

**SHARP**<sup>®</sup>  
POS TERMINAL

MODEL

**ER-A770**

INTER-REGISTER  
COMMUNICATION SYSTEM

**INSTRUCTION  
MANUAL**

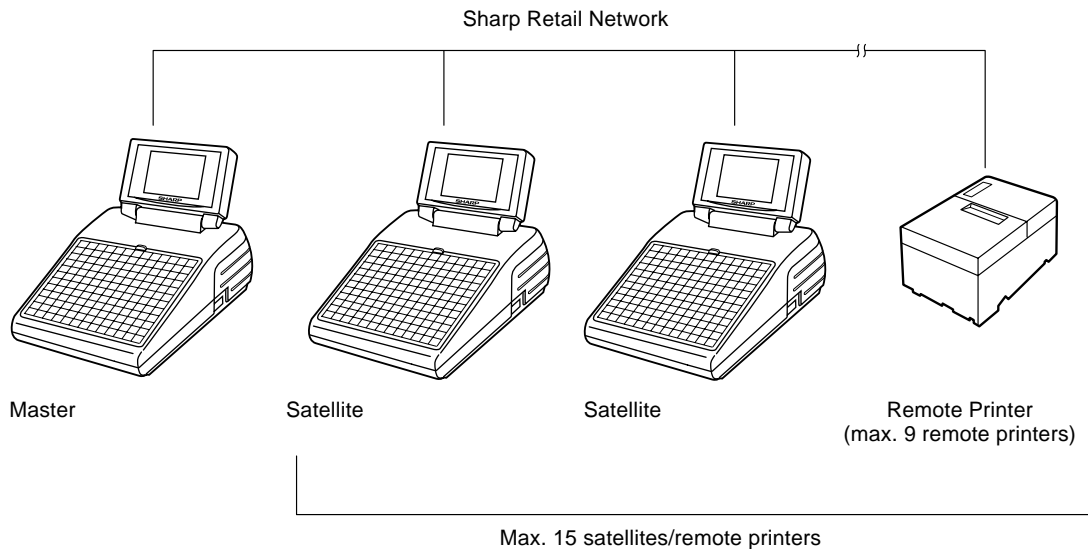
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# Introduction

The ER-A770 inter-register communication (IRC) system consists of one master machine and up to 15 satellite machines/remote printers (max. 9 remote printers) which are all interconnected by the Sharp Retail Network (SRN) to provide data transmission among them. This system allows the manager to exercise centralized control over the satellites through the master.



- One of the satellites may be used as a back-up master.

# 1 Inline Operation

## 1. Message display

### (1) The message displayed during inline communications

- 1) The message shown at below is displayed at the master engaged in IRC transmission (when the broadcasting method has been preset).

ex.:

SENDING DATA

#### NOTE

*The above message is also displayed at the satellite which is engaged in system resetting transmission.*

- 2) The machine number of the satellite that is communicating with the master is instantaneously displayed at the master after IRC transmission.

In this case, the machine number is "000022."

ex.:

000022

## (2) Error messages

When an error occurs, a corresponding error message is displayed.

For a description of the error messages, see the “List of error messages” below.

### List of error messages

Error message (Default)	Description
BUSY	<ul style="list-style-type: none"><li>• The target machine is busy.</li></ul>
LACKING MEMORY	<ul style="list-style-type: none"><li>• The GLU, drive-through code, or related file memory is full.</li></ul>
MOTOR LOCK	<ul style="list-style-type: none"><li>• The remote printer head did not operate correctly.</li></ul>
NO AUTHORITY	<ul style="list-style-type: none"><li>• The server who entered a GLU/PBLU code was not authorized.</li></ul>
UNDEFINED CODE	<ul style="list-style-type: none"><li>• The specified server code is not present in the master.</li></ul>
	<ul style="list-style-type: none"><li>• The entered GLU/PBLU code is not listed.</li></ul>
CODE NOT FREE	<ul style="list-style-type: none"><li>• The specified server has signed on at another machine.</li></ul>
	<ul style="list-style-type: none"><li>• The entered GLU/PBLU code is in use.</li></ul>
POWER OFF	<ul style="list-style-type: none"><li>• The power was not turned on.</li></ul>
T-LOG FULL	<ul style="list-style-type: none"><li>• The T-LOG file is full.</li></ul>
NON RESET	<ul style="list-style-type: none"><li>• IRC initial D/L before resetting.</li></ul>
TYPE ERROR	<ul style="list-style-type: none"><li>• IRC Download file type mismatch.</li></ul>
LINE ERROR	<ul style="list-style-type: none"><li>• SRN line error.</li></ul>
SYSTEM CLOSED	<ul style="list-style-type: none"><li>• Entry is executed in close store state.</li></ul>
IS SIGNED ON	<ul style="list-style-type: none"><li>• IRC server sign-on error (when all server resetting executed).</li></ul>
NO REPLY/MASTER	<ul style="list-style-type: none"><li>• Master does not reply to the request.</li></ul>
NO REPLY/BACKUP	<ul style="list-style-type: none"><li>• Backup master does not reply to the request.</li></ul>
ATTEMPT RETRY?	<ul style="list-style-type: none"><li>• System retry message.</li></ul>

#### NOTE

- To clear the error message displayed, press the [CL] key.
- Please consult your authorized SHARP dealer to remedy the cause for the error condition.

## 2. Open store operation (PGM2 mode) — master and satellite

When the open store operation is performed at the master, the IRC system is opened and the registration function becomes available at all the machines in the IRC system.

The following types of communications between the master and satellites are allowed;

### From the master to the satellite

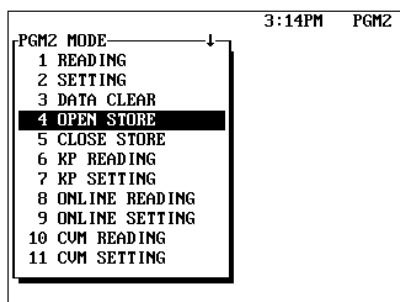
- Sending a request for the satellite to receive data (T-LOG polling)
- Sending a response to inquiry from the satellite

### From the satellite to the master

- Sending a request for T-LOG polling
- Sending data to the T-LOG buffer
- Sending a request for updating of the GLU/PBLU file
- Inquiring for data on the GLU/PBLU and customer files

Open store procedure (PGM2 mode)

### Procedure



Select OPEN STORE from the PGM2 MODE menu and press the [ENTER] key.

### NOTE

- *You can also perform the open store operation at each satellite. Once the open store operation is performed at a satellite, you can make registrations at the satellite. When you perform the open store operation at the satellites, T-LOG polling will not take place.*
- *The open store operation cannot be performed at any machines whose terminal numbers have not been programmed.*
- *If a transmission error occurs when the open store operation is being performed, the master displays and prints (journal printer) the machine number of the satellite that encountered the error. When the master has been programmed to enable the system retry function\*, a prompt to retry the open store operation will be displayed.*

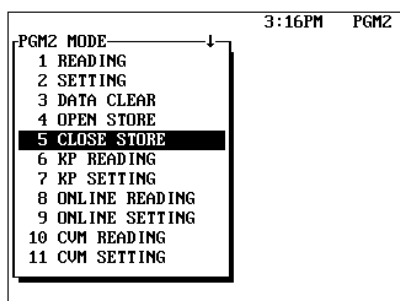
\* For the system retry function, please refer to pages [57](#) - [58](#).

### 3. Close store operation (PGM2 mode) — master and satellite

When the close store operation is performed at the master, the inline system is closed and the registration function becomes unavailable at all the machines in the inline system. It should be noted that for the close store operation, all the satellites must be in their SIGN-OFF state. After this operation, the communications between the master and satellites which have been enabled with the open store operation are disabled. The master, however, can download preset data and reset the sales data at satellites.

In the close store state, any key operation in the REG or MGR mode is invalid.

#### Procedure



#### Menu selection

Select CLOSE STORE from the PGM2 MODE menu and press the [ENTER] key.

#### NOTE

- You can also perform the close store operation at each satellite. Once the close store operation is performed at a satellite, you can no longer make registrations at the satellite.
- If a satellite is in the SIGN-ON state, the master encounters an error and displays the machine number of the satellite.
- When the close store operation is performed, the data remaining in the T-LOG buffers of all the satellites is collected by the master.
- If a transmission error occurs during the close store operation, the master displays and prints (journal printer) the machine number of the satellite that has encountered the error. In this case, a prompt to attempt a retry is displayed when the system retry has been enabled.

## 4. Sign-on operation (server assignment) (REG mode/MGR mode)

The sign-on operation is intended to assign a server to a machine (satellite or the master) and enable him or her to perform entry operations at the machine.

If a server successfully signs on at a machine, his or her server name appears on the LCD of the machine.

The server memory is under the control of the master.

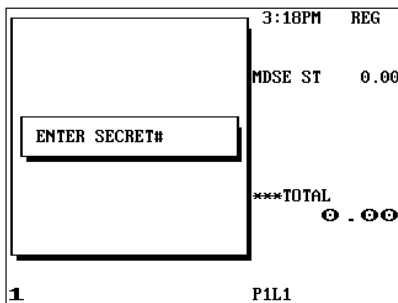
The sign-on operation can be done whether the machine is in the open store or close store state. If the sign-on operation is done at a machine that is in the close store state, registrations cannot be made at the machine due to the close store condition.

### Sign-on procedure

(This procedure is the same as for server assignment at a standalone machine.)

#### Procedure

(using menu)



1. Press the [ENTER] key when the mode selection menu is displayed. Enter your server code and press the [SERV#] key.
2. The pop-up window for the secret code will open if secret code is programmed. Enter your secret code and press the [ENTER] key.
3. The pop-up window for the drawer number will open if drawer number entry is compulsory. Enter your drawer number and press the [ENTER] key.

#### NOTE

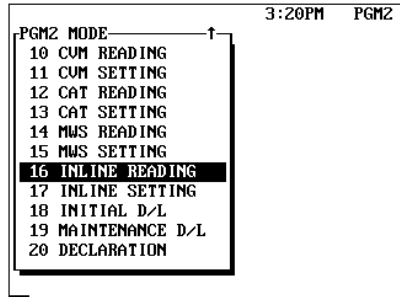
- The sign-on operation can be made only for one server at a time.
- If a server attempts to sign on when another server has already signed on, an entry error will occur (when the stay-down server sign-on has been preset).
- Every server that is preset in the system can sign on at any machine.
- If a server has signed on at a machine, that server cannot sign on at any other machine in the system until he or she signs off at the original machine.
- In case of trouble, the sign-on state can be cleared at the master. (Please consult your authorized SHARP dealer for further details.)

## 5. Server sign-on report

A server sign-on report can be generated at the master. This report is used to determine at which terminal each server has signed on.

### Report generation procedure

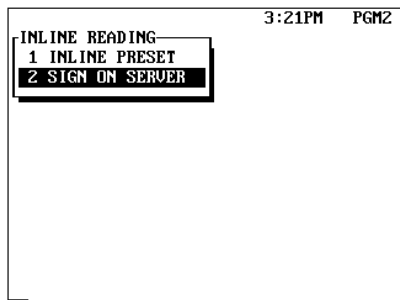
#### Procedure



3:20PM PGM2

PGM2 MODE

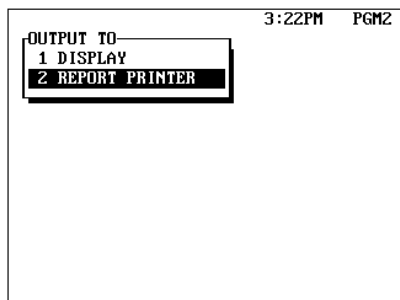
- 10 CUM READING
- 11 CUM SETTING
- 12 CAT READING
- 13 CAT SETTING
- 14 MWS READING
- 15 MWS SETTING
- 16 INLINE READING**
- 17 INLINE SETTING
- 18 INITIAL D/L
- 19 MAINTENANCE D/L
- 20 DECLARATION



3:21PM PGM2

INLINE READING

- 1 INLINE PRESET
- 2 SIGN ON SERVER**



3:22PM PGM2

OUTPUT TO

- 1 DISPLAY
- 2 REPORT PRINTER**

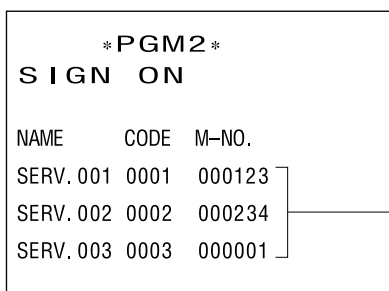
1. Select "PGM2 MODE" from the mode selection menu and press the [ENTER] key.

2. Select "INLINE READING" from the PGM2 MODE menu and press the [ENTER] key.

3. Select "SIGN ON SERVER" from the INLINE READING menu and press the [ENTER] key.

4. Select "DISPLAY" or "REPORT PRINTER" and press the [ENTER] key.

#### Sample Print (master)



```
*PGM2*
SIGN ON

NAME      CODE  M-NO.
SERV. 001 0001  000123
SERV. 002 0002  000234
SERV. 003 0003  000001
```

Server name, server code, machine no. of the machine at which the server has signed on

## 6. Sign-off operation (cancellation of server assignment) (REG mode/MGR mode)

The sign-off operation is intended to cancel the assignment of a server to a machine.

The sign-off operation at a machine (master or satellite) can be done only for the servers who have signed on at the machine and are not in the middle of a registration entry.

### Sign-off procedure

Keyboard entry sequence (REG/MGR/X1/Z1/X2/Z2/PGM1/PGM2 modes)

————→ [SERV#]

#### NOTE

- *The sign-off operation only applies to the server who has signed on.*
- *If a server signs on at a machine while another server has already signed on, the latter is automatically signed off so long as items have not yet been entered and the automatic server sign-off system has been enabled.*

For more information, please consult your authorized SHARP dealer.

## 7. Look-up and updating of the GLU/PBLU file

In the IRC system, the following two types of GLU/PBLU file allocation system are available: a centralized system and an individual system.

### (1) Centralized GLU/PBLU file system

In this system, the GLU/PBLU file exists only in the master. All satellites in the IRC system can access the GLU/PBLU file in the master for registration.

GLU/PBLU-file-related inline communications are made for the following purposes:

- New order or reorder
- Payment entry or temporary finalization
- Bill printing
- Bill transfer/bill totalizing
- Bill separate

There are two types of GLU/PBLU data transmission.

- 1) The GLU/PBLU data is transmitted from the master to a satellite for GLU/PBLU file look-up (in case of a new order/reorder). In this case, the GLU/PBLU reserve counter\* is retained at the master.

\* The reserve counter reserves some records of GLU/PBLU files to prevent a "LACKING MEMORY" error in finalization.

- 2) The GLU/PBLU data is transmitted from a satellite to the master for finalization of a transaction (in case of payment entry or temporary finalization).  
The data transmitted from the satellite is once saved in the GLU/PBLU data receiving file and then in the GLU/PBLU file. In this case, the GLU/PBLU reserve counter is cleared at the master.

If a satellite looks up the GLU/PBLU file in the master or asks the master to update the file, the backup master performs the same process as the master.

### (2) Individual GLU/PBLU file system

In this system, the master and satellites have their own GLU/PBLU files and look up them for registration. Therefore, no inline communications are made regarding GLU/PBLU data.

## 8. Drive-through function

Depending on the setup of your system, drive-through data is either centrally controlled by the master or Individually looked up at each terminal. For more information, please contact your authorized SHARP dealer.

### **Automatic code generation**

Drive-through codes are generated automatically: when the end code for a transaction is generated, the start code for another transaction is automatically generated.

The start/end codes are programmable in the PGM mode and controlled by the master depending upon your system setup.

### **Automatic look-up**

As drive-through codes are temporarily finalized by pressing the [SRVC] or [FINAL] key, data for these codes is automatically looked up in the same sequence as the code was generated.

Drive-through-related inline communications are made for the following purposes:

- New order or re-order
- Payment entry or temporary finalization
- Bill printing

### **(1) Centralized file system**

In this system, the drive-through data is transmitted from the master to a satellite for drive-through file look-up (in case of a new order/reorder). In this case, the drive-through reserve counter is retained at the master.

Data is transmitted from a satellite to the master for finalization of a transaction (in case of a payment entry or temporary finalization). The data transmitted from the satellite is then saved in the temporary drive-through data receiving file and then in the drive-through file. In this case, the drive-through reserve counter is cleared at the master.

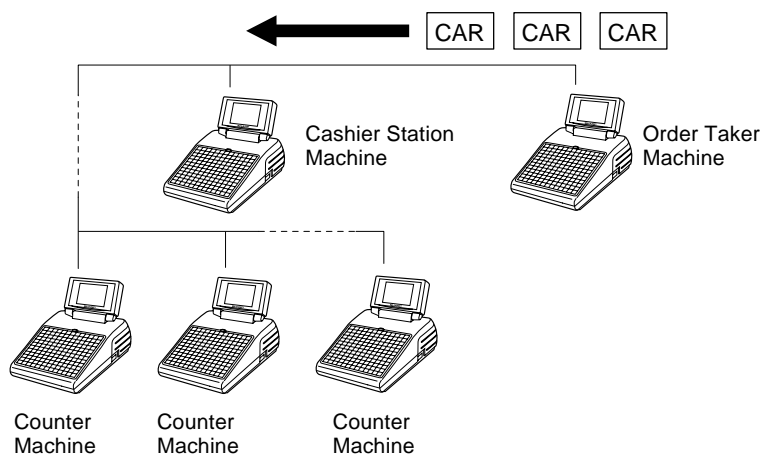
### **(2) Individual file system**

In this system, the master and satellites have their own drive-through data files. They access their own drive-through files for new orders or reorders. The drive-through data of the master or a satellite is saved in its drive-through file for finalization of a transaction (in case of a payment entry or temporary finalization). Therefore, no inline communications are made regarding drive-through data.

**NOTE**

*The drive-through system provides three types of the terminal operations (Order Taker Machine/Cashier Station Machine/Counter Machine).*

*For more details about the system configuration, please consult your authorized SHARP dealer.*

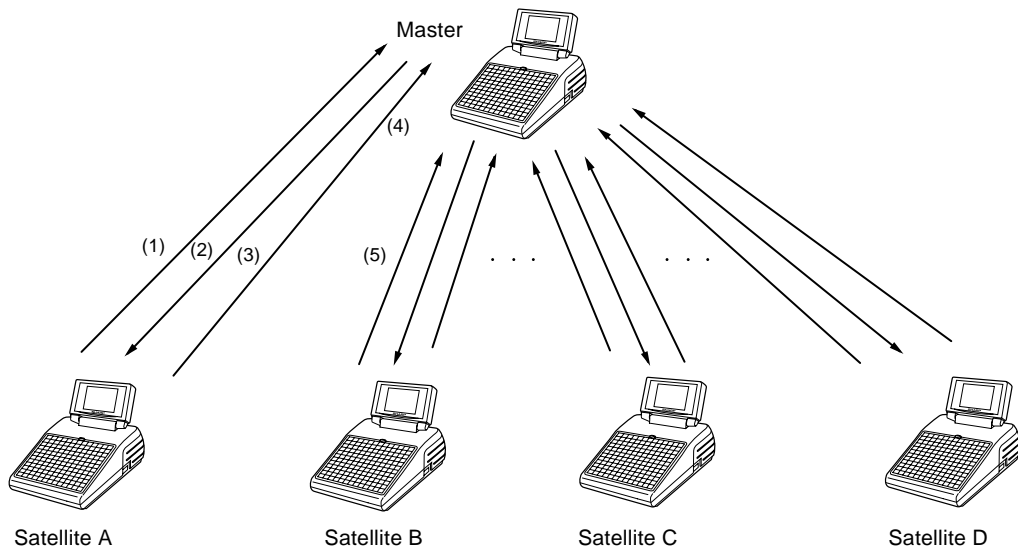


## 9. T-LOG polling

All REG-mode transaction data in each satellite is saved in its T-LOG buffer. T-LOG polling is a data collecting system in which the master collects data from the T-LOG buffers in satellites. T-LOG polling becomes available upon open-store operation and becomes unavailable upon close store operation.

A request for T-LOG polling is issued from the satellite to the master when the number of data records in its T-LOG buffer exceeds a predetermined number in the open store state. As the master detects such a request, it starts collecting the T-LOG buffer data. After collection of the data from one satellite, the master waits for a preset time and starts collecting data from another satellite. In T-LOG polling, the data transmitted to the master is stored in the corresponding file.

The data flow in T-LOG polling is shown below.



Polling sequence (see the figure above)

- (1) Satellite A makes a request for polling.
- (2) The master detects the request and starts collecting T-LOG data from satellite A.
- (3) The T-LOG data is sent to the master.
- (4) After receiving T-LOG data from satellite A, the master waits for a preset time.
- (5) The master detects a request from another satellite (B, C or D) and starts polling for it.

If its T-LOG buffer becomes full, registration will be disallowed at a satellite when it has been programmed for "LOCK UP," and allowed when it has been programmed for "CONTINUE." For how to specify whether the registration is disabled or enabled when the T-LOG buffer becomes full, please refer to the ER-A770 instruction manual.

## 10. Communication with a remote printer (option)

When a remote printer is included in the inline system, order data is output to the remote printer according to preset data on the remote printer.

The remote printer is used to print all or part of the data entered at a machine. It is also called a kitchen printer. It can also be operated at a location other than the kitchen.

If a remote printer number is assigned to a department or PLU, the information on the department or PLU is output to the remote printer when an entry for the department or PLU is made and the transaction is finalized at a machine.

The data which can be output to a remote printer is as follows:

- 1) Item text
- 2) Quantity\*
- 3) Unit price\*/Price\*
- 4) Amount\*
- 5) PLU/department code\*

\* Whether to print or not is selectable

### (1) Second (back-up) remote printer

A second kitchen printer can be assigned to each remote printer for automatic back-up.

If an error occurs during data output to a remote printer, the data is output to the second remote printer assigned to it.

If an error occurs during data output to the second remote printer, the data is output to the receipt printer (the receipt printed at this printer is called a chit).

For how to specify the chit print format, see page [41](#).

Up to two remote printers can be preset to print data on each item (PLU or department).

If two printers are preset to print data on each item, the data is simultaneously output to both printers.

If either of these printers encounters an error, the data is output to the backup printer.

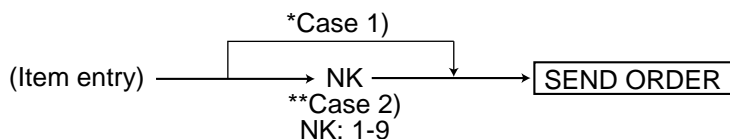
If the backup printer encounters an error, one chit receipt is printed.

## (2) Remote printer send function

This function allows partial food orders to be sent to the remote printers.

Which printer to receive the order is selectable.

The function is intended to allow the cooking staff to begin preparing certain items before the entire order is given.



### \*Case 1)

A partial food order is sent to one or several remote printers which has been specified by the department/PLU programming.

### \*\*Case 2)

A partial food order is sent to the remote printer specified by the system presets.

## (3) Priority printing function

It is desirable for the cooking staff to see the order items that require the longest cooking time at the top of the kitchen chit. This function can send food items in the programmed order of priority by assigning PLUs to priority groups (1 - 9).

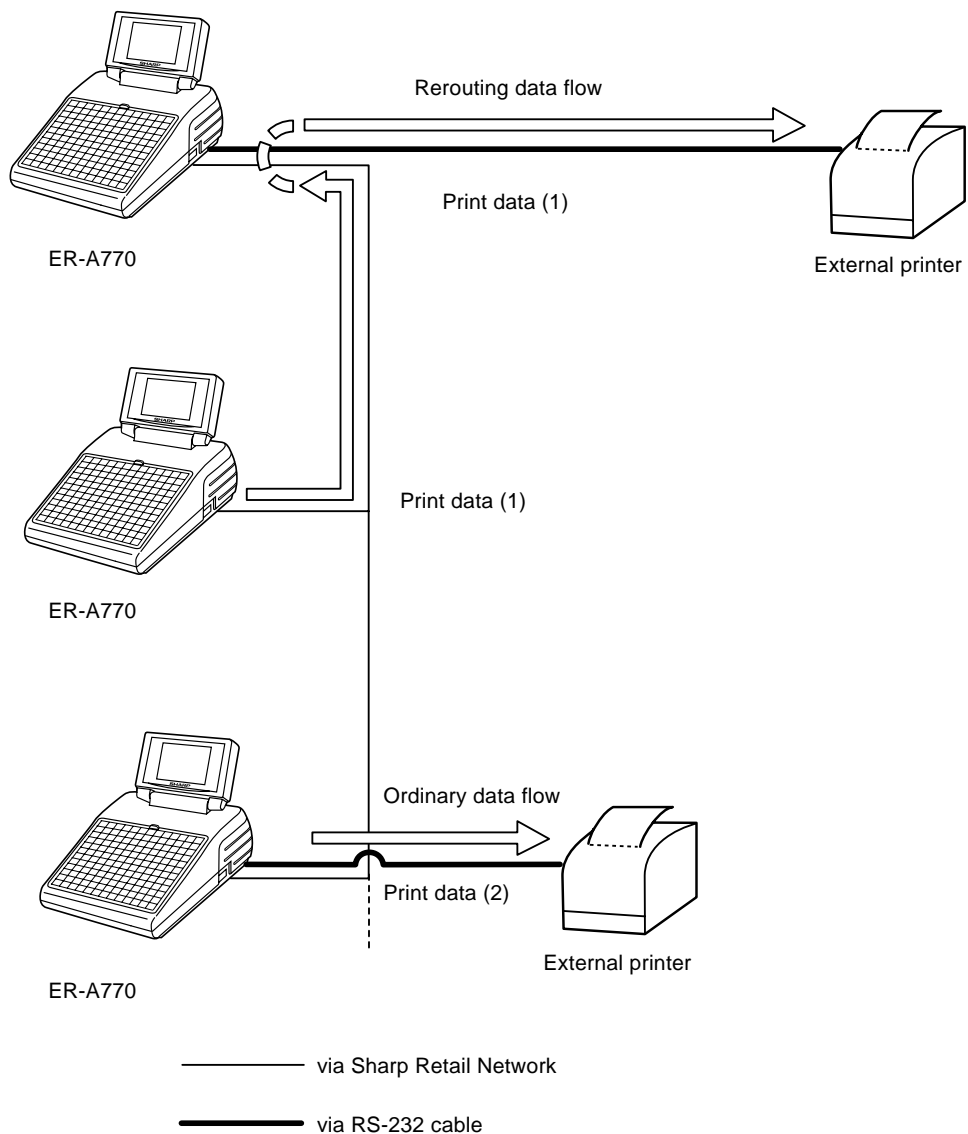
If an error occurs in data output to a remote printer, a corresponding error message appears on the display and the data output to the remote printer is printed on the chit receipt.

For remote printer error messages, see page [5](#).

## 11. Rerouting receipt/journal print data

In restaurant environments, terminals may or may not need a receipt/journal printer. One external printer connected by RS-232 cable can be shared by two or more ER-A770 machines.

Print data rerouting chart



# 2

## Consolidated and Individual Reports

The system can generate two types of sales reports: consolidated reports (reports on all or specified machines in the system) and individual reports (reports on an individual machine). At the master, you can generate consolidated reports on all or specified satellites and reports on the master itself. At each satellite, you can generate certain reports on the satellite.

### 1. Operating modes

X1 mode: Daily sales reading reports.  
Z1 mode: Daily sales resetting reports.  
X2 mode: Periodic consolidation reading reports.  
Z2 mode: Periodic consolidation resetting reports.  
OP XZ mode: Individual server daily sales reading (X) and resetting (Z) reports.

### 2. Job number\*

Each job number is expressed as "XYnn" according to the table below.

Job number: XYnn

	Entry	Category of report
X	0	Individual report
	1	Consolidated report
Y	0	Server report in the OP XZ mode
	1	Daily sales report (X1 or Z1)
	2	Periodic sales report (X2 or Z2)
nn	Item code*	

\* An item code corresponds to the lower two digits of each job number listed in the tables on the following pages.

### 3. Consolidated reports — master/back-up master

#### (1) Report generation procedure

To generate respective reports, use the following procedure, referring to the list of consolidated reports on the following pages.

##### Procedure

3:24PM MODE

1	OPX2 MODE
2	OFF MODE
3	X1 MODE
4	Z1 MODE
5	X2 MODE
6	Z2 MODE
7	UNIT PRICE MODE
8	PGM1 MODE
9	PGM2 MODE
10	AUTO KEY MODE

1. Select the required operating mode (OP XZ, X1, Z1, X2, or Z2) from the mode selection menu and press the [ENTER] key.

3:25PM Z2

Z2 MODE
1 INDIVIDUAL
2 SYSTEM

2. Select SYSTEM and press the [ENTER] key.

3:26PM Z2

SYSTEM
1 DEPARTMENT
2 PLU
3 PLU BY DEPT
4 TRANSACTION
5 ALL SERVER
6 IND. SERVER
7 ALL MANAGER
8 IND. MANAGER
9 EMPLOYEE
10 EMP.SALE(DETAIL)
11 EMP.SALE(ALL CL)

3. Select the type of report you wish to generate and press the [ENTER] key. (If the desired type of report is not listed on the display, scroll up or down the screen.)

3:27PM Z2

DEPARTMENT	
START CODE	91
END CODE	99

4. If you need to enter data to generate the report, follow the instructions given on the display for entry.

## (2) List of consolidated reports (SYSTEM READING/RESETTING)

These reports can be printed on the printer unit (option) or shown on the display screen.

Report type	Description	Operating modes					Job #	Required data/Remarks
		OP XZ	X1	Z1	X2	Z2		
DEPARTMENT	Full department report		<input type="radio"/>	<input type="radio"/>			1110	
					<input type="radio"/>	<input type="radio"/>	1210	
DEPT. IND. GROUP	Individual dept. group report		<input type="radio"/>				1112	Group no. (0 thru 9)
					<input type="radio"/>		1212	
DEPT. GROUP TOTAL	Dept. group total report		<input type="radio"/>				1113	
					<input type="radio"/>		1213	
M-DOWN FOR DEPT.	Department markdown report		<input type="radio"/>				1119	
					<input type="radio"/>		1219	
PLU	PLU report by specified range		<input type="radio"/>	<input type="radio"/>			1120	PLU no. (To specify a PLU no range, enter start and end PLU nos.)
					<input type="radio"/>	<input type="radio"/>	1220	
PLU BY DEPT	PLU report by associated dept.		<input type="radio"/>	<input type="radio"/>			1121	Department no.
					<input type="radio"/>	<input type="radio"/>	1221	
PLU IND. GROUP	Individual PLU specified report		<input type="radio"/>				1122	Group no.
					<input type="radio"/>		1222	
PLU GROUP TOTAL	PLU group total report		<input type="radio"/>				1123	
					<input type="radio"/>		1223	
PLU STOCK	PLU stock report		<input type="radio"/>				1124	PLU no.
PLU COST	PLU cost report		<input type="radio"/>				1125	PLU no.
					<input type="radio"/>		1225	
PLU TOP 20	PLU top-20 report		<input type="radio"/>				1126	Amount or quantity can be selected.
					<input type="radio"/>		1226	Amount or quantity can be selected.
PLU ZERO SALES	PLU zero sales report		<input type="radio"/>				1127	All PLUs of zero sales.
					<input type="radio"/>		1227	
	PLU zero sales report by specified dept.		<input type="radio"/>				1127	PLUs of zero sales by department
					<input type="radio"/>		1227	
PLU MIN. STOCK	PLU minimum stock report		<input type="radio"/>				1128	
PLU HOURLY GROUP	Hourly PLU group report		<input type="radio"/>	<input type="radio"/>			1129	
TRANSACTION	Transaction report		<input type="radio"/>	<input type="radio"/>			1130	
					<input type="radio"/>	<input type="radio"/>	1230	

Report type	Description	Operating modes					Job #	Required data/Remarks
		OP XZ	X1	Z1	X2	Z2		
CID	Cash-in-drawer report		<input type="radio"/>				1131	For all servers
TAX	Tax report		<input type="radio"/>				1133	
					<input type="radio"/>		1233	
ALL SERVER	Full server report		<input type="radio"/>	<input type="radio"/>			1140	
					<input type="radio"/>	<input type="radio"/>	1240	
IND. SERVER	Individual server report	<input type="radio"/>					1041	
			<input type="radio"/>	<input type="radio"/>			1141	
					<input type="radio"/>	<input type="radio"/>	1241	
ALL MANAGER	Full manager report		<input type="radio"/>	<input type="radio"/>			1148	
					<input type="radio"/>	<input type="radio"/>	1248	
IND. MANAGER	Individual manager report		<input type="radio"/>	<input type="radio"/>			1149	Manager no.
					<input type="radio"/>	<input type="radio"/>	1249	
EMPLOYEE	Employee report specified range		<input type="radio"/>				1155	Employee code. (The range can be specified by entering start and end codes.)
					<input type="radio"/>	<input type="radio"/>	1255	
EMP. ADJUSTMENT	Employee adjustment report				<input type="radio"/>		1256	Employee code. (The range can be specified by entering start and end codes.)
EMP. ACTIVE STS.	Employee active status report		<input type="radio"/>				1157	Employee code. (The range can be specified by entering start and end codes.)
EMPLOYEE SALES	Detailed employee sales report				<input type="radio"/>	<input type="radio"/>	1258	(Detailed cleared)
EMPLOYEE SALES	Full employee sales report					<input type="radio"/>	1259	(All reset)
HOURLY	Hourly report		<input type="radio"/>				1160	Use the military time (24-hour) system. For example, to set 2:30 a.m., enter 230; and to set 2:30 p.m., enter 1430.
			<input type="radio"/>	<input type="radio"/>			1160	For all 48 half-hours with zero skipped
LABOR COST%	Labor cost percentage report		<input type="radio"/>				1161	
OVER TIME	Employee over time report		<input type="radio"/>				1162	Employee no.
					<input type="radio"/>	<input type="radio"/>	1262	
EMPLOYEE SUMMARY	Employee summary report				<input type="radio"/>	<input type="radio"/>	1265	Employee no.
PAY PERIOD	Pay period report				<input type="radio"/>	<input type="radio"/>	1266	Employee no.
PAY PERIOD SUM.	Pay period summary report				<input type="radio"/>	<input type="radio"/>	1267	Employee no.

Report type	Description	Operating modes					Job #	Required data/Remarks
		OP XZ	X1	Z1	X2	Z2		
DAILY NET	Daily net report				○	○	1270	
INGREDIENT STOCK	Ingredient stock report		○				1175	Ingredient table no.
GLU	GLU report		○	○			1180	GLU/PBLU code. (The range can be specified by entering start and end codes.)
GLU BY SERVER	GLU report by server		○	○			1181	
CLOSED GLU	Closed GLU report		○	○			1182	Bill no. (The range can be specified by entering start and end codes.)
CL-GLU BY SERVER	Closed GLU report by server		○	○			1183	
DRIVE THRU	Drive-through code report		○	○			1185	Drive-through code. (The range can be specified by entering start and end codes.)
D-THRU BY SERVER	Drive-through code report by server		○	○			1186	
CLOSED D-THRU	Closed drive-through report		○	○			1187	Bill no. (The range can be specified by entering start and end numbers.)
CL-DT BY SERVER	Closed drive-through report by server		○	○			1188	
SERVICE TIME	Drive-through service time report		○	○			1189	
STACKED REPORT	Stacked report (X1/Z1)		○	○			1190	Stacked report 1
							1191	Stacked report 2
STACKED REPORT	Stacked report (X2/Z2)				○	○	1290	Stacked report 1
							1291	Stacked report 2

## 4. Individual reports — master/back-up master/satellite

### (1) Report generation procedure

To generate respective reports, use the following procedure, referring to the list of individual reports on the following pages.

#### Procedure

3:28PM MODE

- 1 OPXZ MODE
- 2 OFF MODE
- 3 X1 MODE
- 4 Z1 MODE
- 5 X2 MODE
- 6 Z2 MODE
- 7 UNIT PRICE MODE
- 8 PGM1 MODE
- 9 PGM2 MODE
- 10 AUTO KEY MODE

1. Select the required operating mode (OP XZ, X1, Z1, X2 or Z2) from the mode selection menu and press the [ENTER] key.

3:29PM X1

X1 MODE

- 1 INDIVIDUAL
- 2 SYSTEM

2. Select INDIVIDUAL and press the [ENTER] key.

3:35PM X1

INDIVIDUAL

- 1 DEPARTMENT
- 2 DEPT. IND. GROUP
- 3 DEPT. GROUP TOTAL
- 4 M-DOWN FOR DEPT.
- 5 PLU
- 6 PLU BY DEPT
- 7 PLU IND. GROUP
- 8 PLU GROUP TOTAL
- 9 PLU STOCK
- 10 PLU COST
- 11 PLU TOP 20

3. Select the type of report you wish to generate and press the [ENTER] key. (If the desired type of report is not listed on the display, scroll up or down the screen.)

3:36PM X1

PLU

START CODE 000001

END CODE 999999

4. If you need to enter data to generate the report, follow the instructions given on the display for entry.

## (2) List of individual reports (READING/RESETTING)

These reports can be printed on the printer unit (option) or shown on the display screen.

Report type	Description	Operating modes					Job #	Required data/ Remarks	Notes*
		OP XZ	X1	Z1	X2	Z2			
DEPARTMENT	Full department report		<input type="radio"/>	<input type="radio"/>			110		MA, SL
					<input type="radio"/>	<input type="radio"/>	210		
DEPT. IND. GROUP	Individual dept. group report		<input type="radio"/>				112	Group no. (0 thru 9)	MA, SL
					<input type="radio"/>		212		
DEPT. GROUP TOTAL	Dept. group total report		<input type="radio"/>				113		MA, SL
					<input type="radio"/>		213		
M-DOWN FOR DEPT.	Department markdown report		<input type="radio"/>				119		MA, SL
					<input type="radio"/>		219		
PLU	PLU report by specified range		<input type="radio"/>	<input type="radio"/>			120	PLU no. (The range can be specified by entering start and end codes.)	MA, SL
					<input type="radio"/>	<input type="radio"/>	220		
PLU BY DEPT	PLU report by associated dept.		<input type="radio"/>	<input type="radio"/>			121	Department no.	MA, SL
					<input type="radio"/>	<input type="radio"/>	221		
PLU IND. GROUP	Individual PLU group report		<input type="radio"/>				122	Group no. (0 thru 9)	MA, SL
					<input type="radio"/>		222		
PLU GROUP TOTAL	PLU group total report		<input type="radio"/>				123		MA
					<input type="radio"/>		223		
PLU STOCK	PLU stock report		<input type="radio"/>				124	PLU no. (The range can be specified by entering start and end codes.)	MA, SL
PLU COST	PLU cost report		<input type="radio"/>				125	PLU no.	MA, SL
					<input type="radio"/>		225		
PLU TOP 20	PLU top-20 report		<input type="radio"/>				126	Amount or quantity can be selected.	MA, SL
					<input type="radio"/>		226		
PLU ZERO SALES	PLU zero sales report		<input type="radio"/>				127	All PLUs of zero sales	MA, SL
					<input type="radio"/>		227		
	PLU zero sales report by specified dept.		<input type="radio"/>				127	PLUs of zero sales by department	MA, SL
					<input type="radio"/>		227		
PLU MIN. STOCK	PLU minimum stock report		<input type="radio"/>				128		MA
PLU HOURLY GROUP	Hourly PLU group report		<input type="radio"/>	<input type="radio"/>			129		MA, SL
TRANSACTION	Transaction report		<input type="radio"/>	<input type="radio"/>			130		MA, SL
					<input type="radio"/>	<input type="radio"/>	230		

Notes\* : MA → Master, SL → Satellite

Report type	Description	Operating modes					Job #	Required data/ Remarks	Notes*
		OP XZ	X1	Z1	X2	Z2			
TAX	Tax report		<input type="radio"/>				133		MA, SL
					<input type="radio"/>		233		
ALL MANAGER	Full manager report		<input type="radio"/>	<input type="radio"/>			148		MA, SL
					<input type="radio"/>	<input type="radio"/>	248		
IND. MANAGER	Individual manager report		<input type="radio"/>	<input type="radio"/>			149	Manager no.	MA, SL
					<input type="radio"/>	<input type="radio"/>	249		
HOURLY	Hourly report		<input type="radio"/>				160	For an individual time range	MA, SL
			<input type="radio"/>	<input type="radio"/>			160	For all 48 half-hours with zero skipped	MA, SL
DAILY NET	Daily net report				<input type="radio"/>	<input type="radio"/>	270		MA, SL
INGREDIENT STOCK	Ingredient stock report		<input type="radio"/>				175	Ingredient table no.	MA, SL
GLU	GLU report		<input type="radio"/>	<input type="radio"/>			180	GLU/PBLU code. (The range can be specified by entering start and end codes.)	MA, SL
GLU BY SEVER	GLU report by server		<input type="radio"/>	<input type="radio"/>			181		MA, SL
CLOSED GLU	Closed GLU report		<input type="radio"/>	<input type="radio"/>			182	Bill no. (The range can be specified by entering start and end codes.)	MA, SL
CL-GLU BY SERVER	Closed GLU report by server		<input type="radio"/>	<input type="radio"/>			183		MA, SL
DRIVE THRU	Drive-through code report		<input type="radio"/>	<input type="radio"/>			185	Drive-through code. (The range can be specified by entering start and end codes.)	MA, SL
D-THRU BY SEVER	Drive-through code report by server		<input type="radio"/>	<input type="radio"/>			186		MA, SL
CLOSED D-THRU	Closed drive-through report		<input type="radio"/>	<input type="radio"/>			187	Bill no. (The range can be specified by entering start and end codes.)	MA, SL
CL-DT BY SEVER	Closed drive-through report by server		<input type="radio"/>	<input type="radio"/>			188		MA, SL
SERVICE TIME	Drive-through service time report		<input type="radio"/>	<input type="radio"/>			189		MA, SL
STACKED REPORT	Stacked report (X1/Z1)				<input type="radio"/>	<input type="radio"/>	190	Stacked report 1	MA, SL
							191	Stacked report 2	MA, SL
STACKED REPORT	Stacked report (X2/Z2)				<input type="radio"/>	<input type="radio"/>	290	Stacked report 1	MA, SL
							291	Stacked report 2	MA, SL

Notes\* : MA → Master, SL → Satellite

## 5. Server report

At the master, you can generate consolidated transaction reports on all servers or individual servers by reading or resetting operation.

At each satellite, you can generate consolidated transaction reports on individual servers by reading or resetting operation.

If a specific server is signed on at a machine when resetting operation for a consolidated individual server report is made at the machine, the data on transactions being handled by the server is also added and printed out.

If that server is signed on at another machine, the message "IS SIGNED ON" is displayed, thus the resetting operation for that server cannot be made.

### Full server report sample

#### Sample Print (master)

01 / 05 / 2001	123456	Date
#0123	12:34PM	Machine no.
JACK0001		Consecutive no.
		Time
#1140 *Z1*		Server name and code
SERVER STOP		Job code
		Report mode
ALL SERVER		Report type
SERVER Z1/Z2	0001	Reset counter
SRV#0001	SERV.001	Server code
	\$0.00	Data on server #0001
000002 IS SIGNED ON		
SRV#0002	SERV.002	Data on server #0002 signed on at machine no.000002
	\$0.00	

# 3

## IRC Programming

First, turn on the machines in the IRC system and place them in the PGM2 mode. The programming procedures for both the master and satellites will be explained below.

### 1. Setting the machine numbers — master and satellite

It is necessary to insure that each terminal has an assigned machine number to the master and satellites prior to further IRC programming.

#### Procedure

1. Select "PGM2 MODE" from the mode selection menu and press the [ENTER] key to enter the PGM2 mode.

2. Select "SETTING" and press the [ENTER] key.

3. Select "TERMINAL" and press the [ENTER] key. Select "MACHINE#" from the REGISTER menu and press the [ENTER] key.

4. Enter a machine number and press the [ENTER] key. Machine number: up to 6 digits (0 - 999999)

5. Repeat steps 1 to 4 for all machines in the IRC system.

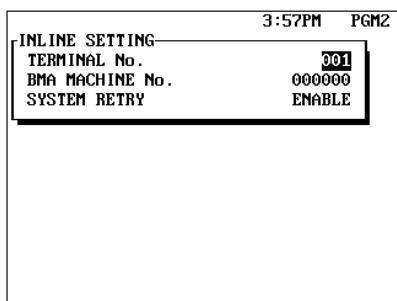
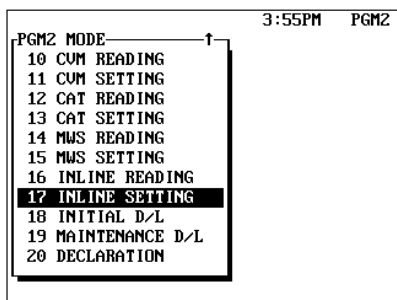
#### NOTE

*In an IRC network, each machine number must be unique.  
Do not use the same machine number for more than one machine.*

## 2. Setting the terminal numbers (IRC machine numbers) — master and satellite

It is assumed that your terminal's setting for inline operations has been performed.

### Procedure



1. Enter the PGM2 mode.
2. Select "INLINE SETTING" and press the [ENTER] key.
3. Enter a terminal number (0 - 254) and press the [ENTER] key.

(For programming for BMA MACHINE No. and SYSTEM RETRY, see pages [31](#) - [32](#).)

4. Repeat steps 1 to 3 for all machines in the IRC system.

### NOTE

- Terminal numbers must be assigned to the master and each satellite in the IRC system. (For setting the master's terminal number, see the next paragraph.)
- If an inline network contains two or more machines with the same terminal number, IRC communications will not be achieved correctly. Each terminal number must be unique.
- The terminal number should be within the range from 1 to 254.
- If the terminal number "000" is programmed for a machine, it is put in the OFF LINE mode and cannot take part in IRC communications.

### 3. Creating/updating the master list — master

#### (1) Creating the master list (subwindow program)

This may only be performed on the pre-designated master.

##### Procedure

```
PGM2 MODE 3:59PM PGM2
10 CUM READING
11 CUM SETTING
12 CAT READING
13 CAT SETTING
14 MWS READING
15 MWS SETTING
16 INLINE READING
17 INLINE SETTING
18 INITIAL D/L
19 MAINTENANCE D/L
20 DECLARATION
```

```
INLINE SETTING 4:00PM PGM2
TERMINAL No. 001
BMA MACHINE No. 000000
SYSTEM RETRY ENABLE
```

```
MASTER LIST 4:01PM PGM2
TERMINAL No. 000
```

```
MASTER LIST 4:01PM PGM2
TERMINAL No. 001
MACHINE No. 123456
```

1. Enter the PGM2 mode.
2. Select "INLINE SETTING" and press the [ENTER] key.
3. Enter a terminal number (0 - 254) for the master and then carry out the programming for other INLINE SETTING items and press the [ENTER] key. The subwindow for the creation of the master list will open.  
  
(For programming for BMA MACHINE No. and SYSTEM RETRY, see pages 31 - 32.)
4. Enter the terminal number (1 - 254) for each machine in the IRC system (for the master and satellites) and press the [ENTER] key. The subwindow for machine number entry will open.
5. Enter the machine number (1 - 999999) that corresponds to the previously entered terminal number and press the [ENTER] key.
6. Repeat steps 4 to 5 for all machines in the IRC system. Press the [CA/AT] key to complete the master list.
7. Proceed to "7. Downloading the contents of the IRC programming to satellites", see page 35 — Inline preset.

**NOTE**

- *The terminal numbers and machine numbers of the master and satellites must be entered into the master list for IRC communications.*
- *The terminal numbers and machine numbers of up to 16 machines (one master and 15 satellites) can be entered into the master list.*
- *The terminal number should be within the range from 1 to 254 and the machine number from 1 to 999999.*
- *A satellite can not perform inline communications unless its terminal and machine numbers are present in the master list.*
- *If a machine number which already exists in the master list is entered, a entry error will occur even when the corresponding terminal number does not exist in the list.*
- *Pressing the [ENTER] key enters the programmed terminal numbers and machine numbers on the master. Pressing the [CA/AT] key issues a receipt on the receipt/journal printer when it exists.*
- *The terminal numbers for remote printers is not preset.*

## **(2) Deleting a machine from the master list (subwindow program)**

To delete a terminal number from the master list, proceed as follows:

1. Select "PGM2 MODE" from the mode selection menu and press the [ENTER] key to enter the PGM2 mode.
2. Select "INLINE SETTING" and press the [ENTER] key. The INLINE SETTING menu will open.
3. Press the [ENTER] key. The subwindow for the master list will open.
4. Select the terminal to be deleted and press the [DEL] key.
5. The machine will ask you as follows: "ARE YOU SURE?" If you are sure to delete it, select "YES." If not, select "NO."
6. Press the [CA/AT] key to complete the master list.
7. Proceed to "7. Downloading the contents of the IRC programming to satellites", see page [35](#) — Inline preset.

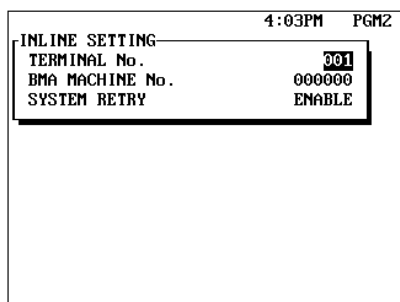
**NOTE**

- *You can delete any of the terminal numbers that are in the master list.*
- *Pressing the [CA/AT] key issues a receipt on the receipt and journal printer (optional).*
- *Deleting the master from the master list will inhibit all requests of the satellites from being serviced.*

## 4. Specifying whether to enable or disable the system retry function when a transmission error occurs — master and satellite

You can specify whether the system retry function is disabled or enabled if the communication between machines does not end successfully.

### Procedure



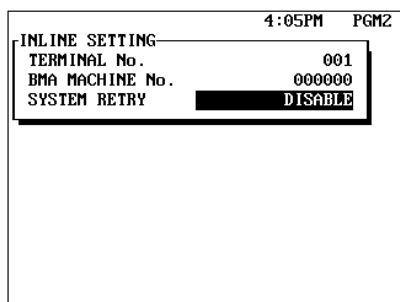
4:03PM PGM2

INLINE SETTING	
TERMINAL No.	001
BMA MACHINE No.	000000
SYSTEM RETRY	ENABLE

1. Enter the PGM2 mode.

2. Select "INLINE SETTING" and press the [ENTER] key.

The INLINE SETTING menu will open.



4:05PM PGM2

INLINE SETTING	
TERMINAL No.	001
BMA MACHINE No.	000000
SYSTEM RETRY	DISABLE

3. Move the cursor to the "SYSTEM ENTRY" line. Select "DISABLE" or "ENABLE" with the [•] key (toggle key) and press the [ENTER] key.

### NOTE

- If the system retry function is enabled, a transmission job with which an error has occurred is not finalized immediately, but the master waits for selection of one of the three commands (RETRY, ABORT and IGNORE) through the keyboard. Then the master retries access to the satellite that has caused the transmission error or terminates the access as a successful or unsuccessful transmission depending on the selection made.
- If the function is disabled, the job is terminated immediately.
- The default setting is "ENABLE."

## 5. Specifying the terminal to serve as a back-up master — master

You can assign one satellite to the function of a back-up master. If the master fails during guest check operation, the assigned terminal will perform the master's function.

A machine number within the range from 1 to 999999 can be entered.

If zero is entered, there will be no back-up master in the IRC system.

This job can be done in the INLINE SETTING window of the master.

The default setting is 0 (no back-up master).

### Procedure

```
PGM2 MODE
10 CUM READING
11 CUM SETTING
12 CAT READING
13 CAT SETTING
14 MWS READING
15 MWS SETTING
16 INLINE READING
17 INLINE SETTING
18 INITIAL D/L
19 MAINTENANCE D/L
20 DECLARATION
```

```
INLINE SETTING
TERMINAL No.      001
BMA MACHINE No.  000000
SYSTEM RETRY      ENABLE
```

1. Enter the PGM2 mode.
2. Select "INLINE SETTING" and press the [ENTER] key.  
The INLINE SETTING menu will open.
3. Move the cursor to the "BMA MACHINE No." line.  
Then enter the machine number of the terminal to serve as a back-up master and press the [ENTER] key.

Important note:

To insure which satellite should be selected and to perform additional set up requirements, please consult your authorized SHARP dealer.

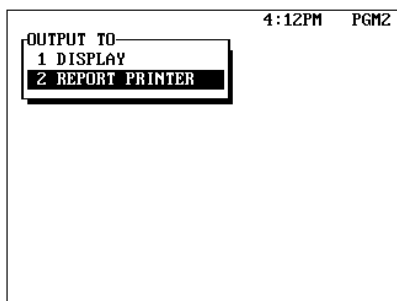
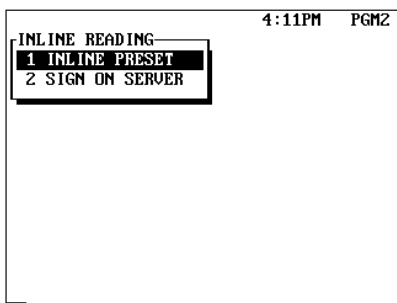
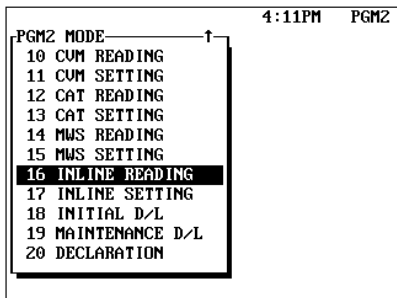
### NOTE

The *DECLARATION* functions in the PGM2 mode enable the back-up master or the master to declare to be the master when the master or back-up master breaks down, and inform satellites of the master's or back-up master's recovery.

For details of these functions, see "Master declaration" and "Recovery declaration" on pages [48](#) - [53](#).

## 6. Reading the contents of the IRC programming — master and satellite

### Procedure



1. Enter the PGM2 mode.
2. Select "INLINE READING" and press the [ENTER] key.  
The INLINE READING menu will open.
3. Select "INLINE PRESET" and press the [ENTER] key.
4. Select "DISPLAY" or "REPORT PRINTER" and press the [ENTER] key.

### Sample Print (master)

### Sample Print (satellite)

```

*PGM2*
INLINE PRESET

T-NO.    001
MASTER LIST
  T-NO.   M-NO.
    001   000001#
    002   000002#
    003   000003#
    004   000004#
    005   000005#
SYSTEM RETRY ENABLE
BACK UP MASTER
  T-NO.   M-NO.
    002   000002#
  
```

```

*PGM2*
INLINE PRESET

T-NO.    002
SYSTEM RETRY ENABLE
  
```

Terminal number of the satellite

Terminal number of the master

System retry function  
(enable/disable)

List of the machines involved in the IRC system  
(terminal no./machine no.)

System retry function  
(enable/disable)

Back-up master  
(terminal no./machine no.)

- You can also read the same contents of the IRC Programming on the display screen.

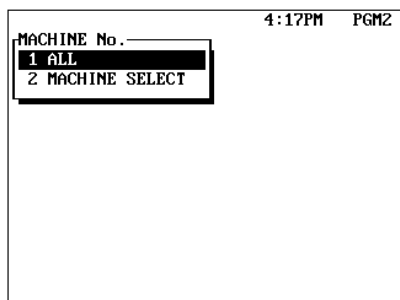
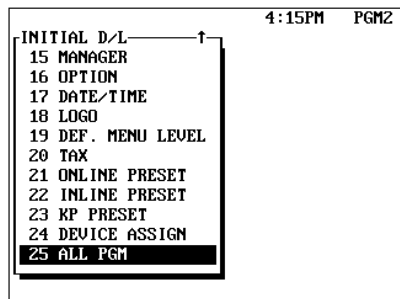
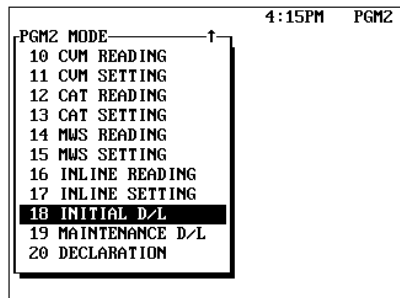
## 7. Downloading the contents of the IRC programming to satellites — master

When you have completed or changed the IRC programming, distribute the IRC preset data from the master to all satellites in the IRC system.

### (1) Initial downloading

For initial setup of the IRC system, use this downloading method. The preset data in the master is downloaded to each satellite, when the existing preset data in the satellite is cleared.

#### Procedure



#### NOTE

Check the contents of the programming of all the satellites in the IRC system that have received the preset data.

---

1. Enter the PGM2 mode.

---

2. Select "INITIAL D/L" and press the [ENTER] key.  
The INITIAL D/L menu will open.

---

3. In order to distribute all preset data files in the master to satellites, select "ALL PGM" and press the [ENTER] key.

In order to distribute an individual preset data file, select the corresponding item and press the [ENTER] key.

For initial downloading of PLU preset data, it is necessary to enter the code range and machine numbers to receive the data.

*NOTE: "25 ALL PGM" will clear the satellite's totalizers.*

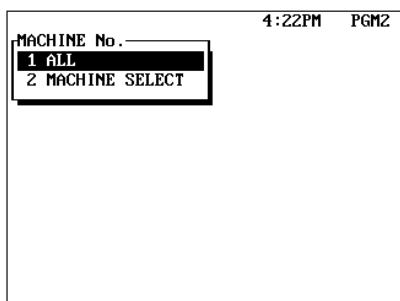
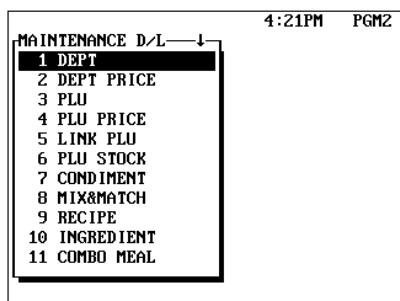
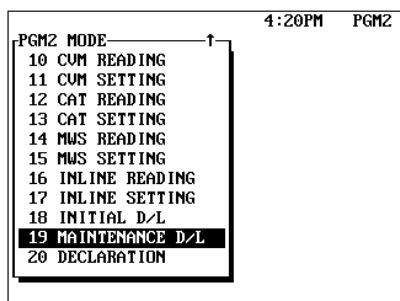
---

4. If you wish to download the IRC programming data to all satellites, select "ALL" and press the [ENTER] key. If you wish to download the data to certain satellite(s), select "MACHINE SELECT" and press the [ENTER] key. In this case, the "MACHINE SELECT" menu will open. Move the cursor to the machine numbers and select "YES."

## (2) Maintenance downloading

To update preset data for the IRC system, use this downloading method. The preset data in the master is downloaded to each satellite without clearing the existing preset data or totalizers.

### Procedure



1. Enter the PGM2 mode.
2. Select "MAINTENANCE D/L" and press the [ENTER] key.  
The MAINTENANCE D/L menu will open.
3. Select a preset data item for maintenance and press the [ENTER] key.  
If needed, enter the code range.
4. If you wish to download the IRC programming data to all satellites, select "ALL" and press the [ENTER] key. If you wish to download the data to certain satellite(s), select "MACHINE SELECT" and press the [ENTER] key. In this case, the "MACHINE SELECT" menu will open. Move the cursor to the machine numbers and select "YES."

## List of downloading jobs (PGM2 mode)

Menu	Job #	Item	Description	Note
INITIAL D/L	4100	DEPT	Department preset data	Preset data copying with clearing
	4119	DIRECT KEY	Dept./PLU key preset data for direct depts./PLUs	
	4200	PLU	PLU/Link PLU	Preset data copying with clearing
	4218	PLU MENU KEY	PLU menu key preset data	Preset data copying with clearing
	4220	LINK PLU	Link PLU preset data	Preset data copying with clearing
	4222	PLU STOCK	PLU stock q'ty data	Preset data copying with clearing
	4223	CONDIMENT	Condiment PLU preset data	Preset data copying with clearing
	4225	MIX & MATCH	Mix & Match preset data	Preset data copying with clearing
	4226	RECIPE	Recipe preset data	Preset data copying with clearing
	4227	INGREDIENT	Ingredient preset	Preset data copying with clearing
	4228	COMBO MEAL	Combo meal preset data	Preset data copying with clearing
	4232	INGREDIENT STOCK	Ingredient stock q'ty data	Preset data copying with clearing
	4300	TRANSACTION	Transaction preset data	Preset data copying with clearing
	4409	SERVER SIGN OFF	All server sign off	
	4450	MANAGER	Manager preset data	Preset data copying with clearing
	4600	OPTION	Other preset data	Programming Job #2324, 2615 - 2621, 2630 - 2632, 2900
	4610	DATE/TIME	Date, time	Preset data copying with clearing
	4614	LOGO	Logo text preset data	Programming Job #2614, 2642, 2643 and 2646
	4634	DEF. MENU LEVEL	Default menu level preset data	Preset data copying with clearing
	4700	TAX	Tax preset data	Preset data copying with clearing
	4800	ONLINE PRESET	Online preset data	Preset data copying with clearing
	4900	INLINE PRESET	Inline preset data	Preset data copying with clearing
	4950	KP PRESET	Remote printer preset data	Preset data copying with clearing
	4990	DEVICE ASSIGN	Device assign preset data	Preset data copying with clearing
	4999	ALL PGM	All PGM-mode preset data (Excepting job #4222, 4232 and 4409)	Downloading of Job #4000 to 4990 is performed collectively.
MAINTENANCE D/L	5100	DEPT	Department preset data	Only preset data copying
	5110	DEPT PRICE	Department price preset data	Only preset data copying
	5200	PLU	PLU/Link PLU	Only preset data copying
	5210	PLU PRICE	PLU price preset data	Only preset data copying
	5220	LINK PLU	Link PLU preset data	Only preset data copying
	5222	PLU STOCK	PLU stock q'ty data	Only preset data copying
	5223	CONDIMENT	Condiment PLU preset data	Only preset data copying
	5225	MIX & MATCH	Mix & Match preset data	Only preset data copying
	5226	RECIPE	Recipe preset data	Only preset data copying
	5227	INGREDIENT	Ingredient preset data	Only preset data copying
	5228	COMBO MEAL	Combo meal preset data	Only preset data copying
	5232	INGREDIENT STOCK	Ingredient stock q'ty data	Only preset data copying
	5300	TRANSACTION	Transaction preset data	Only preset data copying

### NOTE

- The PLU/LINK PLU file (INITIAL D/L and MAINTENANCE D/L) does not include stock data.
- The OPTION file includes the following data:  
Optional feature preset, scale preset, hourly report, stacked report, secret code, auto key, location preset, GLU range.
- The LOGO file includes the following data:  
Logo text and bill logo, dept. group text, PLU group text, hourly group text, currency descriptor.
- The PLU/LINK PLU file (INITIAL D/L and MAINTENANCE D/L) includes LINK PLU preset data.
- The INLINE PRESET file include MWS preset data.
- Initial D/L job #4999 should not be performed when totals exist in the system. (The totalizers of the receiving satellite are erased.)
- Performed individual initial D/L jobs will result in a non-reset error when totals exist in the satellites.

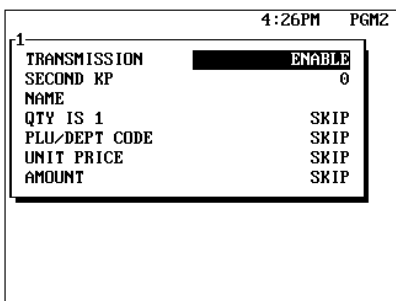
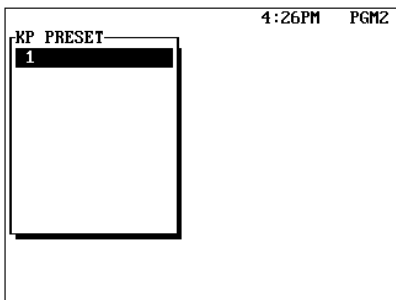
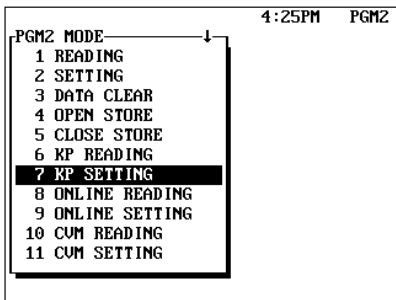
## 8. Programming for the remote printer

For connection of remote printers to the SRN, be sure to contact your dealer.

### (1) Assigning kitchen printer numbers to remote printers — master and satellite

With the following procedure, you can do programming for the remote printers connected to the SRN. For initial setup of remote printers, please contact your authorized SHARP dealer.

#### Procedure



1. Enter the PGM2 mode.
2. Select "KP SETTING" and press the [ENTER] key.  
The KP SETTING menu will open.
3. Select the kitchen printer number to be programmed.
4. Carry out the programming for the remote printer.  
(See the following pages for programming for individual remote printer items.)
  - Be sure to consult your authorized SHARP dealer for the correct settings.
5. After programming for the remote printer, press the [ENTER] key.

## (2) Assigning the second kitchen printer number to each remote printer — master and satellite

With the following procedure, you can assign a second remote printer to which data should be output when the first remote printer encounters an error during transmission of that data. This assignment is made to prepare for remote printer disconnection due to printer breakdown or other troubles.

After the KP SETTING menu appears, proceed as follows:

### Procedure

4:28PM PGM2

1	TRANSMISSION	ENABLE
	SECOND KP	3
	NAME	
	QTY IS 1	SKIP
	PLU/DEPT CODE	SKIP
	UNIT PRICE	SKIP
	AMOUNT	SKIP

1. Move the cursor to the “SECOND KP” line and enter the second kitchen printer number.

2. Press the [ENTER] key to finish the programming for the remote printer.

## (3) Naming the remote printer — master and satellite

The programmed name will be printed together with other data on the remote printer. This enables exact identification of the printout if the remote printer fails.

After the KP SETTING menu appears, proceed as follows:

### Procedure

4:29PM PGM2

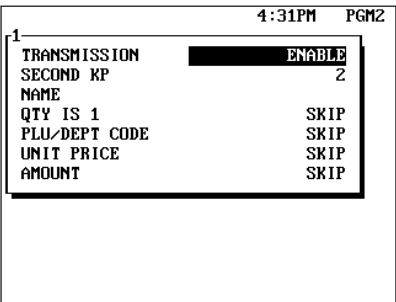
1	TRANSMISSION	ENABLE
	SECOND KP	2
	NAME	
	QTY IS 1	SKIP
	PLU/DEPT CODE	SKIP
	UNIT PRICE	SKIP
	AMOUNT	SKIP

a

Move the cursor to the “NAME” line and enter a desired name for the remote printer.

**(4) Specifying whether to enable or disable the function for data transmission to the remote printer — master and satellite**

If a remote printer is disconnected from the IRC system or any other problem occurs in it, you can disable your machine to stop data transmission to the remote printer. This prevents any error message from appearing on the machine display each time an entry to be transmitted to that printer is made.

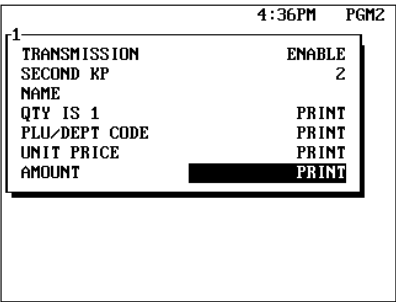


Move the cursor to the “TRANSMISSION” line and select “DISABLE” or “ENABLE” with the [ • ] key (toggle key) or display the choices by pressing the [SBTL] key.

**(5) Specifying the format of remote printing — master and satellite**

With the following procedure, you can specify what items to be printed on the remote printer.

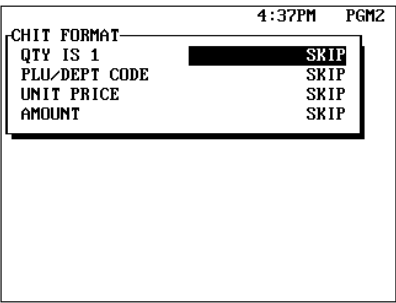
**Procedure**



1. Move the cursor to the following printing format items and select PRINT or SKIP with the [ • ] key (toggle key) or display them by pressing the [SBTL] key.

Printing when quantity is one: PRINT/SKIP  
PLU/department code: PRINT/SKIP  
Unit price PRINT/SKIP  
Amount: PRINT/SKIP

The default setting for these items is SKIP.



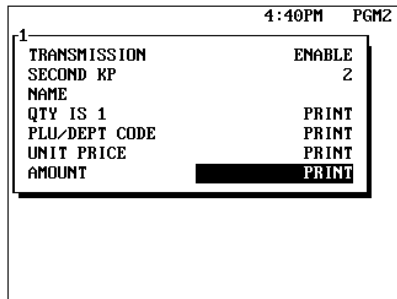
2. Press the [CA/AT] key to finish the programming for the remote printer. The CHIT FORMAT window will open.  
(For programming for CHIT FORMAT, see the next paragraph.)

## (6) Specifying the format of chit printing — master and satellite

If so desired, each PLU/department item may be preset to output to the receipt printer in a chit format.

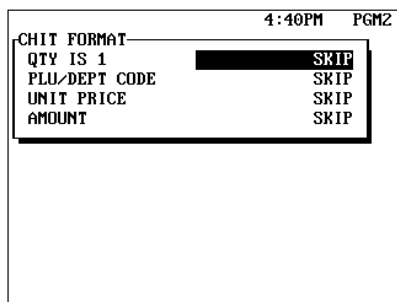
With the following procedure, you can specify what items to be printed on chits.

### Procedure



4:40PM PGM2	
1	
TRANSMISSION	ENABLE
SECOND KP	2
NAME	
QTY IS 1	PRINT
PLU/DEPT CODE	PRINT
UNIT PRICE	PRINT
AMOUNT	PRINT

1. After programming for the KP PRESET items, press the [ENTER] key.



4:40PM PGM2	
CHIT FORMAT	
QTY IS 1	SKIP
PLU/DEPT CODE	SKIP
UNIT PRICE	SKIP
AMOUNT	SKIP

2. Move the cursor to the following CHIT FORMAT items and select PRINT or SKIP with the [ • ] key (toggle key).

Printing when quantity is one: PRINT/SKIP

PLU/department code: PRINT/SKIP

Unit price: PRINT/SKIP

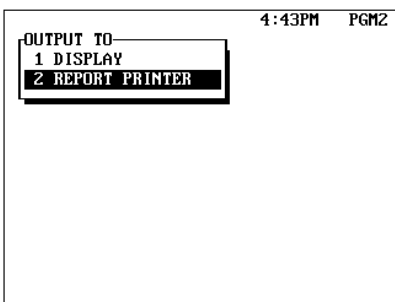
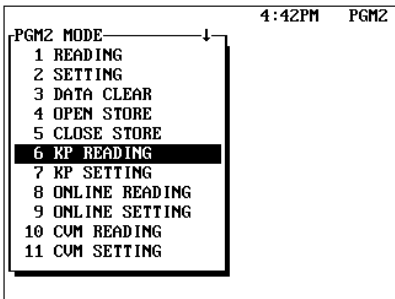
Amount: PRINT/SKIP

The default setting for these items is SKIP.

3. Press the [ENTER] key to finish the programming for chit printing.

## 9. Reading the contents of the remote printer programming — master and satellite

### Procedure

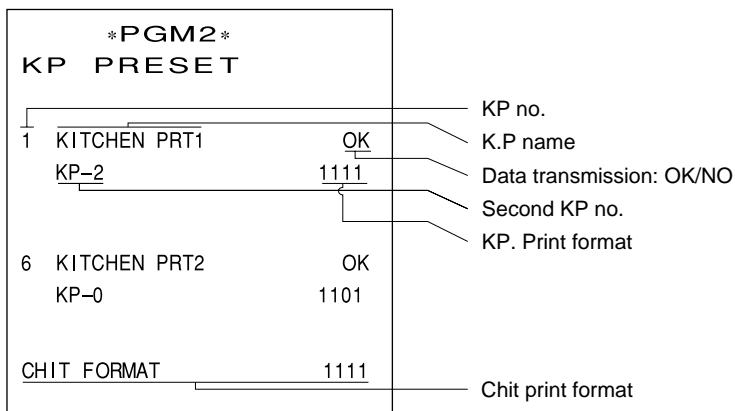


1. Enter the PGM2 mode.

2. Select “KP READING” and press the [ENTER] key.

3. Select “DISPLAY” or “REPORT PRINTER” and press the [ENTER] key.

### Sample Print (master)



## 10. Downloading the contents of the remote printer programming to satellites — master

When you have completed the remote printer programming, you can distribute the preset data from the master to all satellites in the IRC system.

### Procedure

```
PGM2 MODE
10 CUM READING
11 CUM SETTING
12 CAT READING
13 CAT SETTING
14 MWS READING
15 MWS SETTING
16 INLINE READING
17 INLINE SETTING
18 INITIAL D/L
19 MAINTENANCE D/L
20 DECLARATION
```

```
INITIAL D/L
15 MANAGER
16 OPTION
17 DATE/TIME
18 LOGO
19 DEF. MENU LEVEL
20 TAX
21 ONLINE PRESET
22 INLINE PRESET
23 KP PRESET
24 DEVICE ASSIGN
25 ALL PGM
```

```
MACHINE No.
1 ALL
2 MACHINE SELECT
```

1. Enter the PGM2 mode.
2. Select "INITIAL D/L" and press the [ENTER] key.
3. The INITIAL D/L menu will open. Select "KP PRESET" and press the [ENTER] key.
4. If you wish to download the KP PRESET data to all satellites, select "ALL" and press the [ENTER] key. If you wish to download the data to certain satellite(s), select "MACHINE SELECT" and press the [ENTER] key. In this case, the MACHINE SELECT menu will open. Move the cursor to the machine numbers and select "YES."

### NOTE

*Check if all the satellites in the IRC system have received the preset data for the remote printer.*

## 11. Programming for the Manager Work Station (MWS) — master and satellite

The SRN interface for the ER-A770 POS enables the ER-A770 to perform in-line communications to a host P.C. through the connection to a Manager Work Station (MWS).

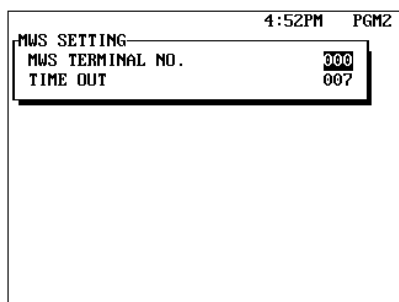
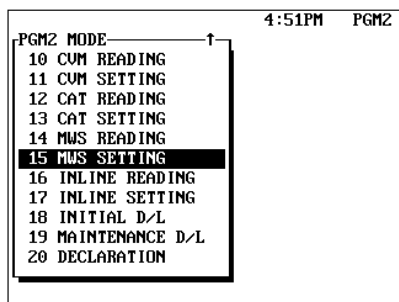
The function of Manager Work Station:

- |                                    |                 |
|------------------------------------|-----------------|
| 1) Down load of the terminal data  | [Terminal ← PC] |
| 2) Up load of the terminal data    | [Terminal → PC] |
| 3) Remote Job Entry (RJE) function | [Terminal ← PC] |
| 4) T-Log function                  | [Terminal → PC] |
| 5) ELECTRONIC MAIL function        | [Terminal ← PC] |

### (1) Programming of the terminal number

The terminal number of MWS can be specified by the following procedure:

#### Procedure

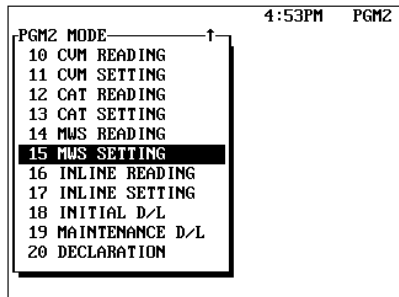


1. Enter the PGM2 mode.
2. Select "MWS SETTING" and press the [ENTER] key.  
The MWS SETTING window will appear.
3. Enter the terminal number (1 - 254) of MWS and press the [ENTER] key.

## (2) Programming of the time-out time

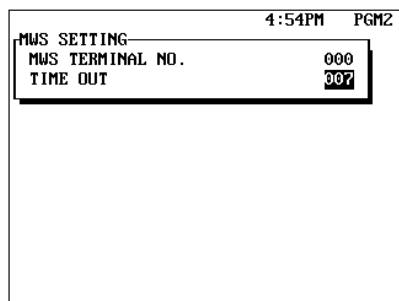
The time-out value for receiving the data can be specified by the following procedure:

### Procedure



4:53PM PGM2

PGM2 MODE	↑
10 CUM READING	
11 CUM SETTING	
12 CAT READING	
13 CAT SETTING	
14 MWS READING	
15 MWS SETTING	
16 INLINE READING	
17 INLINE SETTING	
18 INITIAL D/L	
19 MAINTENANCE D/L	
20 DECLARATION	



4:54PM PGM2

MWS SETTING	
MWS TERMINAL NO.	000
TIME OUT	999

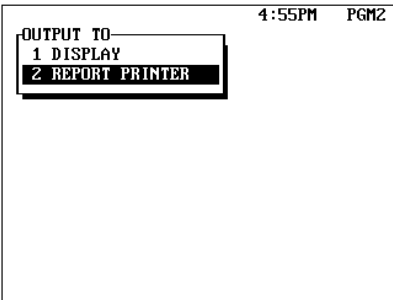
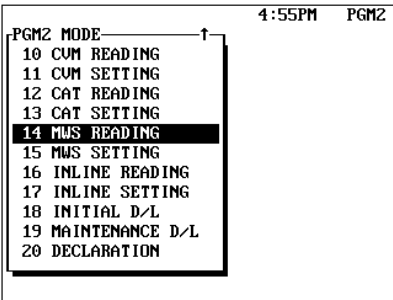
1. Enter the PGM2 mode.
2. Select "MWS SETTING" and press the [ENTER] key.  
The MWS SETTING window will appear.
3. Enter the time-out time (1 - 255 (sec)) and press the [ENTER] key.

#### NOTE:

*This value will depend upon the application. Please consult your authorized SHARP dealer.*

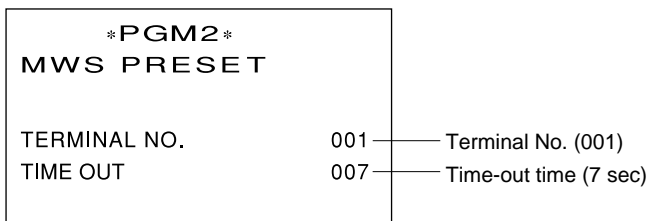
# 12. Reading the contents of the Manager Work Station (MWS) programming — master and satellite

## Procedure



1. Enter the PGM2 mode.
2. Select "MWS READING" and press the [ENTER] key.
3. Select "DISPLAY" or "REPORT PRINTER" and press the [ENTER] key.

## Sample Print (master)



# 4

## System Back-Up

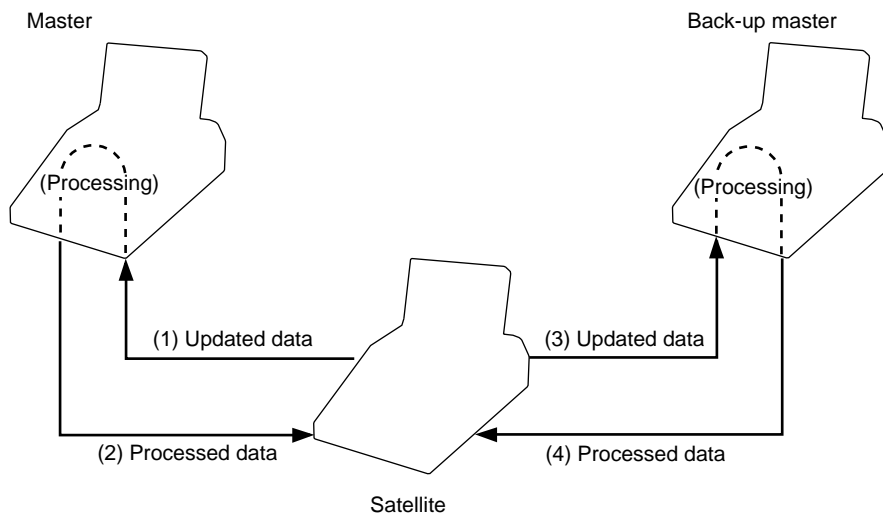
### 1. How the IRC back-up system works

The IRC system incorporates a back-up system.

One of the satellites can be designated to serve as a back-up master.

When both the master and back-up master are in order, the system works in the following sequence:

- (1) Each satellite sends updated GLU/PBLU data to the master.
- (2) The master receives the data, processes it and sends it back to the satellite.
- (3) The satellite sends the updated data to the back-up master.
- (4) The back-up master receives the data, processes it and sends it back to the satellite.



If the master breaks down, the back-up master serves as the master after a master declaration is made at the back-up master. If the back-up master breaks down, updated data transmission to it can be stopped by a master declaration at the master. When the master or back-up master recovers from the breakdown, it resumes its function as the master or back-up master by the recovery declaring operation.

## 2. Master declaration — when the master or back-up master breaks down

When the master or back-up master breaks down, the master declaration procedure should be taken to inform satellites of the breakdown.

### (1) When the master breaks down — Master declaration at the back-up master

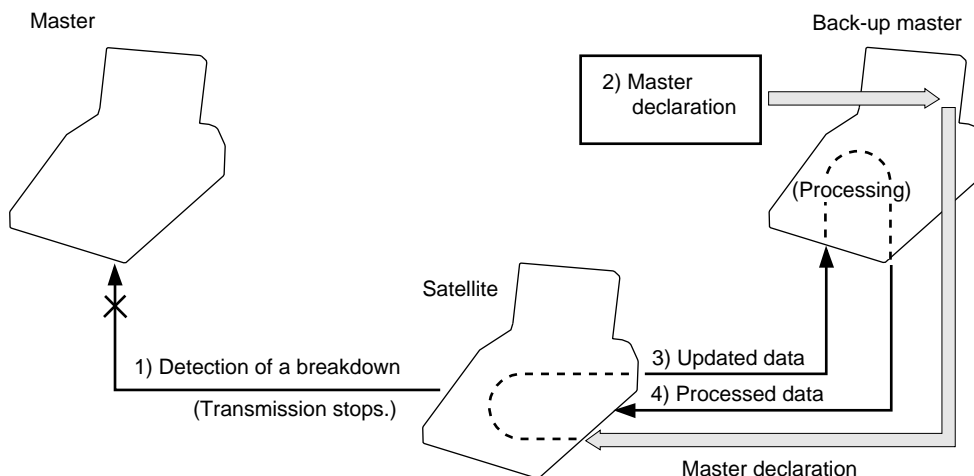
- 1) A satellite detects a breakdown of the master through the system retry function when it is sending updated GLU/PBLU data to the master. At this point, the message “NO REPLY/MASTER” appears in the pop-up window of the display.

NO REPLY/MASTER

\* For the system retry function, see pages [57 - 58](#).

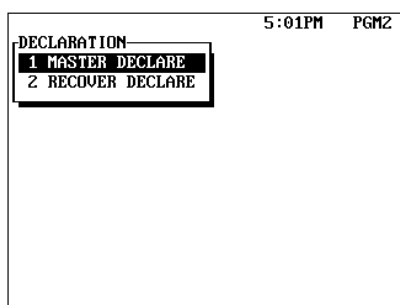
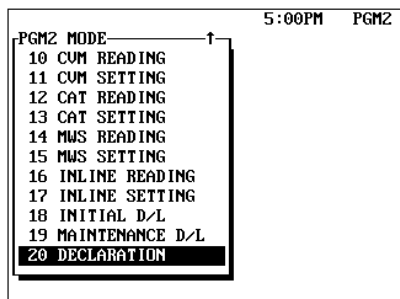
- 2) The master declaration operation must be done at the back-up master. This operation informs the other satellites that the master has broken down and the back-up master will serve as the master hereafter. (During this process, no other operation cannot be done at each satellite.)
- 3) Each satellite in the IRC system starts sending updated GLU/PBLU data to the back-up master.
- 4) The back-up master processes the received data and sends back the processed data to each satellite.

#### Flow of a master declaration at the back-up master



The master declaration procedure is as follows:

### Procedure



1. Select "PGM2 MODE" from the mode selection menu and press the [ENTER] key.
2. Select "DECLARATION" and press the [ENTER] key.
3. Select "MASTER DECLARE" and press the [ENTER] key.

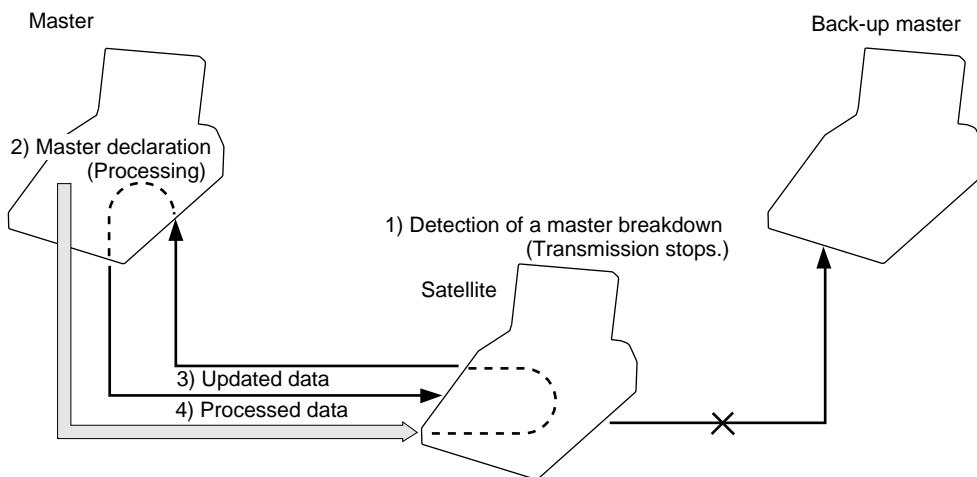
## (2) When the back-up master breaks down — Master declaration at the master

- 1) A satellite detects a breakdown of the back-up master through the system retry function when it is sending updated GLU/PBLU data to both the master and back-up master. At this point, the message “NO REPLY/BACKUP” appears in the pop-up window of the display.

NO REPLY/BACKUP

- 2) The master declaration operation must be done at the master. This operation causes the master to inform all satellites of the breakdown of the back-up master.
- 3) Each satellite in the IRC system sends updated GLU/PBLU data only to the master.
- 4) The master processes the received data and sends back the processed data to each satellite.

### Flow of a master declaration at the master



The master declaration procedure is the same as “(1) When the master breaks down.”

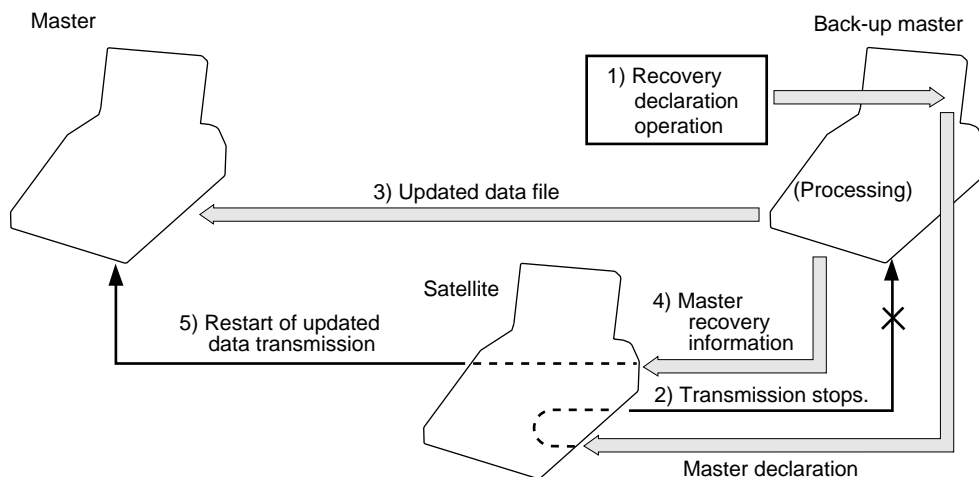
### 3. Recovery declaration — when the master or back-up master recovers from a breakdown

When the master or back-up master recovers from a breakdown, the recovery declaration operation should be taken to inform satellites of the recovery.

#### (1) When the master recovers from a breakdown — Recovery declaration at the back-up master

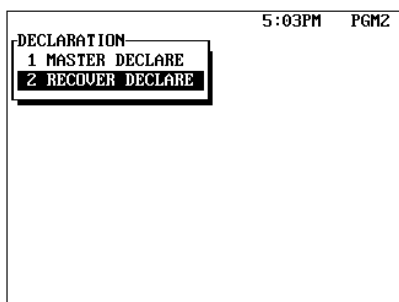
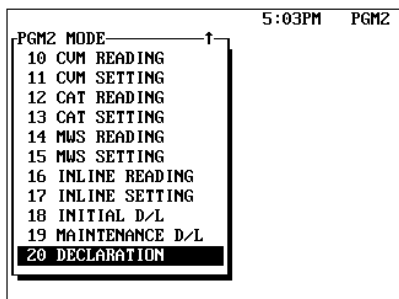
- 1) The recovery declaration operation is done at the back-up master.
- 2) Each satellite stops sending updated GLU/PBLU data to the back-up master.
- 3) The back-up master sends the updated GLU/PBLU data files to the master.
- 4) The back-up master informs all satellites of the master's recovery.
- 5) The satellites restart sending updated GLU/PBLU data to the master.

#### Flow of a recovery declaration at the back-up master



The recovery declaration procedure is as follows:

### Procedure

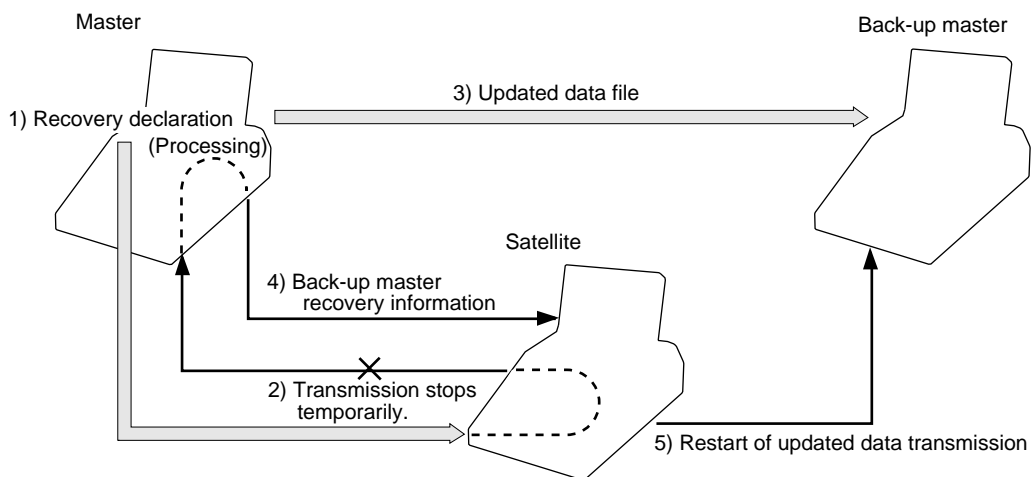


- **1.** Select “PGM2 MODE” from the mode selection menu and press the [ENTER] key.
- **2.** Select “DECLARATION” and press the [ENTER] key.
- **3.** Select “RECOVER DECLARE” and press the [ENTER] key.

## (2) When the back-up master recovers from a breakdown — Recovery declaration at the master

- 1) The recovery declaration operation is done at the master.
- 2) Each satellite stops sending updated GLU/PBLU data to the master temporarily.
- 3) The master sends the updated GLU/PBLU data files to the back-up master.
- 4) The master informs all satellites of the back-up master's recovery.
- 5) The satellites restart sending updated GLU/PBLU data to the back-up master.

### Flow of a recovery declaration at the master



The recovery declaration procedure is the same as “(1) When the master recovers from a breakdown.”

# 5 Error Recovery

## 1. Data clear operation

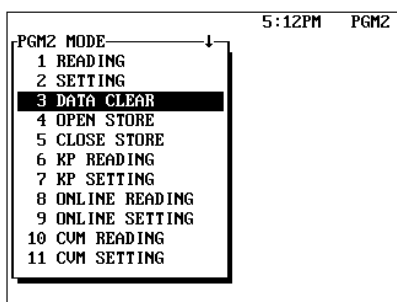
With the data clear operation, you can clear various item memories when necessary. This operation should be done only when the master or system breaks down.

### (1) Data clearing of the electronic journal data — master and satellite

You can clear the electronic journal data in the event of some trouble. This function is available at the master and satellites.

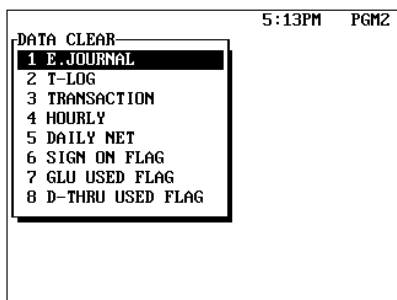
#### Clearing procedure

#### Procedure



1. Select "PGM2 MODE" from the mode selection menu and press the [ENTER] key.

2. Select "DATA CLEAR" and press the [ENTER] key.



3. Select "E.JOURNAL" and press the [ENTER] key.

### (2) Data clearing of the T-LOG buffer — master and satellite

You can clear the T-LOG buffer in the event of some trouble. This function is available at the master and satellites.

#### Clearing procedure

After selecting "DATA CLEAR" from the PGM2 MODE menu with the same procedure as steps 1 and 2 in "(1) Data clearing of the electronic journal data," select "T-LOG."

**NOTE**

- For T-LOG polling, see page 14.
- The above-mentioned data clearing jobs should be performed at the advice of your authorized SHARP dealer.

### (3) Data clearing of the transaction memory — master and satellite

You can clear the transaction memory in the event of some trouble.

This function is available at the master and satellites.

#### Clearing procedure

After selecting “DATA CLEAR” from the PGM2 MODE menu with the same procedure as steps 1 and 2 in “(1) Data clearing of the electronic journal data,” select “TRANSACTION.”

### (4) Data clearing of the hourly sales data memory — master and satellite

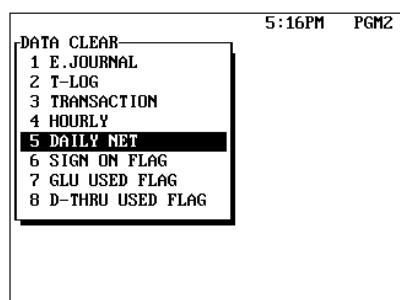
You can clear the hourly sales data memory in the event of some trouble. This function is available at the master and satellites.

#### Clearing procedure

After selecting “DATA CLEAR” from the PGM2 MODE menu with the same procedure as steps 1 and 2 in “(1) Data clearing of the electronic journal data,” select “HOURLY.”

### (5) Data clearing of the daily net sales data memory — master and satellite

You can clear the daily net sales data memory in the event of some trouble. This function is available at the master and satellites.

**Procedure**

#### Clearing procedure

After selecting “DATA CLEAR” from the PGM2 MODE menu with the same procedure as steps 1 and 2 in “(1) Data clearing of the electronic journal data,” select “DAILY NET.”

## **(6) Data clearing of the server sign-on state — master**

You can clear the server sign-on state in case of trouble.

This operation is effective only for the sign-on flag for servers who are signed on at the master.

### Clearing procedure

After selecting “DATA CLEAR” from the PGM2 MODE menu with the same procedure as steps 1 and 2 in “(1) Data clearing of the electronic journal data,” select “SIGN ON FLAG.”

#### **NOTE**

*Server sales data for each satellite at which a server has signed on is not collected by manual clearing of the sign-on state. Server sales data is collected only when sign-off operation is done correctly at satellites.*

## **(7) Data clearing of the GLU/PBLU data in use — master**

You can clear the GLU/PBLU data in use in the event of some trouble.

This operation clears all GLU/PBLU data that is currently in use.

### Clearing procedure

After selecting “DATA CLEAR” from the PGM2 MODE menu with the same procedure as steps 1 and 2 in “(1) Data clearing of the electronic journal data,” select “GLU USED FLAG.”

## **(8) Data clearing of the drive-through data in use — master**

You can clear the drive-through data in use in the event of some trouble.

This operation clears all drive-through data that is currently in use.

### Clearing procedure

After selecting “DATA CLEAR” from the PGM2 MODE menu with the same procedure as steps 1 and 2 in “(1) Data clearing of the electronic journal data,” select “D-THRU USED FLAG.”

## 2. System retry function

If a satellite terminates a transmission job unsuccessfully, the master either terminates the job immediately or awaits a command given through the keyboard, depending on whether the system retry function is disabled or enabled. When the system retry function is enabled, the master awaits the entry of a command and retries access depending on the command as explained below.

This function is used in the following cases:

- The master has failed to download preset or updated data to all or some of the satellites.
- The master has failed to upload sales reports from all or some of the satellites.
- The satellite has failed to download data to other machines.

Whether the system retry function is enabled or disabled when a transmission error occurs is programmed at the master. (See “4. Specifying whether to enable or disable the system retry function when a transmission error occurs” on page [31](#).)

### (1) When the system retry function is disabled:

The master terminates the transmission job immediately in the following two ways.

If none of the satellites have successfully transmitted data, the transmission is regarded as having ended with an error, which is equivalent to ABORT as discussed below.

If there is any satellite which has successfully transmitted data, the transmission is regarded as either successful or unsuccessful depending on the type of transmission job. In this case, the transmission regarded as successful and the one regarded as unsuccessful are equivalent to IGNORE and ABORT, respectively both of which are explained below.

### (2) When the system retry function is enabled:

If a transmission error occurs, the number and error state of the satellite in which the error has occurred and the relevant menu will appear on the display and the master awaits the entry of one of the following commands given through the keyboard:

- A) RETRY command (selection from the menu or press of the 1 key)
  - B) ABORT command (selection from the menu or press of the 2 key)
  - C) IGNORE command (selection from the menu or press of the 3 key)
- (\* If there are only RETRY and IGNORE on the menu, press the 2 key.)

A) RETRY command:

When RETRY is selected, the master attempts a RETRY to the satellite; however, it does not retry when, due to the type of error (for example, command error), it is obvious that the RETRY will fail. This means that the master will not gain access if errors that have occurred during transmission are such types of errors.

B) ABORT command:

When ABORT is selected, the master terminates access to the satellite and regards the transmission as having unsuccessfully ended. However, in the case of program data downloading, the ABORT command may be issued only when all the satellites accessed are in the error state.

C) IGNORE command:

When IGNORE is selected, the master terminates access to the satellite, regards the transmission as having successfully ended and prints only transmitted data.

If no satellites have successfully transmitted data, the IGNORE command may be issued to the master in the case of sales data inquiry (X report), though the result is not printed.

[Retry during sales data inquiry]

During resetting, the CANCEL command may be given only when every accessed satellite is in the error state. The IGNORE and RETRY commands are available unconditionally.

## **BASIC SPECIFICATIONS**

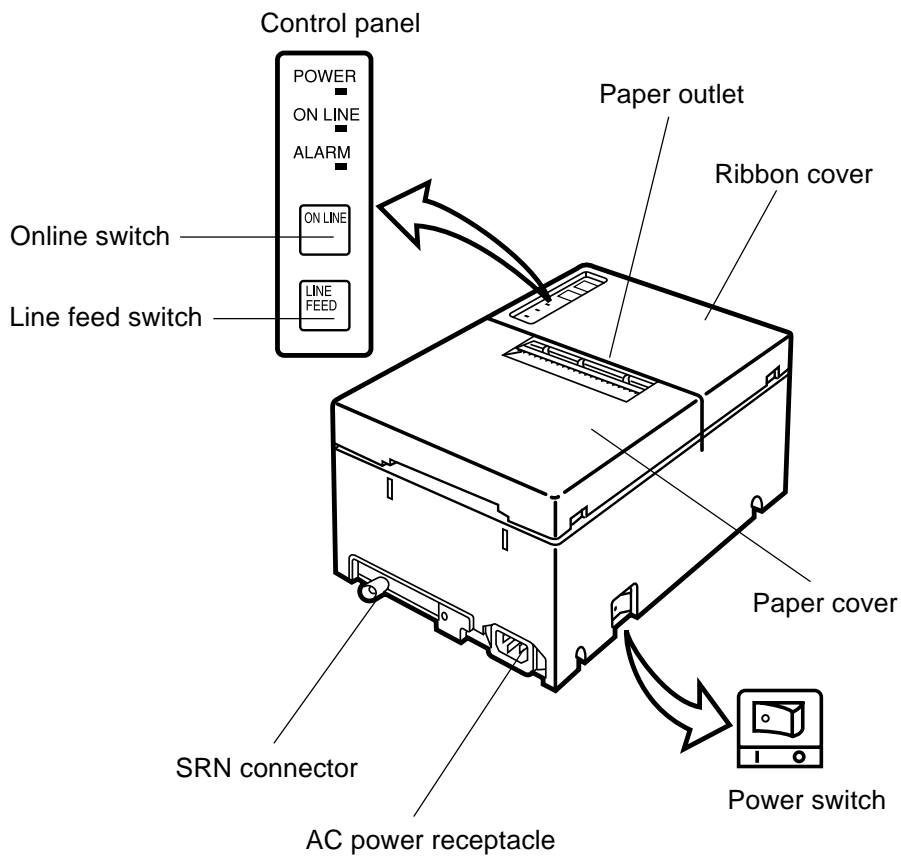
Transmission system:	Serial synchronous, half-duplex transmission.
Transmission line:	Common bus system
Transmission speed:	1 Mbits/sec
Transmission distance:	Total (main + branch) max. 1 km
Transmission cable:	Coaxial cable RG-58/U
No. of connectable machines:	Master: 1 Satellites/Remote printers: max. 15 (Remote printers alone: max. 9)
Transfer system:	Packet-unit

# 6

## Handling the Remote Printer

### • ER-03RP

#### Physical characteristics



## 1. Lamps and switches

### (1) Lamps

- Power lamp  
This lamp lights up when the power switch of the remote printer is turned on.
- Online lamp  
This lamp lights up when the online switch is pressed, and goes off when the switch is pressed again.
- Alarm lamp  
This lamp lights up when the remote printer malfunctions. In this case the printer neither prints any data nor feeds the paper. The alarm state can be cleared by pressing the ONLINE switch or by setting the power switch to the OFF position and then back to the ON position.

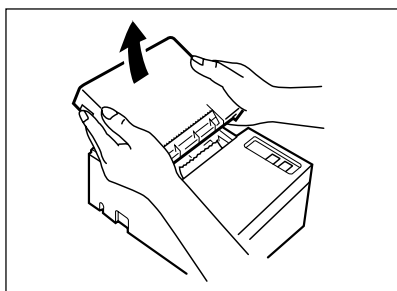
### (2) Switches

- Power switch  
This switch is used to energize the remote printer.
- Online switch  
This switch is used to make the remote printer perform printing.  
It must be pressed before starting registrations which require printing.
- Line feed switch  
This switch is used to advance the paper in the remote printer.

## 2. Replacement of the paper roll

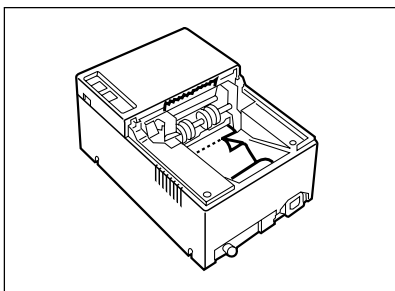
When a colored dye appears on the paper roll, it means that it is time to replace the existing paper roll. Replace the paper roll with a new one by using the procedures described below. When installing a paper roll for the first time, take steps 1 and 4 through 7.

### Procedure



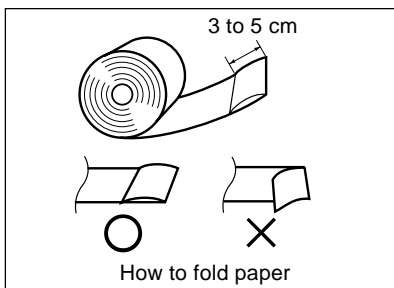
1. Pull up the paper cover and remove it.

## Procedure

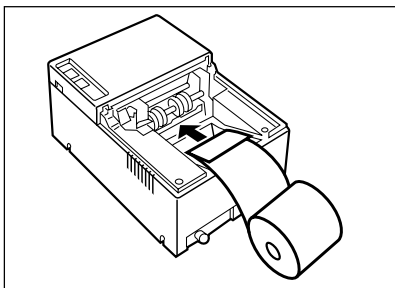


2. Cut the paper along a straight line to remove the paper spool.

3. Press the line feed switch to remove the paper remaining in the printer.



4. Fold the top end of the replacement paper roll by 3 to 5 cm securely as shown at left.

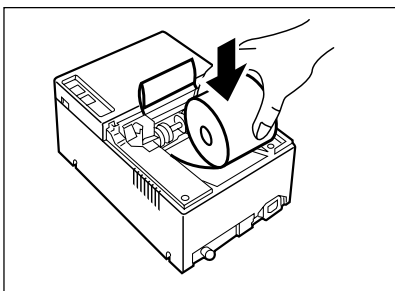


5. Insert the end of the folded paper deep into the paper chute of the printer and press the line feed switch to advance the paper.

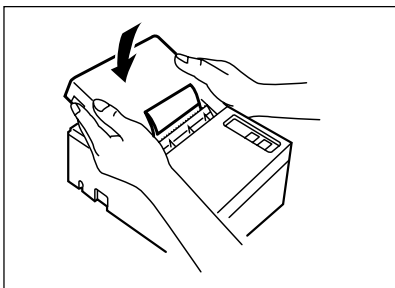
### NOTE

*If paper is not inserted far enough, it will not advance when the line feed switch is pressed.*

## Procedure



6. Remove the slack in the paper and set the roll in position.



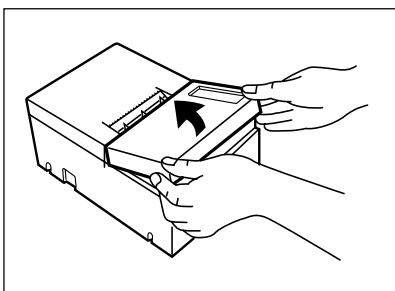
7. Pass the top end of the paper through the paper cutter on the paper cover and close it.

## 3. Replacement of the ink ribbon cassette

When the print becomes faint, replace the ink ribbon cassette with a new one according to the procedures described below.

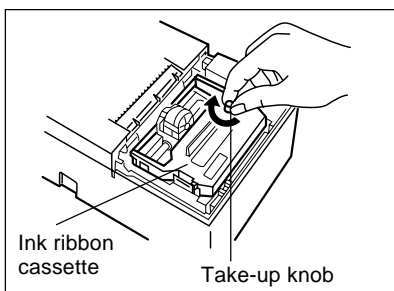
Be sure to turn off the remote printer before replacing the ink ribbon cassette.

## Procedure

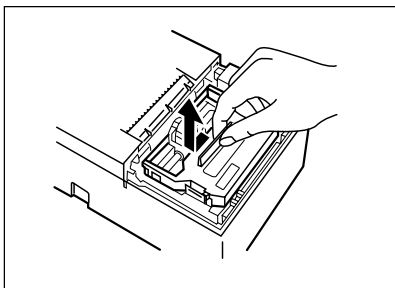


1. Pull up the ribbon cover and remove it.

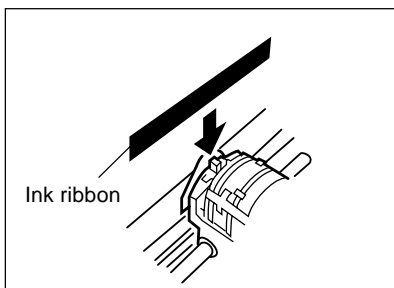
## Procedure



2. Rotate the take-up knob of the ink ribbon cassette in the direction of the arrow to tighten the ink ribbon.



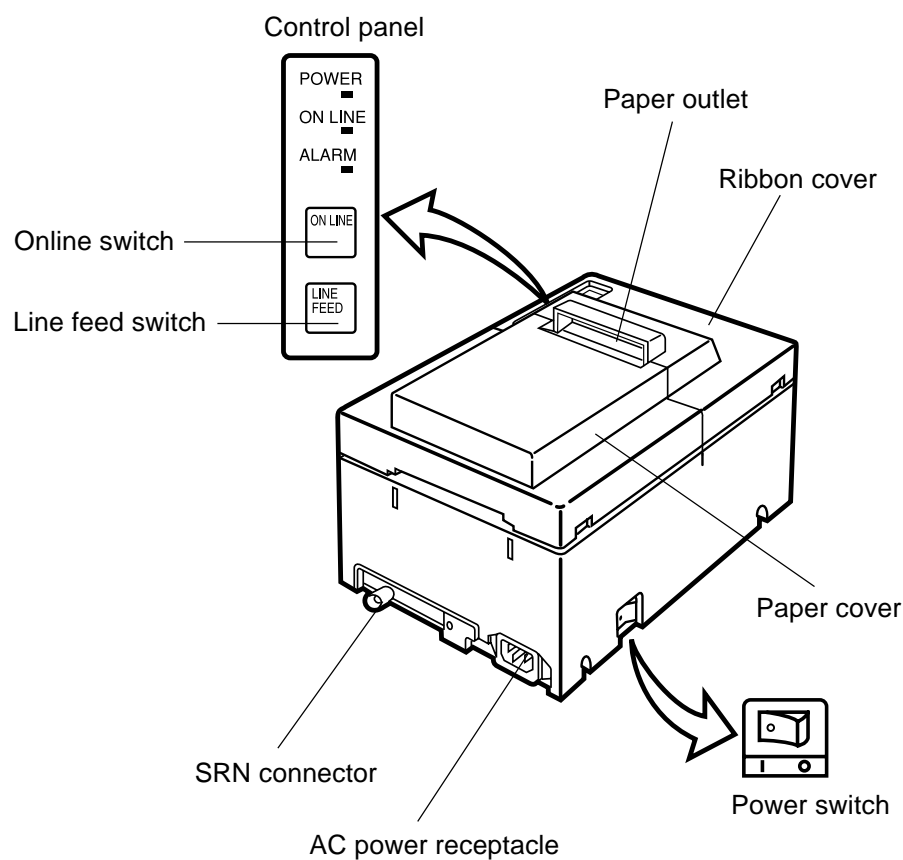
3. Push the ink ribbon cassette to the left, then lift up its right side to remove it.



4. Rotate the take-up knob of the new ink ribbon cassette to tighten the ink ribbon. Install the new ink ribbon cassette so that the ink ribbon sets into the gap between the dot head nose assembly and paper guide as shown at the left.

5. Close the ribbon cover.

• **ER-04RP**  
**Physical characteristics**



## 1. Lamps and switches

### (1) Lamps

- Power lamp

This lamp lights up when the power switch of the remote printer is turned on.

- Online lamp

This lamp lights up when the online switch is pressed, and goes off when the switch is pressed again.

- Alarm lamp

This lamp lights up when the remote printer malfunctions. In this case the printer neither prints any data nor feeds the paper. The alarm state can be cleared by pressing the online switch or by setting the power switch to the OFF position and then back to the ON position.

### (2) Switches

- Power switch

This switch is used to energize the remote printer.

- Online switch

This switch is used to make the remote printer perform printing.

It must be pressed before starting registrations which require printing.

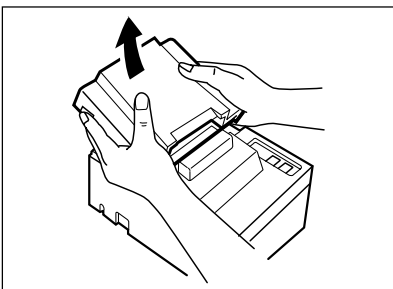
- Line feed switch

This switch is used to advance the paper in the remote printer.

## 2. Replacement of the paper roll

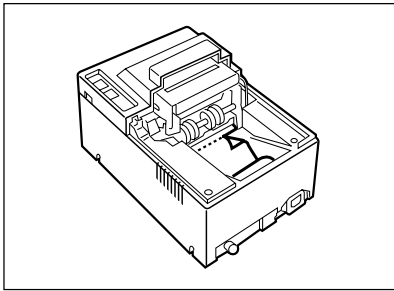
When a colored dye appears on the paper roll, it means that it is time to replace the existing paper roll. Replace the paper roll with a new one according to the procedures described below. When installing a paper roll for the first time, take steps 1 and 4 through 7.

### Procedure



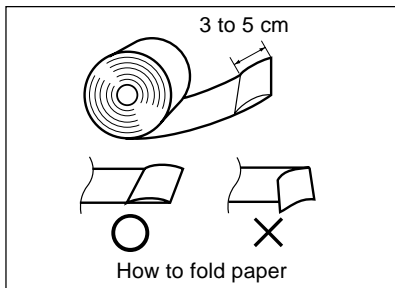
1. Pull up the paper cover and remove it.

## Procedure

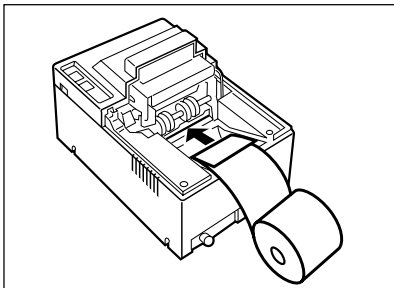


**2.** Cut the paper along a straight line to remove the paper spool.

**3.** Press the line feed switch to remove the paper remaining in the printer.



**4.** Fold the top end of the replacement paper roll by 3 to 5 cm securely as shown at left.

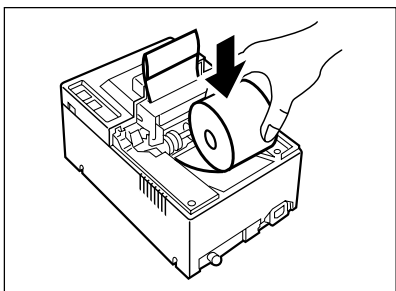


**5.** Insert the end of the folded paper deep into the paper chute of the printer and press the line feed switch to advance the paper.

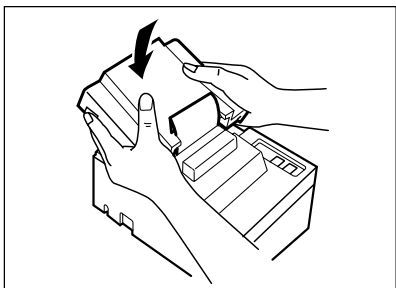
### NOTE

*If paper is not inserted far enough, it will not advance when the line feed switch is pressed.*

## Procedure



6. Take up the slack in the paper and set the roll in position.



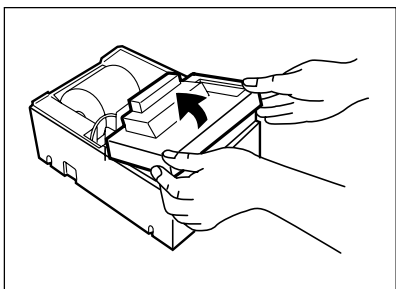
7. Close the paper cover.

## 3. Replacement of the ink ribbon cassette

When the print becomes faint, replace the ink ribbon cassette with a new one according to the procedures described below.

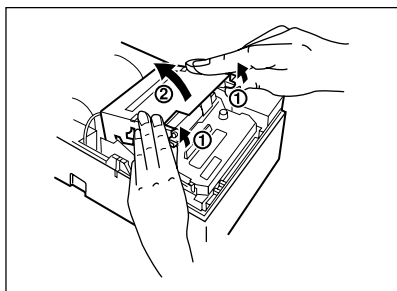
Be sure to turn off the remote printer before replacing the ink ribbon cassette.

## Procedure

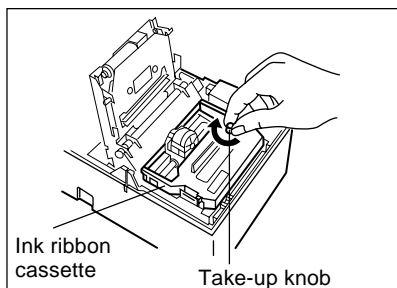


1. Remove the paper cover and the ribbon cover.

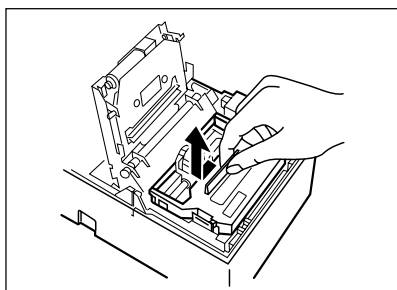
## Procedure



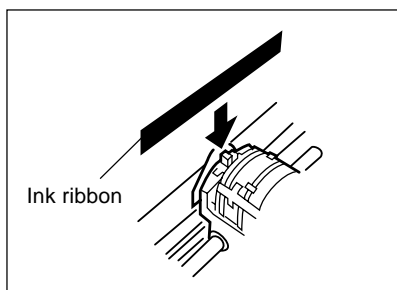
2. Pulling the release levers, lift up the auto cutter.



3. Rotate the take-up knob of the ink ribbon cassette in the direction of the arrow to tighten the ink ribbon.



4. Push the ink ribbon cassette to the left, then lift up its right side to remove it.



5. Rotate the take-up knob of the new ink ribbon cassette to tighten the ink ribbon. Install the new ink ribbon cassette so that the ink ribbon sets into the gap between the dot head nose assembly and paper guide as shown at the left.
6. Close the auto cutter and install the ribbon cover and the paper cover.

