: ³ ² ¹]

This operation clears all the memories (Preset memories, Totalizers, Counters) in the RAM and Reset the program to the key halt condition.

- Operation: (1) Turn the mode switch to SRV2 position.
 (2) Depress keeping numeric **[9]** keys.
 (3) While holding the **[9]** key down, turn the mode switch from SRV2 position to SRV1 position.

NOTE: After performing this procedure, the unit must be completely reprogrammed in both the Service and the Program modes.

5-3. Service Mode (SRV) Programming

1) GENERAL ENTRY KEY SEQUENCE (SRV MODE)

The following are the key operation required for programming.

x → **[@]** → Numeric entry (DATA = ABCD) → **[SBTL]**
 [4 digits, MAX.]

x = JOB Number

JOB # (DATA)

1 ~ 3 Function selection (The data consists of 4 digits number for each job indicated by ABCD in the followings.)

- 6 Lower 7 digits of GT setting
 7 Upper 5 digits of GT setting
 8 Z counters initial amount setting (4 digits)

JOB CODE #1 MRS = 0252

1 → @ → ABCD → SBT L

- A. (1) Number of departments
 (2) GT print on the Z report
 (3) GT resetting

Numeric Entry	(1) Number of departments	(2) GT print on the Z report	(3) GT resetting
0	2 DEPTS	Print	Non resettable
1	4 DEPTS		
2	2 DEPTS		
3	4 DEPTS	Not print	
4	2 DEPTS	Print	
5	4 DEPTS		
6	2 DEPTS		
7	4 DEPTS	Not print	

Department Key Top Layout

2 Depts 4 Depts

2	4
	3
1	2
	1

By ER-10DT

- B. (1) Key catch sound
 (2) Error beep

Numeric Entry	(1) Key catch sound	(2) Error beep
0	Exists	Single error beep and lock
1	Not exists	
2	Exists	Continuous beep and lock *
3	Not exists	

* The beep continues until a CL key depression.

- C. (1) Rounding factor

Numeric Entry	(1) Rounding factor
0	Rounding down
5	Rounding off
9	Rounding up

- D. (1) TAB (Decimal) position
 (2) Zero key select

Numeric Entry	(1) TAB (decimal) position	(2) Zero key select
0	TAB = 0 (0)	00 key
1	TAB = 1 (0.0)	
2	TAB = 2 (0.00)	
3	TAB = 3 (0.000)	
4	TAB = 0 (0)	000 key
5	TAB = 1 (0.0)	
6	TAB = 2 (0.00)	
7	TAB = 3 (0.000)	

JOB CODE #2

MRS = 0005

2 → @ → ABCD → SBT L

- A. (1) Drawer compulsory

Numeric Entry	(1) Drawer compulsory
0	No
1	Yes

- B. (1) Past item void
 (2) VOID mode

Numeric Entry	(1) Past item void	(2) VOID mode
0	Allowed	Exists
1	Not allowed	
2	Allowed	Not exists
3	Not Allowed	
4	Allowed	Exist
5	Not Allowed	
6	Allowed	Not exists
7	Not allowed	

- C. (1) Non add code printing
 (2) No sale after non add code printing
 (3) Negative subtotal

Numeric Entry	(1) Non add code printing	(2) No sale after non add code printing	(3) Negative subtotal
0	Possible	Possible	Allowed
1	Not possible		
2	Possible	Not possible	
3	Not possible		
4	Possible	Possible	Not allowed
5	Not possible		
6	Possible	Not possible	
7	Not possible		

Perform the "program reset" or "master reset" operation.
 (Turn the mode switch from SRV2 to SRV1.)

6. PROGRAM (PGM) MODE

- Place the mode switch to the "PGM" position, and select the required options.

NOTE: All programming is entered when in PGM mode.

6-1. Machine-number (a maximum of 3 digits)

1 → **@** → Entry of a machine number → **SBTL**

MRS = 000 (Max. 3 digits)

MRS = 000

6-2. Consecutive-number (a maximum of 4 digits)

2 → **@** → Entry of a consecutive number → **SBTL**

MRS = 0000 (Max. 4 digits)

- Enter a number that is one less than the number from which you want to start.

6-3. Date setting (a maximum of 6 digits)

4 → **@** → Entry of date → **SBTL**

MRS = 000000 (Year, month, day)

- Enter first "year," second "month" and then "day" (YY/MM/DD, e.g. 86/02/10 for Feb. 10, 1986) for date setting.

6-4. Time setting (4 digits)

5 → **@** → Entry of time → **SBTL**

MRS = 0000 (hour, minute)

- The time can be displayed by pressing the **#/TM** key in the "REG-J" "REG-R", or "VOID" mode position.
- The time display can be cancelled by any key.
- Time is entered according to the 24-hour clock;
2:30 AM is entered as 230.
2:30 PM is entered as 1430.
However, time is displayed and printed according to conventional AM or PM indication;
2:30 AM prints as 2-30.
2:30 PM prints as 2-30*.

6-5. Automatic updating of date

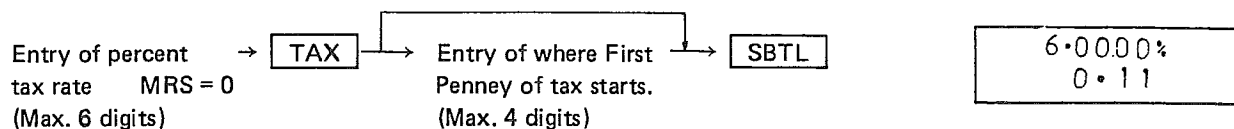
The date is automatically updated as long as the clock unit works. However, the journal paper will continue to show the previous date even when the date has been updated internally. It is therefore necessary to ring-up an empty receipt every day before the start of the business by pushing the **AT/TTL** key in the "REG-J", "REG-R" mode, updating the print of date. If this operation is not done, the first transaction of the day is printed with the previous date.

6-6. Automatic tax calculation function

To apply automatic tax assessment to sales transactions, it is necessary to set a percent tax rate in advance or to establish a tax table.

6-6-1. Percent tax rate programming

Percent tax rate and minimum taxable amount can be programmed in 6 digits (two integer digits and four decimal digits) and 4 digits, respectively.

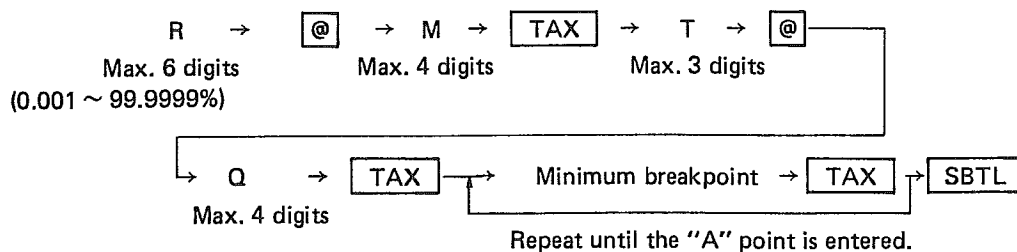


6-6-2. Tax table programming

(1) For this example, refer to the tax table below (column A: 6% rate)

	A		B	C
Tax	Minimum breakpoint	Maximum breakpoint	Breakpoint difference (c)	C
.00	.01	.10	—	Non-cyclic
.01 ← T	.11 ← Q	.22	10	
.02	.23	.38	12	
.03	.39	.56	16	Cyclic (I)
.04	.57	.72	18	
.05	.73	.88	16	
.06	.89	1.10	16	
.07	1.11 ← "A" point	1.22	22	
.08	1.23	1.38	12	Cyclic (II)
.09	1.39	1.56	16	
.10	1.57	1.72	18	
.11	1.73	1.88	16	
.12	1.89	2.10	16	
.13	2.11	2.22	22	

(Procedure)



Programming the New Jersey Tax Table

Key operation	Display	Print
R → 6 00 00 @	P 60000	
M → 1 00 TAX	P 0.00	6.0000%
T → 1 @	P 1	1.00
Q → 1 1 TAX	P 0.11	001 0.11
	P 0.23	002 0.23
	P 0.39	003 0.39
	P 0.57	004 0.57
	P 0.73	005 0.73
	P 0.89	006 0.89
	P 1.11	007 1.11
"A" point → 1 1 1 TAX	P 0.00	
Programming tax table is completed. → SBT		

NOTES:

- 1) The different patterns between the minimum and maximum tax breakpoints can be up to 49 entries.

- (2) In case the tax is not provided for every cent.

Please modify the table by setting the tax for every cent in the following way.

Consider the minimum breakpoint corresponding to unprovided tax to be the same as the one corresponding to the tax provided on a larger amount and set it.

Tax	Minimum breakpoint		Tax	Minimum breakpoint	Breakpoint difference (c)	
.00	0.01		.00	0.01	1	Non-cyclic
.01	0.19		.01	0.19	18	
.03	0.52		.02	0.52	33	
.04	0.85		.03	0.52	0	Cyclic
.05	1.19		.04	0.85	33	
.07	1.52		.05	1.19	34	← "A" point
.08	1.85		.06	1.52	33	
.09	2.19		.07	1.52	0	Cyclic
			.08	1.85	33	
			.09	2.19	34	

R = 4(%), M = 100, T = 1, Q = 19

- (3) In case the tax table is completely cyclic.
 Program the tax table considering the first line to be non-cyclic.
 Example:

Tax	Minimum breakpoint	Breakpoint difference (c)		
.00	0.00	—		
.01	0.11	11		Non-cyclic
.02	0.26	15		
.03	0.43	17		Cyclic
.04	0.69	26	Cyclic	
.05	0.87	18		
.06	1.00	13		
.07	1.11	11		← "A" point
.08	1.26	15		
.09	1.43	17		
.10	1.69	26	Cyclic	Cyclic
.11	1.87	18		
.12	2.00	13		

R = 6(%), M = 100, T = 1, Q = 11

6-6-3. Cancellation of automatic tax calculation function

→ VOID → TAX

NO TX

6-7. Department and minus keys

- (1) Assigning single-item cash sale.

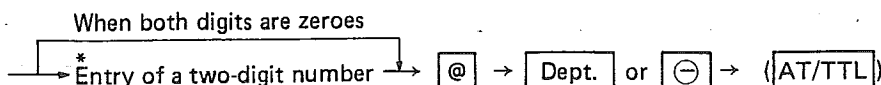
If the single-item cash sale is assigned to a department, a single registration into this department is accomplished by entering a unit price and pressing the corresponding department or minus key. If the preset unit price is desired, then only the department or minus key need be depressed.

The sale is finalized immediately without pressing **AT/TTL**.

(2) A limit on the number of entry digits.

Any number of digits can be chosen (i.e. 0 though 6 digits) to prevent amounts from being entered beyond limit.

If "0" is chosen, registration by entering an amount is prohibited, but use of a preset unit price is permitted.



	Single item cash sale/Limit on the number of entry digits	Numeric input
1st entry	No single-item cash sale	0
	Single-item cash sale	1
2nd entry	Limit on the number of entry digits	0 ~ 6

Leading zeros are not required.

(3) Unit prices

The register allows programming of a unit price for each department which can be a maximum of five digits in length.

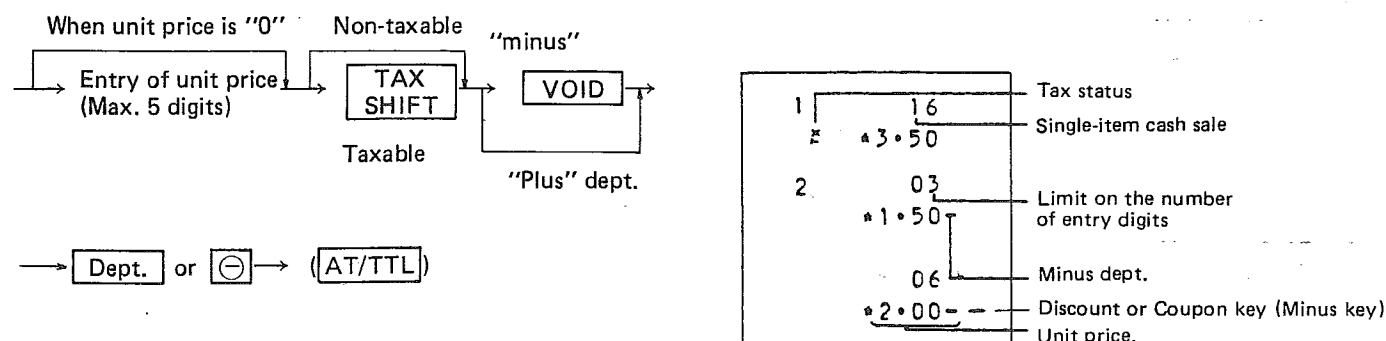
(4) Tax status

Either Taxable or Non-taxable status can be assigned.

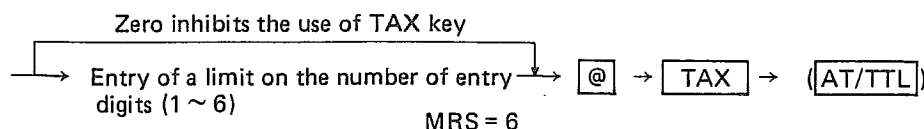
(5) A plus (+) or minus (−) department

Departments where sales are to be registered must be programmed individually as plus department.

The entries for departments programmed as minus are subtracted from the transaction amount.



6-8. An entry digit limit for the manual tax key



4 T X

6-9. The percent key

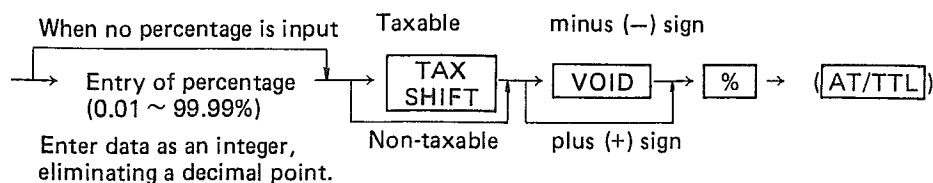
(1) Percentage (a maximum of 4 digits (2i + 2d))

(2) A tax status for the percent calculation amount.

This programming determines whether or not the percent calculation amount is taxable.

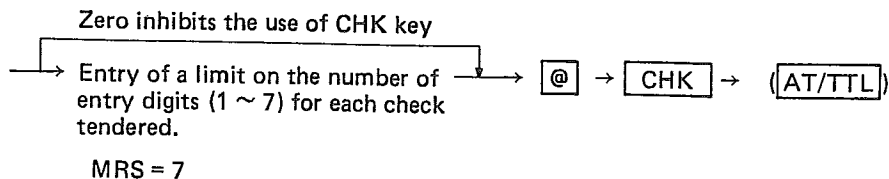
(3) Assigning plus sign (premium) or minus sign (discount)

The ER-1565 register can assign a plus or minus sign to percent calculations. For premium registrations, choose plus sign and for discount registration, choose minus sign.



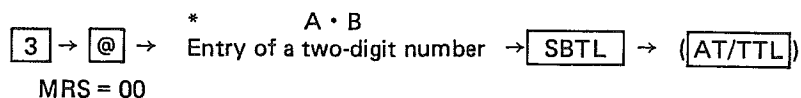
10.00 %

6-10. An entry digit limit for the check key



6 CK

6-11. The printing format and the presence or absence of the time on the receipt/journal.



01#

Entry	Time printing	Printing format	Numeric input
(A) 1st entry (Receipt type)	necessary	Detail	0
		Total	1
	unnecessary	Detail	2
		Total	3
(B) 2nd entry (Journal type)	necessary	Detail	0
		Total	1
	unnecessary	Detail	2
		Total	3

Leading zeros are not required.

6-12. Reading the contents of programming

The ER-1565 prints out all programming with the depression of the (AT/TTL) key.

