ER-150
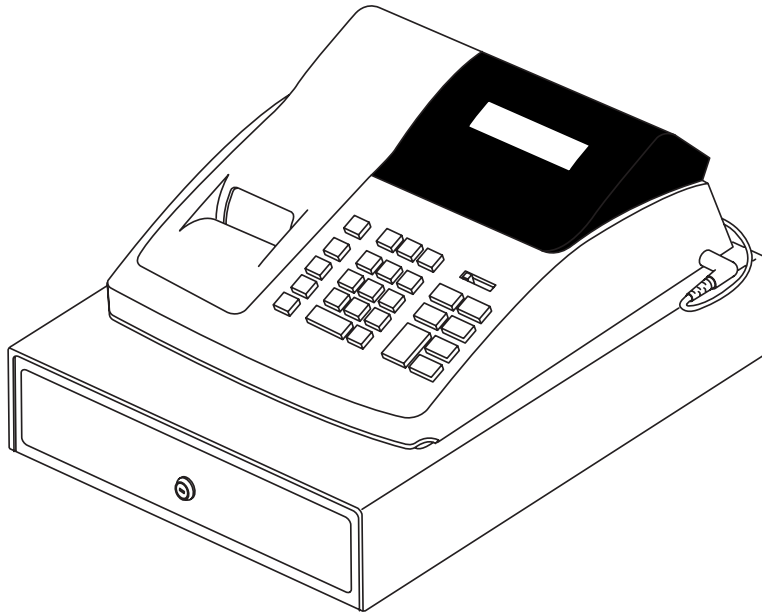
ELECTRONIC CASH REGISTER

Programming & Operation Manual

CRS, Inc.

For Fast Startup, See

"Initial Setup" on page 1

www.crs-usa.com

© 2005, Cash Register Sales, Inc. M-ER150 Version 2.0

All specifications are object to change without notice.

<u>WARNING - U.S.</u>

THIS EQUIPMENT GENERATES, USES AND CAN RADIATE RADIO FREQUENCY ENERGY, AND IF NOT INSTALLED AND USED IN ACCORDANCE WITH THE INSTRUCTIONS MANUAL, MAY CAUSE INTERFERENCE TO RADIO COMMUNICATIONS. IT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS FOR A CLASS A COMPUTING DEVICE PURSUANT TO SUBPART J OF PART 15 OF FCC RULES WHICH ARE DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST SUCH INTERFERENCE WHEN OPERATED IN A COMMERCIAL ENVIRONMENT. OPERATIONS OF THE EQUIPMENT IN A RESIDENTIAL AREA IS LIKELY TO CAUSE INTERFERENCE IN WHICH CASE THE USER, AT HIS OWN EXPENSE, WILL BE REQUIRED TO TAKE WHATEVER MEASURES MAY BE REQUIRED TO CORRECT THE INTERFERENCE.

<u>NOTICE - CANADA</u>

THIS APPARATUS COMPLIES WITH THE CLASS "A" LIMITS FOR RADIO INTERFERENCE AS SPECIFIED IN THE CANADIAN DEPARTMENT OF COMMUNICATIONS RADIO INTERFERENCE REGULATIONS.

CET APPAREIL EST CONFORME AUX NORMES CLASS "A" D'INTERFERENCE RADIO TEL QUE SPECIFIER PAR MINISTRE CANADIEN DES COMMUNICATIONS DANS LES REGLEMENTS D'INTERFERENCE RADIO.

ATTENTION

The product that you have purchased may contain a battery that may be recyclable. At the end of its useful life, under various state and local laws, it may be illegal to dispose of the battery into the municipal waste system.

Check with your local solid waste officials for details concerning recycling options or proper disposal.

TABLE OF CONTENTS

INITIAL SET UP INSTRUCTIONS

The following instructions aid in the initial set-up of the ER-150 Electronic Cash Register.

UNPACK THE CASH REGISTER

    1.   Un-box and unwrap the cash register.

    2.   The following items should be included in the box :
* 1 roll of register paper
* 1 take-up spindle (for journal tape)
* 2 ″AA″ batteries
* 1 battery compartment cover

INSTALL OR REPLACE BATTERIES

Open printer cover and locate battery compartment.
Insert batteries with positive and negative poles positioned as shown.
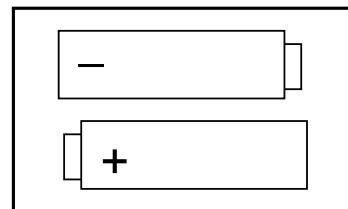
NOTE : This register comes with two ″AA″ alkaline batteries for providing memory back-up in case of a power failure. In order to assure continuous battery back-up protection, it is important to change batteries once each year.

CLEAR RANDOM ACCESS MEMORY (RAM) AND INITIALIZE CASH REGISTER

1. Before plugging register in, place mode switch in **P** position.

OFF	R	X	Z	P
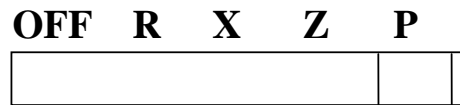
2. Connect the AC plug into a power outlet **while pressing the ″C″ and ″00″ keys.**

3. RAM is now cleared of all memory and the register prints a line of decimals (″........″).

NOTE : This is a one time only procedure to be performed after the battery is first installed.
DO NOT CLEAR RAM ONCE THE REGISTER IS PROGRAMMED OR PROGRAMS AND TOTALS WILL BE LOST.

LOAD PAPER

1. Cut or tear the end of the register tape evenly to insure proper feeding through the printer.

2. Place paper roll in paper compartment, with leading edge of roll towards the rear of the register, and feed the end of the roll into the printer through the paper guide.

2
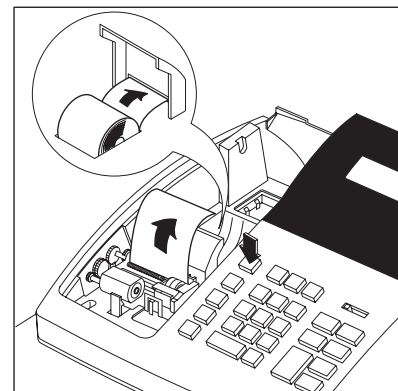
3. Depress the ″**FEED**″ key until the paper begins to advance through the printer.

4. If the paper refuses to feed through the printer, make certain the end of the tape is square and that it is routed properly.

FOR RECEIPT ONLY ...

5. Pass paper through the receipt window of printer cover. Replace over printer compartment.

FOR JOURNAL ONLY ...

6. Route paper over top of paper guide and insert in the slot of the take-up spool.

7. Press the ″**FEED**″ key to wind paper securely on the spool.

8. Replace printer cover.
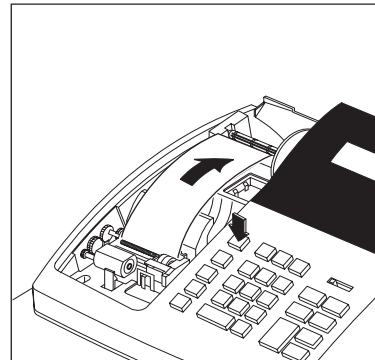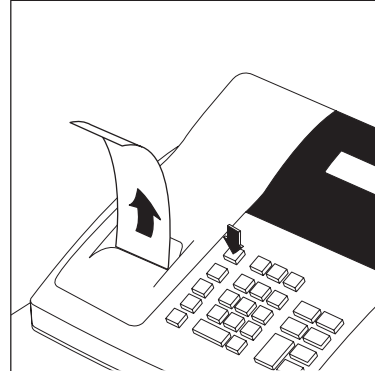
REPLACING THE INK ROLLER

Ink roller are disposable, and should not be re-inked. Re-inking can cause damage to the printer that is not simply replace the ink roller in the following manner :

1. Remove the old roller by lifting straight up on the lever located on the left side.

2. Place the new roller in position (handle to the left) and snap it into place by pressing it straight down.
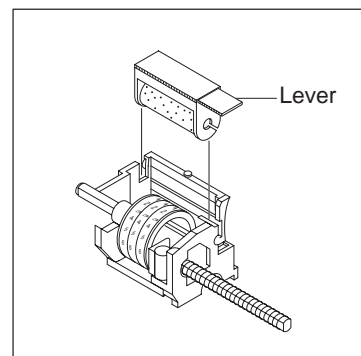
Lever

TAX STATUS PROGRAMMING

The ER-150 may be programmed to tax items
at either a straight percentage tax rate, or a tax table.

ENTERING A FIXED RATE

The ER-150 will accept a 5 digit tax rate, with the decimal
point fixed at three places (00.000). If your area taxes
goods based on a straight percentage, enter the rate in the
following manner.
Place mode switch in **P** position.

1					**TAX**

FIXED DECIMAL

1	0	6	5	0	0	**TAX**

$= 6.5\%$

PRESS 1, ENTER THE FIVE DIGIT TAX RATE,
PRESS "**TAX**"

DEPARTMENT STATUS

Enter the department status digit and press DPT1 or
DPT2 to set the status to be either taxable or
nontaxable, and to designate the department as a
single item department.
When a department is designated as a single
department, the register will finalize the sale as a cash
transaction immediate following the amount entry.
Place mode switch in **P** position.

	DEPARTMENT STATUS DIGIT VALUES ARE
0	Regular department, nontaxable
1	Regular department, taxable
2	Single item department, nontaxable
3	Single item department, taxable

4

FEATURES

MODE SWITCH

OFF - Turns the cash register off. None of the keys will respond when in the off position.

R - Register (on) mode.

X - ″Read″ mode for financial and **C**ash **I**n **D**rawer reports. Totals are <u>NOT</u> zeroed.

Z - ″Reset″ mode for financial and **C**ash **I**n **D**rawer reports. All totals return to zero.

P - Programming position.

DISPLAY

The operator display features a nine place digital display providing the operator with information while operating the cash register. During operations, the display will show the following symbols. All these symbols appear in the left-most position of the display.

$$1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9$$
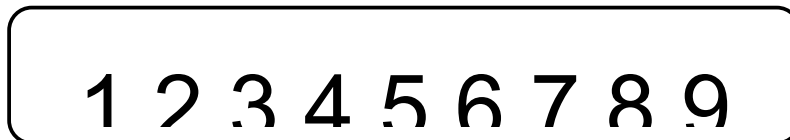
C : Indicates the amount displayed is due in change to the customer.
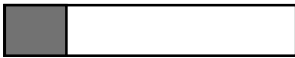
= : Indicates the amount displayed is the amount due total.

- : Indicates the amount displayed is a negative amount.

E : Indicates an error condition. Press ″**C**″ key to clear.

S : Indicates the amount displayed is a subtotal.

KEYBOARD

FEED	RA	PO	X/RF

OFF R X Z P

–	7	8	9	TAX	#/NS
%	4	5	6	DPT2	CH
VD	1	2	3	DPT1	SUB TOTAL
C	0	00			CASH TEND

KEY FUNCTIONS

FEED   Advances paper in printer.

0 - 9, 00   Numeric keypad for entering amounts.

DPT1   Departments 1 and 2 allow the user to
DPT2   classify items into two categories, each with
its own total and tax status.

X/RF   Used for multiplication entry (X), or to refund
sales amounts for merchandise returns.

PO   Used to register money **P**aid **O**ut of the cash
drawer.

RA   Registers amounts **R**eceived on **A**ccount.

–   Registers dollar amount markdowns, or
coupons tendered.

%   Used to register percentage discount on
items or total sale. A set rate may be
programmed, or variable rates entered when
no automatic rate is set. The decimal is set
at two places (00.00).

VD   For voiding entries before a sale is finalized.

C   Clears incorrect entries made on the numeric
keys, or to silence the error tone after entry
errors.

TAX   Used to program the tax rate in P mode. Also reverses the tax status when pressed after the amount, and before the department key. (nontaxable department add tax, taxable department forgive tax, this item only.)

#/NS   Used to print a reference number (#) on the receipt or journal, or to open the cash drawer outside of a sale (**N**o **S**ale).

CH   **CH**arge tender key. Keep a separate total from cash sales.

SUB TOTAL   Display transaction subtotal, including tax.

CASH TEND   Finalizes sales paid in cash and calculates change due.

PROGRAMMING

Read this entire section carefully in order to program your machine to best fit your individual needs.

* MODE SWITCH IN THE **P** POSITION. *

SETTING THE DECIMAL POINT

Enter 0 and press the ″**X/RF**″ key for 2 digit decimal (0.00).
Enter 1 and press the ″**X/RF**″ key for 0 digit decimal (000.).

DEPARTMENT STATUS

Enter the department status digit and press DPT1 or DPT2 to set the status to be either taxable or nontaxable, and to designate the department as a single item department.

When a department is designated as a single department, the register will finalize the sale as a cash transaction immediate following the amount entry.

	DEPARTMENT STATUS DIGIT VALUES ARE
0	Regular department, nontaxable
1	Regular department, taxable
2	Single item department, nontaxable
3	Single item department, taxable

TAX STATUS PROGRAMMING

The ER-150 may be programmed to tax
items at either a straight percentage tax rate, or
on a tax table entered into the machine during this
phase of program-ming.

ENTERING A FIXED RATE

The ER-150 will accept a 5 digit tax rate,
with the decimal point fixed at three places (00.000). If
your area taxes goods based on a straight percentage,
enter the rate in the following manner.

1						TAX

FIXED DECIMAL

1	0	6	5	0	0	TAX

$= 6.5\%$

PRESS 1, ENTER THE FIVE DIGIT TAX RATE, PRESS
"TAX"

FORMULATING A TAX TABLE

In some locales were taxes do not follow flat percentage
rates, it is necessary to enter the tax rate as a table.
Before beginning tax table programming, obtain a local
tax chart and determine tax breaks for your area.

Determine the lowest amount to be taxed, and the amount
of tax that is added at that point (some states add .05 at the
first breakpoint). Next determine the tax break points by
checking the chart for the highest amount allowed before
each penny of tax is added. The difference between the
high amounts before each penny is added determine the
tax break point.

10

As break points are determined, a pattern will appear. Once the pattern has developed, it is repeated for all remaining amounts. However, the first few break points will not fit this pattern. They are referred to as non-repeat breaks.

- The ER-150 allows for 20 breakpoints to establish repeated tax break pattern. Should you make a mistake in entering the break points, depress the ″**C**″ key to clear and re-enter the table from the beginning. The following example is for an Illinois 4% tax.

TAX AMOUNT	RANGE	BREAKPOINT	COMMENTS
0	.00 - .12	–	First taxable amount = .13
1	.13 - .31	19	Difference between .12 & .31
2	.32 - .54	23	Difference between .31 & .54
3	.55 - .81	27	Difference between .54 & .81
4	.82 - 1.08	27	ETC.
5	1.09 - 1.37	29	
6	1.38 - 1.62	25	Repeating breakpoints begin
7	1.63 - 1.87	25	
8	1.88 - 2.12	25	
9	2.13 - 2.37	25	
10	2.38 ········		Pattern established

ENTERING THE TAX TABLE

1	**3**	**TAX**	LOWEST AMOUNT CHARGED TAX
	1	**TAX**	AMOUNT OF FIRST TAX ADDED
1	**9**	**TAX**	FIRST NON-REPEAT TAX BREAK
2	**3**	**TAX**	NEXT NON-REPEAT TAX BREAK
2	**7**	**TAX**	NEXT NON-REPEAT TAX BREAK
2	**7**	**TAX**	NEXT NON-REPEAT TAX BREAK
2	**9**	**TAX**	LAST NON-REPEAT TAX BREAK
		CH	SIGNALS END OF NON-REPEAT, BEGINNING OF REPEATING BREAKPOINTS.
2	**5**	**TAX**	REPEAT BREAKPOINT
2	**5**	**TAX**	REPEAT BREAKPOINT
2	**5**	**TAX**	REPEAT BREAKPOINT
2	**5**	**TAX**	REPEAT BREAKPOINT
		CASH TEND	EXITS TAX TABLE PROGRAMMING

CAUTION : PRESSING THE CASH KEY ANY OTHER TIME IN PROGRAM MODE WILL ERASE ALL TAX PROGRAMMING.

12

SETTING THE PERCENT(%) KEY

| N1 | N2 | N3 | N4 | N5 | % |

	VALUE
N1-N4	Percentage rate with decimal fixed at two places(00.00).
N5	0 = Tax calculated after % discount is applied. 1 = Tax calculate before % discount is applied.

| 1 | 0 | 0 | 0 | 0 | % |

= 10%

MINUS (−) KEY PROGRAMMING

| N1 | − |

N1	VALUE
0	Tax calculated after coupon is applied.
1	Tax calculated before coupon is applied.

SETTING THE MACHINE NUMBER

| N1 | N2 | #/NS |

ENTER A TWO DIGIT ID # FOR N1 & N2
- The machine number prints on the receipt / journal tape along side the transaction number.

RECEIPT PRINT / JOURNAL PRINT

| N1 | SUB TOTAL |

N1	VALUE
0	Receipt Print (advances extra paper)
1	Journal Print

13

SYSTEM OPTIONS

System option programming deals with aspects of programming not associated with any particular key, but with the general operation of the register. Each of the options may be turned on or off in this phase of programming. Five options are set with each five digit entry, for a total of ten. When changing the setting of a single option, the four accompanying options must also be re-entered.

STEP ONE OF SYSTEM PROGRAMMING

All options have a value of zero as an initial setting.

| N1 | N2 | N3 | N4 | N5 | **RA** |

NO	OPTION	VALUE = 0 (Default settings are 0.)	VALUE = 1
N1	CASH DECLARATION	NOT COMPULSORY	COMPULSORY
N2	SKIP ZERO TOTALS FOR REPORTS	NO SKIP	SKIP
N3	DUPLICATE Z REPORTS	NO DUPLICATE	DUPLICATE
N4	TOTAL REFUNDS & VOIDS TO PRINT ON REPORTS	PRINT	NOT PRINT
N5	SUBTOTAL TO PRINT	PRINT	NOT PRINT

STEP TWO OF SYSTEM PROGRAMMING

N1	N2	N3	N4	N5	**PO**

NO	OPTION	VALUE = 0	VALUE = 1
N1	GRAND TOTAL TO PRINT	PRINT	NOT PRINT
N2	GRAND TOTAL TO RESET WITH Z REPORT	NOT RESET	RESET
N3	Z COUNTER TO RESET WITH Z REPORT	NOT RESET	RESET
N4	TRANSACTION NUMBER TO RESET WITH Z REPORT	NOT RESET	RESET
N5	PRINT DATE ON RECEIPT (JOURNAL)	PRINT	NOT PRINT

SETTING THE DATE

- SET MODE SWITCH TO THE ″**X**″ POSITION.

The date must be programmed on a daily basis and will be printed on all transaction receipts and report printouts (if programmed to do so). To program the six digit number, and press the ″**CH**″ key.

M	M	D	D	Y	Y	**CH**

0	9	1	3	9	9	**CH**

=09-13-99

REGISTER MODE OPERATION EXAMPLES

- MODE SWITCH SET TO ″**R**″ POSITION

This section provides examples of transaction in the register mode. When an error occurs, the ″**C**″ key. Error conditions may be caused by incorrect entries or keys pressed in the wrong order.

PERFORMING A NO SALE

Pressing the no sale (**#/NS**) key causes the cash drawer to open outside of a sale, and for the no sale activity counter on the financial report to be incremented.

NON ADD (REFERENCE) NUMBER ENTRIES

The ″**#/NS**″ key may also be used to print up to seven digits for reference on the receipt / journal. The entry can be made prior to any operation in the register mode. This number will not add to any totals or counts.

To use this feature, simply enter a 1-7 digit number and press the department or function key.

DEPARTMENT ENTRIES

MULTIPLE ITEM DEPARTMENT ENTRY

Enter the number of items with the same price,
press the ″**X/RF**″ key,
enter the item price and press the department key.
Finalize the sale.

SINGLE ITEM DEPARTMENT SALES

Enter the amount,
press the single item department.

Register will ring up amount, finalize sale to cash and open drawer. If items have been entered to a regular department as first entry in a sales transaction, and an entry is made into the single item department, it will not finalize the sale automatically but act as a regular department.

MINUS (–) KEY OPERATION

After making an amount entry into a department you may deduct a coupon or markdown by entering the amount to be deducted and pressing the minus ″–″ key. The MINUS key may be used in conjunction with the multiplication ″**X/RF**″ key, and also outside a sale.

PERCENT DISCOUNT OPERATION (%)

The percentage discount key may be used to either apply a discount to a single item (item discount) or to an entire sale (subtotal discount). When applying an item discount, enter the percentage rate and press the ″**%**″ key. The register will now re-display the amount due, less the discount amount.

REFUND PROCEDURE

Press the ″**X/RF**″ key,
enter the amount to be refunded,
press the related department key,
press the appropriate tender key.

VOIDING ENTRIES (VD)

If you should make an incorrect amount / department entry you may correct it with the void (**VD**) key in one of two ways. If the item to be void is the last item entered, simply press the ″**VD**″ key, and the register will remove the very last item entered. To void an item inside a transaction that was not immediately preceding item, enter the amount to be voided, press the ″**VD**″ key, and press the affected department.

PAYMENT PROCEDURES

CASH

There are two operations for closing a transaction to cash : First, after entering all items, press the ″**CASH TEND**″ key. Second, if you desire the register to calculate change due, enter the amount tendered, and press ″**CASH TEND**″.
The amount due back in change is then displayed.

CHARGE

Amount entry on the **CH**arge key is not allowed.
So, to use the **CH**arge key for tendering, simply enter all items and press the **CH**arge key to finalize the transaction.

SPLITTING PAYMENT BETWEEN CASH & CHARGE

After entering a items, press **SUBTOTAL**.
Enter the cash amount tendered first (the cash drawer will not open at this time).
Press the **CH**arge key to finalize, and open drawer.

18

TAX SHIFT PROCEDURE

The TAX key us used to reverse the tax status of a single department entry. That is, to make what would normally be a taxable entry non-taxable, or a non-taxable entry taxable.
It may also used to exempt an entire sale from tax.

To reverse the tax status of an individual item, enter the price of the item, press **TAX**, then press the normal department key.

To exempt an entire sale from tax, ring all items,
press **SUBTOTAL**,
press **TAX**,
finalize sale with either **CASH** or **CH**arge.

RECEIVED ON ACCOUNT (RA) OPERATION

Enter the amount received on account and press the **RA** key.

PAID OUT (PO) OPERATION

Enter the amount to be paid out and press the **PO** key.

MANAGEMENT REPORTS AND BALANCING

MODE	REPORT	ENTRY
X	CASH DECLARATION	$ AMOUNT - **SUBTOTAL**
X	READ FINANCIAL REPORT	**CASH**
Z	RESET FINANCIAL REPORT	**CASH**

• These reports are explained in detail below.

CASH DECLARATION

The cash declaration feature, if made compulsory in option programming, will enforce the entry of the total **C**ash **I**n **D**rawer before allowing financial reports to be taken. This feature does not allow cashiers to mislead management by altering overages and shortages to their advantage.

The **C.I.D.** amount should be entered in the following way

After allowing for the beginning bank, count the remaining cash to be deposited.
Place the cash deposit amount and press the **SUBTOTAL** key.
The ER-150 now issues a receipt showing the total cash declared, the cash total from memory, and the difference between the two as either over or short. The ER-150 will not allow any transactions to take place after cash declaration has been performed until the financial report has been reset in ″**Z**″ mode.

20

SAMPLE FINANCIAL REPORT

09-13-99	DATE
004 Z	Z COUNTER, MODE SWITCH POSITION
012 @	DPT1 COUNTER
54•24TX1	DPT1 SALES TOTAL
001 @	DPT2 COUNTER
1•25 2	DPT2 SALES TOTAL
3•20TX	TAX TOTAL
0•00 %–	% DISCOUNT TOTAL
0•00 –	– (COUPONS/MARKDOWNS) TOTAL
58•69 * 1	NET SALES TOTAL
0•00RF	REFUND TOTAL
–4•00VD	VOID TOTAL
58•69 * 2	GROSS SALES TOTAL
008 #	CUSTOMER COUNT
32•59CA	CASH TOTAL
26•10CH	CHARGE TOTAL
10•00RA	RECEIVED ON ACCOUNT
20•00PO	PAID OUT
22•59AT	CASH DECLARED
004 NS	NO SALE COUNTER
•••••••••	
190770•43 * 3	GRAND TOTAL
064–01	TRANSACTION NUMBER– MACHINE NUMBER

SYSTEM BALANCING EQUATIONS

$$\text{NET SALES TOTAL} = \text{DEPARTMENT TOTALS}$$
$$+ \text{ TAX}$$
$$- \text{ \% DISCOUNT TOTAL}$$
$$- (-) \text{ COUPON / MARKDOWN}$$
$$\text{TOTAL}$$

$$\text{GROSS SALES} = \text{NET SALES TOTAL}$$
$$+ \text{ REFUNDS}$$
$$+ (-) \text{ COUPON / MARKDOWN}$$
$$\text{TOTAL}$$
$$+ \text{ \% DISCOUNTS}$$

$$\text{NEW GRAND TOTAL} = \text{TODAY'S GROSS SALES}$$
$$+ \text{ PREVIOUS GRAND TOTAL}$$

MAINTENANCE

1. Avoid excess dust and extreme temperatures.
2. Be certain that AC cord is inserted firmly in the outlet, and that cord poses no danger of accidental tripping.
3. Use no chemicals or abrasives while cleaning cabinet or keyboard.
4. Do not pull or hold paper while the register is printing.

SPECIFICATION

DIMENSIONS

REG. SIZE (SM DRAWER)	12.8″W × 16.54″L × 8.86″H
NET WEIGHT (SM DRAWER)	10 lb. 36 oz. (5 kg)

DRAWER

SIZE	12.8″W × 16.54″L × 3.74″H
WEIGHT	6 lb. 84 oz. (3.3 kg)

MODE KEY

LOCK SWITCH	SLIDE SWITCH
POSITIONS	5 (OFF, R, X, Z, P)
RECEIPT ON / OFF	NONE (PROGRAMMABLE)

KEYBOARD

TYPE	RUBBER CONTACT TYPE
NUMBER OF KEYS	26
KEYSTROKE BUFFER	8

PRINTER

MODEL #	M–42V
STATIONS	ONE
PAPER	SINGLE PLY(57.5 mm OR 40 mm)
COPY	NONE
PRINT SPEED	2.2 LINES per SECOND

DISPLAY

DIGITRON	# 97D6
CAPACITY	9 DIGITS
SYMBOLS	5 (E, C, -, =, S)

POWER

INPUT	110V AC ○ 10%, 50 / 60 Hz
CONSUMPTION	STANDBY : 2W, MAX : 8W
MEMORY BACK-UP	1 YEAR
BATTERY	AA ALKALINE 1.5 V × 2, OR
	EQUIVALENT

P/Z MODE SIGN ON CODE PROGRAMMING

The ER-150 has the added feature of an extra
security function to limit access to certain phases of
operation.

Through optional programming, you may require a four
digit code before allowing access to the **Z** and
Programming modes.
When the mode switch is changed to a protected mode,
the buzzer sounds until the switch is returned to an
unprotected mode. If no mode protection is required then
you may disregard this section.

TO ESTABLISH OR CHANGE
THE SECRET CODE

1. Switch the mode lock to the ″**X**″ position, press No Sale
   (**#/NS**), enter the four digit code,
   * press the **RA** key for **Z** mode protection.
   * press the **PO** key for **P** mode protection.

ESTABLISHES CODE FOR Z MODE

#/NS					RA

FOUR DIGITS

ESTABLISHES CODE FOR P MODE

#/NS					PO

FOUR DIGITS

NOTE : THE FOUR DIGIT CODE PROTECTION CAN
          BE DISABLED BY ENTERING BEFORE
          FOUR ZERO′S AS THE CODE NUMBER
          USING THE SAME SEQUENCE AS ABOVE.

2. To enter the **Z** or **P** modes once protection is
   established, place the mode switch in the ″**X**″
   position and press the (−) minus key, enter your four
   digit code and press the **%** discount key.

+--+
| |
| **SAFETY NOTICE** |
| |
| The socket-outlet shall be installed near the |
| equipment and shall be easily accessible. |
| |
+--+