

TEC

TEC Electronic Cash Register

MA-1900 (M/S SYSTEM)

Owner's Manual



TOKYO ELECTRIC CO., LTD.

WARNING

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction 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. Operation of this 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.

WARNING

"THIS DIGITAL APPARATUS DOES NOT EXCEED THE CLASS A LIMITS FOR RADIO NOISE EMISSIONS FROM DIGITAL APPARATUS SET OUT IN THE RADIO INTERFERENCE REGULATIONS OF THE CANADIAN DEPARTMENT OF COMMUNICATIONS."

"LE PRÉSENT APPAREIL NUMÉRIQUE N'EMET PAS DE BRUITS RADIOÉLECTRIQUES DÉPASSANT LES LIMITES APPLICABLES AUX APPAREILS NUMÉRIQUES DE LA CLASSE A PRESCRITES DANS LE RÉGLEMENT SUR LE BROUILLAGE RADIOÉLECTRIQUE ÉDICTÉ PAR LE MINISTÈRE DES COMMUNICATIONS DU CANADA."

These technical data are subject to export control law of Japan/COCOM regulations, and diversion contrary thereto is prohibited.

TOKYO ELECTRIC CO., LTD.

TABLE OF CONTENTS

	page
1. INTRODUCTION	1
2. SYSTEM CONFIGURATION	1
3. HARDWARE DESCRIPTION	2
3-1. COMMUNICATION SEQUENCE	2
3-2. HARDWARE COMPOSITION	2
3-3. HARDWARE DIFFERENCES FROM STAND-ALONE ECR	2
4. ADDITIONAL FUNCTION KEYS AND REGISTERING PROCEDURE	4
5. MANAGER'S OWN OPERATIONS IN "MGR" MODE	6
5-1. RE-ENTRY OF TRANSACTION DATA RECORDED OUT OF TRANSACTION BUFFER	6
5-2. RE-ENTRY OF CHECK TRACK SALES DATA	7
5-3. REVERSING THE CARD CHECK FUNCTION STATUS	8
6. DAILY OPERATION FLOW OF MASTER-SATELLITE SYSTEM	9
7. READ AND RESET REPORTS	11
7-1. TERMINAL REPORTS	11
7-2. IN-LINE REPORTS	12
8. PROGRAMMING OPERATIONS	22
9. DLL (Down Line Loading) OPERATIONS	22
10. OTHER OPERATIONS	23

1. INTRODUCTION

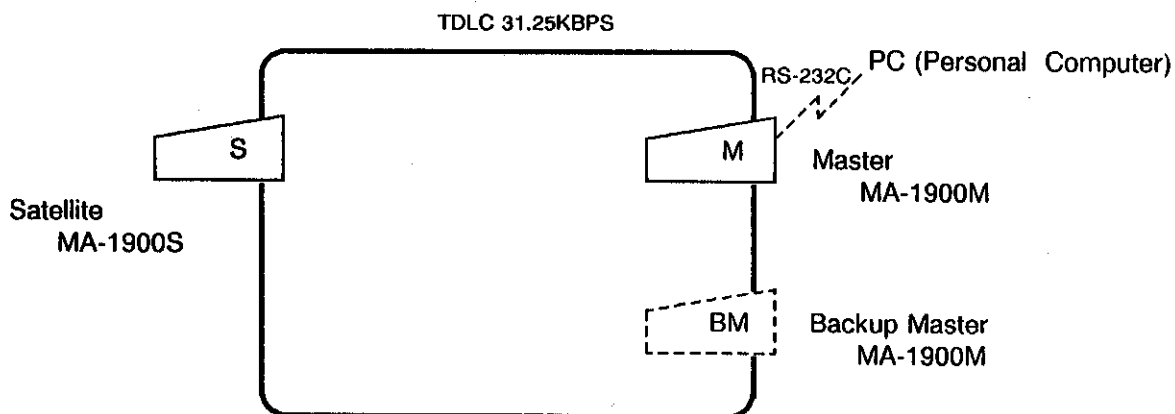
Making the most of the functions of the previously developed MA-1900 stand-alone, the MA-1900 can be developed into a master-satellite system.

Using a master terminal designed by adding a master IFU board to an MA-1900 stand-alone and satellite terminals to which satellite IFU boards are added, the MA-1900 M/S system can comprise an M/S Manual PLU Entry system made up of up to 32 units or an M/S Scanning System by which system files having up to 8,200 items can be held by a maximum of 4 units. By connecting a PC, the system can also be expanded into a transaction data capture system.

Operational functions on each terminal ECR basically stay the same as on a stand-alone ECR, except those deleted, changed, or added for this M/S system use which are described in this manual.

Therefore, any detail information not described here, please refer to the Owner's Manual for the MA-1900 series issued for the stand-alone level.

2. SYSTEM CONFIGURATION



This system can be configured as one of the following two system types. The number of MA-1900 ECR units that can be connected in each system is indicated below.

- | | |
|--------------------------------------|---------------|
| (1) M/S Manual PLU entry System Type | Max. 32 units |
| (2) M/S Scanning System Type | Max. 4 units |

3. HARDWARE DESCRIPTION

3-1 COMMUNICATION SEQUENCE

TDLC (TEC Data Link Control) / 31.25KBPS

3-2 HARDWARE COMPOSITION

A Master-Satellite System is realized by adding the following in-line units to each stand-alone ECR:

Master (or Backup Master) ECR

- Stand-alone Spec. + Master In-line Unit
- Interface Board
 - In-line Cable
 - RTR position (on GT Lock) and RTR Key

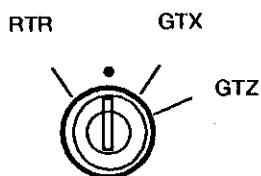
Satellite ECR

- Stand-alone Spec. + Satellite In-line Unit
- Interface Board
 - In-line Cable

NOTE: The components for the Backup Master ECR is exactly the same as those for the Master ECR. The distinction in an actual system loop will be made by the "RTR" position of the GT Lock for the Master use and the Neutral Position for Backup Master use. (A key operation to declare the change from Master to Backup Master, or vice versa, is further necessary.)

3-3 HARDWARE DIFFERENCES FROM STAND-ALONE ECR

1) GT LOCK (for Master ECR or Backup Master ECR)



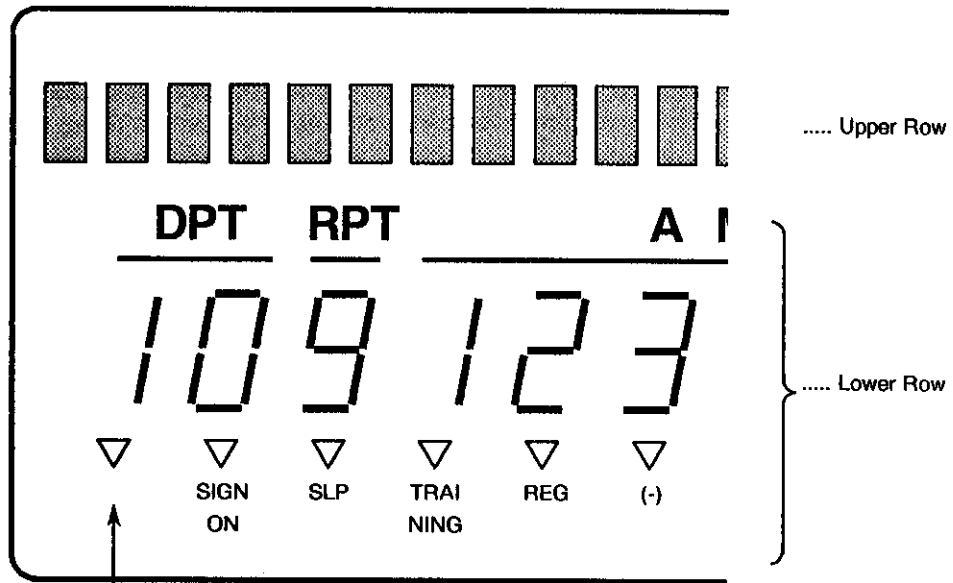
The "RTR" position is newly provided.

(For a Satellite ECR, the lock remains the same as a stand-alone ECR.)

"RTR" position Must be turned to this position when the ECR is installed as the Master ECR and any in-line mode operations are required.

"•" (Neutral Position) A Backup Master ECR must keep this position while it is used as a Satellite ECR. When the original Master ECR becomes down, the Lock can be turned to the "RTR" position to enable this ECR to be used as a new Master ECR of the system. (Refer to the *NOTE* in 3.2 above.)

2) **DISPLAY** (common for Master, Backup Master, and Satellite ECRs)



This triangular lamp flickers on a Satellite ECR when an in-line communication is being performed with the Master ECR, or on the Master ECR with the PC.

In-line Mode Initial Display (on Master ECR only)

	4	3	2	1 ←	Digit No.
RTR/SET Mode:		<input type="checkbox"/>	<input type="checkbox"/>	R	P	
RTR/X Mode:		<input type="checkbox"/>	<input type="checkbox"/>	R	X	
RTR/Z Mode:		<input type="checkbox"/>	<input type="checkbox"/>	R	Z	
RTR/MGR Mode:		<input type="checkbox"/>	<input type="checkbox"/>	R	M	

IN-LINE ERROR CODE AND MESSAGE TABLE
(to be added to the table for the Stand-alone Level)

Error Code	Error Message	Content or Cause of Error
21		Satellite BUSY Error
22		Master BUSY Error
23		DLL Receiving Error
24		Sending No Good in DLL Receiving
25		NAK (Not Acknowledged) Received in Inquiry
26		The Check Track Code Being in Use
27		PLU Table Version does not match.
28		The Card entered through [CARD CHK] is prohibited. (Or call Manager.)
29		-- vacant --
30		Check Digit Error
31		HOLD Error for a Sign ON
32		Consolidated Area is in use.
33		PLU Table DLL Receiving (from PC) Error

4. ADDITIONAL FUNCTION KEYS AND REGISTERING PROCEDURE

The following are keys that can be installed on a MA-1900 ECR of Master or Satellite specifications, in addition to the stand-alone specifications, and the registering procedure using each of the keys.

**PLU
ADD**

PLU ADD KEY ([PLU ADD])

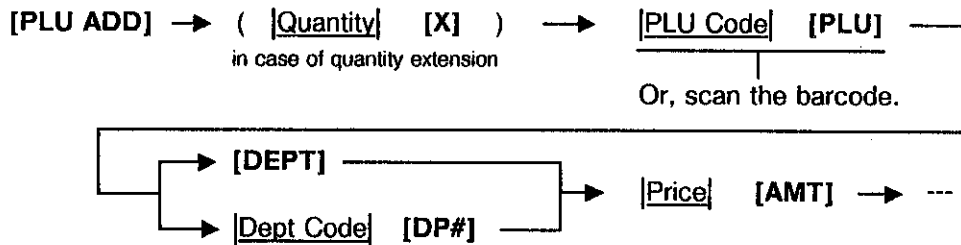
This key is used to add the table of an unprogrammed PLU item (Manual Entry PLU or Barcode Label Item) to the PLU program file memory of the ECR.

The PLU can be entered by first depressing this key, next entering the PLU Code (or by scanning the barcode), and then entering the link Department Code and the preset price. The PLU entered in this way can be entered normally from the next time on.

REGISTERING PROCEDURE FOR AN URGENT PLU TABLE ADDITION

This operation is effective when an "E04" error (undefined code) occurs on entering a PLU code or scanning a barcode of an item in the ordinary entry procedure. The error means that the PLU code has not been programmed in the PLU file. By operating the following procedure, the PLU is entered as a sale item, and at the same time, it is programmed as an additional PLU so that it can be entered as an ordinary PLU thereafter.

Mode Lock: REG, MGR, or  / GT Lock: Neutral (operable on Master or Satellite ECRs)



Link Department Designation

(NOTE: [X] = [@/FOR])

ex.) An operator attempts to enter 4 items of PLU Code 1234 at unit price \$2.00 (linked to Department 3) during a sale, but an "E04" error results. Therefore, the following is operated to enter and program this PLU item.

Mode Lock & GT Lock positions: same as preceding item entries.

- [PLU ADD] (to declare an additional PLU entry and programming)
- 4 [X] (to enter the quantity "4")
- 12345 [PLU] (to enter the PLU Code; can be replaced by scanning the barcode)
- 3 [DP#] (to enter the Link Department Code)
- 200 [AMT] (to enter the unit price of the item)

CARD CHK

CARD CHECK KEY ([CARD CHK])

This key is used to enter the specific card No. of the credit card for payment of a sale of a customer. (Please note that the [CARD No.] key is used to enter a Credit Card Company Classification Code but not the specific No. printed on each card.)

On a card No. entry through this key, the No. is inquired to the "Card No. Negative Check List" programmed in the Master ECR file. When the No. is not found in the list, the card No. will normally be entered and a finalizing operation using a Media Key can follow. When the No. is found in the list, an "E28" error results and the status code No. 1 to 9 (indicating why the card cannot be accepted) is displayed in the AMOUNT portion of the Operator Display. The operator should call the manager as to handling of this card.

REGISTERING PROCEDURE FOR A PAYMENT WITH A CARD

Mode Lock: REG / GT Lock: Neutral (operable on Master or Satellite ECRs)

--- → [Number printed on the card] [CARD CHK] → ---

This operation is allowed at the top of a sale or any time during a sale if before finalizing the sale. When an "E28" error results, the operator calls the manager. The manager then can select one of the following solutions:

1. Tells the customer that the card cannot be accepted referring to the displayed status code (1 to 9). (Or, lets the operator do so without calling the manager.)
2. To allow payment by this card as an exceptional case for some reason, turns the Mode Lock to "MGR" position using the MGR or MA key, and depresses the [CARD CHK] key. The card No. is then accepted and printed.

NOTE: The card check function is activated in the REG mode only; in MGR or mode, the card No. entry is accepted without an inquiry to the "Card No. Negative Check List". Please also note that the card check function can be set to "active" or "non-active" in the SET or MGR mode.

ex.) An operator enters sale items of a customer. When all the items have been entered, the customer says that he wants to pay for the sale with his "ABC Credit Company" card. The No. printed on the card is 12345-678-901. (Presumed that the Card No.1234-678-901 is not in the Card No. Negative Check List, and that the store assigns Code 1 to the "ABC Credit Card Company".)

Mode Lock & GT Lock positions: same as preceding item entries.

The sale items have been entered.

[ST] or [TXBL TL] (to obtain the sale total on the display)

12345678901 [CARD CHK] (Card No. Entry)

1 [CARD NO.] (to classify the Credit Card Company; 1 for "ABC Credit Card Company")

Finalize the sale using the [CRT] (for EU models) or [Chg] (for US/CA models) key.

5. MANAGER'S OWN OPERATIONS IN "MGR" MODE

5-1. RE-ENTRY OF TRANSACTION DATA RECORDED OUT OF TRANSACTION BUFFER

This operation is applied only when a PC (Personal Computer) is connected to the system and the system option "Transaction Data Sending YES" is selected.

The transaction data, arising from sale entries on the ECR, are first stored into the "Transaction Buffer" of the ECR. Usually, the data in the Transaction Buffer are automatically sent to the PC via the Master ECR in any of the following conditions:

1. When the empty area of the Transaction Buffer of the ECR becomes less than the programmed percent. In this case, the "REG" triangular lamp flickers to warn of the near-full condition of the buffer. When the empty area regains more than the programmed percent, the lamp flickering is canceled.
2. When a Transaction Data Collection command is sent from the PC to the ECR via the Master ECR.

However, in case Transaction Buffer becomes full before sending the transaction data in the buffer to the PC, the message "====TRAN FULL====" is printed after the Trailer Line (the line of Date, Time, Register No., Clerk ID, Consecutive No.) on the journal. Sale entries thereafter can normally be registered but the data cannot be stored into the Transaction Buffer. These data should be re-entered later in the "RE-ENTRY MODE", as in the following, to be sent to the PC as transaction data, referring to the sale entry record marked with the TRAN FULL message on the journal.

CONDITION

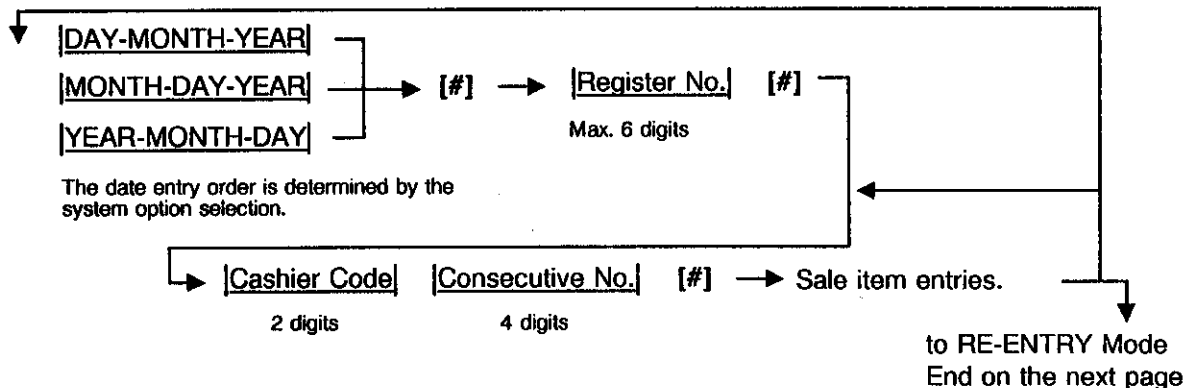
Any time outside a sale (Sign On or Cashier Key ON is required.)
Operable on Master or Satellite ECRs

OPERATION

OPERATION FOR RE-ENTRY MODE START (Mode Lock: MGR / GT Lock: Neutral)

1 | [Training Mode Sign-ON/OFF Code] | [#] (= [# / CID])
 |
 "1" is fixed.
 01 to 99

RE-ENTRY OPERATIONS (Mode Lock: REG, MGR, or □ / GT Lock: Neutral)



OPERATION FOR RE-ENTRY MODE END (Mode Lock: MGR / GT Lock: Neutral)

Same as the RE-ENTRY MODE START operation.

- NOTES**
1. The Consecutive No. will not increment by any entries in the RE-ENTRY Mode.
 2. The data entered in the RE-ENTRY Mode will not be processed into any sales or report total memory.
 3. Print occurs on both the receipt and the journal.
 4. The drawer will not open.
 5. No print occurs on the Remote Slip Printer.

5-2. RE-ENTRY OF CHECK TRACK SALES DATA

This operation is applied only when the system option "Check Track (Customer File Memory)" is selected instead of a Previous Balance Manual Entry. When a sale is entered in the Charge Posting Mode and the sale data cannot be sent to the Check Track file memory in the Master ECR, an "E26" error results, indicating that the specific Customer File is in the in-use condition. Thereafter, that specific Customer File No. cannot be used on any ECR connected to the in-line cable. In this case, the in-use condition of the Customer File can be released by the following operation procedure.

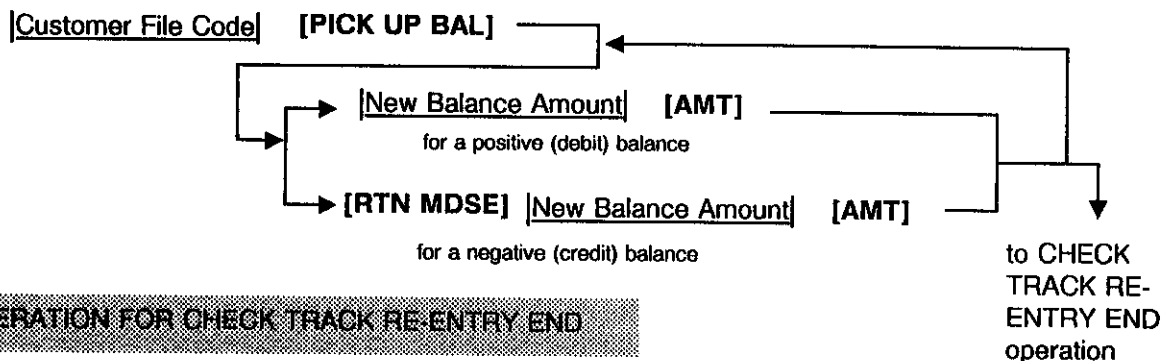
CONDITION When an "E26" error occurs for a charge posting procedure.

OPERATION

OPERATION FOR CHECK TRACK RE-ENTRY START (Mode Lock: MGR / GT Lock: Neutral)

2 [Training Mode Sign-ON/OFF Code] [#] (= [# / CID])
 |
 "2" is fixed.
 01 to 99

RE-ENTRY OPERATIONS (Mode Lock: MGR / GT Lock: Neutral)



OPERATION FOR CHECK TRACK RE-ENTRY END

Same as the CHECK TRACK RE-ENTRY START operation.

- NOTES**
1. No transaction data to be sent to the PC will arise by operations in the CHECK TRACK RE-ENTRY Mode.
 2. The operation is accepted even when the designated Customer File Code is not actually in the "IN-USE" condition.
 3. As the "New Balance Amount", a maximum of 10 digits can be entered within the range from -1000000000 (-\$10,000,000.00) to +8999999999 (\$89,999,999.99).

5-3. REVERSING THE CARD CHECK FUNCTION STATUS

As described for the [CARD CHK] key on page 5, it is programmable whether the Card No. entered through the [CARD CHK] key is inquired to the "Card No. Negative Check List" or not. The status can be set or reversed in the SET mode, and it can also be reversed in the MGR mode as in the following operation procedure.

CONDITION

Any time outside a sale

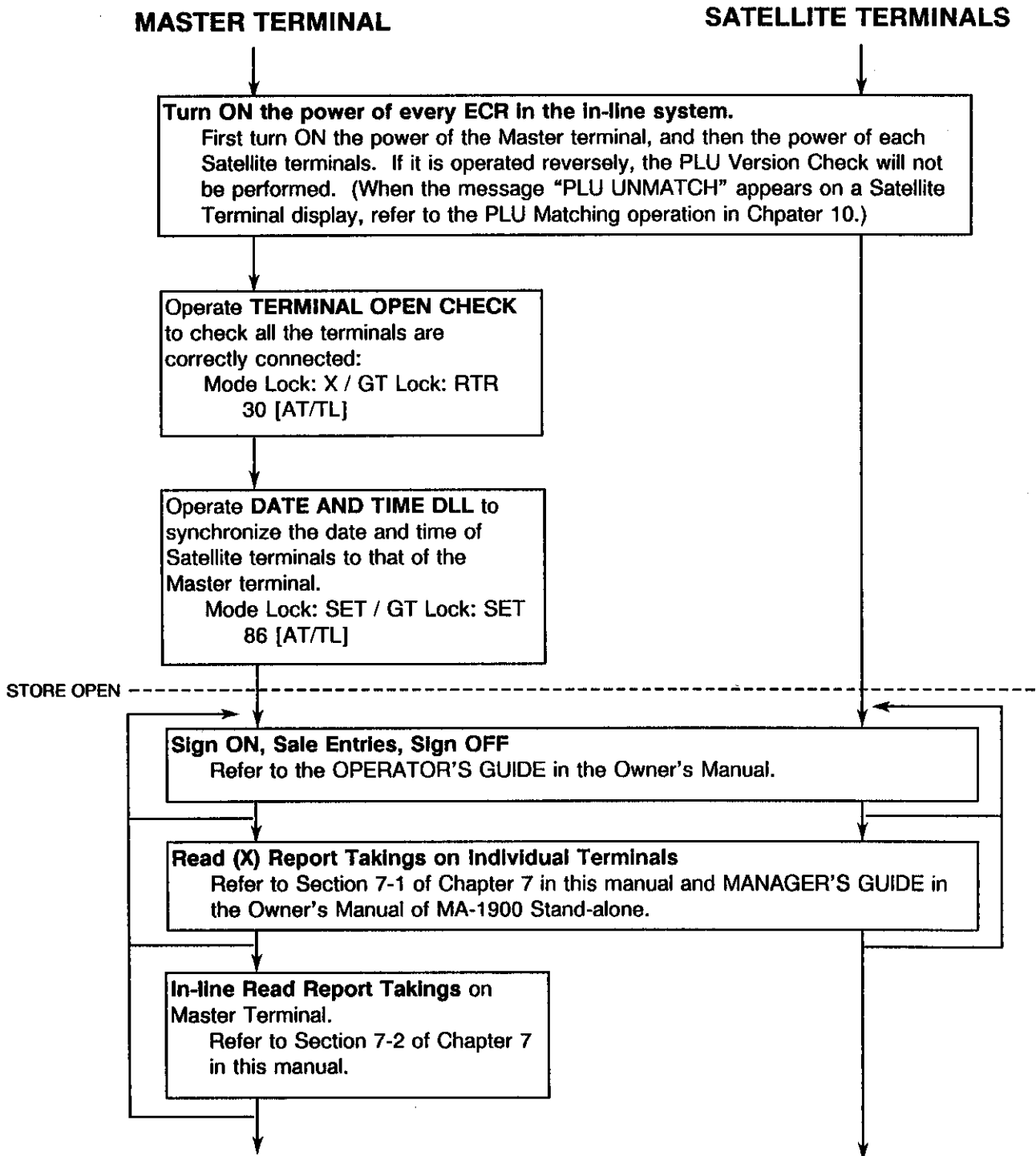
OPERATION

(Mode Lock: MGR / GT Lock: Neutral)

3	Training Mode Sign-ON/OFF Code	[#] (= [# /CID])
	01 to 99	
"3" is fixed.		

6. DAILY OPERATION FLOW OF MASTER-SATELLITE SYSTEM

In a Master-Satellite System, a certain order of jobs on the Master and Satellite terminals are provided. If the necessary jobs are not proceeded in the correct order, sale entries may not be operated or report collections may not be possible. The following chart shows the basic daily operation flow on the Master and Satellite terminals.



(To be continued on the next page.)

7. READ AND RESET REPORTS

7-1. TERMINAL REPORTS

Since most reports are taken as in-line reports on the Master Terminal, many reports which are available on the individual stand-alone ECR basis cannot be taken on Master or Satellite ECRs of the in-line system. The following are the reports which are listed in the **MANAGER'S GUIDE** of the Owners Manual for the MA-1900 stand-alone level but cannot be taken on any ECRs of the in-line system. Other reports not listed below can be taken even in the in-line system. (Before taking those reports, however, please read the next section 7-2: In-line Reports.)

TERMINAL REPORTS that cannot be taken on any ECRs of the in-line system

DAILY REPORTS

Report Header	REPORT NAME
Z13	PLU RESET REPORTS <ul style="list-style-type: none"> • Zone PLU Reset • Sort PLU Reset • All PLU Reset
X14	PLU STOCK READ REPORTS <ul style="list-style-type: none"> • Individual PLU Stock Read • Zone PLU Stock Read • Sort PLU Stock Read • All PLU Stock Read
X15	CUSTOMER FILE READ REPORTS (for Check Track Memory type only) <ul style="list-style-type: none"> • All Files Read • Individual File Read • Zone Files Read • Zero-balance Files Read • Debit-balance Files Read • Credit-balance Files Read

GT REPORTS

Report Header	REPORT NAME
GTX04 GTZ04	CASHIER GT READ AND RESET REPORTS <ul style="list-style-type: none"> • All Cashiers GT Read • All Cashier GT Reset
GTX05 GTZ05	SALESPERSON GT READ AND RESET REPORTS <ul style="list-style-type: none"> • All Salespersons GT Read • All Salespersons GT Reset
GTX13 GTZ13	PLU GT READ AND RESET REPORTS <ul style="list-style-type: none"> • Individual PLU GT Read • Zone PLU GT Read • Zone PLU GT Reset • Sort PLU GT Read • Sort PLU GT Reset • All PLU GT Read • All PLU GT Reset

NOTES: When the "HOLD RESET" type is selected for in-line reset operations, reset report takings on individual ECRs must first be operated to make the ECRs into the "HOLD" condition, followed by in-line reset report collection command entries on the Master ECR. As for details, refer to the next section (7-2).

7-2 IN-LINE REPORTS

NON-HOLD RESET AND HOLD RESET

There are two types of In-line reset report takings -- NON-HOLD RESET and HOLD RESET. One of the two types is selected by system option. The following are the differences between the two reset types; the reset command executions on the Master Terminal are the same.

1) NON-HOLD RESET

This type is helpful to a store where only the store manager or a person authorized by the manager is in charge of taking reset reports at the end of the day and no one else is expected to help him. In this method, the operator (or manager) can execute In-line Reset Commands on the Master Terminal only and no operations are required on each Satellite Terminal.

EXCEPTIONAL RESET REPORTS

- Cashier Resets

Cashier Key Method

Individual Cashier Reset reports can be taken as manual resets on each terminal regardless of the option "Manual Resets on Individual Terminals Allowed". In this case, however, the report data memory is cleared, and In-line Cashier Reset Reports on the Master Terminal will no longer be possible. (When the "Money Declaration Feature" is selected, follow the description for "Money Declaration" in the MANAGER'S GUIDE of the Owner's Manual for the MA-1900 stand-alone level.)

Cashier Signing Method

Individual Cashier Reset reports can be taken as manual resets on each terminal if the option "Manual Resets on Individual Terminals Allowed" is selected. In this case, however, the report data memory is cleared, and In-line Cashier Reset Reports on the Master Terminal will no longer be possible.

- All Salesperson Resets

The same is applied as the "Cashier Signing Method" above.

PROGRAMMABLE OPTIONS

- Manual Resets on Individual Terminals Allowed

If this option is selected and a terminal is manually reset, the terminal will go into the "HOLD" condition just as in the HOLD RESET type later described. Thereafter, the terminal can only take other manual reset reports or wait for the In-line Reset Report Collection command from the Master Terminal.

- Each Terminal Reset Report of and from the individual terminal Issued on a Master Terminal's In-line Reset Report Collection Command

This option may be useful if the store wants sales data recorded by each terminal as well as the entire store's consolidated data issued by the Master Terminal.

- Financial Reset Report of each terminal Issued from Master Terminal as part of In-line Financial Reset Report.

This option may be useful if the store wants sales data of the financial data recorded by each terminal. (This option may not be needed if the option "Manual Resets on Individual Terminals Allowed" is selected.

2) HOLD RESET

This type is designed to take In-line Reset Reports on the Master Terminal by the store manager after taking the individual manual resets on each terminal. Thus this method may be useful for a store where the last cashiers of the day who are responsible for the respective terminals take care of reset report takings of each terminal at the end of the day and the manager will start collection of the data of these terminals thereafter.

The following are the reset reports to be taken as manual resets on each terminal. When any one of them is executed on a terminal, the message "HOLD" is displayed in the upper row of the Operator Display and no operations will be allowed except other reset report takings or an ENFORCED CLEAR OF HOLD CONDITION operation (the HOLD condition is cleared when In-line Reset Report Collection commands are sent from the Master Terminal thereafter). Please note that all the reset reports listed below should be taken, one after another, on this stage. Otherwise, at the time of In-line Reset Report Command executions on the Master ECR, the data not yet reset on a terminal will not be able to be sent to the Master Terminal.

Manual Reset Reports on Each Terminal (including the Master Terminal as Satellite Function):

DAILY RESET REPORTS TO RESULT IN "HOLD" CONDITION (Mode Lock: Z / GT Lock: Neutral)

- Financial Reset (Daily) ... 3 [AT/TL]
- Hourly Range Reset (Daily) ... 10 [AT/TL]
- All Department Reset (Daily) ... 11 [AT/TL]

GT RESET REPORTS TO RESULT IN "HOLD" CONDITION (Mode Lock: Z / GT Lock: GTZ)

The following reports may only be taken on a certain period basis (weekly, monthly, etc.) but not daily.

- Financial Reset (GT) ... 3 [AT/TL]
- All Department Reset (GT) ... 11 [AT/TL]
- Day-of-Week Reset ... 16 [AT/TL]
- Day-of-Month Reset ... 17 [AT/TL]

HANDLING OF OTHER MANUAL RESET REPORTS

- Individual Cashier Resets
 - Cashier Key Method ... Set the Cashier Key of the required cashier, 4 [AT/TL]

Cashier Reset reports can be taken as manual resets on each terminal regardless of the option "Manual Resets on Individual Terminals Allowed". In this case, the sales data memory is cleared on taking the reset report and In-line Cashier Reports on the Master Terminal will no longer be possible. (When the "Money Declaration Feature" is selected, follow the description for "Money Declaration" in the MANAGER'S GUIDE of the Owner's Manual for the MA-1900 stand-alone level.)
 - Cashier Signing Method ... [Cashier Code] [LOG]

Cashier Reset reports can be taken as manual resets on each terminal if the options "Manual Resets on Individual Terminals Allowed" is selected. In this case, the sales data memory is cleared on taking the reset report and In-line Cashier Reports on the Master Terminal will no longer be possible.
- All Salesperson Reset ... 5 [AT/TL]

The description for the "Individual Cashier Resets" is applied to the Salesperson Resets.

PLU Reset reports can by no means be taken as manual reset reports on individual terminals.

PROGRAMMABLE OPTIONS

- Manual Resets on Individual Terminals Allowed

For the HOLD RESET type, this option is only applicable to the Cashier Reset (under the Cashier Signing Method) and Salesperson Reset reports. Taking any of those manual reset reports will immediately clear the report data memory and will not make the terminal into the HOLD condition. (Refer to the Individual Cashier Resets and All Salesperson Resets above.)
- Financial Reset Report of each terminal Issued from Master Terminal as part of In-line Financial Reset Report.

This option may be useful if the store wants sales data of the financial data recorded by each terminal. (This option may not be needed if the option "Manual Resets on Individual Terminals Allowed" is selected.

IN-LINE REPORT COMMAND EXECUTIONS

Before taking in-line reports, please note the following:

- 1) When the "NON-HOLD RESET" type is selected for in-line report operations, In-line Reset Reports (as well as Read Reports) can be taken on the Master Terminal as long as the Satellite Terminals are in the "Signed OFF" condition (for Cashier Signing Method) or in the outside-sale condition (for Cashier Key Method).
- 2) When the "HOLD RESET" type is selected for in-line reset report operations, first take terminal reset reports on individual Master and Satellite terminals and make the terminals into the "HOLD" condition. Then In-line Reset Report takings are allowed on the Master Terminal. (In-line Read Reports, however, can be taken any time on the Master Terminal.)
- 3) When In-line Reports are taken, the power of each Satellite terminal must be turned ON but the Mode Lock and GT Lock can be in any positions.

The operation flow for taking In-line Reports is shown on the next page, and the table of In-line Reports is on the following pages.

The key operation for each In-line Daily Report is the same as the corresponding terminal report available on the stand-alone ECR except for the GT Lock position. Please note that each In-line GT Report requires a 3-digit Report Code instead of a 1 or 2-digit code of the corresponding stand-alone terminal report (for example 108 instead of 8, 117 instead of 17, etc.).

Conditions required on terminals for In-line Report takings:

Read Reports (Daily or GT)

Master Terminal: Any time outside a sale
 Satellite Terminals: Any time outside a sale

Reset Reports (Daily or GT)

(Refer to "NON-HOLD RESET AND HOLD RESET" on the previous pages.)

Master Terminal: Any time outside a sale (for Cashier Key Method)
 Signed-OFF condition (for Cashier Signing Method)
 Satellite Terminals: After its own individual Terminal Reset Reports (for HOLD RESET type)
 Any time outside a sale (for Cashier Key Method of NON-HOLD RESET type)
 Signed-OFF condition (for Cashier Signing Method of NON-HOLD RESET type)

Lock Positions Required

Master Terminal: Mode Lock: X / GT Lock RTR for read reports
 Mode Lock: Z / GT Lock RTR for reset reports
 Satellite Terminals: Any positions

OPERATION FLOW OF IN-LINE READ OR RESET REPORTS

([#] = [#CID])

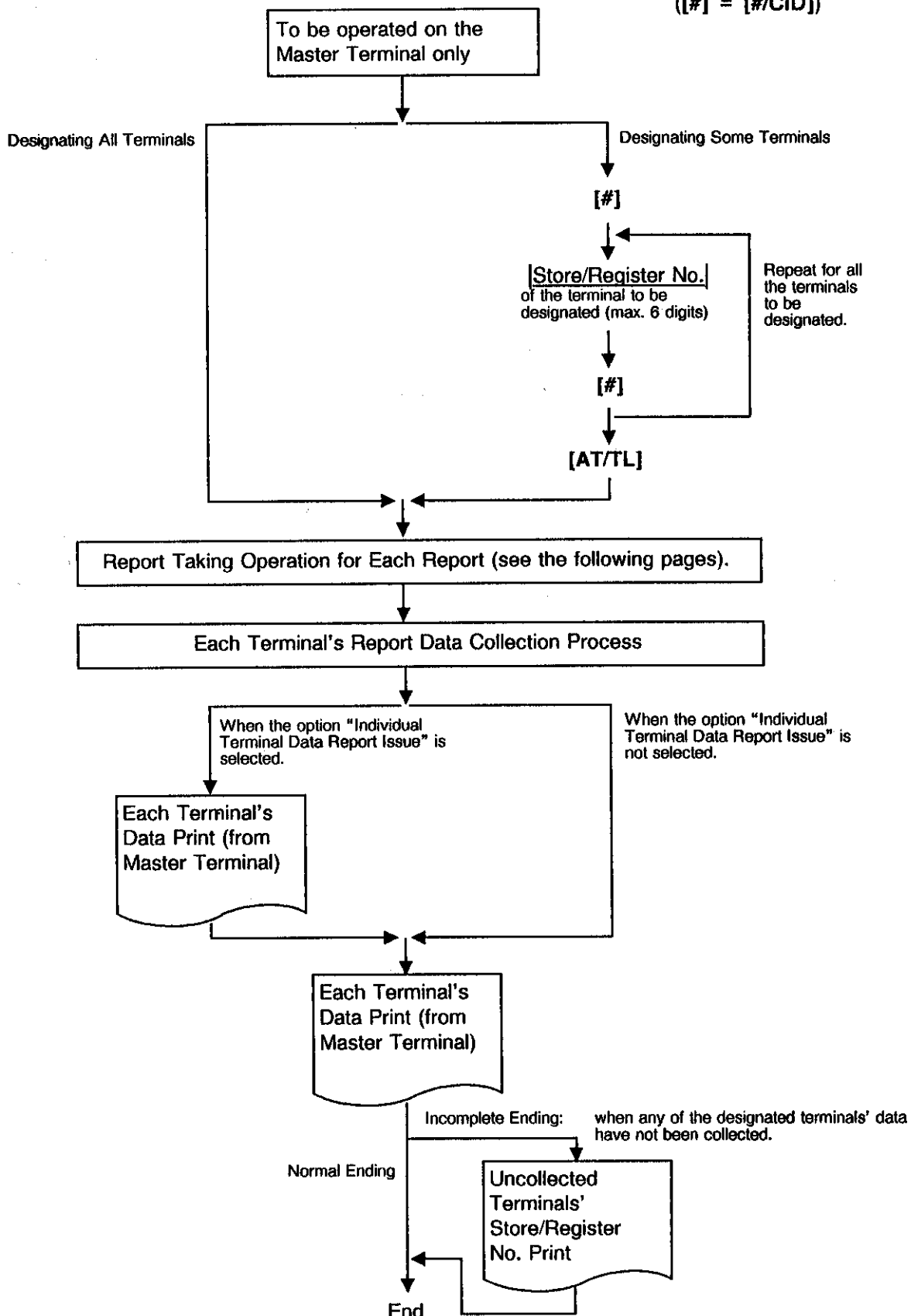


TABLE OF IN-LINE REPORT OPERATIONS

([X] = [AT/FOR]
[OPEN] = [LC OPEN] = [PR OPEN])

GT Lock: RTR

Report Header	Report Name	Mode Lock	Key Operation
	COMBINATION REPORTS		
	•Combination 1 Read: Daily GT	X X	[AT/TL] 100 [AT/TL]
	•Combination 2 Read: Daily GT	X X	1 [AT/TL] 101 [AT/TL]
	•Combination 3 Read: Daily GT	X X	2 [AT/TL] 102 [AT/TL]
	•Combination 1 Reset: Daily GT	Z Z	[AT/TL] 100 [AT/TL]
	•Combination 2 Reset: Daily GT	Z Z	1 [AT/TL] 101 [AT/TL]
	•Combination 3 Reset: Daily GT	Z Z	2 [AT/TL] 102 [AT/TL]
	FINANCIAL REPORTS		
X03 GTX03	•Financial Read: Daily GT	X X	3 [AT/TL] 103 [AT/TL]
Z03 GTZ03	•Financial Reset: Daily GT	Z Z	3 [AT/TL] 103 [AT/TL]
	CASHIER REPORTS (Daily only)		
X04	•Indiv. Terminal All Cashier Read (for Cashier Key Method only)	X	4 [AT/TL]
X04	•All-store All Cashier Read (for Signing Method only)	X	4 [AT/TL]
X04	•All-store Indiv. Cashier Read	X	[3-digit Cashier Code] [LOG]
Z04	•Indiv. Terminal All Cashier Reset (for Cashier Key Method only)	Z	4 [AT/TL]
Z04	•All-store All Cashier Reset (for Signing Method only) (Not available when connected to PC)	Z	4 [AT/TL]
Z04	•All-store Indiv. Cashier Reset	Z	[3-digit Cashier Code] [LOG]
	SALESPERSON REPORTS		
X05	•All-store All Salesperson Read	X	5 [AT/TL]
X05	•All-store Indiv. Salesperson Read	X	[Salesperson Code] [SALES PERSON]
Z05	•All-store All Salesperson Reset (Not available when connected to PC)	Z	5 [AT/TL]
Z05	•All-store All Salesperson Reset	Z	[Salesperson Code] [SALES PERSON]

(To be continued on next page)

TABLE OF IN-LINE REPORT OPERATIONS (continued)

([X] = [@/FOR]
[OPEN] = [LC OPEN] = [PR OPEN])

GT Lock: RTR

Report Header	Report Name	Mode Lock	Key Operation
X06 GTX06	CREDIT CARD COMPANY SALES REPORTS (Read only) • Credit Card Company Sales Read: Daily GT	X X	6 [AT/TL] 106 [AT/TL]
X07 GTX07	DEPARTMENT GROSS PROFIT REPORTS (Read only) • Gross Profit Read: Daily GT	X X	(Process Reports) 7 [AT/TL] 107 [AT/TL]
X08 GTX08	DEPARTMENT GROUP REPORTS (Read only) • Department Group Read: Daily GT	X X	8 [AT/TL] 108 [AT/TL]
X09 GTX08	MEDIA SALES AND IN-DRAWER REPORTS (Read only) • Media Sales and In-drawer Read: Daily GT	X X	9 [AT/TL] 109 [AT/TL]
X10 Z10	HOURLY RANGE REPORTS • Hourly Read (Daily only) • Hourly Reset (Daily only)	X Z	10 [AT/TL] 10 [AT/TL]
X11 GTX11 Z11 GTZ11	DEPARTMENT REPORTS • All Department Read: Daily GT • All Department Reset: Daily GT	X X Z Z	([OPEN]) 11 [AT/TL] ([OPEN]) 111 [AT/TL] 11 [AT/TL] 111 [AT/TL]
X11 GTX11	• Indiv. Department Read: Daily GT	X X	(Process Reports) 11 [#] → [DEPT] (or [Code] [DP#]) → ([ST]) Repeat for required departments. [AT/TL] (to end) Start with 111 instead of 11 in the above pattern.
X12	ALL MEDIA SALES TOTAL AND CASH-IN-DRAWER READ (Daily only)	X	12 [AT/TL]

(To be continued on next page)

TABLE OF IN-LINE REPORT OPERATIONS (continued)

GT Lock: RTR ([X] = [AT/FOR] [OPEN] = [LC OPEN] = [PR OPEN])

Report Header	Report Name	Mode Lock	Key Operation
	PLU REPORTS (Daily only)		([OPEN] key for non-print; NOTE 1)
X13	• Individual PLU Read	X	Barcode Scanning → [PLU Code] [PLU]] → ([ST]) → [AT/TL]
X13	• All PLU Read	X	([OPEN]) [PLU]
X13	• Designated Dept PLU Read	X	([OPEN]) [DEPT] (or [Code] [DP#]) → [PLU]
X13	• Zone PLU Read	X	([OPEN]) [Zone-start PLU Code] [X] → [Zone-end PLU Code] [PLU]
X13	• Designated Dept Zone PLU Read	X	([OPEN]) [DEPT] (or [Code] [DP#]) → [Zone-start PLU Code] [X] → [Zone-end PLU Code] [PLU]
X13	• Sort PLU Read	X	[PLU-sort Code] [PLU] (Process Report)
Z13	• All PLU Reset	Z	[PLU]
Z13	• Designated Dept PLU Reset	Z	[DEPT] (or [Code] [DP#]) → [PLU]
Z13	• Zone PLU Reset	Z	[Zone-start PLU Code] [X] → [Zone-end PLU Code] [PLU]
Z13	• Designated Dept Zone PLU Reset	Z	[DEPT] (or [Code] [DP#]) → [Zone-start PLU Code] [X] → [Zone-end PLU Code] [PLU]
	CUSTOMER FILE READ (for Check Track Memory type only) (Read only)		
X15	• All Files Read	X	[PICK UP BAL]
X15	• Zone Files Read	X	[Zone-start File Code] [X] → [Zone-end File Code] [PICK UP BAL]
X15	• Individual File Read	X	[File Code] [PICK UP BAL]
X15	• Zero-balance Files Read	X	0 [PICK UP BAL]
X15	• Debit-balance Files Read	X	1 [PICK UP BAL]
X15	• Credit-balance Files Read	X	2 [PICK UP BAL]
	DAY-OF-WEEK REPORTS (GT only)		
GTX16	• Day-of-Week GT Read	X	116 [AT/TL]
GTZ16	• Day-of-Week GT Reset	Z	116 [AT/TL]
	DAY-OF-MONTH REPORTS (GT only)		
GTX17	• Day-of-Month GT Read	X	117 [AT/TL]
GTZ17	• Day-of-Month GT Reset	Z	117 [AT/TL]
X20	INACTIVE PLU READ	X	0 [PLU] (Process Report)

(To be continued on next page)

TABLE OF IN-LINE REPORT OPERATIONS (continued)

GT Lock: RTR ([X] = [@/FOR], [#] = [# /CID])
 [OPEN] = [LC OPEN] = [PR OPEN])

Report Header	Report Name	Mode Lock	Key Operation
	DEPARTMENT AND PLU ABC ANALYSIS REPORTS (Read only)		(Process Reports)
X21	• Best Selling Departments in Quantity: Daily GT	X X	1 [#] → (Ending Rank No.) [AT/TL] 101 (Follow from [#] above)
X21	• Best Selling PLUs in Quantity (Link Department Designation): Daily only	X	1 [#] → ([DEPT] (or [Code] [DP#])) → (Ending Rank No.) [PLU]
X22	• Best Selling Departments in Amount: Daily GT	X X	2 [#] → (Ending Rank No.) [AT/TL] 102 (Follow from [#] above)
X22	• Best Selling PLUs in Amount (Link Department Designation): Daily only	X	2 [#] → ([DEPT] (or [Code] [DP#])) → (Ending Rank No.) [PLU]
X23	• Worst Selling Departments in Quantity: Daily GT	X X	3 [#] → (Ending Rank No.) [AT/TL] 103 (Follow from [#] above)
X23	• Worst Selling PLUs in Quantity (Link Department Designation): Daily only	X	3 [#] → ([DEPT] (or [Code] [DP#])) → (Ending Rank No.) [PLU]
X24	• Worst Selling Departments in Amount: Daily GT	X X	4 [#] → (Ending Rank No.) [AT/TL] 104 (Follow from [#] above)
X24	• Worst Selling PLUs in Amount (Link Department Designation): Daily only	X	4 [#] → ([DEPT] (or [Code] [DP#])) → (Ending Rank No.) [PLU]

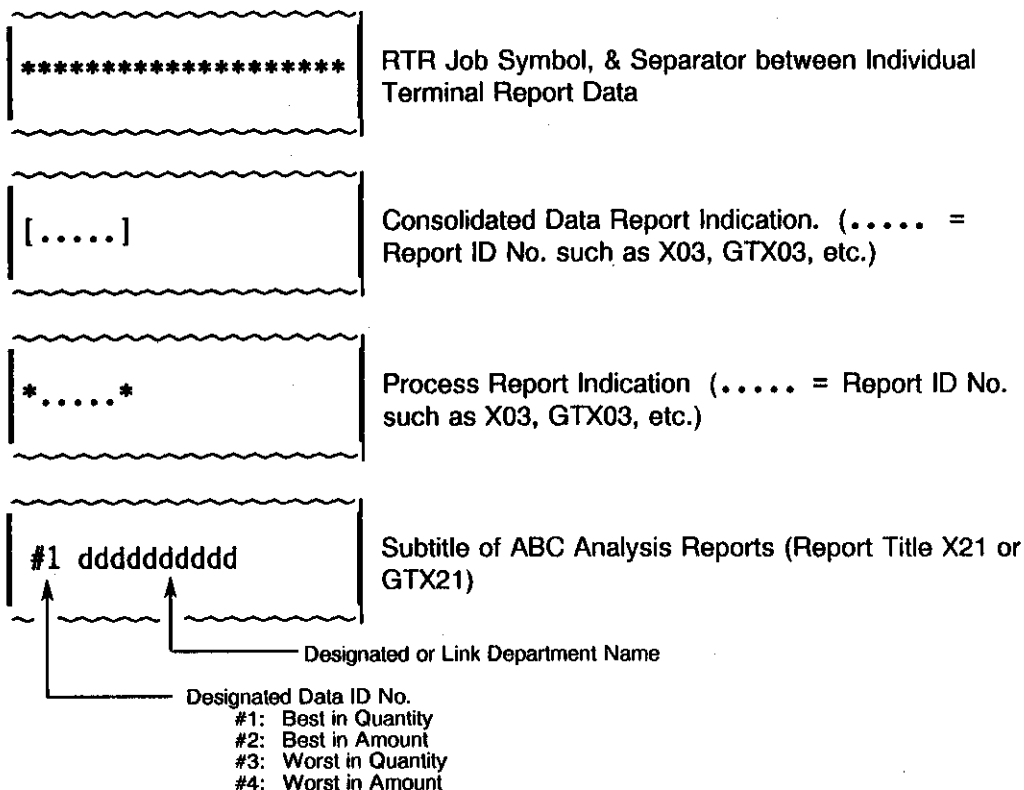
- NOTES**
1. When the operation is preceded with "[OPEN]", it indicates that the report data will only be collected and stored into the Consolidated Memory of the Master Terminal but not print out. This operation is useful in taking a "Process Report" thereafter but not requiring the print out of that report itself.
 2. When the "Process Report" is marked, the report can only be taken after taking another report which consolidates the corresponding data to be based on. Also refer to NOTE 1 above.
 3. As for other miscellaneous operations available in RTRIX or RTRIZ mode, see the last chapter of this manual.

IN-LINE REPORT PRINT FORMAT

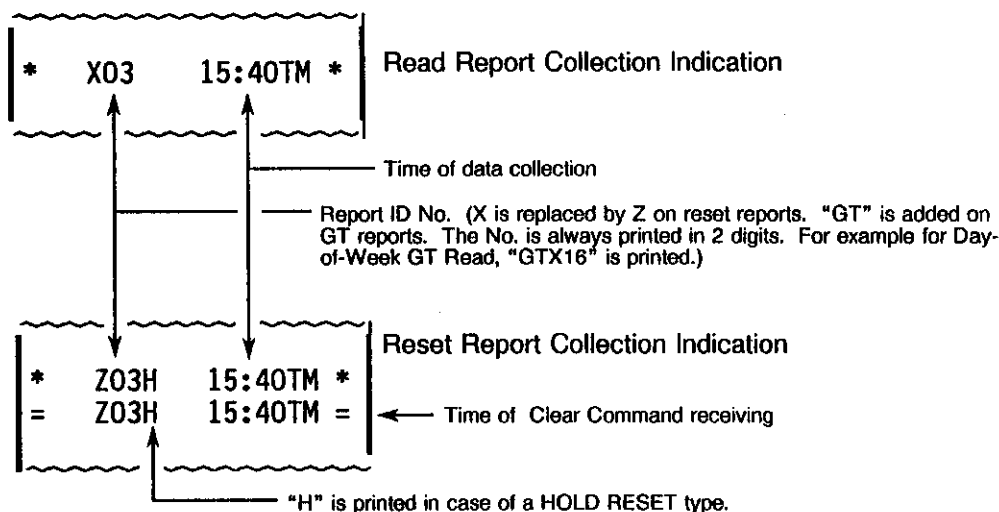
The print format of each report is basically the same as the format of the corresponding stand-alone terminal report except that some indications are additionally printed as in-line operation job IDs.

MASTER TERMINAL (In-line Reports)

Print Format



JOURNAL INDICATIONS ON INDIVIDUAL TERMINALS (when report data is collected)



8. PROGRAMMING OPERATIONS

The system should be programmed fully according to the user's requirements at the time of delivery so that daily operations can immediately start. However, some data must be added or changed daily or in a longer period. Please consult with your TEC representative about what programmings are needed as user's daily jobs and what programmings are to be contained as your TEC representative service. Since the volume of programming contents for the system is large, the TEC representative is entirely responsible of service and information on programming operations. Please also note that some of the programming operations available on stand-alone ECR basis are not acceptable on terminals of an in-line system.

9. DLL (Down Line Loading) OPERATIONS

In a Master-Satellite system, most programming data are set on the Master Terminal and down-line-loaded (DLL) to Satellite Terminals. Since DLL operations are deeply connected with programming operations, it is also your TEC representative's responsibility to service or inform on DLL operations. (Some of them are introduced in Chapter 6 and Chapter 10 of this manual.)

10. OTHER OPERATIONS (relating to In-line Service)

The following are other operations relating to in-line service operations but not described in the preceding chapters.

<u>TABLE OF CONTENTS</u>	
	page
TIME OUT	24
SUSPENDING	25
RETRY	25
INCOMPLETE ENDING	25
CANCEL	26
TERMINAL OPEN CHECK	27
SIGN-OFF / HOLD CHECK	27
CONSOLIDATED REPORT DATA CHECK	28
ENFORCED CLEAR OF CONSOLIDATED REPORT DATA	28
PLU VERSION CHECK	29
PLU VERSION MATCHING	29
ENFORCED CLEAR OF HOLD CONDITION	30
MASTER AND BACKUP MASTER ALTERNATION	31

TIME OUT

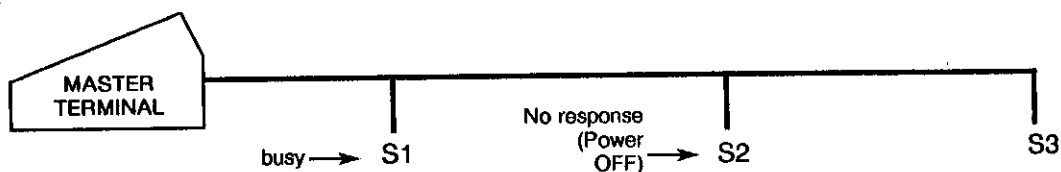
A Time-Out condition arises when the Master Terminal is making an in-line service operation, such as X/Z report collection, DLL, etc. to the Satellite Terminals. The service timer is provided for servicing each of the Satellite Terminals, thus on exceeding the time limit, a Time-Out condition will occur. In this case, either a "RETRY", "SUSPENDING", "INCOMPLETE ENDING", or "CANCEL" operation will be accepted.

ex. 1) In a system with a Master Terminal and 3 Satellite Terminals:



When a report collection is executed on the Master Terminal, a series of data collections from each terminal (S1 to S3) will be performed, but services for S1 and S2 will be skipped due to their "busy" conditions. Thereafter, services will again be attempted to S1 and S2. As a limit of 30 seconds is provided for servicing each terminal, the total service time in this case will be 30 sec. x 2 units = 60 sec. If data collection is successfully done from S1 within this time limit, servicing S2 follows for the rest of the time, and on reaching the time limit, the Time-Out condition arises, displaying on the Master Terminal the number of not-yet collected terminal(s) and the Store/Register No. of the last serviced terminal. On this stage, the operator may only go on to "SUSPENDING" (to wait for a while until S2 clears the "busy" condition), or to "RETRY" (to execute collection service to S2 again, expecting that S2 has already cleared the "busy" condition), or to "INCOMPLETE ENDING" (to abandon the service to S2 and end with collection of the data of so-far collected terminals only), or to "CANCEL" operation. If "RETRY" is operated, the service time now is 30 seconds because only one terminal remains uncollected.

ex. 2)



In this case, S2 is in a "No response" condition and S1 is in a "busy" condition. As only one terminal is responding with some kind of status, a time out limit of 30 seconds is given (the "No response" status is not subject to the service timer). However, if S2 turns into a "Power ON" condition, it will also be subject to the service timer.

SUSPENDING

This is to be operated for the purpose of suspending an in-line service being executed, when any terminals remain unserved, and of going on to a "RETRY", "INCOMPLETE ENDING", or "CANCEL" operation as the next step.

OPERATION ON MASTER TERMINAL: (Same Lock positions as the in-line job being performed)

Depress [ITEM CORR] or [VOID] until the key-in tone is generated.

DESCRIPTION:

The SUSPENDING operation is allowed any time during an in-line service procedure.

If suspending by the [ITEM CORR] or [VOID] key is accepted, the Master terminal's display indicates the number of unserved terminals and the last service-attempted terminal's Register/ID No., and now a "RETRY" or "INCOMPLETE ENDING" operation can be selected as the next step.

RETRY

This is to be operated for the purpose of re-attempting the in-line service that has been stopped due to "TIME OUT" or that has just been suspended by "SUSPENDING" operation.

OPERATION ON MASTER TERMINAL: (Same Lock positions as the in-line job being performed)

Depress [AT/TL].

DESCRIPTION:

The in-line service will again be attempted to the unserved terminals. This operation is possible any number of times after a "TIME OUT" condition or a "SUSPENDING" operation as long as any terminals remain unserved.

INCOMPLETE ENDING

This is to be operated to abandon services to unserved terminals, and ends the in-line service with the services to service-completed terminals only.

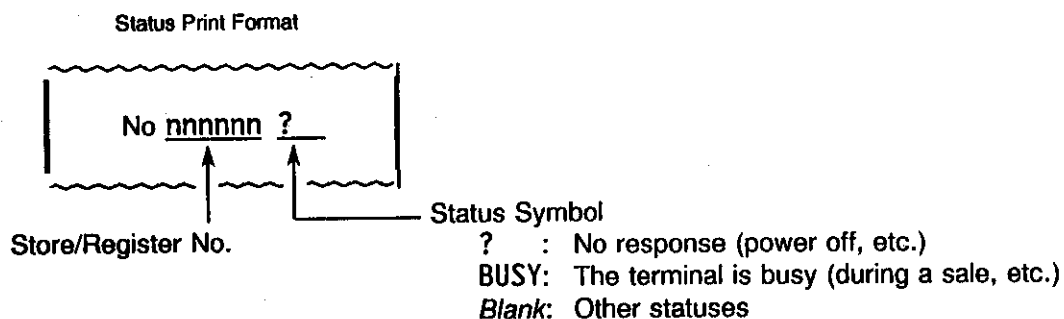
OPERATION MASTER TERMINAL: (Same Lock positions as the in-line job being performed)

Depress [NS].

DESCRIPTION:

If an in-line service being executed does not seem to end normally due perhaps to some abnormal status of any Satellite Terminals after "TIME OUT", "SUSPENDING", and/or "RETRY" operations, the [NS] key can be depressed to end the in-line service with only the service-completed terminals serviced and the unserved terminals remaining unserved. In case of In-line X or Z Report Collection sequences, reports of only the service-completed terminals will be issued.

As part of the print out, the Store/Reg. No. of the terminal and its status will be printed.



CANCEL

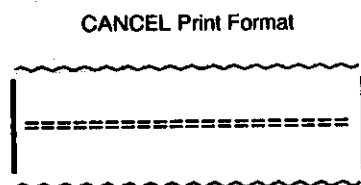
This can be operated when a SUSPENDING condition arises due to a TIME OUT or a SUSPENDING operation. The entire in-line service being performed is canceled. This operation is effective to in-line read report operations but not to any in-line reset report operations.

OPERATION MASTER TERMINAL: (Mode Lock: X / GT Lock: RTR)

Depress [X] or [@/FOR].

DESCRIPTION:

The CANCEL symbol is printed as in the following.



TERMINAL OPEN CHECK

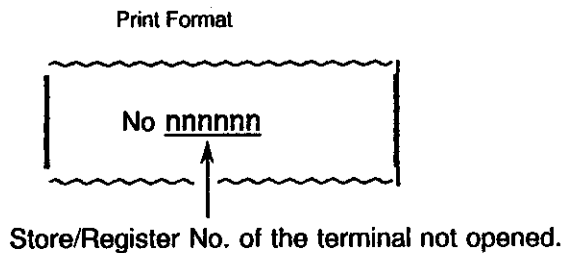
This can be operated to check if terminals are properly connected to the in-line cable.

OPERATION MASTER TERMINAL: (Mode Lock: X / GT Lock: RTR)

30 [AT/TL]

DESCRIPTION:

All the terminals are checked if they are opened, referring to the Terminal Connection Table set in the Master Terminal. The Store/Register Nos of the terminals with no responses are printed on a receipt. When all the terminals are correctly opened, only the header (X30) will be printed on the receipt.



SIGN-OFF / HOLD CHECK

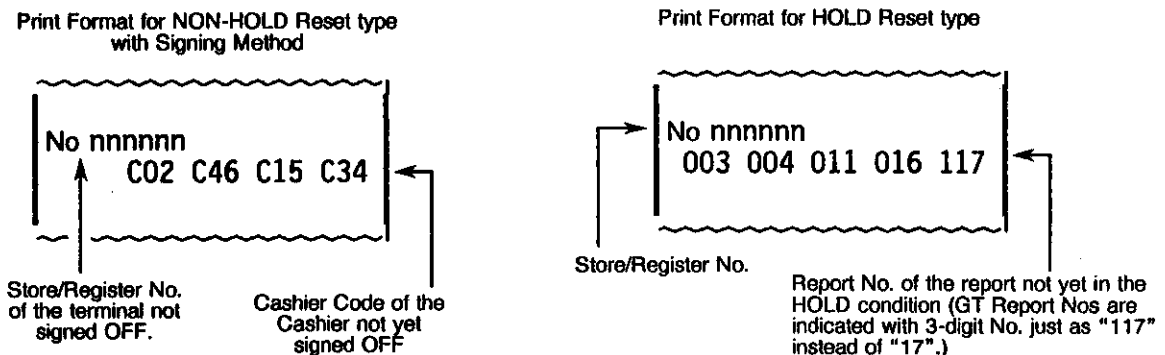
This can be operated before taking in-line reset reports, to check if there are any terminals in a signed-ON condition (for NON-HOLD Reset type with Signing Method) or a not-HOLD condition (for HOLD Reset type).

OPERATION MASTER TERMINAL: (Mode Lock: X / GT Lock: RTR)

31 [AT/TL]

DESCRIPTION:

The Store/Register No. and its signed-ON Cashier codes will be printed (for NON-HOLD Reset type) or the Store/Register No. and its not-HOLD terminal report Nos will be printed (for HOLD Reset type) on a receipt. When all the terminals are correctly signed off or in all-report HOLD conditions, only the header (X31) will be printed on the receipt.



CONSOLIDATED REPORT DATA CHECK

This can be operated only when a PC is connected, to check which report data are remaining in the Consolidation Memory of the Master Terminal.

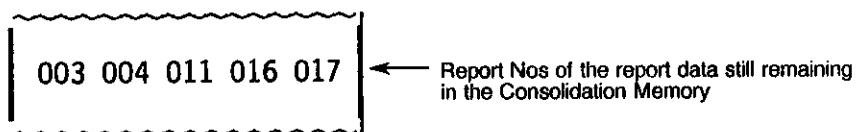
OPERATION MASTER TERMINAL: (Mode Lock: X / GT Lock: RTR)

33 [AT/TL]

DESCRIPTION:

The Report Titles of the consolidated data (of reset reports) are printed on a receipt. When no consolidated data are remaining in the memory, only the header (X33) is printed on the receipt.

Print Format



ENFORCED CLEAR OF CONSOLIDATED REPORT DATA

This can be operated only when a PC is connected, to enforcedly clear the reset report data that are remaining in the Master Terminal and should be sent to the PC.

OPERATION MASTER TERMINAL: (Mode Lock: Z / GT Lock: RTR)

8888 [AT/TL]

DESCRIPTION:

All the reset reports of the remaining data are issued, and the Consolidation Memory is cleared.

PLU VERSION CHECK

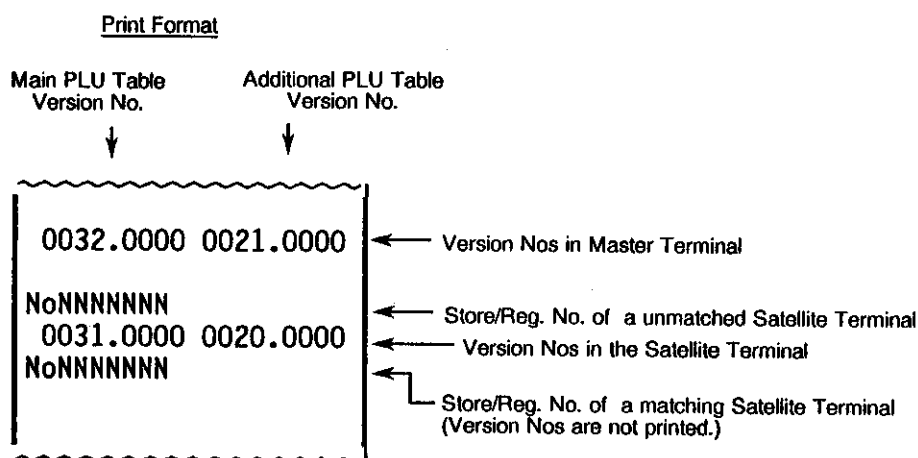
This can be operated to check the matching of the PLU program data between the Master and the Satellite Terminals.

OPERATION ON MASTER TERMINAL: (Mode Lock: X or Z / GT Lock: RTR)

32 [AT/TL]

DESCRIPTION:

The Version No. of PLUs in the Master Terminal and the Version No. of each of the designated Satellite Terminals are printed. Even when the Version No. in a Satellite Terminal is correctly matching, the Store/Register Nos of the terminal will be printed.



PLU VERSION MATCHING

When the PLU Versions of a Satellite Terminal is found to unmatched those of the Master Terminal by the above operation or by the auto PLU Check on the Satellite Terminal power-on (described in Chapter 6), the following may be operated to match the Versions.

OPERATION ON THE SATELLITE TERMINAL: (Mode Lock: MGR / GT Lock: Neutral)

7 x x [#] (x x = Training Mode Sign ON/OFF Code)

DESCRIPTION:

Then the Master Terminal will automatically loads the necessary PLU Table Files (Main or Additional or both which Version Nos have not been matching in the Satellite Terminal).

ENFORCED CLEAR OF HOLD CONDITION (on Individual Terminals)

This can be operated when the HOLD condition on a terminal by no means be cleared because the terminal cannot receive a Clear Command from the Master Terminal for some reason (the Master Terminal becomes down, etc.).

OPERATION ON ANY TERMINAL IN HOLD CONDITION: (Mode Lock: X or Z / GT Lock: Neutral)

9999 [AT/TL]

DESCRIPTION:

On this operation, the HOLD condition is cleared, issuing again all the reset reports that have already been taken as Manual Resets (with the Consecutive Nos identical to those already issued as Manual Resets) and allowing any key-in operations. However, this operation is regarded as an emergent measure to cope with such a trouble as the Master Terminal becomes down, etc. and thus no other solutions can be chosen, because the sales data memory of those reports can no longer be collected by the Master Terminal.

MASTER AND BACKUP MASTER ALTERNATION

The Backup Master Terminal can be changed to be used as the Master Terminal when the Master Terminal becomes down, etc. And the Master Terminal can be changed to be used as the Backup Master when it comes back from repairment, etc.

To switch from the Backup Master Terminal function to the Master Terminal function:

Mode Lock: MGR / Control Lock: RTR

6 x x [#] (x x = Training Sign ON/OFF Code)

The In-line ID No. will automatically be set to No.01 (Master Terminal).

NOTE: This operation must be performed while the original Master Terminal is down (i.e. in an off-line condition).

To switch from the Master Terminal function to the Backup Master Terminal function:

Mode Lock: MGR / Control Lock: RTR

6 x x [#] (x x = Training Sign ON/OFF Code) ... Same as the operation from Backup Master to Master above.

The In-line ID No. will automatically be set to No.02 (Backup Master Terminal).

Print Format for Master Declaration
(from Backup to Master)

```

*   M   E   C   R   *
  
```

Print Format for Backup Master Declaration
(from Master to Backup)

```

*   B   M   E   C   R   *
  
```

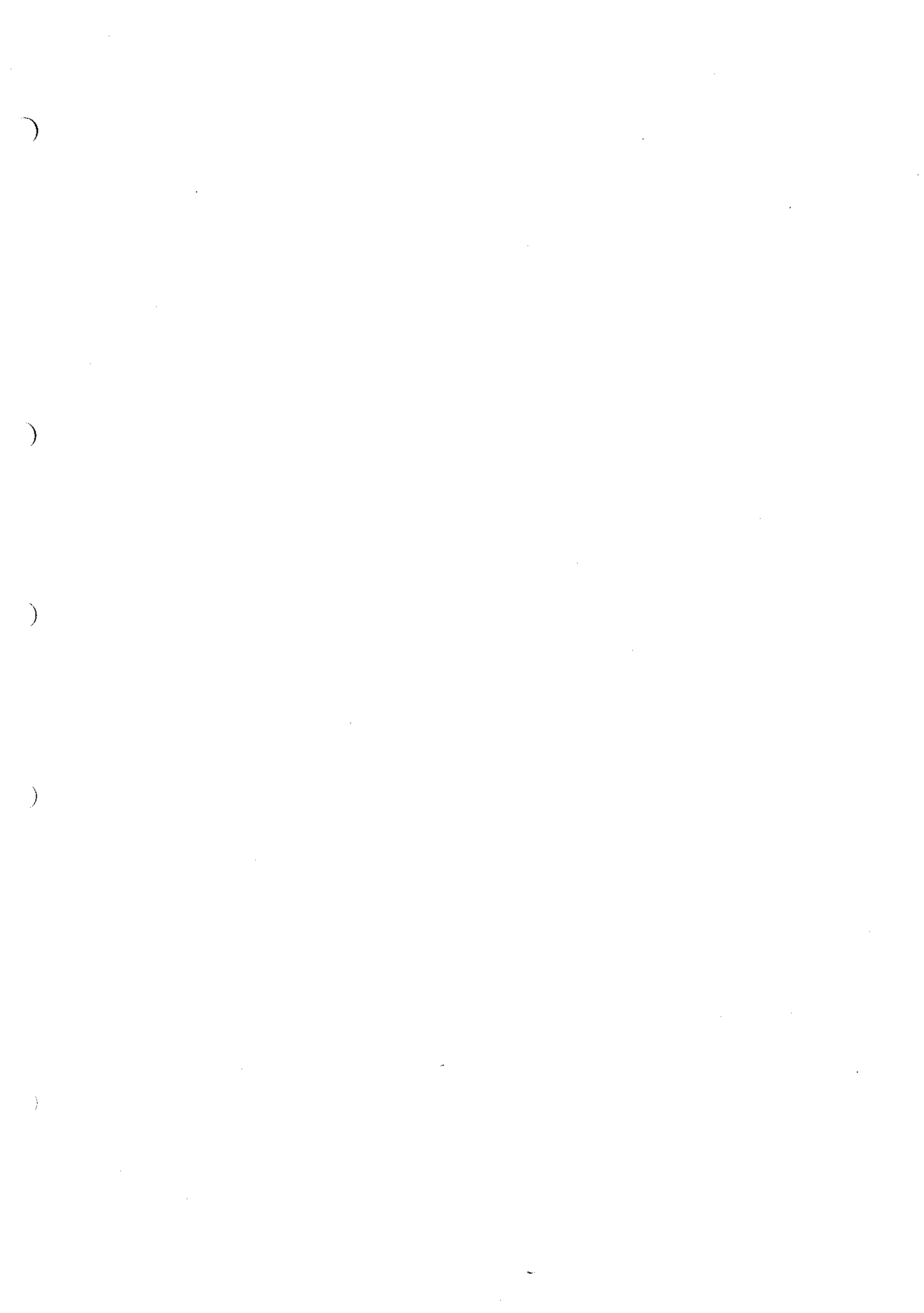

)

)

)

)

)



TEC

TOKYO ELECTRIC CO., LTD.

E PRINTED IN JAPAN
EO1-11006 89081000 © D