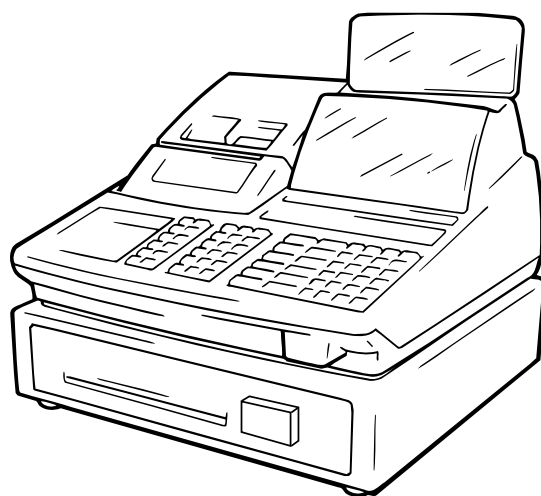




TEC Electronic Cash Register

# MA-1650-4 SERIES

## Owner's Manual



**TOSHIBA TEC CORPORATION**

# TABLE OF CONTENTS

	Page
1. TO OUR CUSTOMERS .....	1-1
2. UNPACKING .....	2-1
3. APPEARANCE AND NOMENCLATURE .....	3-1
4. MODE LOCK AND MODE SELECTOR KEYS .....	4-1
4.1    MODE LOCK .....	4-1
4.2    MODE SELECTOR KEYS .....	4-1
5. DISPLAY .....	5-1
5.1    UPPER ROW (16-digit dot windows) .....	5-2
5.2    LOWER ROW (10-digit 7-segment Numeric Display) .....	5-4
5.3    TRIANGULAR LAMPS .....	5-4
5.4    STATUS LAMPS .....	5-4
6. OUTLINE OF PREPARATION PROCEDURE BEFORE OPERATING THE ECR .....	6-1
6.1    Installing the Receipt/Journal Roll .....	6-2
6.2    Setting the Ribbon Cassette .....	6-5
7. CASHIER SIGNING OR CASHIER KEY OPERATIONS .....	7-1
7.1    CODE ENTRY METHOD .....	7-1
7.2    CASHIER KEY METHOD (Hardware Option) .....	7-3
7.3    CASHIER KEY METHOD ([CLK] Keys) .....	7-4
7.4    TRAINING MODE START AND END .....	7-5
8. KEYBOARD LAYOUT .....	8-1
9. FUNCTIONS OF EACH KEY .....	9-1

10. REGISTERING PROCEDURE AND PRINT FORMAT .....	10-1
10.1 RECEIPT-ISSUE/NON-ISSUE SELECTION .....	10-3
10.2 STORE MESSAGE DISPLAY .....	10-3
10.3 NO-SALE .....	10-4
10.4 LOAN .....	10-4
10.5 DEPARTMENT ENTRY .....	10-5
10.6 GASOLINE ENTRY .....	10-5
10.7 PLU ENTRY (Manual PLU Code Entry) .....	10-6
10.8 PLU ENTRY through Barcode Scanner .....	10-6
10.9 CIGARETTE AND ALCOHOLIC BEVERAGE ENTRY (ENTRY OF SALES ITEM RESTRICTED BY AGE LIMIT) .....	10-6
10.10 REPEAT ENTRY .....	10-7
10.11 QUANTITY EXTENSION (MULTIPLICATION) FOR DEPTs/PLUs .....	10-8
10.12 SPLIT PACKAGE PRICING .....	10-8
10.13 HI-CONE PLUs .....	10-10
10.14 Mix & Match (M & M) Function of Split-Price PLUs .....	10-12
10.15 PRICE SHIFT ENTRY for Split-Price PLUs .....	10-13
10.16 TRIPLE MULTIPLICATION .....	10-15
10.17 SINGLE-ITEM DEPARTMENT or SINGLE-ITEM PLU ENTRY .....	10-16
10.18 OTHER INCOME DEPARTMENT ENTRY, OTHER INCOME PLU ENTRY .....	10-16
10.19 SUB-LINK DEPARTMENT ENTRY .....	10-16
10.19 SUB-LINK PLU ENTRY .....	10-17
10.20 URGENT PLU MAINTENANCE (to enter a PLU item not existing in the PLU program file) .....	10-17
10.21 RETURNED MERCHANDISE .....	10-18
10.22 BOTTLE RETURN .....	10-18
10.23 DOLLAR DISCOUNT .....	10-19
10.24 PERCENT DISCOUNT, PERCENT CHARGE .....	10-19
10.25 STORE COUPON .....	10-19
10.26 VENDOR COUPON .....	10-20
10.27 ITEM CORRECT .....	10-20
10.28 VOID .....	10-20
10.29 ALL VOID .....	10-21
10.30 NON-ADD NUMBER PRINT .....	10-21
10.31 SCALE ENTRY .....	10-22
10.32 LISTING CAPACITY OPEN .....	10-23

10.33	SELECTIVE ITEMIZER (SI) STATUS MODIFICATION .....	10-23
10.34	TAX STATUS or FOOD STAMP STATUS MODIFICATION .....	10-24
10.35	MANUAL TAX ENTRY (where irregular tax amount addition is applied) .....	10-24
10.36	SUBTOTAL (Sale Total Pre-taxed) READ .....	10-24
10.37	TAXABLE TOTAL (Sale Total With Taxes) READ .....	10-24
10.38	TAXABLE TOTAL READ and SUBTOTAL PRINT .....	10-24
10.39	SELECTIVE ITEMIZER (SI) TOTAL READ .....	10-25
10.40	PLU PRESET PRICE READ .....	10-25
10.41	TAX CALCULATION AND PRINT .....	10-25
10.42	TAX EXEMPTION .....	10-26
10.43	FOOD STAMPABLE TOTAL READ, FOOD STAMP TENDERING .....	10-26
10.44	SALE FINALIZATION BY MEDIA KEYS .....	10-27
10.45	MULTI-TENDERING .....	10-27
10.46	SPLIT TENDERING .....	10-28
10.47	SALE FINALIZATION BY EBT (ELECTRONIC BENEFIT TRANSFER) .....	10-29
10.48	SALE FINALIZATION BY EFT (ELECTRONIC FUND TRANSFER) .....	10-30
10.49	CHECK CASHING (No-sale cashing of a non-cash media) .....	10-36
10.50	SALE PAID IN FOREIGN CURRENCIES .....	10-36
10.51	NO-SALE EXCHANGE from Foreign Currency to Domestic Currency .....	10-37
10.52	NO-SALE EXCHANGE from Domestic Currency to Foreign Currency .....	10-37
10.53	RECEIVED-ON-ACCOUNT .....	10-38
10.54	PAID-OUT .....	10-38
10.55	SALESPERSON ENTRY (Salesperson Sign-ON) .....	10-39
10.56	HOLD & RECALL .....	10-39
10.57	CREDIT CARD No. CHECK .....	10-40
10.58	RECEIPT POST-ISSUE .....	10-41
10.59	CHARGE POSTING: Previous Balance Manual Entry Type .....	10-42
10.60	CHARGE POSTING: Customer File Type (Check Track Memory Option) .....	10-44
10.61	FUNCTION KEY ENTRY .....	10-46
10.62	VALIDATION PRINT .....	10-46
10.63	ENDORSEMENT PRINT .....	10-47
10.64	COMMENT PRINT .....	10-48
10.65	REMOTE SLIP PRINTER (hardware option) OPERATION .....	10-49
10.66	WHEN A POWER FAILURE OCCURS ... ..	10-51

11. JOURNAL AND RECEIPT PAPER-END DETECTOR .....	11-1
12. ECR PRINTER MOTOR LOCK DETECTOR .....	12-1
13. REMOTE SLIP PRINTER MOTOR LOCK DETECTOR .....	13-1
14. PRINTER GUIDE OPEN DETECTOR .....	14-1
15. PAPER ROLL REPLACEMENT AND OTHER MAINTENANCE OPERATIONS .....	15-1
15.1 Replacing the Receipt Roll .....	15-1
15.2 Replacing the Journal Roll .....	15-2
15.3 Replacing the Ribbon Cassette .....	15-3
15.4 Replenishing Ink to the Store Name Stamp .....	15-4
15.5 Manual Drawer Releasing .....	15-5
15.6 Removing the Drawer .....	15-5
15.7 CDC (Cash Drawer Cover; Option) Lock .....	15-6
16. SPECIFICATIONS .....	16-1

## TABLE OF CONTENTS

	Page
1. DAILY OPERATION FLOW .....	1-1
2. MANAGER INTERVENTION .....	2-1
2.1 ITEMS PROGRAMMED TO REQUIRE MANAGER INTERVENTIONS .....	2-1
2.2 OTHER OPERATIONS REQUIRING MANAGER INTERVENTIONS .....	2-3
3. MANAGER'S OWN OPERATIONS IN "MGR" MODE .....	3-1
3.1 PICK UP OPERATION .....	3-1
3.2 ENFORCED SIGN-OFF OF A CASHIER (CODE ENTRY Method) .....	3-2
4. OPERATIONS IN "☐" MODE .....	4-1
4.1 ORDINARY OPERATIONS IN "☐" MODE .....	4-1
4.2 CHARGE POSTING WITH CUSTOMER FILE (CHECK TRACK MEMORY) IN "☐" MODE .....	4-1
4.3 SCALE ITEM ENTRY IN "☐" MODE .....	4-3
4.4 PROHIBITIVE OPERATIONS IN "☐" MODE .....	4-3
4.5 MANAGER INTERVENTION REQUIRED STATUS OR AMOUNT LIMIT IN "☐" MODE .....	4-3
5. READ (X) AND RESET (Z) REPORTS .....	5-1
5.1 Combination Reports .....	5-4
5.2 GENERAL NOTES ON REPORT TAKINGS .....	5-4
6. PROGRAMMING OPERATIONS .....	6-1
6.1 BASIC KEY FUNCTIONS AND KEYBOARD VARIATIONS IN PROGRAMMING OPERATIONS .....	6-2
6.2 CHARACTER ENTRIES .....	6-3
6.3 Character Code Entry Method .....	6-4
6.4 Direct Character Entry Method .....	6-5
6.5 CONDITION REQUIRED FOR PROGRAMMING OPERATIONS .....	6-8
6.6 STORE NAME/MESSAGE AND COMMERCIAL MESSAGE PROGRAMMING (Submode 1) .....	6-8
6.7 CASHIER CODE AND NAME PROGRAMMING (Submode 2) .....	6-11
6.8 PLU TABLE PROGRAMMING (Submode 4) .....	6-14
6.9 PLU Programmed Data Copying .....	6-23
6.10 TIME SETTING OR ADJUSTMENT (Submode 5) .....	6-25

6.11	DATE SETTING OR ADJUSTMENT (Submode 6) .....	6-25
6.12	AMOUNT LIMIT SETTING FOR FUNCTION KEYS (Submode 8) .....	6-26
6.13	CUSTOMER FILE CODE (CHECK TRACK NO.) AND NAME SETTING (Submode 15) .....	6-27
6.14	SALESPERSON CODE AND NAME PROGRAMMING (Submode 20) .....	6-29
6.15	LINK-PLU TABLE PROGRAMMING (Submode 25) .....	6-30
6.16	TARE TABLE AND GENERAL UNIT WEIGHT SETTING (Submode 26) .....	6-31
6.17	PLU PRESET-CODE KEY SETTING (Submode 27) .....	6-32
6.18	DISPLAY MESSAGE PROGRAMMING (Submode 31) .....	6-35
6.19	NEGATIVE AMOUNT KEY LIMIT AMOUNT SETTING (Submode 35) .....	6-37
6.20	PLU UNIT PRICE DOLLAR DISCOUNT/EXTRA CHARGE AMOUNT SETTING (Submode 40) .....	6-38
6.21	DEPARTMENT PRESET PRICE SETTING OR CHANGING .....	6-38
6.22	PLU PRESET PRICE SETTING OR CHANGING, WHOLE PACKAGE QUANTITY CHANGING .....	6-39
6.23	%+ AND %- PRESET RATE SETTING .....	6-41
6.24	PRESET RATE SETTING FOR SELECTIVE ITEMIZERS (SI1 and SI2) .....	6-41
6.25	FOREIGN CURRENCY EXCHANGE RATE SETTING .....	6-43
6.26	TAX TABLE PROGRAMMING .....	6-45
6.27	GST RATE SETTING .....	6-47
6.28	STORE/REGISTER NO. SETTING .....	6-47
7.	VERIFICATION OF PROGRAMMED DATA .....	7-1
7.1	Tax Calculation Test .....	7-2
8.	BAR CODE SYSTEM FOR EACH MODEL .....	8-1

## 6. PROGRAMMING OPERATIONS

This chapter is provided for the store programmer or the store manager who may have to change the programmed data of the MA-1650 series ECR on the daily, weekly, or monthly basis. Usually, all the basic program data required for your store should be set before delivering the product by your local TOSHIBA TEC representative. However, in need of changing or adding program data, please refer to this chapter. It is also recommended to read the OPERATOR'S GUIDE as well as other chapters of the MANAGER'S GUIDE in order to thoroughly understand the descriptions in this chapter. If there are any unclear points or program data other than listed here must be changed or added, please contact your TOSHIBA TEC representative.

### TABLE OF PROGRAMMING OPERATIONS

	(page)
BASIC KEY FUNCTIONS AND KEYBOARD VARIATIONS IN PROGRAMMING OPERATIONS .....	6-2
CHARACTER ENTRIES .....	6-3
CONDITION REQUIRED FOR PROGRAMMING OPERATIONS .....	6-8
Submode No. 1: STORE NAME/MESSAGE, COMMERCIAL MESSAGE PROGRAMMING .....	6-8
Submode No. 2: CASHIER CODE AND NAME PROGRAMMING .....	6-11
Submode No. 4: PLU TABLE PROGRAMMING .....	6-14
Submode No. 5: TIME SETTING OR ADJUSTMENT .....	6-25
Submode No. 6: DATE SETTING OR ADJUSTMENT .....	6-25
Submode No. 8: AMOUNT LIMIT SETTING FOR FUNCTION KEYS .....	6-26
Submode No. 15: CUSTOMER FILE CODE (CHECK TRACK NO.) AND NAME SETTING .....	6-27
Submode No. 20: SALESPERSON CODE AND NAME PROGRAMMING .....	6-29
Submode No. 25: LINK-PLU TABLE PROGRAMMING .....	6-30
Submode No. 26: TARE TABLE AND GENERAL UNIT WEIGHT SETTING .....	6-31
Submode No. 27: PLU PRESET-CODE KEY SETTING .....	6-32
Submode No. 31: DISPLAY MESSAGE PROGRAMMING .....	6-35
Submode No. 35: NEGATIVE AMOUNT KEY LIMIT AMOUNT SETTING .....	6-37
Submode No.40: PLU UNIT PRICE DOLLAR DISCOUNT/EXTRA CHARGE AMOUNT SETTING .....	6-38
No Submode No.: DEPARTMENT PRESET PRICE SETTING OR CHANGING .....	6-38
PLU PRESET PRICE SETTING OR CHANGING,	
WHOLE PACKAGE QUANTITY CHANGING .....	6-39
%+ AND %- PRESET RATE SETTING .....	6-41
PRESET RATE SETTING FOR SELECTIVE ITEMIZERS .....	6-41
FOREIGN CURRENCY EXCHANGE RATE SETTING .....	6-43
TAX TABLE PROGRAMMING .....	6-45
GST RATE SETTING .....	6-47
STORE/REGISTER NO. SETTING .....	6-47



## TABLE OF CONTENTS

	Page
1. INTRODUCTION .....	1-1
2. SYSTEM CONFIGURATION .....	2-1
3. HARDWARE DESCRIPTION .....	3-1
3.1. COMMUNICATION SEQUENCE .....	3-1
3.2. HARDWARE COMPOSITION .....	3-1
3.3. OPERATOR DISPLAY INDICATIONS OF MASTER-SATELLITE SYSTEM .....	3-1
4. ADDITIONAL FUNCTION KEY AND REGISTERING PROCEDURE .....	4-1
RTR (Register-to-Register) DECLARATION Key .....	4-1

## TABLE OF CONTENTS

	Page
1. DAILY OPERATION FLOW .....	1-1
2. OPERATIONS BEFORE IN-LINE SERVICE .....	2-1
2.1 TERMINAL OPEN CHECK .....	2-1
2.2 TERMINAL DESIGNATION .....	2-2
2.3 TERMINAL CONDITION CHECK .....	2-3
3. RESERVATION .....	3-1
3.1 RESERVATION FUNCTION .....	3-1
3.2 REPORT RESERVATION PRINT FORMAT .....	3-3
3.3 OPERATIONS RELATIVE TO RESERVATION .....	3-4
4. READ AND RESET REPORTS .....	4-1
4.1 TERMINAL REPORTS .....	4-1
4.2 IN-LINE REPORTS .....	4-2
4.3 OPERATIONS AFTER IN-LINE REPORT TAKINGS .....	4-9
5. PROGRAMMING OPERATIONS .....	5-1
5.1 PROGRAMMING OPERATIONS COMMON WITH STANDALONE ECR LEVEL .....	5-1
5.2 PROGRAMMING OPERATIONS ADDED FOR IN-LINE TERMINALS .....	5-2
5.3 VERIFICATION OF PROGRAMMED DATA RELATED TO IN-LINE SPECIFICATIONS .....	5-3
6. DLL (Down-Line-Loading) OPERATIONS .....	6-1
7. DEPARTMENT AND PLU MAINTENANCE .....	7-1
7.1 PLU TABLE ADDITION/CHANGE/DELETION WITH DLL (Submode 63) .....	7-2
7.2 DEPARTMENT PRESET PRICE SETTING OR CHANGING WITH DLL (Submode 72) .....	7-3
7.3 PLU PRICE CHANGE WITH DLL (Submode 73) .....	7-4
8. INQUIRIES .....	8-1
8.1 PLU INQUIRIES .....	8-1
8.2 CUSTOMER FILE (CHECK TRACK) INQUIRIES .....	8-1
8.3 CREDIT CARD No. INQUIRIES TO THE NEGATIVE CHECK FILE .....	8-2
8.4 CASHIER OCCUPY INQUIRIES .....	8-2
9. BACKUP FUNCTION .....	9-1
10. DATA CAPTURE FUNCTION .....	10-1
11. MASTER AND BACKUP MASTER ALTERNATION .....	11-1
12. TRANSMISSION ERROR .....	12-1
12.1 CAUSE OF ERROR .....	12-1
12.2 ERROR DISPLAY .....	12-1
12.3 ERROR CANCELING PROCESS .....	12-2

13. OTHER OPERATIONS RELATING TO IN-LINE SERVICE .....	13-1
13.1 TIME OUT .....	13-1
13.2 SUSPENDING .....	13-2
13.3 RETRY .....	13-2
13.4 INCOMPLETE ENDING .....	13-2
13.5 CANCEL .....	13-3

This is a “Table of Contents preview” for quality assurance

The full manual can be purchased from our store:

[https://the-checkout-tech.com/manuals/TEC/MA-1650\\_owners\\_programming\\_manual.htm](https://the-checkout-tech.com/manuals/TEC/MA-1650_owners_programming_manual.htm)

And our free Online Keysheet maker:

<https://the-checkout-tech.com/Cash-Register-Keysheet-Creator/>

[HTTPS://THE-CHECKOUT-TECH.COM](https://THE-CHECKOUT-TECH.COM)