SHARP

Dealer Knowledge Book

ER-A520 ER-A530

MODEL ER-A520 & ER-A530

Dealer Knowledge Book

Version 4

Contents

TRADEMARKS

DISCLAIMER

The information contained in this document is furnished without assurance of peripheral/software compatibility between Sharp POS products and the products of the suppliers listed.

Product specifications change without notification (both Sharp and other supplier's products).

Sharp POS does not undertake to update materials. It is the dealer's responsibility to keep current with all technical issues associated with these products.

NOTICE TO USERS

This manual is intended to assist authorized Sharp dealers, with learning and understanding how to the install and provide support for the ER-A520 and ER-A530. Please read each section carefully as it will provide helpful hints and recommendations that will make your time more efficient and produce time saving results. This manual is not intended for end user customers of authorized Sharp dealers.

Section-1: System Presets

Section-1: SRV Mode Programming

SRV-mode programmings consist of service programming jobs, which define the ER-A520/ER-A530 system capabilities. The service program settings are printed on the Receipt / Journal printer.

1. SRV-mode Program Readings:

List of SRV-mode Program Reports:

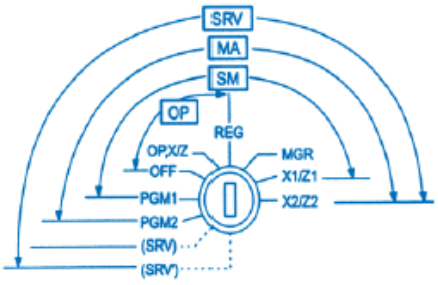
SRV-Mode Related Jobs: (X = indication of availability)	
Job No.	Description
900	System Presets / Memory Allocation
950	Free Key – Function keys
951	Keyboard Layout – Dept & PLU Link Key Position
990	Special Service Patch Data

2. Entering the SRV-Mode

To enter SRV-mode programming

Procedure:

1) Place the mode switch to the SRV' position
2) Place the AC power cord into the wall outlet



CAUTION:
Never enter the SRV mode in the middle of a transaction – severe damage may result to the sales totals.

Section-2: Prior to Beginning

The ER-A520/A530 POS terminal should be initialized by executing a master reset. The Program and Master Reset operations are available in one of the following three types:

Type	Description
Program Reset	Initializes the hardware and resident program without clearing memory and totalizers
Master Reset-1	Initializes the hardware and clears the entire memory – restoring factory initial values
Master-Reset-2	Initializes the hardware and clears the entire memory – restoring factory initial values and enabling free key layout of the ER-A520/A530 "fixed keys"

1. Master Resets:

The Master Reset procedures are primarily performed during installation and setup of the ER-A520 and ER-A530 model cash registers. Each has an important role when installing the equipment.

Follow one the below procedures when you wish to perform a Master Reset.

1. General Rule:

Master Reset: Clears the entire memory and resumes initial values (default program).
Program Reset: Resumes the initial program without clearing memory.

There are 2 methods for performing a Master Reset operation.

1) Master Reset-1: Normal Master Reset (out of box setup).
   Clears the entire memory and resumes initial values.

2) Master Reset-2: Enables the ability to change the layout fixed keys in addition to executing the Master Reset-1.

Fixed Keys: [0] [1] [2] [3] [4] [5] [6] [7] [8] [9] [0] [00] [000] [CL] [.] [@/FOR] [SBTL] [CA/AT]

IMPORTANT NOTES:

During the Master Reset initialization, the following events should be noted.

1) ***MRS*** is displayed on the upper line of the operator display.
2) MASTER RESET*** is printed on the journal tape.
3) The buzzer will beep 3-times.

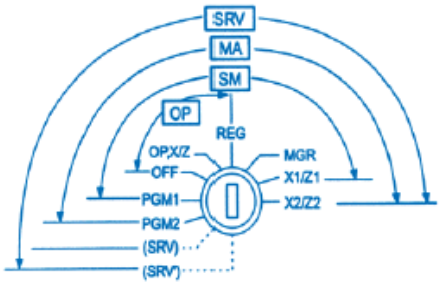
2. Master Reset-1 Operations:

There are two possible procedures to use when performing a Master Reset-1 operation.

Follow the below procedure when you wish to perform a program-reset (initialization).

Procedure A:

1) Place the mode switch to the SRV' position.
2) Place the AC power cord into the wall outlet.
3) Depress and hold the [JOURNAL] feed key.
4) Turn the mode switch from SRV' -- > SRV position.



Procedure B:

1) Remove the AC power cord from the outlet.
2) Place the mode switch to the SRV position.
3) Depress and hold the [JOURNAL] feed key.
4) Replace the AC power cord into the wall outlet.

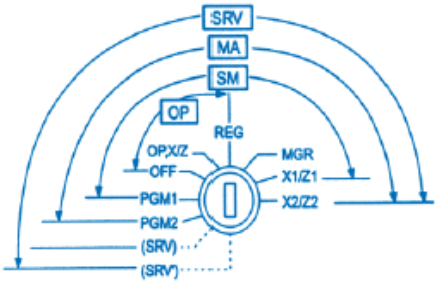
Note:
***Procedure A must be used to reset the hardware. Procedure B cannot reset the hardware.

Master Reset-2 Operations:

There are two possible procedures to use in performing a Master Reset-2 operation.

Procedure A:

1) Place the mode switch to the SRV' position.
2) Place the AC power cord into the wall outlet.
3) Depress and hold the [JOURNAL] & [RECEIPT] feed keys.
4) Turn the mode switch from SRV' -- > SRV position.



***The operator display will show the fixed function keys (starting with the [0] key).

5) Program the Fixed Keys by depressing the desired location(s).
6) Once the [CA/AT] key is placed on the keyboard, ***MRS*** will be displayed and the reset process will continued as outlined in Master Reset-1.

Procedure B:

1) Remove the AC power cord from the outlet.
2) Place the mode switch to the SRV position.
3) Depress and hold the [JOURNAL] & [RECEIPT] feed keys.
4) Replace the AC power cord into the wall outlet.

***The operator display will show the fixed function keys (starting with the [0] key).

5) Program the Fixed Keys by depressing the desired location(s).
6) Once the [CA/AT] key is placed on the keyboard, ***MRS*** will be displayed and the reset process will continued as outlined in Master Reset-1.

Note:
***Procedure A must be used to reset the hardware. Procedure B cannot reset the hardware.

2. Program Reset:

The Program Reset (sometimes referred to as a "Service Reset") may be achieved with the [SRV] key (part no. LKGiM7113RCZZ).

1. General Rule:

A Program Reset should be performed under the following general conditions:

1) After the memory allocation setting has been modified.
2) When a device assignment has been modified in COM port assignment.

IMPORTANT NOTE:
During the Program Reset operation, PROGRAM RESET*** is printed on the journal tape.

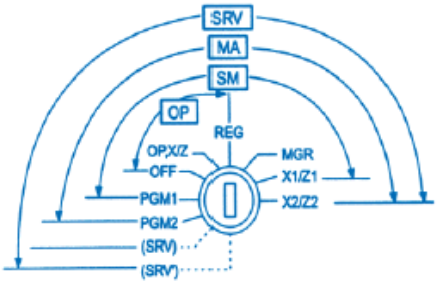
Follow the below procedure when you wish to perform a program-reset (initialization).

2. Procedures:

Based on the SRV Job#926-B setting, there may be 3 possible procedures in performing a Program Reset.

Procedure- A:

1) Place the mode switch to the SRV' position.
2) Place the AC power cord into the wall outlet.
3) Turn the mode switch from SRV' -- > SRV position.



Procedure- B:

1) Remove the AC power cord from the outlet.
2) Place the mode switch to the SRV' position.
3) Replace the AC power cord into the wall outlet.
4) Turn the mode switch clockwise to the SRV position (7 o'clock).

Procedure- C: (based on SRV Job#926-B)

1) Remove the AC power cord from the outlet.
2) Place the mode key in the PGM2 position.
3) Depress and hold the [RECEIPT] & [JOURNAL] feed keys.
4) Replace the AC power cord into the wall outlet while holding the keys.

Note:
***Procedure A must be used to reset the hardware. Procedures B and C cannot reset the hardware.

CAUTION:
Never enter the SRV mode in the middle of a transaction – severe damage may result to the sales totals.

3. Recommended Set Up Procedures

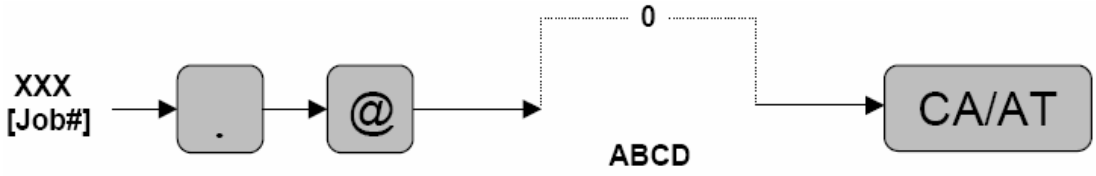
To minimize unnecessary steps when installing the ER-A520 and ER-A530 model cash register, please perform Job#971 (Memory Allocation), Job#900s (Service Parameters), Job#950 (Free Key), Job#951 (Keyboard Link Position) followed by "All" PGM2 settings.

The below chart represents the SRV Job# Reference Descriptions.

SRV-Mode Related Jobs: (X = indication of availability)	
Job No.	Description
901 – 929 980	System Parameters
930 - 939	Report Counters Z-Counters
942 – 943 969	GT Totalizers
944	PGM2 Mode Secret Code
948	Training Cashier Assignment
949	Training Mode Title Programming
950	Keyboard Layout – Function keys
951	Keyboard – Dept & PLU Keys
971	Memory File Allocation Programming
985	Euro Symbol Programming for the TM-295 Slip Printer
986	Domestic Currency Symbol Programming
987	Language Selection for Text Print
989	Resetting of all Counters and Totalizers
990	Special Service Patch
996, 998	Program Data Send/Receive Function

4. Service Mode Programming

Service mode programming is usually performed during the installation process. To change the System Preset settings, the following key operation is required.



Section-3: System Preset Job No.

System Preset: 901

Bit	Description	Data	MRS Defaults	
			A520	A530
A		---	0	0
	Fixed = 0 (Not Used)	---		

	Enter SUM of Selection ----^			
B	Tax System: Auto Tax 1-4 & Manual Tax System / Canadian Tax (Type 1-10) / Canadian Tax (Type-11: VAT-on-VAT)	0/6/7	0	0
	Enter SUM of Selection ----^			
C	Tax Rounding System: - Singapore / Normal	8/0	0	0
	Enter SUM of Selection ----^			
D	Tab Setting: - Decimal setting for display and print	3/2/1/0	2	2
	Enter SUM of Selection ----^			

NOTE:

- 901-C: The Singapore Tax Rounding method will round the tax to the nearest nickel.

System Preset: 902

Bit	Description	Data	MRS Defaults	
			A520	A530
A	----	---	0	0
	----	---		

	Enter SUM of Selection ----^			
B	----	---	0	0
	----	---		
	Fixed = 0 (Not Used)	---		
	Enter SUM of Selection ----^			
C	----	---	0	0

	----	---		
	Enter SUM of Selection ----^			
D	----	---	0	0
	----	---		
	----	---		
	Enter SUM of Selection ----^			

NOTE:

System Preset: 903

Bit	Description	Data	MRS Defaults	
			A520	A530
A	ECR Data Copy (SIO) All RAM data Send/Receive Baud Rate (bps): 38400/19200/9600	6/5/4	5	5
	Enter SUM of Selection ----^			
B	----	---	0	0
	Measure of Weight for Scale Entries Kg/Lb	2/0		
	----	---		
	Enter SUM of Selection ----^			
C		---	0	0
	Tare Weight Entry is allowed Yes/No	2/0		
	Scale Weight System 1 Int. & 3 Dec./2 Int. & 2 Dec.	1/0		
	Enter SUM of Selection ----^			
D	----	---	0	0
	Food Stamp System:			
	Food Stamp Forgiveness / Tax Payable in Food Stamps	3/2/1/0		
	Tax in Not Payable in Food Stamps / No Food Stamps			
	----	---		
	Enter SUM of Selection ----^			

NOTE:

- 903-A is applicable for the 02FD.exe utility (not online communications)
- Manual Scale Entry allowed (Version-C).
- To enabled Scale entries 906-D must be set = 1

System Preset: 904

Bit	Description	Data	MRS Defaults	
			A520	A530
A	Date is printed No/Yes	4/0	0	0
	Fraction treatment at gasoline (OIL) q'ty calculation Rounding/Raising to unit/Disregard	---		
	----	---		
	Enter SUM of Selection ----^			
B	Consecutive No. is printed No/Yes	4/0	0	0
	Decimal point position at gasoline (OIL) q'ty calculation	---		
	----	---		
	Enter SUM of Selection ----^			
C	Fraction treatment at gasoline discount Rounding/Raising to unit/Disregard	0/1/2	0	0
	----	---		
	----	---		
	Enter SUM of Selection ----^			
D	TAB for the gasoline unit price 0.00/0.000 Disable/Enable	0/1	0	0
	Gasoline function Disable/Enable	2/3		
	----	---		
	Enter SUM of Selection ----^			

NOTE:

- 904-A&B applies to Receipts, Slip, and Kitchen Print chits

System Preset: 905

Bit	Description		Data	MRS Defaults	
				A520	A530
A	Tax4 Subtotal is printed on Trans. Reports	No/Yes	4/0	0	0
	Gross Tax4 & Refund Tax4 Totals are printed on Trans. Reports	No/Yes	2/0		
	Net Tax4 Total is printed on Trans. Reports	No/Yes	1/0		
	Enter SUM of Selection ----^				
B	Tax is printed when the Taxable Subtotal = $0.00	Yes/No	4/0	0	0
	Tax is printed when GST is VAT	No/Yes	2/0		
	Tax is printed when Tax = $0.00	No/Yes	1/0		
	Enter SUM of Selection ----^				
C	GST Exempt is printed on Trans. Reports	No/Yes	4/0	0	0
		----	---		
		----	----		
	Enter SUM of Selection ----^				
D	Canadian Tax System: Type10/Type9/Type8/Type7/Type6/Type5/Type4/Type3/Type2/Type1		9/8/7/6/5/4/3/2/1/0	5	5
	Enter SUM of Selection ----^				

NOTE:

- 905-C is related to 905-D the Canadian Tax System

System Preset: 906

Bit	Description		Data	MRS Defaults	
				A520	A530
A	Dept. & PLU/UPC Codes are printed	Yes/No	4/0	0	0
	PLU/UPC (EAN) Stock System: Entry is Inhibited/Error Message and Operation continues/Allowed		2/1/0		
	Enter SUM of Selection ----^				
B	Bottle Return Function is Enabled	Yes/No	4/0	0	0
	Hash Dept. is Enabled	Yes/No	2/0		
	----		---		
	Enter SUM of Selection ----^				
C	Multiplication System: Split-Price/Successive Multiplication/Multiplication		2/1/0	2	2
	Enter SUM of Selection ----^				
D	PLU/UPC (EAN) Price Look Up at Refund Entry	No/Yes	4/0	0	0
	Presetting of the Consecutive No. is Enabled	No/Yes	2/0		
	Fractional Qty System is enabled (3 decimal places)	Yes/No	1/0		
	Enter SUM of Selection ----^				

NOTE:

- 906-D must not be changed until after totalizers are reset (Qty 0 → 0.000 & vice-versus).
- Fractional entries are disabled when a SCALE is enabled in PGM2 Job #2690 programming.
- 906-D must be set = 1 to enable “SCALE”.

System Preset: 907

Bit	Description		Data	MRS Defaults	
				A520	A530
A	----		---	0	0
	Fixed = 0		---		
	----		---		
	Enter SUM of Selection ----^				
B	----		---	0	0
	UPC (EAN) Code Printing on Journal	No/Yes	2/0		
	UPC (EAN) Code Printing on Receipt	No/Yes	1/0		
	Enter SUM of Selection ----^				
C	X Report is Enforced prior to Ind./All Cashier CCD	Yes/No	4/0	1	1
	----		2/0		
	Minus Dept. and PLU/UPC (EAN) items are Enabled	Yes/No	1/0		
	Enter SUM of Selection ----^				
D	CCD Compulsion on ALL Server		0	0	0
	For Individual Server CCD		1		
	Non-Compulsory CCD		2		
	Enter SUM of Selection ----^				

NOTE:

- To enable Coupon PLU items 907-D must be set = 1

System Preset: 908

Bit	Description		Data	MRS Defaults	
				A520	A530
A	GT1 is printed on the Trans.-Z Report	No/Yes	4/0	0	0
	GT2 is printed on the Trans.-Z Report	No/Yes	2/0		
	GT3 is printed on the Trans.-Z Report	No/Yes	1/0		
	Enter SUM of Selection ----^				
B	GT1 is printed on the Trans.-X Report	Yes/No	4/0	0	0
	GT2 is printed on the Trans.-X Report	Yes/No	2/0		
	GT3 is printed on the Trans.-X Report	Yes/No	1/0		
	Enter SUM of Selection ----^				
C	VOID-mode operations affect the Hourly Report	Yes/No	4/0	0	0
	X//Z1 Reports may taken in X2/Z2 Mode	No/Yes	2/0		
	Consecutive No. is Reset upon a Trans.-Z Report	Yes/No	1/0		
	Enter SUM of Selection ----^				
D	X/Z Report Printing:	Journal only/Receipt & Journal	4/0	0	0
	----		---		
	Trans.-Z1 Report resets the GT	Yes/No	1/0		
	Enter SUM of Selection ----^				

NOTE:

- 908-D: The X/Z Report printing option does not apply to Individual Cashier Report

System Preset: 909

Bit	Description	Data	MRS Defaults	
			A520	A530
A	----	---	2	2
	Training GT is printed on the Trans.-X Report Yes/No	2/0		
	Training GT is printed on the Trans.-Z Report No/Yes	1/0		
	Enter SUM of Selection ----^			
B	PLU/UPC (EAN) Item Data is printed on the Z Report No/Yes	4/0	0	0
	----	---		
	----	---		
	Enter SUM of Selection ----^			
C	VOID-mode & MGR VOID is printed on the Trans.-Z2 Report No/Yes	4/0	0	0
	VOID-mode & MGR VOID is printed on the Trans.-Z1 Report No/Yes	2/0		
	----	---		
	Enter SUM of Selection ----^			
D	----	---	0	0
	Fixed = 0	---		
	----	---		
	Enter SUM of Selection ----^			

NOTE:

- 909-B: No Sales Data is printed for the PLU/UPC (EAN)-Z Report when = 4

System Preset: 910

Bit	Description		Data	MRS Defaults	
				A520	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 ----^				

NOTE:

- 910-A: The Cash drawer opening is based on the Individual Server preset

System Preset: 911

Bit	Description	Data	MRS Defaults	
			A520	A530
A	----	---	0	0
	----	---		
	Fractional Qty System: Ignored/Round-Up/Round-Off	2/1/0		
	Enter SUM of Selection ----^			
B	C/D Check of UPC (EAN) Yes/No	4/0	0	0
	----	---		
	----	---		
	Enter SUM of Selection ----^			
C	----	---	0	0
	Fixed = 0	---		
	----	---		
	Enter SUM of Selection ----^			
D	RECEIPT/SLIP header format		0	0
	Format 1: Normal sized Consec. #, Server Name and code	0		
	Format 2: Double-sized Consec. #, normal sized Server Name and code	2		
	Format 3: Double-sized Consec. #, and Server code (Server Name not printed)	4		
	Enter SUM of Selection ----^			

NOTE:

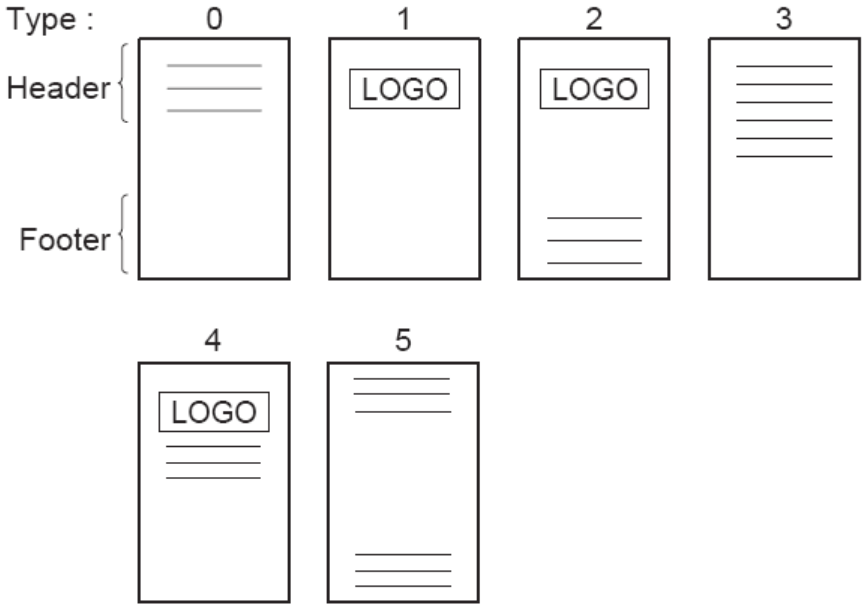
- 911-A: Is ignored for Scale operations

System Preset: 912

Bit	Description		Data	MRS Defaults	
				A520	A530
A	----		---	0	0
	----		---		
	Date Print Format	YYMMDD/DDMMYY/MMDDYY	2/1/0		
		Enter SUM of Selection ----^			
B	----		---	0	0
	----		---		
	Time Clock System	24-Hour System/12-Hour System	1/0		
		Enter SUM of Selection ----^			
C	Receipt After-Transaction Format	Detailed/Totals only	4/0	6	6
	Copy Receipt Function is Enabled	Yes/No	2/0		
	Receipt Footer Print Control	By Media Preset/All Receipts	1/0		
		Enter SUM of Selection ----^			
D	Logo Message Control:	3-Line Header – No Logo Graphic Stamp	0	1	0
		Graphic Logo Stamp only	1		
		Graphic Logo Stamp & 3-Line Footer	2		
		6-Line Header – No Stamp	3		
		Graphic Logo and 3-Line Header	4		
		3-Line Header – No Stamp/3-Line Footer	5		
		Enter SUM of Selection ----^			

NOTE:

- 912-D: The Graphic Logo STAMP – Must use SDW to upload Graphical Logos to the ECRs.
- 912-D: The Graphic Logo bitmap should be 288 dots (w) x 130 dots (h) and black & white only.



System Preset: 913

Bit	Description	Data	MRS Defaults	
			A520	A530
A	----	---	0	0
	----	---		
	VP Total Amounts Contains: Tendered Amount/Total Amount	1/0		
	Enter SUM of Selection ----^			
B	Subtotal is printed when the [SBTL] key is depressed Yes/No	4/0	1	1
	MDSE Subtotal is printed when the [MDSE] key is depressed Yes/No	2/0		
	Escaping Compulsory VP and SLIP print is Enabled Yes/No	1/0		
	Enter SUM of Selection ----^			
C	----	---	0	0
	Error-Tone System Until [CL] is depressed/2 seconds	2/0		
	Keyboard Buffering is Enabled No/Yes	1/0		
	Enter SUM of Selection ----^			
D	Compulsory Drawer Closed prior to operation is enabled Yes/No	4/0	4	4
	Error System "Misoperation"/One-Shot Error Only	2/0		
	Key Touch-Tone is enabled No/Yes	1/0		
	Enter SUM of Selection ----^			

NOTE:

- 913-B: The sequence for escaping "Compulsory" VP or SLIP print operations:
  → [.] → [SLIP or PRINT]

System Preset: 914

Bit	Description	Data	MRS Defaults	
			A520	A530
A	Receipts are printed upon [NO SALE] operations No/Yes	4/0	1	1
	The [NO SALE] function is combined with the [CASH] key Yes/No	2/0		
	Tax Delete function is Enabled Yes/No	1/0		
	Enter SUM of Selection ----^			
B	----	---	1	1
	----	---		
	The [NO SALE] function is allowed after a Non-Add No. entry Yes/No	1/0		
	Enter SUM of Selection ----^			
C	----	---	0	0
	VOID-mode is Enabled No/Yes	2/0		
	Non-Add # Entry is Compulsory at the beginning of each Trans. Yes/No	1/0		
	Enter SUM of Selection ----^			
D	Manual Tax entry is Enabled No/Yes	4/0	0	0
	Check-Cashing function is Enabled Yes/No	2/0		
	Non-Add # Entry is Enabled No/Yes	1/0		
	Enter SUM of Selection ----^			

NOTE:

System Preset: 915

Bit	Description	Data	MRS	
			A520	A530
A	----	---	0	0
	----	---		
	Fixed = 0	---		
	Enter SUM of Selection ----^			
B	----	---	0	0
	Fixed = 0	---		
	----	---		
	Enter SUM of Selection ----^			
C	----	---	0	0
	SBTL (-) or SBTL (%) within the same Transaction Once/Any No. Times	2/0		
	Enter SUM of Selection ----^			
D	Fixed = 0	---	0	0
	----	---		
	----	---		
	Enter SUM of Selection ----^			

NOTE:

System Preset: 916

Bit	Description	Data	MRS Defaults	
			A520	A530
A	----	---	1	1
	----	---		
	Print when the No. Text Characters overlap the Amount 2-Line/Truncate	1/0		
	Enter SUM of Selection ----^			
B	Charge Media Finalization when the Amount = $0.00 Yes/No	4/0	4	4
	----	---		
	Food Stamp SBTL is Compulsory before FS-Tender Yes/No	1/0		
	Enter SUM of Selection ----^			
C	Allow the MDSE SBTL to go Negative No/Yes	4/0	0	0
	[SBTL] Entry is Compulsory before Tendering Finalization Yes/No	2/0		
	[SBTL] Entry is Compulsory before Direct Finalization Yes/No	1/0		
	Enter SUM of Selection ----^			
D	Coupon PLU Totalizer prints on the Trans.-(X/Z) Reports No/Yes	4/0	0	0
	NET Sales SBTL (NET1) is printed on the Trans.-(X/Z) Reports No/Yes	2/0		
	Check-Change Totalizer is printed on the Trans.-(X/Z) Reports No/Yes	1/0		
	Enter SUM of Selection ----^			

NOTE:

System Preset: 917

Bit	Description		Data	MRS	
				A520	A530
A	Tax1 Subtotal is printed on Trans. Reports	No/Yes	4/0	0	0
	Gross Tax1 & Refund Tax1 Totals are printed on Trans. Reports	No/Yes	2/0		
	Net Tax1 Total is printed on Trans. Reports	No/Yes	1/0		
	Enter SUM of Selection ----^				
B	Tax2 Subtotal is printed on Trans. Reports	No/Yes	4/0	0	0
	Gross Tax2 & Refund Tax2 Totals are printed on Trans. Reports	No/Yes	2/0		
	Net Tax2 Total is printed on Trans. Reports	No/Yes	1/0		
	Enter SUM of Selection ----^				
C	Tax3 Subtotal is printed on Trans. Reports	No/Yes	4/0	0	0
	Gross Tax3 & Refund Tax3 Totals are printed on Trans. Reports	No/Yes	2/0		
	Net Tax1 Total is printed on Trans. Reports	No/Yes	1/0		
	Enter SUM of Selection ----^				
D	Total Tax is printed on the Trans.-(X/Z) Reports	No/Yes	4/0	0	0
	Gross & Ref. Manual Tax Totals are printed on Trans. Reports	No/Yes	2/0		
	Net Manual Tax Totalizer is printed on Trans.-(X/Z) Reports	No/Yes	1/0		
	Enter SUM of Selection ----^				

NOTE:

System Preset: 918

Bit	Description		Data	MRS	
				A520	A530
A	Assoc. PLU Text of Combo Meals is printed	No/Yes	4/0	2	2
	Direct-Tender for 2nd or subsequent tender is allowed	Yes/No	2/0		
	Combo Meal Kitchen Printer printing is by	Combo Meal's KP/by PLU's KP	1/0		
	Enter SUM of Selection ----^				
B	----		---	2	2
	PLU Text is printed in RED when the unit price is $0.00	Yes/No	2/0		
	Fractional entries allowed for non-Scalable Dept. & PLU items	No/Yes	1/0		
	Enter SUM of Selection ----^				
C	----		---	3	3
	Kitchen Printer output Groups Like Items	No/Yes	2/0		
	Kitchen Printer output prints Dept. & PLU Text in Double-Sized	Yes/No	1/0		
	Enter SUM of Selection ----^				
D	Tip paid includes cash tip	No/Yes	4/0	3	3
	Clearing of tip totalizer at server Z1 report	Yes/No	2/0		
	Printing of tip totalizer on the server report	Yes/No	1/0		
	Enter SUM of Selection ----^				

NOTE:

System Preset: 919

Bit	Description		Data	MRS	
				A520	A530
A	Guest Check System is Guest Look-up	Compulsory/Non-compulsory	5/4	0	0
	PB Look-up	Compulsory/Non-compulsory	3/2		
	Manual PB-CB	Compulsory/Non-compulsory	1/0		
	Guest Check/PB Look-up code upon Reorder (Only when 919-B =0 or 4)	Compulsory/Non-compulsory	1/0		

	Enter SUM of Selection ----^				
B	Cashier No. is Checked at PBLU Reorder	No/Yes	4/0	4	4
	----		---		
	Guest Check Number-System Entry	Manual/Auto-Generate	1/0		
	Enter SUM of Selection ----^				
C	----		---	0	0
	[PBLU] Entry is Compulsory	Yes/No	2/0		
	Amount Prints when PLU/UPC (EAN) Unit Price is $0.00	Yes/No	1/0		
	Enter SUM of Selection ----^				
D	Normal SBTL is printed in addition to the Conversion SBTL	No/Yes	4/0	0	0
	----		---		
	Foreign Currency Format	Omit Decimal Digits/Not	1/0		
	Enter SUM of Selection ----^				

NOTE:

System Preset: 920

Bit	Description		Data	MRS	
				A520	A530
A	Combine like items for GLU items printed on a Bill	No/Yes	0/4	0	0
	----		---		
	----		---		
	Enter SUM of Selection ----^				
B	----		---	0	0
	Fixed = 0		---		
	----		---		
	Enter SUM of Selection ----^				
C	----		---	0	0
	----		---		
	----		---		
	Enter SUM of Selection ----^				
D	----		---	0	0

	Enter SUM of Selection ----^				

NOTE:

System Preset: 921

Bit	Description		Data	MRS A520	MRS A530
A	Convert UPC-E to UPC-A Code	Yes/No	4/0	0	0
	----		---		
	----		---		
	Enter SUM of Selection ----^				
B	Fixed = 0		---	0	0

C	Bill printing method	Items are printed and deleted/Items reprint each bill	0/1	0	0

D	Tip paid is automatically executed upon Ind. Server/Cashier resetting report when a Tip exists.	Yes/No	0/4	0	0

	Enter SUM of Selection ----^				

NOTE:

System Preset: 922

Bit	Description		Data	MRS Defaults A520	MRS Defaults A530
A	Fixed = 0		---	0	0
	----		---		
	----		---		
	Enter SUM of Selection ----^				
B	Type coin dispenser can issue $1 coins	No/Yes	0/1	0	0
	----		---		
	----		---		
	Enter SUM of Selection ----^				
C	----		---	0	0
	----		---		
	Fixed = 0		---		
	Enter SUM of Selection ----^				
D	----		---	0	0
	----		---		
	Fixed = 0		---		
	Enter SUM of Selection ----^				

NOTE:

System Preset: 923

Bit	Description	Data	MRS Defaults	
			A520	A530
A	----	---	0	0
	----	---		
	(Fixed)	---		
	Enter SUM of Selection ----^			
B	(Fixed)		0	0
	----	---		
	----	---		
	Enter SUM of Selection ----^			
C	----	---	0	0
	(Fixed)	---		
	(Fixed)			
	Enter SUM of Selection ----^			
D	(Fixed)	---	0	0
	(Fixed)	---		
	Enter SUM of Selection ----^			

NOTE:

System Preset: 924

Bit	Description	Data	MRS	
			A520	A530
A	----	---	0	0
	----	---		
	(Fixed)	---		
	Enter SUM of Selection ----^			
B	(Fixed)	---	0	0
	----	---		
	----	---		
	Enter SUM of Selection ----^			
C	----	---	0	0
	(Fixed)	---		
	(Fixed)	---		
	Enter SUM of Selection ----^			
D		---	0	0

	Enter SUM of Selection ----^			

NOTE:

System Preset: 925

Bit	Description	Data	MRS Defaults	
			A520	A530
A		---	0	0

	----	---		
	Enter SUM of Selection ----^			
B	----	---	0	0

	Enter SUM of Selection ----^			
C			0	0
	Enter SUM of Selection ----^			
D	----	---	0	0

	Enter SUM of Selection ----^			

NOTE:

System Preset: 926

Bit	Description		Data	MRS Defaults	
				A520	A530
A	----		---	0	0
	Direct Voids and the Voided item is printed on the KP	No/Yes	2/0		
	Past Voids and the Voided item is printed on the KP	No/Yes	1/0		
	Enter SUM of Selection ----^				
B	Program Reset via PGM2-Mode is Enabled	Yes/No	4/0	0	0
	Refunded Data is sent to the KP	No/Yes	2/0		
	----		---		
	Enter SUM of Selection ----^				
C	Fixed = 0		---	0	0

	Enter SUM of Selection ----^				
D	Fixed = 0			0	0
	----		---		
	----		---		
	Enter SUM of Selection ----^				

NOTE:

- When REFUND Data is preset to print to the KP. It will print in RED.
- When REFUND Data is preset NOT to print to the KP. It will print in BLACK.

System Preset: 927

Bit	Description	Data	MRS Defaults	
			A520	A530
A	Fixed = 0	---	0	0
	----	---		
	----	---		
	Enter SUM of Selection ----^			
B	Fixed = 0	---	0	0
	----	---		
	----	---		
	Enter SUM of Selection ----^			
C	Fixed = 0	---	0	0
	----	---		
	----	---		
	Enter SUM of Selection ----^			
D	Fixed = 0	---	0	0
	----	---		
	----	---		
	Enter SUM of Selection ----^			

NOTE:

System Preset: 928

Bit	Description		Data	MRS Defaults	
				A520	A530
A	----		---	0	0
	----		---		
	Slip Logo is printed on Slip Printer	Yes/No	1/0		
	Enter SUM of Selection ----^				
B	----		---	0	0
	Validation Message is printed on Slip for Checks & Charges	Yes/No	2/0		
	Header Line is printed on Slip on Reorder Entries	No/Yes	1/0		
	Enter SUM of Selection ----^				
C	PLU/UPC (EAN) is printed on the [BILL] when the unit price = $0.00	No/Yes	4/0	0	0
	Combo Meal Individual PLU Item Text is printed on the [BILL]	No/Yes	2/0		
	----		---		
	Enter SUM of Selection ----^				
D	Compulsory Bill Print System:			0	0
	Compulsory for GLU/PBLU entries		2		
	Compulsory for every entry		1		
	Compulsory based on Media key preset		0		
	Enter SUM of Selection ----^				

NOTE:

System Preset: 929

Bit	Description	Data	MRS Defaults	
A	----	---	0	0
	----	---		
	KP Print format for Media Keys Detailed/Summary	1/0		
	Enter SUM of Selection ----^			
B	Server, Transaction resetting allowed with open Guest Checks. Yes/No	1/0	0	0
	----	---		
		0		
	Enter SUM of Selection ----^			
C	When Closed Check file is full Inhibit registration/Continue	0/1	0	0
	----	---		

	Enter SUM of Selection ----^			
D		---	0	0
	Taxable Status of PLU/UPC (EAN), SET at “Non-Taxable” by PGM mode / Taxable Status of PLU/UPC set According to its Associated Department	0/1		
	----	---		
	Enter SUM of Selection ----^			

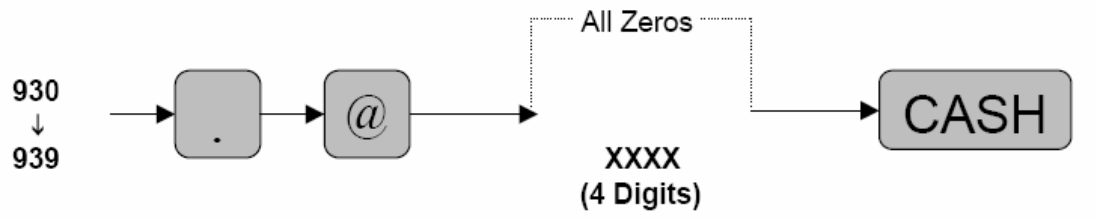
NOTE:

System Preset: 980

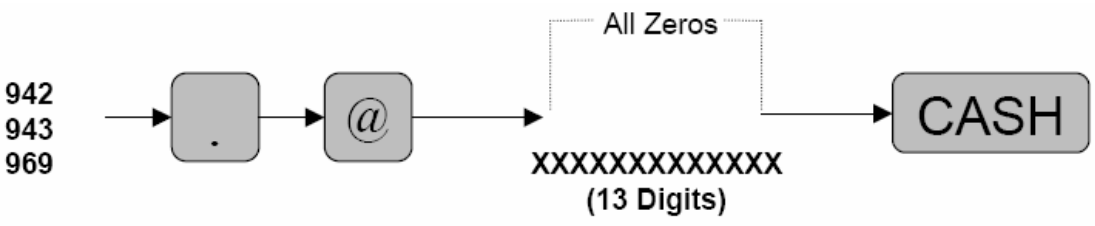
Bit	Description	Data	MRS Defaults	
			A520	A530
A	----	---	0	0
	----	---		
	Fixed = 0	0		
	Enter SUM of Selection ----^			
B	----	---	0	0
	----	---		
	HASH department entries are added to the Hourly Report Yes/No	1/0		
	Enter SUM of Selection ----^			
C	----	---	0	0
	----	---		
	Fixed = 0	0		
	Enter SUM of Selection ----^			
D	----	---	0	0
	Fixed = 0	0		
		0		
	Enter SUM of Selection ----^			

NOTE:

Reset Report Counters – Z1/Z2



930: Z1 General Report Counter
931: Hourly Z1 Report Counter
934: PLU Z1 Report Counter
935: Cashier Z1 Report Counter
936: GLU/PBLU Z1 Report Counter
937: Z2 General Report Counter
939: Daily Net Z2 Report Counter

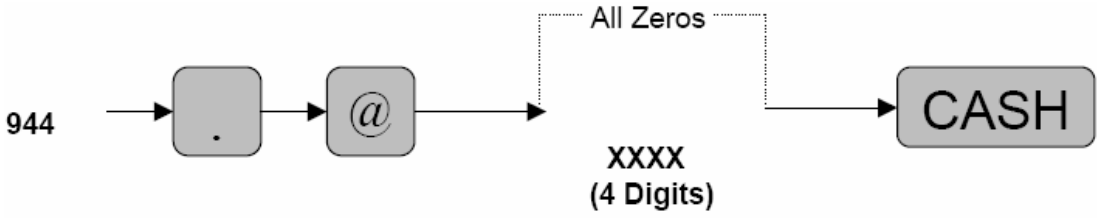


942: GT2 (Positive GT)
943: GT3 (Negative GT)
969: Training GT

Note: The Net GT is obtained from GT2 and GT3 calculations

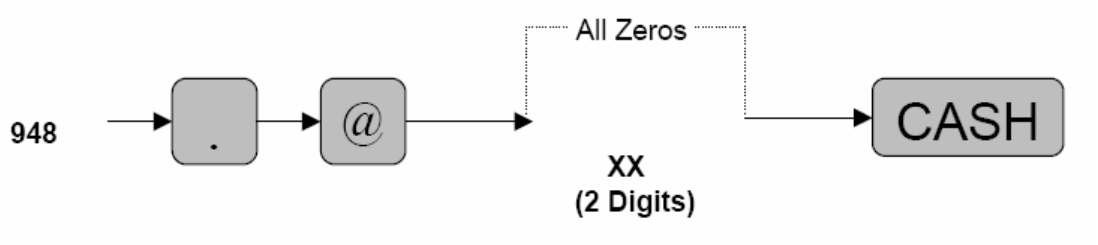
MRS = 0000000000000

PGM-2 Mode Secret Code Programming



MRS = 0000

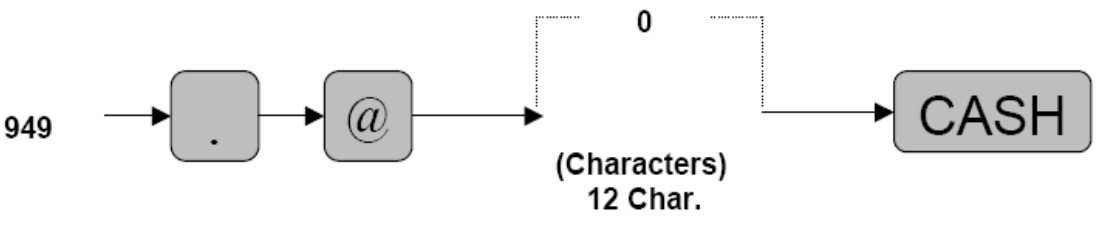
Server/Cashier Training Programming



XX: Cashier/Server Code

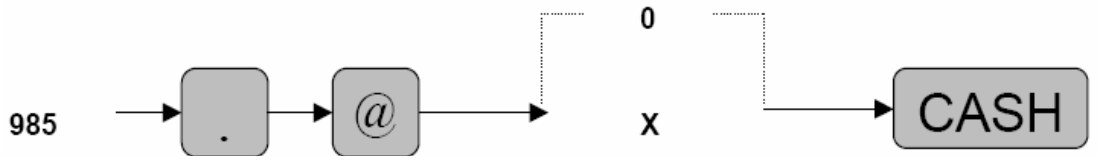
MRS = 00

Training Mode Title Programming



MRS = **TRAINING**

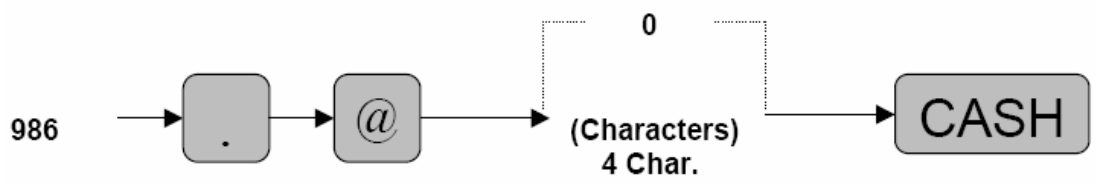
Euro Symbol Programming



X: 0 = “spaces”
1 = Euro Symbol

MRS = 0 (spaces)

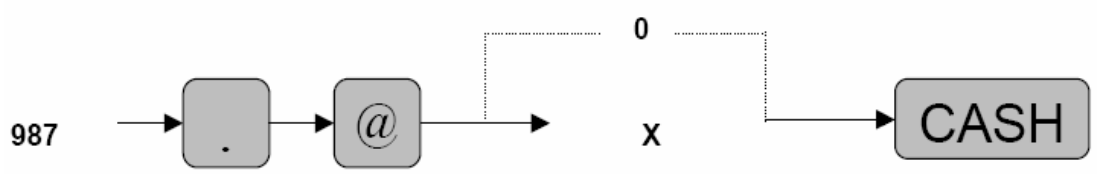
Domestic Currency Symbol



MRS = **$**

Note: The characters are entered using the programming key layout or by entering the numeric codes shown on page 20. This symbol is printed with positive amounts of domestic currency and will be printed to the left-side of the amount.

Language Setting For Text



X: 0 = English Text
1 = French Text
2 = Spanish Text

MRS = 0 (English)

Note: The following text is changed upon the setting above:
- FUNCTION text
- CASHIER text
- MESSAGE text (e.g. Logo, etc.)

Resetting of all Counters and Totalizers

989 → [•] → [@/FOR] → [CA/AT]

*All counters, totalizers, and Z counters are initialized.
The GT1-GT3 memories are initialized.

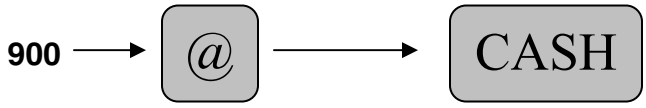
*The following message print occurs on the journal.

| #989 |

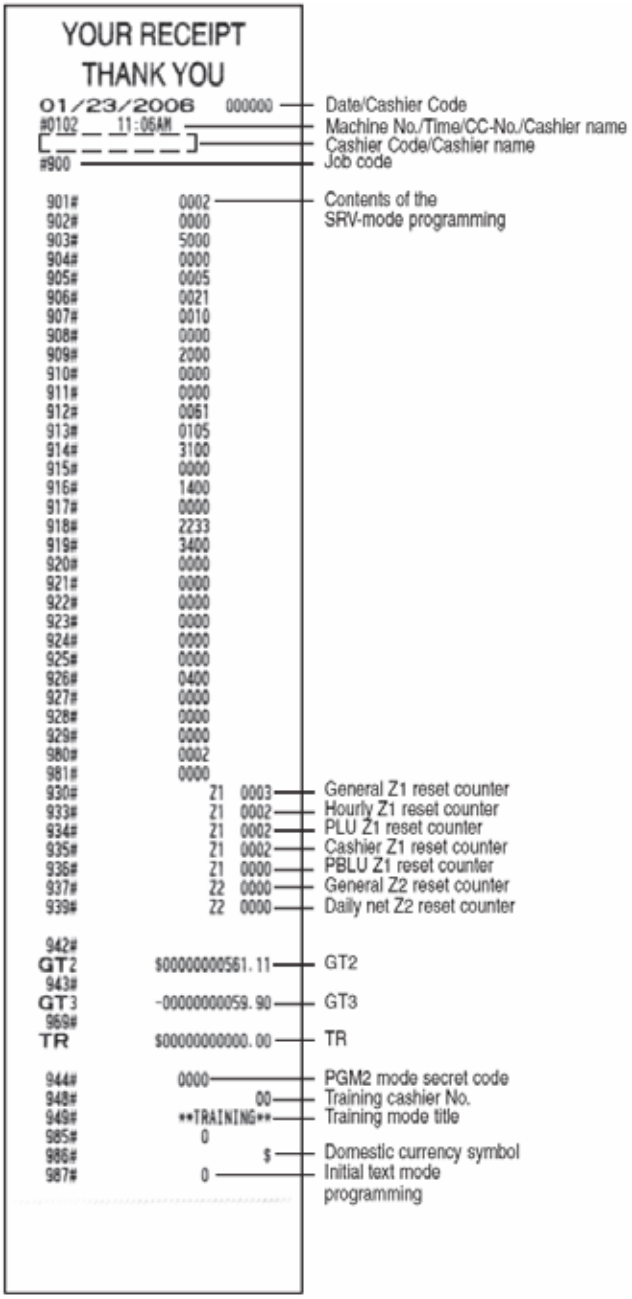
System Preset Reading – SRV Mode

1. Procedures:

1) Place the SRV key to the SRV-Mode position
2) Enter the following sequence:

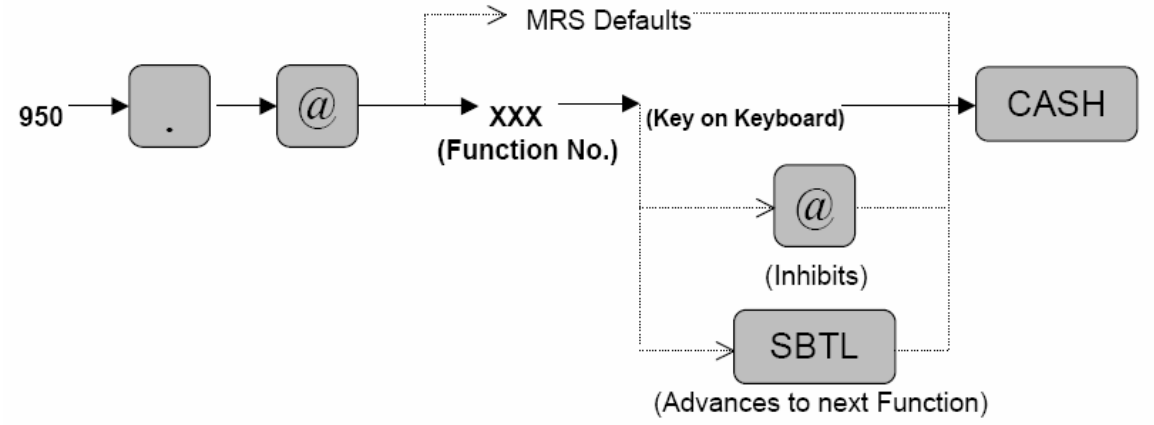


2. Print Out:



Section-2: Free Key Layouts

Function Key Layout



XXX: Function No. 1-130
: 999 (for inhibiting a key)

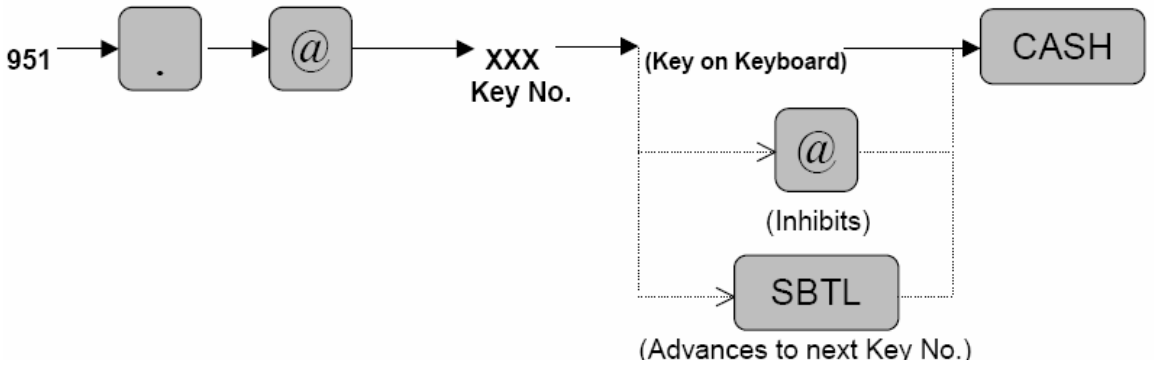
MRS = Standard “out-of-the-box” key layout

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

950 → [•] → [@/FOR] → [CA/AT]

Note: Only the keyboard layout is affected; PGM2 Mode data are retained.

Function Key Layout



XXX: 1-82 (ER-A520)
: 1-151 (ER-A530)
: 999 (for inhibiting a key location)

MRS = Standard “out of box” key layout

Note: The Key No. programmed in this programming will be used in the PGM2 mode programming for assigning direct Dept. and/or PLU keys on the keyboard.

Function Key Reference Chart

1. ER-A520

↑ RECEIPT	↑ JOURNAL	16	22	28	34	40	46	52	58	64	70	76	82
05	10	15	21	27	33	39	45	51	57	63	69	75	81
04	09	14	20	26	32	38	44	50	56	62	68	74	80
03	08	13	19	25	31	37	43	49	55	61	67	73	79
02	07	12	18	24	30	36	42	48	54	60	66	72	78
01	06	11	17	23	29	35	41	47	53	59	65	71	77

Note: The ▢ shaded keys are fixed and cannot be assigned to Key Functions.

2. ER-A530

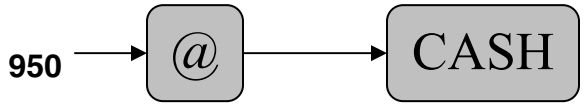
↑ RECEIPT	↑ JOURNAL	25	34	43	52	61	70	79	88	97	106	115	124	115	133	142
08	16	24	33	42	51	60	69	78	87	96	105	114	123	114	132	141
07	15	23	32	41	50	59	68	77	86	95	104	113	122	113	131	140
06	14	22	31	40	49	58	67	76	85	94	103	112	121	112	130	139
05	13	21	30	39	48	57	66	75	84	93	102	111	120	111	129	138
04	12	20	29	38	47	56	65	74	83	92	101	110	119	110	128	137
03	11	19	28	37	46	55	64	73	82	91	100	109	118	109	127	136
02	10	18	27	36	45	54	63	72	81	90	99	108	117	108	126	135
01	09	17	26	35	44	53	62	71	80	89	98	107	116	107	125	134

Note: The ▢ shaded keys are fixed and cannot be assigned to Key Functions.

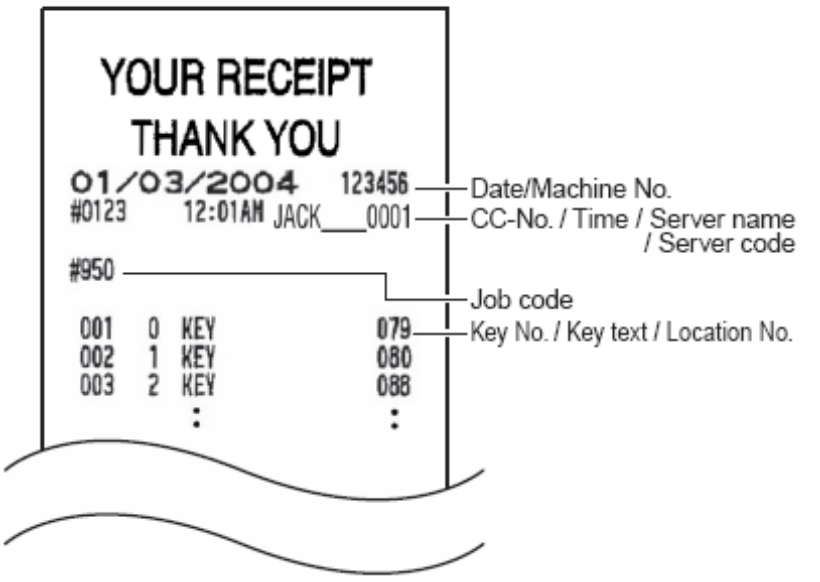
Free Key Layout Reading – SRV Mode

2. Procedures:

1) Place the SRV key to the SRV-Mode position
2) Enter the following sequence:



<SAMPLE>



3. Keyboard Key Positions: Physical Key Location Number

1) Example from the ER-A520 Key No. Layout:

↑ RECEIPT	↑ JOURNAL	16	22	28	34	40	46	52	58	64	70	76	82
05	10	15	21	27	33	39	45	51	57	63	69	75	81
04	09	14	20	26	32	38	44	50	56	62	68	74	80
03	08	13	19	25	31	37	43	49	55	61	67	73	79
02	07	12	18	24	30	36	42	48	54	60	66	72	78
01	06	11	17	23	29	35	41	47	53	59	65	71	77

Note: All keys except the receipt paper feed and journal paper feed keys can be re-positioned.

2) Example from the ER-A530 Key No. Layout:

↑ RECEIPT	↑ JOURNAL	25	34	43	52	61	70	79	88	97	106	115	124	115	133	142
08	16	24	33	42	51	60	69	78	87	96	105	114	123	114	132	141
07	15	23	32	41	50	59	68	77	86	95	104	113	122	113	131	140
06	14	22	31	40	49	58	67	76	85	94	103	112	121	112	130	139
05	13	21	30	39	48	57	66	75	84	93	102	111	120	111	129	138
04	12	20	29	38	47	56	65	74	83	92	101	110	119	110	128	137
03	11	19	28	37	46	55	64	73	82	91	100	109	118	109	127	136
02	10	18	27	36	45	54	63	72	81	90	99	108	117	108	126	135
01	09	17	26	35	44	53	62	71	80	89	98	107	116	107	125	134

Note: All keys except the receipt paper feed and journal paper feed keys can be re-positioned.

4. Reference Free Keys to Keyboard:

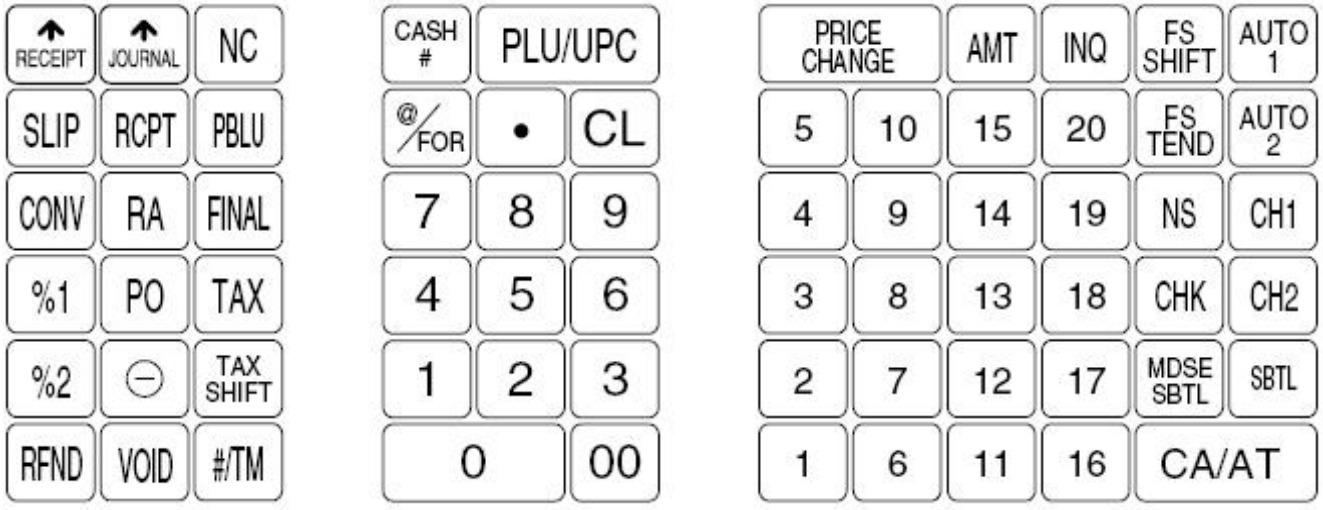
1) Example from the ER-A520 default Key Layout:

Receipt	Journal	NC		CASH #	PLU/ UPC	PLU/ UPC		PRICE CHANGE	PRICE CHANGE	AMT	INQ	FS SHIFT	AUTO 1
		16	22	28	34	40	46	52	58	52	70	76	82
SLIP	RCPT	PBLU		@/FOR	.	CL		005	010	015	020	FS TEND	AUTO 2
5	10	15	21	27	33	39	45	51	57	63	69	75	81
CONV	RA	FINAL		7	8	9		004	009	014	019	NS	CH1
4	9	14	20	26	32	38	44	50	56	62	68	74	80
%1	PO	TAX		4	5	6		003	008	013	018	CHK	CH2
3	8	13	19	25	31	37	43	49	55	61	67	73	79
%2	(-)	TAX SHIFT		1	2	3		002	007	012	017	MDSE SBTL	SBTL
2	7	12	18	24	30	36	42	48	54	60	66	72	78
RFND	VOID	#/TM		0	0	00		001	006	011	0016	CA/AT	CA/AT
1	6	11	17	23	29	34	41	47	53	59	65	71	77

KEY NO.

FREE FUNCTION KEY

DEPT NO. EX. DEPT 7



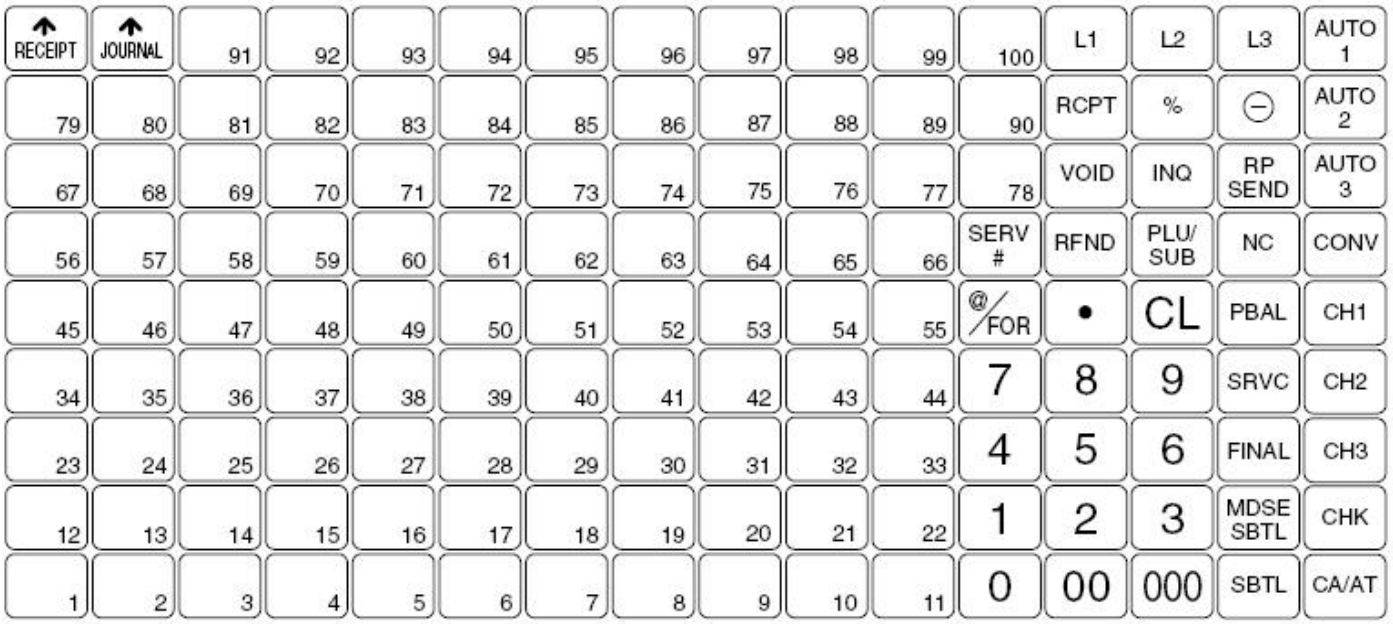
2) Example from the ER-A530 Default Key Layout:

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

PLU NO. EX. PLU1

KEY NO.

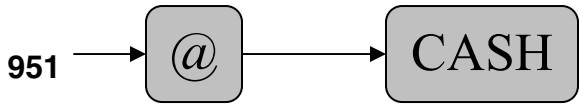
FREE FUNCTION KEY



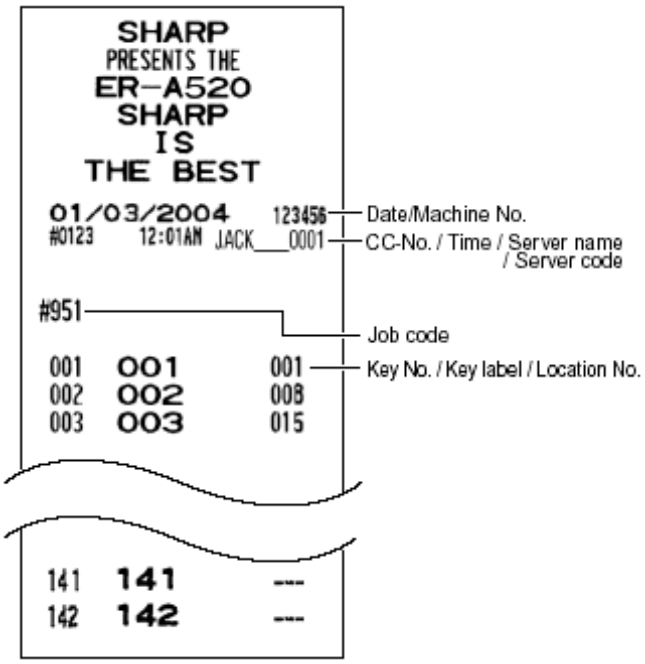
Key Location No. Reading

1. Procedure:

1) Place the SRV key to the SRV-Mode position
2) Enter the following sequence:



2. Print Out:



Function Key ListKey

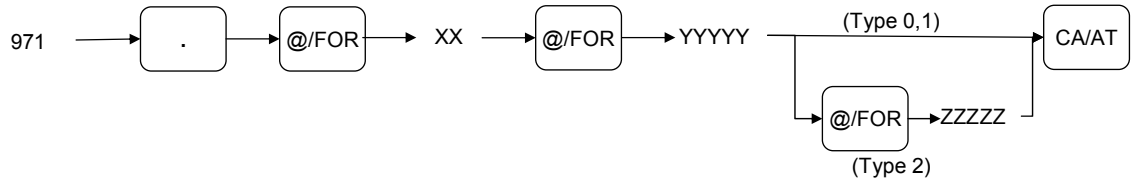
No.	FUNCTION	KEY TEXT (8 Char.)
1	0 KEY	0 KEY
2	1 KEY	1 KEY
3	2 KEY	2 KEY
4	3 KEY	3 KEY
5	4 KEY	4 KEY
6	5 KEY	5 KEY
7	6 KEY	6 KEY
8	7 KEY	7 KEY
9	8 KEY	8 KEY
10	9 KEY	9 KEY
11	00 KEY	0 0 KEY
12	000KEY	00 0K EY
13	DECIMAL POINT	. KEY
14	CLEAR	C L EAR
15	@/FOR	@ / F O R
16	SUB TOTAL	S B T L
17	CA/AT	C A/ AT
18	MERCHANDISE SUB-TOTAL	M D S ST
19	TRAY SUB-TOTAL	T R Y ST
20	GASOLINE SALES SUB-TOTAL	GA S ST
21	NON ADD/TIME	# / T M
22	NO SALE	N S
23	PLU/SUB/UPC	P L U / S B
24	REFUND TYPE OF SALES	R F S A L
25	LEVEL SHIFT#	L E V E L #
26	LEVEL1	L 1
27	LEVEL2	L 2
28	LEVEL3	L 3
29	LEVEL4	L 4
30	LEVEL5	L 5
31	PRICE SHIFT #	P . S F T #
32	PRICE1	P 1
33	PRICE2	P 2
34	PRICE3	P 3
35	PRICE4	P 4
36	PRICE5	P 5
37	PRICE6	P 6
38	TAX1 SHIFT	T A X 1 S F
39	TAX2 SHIFT	T A X 2 S F
40	TAX3 SHIFT	T A X 3 S F
41	TAX4 SHIFT	T A X 4 S F
42	FS SHIFT	F S S F T
43	VALIDATION PRINT	P R I N T
44	SLIP (BILL)	S L I P
45	COPY/AFTER TRANSACTION RECEIPT	RCP T
46	VOID	V OID

No.	FUNCTION	KEY TEXT (8 Char.)
47	REFUND	R F N D
48	RETURN	R E T U R N
49	%1	% 1
50	%2	%2
51	%3	%3
52	%4	%4
53	%5	%5
54	(-) 1	(-) 1
55	(-) 2	(-) 2
56	(-) 3	(-) 3
57	(-) 4	(-) 4
58	(-) 5	(-) 5
59	TAX	TAX
60	COVER COUNT	CVCNT
61	AUTO	AUTO
62	AUTO2	AUTO2
63	AUTO3	AUTO3
64	AUTO4	AUTO4
65	AUTO5	AUTO5
66	AUTO6	AUTO6
67	AUTO7	AUTO7
68	AUTO8	AUTO8
69	AUTO9	AUTO9
70	AUT010	AUTO10
71	CASH2	CA2
72	CASH3	CA3
73	CASH4	CA4
74	CASH5	CA5
75	CHECK	CHECK
76	CHECK2	CHECK2
77	CHECK3	CHECK3
78	CHECK4	CHECK4
79	CHECK5	CHECK5
80	CHARGE1	CH1
81	CHARGE2	CH2
82	CHARGE3	CH3
83	CHARGE4	CH4
84	CHARGE5	CH5
85	CHARGE6	CH6
86	CHARGE7	CH7
87	CHARGE8	CH8
88	CHARGE9	CH9
89	CURRENCY CONVERSION1	CONV1
90	CURRENCY CONVERSION2	CONV2
91	CURRENCY CONVERSION3	CONV3

No.	FUNCTION	KEY TEXT (8 Char.)
92	CURRENCY CONVERSION4	CONV4
93	GLU/PBLU/PB	PBAL/PB
94	NEW CHECK/PB	N. C. /CB
95	SERVICE	SRVC
96	FINAL	FINAL
97	DEPOSIT	DEPO
98	DEPOSIT REFUND	DEP. RF
99	FS TEND	FSTEND
100	RECEIVED ON ACCOUNT	RA
101	RECEIVED ON ACCOUNT2	RA 2
102	PAID OUT	PO
103	PAID OUT2	PO 2
104	SERVER NUMBER	SRV#
105	BIRTHDAY	BIRTH
106	DEPT#	DEPT#
107	SCALE	SCALE
108	OPEN TARE	OPN TR
109	AMOUNT	AMT
110	REPEAT	REPEAT
111	INQUIRE	INQ
112	NO DELETE (UPC)	NO DEL
113	PRICE CHANGE	PR CHG
114	REMOTE PRINTER SEND	RP SND
115	CHARGE TIP	CH TIP
116	CASH TIP	CA TIP
117	TIP PAID	TIP PD
118	GRATUITY EXEMPT	GRT EX
119	EDIT TIP	ED TIP
120	BILL TRANSFER	B. T.
121	BILL SEPARATE	B. S.
122	TRANS OUT	TR OUT
123	TRANS IN	TR IN
124	GLU RECALL	GLU RC
125	WASTE MODE	WASTE
126	EAT IN1	EATIN1
127	EAT IN2	EATIN2
128	EAT IN3	EATIN3
129	CONDIMENT NEXT	C. NEXT
130	CONDIMENT CANCEL	C. CANCEL
999	INHIBIT	INHIBIT

Section-3: File Allocation

Memory Allocation



Procedure:

Enter the SRV-mode as previously outlined.

① Enter 971 → [.]
② Depress [@/FOR] key.
③ Enter the File Group number you want to allocate.
④ Depress [@/FOR] key.
⑤ Enter the value for the File Group.
⑥ If it is File Group type 2, depress [@/FOR] key, enter the number for data.
⑦ Depress the [CA/AT] key.

File Group Table

Group No.	FILE NAME	TYPE	File table No. (Create, Change the number of records or Erase/Change the number of records or Erase)
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

Group No.	FILE NAME	TYPE	File table No. (Create, Change the number of records or Erase/Change the number of records or Erase)
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

Type 0: Create/Erase only
Type 1: Create/Erase and Increase/Decrease the number of records.
Type 2: Create/Erase and Increase/Decrease the number of records for label and data individually.
Note: All memories are shared in the fixed RAM area.

FILE TABLE

Note: This table can be used to calculate the memory allocation size. Its information is not printed on 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

File No.	NAME	RECORD			BLOCK			Label Size	Data Size
		(MRS)	(MAX)	#1	(MRS)	(MAX)	#2		
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

File No.	NAME	RECORD			BLOCK			Label Size	Data Size
		(MRS)	(MAX)	#1	(MRS)	(MAX)	#2		
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.

N O T E S

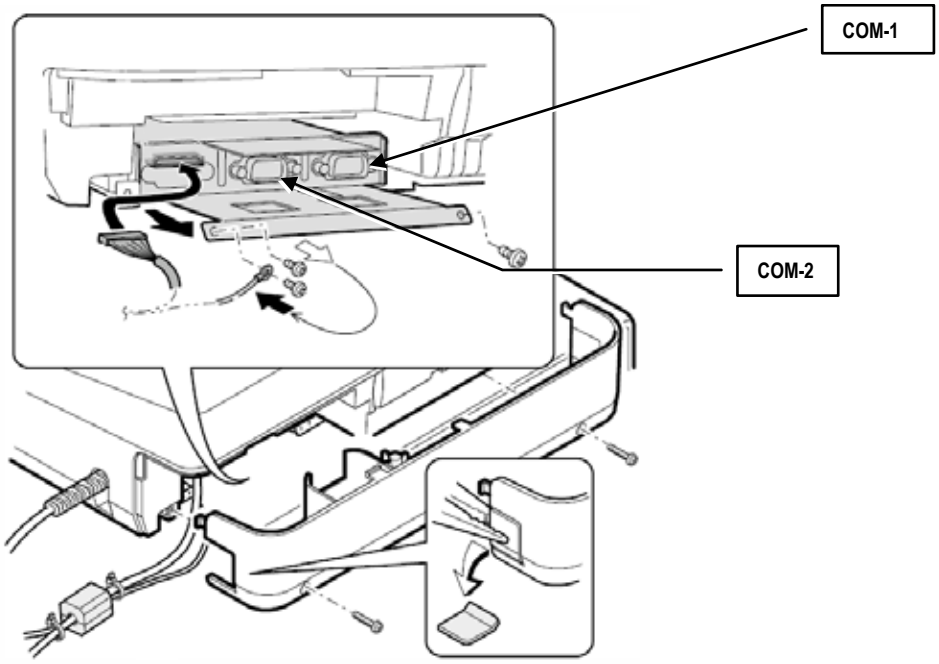
Section-4: PERIPHERALS

Overview – Cable & Communications Specifications

RS-232 connections are simple, universal and a supported data interface for the ER-A520 and ER-A530 model ECRs. The standards for communications of 256kbps or less and line lengths of 15m (50 ft) or less will depend on the length and quality of the cable.

1. Specifications:

(1) Cable: 24 – 28 AWG, Shielded, twisted pair – (refer to the chart on the next page)
(2) Connector: D – Sub 9 pin (female type) connector.
(3) Baud Rate: (Please refer to each peripheral's section)

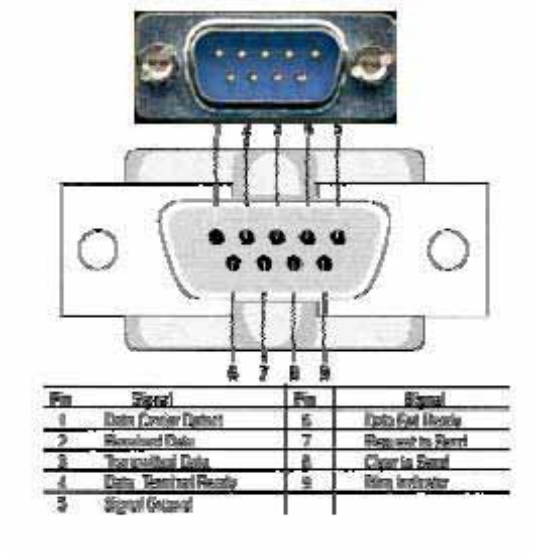


2. Pin Outs:

(Please refer to each peripheral's section.)

3. ECR Pin Outs:

The DB-9 of the ER-A520 and ER-A530 follows EIA computer specifications for its pin outs as shown below:



4. Belden Cable Chart:

The chart below is the specs for a Belden cable that can be used for communications.

RS232 Serial Cable	
Maximum Distance from POS to Printer	50 ft. or less
Type Cable	Twisted Pair
Wire Gauge	24 AWG / Shielded
Belden Number	9540

5. Cable Chart/Distances:

Typically, the recommended cabling distance length will be less than 25 feet when the data rate is 9600 bps or greater. If transmission errors occur, follow these procedures to determine the cause of the problem:

1) Reduce the baud rate – when the preset is available.
2) Reduce the cable length – when the baud rate is fixed.
3) Use a cable with a lower capacitance per foot rating.

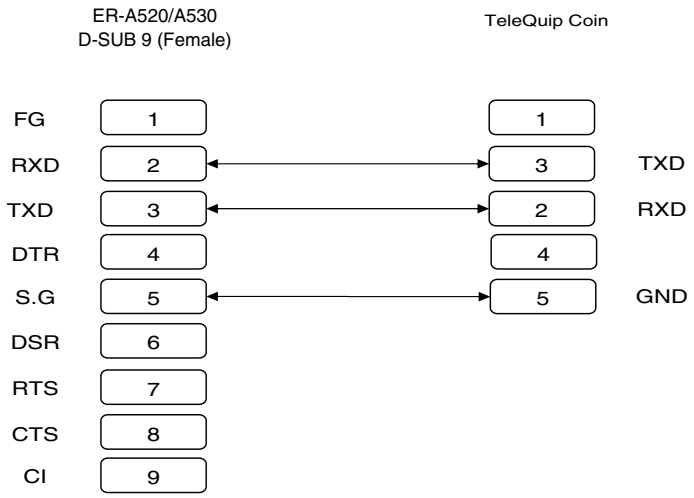
Section – 1: Coin Dispenser

The following table shows the related PGM-Mode Job#s available for the ER-A520 and ER-A530 model ECRs when the Coin Dispenser is connected.

Scale		
Mode	**Job#**	**Description**
PGM-Mode	2690	Channel Assignment
	2510	Cashier Drawer Assignment

Note: The Telequip Transact coin dispenser (sales item ER-COIN) includes the necessary connection cable as standard equipment.

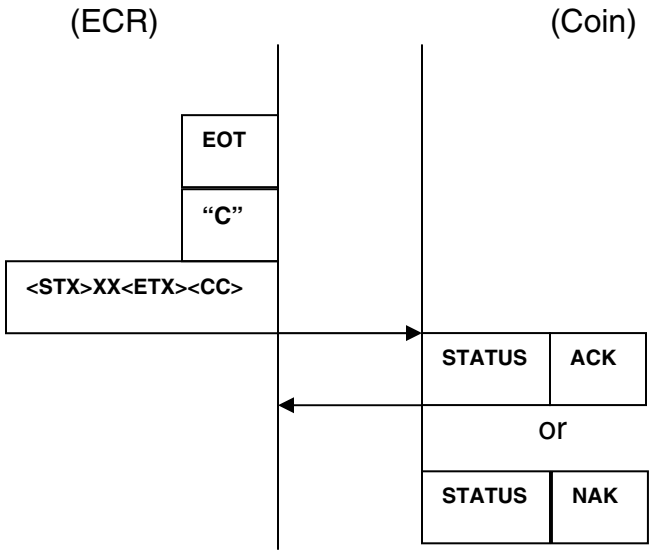
1. Cabling Pin Outs:



2. Data Transmission:

- 7 bits ASCII code
- One Start bit
- Even Parity
- One Stop bit
- Baud Rate: 9600 bps (fixed)

3. Protocol



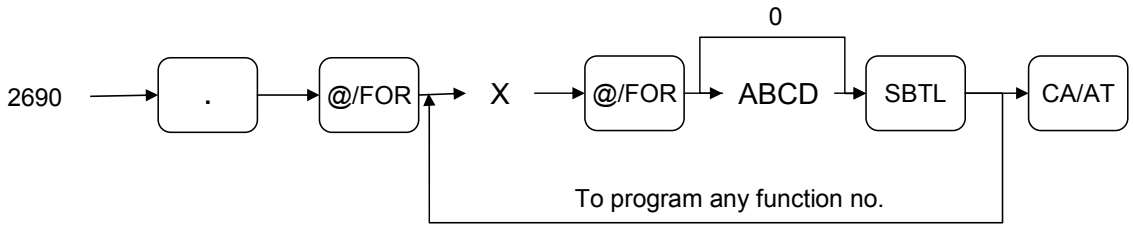
XX: Ten's + ones
CC: Cents

RS-232C Channel Assignment

ER-A520/530 is equipped with two RS-232C interfaces. If you use the communication functions, the channel number of each RS-232C interface must be programmed by using the following procedure.

Key Sequence:

To assign channel number to the peripherals, please follow the sequence below:



X = 1			
Item	Description	Selection	Entry
A	Channel number for on-line communication	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
B	Channel number for print data sending (CVM)	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
C	Channel number for scale	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
D	Channel number for the coin dispenser	Not connected	0
		Standard channel 1	1
		Standard channel 2	2

NOTE:

1. MRS = 0000
2. Data backup function always uses standard channel 2.

X = 2			
Item	Description	Selection	Entry
A	Channel number for the barcode reader	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
B	Channel number the remote printer 1	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
C	Channel number for the remote printer 2	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
D	Always enter 0		0

NOTE:
MRS = 0000

X = 3			
Item	Description	Selection	Entry
A	Always enter 0		0
B	Channel number for the slip printer TM-295	Not connected for internal printer (printing bills on receipt)	0
		Standard channel 1	1
		Standard channel 2	2
C	Always enter 0		0
D	Channel number for CAT	Not connected	0
		Standard channel 1	1
		Standard channel 2	2

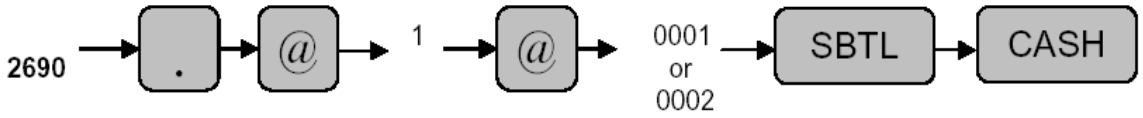
NOTE:
MRS = 0000

Procedure:

Enter the PGM2-Mode as previously outlined

1. Enter 2690
2. Depress [.] key
3. Depress [@/FOR] key
4. Enter 1
5. Depress [@/FOR] key
6. Enter assigned channel numbers (4 digits)
7. Depress [SBTL] key
8. Depress the [CA/AT] key

Channel Assignment for COIN DISPENSER:



Quick Steps – Coin Dispenser

To quickly setup the ER-A520/ER-A530 to interface with a coin dispenser, please refer to the outlined procedures below:

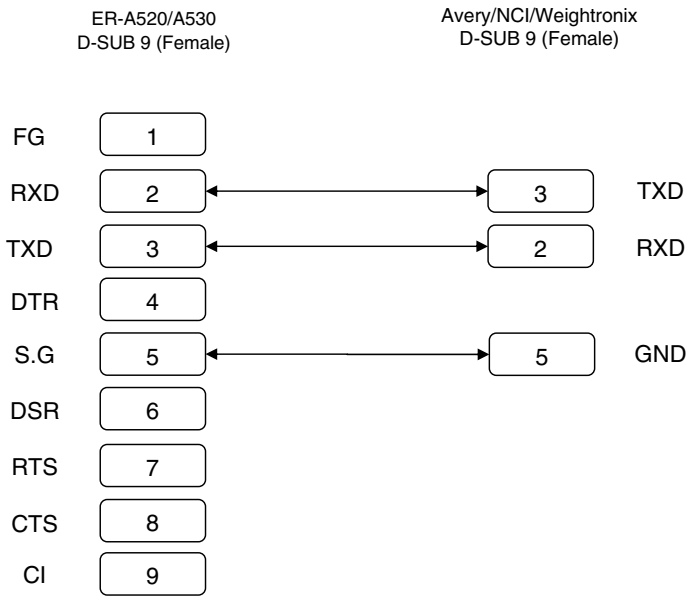
No.	Description	Comments/Procedure
Step–1	Connect the Coin Dispenser	CH–1 or CH–2
Step–2	PGM Job#2690	2690 → [.] → [@] → 1 → @ → 0001 [SBTL] → [CA/AT] for CH–1) or 2690 → [.] → [@] → 1 → @ → 0002 [SBTL] → [CA/AT] for CH–2) **Note:** Must match the physical connection
Step–3	Program Reset	• Place the SRV-Key counter-clockwise to 6 o'clock position (SRV' position) • Count 5 seconds • Turn SRV-Key clockwise to 7o'clock position (SRV position) • Verify"***PROGRAM RESET has printed on the journal-side tape.
Step–4	PGM Job#2510	Verify that the Cashiers have a valid Drawer Assignment (1 or 2)

Section–2: Scale

The following table shows the related SRV and PGM-Mode Job#s available for the ER-A520 and ER-A530 model ECRs when the Scale is connected.

Scale		
Mode	**Job#**	**Description**
SRV-Mode	903–B	Symbol of Scale Entry
	903–C	Unit of Weight for Scale Entries
	906–D	Fractional Quantities Entries
	918–B	Fractional Entries for Non-Scalable Dept./PLU Items
	950	[SCALE] – Function #107
		(OPEN TARE] – Function #108
PGM-Mode	2690	Channel Assignment
	2110	Dept. Function Programming
	2210	PLU Function Programming
	2231	PLU Function Range Programming
	2618	Scale Tare Table Programming

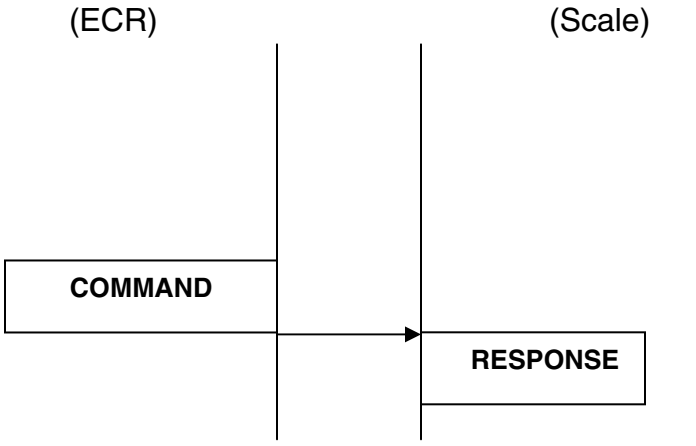
1, **Cabling Pin Outs:**



2. **Data Transmission:**

- Bits ASCII Code
- Even Parity
- One Stop Bit
- Baud Rate: 9600 bps (fixed)

3. **Protocol:**

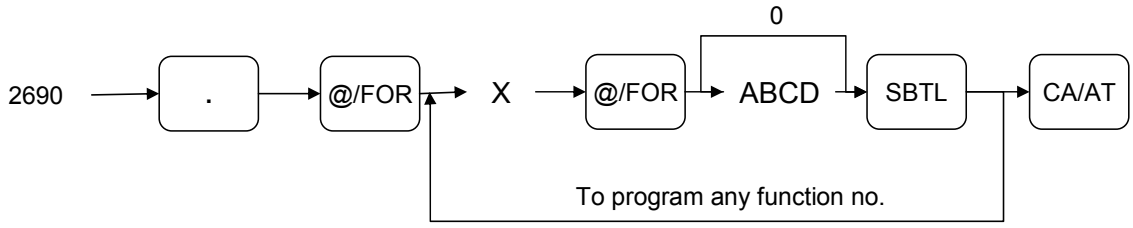


B7 Parity Bit (Even)	B6 Always =1	B5 Net Wt. =1	B4 Center Of Zero =1	B3 Outside Of Zero =1	B2 Under Zero =1	B1 Out Of Range =1	B0 Motion **=1**

RS-232C Channel Assignment

Key Sequence:

To assign channel number to the peripherals, please follow the sequence below:



X = 1			
Item	Description	Selection	Entry
A	Channel number for on-line communication	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
B	Channel number for print data sending (CVM)	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
C	Channel number for scale	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
D	Channel number for the coin dispenser	Not connected	0
		Standard channel 1	1
		Standard channel 2	2

NOTE:

1. MRS = 0000
2. Data backup function always uses standard channel 2.

X = 2			
Item	Description	Selection	Entry
A	Channel number for the barcode reader	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
B	Channel number the remote printer 1	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
C	Channel number for the remote printer 2	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
D	Always enter 0		0

NOTE:
MRS = 0000

X = 3			
Item	Description	Selection	Entry
A	Always enter 0		0
B	Channel number for the slip printer TM-295	Not connected for internal printer (printing bills on receipt)	0
		Standard channel 1	1
		Standard channel 2	2
C	Always enter 0		0
D	Channel number for CAT	Not connected	0
		Standard channel 1	1
		Standard channel 2	2

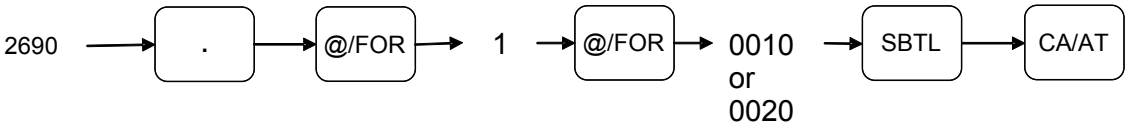
NOTE:
MRS = 0000

Procedure:

Enter the PGM2-Mode as previously outlined

1. Enter 2690
2. Depress [.] key
3. Depress [@/FOR] key
4. Enter 1
5. Depress [@/FOR] key
6. Enter assigned channel numbers (4 digits)
7. Depress [SBTL] key
8. Depress the [CA/AT] key

Channel Assignment for SCALE:



Quick Steps – Scale

To quickly setup the ER-A520/ER-A530 to interface with a Scale, please refer to the outlined procedures below:

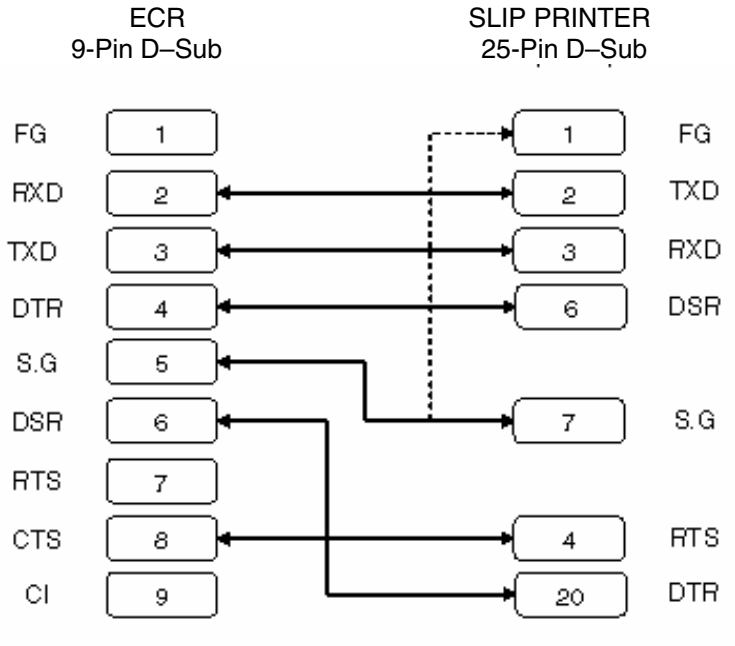
No.	Description	Comments/Procedure
Step–1	Connect the Scale	CH–1 or CH–2
Step–2	SRV Job#903-B, C, D	903 → [.] → [@] → x030 → [CA/AT] (For 3 Decimal Places) or 903 → [.] → [@] → x020 → [CA/AT] (For 2 Decimal Places)
Step–3	SRV Job#906-D	906 → [.] → [@] → xxx1 → [CA/AT] (For Fractional Entries)
Step–4	SRV Job#918	918 → [.] → [@] → x0xx → [CA/AT] (For Non-Scale Fractional Entries) or 918 → [.] → [@] → x1xx → [CA/AT] (For Disallowing Non-Scale Fractional Entries)
Step-5	SRV Job#950	• Place the [SCALE] Key (Function #107) on the keyboard • Place the [OPEN TARE] Key (Function #108) on the keyboard
Step-6	PGM Job #2690	2690 → [.] → [@] → 1 → @ → 0010 [SBTL] → [CA/AT] for CH–1) or 2690 → [.] → [@] → 1 → @ → 0020 [SBTL] → [CA/AT] for CH–2) **Note:** Must match the physical connection
Step-7	Program Reset	• Place the SRV-Key counter-clockwise to 6 o'clock position (SRV' position) • Count 5 seconds • Turn SRV-Key clockwise to 7o'clock position (SRV position) • Verify"***PROGRAM RESET has printed on the journal-side tape.
Step-8	PGM Job #2110 -and/or- PGM Job#2210	2110 → [.] → [@] → (Dept. No.) → @ → xyzxxx [SBTL] → [CA/AT] –and/or- 2210 → [.] → [@] → (Dept. No.) → @ → xyz [SBTL] → [CA/AT] Y = Tare Table No. (1–9) Z = Scale Comp. /Enabled/Inhibited = 2/1/0

Section–3: Slip Printer

The following table shows the related SRV and PGM-Mode Job#s available for the ER-A520 and ER-A530 ECRs when the Slip Printer is connected.

Slip Printer		
Mode	**Job#**	**Description**
SRV-Mode	913–B	Escape Compulsory SLIP & Validation
	920-A	Combine like items for GLU items printed a bill
	921-C	Bill Printing Method
	928–A	Printing of Slip Logo
	928–B	Val. Message Printing on Slip
		Header Line Printing on Slip when Reorder Printing
	928–C	Print PLU Items on Slip when $0.00
		Set PLU Items Print on Slip
	928–D	PB/NBAL Prints on Slip
		Slip Print Compulsion System
	950	[PRINT]–Function #43
		[SLIP]–Function #44
PGM-Mode	2690	Channel Assignment
	2320	Media Key Function Programming
	2615	Validation Limitation Programming
	2616 – 1, 2, 7, 8	Validation for Refund, PO, RA, Item, (-), and Item Printing for PBLU Sale on Slip Printer

1. **Cabling Pin Outs:**



2. **Data Transmission:**

- 8 Bits ASCII Code
- No Start Bit
- Non Parity
- 1 Stop Bit
- Baud Rate: 9600 bps (fixed)

*Handshaking: DTR/DSR Control

TM-U295 Switch–1Settings:

ROM Version 1.08				
Switch	**Contents**	**On**	**Off**	**Setting**
SW1-1	Data Receive Buffer	Ignored	Prints "?"	OFF
SW1-2	Receive Buffer Capacity	35 bytes	512 Kbytes	OFF
SW1-3	Handshaking	XON/XOFF	DTR/DSR	OFF
SW1-4	Data Word length	7 bits	8 bits	OFF
SW1-5	Parity Check	With Parity	Without Parity	OFF
SW1-6	Parity selection	Even Parity	Odd Parity	OFF
SW1-7	Baud Rate Selection	(*1)		OFF
SW1-8	Baud Rate Selection	(*1)		OFF
SW1-9	DSR (#6) Reset	Effective	Invalid	OFF
SW-10	Init (#25) Reset	Effective	Invalid	ON

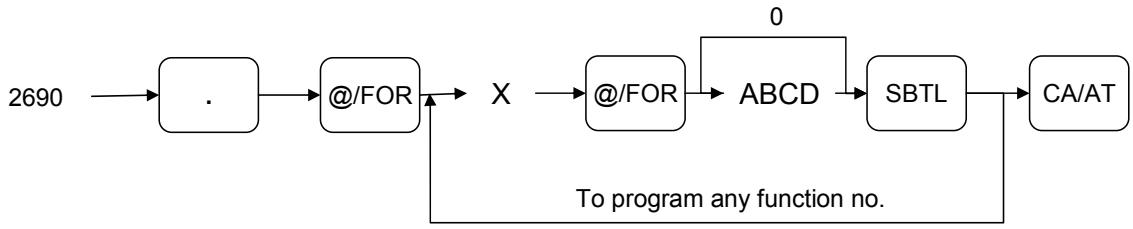
(*1): SW1-7, 1-8 Definitions

Rate	SW1-7	SW1-8
1200 bps	ON	ON
2400 bps	OFF	ON
4800 bps	ON	OFF
9600 bps	OFF	OFF

RS-232C Channel Assignment

Key Sequence:

To assign channel number to the peripherals, please follow the sequence below:



X = 1			
Item	Description	Selection	Entry
A	Channel number for on-line communication	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
B	Channel number for print data sending (CVM)	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
C	Channel number for scale	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
D	Channel number for the coin dispenser	Not connected	0
		Standard channel 1	1
		Standard channel 2	2

NOTE:

1. MRS = 0000
2. Data backup function always uses standard channel 2.

X = 2			
Item	Description	Selection	Entry
A	Channel number for the barcode reader	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
B	Channel number the remote printer 1	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
C	Channel number for the remote printer 2	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
D	Always enter 0		0

NOTE:
MRS = 0000

X = 3			
Item	Description	Selection	Entry
A	Always enter 0		0
B	Channel number for the slip printer TM-295	Not connected for internal printer (printing bills on receipt)	0
		Standard channel 1	1
		Standard channel 2	2
C	Always enter 0		0
D	Channel number for CAT	Not connected	0
		Standard channel 1	1
		Standard channel 2	2

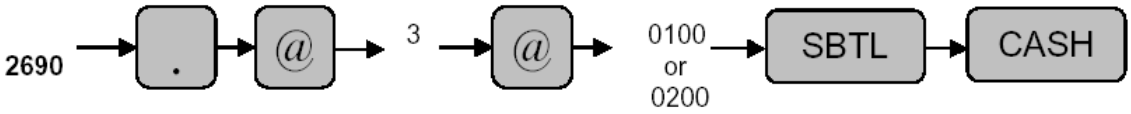
NOTE:
MRS = 0000

Procedure:

Enter the PGM2-Mode as previously outlined

1. Enter 2690
2. Depress [.] key
3. Depress [@/FOR] key
4. Enter 3
5. Depress [@/FOR] key
6. Enter assigned channel numbers (4 digits)
7. Depress [SBTL] key
8. Depress the [CA/AT] key

Channel Assignment for SLIP PRINTER:



Quick Steps – Slip Printer

To quickly setup the ER-A520/ER-A530 to interface with an Epson TM-U295 Slip Printer, please refer to the outlined procedures below:

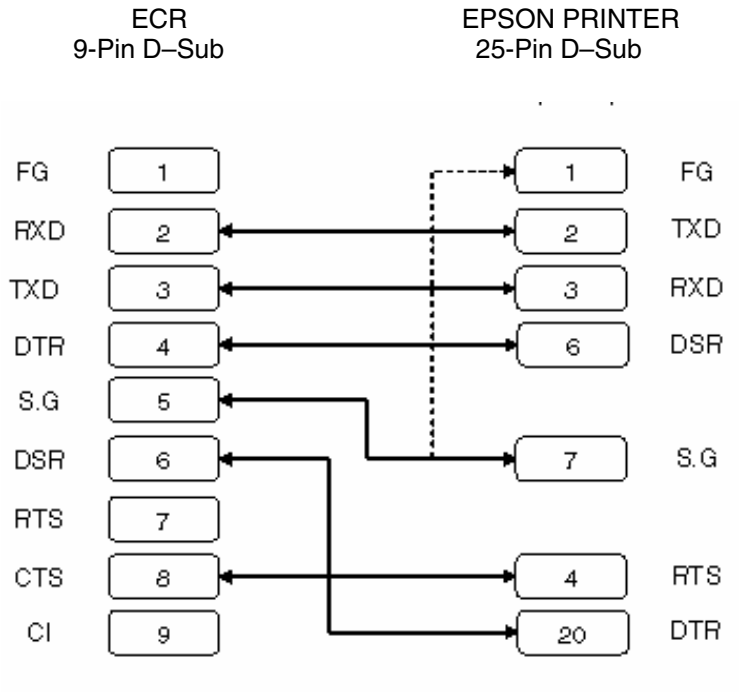
No.	Description	Comments/Procedures
Step–1	Connect the Slip Printer	CH–1 or CH–2
Step–2	SRV Job#913-B	913 → [.] → [@] → x1xx → [CA/AT] (For Escaping Compulsory Slip or Validation) or 913 → [.] → [@] → x0xx → [CA/AT] (For No Escape of Compulsory Slip or Validation)
Step–3	SRV Job#928- A, B, C, D	928 → [.] → [@] → ABCD → [CA/AT] A: Slip Logo Text Prints Yes/No = 1/0 B: VP Message Prints on Slip Yes/No = 2/0 B: C: Header Line on Slip Prints Reorder No/Yes = 1/0 C: Prints $0.00 PLU Items on Slip No/Yes = 4/0 C: Prints PLU Text of Set PLU Links on Slip No/Yes = 2/0 D: Print the PB/NBAL on Slip No/Yes = 4/0 D: Compulsory Slip System PBLU Only/Every Trans/By Media Yes/No = 2/1/0
Step-4	SRV Job#950	• Place the [SLIP] Key (Function #44) on the keyboard • Place the [PRINT (Validation)] Key (Function #43) on the keyboard
Step–5	PGM Job #2690	2690 → [.] → [@] → 3 → @ → 0100 [SBTL] → [CA/AT] for CH–1) or 2690 → [.] → [@] → 3 → @ → 0200 [SBTL] → [CA/AT] for CH–2) **Note:** Must match the physical connection
Step-6	Program Reset	• Place the SRV-Key counter-clockwise to 6 o'clock position (SRV' position) • Count 5 seconds • Turn SRV-Key clockwise to 7o'clock position (SRV position) • Verify"***PROGRAM RESET has printed on the journal-side tape.
Step-7	PGM Job #2615	2615 → [.] → [@] → VVXXAB → [SBTL] → [CA/AT]- VV: Initial Line Feed XX: Max Slip Line No. A: No. of Times for Validation when set for Compulsory = 0–9 B: No. Line Feed after Tray SBTL key is depressed = 0–9
Step-8	PGM Job #2616 #1	2616 → [.] → [@] → 1→ ABCDEFG**H** → [SBTL] → [CA/AT]- H: Validation for Refund Entries Compulsory/NOT= 1/0
Step-9	PGM Job #2616 #2	2616 → [.] → [@] → 2→ ABCDEF**GH** → [SBTL] → [CA/AT]- G: Item Validation Disable/Enable = 1/0 H: Validation printing for discount (-) entry Compulsory/NOT= 1/0
Step-10	PGM Job #2616 #7	2616 → [.] → [@] → 7→ ABCD**E**FGH → [SBTL] → [CA/AT]- E: Item Printing within PBLU Sale on Slip Printer No/Yes = 1/0
Step-11	PGM Job #2616 #8	2616 → [.] → [@] → 8→ ABCD**EFGH** → [SBTL] → [CA/AT]- E: Validation for Check Cashing Compulsory/NOT= 1/0 F: Validation for RA Items Compulsory/NOT= 1/0 G: Validation for PO Items Compulsory/NOT= 1/0 H: Validation for tip-in/tip-paid Compulsory/NOT= 1/0

Section–4: Remote Kitchen Printer

The following table shows the related SRV and PGM-Mode Job#s available for the ER-A520 and ER-A530 ECRs when a Remote Printer is connected.

Remote Kitchen Printer		
Mode	**Job#**	**Description**
SRV-Mode	918–A	Output of Set PLU to KP
	918–B	Red Color Print on KP when PLU/UPC's are ZERO price items
	918–C	Like Items Consolidation on KP
	918–C	Dept/PLU and UPC (EAN) Text Print on KP in Double Size Character
	926–A	Sending Direct VOID and Past Item VOID Data to the KP
	926-B	Sending Refund Data to the KP
	929-A	KP Print Format when Finalizing (Expediter Print Format)
	950	[RP Send]–Function #114
	971	# 9 KP Text 1 (12)/ #12 KP Text 1-6 (12) – **Optional.** If not allocated the PLU description will be used.
	971	#37 KP Buffer
PGM-Mode	2690	Channel Assignment
	2692	Kitchen Printer Programming
	3653	Back Up Kitchen Printer Programming
	3654	Kitchen Printer Name Programming
	3655	Kitchen Printer Print Format Programming
	3656	Chit Receipt Print Format Programming
	2118	Department KP Print Assignment Programming
	2218	PLU/UPC KP Print Assignment Programming
	2328	Media Key Print Assignment Programming

1. **Cabling Pin Outs:**

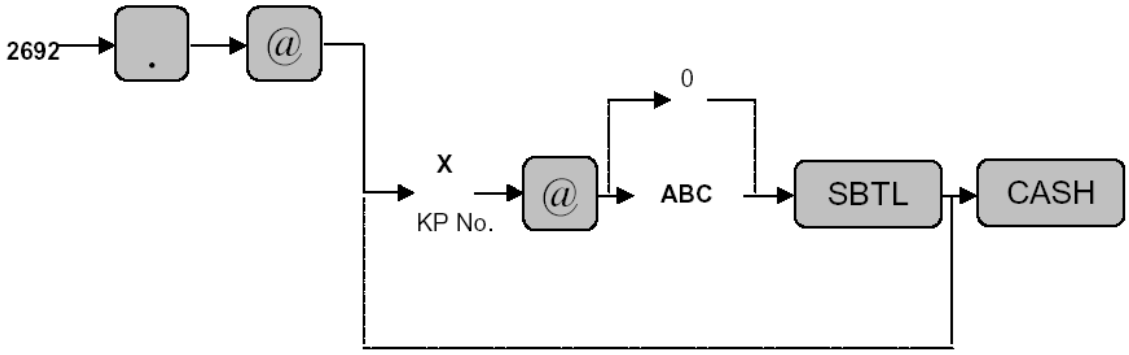


2. **Data Transmission:**

- 8 Bits ASCII Code
- No Start Bit
- Non Parity
- 1 Stop Bit
- Baud Rate: 9600 bps (fixed)

*Handshaking: DTR/DSR Control

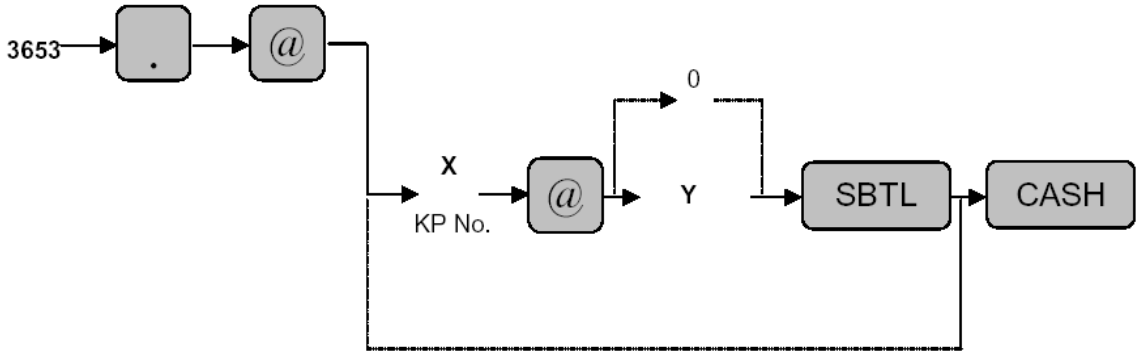
Kitchen Printer Programming - 2692



X: KP No. KP2/KP1 = 2/1

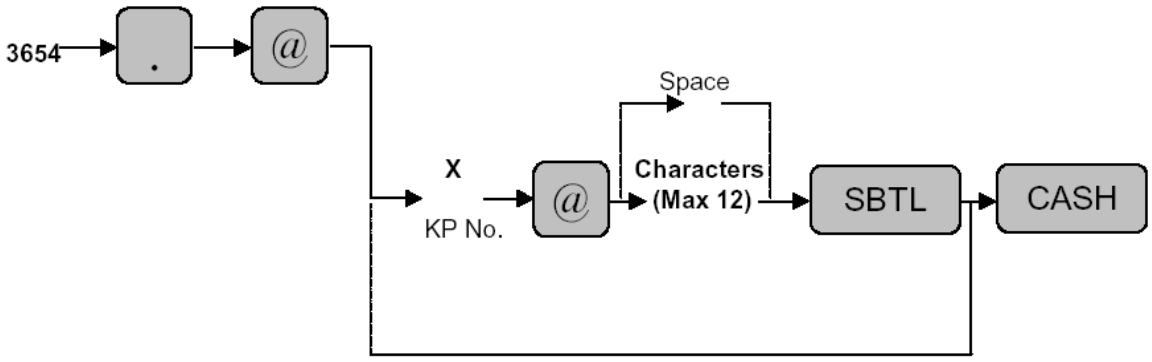
A: Logo Text Print Yes/No = 1/0
B: Auto Cut Yes/No = 1/0
C: Type of Printer
TM-T88III+Logo/TM-T88III/TM-U230/TM-U220 = 3/2/1/0

Back Up Kitchen Printer Programming - 3653



X: KP No. KP2/KP1 = 2/1
Y: 2nd KP (Back Up) KP2/KP1/Nothing =2/1/0
MRS = 0

Kitchen Printer Name Programming - 3654



X: KP No. KP2/KP1 = 2/1

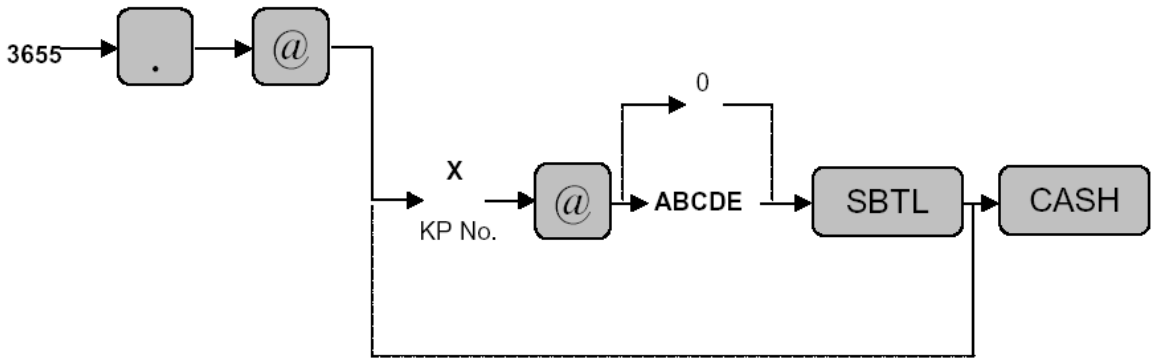
KP Name: Maximum 12 Characters

Characters can be entered by using the character keys or by character code entry. The key sequence for entering character codes is as follows:

XXX → [00] key XXX: Character Code (3 digits)

MRS = Spaces

Kitchen Printer Print Format Programming - 3655

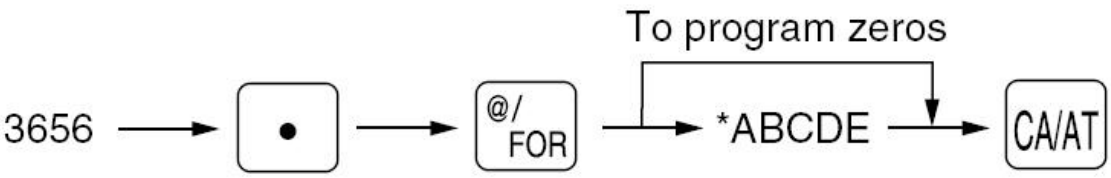


X: KP No.	KP2/KP1	= 2/1
A: Taxable Status Print	Yes/No	=1/0
B: Qty Print when Qty is “1”	Yes/No	=1/0
C: Dept /PLU/UPC (EAN) Code Print	Yes/No	=1/0
D: Unit Price Print	Yes/No	=1/0
E: Total Amount Print	Yes/No	=1/0

MRS = 00000

Note: [Taxable Status Print] = “YES” is effective when [AMOUNT] Print = “YES”

Chit Receipt Format Programming - 3656



A: Taxable Status Print	Yes/No	=1/0
B: Qty Print when Qty is “1”	Yes/No	=1/0
C: Dept /PLU/UPC (EAN) Code Print	Yes/No	=1/0
D: Unit Price Print	Yes/No	=1/0
E: Total Amount Print	Yes/No	=1/0

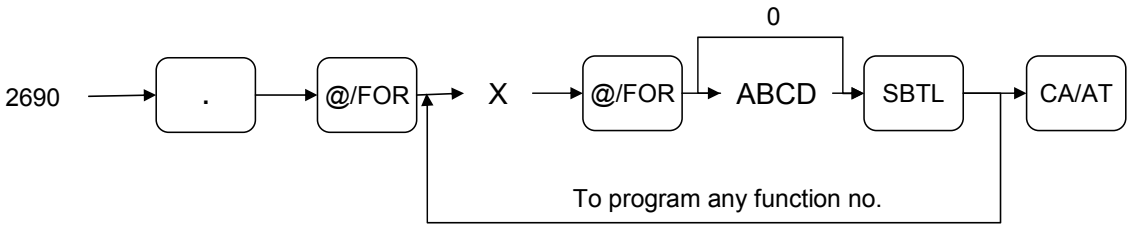
MRS = 00000

Note: [Taxable Status Print] = “YES” is effective when [AMOUNT] Print = “YES”

RS-232C Channel Assignment

Key Sequence:

To assign channel number to the peripherals, please follow the sequence below:



X = 1			
Item	Description	Selection	Entry
A	Channel number for on-line communication	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
B	Channel number for print data sending (CVM)	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
C	Channel number for scale	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
D	Channel number for the coin dispenser	Not connected	0
		Standard channel 1	1
		Standard channel 2	2

NOTE:

MRS = 0000

X = 2			
Item	Description	Selection	Entry
A	Channel number for the barcode reader	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
B	Channel number the remote printer 1	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
C	Channel number for the remote printer 2	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
D	Always enter 0		0

NOTE:
MRS = 0000

X = 3			
Item	Description	Selection	Entry
A	Always enter 0		0
B	Channel number for the slip printer TM-295	Not connected for internal printer (printing bills on receipt)	0
		Standard channel 1	1
		Standard channel 2	2
C	Always enter 0		0
D	Channel number for CAT	Not connected	0
		Standard channel 1	1
		Standard channel 2	2

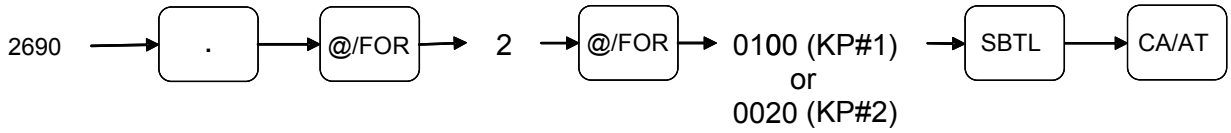
NOTE:
MRS = 0000

Procedure:

Enter the PGM2-Mode as previously outlined

1. Enter 2690
2. Depress [.] key
3. Depress [@/FOR] key
4. Enter 2
5. Depress [@/FOR] key
6. Enter assigned channel numbers (4 digits)
7. Depress [SBTL] key
8. Depress the [CA/AT] key

Channel Assignment for KP:



Quick Steps – Remote Kitchen Printer

To quickly setup the ER-A520/ER-A530 to interface with a Remote Kitchen Printer, please refer to the outlined procedures below:

No.	Description	Comments/Procedures
Step–1	Connect the Remote Printers	KP#1 on CH–1 or KP#2 on CH–2
Step–2	SRV Job#918-A	918 → [.] → [@] → 4xxx → [CA/AT] Output of Set PLU to KP
Step-3	SRV Job#918-B	918 → [.] → [@] → x2xx → [CA/AT] Red Color Print on KP when PLU/UPC's are ZERO price items
Step-4	SRV Job#918-C	918 → [.] → [@] → x0xx → [CA/AT] Like Items Consolidation on KP
Step-5	SRV Job#918-C	918 → [.] → [@] → x1xx → [CA/AT] Dept/PLU and UPC (EAN) Text Print on KP in Double Size Character
Step-6	SRV Job#926-A	926 → [.] → [@] → 3xxx → [CA/AT] Sending Direct VOID and Past Item VOID Data to the KP
Step–6	SRV Job#926-B	926 → [.] → [@] → x0xx → [CA/AT] Sending Refund Data to the KP
Step-7	SRV Job#929-A	926 → [.] → [@] → 1xxx → [CA/AT] Detail KP Print Format when Finalizing (Expediter Print Format)
Step-8	SRV Job#950	• Place the [RP Send] Key (Function #114) on the keyboard if required. **Note:** The RP Send Key can send an item to the remote KP before finalizing the transaction.
Step-9	SRV Job#971	Create #37 KP Buffer
Step-10	PGM Job #2690	KP#1: 2690 → [.] → [@] → 2 → @ → 0100 [SBTL] → [CA/AT] for CH–1) or KP#2: 2690 → [.] → [@] → 2 → @ → 0020 [SBTL] → [CA/AT] for CH–2) **Note:** Must match the physical connection
Step-11	PGM Job #2692	2692 → [.] → [@] → X → @ → ABC [SBTL] → [CA/AT] X: KP No. KP2/KP1 =2/1 A: Logo Text Print Yes/No =1/0 B: Auto Cut Yes/No =1/0 C: Type of Printer TM-T88III+Logo /TM-T88III/TM-U230/TM-U220 = 3/2/1/0
Step-12	Program Reset	• Place the SRV-Key counter-clockwise to 6 o'clock position (SRV' position) • Count 5 seconds • Turn SRV-Key clockwise to 7o'clock position (SRV position) • Verify"***PROGRAM RESET has printed on the journal-side tape.
Step-13	Other PGM2 Mode Programming	3653 → [.] → [@] → X → @ → Y → [SBTL] → [CA/AT] X: KP No. KP2/KP1 = 2/1 Y: Back Up Printer KP2/KP1/Nothing = 2/1/0 3654→ [.] → [@] → X → @ → Name (12 Max) → [SBTL] → [CA/AT X: KP No. KP2/KP1 = 2/1 Characters can be entered by using the character keys or numeric keys. XXX → 00 Key XXX: Character Code (Digits)

Step-14	Other PGM2 Mode Programming	3655 → [.] → [@] → X → @ → ABCDE → [SBTL] → [CA/AT X: KP No. KP2/KP1 = 2/1 A: Taxable Status Print Yes/No = 1/0 B: Qty Print when Oty is 1 Yes/No = 1/0 C: Dept/PLU/UPC(EAN) Code Print Yes/No = 1/0 D: Unit Price Print Yes/No = 1/0 E: Total Amount Print Yes/No = 1/0 MRS = 00000 3656 → [.] → [@ → ABCDE → [SBTL] → [CA/AT Chit Receipt Format A: Taxable Status Print Yes/No = 1/0 B: Qty Print when Oty is 1 Yes/No = 1/0 C: Dept/PLU/UPC (EAN) Code Print Yes/No = 1/0 D: Unit Price Print Yes/No = 1/0 E: Total Amount Print Yes/No = 1/0 MRS = 00000 **Note:** "TAXABLE STATUS Print = YES is effective when "AMOUNT" print = YES

Overview: Scanner (Barcode Reader)

The new ER-A520 and ER-A530 model ECRs are capable of scanning the following UPC (EAN) codes.

1) UPC (EAN) Available Codes:

UPC-A (Number System Character 0,2,3,4,5)

0	*	*	*	*	*	“	“	“	“	“	C/D

* Maker Code “Item Code

2	“	“	“	“	“	‘	*	*	*	*	C/D

“Item Code ‘P/C-Price Check Digit *Price

Note: Maximum Price = $99.99

3											C/D

Use for National Drug Codes or National Health Retail Item Codes

4	*	*	*	*	*	*	*	*	*	*	C/D

*Free Format

5	*	*	*	*	‘	‘	‘	“	“	C/D	

*Maker Code ‘Family Code “Coupon Price

UPC-E

UPC-E is a zero-suppressed version of UPC-A that conforms to the UPS-E Standards.

EAN 13

*	*	“	“	“	“	“	‘	‘	‘	‘	‘	C/D

*Nation Code “ Maker Code ‘Item Code

EAN-13 plus Add-On

*	*	“	“	“	“	“	‘	‘	‘	‘	‘	C/D

*Nation Code “Maker Code ‘Item Code

*	*	*	*	*

*Add On Codes (5 Digits)

*	*	“	“	“	“	“	‘	‘	‘	‘	‘	C/D

*Nation Code “Maker Code ‘Item Code

*	*

*Add On Codes (2 Digits)

EAN8

Ordinary EAN-8 Codes

40 123 12 7
AB CDE FG H
AB: Nation Code
CDE: Maker Code
FG: Item Code
H: Check Digit

*	*	“	“	“	“	‘	CD

*Nation Code “Maker Code ‘Item Code

Internal encoding using the EAN-8 Code (2x Code)

2	*	*	“	“	“	“	CD

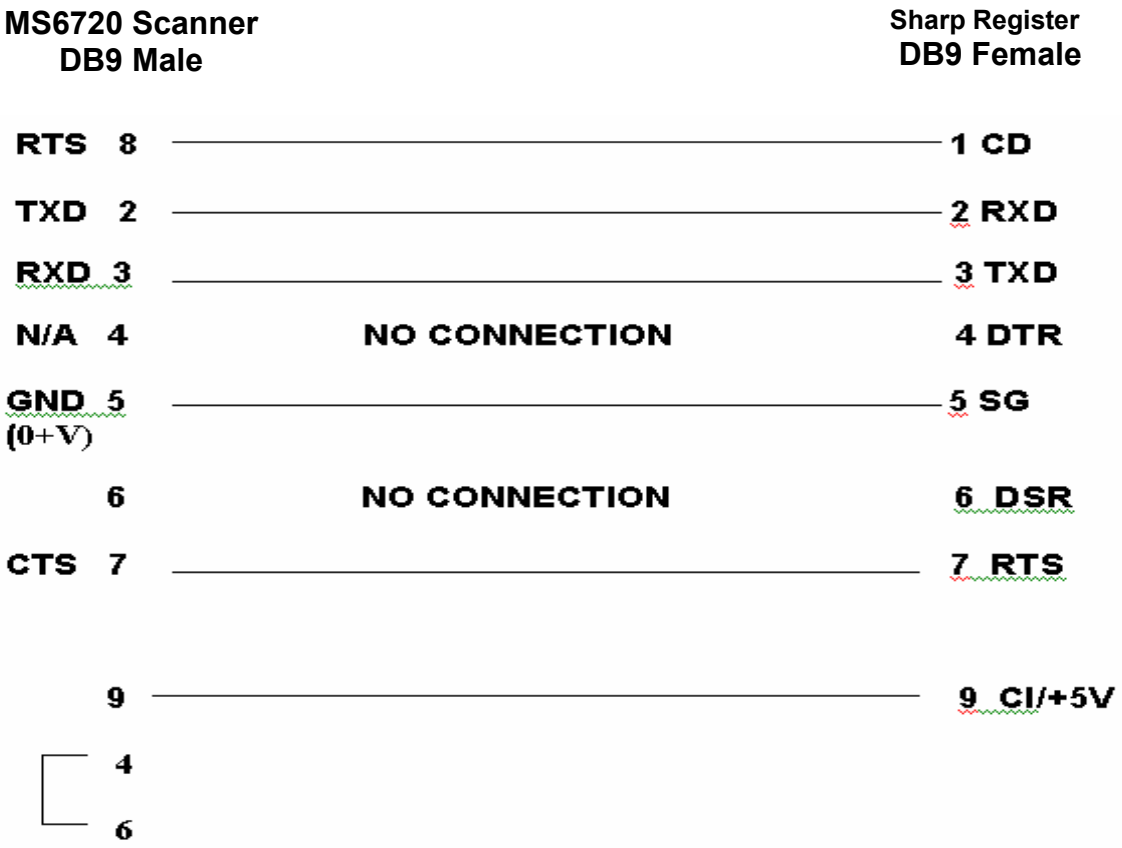
*Dept Code “Price

Section–5: Scanner (Barcode Reader)

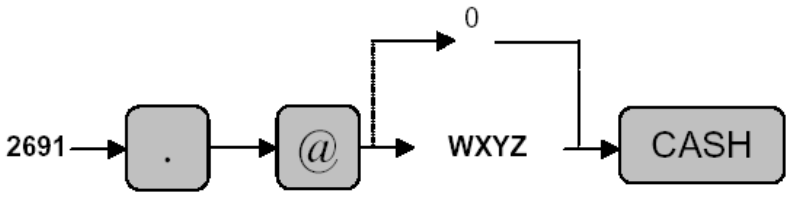
The following table shows the related SRV and PGM-Mode Job#s available for the ER-A520 and ER-A530 ECRs when the Scanner is connected.

Scanner (Barcode Reader)		
Mode	**Job#**	**Description**
SRV-Mode	906-A	Stock Counter Availability Function
	906-D	UPC Look Up at Refund Entry
	907-B	UPC (EAN) Codes Printing on Receipt and Journal
	907-C	Enable Negative UPC
	909-B	Printing of UPC Data when Resetting
	911-B	C/D Check of UPC (EAN)
	921-A	Convert UPC-E Codes to UPC-A Codes
	971	File Groups 14-22, 23, 24 and 26 - **Optional** Dynamic UPC also known as the UPC Learning Function, allows you to register a UPC that has not been programmed in the main PLU/UPC file. The UPC is added to the Dynamic UPC file memory space, for temporary storage or for a later upload to the main PLU/UPC file. This can assist with the register traffic flow and prevent unwanted and inaccurate items from being added to the PLU/UPC file. At the end of day and after verifying the UPCs and making any necessary edits, the contents of the dynamic UPC file can be downloaded to the main UPC file using the PGM 2099 job code. If you do not allocate Dynamic UPC, the UPC Learning Function is still available. The UPC will add directly to the main PLU/UPC file. No upload required.
	950	[DEPT#]-Function #106
		[AMT]–Function #109
		[REPEAT]-Function #110
		[INQ]–Function #111
		[NO DEL]-Function #112
		[PRCHNG]-Function #113
PGM-Mode	2690	Channel Assignment
	2691	Scanner Settings
	1200	UPC (EAN) Programming
	2616 - P10	ERA530 only Enable to allow Learning Function in REG mode

1. **Cabling Pin Outs:**



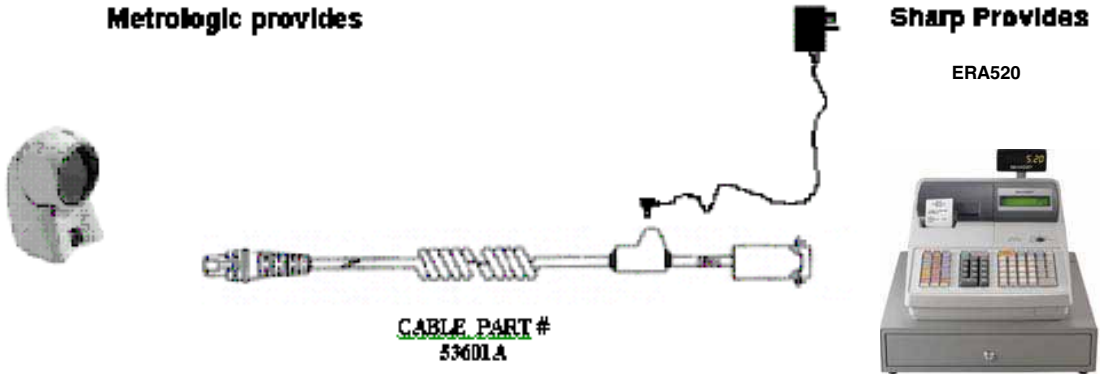
PGM2 Mode Related Programming - 2691



W: Data Bit	7bits / 8bits	=1/0
X: Parity Bit	Non / Odd / Even	=2/1/0
Y: Stop Bit	1bit / 2bits	=1/0
Z: Transmission Speed	19200bps / 9600bps / 4800bps	=2/1/0

MRS = 1110

2. Cable Requirements for other Metrologic Scanners



Note: The RS-232 cable must be labeled **53601A** for the MS7120, MS9520 and MS9540 to work with the ER-A520 and ER-A530 ECRs.
This cable **MUST** be specifically ordered with the scanner from your local distributor.

Metrologic MS6720 Scanner - Programming Requirements:

Scan the following in order from top to bottom.

ENTER PROGRAM MODE

(1)

RECALL DEFAULTS

(2)

PARITY = ODD

(3)

ENABLE RTS/CTS

(4)

DISABLE LINE FEED

(5)

4800 BAUD RATE

(6)

ENABLE STX PREFIX

(7)

ENABLE UPC PREFIX

(8)

Unplug the scanner power supply. Then re - connect (power 0ff/on); This RESET is necessary for the scanner to work properly.

Your Scanner is now ready for use. You will have to program the items you will be scanning into the register.

Metrologic MS7120 Scanner - Programming Requirements:

Scan the following in order from top to bottom.

(1)
ENTER PROGRAM MODE

(2)
RECALL DEFAULTS

(3)
BAUD RATE 4800

(4)
ENABLE STX PREFIX

(5)
ENABLE UPC PREFIX

(6)
PARITY=ODD

Note: if you are having trouble scanning the bar codes, please refer to your Metrologic manual.

(7)
ENABLE RTS/CTS HAND

(8)
DISABLE LF SUFFIX

(9)
ALLOW CONFIGURATION MODE
ON POWER UP

(10)
DISABLE CODABAR

(11)
DISABLE CODE 128

(12)
DISABLE CODE 93

(13)
DISABLE I 2 OF 5

(14)
EXIT PROGRAM MODE

Your scanner is now ready for use. You will have to program the items you will be scanning into the register.

Metrologic MS9540 Scanner - Programming Requirements:

Scan the following in order from top to bottom.

(1)
ENTER EXIT
PROGRAM MODE

(2)
RECALL DEFAULTS

(3)
BAUD RATE
4800

(4)
ENABLE STX PREFIX

(5)
ENABLE UPC PREFIX ID

(6)
PARITY = ODD

(7)
ENABLE RTS/CTS
HAND SHAKING

Your scanner is now ready for use. You will have to program the items you will be scanning into the register.

(8)
DISABLE LF SUFFIX

(9)
ALLOW CONFIGURATION
ON POWER UP

(10)
DISABLE CODABAR

(11)
DISABLE CODE 128

(12)
DISABLE CODE 93

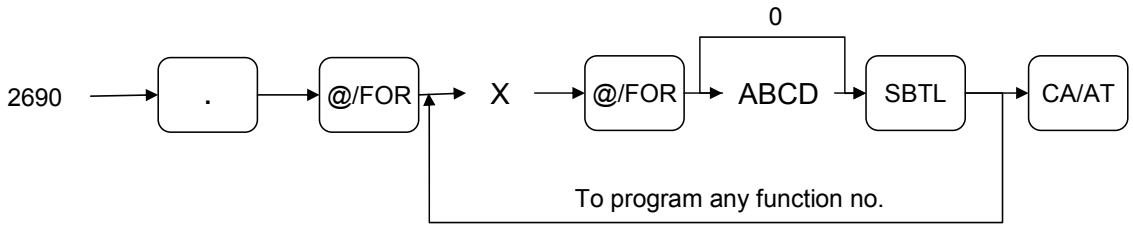
(13)
DISABLE I 2 OF 5

(14)
ENTER EXIT
PROGRAM MODE

RS-232C Channel Assignment

Key Sequence:

To assign channel number to the peripherals, please follow the sequence below:



X = 1			
Item	Description	Selection	Entry
A	Channel number for on-line communication	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
B	Channel number for print data sending (CVM)	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
C	Channel number for scale	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
D	Channel number for the coin dispenser	Not connected	0
		Standard channel 1	1
		Standard channel 2	2

NOTE:

1. MRS = 0000
2. Data backup function always uses standard channel 2.

X = 2			
Item	Description	Selection	Entry
A	Channel number for the barcode reader	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
B	Channel number the remote printer 1	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
C	Channel number for the remote printer 2	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
D	Always enter 0		0

NOTE:
MRS = 0000

X = 3			
Item	Description	Selection	Entry
A	Always enter 0		0
B	Channel number for the slip printer TM-295	Not connected for internal printer (printing bills on receipt)	0
		Standard channel 1	1
		Standard channel 2	2
C	Always enter 0		0
D	Channel number for CAT	Not connected	0
		Standard channel 1	1
		Standard channel 2	2

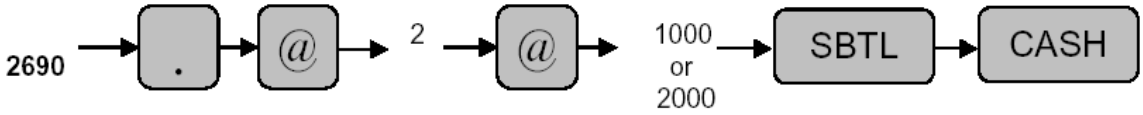
NOTE:
MRS = 0000

Procedure:

Enter the PGM2-Mode as previously outlined

1. Enter 2690
2. Depress [.] key
3. Depress [@/FOR] key
4. Enter 2
5. Depress [@/FOR] key
6. Enter assigned channel numbers (4 digits)
7. Depress [SBTL] key
8. Depress the [CA/AT] key

Channel Assignment for Scanner:



Quick Steps – Scanner (Barcode Reader)

To quickly setup the ER-A520/ER-A530 to interface with a Scanner, please refer to the outlined procedures below:

No.	Description	Comments/Procedure
Step–1	Connect the Scanner	CH–1 or CH–2
Step–2	SRV Job#906-A	906 → [.] → [@] → 0xxx → [CA/AT] Allow Stock Function Unconditionally 906 → [.] → [@] → 1xxx → [CA/AT] Allow Stock Function Despite Error Message 906 → [.] → [@] → 2xxx → [CA/AT] Inhibit PLU/UPC (EAN) item when Stock goes Negative
Step-3	SRV Job#906-D	906 → [.] → [@] → xxx0 → [CA/AT] UPC Price Look Up at Refund Entry
Step-4	SRV Job#907-B	907 → [.] → [@] → x2xx → [CA/AT] UPC (EAN) Codes printing on Receipt and Journal
Step-5	SRV Job#907-C	907 → [.] → [@] → xx1x → [CA/AT] Enable Negative UPC
Step-6	SRV Job#909-B	909 → [.] → [@] → x0xx → [CA/AT] Printing of UPC Data when Resetting
Step-7	SRV Job#911-B	911 → [.] → [@] → x4xx → [CA/AT] C/D Check of UPC (EAN)
Step-8	SRV Job#921-A	921 → [.] → [@] → 4xxx → [CA/AT] Convert UPC-E Codes to UPC-A Codes
Step-9	SRV Job#971	971 File Groups 14-22, 23, 24 and 26 - **Optional**
Step-10	SRV Job#950 (Optional)	• Place the [DEPT#] Key (Function #106) on the keyboard • Place the [AMT] Key (Function #109) on the keyboard • Place the [REPEAT] Key (Function #110) on the keyboard • Place the [INQ] Key (Function #111) on the keyboard • Place the [NO DEL] Key (Function #112) on the keyboard • Place the [PRCHNG] Key (Function #113) on the keyboard
Step-11	PGM Job #2690	2690 → [.] → [@] → 2 → @ → 1000 [SBTL] → [CA/AT] for CH–1) or 2690 → [.] → [@] → 2 → @ → 2000 [SBTL] → [CA/AT] for CH–2) **Note:** Must match the physical connection
Step-12	Program Reset	• Place the SRV-Key counter-clockwise to 6 o'clock position (SRV' position) • Count 5 seconds • Turn SRV-Key clockwise to 7o'clock position (SRV position) • Verify"***PROGRAM RESET has printed on the journal-side tape.
Step-13	PGM Job #2691	2691 → [.] → [@] → WXYZ → [SBTL] → [CA/AT]- W: Data Bit 7bits/8 bits = 1/0 X: Parity Bit Non/Odd/Even = 2/1/0 Y: Stop Bit 1 bit/2 bits = 1/0 Z: Transmission Speed 19200bps/9600bps/4800 bps = 2/1/0

Section-5: PGM Mode Programming

Overview

The ER-A520 and ER-A530 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: PGM1-Jobs (1xxx) may be performed in the PGM1 or PGM2 Mode, where the PGM-2 Jobs (2xxx) may only be performed in PGM2 Mode.

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

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

1. **Programming Sequence:**

When installing the ER-A520 and ER-A530, it is recommended to follow the sequence outlined below:

1) Department Settings: This should be structured towards the balancing procedures required
2) PLU/UPC (EAN) Settings
3) Keyboard Assignment
4) Cashier Settings
5) Tax Rate
6) All other settings

IMPORTANT NOTE:
When using SDW or installing peripherals such as the Slip printer, the sequence may vary.
The RS-232 settings for SDW and peripheral connections will be described in a separate section.

2. General Rule:

When making presets entries, the following rule will apply:

2) 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.
3) If an error occurs on the second and subsequent preset entries, then depress the [CL] key and re-enter the desired values.

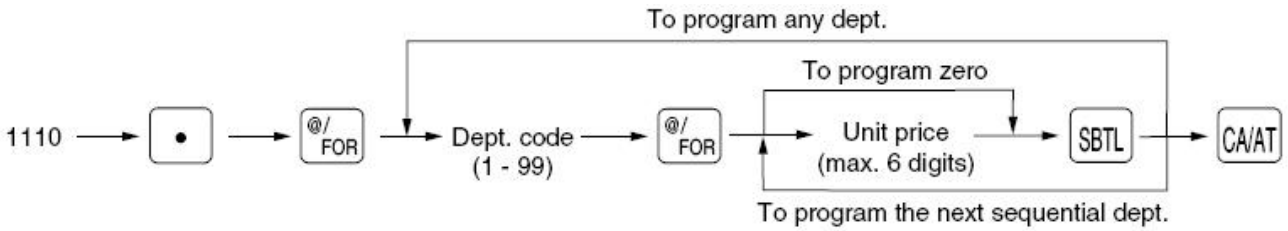
Overview

The following table shows the PGM-Mode **department** programming jobs codes available on the ER-A520 and ER-A530 model ECRs.

PGM Job#	Description
Departments	
1110	Department Unit Price Setting
2110	Department Type and Functions
2111	Dept. Status – Tax, Food stamps, Sign
2112	Department HALO Setting
2114	Department Texts
2115	Department Commission Group
2116	Department Group
2118	Department Print Station Programming
2119	Direct Key for Department
2180	Department Age Limitation

Note: The above chart is shown in numeric order and should not be confused with the actual method recommended as: PGM Job #2110, PGM #2111, PGM #1100 then all others.

Department Price - 1110

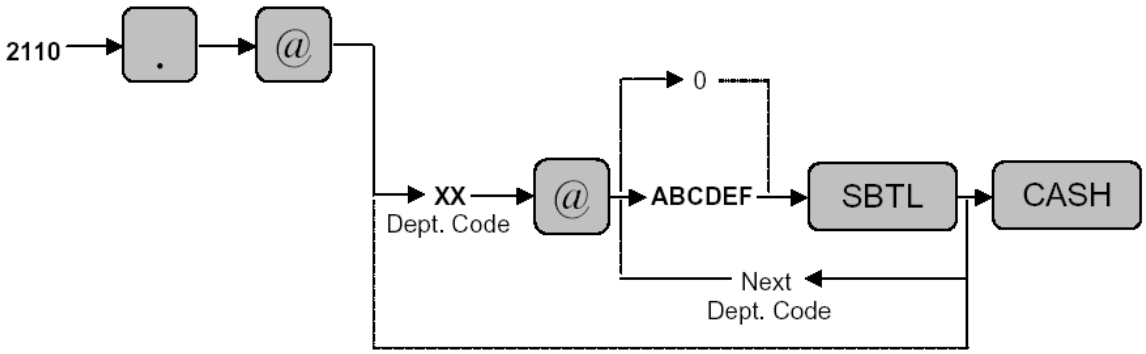


Dept. Code 01-99
Unit Price (0-9999.99)

MRS = 0

Note: If a price is entered for a department, which has, been previously set as “Inhibited” or “Open” in PGM Job #2110, then the type is changed as follows: “Inhibited” →”Preset” and “Open”→”Open & Preset”.

Department Type - 2110

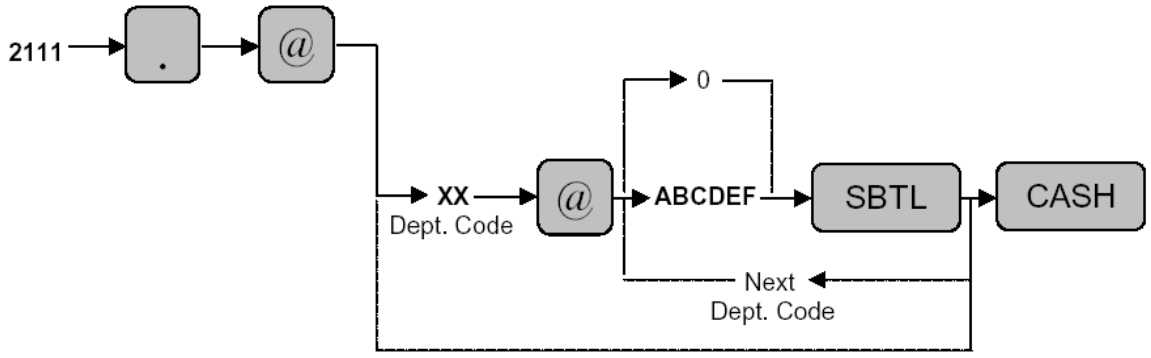


XX : Dept Code 01-99
ABCDEF : See Below

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

Department Status - 2111

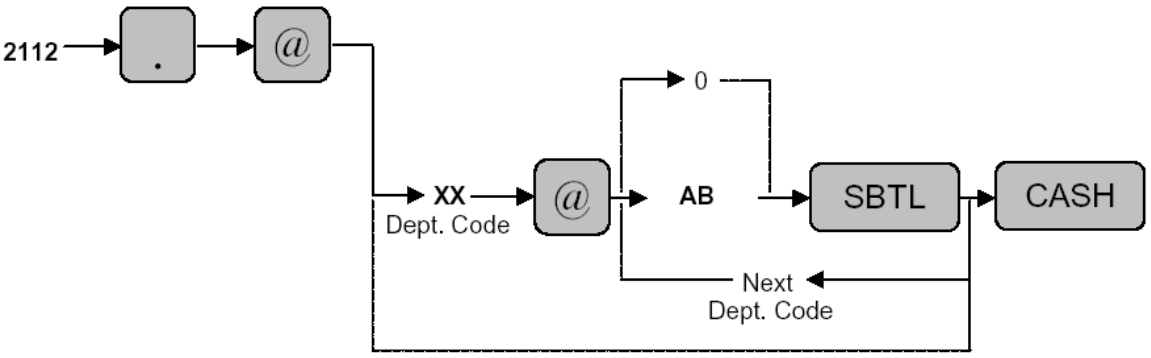


XX : Dept Code 01-99
ABCDEF : See Below

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

Department HALO - 2112



XX : Dept Code 01-99
AB : See Below

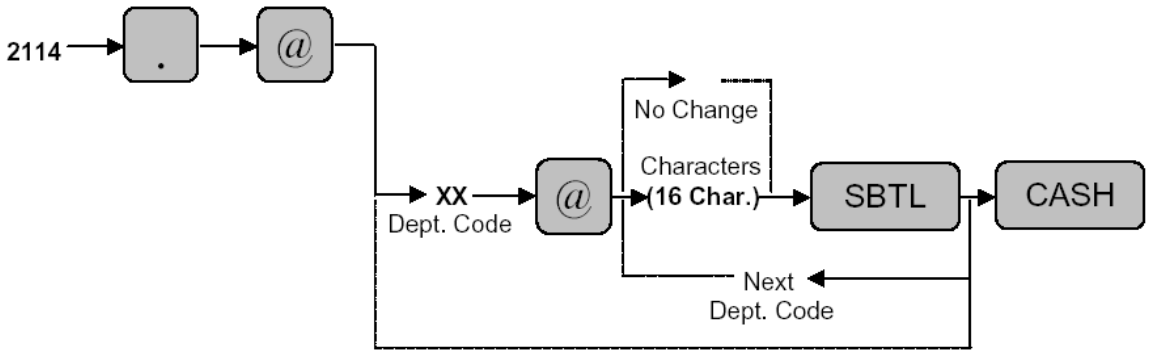
A: Mantissa (0-9)
B: Exponent (0-7)

Notes: Items A and B indicate A x 10B.
(Example: 17 = 10000000 or allows an entry up to 999999)
Any amount below that value will enable within 99999999.

MRS = 17

Number of Depts. is determined by File Group # 1.

Department Text - 2114



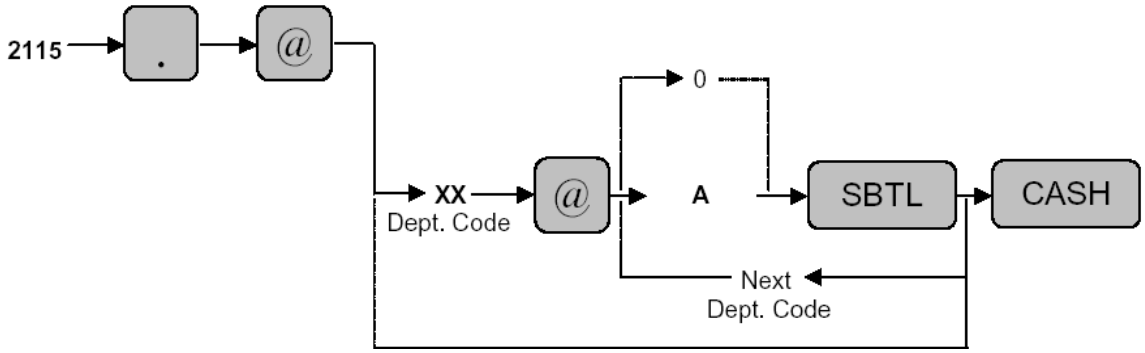
XX : Dept Code 01-99
Characters : Max. 16 (Character length is determined by file group 2 or 3.)

Characters can be entered by using the character keys or by character code entry. The key sequence for entering character codes is as follows:

XXX → [00] Key XXX: Character Codes (3 Digits)

MRS = DPT.XX

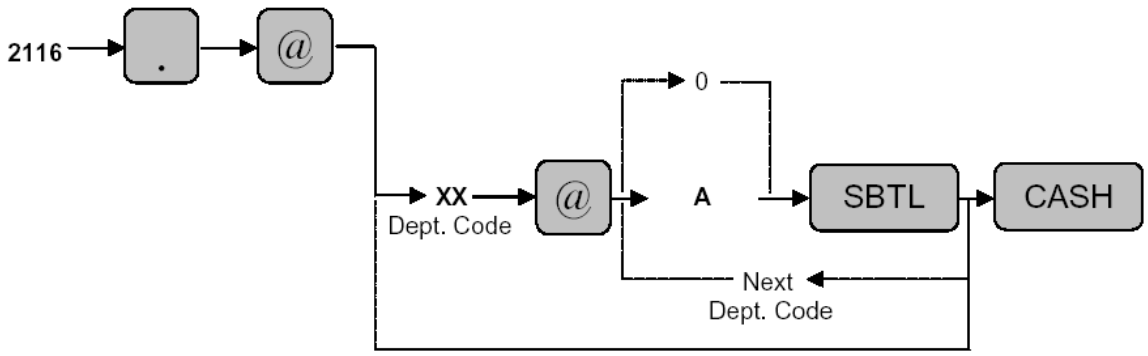
Department Commission Group - 2115



XX : Dept Code 01-99
A : Group No. (0 –9)

MRS = 0

Department Group - 2116



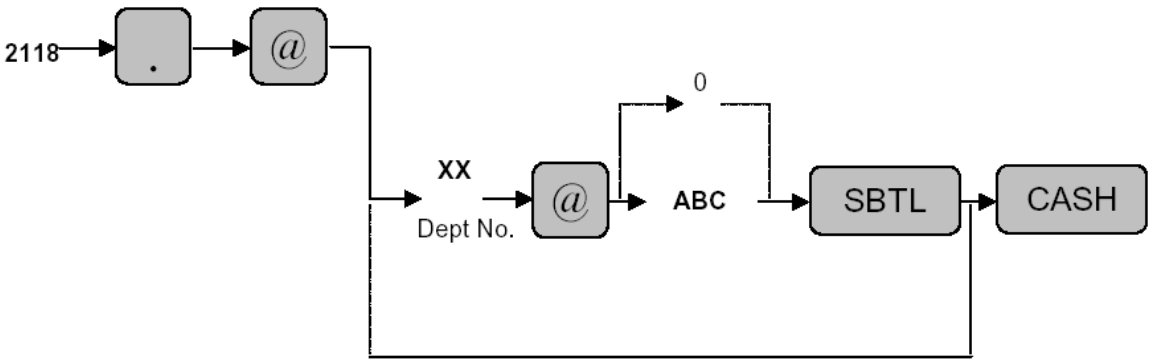
XX : Dept Code 01-99
A : See Below

A: Dept. Group No. (0-9)

MRS = 0

Department Print Station Programming - 2118

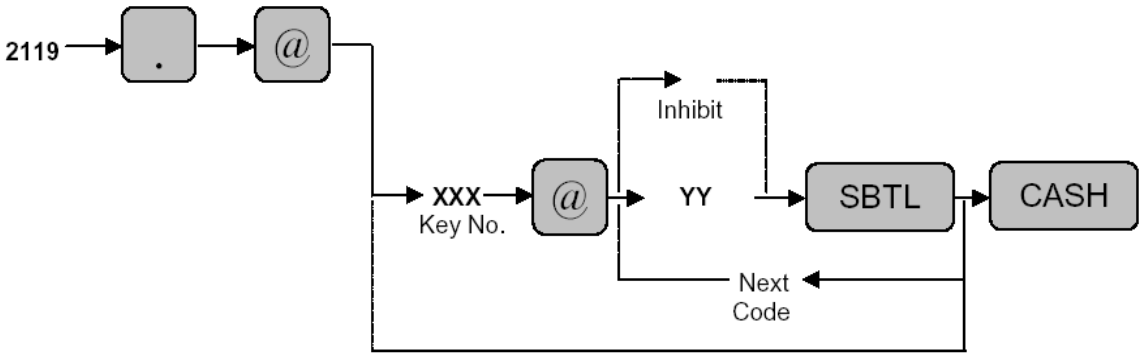
XX: Department Code (01 to Maximum Number of Department Allocated)



A: KP1 Print	Yes/No	=1/0
B: KP2 Print	Yes/No	=1/0
C: Chit Receipt Print	Yes/No	=1/0

MRS = 000

Department Direct Key Assignment - 2119

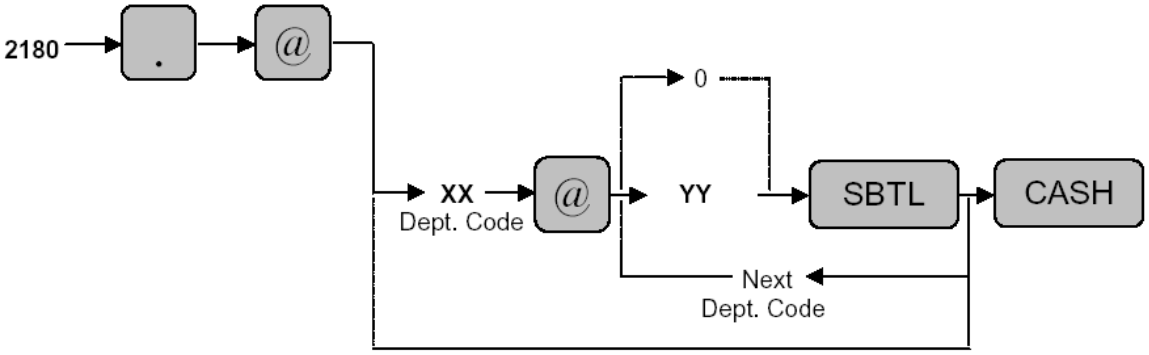


XXX : Key No.
YY : Dept. Code 01-99

MRS = Default Key Layout

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

Department Age Limitation - 2180



XX : Dept. Code 01-99
YY : See Below

MRS = 00

Notes: The age is calculated in years against the date setting of the ECR.
The [BIRTHDAY] key (#105) must be preset in SRV Job#950

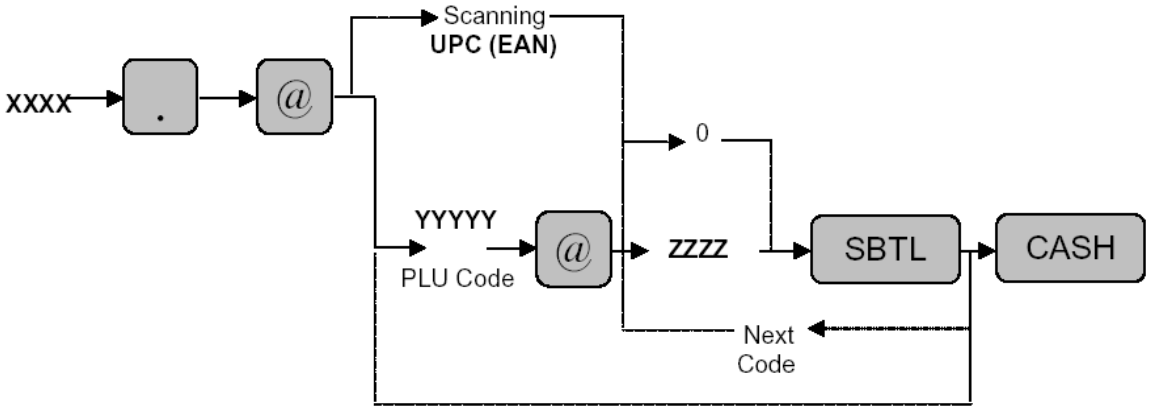
Overview

The following table shows the PGM-Mode **PLU/UPC** programming job codes available on the ER-A520 and ER-A530 model ECRs.

PGM Job#	Description
PLU	
1200	PLU/UPC (EAN) Code Set Up Programming
1210	PLU/UPC (EAN) Unit Price Setting
1211	PLU/UPC (EAN) Base Qty Setting
1220	PLU/UPC (EAN) Stock Setting - Add
1221	PLU/UPC (EAN Stock Setting - Subtract
1222	PLU/UPC (EAN) Stock Setting - Overwrite
2210	PLU/UPC (EAN) Function Programming
2211	PLU/UPC (EAN) Status – Tax, Food Stamps, Sign
2214	PLU/UPC (EAN) Text
2215	PLU/UPC (EAN) Commission Group
2217	PLU/UPC (EAN) Mix & Match Table Assignment
2218	PLU/UPC (EAN) Print Station Programming
2219	Direct Key Assignment for PLU
2220	Link PLU Programming
2221	Set PLU Programming
2225	Mix & Match Table Set Up
2280	PLU/UPC (EAN) Age Limitation

Notes: The above chart is shown in numeric order and should not be confused with the actual method recommended as: PGM Job#1200, PGM Job#2211, PGM Job#1210 then all others.
There is no [LEAD THROUGH PROGMMING] for UPC (EAN) Codes.

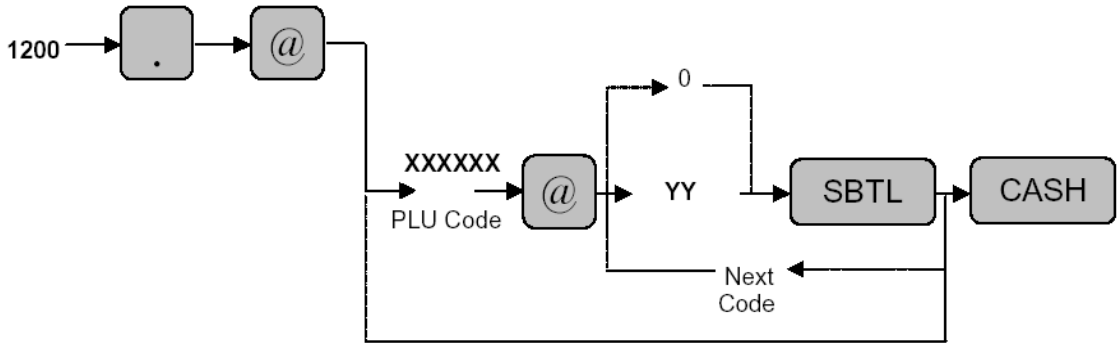
PLU/UPC (EAN) Code Programming Procedures



XXXX : Job Code
YYYYYY : PLU Code = 1 to 99999
Scanning : UPC (EAN) Code = 13 Digits (EAN13, EAN8, UPC-A and UPC-E Types)

Note: Number of PLU/UPCs are determined by File Group 8.
Codes that are 5 digits or less are acknowledge as PLU's (Price Look Up)
Codes that are 6 digits or more are acknowledged as UPC (EAN) codes.

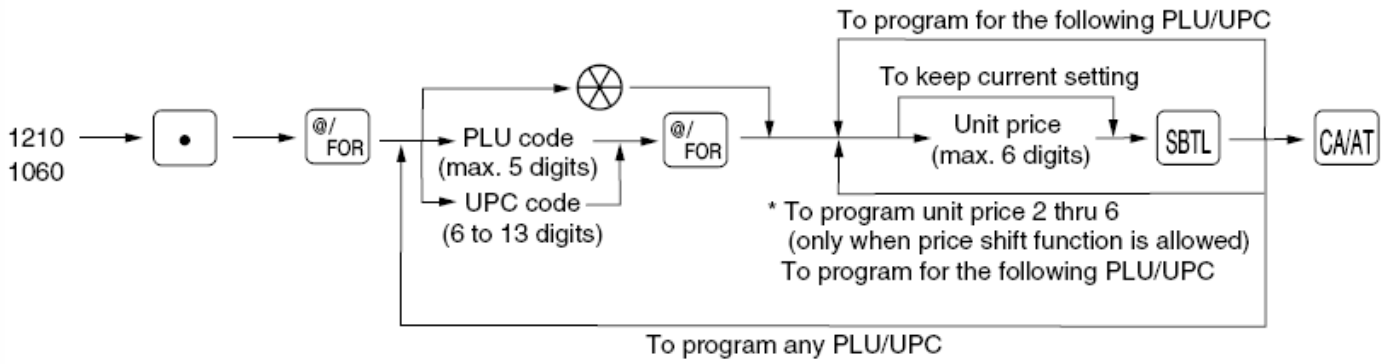
PLU Set Up - 1200



XXXXXX : PLU Code 01-999999
YY : Dept. Code 0-99

MRS = 01 (PLU Codes 000001 – 000020 Only)

PLU Unit Price - 1210



* 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.

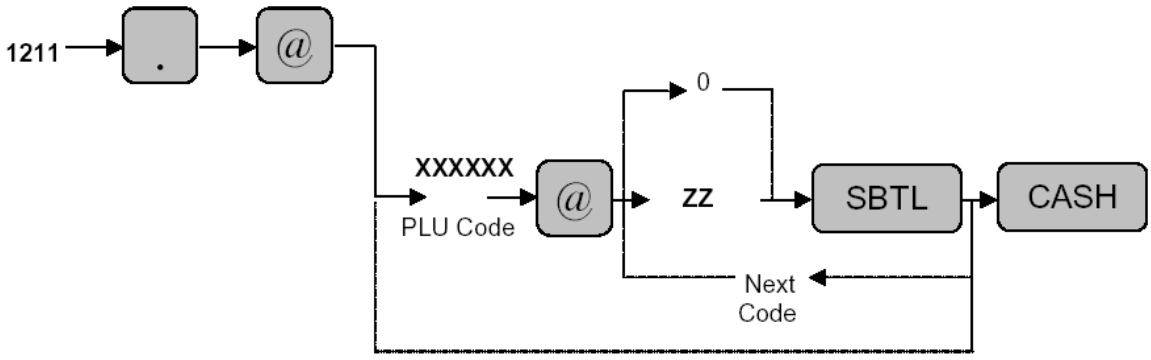
MRS = 000000

Notes: 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).

PLU Base Qty - 1211



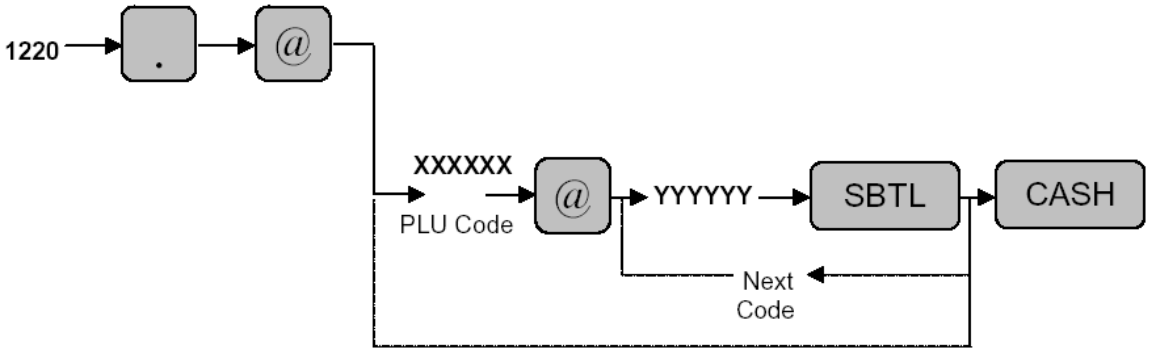
XXXXXX : PLU Code 01-999999
ZZ : See Below

ZZ: Base Qty (00-99) 00 = No Limitation

MRS = 00

Notes: If the PLU record is not in the PLU file during this programming, it will be created automatically upon entering a Base Qty.

PLU Stock (ADD) - 1220

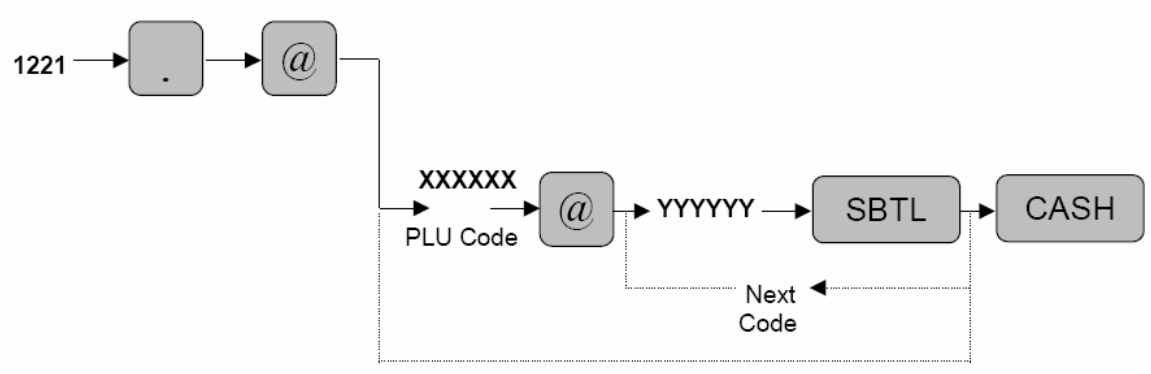


XXXXXX : PLU Code 1-999999
YYYYYY : Stock Value (0-999999)

MRS = 000000

Notes: The value entered is “added” to the existing Stock counter.
PLU/UPC Stock Function is preset in SRV 971 File Group 13.

PLU Stock (Subtract) - 1221

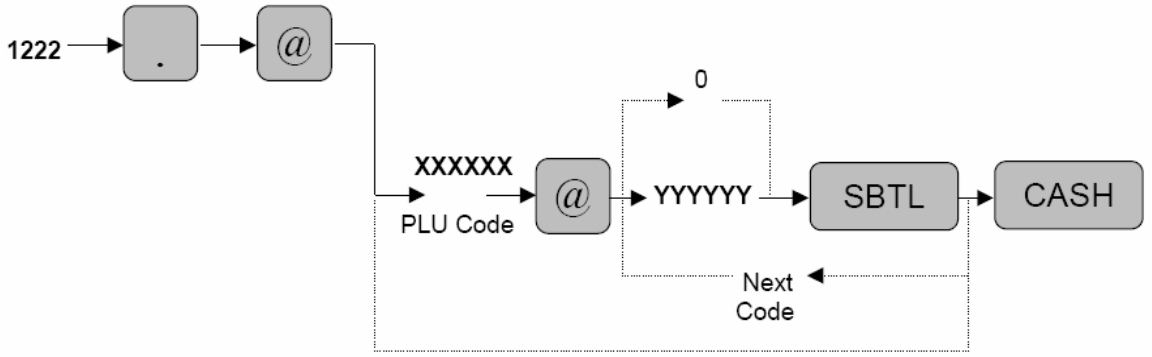


XXXXXX : PLU Code 1-999999
YYYYYY : Stock Value (0-999999)

MRS = 00

Notes: The value entered is “subtracted” from the existing Stock counter.
PLU/UPC Stock Function is preset in SRV 971 File Group 13.

PLU Stock (Overwrite) - 1222

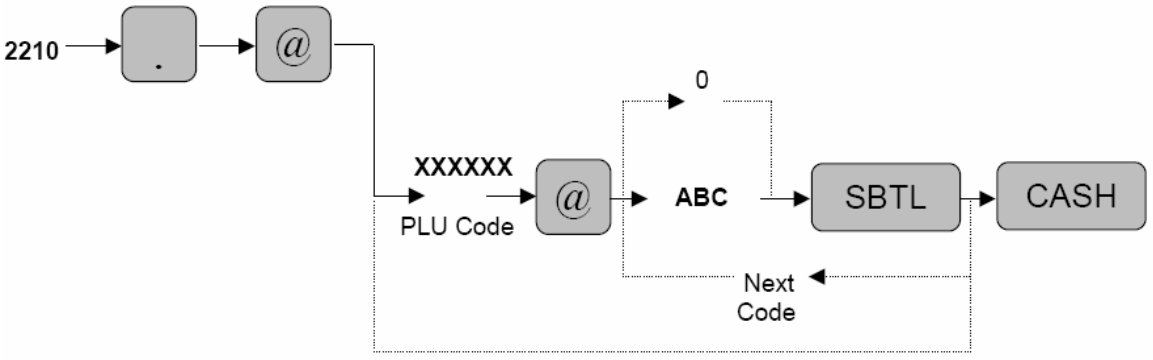


XXXXXX : PLU Code 1-999999
YYYYYY : Stock Value (0-999999)

MRS = 000000

Notes: The value entered “over writes” the existing Stock counter.
PLU/UPC Stock Function is preset in SRV 971 File Group 13.

PLU Function - 2210



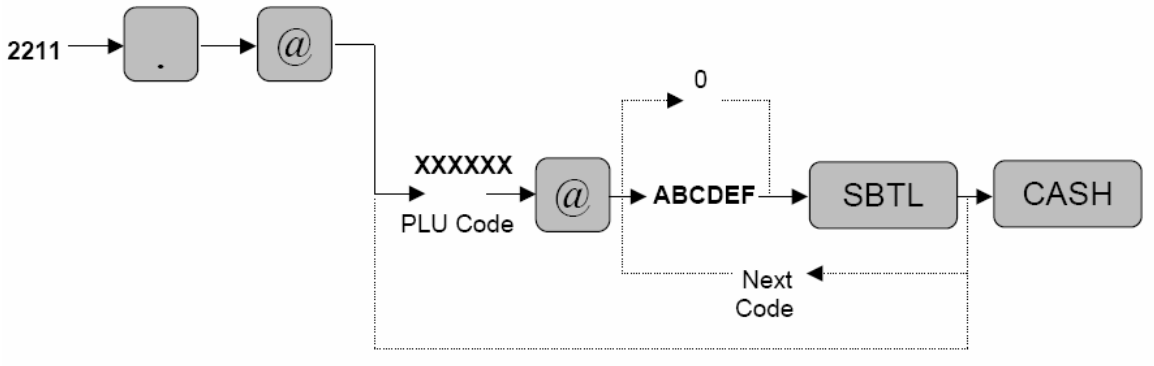
XXXXXX : PLU Code 1-999999
ABC : See Below

A: Tare Table No. Assignment:		9 to 1/0
B: Scale Entry:	Compulsory/Enabled/Inhibit	2/1/0
C: Amount Entry Type:	Open & Preset/Preset/Open/Inhibit	3/2/1/0

MRS = 002

Note: If the PLU record is not in the PLU file during this programming, it will be created automatically upon entry.

PLU Status - 2211



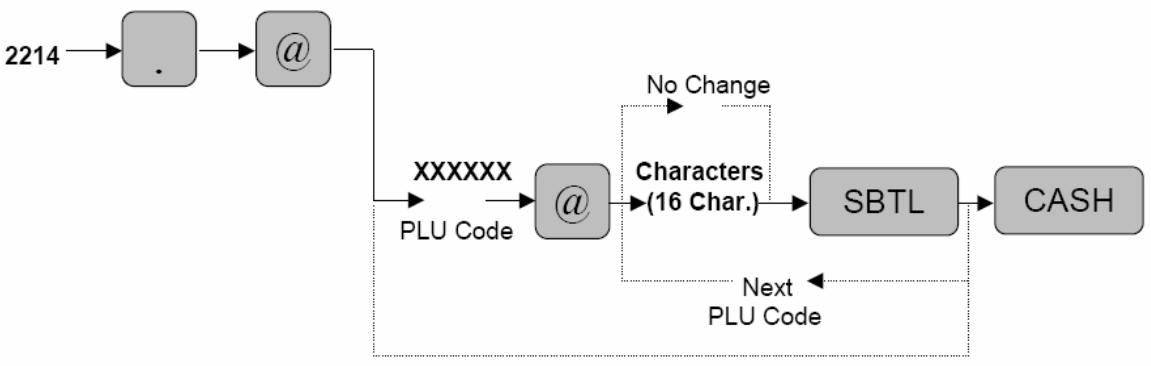
XXXXXX : PLU Code 1-999999
ABCDEF : See Below

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 = 000000

Note: If the PLU record is not in the PLU file during this programming, it will be created automatically upon entry.

PLU Text - 2214



XXXXXX : PLU Code 1-999999
Characters : Max. 16
(Character length is determined by File Group 7/8/10/11.)

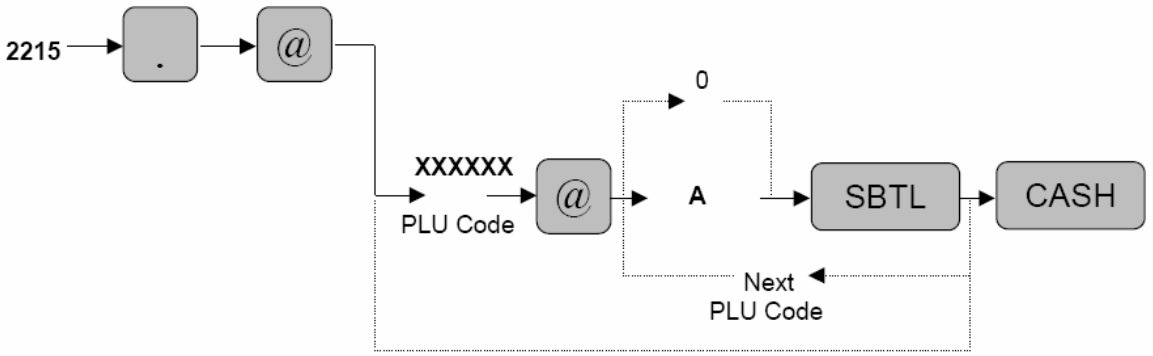
Characters can be entered by using the character keys or by character code entry. The key sequence for entering character codes is as follows:

XXX → [00] key XXX: Character Code (3 digits)

MRS = PLXXXXXX

Note: If the PLU record is not in the PLU file during this programming, it will be created automatically upon entry.

PLU Commission Group - 2215

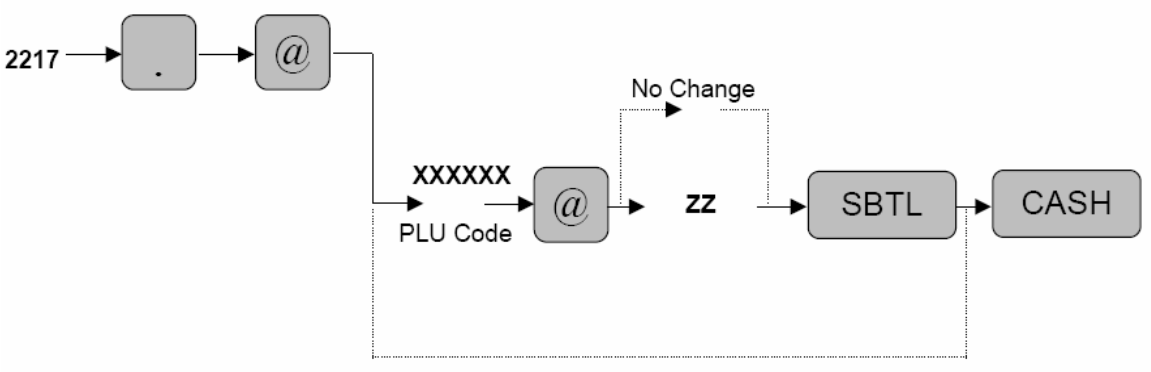


XXXXXX : PLU Code 1-999999
A : Group No. (0-9)

MRS = 0

Note: If the PLU record is not in the PLU file during this programming, it will be created automatically upon entry.

PLU Mix & Match - 2217

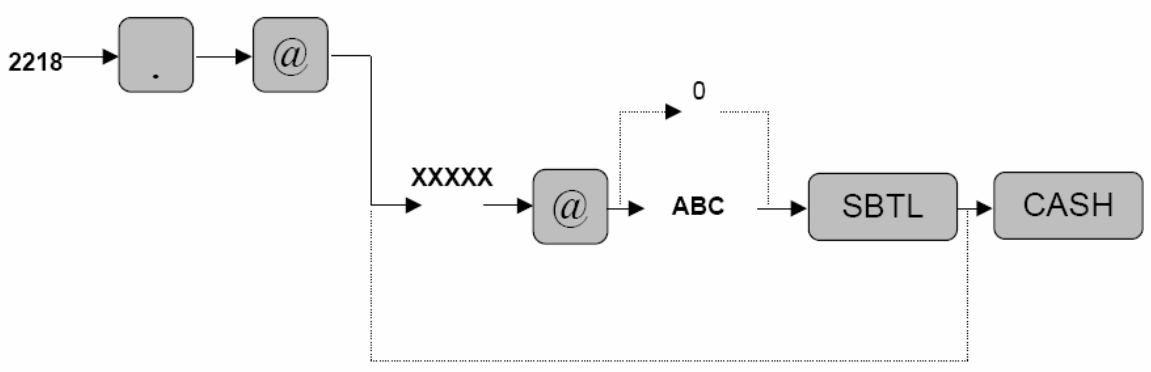


XXXXXX : PLU Code 1-999999
ZZ : Mix & Match Table Number

MRS = 00

Note: If the PLU record is not in the PLU file during this programming, it will be created automatically upon entry.
Mix & Match function is preset in SRV 971, File Group 30.

PLU/UPC (EAN) Print Station Programming - 2218



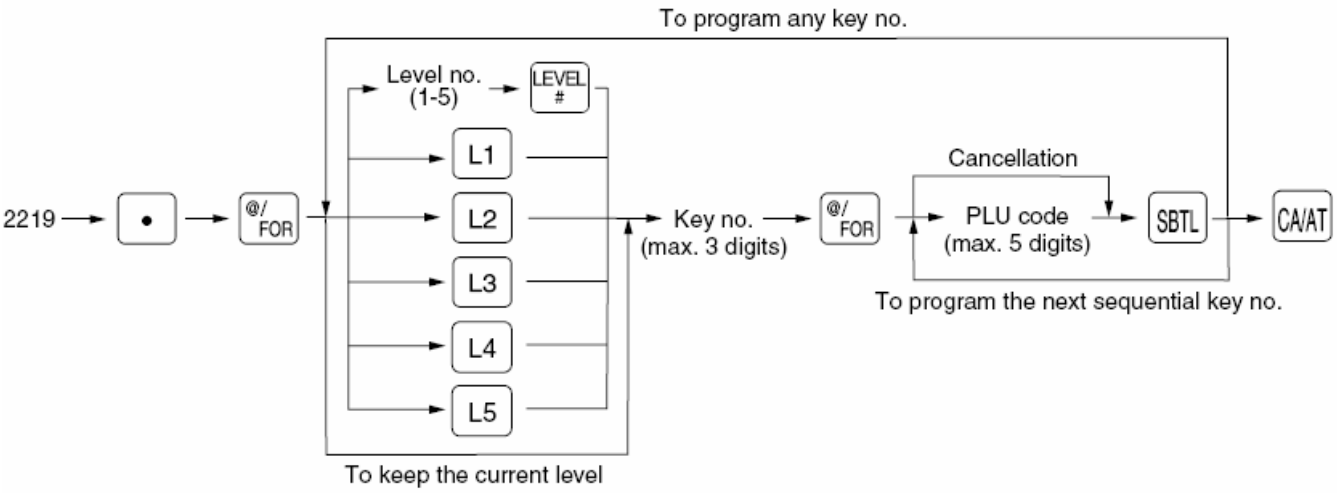
XXXXX: PLU Code = 5 Digits (1 to 99999)
UPC Code = 13 Digits (EAN13, EAN8, UPC-A, UPC-E)

A: KP1 Print	Yes/No	=1/0
B: KP2 Print	Yes/No	=1/0
C: Chit Receipt Print	Yes/No	=1/0

Note: If the record of entered PLU/UPC (EAN) code is not in the PLU/UPC (EAN) file during this programming, it will be created automatically and placed in the PLU/UPC (EAN) file.

MRS = 000

PLU Direct Key Assignment - 2219

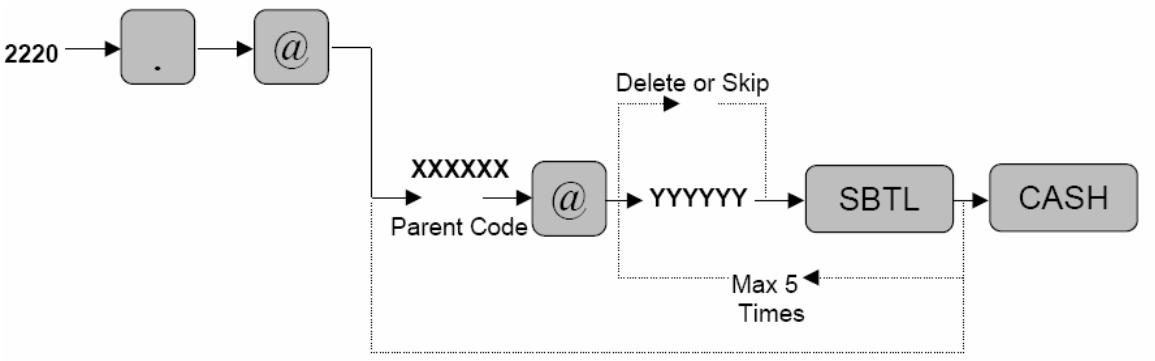


You can assign PLU codes to fixed keys in each PLU level and use those keys as direct PLU key. For assigning a PLU level, press the [L1], [L2], [L3], [L4], or [L5] key or enter level number and press the [LEVEL#] key.
For example, if you want to assign PLU level 1 and key no. 1 to a PLU code, press the [L1] key and enter 1before entering the PLU code.

MRS = Default Key Layout

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

Link PLU - 2220

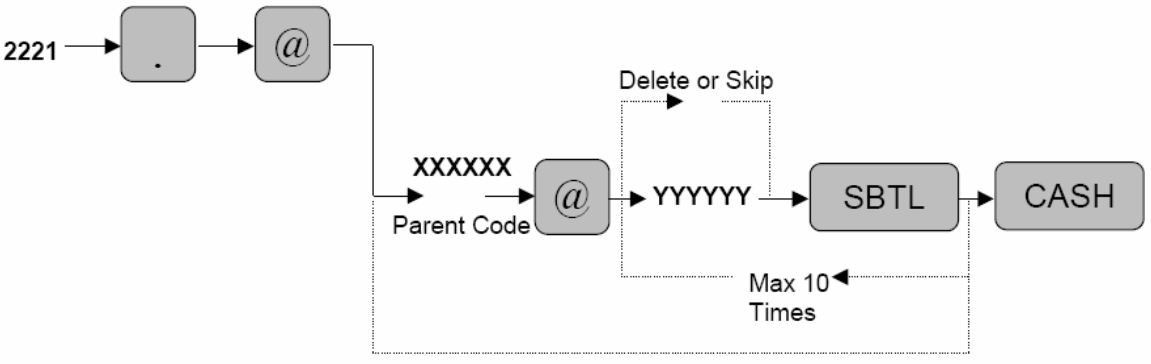


XXXXXX : Parent Code 1-999999
YYYYYY : Linked Code 1-999999

MRS = 0

Note: The parent code must be programmed prior to initiating this program job.
(*): Pressing the [SBTL] key without entering “YYYYYY” will delete the previous settings.
Link PLU function is preset in SRV 971, File Group 27.

Set PLU - 2221

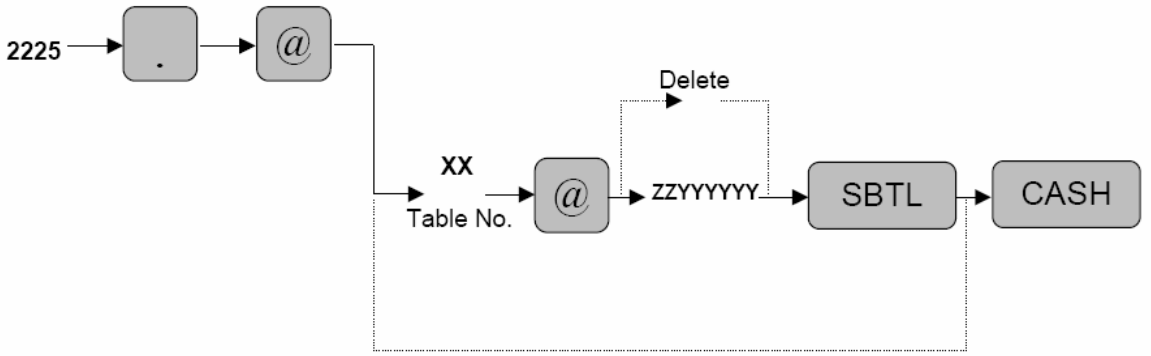


XXXXXX : Parent Code 1-999999
YYYYYY : Tied Code 1-999999

MRS = 0

Note: The parent code must be programmed prior to initiating this program job.
(*): Pressing the [SBTL] key without entering “YYYYYY” will delete the previous settings.

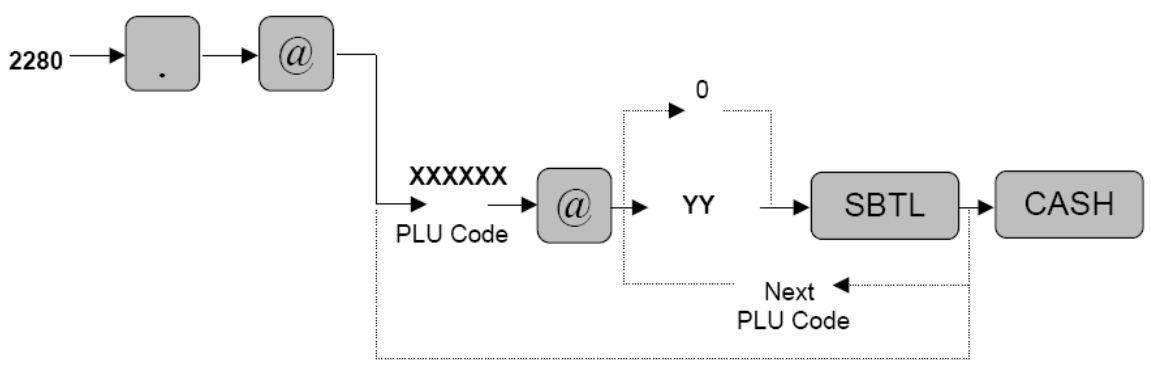
Mix & Match Table - 2225



XX : Table No. 1 – 10
ZZ : Matching Count 1 – 99
YYYYYY : Adjustment Amount 1-999999

MRS = Nothing
Mix & Match function is preset in SRV 971, File Group 30.

PLU Age Limitation - 2280



XXXXXX : Parent Code 1-999999
YY : See Below

YY: Age (00 – 99) 00 = No Limitation

MRS = 00

Notes: The age is calculated in years against the date setting of the ECR.
The [BIRTHDAY] key (#105) must be preset in SRV Job#950

PLU Range

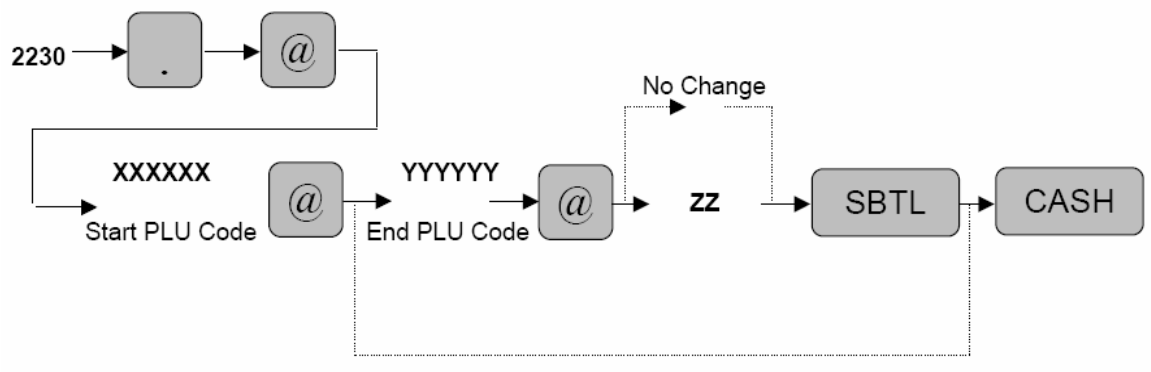
Overview

The following table shows the PGM-Mode **PLU Range** programming job codes available on the ER-A520 and ER-A530 model ECRs.

PGM Job#	Description
PLU Range	
2230	PLU Code Set Up Programming
2231	PLU Function Programming
2332	PLU Status Programming – Tax, Food Stamps, Sign
2235	PLU Commission Group
2236	PLU Age Limitation

Notes: The PLU Range programming job codes only change data for those PLU items that already exist as PLU code.
Range programming is not allowed for UPC (EAN) codes.

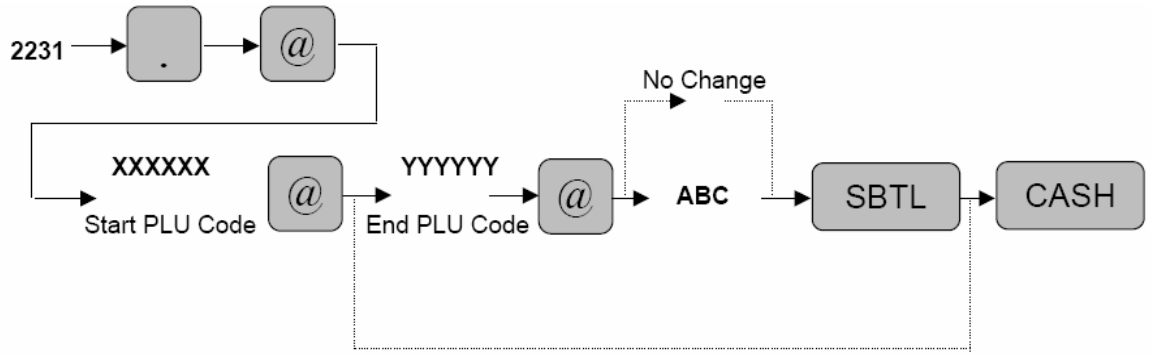
Range PLU Set Up - 2230



XXXXXX : Starting PLU Code 1-999999
YYYYYY : Ending PLU Code 1-999999
ZZ : Dept. Code 1 –99

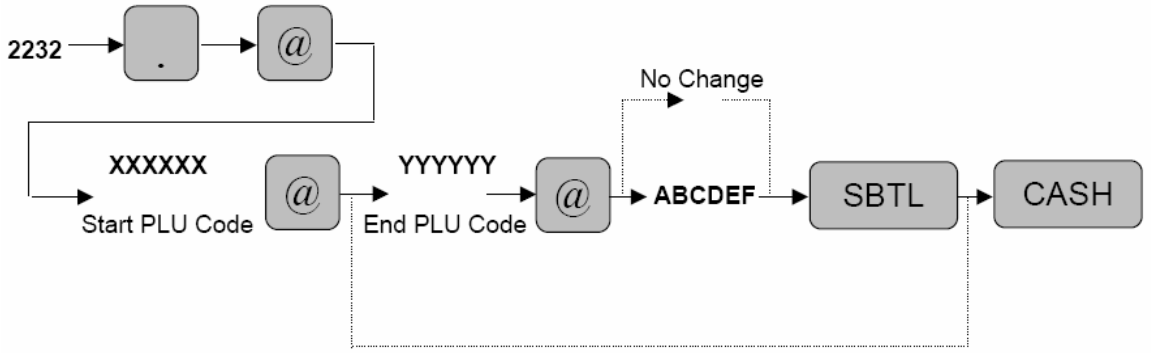
Note: The Dept. code must be established in programming prior to this programming.

Range PLU Functions - 2231



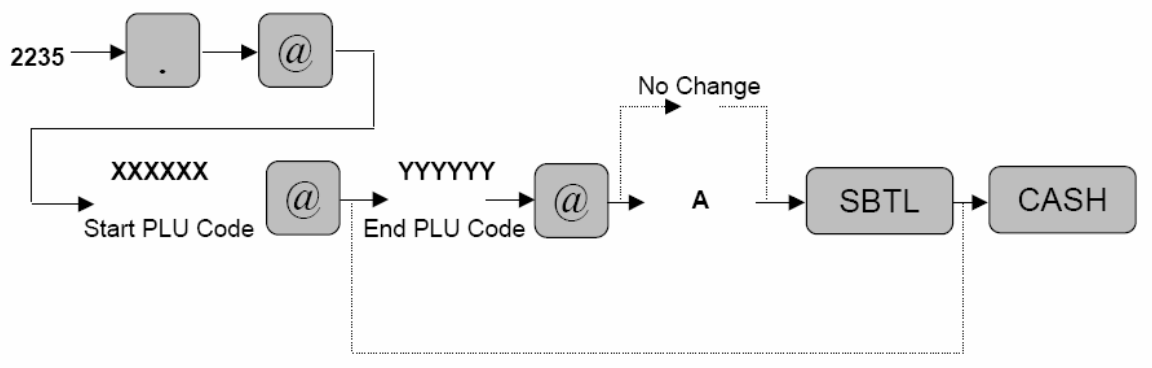
XXXXXX	: Starting PLU Code 1-999999		
YYYYYY	: Ending PLU Code 1-999999		
ABC	A: Tare Table No. Assignment		1-9 /0
	B: Scale Entry:	Compulsory/Enabled/Inhibit	2/1/0
	C: Amount Entry Type:	Open & Preset/Preset/Open/Inhibit	3/2/1/0

Range PLU Status - 2232



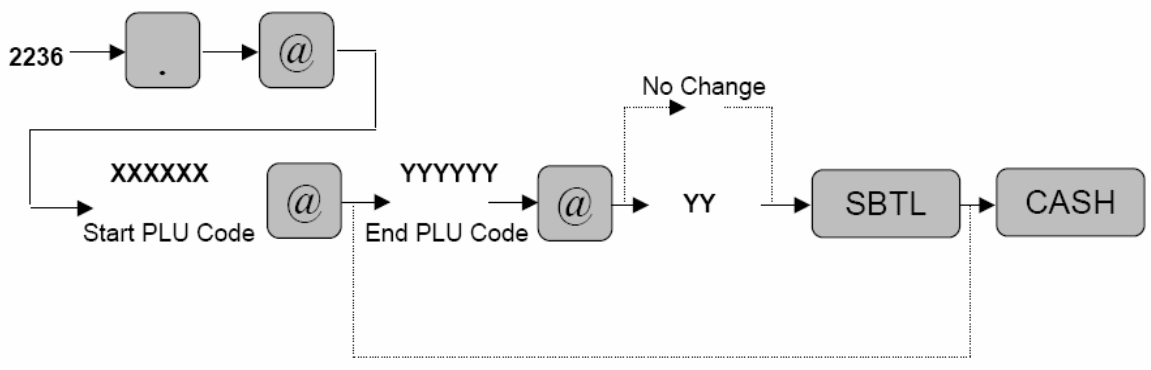
XXXXXX	: Starting PLU Code 1-999999		
YYYYYY	: Ending PLU Code 1-999999		
ABCDEF	A: Sign	-/+	1/0
	B: Food Stamp Eligible	Yes/No	1/0
	C: Taxable 4	Yes/No	1/0
	D: Taxable 3	Yes/No	1/0
	E: Taxable 2	Yes/No	1/0
	F: Taxable 1	Yes/No	1/0

Range PLU Commission Group - 2235



XXXXXX : Starting PLU Code 1-999999
YYYYYY : Ending PLU Code 1-999999
A : Group No. (0 – 9)

Range PLU Age Limitation Group - 2236



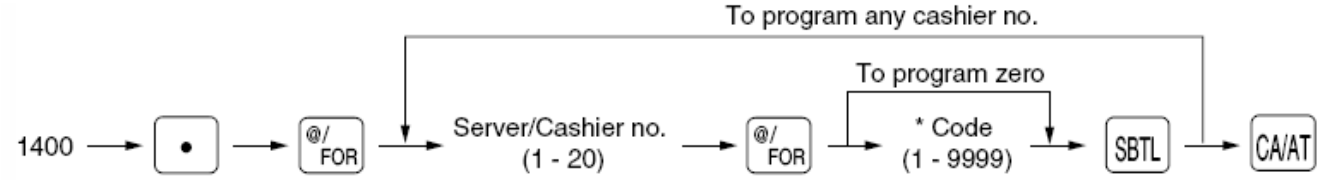
XXXXXX : Starting PLU Code 1-999999
YYYYYY : Ending PLU Code 1-999999
YY : Age (00-99) 00 = No Limitation

Overview

The following table shows the PGM-Mode **Cashiers/Servers** programming job codes available on the ER-A520 and ER-A530 model ECRs.

PGM Job#	Description
1400	Cashier Code Setting
1414	Cashier Text Programming
2410	Cashier Drawer Assignment

Cashier Code - 1400



* Programming code "0" inhibits entries of the selected server/cashier no.

MRS = Same as the Cashier No.

Example:

To program 1111 for server/cashier no.1 and 1014 for server/cashier no. 4

Key operation

1400 • @/FOR
1 @/FOR 1111 SBTL
4 @/FOR 1014 SBTL
CA/AT

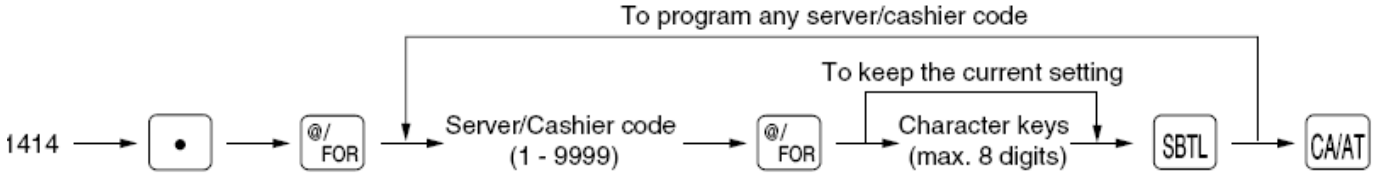
Print

```
#1400  *PGM2*

01SRV# SERV.01          1111
0001-9999      0.00%    0D1
04SRV# SERV.04          1014
0001-9999      0.00%    0D1
```

Server/ Cashier code

Server/Cashier Name - 1414



You can program a maximum of 8 characters (server/cashier name) for each server/cashier.

The server/cashier code must be programmed for the server/cashier using job #1400 prior to assigning text.

Characters can be entered by using the character keys or by character code entry.

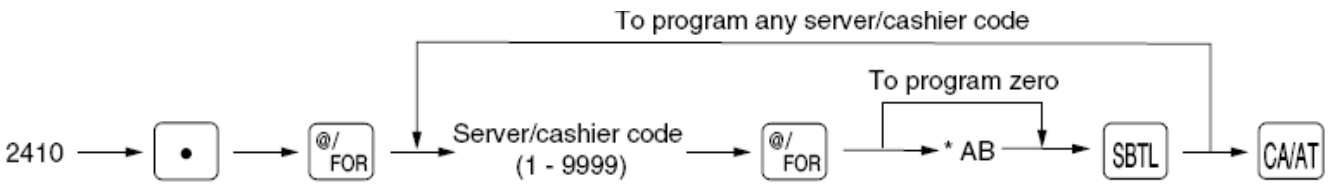
MRS = Spaces

Example:

To program "DICK" for server/cashier code 1111 and "PETER" for server/cashier code 1014:

Key operation	Print
1414 • @/FOR 1111 @/FOR DICK SBTL 1014 @/FOR PETER SBTL CA/AT	#1414 *PGM2* 01SRV# DICK 1111 0001-9999 0.00% 0D1 04SRV# PETER 1014 0001-9999 0.00% 0D1 Server/Cashier name

Cashier Drawer Assignment Code - 2410



* Item		Selection	Entry
A	GLU/PBLU/Manual PB/CB entry	Non-compulsory	0
		Compulsory	1
B	Drawer no.	Use no drawer	0
		Set the drawer no. 1 or 2	1 or 2

MRS = 1

Note: A Drawer assignment of “1” or “2” is required when a Coin Dispenser is connected.

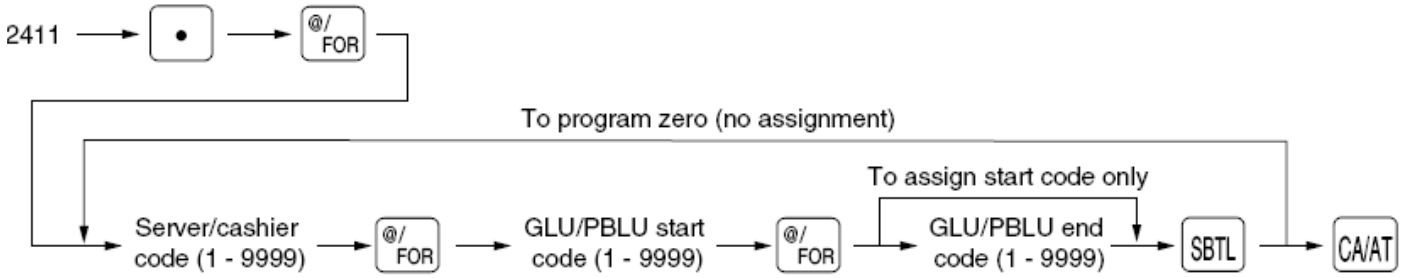
The server/cashier code must be programmed for the server/cashier using job #1400 prior to programming this job.

Example:

Programming AB=01 for server/cashier code 1111

Key operation	Print
2410 • @/FOR 1111 @/FOR 01 SBTL CA/AT	#2410 *PGM2* 01SRV# DICK 1111 0001-9999 0.00% 0D1

GLU/PBLU Code Range Assignment - 2411



Note: The server/cashier code must be programmed by job #1400 prior to programming this job.

Example:

Assigning GLU/PBLU code 1 to 100 for server/cashier code 1111:

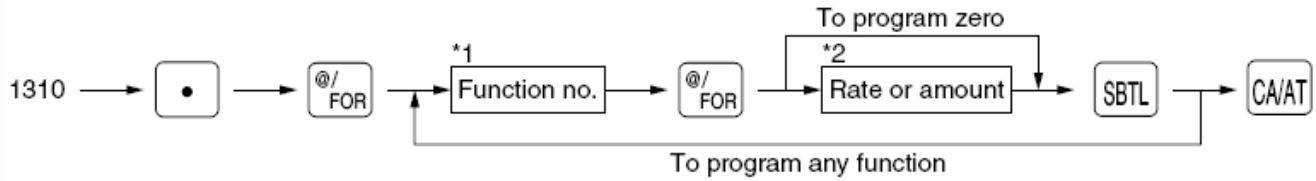
Key operation	Print
2411 • @/FOR 1111 @/FOR 1 @/FOR 100 SBTL CA/AT	#2411 *PGM2* 87SRV# DICK 1111 0001-0100 0.00% 0D1 GLU/PBLU range

Overview

The following table shows the PGM-Mode **Function Keys** programming job codes available on the ER-A520 and ER-A530 model ECRs.

PGM Job#	Description
Function Keys	
1310	Percent Rate Setting – (-), %, Conv., Commission
2311	(-), % Status Programming – Tax, Food Stamp, Sign
2312	Function Key HALO Setting – (-), Tax, Food Stamp, Sign
2322	Media Key HALO Setting
2313	% Key HALO Setting
2314	Function Text Programming
2315	% Key Type Programming – SBTL/Item
2316	(-) Type Programming – SBTL/Item
2320	Media Key Set Up
2321	Media Key Function Programming – CID, CHK, Change, CA/CHK
2326	Media Key Status Programming - Tax
2328	Media Key Print Station Programming
2334	Currency Conversion Text Programming

Rate Programming - 1310



*1: Function no.

1: For the ⊖ key	7: For the %2 key	173: For the commission sale 1	180: For the commission sale 8
2: For the ⊖2 key	8: For the %3 key	174: For the commission sale 2	181: For the commission sale 9
3: For the ⊖3 key	9: For the %4 key	175: For the commission sale 3	87: For the gratuity
4: For the ⊖4 key	10: For the %5 key	176: For the commission sale 4	141: For the CA TIP and CH TIP keys (tip-in)
5: For the ⊖5 key	106: For the CONV key	177: For the commission sale 5	
6: For the % key (%1)	107: For the CONV2 key	178: For the commission sale 6	
	108: For the CONV3 key	179: For the commission sale 7	

*2: Rate or amount
0 — 999999 (Discount amount)
0.00 — 100.00 (% rate)
0.0000 — 9999.9999 (Currency conversion rate)
0.00 — 999.99 (Commission rate)
0.00 — 100.00 (Gratuity rate)
0.00 — 100.00 (Tip-in rate)

MRS = 0

Example:

Assigning $10.00 to the ⊖ key, 10.25% to the % key, and 1.325 to the CONV key.

Key operation

1310 • @/FOR
1 @/FOR 1000 SBTL
6 @/FOR 10 • 25 SBTL
106 @/FOR 0 • 8063 SBTL
CA/AT

Print

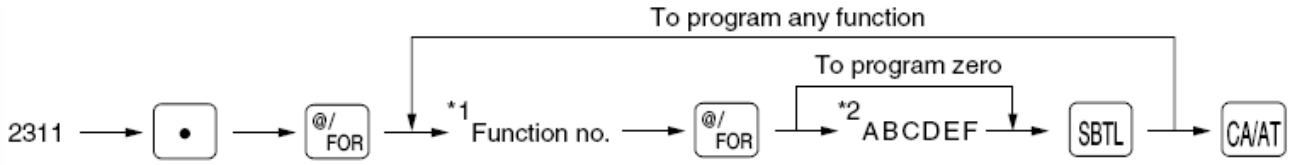
```
#1310 *PGM2*

F001 (-) 1          -10.00   Discount amount
S                      L17
F006 %1             -10.25%  Percent rate
S              3    L100.00%
F106 CONV 1
                     0.8063  Conversion rate
```

Note: You must use the decimal point key when setting percentage rates and/or prices.

When amount entry is selected for tip-in entry on programming job #2616, you cannot program function number 141.

Misc Function Status - 2311



*1: Function no.

1: For the ⊖ key	6: For the % (%1) key	87: For the gratuity
2: For the ⊖2 key	7: For the %2 key	
3: For the ⊖3 key	8: For the %3 key	
4: For the ⊖4 key	9: For the %4 key	
5: For the ⊖5 key	10: For the %5 key	

*2:

Item:		Selection:	Entry:
A	(+/-) sign	Plus	0
		Minus	1
B	Food stamp status	Ineligible	0
		Eligible	1
C	Tax 4 status	Non-taxable	0
		Taxable	1
D	Tax 3 status	Non-taxable	0
		Taxable	1
E	Tax 2 status	Non-taxable	0
		Taxable	1
F	Tax 1 status	Non-taxable	0
		Taxable	1

MRS = 100000

Note: Tax 4 is prohibited if you use the food stamp function.

Example:

Programming ABCDEF=100001 for the % key and ABCDEF=000000 for the %2 key

Key operation

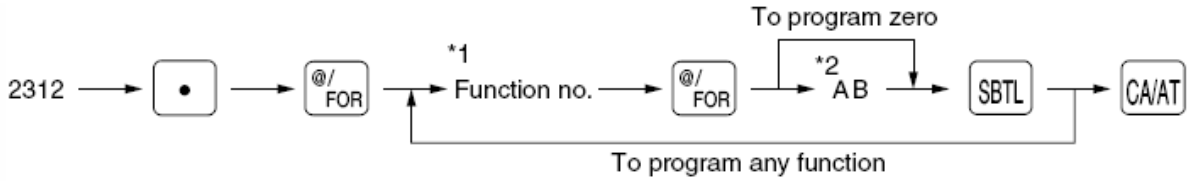
2311 • @/FOR
6 @/FOR 100001 SBTL
7 @/FOR 000000 SBTL
CA/AT

Print

#2311 *PGM2*
F006 %1 -10.25%
S T1 3 L100.00%
F007 %2 0.00%
S 3 L100.00%

Taxable 1

Misc Function HALO - 2312



*1: Function no.

1: For the ⊖ key	53: For the TAX key	141:For the CA TIP and CH TIP key
2: For the ⊖2 key	95: For the RA key	
3: For the ⊖3 key	96: For the RA2 key	
4: For the ⊖4 key	97: For the PO key	
5: For the ⊖5 key	98: For the PO2 key	

*2: AB is the same as A x 10^B.

A: Significant digit (0 through 9)

B: Number of zeros to follow significant digit

0 through 7 (for the ⊖ thru ⊖5, TAX, CA TIP and CH TIP keys)

0 through 8 (for the RA, RA2, PO, and PO2 keys)

For example, presetting 13 ($10.00) here means that amount entries of up to $10.00 are allowed in the REG mode.

You can set up AB = 17 for no limitation (for the ⊖ thru ⊖5, TAX, CA TIP and CH TIP keys).

You can set up AB = 18 for no limitation (for the RA, RA2, PO, and PO2 keys).

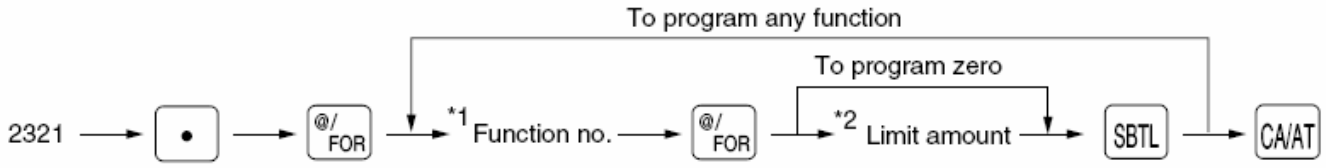
Example:

Programming 13 for the ⊖ key.

Key operation	Print
2312 • @/FOR 1 @/FOR 13 SBTL CA/AT	#2312 *PGM2* F001 (–) 1 -10.00 S L13 ← HALO limit

Misc Media HALO - 2322

You can program the upper limit amounts for check cashing, check change, and cash in drawer.



*1: Function no.
99: For check 1 cashing
100: For check 2 cashing
101: For check 3 cashing
102: For check 4 cashing
103: For check 5 cashing
104: For check change
138: For cash in drawer (sentinel)

*2: Limit amount
0 thru 999999.99 (check cashing and check change)
0 thru 9999999.99 (cash in drawer)

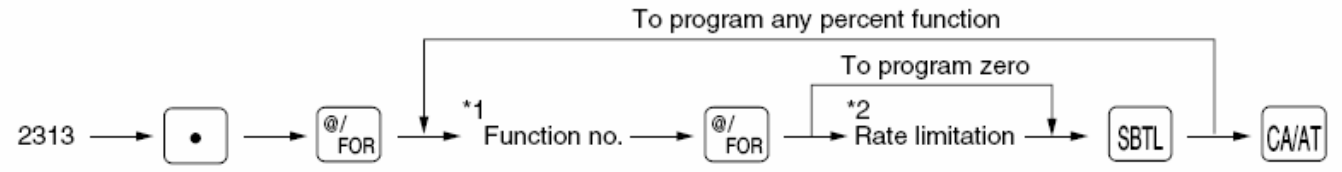
MRS = 18 for each Media Key

Example:

Setting the limit to $99.99 for check 1 cashing.

Key operation	Print
2321 • @/FOR 99 @/FOR 9999 SBTL CA/AT	#2321 *PGM2* F099 CA/CHK1 99.99

Misc % HALO - 2313



*1: Function no.
6: For the % (%1) key
7: For the %2 key
8: For the %3 key
9: For the %4 key
10: For the %5 key

*2: Rate limitation
0.00 – 100.00 (Entering 0.00 inhibits the open percent rate entry)

MRS = 0.00

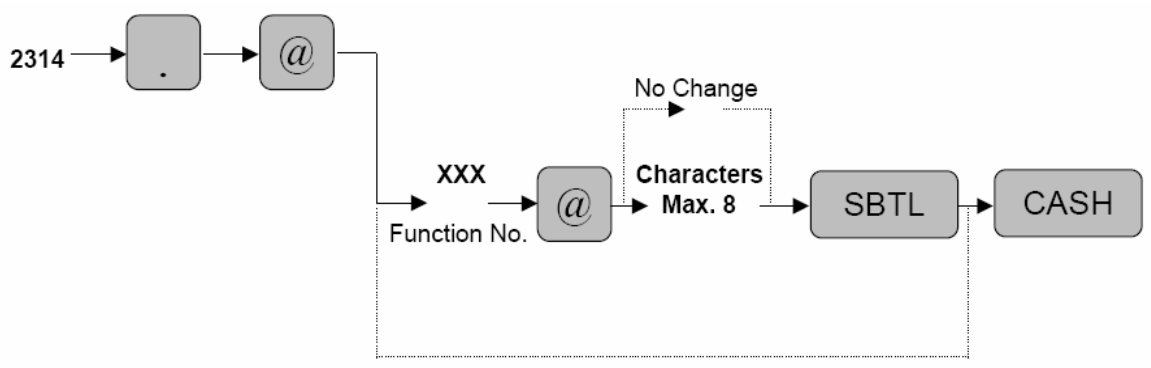
Note: The decimal point key is needed only for fractional entry.

Example:

Programming the limit to 15.5% for the %2 key

Key operation	Print
2313 • @/FOR 7 @/FOR 15 • 5 SBTL CA/AT	#2313 *PGM2* F007 %2 0.00% I 2 L 15.50% — Limitation

Misc. Media Text - 2314



XXX : Function No. (See Below)
Characters : Max. 8

Characters can be entered by using the character keys or by character code entry. The key sequence for entering character codes is as follows:

XXX → [00] key XXX: Character Code (3 digits)

MRS = See Below

Function Table

Function No.	Key or Function	Default Programming		Function no.	Key or function	Default Programming
1	(-) 1	(–) 1		17	Gas discount for check 2	GAS (–)7
2	(-) 2	(–) 2		18	Gas discount for check 3	GAS (–)8
3	(-) 3	(–) 3		19	Gas discount for check 4	GAS (–)9
4	(-) 4	(–) 4		20	Gas discount for check 5	GAS (–)10
5	(-) 5	(–) 5		21	Gas discount for charge 1	GAS (–)11
6	%1	% 1		22	Gas discount for charge 2	GAS (–)12
7	%2	% 2		23	Gas discount for charge 3	GAS (–)13
8	%3	% 3		24	Gas discount for charge 4	GAS (–)14
9	%4	% 4		25	Gas discount for charge 5	GAS (–)15
10	%5	% 5		26	Gas discount for charge 6	GAS (–)16
11	Gas discount for cash 1	GAS (–)1		27	Gas discount for charge 7	GAS (–)17
12	Gas discount for cash 2	GAS (–)2		28	Gas discount for charge 8	GAS (–)18
13	Gas discount for cash 3	GAS (–)3		29	Gas discount for charge 9	GAS (–)19
14	Gas discount for cash 4	GAS (–)4		30	Net sales total	N E T 1
15	Gas discount for cash 5	GAS (–)5		31	Net taxable 1 subtotal	TAX1 ST
16	Gas discount for check 1	GAS (–)6		32	Gross tax 1 total	GRS TAX1

Function No.	Key or Function	Default Programming
33	Tax 1 Total of refund entries	RFD TAX1
34	Net tax 1 total	TAX1
35	Exempt tax 1	TAX EXPT
36	Net taxable 2 subtotal	TAX2 ST
37	Gross tax 2 total	GRS TAX2
38	Tax2 total of refund entries	RFD TAX2
39	Net tax 2 total	TAX2
40	Exempt tax 2	TAX2 EXPT
41	Net taxable 3 subtotal	TAX3 ST
42	Gross tax 3 total	GRS TAX3
43	Tax 3 total of refund entries	RFD TAX3
44	Net tax 3 total	TAX3
45	Exempt tax 3	TAX3 EXPT
46	Net taxable 4 subtotal	TAX4 ST
47	Gross tax 4 total	GRS TAX4
48	Tax 4 total of refund entries	RFD TAX4
49	Net tax 4 total	TAX4
50	Exempt tax 4	TAX4 EXPT
51	Gross manual tax total	GRS MTAX
52	Refund manual tax total	RFD MTAX
53	Net manual tax total	M-TAX
*54	Exempt total from GST	GST EXPT
*55	PST total	PST TTL
*56	GST total	GST TTL
57	FS1 forgive	FS TX1
58	FS2 forgive	FS TX2
59	FS3 forgive	FS TX3
60	Tax total	TTL TAX
61	Net	NET
62	Sales total including tax total	NET2
63	Coupon-like PLU	CP PLU
64	Vender coupon UPC	V. CP UPC
65	Item void	VOID
66	Subtotal void	SBTL VD
67	Manager void	MGR VD
68	Void mode	VOID
69	Refund	REFUND
70	Return	RETURN
71	Hash item void	HASH VD
72	Hash item refund	HASH RF
73	Hash item return	HASH RT
74	No sale	NO SALE
75	Validation print counter	VP CNT
76	Bill (slip) counter	BILL CNT
77	Drawer counter	DRW CNT
78	Tray total counter	TRAY CNT
79	Transfer out	TRAN.OUT
80	Transfer in	TRAN.IN
81	PBAL	✳✳✳PBAL

Function No.	Key or Function	Default Programming
82	Service	SERVICE
83	Deposit	DEPOSIT
84	Deposit refund	DPST RF
85	Cover count	COVER CT
86	Customer counter	TRANS CT
87	Gratuity	GRATUITY
88	Sales total	NET3
89	Cash	CASH
90	Cash2	CASH2
91	Cash3	CASH3
92	Cash4	CASH4
93	Cash5	CASH5
94	Food stamp sales	FSSALE
95	RA	✳✳✳RA
96	RA2	✳✳✳RA2
97	PO	✳✳✳PO
98	PO2	✳✳✳PO2
99	Check cashing 1	CA/CHK1
100	Check cashing 2	CA/CHK2
101	Check cashing 3	CA/CHK3
102	Check cashing 4	CA/CHK4
103	Check cashing 5	CA/CHK5
104	Check change	CHK/CG
105	Food stamp change	FS?CG
106	Currency conversion 1	CONV 1
107	Currency conversion 2	CONV 2
108	Currency conversion 3	CONV 3
109	Currency conversion 4	CONV 4
110	Eat-in 1	EAT IN 1
111	Eat-in 2	EAT IN 2
112	Eat-in 3	EAT IN 3
113	Food stamp in drawer	FS/ID
114	Gross charge 1	CHARGE1
115	Refund charge 1	CHARGE1-
116	Gross charge 2	CHARGE2
117	Refund charge 2	CHARGE2-
118	Gross charge 3	CHARGE3
119	Refund charge 3	CHARGE3-
120	Gross charge 4	CHARGE4
121	Refund charge 4	CHARGE4-
122	Gross charge 5	CHARGE5
123	Refund charge 5	CHARGE5-
124	Gross charge 6	CHARGE6
125	Refund charge 6	CHARGE6-
126	Gross charge 7	CHARGE7
127	Refund charge 7	CHARGE7-
128	Gross charge 8	CHARGE8
129	Refund charge 8	CHARGE8-
130	Gross charge 9	CHARGE9

Function No.	Key or Function	Default Programming
131	Refund charge 9	CHARGE9-
132	Check 1	CHECK1
133	Check 2	CHECK2
134	Check 3	CHECK3
135	Check 4	CHECK4
136	Check 5	CHECK5
137	Cash+ check in drawer	CA/CH ID
138	Cash in drawer	✳✳✳CID
139	Cash tip	CA TIP
140	Charge tip	CH TIP
141	Tip-in (used only for PGM mode)	TIP IN
142	Tip paid	TIP PAID
*143	Exempt VAT	VAT EXPT
144	Sales average	AVE.
145	Price level 1 for PLU/UPC	LEVEL 1
146	Price level 2 for PLU/UPC	LEVEL 2
147	Price level 3 for PLU/UPC	LEVEL 3
148	Price level 4 for PLU/UPC	LEVEL 4
149	Price level 5 for PLU/UPC	LEVEL 5
150	Price level 6 for PLU/UPC	LEVEL 6
151	(+) Dept. total	✳DEPT TL
152	(–) Dept. total	DEPT(-)
153	Hash (+) Dept. total	✳HASH TL
154	Hash (–) Dept. total	HASH(-)
155	(+) Bottle return total	✳BTTL TL
156	(–) Bottle return total	BTTL(-)
157	Gas (+) dept. total	✳GAS TL
158	Gas (–) dept. total	GAS(-)
159	Hash net total (for trans. report)	HASH TTL
160	Waste total (for PLU/trans. report)	WASTE TL
161	Subtotal (–) total (for trans. report)	ST(-) TL
162	Subtotal % total (for trans. report)	ST% TL
163	Item (–) total (for trans. report)	(-) TL
164	Item % total (for trans. report)	% TL
165	Gas discount total (for trans. report)	GASDISTL
166	RA total (for trans. report)	RA TL
167	PO total (for trans. report)	PO TL
168	Check cashing total (for trans. report)	CA/CK TL
169	Cash total (for trans. report)	CASH TL
170	Check total (for trans. report)	CHECK TL
171	Charge total (for trans. report)	CHR TL
172	Currency conversion total (for trans. report)	CONV TL
173	Commission sale 1	COM.SAL1
174	Commission sale 2	COM.SAL2
175	Commission sale 3	COM.SAL3
176	Commission sale 4	COM.SAL4
177	Commission sale 5	COM.SAL5
178	Commission sale 6	COM.SAL6
179	Commission sale 7	COM.SAL7
180	Commission sale 8	COM.SAL8

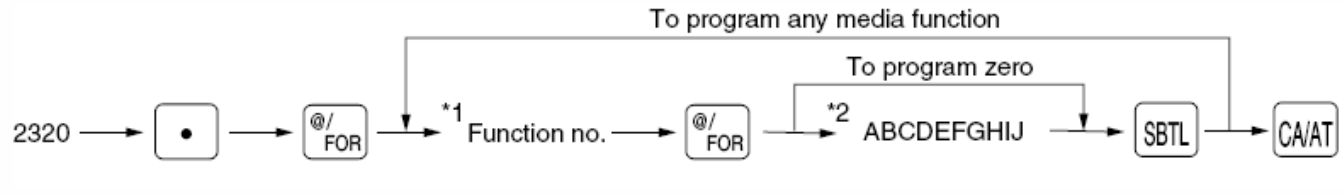
Function No.	Key or Function	Default Programming
181	Commission sale 9	COM.SAL9
182	Non commission sale	NON COM.
183	Commission amount 1	COM.AMT1
184	Commission amount 2	COM.AMT2
185	Commission amount 3	COM.AMT3
186	Commission amount 4	COM.AMT4
187	Commission amount	COM.AMT5
188	Commission amount	COM.AMT6
189	Commission amount	COM.AMT7
190	Commission amount	COM.AMT8
191	Commission amount	COM.AMT9
192	Commission amount	COM.TTL
193	Waste (for PLU/UPC report)	WASTE
194	Net sales (for PLU/UPC report)	NET SLS
195	Net sales total (for PLU/UPC report)	NET TL
196	Free GLU/PBLU (for GLU/PBLU report)	GLU/PBLU
197	Closed check (for server report)	CLOSE CK
198	Open check (for server report)	OPEN CK
199	Percent of net sales (for server report)	(%)SALES
200	Cash/check is	CA/CH IS
201	Conversion1 is	CONV1 IS
202	Conversion2 is	CONV2 IS
203	Conversion3 is	CONV3 IS
204	CCD differ	CCD DIF
205	CCD differ total	DIF TL
206	Subtotal	SUBTOTAL
207	Merchandise subtotal	MDSE ST
208	Tray subtotal	TRAY TL
209	Total	✳✳✳TOTAL
210	Change	CHANGE
211	Food stamp subtotal	FS TL
212	Food stamp tender	FS TEND
213	Food stamp change	FS CG
214	Items	ITEMS
215	Copy receipt title	DEPT
216	Group report title	GROUP
217	PLU/UPC report title	PLU/UPC
218	Stock report	STOCK
219	Zero sales report title	ZERO SAL
220	Category report title	GROUP
221	Transaction report	TRANS.
222	Cash in drawer report title	CID
223	Commission sales report title	SALES
224	CCD report title	CCD
225	Server/cashier report title	SERVER
226	Hourly report title	HOURLY
227	Daily net report title	DAILY
228	GLU/PBLU report title	GLU
229	Non-accessed UPC report title	NO ACCES
230	Dynamic UPC report title	DYN.UPC

Function No.	Key or Function	Default Programming
231	Tax report title	TAX
232	Non-add code text	#
233	GLU/PBLU code text	TBL #
234	Copy receipt title	COPY
235	Waste receipt title	WASTE
236	Bill transfer receipt title	B.T.
237	Bill separate receipt title	B.S.
238	Final (used only for PGM mode)	FINAL
239	Balance	BALANCE
240	Slip print message on journal	SLIP PR.
241	Slip next page	NEXT P.
242	Balance forward	BAL FWD
243	Tare weight	TARE WT.
244	DUE (text on display)	DUE
245	Tip due (text on display)	TIP DUE
246	TAX ST	TAX ST
247	Gas sales subtotal (for cash 1)	GAS1 ST
248	Gas sales subtotal (for cash 2)	GAS2 ST
249	Gas sales subtotal (for cash 3)	GAS3 ST
250	Gas sales subtotal (for cash 4)	GAS4 ST
251	Gas sales subtotal (for cash 5)	GAS5 ST
252	Gas sales subtotal (for check 1)	GAS6 ST
253	Gas sales subtotal (for check 2)	GAS7 ST
254	Gas sales subtotal (for check 3)	GAS8 ST
255	Gas sales subtotal (for check 4)	GAS9 ST
256	Gas sales subtotal (for check 5)	GAS10 ST
257	Gas sales subtotal (for charge 1)	GAS11 ST
258	Gas sales subtotal (for charge 2)	GAS12 ST
259	Gas sales subtotal (for charge 3)	GAS13 ST
260	Gas sales subtotal (for charge 4)	GAS14 ST

Function No.	Key or Function	Default Programming
261	Gas sales subtotal (for charge 5)	GAS15 ST
262	Gas sales subtotal (for charge 6)	GAS16 ST
263	Gas sales subtotal (for charge 7)	GAS17 ST
264	Gas sales subtotal (for charge 8)	GAS18 ST
265	Gas sales subtotal (for charge 9)	GAS19 ST
266	AMOUNT (text on display)	AMOUNT
267	WEIGHT (text on display)	WEIGHT
268	Refund type of sales (text on display)	RF SALE
269	Price change title	PR. CHNG
270	Tip amount for tip edit	TIP AMT
271	Final balance (for closed GLU report)	FIN. BAL
272	Edit tip	EDIT TIP
273	Bill on receipt title	BILL
274	RA cash total (for trans. report)	RA CASH
275	RA2 cash total (for trans. report)	RA2 CASH
276	RA check total (for trans. report)	RA CHK
277	RA2 check total (for trans. report)	RA2 CHK
278	RA charge total (for trans. report)	RA CHR
279	RA2 charge total (for trans. report)	RA2 CHR
280	RA food stamp total (for trans. report)	RA FS
281	RA2 food stamp total (for trans. report)	RA2 FS
282	PO cash total (for trans. report)	PO CASH
283	PO2 cash total (for trans. report)	PO2 CASH
284	PO check total (for trans. report)	PO CHK
285	PO2 check total (for trans. report)	PO2 CHK
286	PO charge total (for trans. report)	PO CHR
287	PO2 charge total (for trans. report)	PO2 CHR
288	PO food stamp total (for trans. report)	PO FS
289	PO2 food stamp total (for trans. report)	PO2 FS

Note: The items marked with " * " are for Canada only.
The function no. 143 "Exempt VAT" is only effective for the Canadian tax system (2 GST, VAT type).

Media Functions - 2320



*1: Function no.

89: For the CA/AT key	120: For the CH4 key	134: For the CHK3 key
90: For the CA2 key	122: For the CH5 key	135: For the CHK4 key
91: For the CA3 key	124: For the CH6 key	136: For the CHK5 key
92: For the CA4 key	126: For the CH7 key	82: For the SRVC key
93: For the CA5 key	128: For the CH8 key	94: For the FS TEND key
114: For the CH1 key	130: For the CH9 key	238: For the FINAL key
116: For the CH2 key	132: For the CHK key	
118: For the CH3 key	133: For the CHK2 key	

*2:	Item:		Selection:	Entry:
	A	GLU/PBLU/Manual PB/CB entry	Enable	0
			Inhibit	1
			Compulsory	2
	B	Short amount tender entry	Enable	0
			Disable	1
	C	Retention of closed GLU/PBLU file	No	0
			Yes	1
	D	Bill (slip) printing	Non-compulsory	0
			Compulsory	1
	E	Footer printing on receipt	No	0
			Yes	1
	F	Non-add code entry	Non-compulsory	0
			Compulsory	1
	G	Change enable (over tender enable)	Enable	0
			Disable	1
	H	Validation printing	Non-compulsory	0
			Compulsory	1
	I	Drawer opening	Yes	0
			No	1
	J	Amount tendered operation	Optional amount tendered for cash or check	0
			Inhibit amount tendered for charge	0
			Compulsory amount tendered	1

MRS = 000000000000000

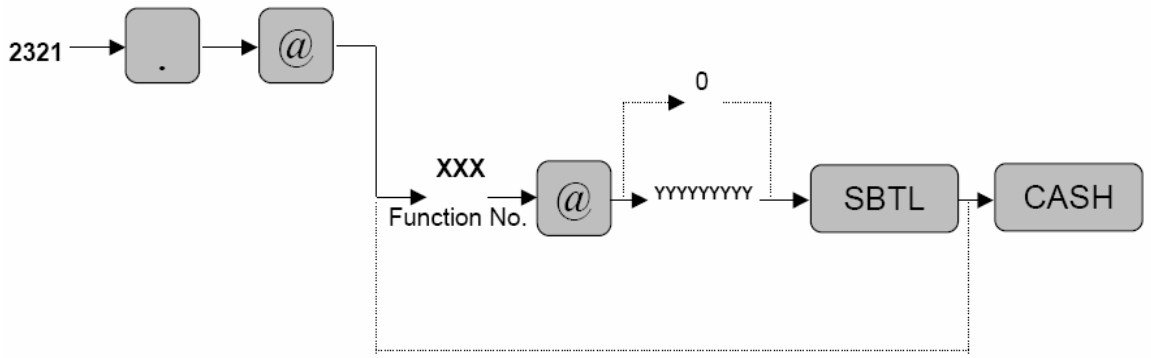
Note: *For the SRVC or FINAL key, always enter 0 as A thru C and E thru J.*
For the FS TEND key, always enter 0 as B, G, and J.

Example:

Programming of the CH3 key for ABCDEFGHIJ=0000000001

Key operation	Print
2320 • @/FOR 118 @/FOR 0000000001 SBTL CA/AT	#2320 *PGM2* F118 CHARGE3 KP000 L18 00000 00000000000 0000000001 A thru J

Media Function HALO - 2321



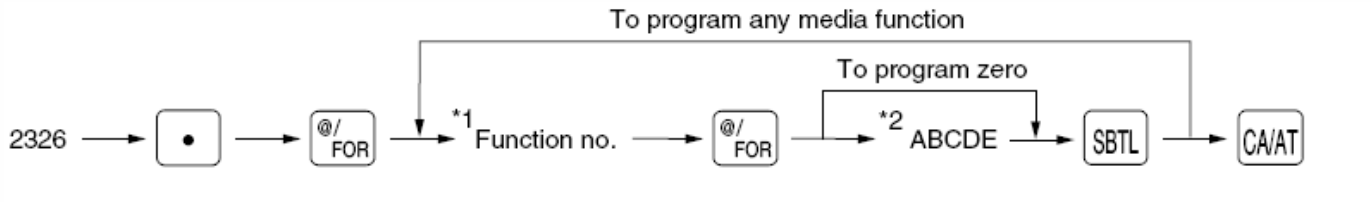
XXX : Function No. (See Below)
YYYYYYYYY : Limitation Amount

MRS = Limitation Amount

No.	Function	Entry Range	MRS Default
68	CA/CHK	0 to 999999999	999999999
69	CHK CHANGE	0 to 99999999	99999999
89	CID (SENTINEL)	0 to 99999999	99999999

Note: Limitation Amounts that are set less than the maximum entry may be overridden in the MGR- Mode.

Media Function Tax Deletion - 2326



*1: Function no.

89: For the CA/AT key	120: For the CH4 key	134: For the CHK3 key
90: For the CA2 key	122: For the CH5 key	135: For the CHK4 key
91: For the CA3 key	124: For the CH6 key	136: For the CHK5 key
92: For the CA4 key	126: For the CH7 key	110: For the EAT IN 1 key
93: For the CA5 key	128: For the CH8 key	111: For the EAT IN 2 key
114: For the CH1 key	130: For the CH9 key	112: For the EAT IN 3 key
116: For the CH2 key	132: For the CHK key	
118: For the CH3 key	133: For the CHK2 key	

*2:

Item:		Selection:	Entry:
A	Gas discount	Disable	0
		Enable	1
B	Tax 4 calculation status	calculate tax 4	0
		delete tax 4	1
C	Tax 3 calculation status	calculate tax 3	0
		delete tax 3	1
D	Tax 2 calculation status	calculate tax 2	0
		delete tax 2	1
E	Tax 1 calculation status	calculate tax 1	0
		delete tax 1	1

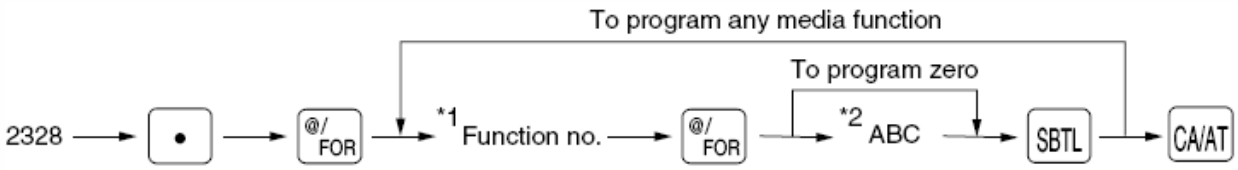
MRS = 0000

Example:

Programming the CH3 EAT IN 1 key to enable gas discount

Key operation	Print
2326 • @/FOR 118 @/FOR 10000 SBTL CA/AT	#2326 *PGM2* F118 CHARGE3 KP000 L18 10000 00000000000 0000000001 A thru E

Media Key Print Station Programming - 2328



*1: Function no.

89: For the CA/AT key	120: For the CH4 key	134: For the CHK3 key
90: For the CA2 key	122: For the CH5 key	135: For the CHK4 key
91: For the CA3 key	124: For the CH6 key	136: For the CHK5 key
92: For the CA4 key	126: For the CH7 key	82: For the SRVC key
93: For the CA5 key	128: For the CH8 key	94: For the FS TEND key
114: For the CH1 key	130: For the CH9 key	238: For the FINAL key
116: For the CH2 key	132: For the CHK key	
118: For the CH3 key	133: For the CHK2 key	

*2:

Item:		Selection:	Entry:
A	Remote printer 1 output	Output	1
		Not output	0
B	Remote printer 2 output	Output	1
		Not output	0
C	Printing on the chit receipt	Yes	1
		No	0

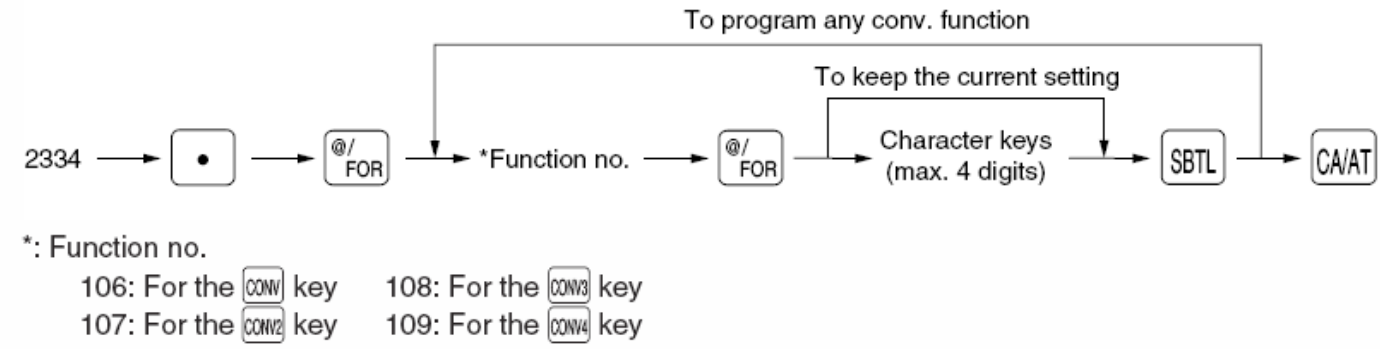
MRS = 000

Example:

Programming of the CH3 key for selecting "remote printer 1 output/remote printer 2 not output/printing on chit receipt"

Key operation	Print
2328 • @/FOR 118 @/FOR 101 SBTL CA/AT	#2328 *PGM2* F118 CHARGE3 KP101 L15 10000 00000000000 0000000001 Print station

Currency Text - 2334



Characters can be entered by using the character keys or by character code entry. The key sequence for entering character codes is as follows:

XXX → [00] key XXX: Character Code (3 digits)

MRS = Spaces

No.	Function	Range
106	Conversion 1	4 Characters
107	Conversion 2	
108	Conversion 3	
109	Conversion 4	

Note: The symbol programmed in this job is printed with the (+) amounts of foreign currency. The character is printed at the left side of the amount.

[Example – in the case where $US is programmed]

I CONV1 1.234567 I
I $US1.23 I

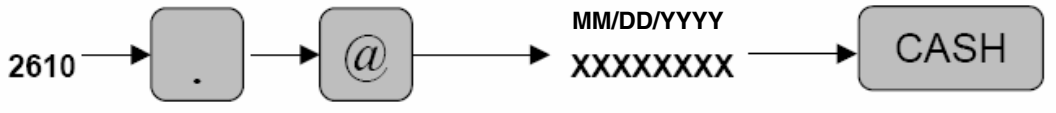
If the characters are programmed as space, then the character is ignored.

Overview

The following table shows the available PGM-Mode **machine settings** programming jobs on the ER-A520 and ER-A530 model ECRs.

PGM Job#	Description
Miscellaneous Machine Setting	
2610	Date Setting
2611	Time Setting
2612	Machine Number Setting
2613	Consecutive Number Setting
2614	Logo Text Programming
2615	Slip Line Feed Programming – 1st Line, Max Lines, No. of Validation, Tray
2616	Optional Feature Settings
2617	Till Timer Setting
2618	Scale Table (Tare) Programming
2619	Hourly Report Setup
2620	Stack Report Setup
2630	Secret Code for PGM1 Mode
2631	Secret Code for X1/Z1 Mode
2632	Secret Code for X2/Z2 Mode
2641	Message Text Programming
2642	Validation Text Programming
2643	Slip Text Programming
2689	Power Save Setting
2710	Tax Table Programming
2711	Tax Rate Programming
2810	PBLU Code Range Setting
2900	Auto Keys Setting
2990	Thermal Printer Programming – Light & Shade

Date Setting - 2610

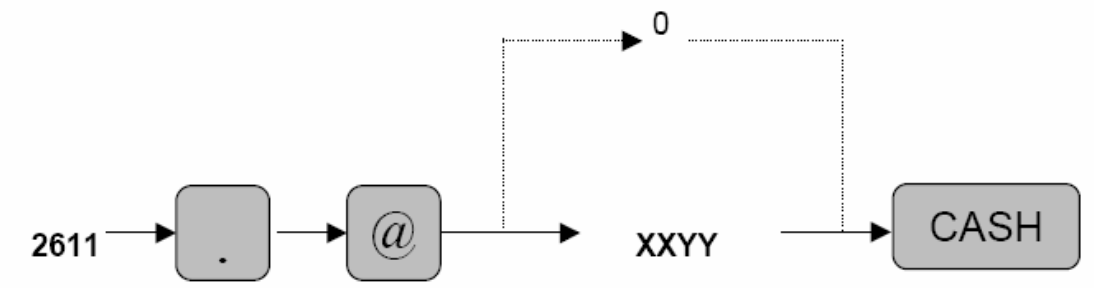


XXXXXXXX : YYYYMMDD, DDMMYYYY or MMDDYYYY
(YYYY: 2000 – 2099)
(MM: 01-12)
(DD: 01-31)

MRS = 01/01/2000 (MM/DD/YYYY)

Note: The date format will conform to the setting used in SRV Job #912-A.

Time Setting - 2611

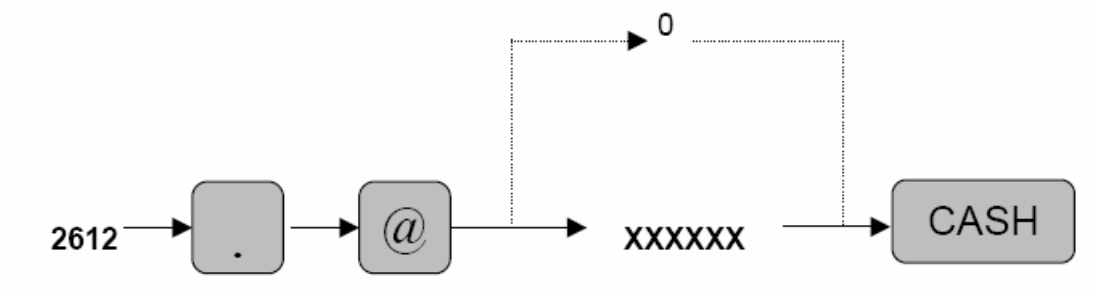


XX : Hour (00 –23)
YY : Minutes (00 – 59)

MRS = 00:00

Note: The time setting will not conform to the setting used in SRV Job #912-B. The time entry is always based on the 24-hour clock system. [Example: 4:00PM = 1600]

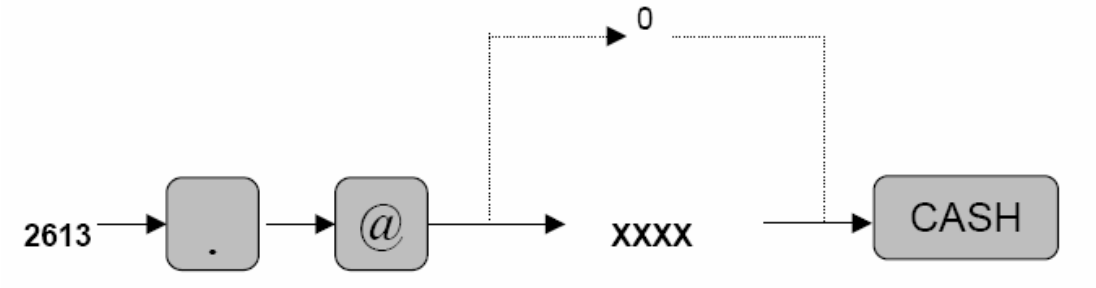
Machine Number - 2612



XXXXXX : Machine No.

MRS = 000000

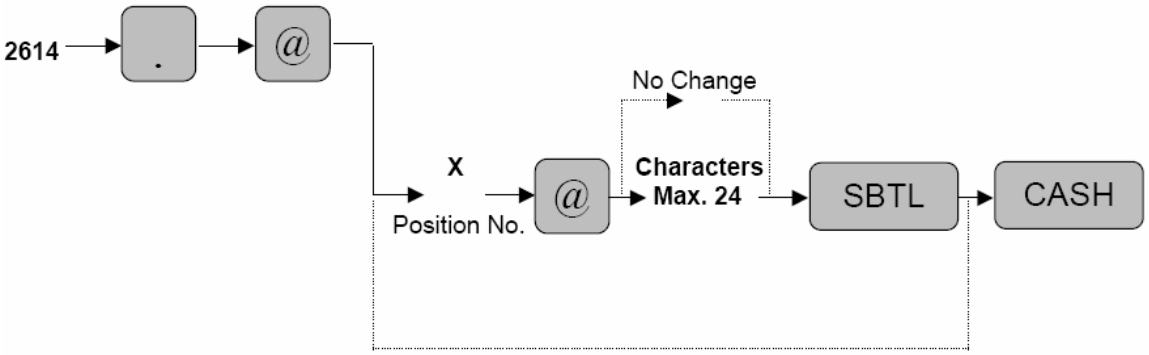
Consecutive Number - 2613



XXXX : Consecutive No.

MRS = 000000

Logo Text - 2614



X: : Position Code = 1 to 6
Characters : Maximum 24 per each position line

Characters can be entered by using the character keys or by character code entry. The key sequence for entering character codes is as follows:

XXX → [00] key XXX: Character Code (3 digits)

MRS = See Below

(ER-A520)

SHARP
PRESENTS THE
ER-A520
SHARP
IS
THE
BEST

(ER-A530)

SHARP
PRESENTS THE
ER-A530
SHARP
IS
THE
BEST

Note: The Logo Text programming will conform to the setting preset in SRV Job #912-D.

Character Key Codes for Text Printing

<Character Code Table for text programming> Printing

CODE	CHARACTER
001	á
002	â
003	ê
004	î
005	ì
006	í
007	ô
008	ó
009	û
010	ú
011	œ
012	[illegible]
013	ù
014	ð
015	ó
016	Λ
017	Ψ
018	Γ
019	..
020	Ω
021	Δ
022	Θ
023	Ξ
024	Π
025	Σ
026	Y
027	Φ
028	[illegible]
029	Ú
030	[illegible]
031	Ó
032	(Space)
033	!
034	"
035	#
036	$
037	%
038	&
039	'
040	(
041	)
042	*
043	+
044	,
045	−
046	.
047	/
048	0

CODE	CHARACTER
049	1
050	2
051	3
052	4
053	5
054	6
055	7
056	8
057	9
058	:
059	;
060	<
061	=
062	>
063	?
064	@
065	A
066	B
067	C
068	D
069	E
070	F
071	G
072	H
073	I
074	J
075	K
076	L
077	M
078	N
079	O
080	P
081	Q
082	R
083	S
084	T
085	U
086	V
087	W
088	X
089	Y
090	Z
091	Ä
092	Ö
093	Ü
094	^
095	_
096	`
097	a

CODE	CHARACTER
098	b
099	c
100	d
101	e
102	f
103	g
104	h
105	i
106	j
107	k
108	l
109	m
110	n
111	o
112	p
113	q
114	r
115	s
116	t
117	u
118	v
119	w
120	x
121	y
122	z
123	{
124	|
125	}
126	ß
127	¢
128	!!
129	1
130	2
131	3
132	4
133	1/2
134	F T
135	←
136	→
137	∞
138	∞
139	▶
140	◀
141	F
142	T
143	↓
144	ç
145	º
146	¿

CODE	CHARACTER
147	Ð
148	à
149	Æ
150	ϕ
151	Á
152	¤
153	é
154	è
155	Pt
156	¡
157	Ñ
158	:
159	£
160	¥
161	[illegible]
162	[illegible]
163	[illegible]
164	[illegible]
165	.
166	T 1
167	T 2
168	T 3
169	T 4
170	1 2
171	1 3
172	1 4
173	2 3
174	2 4
175	3 4
176	[illegible]
177	Á
178	[illegible]
179	
180	Ā
181	ā
182	Ē
183	ē
184	Ī
185	ī
186	Ū
187	ū
188	Ņ
189	ņ
190	Č
191	Š
192	ç
193	[illegible]
194	[illegible]
195	Ş

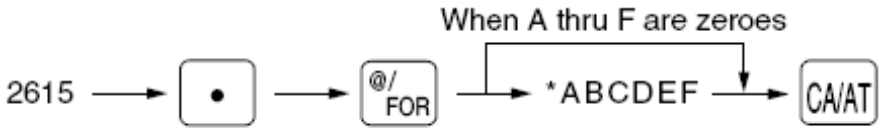
CODE	CHARACTER
196	Ģ
197	ģ
198	Ķ
199	ķ
200	Ļ
201	ļ
202	Ž
203	Đ
204	đ
205	Ć
206	ć
207	€
208	P
209	`
210	[illegible]
211	š
212	č
213	ž
214	ý
215	ù
216	ñ
217	"
218	´
219	[illegible]
220	
221	
222	
223	
224	*
225	§
226	Ø
227	^
228	†
229	]
230	[
231	¨
232	ä
233	ö
234	ü
235	æ
236	å
237	É
238	ñ
253	DC

Note: The above character chart is for your reference.
Please check the actual print out.

(DC): Double Code

: ECR Control Character (Not used for text)

Validation Limitation Settings - 2615



* AB: Initial slip feed line (0 to 64)
CD: Slip print max. line no. (0 to 99)
E: Validation printing counter (1 thru 9 times)
To inhibit validation printing, enter 0.
F: Feed lines after printing of a tray subtotal (0 thru 9 lines)

MRS = 009910

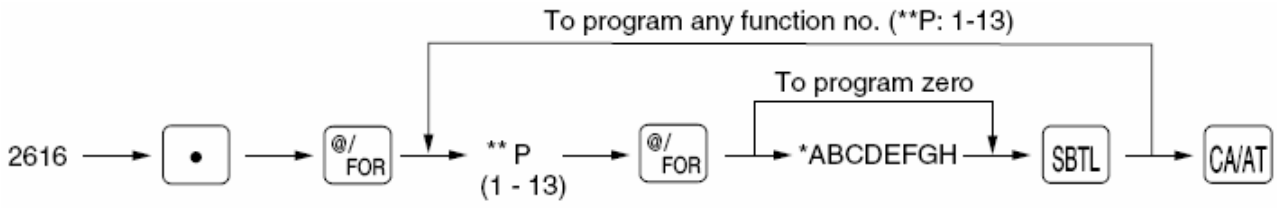
Note: The validation setting will conform to the setting preset in SRV Job #913-A.

Example:

Entering 009910 to ABCDEF

Key operation	Print
2615 • @/FOR 009910 CA/AT	#2615 *PGM2* 00 99 1 0

Optional Feature Programming - 2616



**P : 1

A	: OP X/Z Report	Disable/Enable	1/0
B	: PO Operation in REG-Mode	Disable/Enable	1/0
C	: Refund Type Sale Function in REG-Mode	Disable/Enable	1/0
D	: Refund Entry in REG-Mode	Disable/Enable	1/0
E	: Direct Void in REG-Mode	Disable/Enable	1/0
F	: Indirect Void in REG-Mode	Disable/Enable	1/0
G	: Subtotal Void in REG-Mode	Disable/Enable	1/0
H	: Validation for Refund Entries	Compulsory/Not	1/0

MRS = 00000000

**P : 2

A	: The 1st Last Item Void	Disable/Enable	1/0
B	: PLU Shift Level Return Function	Manual/Auto	1/0
C	: PLU Level Shift	MGR-Only/REG&MGR	1/0
D	: No. Items printed on Receipt	Yes/No	1/0
E	: Time Print	No/Yes	1/0
F	: Journal Print is Detailed	Limited/Detailed	1/0
G	: Item Validation	Disable/Enable	1/0
H	: Validation for Coupon (-) Entries	Compulsory/Not	1/0

MRS = 00000000

**P : 3

A	: Not Used		0
B	: Not Used		0
C	: Zero Sales – Skip print for Cashier Report	No/Yes	1/0
D	: Zero Sales – Skip print for Trans Report	No/Yes	1/0
E	: Zero Sales – Skip print for Dept Report	No/Yes	1/0
F	: Zero Sales – Skip print for PLU/UPC Report	No/Yes	1/0
G	: Zero Sales – Skip print for Hourly Report	No/Yes	1/0
H	: Zero Sales – Skip print for Daily Net Report	No/Yes	1/0

MRS = 00000000

**P : 4

A	: Share % printing in Dept. report	No/Yes	1/0
B	: Tip entry method	Amount/Fixed	0/1
C	: (Not Used)		0
D	: (Not Used)		0
E	: (Not Used)		0
F	: Cover Count entry	Compulsory/Not	1/0
G	: (Not Used)		0
H	: PLU Shift Level Return Timing	by Receipt/Item	1/0

***Only available when XX: 2 – B =”0” (PLU Shift Level Return = “Auto”)

MRS = 00000000

**P : 5

A	: (Not Used)		0
B	: (Not Used)		0
C	: (Not Used)		0
D	: (Not Used)		0
E	: (Not Used)		0
F	: PLU Price Shift	MGR Only/REG&MGR	1/0
G	: PLU/UPC Price Shift Return Mode	Manual/Auto	1/0
H	: PLU/UPC Price Auto Return Timing	by Receipt/Item	1/0

***Only available when XX: 5 – F =”0” (PLU Price Level Return = “Auto”)

MRS = 00000000

**P : 6

A	: (Not Used)		0
B	: (Not Used)		0
C	: (Not Used)		0
D	: (Not Used)		0
E	: (Not Used)		0
F	: (Not Used)		0
G	: (Not Used)		0
H	: (Not Used)		0

MRS = 00000000

**P : 7

A	: Void mode in REG-Mode	Disable/Enable	1/0
B	: (Not Used)		0
C	: No Sale in REG-Mode	Disable/Enable	1/0
D	: $0.00 SBTL Finalization in REG-Mode	Disable/Enable	1/0
E	: Item Printing within PBLU Sale on Slip Printer	No/Yes	1/0
F	: Tip-paid operation in REG mode	Disable/Enable	1/0
G	: Transfer-in/out operation in REG mode	Disable/Enable	1/0
H	: (Not Used)		0

MRS = 00000000

**P : 8

A	: (Not Used)		0
B	: (Not Used)		0
C	: (Not Used)		0
D	: Usability of the received-account entry	w/o Limit/GLU-PBLU	0/1
E	: Validation for Check Cashing	Compulsory/Not	1/0
F	: Validation for RA Items	Compulsory/Not	1/0
G	: Validation for PO Items	Compulsory/Not	1/0
H	: Validation for tip-in/tip-paid	Compulsory/Not	1/0

MRS = 00000000

**P : 9

A	: (Not Used)		0
B	: (Not Used)		0
C	: Birthday Date print on Printer	No/Yes	1/0
D	: (Not Used)		0
E	: (Not Used)		0
F	: (Not Used)		0
G	: (Not Used)		0
H	: Graphic Logo for Footer Print	Yes/No	1/0

MRS = 00000000

**P : 10

A	: (Not Used)		0
B	: (Not Used)		0
C	: Learning function UPC entry	Yes/No	0/1
D	: (Not Used)		0
E	: (Not Used)		0
F	: (Not Used)		0
G	: (Not Used)		0
H	: (Not Used)		0

MRS = 00000000

**P : 11

A	: (Not Used)		0
B	: (Not Used)		0
C	: (Not Used)		0
D	: (Not Used)		0
E	: (Not Used)		0
F	: (Not Used)		0
G	: (Not Used)		0
H	: (Not Used)		0

MRS = 00000000

**P : 12

A	: (Not Used)		0
B	: (Not Used)		0
C	: (Not Used)		0
D	: (Not Used)		0
E	: (Not Used)		0
F	: (Not Used)		0
G	: (Not Used)		0
H	: Price change function in REG mode	Enable/Disable	0/1

MRS = 00000000

**P : 13

A	: (Not Used)		0
B	: (Not Used)		0
C	: (Not Used)		0
D	: Printing price shift text receipt/journal	Yes/No	0/1
E	: (Not Used)		0
F	: Treating EAN8 code (200XXXXC/D)	Yes/No	0/1
G	: (Not Used)		0
H	: Price entry after ISBN/ISSN code entry	Comp./Inhibit	0/1

MRS = 00000000

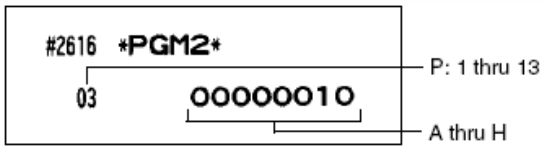
Example:

Programming to select zero suppression for the server/cashier report, transaction report, dept. report, PLU/UPC report and daily net report, and to select non-skip printing for an hourly report.

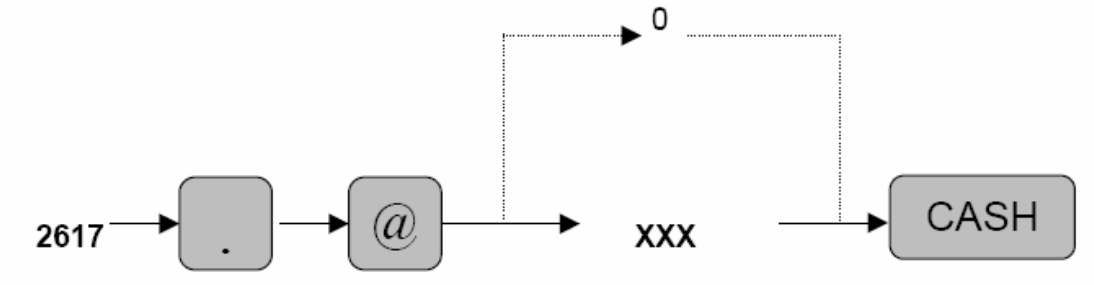
Key operation

2616 [•] [@/FOR]
3 [@/FOR] 00000010 [SBTL]
[CA/AT]

Print



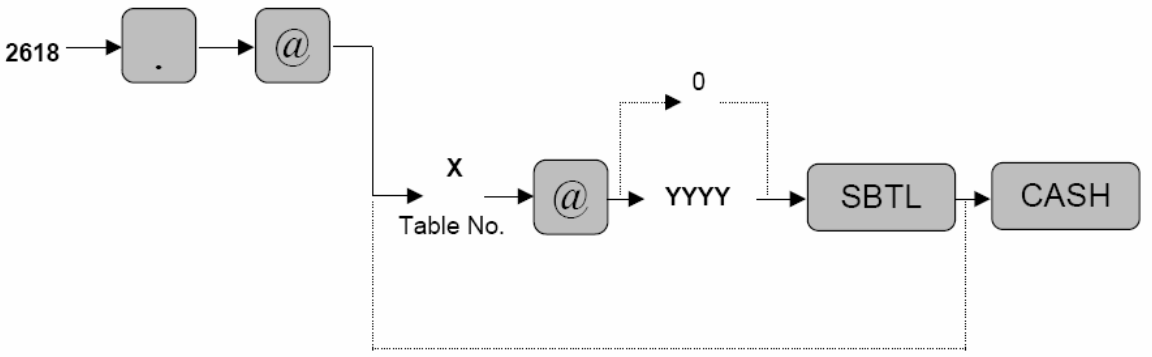
Till Timer Interval Settings- 2617



XXX : 0 – 255 Seconds

MRS 000

Scale Table (Tare) Setting - 2618

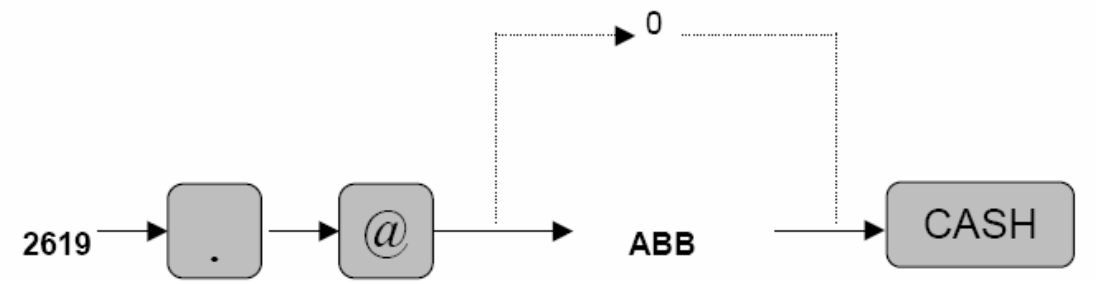


X : Tare Table No. (1 – 9)
YYYY : Weight (0 to 99.99 – Entry is without the decimal point)

MRS = 0.00

Note: This setting will conform to the setting preset in SRV Job #903-C.

Hourly Report Setting - 2619

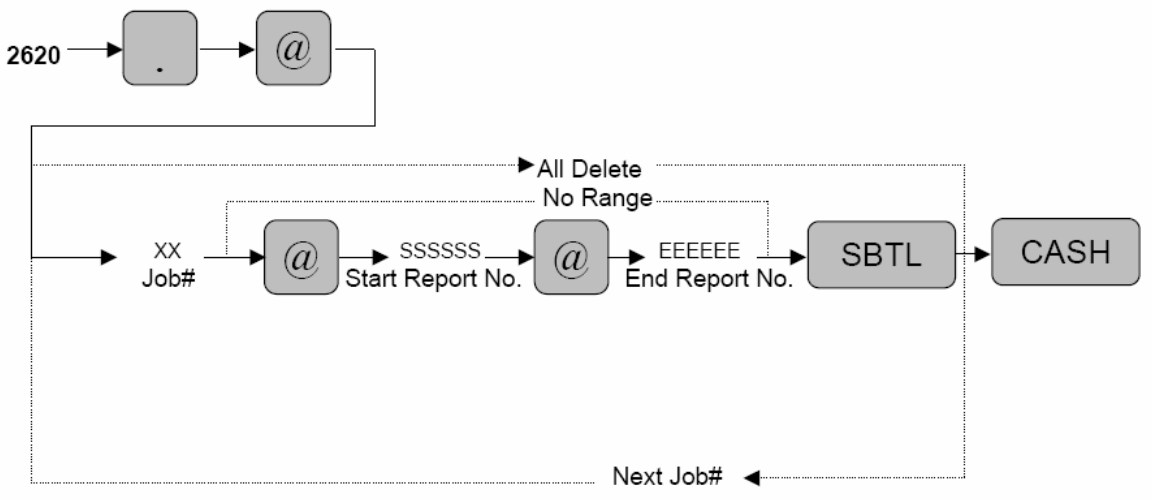


A : Memory Type = 60 Minutes/30 Minutes 1/0
BB : Starting Time = 00 – 23

MRS = 000

Note: (1) The Hourly Report will show sales for 24 hours from the starting time setting.
(2) The Memory Type may not be changed while totals exist. In order to change the Memory type you **MUST** clear the totals with the X1/Z1 (Report #160).

Stack Report Setting - 2620



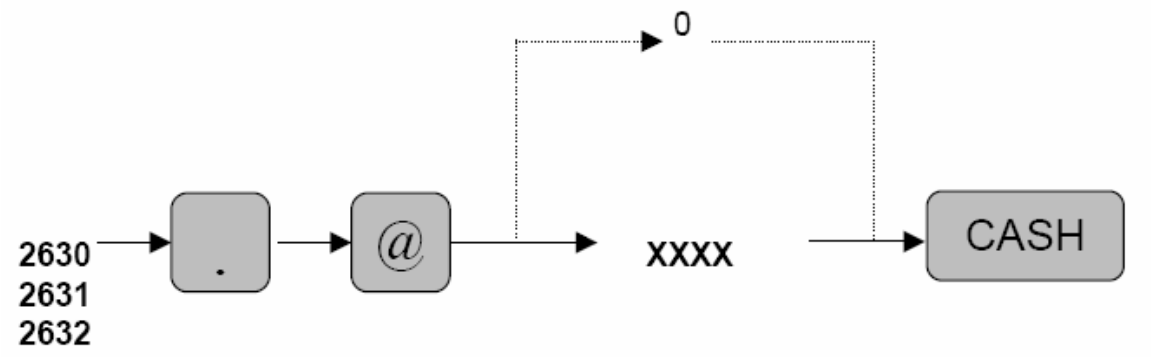
XX : Job#
SSSSSS : Start Code
EEEEEE : End Code

MRS = Nothing

Note: A maximum number of 70 steps are programmable for this job setting. 1 step means the memory size use for No-Range type Job Numbers. The Range type Job# settings consume 8 steps.

Job#	Report Name	Type
00	General	
10	Department	
13	Dept All Group	
20	PLU	Range
24	PLU Stock	Range
27	PLU Zero Sales	
29	PL Category	Range
30	Transaction	
31	CID	
32	Commission Sales	
50	All Cashier	
60	Hourly	ALL
		Range (X Report)
70	Daily Net	
80	PBLU	Range

Secret Code Programming – 2630, 2631, 2632



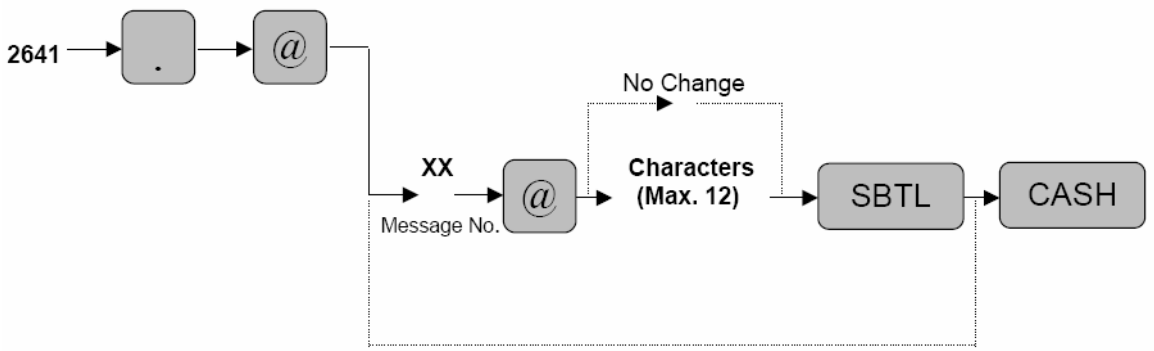
XXX : Secret Code (0 – 9999)

#2630 – PGM1 Mode
#2631 – X1/Z1 Mode
#2632 – X2/Z2 Mode

MRS = 0000

Note: If “0” is entered, the compulsion of the secret code is disabled.

Media Text Programming – 2641



XX : Message No. = 1 – 94
Characters : Max. 12 Characters

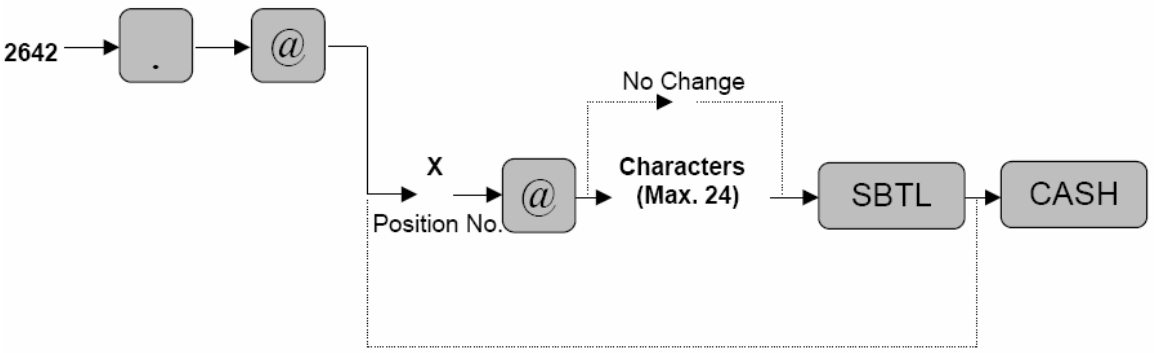
Characters can be entered by using the character keys or by character code entry. The key sequence for entering character codes is as follows:

XXX → [00] key XXX: Character Code (3 digits)

MRS = Default Text

No.	Description	Master Reset	No.	Description	Master Reset
1	Registration Error	ENTRY ERROR	36	Unit Price is Inhibited	INH. UNIT PR
2	Misoperation Error	MISOPERATION	37	Direct Non-Tender Entry (2nd Tender is Inhibited)	NOT NON-TEND
3	Desired code is not programmed	NO RECORD	38	Scale Read Error	SCALE ERROR
4	(Reserved)	----------	39-50	(Reserved)	----------
5	Secret Code Error	SECRET CODE	51	Scale Weight	WEIGHT
6	Code is not Free	NOT FREE	52-53	(Reserved)	----------
7	Memory is Full	MEMORY FULL	54	Tare Weight Entry	ENTR TARE WT
8	Insert Slip Paper	INSERT SLIP	55-56	(Reserved)	----------
9	Cashier has no Authority for the Entry	NO AUTHORITY	67	Registration Buffer is Full	BUFFER FULL
10	Stock is Empty	OUT OF STOCK	68-75	(Reserved)	----------
11	Subtotal is Compulsory	SBTL COMPUL.	76	Compulsory Drawer Close Error	CLOSE DRAWER
12	Tender is Compulsory	TEND COMPUL.	77-80	(Reserved)	----------
13-22	(Reserved)	----------	81	Enter Secret Code	ENTR SECRET#
23	Cashier Resetting Over Error	ENTRY ERR CA	82-83	(Reserved)	----------
24-26	(Reserved)	----------	84	Data Backup Send Success	SEND OK
27	Power Off Error		85	Data Backup Receive Success	RECEIVE OK
28-30	(Reserved)	----------	86	Data Backup Communication Error	COM. ERROR
31	Non-Add Code is Compulsory	#COMPULSORY	87	Data Backup Data Format Error	DATA ERROR
32	A Cashier is Not Signed On	NOT ASSIGNED	88	Data Backup Time Out Error	TIME OUT
33	(Reserved)	----------	89-93	(Reserved)	----------
34	The Entry Exceeded the Overflow Limitation	OVER LIMIT	94	Age Verification Error	AGE ERROR
35	Open Price Entry Inhibited	INH. OPEN PR			

Validation Text Programming – 2642



X : Position Code = 1 – 3
Line : Maximum 24 Characters

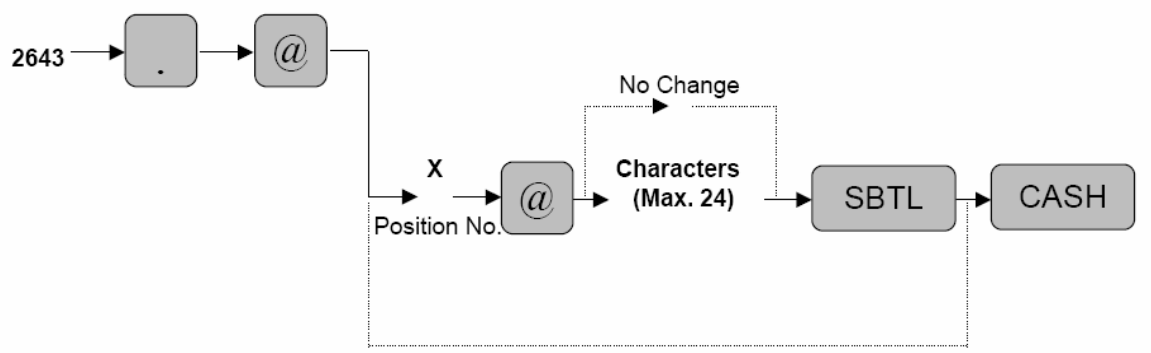
Characters can be entered by using the character keys or by character code entry. The key sequence for entering character codes is as follows:

XXX → [00] key XXX: Character Code (3 digits)

MRS = “ “
“ “
“FOR DEPOSIT ONLY”

Note: Validation message format is preset in SRV Job #928-B.

Slip Text Programming – 2643



X : Position Code = 1 – 3
Line : Maximum 24 Characters

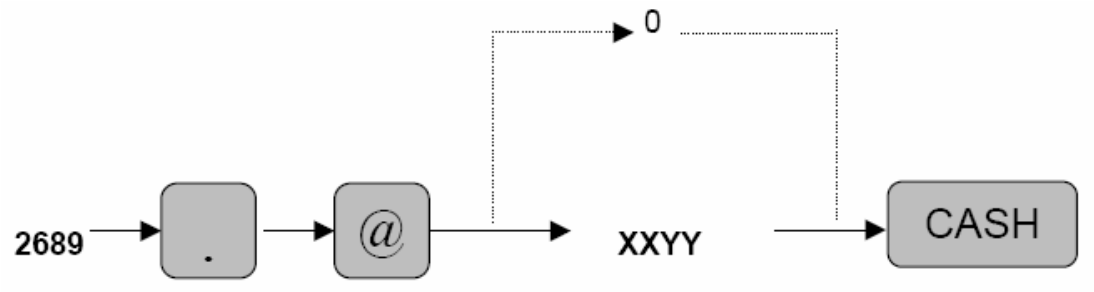
Characters can be entered by using the character keys or by character code entry. The key sequence for entering character codes is as follows:

XXX → [00] key XXX: Character Code (3 digits)

MRS = “Space “
“Space “
“Space ”

Note: Validation message format is preset in SRV Job #928-A.

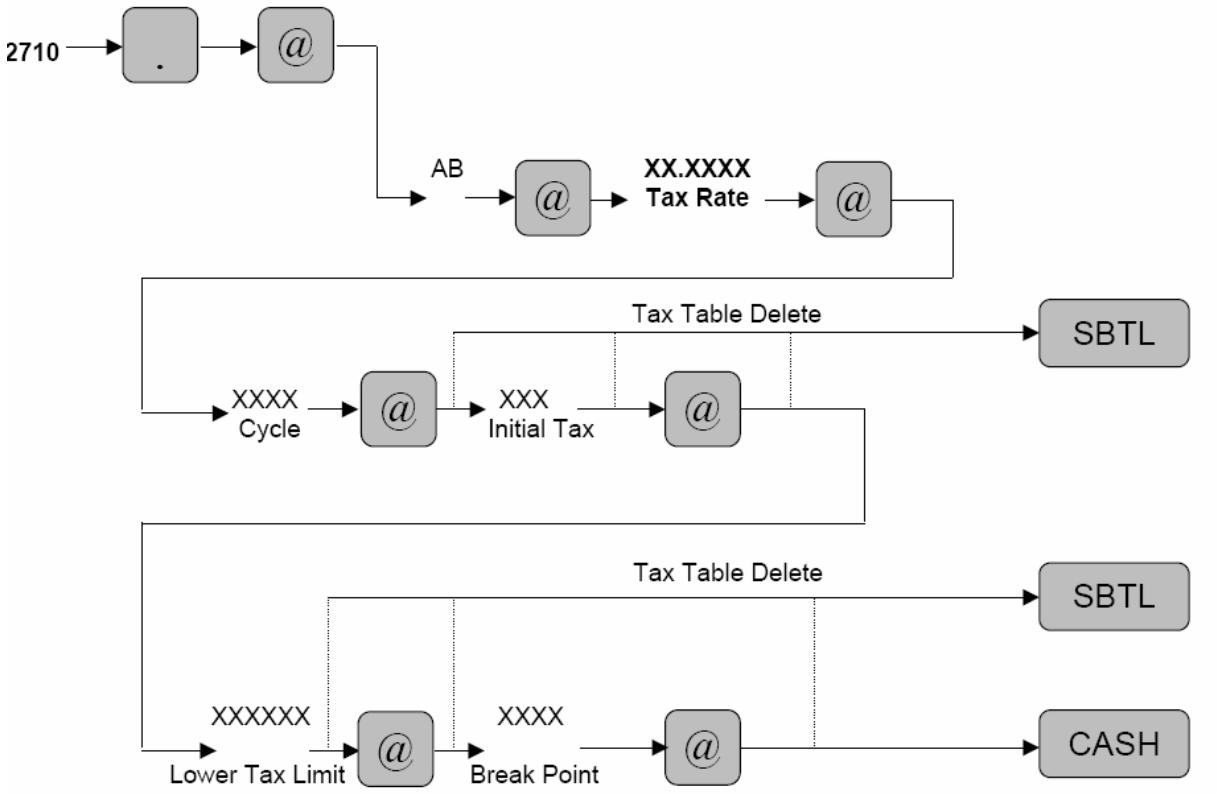
Power Save Programming – 2689



X : Power Saving Function is activated when the Time is displayed — No/Yes = 1/0
YYY: Power Saving Time Setting — 001 –254 (minutes)
999 (Inhibited)

MRS = 0030

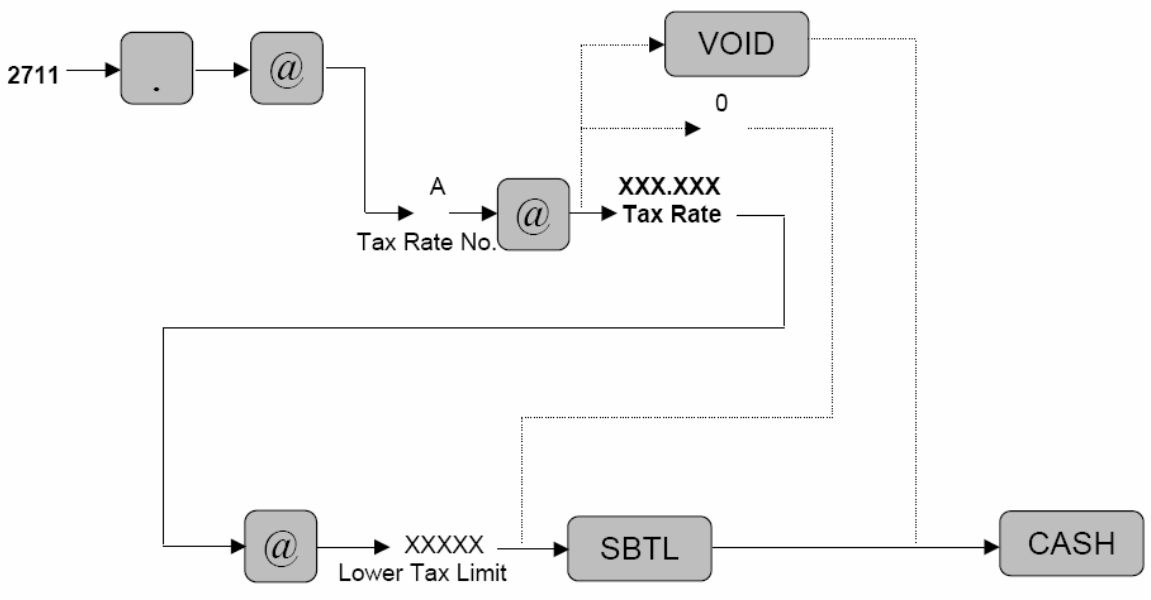
Tax Table Programming – 2710



A: Interval between Break-Points
1 Dollar or more (but less than 100 Dollars) = 1
Below 1 Dollar
B: Tax Table No. = 1/2/3/4
Table-1/Table-2/Table-3/Table-4 = 1/2/3/4
Tax Rate : 0.0001 – 99.9999
Cycle : 0 – 9999
Initial Tax : 0 – 999
Lower Tax Limit : 0 – 99999
Break Point : 0 – 99999

MRS = None
Note: When the interval is 1 dollar or more, 72 BREAK-POINTS may be programmed per TAX TABLE. For intervals less than 1 dollar, 36 BREAK-POINTS may be programmed per TAX TABLE.
Depression of the [SBTL] key as shown above will result in the deletion of the Tax Table Programming.

Tax Rate Programming – 2711



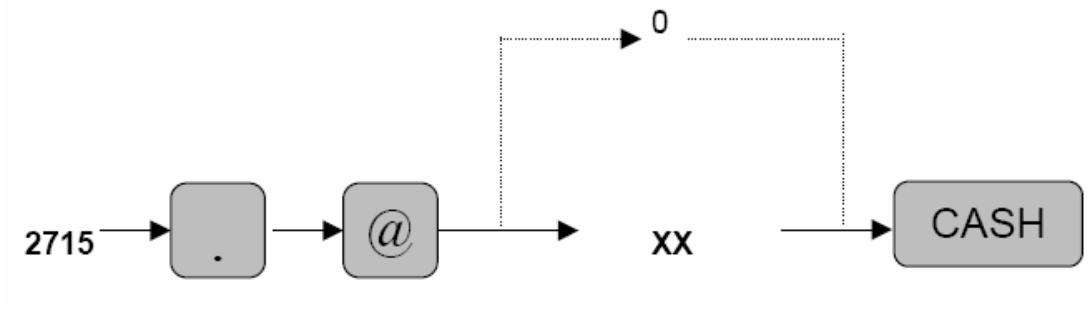
A: Tax-1 Rate No. = 1
Tax-2 Rate No. = 2
Tax-3 Rate No. = 3
Tax –4 Rate No. = 4

Tax % Rate : 0.0000 –100.0000
Lower Tax Limit : 0.00 – 999.99

MRS = None

Note: This programming is invalid for the VAT Tax Table Programming.
Depression of the [VOID] key as shown will result in the deletion of the Tax Table Rate programming.

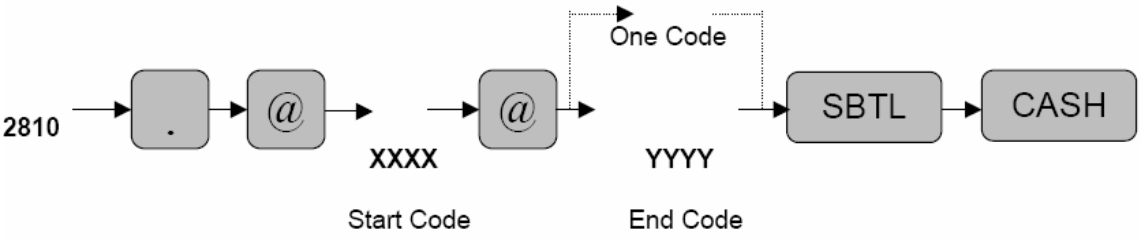
Doughnut Tax Exempt Qty Programming – 2715



XX: Qty for Doughnut Tax Exemption

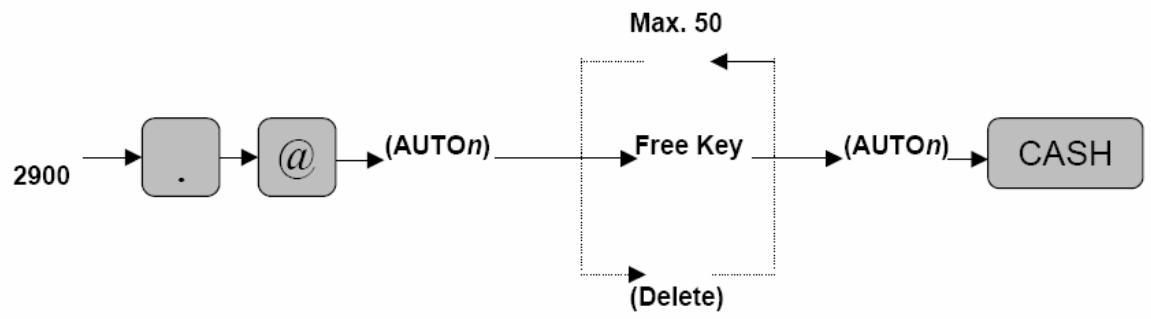
MRS = 0

PBLU Range Programming – 2810



XXXX: Start Code 1 – 9999 MRS = 1
YYYY: End Code 1 – 9999 MRS = 1000

Auto Sequence Key Programming – 2900

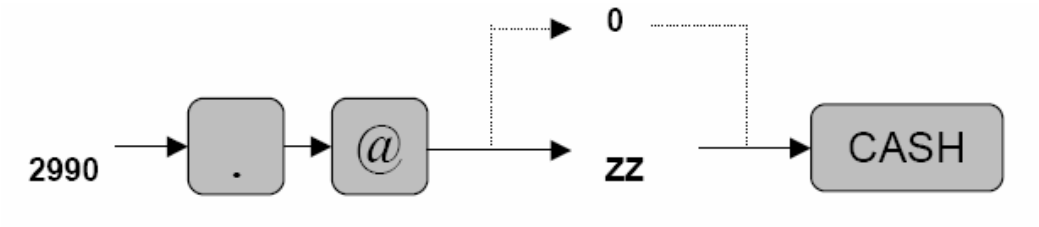


n : Auto Key No. 1 – 10
Free Key : Any key which is depressed from the keyboard (Max. 50 entries)

MRS = Nothing

Note: This programming is performed in the X2/Z2 Mode.

Thermal Printer Setting – 2990



ZZ : Selection of light and shade 00 – 99
00 = 89% of Standard [80% of Printer Standard]
50 = (Standard) [90% of Printer Standard]
99 = 111% of Standard [100% of Printer Standard]

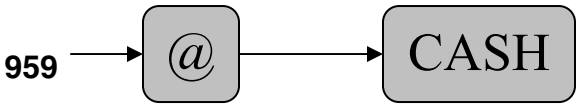
MRS = 50

Note: [80% of the Printer Standard Spec.]
[90% of the Printer Standard Spec.]
[100% of the Printer Standard Spec.]

ROM Version and SSP Listing Reading – PGM2 Mode

1. Procedures:

1) Place the SRV or MGR key to the PGM2-Mode position
2) Enter the following sequence:



2. Example Receipt Print Out:

SHARP
PRESENTS THE
ER-A520

01/18/2006 000000
#0003 2:13PM SERV.01 0001

#0959 *PGM2*

27080RAH1C
RAH1C

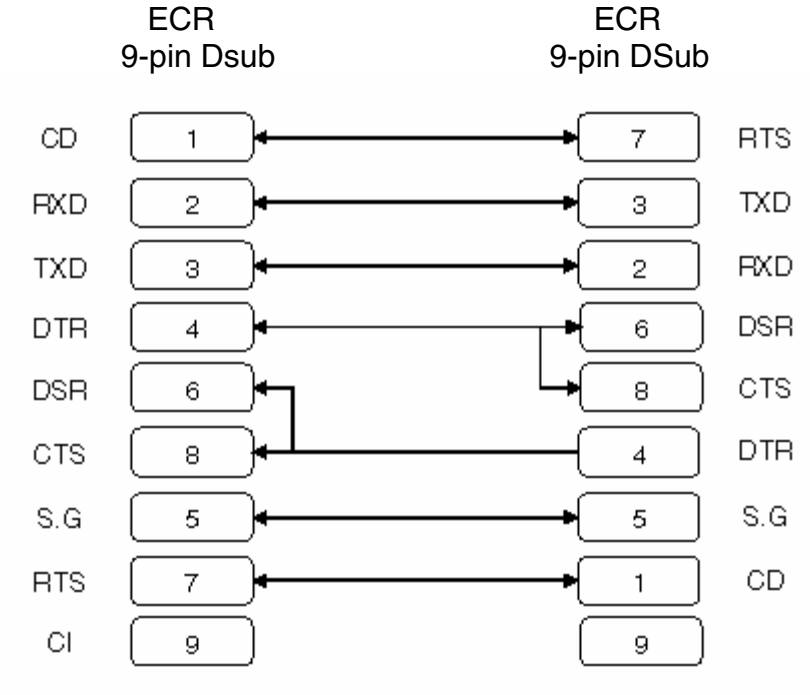
Section-6: Communications

Section-5: Communications (On-Line)

The following table shows the related PGM-Mode **Online Communication** job codes available on the ER-A520 and ER-A530 model ECRs.

Online Communications		
Mode	**Job#**	**Description**
PGM-Mode	2690	Channel Assignment
	6110	Online Terminal No.
	6111	Online Transmission
	6112	Online Function Selection
	6113	Start/End Code
	6115	Online Time Out
	6220	Print Data Sending

1. **Cabling Pin Outs:**



Note: Pin #9 is not used.

2. **Online Interface:**

1) Interface	: RS232
2) Duplex Type	: Half-Duplex/Full-Duplex
3) Line Configuration	: Direct Connection/Modem Connection
4) Data Rate	: 19200, 9600, and 4800 bps (programmable)
5) Synchronization Mode	: Asynchronous
6) Parity Check	: Vertical Parity Check (Odd)
7) Code	: ASCII
8) Bit Sequence	: LSB First
9) Data Format	: 1 start bit + 7 data bits + 1 parity bit + 1 stop bit

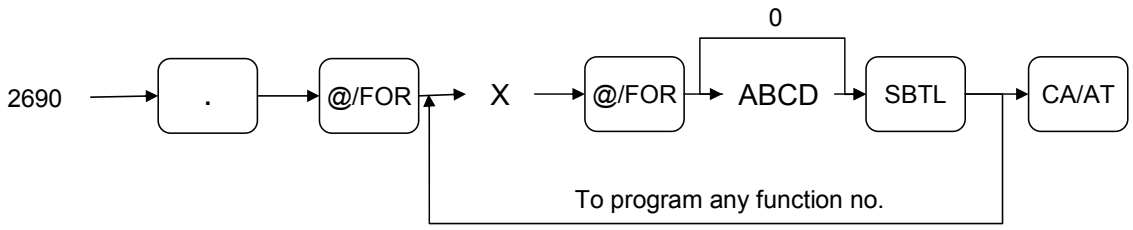
3. **Protocol:**

Polling/Selecting (Simple Procedure)

RS-232C Channel Assignment

Key Sequence:

To assign channel number to the peripherals, please follow the sequence below:



X = 1			
Item	Description	Selection	Entry
A	Channel number for on-line communication	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
B	Channel number for print data sending (CVM)	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
C	Channel number for scale	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
D	Channel number for the coin dispenser	Not connected	0
		Standard channel 1	1
		Standard channel 2	2

NOTE:

1. MRS = 0000
2. Data backup function always uses standard channel 2.

X = 2			
Item	Description	Selection	Entry
A	Channel number for the barcode reader	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
B	Channel number the remote printer 1	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
C	Channel number for the remote printer 2	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
D	Always enter 0		0

NOTE:
MRS = 0000

X = 3			
Item	Description	Selection	Entry
A	Always enter 0		0
B	Channel number for the slip printer TM-295	Not connected for internal printer (printing bills on receipt)	0
		Standard channel 1	1
		Standard channel 2	2
C	Always enter 0		0
D	Channel number for CAT	Not connected	0
		Standard channel 1	1
		Standard channel 2	2

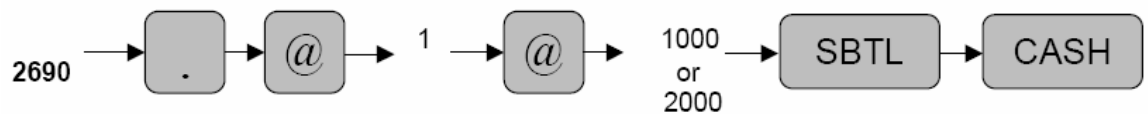
NOTE:
MRS = 0000

Procedure:

Enter the PGM2-Mode as previously outlined

1. Enter 2690
2. Depress [.] key
3. Depress [@/FOR] key
4. Enter 1
5. Depress [@/FOR] key
6. Enter assigned channel numbers (4 digits)
7. Depress [SBTL] key
8. Depress the [CA/AT] key

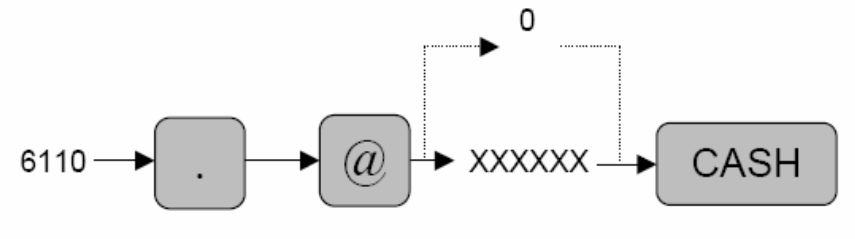
Channel Assignment for Communications (ONLINE):



2. Procedure for Reading the Online Settings:

On-line preset	PGM2 or PGM1	6110	→ 6110 → @/FOR → CA/AT	6110, 6111, 6112, 6113, 6115, 6212, 6213, 6220

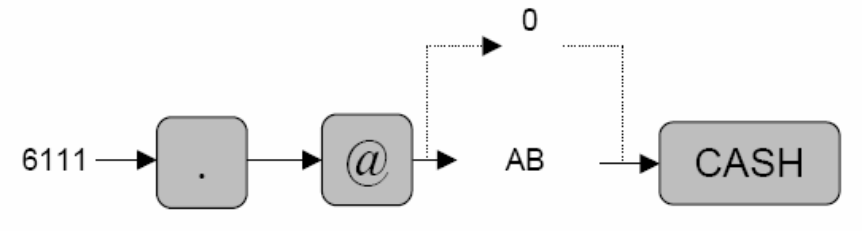
RS232 Terminal No. - 6110



XXXXXX: Terminal No. (0-999999)

MRS = 000001

RS232 Transmission - 6111



A: CI Sensing is Enabled	Yes/No	= 1/0
B: Transmission Line Form	Half Duplex/Full Duplex	= 1/0

MRS = 00

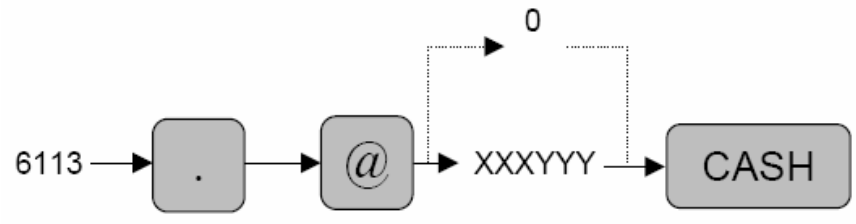
RS232 Function Selection - 6112

*	Item:	Selection:	Entry:
A	Baud rate (38400/19200/9600/4800 bps) The selected baud rate is used for on-line communications. It is not used for the data backup function.	4800 bps	4
		9600 bps	5
		19200 bps	6
		38400 bps	7

Note: The value of the baud rate is used for the Online and Print Data Sending functions. This should not be confused with the SRV Job#903-A setting which is dedicated to the ECR Data Copy function.

MRS = 06

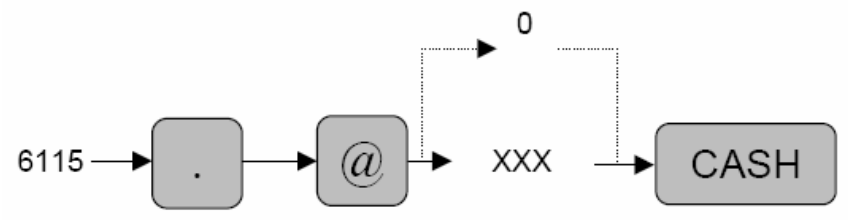
RS232 Start/End Codes - 6113



A: Start Code = 000–127
B: End Code = 000–127

MRS = 002013

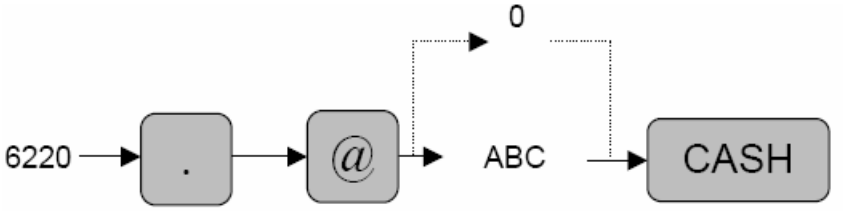
RS232 Time Out - 6115



XXX : Time Out Value = 1–255 seconds

MRS = 007

Print Data Sending - 6220



A: Sensing of the DTR Signal	No/Yes	= 1/0
B: Sensing of the CTS Signal	No/Yes	= 1/0
C: Sending All Print Data is Enabled	Yes/No	= 1/0

MRS = 000

Quick Steps – Communications

To quickly setup the ER-A520 and ER-A530 to interface with the Communications software (example: SDW or some other software), please refer to the related procedures below:

No.	Description	Comments/Procedure
Step–1	Connect SDW	CH–1 or CH–2
Step–2	PGM Job#2690	2690 → [.] → [@] → 1 → @ → 1000 [SBTL] → [CA/AT] for CH–1) or 2690 → [.] → [@] → 1 → @ → 2000 [SBTL] → [CA/AT] for CH–2) **Note:** Must match the physical connection
Step–3	Program Reset	• Place the SRV-Key counter-clockwise to 6 o'clock position (SRV' position) • Count 5 seconds • Turn SRV-Key clockwise to 7o'clock position (SRV position) • Verify"***PROGRAM RESET has printed on the journal-side tape.
Step-4	PGM Job#6110	6110 →[.] →[@]→ 000001 →[CASH] (Online Terminal No.) **Note:** Leave at MRS defaults (Terminal = 000001)
Step-5	PGM Job #6111	6111 →[.] →[@] AB →[CASH] (RS232 Transmission) **Note:** Leave at MRS defaults (AB = 00)
Step-6	PGM Job#6112	6112 →[.] →[@]→ AB →[CASH] (RS232 Functions) A: RS232 Baud Rate 38400/19200/9600/4800 bps = 7/6/5/4 **Note:** MRS defaults is 19200 bps (or 6)
Step-7	PGM Job #6113	6113 →[.] →[@]→ xxxyyy →[CASH] (Start & End Code) **Note:** Leave at MRS defaults (or 002013)
Step-8	PGM Job #6115	6115 →[.] →[@]→ xxx →[CASH] (Time Out) 1st Response Wait **Note:** Leave at MRS defaults (or 007)
Step-9	PGM Job#6220	6220 →[.] →[@]→ ABC→[CASH] (Print Data Sending) A: Sensing of DTR No/Yes = 1/0 B: Sensing of CS No/Yes = 1/0 C: Sending of Print All Data Yes/No = 1/0 **Note:** PGM Job #6112-A must be = 1

Section-7: Credit Card Authorization

Section–7: Credit Card Authorization Terminal (CAT)

The ER-A520 and ER-A530 model cash registers provide an interface for supporting the Data Tran SL for credit card processing.

Function Overview

The ER-A520 and ER-A530 model cash register provides an interface for supporting the Data Tran SL for credit card processing.

1. Types of Networks involve:

- Host based
- Terminal based

2. Key functions provided by the ER-A520 and ER-530 for Credit Card Authorization:

- Installation and Setup
  a. Initialization
  b. Dial Out
  c. Dial In
  d. Presets
  e. Local Inquiry
  f. Local Summary
  g. Charge Batch
  h. Clear Batch

3. Sales Functions Supported:

1) Credit Card Authorization (including Check Cards)
a) Dial Up
b) Authorization Only
c) Post Authorization

2) Check Tender w/o MICR (Manual Data Entry)
3) Auth Only and Post Auth Sales

4. Corrections:

1) Voids for Credit and Check Cards
2) Refunds for Credit and Check Card Sales
3) Void for Auth Only and Post Auth Sales

System Configuration

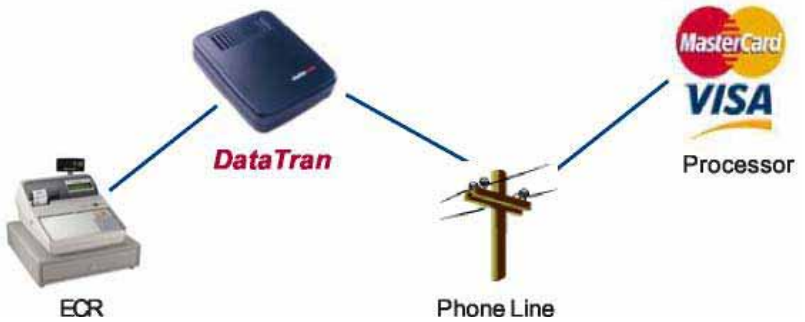
The Data Tran SL and MCR part no. may be obtained through contacting DataCap Inc. (215-997-8989).

1. System Configuration:

For any ECR with a serial port programmed to use Datacap's proprietary DataTran™ command interface

Dial Only Configuration DataTran™

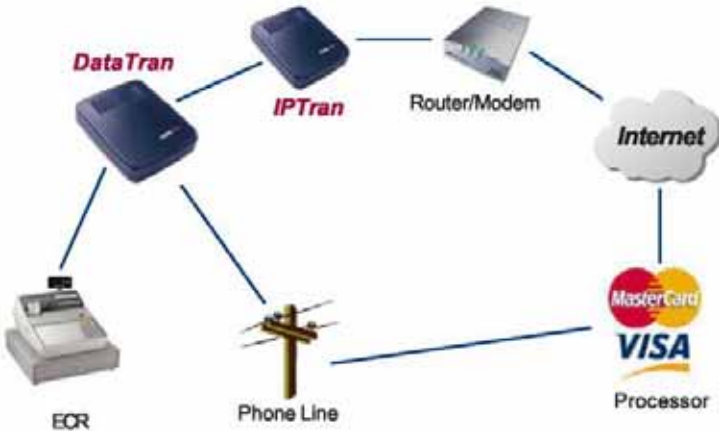
Provides dial transaction processing through standard phone line.
DataTran connects to ECR serial port and to regular phone jack. Merchant parameters must be obtained from bank or service provider and provided to Datacap for programming. Merchant info can be loaded at the factory or remotely from Datacap servers over the phone.



IP with Dial Backup Configuration

DataTran™ and IPTran
Provides fast transaction processing using a persistent Internet connection and automatic fail over to dial transactions through standard phone line in the event of an Internet failure.

DataTran connects to ECR serial port and to regular phone jack, IPTran connects to DataTran and Internet router or modem. Merchant parameters must be obtained from bank or service provider and provided to Datacap for programming. Merchant info can be loaded at the factory or remotely from Datacap servers over the phone



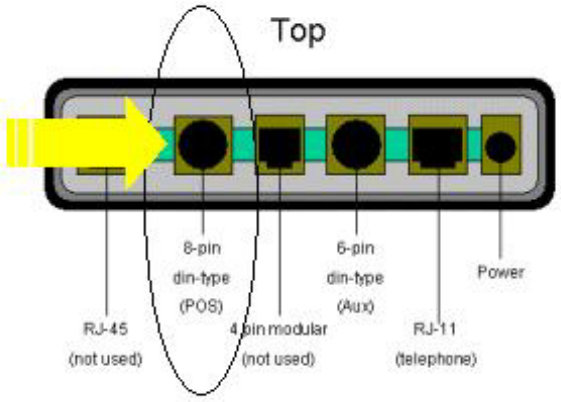
Note: The ECR Data Copy Function is dedicated to CH-2.

2. Serial Interface:

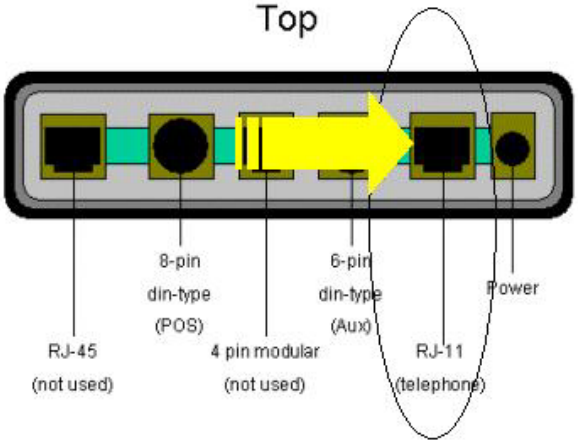
- Operation Mode : Half Duplex
- Line Configuration : Direct Connection
- Data Rate : 2400 bps (fixed)
- Transmission Technique : Asynchronous Serial Transmission
- Connection : Activated by the ER-A520 and ER-A530
- Checking : 1 Start Bit, 8 Data Bits, No Parity, 1 Stop Bit
- Code : ASCII
- Bit Sequence : LSB First

3. Installation Sequence:

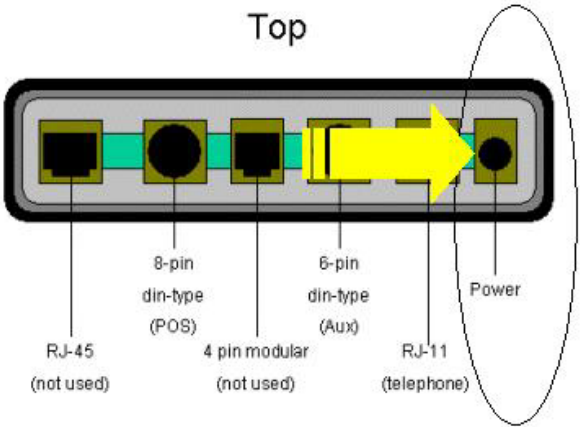
1) Remove the AC power cord of the ER-A520 or ER-A530 from the wall outlet.
2) Connect the DB9 Data Tran SL cable to CH-1or CH-2 of the ECR.
3) Connect the 8 pin DIN to the receptacle marked “ECR/POS” at the Data Tran SL.



4) Connect the RJ-11 (telephone) jack to the DataTran 162 modem as indicated below.



5) Connect the external power adapter to the receptacle of the Data Tran SL.



6) Plug the AC power cord of the ER-A520 and ER-A530 into the wall outlet.
7) Plug the Data Tran SL external power adapter into the wall outlet.

Note:

1) When power is applied to the DataTran modem, there is an LED indicator in the front of the unit.
2) When AC Power is removed and re-applied, it is necessary to initialize the DataTran

Definitions

The interface for credit card authorization for the ER-A520 and ER-A530 will introduce new terminology, which you should understand prior to installing the EFT solution. Some of the terminologies associated with processing payments electronically are listed below.

1. Network Programming:
   This is related to the Merchant Set Up information stored within the Data Tran Unit. The merchant parameters within the Data Tran may be loaded via the ER-A520/ER-A530's DIAL OUT/DIAL IN commands.

2. Initialization:
   Used to synchronize/initialize the Data Tran SL upon installation, setting changes at the ER-A520 and ER-A530 and when AC power becomes unplugged from the Data Tran SL or for any reason.

3. Batch Execution:
   The PGM mode is used for batch execution jobs.

4. Reports:
   The PGM mode is used for reports.

Note: Opening, Closing Credit Card Batches and Reports are available from the ECR.

Prior to Programming – Recommended Settings

1. Credit Card Finalization Keys:

There are 2 methods in which to set the system for credit card finalization.

Method-1: For Simplified Operations:
It is possible to provide a single Credit Card key and rely on the processor to itemize the individual credit card's totalizer. This is also required when the merchant selects to honor more than 5 Credit card types.

Method-2: For Detailed Operations:
It is possible to provide a media key for each type of credit card (Max. 5), at the cash register.

Note: Refer to the below table when programming media keys to be used as Credit Cards.

Job # 2330

Credits Cards				
Bit	**Description**	**Setting**	**Preset**	**Recommended Setting**
A	CAT transaction	Compulsory/Not	1/0	1 = Compulsory
B	CAT Action	Dial/Post-Auth/Auth-Only	1/0/2	1 = Dial
C	CAT Type	Check/Credit	2/0	0 = Credit
D	Card Number Printing	No/Yes	1/0	0 = Yes
E	Card Number Print Format	Full/Partial	1/0	0 = Partial
F	Signature Line Print	No/Yes	1/0	0 = Yes
G	Expiration Date Print	No/Yes	1/0	0 = Yes
H	Always enter Zero		0	0
I	Tip and total amount printing on authorization receipt	No/ Yes	1/0	1 = No
J	Receipt and authorization receipt printing when CAT entry is made at receipt OFF status	No/ Yes	1/0	0 = Yes
K	Number of CAT Authorization Receipt	No. of Copies (CAT Only)	0-9	1 = 1 copy *

* Even when zero is set, one receipt is issued.

2. Check Cards:

When programming a media key for a Check Card (w/o PIN Entry), use the same settings as a Credit Card.

3. Check Finalization Keys (w/Manual Data Input):

The ER-A520 and ER-A530 can also support end user requirements that include processing the traditional written Check as a form of sales finalization. The method that is used with Check finalization is supported with data entry versus a MICR reader.

Note: Refer to the below table when programming media keys to be used as Checks.

Job # 2330

Credits Cards				
Bit	**Description**	**Setting**	**Preset**	**Recommended Setting**
A	CAT transaction	Compulsory/Not	1/0	1 = Compulsory
B	CAT Action	Dial/Post-Auth/Auth-Only	1/0/2	1 = Dial
C	CAT Type	Check/Credit	2/0	2 = Check
D	Card Number Printing	No/Yes	1/0	0 = Yes
E	Card Number Print Format	Full/Partial	1/0	0 = Partial
F	Signature Line Print	No/Yes	1/0	0 = Yes
G	Expiration Date Print	No/Yes	1/0	0 = Yes
H	Always enter Zero		0	0
I	Tip and total amount printing on authorization receipt	No/ Yes	1/0	1 = No
J	Receipt and authorization receipt printing when CAT entry is made at receipt OFF status	No/ Yes	1/0	0 = Yes
K	Number of CAT Authorization Receipt	No. of Copies (CAT Only)	0-9	1 = 1 copy *

* Even when zero is set, one receipt is issued.

Programming List

The following table shows the related SRV and PGM-Mode CAT job codes available on the ER-A520 and ER-A530 model ECRs.

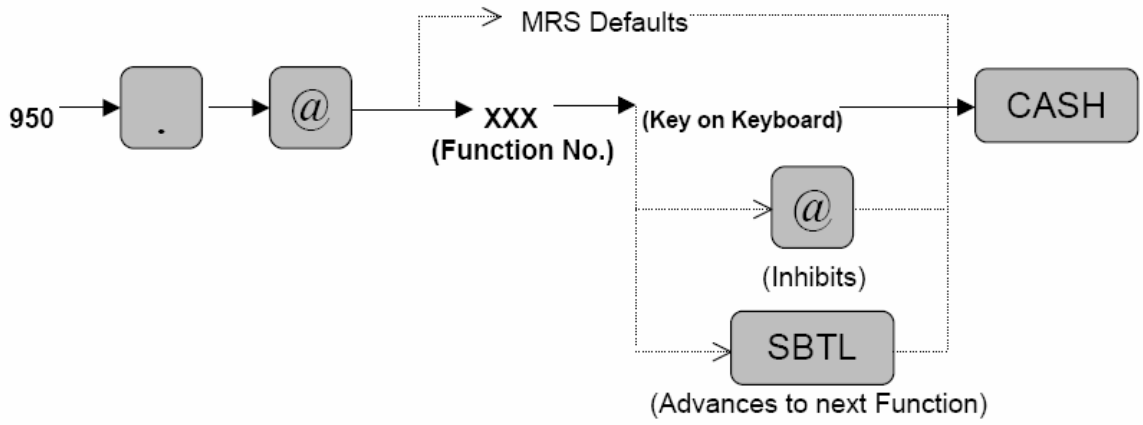
Credit Card Authorization Terminal (CAT)		
Mode	**Job#**	**Description**
SRV Mode	950	Free Key Layout:
		Function #75 – CHECK1
		Function #76 – CHECK2
		Function #80 – CHARGE1
		Function #81 – CHARGE2
		Function #82 – CHARGE3
		Function #83 – CHARGE4
		Function #84 – CHARGE5
PGM2 Mode	2690	Channel Assignment
	2330	Media Key Function Programming
	7110	CAT Phone Number for Dial Out
	7111	CAT Password for Dial Out
	7112	CAT Function Programming
	7113	CAT Time-Out 1
	7114	CAT Time-Out 2
	7115	CAT Time-Out 3
	7116	Allow Cash Tip Rate for AUT.
	7117	Initiates the Data Tran SL Unit
	7118	Initiates the Dial Out Function
	7119	Initiates the Dial In Function

Function Key Programming - 950

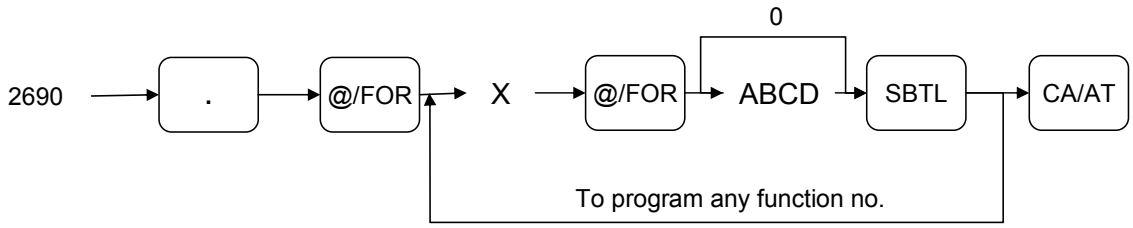
The only SRV-Mode programming required to utilize the Data Tran SL interface is assigning the necessary function keys to the keyboard of the cash register.

FUNCTION	DESCRIPTION
CA1-5	The CA1–5 Media keys are preset for Cash settlement keys.
CHK1-2	The Check 1–5 media keys are preset for Checks and/or Check Card settlement keys (w/o MICR).
CHG1-5	The CH1–9 media keys are preset for Credit Card settlement keys.
RCPT	The Receipt Copy key is used to generate 2nd and subsequent copies of the sales transaction.

Note: For step-by-step procedures for placing function keys on the keyboard, please refer to SRV Job#950 in Section-1.



RS232 Channel Assignment - 2690



X = 1			
Item	Description	Selection	Entry
A	Channel number for on-line communication	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
B	Channel number for print data sending (CVM)	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
C	Channel number for scale	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
D	Channel number for the coin dispenser	Not connected	0
		Standard channel 1	1
		Standard channel 2	2

NOTE:

1. MRS = 0000
2. Data backup function always uses standard channel 2.

X = 2			
Item	Description	Selection	Entry
A	Channel number for the barcode reader	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
B	Channel number the remote printer 1	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
C	Channel number for the remote printer 2	Not connected	0
		Standard channel 1	1
		Standard channel 2	2
D	Always enter 0		0

NOTE:
MRS = 0000

X = 3			
Item	Description	Selection	Entry
A	Always enter 0		0
B	Channel number for the slip printer TM-295	Not connected for internal printer (printing bills on receipt)	0
		Standard channel 1	1
		Standard channel 2	2
C	Always enter 0		0
D	Channel number for CAT	Not connected	0
		Standard channel 1	1
		Standard channel 2	2

NOTE:
MRS = 0000

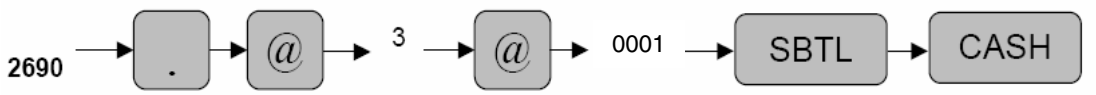
Procedure:

Enter the PGM2-Mode as previously outlined

1. Enter 2690
2. Depress [**.**] key
3. Depress [@/FOR] key
4. Enter 3
5. Depress [@/FOR] key
6. Enter assigned channel numbers (4 digits)
7. Depress [SBTL] key

Depress the [CA/AT] key

Channel Assignment for CAT [EFT]:



General Rule – CAT Settings

1. CAT Settings:

1) Set communication time out as shown below.

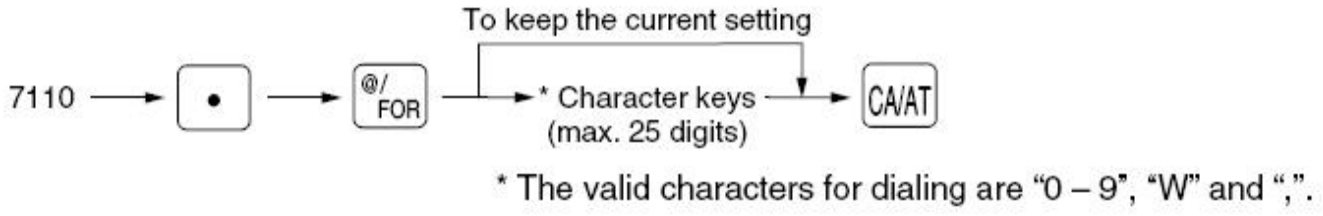
TIME OUT1 = 010
TIMEOUT2 = 180
TIMEOUT3 = 3000

2) Set the TEL NO. only when instructed for DIAL OUT purposes.
3) Set the TEL ID only when instructed for DIAL OUT purposes.
4) Set TEL MODE to the desired setting.

2. Procedure for Reading the CAT Settings:

CAT preset	PGM2	7110	→ 7110 → @/FOR → CA/AT	7110, 7111, 7112, 7113, 7114, 7115, 7116

Telephone No. Setting (Dial Out) - 7110



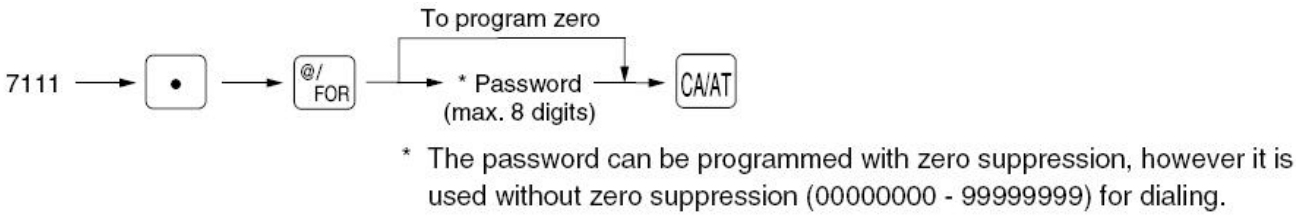
Characters can be entered by using the character keys or by character code entry. The key sequence for entering character codes is as follows:

XXX → [00] key XXX: Character Code (3 digits)

MRS = 0_____ (__ :space)

Note: The valid characters for the Dial Out operation are "0" to "9","W" and " ".

Password Setting (Dial Out) - 7111

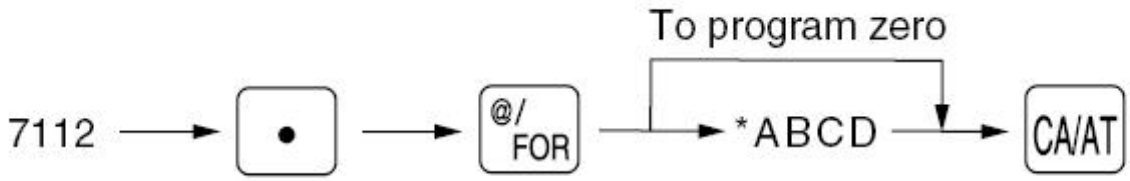


XXXXXXXX: Password (Tel ID) = 8 digits (00000000-99999999)

MRS = 00000000

Note: The Tel ID is the password for the merchant parameter file, which is assigned and posted for downloading by Datacap, Inc.

CAT Function Setting - 7112



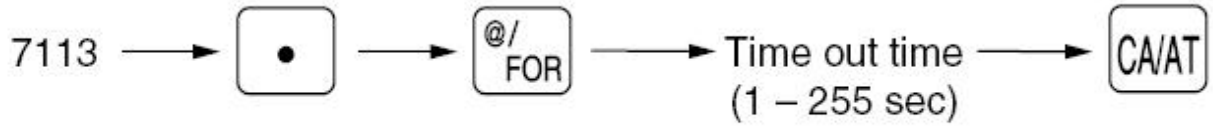
A: Food Stamp Mode	Disable/Enable	=1/**0**
B: PIN Pad is connected to CAT (Data Tran SL) for Debit Cards – **Not Available**	No/Yes	= **1**/0
C: Key Type PIN Pad **– Not Available**	Index/Dukpt/Static	= 2/1/**0**
D: Dial Mode for Dialing Out	Pulse/Tone	=1/**0**

Note: The "B" bit MUST be set to [NO] if the PIN Pad is not connected or else the Data Tran SL will not initialize.

MRS = 0000, **Change to 0100.**

Note: The encryption of the Verifone PIN Pad **(Not Available)** must match the merchant parameters set in the Data Tran SL. This will correspond with the setting programmed in PGM Job#7112.

CAT Time Out #1 - 7113

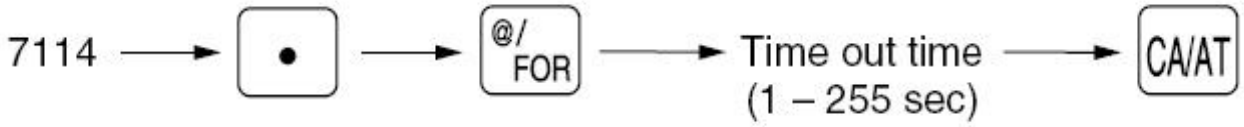


XXX: Time Out Value (1- 255 sec.)

MRS = 030, **Change to 010.**

Notes: Time limit for reading of the card data.
The time out value for the Data Tran should be between "5~60" seconds.

CAT Time Out #2 - 7114



XXX: Time Out Value (1-255 sec.)

MRS = 099, **Change to 180.**

Note: Time limit for the response of the Authorization.

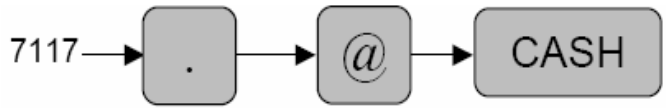
CAT Time Out #3 - 7115

XXXX: Time Out Value (1- 3000 sec.)

MRS = 0099, **Change to 3000.**

Note: Time limit for the DIAL IN and DIAL OUT functions.

CAT Initialize - 7117

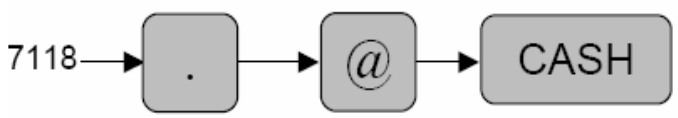


The following Data Tran SL commands are executed sequentially:

AT&C1<cr> : Set Carrier Sense
AT&UT0 0 1 1<cr> : Set Response Options

AT&UT1 1 : Set Flow Control

CAT Dial Out - 7118



The following Data Tran SL commands are executed sequentially:

AT&UH<A><B><C><cr> : Remote load where the ECR initiates the Data Tran SL to Dial Out.
AT&U96<cr> : List the installed Network

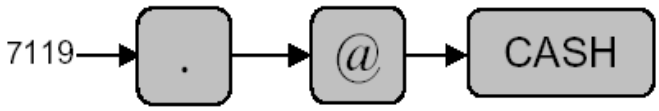
<A> : The telephone number which is preset in PGM Job#7110
<B> : The telephone ID(Password) which is preset in PGM Job#7111
<C> : The Dial Mode preset in PGM Job#112

*1 The command expects the response:<cr><if>OK<cr><if>. If any other response is returned, then the “INVALID RESPONSE” message is displayed. If no response is returned within the Time Out#2, the “TIME OUT ERROR” message is displayed.

*2 The command expects the response:<cr><if>(print data)<cr><if>. If any other response is returned, then the “INVALID RESPONSE” message is displayed. If no response is returned within the Time Out#2, the “TIME OUT ERROR” message is displayed.

*3 The ER-A520 and ER-A530 will print the (print data) returned.

CAT Dial In - 7119



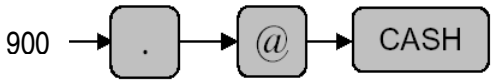
The following Data Tran SL commands are executed sequentially:

AT&UH<cr> : Remote load where the ECR places the Data Tran in the Wait-State for Dial In
AT&UP96<cr> : List the installed Network

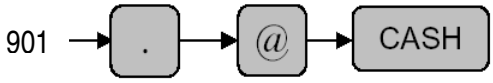
Batch Execute

Z1 Mode

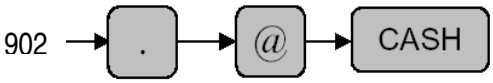
Clear Batch



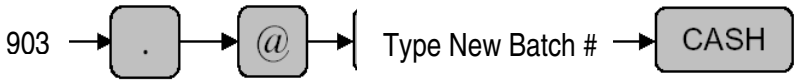
Open Batch



Close Batch

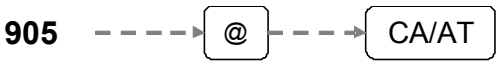


Change Batch

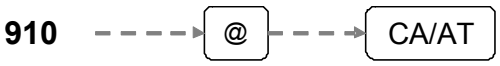


X1 Mode

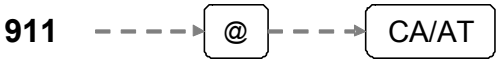
Batch Status



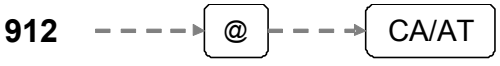
Local Total



Local Summary



Local Inquiry



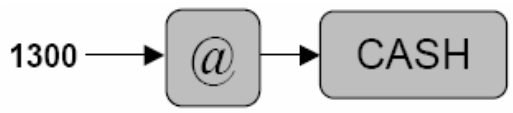
Quick Steps - CAT

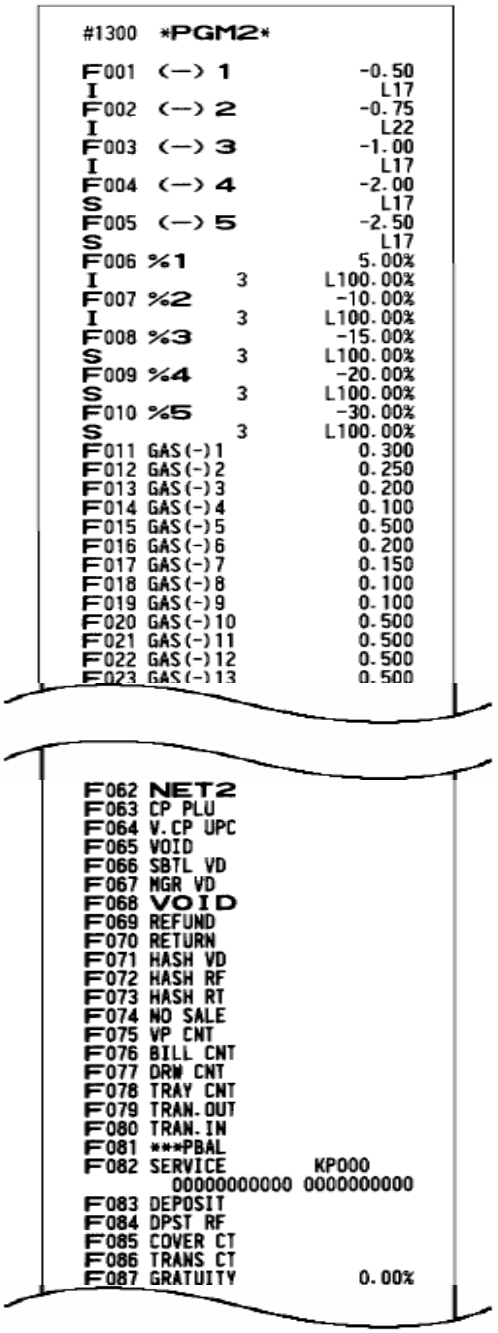
No.	Description	Comments/Procedures
Step–1	Connect the CAT	CH–1 or CH–2 (Recommended CH-2)
Step–2	PGM Job#2690	2690 → [.] → [@] → 3 → @ → 0001 [SBTL] → [CA/AT] for CH–1) or 2690 → [.] → [@] → 3 → @ → 0002 [SBTL] → [CA/AT] for CH–2) **Note:** Must match the physical connection
Step–3	Program Reset	• Place the SRV-Key counter-clockwise to 6 o'clock position (SRV' position) • Count 5 seconds • Turn SRV-Key clockwise to 7o'clock position (SRV position) • Verify"****PROGRAM RESET has printed on the journal-side tape.
Step-4	PGM Job#7110	7110 →[.] →[@]→(Telephone No.) →[CASH] (Telephone No.for Dial Out)) **Note:** This information comes from Datacap.
Step-5	PGM Job #7111	7111 →[.] →[@] xxxxxxxx →[CASH] (Password for Merchant Parameter) **Note:** This information comes from Datacap.
Step-6	PGM Job#7112	7112 →[.] →[@]→ ABC →[CASH] A: Food Stamp mode Disable/Enable = 0/1 B: PIN Pad for CAT is preset No/Yes = 1/0 C: Key Type for PIN Pad Index/Dukpt/Static = 2/1/0 D: Dial Mode for Dialing Pulse/Tone = 1/0 **Note:** This information comes from Datacap. (MRS =0 000. **Change to 0100**).
Step-7	PGM Job #7113	7113 →[.] →[@]→030→[CASH] (Time Out #1) – ½ min. Wait for 1st ACK reply. **Note:** MRS Default = 030. **Change to 010.**
Step-8	PGM Job #7114	7114 →[.] →[@]→180→[CASH] (Time Out #2) – 3 min. Max. Response Wait. **Note:** MRS Default = 090. **Change to 180.**
Step-9	PGM Job#7115	7115 →[.] →[@]→3000→[CASH] (Time Out #3) – 5min. Max. Dial Out Wait **Note:** MRS Default = 099. **Change to 3000.**
Step-10	PGM Job#2330	**Example of Media Key Settings:** 2330 →[.] →[@] → 114, 116, 118, 120, 122, 124, 126, 128, or 130 →[@] 1100000010X →[SBTL]→[CASH] - (CHG1-CHG9), X = # of CAT receipts 2330 →[.] →[@] → 132 or 136 →[@] 1120000010X →[SBTL]→[CASH] - (CHK1-CHK5), X = # of Check receipts
Step-11	PGM Job#7117	7117 →[.] →[@] →[CASH] (To initialize the Data Tran SL Unit)

Media Key Programming Readout

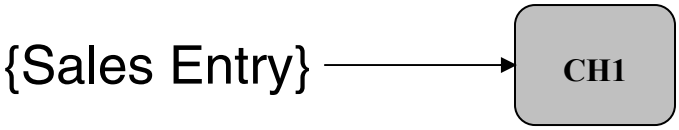
To obtain the media key presets reading, please follow the below procedure:

1) Place the Mode key in the PGM2-Mode.
2) Enter the following sequence.





Sample Operations – Credit Card Sale – REG/MGR Mode



Note: When the media key is depressed, the ER-A520 and ER-A530 will display “SWIPE CARD”.

SWIPE CARD

1, MCR Card Swipe Method:

Step-1: Swipe the credit card at the MCR unit of the Data Tran SL.

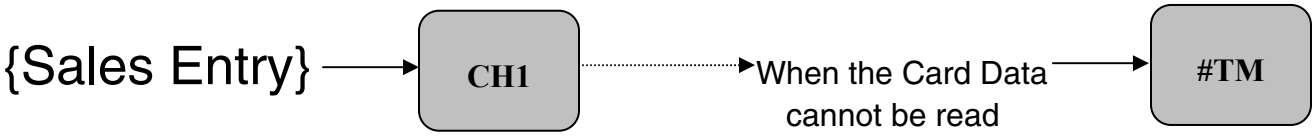
Note: Once the Data Tran receives the Track Data the ER-A520 and ER-A530 will display “PROCESSING”.

PROCESSING…….

Step-2. Once the authorization is received, the receipt is printed.
Step-3. Depress the [RCPT] key to issue a second receipt.

2. Manual Entry Method – When the card data cannot be read:

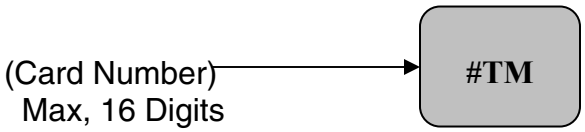
Step-1: Depress the [#TM] key
(Aborts the MCR method and sends a <cr> to the Data Tran SL)



Note: When the [#/TM] key is depressed the ER-A520 and ER-A530 will display “CARD NO.”

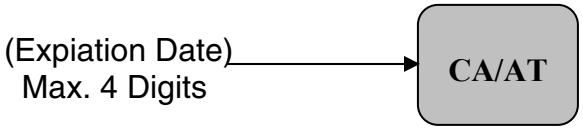
CARD NO.

Step-2: Enter the Card Number using the Ten-Key pad and press the [#/TM] key.



Note: When the [#/TM] key is depressed the ER-A520 and ER-A530 will display "EXP. DATE."

Step-3: Enter the Expiration Date (4-Digits) using the Ten-key pad and depress the [CA/AT] Key.



Note: When the [CA/AT] key is depressed the ER-A520 and ER-A530 will display "PROCESSING."

Step-4: Once the authorization is received, the receipt is printed.
Step-5: Depress the [RCPT] key to issue a second receipt.

Sample Operations – Refund Credit Card Sale – REG/MGR Mode

Refund
{Sales Entry} → CH1

Note: When the media key is depressed, the ER-A520 and ER-A530 will display “SWIPE CARD”.

SWIPE CARD

1, MCR Card Swipe Method:

(Processing is the same as the normal sales transaction)

2. Manual Entry Method – When the card data cannot be read:

(Processing is the same as the normal sales transaction)

Sales Operation Void Credit Card Sale – REG/MGR Mode

VOID Mode
{Sales Entry} → CH1

Note: When the media key is depressed, the ER-A520 and ER-A530 will display “SWIPE CARD”.

SWIPE CARD

1, MCR Card Swipe Method:

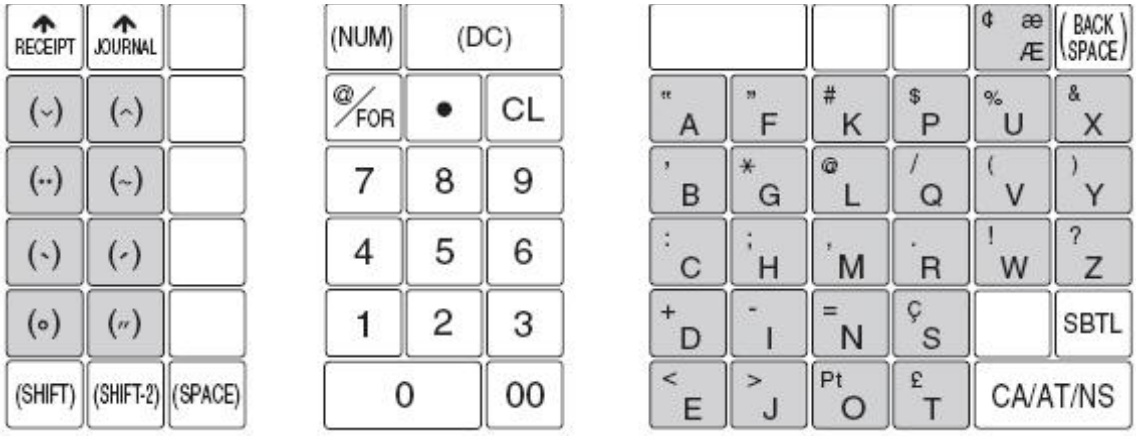
Step-1: Swipe the credit card at the MCR Unit of the Data Tran SL.

Note: Once the Data Tran receives the Track data, the ER-A520 and ER-A530 will display “AP CODE”.

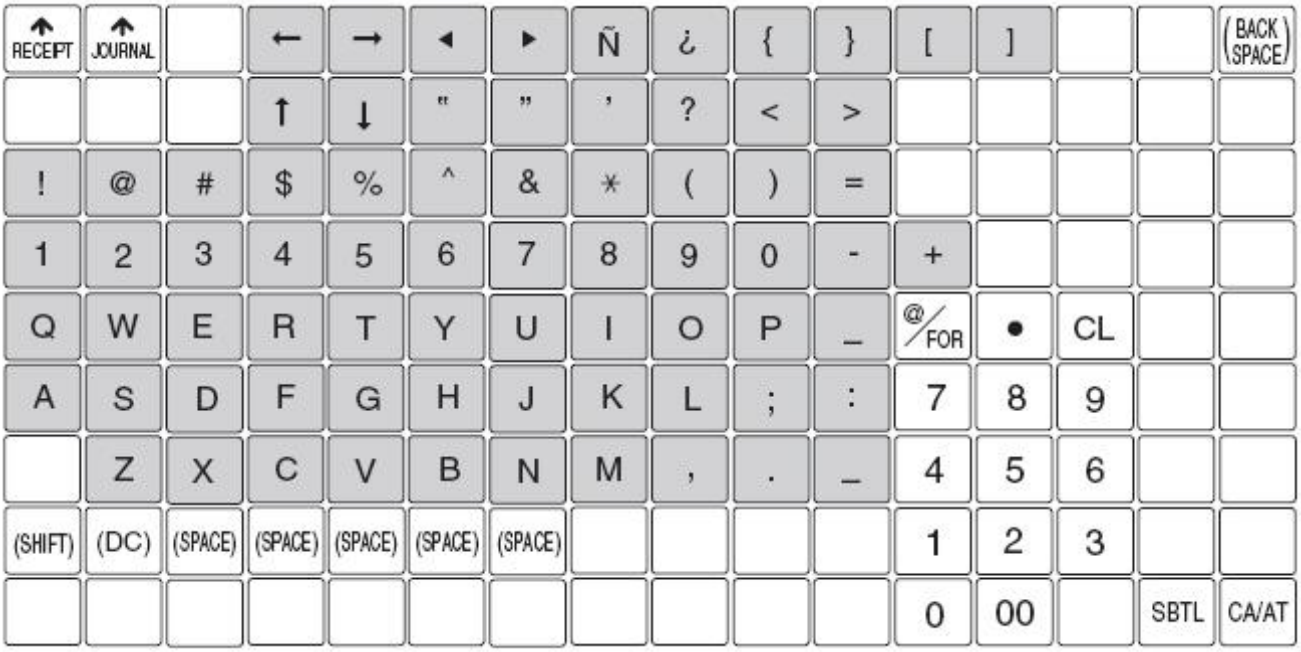
AP CODE XXXXXXXXXXXXXXX

Step-2: Enter Approval code by using of the character keyboard- see the chart below

ER-A520



ER-A530



Step-3: Depress the [RCPT] key to issue a second receipt.

PROCESSING…….

Section-8: Utilities

Section – 1 General Overview

The ER-A520 and ER-A530 model ECRs provide the ability to send /receive its RAM data for easy storage or duplication.

1. Types of RAM data supported:

    (1) SSP data (only)……sending/receiving
    (2) RAM image data (including SSP data) ……sending/receiving

2. Functions Supported:

    (1) ER-A520/ER-A530 to ER-A520/A530
    (2) ER-A520/ER-A530 to PC
    (3) PC to ER-A520/ER-A530

3. Recommended Sequence:

    (1) Always prepare the receiving equipment prior to initiating the sending machine.
    (2) Once the receiving equipment has been properly set, then invoke the sending device.
    (3) Upon completion of receiving the RAM data it is necessary to perform a “Program Reset”.

Cable & Communications Specifications

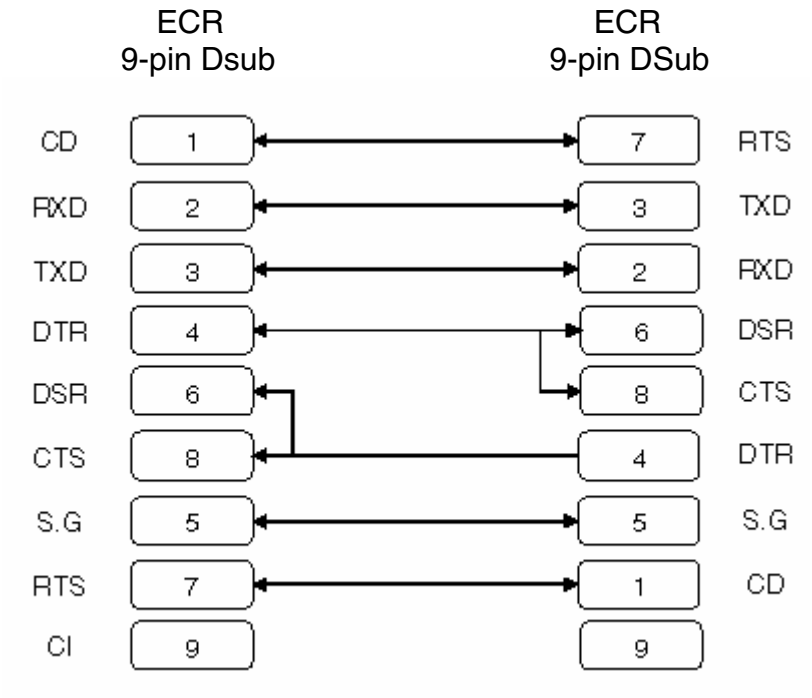
The below diagram represents the cable specification required when connecting the ER-A520 or ER-A530 model ECR to another same type ECR. The same cable is also used when connecting to a PC when the 02FD.exe program RAM Data Copy utility is used.

1. Specifications:

(1) Cable: 24-28AWG, Shielded, twisted-pair – (example: Belden no. 8134).
(2) Connector: D-sub 9 pin 9female type) connector.
(3) Baud Rates: 19200, 9600, 4800, 2400, 1200.

2. Pin Outs:

When connecting the ER-A520/ER-A530 to another ER-ER-A530 or PC, please refer to the diagram below for the connection pin out diagram.



Note: Pin #9 is not use

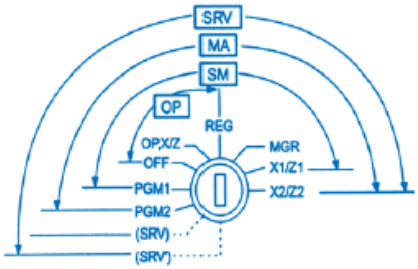
SD: Transmitted Data
RD: Received Data
DTR: Data Terminal Ready
DSR: Data Set Ready
RTS: Request to Send
DCD: Data Carrier Detector
CTS: Clear to Send
SG: Signal Ground

Program Reset Procedures

1. Program (SRV) Reset:

To perform a Program Reset, the SRV key (p/n: LKGiM7113RCZZ) must be used. Please refer to the mode switch positions when performing the below key sequence.

1) Insert the SRV key and rotate counterclockwise to the 6 o'clock position to the SRV' position.
   (Please note that the display goes out.)
2) Count for 5 seconds.
3) Rotate the SRV key clockwise to the SRV (7 o'clock) position.
   (Please note that the display becomes lit and ***Program Reset is printed on the journal printer.)***



Mode Switch Positions

<u>Failure to adhere to the above procedure may result in corrupt or broken RAM addressing.</u>

Section –2: ECR Data Sending/Receiving Settings

The following table shows the related SRV-Mode Job #'s available for the ER-A520 and ER-A530 model ECRs when the ECR Data Copy Function is used.

ECR Data Send/Receive		
Mode	**Job#**	**Description**
SRV-Mode	903-A	ECR Data Function Baud Rate
	996	Send ECR Data
	998	Receive ECR Data

Notes: Please note that the ECR Data Copy Function is dedicated to CH-1.
Please perform a Program Reset at the Receiving Machine when the data sending function has successfully completed.

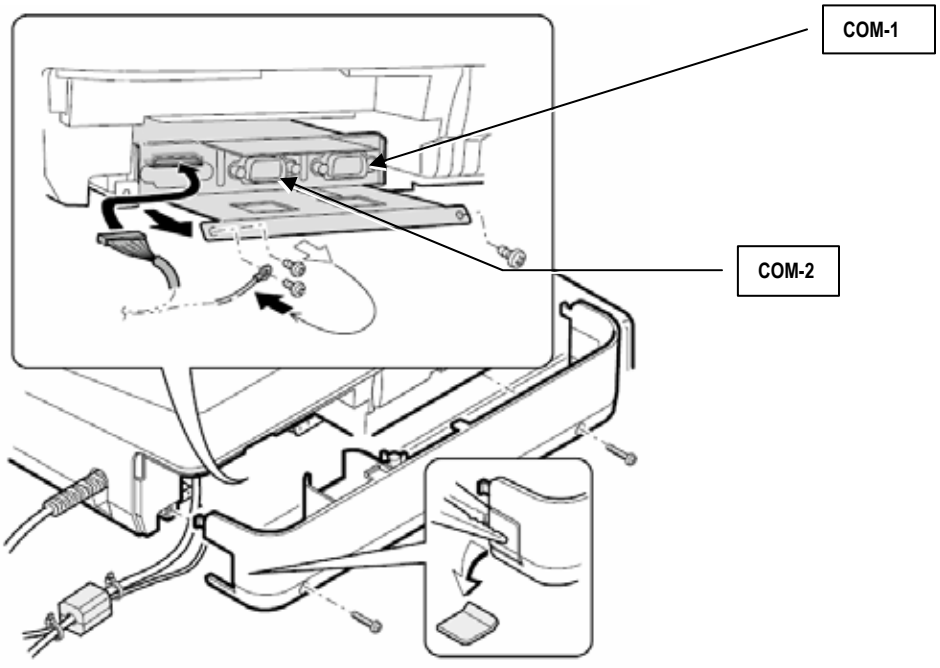
Function Sequence

To ensure successful operations please adhere to the following sequence:

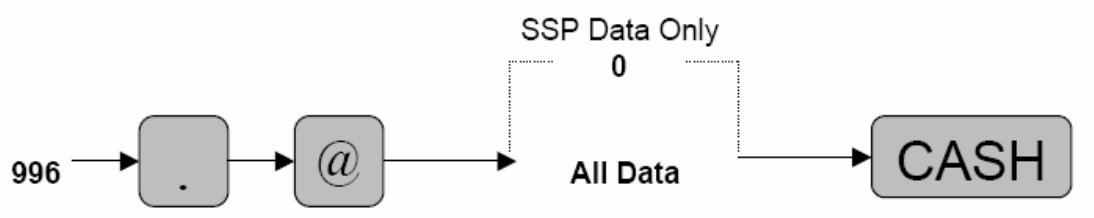
(1) Connect ECR-#1 (Sending) and ECR-#2 (Receiving) with the prescribed cable CH-2 to CH-2.
(2) At ECR-#2 (Receiving) enter the SRV Job# 998.
(3) At ECR-#1 (Sending) enter the SRV Job# 996
(4) Verify successful completion of the Data Copy function.
(5) Perform a Program Reset at ECR-#2 (Receiving) when finished.

Precautions:

- *Ensure that the receiving ECR model is the same as the sending model ECR.*
- *Ensure that the receiving ECR has the same or more memory than the sending ECR.*



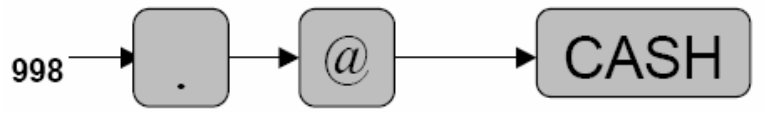
ECR Data Send - 996



Note: The speed which the data is sent is determined by the SRV Job #903-A setting.

MRS = 19200bps

ECR Data Receive - 998



Note: The speed which the data is received is determined by the SRV Job #903-A setting.

MRS = 19200bps

Quick Steps – ECR to ECR Data Copy

To quickly setup the ER-A520/ER-A530 to copy the RAM Data from one unit to another, please refer to the outlined procedure below:

No.	Description	Comments/Procedures
Step – 1	Connect each ECR	Channel 2 to Channel 2 Only
Step – 2	SRV Job#903	903→ [.] @ → 5000 [CA/AT] for 19200bps **Note:** MRS default is 5000 (19200)
Step – 3	Set the Receiving ECR SRV Job #998	998 → [.] @ → [CA/AT]
Step – 4	Set the Sending ECR SRV Job #996	996 → [.] @ → [CA/AT]
Step – 5	Verify Completion	Look at the Sending and Receiving ECR's Journal Tapes **Note:** Sending Unit will print [Send OK] Receiving Unit will print [Received OK]
Step – 6	Program Reset	Execute a Program Reset at the Receiving Unit

Precaution:

Ensure that the receiving ECR model is the same as the sending model ECR.

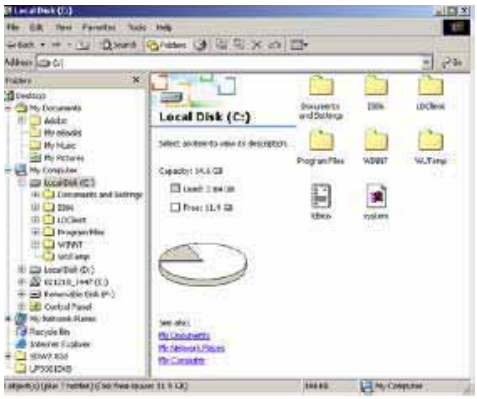
Section – 3: Preparing the PC – 02FD.exe

The 02FD.exe utility has been created to work within the Windows environment. This utility may be used when backing up or restoring the ER-A520/ER-A530 program data. The following procedures should be followed.

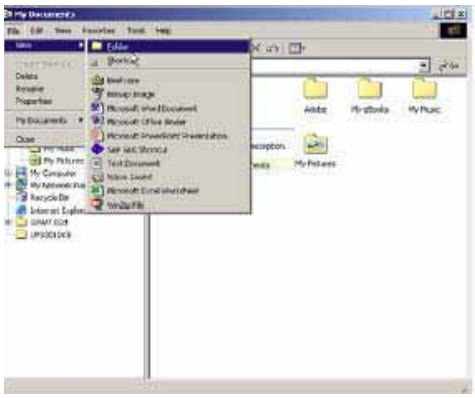
Step –1.Create the 02FD folder at the PC.

(1) Open the Windows Explorer Program.
(2) Under File, select NEW, then FOLDER.
(3) Label the folder as 02FD (Fig. 1).
(4) Create the additional Sub-folders it desired.

Example:
- Create a Sub folder named ER-A530DATA (Fig. 2).

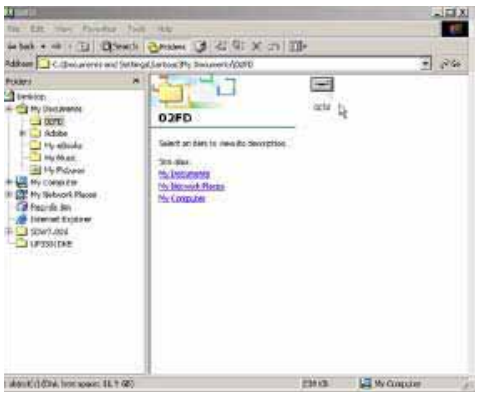


(Fig. 1)



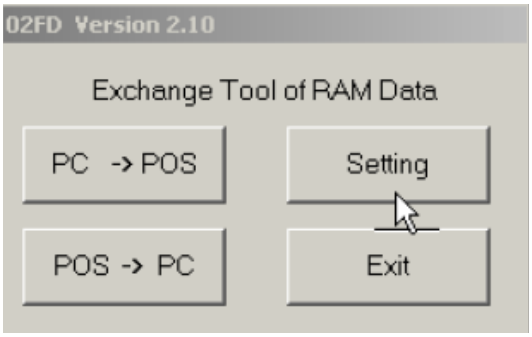
(Fig. 2)

Step –2.Copy the 02FD.exe file to the 02FD folder (Fig. 3).



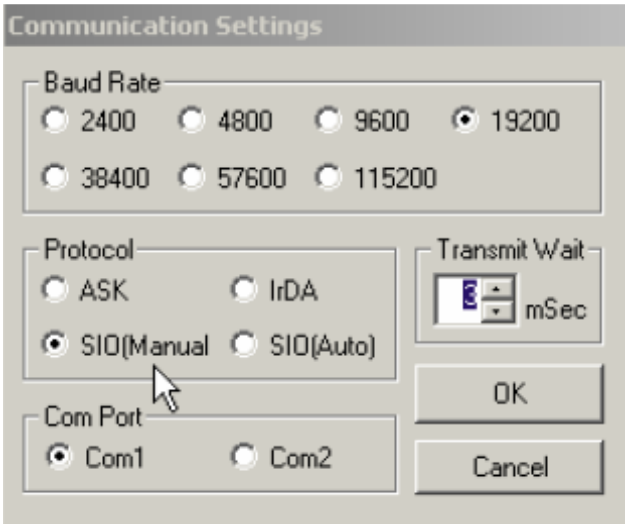
(Fig. 3)

Step – 3. At the PC, launch the 02FD.exe application. (1) Using the mouse, select the [SETTING] Button (Fig. 4).



(Fig. 4)

Step – 4. Under setting, select the required Baud Rate, Protocol and Communications port (see Fig. 5).



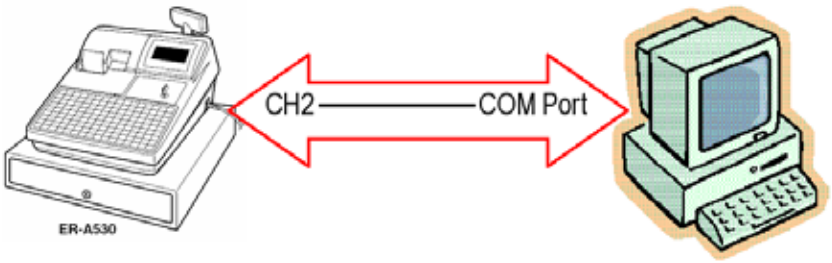
(Fig. 5)

Note: The maximum baud rate is 19200bps. For the Protocol setting, SIO (Manual) is the only eligible selection.

Step – 5. Select [OK] button to save the settings and return to the 02FD Main Menu.

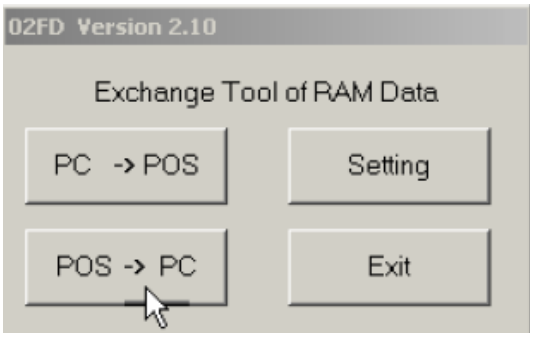
Section – 4: ECR to PC Sending

Step – 1.Connect the ER-A520/ER-A530 to the PC using the previously specified RS-232 cable.



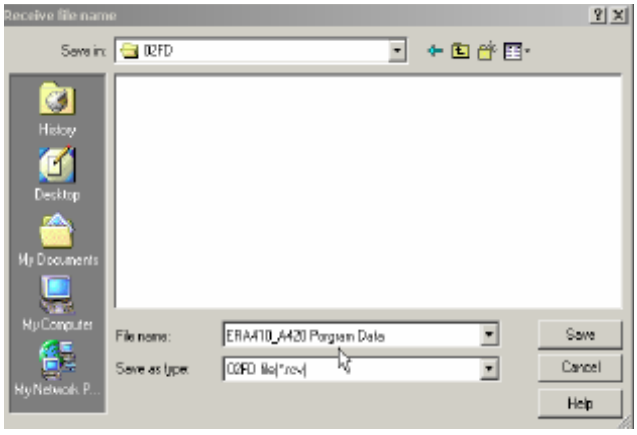
Note: The RS-232 cable from the PC **MUST** be connected to **Channel 2** of the ECR model.

Step –2. At the PC, select the [POS→PC] button (Fig. 6).



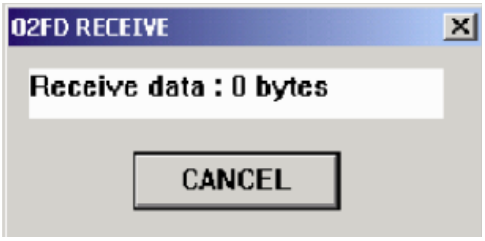
(Fig. 6)

Step – 3. Name the new program data to be saved (Fig. 7).



(Fig. 7)

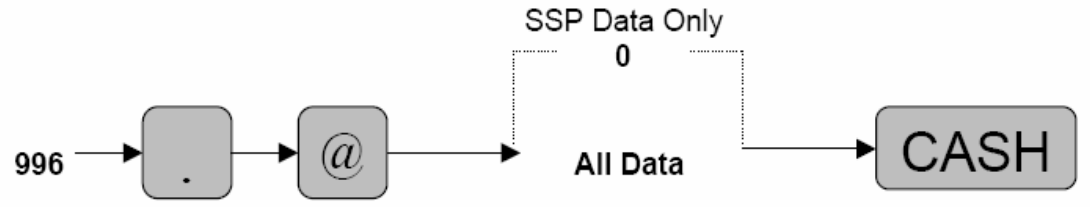
Step – 4.Click the [SAVE] button and the 02FD program will automatically begin the receive process (Fig. 8).



(Fig. 8)

Step – 5. Place the ECR in the SRV Mode position (7 o'clock position).

Step – 6. Enter the Send ECR Data key sequence.



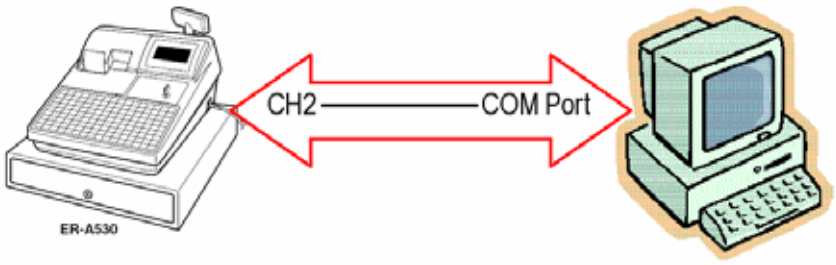
Step – 7. Verify the ECR Send Data was successfully completed by verifying the journal tape print message [SEND OK].

Section – 5: PC to ECR Receiving

Precaution:

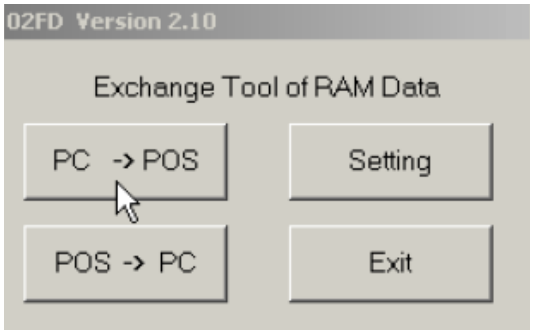
Ensure that the receiving ECR model is the same as the program data.

Step – 1.Connect the ER-A520/ER-A530 to the PC using the previously specified RS-232 cable.



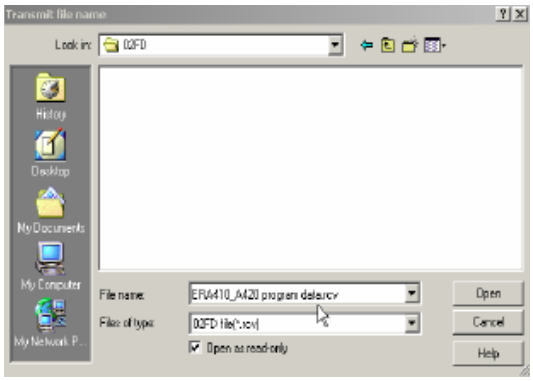
(Fig. 9)

Step – 2. At the PC, select [PC→POS] button (Fig. 10).



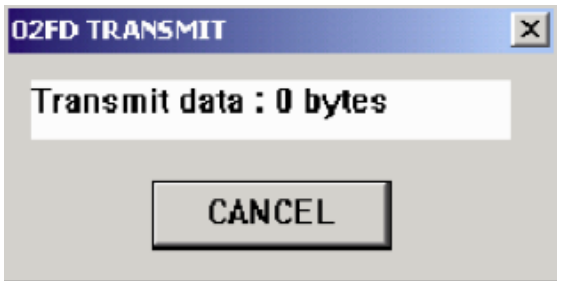
(Fig. 10)

Step – 3. Select the program data to be sent (Fig. 11).



(Fig. 11)

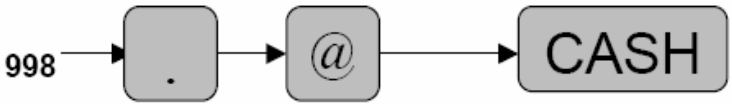
Step – 4. Click the [OPEN] button and the 02FD program will automatically begin the sending process (Fig. 12).



(Fig. 12)

Step – 5. Place the ECR in the SRV Mode position (7 o'clock position).

Step – 6. Enter the Receive ECR Data key sequence.



Step – 8. Verify the ECR Receive Data was successfully completed by verifying the journal tape print message [RECEIVE OK].

Section – 6: Error Codes

It is important to verify the successful completion of the RAM Data Copy function. However, in the event that the ER-A520/ER-A530 result is an error at initiating the RAM Data Copying function or during communications please refer to the ERROR CODES to determine the cause.

1. Display error codes.

   (Please refer to the next page.)

2. Correction procedures:

   Once the error code has resulted, then the following procedure is recommended:

   (1) Depress the [CL] key
   (2) Determined the cause of the problem
   (3) Correct the problem
   (4) Retry the procedure as before

6. Verification by Journal print.

   The successful communications message will be printed at the journal printer upon successful completion of communications.

   (1) Examples of successful messages:

```
12/30/2003  10:30AM    01
   000001    #0001
    #996      SEND OK
```

```
12/30/2003  10:30AM    01
   000001    #0001
```

   (2) Examples of error messages:

```
12/30/2003  10:45AM    01
   000001    #0001
 #996      COM. ERROR 08
```

```
12/30/2003  10:45AM    01
   000001    #0001
    #998      TIME OUT
```

Error Messages

After communications is terminated, one of the following messages is printed.

1. **SEND Operation**

(1) Normal termination of a “SEND” operation….
I #996 SEND OK I Job No. /Message

(2) Communication Error of a “SEND” operation…
I #996 COM ERROR 01 I Job No./Message/Error Code

(3) Time Out Error of a “SEND” operation…
I #996 TIME OUT I Job No. /Error Message

2. **RECEIVE Operation**

(1) Normal termination of a “RECEIVE” operation…
I #998 RECEIVE OK I Job No. /Message

(2) Communication Error of a “SEND” operation…
I #998 COM. ERROR 01 I Job No./Message/Error Code

(3) Data Error of a “SEND” operation…
I #998 DATA ERROR 15 I Job No./Message/Error Code

(4) Time Out Error of a “SEND” operation…
I #998 TIME OUT I Job No. /Error Message

3. **Error Codes**

01 = ID No. Error (ID No. in IDENQ is not correct)
02 = Parity Error
03 = Check Sum Error
04 = Data Size Error
05 = Hardware Error
06 = Power Off Error
07 = Time Out Error
08 = DSR Off Error
11 = Transmit Data Size Error
12 = Block Sequence Error (Irregular Sequence No. has been received)
13 = NAK Code Error (NAK code has been received)
15 = ECR Type Error (Models of the two ECRs are different

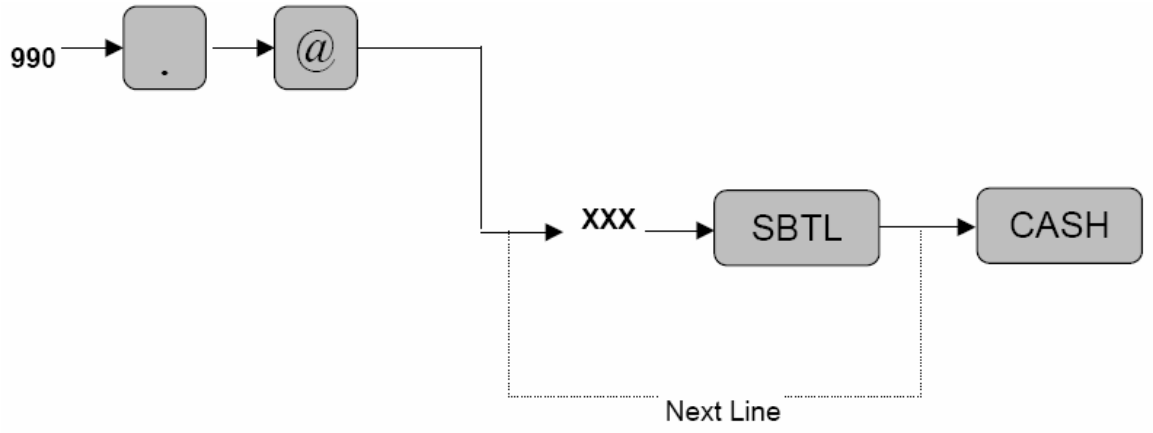
Note: All Error Messages are fixed

Section-9: SSP’s

SSP Data Entry

1. Procedures:

1) Place the SRV key to the SRV-Mode position
2) Enter the following sequence:



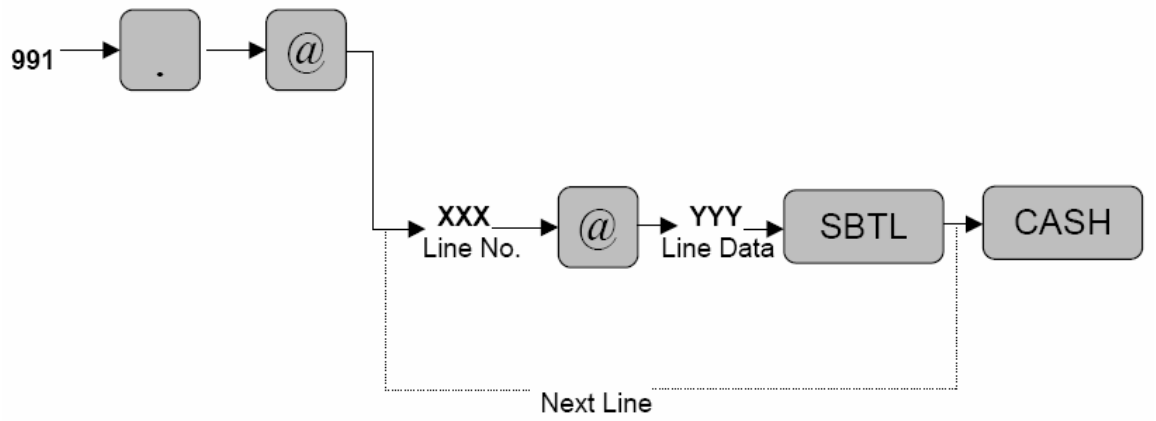
XXX: Line No. Data

MRS = None

Notes: The 1st Line No entered represents the SSP #.
The contents of the SSP Data entry are printed on the Receipt and Journal.
If a "CHECK SUM ERROR" message is printed after the depression of the [CASH] key, it will be necessary to review the contents against the provided bulletin and reenter the specific line no. data which is not been previously entered correctly by the following procedure outline for SRV Job#991 (next page).

IMPORTANT: A SERVICE RESET (Program Reset) is mandatory in order for the SSP data to take effect.

SSP Data Correction Entry



XXX: Line No.
YYY: Corrected Line Data

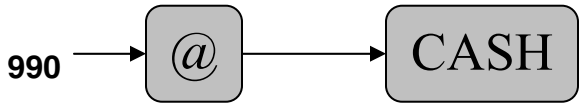
Notes: Enter each Line No. and the corrected data.
Once all lines have been corrected, depress the [CASH] key. Verify that the "CHECK SUM ERROR" message is not printed.

IMPORTANT: A SERVICE RESET (Program Reset) is mandatory in order for the SSP to take effect.

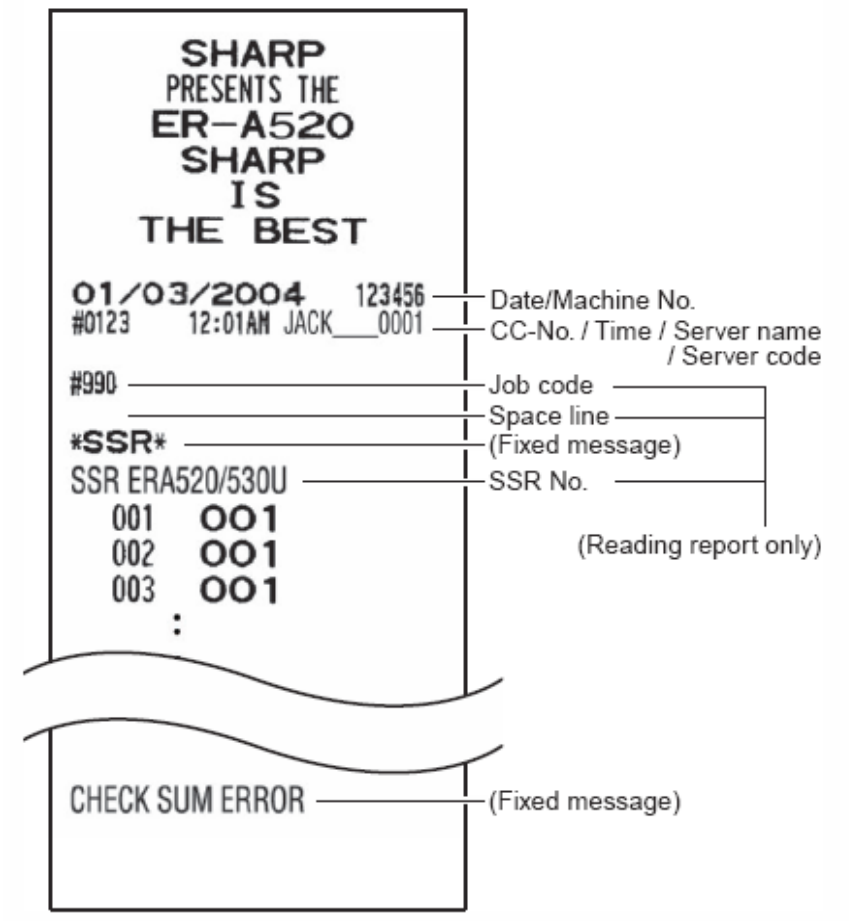
SSP Data Reading – SRV Mode

1. Procedures:

1) Place the SRV key to the SRV-Mode position
2) Enter the following sequence:



2. Print Out:



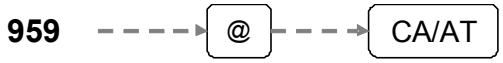
Notes

Section-10: FLASH ROM

The ROM level of the ER-A520 and ER-A530 may be determined in either of the following ways.

(1) In SRV mode, the ROM level may be printed upon making the key entry for the Flash ROM Test SRV job #130.

(2) In PGM2 mode, the ROM level may be printed upon making the key entry for executing the PGM2 job #959 reading.

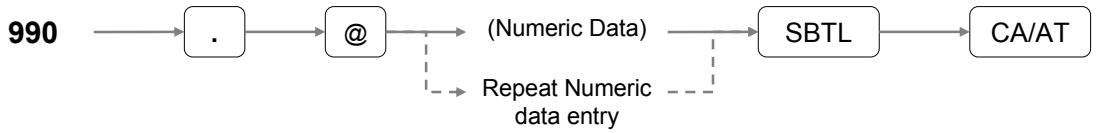


No.	Description of Symptom/Modification	Model	Version	SSP No.
1	The PLU item which is assigned "Condiment Compulsory" is printed in RED at the Kitchen Printer (TM-U200/U230) **Note:** This SSR also includes ERA520/530U-001	ER-A520 ER-A530	RAH1A RAH1B	SSR ERA520/530U-002
2	The key position is duplicated during the Free Key Assignment of [AUTO6] and [AUTO7] by SRV Job#950 which results in an incorrect assignment for the [AUTO6], [AUTO7] and [AUTO8] keys in JOB#2900.	ER-A520 ER-A530	RAH1A RAH1B	SSR ERA520/530U-001

Please refer to the applicable technical bulletin and/or service manual for the procedures to be followed for entering SSR data.

IMPORTANT
SSR ERA520/530U-001 MUST be deleted prior to entering the above SSR data entry

(Standalone)
In SRV mode, enter the SSP setting mode as follows:



SSR ER-A520/530U-002 – ROM version: RAH1A/RAH1B

Step	Data		Function	Step	Data		Function
1	002	→	SBTL	37	242	→	SBTL
2	160	→	SBTL	38	160	→	SBTL
3	241	→	SBTL	39	241	→	SBTL
4	106	→	SBTL	40	232	→	SBTL
5	102	→	SBTL	41	125	→	SBTL
6	242	→	SBTL	42	242	→	SBTL
7	000	→	SBTL	43	000	→	SBTL
8	154	→	SBTL	44	154	→	SBTL
9	029	→	SBTL	45	028	→	SBTL
10	150	→	SBTL	46	071	→	SBTL
11	174	→	SBTL	47	007	→	SBTL
12	136	→	SBTL	48	027	→	SBTL
13	157	→	SBTL	49	218	→	SBTL
14	048	→	SBTL	50	013	→	SBTL
15	049	→	SBTL	51	071	→	SBTL
16	218	→	SBTL	52	006	→	SBTL
17	55	→	SBTL	53	027	→	SBTL
18	070	→	SBTL	54	154	→	SBTL
19	067	→	SBTL	55	012	→	SBTL
20	218	→	SBTL	56	199	→	SBTL
21	005	→	SBTL	57	166	→	SBTL
22	070	→	SBTL	58	254	→	SBTL
23	068	→	SBTL	59	255	→	SBTL
24	154	→	SBTL	60	048	→	SBTL
25	047	→	SBTL	61	154	→	SBTL
26	248	→	SBTL	62	005	→	SBTL
27	032	→	SBTL	63	233	→	SBTL
28	007	→	SBTL	64	177	→	SBTL
29	196	→	SBTL	65	049	→	SBTL
30	026	→	SBTL	66	246	→	SBTL
31	182	→	SBTL	67	199	→	SBTL
32	003	→	SBTL	68	171	→	SBTL
33	034	→	SBTL	69	254	→	SBTL
34	204	→	SBTL	70	255	→	SBTL
35	146	→	SBTL	71	048	→	SBTL
36	102	→	SBTL	72	223	→	SBTL

(Continued on next page)

SSR ER-A520/530U-002 – (continued)

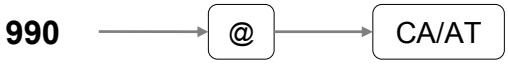
Step	Data		Function	Step	Data		Function
73	160	→	SBTL	110	232	→	SBTL
74	241	→	SBTL	111	128	→	SBTL
75	198	→	SBTL	112	204	→	SBTL
76	097	→	SBTL	113	240	→	SBTL
77	250	→	SBTL	114	180	→	SBTL
78	000	→	SBTL	115	176	→	SBTL
79	154	→	SBTL	116	049	→	SBTL
80	248	→	SBTL	117	091	→	SBTL
81	188	→	SBTL	118	098	→	SBTL
82	198	→	SBTL	119	250	→	SBTL
83	097	→	SBTL	120	000	→	SBTL
84	250	→	SBTL	121	182	→	SBTL
85	189	→	SBTL	122	003	→	SBTL
86	000	→	SBTL	123	034	→	SBTL
87	253	→	SBTL	124	204	→	SBTL
88	048	→	SBTL	125	000	→	SBTL
89	153	→	SBTL	126	253	→	SBTL
90	111	→	SBTL	127	048	→	SBTL
91	199	→	SBTL	128	239	→	SBTL
92	000	→	SBTL			→	CA/AT
93	176	→	SBTL				
94	131	→	SBTL				
95	188	→	SBTL				
96	143	→	SBTL				
97	253	→	SBTL				
98	048	→	SBTL				
99	176	→	SBTL				
100	049	→	SBTL				
101	205	→	SBTL				
102	142	→	SBTL				
103	098	→	SBTL				
104	250	→	SBTL				
105	240	→	SBTL				
106	182	→	SBTL				
107	176	→	SBTL				
108	049	→	SBTL				
109	099	→	SBTL				

Note: A PROGRAM RESET is mandatory after the SSR data entry for the modification to have an effect.

Additional SSP Setting Procedures:

1. SRV-Mode SSP Report Print

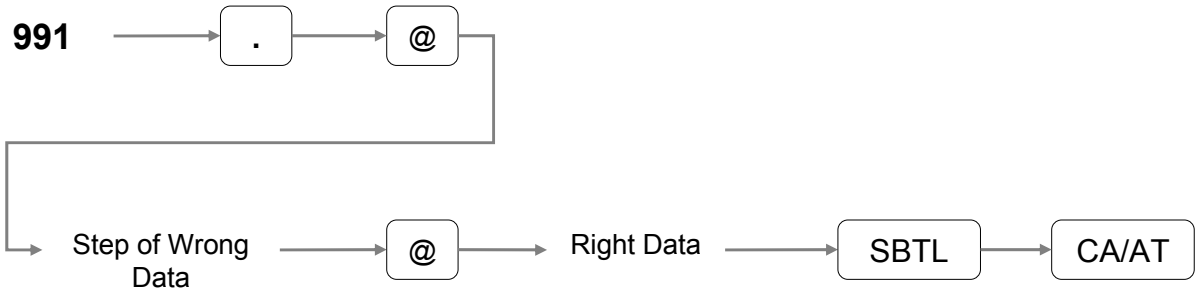
To print the contents of the SSP data follow the key sequence outlined below:



Important:
Compare the printed receipt with the technical bulletin when a "CHECKSUM ERROR" is printed upon depression of the [CA/AT] key

2. SRV-Mode SSP Error Correction

If there is an error you may correct the data by following the sequence outlined below:



Important:
Upon depression of the [CA/AT] key verify that the "CHECKSUM ERROR" is not printed. If so, then re-verify the data against what has been printed and once the wrong data is identified, repeat the error correction procedure

NOTE:
A PROGRAM RESET is mandatory after the SSP data entry for the modification to have an effect.

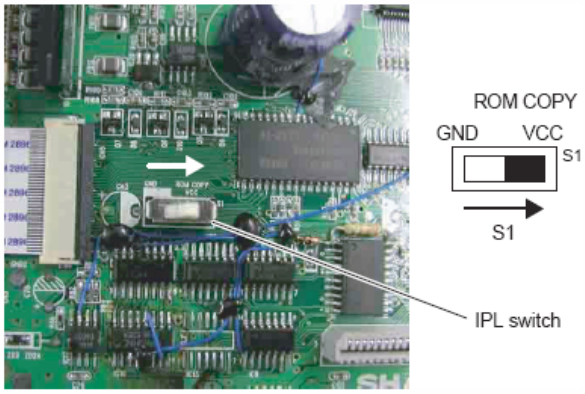
3. SRV-Mode SSP Deletion

In case it is necessary to delete all entered SSR data to correct wrongful data entered, please follow the procedure below:

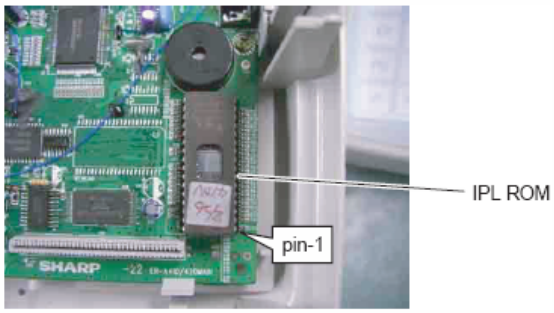
IPL from EPROM (Early Models)

Before installation, unplug the AC power cord from the AC outlet.

1. Open the top cabinet.
2. Set the IPL switch (S1) to the ROM COPY position.



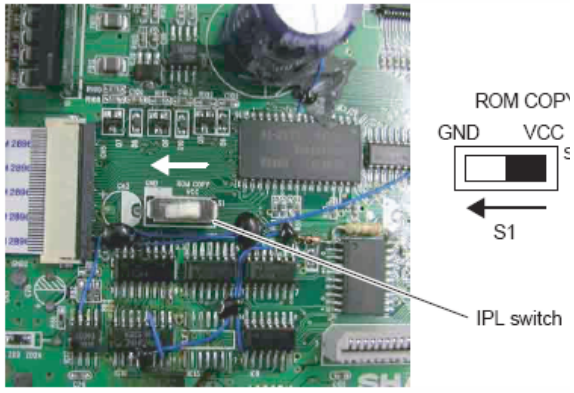
3. Install the IPL ROM in the IC socket of the MAIN PWB.



4. Turn the mode key switch to SRV' position, and insert the AC power cord into the AC outlet.
5. Turn the mode key switch to SRV position. The IPL procedure is started.

   When the procedure is completed, the message of "Completed" is shown.

6. Unplug the AC power cord from the AC outlet.
7. Remove the IPL ROM from to the IC socket of the MAIN PWB.
8. Set the IPL switch (S1) to GND position.



9. Replace the top cabinet.
10. Perform a master reset.

    Turn the mode key switch to the SRV' position, insert the AC pow cord into the AC outlet.
    While holding down the Journal feed key, turn the mode key fr the SRV position to the SRV' position.

IPL FUNCTION via RS232 Interface (Later Models)

This function is used to rewrite the Flash ROM program of the main PWB unit for the ER-A520/A530, where an existing program is written in the Flash ROM and is operating normally. That is, the product must be operating normally in order to use this function. If the product is not operating normally for some reason, this function cannot be used. If the Flash ROM itself is defective, replace it with one where the program has already been written. In this case, there is no need to use this function.

Required:

① POSTool3.exe (PC software for writing the ROM data).

② ROM data file (Example: A520U_1C.ROM).

③ RS232 crossover cable.

④ PC (OS: Windows 98SE, ME, 2000, XP).

⑤ ER-A520/A530 (where an existing program is already written and is operating normally).

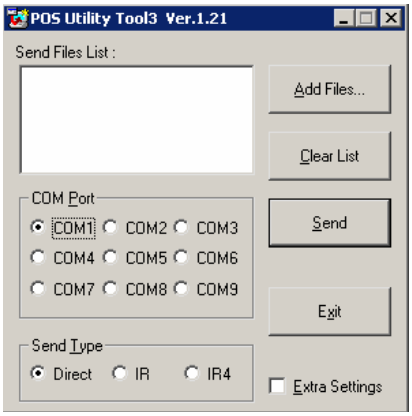
Procedures:

① Copy the POSTool3.exe file and the ROM data file to the desired folder on the PC to be used.

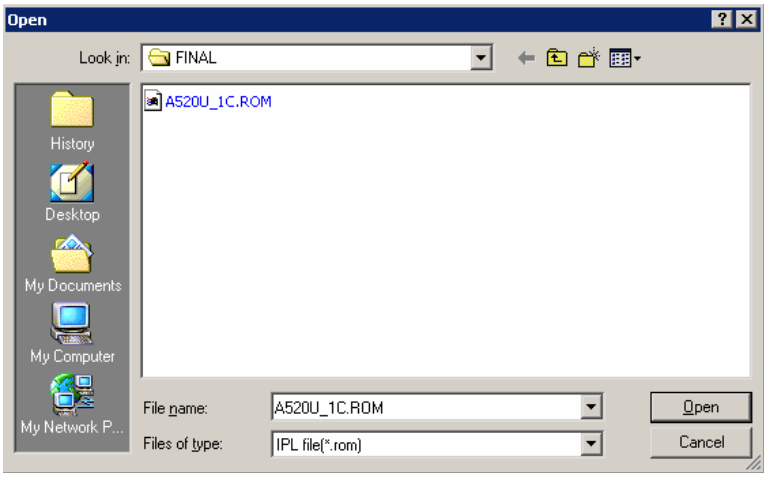
② Connect the COM port (RS232) of the PC and Channel 2 of the ERA520/A530 with the RS232 crossover cable.

③ Operations at the PC:

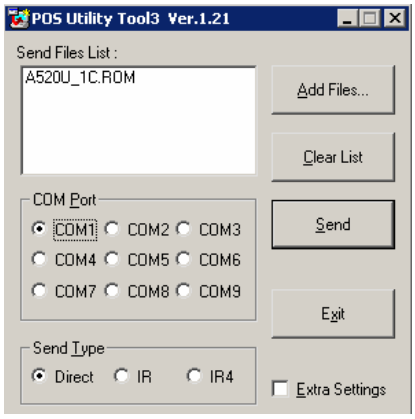
i. Start the application (click on POSTool3.exe).



ii. Click [Add files] and select ROM data (example: A520U_1C.ROM).



After selection, the screen below is displayed.



④ Operations at the ECR:

i. Set the MODE switch to the [SRV'] position.

ii. Turn on the power source of the ECR.

iii. Perform the operation depending on the model.

iv. Press and hold [↑/RECEIPT] key and [↑/JOURNAL] key and [PLU 1] key (the left end key) simultaneously, turn the MODE switch from [SRV'] to [SRV] position.

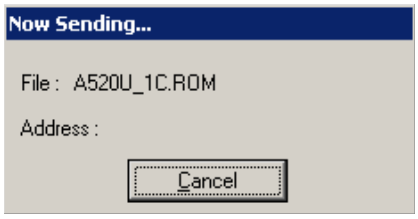
v. Press and hold [↑/RECEIPT] key and [↑/JOURNAL] key and [1] key (the left end key) simultaneously, turn the MODE switch from [SRV'] to [SRV] position.

Please note that in addition to holding down the [RECEIPT] and [JOURNAL] keys, the [REFUND] key will need to be held down on the ER-A520 model. The [PLU 1] key will need to be held down on the ER-A530 model.

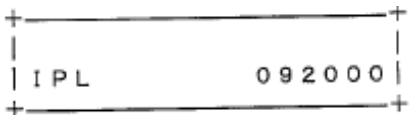
At that time, the ECR display as follows:

⑤ Operations on the PC:

i. Click [Send] and the ROM data is transferred.
When the ROM data is transferred, the following window appears.



⑥ Display on the ECR:
At that time, the ECR display as follows.



⑦ Operations on the PC:
"Complete" is displayed and the transfer window disappears.

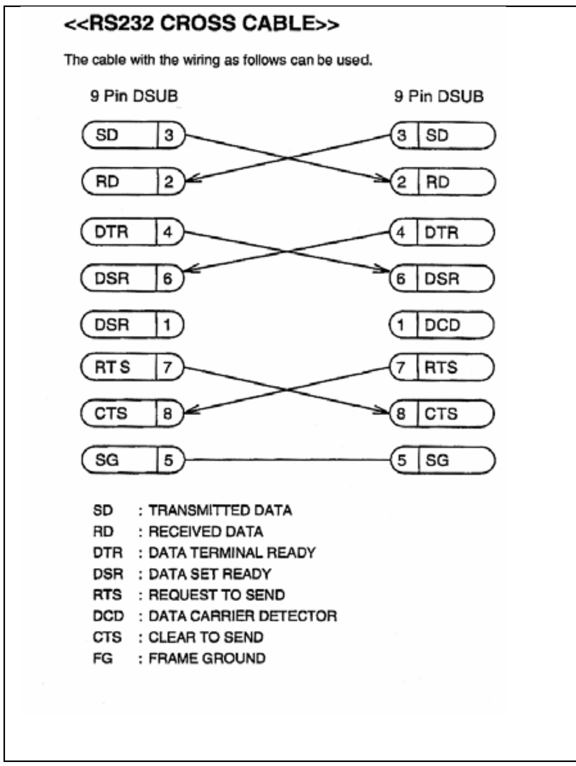
⑧ The operation is completed. (Sending time: 3 minutes 30 seconds.)

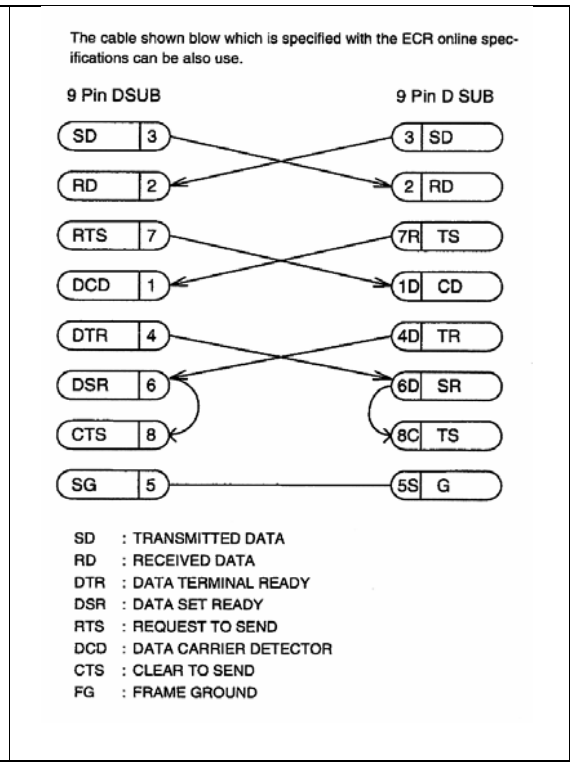
⑨ Display on the ECR:
At that time, if the ECR display as follows, it is OK.

```
+------------------------------+
|Completed.                    |
|IPL                    0FBC00 |
+------------------------------+
```

⑩ Operations on the ECR:

i. Turn OFF the power source of the ECR.
ii. Disconnect the RS232 crossover cable.
iii. Turn the MODE switch to [SRV'].
iv. Turn on the power source of the ECR.
v. Perform the master reset. (For the operating procedures, refer to the Service Manual.)
vi. Perform the ROM CHECK DIAG, and check to confirm that the operation is normally completed. (For the operating procedures, refer to the Service Manual.)
vii. All the procedures are completed with the above.





Section-11: LOGO UTILITY

Functions Overview

The ER-A520/530 model ECR provides support for loading image data that may be used as an graphics logo for the header or footer of a receipt. The data must meet the specifications defined within this document that will outline the attributes necessary for loading the image data.

1. Type of function supported:

   (1) Sending picture file (*.bmp or *.pcx) data to the ECR .....PC to ER-A520/ 530

2. Function Supported:

   (1) Changes the Image Logo for use on the ER-A520/530 on customer receipts and reports.

3. Format Specifications:

   (1) File format: *.PCXor*.BMP

   (2) Size: 360 dots (w) x 130 dots (h)

   (3) Color: Monochrome only (black & white)

Introduction

This document will help you utilize the graphics logo function of the ER-A520/530 model ECR. This documentation assumes that you are familiar with general PC and the Microsoft® Windows operating system as it relates to the settings for the desktop, communications ports, etc. Please read this introductory section carefully as it will provide helpful hints and recommendations that will make your time more efficient and produce time saving results.

Recommended Sequence for the ER-A520/530

1. Always install the necessary options (i.e. optional RAM, etc.) prior to programming.
2. Start your programming sessions by executing one of the Master Reset operations.
   (For detailed information about the MasterReset operations, please refer to the applicable Service Manual.)
3. Recommended order for programming:
   Please complete the SRV mode and PGM mode sections in the order outlined below:
   (1) Always back up your program prior to loading the Logo Image data into a customer's existing machine.
   (2) Set the applicable SRV parameters (SRV job #912).
   (The Logo image data replaces the ECR's "STAMP" image.)
   (3) Load the image data to be used as the Logo (header or footer).
   (4) Perform a Program Reset (SRV Reset).
   (5) Back up the NEW Program with the Logo Image.
   (6) Test system performance and reporting prior to installation.

Cable Specifications

The RS232 function is used to download the logo image to the ER-A520/530 from the PC. Your SIO function is dedicated to CHANNEL 2.

The below diagram represents the cable specifications required when connecting the ER-A520/530 to a PC when the Logo Image Data function is used.

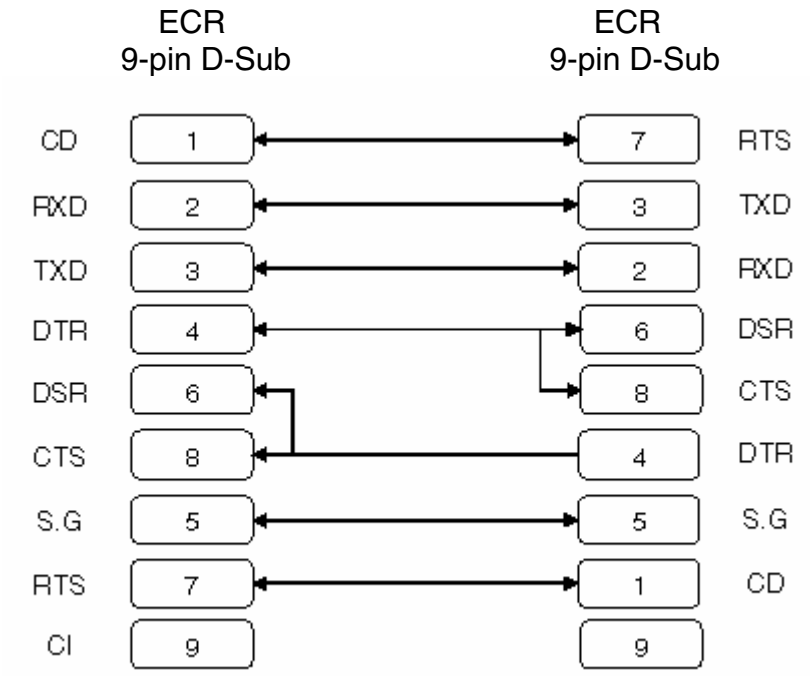
1. Specifications:

(1) Extension Cable: Shielded, twisted pair, 24 AWG

(2) Connectors: D Sub 9 pin (female type) connector

(3) Baud Rates: 38400

2. Pin Outs:



Note: Pin #9 is not use

SD: Transmitted Data
RD: Received Data
DTR: Data Terminal Ready
DSR: Data Set Ready
RTS: Request to Send
DCD: Data Carrier Detector
CTS: Clear to Send
SG: Signal Ground

Reset Procedures

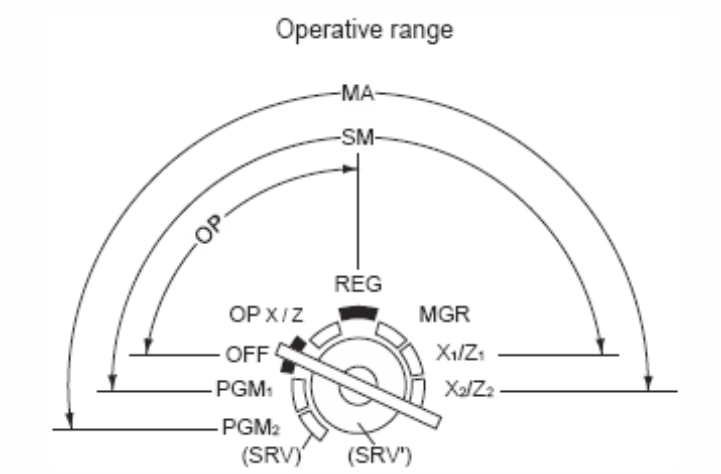
1. Program (SRV) Reset:

   To perform a Program Reset, the SRV key (p/n: LKGiM7113RCZZ) must be used. Please refer to the following diagram when performing the following key sequence.

   (1) Insert the SRV key and rotate it counterclockwise to the 6 o'clock position to the SRV position.
   (Please note that the display goes out.)

   (2) Count for 5 seconds.

   (3) Rotate the SRV key clockwise to the SRV (7 o'clock) position.
   (Please note that the display becomes lit and PRG. RESET is printed on the journal printer)



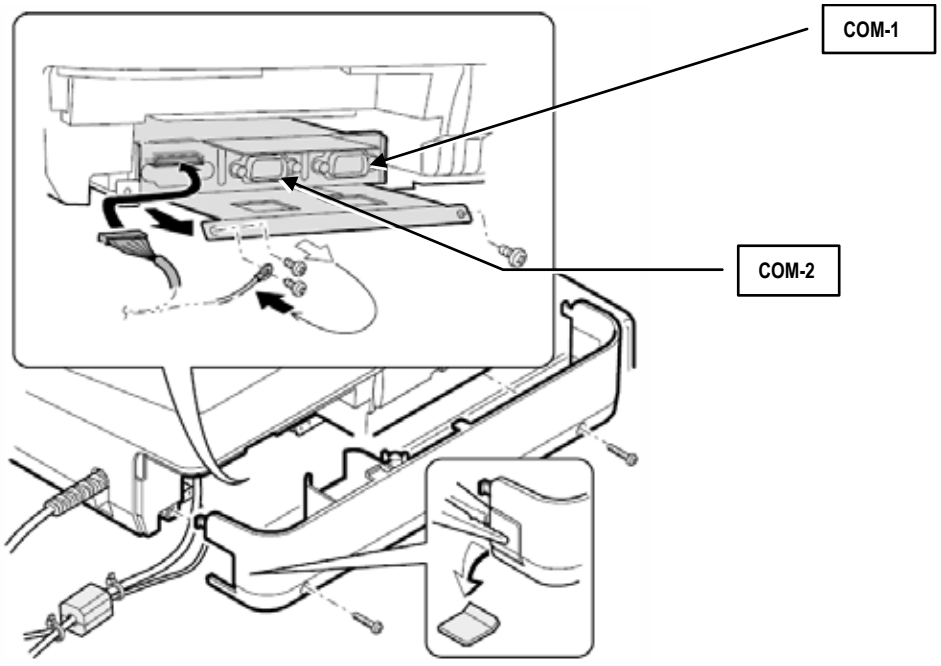
Failure to adhere to the above procedure may result in corrupt or broken RAM addressing.

Preparing the ER-A520/530

1. The ER-A520/530 SIO Function Connection:

   The Program Back Up/Restore (SIO) function has been fixed to port-2 (CH #2) of the ER-A520/530 as shown below.

   When using the SIO function, the connection for the cable is port-2 (CH-2).



2. SRV Mode Related Jobs:

The SRV mode presets related to the usage of the LogoLoader.exe are described within this section.

(1) SRV job #903: SIO Baud Rate is set in SRV mode 903 A as outlined below.

SRV Job #903			
Bit	**Description**	**Data**	**MRS Defaults**
	SIO Data Copy Baud Rate		
A	38400 19200 / 9600	6/5/4	5

	SUM of Selections ..^		8
B	---	4/0	
	Scale Entry Symbol is "Kg" / "Lb"	2/0	
	---	1/0	
	SUM of Selections .^		0
	---	4/0	
C	Tare EntryAllowed Yes/No	2/0	
	Unit of Weight for Scale Entries 1 ID + 3 DD (x.xxx) / 21D + 213DD (xx.xx)	1/0	
	SUM of Selections .^		0
D	Food Stamp System (related Tax Forgiveness) Tax Payable by FS Tend / Tax is not Payable / Tax is Forgiven No Food Stamps	3/2/1/0	
	SUM of Selections .^		0

Recommendation: Use 38400 bps – Job 903 “A” = 6

(2) SRV job #912: Header and Footer print is set in SRV mode 912 C&D as outlined below.

SRV Job #912			
Bit	**Description**	**Data**	**MRS Defaults**
	---	---	
A	Date Print Format: YYMMDD / DDMMYY/ MMDDYY	2/1/0	
	---	---	
	SUM of Selections ..^		0
	---	---	
B	---	---	
	Time System: 24-Hour System / 12-Hour System	1/0	
	SUM of Selections ..^		0
	After Transaction Receipt Format: Detailed / Summary	4/0	
C	Copy Receipt Function is Enabled: Yes / No	2/0	
	Footer Print Control: by Media Key Preset / All Receipts	1/0	
	SUM of Selections ..^		
D	Logo Message Control: 3-Line Header instead of Stamp (Logo) /Stamp(Logo) Only/ Stamp (Logo) & 3-Line Header / 6-Line Header instead of Stamp (Logo) / 3-Line Header instead of Stamp (Logo) & 3-Line Footer	0 / 1 / 2 / 3 / 5	6
	SUM of Selections .^		1

Preparing the PC Environment

The ER-A520/530 Logo Downloader Utility is provided as two separate files that are self-extracting and contain all the necessary elements for installation of the program.

1. Using Windows Explorer, create a temporary folder to copy the following files:
   (1) LogoLoader.cab
   (2) Setup.exe
   (3) Setup.lst
2. While in Explorer, double click each file and its contents will be extracted within the same folder.
3. To install the LOGO utility, locate the SETUP.exe and double click to initiate the installation process.
4. The installation files will be copied to the PC. (Fig. 1)
5. The installation process will begin when you click on the Installation Icon. (Fig. 3)
6. You will be prompted to select the desired directory to install the utility. (Fig. 4)

Recommendation: Use the default setup to avoid overwriting other Sharp Utilities.

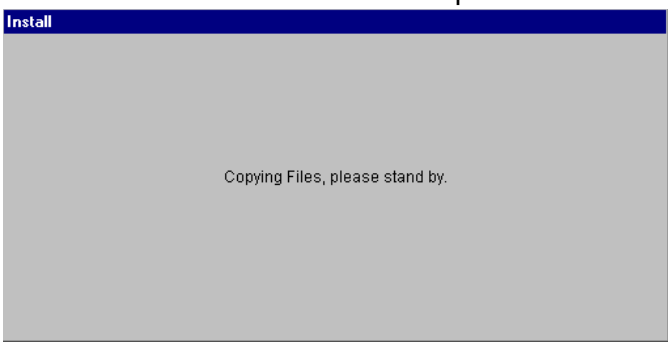


Figure 1

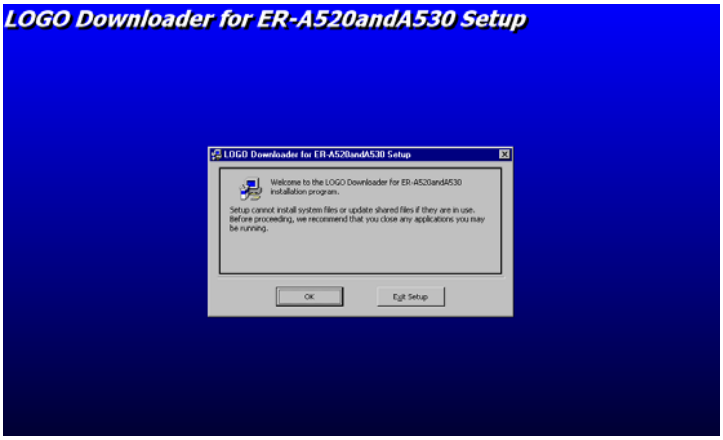


Figure 2

Figure 3

7. Select the Program Group where the utility will be referenced and then click [Continue]. (Fig. 5)
8. When the installation process has been successfully completed, click [OK] to exit to the installation program. (Fig. 6)
9. For easy reference to the application, you can rename and place the LogoLoader.exe shortcut onto your notebook or computer desktop.

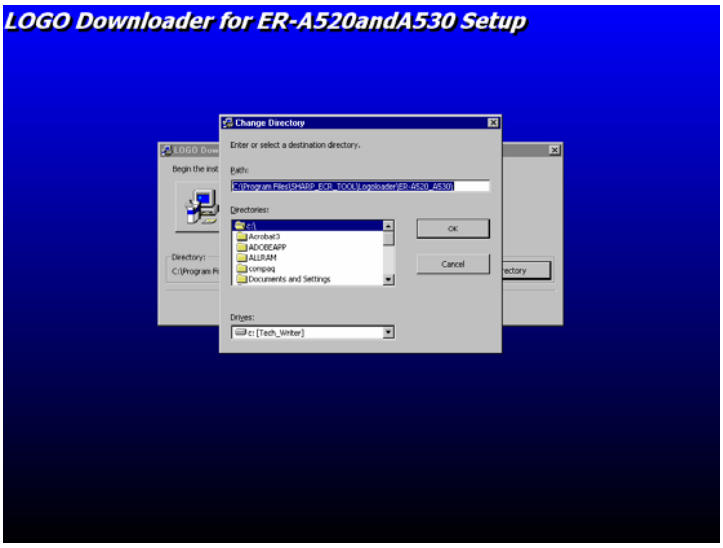


Figure 4

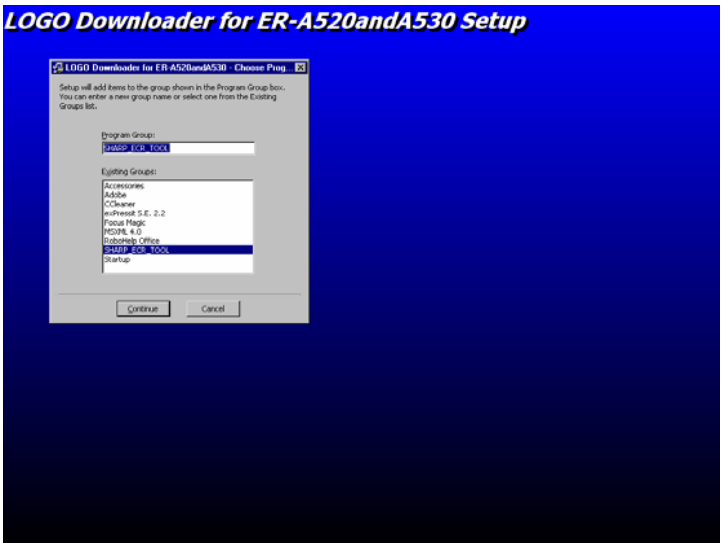


Figure 5

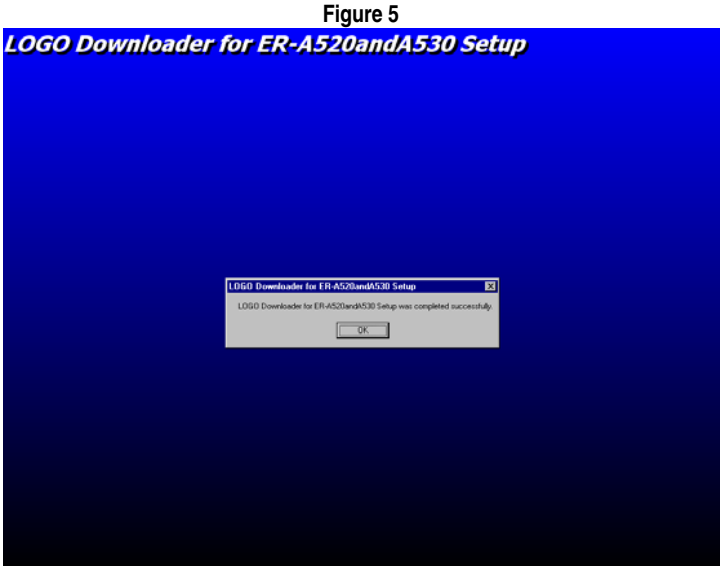


Figure 6

Creating a Logo Image

Prior to starting the Logo Downloader application it is recommended that you create and format the image data to be used by setting the attributes according to the previously mentioned specifications.

Format Specifications:

(1) File format: *.PCX or *.BMP

(2) Size: 360 dots (w) x 130 dots (h)

(3) Color: Monochrome only (black & white)

The *.bmp or *.pcx image data can easily be modified using PC based applications to the above specifications as shown in the illustration below (Fig. 7):

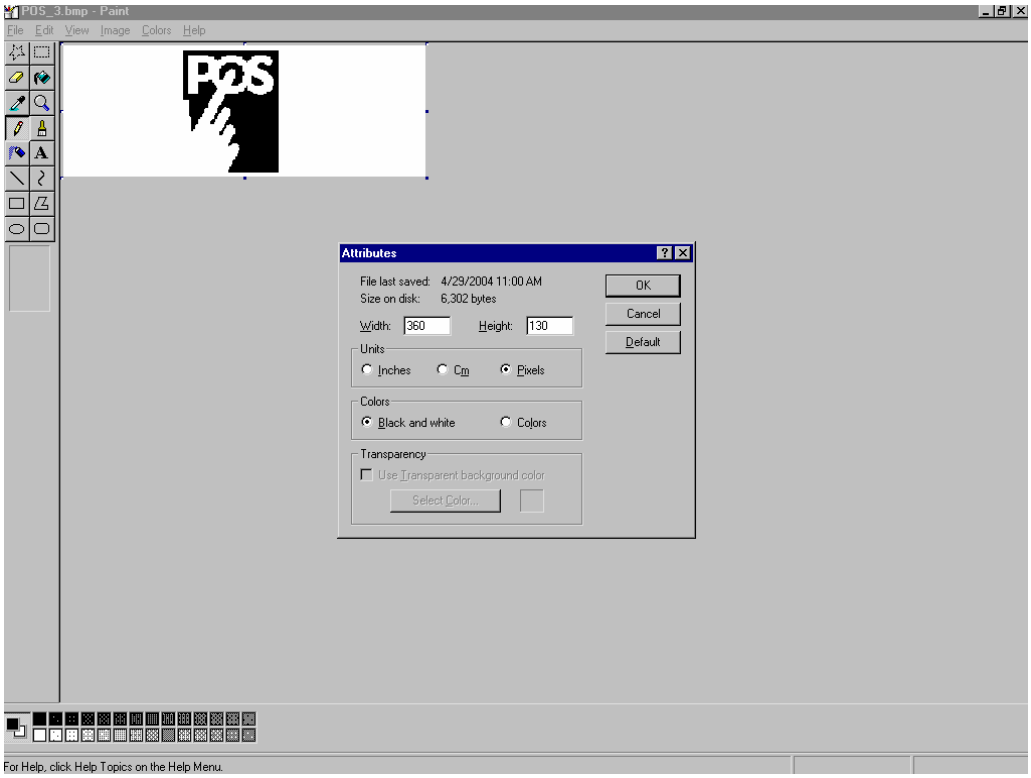


Figure 7

From PC to ER-A520/530

1. Connect the ER-A520/530 to the PC using the previously specified RS 232 cable.
2. From the Main Window, use the mouse pointer to select the desired function to be performed:
   1) Download Graphic to ECR.
   2) Change communication settings.

Figure 8

3. The Downloader will prompt you if you have an image file ready for transfer to the ER-A520/530. Click [Continue] if you have a file that has been prepared. (Fig. 9)

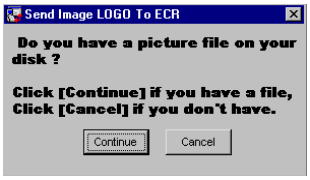


Figure 9

4. Navigate to the applicable folder where the image is stored and select the image. Click the [Open] button to continue. (Fig. 10)

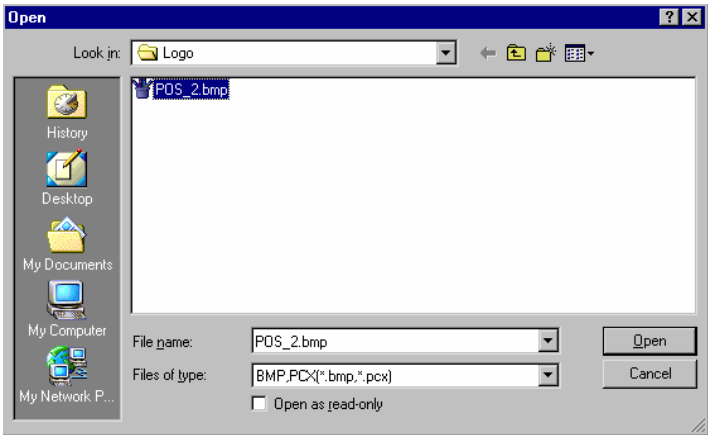


Figure 10

5. Once selected, if the image data complies with the specifications, the image will be displayed.

6. If the image is the valid, then click the [Send] button to initiate sending the image to the ER-A520/530. (Fig. 11)

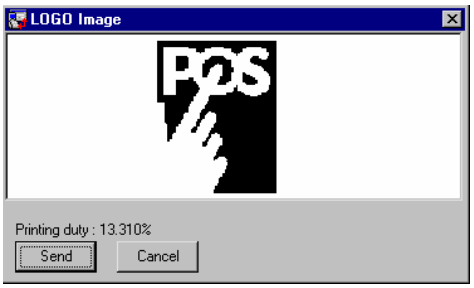


Figure 11

7. Click the [Yes] button to send the image to the header or the [No] button to send the image to the footer.

8. Upon successful completion of the image data transfer, please perform a Program (SRV) Reset as outlined on pg. 251.

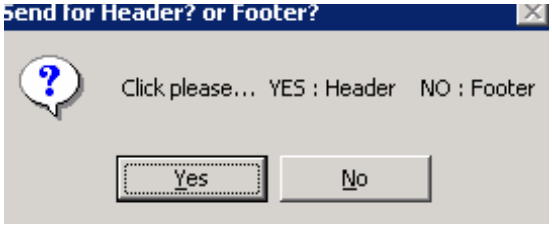


Figure 12

9. To verify the communications settings, click the *Change detail communication settings* option from the Main window. The *Communication Settings* menu will automatically appear to verify the settings.

   (1) Select the required Baud Rate, Duplex type, and Communications port for the PC that would match the ER-A520/530 settings. Click [OK] to return to the Main window. (Fig. 13)

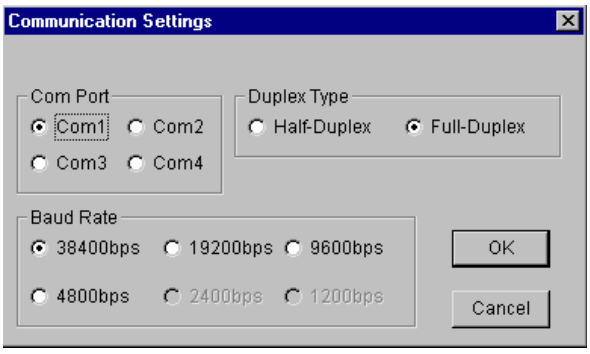


Figure 13

Error Descriptions

Although the LogoLoader PC utility is simple to execute, there are two places during usage of this utility where you may encounter errors.

(1) While opening an image data file that does not meet the specifications during transfer or conversion operations.

(2) During communications if the communications encounters problems for some reason.

1. Error Display when the image data does not meet specifications. (Fig. 14)

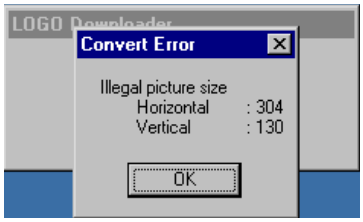


Figure 14

2. The following Communications error could result which are related to the ER-A520/530's SIO communications function.

Code	Description
01	COMMAND ERROR
02	PARITY ERROR
03	CHECKSUM ERROR
04	DATA SIZE ERROR
05	HARDWARE ERROR
06	POWER OFF ERROR (Power off during communication)
07	TIME OUT ERROR
08	DSR OFF ERROR (PC's DTR signal is "OFF")
11	TRANSMIT DATA SIZE ERROR
12	BLOCKSEQUENCEERROR
13	:NAKERROR
15	MACHINE TYPE ERROR (The different model's data is received.)

Note:

The above error codes are printed on the ER-A520/530's printer on the journal side.

Quick Start Procedures

For a quick reference procedure for using the LogoLoader utility with the ER-A520/530, please use the sequential steps outlined in the chart below.

Step	PC Side	Step	ER-A520/530 Side
1	Connect the PC to the ER-A520/530 (CH-2).	2	Set SRV Job #912-D: 1, 2, or 5" PGM2 Mode Set Job #2690 2690 . @ 1 @ 1000 SBTL CASH for CH-1 2690 . @ 1 @ 2000 SBTL CASH for CH-2 Baud Rate Setting - Job #6112 6112 . @ 7 CASH
3	Launch the LogoLoader.exe at the PC.		
4	Select the option to change the communication details; specify: Baud Rate: 38,400 Full-Duplex Com Port: based on your PC configuration Click [OK]		
6	From the Main window, choose the option to send the graphic logo. Select the previously created logo image and click [Open].		
7	View the image to verify that it is the correct one and click [Send].		
8	You must make the Send to Header or Footer selection, but go to the ER-A520/530 prior to clicking [Yes] or [No].	9	At the ER-A520/530, place the key to the REG position.
10	Click [Yes] or [No]. The PC will display the Communication Status to indicate the progress of the transmission.	11	The ER-A520/530 will displayCC2 while communications is in session.
		12	Perform the PGM (SRV) Reset