SHARP®

ER-A Models
Electronic Cash Registers
Participant

P009.00

Sharp Academy

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ER-A Model

Electronic Cash Registers

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ER-A Model

Electronic Cash Registers

Sharp Academy welcomes you to participate in an interactive class designed to provide information to support your Point of Sale system.

DOCUMENT	COURSE #
Course Agenda	P009.00
COURSE TITLE	
ER-A Model Electronic Cash Registers	

ER-A Model Electronic Cash Registers
Product Introduction
Target Market Selling
Resources & Information
Master Reset
Service Mode Programming
PGM/PGM1/PGM2 Mode Programming

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SHARP

Sharp
ER-A Model
Electronic Cash Registers

SHARP

ER-A Series Models

- ER-A242
- ER-A320
- ER-A330
- ER-A410
- ER-A420
- ER-A440
- ER-A450T
- ER-A520
- ER-A530

SHARP

ER-A242 Target Market

- **General Merchandise**
- **Small Retailers**
  - Restaurant
  - Bar
  - Coffee Shop

Businesses that want easy-to-use features with fast, quiet thermal printing.

ER-A242 Features

- Thermal Printer
- Large LED Displays
- Metal Cash Drawer
- Raised Keyboard
- PC Connectivity
- Multi-language Support
- Electronic Journal

4-M/1-3 P009.00

ER-A320 Target Markets

Small to Medium Retail & Hospitality

- General Purpose
- Bakery
- Coffee Shop
- Snack Bar
- Variety/Apparel

5-M/1-3 P009.00

ER-A320 Features

- Compact Cabinet Design
- 10 Standard Departments, expandable to 40
- Up to 600 PLUs
- Built-in Calculator
- Large LED Display
- Single Line Validation
- Heavy Duty Printer

6-M/1-3 P009.00

ER-A330 Target Markets

Small to Medium Retail & Hospitality

- General Purpose
- Bakery
- Coffee Shop
- Snack Bar
- Variety/Apparel

7-M/1-3 P009.00

ER-A330 Features

- Compact cabinet design
- 10 standard departments, expandable to 50
- Full range of management reports
- Single line validation
- Large LED display
- Built-in calculator
- Up to 750 PLUs
- Food stamp capability

8-M/1-3 P009.00

ER-A410/420 Target Markets

Small to Medium Retail & Hospitality

- Convenience Store
- Cafeteria
- General Merchandise
- Pub or Restaurant

9-M/1-3 P009.00

ER-A410/420 Features

- Integrated high speed 2-station thermal printer with logo capability
- 2-line alpha-numeric backlit LCD operator display
- Built-in RS-232 ports
- Raised keyboard design
- Powerful, flexible built-in software
- Compact, low profile design
- Full range of management reports
- Back Office Software Solution
- PC Link software utility
- Optional SDW Software

10-M/1-3 P009.00

ER-A440 Target Markets

Small to Medium Retail & Hospitality

- Convenience Store
- Stationery Store
- Counter Quick Service
- Small Cafeteria

11-M/1-3 P009.00

ER-A440 Features

- High Speed Printing
- Large LED Display
- 20 standard departments, up to 50
- 950 standard PLUs expandable to 10,000
- Standard RS-232C interface
- Compact Cabinet Design
- Age verification function

12-M/1-3 P009.00

ER-A450T Target Markets

Small to Medium Retail & Hospitality

- General Purpose
- Gift/Variety
- General Merchandise
- Convenience Store

ER-A450T Features

- Thermal Printing
- Scanning Interface
- Expansion Capabilities
- Charge Posting
- LED Displays
- Age Verification
- Easy Programming
- Reports
- Back Office Software Solution

ER-A520/530 Target Markets

- Cafeteria
- Convenience Store
- Fast Food
- Bar/Restaurant

ER-A520/530 Features

- High speed two-station thermal printer
- Two-line alphanumeric display
- Two built-in RS-232 ports
- Raised keyboard
- UPC Learning Function
- Powerful, flexible built-in software
- 2000 standard UPC, expandable to 15,000
- After Transaction Receipt
- Back Office Software Solution

16-M/1-3 P009.00

Sharp Accessories & Supplies

ER-A530 Sharp Accessories & Supplies example

Model	Description
ERA530	Flat Keys/2 Sta. Thermal printer/RS232 (2)
Accessories	**Description**
UPS02MB	2MB Memory Board
UPP16DP	Pole 16 Char. Customer Display
ERSC6710	10"x10" Avery/Weightronix Scale (Serial)
ERSC6720	14"x12" Avery/Weightronix Scale (Serial)
ER04DW	5B/5C Cash Drawer w/ Coin Case
ER55CC2	5B/5C Coin Case
Supplies	**Description**
ER57TRT	57.5mm Thermal Roll Tray - 5 Trays of 10 Rolls

17-M/1-3 P009.00

3rd Party Interface/Options

Availability Varies by Model

- Credit, Check, Debit Card Authorization
- Coin Dispenser
- Online Communication/PC
- Remote/Kitchen Printer
- Slip/Bill Printer
- Validation Printer
- Scale
- Barcode Reader / Scanner
- Print Data Send

18-M/1-3 P009.00

Optional Back Office Solutions

- **Easy Programming Software**
  - ER-A242, ER-A410/ER-A420
- **SDW Back Office Software**
  - ER-A410/420, ER-A450T, ER-A520/530

PA-DSS Compliancy

The ERA models are exempt from PA-DSS requirements due to the following from the PA-DSS:

Excerpt of Payment Application – Data Security Standards,
Security Audit Guidelines, Version 1.1 PA-DSS Applicability
to Hardware Terminals

For the complete validated product listing:

http://usa.visa.com/merchants/risk_management/cisp_payment_applications.html

PA-DSS Compliancy

Hardware terminals with resident payment applications (dumb POS terminals or standalone POS terminals), do not need to undergo a PA-DSS review if all **of the following are true:**

1. **The terminal has no connections to any of the merchant's systems or networks.**
2. **The terminal connects only to the acquirer or processor.**
3. The payment application vendor provides secure remote 1) updates, 2) troubleshooting, 3) access and 4) maintenance.
4. **The following are never stored after authorization:**
   - **Full contents of any track from the magnetic stripe (that is on the back of a card, in a chip, or elsewhere).**
   - **Card-validation code or value (three- or four-digit number printed on front or back of payment card).**
   - **PIN or encrypted PIN block.**

All the **bold statements** apply to the ERA units and the actual processing unit is the Datacap device.

Resources

POS information at your fingertips!

www.sharp-pos.com

- Technical Documentation
- Demo Templates & Software
- Product Information
- Sharp Academy Certification
- Much much more....

Have a question, suggestion or comment?

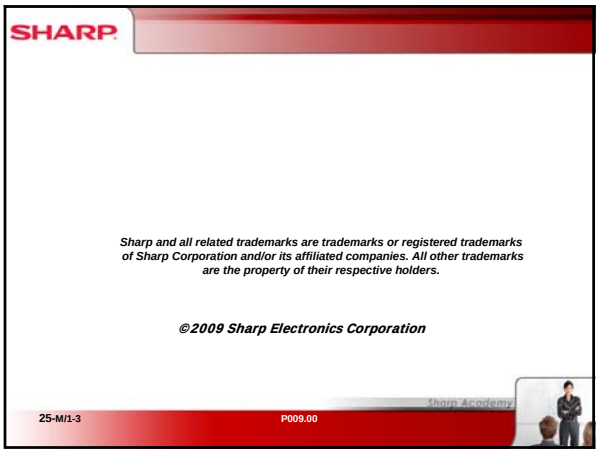
Click on "Contact Us" on the POS website and we will get back to you!

ER-A Series Key Selling Points

- Competitive features & functionality
- Feature-rich
- Small to medium sized businesses

Conclusion

This concludes the ER-A Model Electronic Cash Register Overview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ER-A Model Documentation and Software/Utilities

ER-A Documentation Avaialabilty by Model

Documentation availability by MODEL	Description
ER-A242	ER-A242 Service Manual
ER-A242	ER-A242 Parts Guide
ER-A242	ER-A242 Instruction Manual
ER-A320	ER-A320 Installation Manual
ER-A320	ER-A320 Service Manual
ER-A320	ER-A320 Programming Manual
ER-A320	CR-812All Printer Service Manual
ER-A320	ER-A320 Instruction Manual
ER-A320	ER-A320 Parts Guide
ER-A330	ER-A310 / ER-A330 Installation Manual
ER-A330	ER-A310 / ER-A330 Service Manual
ER-A330	ER-A310 / ER-A330 Programming Manual
ER-A330	UCR-812A Printer Unit Service Manual
ER-A330	ER-A310 / ER-A330 Instruction Manual
ER-A330	ER-A310 / ER-A330 Parts Guide
ER-A410/A420	ER-A410 / ER-A420 Installation Manual
ER-A410/A420	ER-A410 / ER-A420 Programming Manual
ER-A410/A420	ER-A410 / ER-A420 Service Manual
ER-A410/A420	PR-45M Printer Unit Service Manual
ER-A410/A420	ER-A410 / ER-A420 Instruction Manual
ER-A410/A420	ERA410/420 Parts Guide
ER-A410/A420	ER-A410 / ER-A420 Dealer Knowledge Book
ER-A410/A420	PC Link Setup Utility Procedure Guide
ER-A440	ER-A440 Installation Manual
ER-A440	ER-A440 Service Manual
ER-A440	ER-A440 Program Manual
ER-A440	ER-A440 Instruction Manual
ER-A440	ER-A440/A460/A470 printer manual
ER-A440	ER-A440 RS232 installation manual
ER-A440	ER-A440 Parts Manual
ER-A450T	ER-A450T Service Manual
ER-A450T	ER-A450T Program Manual
ER-A450T	PR-45M Printer Unit Service Manual
ER-A450T	ER-A450T Instruction Manual (NPC only p/n# IB-ERA450T)
ER-A450T	ER-A450T Parts Guide
ER-A450T	Logo Converter Utility Dealer Knowledge Book
ER-A520/A530	ER-A520 / ER-A530 Installation Manual
ER-A520/A530	ER-A520 / ER-A530 Programming Manual
ER-A520/A530	ER-A520 / ER-A530 Service Manual
ER-A520/A530	PR-58HM Printer Unit Service Manual
ER-A520/A530	ERA520 / ER-A530 Instruction Book
ER-A520/A530	ERA520 / ER-A530 Parts Guide
ER-A520/A530	ER-A520 / ER-A530 Dealer Knowledge Book

ER-A Software / Utility Avaialabilty by Model

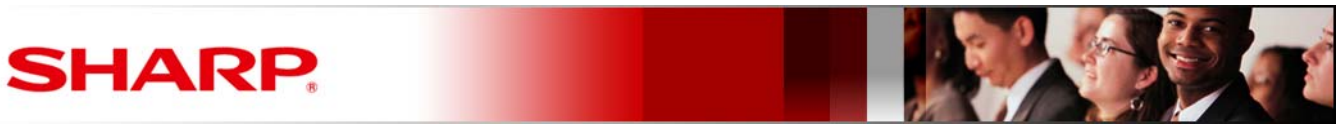
Software/Utility availability by MODEL	Description
SDW Back Office Software	**Compatible Models - ER-A410/420, ER-A450T, ER-A520/530. SDW** is an Advanced Communications Back Office PC Software for Sharp ECR and POS Systems that performs on-site and remote polling and programming as well as basic to advanced reporting and other automated tasks.
ER02FD.EXE	**02FD PC/POS Loader Utility Program** - Saving/Loading Programs for ER-A410/420, ER-A450T, ER-A520/530, UP-600/700, ER-A770, ER-A771, UP-3301, UP-3500
POSTool3.exe	**PC/POS IPL Utility Program** - Flashing ROMS on the ER-A520/530.
POSTool4.exe	**PC/POS IPL Utility Program** - Flashing ROMS on the ER-A410/420.
PC Link	**PC Link Setup Utility** - Easy Programming Utility for the ER-A410/420
Graphical Logo Utility	**ER-A410/420 via PC Link**
	ER-A450T Logo Converter Utility
	ER-A520/530 LOGO Downloader Utility

DOCUMENTATION - varies by model

1	Sharp Instruction, Service, Programming and Parts manuals and Procedures Guide are available on www.sharp-pos.com – Technical Manuals and Legacy Technical Manuals links.

DEMO TEMPLATES - varies by model

1	Demo templates are available on www.sharp-pos.com – Document/Download Library - Software link.



ER-A Model Program Reset and Master Reset Overview

PROGRAM RESET and MASTER RESET

The availability and procedure of the following Program and Master Reset operations vary by model. Please refer to the respective model Programming, Service manual, or Dealer Knowledge Book for procedures.

1. Program Reset	Program Reset (also known as a Service Reset) is used to re-initialize the program with out clearing any of the programming and for accessing SRV (Service) Mode programming. • A program reset unlocks the POS terminal when an operation lock up has occurred. • A program reset DOES NOT clear the program, sales totals or grand totals (GT). • If applicable, a program reset is mandatory after installing an RS232 peripheral device, an SSP, changing a System Preset or File/Memory Allocation Group.
2. Master Reset / Master Reset-1	Master Reset / Master Reset -1, also known as MRS-1, clears the entire available memory and restores the initial factory default values for the keyboard and PGM-mode programming.
3. Master Reset-2	Master Reset-2, also known as MRS-2, clears the entire available memory, allows free assignment of the ten-key pad, eliminates the Direct Department and PLU assignments, and restores the initial factory default values for all other PGM-Mode programming.

PROGRAM RESET and MASTER RESET by Model

Program Reset / SRV Loop Reset	Master Reset / Master Reset 1	Master Reset 2
ER-A242	ER-A242	
ER-A320	ER-A320	ER-A320
ER-A330	ER-A330	ER-A330
ER-A410	ER-A410	ER-A410
ER-A420	ER-A420	ER-A420
ER-A440	ER-A440	ER-A440
ER-A450T	ER-A450T	ER-A450T
ER-A520	ER-A520	ER-A520
ER-A530	ER-A530	ER-A530

INSTRUCTIONS FOR PROGRAM RESET and MASTER RESET

1	A master reset must be performed, after the unit is unboxed and prior to the start of programming.
2	After the execution of a Master Reset-1, ring a sale using the default keyboard to verify everything is working prior to programming.

DOCUMENTATION - varies by model

1	Sharp Instruction, Service, Programming and Parts manuals and Procedures Guide are available on www.sharp-pos.com – Technical Manuals and Legacy Technical Manuals links.

DEMO TEMPLATES - varies by model

1	Demo templates are available on www.sharp-pos.com – Document/Download Library - Software link.

ER-A Model Mode Switch, Keys and Job Codes Overview

Mode Switch, Keys and Job Codes Overview

The Sharp ER-A model programming consists of SRV (Service Mode) and/or PGM / PGM2 (Program Mode) job codes.

Access to the modes is controlled by the mode switch and mode keys.

Job codes tell the ECR (Electronic Cash Register) what programming function to perform. Each job code has bits that enable, disable, or define the settings for the respective job code.

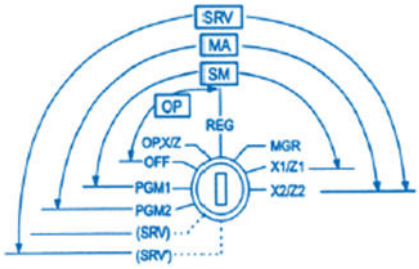
The available Mode Switch, supplied Mode Keys and Job Codes vary by model.

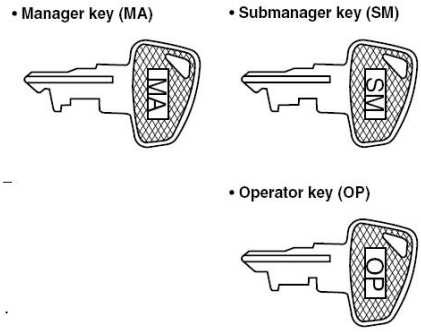
Mode Switch and Keys

The key can only be inserted or removed when the switch is in the “REG” or “OFF” position.

The following diagram illustrates the various modes and operative range of the keys supplied with the ECR. SRV and SRV’ modes are reserved for Authorized Sharp Dealers and Servicers and is only accessible using a key labeled SRV. This key is not supplied with the ECR and must be ordered via the National Parts Center (NPC). See your Sharp POS Support Directory for contact information.

The Mode Switch and supplied Mode Keys vary by model.





- **REG MODE**: This mode allows you to enter sales.
- **OPXZ MODE**: This mode allows servers to take X or Z reports of their sales information and can also be used for employee functions.
- **OFF MODE:** This mode locks all operations of the POS terminal. When you select this mode, the window will disappear. Touching any key turns the POS terminal ON.
- **PGM1 Mode**: This mode allows you to program those items that need to be changed often such as PLUs (plus, prices, dept association), %, Servers/Cashiers.
- **PGM / PGM2 Mode**: This mode allows you to program those items that do not require frequent changes such as date, time, departments, items, tax, servers/cashiers, terminal functions etc.

- **MGR MODE**: The manager can use this mode to make entries that may not be permitted by servers/cashiers such as voids and discounts.
- **X1/Z1 MODE**: **X1 Mode** is used to take various daily reading reports. **Z1 MODE** is used to take various daily resetting reports.
- **X2/Z2 MODE**: **X2 Mode** is used to take various weekly or monthly reading reports. **Z2 MODE** is used to take various weekly or monthly resetting reports.
- **SRV MODE**: (Also known as the 7 o'clock position) This mode allows access to SRV Mode programming. (Authorized Sharp Dealer or Servicers only)
- **SRV' MODE**: (Also known as the 6 o'clock position) This mode is used to perform a Program or Master Reset and access SRV Mode programming. (Authorized Sharp Dealer or Servicers only)

Sample Job Codes - varies by model

Description	ER-A410	ER-A420	ER-A450T	ER-A520	ER-A530
SRV Mode Job Codes					
System Preset	900	900	900	900	900
GT memory	942, 943, 969	942, 943, 969	942, 943, 969	942, 943, 969	942, 943, 969
Z Counter	930, 933, 934, 935, 936, 937, 939	930, 933, 934, 935, 936, 937, 939	930, 933, 934, 935, 936, 937, 939	930, 933, 934, 935, 936, 937, 939	930, 933, 934, 935, 936, 937, 939
Training	948	948		948	948
File Allocation	975	975	970	970	970
Free Key Assignment	950, 951	950, 951	950, 951	950, 951	950, 951
SSP	990	990	990	990	990
PGM2 Mode Job Codes					
PLU	1200, 1210, 1211, 1222, 2210, 2211, 2214, 2215, 2217, 2218, 2280,	1200, 1210, 1211, 1222, 2210, 2211, 2214, 2215, 2217, 2218, 2280,	1000, 1010, 1011, 1200, 1210, 1211, 1222, 2010, 2011, 2014, 2017, 2030, 2080, 2210, 2211, 2214, 2215, 2280	1200, 1210, 1211, 1222, 1331, 2210, 2211, 2214, 2215, 2216, 2217, 2218, 2244, 2258, 2280	1200, 1210, 1211, 1222, 1331, 2210, 2211, 2214, 2215, 2216, 2217, 2218, 2244, 2258, 2280
Link-PLU	2220	2220	2220	2020	2020
Set-PLU	2221	2221		2221	2221
EAN/UPC format	2025	2025	2025	2025	2025
Condiment				2222, 2223	2222, 2223
Promotion (Mix & match)	2225	2225	2020	2225	2225
Departments	1110, 2110, 2111, 2112, 2114, 2115, 2116, 2118, 2180	1110, 2110, 2111, 2112, 2114, 2115, 2116, 2118, 2180	1110, 2110, 2111, 2112, 2114, 2116, 2180,	1110, 2110, 2111, 2112, 2114, 2115, 2116, 2118, 2158, 2180	1110, 2110, 2111, 2112, 2114, 2115, 2116, 2118, 2158, 2180
Tax	2710, 2711	2710, 2711	2710, 2711	2710, 2711	2710, 2711
(%) Discount	1310, 2311, 2312	1310, 2311, 2312	1310, 2311, 2312, 2315	1310, 2310, 2315,	1310, 2310, 2315,
(-) Discount	1310, 2311, 2313	1310, 2311, 2313	1310, 2311, 2313, 2316	1310, 2311, 2313, 2316	1310, 2311, 2313, 2316
Server/Cashier	1500, 1514, 2510	1500, 1514, 2510	1500, 1514, 2510	1400, 1414, 2410, 2411, 2413	1400, 1414, 2410, 2411, 2413
Direct Key Assignment	2119, 2219, 2900	2119, 2219, 2900	2119, 2219, 2900	2119, 2219, 2900	2119, 2219, 2900

MODEL	ER-A410	ER-A420	ER-A450T	ER-A520	ER-A530
PGM2 Mode Job Codes					
Remote Printer	2692, 3653, 3654, 3655 3656	2692, 3653, 3654, 3655 3656		2692, 3653, 3654, 3655, 3656	2692, 3653, 3654, 3655, 3656
Media keys	2320, 2326, 2328,	2320, 2326, 2328,	2320, 2326, 2328,	2320, 2326, 2328, 2330,	2320, 2326, 2328, 2330,
HALO	2312, 2322, 2321	2312, 2322, 2321	2312, 2322, 2321	2312, 2321, 2322	2312, 2321, 2322
Reports (0 Skip)	2616	2616	2616	2616	2616
Secrets codes	2630, 2631, 2632	2630, 2631, 2632	944, 2630, 2631, 2632	944, 2630, 2631, 2632	944, 2630, 2631, 2632
Foreign currency	2334	2334		2334	2334
Tare table	2618	2618	2618	2618	2618
Stacked report	2620	2620	2620	2620	2620
Barcode reader	2691	2691	2691	2691	2691
Optional	2615, 2616, 2617, 2619, 2689, 2715, 2810	2615, 2616, 2617, 2619, 2689, 2715, 2810	2615, 2616, 2617, 2619, 2689, 2715, 2810,	2029, 2615, 2616, 2617, 2619, 2689, 2715, 2810	2029, 2615, 2616, 2617, 2619, 2689, 2715, 2810
Logo text	2614	2614	2614	2614	2614
Transaction text	2314	2314	2314	2314	2314
VP text	2642	2642	2642	2642	2642
Dept Group text				2350	2350
PLU group text				2351	2351
Message text (Errors)	2641	2641		2641	2641
Send Date & time	2610, 2611	2610, 2611	2610, 2611	2610, 2611	2610, 2611
Stock quantity, Add	1220	1220		1220	1220
Stock quantity, subtract	1221	1221		1221	1221
Consecutive Bill number	2613	2613	2613	2636	2636
Device assign	2690	2690	2690	2690	2690
Internal Printer PGM	2990	2990	2990	2990	2990
Loading Dynamic UPC to main UPC file				2099	2099
CAT (Credit Card Authorization)	7110, 7112, 7113, 7114, 7115	7110, 7112, 7113, 7114, 7115		7110, 7111, 7112, 7113, 7114, 7115, 7116	7110, 7111, 7112, 7113, 7114, 7115, 7116
Initialize Data Tran modem	7117	7117	7117	7117	7117

Important! As the above chart demonstrates although the availability of a programming option may vary between the ER-A models, with the exception of the ER-A242, the SRV and PGM2 Jobs codes are consistent throughout the ER-A product line.

Example:

1. SRV Mode job code 950 is used for free key programming on all ER-A models where free key assignment is available.
2. With the exception of the ER-A242, PGM2 Mode job code 1200 is used to associate a PLU to a department on all ER-A models.

NOTE:

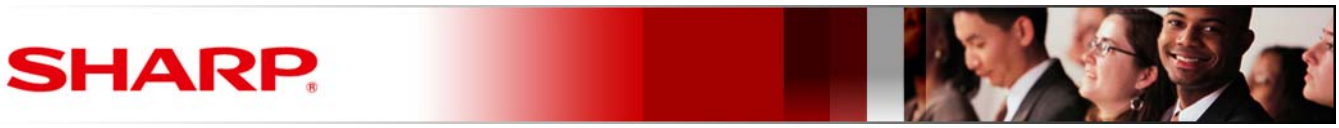
1. SRV Mode programming is not available on the ER-A242.
2. The ER-A242 uses a single digit job code or keystroke sequence/procedure for PGM Mode.

DOCUMENTATION - varies by model

1	Sharp Instruction, Service, Programming and Parts manuals and Procedures Guide are available on www.sharp-pos.com – Technical Manuals and Legacy Technical Manuals links.

DEMO TEMPLATES - varies by model

1	Demo templates are available on www.sharp-pos.com – Document/Download Library - Software link.



ER-A Model SRV (Service) Mode Programming Overview

SRV (Service) Mode - varies by model.

SRV-mode programming consists of service programming job codes, which define the system capabilities.

The program settings may be printed on the Receipt / Journal printer.

ER-A Model SRV Mode Job Codes	
Job Codes	**Description**
1. READING **- 900, 950, 951 971, 990 Job Codes**	Print System Preset, Free Key Layout, File Allocation, and SSP settings on the Receipt / Journal printer.
2. SYSTEM PRESETS **– 900 Job Codes**	Program System Presets, Z Report Counters, GTs, Secret Codes, Training Cashier Title and Code, Language, and Currency Symbol. System Presets are used to define basic system settings and controls such as the cashier number entry system, compulsory closing of the cash drawer prior to operation, date format, tax and grand total printing on reports and many others.
3. FILE ALLOCATION **– 975 or 970 Job Codes**	File Allocation is used to distribute the memory in a Sharp ECR where the memory is allocable. This allows 'Files' to be different sizes depending on need and for better use of the available memory.
4. FREE KEY ASSIGNMENT **– 950 & 951 Job Codes**	Free Key programming allows you to easily place function keys other than departments and PLUs onto a keyboard position based on your customer's requirements
5. SSP – 990 Job Codes	A "Patch" is a service function that allows the program in a ROM to be modified without replacing the chip. It is properly called a SSP. The first step in a patch is the number of the patch. Leading zeros are input as part of the patch step. Usually, when several patches are out for a unit, then a new version ROM will be made available. This new ROM will incorporate the previous patches issued.
6. TRAINING	When training a new employee, sales may be rung up without affecting sales totals when you place the ECR into Training mode via signing on with the training cashier. Training operations are valid only in REG, MGR, and VOID mode. The training cashier memory is updated in the training mode. Other memories are not updated.

SRV Mode Programming by Model

System Presets 900 Job Codes	Free Key 950 & 951 Job Codes	File Allocation 975 or 970 Job Codes	SSP 990 Job Codes	Training*
ER-A320	ER-A320			
ER-A330	ER-A330			
ER-A410	ER-A410	ER-A410	ER-A410	ER-A410
ER-A420	ER-A420	ER-A420	ER-A420	ER-A420
ER-A440	ER-A440	ER-A440	ER-A440	
ER-A450T	ER-A450T	ER-A450T	ER-A450T	
ER-A520	ER-A520	ER-A520	ER-A520	ER-A520
ER-A530	ER-A530	ER-A530	ER-A530	ER-A530

NOTES:

1. SRV Mode programming is not available on the ER-A242.
2. ER-A242, ER-A320, ER-A330, ER-A440 and ER-A450T – Training Enabled/Disabled in PGM Mode.

INSTRUCTIONS FOR SRV MODE PROGRAMMING

1	Program System Preset 900 jobs.
2	Assign Free (Function) Keys job 950.
3	If required, assign key numbers to the remaining keyboard positions with job 951.
4	Allocated Memory File Group sizes with File Allocation job 975 or 971.
5	If required, complete all other related SRV mode programming (ex. 990).
6	Perform a Program Reset.

DOCUMENTATION - varies by model

1	Sharp Instruction, Service, Programming and Parts manuals and Procedures Guide are available on www.sharp-pos.com – Technical Manuals and Legacy Technical Manuals links.

DEMO TEMPLATES - varies by model

1	Demo templates are available on www.sharp-pos.com – Document/Download Library - Software link.

ER-A Models SRV (Service) Mode - System Presets Overview

SYSTEM PRESETS

SRV Mode System Presets also known as 900 job codes are used to define system settings and controls such as the cashier number entry system, compulsory closing of the cash drawer prior to operation, date format, tax and grand total printing on reports and many others.

Each System Presets controls a specific group of settings, programmed as a set of 4 bits (A B C D). Various setting may be enabled, disabled or defined by entering a predetermined value or the sum of the predetermined value for the respective bit.

The program settings may be printed on the Receipt / Journal printer.

System Presets Availability by Model

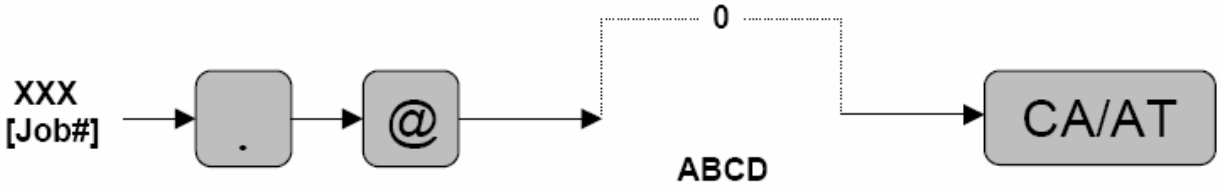
System Presets (900 Job codes)	Y/N
ER-A242	N
ER-A320	Y
ER-A330	Y
ER-A410	Y
ER-A420	Y
ER-A440	Y
ER-A450T	Y
ER-A520	Y
ER-A530	Y

NOTE: System Presets are not available on the ER-A242.

System Preset Programming

For the ER-A models, the following key operation is required to change a system preset settings.

From SRV Mode:



Where A, B, C, and D are the bits that need to be set for each System Preset programming job.

Important! As previously mentioned, although the availability of a programming option may vary between the ER-A models, with the exception of the ER-A242 the SRV and PGM2 Jobs codes are consistent throughout the ER-A product line. This especially holds true for System Presets.

EXAMPLE: While the settings for a specific System Preset will vary by ER-A model, generally the System Preset will control the same settings throughout the ER-A product line.

Please note the actual bit (ABCD) values to enable, disable or define the settings will vary greatly by ER-A Model.

Example System Preset "General" Description of Options

System Preset	"General" Description of Options – Varies by Model
901	Tax System & Decimal Tab Setting
902	NOT USED
903	Scale, Food Stamp System
904	Print Date / Consecutive Number
905	Tax 4 Subtotal print on X/Z, Tax print when subtotal = 0, Canadian Tax System
906	Dept., and PLU code printing, Bottle Return and Hash Dept., UPC Refunding, Split Price and Multiplication System (Split Price, Fast Food, Multiplication, Successive Multiplication), Print Consecutive number, Fractional Quantity (3 decimal places)
907	Minus Dept., UPC code printing
908	GT (Grand Total) Report printing options, and Void-mode nets Hourly report
909	Training mode GT, Void mode totals, and PLU/UPC data Report Printing
910	Server/Cashier System options
911	Fractional Quantity System, UPC check digit, and Header format
912	Date/Time Format, Time Clock System, Copy Receipt Format, Receipt Footer Format and Header/Footer/Logo Format
913	Validation Options, SBTL print, Error-Tone System, Keyboard Buffering, and Compulsory. drawer closing
914	No sale options, Tax Delete Function, Void Mode, Manual Tax, Check Cashing, and Non-add#
915	Fractional Treatment, SBTL (-) and (%) *Dollar symbol, Paid Out, RA., and Coupons/Discounts*
916	2 line print, Charge Media Finalization when $0.00, Compulsory Subtotal, Coupon, Net Sales SBTL and Check-Change Report print
917	Tax 1/2/3 and Manual Tax Report Print Options
918	Combo Meal Options, Direct Tender for 2nd and subsequent tender, $0.00 PLU print in Red, Fractional Entries allowed for non-scale Dept & PLU, and Kitchen Printer output group like items and/or Double-Sized print, Tip Paid include cash and Tip Paid print options.
919	PBLU/GLU/PB Check file system selections, Foreign Currency Format
920	Enabling Back-up Master, Inline options and Terminal designation
921	NOT USED
922	Convert UPC – E to UPC-A (scanning systems only)
923	T-log polling options
924	NOT USED
925	NOT USED
926	Voids print on KP, Program Reset in PGM2 Mode, Refund print on KP,
927	NOT USED
928	Slip/Bill Printer options
929	KP Print Format for Media Keys and Tax Status of PLU/UPC which is set to NON-TAX by individual programming or by associated dept.
980	PLU Stock , Hash Dept affect Hourly, RCPT key is separate from PO key, PLU price 2
930-939	Z Report Counter
942, 943, 969	GT2, GT3, Training GT
944	Secret Code
948, 949	Training Cashier, Training Mode Title
985, 986	Foreign Currency Symbol, Domestic Currency Symbol
987	Language Setting for Text (English, French or Spanish)
989	Reset all Counters and Totalizers

Example System Preset Programming

Issue: How do I determine the Server/Cashier Sign-on System?

The Sharp ER-A Series offers two (2) options determined by System Preset 910B for Server/Cashier Sign-on System.

- **Stay-Down:** Server/Cashier remains signed on to the ECR until they manually sign off with the depression of the SERV# / CASH# key.
- **Auto Sign-Off:** Server/Cashier is signed off after finalizing the transaction by selecting the Service, Final, or payment key.

ER-A410/420 Example System Preset 910 options

System Preset: 910

Bit	Description		Data	MRS Defaults A520	MRS Defaults A530
A	----		---	0	0
	Overlapped Cashier Function	Yes/No	1/0		
	----		---		
	Enter SUM of Selection ----^				
B	Cashier Code Display	Appear/Hidden	2/0	2	2
	Auto Sign Off at the End of the Transaction	Yes (Everytime) / No After Cashier Z1 Only	1/0		
	----		---		
	Enter SUM of Selection ----^				
C	----		---	0	0
	Fixed = 0		---		
	----		---		
	Enter SUM of Selection ----^				
D	(Fixed): Server/Cashier system is code entry		4	4	4
	----		---		
	----		---		
	Enter SUM of Selection ----^				

ER-A440 Example System Preset 910 options

[JOB#910] MRS=0004

#910-A: Not used (Fixed at "0")

#910-B: 1. Cashier # on display

2. Auto cashier sign off at the end of each transaction

1. Cashier # on display	2. Auto cashier sign off at the end of each transaction	910-B	
Hidden	No	0	
	Yes	1	
Appear	No	2	★
	Yes	3	

#910-C, D: Not used (Fixed at "04")

System Presets 910	MRS* Default (ABCD)	MRS* Server/Cashier System
ER-A242	N/A	N/A
ER-A320	0000	N/A
ER-A330	0100	Auto Sign-Off
ER-A410	0204	Stay-Down
ER-A420	0204	Stay-Down
ER-A440	0004	Stay-Down
ER-A450T	0204	Stay-Down
ER-A520	0204	Stay-Down
ER-A530	0204	Stay-Down

***MRS = Master Reset**

INSTRUCTIONS FOR PROGRAMMING SYSTEM PRESETS

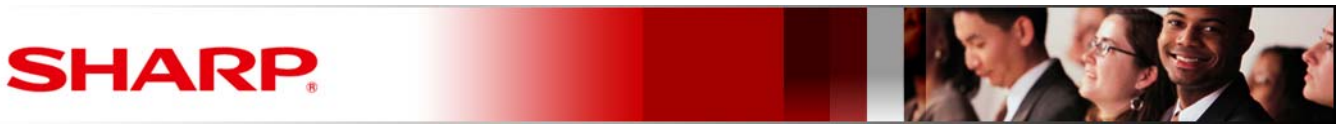
1	When making entries for System Presets, leading zeros are not required. Please note trailing zeros are required and the order of entry is from the left-most digit (A) to the right-most digit (D).
2	When changing the value of a System Preset, the values of bits A, B, C, D must be entered even if only one of the bits is modified.
3	Upon completion of System Preset programming and prior to returning to REG Mode or other MODE, a Program Reset is required/mandatory.
4	When making changes to multiple System Presets, complete all System Preset programming and then perform a Program Reset.

DOCUMENTATION – varies by model

1	Sharp POS Instruction, Service, Programming and Parts manuals and Procedures Guide are available on www.sharp-pos.com - Technical Manuals link.

DEMO TEMPLATES - varies by model

1	Demo templates are available on www.sharp-pos.com – Document/Download Library - Software link.



ER-A Model SRV (Service) Mode – Free Key Overview

FREE KEY Overview

SRV Mode Free Key programming, also known as 950 programming, allows you to easily place function keys other than departments and PLUs onto a keyboard position based on your customer's requirements. Function Keys are keys that perform actions, such as cash, check, charge, void, RA/PO, and auto keys.

NOTE: For the ER-A320 and ER-A330, 950 programming is used to assign departments to the physical keyboard. Optional key top kits may be purchase to access the newly assigned departments. PLUs **can not** be placed directly on the keyboard. The PLU/SUB function key is used to register PLUs.

SRV Mode Key Number Assignment programming, also known as 951 programming allows you to assign a key number to a fixed key position for departments, and direct PLU keys. Please see the chart below for availability.

NOTE: Normally, there is no need to change the 951 programming from the MRS default settings which are shown in the respective Sharp ER-A model Instruction Manual/Book.

Please see the respective Sharp ER-A model Programming Manuals and Dealer Knowledge Books for the Function Key List and Key Position charts.

FREE KEY Availability by Model

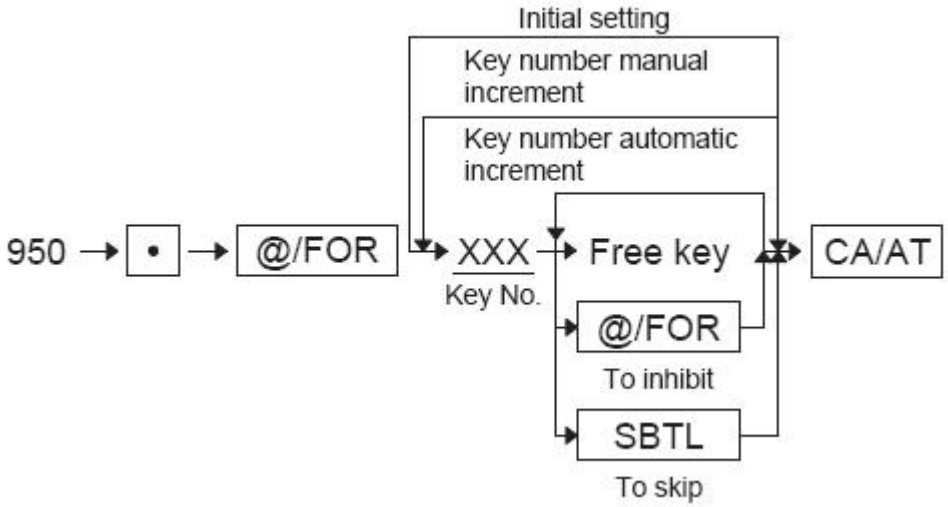
Free Key	Job Code 950 Y/N	Job Code 951 Y/N
ER-A242	N	N
ER-A320	Y	N
ER-A330	Y	N
ER-A410	Y	Y
ER-A420	Y	Y
ER-A440	Y	Y
ER-A450T	Y	Y
ER-A520	Y	Y
ER-A530	Y	Y

NOTE: Free Key assignment and Key No. assignment are not available on the ER-A242.

ER-A320 and ER-A330 FREE KEY Programming

For the ER-A320 and ER-A330 models, the following key operation is used to assign function keys to the keyboard:

From SRV Mode:



NOTE: If the "fixed" function keys are accidentally placed in the wrong position, it may become necessary to restore the MRS default keyboard in order to continue. "Fixed" function keys are those keys required for programming, such as 00-9, Decimal Point, CL, @/FOR, SBTL, CA/AT keys.

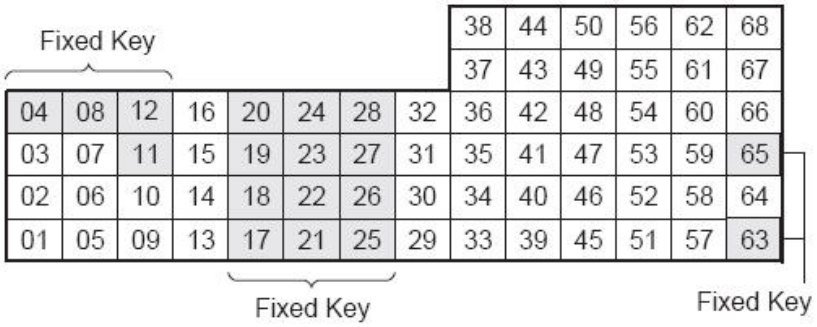
Example ER-A320 Function Key List (Not all Function Keys are shown):

Key No.	Key name
1	0 key (Fixed key)
2	1 key (Fixed key)
3	2 key (Fixed key)
4	3 key (Fixed key)
5	4 key (Fixed key)
6	5 key (Fixed key)
7	6 key (Fixed key)
8	7 key (Fixed key)
9	8 key (Fixed key)
10	9 key (Fixed key) ,
11	00 key (Fixed key)
12	Decimal point (Fixed key)
13	CL(Fixed key)
14	@/FOR (Fixed key)
15	SBTL (Fixed key)
16	CA/AT (Fixed key)
17	CASH2
18	MDSE SBTL
19	PLU/SUB
20	TAX1 SHIFT

34	AUTO
35	AUTO2
36	(Reserved)
37	(Reserved)
38	CHECK
39	CHARGE1
40	CHARGE2
41	CONV1
42	CONV2
43	CONV3
44	CONV4
45	(Reserved)
46	RA
47	PO
48	(Reserved)
49	DEPT#
50	NS
51	ESCP
101	DEPT.1
102	DEPT.2
103	DEPT.3
104	DEPT.4

ER-A320

ER-A320 KEY POSITION

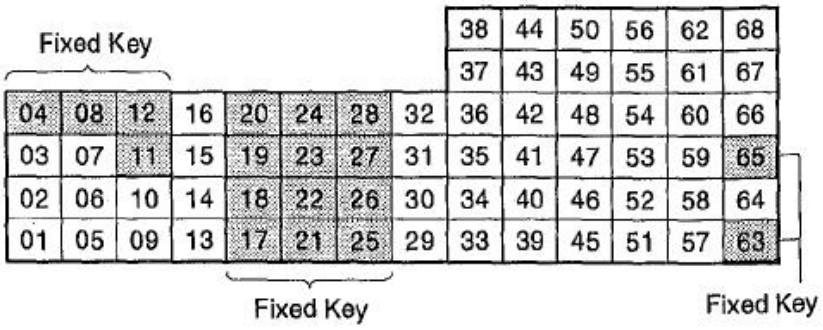


Key Top Kits

Model	Description
ERA320	Raised Keys/ 2 Sta. Drum printer
Accessories	**Description**
ER11DK7G	1x1 Dummy Key kit – 30 pieces (Grey)
ER51DK7G	5x1 Dummy Key kit – 10 pieces (Grey)
ER11KT7	1x1 Key Expansion kit – 30 pieces
ER12KT7	1x2 Key Expansion kit – 30 pieces
ER22KT7	2x2 Key Expansion kit – 10 pieces

ER-A330

ER-A310/A330 KEY POSITION



Key Top Kits

Model	Description
ERA330	Raised Keys/ 2 Sta. Drum printer
Accessories	**Description**
ER11DK7	1x1 Dummy Key kit – 30 pieces
ER51DK7	5x1 Dummy Key kit – 10 pieces
ER11KT7	1x1 Key Expansion kit – 30 pieces
ER12KT7	1x2 Key Expansion kit – 30 pieces
ER22KT7	2x2 Key Expansion kit – 10 pieces

ER-A410/420, 440, 450T and 520/530 FREE KEY, Dept & PLU Programming

Programming the keyboard for the ER-A410/420, 440, 450T and 520/530 involve 4 primary job codes:

1. **SRV Mode 950**: Function key positioning
2. **SRV Mode 951**: Key No. assignment for Depts. and PLUs.
3. **PGM2 2119**: Department location on the keyboard.
4. **PGM2 2219**: PLU location on the keyboard.

Model	SRV 950 Y/N	SRV 951 Y/N	PGM2 2119 Y/N	PGM2 2119 Y/N
ER-A242	N	N	N	N
ER-A320	Y	N	N	N
ER-A330	Y	N	N	N
ER-A410	Y	Y	Y	Y
ER-A420	Y	Y	Y	Y
ER-A440	Y	Y	Y	Y
ER-A450T	Y	Y	Y	Y
ER-A520	Y	Y	Y	Y
ER-A530	Y	Y	Y	Y

Recommended Programming Sequence

1. **SRV Mode 950:** Function key positioning.
2. **SRV Mode 951:** Key No. assignment for Depts. and PLUs.
3. **PGM2 Mode:** Program the Department or PLU. (Minimum requirements – Departments - Job code 2110 and PLU – Job code 1200).

NOTE:

1. If the department or PLU has not been created (does not exist in the ECR), PGM2 Mode 2119/2219 programming is prohibited.
2. At MRS, only a certain number of departments and PLUs exist/used, regardless of the amount that is allocated/used.

EXAMPLE: 2000 PLU/UPC records are allocated, however, at MRS only 20 are used. Items 21-2000 will not be available for PGM2 Mode 2119/2219 programming until Step 3 has been performed.

Group Number or File Table No. (Depends on Model*)	Description	(MRS) No. of Records	(MRS) No. of Used Records
4	PLU/UPC	2000	20

4. **PGM2 2119:** Department location on the keyboard.
5. **PGM2 2219:** PLU location on the keyboard.

ER-A410/420, 440, 450T and 520/530 SRV Mode 950 & 951 Programming

The ER-A410/420, 440, 450T and 520/530 SRV Mode 950 & 951 programming is based on the Function Key List and Key Position chart found in the respective model Programming Manual and/or Dealer Knowledge Books. The key position numbers are fixed and cannot be changed.

Color-coded keyboard from the ER-A530:

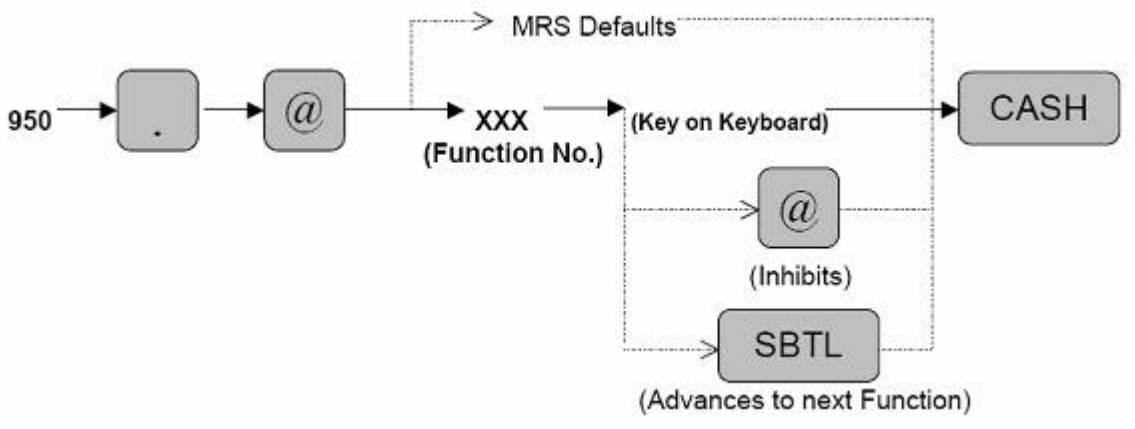
950 Function key postions (Function keys)
951 Fixed Key Positions (Lower Left corner)
951 Programmable Key No. (Upper Right corner) - used for 2119, 2219 programming

↑ Receipt	↑ Journal	91 25	92 34	93 43	94 52	95 61	96 70	97 79	98 88	99 97	100 106	L1 115	L2 124	L3 133	AUTO 1 142
79 8	80 16	81 24	82 33	83 42	84 51	85 60	86 69	87 78	88 87	89 96	90 105	RCPT 114	% 123	(-) 132	AUTO 2 141
67 7	68 15	69 23	70 32	71 41	72 50	73 59	74 68	75 77	76 86	77 95	78 104	VOID 113	INQ 122	RP SEND 131	AUTO 3 140
56 6	57 14	58 22	59 31	60 40	61 49	62 58	63 67	64 76	65 85	66 94	SERV 103	RFND 112	PLU/ SUB 121	NC 130	CONV 139
45 5	46 13	47 21	48 30	49 39	50 48	51 57	52 66	53 75	54 84	55 93	@/ FOR 102	• 111	CL 120	Table 129	CH1 138
34 4	35 12	36 20	37 29	38 38	39 47	40 56	41 65	42 74	43 83	44 92	7 101	8 110	9 119	Service 128	CH2 137
23 3	24 11	25 19	26 28	27 37	28 46	29 55	30 64	31 73	32 82	33 91	4 100	5 109	6 118	Final 127	CH3 136
12 2	13 10	14 18	15 27	16 36	17 45	18 54	19 63	20 72	21 81	22 90	1 99	2 108	3 117	MDSE. SBTL 126	CHK 135
1 1	2 9	3 17	4 26	5 35	6 44	7 53	8 62	9 71	10 80	11 89	0 89	00 107	000 116	SBTL 125	CA/AT 134

NOTE: The **Key Position** numbers are different from the **Key No.** numbers.

The following key operation is used to assign SRV Mode 950 Function Keys to the keyboard.

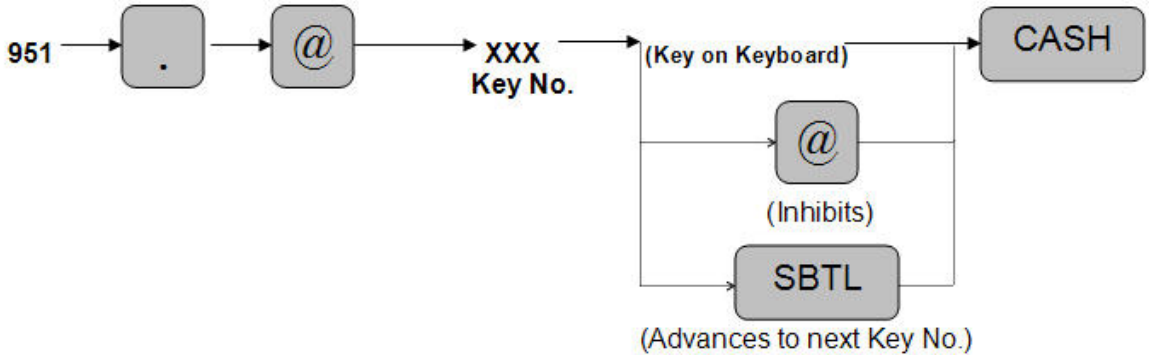
From SRV Mode:



The following key operation is used to program SRV Mode 951 Key No. Assignment:

Perform the following to assign a Key No. to a Key Position that will be used as a Department or PLU using the respective model Programming Manual or Dealer Knowledge Book Key Position chart.

From SRV Mode:



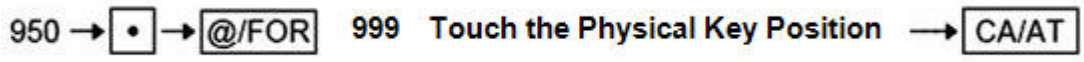
NOTE:

1. The Key No. number will automatically increase by one from the original number when you touch the key on the keyboard so you may program your Key No.(s) without having to use the complete string.
2. When the number increases just touch the next key on the keyboard where you wish to assign the new number, press [CA/AT] when finished with all Key No. assignments.

To Inhibit or remove a Function Key

If you wish to assign a PLU/Dept. to a key location that is currently a function key, you must inhibit the key first to make it available for reassignment.

From SRV Mode:



NOTE: If the "fixed" function keys are accidentally placed in the wrong position, it may become necessary to restore the MRS default keyboard in order to continue. "Fixed" function keys are those keys required for programming, such as 00-9, Decimal Point, CL, @/FOR, SBTL, CA/AT keys.

To return the keyboard to the MRS default keyboard

If the function keys are accidentally placed in the wrong position, it may be necessary to restore the MRS default keyboard in order to continue.

From SRV Mode:

950 → [•] → [@/FOR] → [CA/AT]

NOTE:

1. Only the keyboard layout is affected; PGM2 Mode data is retained.
2. Depending on the model it may require that you perform a master reset.

ER-A410/420, 440, 450T and 520/530 PGM2 Mode 2119/2219 Programming

Program the Department or PLU

Perform the following to assign the Key Position to a Department or PLU:

Please ensure the Department and/or PLU exist in the ECR. The minimum programming requirements are Department, Job code 2110 and PLU – Job code 1200.

NOTE:

1. If the department or PLU has not been created (does not exist in the ECR), PGM2 Mode 2119/2219 programming is prohibited.
2. At MRS, only a certain number of departments and PLUs exist/used, regardless of the amount that is allocated/used.

EXAMPLE: 2000 PLU/UPC records are allocated, however, at MRS only 20 are used. Items 21-2000 will not be available for PGM2 Mode 2119/2219 programming until Step 3 has been performed.

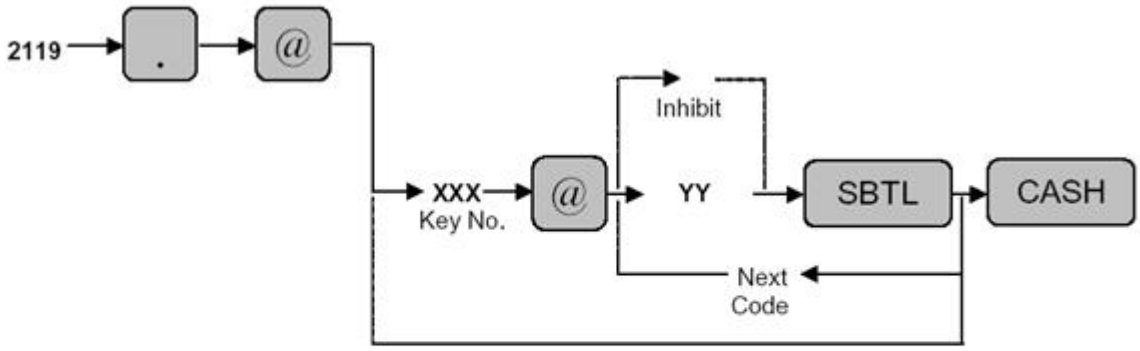
Group Number or File Table No. (Depends on Model*)	Description	(MRS) No. of Records	(MRS) No. of Used Records
4	PLU/UPC	2000	20

4. PGM2 Job Code 2119 – Department location on the keyboard

Departments can be located on a key that has a defined *Key No.* and is not occupied by a function key.

The following key operation is used to assign a department to a physical key position.

From PGM2 Mode



XXX : Key No.
YY : Dept. Code 01-99

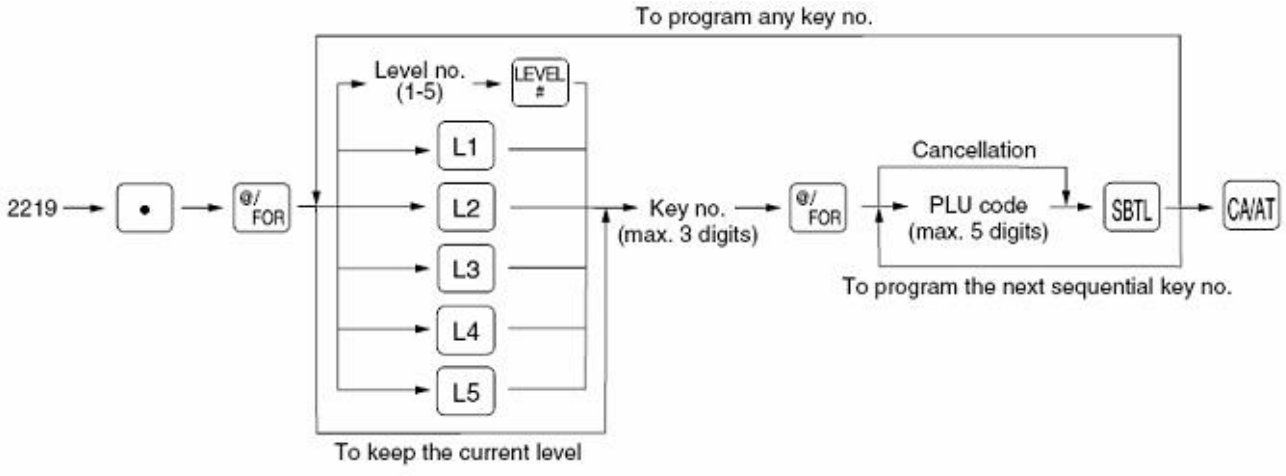
NOTE: The Key No. which has been previously programmed in SRV Job#951

Example: Assigning Dept 8 to Key No. 79: 2119 [@/FOR] 79[@/FOR] 8 [SBTL] [CA/AT]

5. PGM2 Job Code 2219 – PLU location on the keyboard

PLUs can be located on a key that has a defined *Key No.* and is not occupied by a function key.

From PGM2 Mode



You can assign PLU codes to fixed keys in each PLU level and use those keys as direct PLU key. For assigning a PLU level, press the [L1], [L2], [L3], [L4], or [L5] key or enter level number and press the [LEVEL#] key.

For example, if you want to assign PLU level 1 and key no. 1 to a PLU code, press the [L1] key and enter 1 before entering the PLU code.

NOTE: PLU codes must have been already defined.
The Key No. has been previously programmed in SRV Job#951.

EXAMPLE: Assigning PLU 7 to Key No. 67, 2219 [@/FOR] 67 [@/FOR] 7 [SBTL] [CA/AT]

FREE KEY Reading

You can determine where keys are located with the following three (3) reports. These reports may be printed on the Receipt/Journal printer. Please see the respective Sharp ER-A model Programming Manuals and Dealer Knowledge Books for procedures and sample readings.

SRV Mode Reports:

1. **950**: Displays the Function keys and the location based on the Key Position chart.
2. **951**: Displays the Key No. correlation to the Key Position chart. (e.g.: the Left and Center number are the Key No. while the Right is the Key Position).

PGM2 Mode Reports:

1. **2119** – Displays Key No. and Department and/or PLU assignment. (e.g. the Left column shows the Key No. while the Right column shows the Department or PLU).

ER-A520/530 SRV Mode 950 Reading

Key operation

950 → [@/FOR] → [CA/AT]

SHARP
PRESENTS THE
ER-A520
SHARP
IS
THE BEST

01/06/2000 9:01PM 0001 — Date/Time/Cashier code
000000#0010 — Machine No./CC-No./Cashier name
[ ] — Cashier code/Cashier name
#950 — Job code

			Key No./Key text/Location No.
001	0 KEY	085	
002	1 KEY	086	
003	2 KEY	093	
004	3 KEY	100	
005	4 KEY	087	
006	5 KEY	094	
007	6 KEY	101	
008	7 KEY	088	
009	8 KEY	095	
010	9 KEY	102	
011	00 KEY	092	
012	000KEY	---	
013	. KEY	096	
014	CLEAR	103	
015	@/FOR	089	
016	SBTL	106	
017	CA/AT	113	
018	MDS ST	099	
019	TRY ST	---	
020	#/TM	097	
021	NS	---	
022	PLU/SB	---	
023	RF SAL	---	
024	L1	091	
025	L2	098	
026	L3	105	
027	P.SFT	090	
028	TAX1SF	115	
029	TAX2SF	---	
030	TAX3SF	---	
031	TAX4SF	---	
032	FS SFT	---	
033	PRINT	---	
034	SLIP	---	

ER-A520/530 SRV Mode 951 Reading

Key operation

951 → [@/FOR] → [CA/AT]

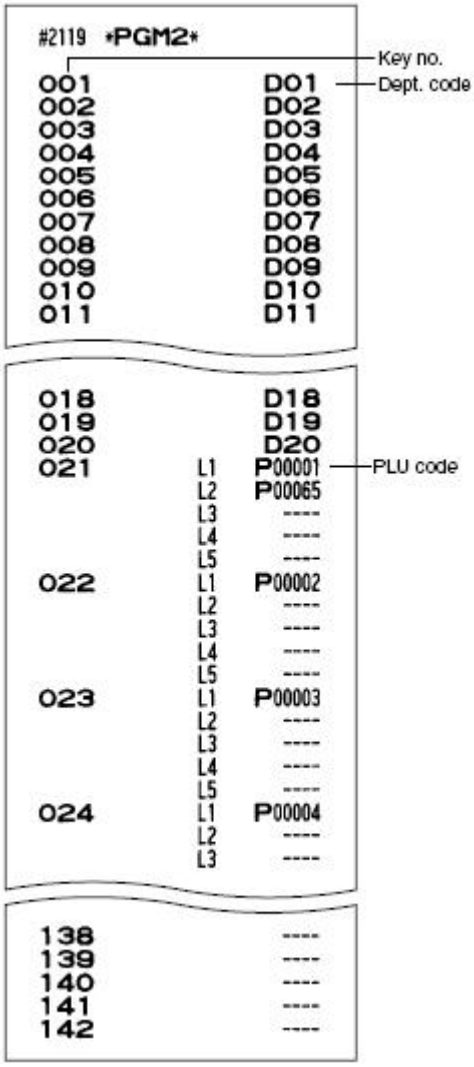
SHARP
PRESENTS THE
ER-A520
SHARP
IS
THE BEST

01/06/2000 9:02PM 0001 — Date/Time/Cashier code
000000#0011 — Machine No./CC-No./Cashier name
[ ] — Cashier code/Cashier name
#951 — Job code

			Key No./Key label/Location No.
001	001	---	
002	002	---	
003	003	---	
004	004	---	
005	005	---	
006	006	---	
007	007	---	
008	008	---	
009	009	---	
010	010	---	
011	011	---	
012	012	---	
013	013	---	
014	014	---	
015	015	---	
016	016	---	
017	017	---	
018	018	---	
019	019	---	
020	020	---	
021	021	001	
022	022	008	
023	023	015	
024	024	022	
025	025	029	
026	026	036	
027	027	043	
028	028	050	
029	029	057	
030	030	064	
031	031	071	
032	032	078	
033	033	002	
034	034	009	

2119

2119 → @/FOR → CA/AT



INSTRUCTIONS FOR PROGRAMMING FREE KEY

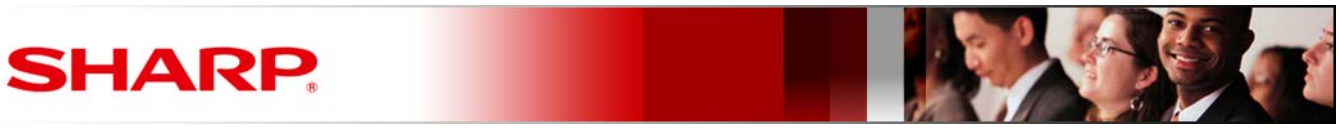
1	Typically, a function key must physically exist on the keyboard in order to update and report the associated sales total(s).
2	A function key must physically exist on the keyboard before any associated PGM/PGM1/PGM2 mode programming can be performed.
3	You may place any function key in multiple locations on the keyboard.
4	If you wish to assign a PLU/Dept. to a key location that is currently assigned a function key, you must inhibit the key first to make it available for reassignment.
5	PGM2 Mode Direct Key (2119 / 2219) programming allows you to link a PLU or DEPT to a key position on the **keyboard only** for direct registration based on the end user's requirements.

DOCUMENTATION –varies by model

1	Sharp POS Instruction, Service, Programming and Parts manuals and Procedures Guide are available on www.sharp-pos.com - Technical Manuals link.

DEMO TEMPLATES - varies by model

1	Demo templates are available on www.sharp-pos.com – Document/Download Library - Software link.



ER-A Model SRV (Service) Mode – File Allocation Overview

FILE ALLOCATION Overview

SRV Mode File Allocation, also known as memory file allocation and 970 programming, is used to distribute the memory in a Sharp ECR where the memory is allocable. This allows 'Files' to be different sizes depending on need and for better use of the available memory.

The concept of file allocation is similar to partitioning a hard disk drive. Instead of disk space, you are working with areas of memory. File allocation allows for dividing and dedicating memory space for the files to store its data.

Available memory maybe expanded with the addition of an optional memory expansion chip or board.

File Allocation Availability by Model

File Allocation (975 or 970 Job Codes)	Y/N	SRV Mode Job Code
ER-A242	N	n/a
ER-A320	N	n/a
ER-A330	N	n/a
ER-A410	Y	975
ER-A420	Y	975
ER-A440	Y	970
ER-A450T	Y	970
ER-A520	Y	970
ER-A530	Y	970

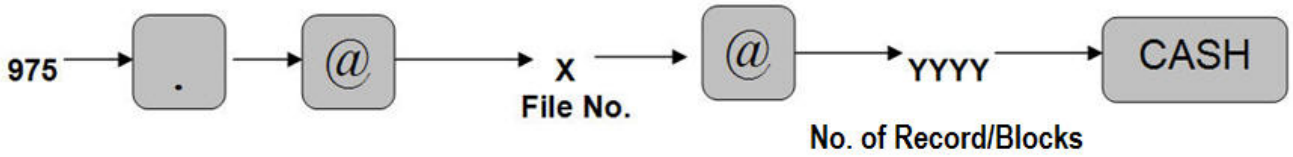
Optional Memory Expansion by Model

Model	Y/N	Optional Memory Expansion	Comments
ER-A242	N	n/a	n/a
ER-A320	N	n/a	n/a
ER-A330	N	n/a	n/a
ER-A410	N	n/a	n/a
ER-A420	N	n/a	n/a
ER-A440	Y	ER-03RA (128K RAM Chip)	Please order Service Part No. VHI62LV4007-1
ER-A450T	Y	n/a	n/a
ER-A520	Y	UPS02MB (2MB Board)	Sales Accessory
ER-A530	Y	UPS02MB (2MB Board)	Sales Accessory

ER-A410/420 File Allocation Programming

For the ER-A410/420 models, the following key operation is used to program file allocation:

From SRV Mode:



X: see the chart below
YYYY: see the chart below
MRS: see the chart below

NOTE:

1.The maximum number for "YYYY" cannot be exceeded.

2.The codes indicated are for PGM and REG mode operations.

FILE NAME	X	YYYY	Codes	MRS DEFAULTS	
				ERA410	ERA420
Departments	**1**	1-99	2-digits	20	10
PLU/UPC	**2**	0-1500	6-digits	500	500
PBLU	**3**	0-999	4-digits	50	0
Cashier	**4**	1-20	2-digits	20	20
Number of Overlapped Cashier	**5**	0: 0 NOTE: Same as the number of cashiers [**} allocated	2-digits	0	0
KP Buffer	**6**	0 = Erase 1 = Create Same as Reg Buffer	n/a	0	0

ER-A440, 450T, 520 & 530 File Allocation Overview

File allocation programming for the ER-A440, 450T, 520 and 530 uses **File Groups** to reserve areas of memory for data storage.

During file allocation, file groups work much like a batch file or command file does in an operating system or software program. **A single File Group may reserve areas of memory for a single file table or multiple dependent or related file tables.**

Programming by "Group" allows certain portions of some files (such as text length for Departments and PLUs) to be changed without affecting other programmed areas of the function.

Depending on the File Group Type, the file allocation requirements will vary.

Please see the respective Sharp ER-A model Programming Manuals and Dealer Knowledge Books for the File Group No, name, type, and table numbers.

File Allocation Terminology

The following terminology is used in File Allocation.

- **Group No.**: (Also known as File Group No.) (See above -File Allocation Overview) This is a reference number for the file group and is used in the actual File Allocation Programming. Depending on the model, the Group No. is used and printed on the actual File Allocation Reading.

- **File No. / Table No.**: (Also known as File Table No.) This is a reference number for the individual files within a File Group. Depending on the model, the File Table No. is used and printed on the actual File Allocation Reading.

- **File Name**: Indicates the purpose of the particular file.

- **# Records**: This area refers to the amount, or number, of each function that memory can be allocated for. The actual meaning of each record depends upon the file. (e.g.: With PLU or Department Files, each PLU, or Department requires one record; with table files such as PLU Link or Condiment, each record equals one line of the table.)

  "# Records" is usually divided into two columns on the table - DEFAULT (at MASTER RESET) and MAXIMUM. If the Maximum number of records for the file is denoted by asterisks, it is limited only by the available memory in the machine.

- **# Blocks**: The "Blocks" referred to are individual memory areas set aside for transaction data for each Cashier, Clerk, or Server. Each block of memory has a fixed number of records in it. Each record corresponds to a particular piece of data that would be printed in a Cashier, Clerk, or Server Report. Block counts other than "1" are used only for Cashier, Clerk, and Server Files.

- **Label Size**: This denotes the number of bytes in the header of the data. In the "ER-A" Series, the number of bytes in the label MUST be added to the number of bytes in the record length to get an accurate number of bytes each record requires.

- **Record Length (Data Size)**: Shows the number of bytes required for the data in each record.

- **Memory Size**: Shows the total number of bytes required for the file at default. In some File Allocation Tables, the total number of bytes is also shown for the file if it is opened to the maximum number of records.

File Group Types:

- **Type 0:** (Child) is modified automatically when the parent file group is changed. Create/Erase only. (e.g.: Department Text, PLU Price, or PLU Stock)
- **Type 1:** (Parent or Primary) requires a **Number of Records Entry**. Create/Erase and Increase/Decrease the number of records. (e.g.: Dept., PLU, or Server/Cashier)

  Operational buffers, such as the "Register Buffer", are also considered to be Primary Files.

  Primary Files also include those files opened for report data storage such as Term, Gross Margin, Daily Net, Hourly, and Transaction. These reports can not be run if the corresponding files are not allocated.
- **Type 2:** Requires an **Entry of Indexes and Records**. Create/Erase and Increase/Decrease the number of records for label and data individually. (e.g.: GLU/PBLU)

Calculating Memory Usage

Calculating the memory needed for specific applications is very important. This information is needed to know what RAM options are required. If given a set amount of RAM, it enables you to determine the maximum number of functions (such as PLUs, and UPCs) that can be installed.

The general formula for calculating the memory required for any particular file is (See **Example ER-A520/530 File Table No. Listing)**:

$$TN = (NR \times NB) \times (RL + LS)$$

Where:

TN = Total Number of bytes.
NR = Number of Records
NB = Number of Blocks
RL = Record Length (Data Size)
LS = Label Size

If the file that is being calculated is allocated is MRS, you should subtract the number of bytes the file uses at MRS from the value derived by the formula shown above. The result will be the amount of ADDITIONAL RAM required, or if the file size is being decreased, the amount of RAM freed.

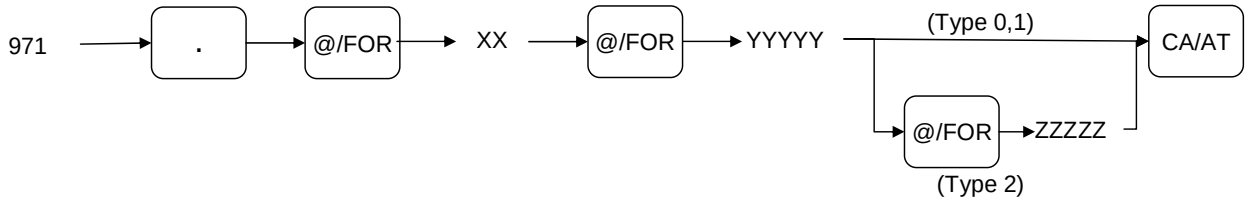
Reminders:

1. The number of bytes in the Label Size must be added to the Record Length in order to get the actual number of bytes required for each record.
2. If the number of records (or blocks) of a **Type 1** (Parent or Primary) **file group** is changed, the files that follow the **Type 1** (Parent or Primary) **file group** size will also be changed.

ER-A440, 450T, 520 & 530 File Allocation Programming

For the ER-A440, 450T, 520, and 530 models, the following key operation is used to program file allocation:

From SRV Mode:



XX = File Group No.
YYYYY = Desired number of Records/Blocks (items)
ZZZZZZ =Total Lines of stored data

MRS = See the **Example ER-A520/530 File Table No. Listing** below:

NOTES: (1) The maximum number for "YYYYY" cannot be exceeded.
(2) ***** The maximum number is based on the total amount of available memory.

"Sister" File Groups

***Important:** You must delete the "sister" file group in order to allocate file groups that are flagged with an asterisk (See **Example ER-A520/530 File Group Listing).** (e.g.: PLU/UPC Price 1 and PLU/UPC Price 1-6 or PLU/UPC Text 1 (8 Char) and PLU/UPC Text 1 (16 Char) are considered "sister" file groups. You can only allocate one or the other not both.)

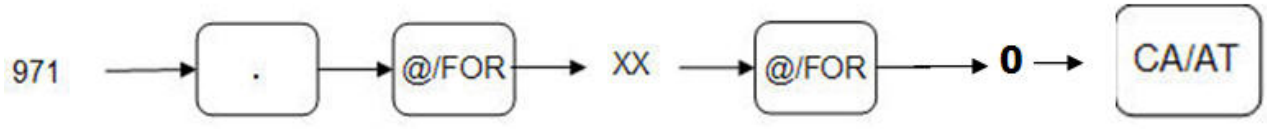
E.g.: The ER-A520/ER-A530 at MRS is allocated for PLU/UPC Price 1. In order to change the memory allocation to allow for PLU/UPC Price 1-6, two things need to be considered:

1. The **File Group #5** (PLU/UPC Price 1) must be deleted prior to allocating the **File Group #6** (PLU/UPC Price 1-6).
2. The PLU/UPC Price 1-6 will require more memory than PLU/UPC Price 1. Optional memory may be required.

To Delete a File Group

If you wish to free up available memory space by deleting a file group **that is not required** (e.g. Link PLU, Set PLU, Dynamic UPC etc.), perform the following procedure:

From SRV Mode:



Increasing and Reducing the No. of Records

It is always safe to increase the size of a particular File Group if memory is available to accommodate the increase.

When reducing the size of a particular File Group, do not reduce the No. of Records below the No. of Used Records to prevent data loss.

E.g. Using the Example ER-A520/530 970 File Reading below:

In this example using the MRS defaults, PLU/UPC Group No. 4 must not be reduced below 20. If reduced below 20, any data associated with those records is lost.

Group Number or File Table No. (Depends on Model*)	Description	No. of Records	No. of Used Records
4	PLU/UPC	2000	20

* ER-A520/520 970 Reading Prints according to Group No.

NOTE: Reducing the number of Records can free up available memory space.

EXAMPLE:

At MRS, the ECR has 2000 records reserved for PLU/UPC (sales items). You determine that they will not require or use more than 500 records. You can safely reduce the No. of Records for the PLU/UPC File Group to 500 to free up available memory for use by other File Groups without losing data in records 1-500.

Example ER-A520/530 File Group Listing:

GROUP No.	FILE NAME	TYPE	FILE TABLE NO.
1	Dept	1	01, 02, 03, 05, 06
*2	Dept TEXT (8)	0	03
*3	Dept TEXT (16)	0	04
4	PLU/UPC	1	08, 09, 10, 12, 18, 20, 22
*5	PLU/UPC PRICE 1	0	10, 20, 22, /21, 23
*6	PLU/UPC PRICE 1-6	0	11, 24, 26, /25, 27
*7	PLU/UPC TEXT1 (8)	0	12
*8	PLU/UPC TEXT1 (16)	0	13
*9	PLU/UPC KP TEXT1 (12)	0	14
*10	PLU/UPC TEXT1-6 (8)	0	15
*11	PLU/UPC TEXT1-6 (16)	0	16
*12	PLU/UPC KP TEXT1-6 (12)	0	17
13	PLU/UPC stock	0	19
14	DYNAMIC UPC	1	28, 29, 30, 33, 34, 38, 39, 41
*15	DYNAMIC UPC PRICE 1	0	30, 39, 41, /40, 42
*16	DYNAMIC UPC PRICE 1-6	0	31, 43, 45, /44, 46
*17	DYNAMIC UPC TEXT1 (8)	0	32
*18	DYNAMIC UPC TEXT1 (16)	0	33
*19	DYNAMIC UPC KP TEXT1 (12)	0	34
*20	DYNAMIC UPC TEXT1-6 (8)	0	35
*21	DYNAMIC UPC TEXT1-6 (16)	0	36
*22	DYNAMIC UPC KP TEXT1-6 (12)	0	37
23	UPC PGM PICK UP	1	47
24	DYNAMIC UPC PGM PICK UP	1	48
25	UPC X/Z PICK UP	1	49
26	DYNAMIC UPC X/Z PICK UP	1	50
27	Link PLU	1	51
28	Set PLU	1	52
29	Condiment table	1	53, 79
30	Mix&Match Table	1	54, 55
31	SERVER	1	59, 60, 61, 62, 63, /64, 74, 81, 82
32	Reg buffer	1	69, 70, 71, 72, /79, 73, 74, 81, 82
33	Overlapped Server	0	74, 81, 82
34	GLU/PBLU	2	75, 80
35	Closed GLU	1	76, 77
36	AUTO GLU Generate code	1	78
37	KP BUFFER	0	73
38	BS/BT buffer	0	72

39	Term Dept	0	07
40	Term PLU/UPC	0	21, 23
41	Term Transaction	0	58
42	Term SERVER	0	64
43	Term DYNAMIC UPC	0	40, 42
44	All of term file	0	07, 21, 23, 40, 42, 58, 64

Example ER-A520/530 File Table No. Listing:

NOTE: For the ERA520/530, this table can be used to calculate the memory allocation size. This information is not printed on the FILE READING REPORT.

FILE No.	NAME	RECORD			BLOCK			Label Size	Data Size
		(MRS)	(MAX)	#1	(MRS)	(MAX)	#2		
01	DEPT PRESET	20	99		1	1		3	8
02	PRICE	20	99	(1)	1	1		0	3
03	TEXT (8 chara)	0	99	(1)	1	1		0	8
04	TEXT (16 chara)	20	99	(1)	1	1		0	16
05	CVM CHARACTER	20	99	(1)	1	1		0	1
06	DAILY	20	99	(1)	1	1		0	13
07	TERM	20	99	(1)	1	1		0	13
08	PLU/UPC PRESET	1000	*****		1	1		9	15
09	FLAG	1000	*****	(8)	1	1		0	3
10	PRICE1	1000	*****	(8)	1	1		0	3
11	PRICE1-6	0	*****	(8)	1	1		0	18
12	TEXT1 (8 chara)	0	*****	(8)	1	1		0	8
13	TEXT1 (16 chara)	1000	*****	(8)	1	1		0	16
14	KP TEXT1 (12 chara)	1000	*****	(8)	1	1		0	12
15	TEXT1-6 (8 chara)	0	*****	(8)	1	1		0	48
16	TEXT1-6 (16 chara)	0	*****	(8)	1	1		0	96
17	KP TEXT1-6 (12 chara)	0	*****	(8)	1	1		0	72
18	CVM CHARACTER	1000	*****	(8)	1	1		0	1
19	STOCK	0	*****	(8)	1	1		0	4
20	DAILY (Price1)	1000	*****	(8)	1	1		0	9
21	TERM (Price1)	0	*****	(8)	1	1		0	9
22	WASTE DAILY (Price1)	1000	*****	(8)	1	1		0	9
23	WASTE TERM (Price1)	0	*****	(8)	1	1		0	9
24	DAILY (Price1-6)	0	*****	(8)	6	6		0	9
25	TERM (Price1-6)	0	*****	(8)	6	6		0	9
26	WASTE DAILY (Price1-6)	0	*****	(8)	6	6		0	9
27	WASTE TERM (Price1-6)	0	*****	(8)	6	6		0	9

28	DYNAMIC UPC PRESET	0	*****		1	1		9	13
29	FLAG	0	*****	(28)	1	1		0	3
30	PRICE1	0	*****	(28)	1	1		0	3
31	PRICE1-6	0	*****	(28)	1	1		0	18
32	TEXT1 (8 chara)	0	*****	(28)	1	1		0	8
33	TEXT1 (16 chara)	0	*****	(28)	1	1		0	16
34	KP TEXT1 (12 chara)	0	*****	(28)	1	1		0	12
35	TEXT1-6 (8 chara)	0	*****	(28)	1	1		0	48
36	TEXT1-6 (16 chara)	0	*****	(28)	1	1		0	96
37	KP TEXT1-6 (12 chara)	0	*****	(28)	1	1		0	72
38	CVM CHARACTER	0	*****	(28)	1	1		0	1
39	DAILY (Price1)	0	*****	(28)	1	1		0	9
40	TERM (Price1)	0	*****	(28)	1	1		0	9
41	WASTE DAILY (Price1)	0	*****	(28)	1	1		0	9
42	WASTE TERM (Price1)	0	*****	(28)	1	1		0	9
43	DAILY (Price1-6)	0	*****	(28)	6	6		0	9
44	TERM (Price1-6)	0	*****	(28)	6	6		0	9
45	WASTE DAILY (Price1-6)	0	*****	(28)	6	6		0	9
46	WASTE TERM (Price1-6)	0	*****	(28)	6	6		0	9
47	UPC PGM PICK UP	100	100		1	1		9	0
48	DYNAMIC UPC PGM PICK UP	0	100		1	1		9	0
49	UPC X/Z PICK UP	100	100		1	1		9	0
50	DYNAMIC UPC X/Z PICK UP	0	100		1	1		9	0
51	LINK PLU	10	*****		1	1		9	35
52	SET PLU	10	*****		1	1		9	70
53	Condiment Table	10	99		1	1		3	107
54	MIX & MATCH TABLE	10	99		1	1		3	4
55	MIX & MATCH SOLD	10	99	(54)	1	1		0	5
56	TRANSACTION LABEL	169	169		1	1		4	0
57	DAILY	169	169	(56)	1	1		0	9
58	TERM	169	169	(56)	1	1		0	9
59	SERVER PRESET	20	20	0	1	1		3	10
60	FLAG	20	20	(59)	1	1		0	1
61	TEXT	20	20	(59)	1	1		0	8
62	SERVER TRNS. LABEL	113	113	0	20	20	(59)	4	0
63	DAILY	113	113	(62)	20	20	(59)	0	9
64	TERM	113	113	(62)	20	20	(59)	0	9
65	RESET SERVER LABEL	113	113	0	1	1		4	0
66	TOTAL	113	113	(65)	1	1		0	9

67	TOTAL SERVER LABEL	113	113	0	1	1		4	0
68	TOTAL	113	113	(67)	1	1		0	9
69	REG BUFFER	250	250	0	1	1		0	48
70	(Reserved)	0	0	0	1	1		0	48
71	GLU/PBLU BUFFER	250	250	0	1	1		0	48
72	B.T. BUFFER	250	250	0	1	1		0	48
73	KP BUFFER	0	250	0	1	1		0	52
74	OVERLAPPED SERVER	0	250	0	0	20	(59)	0	48
75	GLU/PBLU	10-1000	****-*****	0	1	1		4	43
76	CLOSED GLU	0	*****	0	1	1		4	146
77	CLOSED GLU AMOUNT	0	*****	(76)	1	1		0	125
78	AUTO GLU Generate Code	11	11	0	1	1		0	2
79	CONDIMENT EDIT BUFFER	250	250	0	1	1		0	48
80	OPEN GLU BUFFER	250	250	0	1	1		6	10
81	OVERLAPPED GLU/PBLU BUFFER	0	250	0	0	20	(59)	0	48
82	OVERLAPPED MIX&MATCH BUFFER	0	250	0	0	20	(59)	0	5
83	FUNCTION TEXT	289	289	0	1	1		4	8

(#1): Same as the number of record of table no.
(#2): Same as the number of block of table no.

File Allocation Reading

The File Allocation Reading may be printed on the Receipt / Journal printer. Please see the respective Sharp ER-A model Programming Manuals and Dealer Knowledge Books for procedures and sample readings.

Example File Allocation Readings:

ER-A410/420 900 Reading

Key operation.

900 → [@/FOR] → [CA/AT]

```
SHARP
PRESENTS THE
ER-A420
SHARP
IS
THE BEST

01/06/2000  9:01PM  0001      Date/Time/Cashier code
000000#0009                   Machine No./CC-No./Cashier name
                              Cashier code/Cashier name
#900                          Job code
 901#        0002             Contents of the
 902#        0000             SRV-mode programming
 903#        5000

 929#        0000
 980#        0000
 930#     Z1 0000             General Z1 reset counter
 933#     Z1 0000             Hourly Z1 reset counter
 934#     Z1 0000             PLU Z1 reset counter
 935#     Z1 0000             Cashier Z1 reset counter
 936#     Z1 0000             PBLU Z1 reset counter
 937#     Z2 0000             General Z2 reset counter
 939#     Z2 0000             Daily net Z2 reset counter

 942#
GT2  $00000000000.00         GT2
 943#
GT3  $00000000000.00         GT3
 969#
TR   $00000000000.00         TR

 944#        0000             PGM2 mode secret code
 948#          00             Training cashier No.
 949#  **TRAINING**           Training mode title
 975#                         Memory Allocation
                1  10         Department
                2 500         PLU record
                3   0         PBLU record
                4  20         Cashier
 985#        0
 986#          $              Domestic currency symbol
 987#        0                Initial text mode
                              programming
```

ER-A440 970 Reading Prints According to File Table No.

Key operation

970 → [@/FOR] → [CA/AT]

```
SHARP
PRESENTS THE
ER-A440                                  ← Header logo

01/01/00 12:05AM                         ← Data/ Time
000000 #0007                             ← Machine No./ Consective No.

#970                                     ← JOB#

*001*  00020      /00020                 ← File table No./ No. of records/
*002*  00020      /00020                   No. of used records
*004*  00020      /00020
*006*  00020      /00020
*007*  00020      /00020
*008*  00950      /00020
*009*  00950      /00020
*011*  00950      /00020
*013*  00950      /00020
*015*  00050      /00000
*016*  00083      /00083
*017*  00083      /00083
*018*  00083      /00083
*019*  00004      /00004
*020*  00004      /00004
*021*  00004      /00004
*022*  00042   004/00042                 ← File table No./ No. of records/
*023*  00042   004/00042                   No. of blocks/ No. of used records
*024*  00042   004/00042
*025*  00042      /00042
*026*  00042      /00042
*027*  00048      /00048
*028*  00048      /00048
*029*  00036      /00000
*030*  00036      /00000
*031*  00080      /00080

1F4000                                   ← File memory start address
1FEF80                                   ← Empty memory start address
1FFFFF                                   ← Memory end address
```

ER-A450T
970 Reading
Prints According to File Table No.

Key operation

970 → [@/FOR] → [CA/AT]

```
SHARP
PRESENTS THE
ER-A450T

01/01/00 12:00AM
000000 #0003

#970

*001*  00020      /00020
*002*  00020      /00020
*003*  00020      /00020
*005*  00020      /00020
*006*  00020      /00020
*007*  00500      /00020
*008*  00500      /00020
*009*  00500      /00020
*011*  00500      /00020
*014*  01500      /00000
*015*  01500      /00000
*016*  01500      /00000
*018*  01500      /00000
*020*  01500      /00000
*024*  00100      /00000
*025*  00100      /00000
*029*  00089      /00089
*030*  00089      /00089
*031*  00089      /00089
*032*  00004      /00004
*033*  00004      /00004
*034*  00004      /00004
*035*  00043   004/00043
*036*  00043   004/00043
*037*  00043   004/00043
*038*  00043      /00043
*039*  00043      /00043
*040*  00048      /00048
*041*  00048      /00048
*042*  00036      /00000
*043*  00036      /00000
*044*  00080      /00080
*045*  00010      /00000

1E4700
1FCAD4
1FFFFF
```

- Header graphical logo (Default:Graphical LOGO only)
- Date/Time
- Machine No./Consective No.
- JOB#
- File table No./No.of records/ No.of used records
- File table No./No.of records/ No.of blocks/No.of used records
- File memory start address
- Empty memory start address
- Memory end address

ER-A520/530
970 Reading
Prints According to Group No.
(Example ER-A520/530 File Group Listing)

Key operation

970 → [@/FOR] → [CA/AT]

```
YOUR RECEIPT

THANK YOU

01/01/2000      000000
#0005      7:37PM

#970

*01*      00010          /00010
*03*      00010          /00010
*04*      02000          /00020
*05*      02000          /00020
*08*      02000          /00020
*09*      02000          /00020
*23*      00100          /00000
*25*      00100          /00000
*27*      00015          /00000
*28*      00015          /00000
*29*      00010          /00010
*30*      00010          /00010
*31*      00020          /00020
*32*      00250          /00250
*34*      00050-05000    /00000
*36*      00011          /00011
*38*      00250          /00250
*39*      00010          /00010
*41*      00169          /00169
*42*      00113          /00113

319000
39039D
3FFFFF
```

NOTE: The File Readings, comprised of three (3) hexadecimal numbers, printed at the bottom of the report provide important information.

ER-A520/530 MRS Values	Out of Box (HEX)	Optional Expansion Memory Board (UPS02MB)	Comments
Starting Address	**319000**	**319000**	
Used Address	**39039D**	**39039D**	**Currently (MRS) used memory.**
End Address	**3FFFFF**	**5FFFFF**	**Maximum available memory.**

Summary:

The amount of memory available for allocation is the difference between the End Address and the Used Address. By familiarizing yourself with the default End Address, you will be able to easily identify if any optional memory has or has not been installed.

Without prior knowledge of optional expansion memory chip or board installation, the only way to determine if optional memory has been added is to perform the optional memory diagnostic or to view the physical chip or board. For some models, viewing the physical chip or board may require disassembly of the ECR.

INSTRUCTIONS FOR PROGRAMMING FILE ALLOCATION

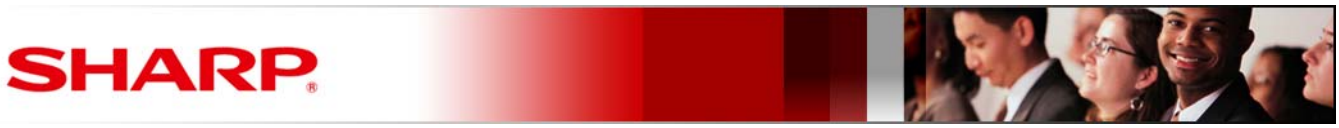
1	Before you start any programming, it is recommended that you check the available memory.
2	Before you start programming memory allocation, you should consult with your customer to determine how much and what size file memory is necessary.
3	When allocating File Groups, it is important to note which individual file tables are affected.
4	When allocating File Groups, observe the contents printed on the Journal Printer. If there is a problem with the allocation such as no available memory, it will be indicated on the Journal Printer.
5	Upon completion of File programming and prior to returning to REG Mode or any other MODE, a Program Reset is required/mandatory.
6	When making changes to multiple Files, complete all File programming and then perform a Program Reset.

DOCUMENTATION – varies by model

1	Sharp POS Instruction, Service, Programming and Parts manuals and Procedures Guide are available on www.sharp-pos.com - Technical Manuals link.

DEMO TEMPLATES - varies by model

1	Demo templates are available on www.sharp-pos.com – Document/Download Library - Software link.



ER-A Models PGM/PGM1/PGM2 Mode Overview

PGM/PGM1/PGM2 Mode Overview - varies by model

The Sharp ER-A model programming consists of SRV (Service Mode) and/or PGM/PGM1/PGM2 (Program) Mode job codes.

Job codes tell the ECR (Electronic Cash Register) which programming function to perform. Each job code has bits that enable, disable, or define the settings for the respective job code. The program settings may be printed on the Receipt / Journal printer.

PGM/PGM1/PGM2 Mode job codes allow the user to program settings such as the date, time, departments, items, tax, servers/cashiers, terminal functions, preset prices, etc.

It's important to know how the ECR was Service Mode programmed before attempting PGM Mode Programming, as many of the PGM job codes are affected (allowed or disallowed) by Service Mode programming entries.

PGM/PGM1/PGM2 Mode Availability by Model

Access to PGM/PGM1/PGM2 Mode is controlled by the mode switch and mode key.

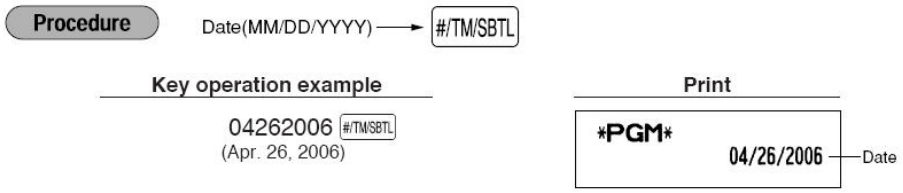
Model	PGM	PGM1	PGM2
ER-A242	Y	N	N
ER-A320	Y	N	N
ER-A330	Y	N	N
ER-A410	N	Y	Y
ER-A420	N	Y	Y
ER-A440	N	Y	Y
ER-A450T	N	Y	Y
ER-A520	N	Y	Y
ER-A530	N	Y	Y

ER-A242 PGM Mode Programming

The ER-A242 uses a single digit job code or keystroke sequence for PGM Mode programming. Please refer to the ER-A242 Instruction Manual for programming procedures.

Example 1 - Date:

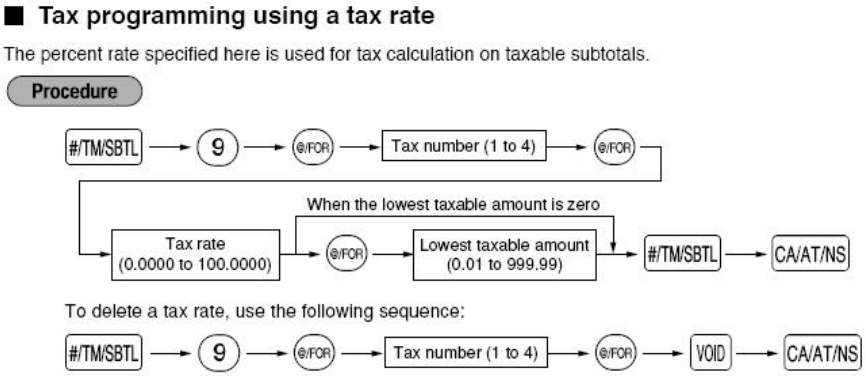
From PGM Mode:



Note *You can use the date format of day-month-year (DD/MM/YYYY) or year-month-day (YYYY/MM/DD) format. To change the format, refer to "Various Function Selection Programming 1" section (Job code 61).*

Example 2 – Tax:

From PGM Mode:



NOTES:

1. **The ER-A242 comes with PC friendly software for item upload, graphic logo design and periodic sales reports. PC connectivity and programming with the PC software enables fast and easy programming.**
2. SRV Mode programming is not available on the ER-A242.

ER-A320, 330, 410/420, 440, 450T & 520/530 PGM/PGM1/PGM2 Mode Programming

PGM/PGM1/PGM2 Mode programming for the ER-A320, 330, 410/420, 440, 450T & 520/530 use 4 digit job codes and/or "direct key entry". Access to PGM/PGM1/PGM2 Mode is controlled by the mode switch and mode key.

REMINDER:

The ER-A320 and ER-A330 uses PGM Mode only. Therefore all PGM Programming regardless of the job code is done in PGM Mode.

The ER-A410/420, 440, 450T & 520/530 uses PGM1 Mode and PGM2 Mode.

With the exception of the ER-A320 and ER-A330, the first number of the job code designates the PGM mode to use (PGM1 or PGM2). The second number of the job code designates the general function being programmed.

EXAMPLE: Job code 2610 is used to program the Date.

2 = PGM2 Mode

6 = Miscellaneous Function

Other common designations for the second number of the PGM/PGM1/PGM2 job code:

0 - Dynamic UPC

1 - Departments

2 - PLU/UPC

3 - Function Keys – i.e. media settings, media descriptions, HALO, etc.

4 or 5 – Server/Cashier

6 - Miscellaneous Functions – i.e. date, time, register #, optional settings, stack report, devices etc.

7 - Tax

9 - Training Mode and Auto Keys (NOTE: Auto keys are programmed in X2 / Z2 Mode)

Important! As previously mentioned, although the availability of a programming option may vary between the ER-A models, with the exception of the ER-A242 the SRV and PGM2, Jobs codes are consistent throughout the ER-A product line. This holds true for PGM/PGM1/PGM2 Mode programming.

EXAMPLE: With the exception of the ER-A242, PGM/PGM1/PGM2 Mode job code 2610 is used for programming the date on all ER-A models.

ER-A410/420, 440, 450T & 520/530 PGM1/PGM2 Mode Programming

The ER-A410/420, 440, 450T & 520/530 generally consists of two types of programming that are managed by the mode key.

1. PGM2-Mode Programming: PGM Jobs that are 2xxx
2. PGM1-Mode Programming: PGM Jobs that are 1xxx

NOTE:

1. PGM1 Job Codes (1xxx) may be performed in PGM1 or PGM2 Mode.
2. PGM2 Jobs Codes (2xxx) may only be performed in PGM2 Mode.

PGM2-Mode programming is primarily used when installing the ECR, and for maintaining select presets intended for Managers/ Owners only.

The PGM1-Mode Programming is intended for settings that change frequently.

ER-A320, 330, 410/420, 440, 450T & 520/530 Job Code Based Programming - varies by model

For the ER-A320, 330, 410/420, 440, 450T & 520/530 models, the following key operation is used for PGM/PGM1/PGM2 Job Code based programming. Please see the respective model Programming and Instruction Manuals, and/or Dealer Knowledge Book for detailed procedures.

NOTE: See the Appendix for a detailed chart of the ER-A320, 330, 410/420, 440, 450T, and ER-A520/530 PGM Job Codes.

General Rule:

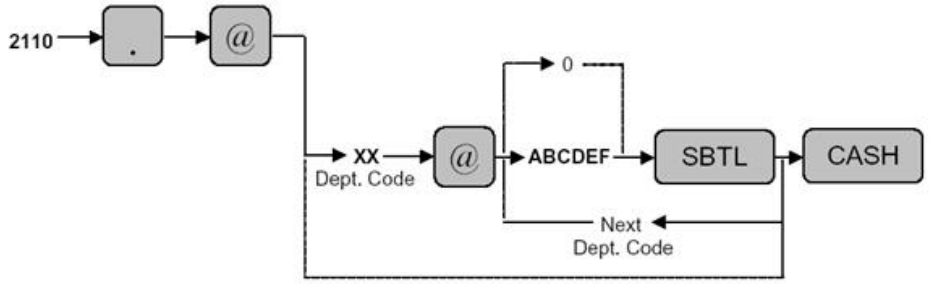
When making PGM/PGM1/PGM2 entries, the following rules apply:

1. If an error occurs prior to completing the 1st valid entry, it is necessary to depress the [CL] key and start the PGM Job # again from the beginning.
2. If an error occurs on the second and subsequent preset entries, then depress the [CL] key and re-enter the desired values.

Example ER-A520/530 – Job Code 2110 Programming – Dept Status Entry Type:

From PGM2 Mode:

Department Type - 2110



XX : Dept Code 01-99
ABCDEF : See Below

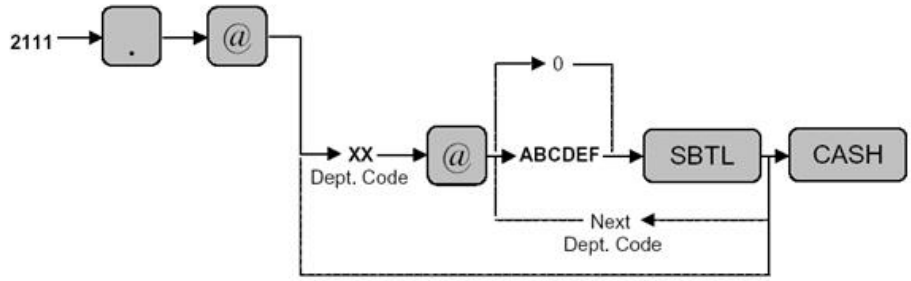
A: Item Validation:	Compulsory/Not	1/0
B: Tare Table No. Assignment:		1-9/0
C: Scale Entry:	Compulsory/Enable/Inhibit	2/1/0
D: SIF/SICS/Normal:		2/1/0
E: Bottle Return/Hash/Normal		2/1/0
F: Amount Entry Type	Open&Preset/Preset/Open/Inhibit	3/2/1/0

MRS = 000001

Example ER-A520/530 – Job Code 2111 Programming – Dept Status Tax:

From PGM2 Mode:

Department Status - 2111



XX : Dept Code 01-99
ABCDEF : See Below

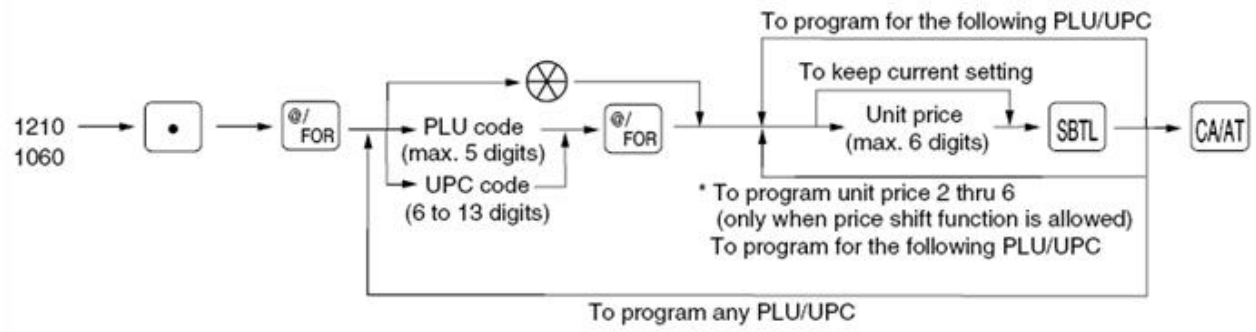
A: Sign:	+/-	1/0
B: Food Stamp Eligible:	Yes/No	1/0
C: Taxable 4:	Yes/No	1/0
D: Taxable 3:	Yes/No	1/0
E: Taxable 2:	Yes/No	1/0
F: Taxable 1:	Yes/No	1/0

MRS = 000001

Examples ER-A520/530 Job Code 1210 Programming - PLU/UPC/EAN Price

From PGM1 or PGM2 Mode:

PLU/UPC Unit Price – 1210 / (1060 – Dynamic UPC)



* In case the price shift function is allowed, the register prompts to enter a unit price for the following level by displaying "P2" thru "P6" on the display, and when a unit price of level 6 is entered, the register goes to the status for programming the following PLU/UPC. When you press the [CA/AT] key while programming multiple prices for a PLU/UPC code, prices for the remained levels are kept unchanged.
In case the single price entry is allowed for a PLU/UPC code, the register goes to the status for programming the following PLU/UPC.

MRS = 000000

NOTE: If a price is entered for a PLU which has been previously set as "Inhibited" or "Open" in PGM Job #1200, then the type is changed as follows: "Inhibited" → "Preset" and "Open" → "Open & Preset".

Price-2 – Price-6 are available when SRV Job #971-D File Group 6 is set.

The preset amount will work as the unit price for the "Preset" type and as the HALO amount for the "Open" type. In the case of the "Open" type, zero preset prevents amount entry and a 9999.99 preset is the maximum limitation. In the case of the "Preset" type zero and 9999.99 preset have no special meaning (i.e. zero amount preset is available).

ER-A320, 330, 410/420, 440, 450T & 520/530 "Direct Key Entry" Programming - varies by model

For the ER-A320, 330, 410/420, 440, 450T & 520/530 models, the following key operation is used for PGM/PGM1/PGM2 "Direct Key Entry" programming. Please see the respective model Programming, Instruction and/or Dealer Knowledge Book for detailed procedures.

General Rule:

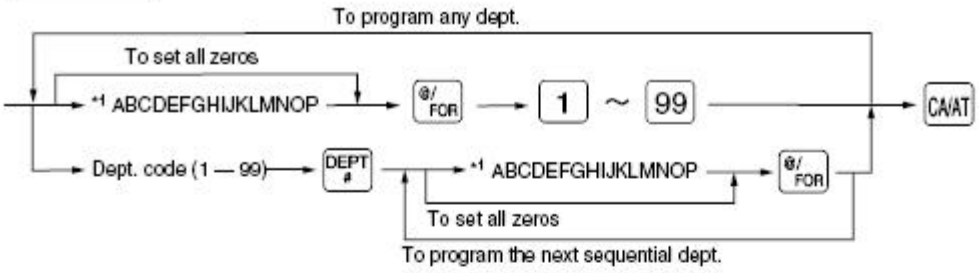
When making PGM/PGM1/PGM2 entries, the following rules apply:

1. If an error occurs prior to completing the 1st valid entry, it is necessary to depress the [CL] key and start the PGM Job # again from the beginning.
2. If an error occurs on the second and subsequent preset entries, then depress the [CL] key and re-enter the desired values.

Example ER-A520/530 – Direct Key Entry Programming – Dept Status Entry Type and Tax:

From PGM2 Mode:

Procedure

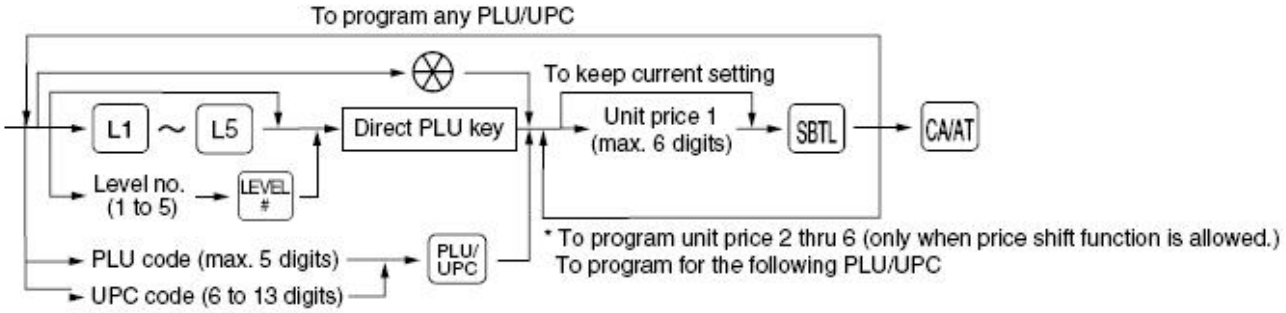


*1 Item:		Selection:	Entry:
A	Group number		0 thru 9 (0: Non group)
B	Commission group number		0 thru 9 (0: Non commission)
C	Sign (plus/minus)	Plus	0
		Minus	1
D	Food stamp status	Ineligible	0
		Eligible	1
E	Tax 4 status	Non-taxable	0
		Taxable	1
F	Tax 3 status	Non-taxable	0
		Taxable	1
G	Tax 2 status	Non-taxable	0
		Taxable	1
H	Tax 1 status	Non-taxable	0
		Taxable	1
I	Item validation printing	Non-compulsory	0
		Compulsory	1
J	Tare table number		0 thru 9 (0: not used)
K	Scale entry	Inhibit	0
		Enable	1
		Compulsory	2
L	Registration type	Normal	0
		SICS (Single Item Cash Sale)	1
		SIF (Single Item Finalization)	2
M	Department type	Normal department	0
		Hash department	1
		Bottle return department	2
		Gas department	3
N	Type of unit price entry	Inhibit department key	0
		Open only	1
		Preset only	2
		Open and preset	3
O	Significant digit for HALO		1 thru 9
P	Number of zeros to follow the significant digit for HALO		0 thru 7

Example ER-A520/530 – Direct Key Entry Programming – PLU/UPC/EAN Price:

From PGM1 or PGM2 Mode:

Procedure



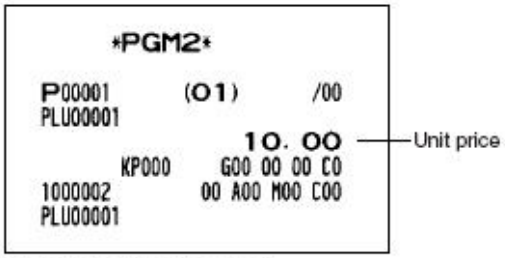
* In case that price shift function is allowed, the register prompts to enter a unit price for the following level by displaying "P2" thru "P6" on the display, and when a unit price of level 6 is entered, the register goes to the status for programming the following PLU/UPC. When you press the CA/AT on the way of programming multiple prices for a PLU/UPC code, prices for the remained levels are kept unchanged.
In case that single price entry is allowed for a PLU/UPC code, the register goes to the status for programming the following PLU/UPC.

Example

Key operation

1 PLU/UPC 1000 SBTL CA/AT

Print



(In case of single price entry)

INSTRUCTIONS FOR PGM/PGM1/PGM2 MODE PROGRAMMING

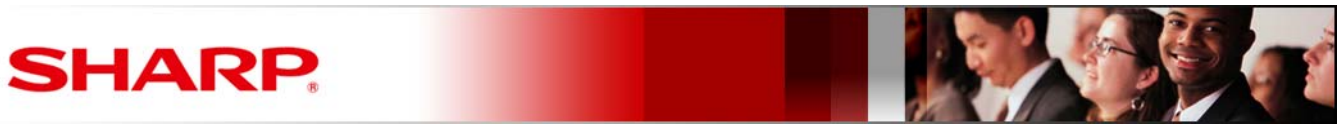
1	Program Department Settings: This should be structured towards the balancing procedures required.
2	Program PLU/UPC (EAN) Settings.
3	Keyboard Direct Key Assignment.
4	Cashier Settings.
5	Tax Rate, Date and Time.
6	All other settings. **NOTE:** PGM programming entries to any function key will not be accepted unless the key has been placed on the keyboard using SRV Mode 950 programming.

DOCUMENTATION - varies by model

1	Sharp Instruction, Service, Programming and Parts manuals and Procedures Guide are available on www.sharp-pos.com – Technical Manuals and Legacy Technical Manuals links.

DEMO TEMPLATES - varies by model

1	Demo templates are available on www.sharp-pos.com – Document/Download Library - Software link.



ER-A Model Electronic Cash Register Independent Study Programming & Application Labs

ER-A310/A320/A330, ERA410/420, A440, A450T, and A520/A530 Labs

These labs will provide opportunity and guidance for practical hands-on application and programming experience with Sharp ER-A Model Electronic Cash Registers. Each lab will take approximately one hour to complete. You will need the appropriate technical documentation.

Your comments, suggestions, and contributions to the improvement of these materials are encouraged.

DOCUMENTATION - varies by model

1	Sharp Instruction, Service, Programming and Parts manuals and Procedures Guide are available on www.sharp-pos.com – Technical Manuals and Legacy Technical Manuals links.

DEMO TEMPLATES - varies by model

1	Demo templates are available on www.sharp-pos.com – Document/Download Library - Software link.

ECR LAB 1: ER-A310/A320/A330

Requirements:

- **ERA310/A320/A330 Cash Register**
- **SRV Key**
- **ERA310/330 or 320 Service Manual**
- **ERA310/330 or 320 Programming Manual**
- **ERA310/330 or 320 Instruction Manual**
- **ERA310/330 or 320 Installation Manual**

Exercises:

	Internal Use Only
1. Which of the following procedures will perform a MASTER RESET? (Select all that apply) ❑ Turn off the power. Turn the mode switch to the (SRV') position. Turn on the power. With the journal feed key pressed down turn to (SRV) from the (SRV') position. ❑ Turn the mode switch to the (SRV') position to the (SRV). ❑ Unplug the ECR. With the mode switch in the (SRV') position. Plug in the ECR. Turn the mode switch to the (SRV') position to the (SRV).	
2. How many departments are available after a master reset? ❑ 5 ❑ 8 ❑ 10 ❑ 15 ❑ 20	
3. What programming and/or hardware requirements are needed to place more department keys on the keyboard? (Select all that apply) ❑ SRV 950 ❑ PGM 2119 ❑ PGM 2200 ❑ SRV 951 ❑ Key top kit ❑ SRV 971	
4. What is the model number of the printer in the ER-A310? ❑ CR-510 ❑ CR-802 ❑ CR-812A ❑ CR-911A ❑ DP-730 ❑ M-445 ❑ M-820	
5. What is the model number of the printer in the ER-A320 / A330? ❑ CR-510 ❑ CR-802 ❑ CR-812A ❑ CR-911A ❑ DP-730 ❑ M-445 ❑ M-820	
6. Can you have both receipt and journal tapes with this model? ❑ Yes ❑ No	
7. Program an 8.25% NY tax rate and a 6% NJ tax table. Use the Operators Manual to get the 6% NJ tax chart. (Attach programming receipts)	
8. Program Dept #1 to be taxable at 6% with a preset price of $1.00. (Attach programming receipts)	
9. Program Dept #2 to be an open department with a $9.00 HALO. (Attach programming receipts)	

10. Can the SBTL key be programmed as compulsory before tendering? ❑ Yes ❑ No If yes, what PGM job code and/or bit is required? ❑ PGM 2616 ❑ SRV 916C ❑ SRV 913D ❑ Job 5 C, D, E ❑ Job 9	
11. Program PLU #1 to be taxable at 6% with a preset price of $2.00. **(Attach programming receipts)**	
12. Program PLU #2 to be an open PLU with a $9.00 HALO. **(Attach programming receipts)**	
13. Can voids and refunds be disabled in REG mode? ❑ Yes ❑ No If yes, what PGM job code and/or bit is required? ❑ PGM 2616 D-G ❑ SRV 931D ❑ PGM 2320H	
14. Can the COMPULSORY DRAWER CLOSE option be changed, so that the ECR can be operated with the drawer open? ❑ Yes ❑ No If yes, what PGM job code and/or bit is required? ❑ PGM 2616 ❑ SRV 916C ❑ SRV 913D ❑ Job 5 C, D, E ❑ Job 9	
15. How many times can you perform a validation? ❑ None ❑ 1 ❑ 5 ❑ 9 ❑ unlimited	
16. Can the CALCULATOR mode be disabled? ❑ Yes ❑ No If yes, on which model(s)? (Check all that apply) ❑ ER-A310 ❑ ER-A320 ❑ ER-A330 If yes, what PGM job code and/or bit is required? ❑ PGM 2616 ❑ SRV 916C ❑ SRV 913D ❑ Job 5 C, D, E ❑ Job 9	

ECR LAB 2: ER-A410/A420

Requirements:

- **ER-A410 or 420 Cash Register**
- **SRV Key**
- **ERA410/420 Service Manual**
- **ERA410/420 Programming Manual**
- **ER-A410/420 Instruction Manual**
- **ERA410/420 Installation Manual**
- **ER-A410/420 Dealer Knowledge Book**

Exercises:

	Internal Use Only
1. How many departments are available after a master reset? ERA410 ❑ 5 ❑ 8 ❑ 10 ❑ 15 ❑ 20 ERA420 ❑ 5 ❑ 8 ❑ 10 ❑ 15 ❑ 20	
2. What programming and/or hardware requirements are needed to place more department keys on the keyboard? (Select all that apply)? ❑ SRV 950 ❑ PGM 2119 ❑ PGM 2200 ❑ SRV 951 ❑ Key top kit ❑ SRV 971	
3. What is the model number of the printer in this ECR? ❑ CR-510 ❑ CR-802 ❑ CR-812A ❑ CR-911A ❑ DP-730 ❑ M-445 ❑ PR-45MII	
4. Can you have both receipt and journal tapes with this model? ❑ Yes ❑ No	
5. Program an 8.25% NY tax rate and 6% NJ tax table. Use the Operators Manual to get the 6% NJ tax table. (Attach programming receipts)	
6. Program Dept #1 to be taxable at 6% with a preset price of $1.00. (Attach programming receipts)	
7. Program Dept #2 to be an open department with a $9.00 HALO. (Attach programming receipts)	
8. Can the SBTL key be programmed as compulsory before tendering? ❑ Yes ❑ No If yes, what PGM job code and/or bit is required? ❑ PGM 2616 ❑ SRV 916C ❑ SRV 913D ❑ Job 5 C, D, E ❑ Job 9	

9. Program PLU #1 to be taxable at 6% with a preset price of $2.00. (Attach programming receipts)	
10. Program PLU #2 to be an open PLU with a $9.00 HALO. (Attach programming receipts)	
11. Can voids and refunds be disabled in REG mode? ❑ Yes ❑ No If yes, what PGM job code and/or bit is required? ❑ PGM 2616 ❑ SRV 931D ❑ PGM 2320H	
12. Can the COMPULSORY DRAWER CLOSE option be changed, so that the ECR can be operated with the drawer open? ❑ Yes ❑ No If yes, what PGM job code and/or bit is required? ❑ PGM 2616 ❑ SRV 916D ❑ SRV 913D ❑ Job 5 C, D, E ❑ Job 9	
13. How many times can you perform a validation? ❑ None ❑ 1 ❑ 5 ❑ 9 ❑ unlimited	
Which programming is needed to disable compulsory cashier sign on for every transaction? ❑ PGM 2616 ❑ SRV 916C ❑ SRV 913D ❑ Job 5 C, D, E ❑ SRV 910B	
14. Which programming is needed to print TOTALS –ONLY on the journal tape? ❑ PGM 2616 2F ❑ SRV 916C ❑ SRV 913D ❑ Job 5 C, D, E ❑ Job 9	

ECR LAB 3: ER-A440

Requirements:

- **ER-A440 Cash Register**
- **SRV Key**
- **ERA440 Service Manual**
- **ERA440 Programming Manual**
- **ERA440 Instruction Manual**
- **ERA440 Installation Manual**

Exercises:

	Do Not Write Here
1. How many departments are available after a master reset? ❑ 5 ❑ 8 ❑ 10 ❑ 15 ❑ 20	
2. What programming and/or hardware requirements are needed to place more department keys on the keyboard? (Select all that apply) ❑ SRV 950 ❑ PGM 2119 ❑ PGM 2200 ❑ SRV 951 ❑ Key top kit ❑ SRV 971	
3. What is the model number of the printer in this ECR? ❑ CR-510 ❑ CR-802 ❑ CR-812A ❑ CR-911A ❑ DP-730 ❑ M-445 ❑ M-820	
4. Can you have both receipt and journal tapes with this model? ❑ Yes ❑ No	
5. Program an 8.25% NY tax rate and 6% NJ tax table. Use the Operators Manual to get the 6% NJ tax chart. (Attach programming receipts)	
6. Program Dept #1 to be taxable at 6% with a preset price of $1.00. (Attach programming receipts)	
7. Program Dept #2 to be an open department with a $9.00 HALO. (Attach programming receipts)	
8. Can the SBTL key be programmed as compulsory before tendering? ❑ Yes ❑ No If yes, what PGM job code and/or bit is required? ❑ PGM 2616 ❑ SRV 916C ❑ SRV 913D ❑ Job 5 C, D, E ❑ Job 9	
9. Program PLU #1 to be taxable at 6% with a preset price of $2.00. (Attach programming receipts)	

10. Program PLU #2 to be an open PLU with a $9.00 HALO. (Attach programming receipts)	
11. Can voids and refunds be disabled in REG mode? ❑ Yes ❑ No If yes, what PGM job code and/or bit is required? ❑ PGM 2616 ❑ SRV 931D ❑ PGM 2320H	
12. Can the COMPULSORY DRAWER CLOSE option be changed so that the ECR can be operated with the drawer open? ❑ Yes ❑ No If yes, what PGM job code and/or bit is required? ❑ PGM 2616 ❑ SRV 916D ❑ SRV 913D ❑ Job 5 C, D, E ❑ Job 9	
13. How many times can you perform a validation? ❑ None ❑ 1 ❑ 5 ❑ 9 ❑ unlimited	
14. What programming is needed to disable compulsory cashier sign on for every transaction? ❑ PGM 2616 ❑ SRV 916C ❑ SRV 913D ❑ Job 5 C, D, E ❑ SRV 910B	
15. What programming is needed to print TOTALS –ONLY on the journal tape? ❑ PGM 2616 2F ❑ SRV 916C ❑ SRV 913D ❑ Job 5 C, D, E ❑ Job 9	

ECR LAB 4: ER-A450T

Requirements:

- **ER-A450T Cash Register**
- **ER-450T Programming Manual**
- **SRV Key**
- **ERA450T Instruction Manual**
- **ER-A450T Service Manual**
- **ER-A450T Installation Manual**

Exercises:

	Internal Use Only
1. What is the maximum number of departments available on the ER-A450T? ❑ 10 ❑ 20 ❑ 40 ❑ 50 ❑ 99	
2. What programming and/or hardware requirements are needed to place more department keys on the keyboard? (Select all that apply) ❑ SRV 950 ❑ PGM 2119 ❑ PGM 2200 ❑ SRV 951 ❑ Key top kit ❑ SRV 971	
3. What is the model number of the printer in the EE-A450T? ❑ CR-510 ❑ CR-802 ❑ CR-812A ❑ CR-911A ❑ DP-730 ❑ M-445 ❑ PR-45M	
4. Which of the following procedures will change the receipt printing status On or Off? ❑ Turn the mode switch to the REG position. Press the RCPT key to change the printing status (On or Off). ❑ Turn the mode switch to the MGR position. Press the RCPT key to change the printing status (On or Off). ❑ Turn the mode switch to the OP X/Z position. Press the RCPT key to change the printing status (On or Off).	
5. What error code will appear on the operator display for a cashier not signed in? ❑ E01 ❑ E02 ❑ E12 ❑ E32	
6. What SRV job code is used to enable/disable VOID mode? ❑ 913C ❑ 914C ❑ 915C ❑ 916C	
7. What SRV job code is used to enable/disable fractional entries for non-scalable UPC/PLU/Dept? ❑ 906D ❑ 916A ❑ 918B ❑ 916C	

8. Can the SBTL key be programmed as compulsory before tendering? ❑ Yes ❑ No If yes, what PGM job code and/or bit is required? ❑ PGM 2616 ❑ SRV 916C ❑ SRV 913D ❑ Job 5 C, D, E ❑ Job 9	
9. Can voids and refunds be disabled in REG mode? ❑ Yes ❑ No If yes, what PGM job code and/or bit is required? ❑ PGM 2616 ❑ SRV 931D ❑ PGM 2320H	
10. Can the COMPULSORY DRAWER CLOSE option be changed, so that the ECR can be operated with the drawer open? ❑ Yes ❑ No If yes, what PGM job code and/or bit is required? ❑ PGM 2616 ❑ SRV 916D ❑ SRV 913D ❑ Job 5 C, D, E ❑ Job 9	
11. How many times can you perform a validation? ❑ None ❑ 1 ❑ 5 ❑ 9 ❑ unlimited	
12. What programming is needed to disable compulsory cashier sign on for every transaction? ❑ PGM 2616 ❑ SRV 916C ❑ SRV 913D ❑ Job 5 C, D, E ❑ SRV 910B	
13. What programming is needed to print TOTALS –ONLY on the journal tape? (Select all that apply): ❑ PGM 2616 2F ❑ SRV 916C ❑ SRV 913D ❑ Job 5 C, D, E ❑ Job 9	
14. What does "H" on the operator display indicate? ❑ Help is required ❑ Paper Release is not position properly ❑ Paper has run out	
15. What are the programming requirements to connect a scale? (Select all that apply) ❑ PGM 2690 ❑ SRV 903 ❑ PGM 2691 ❑ SRV 906 ❑ SRV 945 ❑ SRV 946 ❑ SRV 950 ❑ SRV 951 ❑ PGM 2210 ❑ PGM 2110 ❑ PGM 2231 ❑ PGM 2618	
16. What does "PPPPPPPPPP" on the operator display indicate? ❑ Help is required ❑ Paper Release is not position properly ❑ Paper has run out	
17. How many RS-232C ports are available with this model? None 1 2 3 4	

18. Port #1 and Port #2 are equivalent to which Channel numbers x and y respectively? 1 and 2 1and 4 1 and 6 1 and 8	
19. Which of the following may be interfaced via the RS-232C port on the ER-A450T? (Select all that apply) Coin Dispenser Credit Card Scale Scanner Slip Printer Pole Display	
20. What is the +5/C1 switch used for? Coin Dispenser Credit Card Scale Scanner	
21. Which Diagnostic code is used to confirm RS-232C channel assignments? ❑ SRV 200 ❑ SRV 300 ❑ SRV 400 ❑ SRV 500 ❑ SRV 600 ❑ SRV 700	
22. Which of the following may be flagged as scalable? PLU SKU UPC Dept. Tare	
23. Which file groups must be allocated to allow UPC scanning on the ER-A450T? (Select all that apply) ❑ 8 ❑ 9 ❑ 10 ❑ 11 ❑ 12 ❑ 13 ❑ 14 ❑ 15 ❑ 23 ❑ 27 ❑ 28	
24. Which keys must be placed on the keyboard for UPC operation? (Select all that apply) ❑ DELETE ❑ AMT ❑ INQ ❑ UPC ❑ DEPT# ❑ REPEAT	
25. What is the maximum number of UPCs available on the ERA450T? ❑ 500 ❑ 1,000 ❑ 10,000 ❑ 15,000 ❑ 20,000	
26. What PGM job codes are used to program a UPC? (Select all that apply) ❑ 1100 ❑ 1000 ❑ 1010 ❑ 1011 ❑ 2000 ❑ 2100 ❑ 2010 ❑ 2011 ❑ 2012 ❑ 2014 ❑ 2017 ❑ 2020 ❑ 2025 ❑ 2080	
26. How do you delete a UPC code? (Attach programming receipts)	
27. Program 5 UPC codes with names and prices. (Attach programming receipts)	

28. What are the types of UPC codes the ERA450T can read? ❑ UPC-A ❑ UPC-B ❑ UPC-C ❑ UPC-E ❑ EAN-8 ❑ EAN-13	
29. Can Mix and Match tables be used for UPCs? ❑ T ❑ F	
30. What are the programming requirements to connect a slip printer? (Select all that apply) ❑ SRV 901 ❑ SRV 903 ❑ SRV 905 ❑ SRV 906 ❑ SRV 946 ❑ SRV 950 ❑ SRV 951 ❑ PGM 2230 ❑ PGM 2320 ❑ PGM 2615 ❑ PGM 2690 ❑ PGM 2616	
31. Diagnostic code used to confirm RS232 channel assignments? ❑ SRV 200 ❑ SRV 300 ❑ SRV 400 ❑ SRV 500 ❑ SRV 600 ❑ SRV 700	

ECR LAB 5: ER-A520/A530

Requirements:

- **ER-A520 or 530 Cash Register**
- **ER-A520/530 Programming Manual**
- **ER-A520/530 Dealer Knowledge Book**
- **SRV Key**
- **ER-A520/530 Instruction Manual**
- **ER-A520/530 Service Manual**
- **ER-A520/530 Installation Manual**

Exercises:

	Do Not Write Here
1. What other printers may be interfaced to ER-A520/530? (Select all that apply.) ❑ Remote/Kitchen Printer ❑ Validation Printer ❑ Bill/Slip Printer ❑ Report Printer ❑ On-Line Printer ❑ Drive-Thru Printer	
2. What programming and/or hardware requirements are needed to place more department keys on the keyboard for the ER-A520/530? (Select all that apply) ❑ SRV 950 ❑ PGM 2119 ❑ PGM 2200 ❑ SRV 951 ❑ Key top kit ❑ SRV 971	
3. What utility/software is used for saving/loading the program on the ER-A520/530? (Select all that apply) ❑Logo Utility ❑POS Utility ❑02FD Utility ❑PCLINK ❑SDW	
4. Can you have both receipt and journal tapes with this model? ❑ Yes ❑ No	
5. Which System Preset(s) is needed to permit check-cashing operations? (Select all that apply) ❑ 901 ❑ 902 ❑ 903 ❑ 910 ❑ 914 ❑ 916 ❑ 918 ❑ 919 ❑ 920 ❑ none	
6. Which System Preset(s) is needed for Dept./PLU doubled sized text at the RP? (Select all that apply) ❑ 901 ❑ 902 ❑ 903 ❑ 910 ❑ 914 ❑ 916 ❑ 918 ❑ 919 ❑ 920	
7. Select all available memory options for the ER-A520/530? ❑ UP-S02M ❑ UP-S02MB ❑ UP-S04M ❑ UP-S04MB ❑ ER-03MB ❑ ER-04MB.	

8. What action must be taken, if you wish to allocate a file group that has a sister file group? ❑ Create the sister file group ❑ Erase the sister file group ❑ Increase the sister file ❑ Decrease the sister file group	
9. Which of the following actions may be taken with Type "0" files during memory allocation? (Select all that apply) ❑ Create ❑ Erase ❑ Increase ❑ Decrease	
10. Which of the following actions may be taken with Type "1" files during memory allocation? (Select all that apply) ❑ Create ❑ Erase ❑ Increase ❑ Decrease	
11. Which of the following actions may be taken with Type "2" files during memory allocation? (Select all that apply) ❑ Create ❑ Erase ❑ Increase ❑ Decrease	
12. What does the left column on the 970 report represent? ❑ File # ❑ Group # ❑ Table # ❑ # of Records Allocated ❑ # of Records currently Used	
13. What does the middle column on the 970 report represent? ❑ File # ❑ Group # ❑ Table # ❑ # of Records Allocated ❑ # of Records currently Used	
14. What does the right column on the 970 report represent? ❑ File # ❑ Group # ❑ Table # ❑ # of Records Allocated ❑ # of Records currently Used	
14. Which programming is needed to print TOTALS –ONLY on the journal tape? ❑ PGM 2616 2F ❑ SRV 916C ❑ SRV 913D ❑ Job 5 C, D, E ❑ Job 9	
15. What does the left column on the Free Key reading represent? ❑ Free Key Position # ❑ Function # ❑ Function Name	
16. What does the right column on the Free Key reading represent? ❑ Free Key Position # ❑ Function # ❑ Function Name	

17. What does the middle column on the Free Key reading represent? ❑ Free Key Position # ❑ Function # ❑ Function Name	
18. What does the right column on a ER-A520/530 Direct Key reading represent? ❑ Direct Key # ❑ Key Func.# ❑ Desc. ❑ PLU #, Dept #, Combo Item Link ❑ Menu Level #	
19. What does the left column on a ER-A520/530 Direct Key reading represent? ❑ Direct Key # ❑ Key Func.# ❑ Desc. ❑ PLU #, Dept #, Combo Item Link ❑ Menu Level #	

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Appendix

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PGM/PGM1/PGM2 Mode Job Codes - Availability Varies by Model									
Job Code	**Description**	**ER-A320**	**ER-A330**	**ER-A410**	**ER-A420**	**ER-A440**	**ER-A450T**	**ER-A520**	**ER-A530**
General									
2610	**Date**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
2611	**Time**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
2612	**Register #**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
2613	**Consecutive Transaction #**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
2710	**Tax Table**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
2711	**Tax Rate**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
2715	**Doughnut (Quantity) Tax**	**N**	**N**	**Y**	**Y**	**N**	**Y**	**Y**	**Y**
DEPARTMENT									
1110	**Department Price**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
2110	**Dept. Function Selection** (item validation, SICS/SIF/Normal, bottle return/HASH/normal, **ER-A450T, ER-A410/420 & ER-A520/530** - tare table, scale and amount entry type (open & preset/preset/open/inhibit).	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
2111	**Department Status** (+/- Sign, Food Stamp, tax status 1-4)	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
2112	**Department HALO/LALO**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
2114	**Department Text**	**N**	**N**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
2115	**Department Commission Group**	**N**	**N**	**Y**	**Y**	**N**	**N**	**Y**	**Y**
2116	**Department Group #1-9**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
2118	**Department Print Station PGM**	**N**	**N**	**Y**	**Y**	**N**	**N**	**Y**	**Y**
2119	**Department Direct Key Assignment**	**N**	**N**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
2180	**Department Age Limitation**	**N**	**N**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
2350	**Department Group Text**	**N**	**N**	**N**	**N**	**N**	**N**	**Y**	**Y**
PLU/UPC [(ER-A410/420 and ER-A520/530 - PLU and UPC Job Code, ER-A320, A330, A440 and ER-A450T - PLU Job Code) / ER-A450T UPC Job Code]*	**Notes:** 1. *ER-A410/420 & ER-A520/530 PLU/UPC file **is** shared. **2.** T**he ER-A410/420 and ER-A450T do not have a Dynamic UPC file**. **3.** *ER-A450T PLU, UPC and Dynamic UPC files **are not** shared. **4.** *ER-A320, 330, 440 **PLUs** only.								

PGM/PGM1/PGM2 Mode Job Codes - Availability Varies by Model									
Job Code	**Description**	**ER-A320**	**ER-A330**	**ER-A410**	**ER-A420**	**ER-A440**	**ER-A450T**	**ER-A520**	**ER-A530**
1200 / 1000	**PLU/UPC Department Assignment**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
1210 / 1010	**PLU/UPC Price**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
1211 / 1011	**PLU/UPC Base Quantity** or weight for split-price entries (split pricing)	**N**	**N**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
2210 / 2010	**PLU/UPC Functional Selection - ER-A320/330** (+/- Sign, Food Stamp, Tax Status, Mode (prohibit, subdepartment, PLU, PLU/Subdepartment, Delete), **ER-A440, ER-A450T, ER-A410/420 & ER-A520/530** - price shift entry, tare table, scale and amount entry type (open & preset/preset/open/inhibit), record delete method (X/Z, non-delete, now).	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
2211 / 2011	**PLU/UPC Status** (+/- Sign, Food Stamp, tax status 1-4)	**N**	**N**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
2214 / 2014	**PLU/UPC Text**	**N**	**N**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
2215	**PLU/UPC Commision Group**	**N**	**N**	**Y**	**Y**	**N**	**N**	**Y**	**Y**
2216	**PLU/UPC Group # (1-99)**	**N**	**N**	**N**	**N**	**N**	**N**	**Y**	**Y**
2217 / 2017	**PLU/UPC Mix & Match**	**N**	**N**	**Y**	**Y**	**N**	**Y**	**Y**	**Y**
2218	**PLU/UPC (EAN) Print Station Programming**	**N**	**N**	**Y**	**Y**	**N**	**N**	**Y**	**Y**
2219	**PLU/UPC Direct Key Assignment**	**N**	**N**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
2220 / 2030	**Linked PLU**	**N**	**N**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
2221	**Set PLU** (promo/combo PLU #'s - selling multiple items as a combination eg. Monday Special Sandwich, drink and salad) max. 25 items, ring up under one price for inventory purposes).	**N**	**N**	**Y**	**Y**	**N**	**N**	**Y**	**Y**
2225 / 2020	**Mix & Match Table**	**N**	**N**	**Y**	**Y**	**N**	**Y**	**Y**	**Y**
2280 / 2080	**PLU/UPC Age Limitation**	**N**	**N**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
2351	**PLU Group Text**	**N**	**N**	**N**	**N**	**N**	**N**	**Y**	**Y**
2029	**Delete Period for Non-Accessed UPC Codes**	**N**	**N**	**Y**	**Y**	**N**	**Y**	**Y**	**Y**
2025	**UPC/EAN Code Format Programming**	**N**	**N**	**Y**	**Y**	**N**	**Y**	**Y**	**Y**
PLU Stock Control									
1220	**Increment PLU stock quantities**	**N**	**N**	**Y**	**Y**	**N**	**N**	**Y**	**Y**

PGM/PGM1/PGM2 Mode Job Codes - Availability Varies by Model									
Job Code	Description	ER-A320	ER-A330	ER-A410	ER-A420	ER-A440	ER-A450T	ER-A520	ER-A530
1221	**Decrement PLU current stock quantities**	N	N	Y	Y	N	N	Y	Y
1222	**Entering PLU stock quantities**	N	N	Y	Y	N	N	Y	Y
PLU RANGE PROGRAMMING		N	N	Y	Y	Y	Y	Y	Y
2230	**PLU Code Range Programming** for PLU numbers sub-department mode and department assignment.	N	N	Y	Y	Y	Y	Y	Y
2231	**PLU Functions Range Programming** - ER-A410/420 & ER-A520/530 - tare table, scale and amount entry type (open & preset/preset/open/inhibit).	N	N	Y	Y	Y	Y	Y	Y
2232	**PLU Status Range Programming** (+/- Sign, Food Stamp, tax status 1-4)	N	N	Y	Y	N	N	Y	Y
2235	**PLU Commission Group Range Programming**	N	N	Y	Y	N	N	Y	Y
2236	**PLU Age Limitation Range Programming**	N	N	Y	Y	Y	Y	Y	Y
Dynamic UPC									
2690	**Channel No. for Barcode Reader**	N	N	N	N	N	Y	Y	Y
2691	**Barcode Reader Programming**	N	N	N	N	N	Y	Y	Y
1050	**Dynamic UPC Department Assignment**	N	N	N	N	N	N	Y	Y
1060	**Dynamic UPC Price**	N	N	N	N	N	N	Y	Y
1061	**Dynamic UPC Base Quantity** or weight for split price entries	N	N	N	N	N	N	Y	Y
2060	**Dynamic UPC Functional Programming** (Delete Method, Continment Type PLU, Condiment Entry, Price Shift, Tare Table, Scale, Entry Type)	N	N	N	N	N	N	Y	Y
2061	**Dynamic UPC Functional Programming** (+/- Sign, Food Stamp, Tax)	N	N	N	N	N	N	Y	Y
2064	**Dynamic UPC Item Label (Text)**	N	N	N	N	N	N	Y	Y
2065	**Dynamic UPCCommission Group**	N	N	N	N	N	N	Y	Y
2066	**Dynamic UPC Group Number**	N	N	N	N	N	N	Y	Y
2067	**Dynamic UPC Mix & Match Table**	N	N	N	N	N	N	Y	Y
2068	**Dynamic UPC Print Station Assignment**	N	N	N	N	N	N	Y	Y
2081	**Dynamic UPC Age Limitation**	N	N	N	N	N	N	Y	Y

PGM/PGM1/PGM2 Mode Job Codes - Availability Varies by Model									
Job Code	**Description**	**ER-A320**	**ER-A330**	**ER-A410**	**ER-A420**	**ER-A440**	**ER-A450T**	**ER-A520**	**ER-A530**
MISCELLANEOUS KEYS									
1310	**PGM of Miscellaneous Keys** (minus %, conversion, tip, gratuity)	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
2311	**Miscellaneous Key Programming** (+/- Sign, tax, optional, FS, tax 1-4)	**N**	**N**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
2312	**Limit Amount HALO** (minus, TAX, RA & PO), **ER-A410/420, ER-A440 & ER-A450T & ER-A520/530 - HALO minus, Tax, RA, PO, CA, CHK, CH keys**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
2313	**HALO for %**	**N**	**N**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
2314	**Text Programming for Misc. Keys**	**N**	**N**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
2315	**% item or % subtotal selection**	**N**	**N**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
2316	**Subtotal (-) or Item (-)** Vendor or store (total sale or item) coupon selection	**N**	**N**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
2320	**PGM media keys** (status, validation, tax calculation, drawer open, over-tendering, footer print on receipt, enter of amount tendered…)	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
2321	**HALO amount lockout for check change, check cashing, and cash in drawer** (CID) sentinel	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
2322	**HALO** amount lockout of entry for **Media Keys**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
2326	**Media Key Programming (Tax Delete)**	**N**	**N**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
2328	**Media Key Print Stations Programming**	**N**	**N**	**Y**	**Y**	**N**	**N**	**Y**	**Y**
2334	**Currency Conversion Text Programming**	**N**	**N**	**Y**	**Y**	**N**	**N**	**Y**	**Y**
Server/Cashier/Clerk									
1400	**Server/Cashier Code**	**N**	**N**	**N**	**N**	**N**	**N**	**Y**	**Y**
1414	**Server/Cashier Name**	**N**	**N**	**N**	**N**	**N**	**N**	**Y**	**Y**
2410	**Server/Cashier Functional Programming**	**N**	**N**	**N**	**N**	**N**	**N**	**Y**	**Y**
2411	**GLU/PBLU Code Range Assignment**	**N**	**N**	**N**	**N**	**N**	**N**	**Y**	**Y**
2413	**Net Sales % Rate**	**N**	**N**	**N**	**N**	**N**	**N**	**Y**	**Y**
1500	**Cashier Code**	**N**	**N**	**Y**	**Y**	**Y**	**Y**	**N**	**N**

PGM/PGM1/PGM2 Mode Job Codes - Availability Varies by Model									
Job Code	Description	ER-A320	ER-A330	ER-A410	ER-A420	ER-A440	ER-A450T	ER-A520	ER-A530
1514	**Cashier Name Programming**	N	N	Y	Y	Y	Y	N	N
2510	**Cashier Drawer Assignment**	Y	Y	Y	Y	Y	Y	N	N
2519	**Cashier Password**	Y	Y	N	N	N	N	N	N
OTHER PROGRAMMING									
2614	**Logo Text Programming**	N	N	Y	Y	Y	Y	Y	Y
2615	**Slip Printer Parameters Programming** (line feed, validation and tray subtotal printing)	N	N	Y	Y	Y	Y	Y	Y
2616	**Programming for Optional Feature Selection** (validation, character key, PLU price shift, No sale, coupon key, refund, voids, zero skip, share % printing, PLU level shift system etc.)	Y	Y	Y	Y	Y	Y	Y	Y
2617	**Till Timer Interval**	N	N	Y	Y	Y	Y	Y	Y
2618	**Scale Tare Table Programming**	N	N	Y	Y	N	Y	Y	Y
Time Range for Hourly Report									
2619	**Time Range for Hourly Report** (minutes and starting time)	N	N	Y	Y	Y	Y	Y	Y
Stack Report									
2620	**Stack report 1** (selection of reports to be printed in the stacked report sequence 1 & 2); allows multiple X1/Z1, X2/Z2 reports to be printed in sequence with only a single request.	N	N	Y	Y	Y	Y	Y	Y
2621	**Stack report 2** (selection of reports to be printed in the stacked report sequence 1 & 2); allows multiple X1/Z1, X2/Z2 reports to be printed in sequence with only a single request.	N	N	N	N	N	N	Y	Y
Secret Codes									
2630	**PGM1 Mode** - Program secret codes to control access to register modes	N	N	Y	Y	Y	Y	Y	Y
2631	**X1/Z1 Mode**	N	N	Y	Y	Y	Y	Y	Y
2632	**X2/Z2 Mode**	N	N	Y	Y	Y	Y	Y	Y
Message Programming									

PGM/PGM1/PGM2 Mode Job Codes - Availability Varies by Model									
Job Code	**Description**	**ER-A320**	**ER-A330**	**ER-A410**	**ER-A420**	**ER-A440**	**ER-A450T**	**ER-A520**	**ER-A530**
2641	**Editing Guidance/Error Messages Programming**	**N**	**N**	**Y**	**Y**	**N**	**N**	**Y**	**Y**
2642	**Validation Text Programming**	**N**	**N**	**Y**	**Y**	**N**	**Y**	**Y**	**Y**
2643	**Slip Printer Logo Message Programming**	**N**	**N**	**Y**	**Y**	**N**	**Y**	**Y**	**Y**
2689	**Power Save Mode**	**N**	**N**	**Y**	**Y**	**N**	**N**	**Y**	**Y**
GLU/PBLU									
2810	**Available GLU/PBLU Codes**	**N**	**N**	**Y**	**Y**	**N**	**Y**	**Y**	**Y**
Auto Key – pgm done in X2/Z2									
2900	**AUTO Key Programming** (frequently performed transaction & operations can be made simpler by programming the sequence in an auto key	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
TRAINING MODE									
2910	Activation of training mode	**Y**	**Y**	**N**	**N**	**Y**	**Y**	**N**	**N**
2911	Cancellation of training mode	**Y**	**Y**	**N**	**N**	**Y**	**Y**	**N**	**N**
***N => See SRV Mode Programming**									
Printer Density									
2990	Functional Programming for the Printer	**N**	**N**	**N**	**N**	**N**	**Y**	**Y**	**Y**
Online		**N**	**N**						
2690	Channel No. for Online Communicaiton	**N**	**N**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
6110	Online Terminal No.	**N**	**N**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
6111	**Online Transmission Form (half/full duplex)**	**N**	**N**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
6112	**Online Function Selectons**	**N**	**N**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
6113	**Online Start/End Code**	**N**	**N**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
6115	**Onlne Time Out**	**N**	**N**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
6212	**Print Data Sending Baud Rate**	**N**	**N**	**N**	**N**	**Y**	**Y**	**Y**	**Y**
6213	**Print Data Send Start/End Code**	**N**	**N**	**N**	**N**	**Y**	**Y**	**Y**	**Y**
6220	**Print Data Sending**	**N**	**N**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**
Remote Printing									
2690	**Channel No. for Remote Printer**	**N**	**N**	**Y**	**Y**	**N**	**N**	**Y**	**Y**

PGM/PGM1/PGM2 Mode Job Codes - Availability Varies by Model									
Job Code	Description	ER-A320	ER-A330	ER-A410	ER-A420	ER-A440	ER-A450T	ER-A520	ER-A530
2692	Remoter Printer Programming	N	N	Y	Y	N	N	Y	Y
3653	Back Up Printer Programming	N	N	Y	Y	N	N	Y	Y
3654	Remoter Printer Name	N	N	Y	Y	N	N	Y	Y
3655	Remote Printer Format Programming	N	N	Y	Y	N	N	Y	Y
3656	Chit Receipt Print Format Programming	N	N	Y	Y	N	N	Y	Y
2094	Dynamic UPC Item Label for Remote Printer	N	N	N	N	N	N	Y	Y
CAT (Credit Authorization Terminal)									
2690	Channel No. for CAT	N	N	Y	Y	N	N	Y	Y
7110	Phone No. for Dial Out	N	N	Y	Y	N	N	Y	Y
7111	Password for Dial Out	N	N	Y	Y	N	N	Y	Y
7112	CAT Functional Selection	N	N	Y	Y	N	N	Y	Y
7113	Time Out 1	N	N	Y	Y	N	N	Y	Y
7114	Time Out 2	N	N	Y	Y	N	N	Y	Y
7115	Time Out 3	N	N	Y	Y	N	N	Y	Y
7116	Allow Cash Tip Rate Authorization	N	N	N	N	N	N	Y	Y
7117	Modem Initialization	N	N	Y	Y	N	N	Y	Y
7118	Initiates the Dial Out Function	N	N	Y	Y	N	N	Y	Y
7119	Initiates the Dial In Function	N	N	Y	Y	N	N	Y	Y
Scale									
2690	Channel No. for Scale	N	N	Y	Y	N	Y	Y	Y
Coin Dispenser									
2690	Channel No. for Coin Dispenser	N	N	Y	Y	N	N	Y	Y
CVM									
2690	Channel No. for CVM	N	N	N	N	N	N	Y	Y
2158	CVM Control Character	N	N	N	N	N	N	Y	Y
2059	Dynamic UPC CVM Control Character	N	N	N	N	N	N	Y	Y

Research/Escalation Procedures - Sharp ER-A and UP Models

1. Please collect the following information prior to reporting or escalating a call involving an ECR/POS application and/or programming issue. This will minimize the number of callbacks.

Customer information

Account #	**Date:**	**Tech:**
Dealer Name:		**Phone Number:**
City:	**State:**	**Zip:**
Fax Number:	**E-Mail:**	**E-Quality #**
Problem:		
Error Message:		

System Information:

Model/Software:

☐ ER-A242 ☐ ER-A320 ☐ ER-A330 ☐ ER-A410 ☐ ER-A420
☐ ER-A440 ☐ ER-A450T ☐ ER-A520 ☐ ER-A530

☐ UP-600 ☐ UP-700 ☐ UP-810F ☐ UP-820F ☐ UP-820N
☐ UP-3500 ☐ UP-X300

☐ UP-X500 ☐ UP-V9900 ☐ UP-V990L ☐ UP-V9900V

☐ SDW ☐ ER-02FD ☐ POS Utility/Tool ☐ Logo Utility ☐ PC Link

☐ Other: _____

Configuration Information:

ROM/Software Version:

Embedded ECR/POS Systems:

1. From PGM2 Mode
2. 959 @/FOR CASH or
3. 959 X/TIME

Number of Terminals:

☐ Standalone
☐ IRC

Sharp Accessories:

☐ Optional Memory _____
☐ Card Reader _____
☐ Integrated Display_____
☐ Scale _____
☐ Cash Drawer _____
☐ VivoPay™_____

Third Party Interface/Options:

☐ Account Balance Interface ____
_____
☐ Drink Dispenser _____
_____
☐ CAT/EFT _____

☐ Coin Dispenser _____
☐ Printer(s) _____
_____
_____
☐ CVM/KVM _____
_____
☐ Scale _____
_____
☐ Barcode Reader _____
_____
☐ Online/PC _____
☐ IC Card Reader _____
☐ Other _____

Major Account:

☐ Dunkin' Brands®
☐ Philly's Best
☐ Blimpie®
☐ AAFES®
☐ ARAMARK
☐ Other:
_____
_____
_____

Terminal #1	T# Terminal Number	C# Channel Number
Receipt Printer		
Bill Printer		
Journal Printer		
Kitchen Printer #1		
Kitchen Printer #2		
Kitchen Printer #3		
CAT #2		
Other		

Repeat for each Terminal.

Terminal #2	T# Terminal Number	C# Channel Number
Receipt Printer		
Bill Printer		
Journal Printer		
Kitchen Printer #1		
Kitchen Printer #2		
Kitchen Printer #3		
CAT #2		
Other		

Repeat for each Terminal.

2. As required, collect or have the caller e-mail or fax the following readings and/or programs.

Reports	Job # / Reading Menu Option	Description/Comments
SRV Mode	**900, 970, 959** / (System Preset, File, and SSP)	System Preset, File (Memory Allocation), and SSP Readings
	950/ Free Key	Free Key Assignment Reading
	951 Direct Key	ER-A POS
	Device Assign/Config	Systems POS
PGM2 Mode	**959**	ROM Version Reading
	2119 Direct Key	Direct Key Assignment Reading
	1200/1100 PLU/Dept	PLU/Dept Reading
	1300 Function Preset and Media	13xx, 23xx, Optional Settings, Media, & Function Reading
	2600 – Functional Preset	26xx, Optional Settings, Channel Assign for ER-A Products
	2700 – Tax	Tax Reading
	1400 – Personnel	Servers, Employee, Job Location Readings
	2640 – Text	Function Text Readings
	2900 – Auto Keys	Auto Key Readings
1. As required, obtain copies of receipts, journal tapes, KP printouts, and X/Z reports.		
2. Copy of Program: If all else fails, obtain a copy of the program for further investigation.		

Troubleshooting

At the office, try to duplicate on a Master Reset System. This will help to isolate the issue. (e.g. Out of box versus program data issue)

DOCUMENTATION - varies by model

1	Sharp Instruction, Service, Programming and Parts manuals and Procedures Guide are available on www.sharp-pos.com – Technical Manuals and Legacy Technical Manuals links.

DEMO TEMPLATES - varies by model

1	Demo templates are available on www.sharp-pos.com – Document/Download Library - Software link.

Acronym	Definition
BOGO	Buy One Get One
CAT	Credit Card Authorization Terminal
CID	Cash in Drawer
EFT	Electronic Funds Transfer
EOD	End of Day
EOS	End of Shift
EOW	End of Week
EPAY	Electronic Payment
FAT	File Allocation Table
GLU	Guest Lookup
HALO	High Amount Lock Out
IRC	Inter Register Communication/Inline Register Communication
LALO	Low Amount Lock Out
PBLU	Previous Balance Lookup
PGM	Program
PLU	Price Lookup
RAM	Random Access Memory
ROM	Read Only Memory
RP	Remote Printer
RS-232C	Recommended Standard 232
SICS	Single Item Cash Sale
SIF	Single Item Finalize
SRN	Sharp Retail Network
UPC	Universal Product Code

Term	Definition
Application Program	This is the program for a particular customer
Auto Key Function	Auto keys are used to automate or assign operations or functions to a single key. Auto keys allow for programming of several keys to a single key. For example, a $20.00 speed tender, a Z Report or Tax Delete operation.
BOGO	Buy One Get One promotion.
Cash In Drawer (CID)	This amount is the "amount" of cash that should be in the drawer. It reflects paid outs, refunds, etc.
Charge Posting/Customer Management	This is an account record, such as a hotel / motel function or layaway which shows the current balance of an account. It reflects the charges and payments received to the account.
Compulsory	This refers to a "Mandatory" function or procedure. E.g. "Compulsory drawer operation" means that the drawer has to be "Closed" for the machine to operate.
Condiment Tables	The "condiment entry" is intended to guide the operator in making menu entries that require special instructions. E.g. chicken nuggets may be linked to a condiment table that will prompt for a choice of toppings (ranch, bleu cheese, honey mustard, none).
Department	This is a section of memory where the sales of items are stored. This total is updated on the fly. To see the amount of sales, an "X" (Read) or a "Z" (Zero out) report has to be taken. This category is named by the customer in PGM programming. E.g. "MEAT", "PRODUCE", "BEER", "CIGARETTES".
Department Group	This is a section of memory where the departments are grouped and stored for reporting purposes. This total is updated on the fly. To see the amount of sales, an "X" (Read) or a "Z" (Zero out) report has to be taken.
FAT	File Allocation Table: This is how we distribute the memory in a Sharp register where the memory is allocable. This allows "Files" to be different sizes depending on need. This allows better use of the memory available.
GLU	Guest Look Up: This differs from a previous balance look up in that the GLU file holds an itemization of all registrations on the balance, while PBLU retains only the amount owed at the time of service.
IRC	Inline or Inter-Register Communication: IRC is essentially a Local Area Network (LAN) consisting of Point Of Sale terminals, remote printers, a hub or switch, and possibly a personal computer. An IRC system allows the manager to exercise centralized control over the satellite terminals through the master terminal. It is used to consolidate totals from one or more registers, to download programming, and sending information to a remote printer.
Loop Reset	This is a service reset.

Master	This is the controlling unit in an IRC system. The master will have generally the most memory of the units in the system. It is used for real-time transmission, to consolidate totals from one or more registers, to download programming, sending information to a remote printer, and consolidation of sales data for further processing. For example, a back office application.
Master Reset	This operation will reset all the totals in the machine. There are three (3) types of master resets. **MRS-1** (Master Reset-1)**:** Clears the entire available memory and restores the initial factory default values for the keyboard and PGM-mode programming. **MRS-2** (Master Reset-2)**:** Clears the entire available memory, allows free assignment of the ten-key pad, eliminates the Direct Department and PLU assignments, and restores the initial factory default values for all other PGM-Mode programming. **MRS-3** (Master Reset-3)**:** Clears the entire available memory, allows the input of the product serial number and the assignment of the ten-keypad, eliminates the Direct Department and PLU assignments, and restores the initial factory default values for all other PGM-Mode programming.
Mode Switch (Mode Lock)	This is the control lock of the register. Determines the "Mode" of operation of the register.
Option	A device or function that can be added to a register. It is usually not found on the unit out of the box.
Patch	A "Patch" is a service function that allows the program in a ROM to be modified without replacing the chip. It is properly called a SSP. The first step in a patch is the number of the patch. Leading zeros are input as part of the patch step. Usually, when several patches are out for a unit, then a new version ROM will be made available. This new ROM will incorporate the previous patches issued.
PBLU	Previous Balance Look Up: This is a guest check system. The guest check will show the current balance of items ordered, until the check is "serviced". It may or may not include tax and a gratuity.
PLU	Price Look Up: a PLU is a section of memory where an item is assigned a number, a name, and a preset price. The machine will locate this item by number and add the amount to the sale. The price does not have to be input through the keyboard during a sale.
PLU Groups	This is a section of memory where the **PLUs** are grouped and stored for reporting purposed. This total is updated on the fly. To see the amount of sales, an "X" (Read) or a "Z" (Zero out) report has to be taken.
PLU (Linked)	A Link PLU is used when more than one and up to five items is registered with one key depression. Each unit price is accumulative for those PLU items associated to the link type operation and are printed with the individual unit prices. For example, Bottle Deposits, specials or messages.

PLU Menu Key	A PLU Menu key is used to group similar items together under one key for sales registration.
Program Reading	A printout on the receipt printer of various PGM1, PGM2 or SRV program reading. For example, a department program reading.
Program Reset	This is a procedure used to re-initialize the program with out destroying any of the programming. • A program reset unlocks the POS terminal when an operation lock up occurred. • A program reset DOES NOT clear the program, sales totals or GTs. • A program reset is mandatory after installing an RS232 peripheral device, an SSP, changing a System Preset Job Code or Memory Allocation File Group. • A program reset must NOT be performed in an IRC configuration, unless a CLOSE STORE in PGM2 Mode is executed.
UPC	Universal Product Code: This is the bar code you see on packages used to identify the product. This code can be programmed into the registers memory with a name and price. When this code is entered into the machine through the keyboard, or by a scanner, the price will be added to the sale.
RAM	Random Access Memory: This is the memory where the general programming is stored. This information changes frequently.
Ram Clear	This refers to a “Master reset” operation.
Range	This refers to a starting and ending point for a report. This is used in Department, PLU, and UPC reports to read a section of the information without taking a full report.
Remote Drawer	Refers to a drawer not mounted to the register itself.
Read Only Memory (ROM)	This is the chip where the basic machine structure is stored. This is not changeable.
RP	Refers to a “Remote Printer”. Can be used on an IRC system or can refer to a RS-232C printer
RS-232C	This is an industry standard for serial communication between a host and a peripheral unit. It usually utilizes a D-Sub 9-pin connector, Modular Jack RJ45 8-pin connector or USB connector and in Sharp systems depending on the number of RS-232 peripherals an optional RS-232 board may be required.
Satellite	This is a POS that has no control over IRC functionality. It only participates in an IRC system. It usually has the minimum memory to function as needed. The reporting, consolidation and preset data downloading will be done at the master.

Sentinel	This is a function that has a programmable limit as to the maximum amount of money to be kept in the drawer. When this amount is reached, an indicator will light in the display. This signals the operator or manager to make a “Paid Out” or “Drop” to decrease the amount of “CASH” in the drawer.
Service Reset	This is a program reset.
SICS	Single Item Cash Sale: This is a function that allows a single key operation to ring in an amount to a department, add the tax if applicable, and open the drawer.
SIF	Single Item finalize: This is a function that allows one key, no matter when it is depressed in a transaction, to total out (FINALIZE) the sale.
Slip	This refers to a “Slip printer”. This is the printer used to print the information on the guest check, or “Slip.”
SRN	Sharp Retail Network: Basically the same as IRC. The two terms are interchangeable.
Standalone	This unit will have the files needed to function independently. There is no IRC functionality.
Stacked Report	The Stack Report printing function allows for multiple X/Z reports to be printed in sequence by a single request.
Sub-department	A sub-department is a PLU, without a preset price. If you enter a price, that price becomes the highest amount that can be entered, (HALO). The sub- department price will be entered through the keyboard during the sale.
Tare Weight	This is the weight of an empty container or item that will be used to hold goods that are being weighed to determine cost.
Tax Percentage Rate	This rate is applied to whole dollar amounts.
Tax Table	This is a part of the memory programming used to calculate state and local taxes that apply to the sale of items. This is done by entering in the “Breakpoints” of the table established by the state, county, and / or city.
Term Totals (Periodic)	Some of the registers made by Sharp have the option in programming to have “Term” totals. This is a summary of the daily “Z” reports. They can be cleared at the end of the week (WEEKLY) or at the end of the month (MONTHLY).

Credit Card	
Term	**Definition**
Credit Card Authorization (CAT)	Also known as EFT (Electronic Funds Transfer) and EPAY (Electronic Payment), Credit Card Authorization (CAT) involves processing and authorization of Credit Card, Debit Card, Check (w/o MICR), Gift Card and EBT (Electronic Benefits Transfer) transactions. Available processing and authorizations vary by ECR/POS model and Merchant Service Provider.
Network Programming	Involves the Merchant Service Provider/Payment Processor set up information stored within the CAT, EFT or EPAY device.
Initialization	Used to synchronize/initialize the CAT, EFT or EPAY device upon installation, after setting changes at the ECR/POS system and for unexplained occurrences when the CAT, EFT, or EPAY device ceases to function normally.
Batch Execution	Depending on the type of network used for CAT, EFT or EPAY authorization (Host or Terminal Based), there are four (4) batch commands supported: (1) Open Batch is required to process CAT, EFT or EPAY transactions and should be a part of open store procedures. (2) Close Batch is used to settle the credit card transactions at the end of day. (3) Clear Batch is used to erase all current batch transactions when batch settlement can not be achieved. (4) Change Batch No. is used to change the existing batch number when replacement (loaner) units are installed and/ or when there is a conflict at the processor and network advises you to change the batch number.
Reports	Depending on the type of network used for CAT, EFT or EPAY authorization (Host or Terminal Based), there are four (4) different reports supported: (1) Local Summary report is used to indicate the summary information pertaining to each applicable transaction processed. (2) Local Inquiry report retrieves each record from CAT, EFT or EPAY device in detail (ex: Date, time, etc.). (3) Local Total report summarizes the CAT, EFT or EPAY device's totalizers by the type of credit card. (4) Batch Status report is used to determine the batch (Open or Close) status at that specific time the report is initiated.