



MODEL UP-600/700

Dealer Knowledge Book

Version 2.0

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NOTICE TO USERS

This manual is intended to assist authorized Sharp dealers, with learning and understanding how to the install the UP-600/700. This documentation assumes that you are familiar with the general programming concepts of SHARP POS/ECR systems. 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: Overview

SRV-mode programming consists of service programming jobs, which define the UP-600/700 system capabilities. The service program settings may be printed on the RECEIPT/JOURNAL printer or displayed on the operator display.

1. SRV-mode Program Main Menu:

SRV-mode Program Main Menu:	
Main Menu	Description
1 READING	Print or view system preset, device configuration, free key, file, and SSP settings.
2 SETTING	Program device configuration, system preset, Z counter, GT, mode secret #, free key, file, supervisor, memory initial, SSP settings or perform backup send and backup receive operations.
3 IRC SETTING	Program satellite, master, and backup master, standalone with IRC and stand alone terminal settings or perform an IRC reset.
4 DOWN LOAD	In an IRC system, transfer SRV parameters (system presets) and free key program settings from a master terminal to all or an individual satellite terminal on the existing IRC network.
5 DIAGNOSTIC	Perform product&test, ram&rom&ssp, lock&key&switch, serial I/O, display&printer, mcr&drawer, TCP/IP diagnostic testing. Please refer to the Service Manual for requirements and possible results.

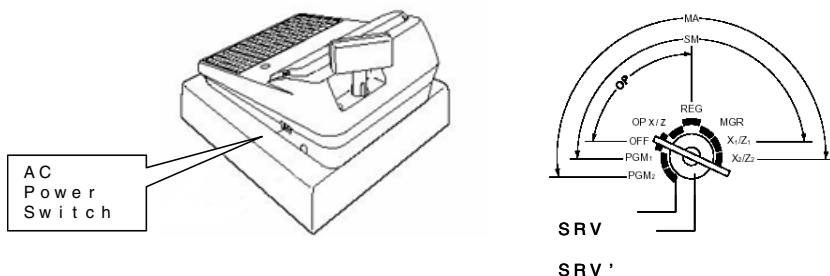
For more information on SRV Mode programming please see the Service Programming Manual.

2. Entering the SRV-Mode

To enter SRV-mode programming, you must turn the SRV key counter clock wise to the 6 o'clock position wait five seconds and turn the SRV key to the 7 o'clock position.

Procedure:

- ① Turn the AC Power Switch “OFF”
- ② Set the mode switch to (SRV') position
- ③ Turn on the AC Power Switch “ON”
- ④ Turn to the (SRV) position from (SRV') position



The SRV-mode Main Menu will appear:

CAUTION: Never place the Service key to the SRV' or SRV position while AC power is applied – severe damage may result to the RAM and program contents.

3. SRV-mode Program Jobs:

Please refer to the charts below for the available programming options:

NOTE: To use the job number you must be at the SRV Main Menu.

SRV-mode Main Menu:	
Main Menu	Description
1 READING	Reading
2 SETTING	Setting
3 IRC SETTING	IRC Setting
4 DOWNLOAD	Download
5 DIAGNOSTIC	Device Configuration (Assignment)

SRV-mode READING Jobs:	
Job No.	Description
900	System Presets
945	Device Configuration
950	Free Key – Function keys
970	File - Memory Allocation
990	SSP - Special Service Patches

NOTE: To use the job number you must be at the SRV Main Menu or PGM2 Main Menu.

SRV-mode SETTING Jobs:	
Job No.	Description
945	Device Configuration - R/J, Bill(Slip), Report Printer(X,Z), Validation, KP1-9, CAT1-2, Pin Pad, Scanner, Scale, Coin Disp, Online (PC), CVM Data I/F, Prepaid Card, ONL Acct Bal
901 - 981	System Preset
930 - 941	Z-Counters - Trans. Z1/Z2, Cons. Tran Z1/Z2, Server Z1/Z2, Hourly Z1, PLU/UPC Z1/Z2, GLU Z1, Trans Z2, Cons. Tran. Z2, Daily Net Z2 Department Z1/Z2
942, 943, 969	GT – positive, negative, training
944	Mode Secret# - OP XZ, X1, Z1, X2, Z2, PGM1 and PGM2
950	Free Key – Function keys
(n/a)	Key Initial – returns the keyboard to master reset settings
971	File – memory allocation
985	Supervisor mode On/Off
989	Memory Initial - returns the all totals and counters to zero
990	Special Service Patch
996	Backup Send
998	Backup Receive

SRV-mode IRC SETTING Jobs:	
Job No.	Description
920, PGM 3610, 3611, 3616	Terminal Setting
899, PGM 4900	IRC Reset – Available for Master, Back Up Master, and Satellite terminals only.

SRV-mode DOWN LOAD Jobs:		Available for Master Terminals Only
Job No.	Description	
800	SRV Parameter	
850	Free Key	

SRV-mode DIAGNOSTIC Menu:		See Service Manual for Requirements
Diagnostic	Description	
PRODUCT&TEST DIAG	PWB diag, SETdiag, EMI test, Temperature Test, Scanner Test	
RAM&TOM&SSP DIAG	Standand RAM Check, UP-S02MB and UP-S04MB Check , Standard and Service ROM Check, SSP Check	
CLOCK&KEY&SWITCH	Date & Time, Key Code, Clerk Code, Mode Switch	
SERIAL I/O RS232 I/F DIAG	Requires loop back connector CH1-CH8 Check	
DISPLAY&PRINTER	LCD, popup, pole, printer check, printer cg, PES&NES sensor and A/D Converter check	
MCR&DRAWER	MCR, Drawer 1 and 2 check	
TCP/IP	Self, Loopback (requires loop back connector), MAC ADDR&FIRM Read and Write, Data Trans (MA) and (SA)	

Section-2: Prior to Beginning

Executing a master reset will initialize the UP-600/700 POS terminal. The following three types of Program and Master Reset operations are available.

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 UP-600/700 “fixed keys”
Master Reset-3	Is the same as a Master Reset-2 and requires the entry of a serial number – also prohibiting the reset of the GT totalizers

Definition of Reset-switch

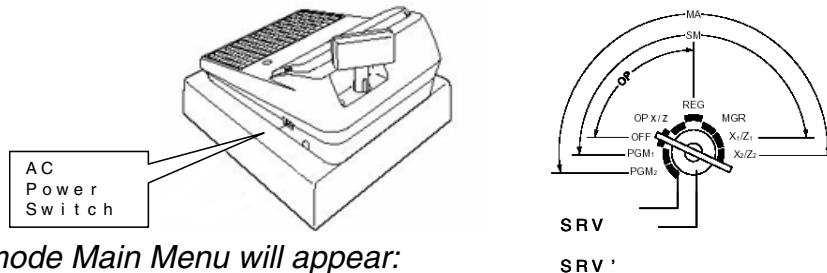
ON position : this position places the CKDC at the “reset” state (Reset status)
 OFF position : this position places the CKDC to the “active” state (Normal status)

1. Program Reset:

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

Procedure:

- Turn the AC Power Switch “OFF”
- Set the mode switch to (SRV’) position
- Turn on the AC Power Switch “ON”.
- Turn to the (SRV) position from (SRV’) position.



The SRV-mode Main Menu will appear:

CAUTION:

Never place the Service key to the SRV’ or SRV position while AC power is applied – severe damage may result to the RAM and program contents.

Note: When disassembling and reassembling always power up using method 1 only. Method 2 will not reset the CKDC9.

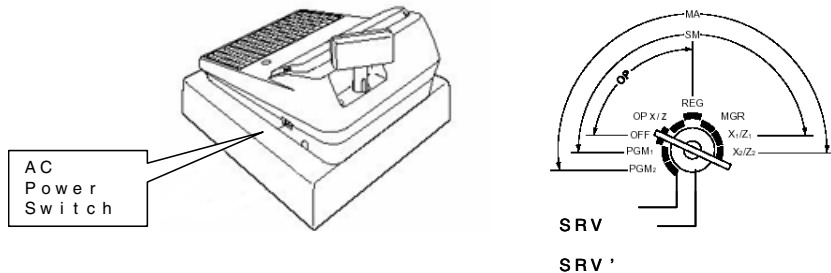
Note: SRV programming job#926-B must be set to “4” to allow the PGM program loop reset.

2. Master Resets:

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

Master Reset-1 Procedure:

- ① Turn the AC Power Switch "OFF"
- ② Set the MODE switch to the (SRV') position.
- ③ Turn on the AC switch "ON".
- ④ While holding down the JOURNAL FEED key, turn to the (SRV) position from the (SRV') position.



Display

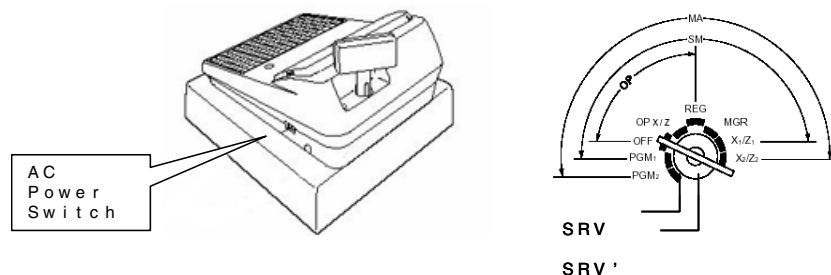
*****MRS.*****

The Master Reset Operation will begin and is finalized upon "3" audible beeps.

The SRV-mode Main Menu will appear:

Master Reset-2 Procedure:

- ① Turn the AC Power Switch "OFF"
- ② Set the MODE switch to the (SRV') position.
- ③ Turn on the AC switch "ON".
- ④ While holding down the JOURNAL FEED key, and RECEIPT FEED keys, turn to the (SRV) position from the (SRV') position.



CAUTION:

Never place the Service key to the SRV' or SRV position while AC power is applied – severe damage may result to the RAM and program contents.

⑤ Key position assignment.

Enter the keys on the key board [0]- [9], [00], [.] [CL], [@/FOR], [SBTL], [UP], [DOWN], [LEFT], [RIGHT], [CANCEL] [ENTER], [CA/AT].

Key No.	Key Name	Key No.	Key Name	Key No.	Key Name
001	"0"	11	"00" Key	021	"ENTER" key
002	"1"	12	Decimal Point "." Key	022	"CA/AT" key
003	"2"	13	"CL" Key		
004	"3"	14	"(@/FOR)" key		
005	"4"	15	"SBTL" key		
006	"5"	16	UP "↑"		
007	"6"	17	DOWN "↓"		
008	"7"	18	LEFT "←"		
009	"8"	19	RIGHT "→"		
010	"9"	20	"CANCEL" key		

- ① When the 0 key is pressed, the key of the key number displayed is disabled.
- ② Push the key on the keyboard to be assigned. With this, the function key of the key number displayed is assigned to that key position.
- ③ When relocating the keyboard, the PGM 1/2 mode uses the standard key layout. Turn on the AC switch "ON".

DISPLAY

*****MRS.*****

The Master Reset Operation will begin and is finalized upon "3" audible beeps.

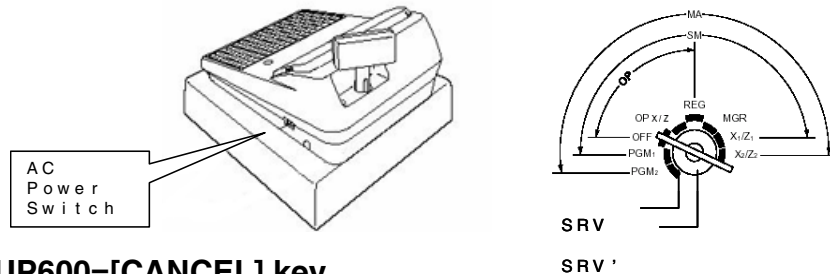
Note: After the execution of the MRS-2, only the RECEIPT FEED and JOURNAL FEED keys remain effective on the key assignment. Any key can be assigned to any key position on the main keyboard.

CAUTION:

Never place the Service key to the SRV' or SRV position while AC power is applied – severe damage may result to the RAM and program contents.

Master Reset-3 Procedure:

- ① Turn the AC Power Switch “OFF”
- ② Set the MODE switch to the (SRV’) position.
- ③ Turn on the AC switch “ON”.
- ④ While holding down the JOURNAL FEED key, and the MRS-3 key, turn to the (SRV) position from the (SRV’) position.



MRS-3 key : UP600=[CANCEL] key

UP600 Master Reset Keyboard

Receipt	Journal	RCPT		CASH#	PLU/UPC		PRICE CHANGE		AMT	INO	FS SHIFT	AUTO 1
FUNC	CANCEL	PAGE UP		@/FOR	.	CL	DEPT 5	DEPT 10	DEPT 15	DEPT 20	FS TEND	AUTO 2
CONV#	↑	PAGE DOWN		7	8	9	DEPT 4	DEPT 9	DEPT 14	DEPT 19	NS	NEXT\$
←	↓	→		4	5	6	DEPT 3	DEPT 8	DEPT 13	DEPT 18	CHK#	CH#
TAX	TAX SHIFT	(ENTER)		1	2	3	DEPT 2	DEPT 7	DEPT 12	DEPT 17	MDSE	SBTL
RFND	VOID			0	0		DEPT 1	DEPT 6	DEPT 11	DEPT 16	CA/AT	

MRS-3 key : UP700=[PLU72]key

UP700 Master Reset Keyboard

Receipt	Journal	P 87	P 88	P 89	P 90	P 91	P 92	P 93	P 94	P 95	P 96	P 97	P 98	P 99	P 100
P 71	P 72	P 73	P 74	P 75	P 76	P 77	P 78	P 79	P 80	P 81	P 82	P 83	P 84	P 85	P 86
P 58	P 59	P 60	P 61	P 62	P 63	P 64	P 65	P 66	P 67	P 68	P 69	P 70	M FUNC	AUTO	NC
P 48	P 49	P 50	P 51	P 52	P 53	P 54	P 55	P 56	P 57	RCPT	VOID	RFND	CANCEL	LEVEL #	CONV
P 38	P 39	P 40	P 41	P 42	P 43	P 44	P 45	P 46	P 47	SRV #	@/FOR	.	CL	P SHIFT	TAX 1
P 28	P 29	P 30	P 31	P 32	P 33	P 34	P 35	P 36	P 37	DOWN	7	8	9	PLU	PBAL
P 18	P 19	P 20	P 21	P 22	P 23	P 24	P 25	P 26	P 27	DOWN	4	5	6	CHK	SRVC
P 9	P 10	P 11	P 12	P 13	P 14	P 15	P 16	P 17	UP	ENTER	1	2	3	CHG	FINAL
P 1	P 2	P 3	P 4	P 5	P 6	P 7	P 8	LEFT	DOWN	RIGHT	0	00	000	SBTL	CA/AT

- ⑤ The product serial No. input window is displayed as shown below

Display: SERIAL No. 0000000

- ⑥ Enter the product serial number of this POS and depress the [CA/AT] key.

⑦ Key position assignment.

Enter the keys on the key board [0]- [9], [00], [.] [CL], [@/FOR], [SBTL], [UP], [DOWN], [LEFT], [RIGHT], [CANCEL] [ENTER], [CA/AT].

Key No.	Key Name	Key No.	Key Name	Key No.	Key Name
001	"0"	11	"00" Key	021	"ENTER" key
002	"1"	12	Decimal Point "." Key	022	"CA/AT" key
003	"2"	13	"CL" Key		
004	"3"	14	"(@/FOR)" key		
005	"4"	15	"SBTL" key		
006	"5"	16	UP "↑"		
007	"6"	17	DOWN "↓"		
008	"7"	18	LEFT "←"		
009	"8"	19	RIGHT "→"		
010	"9"	20	"CANCEL" key		

- ① When the 0 key is pressed, the key of the key number displayed is disabled.
- ② Push the key on the keyboard to be assigned. With this, the function key of the key number displayed is assigned to that key position.
- ③ When relocating the keyboard, the PGM1 or PGM2 mode uses the standard key layout.
- ④ Turn on the AC switch "ON".

Display *****MRS.*****

The Master Reset Operation will begin and is finalized upon "3" audible beeps.

Note: After the execution of the MRS-3, only the RECEIPT FEED and JOURNAL FEED keys remain effective on the key assignment. Any key can be assigned to any key position

Note: If you perform a Master Reset-3 and then wish to perform a Master Reset-1 or Master Reset-2, you must disconnect the batteries.

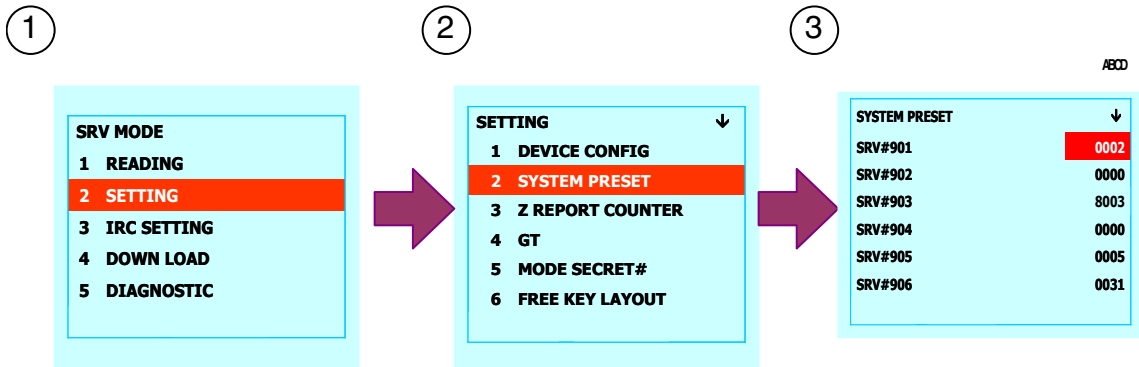
- ① Turn the AC Power Switch “OFF”.
- ② Remove the top cabinet. Please refer to the Installation Manual.
- ③ Disconnect the battery from the main board.
- ④ Leave the POS unplugged for 24 hours.
- ⑤ Turn on the AC switch “ON”.
- ⑥ You should get a “Ram” error. If not repeat steps 1-4.
- ⑦ Perform the Master Reset-1 or Master Reset-2.
- ⑧ Turn the AC Power Switch “OFF”.
- ⑨ Reconnect the battery to the main board.

CAUTION: Never place the Service key to the SRV' or SRV position while AC power is applied – severe damage may result to the RAM and program contents.

3. System Preset:

When making entries for system presets, leading zeros are not required. Please note that trailing zeros are required and that the order of entry is from the left-most digit (A) to the right-most digit (D).

Reference:



Section-3: System Preset Job No.

System Preset: 901

Bit	Description	Data	MRS
A	----	---	0
	----	---	
	----	---	
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
Enter SUM of Selection ----^			
C	Tax Rounding System: - Singapore / Normal	8/0	0
Enter SUM of Selection ----^			
D	Tab Setting: - Decimal setting for display and print	3/2/1/0	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
A	----	---	0
	----	---	
	Inline operations are Enabled	Yes/No	
Enter SUM of Selection ----^			
B	----	---	0
	----	---	
	----Not Used – Do not change! Fixed at “0”	---	
Enter SUM of Selection ----^			
C	Operator Display Format	Check Out (2-Line)/GLU Mode -Hospitality (1-Line)	UP-600 (5) UP-700 (0)
	----	---	
	----	---	
Enter SUM of Selection ----^			
D	----	---	0
	----	---	
	----Not Used – Do not change fixed at “0”	---	
Enter SUM of Selection ----^			

NOTE:

-902-A: is set automatically during the IRC Setting Terminal selection

-902-C=0: Will display open GLU upon sign-on, if using GLU or GLU recall to display manually.

-902-C must be set to 5 for scale interface.

System Preset: 903

Bit	Description	Data	MRS
A	All RAM data Send/Receive Baud Rate (bps): 115200/57600/38400/19200/9600/4800/2400	8/7/6/5 /4/3/2	8
	Enter SUM of Selection ----^		
B	----- Measure of Weight for Scale Entries	--- Kg/Lb	0
	Enter SUM of Selection ----^		
C	----- Tare Weight Entry is disallowed / Scale Weight System 2 decimal places	---	0
	Tare Weight Entry is disallowed / Scale Weight System 3 decimal places	0	
	Tare Weight Entry is allowed / Scale Weight System 2 decimal places	1	
	Tare Weight Entry is allowed / Scale Weight System 3 decimal places	2	
Enter SUM of Selection ----^		3	
D	Food Stamp System:	Tax is not charged on Food Stamp items	UP-600 (3) UP-700 (0)
		Tax is payable w/ Food Stamps	
		Tax is NOT payable w/ Food Stamps	
		No Food Stamps	
Enter SUM of Selection ----^		0	

NOTE:

-903-A is applicable for the 02FD.exe utility (not Online communications) and ECR to ECR Data Transfer.
 -903C = 0 for CAS Scale

System Preset: 904

Bit	Description	Data	MRS
A	Date is printed	No/Yes	0
	Gas Department Fraction Calculation	Ignore/Round Up/Round Off	
Enter SUM of Selection ----^		4/0 2/1/0 ---	
B	Consecutive No. is printed	No/Yes	0
	Gas Dept. Decimal Position		
Enter SUM of Selection ----^		4/0 3/2/1/0 ---	
C	Gas Dept. Discount Fraction Calculation	Ignore/Round Up/Round Off	0
	Enter SUM of Selection ----^		
D	Gas Dept. Unit Price Tab Position	3 decimal palces/2 decimal places	0
	Gas Dept. Function is Enabled	Yes/No	
Enter SUM of Selection ----^		2/0 1/0 ---	

NOTE:

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

System Preset: 905

Bit	Description	Data	MRS
A	Tax4 Subtotal is printed on Trans. Reports	No/Yes 4/0	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
	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

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
	Enter SUM of Selection ----^		

NOTE:

-Trans. Report represents both X1/Z1 and X2/Z2

System Preset: 906

Bit	Description	Data	MRS
A	Dept. & PLU/UPC Codes are printed	Yes/No 4/0	0
	PLU/UPC 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
	Hash Dept. is Enabled	Yes/No 2/0	

Enter SUM of Selection ----^			
C	Multiplication System: Fast Food (FF sequence)/Split-Price/Successive Multiplication/Multiplication	3/2/1/0	3
	Enter SUM of Selection ----^		
D	PLU/UPC Price Look Up at Refund Entry	No/Yes 4/0	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:

-To enable Scale entries 906-D must be set = 1, 3, 5 or 7

-To allow OPEN type PLU entries 906-C FF(Fast Food Sequence) must be disabled.

-FF(Fast Food Sequence) cannot be used for Coupon Like PLU.

System Preset: 907

Bit	Description	Data	MRS
A	----	---	0
	----	---	
	----	---	
Enter SUM of Selection ----^			
B	----	---	0
	UPC code is printed on the Journal	No/Yes 2/0	
	UPC code is printed on the Receipt	No/Yes 1/0	
Enter SUM of Selection ----^			
C	----	---	1
	----	---	
	Minus Dept. and PLU items are Enabled	Yes/No 1/0	
Enter SUM of Selection ----^			
D	----	---	0
	----	---	
	----	---	
Enter SUM of Selection ----^			

NOTE:

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

System Preset: 908

Bit	Description	Data	MRS
A	GT1 is printed on the Trans.-Z Report	No/Yes 4/0	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
	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
	----	---	
	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
	----	---	
	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 Server Report
 Trans- Z1 GT reset option is not allowed if a Master Reset 3 was executed.

System Preset: 909

Bit	Description	Data	MRS	
A	-----	---	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 Item Data is printed on the Z Report	No/Yes	4/0	
	-----	---	0	
	-----	---		
Enter SUM of Selection ----^				
C	VOID-mode & MGR VOID is printed on the Trans.-Z2 Report	No/Yes	4/0	
	VOID-mode & MGR VOID is printed on the Trans.-Z1 Report	No/Yes	2/0	
	-----	---	0	
Enter SUM of Selection ----^				
D	-----	---		0
	-----	---		
	-----	---		
Enter SUM of Selection ----^				

NOTE:

-909-B: No Sales Data is printed for the PLU-Z Report when = 4

System Preset: 910

Bit	Description	Data	MRS	
A	-----	---	0	
	The Cash Drawer opens at Server Sign-On	Yes/No		2/0
	-----	---		
Enter SUM of Selection ----^				
B	-----	---	0	
	-----	---		
	-----	---		
Enter SUM of Selection ----^				
C	-----	---	2	
	Server/Cashier Sign-on System	Auto Sign-Off/Stay-Down		2/0
	-----	---		
Enter SUM of Selection ----^				
D	(Fixed): Server/Cashier system is code entry	4	4	
	-----	---		
	-----	---		
Enter SUM of Selection ----^				

NOTE:

- 910-A: The Cash drawer opening is based on the Individual Server preset
- 910-C: The Server stay-down system requires a manual sign-off sequence
- 910-C = 0: Sign-ON/OFF chit prints.

System Preset: 911

Bit	Description	Data	MRS
A	----	---	0
	----	---	
	Fractional Qty System: Ignored/Round-Up/Round-Off	2/1/0	
Enter SUM of Selection ----^			
B	UPC Check Digit System Checking is Enabled Yes/No	4/0	0
	----	---	
	----	---	
Enter SUM of Selection ----^			
C	----	---	0
	----	---	
	----	---	
Enter SUM of Selection ----^			
D	----	---	0
	----	---	
	Receipt/Journal/(Bill)Slip Header Format: Format-3/Format-2/Format-1	4/2/0	
Enter SUM of Selection ----^			

NOTE:

- 911-A: Must be set for rounding for Scale operations = 0
- 911-B: You cannot modify this setting once UPC codes have been preset in the system
- 911-D: Format-1 = Format-2 = Format-3 =

System Preset: 912

Bit	Description	Data	MRS	
A	----	---	0	
	----	---		
	Date Print Format YYMMDD/DDMMYY/MMDDYY	2/1/0		
Enter SUM of Selection ----^				
B	----	---	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	
	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 Stamp	0	1
		Graphic Logo Stamp only	1	
		Graphic Logo Stamp & 3-Line Footer	2	
		6-Line Header – No Stamp	3	
		3-Line Header – No Stamp/3-Line Footer	5	
Enter SUM of Selection ----^				

NOTE:

- 912-D: The STAMP (Graphic Logo) selection is for the UP-700 only

System Preset: 913

Bit	Description	Data	MRS
A	----	---	0
	Validation Print Format Machine No. & Amount/Date & Amount	2/0	
	Validation: Amount Contents Tendered Amount/Total Sale Amount	1/0	
Enter SUM of Selection ----^			
B	Subtotal is printed when the [SBTL] key is depressed Yes/No	4/0	1
	Merch. Subtotal is printed when the [MDSE] key is depressed Yes/No	2/0	
	Escaping Compulsory Bill print is Enabled Yes/No	1/0	
Enter SUM of Selection ----^			
C	----	---	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
	Error System "Misoperation"/One-Shot Error only	2/0	
	Key Touch-Tone is enabled No/Yes	1/0	
Enter SUM of Selection ----^			

NOTE:

- 913-A: Validation Print format selection is for the UP-600 only. The UP-700 uses the TM-295 for Validation. The UP-700 internal printer cannot be used for VP.

- 913-B: The sequence for escaping "Compulsory" Bill print operations: → [.] → [BILL]

System Preset: 914

Bit	Description	Data	MRS
A	Receipts are printed upon [NO SALE] operations No/Yes	4/0	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
	----	---	
	The [NO SALE] function is allowed after a Non-Add No. entry Yes/No	1/0	
Enter SUM of Selection ----^			
C	Paper Near End Error Sys Enforce Paper Placement/Unlock w/ [CL] key	---	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
	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
A	----	---	0
	----	---	
	Dollar Amount Symbol (Space), (*) Asterisk, (\$) Dollar Symbol	2/1/0	
Enter SUM of Selection ----^			
B	----	---	0
	----	---	
	[PO] System Cash only/Mixed-Tender	1/0	
Enter SUM of Selection ----^			
C	Near-End Paper Checking function is Enabled No/Yes	4/0	4
	SBTL (-) or SBTL (%) within the same Transaction Once/Any No. Times	2/0	
	[RA] System Cash only/Mixed-Tender	1/0	
Enter SUM of Selection ----^			
D	----	---	0
	----	---	
	----	---	
Enter SUM of Selection ----^			

NOTE:

- 915-C: The Near-End paper sensor is for the UP-600 (DP-750) printer only

System Preset: 916

Bit	Description	Data	MRS
A	----	---	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
	----	---	
	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
	[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
	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:

-916-C: Allow the sales transaction to go negative

System Preset: 917

Bit	Description	Data	MRS
A	Tax1 Subtotal is printed on Trans. Reports	No/Yes 4/0	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
	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
	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
	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
A	Assoc. PLU Text of Combo Meals is printed	No/Yes 4/0	2
	Direct-Tender for 2 nd 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
	PLU 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
	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 function includes Cash Tips	No/Yes 4/0	3
	Tip Totals are Reset upon executing a Server Z1 Report	Yes/No 2/0	
	Tip Totalizer is printed on the Server Report	Yes/No 1/0	
Enter SUM of Selection ----^			

NOTE:

- 918-C: Does not apply to items that are entered as part of a Condiment entry

System Preset: 919

Bit	Description	Data	MRS
A	Guest Check System GLU (detail)/PBLU (totals)	4/2	5
	----	---	
	GLU/PBLU Entry is Compulsory for Reorder Entries No/Yes	1/0	
Enter SUM of Selection ----^			
B	Checking of Server# for Guest Check Entries when re-ordering No/Yes	4/0	1
	----	---	
	Guest Check Number-System Entry Manual/Auto-Generate	1/0	
Enter SUM of Selection ----^			
C	----	---	0
	[GLU/PBLU] Entry is Compulsory Yes/No	2/0	
	Amount Prints when PLU Unit Price is \$0.00 (recei[pt/bill) Yes/No	1/0	
Enter SUM of Selection ----^			
D	Normal SBTL is printed in addition to the Conversion SBTL No/Yes	4/0	0
	----	---	
	Foreign Currency Format Omit Decimal Digits/Not	1/0	
Enter SUM of Selection ----^			

NOTE:

- 919-B: Requires that the Auto GLU Gen (File 40) is allocated.
- 919-C: Text will always print even if Amount prints when PLU Unit Price is \$0.00.

System Preset: 920

Bit	Description	Data	MRS	
A	----	---	2	
	(Fixed)	2		
	Back-Up Master Function is Enabled Yes/No	1/0		
Enter SUM of Selection ----^				
B	Back-Up Master can perform System Reports & Download Jobs No/Yes	4/0	0	
	----	---		
	----	---		
Enter SUM of Selection ----^				
C	Inline Download Jobs are Broadcasted (vs. sending individual) No/Yes	4/0	4	
	----	---		
	PGM2-Mode Programming is allowed at the Satellite Terminal Yes/No	1/0		
Enter SUM of Selection ----^				
D	The POS Terminal Type	Back-up Master	3	0
		Master	2	
		Satellite	1	
		Standalone	0	
Enter SUM of Selection ----^				

NOTE:

- 920-D: This is setting is determined in the IRC Setting / Terminal Setting Programming in the SRV Mode.

System Preset: 921

Bit	Description	Data	MRS
A	Convert UPC-E codes to UPC-A	Yes/No	4/0
	----		2/0
	----		1/0
Enter SUM of Selection ----^			
B	GLU System Control	Each Terminal/Centralized (Master)	4/0
	----		---
	----		---
Enter SUM of Selection ----^			
C	----		---
	----		---
	Bill Printing Method:	Item Data Is Retained/Item Data is Cleared	1/0
Enter SUM of Selection ----^			
D	Individual Server Report executes the Tip Paid function	No/Yes	4/0
	----		---
	----		---
Enter SUM of Selection ----^			

NOTE:

- 921-A: Do not modify this setting once UPC codes have been preset
- 921-C For roll/soft check printers only.

System Preset: 922

Bit	Description	Data	MRS
A	----		---
	----		---
	----		---
Enter SUM of Selection ----^			
B	----		---
	----		---
	\$1 Coin Dispenser Handling is Enabled	Yes/No	1/0
Enter SUM of Selection ----^			
C	----		---
	----		---
	Enter SUM of Selection ----^		
D	----		---
	----		---
	----		---
Enter SUM of Selection ----^			

NOTE:

System Preset: 923

Bit	Description	Data	MRS
A	The No. of Records which are requested for the T-Log Polling Function (x 100) example: if AB = 15; then the Satellite will request for T-Log polling when the no. of records reaches 1500 (15 x 100)	0 - 99	00
B	* see Note below when referring to a Master or Standalone terminal		
Enter SUM of Selection ----^			
C	----	---	1
	----	---	
	T-Log Function is Enabled Yes/No	1/0	
Enter SUM of Selection ----^			
D	----	---	0
	----	---	
	T-Log Polling Cycle (seconds)	0 - 9	
Enter SUM of Selection ----^			

NOTE:

- 923-A+B: Satellite Terminals
 - (AB setting) x (100) = No. Records stored before the Satellite makes its request to the Master to poll the T-Log data

- Master Terminals
 - AB = 00: T-Log Data sending to the MWS PC is disabled
 - AB = 01 – 99: (AB setting) x (100) = No. Records stored before the Master makes its request to the MWS PC to poll T-Log data

- 923-D: This setting is the wait-cycle (in seconds) for the Master when making the next T-Log polling request

System Preset: 924

Bit	Description	Data	MRS
A	----	---	1
	----	---	
	(Fixed)	1	
Enter SUM of Selection ----^			
B	(Fixed)	4	4
	----	---	
	----	---	
Enter SUM of Selection ----^			
C	----	---	3
	(Fixed)	2	
	(Fixed)	1	
Enter SUM of Selection ----^			
D	Inline System Control upon Individual Z2 Resetting Reports	Lock After Ind. Daily Net Z2 Report	3
		Lock after Ind. Trans. Z2 Report	
Enter SUM of Selection ----^			

NOTE:

System Preset: 925

Bit	Description	Data	MRS	
A	----	---	0	
	----	---		
	----	---		
Enter SUM of Selection ----^				
B	----	---	3	
	(Fixed)	2		
	Various Individual report jobs are allowed	Yes/No 1/0		
Enter SUM of Selection ----^				
C	Print format for Consol. Reports:		0	
		Individual only		2
		Consolidated only		1
		Individual & Consolidated		0
Enter SUM of Selection ----^				
D	----	---	3	
	Allow resetting reports while Server remains signed-on	Yes/No 2/0		
	Allow resetting reports while the store is open	Yes/No 1/0		
Enter SUM of Selection ----^				

NOTE:

925-B: When selecting No = "0", only the Master will be able to reset the reports

System Preset: 926

Bit	Description	Data	MRS
A	----	---	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
	Refunded Data is sent to the KP	No/Yes 2/0	
	----	---	
Enter SUM of Selection ----^			
C	Open/Close Store operation is Enabled for Standalone w/ Online	Yes/No 4/0	0
	Send AT Command String when Open Store is Executed	Yes/No 2/0	
	Send AT Command String when Close Store is Executed	Yes/No 1/0	
Enter SUM of Selection ----^			
D	Online Channel is Reversed in Close Store state	Yes/No 4/0	0
	----	---	
	----	---	
Enter SUM of Selection ----^			

NOTE:

System Preset: 927

Bit	Description	Data	MRS
A	----	---	0
	----	---	
	----	---	
Enter SUM of Selection ----^			
B	----	---	0
	----	---	
	----	---	
Enter SUM of Selection ----^			
C	----	---	0
	----	---	
	----	---	
Enter SUM of Selection ----^			
D	----	---	0
	----	---	
	----	---	
Enter SUM of Selection ----^			

NOTE:

System Preset: 928

Bit	Description	Data	MRS
A	----	---	1
	----	---	
	SLIP Logo Text is Printed	Yes/No 1/0	
Enter SUM of Selection ----^			
B	----	---	0
	VP Message printing on Slip is Enabled for Check & Charge	Yes/No 2/0	
	Header is Printed on Slip when Reorder entries are printed	No/Yes 1/0	
Enter SUM of Selection ----^			
C	PLU is printed on the [BILL] when the unit price = \$0.00	No/Yes 4/0	6
	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
	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
A	----	---	0
	----	---	
	KP Print format for Media Keys	Detailed/Summary 1/0	
Enter SUM of Selection ----^			
B	----	---	0
	----	---	
	Server & Trans.-Z Resetting is allowed when Open GLUs exist	Yes/No 1/0	
Enter SUM of Selection ----^			
C	----	---	0
	----	---	
	Sales entries can continue when the Closed GLU file is FULL	Yes/No 1/0	
Enter SUM of Selection ----^			
D	Tax Print Method and PLU/UPC Tax Status Setting	Every Tax is printed on bill / By each item's preset 2 or 3	0
	Tax Print Method and PLU/UPC Tax Status Setting	Every Tax is printed on bill / By the Assoc. Dept. 0, 1 or 4	
	----	---	
Enter SUM of Selection ----^			

NOTE: Tax Print Method – The detail of tax is always printed on the bill. The Service Program Manual is incorrect.

System Preset: 980

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

NOTE:

System Preset: 981

Bit	Description	Data	MRS
A	----	---	0
	----	---	
	----	---	
Enter SUM of Selection ----^			
B	----	---	0
	----	---	
	----	---	
Enter SUM of Selection ----^			
C	----	---	0
	----	---	
	----	---	
Enter SUM of Selection ----^			
D	----	---	0
	----	---	
	----	---	
Enter SUM of Selection ----^			

NOTE:

Z Report Counter - 930

Counter	Description	No. Digits	MRS
Transaction Z1	Transaction Z1 Report Counter	(4 digits)	0000
Consoli. Trans. Z1	System Transaction Z1 Report Counter	(4 digits)	0000
Server Z1/Z2	Server Z1/ Z2 Report Counter	(4 digits)	0000
Hourly Z1	Hourly Z1 Report Counter	(4 digits)	0000
PLU/UPC Z1/Z2	PLU/UPC Z1/Z2 Report Counter	(4 digits)	0000
GLU Z1	GLU/PBLU Z1 Report Counter	(4 digits)	0000
Transaction Z2	Transaction Z2 Report Counter	(4 digits)	0000
Consoli. Trans Z2	System Transaction Z2 Report Counter	(4 digits)	0000
Daily Net Z2	Daily Net Sales Z2 Report Counter	(4 digits)	0000
Department Z1	Department Z1 Report Counter	(4 digits)	0000
Department Z2	Department Z2 Report Counter	(4 digits)	0000

NOTE:

GT Report Counter - 942

Counter	Description	No. Digits	MRS
Positive GT	GT2 (Positive): 13 digits	(13 digits)	0000000000000
Negative GT	GT3 (Negative): 13 digits	(13 digits)	0000000000000
Training GT	Training GT: 13 digits	(13 digits)	0000000000000

NOTE:

Mode Secret Code - 944

Counter	Description	No. Digits	MRS
OP X/Z Mode	OP X/Z Mode Secret Code	(4 digits)	0000
X1 Mode	X1 Mode Secret Code	(4 digits)	0000
Z1 Mode	Z1 Mode Secret Code	(4 digits)	0000
X2 Mode	X2 Mode Secret Code	(4 digits)	0000
Z2 Mode	Z2 Mode Secret Code	(4 digits)	0000
PGM1 Mode	PGM1 Mode Secret Code	(4 digits)	0000
PGM2 Mode	PGM2 Mode Secret Code	(4 digits)	0000

NOTE:

- If “0” is entered then compulsory secret code entry is cancelled.

Section – 2: FREE KEY LAYOUT

Section-1: Overview

Free Key programming allows you to place function keys other than department, PLU and combo table keys directly onto a key position. The Free Key programming is used to design the POS keyboard based on the end user's requirements.

Direct Key programming allows you to link a PLU, DEPT, or Combo Table to a key position on the keyboard for direct registration based on the end user's requirements.

The UP600 keyboard default (MRS) is raised type popular (common) to Retail environments. The UP700 keyboard default (MRS) is flat type offering protection against spills and wet hands common in Quick Service and Table Service establishments.

UP600 Master Reset Keyboard

Receipt	Journal	RCPT		CASH#	PLU/UPC			PRICE CHANGE		AMT	INQ	FS SHIFT	AUTO 1
MISC FUNC	CANCEL	PAGE UP		@/FOR	.	CL		DEPT 5	DEPT 10	DEPT 15	DEPT 20	FS TEND	AUTO 2
CONV#	↑	PAGE DOWN		7	8	9		DEPT 4	DEPT 9	DEPT 14	DEPT 19	NS	NEXT\$
←	↓	→		4	5	6		DEPT 3	DEPT 8	DEPT 13	DEPT 18	CHK#	CH#
TAX	TAX SHIFT	(ENTER)		1	2	3		DEPT 2	DEPT 7	DEPT 12	DEPT 17	MDSE SBTL	SBTL
RFND	VOID			0	0			DEPT 1	DEPT 6	DEPT 11	DEPT 16	CA/AT	

UP700 Master Reset Keyboard

Receipt	Journal	P 87	P 88	P 89	P 90	P 91	P 92	P 93	P 94	P 95	P 96	P 97	P 98	P 99	P 100
P 71	P 72	P 73	P 74	P 75	P 76	P 77	P 78	P 79	P 80	P 81	P 82	P 83	P 84	P 85	P 86
P 58	P 59	P 60	P 61	P 62	P 63	P 64	P 65	P 66	P 67	P 68	P 69	P 70	M FUNC	AUTO	NC
P 48	P 49	P 50	P 51	P 52	P 53	P 54	P 55	P 56	P 57	RCPT	VOID	RFND	CANCEL	LEVEL #	CONV
P 38	P 39	P 40	P 41	P 42	P 43	P 44	P 45	P 46	P 47	SRV #	@/FOR	.	CL	P SHIFT	TAX 1
P 28	P 29	P 30	P 31	P 32	P 33	P 34	P 35	P 36	P 37	DOWN	7	8	9	PLU	PBAL
P 18	P 19	P 20	P 21	P 22	P 23	P 24	P 25	P 26	P 27	DOWN	4	5	6	CHK	SRVC
P 9	P 10	P 11	P 12	P 13	P 14	P 15	P 16	P 17	UP	ENTER	1	2	3	CHG	FINAL
P 1	P 2	P 3	P 4	P 5	P 6	P 7	P 8	LEFT	DOWN	RIGHT	0	00	000	SBTL	CA/AT

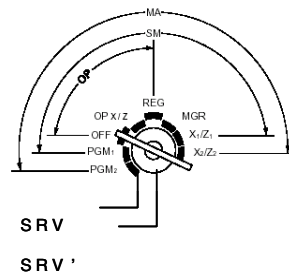
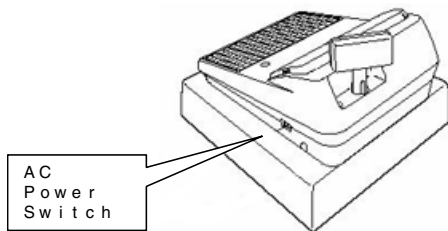
Section-2: Free Key Layout Readings

4. Entering the SRV-Mode

To enter SRV-mode programming, you must turn the SRV key counter clock wise to the 6 o'clock position (SRV') wait five seconds and turn the SRV key to the 7 o'clock position.

Procedure:

- ⑤ Turn the AC Power Switch "OFF"
- ⑥ Set the mode switch to (SRV') position
- ⑦ Turn on the AC Power Switch "ON"
- ⑧ Turn to the (SRV) position from (SRV') position



The SRV-mode Main Menu will appear:

SRV MODE	
1	READING
2	SETTING
3	IRC SETTING
4	DOWN LOAD
5	DIAGNOSTIC

CAUTION: Never place the Service key to the SRV' or SRV position while AC power is applied – severe damage may result to the RAM and program contents.

5. Free Key and Direct Key Program Readings:

In SRV-mode, it is possible to print the Free Key assignment:

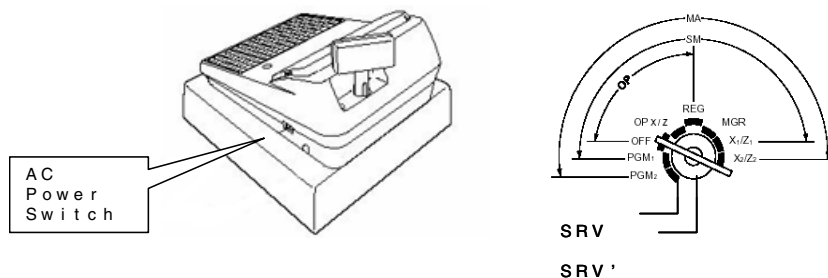
SRV-mode Free Key Reading:

SRV-mode Free Key (950) Reading		
Mode	Main Menu	Sub Menu
SRV	1 READING	3 FREE KEY

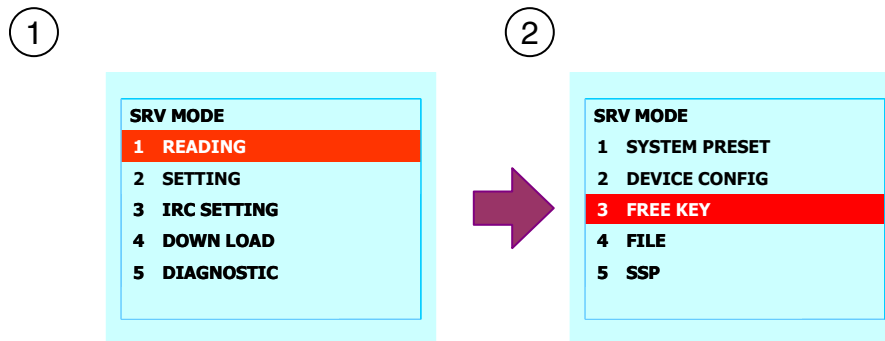
Procedure:

To enter SRV-mode programming, you must turn the SRV key counter clock wise to the 6 o'clock position (SRV') wait five seconds and turn the SRV key to the 7 o'clock position.

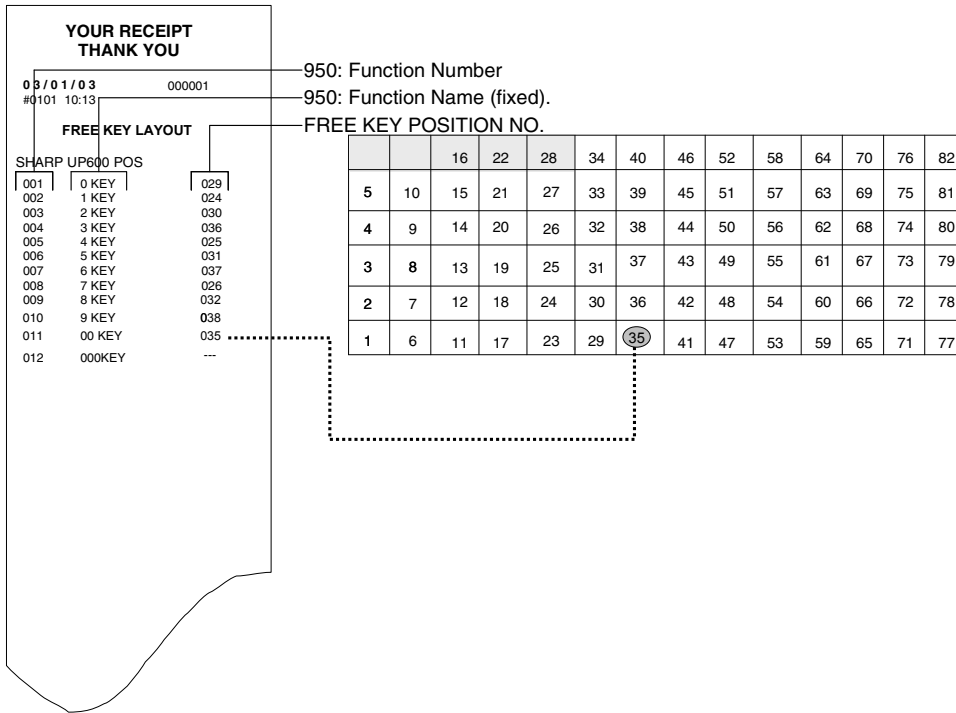
- ① Turn the AC Power Switch "OFF"
- ② Set the mode switch to (SRV') position
- ③ Turn on the AC Power Switch "ON"
- ④ Turn to the (SRV) position from (SRV') position
- ⑤ The SRV-mode Main Menu will appear
- ⑥ Select [1 READING]
- ⑦ Select [3 FREE KEY]
- ⑧ The report will automatically print.



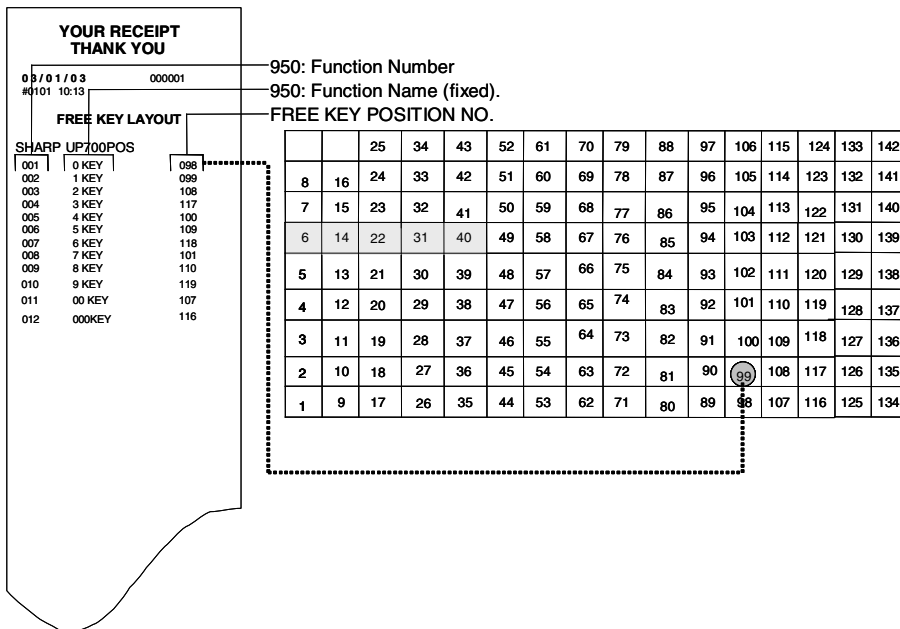
CAUTION: Never place the Service key to the SRV' or SRV position while AC power is applied – severe damage may result to the RAM and program contents.



Print Example UP600:



Print Example UP700:



PGM2-mode Reports:

In PGM2-mode, it is possible to print the Direct Key assignment:

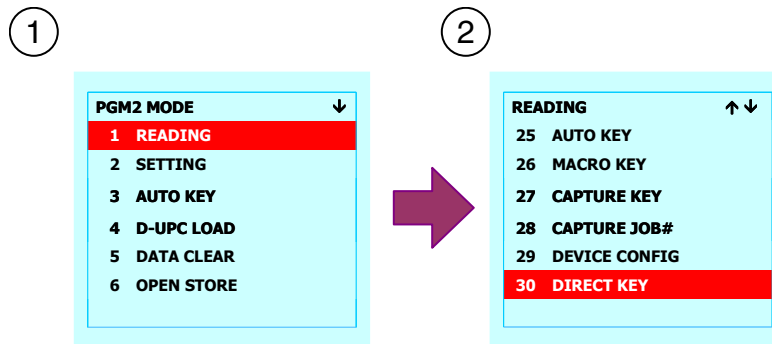
PGM2-mode Direct Key Reading:

PGM2-mode Readings		
Mode	Main Menu	Sub Menu
PGM2	1 READING	30 DIRECT KEY

Procedure – Direct Key:

Enter the PGM2-Mode by turning the MA key counter clock wise to the PGM2 position

- ① Select [1 READING]
- ② Select [30 DIRECT KEY]
- ③ This report will automatically print



Print Example UP600:

**YOUR RECEIPT
THANK YOU**

03 / 0 1 / 0 3 000001

#0101 10:13

FREE KEY LAYOUT

SHARP UP600 POS

001	D01	PL0001
002	---	---
003	---	---
004	---	---
005	---	---
006	---	---
007	---	---
41	L1	---
	L2	---
	L3	---
	L4	---
	L5	---
	L6	---
	L7	---
	L8	---
	L9	---
	L10	---

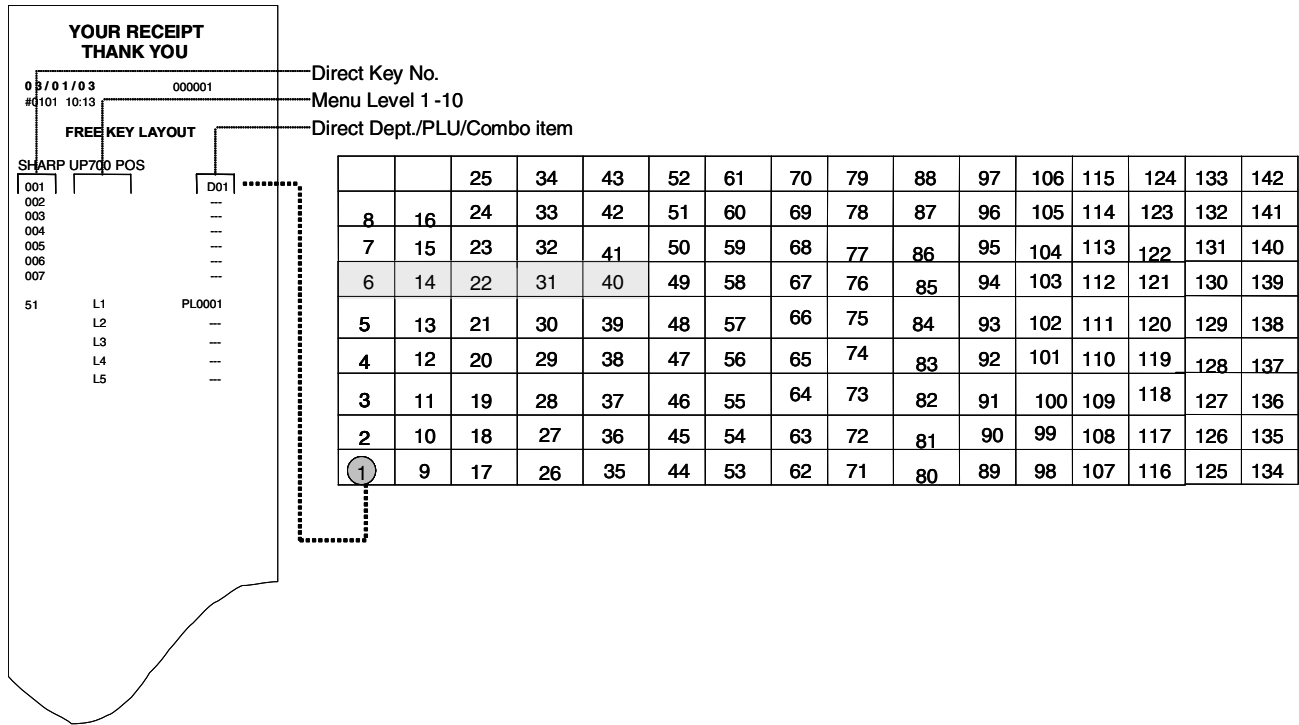
Direct Key No.

Menu Level 1-10

Direct Dept./PLU/Combo item

		16	22	28	34	40	46	52	58	64	70	76	82
5	10	15	21	27	33	39	45	51	57	63	69	75	81
4	9	14	20	26	32	38	44	50	56	62	68	74	80
3	8	13	19	25	31	37	43	49	55	61	67	73	79
2	7	12	18	24	30	36	42	48	54	60	66	72	78
①	6	11	17	23	29	35	41	47	53	59	65	71	77

Print Example UP700:



Section-3: Free Key Layout Setup

There are 246 function numbers available for assignment to a physical key position. These function numbers may be assigned to multiple key positions.

Although, the Free Key job starts you with Function #24 [P UP] it is possible to enter Functions #0-23.

Typically, a function must exist on the keyboard in order to update and report the associated total(s) in memory with sales amounts.

A function must exist on the keyboard before any associated PGM mode programming can be performed.

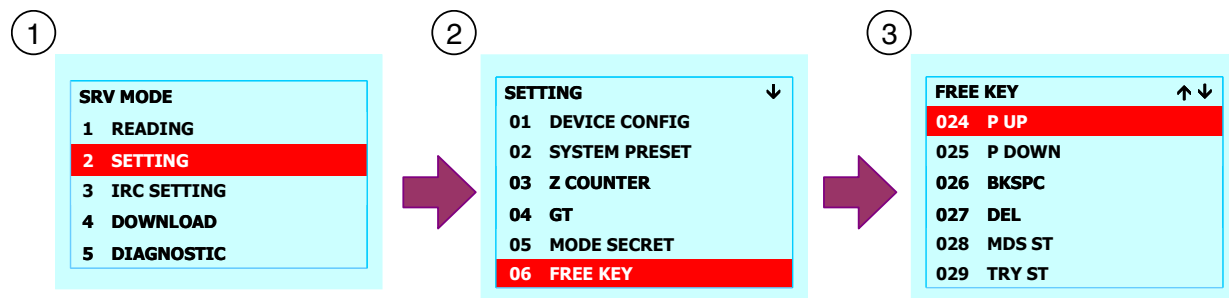
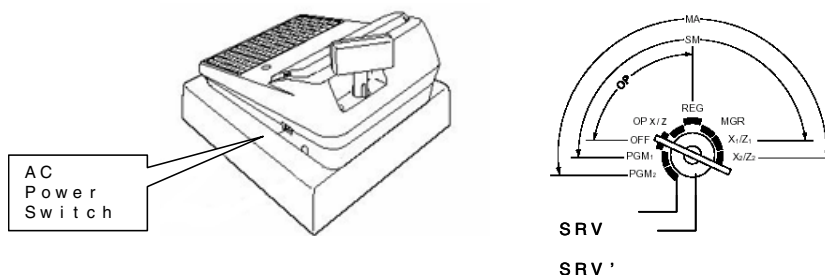
1. Free Key Assignment

Free Key programming allows you to place function keys other than department, PLU and combo table keys directly onto a key position.

Procedure:

To enter SRV-mode programming, you must turn the SRV key counter clock wise to the 6 o'clock position (SRV') wait five seconds and turn the SRV key to the 7 o'clock position.

- ① Turn the AC Power Switch "OFF"
- ② Set the mode switch to (SRV) position
- ③ Turn on the AC Power
- ④ Turn to the (SRV) position from (SRV') position
- ⑤ The SRV-mode Main Menu will appear
- ⑥ Select [2 SETTING]
- ⑦ Select [06 FREE KEY]
- ⑧ Highlight the key you wish to assign to a key position and touch the key position



Free Key Function List		
Function No.	Function	Description
999	INHIBIT	Removes previously assigned function
1-12	0 KEY-000KEY	Numeric Keys
13	. KEY	Decimal Point Key
14	CL	Clear Entry
15	@/FOR	Multiplier Key
16	SBTL	Displays Transaction Total with Tax
17	UP	Move the Cursor Up
18	DOWN	Move the Cursor Down
19	LEFT	Move the Cursor Left
20	RIGHT	Move the Cursor Right
21	CANCEL	Cancel Programming or an Entry or Page Back
22	ENTER	To Save an Entry or Page Forward
23	CA/AT	Cash Media Totalizer, Finalized Programmed Data
24	P UP	Page Up to the Next Screen or Menu
25	P DOWN	Page Down to the Next Screen or Menu
26	BKSPC	Back Space use when programming or editing
27	DEL	Deletes a highlighted item or text on the screen
28	MDS ST	Displays Transaction Total without Tax
29	TRY ST	Displays and Print s a Tray Subtotal per Order
30	GAS ST	Gasoline sales subtotal key
31	#/TM	Use to Enter Non Add Numbers
32	NS	No Sale Key
33	SCALE	Displays Weight from the Scale
34	PLU	Price Look Up Key
35	LEVEL #	Shifts Menu Levels
36-40	L1-L5	Menu Level Keys
41	P.SFT #	Shifts Price Levels
42 – 47	P1 – P6	Price Level Keys
48	TAX1SF	Tax Shift 1
49	TAX2SF	Tax Shift 2
50	TAX3SF	Tax Shift 3
51	TAX4SF	Tax Shift 4
52	FS SFT	Food Stamp Shift Key – Toggles Food Stamp status on/off
53	GD1SFT	Group Discount 1 Shift Key
54	GD2SFT	Group Discount 2 Shift Key
55	GD3SFT	Group Discount 3 Shift Key
56	PRINT	Validation Print Key
57	BILL	Use to print the bill /guest check on a soft/hard check print
58	RCPT	Use to issue a copy receipt
59	CH TIP	Use to add a charge tip to a guest check
60	CA TIP	Use to add a cash tip to a guest check

Function No.	Function	Description
61	TIP PAID	Use to pay out tip amounts to the servers
62	VOID	Use to Void an Item Immediately and Void Mode
63	I. VOID	Use to Void a Previous Item Entry
64	ST VOID	Use to CANCEL or Void an Entire Transaction
65	RFND	Use to Refund an Amount or Item
66	RETURN	Use to Return an Amount or Item
67-71	% 1 – % 5	Use as % Mark Up or Mark Up Down Keys
72-76	(-) 1 – (-) 9	Use as Dollar Discount Keys
77	GRP DISC %1 KEY	Group discount 1% key
78	GRP DISC %2 KEY	Group discount 2% key
79	GRP DISC %3 KEY	Group discount 3% key
80	TAX	Use to Enter the Tax Amount Manually
81	CV CNT	Use to Enter the Number of Customers
82-106	AUTO – AUTO 25	Programmable Macro Keys (25 Keystrokes Max)
107-110	CA2-CA5	Cash 2-5 Media Totalizer
111-115	CHK – CHK5	Check 1-5 Media Totalizer
116-124	CH1 – CH 9	Charge 1-9 Media Totalizer
125-128	CONV1 – CONV4	Currency Conversion 1-4 Keys
129	PBAL	Use to recall an Open Guest Look Up Order
130	N.C.	Use to Open / Start a new Guest Look Up Order
131	SRVC	Service Key – used for guest look up (GLU/PBLU) orders. Does not calculate or print tax on the guest check and/or receipt. Stores the sales taxable subtotal and other data as they are in the GLU file. Also sends orders to the remote printers
132	FINAL	Final Key – used for guest look up orders. Calculates and prints the order with tax on the check and/or receipt. Also Sends Order to the remote printers
133	DEPO	Use to Deposit a Media Amount on a Guest Check
134	DEP. RF	Use to Refund the Media Deposit Amount
135	B.T.	Use to Transfer a Bill (Guest Check) to another
136	FS TENDER KEY	Food Stamp Tender Key
137	RA	Receive on Account Key
138	RA2	Receive on Account Key 2
139	PO	Paid Out Key
140	PO2	Paid Out Key 2
141	SRV#	Server (Cashier) Sign On Key
142	EAT IN 1	Use as a Totalizer for Take Out or Dine In Orders
143	EAT IN 2	Use as a Totalizer for Take Out or Dine In Orders
144	EAT IN 3	Use as a Totalizer for Take Out or Dine In Orders
145	RP SND	Use to Send an item to the RP before Service of Final
146	GRT EX	Use to Exempt an Order from a Gratuity Amount
147	OPN TR	Use to Enter an Open Tare Amount
148	BALANCE KEY	Used with the customer management function to look up the customer's account balance
149	REPEAT	Use to re-register a previously ordered item
150	AMOUNT KEY	Use to input an amount when required

Function No.	Function	Description
151	DEPT # ENTRY KEY	Use to register a dept #
152	INQ KEY	Use to inquire a price
153	PRICE CHANGE KEY	Use to Change price
154	CUSTOMOER KEY	Use to enter Customer Account # for the customer management feature
155	BIRTHDAY KEY	Age Verification
156	TR. OUT	Use to Transfer Out a Guest Check From a Server
157	TR. IN	Use to Transfer In a Guest Check to a Server from Another Server
158	TABLE #	Use to Enter the Number of Persons on a GC Required I. Pay Buffer Created in Memory
159	I. PAY	Allow to Pay Out Individual Check Before Finalization Required Individual Pay Buffer Created in Memory
160	M.FUNC	A Fixed Set of Function Keys in a Menu Window This Menu Window Cannot be Edited
161	CASH MENU KEY	List CA-CA5
162	CHECK MENU KEY	List CHK1-CHK5
163	CHARGE MENU KEY	List CHG1-CHG5
164	CONV MENU KEY	List Conversions 1-4
165	VOID MENU KEY	List all Voids
166	RFND SALES KEY	Use for Dept and PLU/UPC entries only. Press at the beginning of the transaction to put the POS in REFUND SALES mode. Cannot finalize with a check payment.
167	RCP.SW	Use to Tum ON/OFF a Receipt Printer
168	B.S.	Use to Split a Guest Check in a Fine Dining Operation
169	WASTE	Use to Report Wasted Products
170	C NEXT	Skip the Next Condiment Table Programmed
171	NEXT \$	Use to Tender the Next Dollar Cash Amount
172	EDIT TIP	Use to Edit Charge Tip Amount on a Guest Check
173	REPEAT	Use to Repeat a Previous Item Ordered
174	GLU RECALL	Recall Checks
175-179	MESSAGE 1-5	Prints doubled sized characters together with items on the remote printer or chit receipt.
180	MESSAGE MENU KEY	List of Message 1-5
181-230	PLU MENU 1-50 KEY	Pop Up Menu Selection Window (Max 50 Items Per)
231-234	Macro Function 1-4 KEY	Use to run a series of instructions with a single key stroke. 15 Max. mode position/auto key no. for each macro key
235	UP SIZE KEY	Up charge key
236-245	CAPTURE 1-10 KEY	Use to collect information at the POS when a specific function key is pressed.
246	FUNCTION MENU KEY	Allows for presetting specific functions to a single key position.

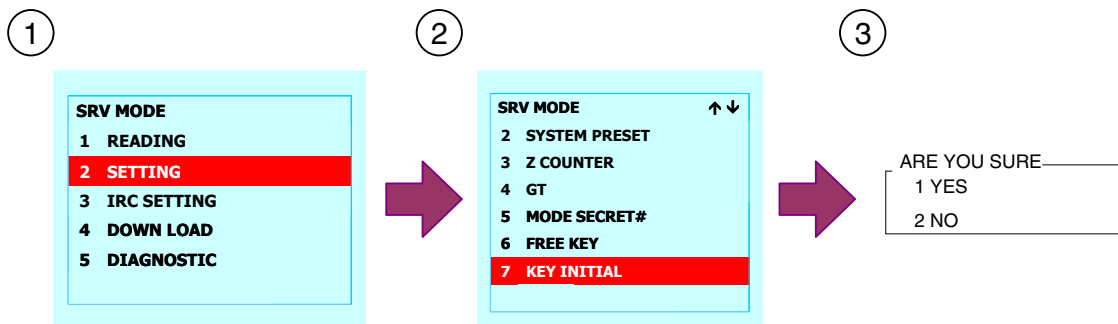
2. Key Initial

The UP-600/700 Keyboard layout can be recovered to MRS defaults without risk of losing previously programmed PLU items, etc by initiating the Initial Key Layout.

Procedure:

To enter SRV-mode programming, you must turn the SRV key counter clock wise to the 6 o'clock position (SRV') wait five seconds and turn the SRV key to the 7 o'clock position.

- ① Turn the AC Power Switch "OFF"
- ② Set the mode switch to (SRV) position
- ③ Turn on the AC Power
- ④ Turn to the (SRV) position from (SRV') position
- ⑤ The SRV-mode Main Menu will appear
- ⑥ Select [2 SETTING]
- ⑦ Select [7 INIT. KEY LAYOUT]
- ⑧ At the "ARE YOU SURE?" prompt, select [YES] = restore to MRS1 Defaults or [NO] to cancel the request



UP600 Master Reset Keyboard

Receipt	Journal	RCPT		CASH#	PLU/UPC		PRICE CHANGE	AMT	INQ	FS SHIFT	AUTO 1	
FUNC	CANCEL	PAGE UP		@/FOR	.	CL	DEPT 5	DEPT 10	DEPT 15	DEPT 20	FSTEND	AUTO 2
CONV#	↑	PAGE DOWN		7	8	9	DEPT 4	DEPT 9	DEPT 14	DEPT 19	NS	NEXT\$
←	↓	→		4	5	6	DEPT 3	DEPT 8	DEPT 13	DEPT 18	CHK#	CH#
TAX	TAX SHIFT	(ENTER)		1	2	3	DEPT 2	DEPT 7	DEPT 12	DEPT 17	MOSE	SBTL
RFND	VOID			0	0		DEPT 1	DEPT 6	DEPT 11	DEPT 16		CA/AT

UP700 Master Reset Keyboard

Receipt	Journal	P 87	P 88	P 89	P 90	P 91	P 92	P 93	P 94	P 95	P 96	P 97	P 98	P 99	P 100
P 71	P 72	P 73	P 74	P 75	P 76	P 77	P 78	P 79	P 80	P 81	P 82	P 83	P 84	P 85	P 86
P 58	P 59	P 60	P 61	P 62	P 63	P 64	P 65	P 66	P 67	P 68	P 69	P 70	M FUNC	AUTO	NC
P 48	P 49	P 50	P 51	P 52	P 53	P 54	P 55	P 56	P 57	RCPT	VOID	RFND	CANCEL	LEVEL#	CONV
P 38	P 39	P 40	P 41	P 42	P 43	P 44	P 45	P 46	P 47	SRV#	@/FOR	.	CL	P SHIFT	TAX 1
P 28	P 29	P 30	P 31	P 32	P 33	P 34	P 35	P 36	P 37	DOWN	7	8	9	PLU	PBAL
P 18	P 19	P 20	P 21	P 22	P 23	P 24	P 25	P 26	P 27	DOWN	4	5	6	CHK	SRVC
P 9	P 10	P 11	P 12	P 13	P 14	P 15	P 16	P 17	UP	ENTER	1	2	3	CHG	FINAL
P 1	P 2	P 3	P 4	P 5	P 6	P 7	P 8	LEFT	DOWN	RIGHT	0	00	000	SBTL	CA/AT

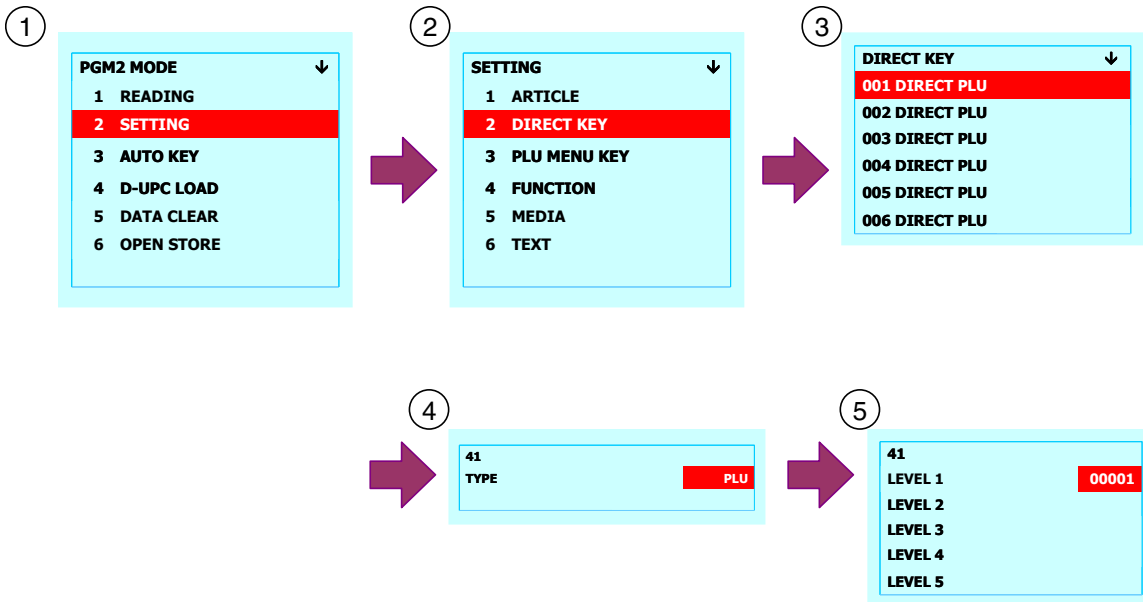
3. PGM Mode Programming – Direct Key

Direct Key programming allows you to link a PLU, DEPT, or Combo Table to a key position for direct registration.

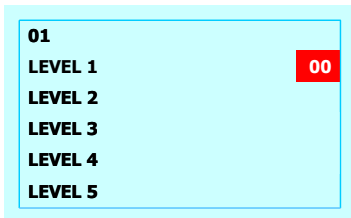
Procedure:

Enter the PGM2-Mode by turning the MA key counter clock wise to the PGM2 position

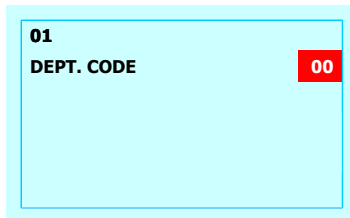
- ① Select [2 SETTING]
- ② Select [2 DIRECT KEY]
- ③ Select a key location where you wish to place a direct Dept., PLU, or Combo key. Use the up/down arrows to select desired key from the menu or by pressing the key on the keyboard.
- ④ Using the decimal point key or subtotal key, select the type (PLU, Combo or Dept).
 - When selecting a PLU, the screen on which the PLU number for Level #1-#5 will display.
 - When selecting a department, the screen on which a department code is entered the message (“DEPT. CODE”) will appear.
 - When selecting a combo, the screen on which a combo table number is entered (COMBO TBL#”) will appear.
- ⑤ Enter the PLU code for the respective level(s), or Department code or Combo Table No. for each Menu Level



Combo Table Display



Dept. Display



UP600 Direct Key Position Key Numbers

R	J	16	22	28	34	40	46	52	58	64	70	76	82
5	10	15	21	27	33	39	45	51	57	63	69	75	81
4	9	14	20	26	32	38	44	50	56	62	68	74	80
3	8	13	19	25	31	37	43	49	55	61	67	73	79
2	7	12	18	24	30	36	42	48	54	60	66	72	78
1	6	11	17	23	29	35	41	47	53	59	65	71	77

UP700 Key Position Key Numbers

R	J	25	34	43	52	61	70	79	88	97	106	115	124	133	142
8	16	24	33	42	51	60	69	78	87	96	105	114	123	132	141
7	15	23	32	41	50	59	68	77	86	95	104	113	122	131	140
6	14	22	31	40	49	58	67	76	85	94	103	112	121	130	139
5	13	21	30	39	48	57	66	75	84	93	102	111	120	129	138
4	12	20	29	38	47	56	65	74	83	92	101	110	119	128	137
3	11	19	28	37	46	55	64	73	82	91	100	109	118	127	136
2	10	18	27	36	45	54	63	72	81	90	99	108	117	126	135
1	9	17	26	35	44	53	62	71	80	89	98	107	116	125	134

NOTE:

On a MRS UP700, only PLU #1-#20 have been associated to a department, thus any entry of PLU #21 or higher will result in an entry error. The PLU must be programmed in memory before it can be linked to a key position.

On a MRS UP600, only DEPT #1-#20 have been assigned to a key position, thus any entry of DEPT#21 or higher will result in an entry error. The DEPT must be programmed in memory before it can be linked to a key position.

Section – 3: FILE ALLOCATION

Section-1: Overview

File Allocation also known as memory file allocation and 970 programming, is used to **reserve** areas of memory for data storage.

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

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

The UP-600 and UP-700 Memory:

- Out of box (MRS) approximately 512K.

Options:

- UP-S02MB - 2MB RAM Bd. (install via side ROM/RAM case)
- UP-S04MB - 4MB RAM Bd. (install via side ROM/RAM case)

Memory Allocation program settings may be printed on the RECEIPT/JOURNAL printer or displayed on the operator display.

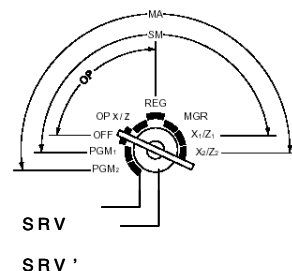
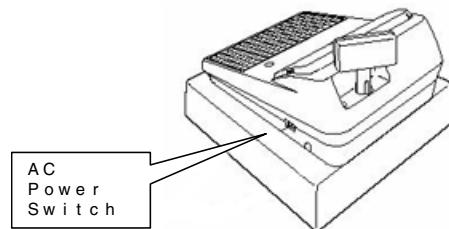
6. Entering the SRV-Mode

To enter SRV-mode programming, you must turn the SRV key counter clock wise to the 6 o'clock position wait five seconds and turn the SRV key to the 7 o'clock position.

Procedure:

Turn the AC Power Switch "OFF"

- ① Set the mode switch to (SRV') position
- ② Turn on the AC Power Switch "ON"
- ③ Turn to the (SRV) position from (SRV') position



The SRV-mode Main Menu will appear:

CAUTION:

Never place the Service key to the SRV' or SRV position while AC power is applied – severe damage may result to the RAM and program contents.

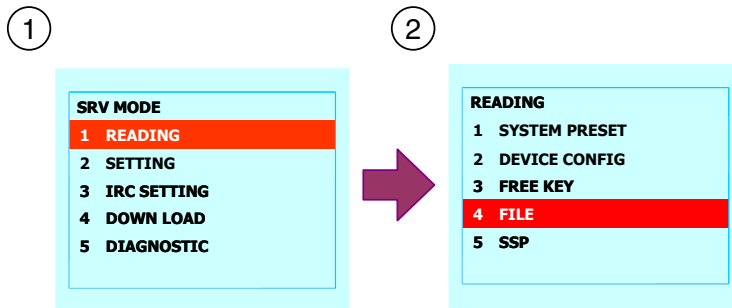
7. SRV-mode Program Readings:

List of SRV-mode Program Reports:

Device Assignment		
Mode	Main Menu	Sub Menu
SRV-Mode	1 READING	4 FILE

Procedure:

- ⑨ Enter the SRV-Mode as previously outlined
- ⑩ Select [1 READING]
- ⑪ Select [4 FILE]
- ⑫ This report will automatically start to print.



Caution:

When adding the optional memory board (UP-S02MB), (UP-S04MB), it is necessary to execute one of the Master Reset procedures outlined in Section – 1.

Example: Master Reset-1, Master Reset-2, and Master Reset-3

Section-2: Allocating Memory Files

IMPORTANT: Memory File Allocation – Must be determined before any extensive PGM2 Mode programming is started.

1. File Group Tables:

There are Four Types of File Groups: File Type 0, File Type 1, File Type 2, and File Type 3.

- A File Group generates a file table or tables when it is created.
- A File Group **Type 0** (Child) is modified automatically when the parent file is changed. Create/Erase only.
- A File Group **Type 1** (Parent) requires a **Number of Record Entry**. Create/Erase and Increase/Decrease the number of records.
- A File Group **Type 2** requires a **Number of Blocks Entry**. Create/Erase and Increase/Decrease the number of blocks.
- A File Group **Type 3** requires an **Entry of Indexes and Records**. Create/Erase and Increase/Decrease the number of records for label and data individually.
- A File Group **Type 4** requires a **Number of Record Entry**. Create/Erase and Increase/Decrease the number of records for label and data individually.

File Group Listing (1/2)				
No.	File Group Name	Individual File Tables	Type	Mandatory
1	DEPT	01, 02, 03, 05,06	Parent	Yes
2	DEPT TEXT (8)	03	Child	Min.
3	DEPT TEXT (16)	04	Child	Opt.
4	DEPT MARK DOWN	11/12,13,14,15	Child	Opt.
5	PLU	16,17,18,20,26,28,30,32,34,36	Child	Opt.
6	PLU/UPC PRICE 1	18,28,30,32,34,36,29,31,33,35,37	Parent	Min.
7	PLU/UPC PRICE 1 to 6	19,38,40,42,44,46,39,41,43,45,47	Child	Min.
8	PLU/UPC TEXT 1 (8)	20	Child	Opt.
9	PLU/UPC TEXT 1 (16)	21	Child	Min.
10	PLU/UPC KP TEXT 1 (12)	22	Child	Opt.
11	PLU/UPC TEXT 1-6 (8)	23	Child	Opt.
12	PLU/UPC TEXT 1 - 6 (16)	24	Child	Opt.
13	PLU/UPC KPTEXT 1 - 6 (12)	25	Child	Opt..
14	PLU STOCK	27	Child	Opt.
15	DYNAMIC UPC	48,49,50,53,54,58,59,61,63,193	Child	Opt.
16	DYNAMIC PLU PRICE 1	50,59,61,63,193,60,62,64,194	Parent	Opt.
17	DYNAMIC PLU PRICE 1-6	51,65,67,69,195,66,68,70,196	Parent	Opt.
18	DYNAMIC PLU TEXT 1 (8)	52	Parent	Opt.
19	DYNAMIC PLU TEXT 1 (16)	53	Parent	Opt.
20	DYNAMIC PLU KP TEXT 1-6 (12)	54	Parent	Opt.
21	DYNAMIC PLU TEXT 1-6 (8)	55	Parent	Opt.
22	DYNAMIC PLU TEXT 1-6 (16)	56	Child	Opt.
23	DYNAMIC PLU KP TEXT 1-6 (12)	57	Parent	Yes
24	UPC PGM PICK UP	71	Parent	IRC
25	DYNAMIC UPC PGM PICK UP	72	Parent	Opt.
26	UPC X/Z PICK UP	73	Parent	Opt.
27	LINK PLU	74	Parent	Opt.
28	COMBO MEAL	75,76,78	Parent	Opt.
29	COMBO MEAL KP TEXT	77	Child	Opt.
30	CONDIMENT TABLE	81,151	Parent	Opt.
31	MIX & MATCH TABLE	82,83	Parent	Opt.
32	SERVER	90,91,92,93,94,95,96,97,98,101	Parent	Opt.
33	SIGN OFF CLERK (IRC)	104,105	Child	Yes
34	HOURLY	106,107	Parent	Opt.

No.	File Group Name	Individual File Tables	Type	Mandatory
35	DAILY NET	111,112/113,115	Parent	Opt.
36	REG BUFFER	117,118,119,120,146,148,156,157, 122,123,125,128,129,145,151,121, 158	Parent	Opt.
37	KP BUFFER	121,158	Parent	Opt.
38	GLU/PBLU (PRESET+BUFFER)	130,154,155	3	Opt.
39	CLOSED GLU	131,197	Parent	Opt.
40	AUTO GLU GENERATE CODE	132	Parent	Opt.
41	GLU/PBLU RCV BUFFER (IRC)	122	2	Opt.
42	KP PRESET (IRC)	139,140	Parent	Opt.
43	CUSTOMER (PRESET)	159,169	Parent	Opt.
44	CUSTOMER (SALES)	161	3	Yes
45	T-LOG BUFFER	124	Parent	Yes
46	JOURNAL-LOG BUFFER	126	Parent	Opt.
47	RECEIPT WINDOW BUFFER	127	Parent	Opt.
48	INDIVIDUAL PAY BUFFER	128,129,145,147	Child	Opt.
49	TERM DEPT	7,12	Child	Opt.
50	TERM PLU/UPC	29,31,33,35,37	Child	Opt.
51	TERM TRANSACTION	86	Child	Opt.
52	TERM SERVER	95	3	Opt.
53	ALL OF TERM FILE	7,12,29,31,33,35,37,60,62,64,86,95,194	3	Opt.
54	GLU/PBLU (PRESET ONLY)	130, 154, 155	3	Opt.
55	B.T. BUFFER (BUFFER ONLY)	120	Child	Opt.
56	MESSAGE TEXT (KP)	152, 153	Child	Yes
57	REPEAT ROUND BUFFER	157	Child	Opt.
58	POSITIVE#	163	Parent	Opt.
59	CHARGE POSTING (POSITIVESALES)	164	Parent	Opt.
60	NEGATIVE #	166	Child	Opt.
61	CAPTURE JOB	169, 170	Child	Opt.
62	CAPTURE JOB (SALES)	171	3	
63	RJE COMMAND BUFFER	172, 173, 174, 175, 176, 177, 178, 179, 180/181, 182, 183, 184, 185, 186, 187	Parent	
64	RJE SCHEDULER BUFFER	181, 182, 183, 184, 185, 186, 187	Child	
65	ONLINE PRINT BUFFER	188	Parent	
66	MSG SPOOL (MACHINE)	189	Parent	
67	MSG SPOOL (SERVER)	190	4	
68	TERM DYNAMIC PLU	60, 62, 64, 194	Child	
69	DYNAMIC UPC X/Z PICK UP	192	Parent	
70	PLU ENH. SALES	30, 31, 32, 33, 34, 35, 36, 37, 61, 62, 63, 64, 193, 194	Child	
71	RECEIVE CHARE POSTING	165	Parent	
72	ACCT BAL OFFLINE FILE	Used for ITC cash card system	Parent	

IMPORTANT: Prior to beginning Memory Allocation, the following important guideline is to be observed. Develop the UP-600/700 program a Standalone terminal setting.

2. File Table Descriptions:

Please review some of the recommended setting notes related to Memory File Group allocation. These files must be programmed individually at each terminal.

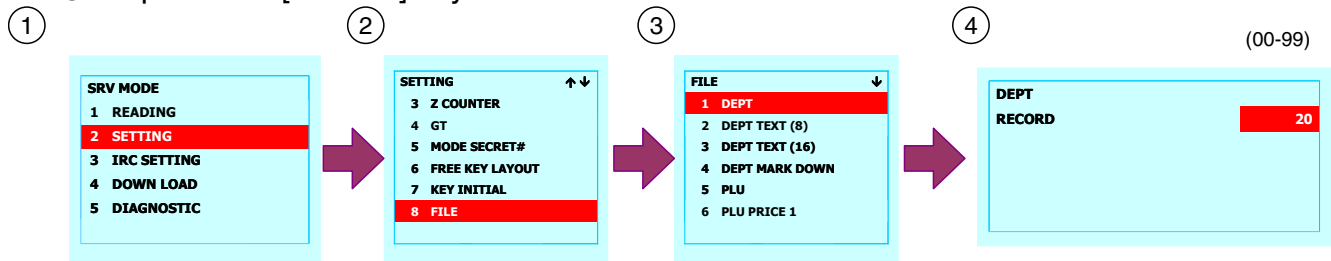
Departments (File Groups #1, #2, #3, #5 #6, and #29)

File Group #1 is the “parent” File Group in which the total number of Departments is set.

Procedure:

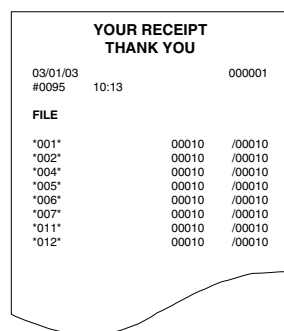
Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [8 FILE]
- ③ Select [1 DEPT]
- ④ Enter the desired number of departments (00 – 99)
- ⑤ Depress the [ENTER] key



Note: The department file is a fixed type allocation. This means that when you allocate a specific number of departments; the specific numbers of departments are held in memory.

Example:



← 10 Departments are allocated and 10 Departments are held in memory.

Allocation Method: File Group #1: DEPT is allocated to the same size at the Standalone, Master and Satellite.

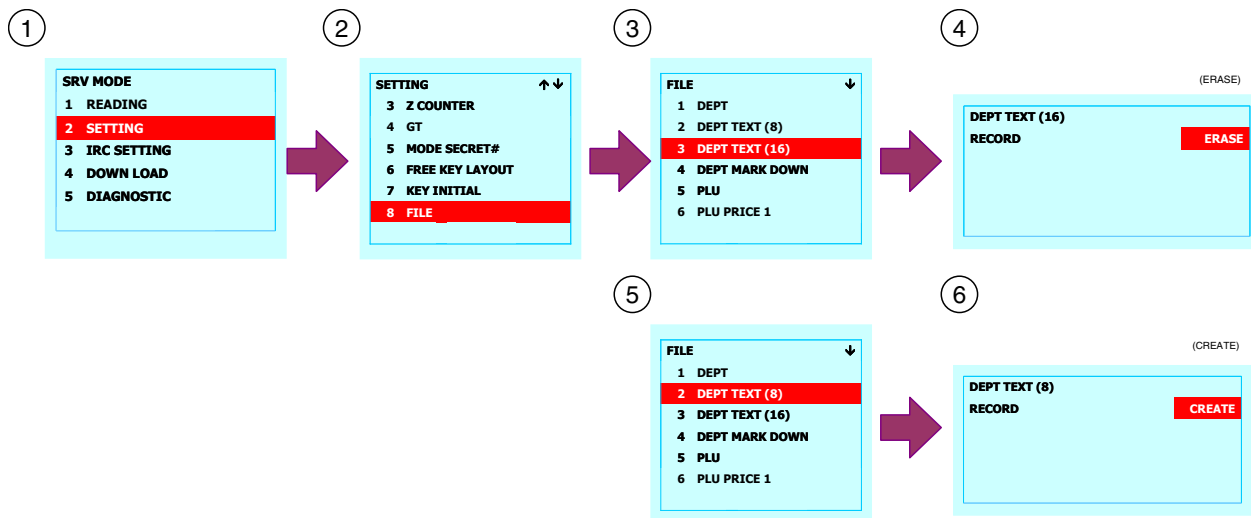
Department Text (File Groups #2, #3)

There are 2 different lengths for text characters for departments. The default allocation uses 16 characters and if memory permits, the File Group No. 3: Dept Text (16) can be deleted to allow allocation of File Group No. 2: Dept Text (8).

Procedure:

Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [8 FILE]
- ③ Select [3 DEPT TEXT (16)]
- ④ Toggle the record selection to “ERASE” (depress the [.] key) followed by depressing the [ENTER] key.
- ⑤ Select [2 DEPT TEXT (8)]
- ⑥ Insure the record selection is set to “CREATE” and follow this by depressing the [ENTER] key.



Allocation Method: File Group #2 or #3: DEPT TEXT (8) or (16) is allocated to the same type at the Standalone, Master and Satellite and follows the File Group #1: DEPT settings

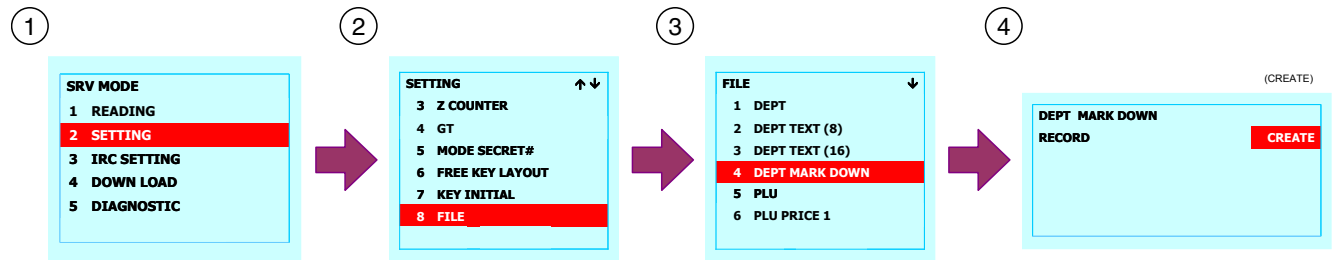
Department Mark Down (File Group #5)

It is possible to report item coupons and discounts by each department when the File Group No. 5: DEPT MARK DOWN file has been allocated. To create this file in memory you must create the file as follows:

Procedure:

Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [8 FILE]
- ③ Select [4 DEPT MARK DOWN]
- ④ Toggle the record selection to "CREATE" (depress the [,] key) followed by depressing the [ENTER] key.



Allocation Method: File Group #5: DEPT MARK DOWN is allocated the same at the Standalone, Master and Satellite and follows the File Group #1: DEPT settings

PLU/UPC Items (File Groups #5, #6, #7, #8, #9 #10, #11, #12, and #50)

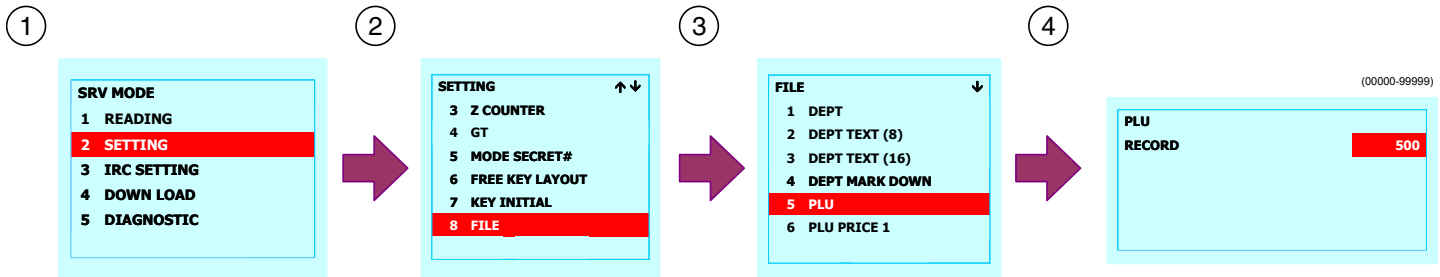
In the UP600/700 the PLU and UPC file group is shared. The system identifies a PLU as an article item with 5 or less digits and an UPC as an article item with 6 – 13 digits. **In File Allocation, PLU refers to both PLUs and UPCs.**

File Group #5 is the “parent” File Group in which the total number of PLU/UPC items is set.

Procedure:

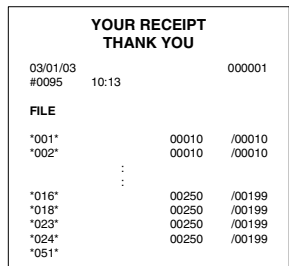
Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [8 FILE]
- ③ Select [5 PLU]
- ④ Enter the desired number of PLU records (00000 – 99999)
- ⑤ Depress the [ENTER] key



Note: The PLU/UPC file is a dynamic type allocation. In summary this means that when you allocate a specific number of PLU/UPC items; only the number of PLU items assigned to a department are held in memory. The total number of PLU/UPC records is dependent on the available memory.

Example:



← 250 PLU/UPC records are allocated and 199 PLU/UPC records are used.

Allocation Method: File Group #5: PLU/UPC is allocated to the same size at the Standalone, Master and Satellite.

PLU/UPC Price Shifts (File Groups #7, #8)

The UP-600/700 PLU/UPC file may have one of two types of Price Shifts:

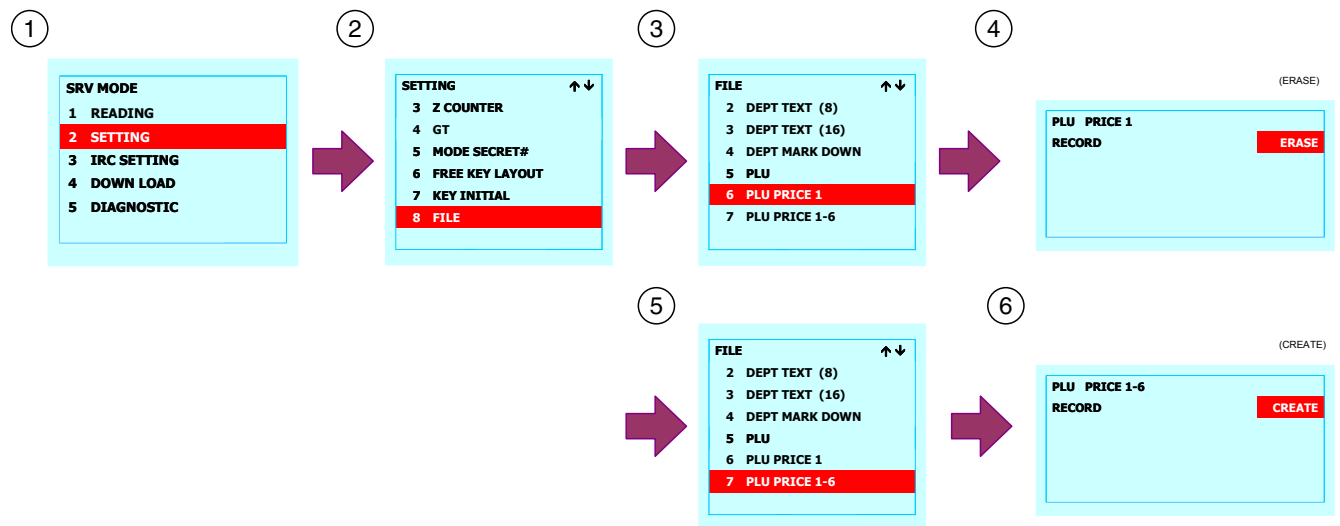
File Group No. 6: PLU/UPC PRICE 1 or **File Group No. 7: PLU/UPC PRICE 1 – 6.**

The MRS allocation uses 1 Price Shift. If multiple price shifts are required, you may delete File Group 6 -Price Shift 1 and create File Group 7 - Price Shift 1-6. **NOTE:** Price shift 1-6 will accumulate more memory.

Procedure:

Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [8 FILE]
- ③ Select [6 PLU PRICE 1]
- ④ Toggle the record selection to “ERASE” (depress the [.] key) followed by depressing the [ENTER] key.
- ⑤ Select [7 PLU PRICE 1-6]
- ⑥ Insure the record selection is set to “CREATE” and follow this by depressing the [ENTER] key.



Allocation Method: File Group #6 or #7: PLU/UPC PRICE 1 or (1 to 6) is allocated based on the number of PLU/UPC records in File Group #5 and must be the same type at the Standalone, Master and Satellite.

PLU Text (File Groups #8, #9, #11, #12)

The MRS allocation uses 16 characters for PLU/UPC Text 1. There are two choices for the length of the PLU/UPC descriptor based for Price 1 or Price (1-6).

File Group Number	Description	Comments
8	PLU/UPC Text 1 (8)	1 Descriptor – 8 Characters
9	PLU/UPC Text 1 (16) - DEFAULT	1 Descriptor – 16 Character
11	PLU/UPC Text 1-6 (8)	6 Descriptors – 8 Characters
12	PLU/UPC Text 1-6 (16)	6 Descriptors – 16 Characters

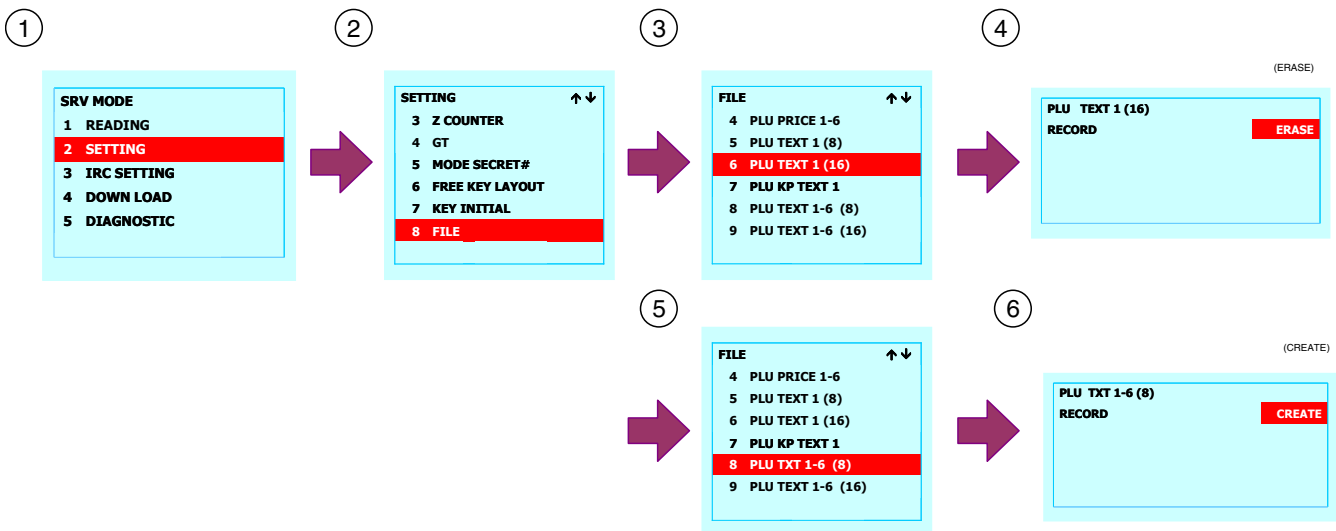
If a different PLU Text is required, you may delete File Group 9 and create File Group 8, 11 or 12.

NOTE: PLU /UPC Text 1-6 (8 or 12) will accumulate more memory.

Procedure:

Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [8 FILE]
- ③ Select [9 PLU TEXT 1 (16)]
- ④ Toggle the record selection to “ERASE” (depress the [.] key) followed by depressing the [ENTER] key.
- ⑤ Select [8 PLU PRICE 1-6 (8)]
- ⑥ Insure the record selection is set to “CREATE” and follow this by depressing the [ENTER] key.



Allocation Method: File Group #8, #9, #11 or #12: PLU TEXT (8) or (16) must be consistent with the PLU/UPC Price(s). The number of records allocated is based on File Group #5 and must be allocated to the same type at the Standalone, Master and Satellite.

E.g. If you choose the MRS setting of File Group #6 (PLU/UPC Price 1), you must select PLU/UPC Text Files Groups 8 (PLU/UPC Text1 (8)) or 9 PLU/UPC Text1 (16)- MRS .

PLU KP Text (File Groups #10, #13)

The PLU KP text File Group is not allocated at MRS. If you wish to use a description other than the PLU text descriptor to print on the remoter printers, the PLU KP text file may be used.

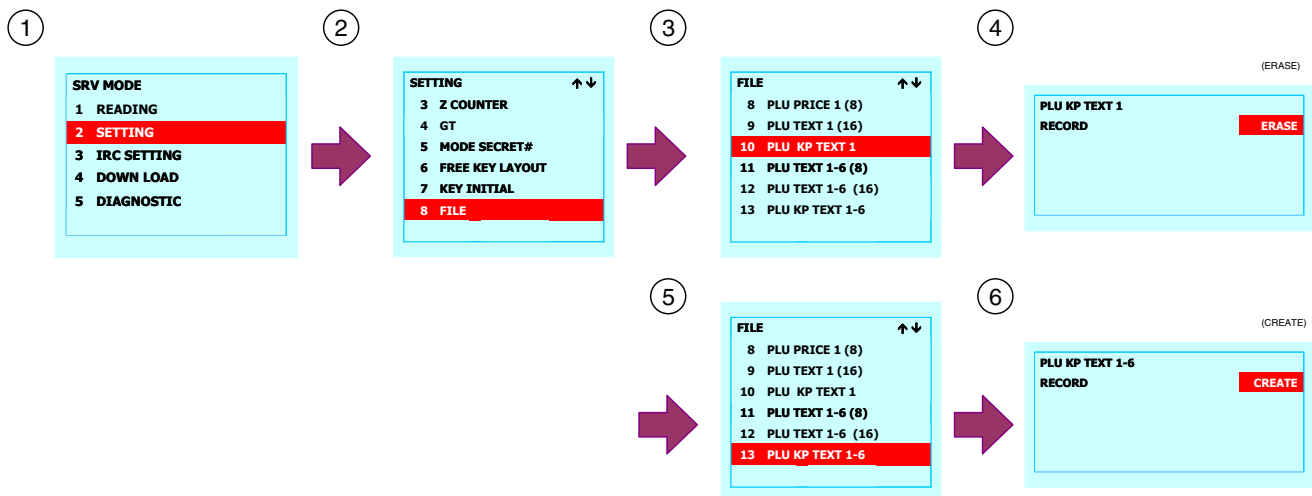
The UP-600/700 PLU file may have one of two types of PLU KP Text – **File Group No. 10: PLU KP Text 1 (12)** or **File Group No. 13: PLU KP Text 1 – 6 (12)**. The File Group used must be consistent with the PLU Price and Text used. Price 1 use Text 1 or Price 1-6 use Text 1-6

NOTE: PLU KP Text 1-6 will accumulate more memory.

Procedure:

Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [8 FILE]
- ③ Select [10 KP TEXT 1 – 6]
- ④ Toggle the record selection to “ERASE” (depress the [.] key) followed by depressing the [ENTER] key.



Allocation Method: File Group #10, #13: KP-TEXT1 or KP-TEXT 1-6. The number of records allocated is based on File Group #5 and must be allocated to the same type at the Standalone, Master and Satellite.

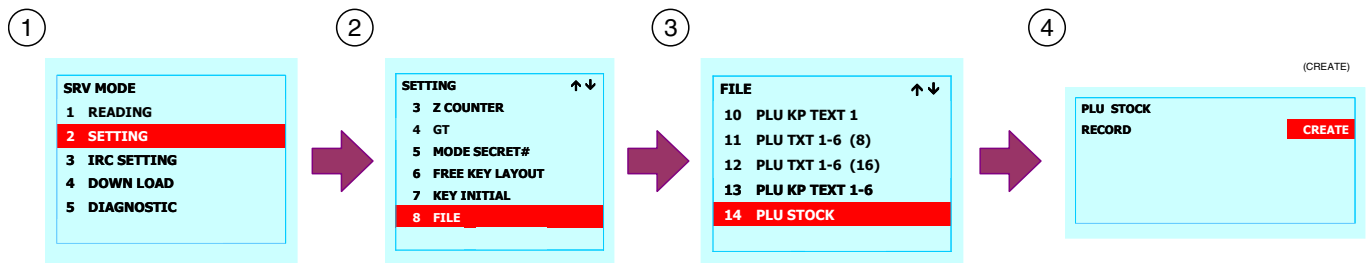
PLU/UPC Stock (File Group #15)

It is possible to report PLU/UPC stock levels by each PLU when File Group No. 15: PLU STOCK has been allocated. The file is allocated based on the number of records allocated in File Group No. 5: PLU/UPC. To create this file in memory you must create the PLU STOCK file as follows:

Procedure:

Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [8 FILE]
- ③ Select [14 PLU STOCK]
- ④ Insure the record selection is set to “CREATE” and follow this by depressing the [ENTER] key.



Allocation Method: File Group #14: PLU STOCK must be allocated at the Standalone, Master and Satellite.

Please consider the general rules listed below when using this feature:

- For the In-Line Configuration, stock keeping is updated by batch processes and not kept in real-time.

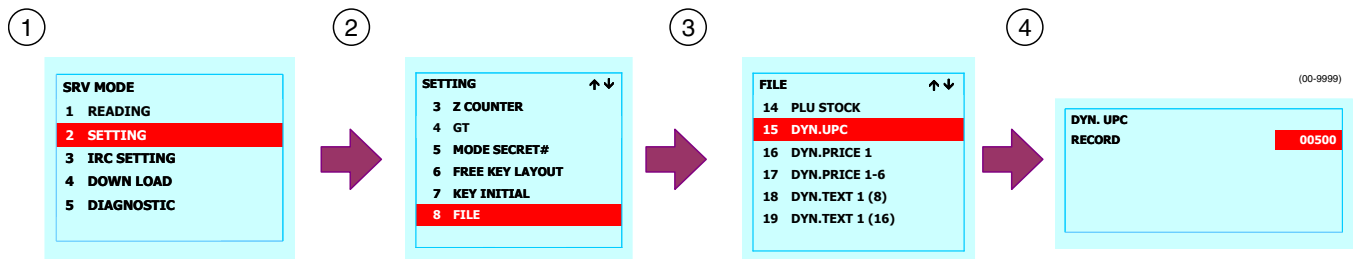
Dynamic UPC (File Group #15) #15,#16,#17,#18,#19,#21,#22,

File Group #15 is the “parent” File Group in which the total number of DYN.UPC records is set. Dynamic UPC also known as the UPC Learning Function, allows you to register a UPC that has not been programmed in the PLU/UPC file. The UPC is added to the Dynamic UPC file memory space, for temporary storage or for a later upload to the 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.

Procedure:

Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [8 FILE]
- ③ Select [15 DYN.UPC]
- ④ Enter the desired number of PLU items (00000 – 99999)
- ⑤ Depress the [ENTER] key



Dynamic. UPC Price Shifts (File Groups #16, #17)

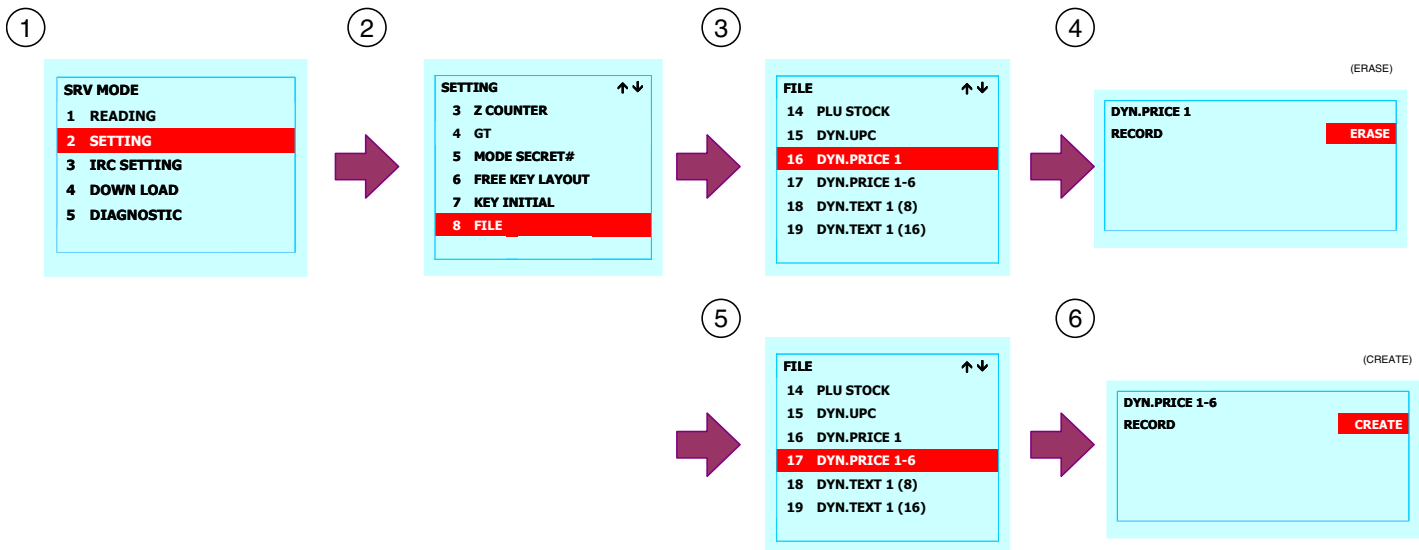
The UP-600/700 UPC file may have one of two types of Dynamic UPC Price Shifts – **File Group No. 16: Dynamic PRICE 1** or **File Group No. 17: Dynamic PRICE 1 – 6**. The default allocation uses Dynamic Price 1. If multiple price shifts are required, you may delete File Group #16 - Dynamic Price 1 and create File Group # 17 Dynamic Price 1-6.

NOTE: Dynamic UPC Price shift 1-6 will accumulate more memory.

Procedure:

Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [8 FILE]
- ③ Select [16 DYN. PRICE 1]
- ④ Toggle the record selection to “ERASE” (depress the [.] key) followed by depressing the [ENTER] key.
- ⑤ Select [17 DYN. PRICE 1-6]
- ⑥ Insure the record selection is set to “CREATE” and follow this by depressing the [ENTER] key.



Allocation Method: File Group #16 or #17: DYNAMIC UPC PRICE 1 or (1 to 6) is allocated based on the number of DYN UPC items in File Group #15 and must be the same type at the Standalone, Master and Satellite.

DYNAMIC.UPC Text (File Groups #18, #19, #21, #22)

The default allocation uses 16 characters for DYNAMIC UPC PRICE 1. If multiple Price shifts required If memory permits, then delete the File Group No. 18: DYN. TEXT 1 (8) to allow allocation of File Group No. 19: DYN. TEXT 1 – 6 (8).

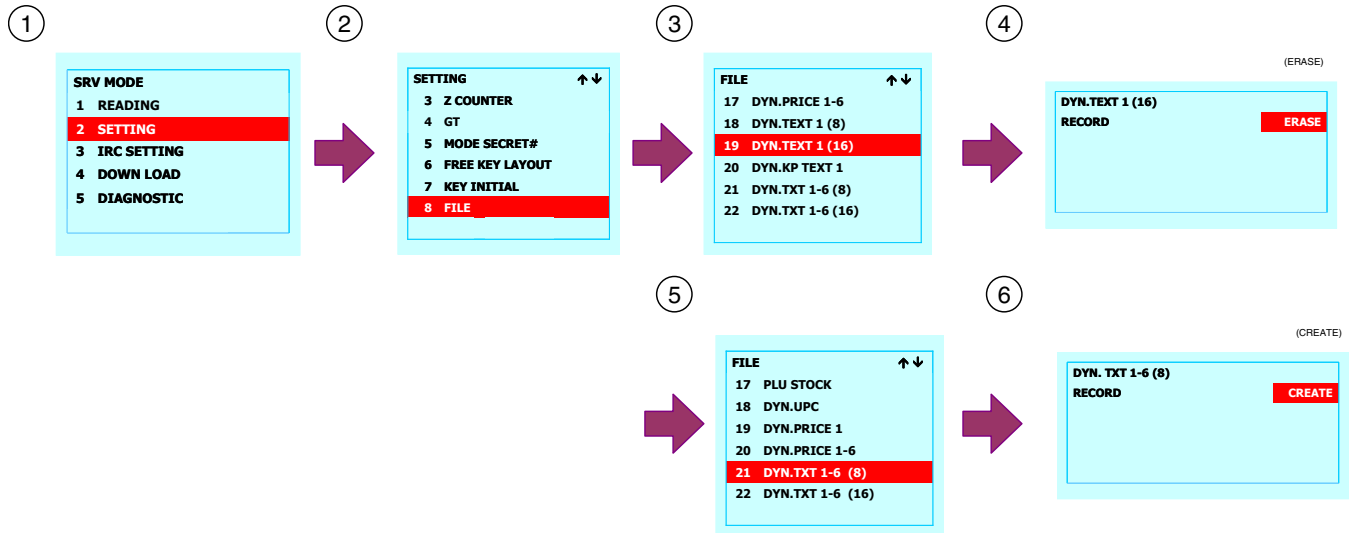
If it is desired to change the number of Price Shifts, then it will be necessary to allocate the desired File Group No. 21: DYN.TEXT 1-6 (8) or File Group No. 22:DYN.TEXT 1-6 (16).

Example: Assumes that the File Group No. 22: DYN. PRICE 1 to 6 has been erased and that File Group No. 16: DYN.PRICE 1 has been created.

Procedure:

Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [8 FILE]
- ③ Select [19 DYN. TEXT 1 (16)]
- ④ Toggle the record selection to “ERASE” (depress the [.] key) followed by depressing the [ENTER] key.
- ⑤ Select [10 PLU PRICE 1-6 (8)]
- ⑥ Insure the record selection is set to “CREATE” and follow this by depressing the [ENTER] key.



Allocation Method: File Group #8, #9, #11 or #12: PLU TEXT (8) or (16) is allocated to the same type at the Standalone, Master and Satellite.

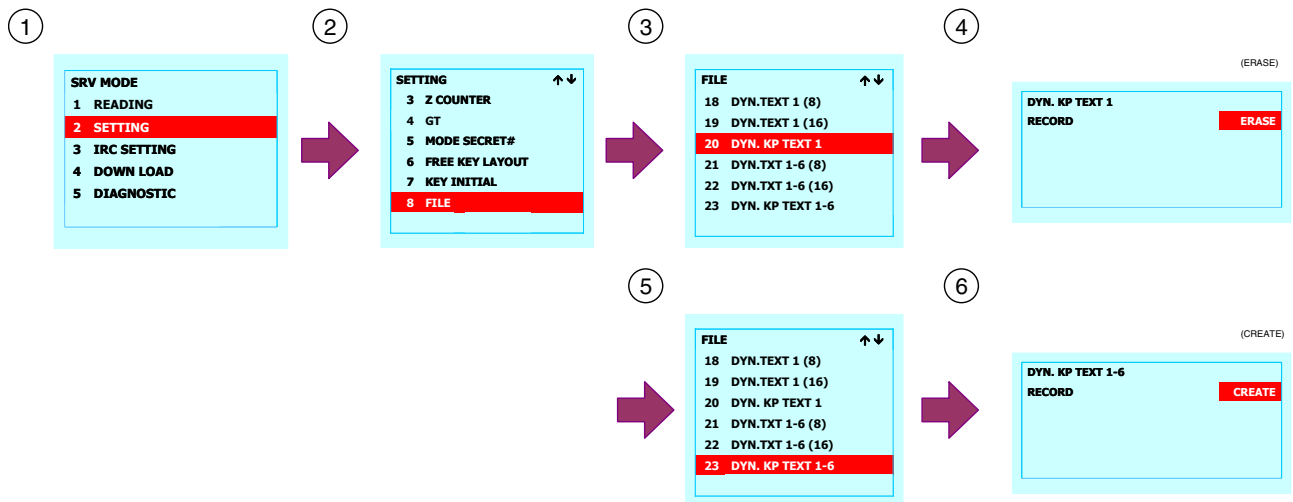
DYNAMIC UPC KP Text (File Groups #20, #23)

If you wish to use a description other than the DYN. Text descriptor to print on the remoter printers, the DYN. KP text file may be used.

Procedure:

Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [8 FILE]
- ③ Select [20 KP TEXT 1]
- ④ Toggle the record selection to “ERASE” (depress the [.] key) followed by depressing the [ENTER] key.



Allocation Method: File Group #20, #23:DYN. KP-TEXT1 or DYN. PLU KP-TEXT 1-6 must be allocated to the same type at the Standalone, Master and Satellite.

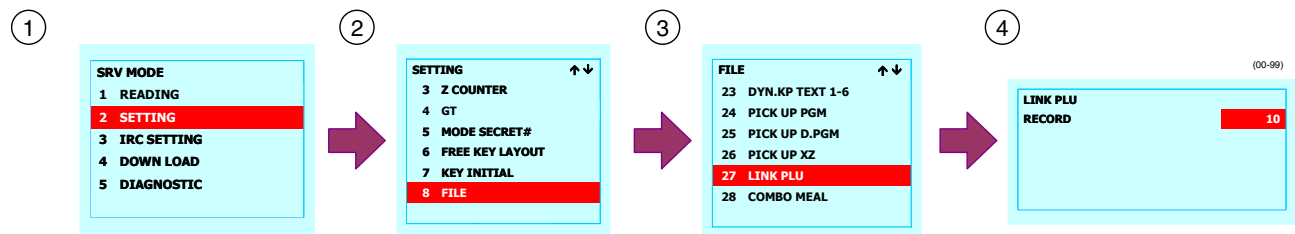
Link PLU (File Group #27)

The link type PLU is used when more than one and up to five items are rung with one key depression. Each unit price is accumulative for those PLU items associated to the link type operation and are printed with the individual unit prices. (e.g. special menu items or messages). To change or delete this file, enter “0” to delete or “01 – 99” as follows:

Procedure:

Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [8 FILE]
- ③ Select [27 LINK PLU]
- ④ Enter “0” to delete (followed by “YES” at the prompt) or enter the number of Link PLU records and follow this by depressing the [ENTER] key.



Allocation Method: File Group #27: LINK PLU tables must be allocated to the same size at the Standalone, Master and Satellite

Combo Meals (File Group #28)

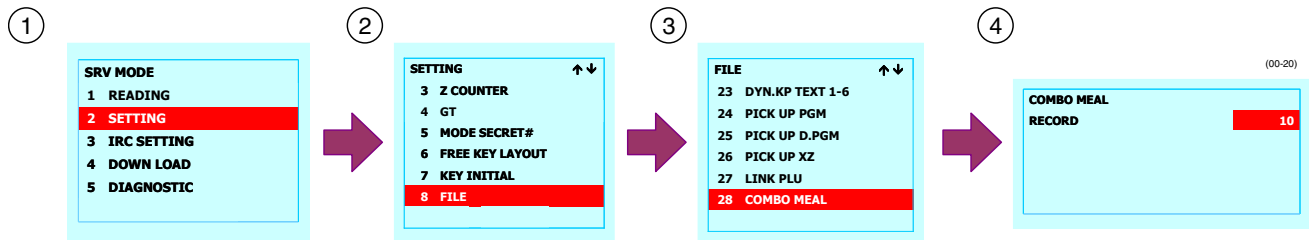
The Combo Meal Table file allocation allows for combining menu items, which exist in the PLU item file and “bundle” them together with a different unit price. The maximum number of PLU items that may be combined in a single table is “9”.

When the Combo Meal key is selected, the adjusted prices are added together and the Combo Meal is entered at a single price based on the calculation. To change or delete this file, enter “0” to delete or “01 – 20” as follows:

Procedure:

Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [8 FILE]
- ③ Select [28 COMBO MEAL]
- ④ Enter “0” to delete (followed by “YES” at the prompt) or enter the number of Combo Meal Tables and follow this by depressing the [ENTER] key.



Allocation Method: File Group #28: Combo Meal tables must be allocated to the same size at the Standalone, Master and Satellite.

Condiment Tables (File Group #30)

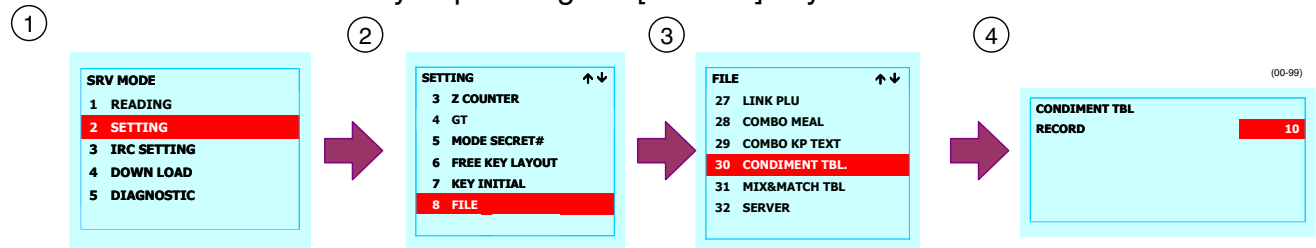
The Condiment Table file allocation allows for assignment of prep instructions to a previously entered PLU or Combo Meal item. The condiment allows for the preset of a “Repeat Counter” as well as assignment to a “Next” table no. when it is necessary to enter more than one instruction for preparing the food.

When a PLU or Combo Meal key is selected, the assigned Condiment Table appears on the keyboard. To change or delete this file, enter “0” to delete or “01 – 99” as follows:

Procedure:

Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [8 FILE]
- ③ Select [30 CONDIMENT TABLE]
- ④ Enter “0” to delete (followed by “YES” at the prompt) or enter the number of Condiment Tables and follow this by depressing the [ENTER] key.



Allocation Method: File Group #30: Condiment tables must be allocated to the same size at the Standalone, Master and Satellite

Please consider the general rules listed below when using this feature:

- A maximum of (51) PLU items can be set within any one-condiment table.
- The first PLU entered in a table is used as the display prompt.
- Repeat times (1 – 9) the number of times the table will appear on screen.
- Next table# is used to designate the next condiment table to display on screen (table linking).
- Condiment type PLU items *CANNOT* be associated to different condiment tables. No sub-windowing.

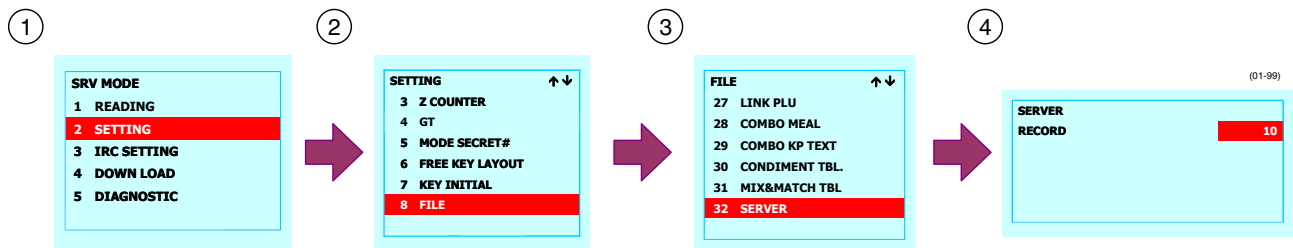
Servers (File Group #32)

The Server File is mandatory for operating the UP-600/700 system. In order to make sales entries a Server must be signed on to the POS terminal. The server file is a fixed-type allocation and when reports are issued, all servers are printed. To change this file in memory you must modify the Server file as follows:

Procedure:

Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [8 FILE]
- ③ Select [22 SERVER]
- ④ Enter "0" to delete (followed by "YES" at the prompt) or enter the number of Server records and follow this by depressing the [ENTER] key.



Allocation Method: File Group #22: SERVER is to be allocated at the Standalone, Master and Backup Master (based on SRV Job#920-B).

Listed below are some things to consider when using this function:

- The maximum number of Servers is 255
- It is mandatory to have Servers allocated. **Do not delete this file**
- For the Inline configuration, the Server system is centralized at the Master
- When a terminal is a Satellite, do not modify this file – the system will modify/set this file allocation upon the IRC SETTING
- Secret coded Servers are a preset 4-digit code in PGM mode
- When a Back-Up Master is part of the In-Line configuration, then it is necessary to allocate the Server related File Groups to the same number of records as the Master.
- Only one Server may be signed on at any terminal at a time
- The UP-600/700 employs two types of Server systems;
 - 1st: Auto sign on/off system
(Servers are automatically signed off when the transaction is finalized)
 - 2nd: Stay-down system
(Servers can be signed and remain signed on until physically signed off)

Sign Off Server (File Group #33)

A Master in the Inline system configuration uses the Sign-Off Server File. The usage of the file is to monitor, which Server is signed on at a particular terminal (In-Use Flag). This file does not have to be allocated and is automatically allocated during the SRV Job for IRC SETTING.

Allocation Method: *File Group #24: SERVER SIGN OFF is only allocated at the Master and the Backup Master (based on SRV job #920-B).*

Caution: This allocation is used in some error recovery procedures after a system is installed and a Server number becomes unavailable due to a malfunction at a Satellite. Avoid allocating this file unless instructed to.

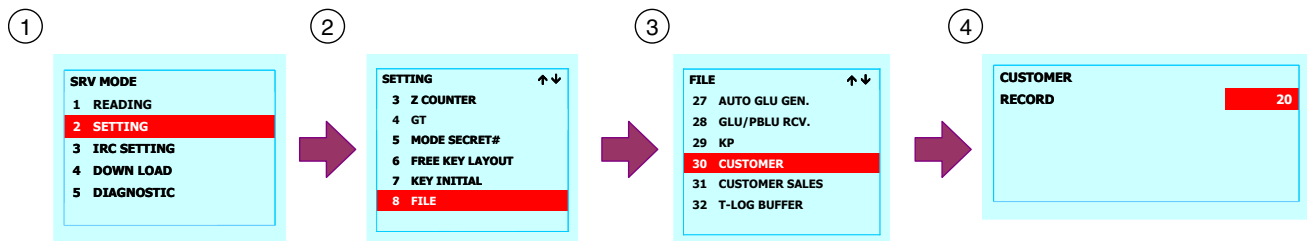
Customer (File Group #43)

File Group No. 43: CUSTOMER is the file group that is used to allocate the necessary file for the dedicated collection of summary or detailed sales data by a Customers code. This file is allocated at the master.

Procedure:

Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [8 FILE]
- ③ Select [43 CUSTOMER]
- ④ Enter "0" to delete (followed by "YES" at the prompt) or enter the number of Customer records and follow this by depressing the [ENTER] key.



Allocation Method: File Group #43: CUSTOMER is to be allocated at the Standalone, Master and Backup Master (based on SRV Job#920-B).

Listed below are some things to consider when using this function:

Customer Sales (File Group #44)

File Group No. 44: CUSTOMER SALES is the file allocated when the sales entries of customers are to be tracked and reported. The detail or summary information of an customer sale is tracked and may be and can be calculated as follows:

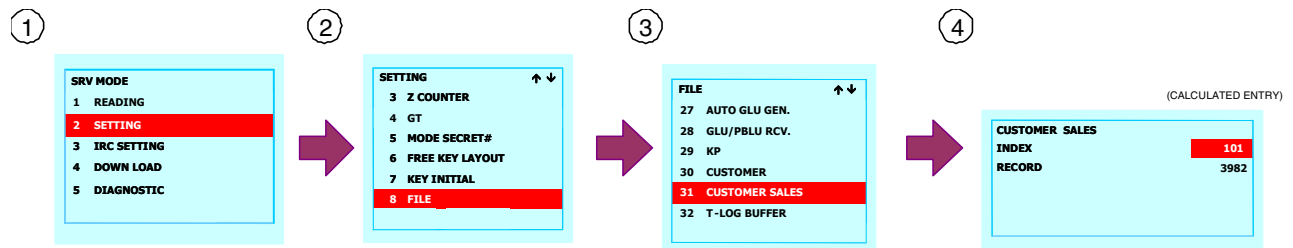
Examples:	Detailed	Summary
No. Terminals	5	5
No. Total Customers (System-wide) + 1	101	101
Avg. No. Items per Check	32	7
REG BUFFER setting	150	150
Calculation	$(101 \times 32) + (5 \times 150)$	$(101 \times 7) + (5 \times 150)$
No. Records Required	3232 + 750	700 + 750
Allocation Entry:	Index = 101	Index = 101
	Records = 3982	Records = 1450

To change this file in memory you must modify the CUSTOMER as follows:

Procedure:

Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select 8 FILE
- ③ Select [44 CUSTOMER SALES]
- ④ Enter "0" to delete (followed by "YES" at the prompt) or enter the Index (no. Customers) and the Records (calculation) and follow each by depressing the [ENTER] key.



Allocation Method: File Group #43: CUSTOMER SALE is to be allocated at the Master and Backup Master (based on SRV Job#920-B).

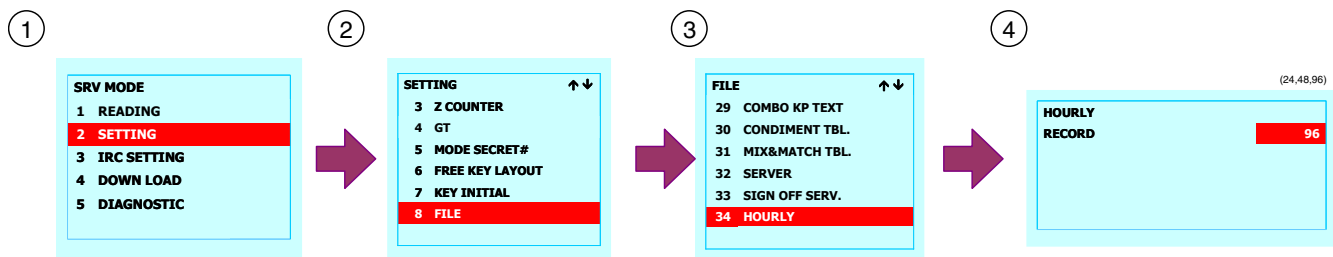
Hourly (File Group #34)

File Group No. 34: HOURLY is the file allocated when the restaurant owner wishes to summarize “Net Sales” by specific ranges of time. This report is updated after individual sales transactions are executed and stored by a pre-defined time interval. The allocation is (no. Days +1). To change this file in memory you must modify the HOURLY as follows:

Procedure:

Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [8FILE]
- ③ Select [34 HOURLY]
- ④ Enter “0” to delete (followed by “YES” at the prompt) or enter the number of (days +1) required to store totals and follow this by depressing the [ENTER] key.



Allocation Method: File Group #34: HOURLY is allocated the same at the Standalone, Master and Satellite

Listed below are some things to consider when using this function:

- The allocation must match the type PGM2 setting for the Hourly Time Interval: 15 min. (96), 30 min. (48) or 1 hour (24)
- The recommended setting is to leave the default settings which covers all requirements

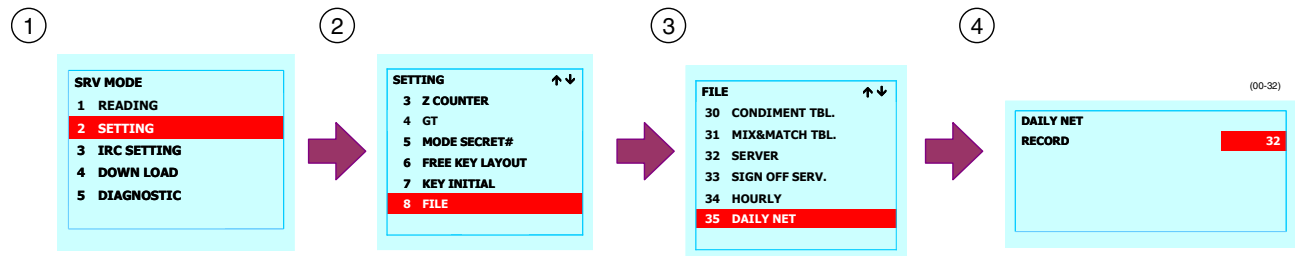
Daily Net (File Group #35)

File Group No. 35: DAILY NET is the file allocated when the restaurant owner wishes to summarize “Net Sales” by calendar dates. This report is updated after individual Transaction Z1 Reports are executed. The allocation is (no. days +1). To change this file in memory you must modify the DAILY NET as follows:

Procedure:

Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [8 FILE]
- ③ Select [35 DAILY NET]
- ④ Enter “0” to delete (followed by “YES” at the prompt) or enter the number of (days +1) required to store totals and follow this by depressing the [ENTER] key.



Allocation Method:

File Group #35: DAILY NET is to be allocated the same at the Standalone, Master and Satellite

Listed below are some things to consider when using this function:

- The recommended setting for File Group #35: DAILY NET is 31 (31 days + 1)

GLU/PBLU (ALL) (File Group #38)

File Group No. 38: GLU/PBLU (ALL) is the file allocated when the GLU/PBLU Guest Check Lookup/Previous Balance Lookup function is required. A Guest Check sale is tracked in detail (GLU) or summary (PBLU) and can be calculated as follows:

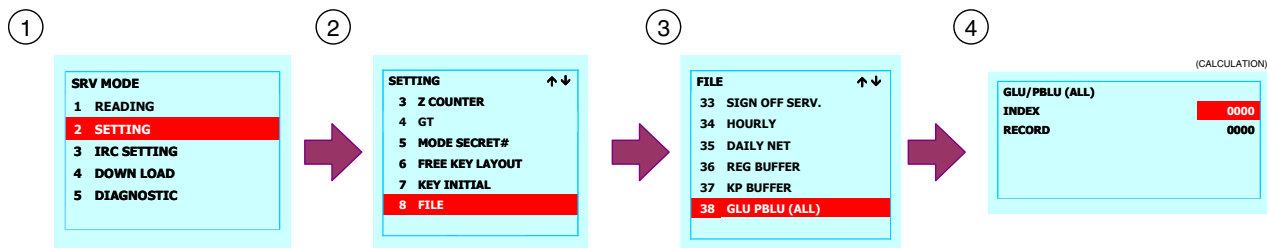
Method	Memory	Calculation
Detailed (GLU)	Index	No. Total Open Checks at a time
	Record	(Avg. no. Items per check) x (no. Open Checks) + (No. Terminals x REG BUFFER size)
Summary (PBLU)	Index	No. Total Open Checks at a time
	Record	(7) x (no. Open Checks) + (No. Terminals x REG BUFFER size)

To change this file in memory you must modify the GLU/PBLU (ALL) as follows:

Procedure:

Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [8 FILE]
- ③ Select [38 GLU/PBLU (ALL)]
- ④ Enter "0" to delete (followed by "YES" at the prompt) or enter the Index (no. Checks) and the Records (calculation) and follow each by depressing the [ENTER] key.



Allocation Method:

File Group #38: GLU/PBLU (ALL) is to be allocated at the Standalone, Master, Satellite and Backup Master (based on SRV Job#920-B and SRV Job#921-B).

Listed below is an example how to calculate the Index and Record setting for this function:

Examples:	Detailed	Summary
No. Terminals	5	5
No. Total Checks (System-wide) + 1	101	101
Avg. No. Items per Check	32	7
REG BUFFER setting	250	250
Calculation	$(101 \times 32) + (5 \times 250)$	$(101 \times 7) + (5 \times 250)$
No. Records Required	3232 + 1250	707 + 1250
Allocation Entry:	Index = 101	Index = 101
	Records = 4482	Records = 1957

Please consider the general rules listed below when using this feature:

- Used when it is necessary to clear the Open GLU/PBLU preset area (File Group #38)
- The Open GLU/PBLU file area should be erased using this File Group when:
 - SRV job # 919-A is changed from a GLU type system to a PBLU type system and vice-versa and preserves the GLU related buffers

Closed GLU (File Group #39)

File Group No. 39: CLOSED GLU is the file allocated in conjunction with the GLU (Guest Look Up) function and is used to track the GLU (Guest Checks), which have been closed by a Media function for payment. This file is also used for the EDIT TIP function. The Closed GLU is tracked in summary and can be calculated as follows:

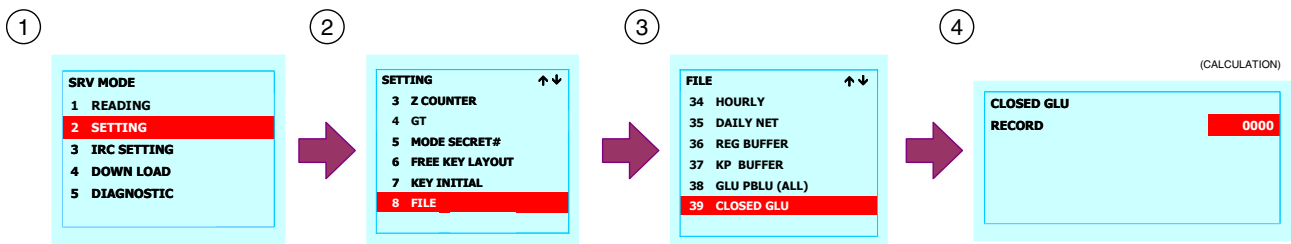
Method	Memory	Calculation
Summary	Index	No. Total Checks closed for a reporting period (e.g. 1 day)
	Record	(2) x (No. Checks closed)

To create this file in memory you must allocate the CLOSED GLU file as follows:

Procedure:

Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [8 FILE]
- ③ Select [39 CLOSED GLU]
- ④ Enter "0" to delete (followed by "YES" at the prompt) or enter the Records (no. Guest Checks x 2) and follow each by depressing the [ENTER] key.



Allocation Method: File Group #39: CLOSED GLU is to be allocated at the Standalone, Master and Backup Master (based on SRV Job#920-B and SRV Job #921-B)

Listed below is an example how to calculate the Record setting for this function:

Examples:	Summary
No. Closed Guest Checks (for 1 day)	300
No. Records per Check	2
Calculation	300 x 2
Allocation Entry:	Records = 600

Listed below are some things to consider when using this function:

- For the centralized Inline configuration, the Closed GLU file allocation is at the Master
- When a terminal is a Satellite, do not modify this file – the system will modify/set this file allocation upon the IRC SETTING

Auto Generation (File Groups #40)

File Groups No. 40: AUTO GLU GEN. File that are allocated when it is desired to generate the GLU (Guest Check) numbers automatically. The allocation for these files can be calculated as follows:

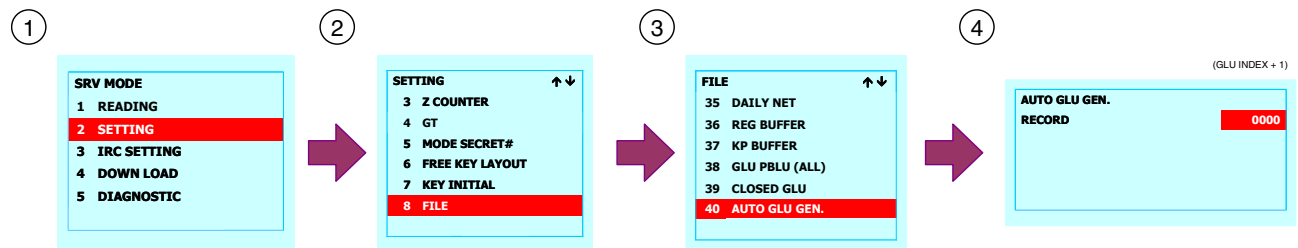
No.	File Group	Calculation
40	Auto GLU Gen.	Index from File Group #35: GLU/PBLU (ALL) + 1

To create these files in memory you must allocate them as follows:

Procedure:

Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [8 FILE]
- ③ Select [40 AUTO GLU GEN.]
- ④ Enter "0" to delete (followed by "YES" at the prompt) or enter the Records and follow each by depressing the [ENTER] key.



Allocation Method: File Group #40: AUTO GLU GEN. and File Group #40: DRIVE THRU GEN. are allocated at the Standalone, Master, Satellite and Backup Master (based on SRV Job #921-B).

Listed below are some things to consider when using this function:

- The GLU number range is preset in PGM2 (e.g. 1 – 100)
- The number generated will be the lowest available number within the range

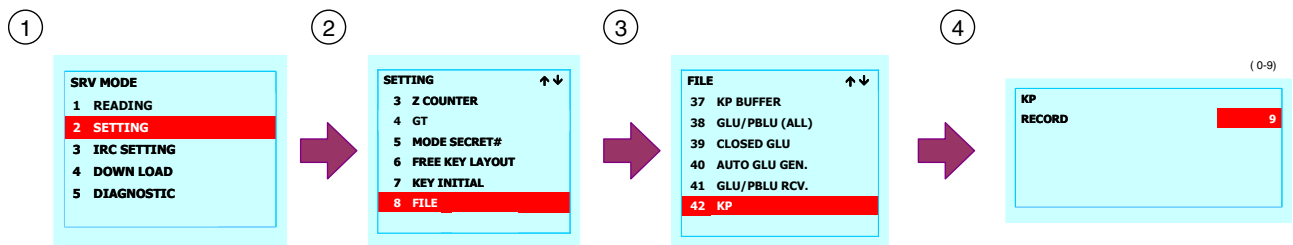
KP and KP Buffers (File Groups #42 and #34)

File Groups No. 42: KP and File Group No. 37: KP BUFFER work together to provide a maximum of (9) Kitchen printers with a buffer allocated to provide Inline system printer routing between terminals. To change this file in memory you must modify the KP as follows:

Procedure:

Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [8 FILE]
- ③ Select [42 KP]
- ④ Enter "0" to delete (followed by "YES" at the prompt) or enter the number of KP (kitchen printers) and follow this by depressing the [ENTER] key.



Allocation Method: File Group #42 and #37: KP and KP BUFFER are to be allocated the same at the Standalone, Master and Satellite

Listed below are some things to consider when using this function:

- The recommended setting for File Group #42: KP is 9
- File Group #36: REG BUFFER controls File Group #37: KP BUFFER

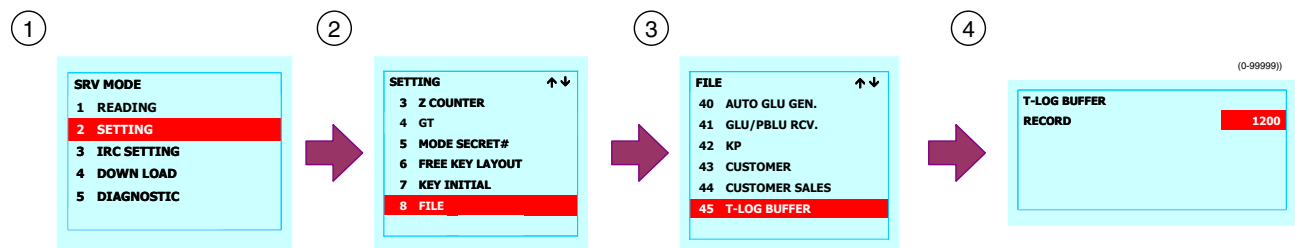
T-Log Buffer (File Group #45)

File Group No. 45: T-LOG BUFFER is the file allocated in certain configurations where a Back Office application collects the T-Log data for processing. The T-Log (Transaction Log) data collects and stores sales entry data made in the REG and MGR modes. To modify this file in memory you must allocate the T-LOG BUFFER file as follows:

Procedure:

Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [8 FILE]
- ③ Select [45 T-LOG BUFFER]
- ④ Enter "0" to delete (followed by "YES" at the prompt) or enter the Records and follow by depressing the [ENTER] key.



Allocation Method:

File Group #45: T-LOG BUFFER is allocated at the Standalone, Master and Satellite and is controlled by SRV Job#923-C

Listed below is an example how to calculate the Record setting for this function:

Examples:	Calculation
Satellite	(Avg. No. Items) x (No. Transactions)
Master	(Avg. No. Items) x (Total No. Transactions)

Listed below are some things to consider when using this function:

- For the Inline configuration, the T-LOG BUFFER file allocation is used
- The actual setting for the T-Log When a terminal is a Satellite, do not modify this file – the system will upon the IRC SETTING

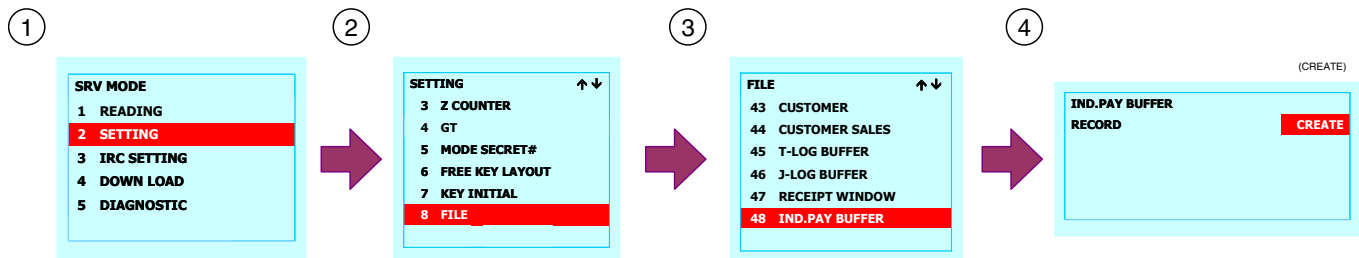
Individual Pay Buffer (File Group #48)

The Individual Pay Buffer is not included from MRS defaults. File Group No. 46: IND. PAY BUFFER is allocated when the Bill is separated and individual payment is desired. To create this file in memory you must create the IND.PAY BUFFER file as follows:

Procedure:

Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [8 FILE]
- ③ Select [48 IND.PAY BUFFER]
- ④ Insure the record selection is set to “CREATE” and follow this by depressing the [ENTER] key.



Allocation Method: File Group #48: IND.PAY BUFFER will automatically be set to the File Group #36: REG BUFFER and must be allocated to the same level at the Standalone, Master and Satellite.

Buffers (File Groups #36, #41, #46, #47, #48, #55,)

The UP-600/700 system utilizes numerous buffers to manage the system's functions and calculations. The following System Buffers are available for modification and are outlined below:

System Buffer Descriptions		
No.	File Group	System Usage
36	Register Buffer	The edited registration buffer is used for consolidating like items, receipt printing, calculations and updating totalizers
41	GLU/PBLU Receive Buffer	Used at the Master during Inline communications as a temporary buffer for centrally controlling GLU entries and updating
46	J-Log Buffer	Used for journal printing and acts as the buffer for the printer re-routing function in an Inline configuration
47	Receipt Window Buffer	Is the display control for the Receipt Window on the screen while in REG-mode
48	Individual Payment Buffer	The temporary buffer for the Register Buffer during the Individual Guest Check Payment operation
55	B.T. Buffer	The temporary buffer for the Register Buffer during the Individual Guest Check Bill Totalizing and Transfer operation

Notes:

The maximum file settings for Systems Buffers are indicated below:

- File Table #138 (Register Buffer): Set according to the number of items in a transaction
(MRS Default = 250 – this is recommended unless otherwise informed)
- File Table #117 (Edited Register Buffer): Refers to File Table #117 automatically
- File Table #119 (GLU/PBLU Buffer): Refers to File Table #117 automatically
- File Table #120 (B.T. Buffer): Refers to File Table #117 automatically
- File Table #121 (KP Buffer): Refers to File Table #117 automatically
- File Table #122 (GLU/PBLU Rcv. Buffer): Refers to File Table #117 automatically
- File Table #123 (GLU/PBLU Save Buffer): Refers to File Table #117 automatically
- File Table #126 (J-Log Buffer): 100 Records
- File Table #127 (Receipt Window Buffer): 30 Records
- File Table #128 (Individual Pay Edit Buffer): Refers to File Table #117 automatically
- File Table #129 (Individual Pay Buffer): Refers to File Table #117 automatically

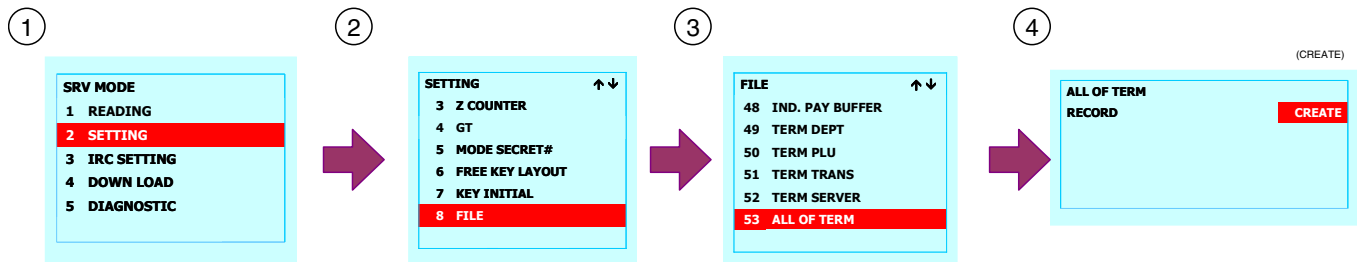
Term File Groups (File Groups #49, #50, #51, #52, #53)

Term files are allocated to provide “period-to-date” totalizers for Departments, PLU, transaction and Server sales. For simplified term file allocation, File Group No. 51: ALL OF TERM FILE is provided to globally create or erase all of the term files at one execution. To create these files in memory you must create the ALL OF TERM FILE as follows:

Procedure:

Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [8 FILE]
- ③ Select [53 ALL OF TERM FILE]
- ④ Insure the record selection is set to “CREATE” and follow this by depressing the [ENTER] key.



Allocation Method:

File Group #53: ALL OF TERM FILE will automatically create File Groups #49 - #53 and must be allocated to the same level at the Standalone, Master and Satellite

Please consider the general rules listed below when using this feature:

- PLU TERM file allocation is not available at Master Reset and can be allocated if period-to-date totals are required for PLU item sales.

Section-3: More on Memory Allocation**IMPORTANT:**

Memory File Allocation – Must be determined before any extensive PGM2 Mode Programming is started.

1. Overview:

In order to store programming and sales data, not only must space in memory be available, but also the logic circuitry must know exactly where in memory it resides in order to retrieve it on demand. If an additional number of functions (such as increasing the number of PLU items from default, or the “out of box” number) were to be made available, additional RAM has to be added to the register to hold this information. Until a few years ago, RAM additions to the register were mounted in specific RAM slots, depending upon the function that was to be expanded. For example, if PLU items were to be expanded, the chip had to be mounted in the RAM slot that was used for PLU items.

The limitation of additional memory chips to specific functions is a disadvantage because the unused portion of the chip could not be used for anything else. If another function, such as “Previous Balance Files”, was to be expanded, a “PB” chip had to be installed even though there may have been sufficient unused memory on the “PLU” chip.

To solve this problem, the method of memory access in the register was changed so that if an optional RAM chip was installed, the memory in that chip could be used for any purpose. Instead of designating the whole chip to a function, separate portions of the memory area of the chip are set aside for any of the functions that can be expanded, utilizing the chip’s storage capabilities.

Memory in this type of register is seen by the logic as one continuous block of addresses. Additional memory added to the register takes up where the last address of the previous chip left off resulting in a larger block.

Before any portion of the memory can be utilized for storage of a specific function, the logic must know how large a block of the memory area needs to be set aside, or “allocated” for that function.

Memory is allocated for each function by programming. This programming references the File Allocation Table (FAT) which provides the following information:

- A list of the files that are in the register (FDS records)
- Each file’s maximum and minimum expansion limits
- The default size of each file
- The amount of RAM memory (in bytes) required for each function
- Each file’s reference number (Table or Group #) used for programming

2. Glossary or Terms:

The following terminology is used when discussing the Memory File Allocation Table:

Table #: This is a reference number for the file and is used in the actual File Allocation Programming

File Name: Indicates the purpose of the particular file.

File #: Is used to indicate individual files (by giving them a unique file number) the POS terminal's application can prevent conflicts in memory allocation by preventing selected files from being opened at the same time. For example, you cannot have memory allocated for both 8 character departments and 16 character departments at the same time.

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

“ # Records” is usually divided into two columns on the file table – MRS DEFAULT and MAXIMUM. When asterisks denote the Maximum number of records for the file, it is limited only by the available memory in the machine.

Blocks: The “Blocks” referred to are actually individual memory areas set aside for transaction data for each *Server*. Each block of memory has a fixed number of records in it. Each record corresponds to a particular piece of data that would be printed in the *Server* Report. Block counts other than “1” are seldom recommended.

Label Size: This denotes the number of bytes in the header area of each memory file. The number of bytes in the label *MUST* be added to the number of bytes in the record length to get an accurate number of bytes each record requires.

Record Length: Shows the number of bytes required for the data in each record within a specific file.

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

3. File Types:

There are four types of files that can be listed in the File Allocation, depending upon the register model:

Primary Files: These include functions such as Departments, PLU and Servers. The register usually references the size of these files when the other types of files are opened by the register's logic. Operational buffers, such as the "Register Buffer", are also considered to be Primary Files.

Primary Files also include those files opened for report data storage such as Term, Gross Margin, Daily Net, Hourly, and Transaction. Without these files being opened, these reports cannot be run.

Save Files (IRC – Master and Satellite): These are memory areas that hold transaction sales data to be retrieved by the Master in registers in an Inter-Register Communications (IRC) System when a Consolidation Report is performed. If SAVE Files are used, they must be present in all the registers in the IRC System. SAVE Files cannot be entered through normal (FILE Allocation) programming, if they have been programmed as "enabled" in Service Job Code 924 programming, the file memory will automatically be created when the IRC SETTING is executed. These files are always opened to the same size as the corresponding Primary File. If the number of records in the Primary File is changed, the number of records in the SAVE Files will automatically change to the same size.

Receive Files (IRC – Master/Backup Master Only): These files are automatically opened in the "Master register" in an IRC System when the IRC SETTING job is executed. They provide a buffer area for transaction sales data retrieved from the Satellite(s) when a Consolidation Report is performed. The size (number of records) of the Receive Files is always opened to the same size as the corresponding Primary File in the Master. To insure there will be room for all the data from the Satellite(s), the Satellite's memory allocation MUST match the Master's Primary Files.

Consolidation Files (IRC – Master/Backup Master Only): Data received by the Master from the Satellite(s) in its Receive Files is totaled in the Master's Consolidation Files to provide store-wide reports. As with the other IRC Files, these files are opened when the IRC SETTING job is executed at the Master/Backup Master (based on SRV Job#920-B) to the same size as the corresponding Primary Files.

4. Calculating Memory Usage

Calculating the memory needed for specific applications is very important. This information is needed to know what RAM options are required. On the other hand, given a set amount of RAM, it enables you to determine the maximum number of functions (such as PLU items and Guest Check) that can be implemented.

The general formula for calculating the memory required for any particular file requires is:

$$TN = NR (x) NB (x) RL$$

Where:

TN = Total Number of bytes.
NR = Number of Records
NB = Number of Blocks
RL = Record Length

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

Remember that the Label Size *must* be added to the Record Length in order to get the actual number of bytes required for each record.

When calculating memory, it's also important to remember that if the number of records (or blocks) of a Primary file is changed, the files that follow the primary's size will also be changed. This is especially important in IRC. For example, if the number of PLU items is changed in an IRC Master using SAVE files, the SAVE PLU, Receive PLU, and Consolidation PLU Files will be automatically changed by the same amount.

Section – 4: PERIPHERALS

Section-1: Overview

This section has been developed to assist in the implementation of peripheral devices that require connection to an RS232 port and are not part of the Inline system or communicate to external host devices.

The following devices are considered peripheral devices:

Peripheral Devices		
No.	Device	Abbreviation
1	Receipt/Journal Printer	01. R/J Printer
2	Bill Printer	02. Bill (SLIP)
3	Report Printer	03. Report Printer
4	Validation Printer	04. Validation (VP)
5	CAT – Credit Card Authorization	15. CAT#2 - covered in another section
6	Scanner	17. BCR(Scanner)
7	Scale	18. Scale
8	Coin Dispenser	19. Coin Disp.
9	Online	20. Online - covered in another section

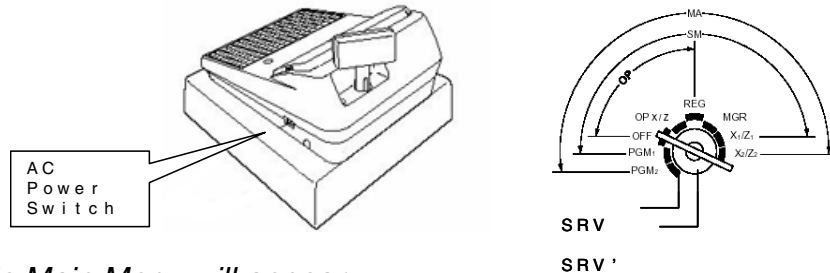
Device configuration programming consists of SRV and PGM2 – mode-programming jobs, which define the peripheral devices which make up the UP-600/700 system.

1. Entering the SRV-Mode

To enter SRV-mode programming, you must turn the SRV key counter clock wise to the 6 o'clock position wait five seconds and turn the SRV key to the 7 o'clock position.

Procedure:

- ⑨ Turn the AC Power Switch “OFF”
- ⑩ Set the mode switch to (SRV) position
- ⑪ Turn on the AC Power Switch “ON”



The SRV-mode Main Menu will appear:

CAUTION:

Never place the Service key to the SRV' or SRV position while AC power is applied – severe damage may result to the RAM and program contents.

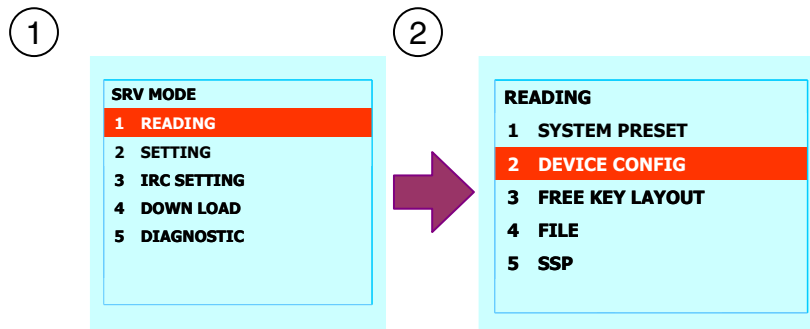
2. SRV-mode Program Readings:

List of SRV-mode Program Reports:

Device Config		
Mode	Main Menu	Sub Menu
SRV-Mode	1 READING	2 DEVICE CONFIG

Procedure:

- (1) Enter the SRV-Mode as previously outlined
- (2) Select [1 READING]
- (3) Select [2 DEVICE CONFIG]



Caution:
 When adding peripheral devices, it is critical not to assign more than 1-type device to the same channel no. Please verify that multiple type devices are not assigned to the same channel no.

Example:

- Printers **“CAN”** share the same Channel No. Assignment
- Printers and a Scale **“CANNOT”** share the same Channel No. Assignment

3. PGM-mode Program Readings:

The PGM mode readings for peripheral devices are associated to the other presets readings (ex: Dept., PLU, Media Keys, etc.) which may be found within each section.

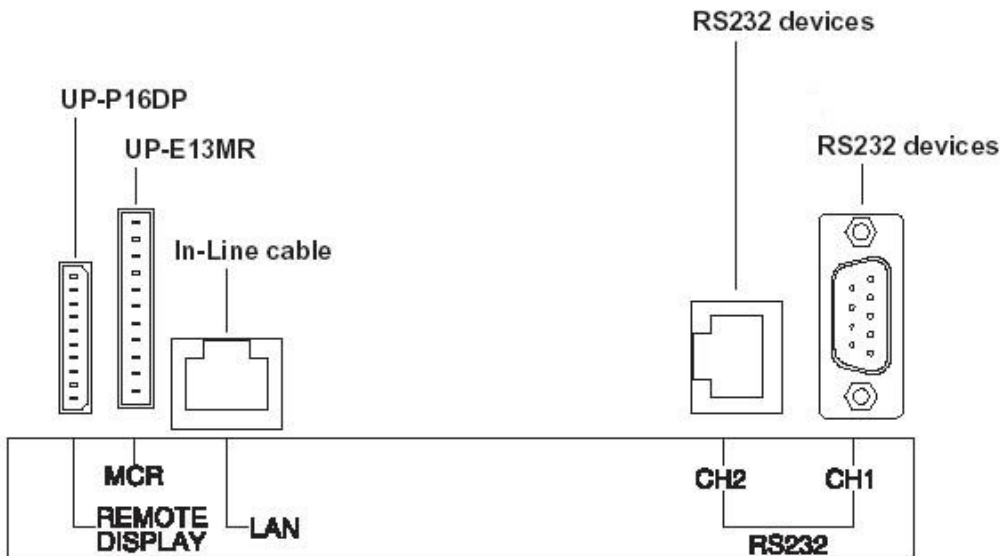
Section-2: Peripheral Device Overview

Prior to programming, it is important to insure that the hardware connections necessary for each device are accomplished. As a basic rule, the following steps may be used for each peripheral device:

1. Connecting the UP600/700:

Procedure:

- 1 Connect the specified RS232 cable to the desired Channel to be assigned
- 1 Install a ferrite core (part no. RCORF6699BHZZ) within 50 cm of the connector on the connection cable to reduce interference



2. Cabling Specifications:

As a general rule, each peripheral’s manufacturer should provide their recommended specifications for cabling to the peripheral device. The below guideline for cabling should be observed when connecting a serial device to the UP600/700 terminal:

Cabling Specifications:

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

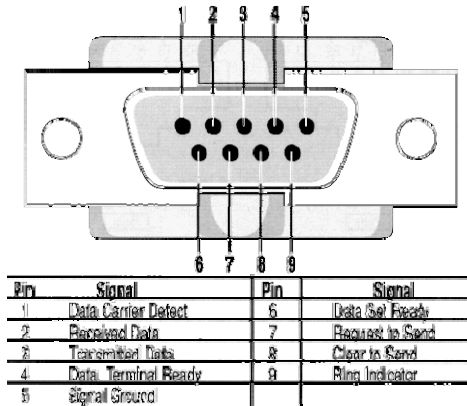
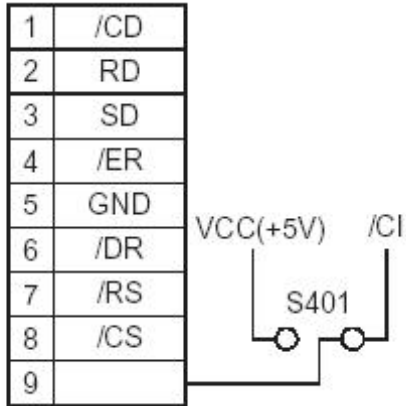
* The true maximum distance will be determined by the quality of the cable

3. CN1 and CN2 Connector:

CH1 utilizes a standard PC-type COM Port - EIA-574 RS-232 pin out on a DB-9 pin used for Asynchronous Data for RS232.

1) PORT 1 (CH1) (CN402)

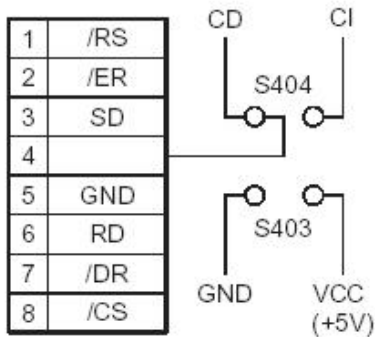
Connector type: D-SUB 9pin
Data rate: max. 38,400 bps



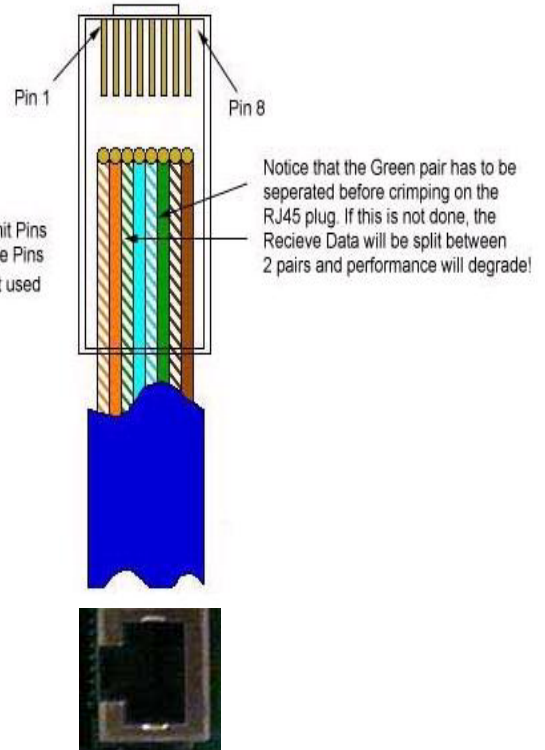
CH2 utilizes a Modular Jack RJ45 8 pin type COM Port for RS232.

2) PORT2 (CH2) (CN403)

Connector type: Modular jack RJ45 8pin
Data rate: max. 115,200 bps



Pins 1 & 2 are the Transmit Pins
Pins 3 & 6 are the Receive Pins
Pins 4, 5, 7, and 8 are not used

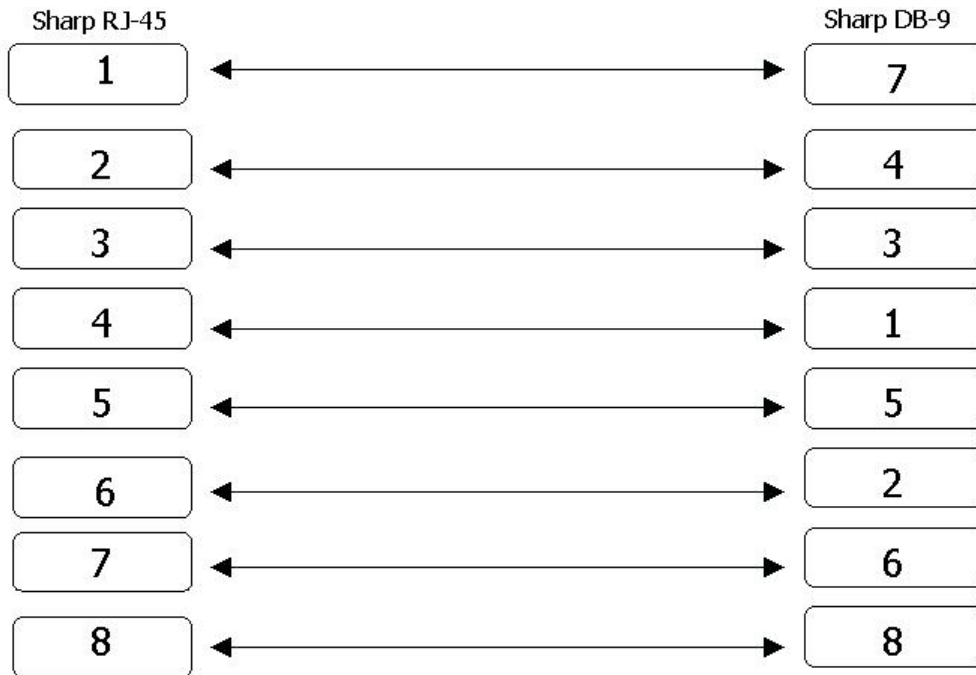


4. Conversion Cable

With the exception of printers, to attach devices to CN 2 a DB9 to RJ45 Conversion Cable is required. See the appropriate peripheral for other cable requirements.

Modular Conversion Cable for CH2

Datacomm Part# DCN100226-3E (800) 544-4627



Section-3: Printers

A variety of printers may be configured with the UP600/700 system. As a basic rule, the following steps may be used for each peripheral device:

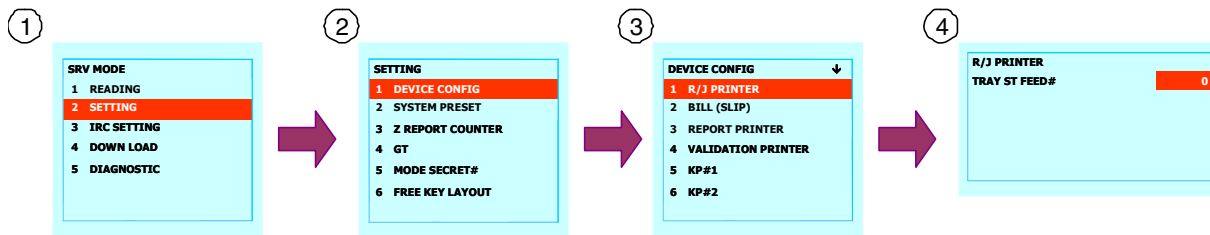
1. R/J Printer setup

The Receipt and Journal printer are built-in (internal) to the UP-600/700 POS System.

Procedure

Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [1 DEVICE CONFIG]
- ③ Select [1 R/J PRINTER]



- ④ Enter the desired Channel # and choose the desired parameters:
 - **Light & Shade**
 - **Image Foot** ← to view the choices printers depress the [DECIMAL or SBTL] key
 - **Print (Buffering or Real Time)** ← to view the choices printers depress the [DECIMAL or SBTL] key
 - **Tray ST Feed#**
- ⑤ Depress the [CASH] key when all settings are completed
The menu will return to the Device Config Sub-Menu
- ⑥ Depress the [CANCEL] key to return to the SRV Mode Setting Sub-Menu

NOTE:
 When “ALL” devices are assigned to the desired Channel No., it is recommended that a PROGRAM Reset be performed.

Assignment Method:
The CHANNEL NO. assignment is required at the machine where the printer is physically connected. For the Inline configuration – the TERMINAL and CHANNEL of the machine where the printer is physically located is required

- Please consider the general rules listed below when using this feature:
- A printing device can not be assigned to a Channel where a non-printing device is already assigned (ex: SCALE)

Related Programming Jobs: J-Printer

SRV Mode

SRV Menu / Job#		Description
Setting – System Preset	908-D	Printing of X/Z Report

PGM2 Mode

PGM Menu	Selection	Description	Options
2. Setting	10. Optional	4. Printing Select	Journal Select
			Journal Size Tax Status

Related Programming Jobs: R-Printer

SRV Mode

SRV Menu / Job#		Description
Setting – System Preset	904-A	Printing of Date
Setting – System Preset	904-B	Printing of Consecutive Number
Setting – System Preset	911-D	Receipt Header Format
Setting – System Preset	912-D	Receipt Logo Format
Setting – Free Key	950	Function No. 58 RCPT (Copy Receipt)
		Function No. 167 RCP. SW [Receipt On/Off]

PGM2 Mode

PGM Menu #	Selection	Description	Options
2. Setting	5. Media	1. Cash	Footer on Receipt Number of Receipt Chit Receipt
		2. Check	
		3. Charge	
		7. Service	
		8. Final	
	10. Optional	3. Print Selection Formats	Time Printing Tax Status

2. BILL Printer setup

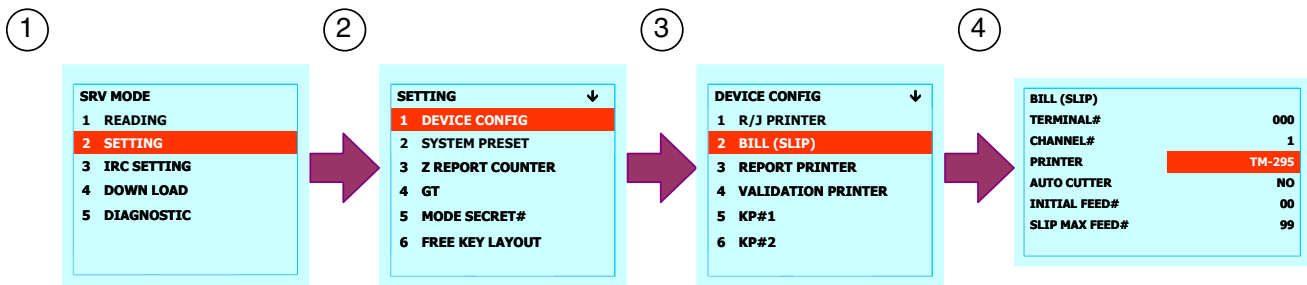
A BILL printer may be added to the UP600/700 configuration for printing Guest checks. The selected Epson series printers may be used and setup as outlined below:

ONLY! The UP-700 ONLY ROM Version RAU2A/RAV2A may be used to allow the UP-700 internal printer to also be used as a Bill Printer. The UP-600 requires an external printer.

Procedure

Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [1 DEVICE CONFIG]
- ③ Select [2 BILL (SLIP)]



- ④ Enter the desired Terminal # and/or Channel # and choose the desired parameters:
 - **Printer Name (Type)** ← to view the available printers depress the [DECIMAL OR SBTL] key
 - **Auto Cutter Yes/No**
 - **Initial Feed # = 02 min.**
 - **Slip Max Line = 32 or 36 to prevent the printer from going into an endless loop.**

- ⑤ Depress the [CASH] key when all settings are completed
The menu will return to the Device Config Sub-Menu

- ⑥ Depress the [CANCEL] key to return to the SRV Mode Setting Sub-Menu

NOTE:
When “ALL” devices are assigned to the desired Channel No., it is recommended that a PROGRAM Reset be performed.

Assignment Method: *The CHANNEL NO. assignment s required at the machine where the printer is physically connected. For the Inline configuration – the TERMINAL and CHANNEL of the machine where the printer is physically located is required*

Please consider the general rules listed below when using this feature: A printing device cannot be assigned to a Channel where a non-printing device is already assigned (ex: SCALE)

Related Programming Jobs: BILL Printer

SRV Mode

SRV Menu / Job#		Description
Setting – System Preset	911D	Slip Header Detail
Setting – System Preset	913-A, B	Escape Compulsory Bill Printing
Setting – System Preset	921C = 1	To retain detail
Setting – System Preset	928-C	Printing of “0” Price Items on Bill
		Printing of PLU Text in a Combo Meal on Bill
Setting – System Preset	928-D	Compulsory Bill Printing Method
Setting – Free Key	950	Function No. 57 [BILL]
		Function No. 129 [PBAL]
		Function No. 130 [N.C.]
		Function No. 136 [SERVICE]
		Function No. 132 [FINAL]

PGM2 Mode

PGM Menu#	Selection	Description	Option
2. Setting	5. Media	1. Cash	Header On Bill Footer On Bill Bill Print Compulsory
		2. Check	
		3. Charge	
		7. Service	
		8. Final	
	10. Optional	4. Printing Select	Print Items on Bill
	11. Logo Text	3 Bill Logo	Header and Footer

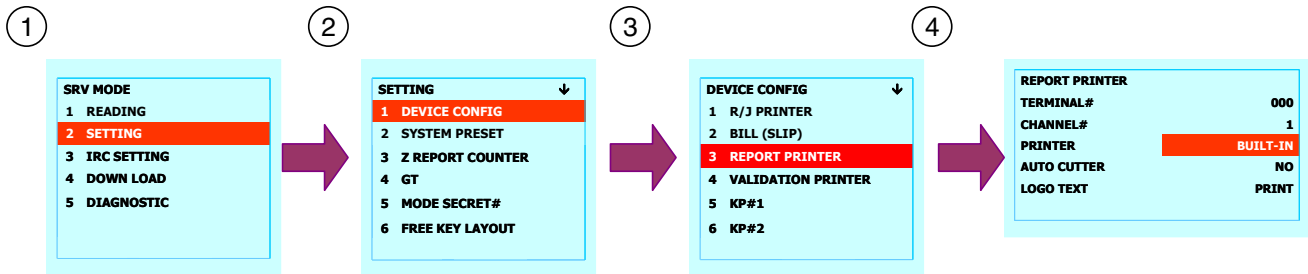
3. Report Printer setup

The Report printer may be added to the UP600/700 configuration for issuing Individual or System Sales Reports. The Epson series printers may be used and may be setup as outlined below:

Procedure

Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [1 DEVICE CONFIG]
- ③ Select [3 REPORT PRINTER]



- ④ Enter the desired Terminal # and/or Channel # and choose the desired parameters:
 - **Printer Name (Type)** ← to view the available printers depress the [DECIMAL or SBTL] key
 - **Auto Cutter Yes/No**
 - **Logo Text** ← to view the choices depress the [DECIMAL or SBTL] key
- ⑤ Depress the [CASH] key when all settings are completed
The menu will return to the Device Config Sub-Menu
- ⑥ Depress the [CANCEL] key to return to the SRV Mode Setting Sub-Menu

NOTE:
 When “ALL” devices are assigned to the desired Channel No., it is recommended that a PROGRAM Reset be performed.

Assignment Method:
The CHANNEL NO. assignment is required at the machine where the printer is physically connected. For the Inline configuration – the TERMINAL and CHANNEL of the machine where the printer is physically located is required

- Please consider the general rules listed below when using this feature:
- A printing device can not be assigned to a Channel where a non-printing device is already assigned (ex: SCALE)

Related Programming Jobs: Report Printer

SRV Mode

SRV Menu / Job#		Description
Setting – System Preset	905	Taxable 4 Subtotal, Gross Tax, Refund, Net Tax GST EXPT print on X/Z Report
Setting – System Preset	908-D	Printing of X/Z Report
Setting – System Preset	909-B	Printing PLU/UPC sales data on Z Report
Setting – System Preset	909 A, C	Printing Training GT, VOID Mode Totalizer on X/Z Report
Setting – System Preset	917	Printing Tax 1,2,3, and manual Tax on X/Z Report
Setting – System Preset	918D	Tip Totalizer Reset and Print
Setting – System Preset	925	In-Line Reporting

PGM2 Mode

PGM Menu #	Selection	Description	Options
2. Setting	10. Optional	1. Func. Prohibit	OPXZ Report Auto Hourly
		2. Func. Select2	

4. Validation Printer setup

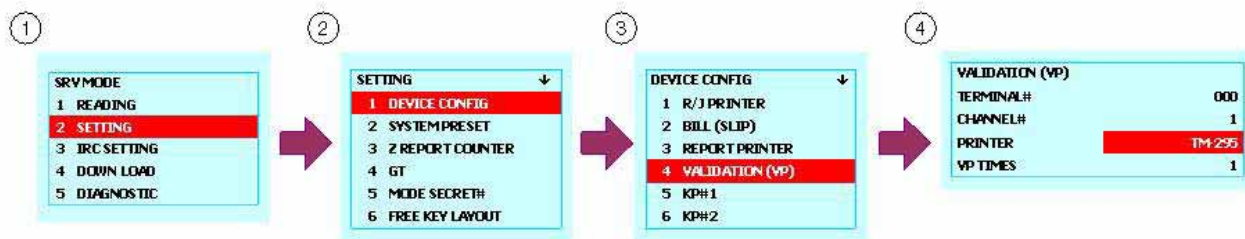
A Validation Printer may be added to the UP600/700 configuration to allow for the VP Text Message e.g. FOR DEPOSIT ONLY.

Only the Epson TM-295 series printers may be used as a Validation Printer.

Procedure

Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [1 DEVICE CONFIG]
- ③ Select [4 VALIDATION PRINTER (VP)]



- ④ Enter the desired Terminal # and/or Channel # and choose the desired parameters:
 - **Printer Name (Type)** ← to view the available printers depress the [DECIMAL or SBTL] key
 - **VP Times (0-9)**
- ⑤ Depress the [CASH] key when all settings are completed
The menu will return to the Device Config Sub-Menu
- ⑥ Depress the [CANCEL] key to return to the SRV Mode Setting Sub-Menu

NOTE:
 When “ALL” devices are assigned to the desired Channel No., it is recommended that a PROGRAM Reset be performed.

Assignment Method:
The CHANNEL NO. assignment is required at the machine where the printer is physically connected. For the Inline configuration – the TERMINAL and CHANNEL of the machine where the printer is physically located is required

- Please consider the general rules listed below when using this feature:
- A printing device can not be assigned to a Channel where a non-printing device is already assigned (ex: SCALE)

Related Programming Jobs: Validation Printer

SRV Mode

SRV Menu# / Job#		Description
Setting – System Preset	913-A =1	Validation Print Format and Contents (Tendered Amount)
Setting – System Preset	928	VP Message printing n slip enabled for Check & Charge
Setting – Free Key		Function No. 56 [PRINT]

PGM2 Mode

PGM Menu #	Selection	Description	Options	
2. Setting	01. Article	01. Department	Compulsory Validation	
		02. PLU/UPC		
	05. Media	1. Cash	VP Non-Compulsory or Compulsory	
		2. Check		
		3. Charge		
		7. Service		
	10. Optional	8. Final	1. Func. Select1	Item, RF/RT, (-), CA/CHK RA, PO and Tip VP
		13. Logo Text		

Epson Series Printers

Epson TM-U295:

TM-U295 Switch-1 Settings:

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
SW1-10	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

Epson TM-U300:

Switch Settings

Switch Settings				
Switch	Contents	ON	OFF	UP-3301 Requirements
SW-1	Data Receive error	Ignored	Prints “?”	OFF
SW-2	Receive Buffer Capacity	48 bytes	4 Kbytes	OFF
SW-3	Handshaking	XON/XOFF	DTR/DSR	OFF
SW-4	Word Length	7 bits	8 bits	OFF
SW-5	Parity check	with Parity	without Parity	OFF
SW-6	Parity selection	Even parity	Odd parity	OFF
SW-7	Baud Rate setting	(*1)		OFF
SW-8	Baud Rate setting	(*1)		OFF
SW-9	Internal use (fixed)	Ignored	Prints “?”	OFF
SW-10	Internal use (fixed)	Connect	Not connected	OFF

(*1) Baud Rate selection

Rate	SW-7	SW-8
1200	ON	ON
2400	OFF	ON
4800	ON	OFF
9600	OFF	OFF

Epson TM-T80:

Switch Settings

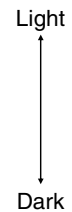
Switch Settings				
Switch	Contents	ON	OFF	UP-3301 Requirements
SW1-1	Data Receive error	Ignored	Prints “?”	OFF
SW1-2	Receive Buffer Capacity	45 bytes	4 Kbytes	OFF
SW1-3	Handshaking	XON/XOFF	DTR/DSR	OFF
SW1-4	Parity check	with Parity	without Parity	OFF
SW1-5	Parity selection	Even parity	Odd parity	OFF
SW1-6	Baud Rate setting	(*1)		ON (9600)
SW1-7	Baud Rate setting	(*1)		OFF
SW1-8	Print Density selection	(*2)		OFF (Level2)
SW1-9	Print Density selection	(*2)		OFF
SW1-10	(fixed to OFF)	—	—	OFF

(*1) Baud Rate selection

Rate	SW1-6	SW1-7
1200	ON	ON
4800	OFF	ON
9600	ON	OFF
19200	OFF	OFF

(*2) print Density selection

Level	SW2-2	SW2-3
Level-1	ON	ON
Level-2	OFF	OFF
Level-3	ON	OFF
Level-4	OFF	ON



Epson TM-T85:

Switch Settings

Switch Settings				
Switch	Contents	ON	OFF	UP-3301 Requirements
SW1-1	Data Receive error	Ignored	Prints “?”	OFF
SW1-2	Receive Buffer Capacity	45 bytes	4 Kbytes	OFF
SW1-3	Handshaking	XON/XOFF	DTR/DSR	OFF
SW1-4	Parity check	with Parity	without Parity	OFF
SW1-5	Parity selection	Even parity	Odd parity	OFF
SW1-6	Baud Rate setting	(*1)		ON (9600)
SW1-7	Baud Rate setting	(*1)		OFF
SW1-8	Print Density selection	(*2)		OFF (Level2)
SW1-9	Print Density selection	(*2)		OFF
SW1-10	(fixed to OFF)	—	—	OFF

(*1) Baud Rate selection

Rate	SW1-6	SW1-7
1200	ON	ON
4800	OFF	ON
9600	ON	OFF
19200	OFF	OFF

(*2) print Density selection

Level	SW2-2	SW2-3
Level-1	ON	ON
Level-2	OFF	OFF
Level-3	ON	OFF
Level-4	OFF	ON



Epson TM-T88 (2):

Switch Settings

TM-T88(3)				
Switch	Contents	ON	OFF	UP-3301 Requirements
SW1-1	Data Receive error	Ignored	Prints “?”	OFF
SW1-2	Receive Buffer Capacity	45 bytes	4 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	Transmission Speed	(*1)		ON (9600)
SW1-8	Transmission Speed	(*1)		OFF
SW2-1	Busy Condition	Buffer Full – Off Line	Buffer Full – Printer error	OFF
SW2-2	Do Not Change	–	–	OFF
SW2-3	Print Density/Low power	(*2)		OFF
SW2-4	Print Density/Low power	(*2)		OFF
SW2-5	Release condition of Receive error	Remaining receive buffer capacity reaches 138 bytes	Remaining receive buffer capacity reaches 256 bytes	OFF
SW2-6	Do Not Change	–	–	OFF
SW2-7	Do Not Change	–	–	OFF
SW2-8	Do Not Change	–	–	OFF

(*1) Baud Rate selection

Rate	SW1-7	SW1-8
1200	ON	ON
4800	OFF	ON
9600	ON	OFF
19200	OFF	OFF

(*2) print Density selection

Level	SW2-2	SW2-3
Low power consumption mode	ON	ON
1 (Normal)	OFF	OFF
2 (Medium)	ON	OFF
3 (Dark)	OFF	ON

Data Transmission Format

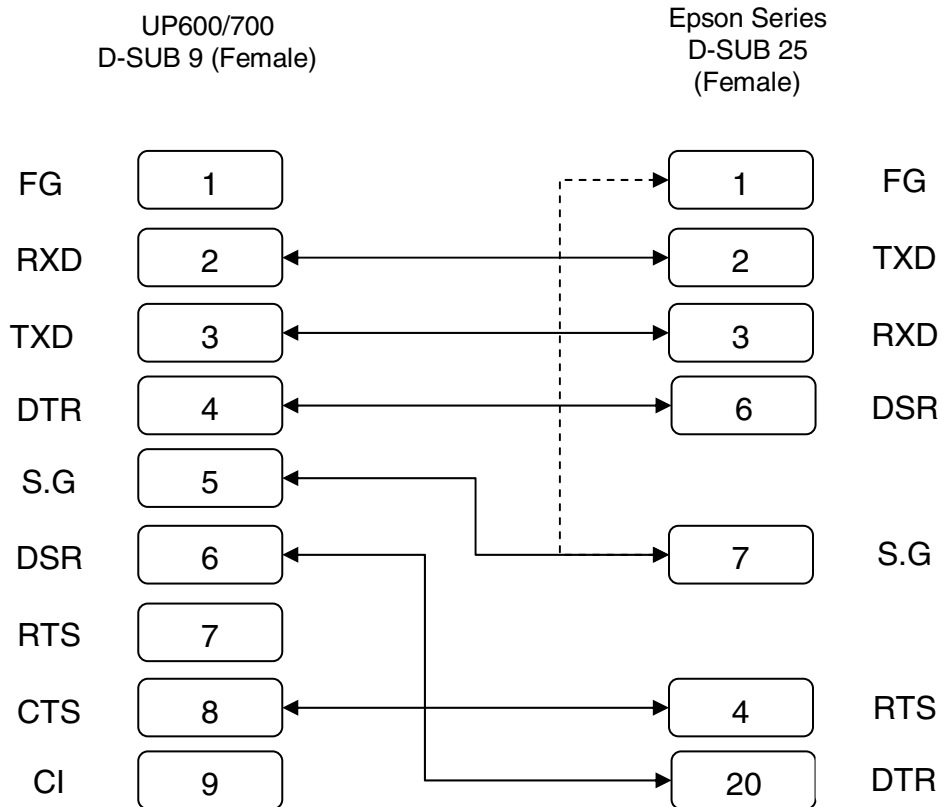
- 7 bits ASCII code
- One Start bit
- Even Parity
- One Stop bit
- Baud Rate: 9600 bps asynchronous

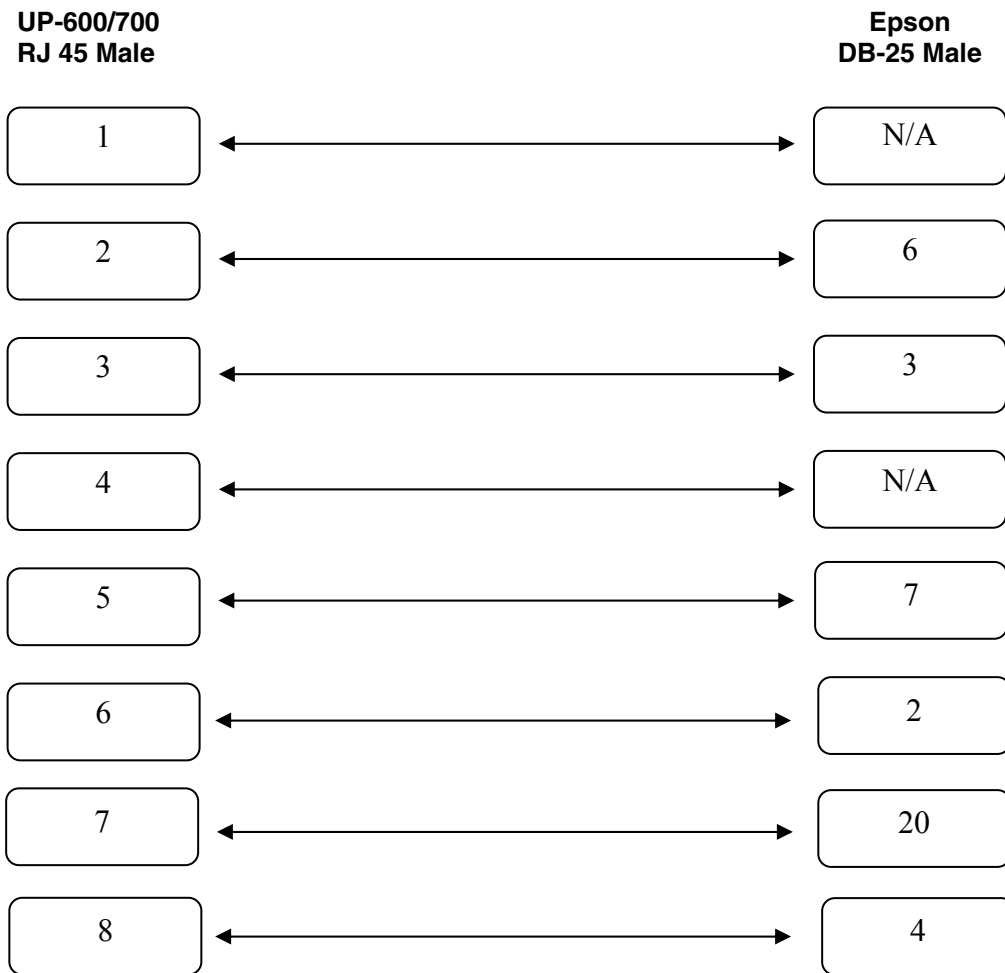
Connection Cable

The pin outs for the Epson Series printers are shown below:

DB-9 to DB-25 Printer Cable

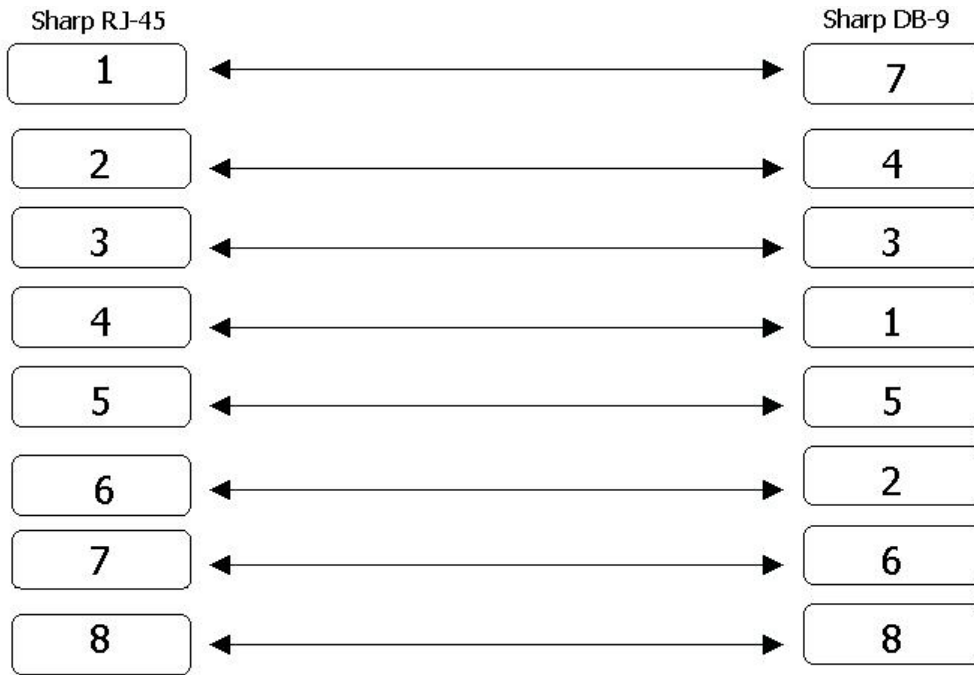
Datacomm Part# DCN 99521-3E (800) 544-4627



RJ-45 to DB-25 Printer Cable

Modular Conversion Cable for CH2

Datacomm Part# DCN100226-3E (800) 544-4627



Section-4: Scanner (Barcode Reader)

A serial Scanner may be added to the UP600/700 configuration for reading barcodes as outlined in the examples below. The dealer must procure the scanner. Please inform the supplier that the scanner will be interfaced with a Sharp POS System.

The UP-600/700 is 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

The following programming is required at the POS to change the EAN 13 UPC code Non-PLU code format (flag code 02, 20-29) to allow a five-digit price. EAN-13 codes are used for in store marking, such as meats and variable weight items.

Scale

Change the scale from UPC A Type 2 to EAN13 code.

UP-600/700

Turn the mode key to PGM2.

Select [02 SETTING]

Select [01 ARTICLE]

Select [11 UPC NON-PLU]

01	
TYPE OF CODE	EAN13
SYSTEM CODE	02
LENGTH FLD#1	4
LENGTH FLD#2	5
FIELD#2 DATA	PRICE
PRICE C/D	YES
TAB	2

Type of Code = Non-PLU Format EAN13.

System Code = Flag Code (02, 20-29).

Length FLD#1 = number of digits for Field 1.

Length FLD#2 = number of digits for Field 2.

Field#2 Data = PRICE.

TAB = number of digits after the decimal place.

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

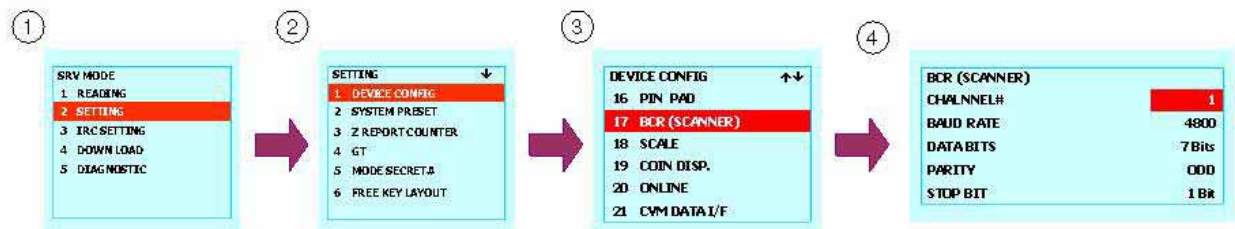
"Price

1. Scanner Setup

Procedure

Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [1 DEVICE CONFIG]
- ③ Select [17 BCR(SCANNER)]
- ④ Enter the desired Channel #. The Baud Rate, Data Bits, Parity and Stop Bit should be set as indicated in the slide.

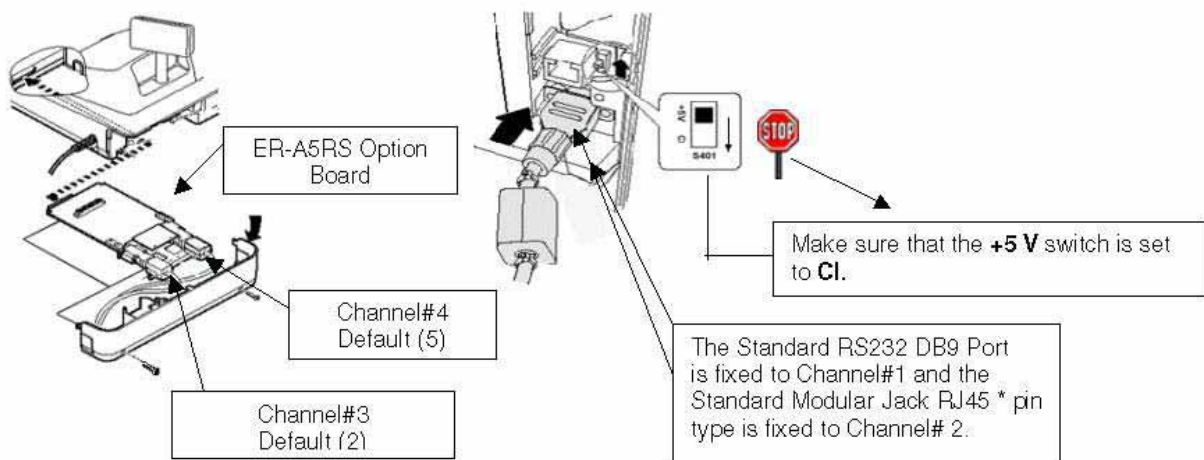


- ⑤ Depress the [CASH] key when all settings are completed

The menu will return to the Device Config Sub-Menu

- ⑥ Depress the [CANCEL] key to return to the SRV Mode Setting Sub-Menu

Note: If you are using the ER –A5RS option board, you have two additional RS-232 ports. By default these are set to **channel #5** and **channel #2**. Using the dipswitches on the ER-A5RS board change to CH to 3 and 4.



NOTE: When “ALL” devices are assigned to the desired Channel No., it is recommended that a PROGRAM Reset be performed.

Assignment Method: The CHANNEL NO. assignment is required at the machine where the Scanner is physically connected. For the Inline configuration – there is no re-routing function available

Related Programming Jobs: Scanner

SRV Mode Related Jobs

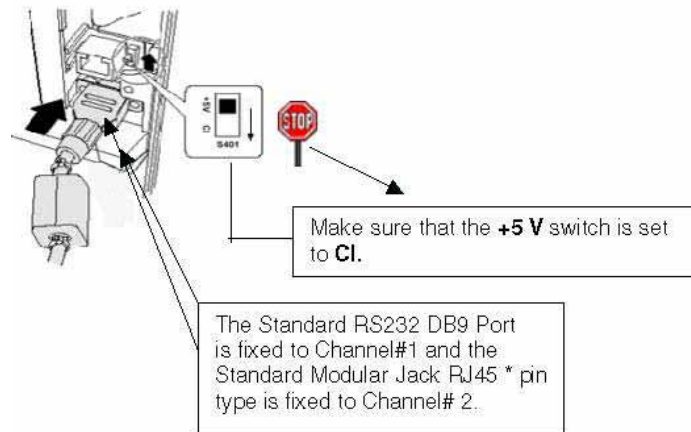
SRV Menu / Job#		Description
Setting – System Preset	906-A	Inhibit PLU/UPC (EAN) item when Stock goes Negative
Setting – System Preset	906-D	UPC Price Look Up at Refund Entry
Setting – System Preset	907-B	UPC (EAN) Codes printing on Receipt and Journal
Setting – System Preset	907-C	Enable Negative UPC
Setting – System Preset	909-B	Printing of UPC Data when resetting
Setting – System Preset	911-B	C/D check of UPC (EAN)
Setting – System Preset	918-C	Printing of UPC text on KP in double size character
Setting – System Preset	920-C	Automatic UPC download to all machines in an inline system
Setting – System Preset	921-A	Convert UPC-E code to UPC-A code
Setting – File		File Group No. 5 PLU/UPC
Setting – File		File Group No. 6 or 7 PLU/UPC Price 1 or PLU/UPC Price 1-6
Setting – File		File Group No. 8 or 9 PLU/UPC Text (8) or PLU/UPC Text (16)
Setting – File		File Group No. 10 or 13 PLU/UPC KP Text 1 (12) or PLU/UPC KP Text 1-6 (12)
Setting – File		File Group No. 11 or 12 PLU/UPC Text 1-6 (8) or PLU/UPC Text 1-6 (16)
Setting – File		File Group No.15 Dynamic UPC
Setting – File		File Group No. 16 or 17 Dynamic UPC Price 1 or Dynamic UPC Price 1-6
Setting – File		File Group No. 20 or 23 Dynamic UPC KP Text 1 (12) or Dynamic UPC KP Text 1-6 (12)
Setting – File		File Group No. 21 or 22 Dynamic UPC Text 1-6 (8) or Dynamic UPC Text 1-6 (16)
Setting – File		File Group No. 24 UPC PGM Pick Up
Setting – File		File Group No. 25 Dynamic PGM Pick Up
Setting – File		File Group No. 26 UPC X/Z Pick Up
Setting – File		File Group No. 68 Term Dynamic PLU
Setting – File		File Group No. 69 Dynamic UPC X/Z Pick Up
Setting – Free Key		Function No. 27 Delete key
Setting – Free Key		Function No. 34 PLU/UPC key
Setting – Free Key		Function No. 149 Repeat key
Setting – Free Key		Function No. 150 Amount key
Setting – Free Key		Function No. 151 Department number entry key
Setting – Free Key		Function No. 152 Inquire key
Setting – Free Key		Function No. 153 Price change key

PGM2 Mode

PGM Menu #	Selection	Description	Options
2. Setting	01. Article	02. PLU/UPC	UPC Programming
		11. UPC Non-Plu	UPC Non-PLU Programming
		12. UPC Delete	Non used UPC period (day)
	10. Optional	1. Func. Prohibit	UPC learning, Price Change
3. Func. Select2		ISBN Price	
4. D-UPC Load			Uploading UPC from Dynamic UPC file to main UPC

2. Connecting the Hardware

1. Disconnect all equipment from AC power.
2. Connect the scanner to the POS system (Scanner, Power Adapter, Serial (RS232) Adapter Cable and POS. as specified. Examples provided below



3. Reconnect all equipment to AC power. Make sure the AC input requirements of the power supply match the AC outlet.

Suggested Suppliers

The supplier 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 notifications (both our products and the 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

AVNET CT

336 Los Coches Street
Milpitas, CA 95035

PHONE: 1-800-767-3478

FAX: 1-408-732-1744

INTERNET: <http://www.symbol.com>

SYMBOL TECHNOLOGIES INC.

One Symbol Plaza
Hotsville, NY 11742-1300

PHONE: 1-800-722-6234

INTERNET: <http://www.symbol.com>

METROLOGIC INSTRUMENTS, INC.

90 Coles Road
Blackwood, NJ 08012

PHONE: 800-ID-METRO (436-3876) or 856-228-8100

FAX: 856-228-6673

Email: marketing@metrologic.com

INTERNET: www.metrologic.com

POS SALES MANAGEMENT

7405 SW Tech Center Drive
Suite 120
Tigard, OR 97223







PHONE: 1-866-775-9999

INTERNET: www.possmi.com

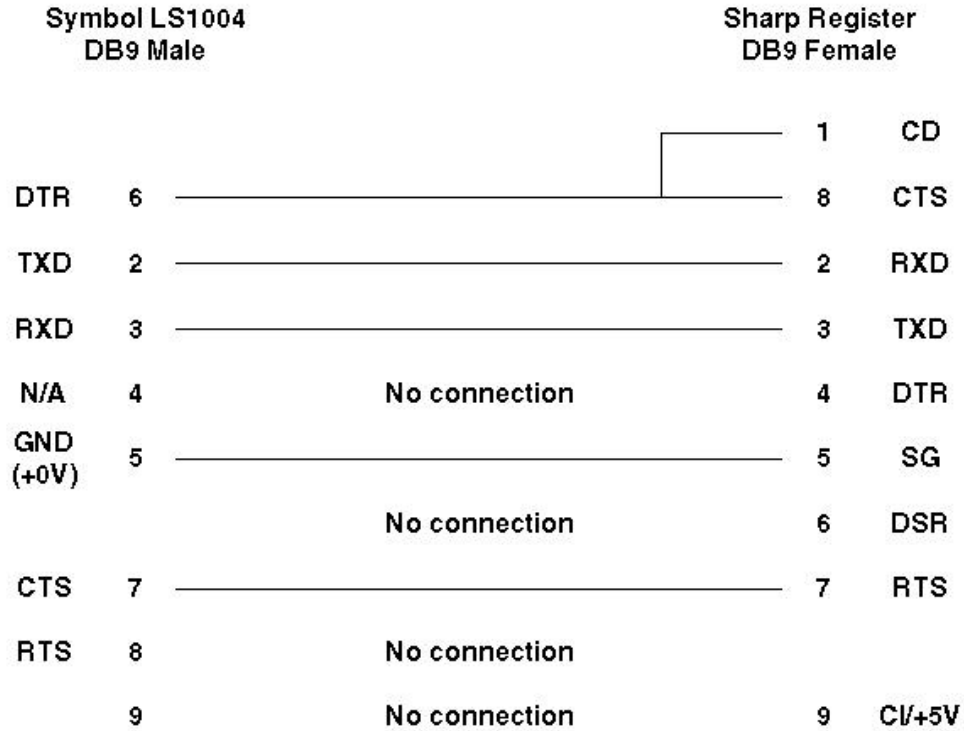
EMAIL: sales@possmi.com

What to purchase – Symbol Models

Please inform the supplier that the scanner will be interfaced with a Sharp POS System.

Scanner (Model)	Power Adapter	Serial (RS232) Adapter Cable	POS
<p>SYMBOL - SYM1004 power supply & cable are included. Please specify part #.</p>  <p>ND 1223 Rev B9915-20312-01</p>		<p>Dealer Provides</p>  <p>ADAPTER CABLE</p>	<p>Sharp UP-600/700 POS System</p> 
<p>Symbol – SYM4004 power supply & cable are included. Please specify part#.</p>  <p>25-164-56-20 REV A 001726676A CABLE, RS232</p>		<p>Dealer Provides</p>  <p>ADAPTER CABLE</p>	<p>Sharp UP-600/700 POS System</p> 

LS 1004/4004 Adapter Cable



Note: Use 5 conductor, shielded cable that complies with all local and national electrical codes. Length should be as short as practical, not to exceed 3 feet long.

LS1004 Programming Barcodes

Scan the following four columns, in order, from top to bottom.

(1)



Set RS-232C Host



Standard RS-232 Host Type



Continuous



Disable All Code Types



Enable UPC/EAN



Do Not Transmit
UPC-A Check Digit



Do Not Transmit
UPC-E Check Digit



Decode UPC Only Disable



Do Not Convert
UPC-E to UPC-A

(2)



Ignore UPC/EAN
Supplementals



Disable EAN Zero
Extend



System Character



System Character



Disable Code 128



Do Not Verify Code
39 Check Digit



Disable Code 39
Full ASCII



Disable Code 93



Disable Code 1 2 of 5

(3)

I



Disable Code D 2 of



Disable Codabar



Disable CLSI Editing



Disable NOTIS Editing



Transmit Code ID
Character



Prefix STX



Suffix CR



4800



Odd

(4)

I



7-Bit



1 Stop Bit



RTS/CTS




















None

Unplug the scanner power supply. Then reconnect, (power Off/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.

LS 4004 Scanner Programming Barcodes


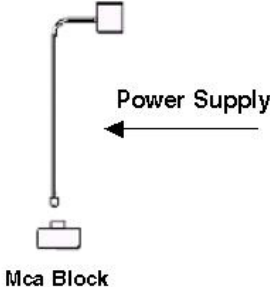










1. Scan the following three columns in order from top to bottom.

<p>(1)</p> <p>↓</p> <p>SET DEFAULTS</p>  <p>FUJITSU RS-232C</p>  <p>CONTINUOUS ON</p>  <p>DO NOT TRANSMIT UPC -A CHECK DIGIT</p>  <p>DO NOT TRANSMIT UPC -E CHECK</p>  <p>SYMBOL CODE ID CHARACTER</p>  <p>SCAN PREFIX</p> 	<p>(2)</p> <p>↓</p> <p>1</p>  <p>0</p>  <p>0</p>  <p>2</p>  <p>SCAN OPTIONS</p>  <p>PREFIX DATA SUFFIX</p>  <p>ENTER</p> 	<p>(3)</p> <p>↓</p> <p>BAUD RATE 4800</p>  <p>ODD</p>  <p>7 BIT</p> 
---	--	---

2. **Unplug the scanner power supply. Then reconnect, (power off/on), This RESET is necessary for the scanner to work properly.**
3. **Your Scanner is now ready for use. Program the items you will be scanning into the register.**

What to purchase – Metrologic Models

Please inform the supplier that the scanner will be interfaced with a Sharp POS System.

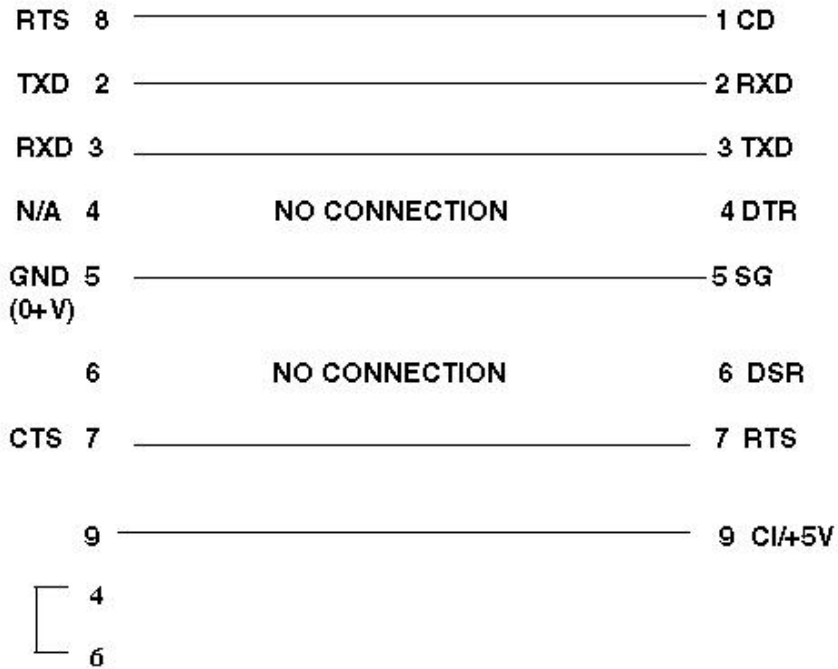
Scanner (Model)	Power Adapter	Serial (RS232) Adapter Cable	POS
<p>Metrologic - MS6720 power supply is included</p>   <p>Mca Block</p>	<p>Power Supply</p>	<p>Dealer Provides</p>  <p>ADAPTER CABLE 51282</p>	<p>Sharp UP-600/700 POS System</p> 
<p>Metrologic MS7120 includes Power Supply and Adapter Cable. Please specify part #.</p> 		 <p>CABLE PART # 53601A</p>	<p>Sharp UP-600/700 Point of Sale System</p> 
<p>Metrologic MS9540 includes Power Supply and Adapter Cable. Please specify part #.</p> 		 <p>CABLE PART # 53601A</p>	<p>Sharp UP-600/700 Point of Sale System</p> 

Metrologic MS6720 Adapter Cable

Scanner
DB9 Male

Sharp Register
DB9 Female

Note: Use 6 conductor, shielded cable that complies with all local and national electrical codes. Length should be as short as practical, not to exceed 3 feet long.



MS-6720 Scanner Programming Barcodes

1. Scan the following in order from top to bottom.

ENTER PROGRAM MODE



(1)

DISABLE LINE FEED



(5)

EXIT PROGRAM MODE



(9)

RECALL DEFAULTS



(2)

4800 BAUD RATE



(6)

PARITY = ODD



(3)

ENABLE STX PREFIX



(7)

ENABLE RTS/CTS



(4)

ENABLE UPC PREFIX



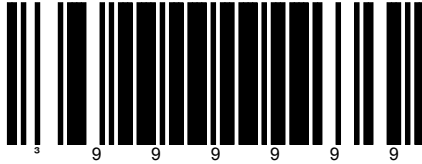
(8)

2. Unplug the scanner power supply. Then reconnect, (power Off/on), This RESET is necessary for the scanner to work properly.
3. Your Scanner is now ready for use. You will have to program the items you will be scanning into the register.

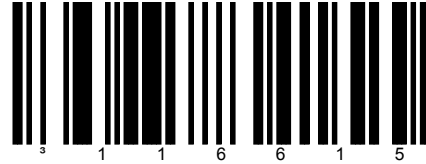
Metrologic 7120 Programming Barcodes

1. Scan the following in order from top to bottom.

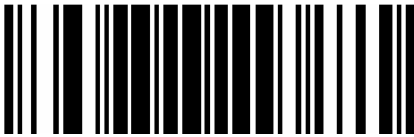
(1) ENTER PROGRAM MODE



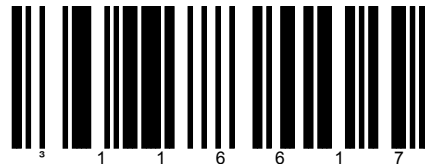
(4) ENABLE STX PREFIX



(2) RECALL DEFAULTS



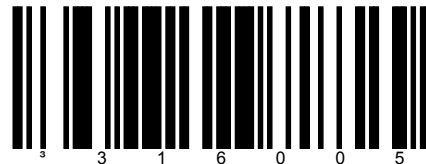
(5) ENABLE UPC PREFIX



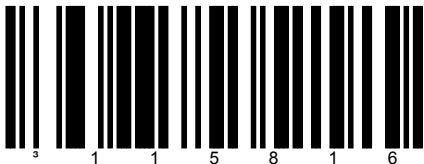
(3) BAUD RATE 4800



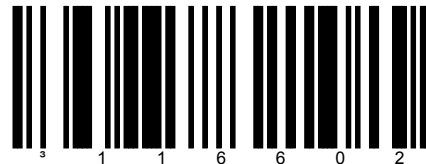
(6) PARITY=ODD



(7) ENABLE RTS/CTS HAND SHAKING

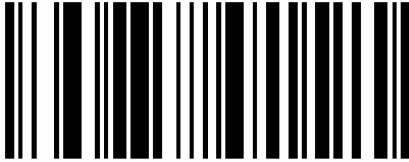


(8) DISABLE LF SUFFIX

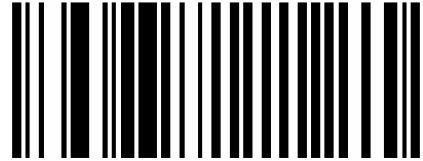


NOTE: IF YOU ARE HAVING TROUBLE SCANNING THE BAR CODES, PLEASE REFER TO YOUR METROLOGIC MANUAL.

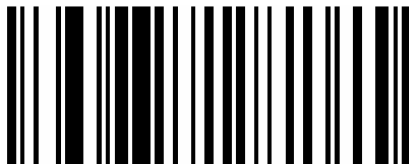
**(9) ALLOW CONFIGURATION MODE
ON POWER UP**



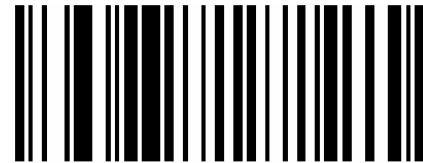
(12) DISABLE CODE 93



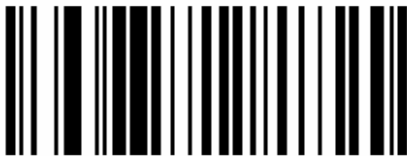
(10) DISABLE CODABAR



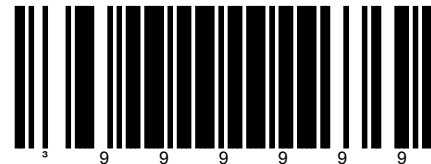
(13) DISABLE I 2 OF 5



(11) DISABLE CODE 128



(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 MS9520/40 Programming Barcodes

1. 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



(8) DISABLE LF SUFFIX



(9) ALLOW
CONFIGURATION ON
POWER UP



(10) DISABLE CODABAR



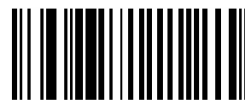
(11) DISABLE CODE 128



(12) DISABLE CODE 93



(13)
DISABLE I 2 OF 5



(14) ENTER EXIT
PROGRAM MODE



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

Section-5: Scale

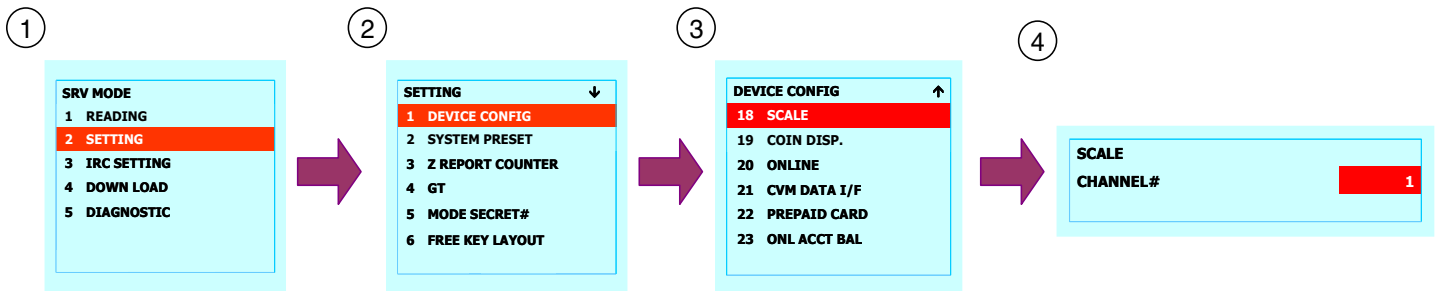
The Scale may be added to the UP600/700 configuration as outlined below. Models ERSC6710 and ERSC670 Avery/Weightronix Scales (Serial) are available from Sharp Sales.

1. Scale Setup

Procedure

Enter the SRV-Mode as outlined in Section -1

- ⑦ Select [2 SETTING]
- ⑧ Select [1 DEVICE CONFIG]
- ⑨ Select [18 SCALE]
- ⑩ Enter the desired Channel # and choose the desired parameters:



- ⑪ Depress the [CASH] key when all settings are completed
The menu will return to the Device Config Sub-Menu
- ⑫ Depress the [CANCEL] key to return to the SRV Mode Setting Sub-Menu

NOTE:

When “ALL” devices are assigned to the desired Channel No., it is recommended that a PROGRAM Reset be performed.

Assignment Method:

The CHANNEL NO. assignment is required at the machine where the Scale is physically connected. For the Inline configuration – there is no re-routing function available

Please consider the general rules listed below when using this feature:

- Manual entry of weighed items is prohibited unless the item is Refunded
- The UP600/700 customer display is not the certified display for the scale

Related Programming Jobs: Scale

SRV Mode Related Jobs

	SRV Job#	Description
Setting – System Preset	902-C = 5	Allows the item subtotal to display on screen. Otherwise only the weight ad price per pound will display. Required for scale refund operation
Setting – System Preset	903-B	Scale Weight System
Setting – System Preset	903-C	Scale is Enabled
		Tare Entry is Enabled
		Unit Weight for Scale Entry
Setting – System Preset	906-C	Multiplication Entry. If using, UP-P16DP set to 5.
Setting – System Preset	906-D = 1,3,5 or 7	Fractional Qty entries are Enabled
Setting – Free Key	950	Function No. 33 [SCALE]
		Function No. 147 [OPEN TARE]

PGM2 Mode

PGM Job #	Selection	Description	Options
2. Setting	01. Article	01. Department	Scale Compulsory / Inhibit/ Enable
		02. PLU/UPC	
		03. PLU Range	
	10. Scale Tare Table	Table 1 – 9 (Weight preset)	

Department Programming

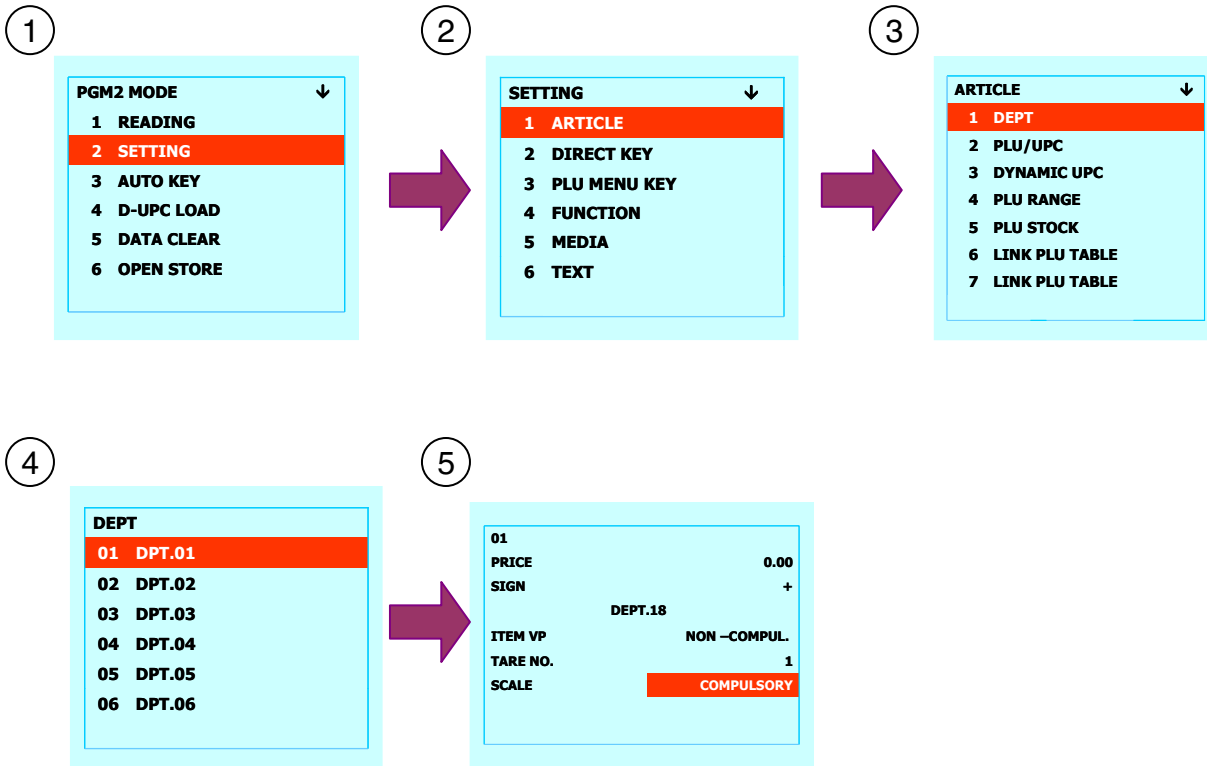
Follow the procedure outlined below to assign the Scale status to a department.

Procedure

Enter the PGM2-Mode by turning the MA key counter clock wise to the PGM2 position.

- ① Select [2 SETTING]
- ② Select [1 ARTICLE]
- ③ Select [1 DEPT]
- ④ Select the desired department from the Department list

⑤ Go to the SCALE option and select “INHIBIT”/”ENABLE”/”COMPULSORY” by toggling the setting with the [.] decimal key or by depressing [SBTL] and making the desired setting.



Assignment Method:

A Department may be preset as Scale: “Inhibited”/”Enabled”/”COMPULSORY”

Please consider the general rules listed below when using this feature:

- A setting of “COMPULSORY” allows scaleable registration without the depression of the [SCALE] key prior to the entry
- The Fast Food multiplication sequence must be disabled in SRV Job#906-C

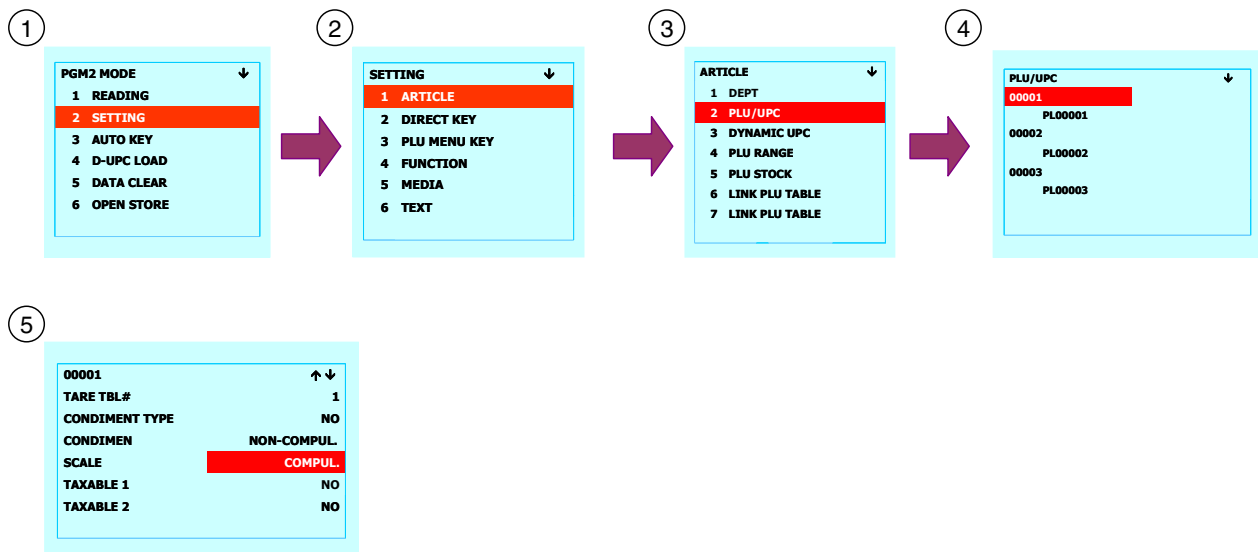
PLU Programming

Follow the procedure outlined below to assign the Scale status to a PLU/UPC.

Procedure

Enter the PGM2-Mode by turning the MA key counter clock wise to the PGM2 position

- ① Select [2 SETTING]
- ② Select [1 ARTICLE]
- ③ Select [2 PLU/UPC]
- ④ Select the desired PLU from the PLU list
- ⑤ Go to the SCALE option and select "INHIBIT"/"ENABLE"/"COMPULSORY" by toggling the setting with the [.] decimal key or by depressing [LIST] and making the desired setting.



Assignment Method:

A PLU may be preset as Scale: "Inhibited"/"Enabled"/"COMPULSORY"

Please consider the general rules listed below when using this feature:

- A setting of "COMPULSORY" allows scaleable registration without the depression of the [SCALE] key prior to the entry
- The Fast Food multiplication sequence must be disabled in SRV Job#906-C

Tare Table Programming

Follow the procedure outlined below to program the tare tables. A maximum of 9 scale tare tables are available. System Preset 903C = 2 or 3 to allow scale tare tables.

Procedure

Enter the PGM2-Mode by turning the MA key counter clock wise to the PGM2 position

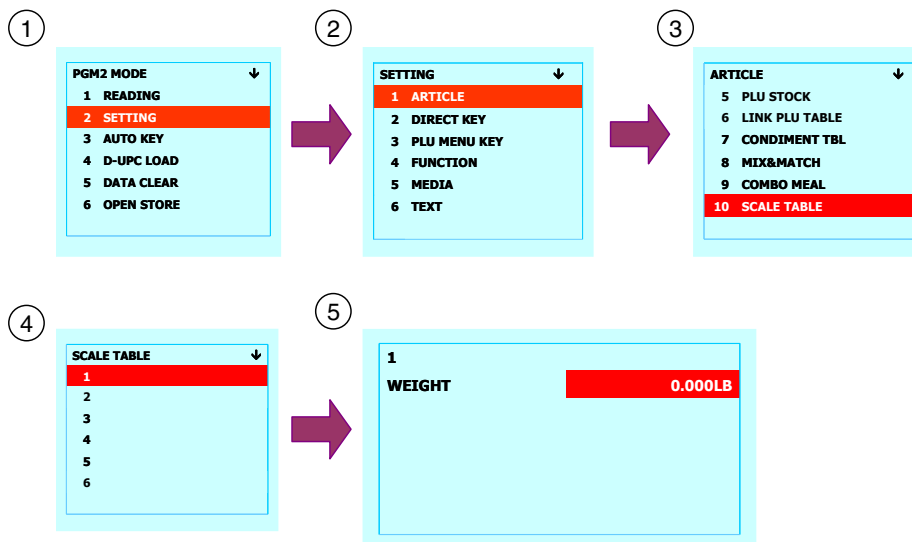
- ① Select [2 SETTING]
- ② Select [10 SCALE TABLE]
- ③ Select the desired Tare Weight Table
- ④ Enter the Tare Weight which is to be deducted when the article is to be weighed followed by entering the [ENTER] to return to the Scale Table sub-menu.

Assignment Method:

A Tare (Scale Table) weight preset will be based on the setting in SRV Job#903

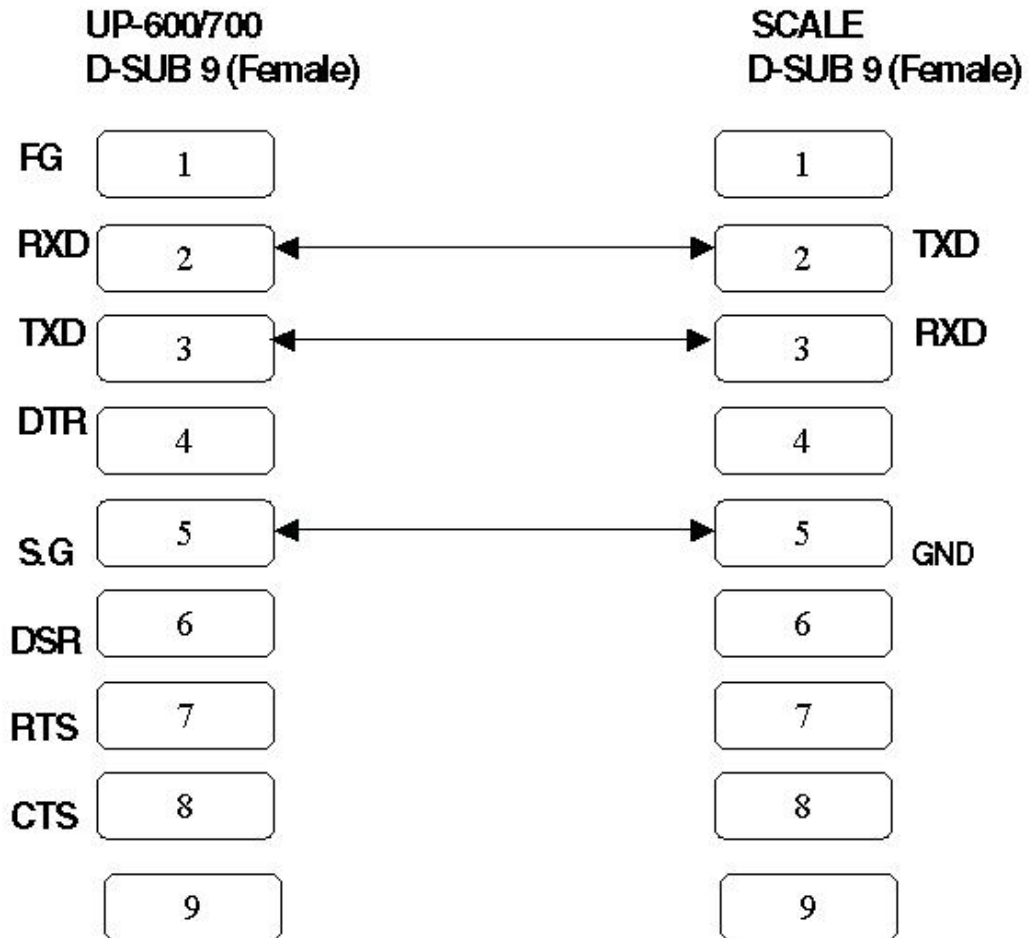
Please consider the general rules listed below when using this feature:

- The Scale Table assignment is by each Department and/or PLU



2. Data Transmission Format

- 7 bits ASCII code
- Even Parity
- One Stop bit
- Baud Rate: 9600 bps

3. Connection Cable Diagram

Section-6: Coin Dispenser

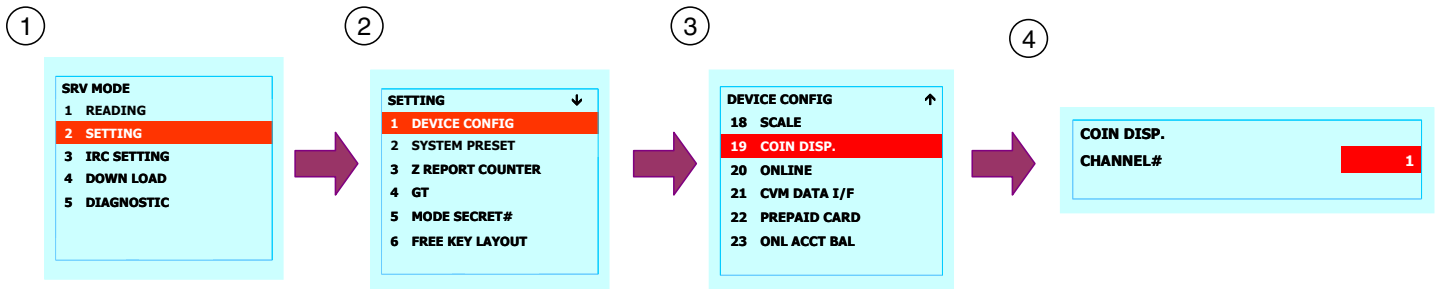
The TeleQuip Transact Coin Dispenser may be added to the UP600/700 configuration as outlined below:

1. Coin Dispenser Setup

Procedure

Enter the SRV-Mode as outlined in Section -1

- Select [2 SETTING]
- Select [1 DEVICE CONFIG]
- Select [19 COIN DISPENSER]
- Enter the desired Channel # and choose the desired parameters:



- Depress the [CASH] key when all settings are completed
The menu will return to the Device Config Sub-Menu
- Depress the [CANCEL] key to return to the SRV Mode Setting Sub-Menu

NOTE:

When “ALL” devices are assigned to the desired Channel No., it is recommended that a PROGRAM Reset be performed.

Assignment Method:

The CHANNEL NO. assignment is required at the machine where the Coin Dispenser is physically connected. For the Inline configuration – there is no re-routing function available

Please consider the general rules listed below when using this feature:

- In order for the Coin Dispenser to issue change, the Cashier/Server drawer assignment must be set (“1”, or “2”)
- Change due must be enabled in the Media programming.

Related Programming Jobs: Coin Dispenser

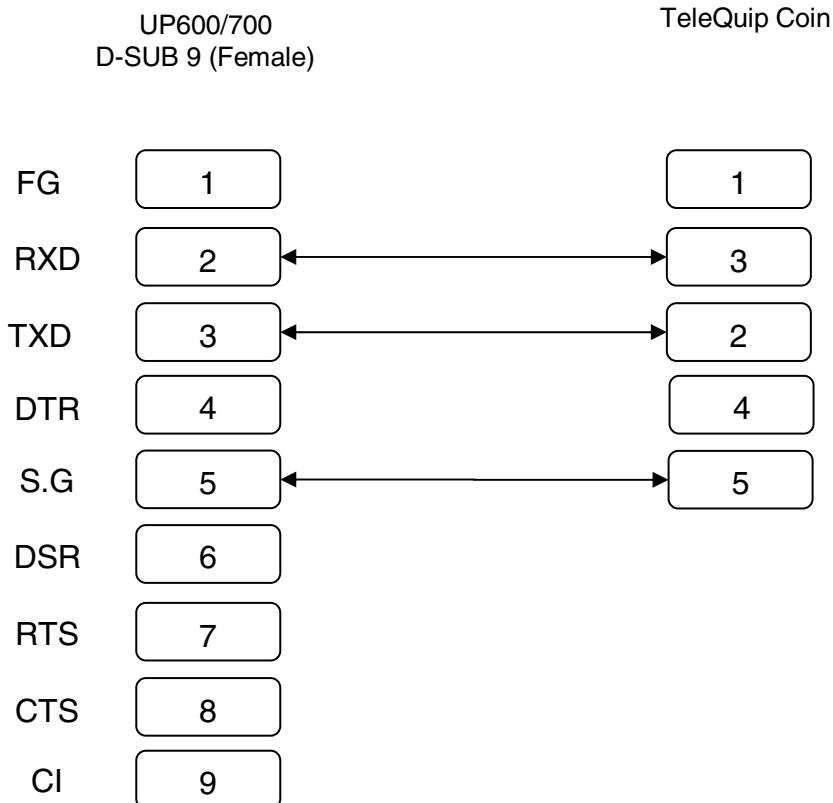
PGM2 Mode

PGM Job#	Selection	Description	Options	
2. Setting	5. Media	1. Cash	Short Tender	Enable
		2. Check	Change Due	Enable
			Drawer Opening	Yes

2. Data Transmission Format

- 4. 7 bits ASCII code
- 5. One Start bit
- 6. Even Parity
- 7. One Stop bit
- 8. Baud Rate: 9600 bps asynchronous

3. Connection Cable Diagram



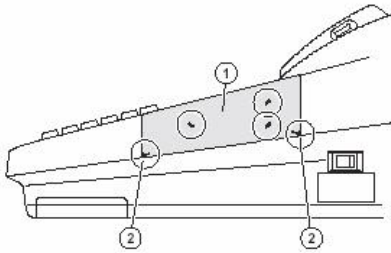
Section-7: MCR UNIT UP-E13MR

The Magnetic Card Reader is used for account balances, Customer File, Credit Cards, and Debit card. Tracks 1, 2, and 3 are available.

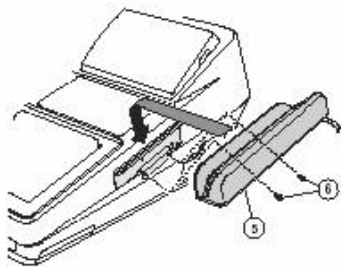
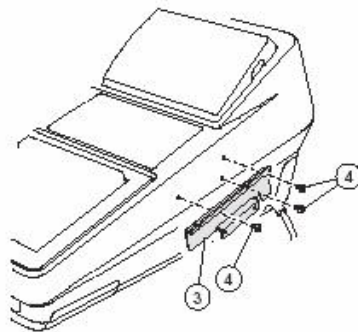
1. MCR Installation

Procedure

- ① Align the MCR sheet (1) with the positioning line of the top cabinet (2).
- ② Mark 3 points of the asterisk mark on the MCR sheet (3).



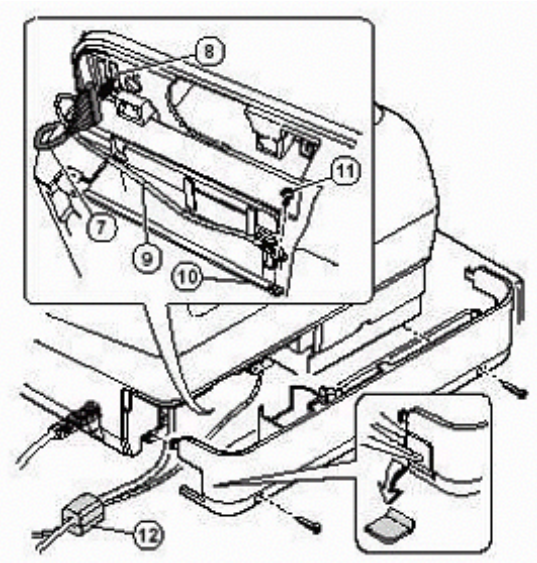
- ③ Aligning with the markings, secure the MCR angle 1 (3) to the top cabinet (2) with 3 screws (4).
- ④ Install the MCR unit (5) to the MCR angle 1 (3) and secure with 2 screws (6).



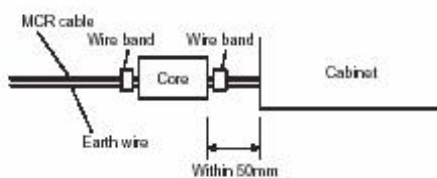
2. MCR connection

Procedure

- ① Remove the rear cover.
- ② Connect the MCR cable (7) to the MCR connector (8).
- ③ Fix the earth wire (9) to the main chassis (10) with a screw (11).
- ④ Install the core (12) to the MCR cable (7) and earth wire (9) with two wire bands.



NOTE Install the ferrite core in a position less than 50mm from the cabinet.



Section-3: More on RS232

RS232 communications for peripheral devices is usually low-speed communications, which do not demand the tight specifications required for complex communications.

Cabling considerations - you should use cabling made for RS-232 data communications using a high quality low capacitance data grade cable. The standard maxim length is 50' but if data is Async you can increase that distance with a good grade of cable.

The RS-232 signal on a single cable is impossible to screen effectively for noise. By screening (or shielding) the entire cable you can reduce the influence of outside noise, but internally generated noise remains a problem. As the baud rate and line length increase, the effect of capacitance between the different lines introduces serious cross talk (this especially true on synchronous data - because of the clock lines) until a point is reached where the data itself is unreadable. Using low capacitance cable and shielding each pair can reduce Signal Cross talk.

The maxim distance will depend on the speed and noise level around the cable run. On longer runs a line driver may be required. This is a simple modem used to increase the maxim distance you can run RS-232 data.

Section – 5: INLINE

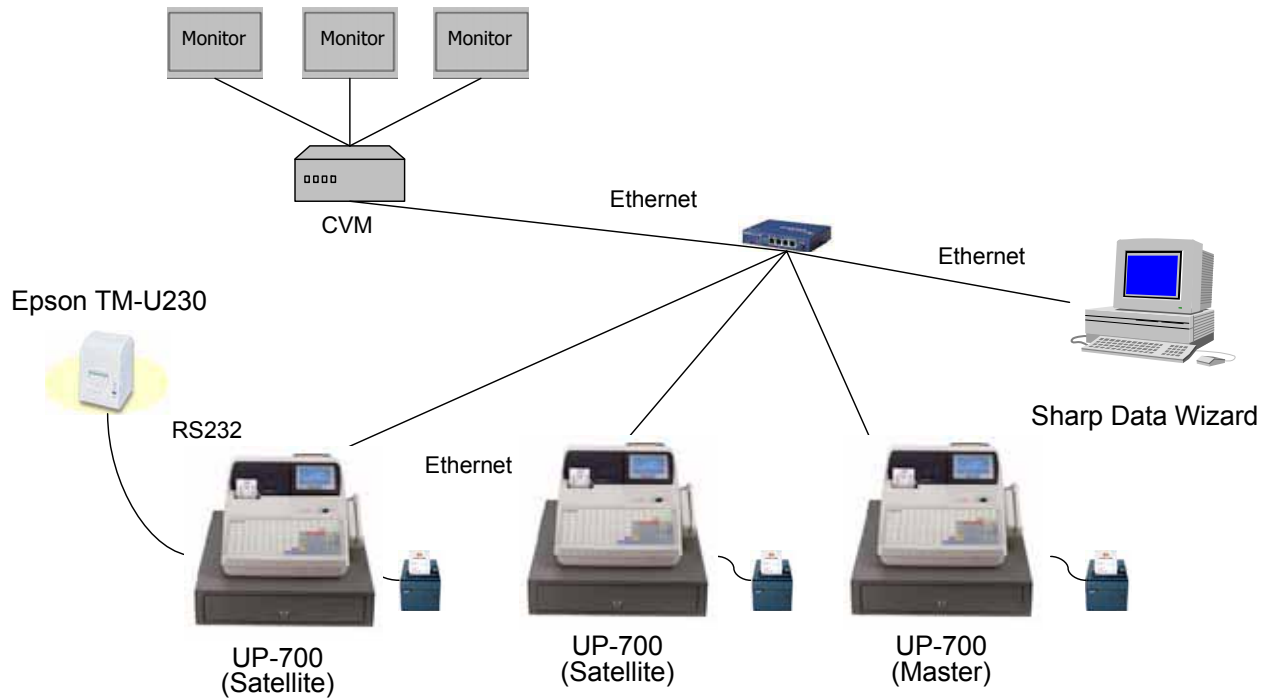
Section-1: Overview

This section has been developed to assist in the implementation of inline operations for the model UP-600/700 that incorporates an Ethernet topology using some of the TCP/IP suite of protocols.

In simplistic terms, the UP-600/700 inline system is essentially a Local Area Network (LAN) consisting of point of sale terminals, remote printers, a hub and possibly a personal computer.

For additional information, please refer to the Sharp UP-600/700 Inter Register Communications Manual.

1. Basic Configuration



2. Inline System General Specification

The basic UP-600/700 Inline system consists of the following:

Specifications & Requirements		
Number of Terminals	Maximum 16 Terminals	1 Master / 15 Satellites
		1 Satellite can be a Backup Master
Maximum Cable Distance	328 Feet per run (from POS to Hub)	
Additional Requirements	Hub 10Base-T	

3. Inline Function Principles

The INLINE system enables multiple POS terminals to be connected through LAN cables for executing the following tasks:

- Real time transmission between POS terminals (for select data such as Server Sign-on and Guest check data (GLU) entry) (Master ↔ Satellite)
- Batch consolidation of sales data between POS terminals (Satellite → Master)
- Preset data downloading between POS (Master → Satellite)
- Automatic printout of menu data from the POS to kitchen printers (All → KP)
- Consolidation of sales data by T-LOG polling (Satellite → Master)

Note: Real time transmission is used for this inline system. Since the satellites operate by back tasks, care should be exercised for downloading

The following are considered Inline functions:

Inline Functions			
No.	Functions	Description	
1	Downloads	SRV-mode	System Presets
			Free Key Layout
		PGM-mode	All
2	Sales Data Collection	Individual or All Satellites	
		Sales Data Consolidation by the Master	
		Report printing	
3	Centralized Control	Guest Checks/Drive Through operations	
		Servers/Employees	
4	Printer Re-routing	Kitchen Printer	
5	Misc. Functions	Open/Close Store	
		Manager Retry Functions	
6	T-Log polling	Transaction Log analysis	

Server Sign On/Off function:

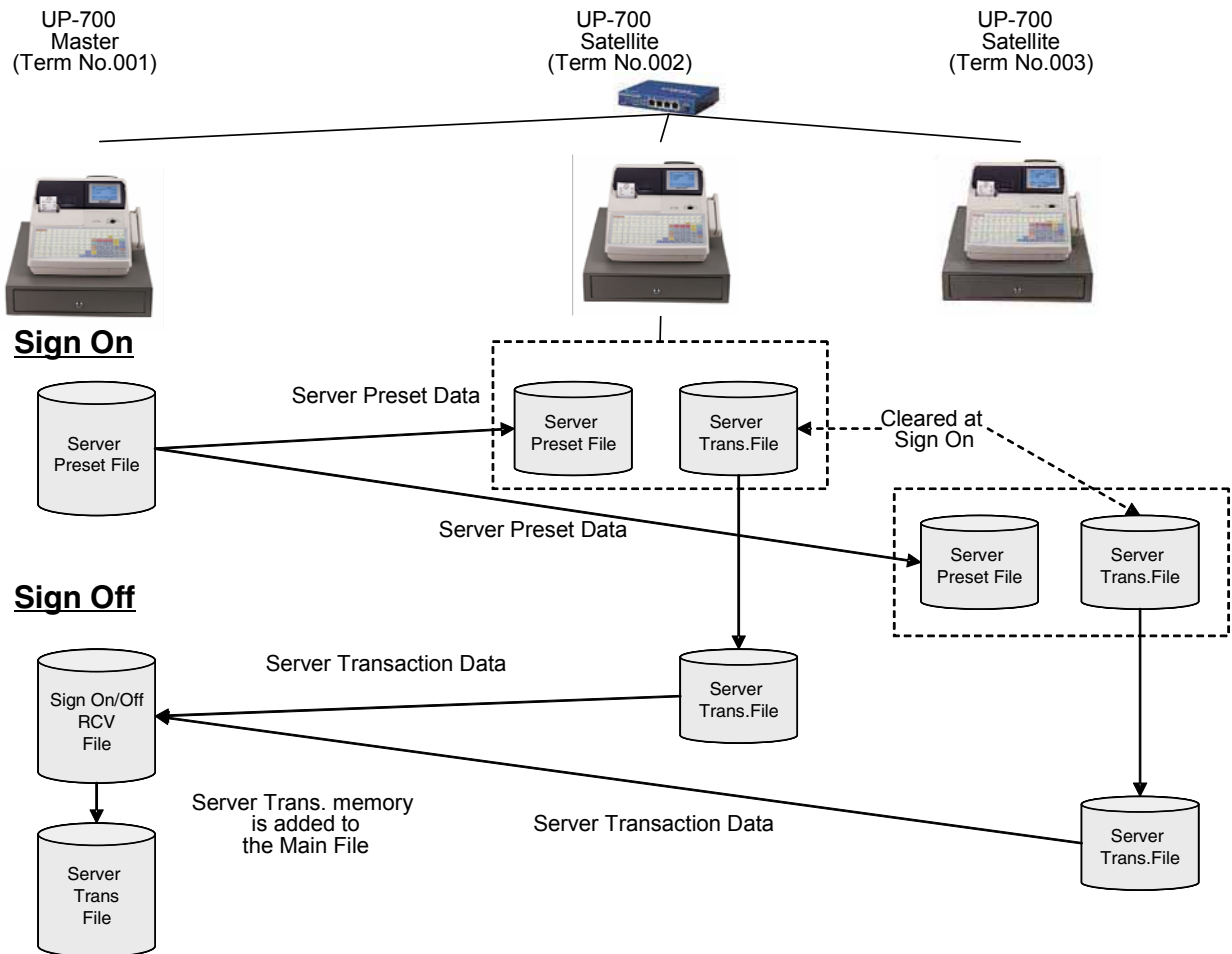
The Master has transaction memories dedicated to ALL Servers and utilizes a RECEIVE BUFFER to process the data.

Server signs ON at a Satellite terminal:

- Its Server Transaction memory is cleared
- Its Server preset memory is received

Server signs OFF at a Satellite Terminal:

- The contents of its Server transaction memory is transferred to the Master
- The transferred data is added into the Transaction memory for the specific Server that signed off



IMPORTANT:

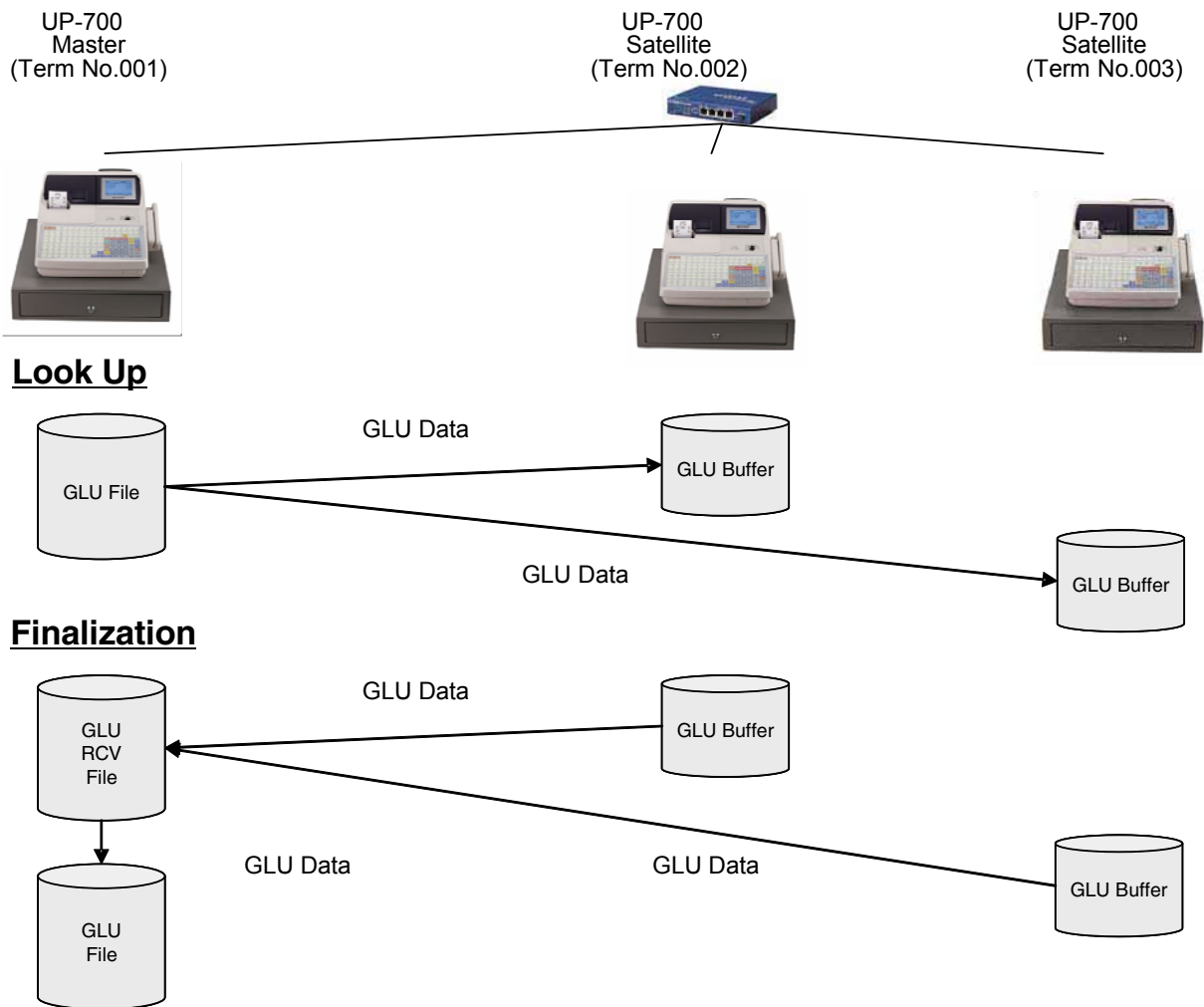
The PROGRAM RESET can cause the system to become unbalanced when performed while Servers remain signed on. When a Backup Master exists, the same data transfer occurs (based on SRV Job #920-B)

GLU/PBLU Lookup function:

The Inline system offers a “floating” GLU/PBLU (guest check) system allowing any terminal within the system to access the Guest Check data. When the GLU file lookup entry is made in REG or MGR mode at a Satellite, inline communications are initiated with the Master under the following type entries:

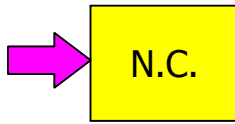
- New Order or Reorder – *Look up*
- Payment entry (any Media key) or Temporary finalization ([SERVICE] or [FINAL]) - *Finalization*
- Bill printing
- Bill Transfer/Bill Totalizing (Check-Add)

Inline communications for GLU/PBLU entries are classified as Look up or Finalization:



IMPORTANT: The above data transfer illustrates why a PROGRAM RESET can cause the system to become unbalanced when performed while Guest Checks are in an open state

GLU System:



GLU/PBLU Auto Code Generation and Lookup

Auto Code Generation (Looping Code Generation):

example:

00000001 → 00000002 → 00000003 → → 99999999 → 00000001
create create create create create

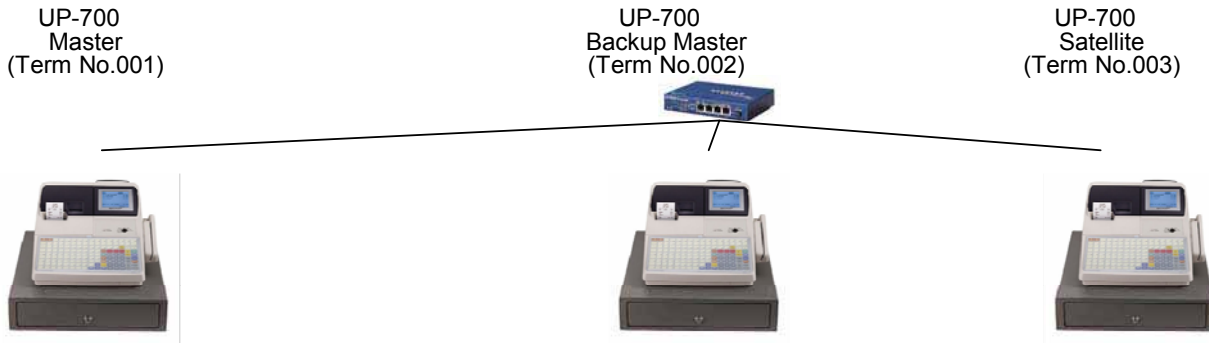


T-Log Polling function:

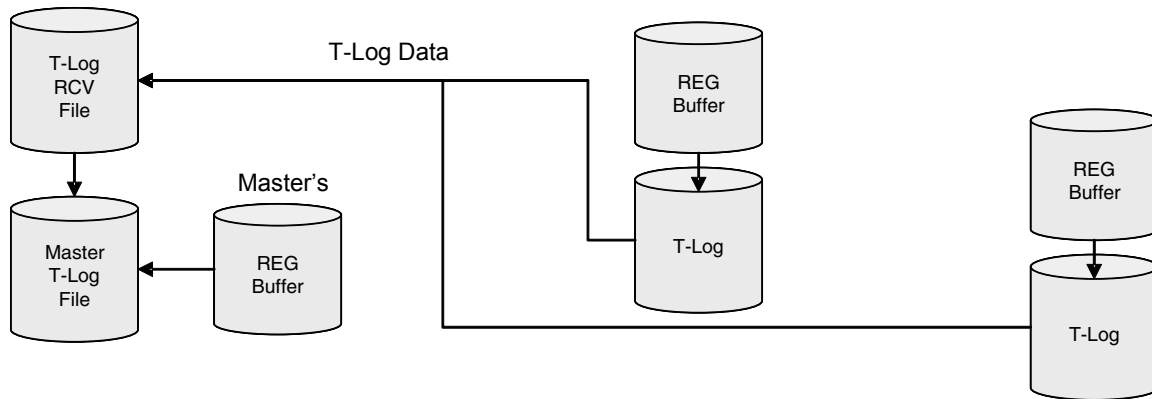
The transaction data in REG and MGR mode can be saved in the T-Log file where the Master consolidates the system's data for further processing.

T-Log Polling – Sequence

- ① T-Log polling starts by the execution of the Open Store command from the Master
- ② T-Log polling is stopped by the execution of the Close Store command from the Master
- ③ T-Log polling and Consolidation occurs upon the Closed Store command
- ④ When T-Log data exceeds the preset record number (defined in SRV Job#923-A&B), the Satellite will request the Master to poll the T-Log data
- ⑤ The Master starts the T-Log polling of the Satellite and consolidates the data in its own file
- ⑥ When the Master completes the polling of the 1st Satellite, it will wait for a polling cycle (as defined in SRV Job#923-D) and start the consolidation of the next Satellite,



T-Log Polling



IMPORTANT:

T-Log data is used to analyze transaction details by software applications such as the Sharp Data Wizard for reporting analytics down to the receipt level

Please consider the general rules listed below when using this feature:

- If the T-Log file becomes full, it is possible to inhibit all further REG-mode operations
- The T-Log full error is printed on the Journal printer if assigned

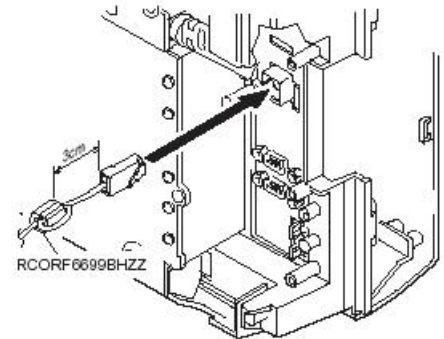
Section-2: Inline System Connection

Prior to programming, it is important to insure that the hardware connections necessary for each terminal are accomplished. As a basic rule, the following steps may be used for each peripheral device:

1. Connecting the UP-600/700:

Procedure:

- ⑩ Connect the specified LAN cable to the Ethernet port marked "LAN"
- ⑪ Install a ferrite core (part no. RCORF6699BHZZ) within 3 cm of the connector on the connection cable to reduce interference



2. Cabling Specifications:

The below guideline for cabling should be observed when connecting a UP-600/700 as an Inline terminal:

Cabling Specifications:

Specifications & Requirements	
Maximum Cable Distance	328 Feet per run (from POS to Hub)
Requirements	Hub 10Base-T
	Straight RJ45 CAT 5 Cable UTP 24 AWG with shielded connector. <div style="text-align: center; margin: 10px 0;"> </div> <p>The Electrical Industries Association (EIA) divides UTP into different <i>categories</i> by quality grade (<i>average wiring grade -AWG</i>).</p> <p>The rating for each category refers to conductor size, electrical characteristics, and twists per foot. UTP cables consist of four pairs of unshielded copper wires twisted around each other and bundled with resin and coated as a single line. Cable connectors should be 8-core (RJ-45) shielded modular jacks.</p>

Connector Specifications:

IMPORTANT:

The UP-600/700 LAN port is a shielded-type port that provides a well-grounded connection for external cabling. In order to insure a proper connection it is recommended that shielded RJ-45 connectors be used for external cabling.



Section-3: Inline System Readings

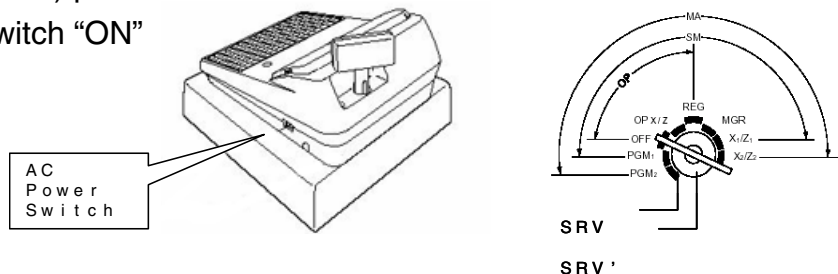
Inline programming consists of SRV and PGM2 – mode-programming jobs, which define the system configuration, which makes up the UP-600/700 Inline system.

1. Entering the SRV-Mode

To enter SRV-mode programming, you must turn the SRV key counter clock wise to the 6 o'clock position wait five seconds and turn the SRV key to the 7 o'clock position.

Procedure:

- ⑫ Turn the AC Power Switch “OFF”
- ⑬ Set the mode switch to (SRV) position
- ⑭ Turn on the AC Power Switch “ON”



The SRV-mode Main Menu will appear:

CAUTION:

Never place the Reset-switch in the “ON” position while AC power is applied – severe damage may result to the RAM and program contents.

IMPORTANT:

A program reset should NOT be performed at any terminal in an Inline configuration when the system is being used (e.g. Guest Checks are opened or servers are signed on). A safe scenario for performing a Program Reset is to only perform this when the system is in the CLOSE STORE state (executed in the PGM2 Mode)

Please consider the general rules listed below when using this feature:

- A Closed Store command can not be executed when Servers remain signed on at the Satellites

2. SRV-mode Program Readings:

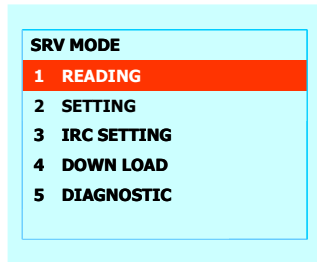
List of SRV-mode Program Reports:

Program Readings		
Mode	Main Menu	Sub Menu
SRV-Mode	2 SETTING	1 SYSTEM PRESET
		2 DEVICE CONFIG
		3 FILE
		4 FREE KEY

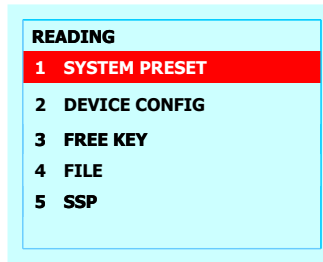
Procedure – example (System Presets):

- (4) Enter the SRV-Mode as previously outlined
- (5) Select [1 READING]
- (6) Select [1 SYSTEM PRESETS]
- (7) Select either [1 DISPLAY] or [2 PRINTER]

①



②



Usage Method:

The resulting report will provide the settings for the SRV Job# 902, #920 ~ #925 which will determine how the UP-600/700 will function.

Please consider the general rules listed below when using this feature:

- The Master List will include the terminal number (IP ADDRESS 4 only) and the machine no. for each terminal in the system
- The Master’s terminal no. must be programmed in the Master List (should be first)

3. PGM-mode Program Readings:

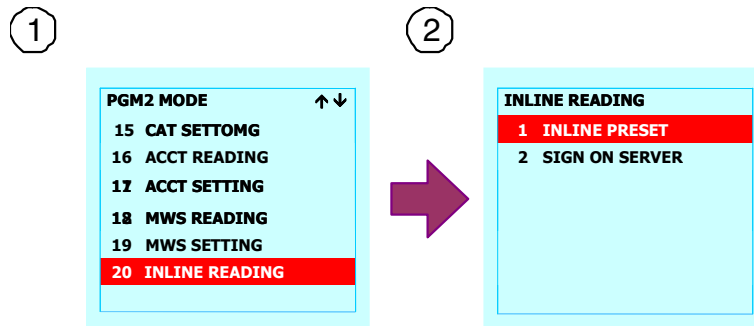
List of PGM-mode Program Reports:

Program Readings		
Mode	Main Menu	Sub Menu
PGM2-mode	08 KP READING	
	20 INLINE READING	1 INLINE PRESET
		2 SIGN ON SERVER

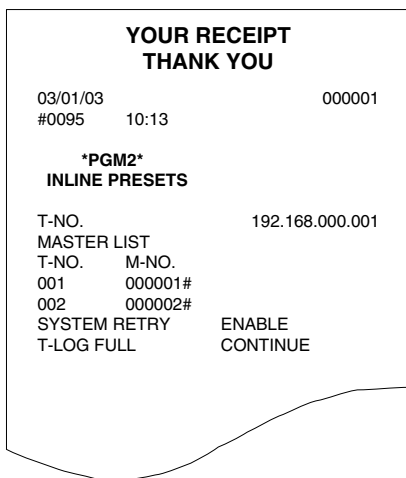
Procedure – Inline Preset:

Enter the PGM2-Mode by turning the MA key counter clock wise to the PGM2 position

- ① Select [20 INLINE READING]
- ② Select [1 INLINE [PRESET]
- ③ This will automatically start to print.



Print Example:



Section-4: Basic Inline System Setup

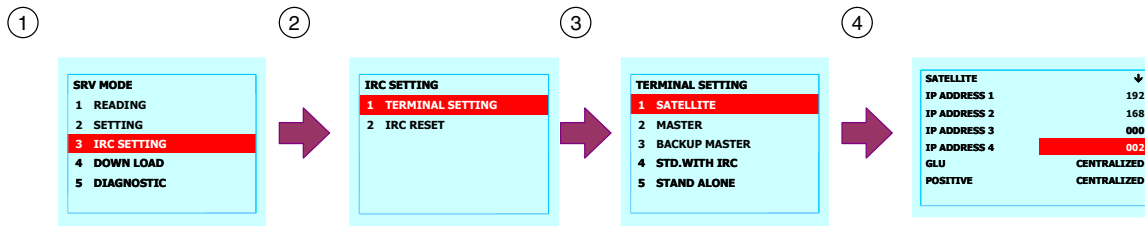
Each Satellite and a Master is assigned a unique terminal IP Address during the IRC programming. The terminal IP Address acts as the “terminal no.” for each machine on the network. The Inline setup has been automated through the IRC SETTING job in SRV-mode, which may be executed as follows:

1. Satellite

Procedure:

Enter the SRV-Mode as outlined in Section -3

- ① Select [3 IRC SETTING]
 - ② Select [1 TERMINAL SETTING]
 - ③ Select [1 SATELLITE]
 - ④ Enter the desired IP ADDRESS along with choosing the desired parameters:
4. GLU System: Centralized/Individual
 5. Machine Location: Cashier Station/Order Taker/Counter
 6. Backup Master: Not/Exist



Assignment Method:

The Satellite terminals should be setup prior to the Master. The IRC SETTING job will automatically CREATE or ERASE memory file allocation based on the terminal-type selection.

Please consider the general rules listed below when using this feature:

- A PROGRAM RESET is required upon completion
- A journal printer should be connected in order to see that the available memory is sufficient (memory lacking errors are printed only on the journal printer)

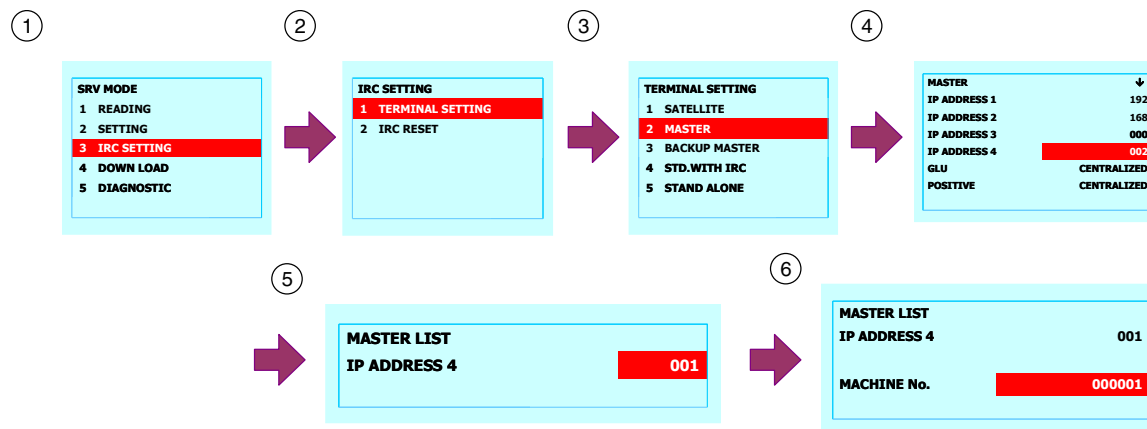
2. Master

Procedure:

Enter the SRV-Mode as outlined in Section -3

- ① Select [3 IRC SETTING]
- ② Select [1 TERMINAL SETTING]
- ③ Select [2 MASTER]
- ④ Enter the desired IP ADDRESS along with choosing the desired parameters:
 7. GLU System: Centralized/Individual
 8. D-Thru System: Centralized/Individual
 9. Machine Location: Cashier Station/Order Taker/Counter
 10. Back up Master Exists: Not/Exist
- ⑤ Enter the master's IP ADDRESS 4 followed by its machine no. followed by depressing the [ENTER] key
- ⑥ IP ADDRESS 4 and machine number for every Satellite in the system followed by depressing the [ENTER] key a second time upon entry of the last Satellite

The Master will display "processing" - automatically executing an Inline Preset download



Assignment Method:

The Master terminal should be setup after the Backup Master and Satellite terminals. After the IRC SETTING job has automatically created the necessary memory file allocation, it will automatically download the Inline Presets.

Please consider the general rules listed below when using this feature:

- A PROGRAM RESET is required upon completion
- A journal printer should be connected in order to see that the available memory is sufficient (memory lacking errors are printed only on the journal printer)

3. Memory File Allocation Usage

Once the SRV Job: IRC SETTING has been executed, depending on the type of terminal; memory files are created or erased to establish the Inline system environment for data transfer. The following sections will outline which files exist and how they interact in the Inline configuration.

Satellite's File Allocation:

When the type Terminal is a Satellite, selected memory files are erased from the system. The specific files erased or created upon the IRC SETTING job is determined by the setting in System Preset Job# 924 and #925 and which "Parent" file is resident in the UP-600/700 at the time of execution of the IRC SETTING job. The below chart represents the files allocation when the terminal is a Satellite:



Dept.	Preset, Totalizer, Save
Transaction	Preset, Totalizer, Save
Server	*2
PLU	Preset, Totalizer, Save
Condiments	Preset
Combo Meal	Preset, Sold
Recipe	Preset
Ingredient	Preset, Stock
Link PLU	Preset
Mix & Match	Preset, Sold
GLU Buffer	
B.T. Buffer	
Manager	Preset
Kitchen Printer	Preset, Edit
Hourly	Totalizer, Save
Daily Net	Totalizer
T-Log	Logging

*2: The Server preset file is eliminated and only working memories are reserved

Assignment Method:

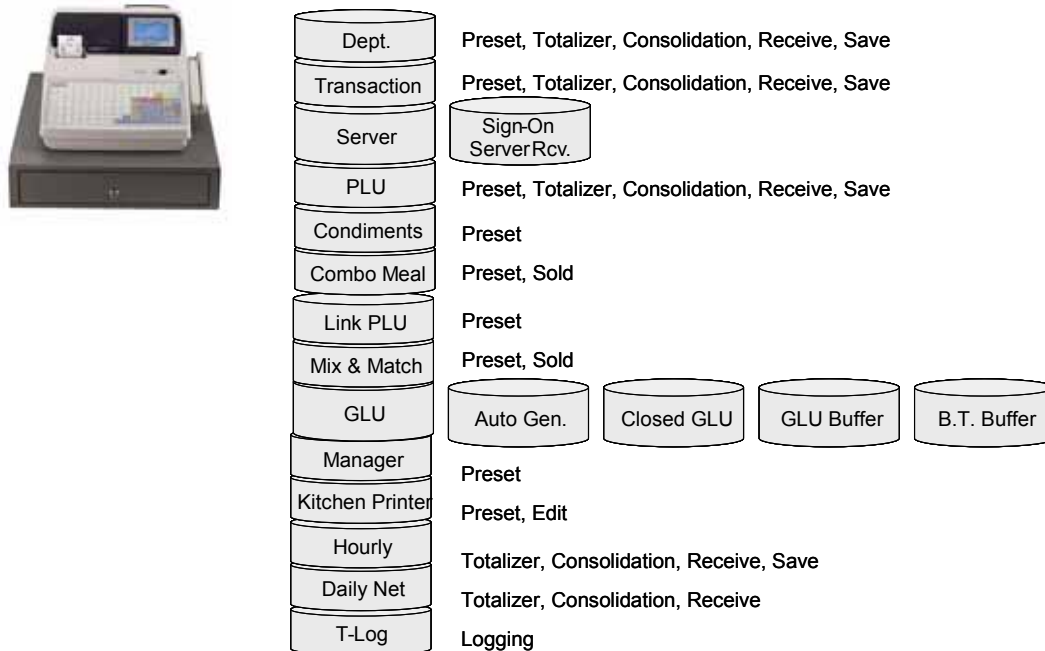
The Satellite terminal should be setup prior to the Master.

Please consider the general rules listed below when using this feature:

- A PROGRAM RESET is required upon completion
- A journal printer should be connected in order to see that the available memory is sufficient (memory lacking errors are printed only on the journal printer)

Inline System – Master’s File Allocation:

When the Type Terminal has been selected as a Master; additional memory files are created. The specific files created upon the IRC SETTING job is determined by the setting in System Preset Job# 924 and #925 and which “Parent” file is resident in the UP-600/700 at the time of execution of the IRC SETTING job. The below chart represents the files allocation when the terminal is a Master:



Caution:

The Master terminal should be setup after the Satellite terminals. The IRC SETTING job will automatically CREATE memory file allocation based on the terminal-type selection.

Please consider the general rules listed below when using this feature:

- A PROGRAM RESET is required upon completion
- A journal printer should be connected in order to see that the available memory is sufficient (memory lacking errors are printed only on the journal printer)

IRC Setting related errors

Lacking Memory:

When memory allocation has exceeded the physical capacity, then the "LACKING MEMORY" results upon executing the IRC SETTING job

```
03/01/03          000001
#0095          10:13
INLINE RAM CLEAR
922#          1000
920#          6002
921#          0000
T-NO.          192.168.000.001
MASTER LIST
T-NO.          M-NO.
001          000001#
002          000002#
*008*
*094*
*120*
*124*
*053*
*058*          LACKING MEMORY
*063*          LACKING MEMORY
*068*          LACKING MEMORY
*073*          LACKING MEMORY
*185*
*144*
*143*
*009*
*014*
*054*          LACKING MEMORY
*059*
*064*          LACKING MEMORY
*069*
*074*
*089*
*095*
*121*
*125*
*134*
*135*
*010*
*015*
*055*
*060*
*065*
*070*
*075*
*090*
*096*
*122*
*126*
*136*
*137*
*146*
*111*
*112*
INITIAL D/L
INLINE PRESET
0000002          OK
```

Section-5: IRC Related Programming

IRC setup programming consists of service-mode and PGM-mode programming jobs, which define the UP-600/700 Inline system capabilities.

Related Programming Jobs: Inline System

SRV Mode:

SRV-Mode Related Jobs		
SRV Menu	Job No.	Description
Setting – System Preset	902-A	Inline operations are Enabled
Setting – System Preset	919-A	Guest Check System / GLU/PBLU Entry is Compulsory for Reorder Entries
Setting – System Preset	920-A, B, C, D	A-Back-Up Master Function is Enabled B-Back-Up Master can perform System Reports & Download Jobs C-Inline Download Jobs are Broadcasted (vs. sending individual) D-PGM2-Mode Programming is allowed at the Satellite Terminal
Setting – System Preset	921-B	GLU System Control-Each Terminal/Centralized (Master)
Setting – System Preset	923-A, B, C, D	A, B- The No. of Records which are requested for the T-Log Polling Function C-T-Log Function is Enabled D-T-Log Polling Cycle (seconds)
Setting – System Preset	924	Inline System Control upon Individual Z2 Resetting Reports / Lock After Ind. Daily Net Z2 Report / Lock after Ind. Trans. Z2 Report
Setting – System Preset	925-A, B, C, D	A-Method of System Trans.-Z Resetting / Only Individual Reset/All data / System Trans.-Z Consolidation Clears Individual memory B-Variou Individual report jobs are allowed C-Print format for Consol. Reports D- Allow resetting reports while Server remains signed-on / Allow resetting reports while the store is open

Note: These are minimal settings for the terminals. More programming may be necessary as per end user specifications.

Caution:

Making changes to the Systems Presets that are related to Inline System control will require the execution of the IRC SETTING job.

Please consider the general rules listed below when using this feature:

- An IRC SETTING is required after modification to the above SRV Job's
- A PROGRAM RESET is required upon modification

PGM-Mode:

PGM Mode Job Listing			
PGM2 –Menu	Description	Master	Satellite
PGM2	05 Data Clear	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> limited
PGM2	06 Open Store	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PGM2	07 Close Store	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PGM2	08 KP Reading	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PGM2	09 KP Setting	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PGM2	20 Inline Reading	Inline Preset	<input checked="" type="checkbox"/>
		Sign On Server	<input checked="" type="checkbox"/>
	21 Inline Setting	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PGM2	22 Initial D/L	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PGM2	23 Mainte. D/L	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PGM2	24 Declaration	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Inline System – Terminal No. IP Address:

This programming is intended to determine the terminal number of each machine within the Inline system

- TERMINAL NO. IP ADDRESS 1 – 3 must be set the same for every machine within the Inline system
- TERMINAL NO. IP ADDRESS 4 is different from the register’s MACHINE NO.
- If TERMINAL NO. IP ADDRESS 4 is programmed at “0”, the machine’s Inline communications function is disabled
- If two or more machines are assigned the same terminal number within the same Inline system, communications cannot be assured
- TERMINAL NO. IP ADDRESS 4 and MACHINE NO. are independent, they correspond to one another for numerous communications functions (e.g. Backup Master, Online polling, etc)
- TERMINAL NO. IP ADDRESS 4 must be 1 and 254

Assignment Method:

When the above guidelines are not observed, when programming the Master’s polling list, a LOCK ERROR will result

1. Inline Setting

The INLINE SETTING programming job is available as a standard preset in case there is the requirement for modification after the initial SRV Mode IRC SETTING job has been executed.

Procedure:

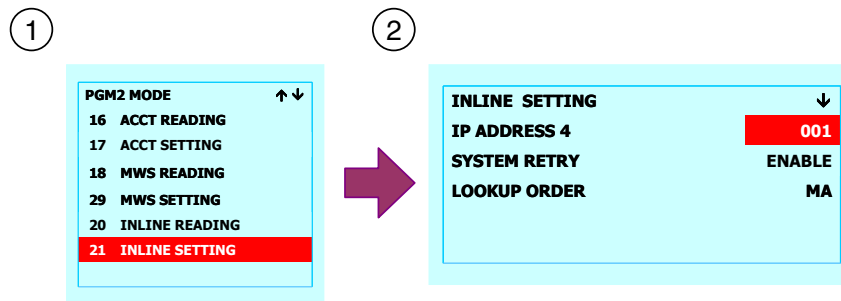
Enter the PGM2-Mode by turning the MA key counter clock wise to the PGM2 position

① Select [21 INLINE SETTING]

② Enter the desired IP ADDRESS along with choosing the desired parameters:

11. System Retry: Enable/Disable

12. T-Log Full: Continue/Lock up



Assignment Method:

It is recommended that the when changing the IP ADDRESS 4 setting that this be performed through the IRC SETTING job.

Please consider the general rules listed below when using this feature:

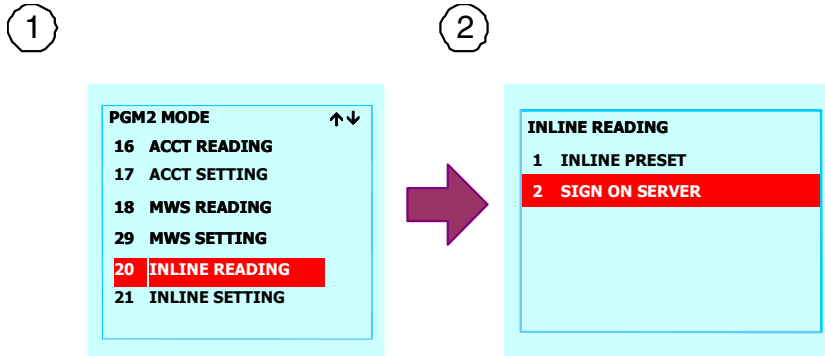
- When changes are made at the Master, the Master List will be prompted (the existing Machine No. will appear at the Terminal No. input)
- The INITIAL D/L: INLINE PRESET job should be performed upon completion

2. Server Sign On Report

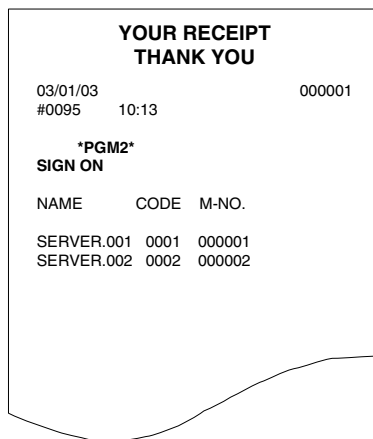
Procedure:

Enter the PGM2-Mode by turning the MA key counter clock wise to the PGM2 position

- ① Select [21 INLINE SETTING]
- ② Select [2 SIGN ON SERVER]
- ③ This will automatically start to print.



Print Example:



Important:

It recommended that the SERVER SIGN ON reading is performed prior to working on an installed system to insure that when entering the SRV mode that the servers have been previously signed off

3. Open Store

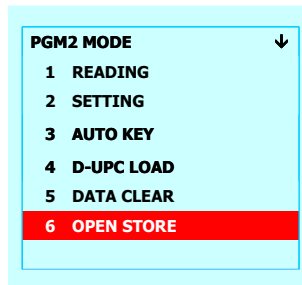
The Open Store command is used to control the Inline system. Upon execution at the Master, sales entry and the T-Log polling service to Satellite machines is started.

Procedure:

Enter the PGM2-Mode by turning the MA key counter clock wise to the PGM2 position

① Select [6 OPEN STORE]

The Open Store command is executed based on the Master's polling list presets



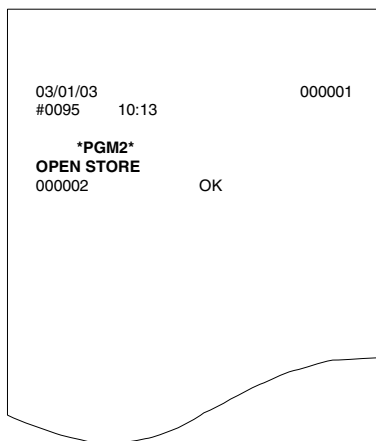
Usage Method:

Notification of the Inline System status is printed on the journal printer

Please consider the general rules listed below when using this feature:

- Each Satellite within the system will print its status upon completion

Print Example:



4. Close Store

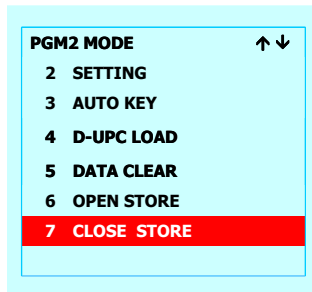
The Close Store command is used to control the Inline system. Upon execution at the Master, sales entries and the T-Log polling service to Satellite machines is halted.

Procedure:

Enter the PGM2-Mode by turning the MA key counter clock wise to the PGM2 position

- Select [7 CLOSE STORE]

The Closed Store command is executed based on the Master's polling list presets



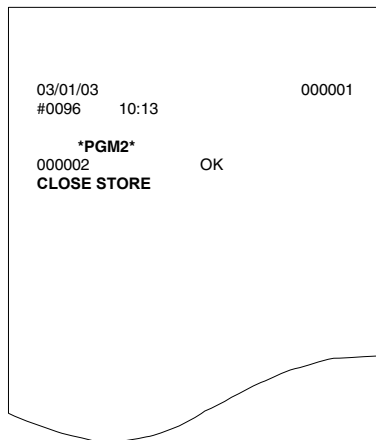
Usage Method:

Notification of the Inline System status is printed on the journal printer

Please consider the general rules listed below when using this feature:

- All servers must be signed off prior to executing the Close Store command or the "IS SIGNED ON" error will appear listing which machines have a server signed on to it

Print Example:



Section-6: Remote Printing and Printer Re-routing

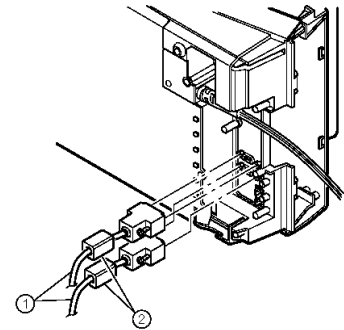
This section will assist in the implementation of printer devices used for remote printing, which require connection to an RS232 port and is considered part of the Inline system.

Prior to programming, it is important to insure that the hardware connections necessary for each device are accomplished. As a basic rule, the following steps may be used for each peripheral device:

1. Connecting the UP-600/700:

Procedure:

- ① Connect the specified RS232 cable to the desired Channel to be assigned
- ② Install a ferrite core (part no. RCORF6699BHZZ) within 50 cm of the connector on the connection cable to reduce interference



2. Cabling Specifications:

As a general rule, each peripheral's manufacturer should provide their recommended specifications for cabling to the peripheral device. The below guideline for cabling should be observed when connecting a serial device to the UP-600/700 terminal:

Cabling Specifications:

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

* The true maximum distance will be determined by the quality of the cable

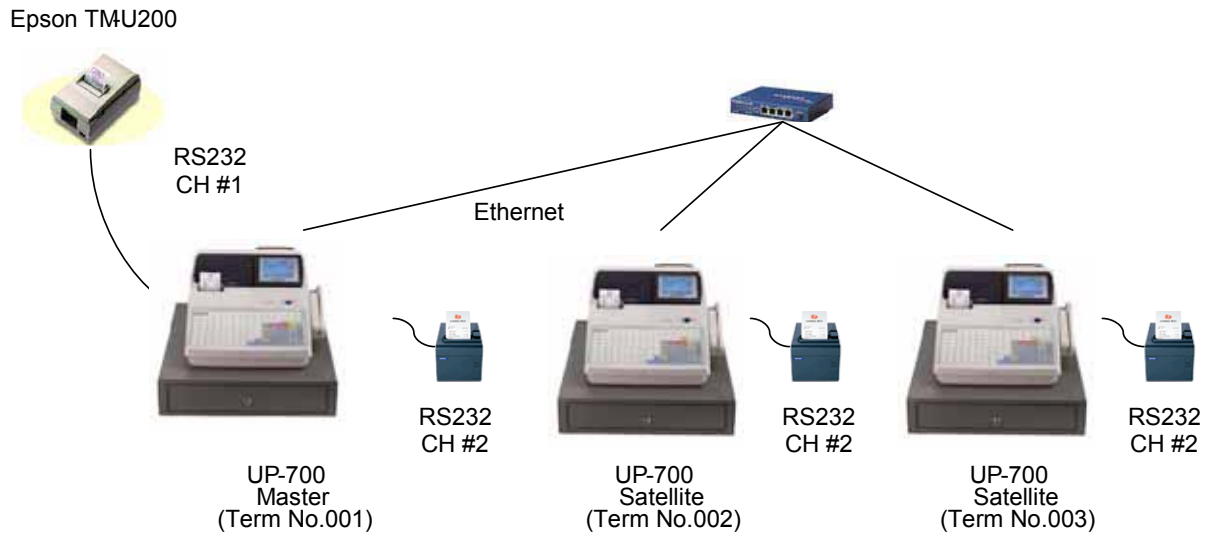
3. Standard D-Sub 9 Pin Connector:

The UP-600/700 CH1 utilizes a standard PC-type COM Port - EIA-574 RS-232 pin out on a DB-9 pin used for Asynchronous Data and **CH2** utilizes a Modular Jack RJ45 8 pin type COM Port for RS232. Please refer to the Peripherals section for port and cable pinouts.

4. KP System Overview

A Remote printer (KP) may be added to the UP-600/700 configuration when item printing to a remote location such as a kitchen or prep area is required. A system overview and example Device assignment assuming that KP #1 is used:

Example KP Configuration:



The following device assignments are considered based on the above configuration:

KP Setup		
Term. No.	Type Terminal	KP #1 Device Assign Setup (Terminal No./Channel No.)
001	Master	Term. No.= 000 / Channel No.= 1
002	1 st Satellite	Term. No.= 001 / Channel No.= 1
003	2 nd Satellite	Term. No.= 001 / Channel No.= 1

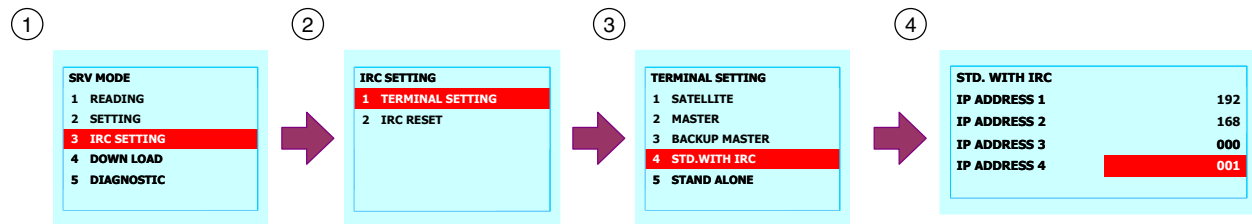
Basically the Satellite's are using the port settings of another terminal. This means that it is possible for the Satellites to utilize their own Channel No. 1 as a direct connection to another device.

5. Standalone with IRC – (Minimum Setting)

Procedure:

Enter the SRV-Mode as outlined in Section -3

- Select [3 IRC SETTING]
- Select [1 TERMINAL SETTING]
- Select [4 STD. WITH IRC]
- Enter the desired IP ADDRESS followed by depressing the [ENTER] key



Assignment Method:

The IRC SETTING job will automatically CREATE the memory file allocation based on the KP preset being preset and initialize the I/O control for KP printing

Please consider the general rules listed below when using this feature:

- A PROGRAM RESET is required upon completion
- A journal printer should be connected in order to see that the available memory is sufficient (memory lacking errors are printed only on the journal printer)

Printer Devices: KP Printing System

The following devices may be considered for KP devices:

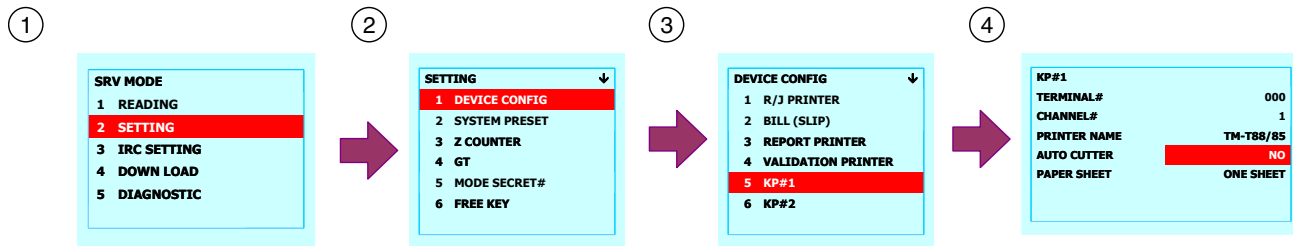
Device	Type Printer
KP #1 – KP #9	Epson TM-U200/U230
	Epson TM-U300
	Epson TM-T80
	Epson TM-T85/88(3)
	Epson TM-T88(3)
	ER-01PU
	UP-T80BP

6. KP Printer Device setup

Procedure

Enter the SRV-Mode as outlined in Section -3

- ⑥ Select [2 SETTING]
- ⑦ Select [1 DEVICE CONFIG]
- ⑧ Select [5 KP#1] – [13 KP#9]
- ⑨ Enter the desired Channel # and Terminal # and choose the desired parameters (Printer Name: Type and Auto Cutter: Yes/No)



- ⑩ Depress the [CASH] key when all settings are completed
The menu will return to the Device Assign Sub-Menu
- ⑪ Depress the [CANCEL] key to return to the SRV Mode Setting Sub-Menu

NOTE:

When “ALL” KP printers are assigned to the desired Channel No., it is recommended that a PROGRAM Reset be performed.

Assignment Method:

The CHANNEL NO. assignment is only dedicated at the machine where the printer is physically connected. For the Inline configuration – the TERMINAL and CHANNEL of the machine where the printer is physically located is required

Please consider the general rules listed below when using this feature:

- A printing device can not be assigned to a Channel where a non-printing device is already assigned (ex: SCALE)

Related Programming Jobs: KP Printing

SRV Mode

SRV Menu / Job#	Description
Setting – System Preset	902-A Inline operations are ENABLED
Setting – System Preset	918-A, B, C A: Combo Text print selections B: PLU text RED print selections C: KP print output selections (grouping like items/double-size)
Setting – System Preset	926-A, B A: Direct Voids/Past Void printing selections B: Refund print selections
Setting – System Preset	929-A Media Key KP Print Format is Detailed/Summary
Setting – Free Key	950 Function No. 145 [RP SEND]

PGM2 Mode

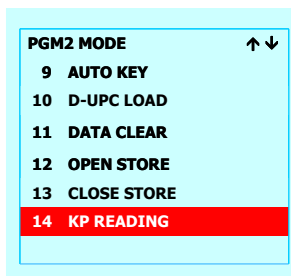
PGM2 Menu /Job #	Description
PGM2 – KP Setting	KP Setting / Remote printer
	Enable data transmission for Remote printers
	Second Remote printer number assignment
	Remote printer header text setting
	Remote printer formatting
	Chit Receipt print formatting

KP Setting PGM Reading

Procedure

Enter the PGM2-Mode by turning the MA key counter clock wise to the PGM2 position

- ① Select [08 KP READING]
- ② This will automatically start to print.



Note:

The KP may output: Item Text, Quantity, Unit Price, Amount, DEPT/PLU code, Media, Non Add # and Header information

7. KP Printer Setting Options

The option selections for KP #1 – KP #9 are preset in PGM2 mode.

Second (Backup) Remote Printing:

If an error occurs at the first assigned remote printer, then the system recovers automatically and prints the data at the assigned Second KP (backup).

Duplicate Remote Printer Assignment:

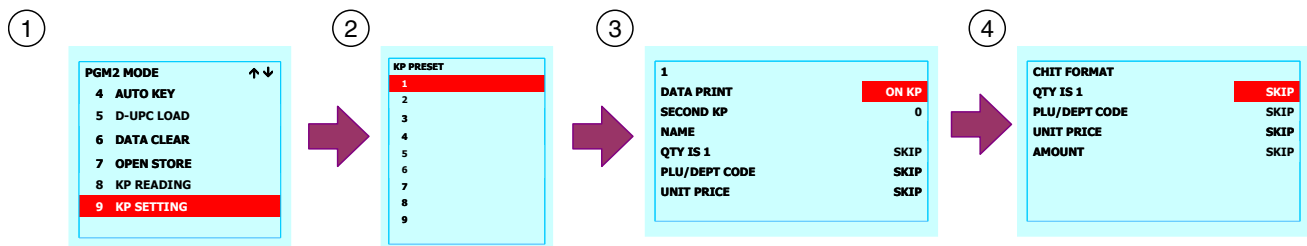
The UP-600/700 system is capable of assigning two remote printers to any item (department, PLU, and media keys) simultaneously.

KP PGM Presets

Procedure

Enter the PGM2-Mode by turning the MA key counter clock wise to the PGM2 position

- ① Select [09 KP SETTING]
- ② Select the KP (1 – 9)
- ③ Enter the desired parameters followed by depressing the [CASH] key:
 - 13. Data Print: ON KP, CHIT or Nothing
 - 14. Second KP: 0 – 9
 - 15. Name: Max. 12 char.
 - 16. Qty is 1: Skip/Print
 - 17. PLU/Dept Code: Skip/Print
 - 18. Unit Price: Skip/Print
 - 19. Amount: Skip/Print



Procedure (continued)

The CHIT FORMAT settings will be prompted

④ Enter the desired parameters followed by the [CASH] key:

- | | |
|--------------------|----------------|
| 20. Transmission: | Enable/Disable |
| 21. Second KP: | 0 – 9 |
| 22. Name: | Max. 12 char. |
| 23. Qty is 1: | Skip/Print |
| 24. PLU/Dept Code: | Skip/Print |
| 25. Unit Price: | Skip/Print |
| 26. Amount: | Skip/Print |

Assignment Method:

When a second KP is not assigned then the data is printed on a CHIT receipt if the Receipt printer is assigned at the machine

Please consider the general rules listed below when using this feature:

- When transmission is selected for “DISABLE” then a CHIT receipt is printed

More on KP Assignments

Receipt Chit Assignment:

In addition to the two printer assignments per item, there is also the capability to print those same items in remote printer format at the terminals own R/J printer.

Expeditor Printer Assignment:

The setting is performed through the assigning of a remote printer to a specific media key. This will initiate a "receipt" type order to be printed once the previously assigned media key has concluded sales.

RP Send Function:

The RP Send function allows for the operator to send those items that require longer prep time first, prior to the conclusion of that order entry.

Black and Red Print:

The UP-600/700 supports two colors for easy viewing of Condiment (zero priced PLU items) instructions, modifiers, and corrections.

Kitchen Printer Recapitulation:

This feature consolidates like items on the remote printer.

Priority Print:

This feature can send items in the programmed order of priority by assigning PLU items to priority groups (1-9).

8. KP Print Examples

Print Example – Normal

```

03/01/03 000001      BILL#0007
#0100 10:23          SERV.0001

GLU#00000006
HOT GRILL

PL0000001
PL0000054
PL0000003
PL0000055
FULL ORDER
    
```

Print Example – w/ Multiplication

```

03/01/03 000001      BILL#0007
#0100 10:23          SERV.0001

CAR#00000007
HOT GRILL

      2 @

PL0000001
PL0000054
PL0000054
PL0000003
PL0000055
FULL ORDER
    
```

Print Example – Summary Media

```

03/01/03 000001      BILL#0007
#0100 10:23          SERV.0001

CHARGE1                $5.00
    
```

Print Example – Detailed Media

```

03/01/03 000001      BILL#0007
#0100 10:23          SERV.0001

CAR#00000006

***PBAL                $0.00
PL0000003                $1.00
  PL0000054                $0.01
  PL0000013                $0.01
  BAL FWD                  $1.02
    CHARGE1                $1.02
  BALANCE                  $0.00
  --CHECK CLOSED
    
```

Print Example – KP Print Options

```

03/01/03 000001      BILL#0007
#0100 10:23          SERV.0001

CAR#00000007
HOT GRILL

      1 @ PL0000001      0.01
                                Unit Price
PL0000001              $0.01
                                Amount
FULL ORDER

PLU Code
    
```

Section-7: Inline Download Jobs

When modifications are made to the Inline Master, system presets, keyboard and preset (pgm2) data programming, you can distribute the preset data from the master to all satellites in the network.

The purpose is to keep the Inline system synchronized through the usage of program data download jobs (Master → Satellites).

Benefits:

Feature	Explanation
Saves Time when programming	Because the Master is capable of downloading centrally, it is only necessary to make your program changes (1) time.
Saves time for reporting	Because the Master is capable of uploading and consolidating sales data, hours of addition are saved for more important things.
Any time	The UP-600/700 allows for preset price changes on-the-fly". Thus, midday special prices can be change without corrupting sales totals
Add new items	The UP-600/700 system allows for the addition of a new item at any time. This means that you do not have to wait until a daily/period Z report to make changes

1. Download Methods

There are three options for updating preset data in the UP-600/700 Inline system:

MODE	Option		Explanation	Intended Use
SRV	Download	SRV Parameter	Downloading System Presets (900s) and the Free key (950) layout/keyboard	During setup
		Free Key Layout		
PGM 2	Initial D/L		Downloading the contents of the file program data of the Master into the file of a Satellite after clearing the file totalizers (Z1/Z2).	During setup
PGM 2	Maintenance D/L		Downloading the contents of the file program data of the Master into the file of a Satellite without clearing the file totalizers (Z1/Z2)	When Preset data is changed

2. SRV Mode Download Jobs

The SRV Mode Download option allows for transmitting the system presets settings and free key layout from the master to the satellite terminals. This option is used typically upon initial setup of the Inline system.

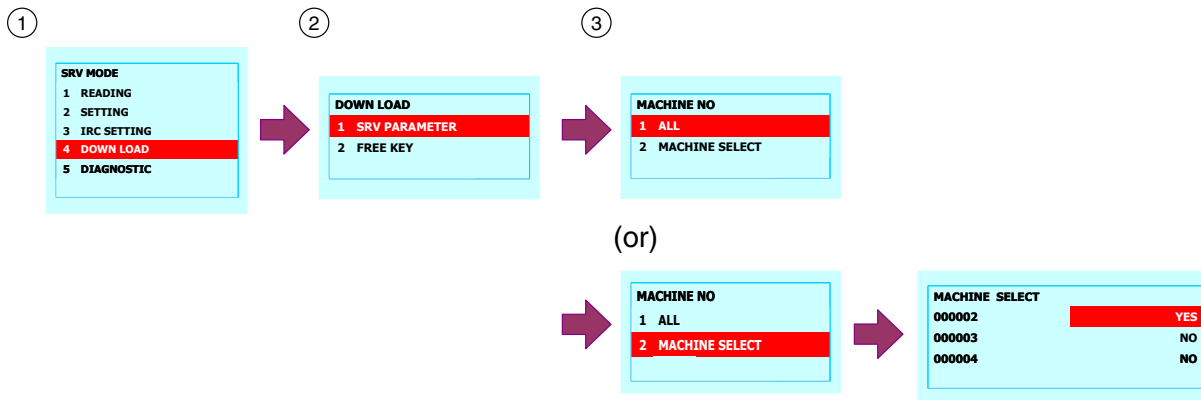
SRV Mode

SRV Menu / Job#	Description
04 Download	1 SRV Parameter
	2 Free Key Layout

Procedure

Enter the SRV-Mode as outlined in Section -3

- ① Select [4 DOWN LOAD]
- ② Select [1 SRV PARAMETER]
- ③ Select [1 ALL] or [2 MACHINE SELECT] (followed by selecting each machine)
- ④ Execute the Download Job by depressing the [ENTER] key



Assignment Method:

For 2 MACHINE SELECT: choose each machine by toggling the [.] decimal key to change the selection from “NO” to “YES”

Please consider the general rules listed below when using this feature:

- SRV Parameter (System Presets) jobs that may cause system malfunctions will not be downloaded

3. PGM2 Mode Download Jobs

The Initial Download method for distributing preset data transmits the program data from the Master after the file area is cleared. This method is used typically upon initial setup of the Inline system.

PGM2 Mode

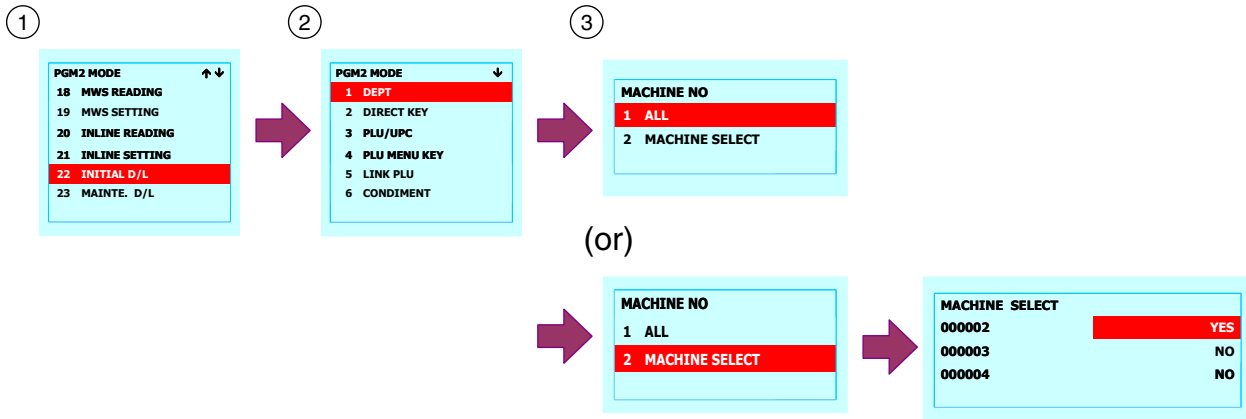
PGM2 Mode Menu	Description	Timing
22 INITIAL D/L	01 DEPT – Department	only after Z1 and Z2
	02 DIRECT KEY – Direct Departments and PLU	anytime
	03 PLU – PLU presets	only after Z1 and Z2
	04 PLU Menu Key	anytime
	05 LINK PLU	anytime
	06 CONDIMENT	anytime
	07 MIX&MATCH	anytime
	08 COMBO MEAL	only after Z1 and Z2
	09 UPC NON-PLU	only after Z1 and Z2
	10 TRANSACTION	only after Z1 and Z2
	11 SERV. SIGN OFF	anytime
	12 OPTION	only after Z1 and Z2
	13 DATE/TIME	anytime
	14 LOGO	anytime
	15 DEF. MENU LEVEL	only after Z1 and Z2
	16 TAX	anytime
	17 NEGATIVE#	anytime
	18 POSITIVE#	anytime
	19 MACRO KEY	anytime
	20 FUNC. MENU KEY	anytime
	21 CAPTURE KEY	anytime
	22 CAPTURE JOB#	only at Initial setup
	23 ONLINE PRESET	anytime
	24 INLINE PRESET	anytime
	25 KP PRESET	anytime
	26 DEVICE CONFIG	only at Initial setup
	27 ALL PGM	only at Initial setup

Procedure

Enter the PGM2-Mode by turning the MA key counter clock wise to the PGM2 position

- ① Select [22 INITIAL D/L]
- ② Select the desired file data (and their parameters) to be downloaded

③ Choose the Satellites to receive the file data (All/by each machine)



Caution
 INITIAL D/L Job #27 ALL PGM will clear the Satellite's totals if executed prior to performing the Z1 or Z2 reports

Maintenance Download Jobs

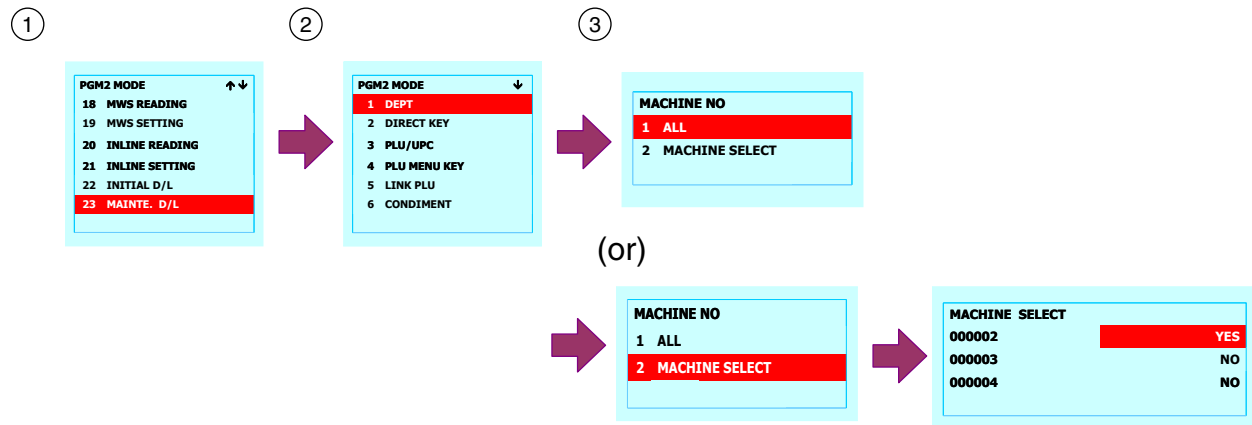
The Maintenance Download method for distributing preset data transmits the program data from the Master without clearing the file area. This method is used when the preset data is modified after the initial installation.

Job #	Description	Timing
MAINTENANCE D/L	01 DEPT	anytime
	02 DEPT PRICE	anytime
	03 DEPT CVM DATA	anytime
	04 PLU/UPC	anytime
	05 PLU PRICE	anytime
	06 PLU CVM DATA	anytime
	07 LINK PLU	anytime
	08 CONDIMENT	anytime
	09 MIX&MATCH	anytime
	10 COMBO MEAL	anytime
	11 COMBO CVM DATA	anytime
	12 TRANSACTION	anytime

Procedure

Enter the PGM2-Mode by turning the MA key counter clock wise to the PGM2 position

- ① Select [23 MAINTE. D/L]
- ② Select the desired file data (and their parameters) to be downloaded
- ③ Choose the Satellites to receive the file data (All/by each machine)



Assignment Method:

For 2 MACHINE SELECT: choose each machine by toggling the [.] decimal key to change the selection from “NO” to “YES”

More on Download Jobs

- ① PGM download for PLU/UPC do not include Stock data.
- ② PGM download for Option includes the following:
 - Optional feature presets
 - Scale preset
 - Validation presets
 - Hourly report format presets
 - Stack report presets
 - Secret code presets (PGM mode)
 - Auto key presets
 - Location presets
 - GLU range
- ③ The Logo file includes logo text, bill logo, dept, group text, hourly group text, currency, and descriptor.
- ④ PGM download jobs for PLU/UPC include Link PLU and Set PLU presets

Note:

Initial D/L All PGM should not be performed when totals exist in the system. The totalizers of the receiving satellite are erased. Performed individual initial D/L jobs will result in a non-reset error.

Section-8: Manual Clear Jobs

In the event a problem has occurred within the Inline system, it is possible to manually clear selected status flags and memories to

PGM2 Mode – Manual Clear Jobs:

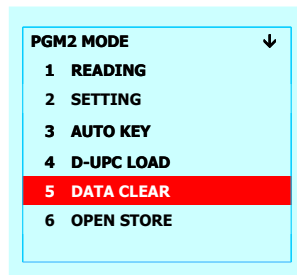
PGM 2 Mode Menu	PGM2 –Mode Programming	Master	Satellite
05 DATA CLEAR	1 T-LOG	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	2 CAPTURE DATA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	3 TRANSACTION	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	4 HOURLY	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	5 DAILY NET	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	6 SIGN ON FLAG	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	7 GLU USED FLAG	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	8 OFFLINE ACCT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Procedure

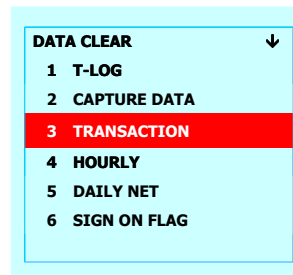
Enter the PGM2-Mode by turning the MA key counter clock wise to the PGM2 position

- ① Select [05 DATA CLEAR]
- ② Select the desired memory to be cleared followed by depressing the [ENTER] key

①



②



Caution

It is recommended to use the MANUAL CLEAR option as a last resort as they will cause the system to become unbalanced.

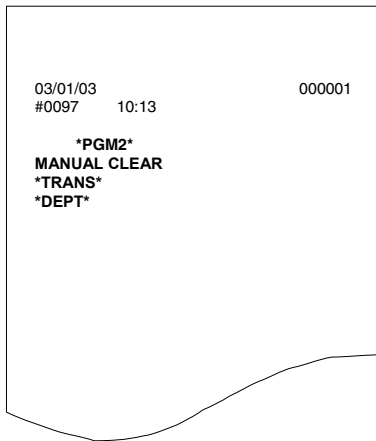
Assignment Method:

It is recommended to restrict the MANUAL CLEAR jobs from unsupervised end-user usage

Please consider the general rules listed below when using this feature:

- The results of the MANUAL CLEAR job are printed on the Journal printer
- The TRANSACTION manual clear job clears both the Department and Transaction memories

Print Example:



Section-9: System Backup Master

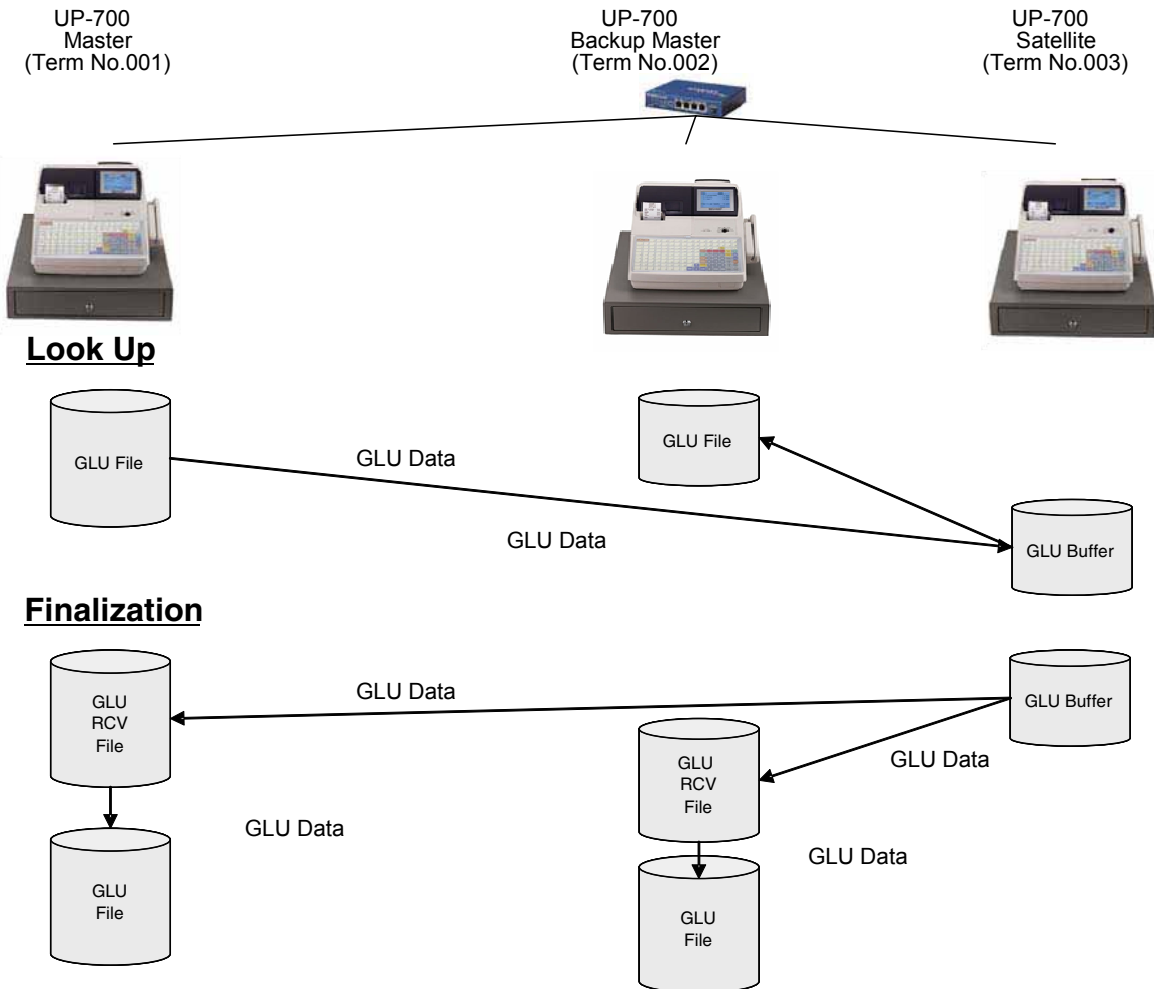
The UP-600/700's Backup Master function is performed by one of the Satellites designated as a Backup Master that can execute the Master's functions when trouble exists.

The functions that a Backup Master may perform are as follows:

- GLU Function: File lookup and Uploading, System Reports and Download Jobs

1 Backup Master GLU/PBLU Lookup function:

- All Satellites upload Guest Check data to the Master
- The Master receives the data, processes it and sends it back to the Satellite
- The Satellite then sends the data to the Backup Master
- The Backup Master receives the data, processes it and sends it back to the Satellite



IMPORTANT:

The above data transfer is only possible when SRV Job#920-B has enabled the Backup Master to provide this function (= +4)

2 Inline System Setup – with a Backup Master

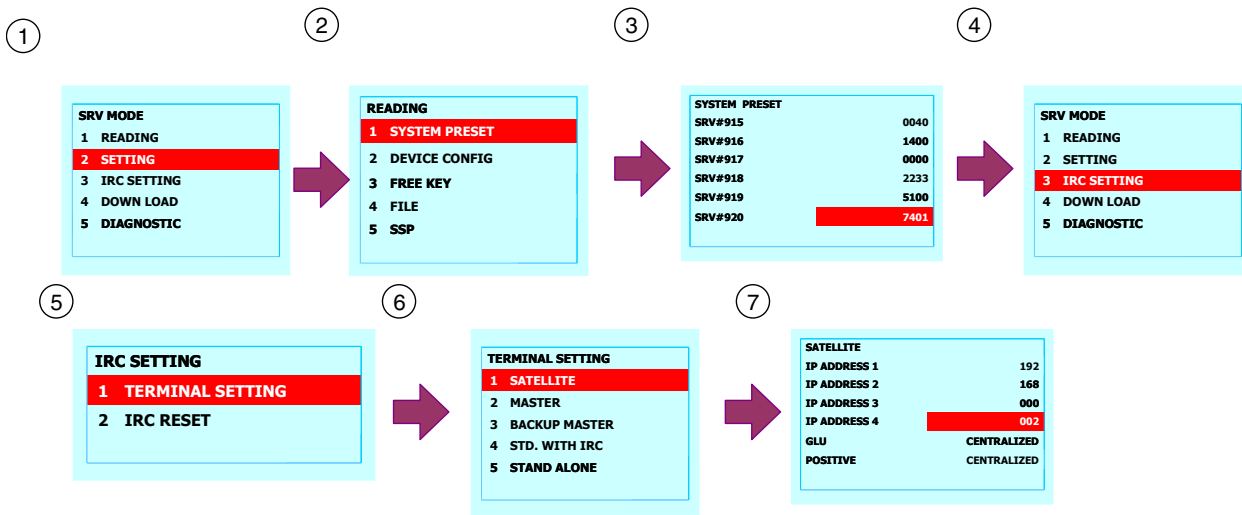
Please note that the SRV mode IRC SETTING job is combined with SYSTEM PRESET settings to enable a Backup Master that can provide the functions supported by the Master.

Satellite – Minimum procedure

Procedure:

Enter the SRV-Mode as outlined in Section -3

- ① Select [2 SETTING]
- ② Select [1 SYSTEM PRESET]
- ③ Set SRV#920 = 74x1 followed by [ENTER] key and then [CASH] to return to the SRV SETTING menu
- ④ Depress the [CANCEL] key to return to the SRV Main Menu
- ⑤ Select [3 IRC SETTING]
- ⑥ Select [1 TERMINAL SETTING]
- ⑦ Select [1 SATELLITE]
- ⑧ Enter the desired IP ADDRESS along with choosing the desired parameters:
 27. GLU System: Centralized/Individual
 28. Machine Location: Cashier Station/Order Taker/Counter
 29. Backup Master: Exist
- ⑨ Depress the [CASH] key to complete the IRC SETTING



Important

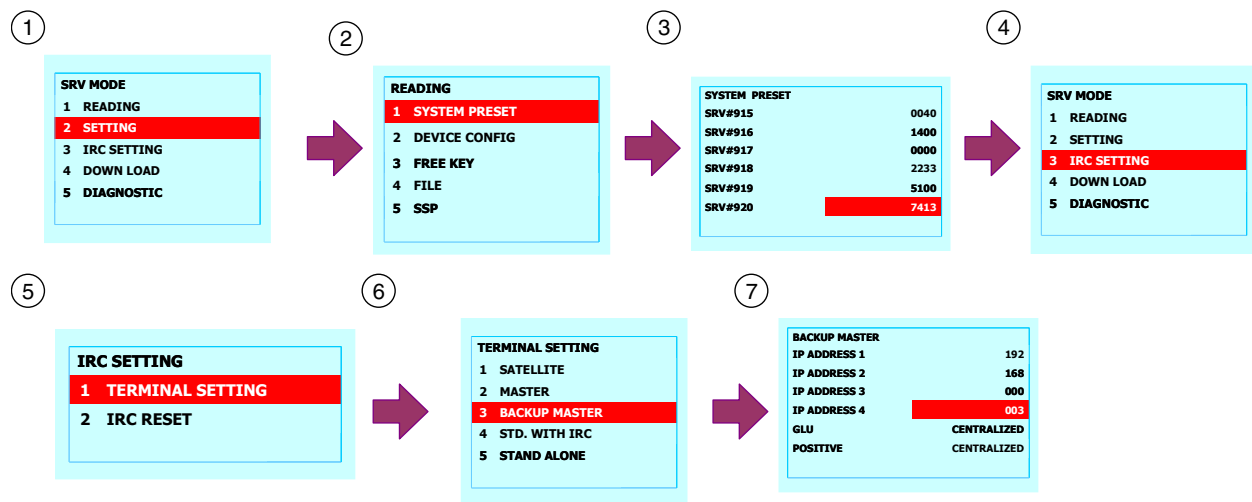
A PROGRAM RESET should be performed at the completion of the IRC SETTING job

Backup Master – Minimum procedure

Procedure:

Enter the SRV-Mode as outlined in Section -3

- ① Select [2 SETTING]
- ② Select [SYSTEM PRESET]
- ③ Set SRV#920 = 7413 followed by [ENTER] key and then [CASH] to return to the SRV SETTING menu
- ④ Depress the [CANCEL] key to return to the SRV Main Menu
- ⑤ Select [3 IRC SETTING]
- ⑥ Select [1 TERMINAL SETTING]
- ⑦ Select [3 BACKUP MASTER]
- ⑧ Enter the desired IP ADDRESS along with choosing the desired parameters:
 30. GLU System: Centralized/Individual
 31. Machine Location: Cashier Station/Order Taker/Counter
- ⑨ Depress the [CASH] key to complete the IRC SETTING



Important

A PROGRAM RESET should be performed at the completion of the IRC SETTING job

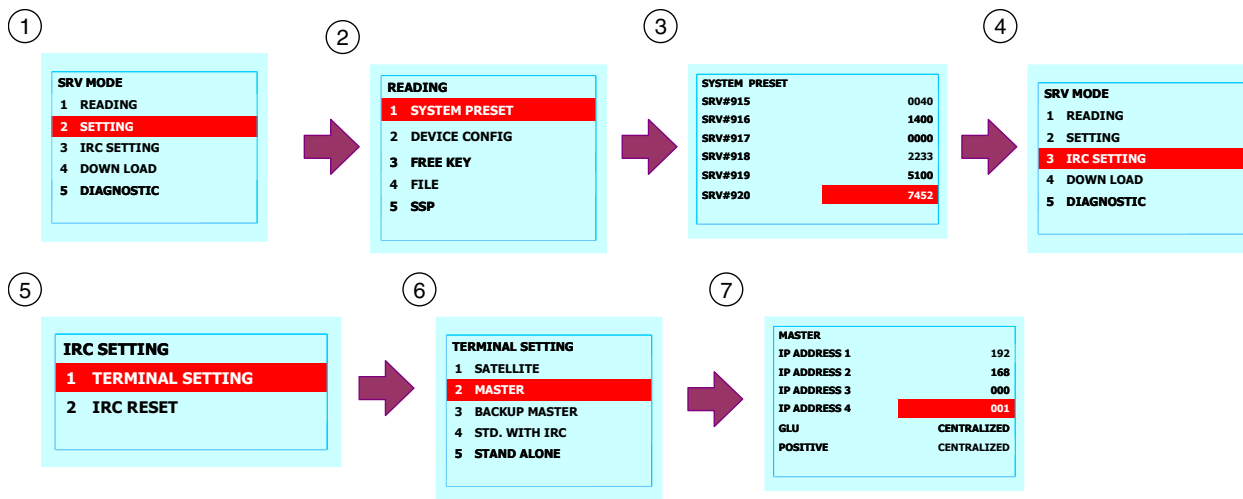
Master – Minimum procedure

The assumption is that the machine, which is designated as the Master, has a Standalone program defined prior to the following procedure.

Procedure:

Enter the SRV-Mode as outlined in Section -3

- ① Select [2 SYSTEM PRESET]
- ② Select [1 TERMINAL SETTING]
- ③ Set SRV#920 = 7452 followed by [ENTER] key and then [CASH] to return to the SRV SETTING menu
- ④ Depress the [CANCEL] key to return to the SRV Main Menu
- ⑤ Select [3 IRC SETTING]
- ⑥ Select [1 TERMINAL SETTING]
- ⑦ Select [2 MASTER]
- ⑧ Enter the desired IP ADDRESS along with choosing the desired parameters:
 32. GLU System: Centralized/Individual
 33. D-Thru System: Centralized/Individual
 34. Machine Location: Cashier Station/Order Taker/Counter
 35. Backup Master: Exist
- ⑨ Depress the [CASH] key to continue the IRC SETTING preset for the Master List



Important
 A PROGRAM RESET should be performed at the completion of the IRC SETTING job

Procedure (cont.):

- ⑩ Enter the IP ADDRESS4 for the Master
- ⑪ Enter the MACHINE No. for the Master
- ⑫ Repeat steps 10 and 11 for every terminal in the Inline system and depress [CASH] after the entry of the last terminal's machine number has been entered

The entry of the Backup Master's machine no. will appear

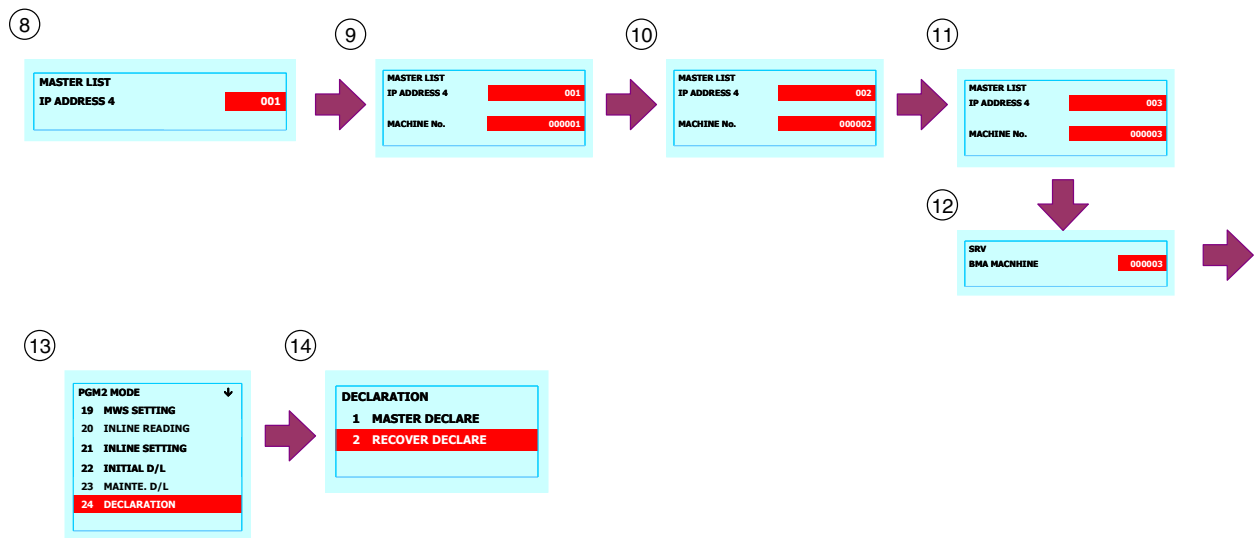
- ⑬ Enter the BMA MACHINE NO. followed by depressing the [CASH] key

*The Master will finalize the IRC SETTING will automatically continue and execute Inline Presets download - **Perform a PROGRAM RESET***

While in the SRV MODE main menu select [4 DOWNLOAD] and download [1 SRV PARAMETER] and [2 FREE KEY] if required and depress [CANCEL] to exit SRV mode

Enter the PGM2-Mode by turning the MA key counter clock wise to the PGM2 position

- ⑭ Select [24 DECLARATION]
- ⑮ Select [2 RECOVER DECLARE] to send the GLU/Server data to the Backup Master



Important

A PROGRAM RESET should be performed at the completion of the IRC SETTING job

Completing the Inline System:

- ⑩ Select [22 INITIAL D/L]
- ⑪ Select [27 ALL PGM] and select [1 ALL] to initiate downloading to all machines

While in PGM2 MODE, select [6 OPEN STORE] prior to going to REG mode

Related Programming Jobs: Backup Master

SRV Mode

SRV Mode Menu / Job#		Description
Setting – System Preset	920-A, B, C, D	Inline Terminal setting
Setting - File		No. 32: Server
		No. 38: GLU/PBLU (All)
		No. 39: Closed GLU
		No. 40: Auto Generate

PGM2 Mode

PGM2 Mode Menu	PGM2 –Mode Programming	Master	Backup Master	Satellite
24 DECLARATION	1 Master Declaration	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	2 Recover Declaration	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Important
To insure that the Backup Master system is fully functional when a Master breaks down, it is recommended to make sure that the physical printers required for operation be connected to each terminal separately

Please consider the general rules listed below when using this feature:

- The printer rerouting function for the Receipt, Journal and Report printers should be minimized when Backup Master is required
- If the terminal breaks down where the Receipt, Journal or Report printer are physically attached – Printer related errors will result

Master Declaration – Backup Master and Master

Assignment Method:

This operation is enabled for use when the Master or Backup Master breaks down

Please consider the general rules listed below when using this feature:

- Master Declaration is used at the Backup Master when the Master has failed communications.
- Master Declaration at the Master is used when the Backup Master has failed communication
- Completion of the Master Declaration executes the following processes:
 - Inhibits GLU data communications
 - Error GLU data and Error Server data is collected
 - Notification of the Master/Backup Master breakdown situation to the Satellites
 - When done at the Master – the Satellites do not update the Backup Master
 - When done at the Backup Master – Satellites do not update the Master
 - Restarts the GLU data communications when completed

Print Example:

```
03/01/03          000001
#0097   10:13

  *PGM2*
MASTER DECLARE

GLU STOP

ERROR DATA UPLOAD

000001          OK
000002          OK

GLU START

000001          OK
000002          OK
```

Recovery Declaration – Backup Master and Master

Assignment Method:

This operation is enabled for use when the Master or Backup Master is recovered

Please consider the general rules listed below when using this feature:

- Recover Declaration is performed upon initial setup of the Inline system
- Recover Declaration is used at the Backup Master when the Master has recovered
- Recover Declaration is used at the Master when the Backup Master has recovered
- Completion of the Master Declaration executes the following processes:
 - Inhibits GLU data communications
 - Error GLU data and Error Server data is collected
 - Notification of the Master/Backup Master breakdown situation to the Satellites
 - When done at the Master – the Satellites will begin to update the Backup Master
 - When done at the Backup Master – Satellites will begin to update the Master
 - Restarts the GLU data communications when completed

Important

When preset programming for Servers, Employees and Guest Checks is “modified” it is mandatory to synchronize the Backup Master by executing the RECOVERY DECLARE job

Print Example:

```
03/01/03          000001
#0100   10:23
*PGM2*
RECOVERY DECLARE

GLU STOP

ERROR DATA UPLOAD
000001   OK
000002   OK

SERVER DATA DOWN LOAD
000001   OK

GLU DATA/CLOSED GLU
DATA DOWNLOAD
000001   OK

GLU START

000001       OK
000002       OK
```

The actual printed output will vary based on the features allocated.

When Employees are used, the data is shown

Section-10: Inline System Report List

Inline system reports are differentiated from standalone reports with simply adding a leading 4th digit to the report job number (example: 110 (standalone) → 1110 (Inline)).

1. Inline System Reports – Master and Backup Master

Report Name	Mode *1						Job# *3	Data for Reading
	OP X/Z		X1/Z1		X2/Z2			
	X	Z	X1	Z1	X2	Z2		
DEPT			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1x10	---
DEPT.IND.GROUP			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		1x12	GROUP No.
DEPT.GROUP TOTAL			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		1x13	---
MARK DOWN FOR DEPT			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		1x19	---
PLU BY RANGE			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1x20	PLU CODE
PLU BY DEPT			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1x21	DEPT CODE
PLU IND.GROUP TOTAL			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		1x22	GROUP No.
PLU GROUP TOTAL			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		1x23	---
PLU STOCK			<input checked="" type="checkbox"/>				1x24	PLU CODE
PLU COST			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		1x25	PLU CODE
PLU TOP 20			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		1x26	AMOUNT/ QTY
PLU ZERO SALES			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		1x27	ALL
PLU ZERO SALES DEPT			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		1x27	DEPT CODE
PLU MINIMUM STOCK			<input checked="" type="checkbox"/>				1x28	---
PLU GROUP BY HOURLY			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			1x29	---
TRANSACTION			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1X30	---
CID			<input checked="" type="checkbox"/>				1x31	---
TAX			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		1x33	---
ALL SERVER			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1x40	---
IND.SERVER	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1x41	Note: *2
EMPLOYEE			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1x55	Note: *2
EMPLOYEE ADJUSTEMNT					<input checked="" type="checkbox"/>		1x56	Employee No./*2
EMPLOYEE ACTIVE STATUS			<input checked="" type="checkbox"/>				1x57	Employee No./*2
EMPLOYEE SALES					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1x58	Detailed
EMPLOYEE SALES					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1x59	All
HOURLY (ALL)			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			1x60	---
RANGE			<input checked="" type="checkbox"/>				1x60	---
LABOR COST %			<input checked="" type="checkbox"/>				1x61	---
EMPLOYEE OVERTIME			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1x62	Employee No.
DAILY NET					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1x70	
INGREDIENT STOCK			<input checked="" type="checkbox"/>				1x75	Ingredient Code
GLU			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			1x80	Note: *2
GLU BY SERVER			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			1x81	---
CLOSED GLU			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			1x82	Note: *2
CLOSED GLU BY SERVER			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			1x83	---
DRIVE THRU			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			1x85	Note: *2
DRIVE THRU BY SERVER			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			1x86	---
CLOSED DRIVE THRU			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			1x87	Note: *2
CLOSED DRIVE THRU BY SERVER			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			1x88	---
DRIVE THRU SERVICE TIME			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1x89	---
STACKED REPORT			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1x90,1x91	---
RESET CLEAR				<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	1x99	---

Assignment Method:

All reports are printed on the Report printer if assigned as a device

Please consider the general rules listed below when taking reports:

- To “STOP” a report from printing you may “cancel” it by depressing the [@/FOR] key
- When the printing is stopped, the following occurs:
 - Z-counters are incremented
 - When stopped during Z-Reports, the Memory is not reset
- When the Master has consolidated the data, the report can not be stopped

Note:

*1: X1: Daily X Report, Z1: Daily Z Report, X2: Periodic X Report, Z2: Periodic Z Report

*2: The Range can be specified by entering Start and End numbers (codes)

*3: When a “2” is entered as the 3rd digit – the Periodic report is selected (ex: 1110 → 1210)

2. Individual Reports – All Machines

Report Name	Mode *1						Job# *3	Data for Reading
	OP X/Z		X1/Z1		X2/Z2			
	X	Z	X1	Z1	X2	Z2		
DEPT			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	x10	---
DEPT.IND.GROUP			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		x12	GROUP No.
DEPT.GROUP TOTAL			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		x13	---
MARK DOWN FOR DEPT			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		x19	---
PLU BY RANGE			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	x20	PLU CODE
PLU PICK UP			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	x20	
PLU BY DEPT			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	x21	DEPT CODE
PLU IND.GROUP TOTAL			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		x22	GROUP No.
PLU GROUP TOTAL			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		x23	---
PLU STOCK			<input checked="" type="checkbox"/>				x24	PLU CODE
PLU COST			<input checked="" type="checkbox"/>				x24	PLU CODE
PLU STOCK PICK			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		x26	AMOUNT/ QTY
PLU ZERO SALES			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		x27	ALL
PLU ZERO SALES DEPT			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		x27	DEPT CODE
PLU MINIMUM STOCK			<input checked="" type="checkbox"/>				x28	---
PLU CATEGORY			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			x29	---
TRANSACTION			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	X30	---
DYNAMIC UPC			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	X69	
D-UPC PICK UP			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	X69	
D-UPC By Dept			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	X66	
CID			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		X31	---
TAX			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		X33	---
POSITIVE CHECK			<input checked="" type="checkbox"/>				X39	
ALL SERVER			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	x40	---
IND.SERVER	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	x41	Note: *2
HOURLY (ALL)			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			x60	---
RANGE			<input checked="" type="checkbox"/>				x60	---
DAILY NET					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	x70	
GLU			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			x80	Note: *2
GLU BY SERVER			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			x81	---
CLOSED GLU			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			x82	Note: *2
CLOSED GLU BY SERVER			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			x83	---
CUSTOMER SALES 1					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	x85	Note: *2
CUSTOMER SALES 2					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	x89	---
CUSTOMER BY AMT					<input checked="" type="checkbox"/>		x86	Note: *2
CHARGE ACCOUNT					<input checked="" type="checkbox"/>		x88	---
NO ACCESS UPC			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			X05	---
NO ACCESS CUSTOM					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	X87	---
CUSTOMER DELETE						<input checked="" type="checkbox"/>	X98	
STACKED REPORT					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	X90, X91	

Assignment Method:

All reports are printed on the Report printer if assigned as a device

Please consider the general rules listed below when taking reports:

- To “STOP” a report from printing you may “cancel” it by depressing the [@/FOR] key
- When the printing is stopped, the following occurs:
 - Z-counters are incremented
 - When stopped during Z-Reports, the Memory is not reset
- When the Master has consolidated the data, the report can not be stopped

Note:

*1: X1: Daily X Report, Z1: Daily Z Report, X2: Periodic X Report, Z2: Periodic Z Report

*2: The Range can be specified by entering Start and End numbers (codes)

*3: When a “2” is entered as the 3rd digit – the Periodic report is selected (ex: 110 → 210)

Section-11: Error Handling

When an error in the Inline system occurs, a corresponding message is displayed. When troubleshooting an Inline system, please refer to the Error Message table below:

1. Types of Errors

General Error Messages:

List of Error Messages	
Error Message	Description
BUSY	The target machine is busy
LACKING MEMORY	The GLU, Drive Through code, or related file memory is full
MOTOR LOCK	The remote printer head did not operate correctly
NO AUTHORITY	The server who entered a GLU/PBLU code was not authorized to open that check number
UNDEFINED CODE	The specified server codes is not present in the master
CODE NOT FREE	The specified server was signed on at another machine The entered GLU/PBLU code is in use
POWER OFF	The power of the target machine is turned off
T-LOG FULL	The T-Log memory file is full
NON RESET	IRC initial D/L job is performed when totals exist at the Satellite
TYPE ERROR	IRC Download job encountered a different file type at the Satellite
LINE ERROR	Transmission error
SYSTEM CLOSED	The system is in a Closed Store state
IS SIGNED ON	Inline Server sign on error when performing a server report
NO REPLY/MASTER	Master does not reply to the request
NO REPLY/BACKUP	Backup Master does not reply to the request
ATTEMPT RETRY?	System retry message

More on Type Errors

In the event you have a different ROM version between the Master and the Satellites it is probable that you will experience a [TYPE ERROR].

This will be displayed when performing the PGM2 [INITIAL D/L] – [21 ALL PGM] download function.

Server Sign On/Off Error Processing

There are two methods of error handling for the Server function. When an error occurs during the Server sign-on a “Lock” error will result. When there is an error upon Server sign-off process the Manager Function is initiated.

Method-1: Lock Errors (at Sign On)

List of Server Sign On Lock Errors	
Error Message	Description
NO RECORD	The specified Server code is not present in the Master
IRC BUSY	The Master is busy – can not respond within the time out period
IRC ERROR	Transmission error

Method-2: System Retry (at Sign Off)

If the Master is busy or out of service when a Satellite attempts to send Server data to the Master, the Satellite display the Manager Retry error message and will wait for input prior to proceeding.

SYSTEM RETRY? Error:

- ① To “retry” the transmission, press the [RETRY?] key
- ② To “terminate” the transmission depress the [ABORT] key and the error condition will be displayed.



This causes the Satellite to place the Server’s data in an error-save file and terminates that transaction.

Thereafter ordinary sales operations can be performed at the Satellite, as that server will remain “on” the specific terminal until the Master or communications are recovered.

Assignment Method:

Once the Master is recovered, the Server data is updated automatically

Please consider the general rules listed below when using this feature:

- It is not recommended to perform a PROGRAM RESET at a Satellite when the Master experiences problems preventing communications

SYSTEM RETRY? Error(Backup Master):

- ① To “retry” the transmission, press the [RETRY?] key
- ② To “terminate” the transmission depress the [ABORT] key and the error condition will be displayed.
- ③ To “ignore” the error depress [IGNORE]



Important

When in an Inline system with a Backup Master, the recommended selection should be to depress [ABORT] followed by the execution of the [MASTER DECLARATION]. This causes the Satellite to place the Server/GLU data in an error-save file and terminates that transaction. Thereafter when the Master Declaration is performed, the data is recovered.

Guest Check Lookup/Drive Thru Lookup Error Processing

The error processing for the GLU/PBLU and Drive Through guest check operation is the same. There are two methods of error handling for the guest check functions. When an error occurs during the “look up” function a “Lock” error will result. When there is an error upon finalization process the Manager Function is initiated.

Method-1: Lock Errors (at Look Up)

List of Guest Check Lookup Lock Errors	
Error Message	Description
NO RECORD	The GLU code is not entered (listed) at the Master
NOT FREE	The GLU code is already in use
MEMORY FULL	There is not enough available memory in the GLU file
NO AUTHORITY	The Server entering the GLU-code does not have permission to open that code
IRC BUSY	The Master is busy – can not respond within the time out period
IRC ERROR	Transmission error

Method-2: Manager Retry (at Finalization)

If the Master is busy or out of service when a Satellite attempts to send guest check data to the Master, the Satellite display the Manager Retry error message and will wait for input prior to proceeding.

MANAGER RETRY? Error:

- ① To “retry” the transmission, press the [RETRY?] key
- ② To “terminate” the transmission depress the [ABORT] key and the error condition will be displayed.



This causes the Satellite to place the guest check data in an error-save file and terminates that transaction.

Thereafter ordinary sales operations can be performed at the Satellite, as that server will remain “on” the specific terminal until the Master or communications are recovered.

Guest check operation is restricted to the GLU code, which has been stored in the error-save file since the look up function to the Master is not possible.

Assignment Method:

Once the Master is recovered, reopen the GLU (xxxxxxx → [PBAL]) and finalize normally

Please consider the general rules listed below when using this feature:

- It is possible to reopen the GLU to add items and finalize through the [SERVICE] or [FINAL] key

KP Printer Error Processing

The error processing for print data that is output to a kitchen printer using the Inline system will result in initiating the Manager Function or some related error depending on the circumstances at the time of sending the data.

Manager Retry (at KP printing)

If the terminal where the printer is connected is busy or out of service when the sending machine attempts to KP print data to another terminal, the sending machine may display the Manager Retry error message and will wait for input prior to proceeding.

MANAGER RETRY? Error:

- ① To “retry” the transmission, press the [RETRY?] key
- ② To “terminate” the transmission depress the [ABORT] key and the error condition will be displayed.



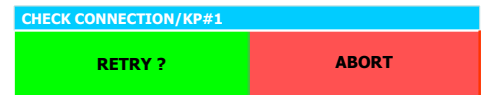
When [ABORT] is selected, based on the system setup, the KP data will be printed at the secondary KP assigned or (if a Receipt printer has been assigned), the data will be printed at as a “CHIT” receipt.

Other Errors (at KP printing)

Based on the physical state of the Inline system, other errors may result based on where the trouble is within the system.

No power at Printer- Check Connection Error:

- ① To “retry” the transmission, press the [RETRY?] key
- ② To “terminate” the transmission depress the [ABORT] key



No power at Terminal – Busy Error:

- ① To “retry” the transmission, press the [RETRY?] key
- ② To “terminate” the transmission depress the [ABORT] key



Caution

It is recommended to program a Receipt printer as part of the secondary printer to alert the Cashier that there is a problem somewhere in the system. This also provides a method to continue food prep when the system has troubles.

2. Manager Retry Function

The Manager Retry function is selected as “Enabled” or “Disabled” and related to Inline transmissions and the T-Log polling functions. This function is summarized as follows:

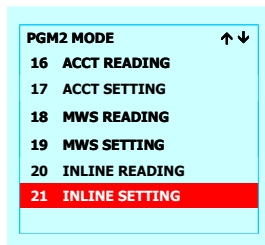
List of Manager Retry Settings		
Category	Description	Default Setting
System Retry	Disable/Enable	Enable
T-Log Buffer Full	Continue/Lockup	Continue

Procedure:

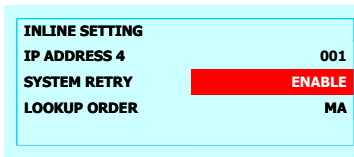
Enter the PGM2-Mode by turning the MA key counter clock wise to the PGM2 position

- ① Select [21 INLINE SETTING]
 - ② Select the setting for “SYSTEM RETRY” (ENABLE/DISABLE) and T-LOG FULL (CONTINUE/LOCK) followed by depressing the [CASH]
- The prompt for the Master List entry will follow and entering the terminal number will automatically display the associated.*

①



②



Assignment Method:

The MGR RETRY function should be enabled (not disabled) to alert the operator of trouble within the Inline system

Please consider the general rules listed below when using this feature:

- When the SYSTEM RETRY is set as DISABLE, the transmission job will terminate without notification to the operator
- When the T-LOG FULL setting is set to CONTINUE notification will be printed on the Journal printer

Glossary of Terms

This network of point of sale systems and printers is controlled by a Master terminal. The master is analogous to the file server in a PC LAN. The Master unit controls the issuing of guest check numbers, stores sales data, and coordinates communication between all nodes (Satellites) connected to the inline system.

The UP-600/700 inline system also provides for a backup to the Master called the Backup Master. The Backup Master's main function is to take over the jobs of the Master unit in the event of the Master unit failing.

The satellites receive data from the master and report back sales data, guest check information, and preset data look-up requests.

The final components of the UP-600/700 inline system are the remote printers (or kitchen printers). The remote printers are output devices only but can communicate error codes and other status information of the network.

Each satellite, each printer, the Backup Master, and the Master are assigned a unique terminal ID # during the IRC programming. The terminal ID acts as the "address" for each device on the network. When data is sent on the network, the data are contained in an entity called a frame (packet).

Ethernet is a bus or star bus based technology that uses base band signaling and CSMA/CD (*carrier sense multiple access with collision detection*) to arbitrate network access. The Ethernet medium is passive, which means that the terminal drives the signals over the network. The UP-600/700 Point of Sale systems are connected in the star topology which means each terminal has its own connection directly to the hub.

Section – 6: COMMUNICATIONS

Section-1: Overview

This section has been developed to assist in the implementation of a Back Office Application, which requires connection to an RS232 port or TCP/IP external host devices.

The following devices are considered peripheral devices:

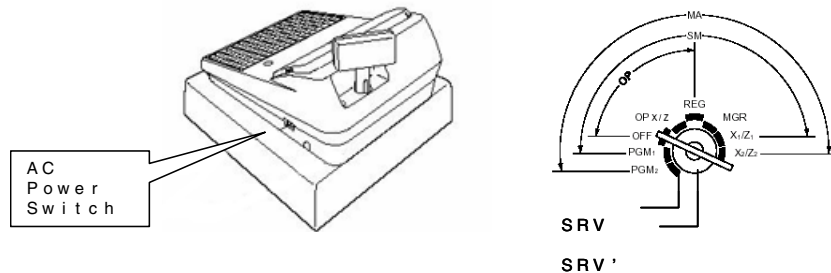
Communication Functions		
No.	Function	Abbreviation
1	Back Office Communications	Online
2	Manager Work Station	MWS
3	Credit Card Authorization	See Section - 7

1. Entering the SRV-Mode

To enter SRV-mode programming, you must turn the SRV key counter clock wise to the 6 o'clock position wait five seconds and turn the SRV key to the 7 o'clock position.

Procedure:

- ⑮ Turn the AC Power Switch “OFF”
- ⑯ Set the mode switch to (SRV) position
- ⑰ Turn on the AC Power Switch “ON”



The SRV-mode Main Menu will appear:

CAUTION: Never place the Service key to the SRV' or SRV position while AC power is applied – severe damage may result to the RAM and program contents.

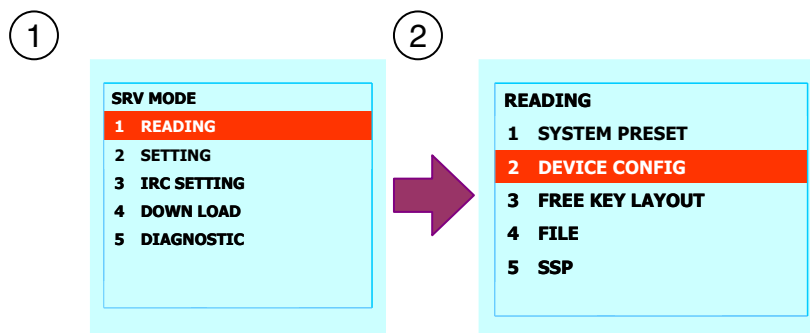
2. SRV-mode Program Readings:

List of SRV-mode Program Reports:

Device Assignment		
Mode	Main Menu	Sub Menu
SRV-Mode	1 READING	1 DEVICE ASSIGN

Enter the SRV-Mode as outlined in Section -1

- ⑤ Select [1 READING]
- ⑥ Select [2 DEVICE CONFIG]



Caution:

When adding any communication functions, it is critical to note that peripheral devices cannot be assigned to the same channel no. Please verify that multiple type devices are not assigned to the same channel no.

Example:

- Printers **“CAN”** share the same Channel No. Assignment
- ONLINE **“CANNOT”** share the same Channel No. Assignment with Printers

3. PGM-mode Program Readings:

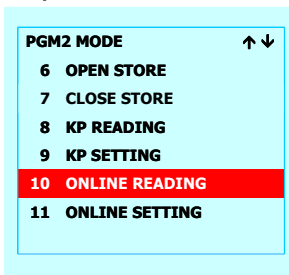
List of PGM2-mode Program Reports:

Communications List	
Mode	Main Menu
PGM2-Mode	10 ONLINE READING
	18 MWS READING

Procedure – Online:

Enter the PGM2-Mode by turning the MA key counter clock wise to the PGM2 position

- ① Select [10 ONLINE READING]
- ② This will automatically start to print.



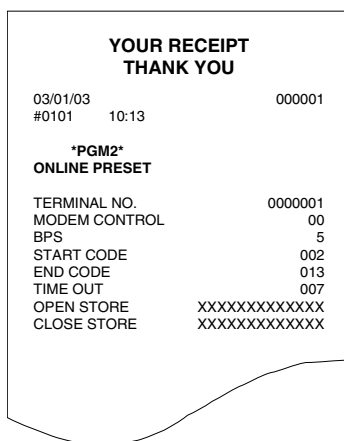
Assignment Method:

The ONLINE NO. assignment is required only at the Master or Standalone machine.

Please consider the general rules listed below when using this feature:

- The Online Terminal No. is not used for Inline communications and is only for host communications

Print Example:



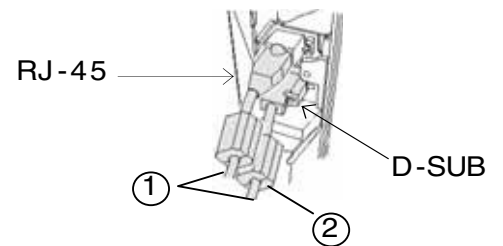
Section-2: Online via RS-232

Prior to programming, it is important that the hardware connections necessary for Online communications are accomplished. As a basic rule, the following steps may be used whether the online connection is direct to a PC or a modem.

1. Connecting the UP-600/700:

Procedure:

- ③ Connect the specified RS232 cable to the desired Channel to be assigned
- ④ Install a ferrite core (part no. RCORF6699BHZZ) within 50 cm of the connector on the connection cable to reduce interference



2. Cabling Specifications:

As a general rule, each peripheral’s manufacturer should provide their recommended specifications for cabling to the peripheral device. The below guideline for cabling should be observed when connecting a serial device to the UP-600/700 terminal:

Cabling Specifications:

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

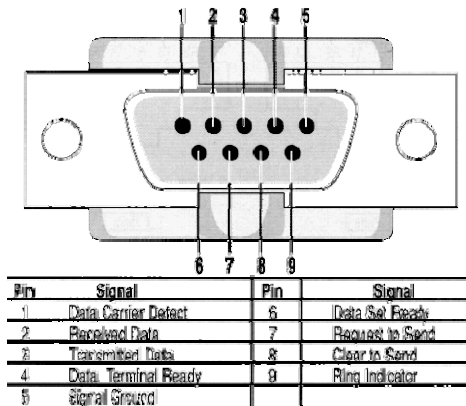
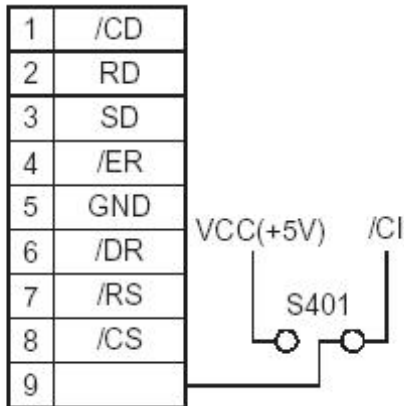
- The true maximum distance will be determined by the quality of the cable

3. CN1 and CN2 Connector:

CH1 utilizes a standard PC-type COM Port - EIA-574 RS-232 pin out on a DB-9 pin used for Asynchronous Data for RS232.

1) PORT 1 (CH1) (CN402)

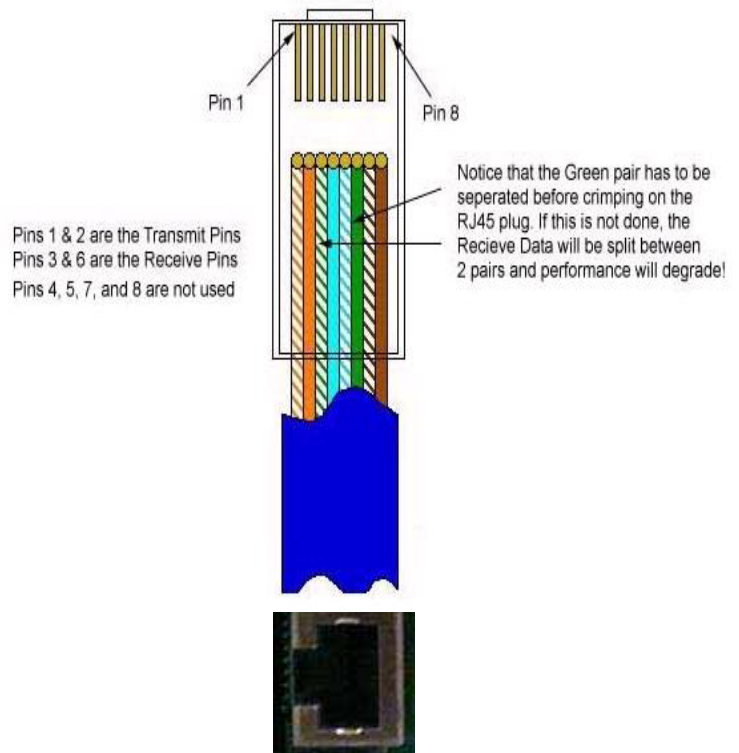
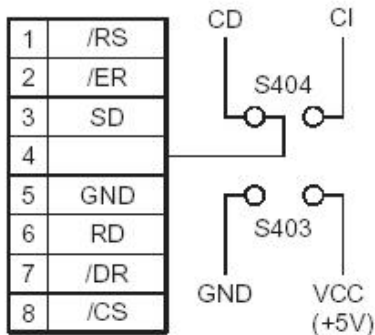
Connector type: D-SUB 9pin
Data rate: max. 38,400 bps



CH2 utilizes a Modular Jack RJ45 8 pin type COM Port for RS232.

2) PORT2 (CH2) (CN403)

Connector type: Modular jack RJ45 8pin
Data rate: max. 115,200 bps

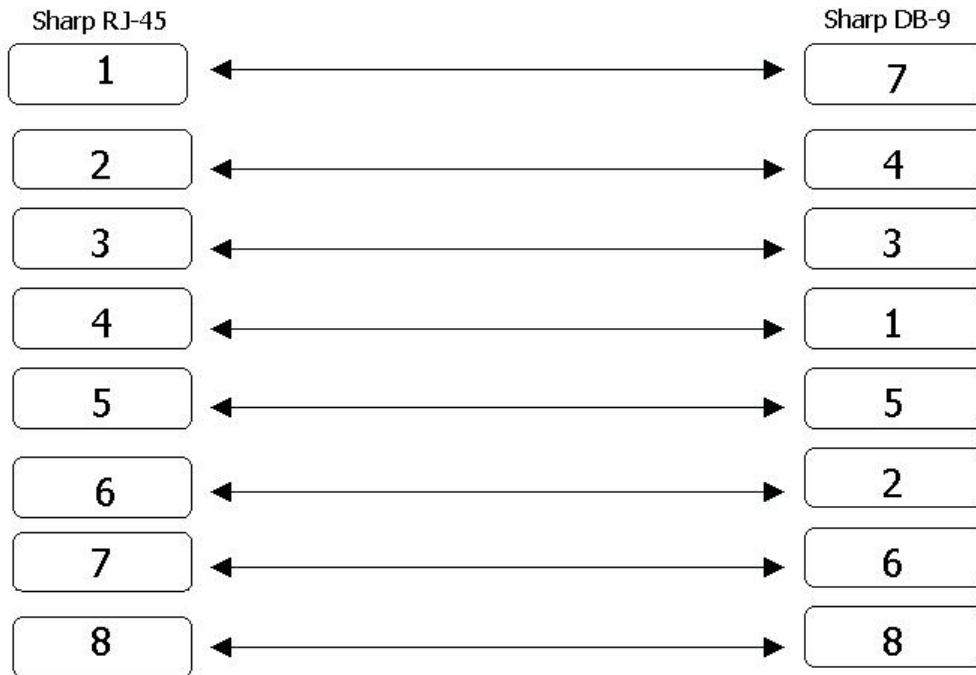


4. Conversion Cable

With the exception of printers, to attach devices to CN 2 a DB9 to RJ45 Conversion Cable is required. See the appropriate peripheral for other cable requirements.

Modular Conversion Cable for CH2

Datacomm Part# DCN100226-3E (800) 544-4627



Section-3: RS232 Communications Setup

Communications setup programming consists of SRV and PGM2 mode programming, which define the parameters which make up the UP-600/700 system.

1. Related Programming Jobs: Online System

SRV Mode:

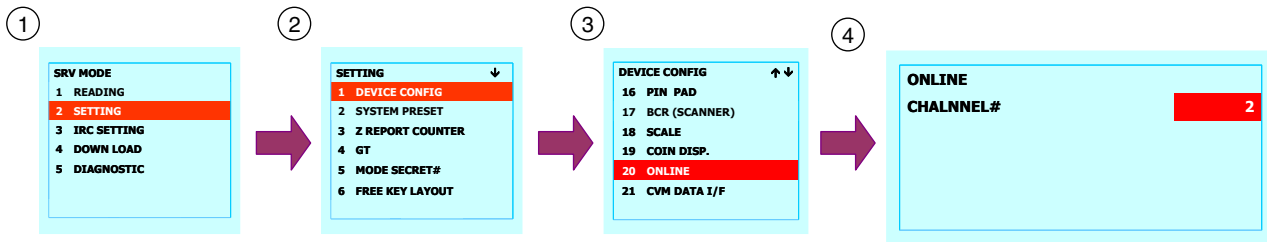
SRV-Mode Related Jobs		
SRV Mode Menu / Job No.	Description	
Setting – Device Config	20 Online	Online Channel Assignment for RS232 Connection
Setting – System Preset	926-C, D	C-Open Store operation for a Standalone, Sending AT command D-Online channel is reversed in a Closed Store condition

Procedure:

Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [1 DEVICE CONFIG]
- ③ Select [20 ONLINE]
- ④ Enter the desired Channel # and depress the [CASH] key when completed

The menu will return to the Device Assign Sub-Menu, Depress the [CANCEL] key to exit



NOTE:

When the Online is assigned to the desired Channel No., it is recommended that a PROGRAM Reset be performed.

Assignment Method:

The ONLINE NO. assignment is required only at the standalone or master machine.

Please consider the general rules listed below when using this feature:

- A communications device can not be assigned to a Channel where a printing device is already assigned (ex: J-Printer)

PGM-Mode:

PGM Mode Job Listing		
PGM2 -Mode	Master	Satellite
11 Online Setting	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

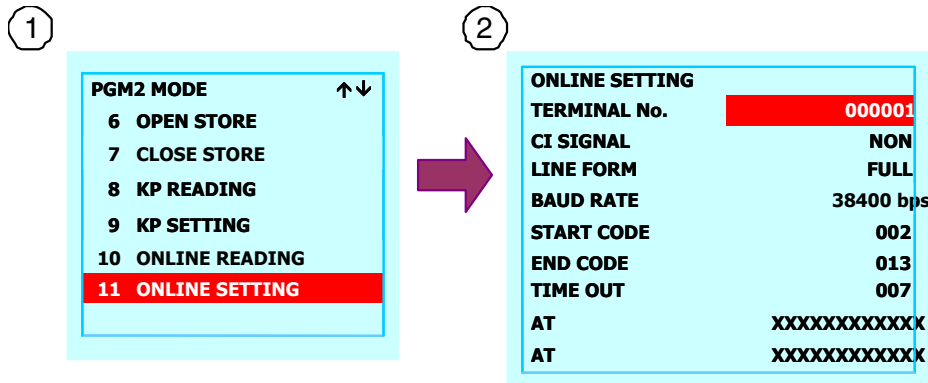
Procedure – Online:

Enter the PGM2-Mode by turning the MA key counter clock wise to the PGM2 position

① Select [11 ONLINE SETTING]

② Enter the desired parameters – usually prescribed by the application software company:

- Terminal No. (000000 – 999999) ← *usually set to 000001*
- CI Signal: Non/Sensing ← *“Non” is for direct, “Sensing” is for Modems*
- Line: Full/Half
- Baud: 38400, 19200, 9600, 4800, 1200, 600, 300 bps
- Start: (000 – 999)
- End: (000 – 999)
- Time: (000 – 999) seconds



Assignment Method:

The application software provider determines the settings for Online

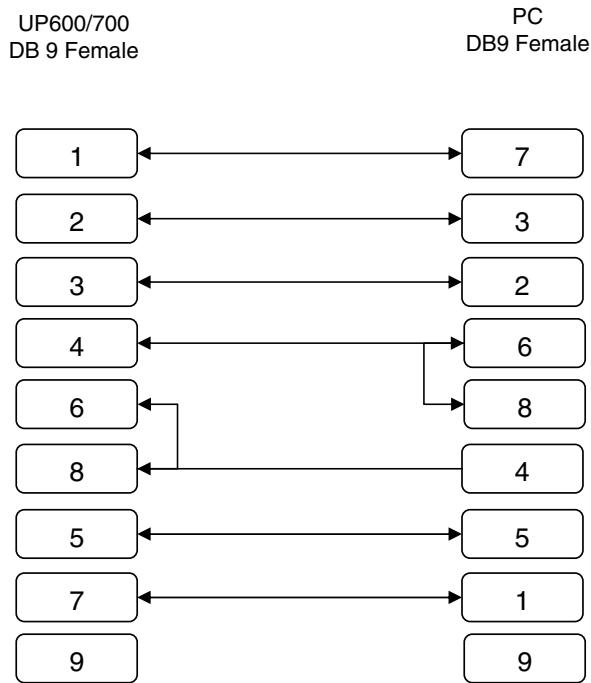
Please consider the general rules listed below when using this feature:

- When connecting a modem, data compression is not recommended
- The AT Command will be determined by the modem mfg.
- For the Inline system, the Master terminal is connected

2. Connection Cable Pin outs

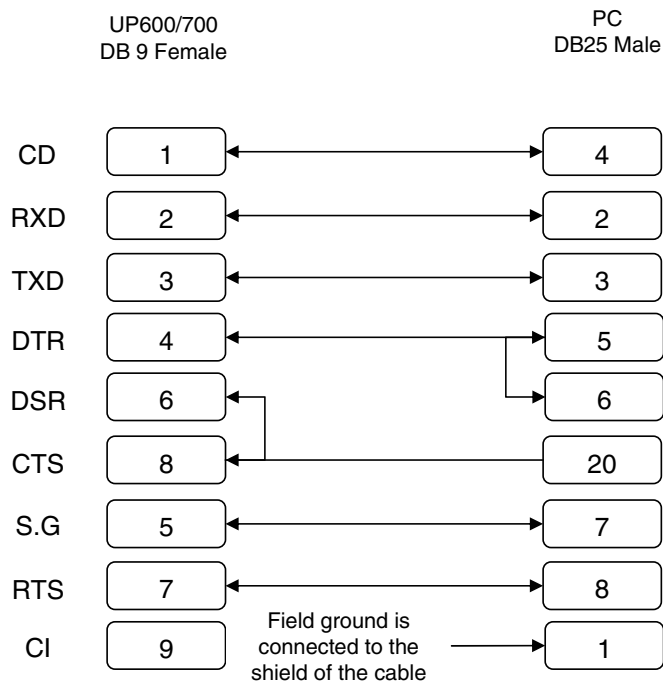
9-to-9 pin Connection Cable

The pin outs for a direct connection to a PC are shown below:



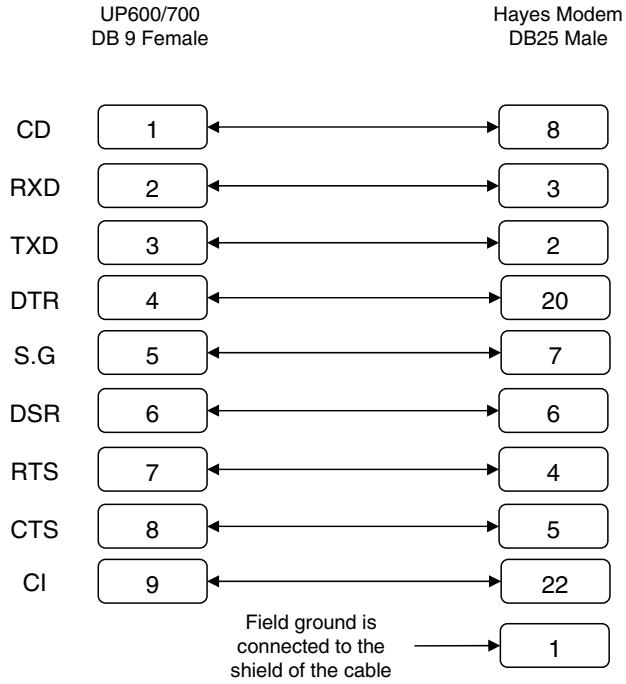
9-to-25 pin Connection Cable

The pin outs for a direct connection to a PC are shown below



9-to-25 pin Connection Cable

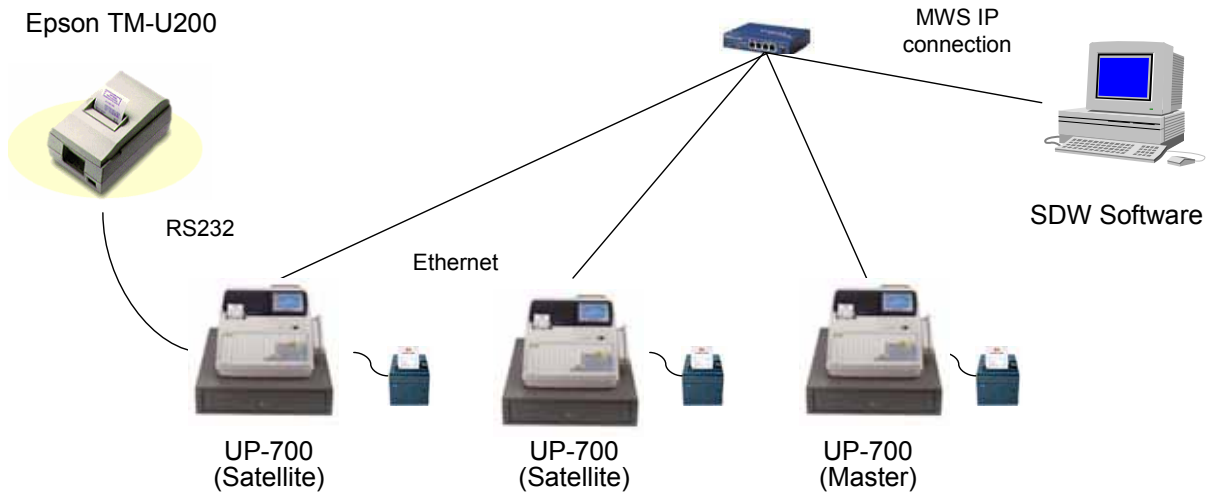
The pin outs for a direct connection to a Hayes Modem are shown below:



Section-4: MWS Setup

In simplistic terms, the UP-600/700 Online functions may be accomplished using the LAN connection instead of the RS232 connection when the PC can be directly connected to the Inline system.

1. Basic Configuration



2. Inline System General Specification

The basic UP-600/700 Inline system with MWS consists of the following:

Specifications & Requirements		
Number of Terminals	Maximum 16 Terminals	1 Master / 15 Satellites
	Host PC on LAN	1 MWS
Maximum Cable Distance	328 Feet per run (from POS to Hub)	
Additional Requirements	Hub 10Base-T	

3. MWS Function Principles

The MWS system enables a PC to communicate using the same online commands over the same LAN used by the Inline systems. For further information, please refer to the SDW polling software application.

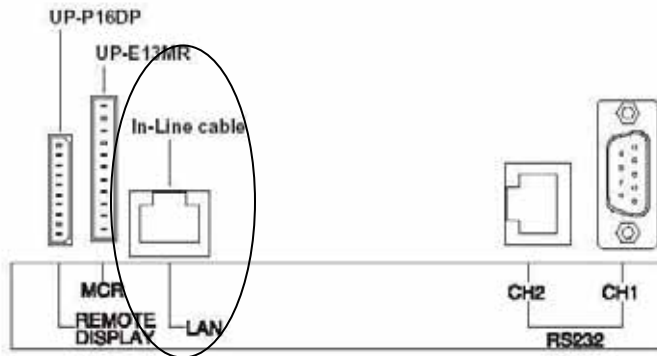
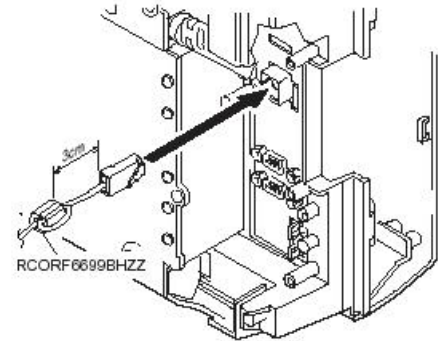
Section-5: MWS Connection using the Inline System

Prior to programming, it is important to insure that the hardware connections necessary for each terminal are accomplished. As a basic rule, the following steps may be used for the UP-600/700 connection to an Inline system:

1. Connecting the UP-600/700:

Procedure:

1. Connect the specified LAN cable to the Ethernet port marked "LAN"
2. Install a ferrite core (part no. RCORF6699BHZZ) within 3 cm of the connector on the connection cable to reduce interference



2. Cabling Specifications:

The cabling for the MWS specification is the same as for the Inline system. Please refer to Section 5: Inline for information for the cabling specifications.

3. Related Programming Jobs - MWS:

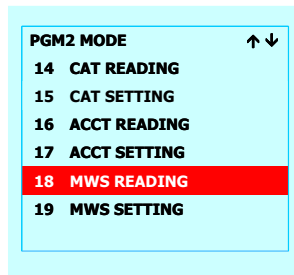
Once the Inline system has been properly configured, to determine the MWS settings, please refer to the PGM2- mode reading as outlined below:

Program Readings	
PGM Menu	Main Menu
PGM2 Mode	18 MWS READING

Procedure:

Enter the PGM2-Mode by turning the MA key counter clock wise to the PGM2 position

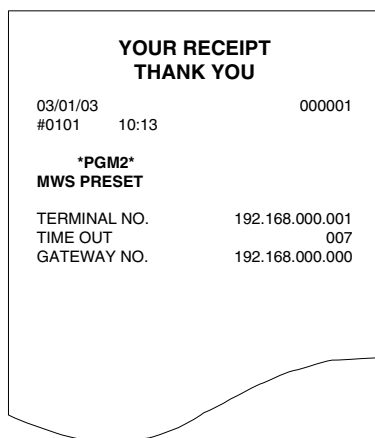
- ④ Select [18 MWS READING]
- ⑤ This will automatically start to print



Usage Method:

The resulting report will provide the settings for the MWS IP ADDRESS and a Gateway IP ADDRESS, which may be used when the Inline system is an extended LAN

Print Example:



Section-6: MWS Communications Setup

Once the Inline System has been properly established, the communications setup programming consists of a single PGM2 – mode-programming job, which defines the parameters which make up the UP-600/700 MWS IP connection.

1. Related Programming Jobs: MWS System

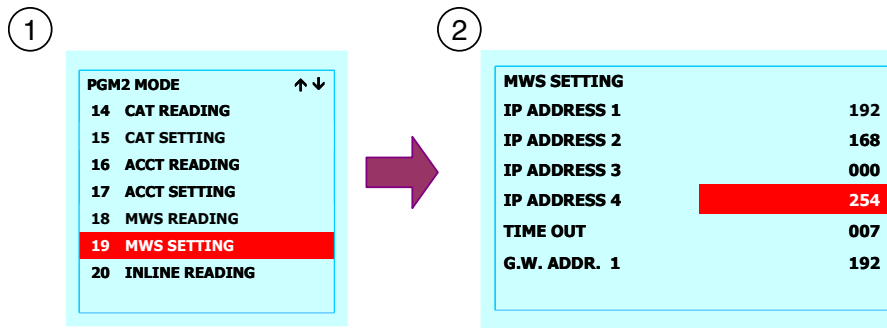
Procedure – MWS:

Enter the PGM2-Mode by turning the MA key counter clock wise to the PGM2 position

① Select [19 MWS SETTING]

② Enter the desired parameters – usually prescribed by the application software company:

- 36. IP ADDRESS 1: (000 – 254) ← *same as Master's*
- 37. IP ADDRESS 2: (000 – 254) ← *same as Master's*
- 38. IP ADDRESS 3: (000 – 254) ← *same as Master's*
- 39. IP ADDRESS 4: (000 – 254) ← *PC's unique number (000 – 254)*
- 40. Time out: (000 – 999) ← *leave at "007"*
- 41. G.W. ADDR 1 – 4: (000 – 255) ← *provided by IT assignment*



NOTE: The UP-600/700 MUST be a Master or Std With IRC to communicate through TCP/IP.

Assignment Method:

The MWS SETTING is only available for an Inline system or a unit that has been setup as STD. WITH IRC (standalone with Inline)

Please consider the general rules listed below when using this feature:

- The MWS IP ADDRESS number must be unique to the Inline system
- The MWS IP ADDRESS represents the IP address of the PC to be connected

Glossary - More on RS232

Independent channels are established for two-way (full-duplex) communications. The RS232 signals are represented by voltage levels with respect to a system common (power / logic ground). The "idle" state (MARK) has the signal level negative with respect to common, and the "active" state (SPACE) has the signal level positive with respect to common. RS232 has numerous handshaking lines (primarily used with modems), and also specifies a communications protocol.

The RS-232 interface presupposes a common ground between the DTE and DCE. This is a reasonable assumption when a short cable connects the DTE to the DCE, but with longer lines and connections between devices that may be on different electrical busses with different grounds, this may not be true.

RS232 Term Definitions

Glossary of Abbreviations etc.

CTS	Clear To Send [DCE --> DTE]
DCD	Data Carrier Detected (Tone from a modem) [DCE --> DTE]
DCE	Data Communications Equipment e.g. Modem
DSR	Data Set Ready [DCE --> DTE]
DSRS	Data Signal Rate Selector [DCE --> DTE] (Not commonly used)
DTE	Data Terminal Equipment e.g. computer, printer
DTR	Data Terminal Ready [DTE --> DCE]
FG	Frame Ground (screen or chassis)
NC	No Connection
RCk	Receiver (external) Clock input
RI	Ring Indicator (ringing tone detected)
RTS	Ready To Send [DTE --> DCE]
RxD	Received Data [DCE --> DTE]
SG	Signal Ground
SCTS	Secondary Clear To Send [DCE --> DTE]
SDCD	Secondary Data Carrier Detected (Tone from a modem) [DCE --> DTE]
SRTS	Secondary Ready To Send [DTE --> DCE]
SRxD	Secondary Received Data [DCE --> DTE]
STxD	Secondary Transmitted Data [DTE --> DTE]
TxD	Transmitted Data [DTE --> DTE]

More on Cabling

Cabling considerations - you should use cabling made for RS-232 data communications using a high quality low capacitance data grade cable. The standard maximum length is 50' but if data is Async you can increase that distance with a good grade of cable.

The RS-232 signal on a single cable is impossible to screen effectively for noise. By screening (or shielding) the entire cable you can reduce the influence of outside noise, but internally generated noise remains a problem. As the baud rate and line length increase, the effect of capacitance between the different lines introduces serious cross talk (this especially true on synchronous data - because of the clock lines) until a point is reached where the data itself is unreadable. Using low capacitance cable and shielding each pair can reduce Signal Cross talk.

The maximum distance will depend on the speed and noise level around the cable run. On longer runs a line driver may be required. This is a simple modem used to increase the maximum distance you can run RS-232 data.

Cabling Construction

Beyond the obvious traits such as number of conductors and wire gauge, cable specifications include a handful of less intuitive terms.

Characteristic Impedance (Ohms): A value based on the inherent conductance, resistance, capacitance and inductance of a cable that represents the impedance of an infinitely long cable. When the cable is cut to any length and terminated with this Characteristic Impedance, measurements of the cable will be identical to values obtained from the infinite length cable. That is to say that the termination of the cable with this impedance gives the cable the appearance of being infinite length, allowing no reflections of the transmitted signal. If termination is required in a system, the termination impedance value should match the Characteristic Impedance of the cable.

Basic constructions

Wire and cable consists, for the most part, of four basic constructions:

- Single conductor
 - One conductor, bare or insulated.
- Multiconductor
 - Multiple insulated wires
- Twisted pairs
 - Two insulated wires usually twisted together
- Coaxial cable
 - Insulated center conductor with a shield and jacket overall.

Solid and Stranded

Conductors come in two variations, solid and stranded. Solid (Figure 1) offers slightly lower resistance. The key to solid conductors is better performance at high frequencies.

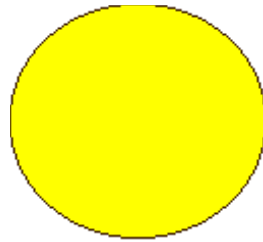


Figure 1

Stranded (Figure 2) offers greater flexibility, that is limpness, and greater "flex-life", or flexes until failure.

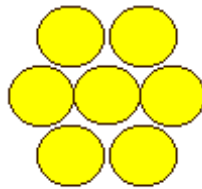
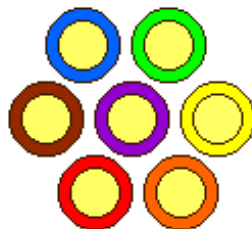


Figure 2

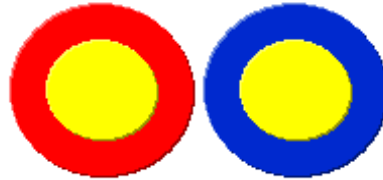
Multiconductor

As the name implies, multiconductor cables consist of many conductors. (Figure 3.) They are common in control applications but are rarely used for signal applications, and therefore, we will not be focusing on them for this paper.



Twisted Pairs

Twisted pairs (Figure 4) consist of two insulated wires twisted together. They are specifically intended for carrying. Twisted pairs offer low noise pick-up and low noise emission from a cable because it is a balanced line and because a balanced line offers "common-mode noise rejection".



Balanced Line

A balanced line is a configuration where two wires are kept close together, usually by twisting them (Figure 5). Conductors need to be the same length, the same size, with a constant distance between them.



Figure 5

It should be noted that the signal, at any instant in time, is exactly the same but opposite polarity on the two wires. Another way of saying that is, if you note the signal voltage at any point of the cable, they should add up to zero.

When Noise Appears:

Noise is a fact of life. It is electromagnetic radiation and can come from many sources including fluorescent lighting, motors, car ignition systems, equipment such as hospital analyzers, transmission equipment from CB's, truck, taxis, radio and television broadcasters, and natural sources such as the sun.

When noise appears, and hits the two wires in our twisted pairs (Figure 6), the electromagnetic radiation of the noise induces a voltage in both wires. However, the direction is the same or "common mode" in both wires.



Figure 6

When the two noise signals reach either end of the cable, there is either a passive balancing device (such as a transformer shown in Figure 6) or the equivalent active balanced input. As you can see, the two noise signals on the two wires cancel each other out. In this way, the noise cancels out and the signal (which is "differential mode") can continue through.

Shielding

Shields are added to twisted pairs, or multiconductor cables, to help prevent ingress (interference) or egress (radiation) of noise. Shields are an inherent part of coax cable. There are six basic shield configurations:

- Unshielded
 - Twisted pairs, especially in data, are often unshielded. Coax, by definition, cannot be unshielded.
- Serve/spiral shields
 - Serve or spiral shields are simply wound around the inner conductors.
- Braid shields
 - Conductors woven or braided around a core. Most effective from 1,000 Hz to 50 MHz.
- French braid shields
 - This is a combination of serve and braid. Here two serves are braided along one axis.
- Foil shields
 - These are the simplest, cheapest, and easiest to apply. They are most effective above 50 MHz
- Combination shields
 - Combined foil and braid shields are effective at low and high frequencies.

Unshielded

Unshielded cable is appropriate where no noise is present, such as no cross talk from adjacent wires. Or it can be used if you don't care if there is noise, that noise cannot substantially affect the signal on the cable.

Unshielded cables are especially prevalent in the data world where pairs have very tight twists, or may use conductors that are bonded together. Such high-performance pairs are good to excellent at not picking up or radiating noise.

Braid Shields

Braid shields are formed by spinning wires or groups of wires around a core. This slow and labor-intensive process makes braiding the most expensive single step of cable manufacturing. Single braid coverage of up to 95% can be realized. Double braid coverage can be up to 98% coverage. Since braids always have "holes" where the wires cross, 100% coverage not possible with braid.

Braid shields are most effective at frequencies from 1,000 Hz to 50 MHz. For these frequencies, the low resistance of a braid gives good coverage. Below 1,000 Hz there is no standard braid material, which is effective. The wavelengths are so long, and the low frequency energy so pronounced, that the only effective shielding is solid steel conduit. And, at 60 Hz, even steel conduit gives 27 dB of noise reduction.

Foil Shields

Foil shields are the easiest and cheapest to apply. They can be applied as fast as the cable will run. Foil shields actually consist of two layers, a metal layer and a plastic substrate of polyester. This can be easily seen since the foil is silver on one side and colored (red, blue green or other colors) on the plastic side.

Since foil shields lack the mass and low resistance of a braid shields, the exhibit poor to average low-frequency performance. However, after 50 MHz, foil shields have excellent high frequency coverage. Since foil is a continuous sheet of metal, coverage can be 100%.

Combination Shields

Combination shields consist of foil and braid combined. Occasionally there can be more than one layer of each, such as "quad" cable television cable, so called because it has two layers of foil and two layers of braid. Because of this, combination shields are the most expensive of all. But they also give the best broadband coverage, since it contains a braid for low frequencies and a foil for high frequencies

The difference between broadcast coax cables, which often contain foil and braid in digital applications, and CATV/broadband cable is that CATV cables use low coverage braid (sometimes as low as 40). The reason is that these cables only operate above 50 MHz. At those frequencies, braid shields are ineffective. It is actually the foil shield that is doing all the noise reduction. The braid shield is there to give the F-connector something to grab onto. It's a reliability issue, not a performance issue. CATV braids are aluminum belying their low cost and indicating that this braid is not included for performance.

Combination braids are required for digital video such as SDI or HD. The Broad frequency range of SDI (135 MHz) or HD (750 MHz) make a combination shield a requirement. That being said, it should be notes that double-braid cables (such as Belden 8281) can still operate at these high frequencies. It is simply that the effective distance they can run is severely reduced compared to cables with foil + braid (among other improvements). Most precision digital cables contain 95% braid + 100% foil

More on the Type Wire

Wire Gauge

The size of each wire is describes as the gauge size, and is measured in units of American Wire Gauge (AWG). Below is a list of gages with a description of how small or large that size is:

40 AWG	smaller than a hair
30 AWG	sewing thread
20 AWG	diameter of a pin
10 AWG	knitting needle
1 AWG	pencil
1/0	"1-aught" finger

Resistance

The choice of metal, the gauge size of the wire, and the length of the wire can determine the resistance of any conductor. Charts are available, such as in the back pages of the Belden Master Catalog, which shows the resistance for stranded wire from 36 AWG to 10 AWG, and the resistance for solid 40 AWG to 10 AWG.

All wire has resistance. Resistance affects the signal by turning part of the signal into heat. This creates a voltage drop on the wire when one end is compared to the other. The voltage drop can be determined by one of the formulas of Ohm's Law, $E = I^2R$, where E is the voltage drop on the wire, I is the current in amps, and R is the resistance in ohms.

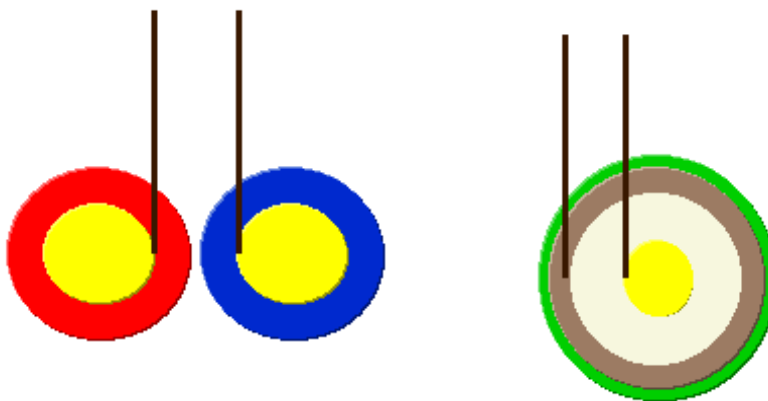
While a voltage drop in the presence of any resistance is unavoidable, picking a larger conductor with lower resistance can reduce the effect. Also, resistance is linear over frequency, meaning that resistance affects all frequencies equally. It is therefore often ignored since the effect may be a minor drop in overall level.

Insulation

Basic insulation prevents wires from touching each other and creating a short circuit or grounding portions of a circuit that should not be grounded.

Capacitance

A capacitor is a device that holds an electrical charge. It consists of two metal plates with insulation in between. Well, isn't that exactly what a cable is? Two metal plates (or wires) with an insulator (dielectric) in between. Figure 9 shows the specific parts of a twisted pair and coax cable that are involved with capacitance.



While cables do have capacitance, it is very small, due mostly to the fact that the wires are also small. Capacitance in cables is almost always measured in picofarads-per-foot. (pF/ft.) A picofarad is a trillionth of a farad, the unit of capacitance. So why would we have any interest in an effect that small? Because you don't use just one foot of cable. Most often you are using tens, hundreds, even thousands of feet. And this capacitive effect adds up. That is, a 1,000-ft. cable will have 1,000 times the capacitance as a one-foot piece. Then you can get up to some serious capacitance!

The real problem with capacitance is that it is affected by the frequency of the signal on the cable. The higher the frequency, the more the capacitance "stores" that signal as a charge. This "reaction" to frequency creates "capacitive reactance" also measured in Ohms, like resistance. But the effect changes with frequency, which resistance does not. Being "Frequency-dependant", capacitance is responsible for the "Frequency response curve" of any cable.

Inductance

The electrical signal down a wire also creates a magnetic field down that wire. This effect is called "inductance". However, on most cables, the inductive effect is so tiny, that it is never listed in a catalog. The effect, with a frequency running on the cable, is called "inductive reactance".

Because the inductance is tiny on most cables, the inductive reactance is also tiny. Inductance and capacitance are reverse effects. Therefore, they cancel each other out. But, in almost every cable, the capacitance and capacitive reactance and so much greater that they cancel out the inductance and inductive reactance/ But there is still capacitance, and capacitive reactance, left. This is why capacitance is a critical number in almost every cable type from analog audio to high-speed UTP, and inductance is essentially ignored.

Inductance is based mainly on the size of the wire (AWG) and can be most easily changed by changing the size of the wire.

Impedance

Of all the effects of frequency on a cable, impedance is the hardest specification to understand. That is because it is the sum-total effect of resistance, capacitance, and inductance when a frequency or band of frequencies is applied to the cable. Since it describes the "total opposition to current flow" caused by these three factors, it too is measured in Ohms.

Fire Ratings

The National Fire Protection Agency (NFPA) is a voluntary non-profit organization that puts out the National Electrical Code (NEC). This book sets suggested standards for safe construction of buildings. These standards include flammability testing of wire and cable.

The NEC code is voluntary. This means that a state, county, or city may or may not adopt the code. The majority of the states and communities subscribe to the NEC, but you can't know for sure unless you ask.

The NEC book lists many different cable ratings. Unrated cables are those which will not be installed, and which will be visible when in operation such as microphone cables. In the 1999 NEC, they now state that any cable installed must carry a rating. If this is how your inspector interprets the new rules, then unrated cables cannot even be installed in a conduit.

Section – 7: CREDIT CARD AUTHORIZATION

Section-1: Overview

Sharp has implemented one of the best-integrated credit card interfaces in the industry. Compared to purchasing terminals for a new store, payback is immediate. Payback is within a few months when replacing installed dial terminals. Selling integrated payments provides advantages to customers, additional profitable revenue opportunities for dealers, and makes it difficult for competitors to convince customers to switch systems.

The UP-600/700 model POS terminal provides an interface for supporting credit card and check processing, as well as, with the addition of the Peripheral Device Controller and the Verifone 1000 PIN pad, debit sales with PIN entry are possible.

DataTran™ adds efficient, cost-effective dial-up electronic payments to Sharp UP-600 and UP-700 single Point of Sale Systems and multiple LAN'd Point of Sale Systems.

IPEnabler™ and **IPTran™** are two IP options that allow **2 second internet-based transactions** over a persistent Internet connection. DataTran and IPEnabler accept commands from the register(s) to handle payment authorization, and support the register settlement and reporting activities.

The POS's printer is used to print electronic payment receipts and signature drafts, and the register card reader is used to swipe cards. This is all accomplished using a single phone line or comm line and batch per store, resulting in significant cost savings compared to using separate terminals and phone/comm lines for each POS.

DataTran can be used with most U.S. payment services, and some elsewhere. DataTran 162 SL is used for dial-up EFT with single registers, and DataTran 162 ML for dial-up with multiple LAN'd registers. Merchant parameter 'factory load' is highly recommended for fast, accurate dial-up installs.

IPTran can currently be used for Internet authorizations with Vital/Visanet, Mercury Payments (Global Payments, non-tips only), and Sterling Payments (Paymentech, non-tips only), with other IP services being added.

IPEnabler can currently be used for Internet authorizations with Mercury Payment, Sterling Payments, FDMS/Cardnet, Vital/Visanet, or Nova. Mercury Payments has a revenue/residual program for resellers, offering you an additional revenue stream, and with Mercury Payments the store software is less.

Accepted Payment Types

Credit cards, off-line debit cards (check cards or checking account cards, not requiring PINs), and check authorizations are accepted. On-line debit/ATM cards (requiring PIN pads) are also supported, requiring Datacap's Peripheral Device Controller (PDC) and a debit PIN pad to be installed on a serial port of each register accepting debit cards. Private or in-house charges and gift/prepaid cards are not currently supported by the Sharp interface. Tips can be added at the register.

Pricing Information

When you are ready to order a DataTran configuration, get a certified network list from Datacap. Get the correct Merchant Parameter Sheet to provide payment-network setup information needed to factory load the network and parameters required (or give Datacap the bank/processor contact info on a Get-and-Load request form and have Datacap get the parameter info for an additional \$25 fee).

For IPEnabler installation you'll just need the customer's merchant id, and the payment service IP address, and perhaps a few other fields, depending on the service used. The IPEnabler install disk tells you what parameter info is needed and where to get it, or get the Datacap IP Merchant Parameter Sheet from Datacap or the Datacap web site, for the specific payment service being used.

For more information about Datacap's integrated payment solutions, services, part number and pricing, please contact:

DATACAP Systems, Inc.

Corporate Headquarters
 100 New Britain Boulevard
 Chalfont, PA 18914-1832

PHONE: 215-997-8989 **FAX:** 215-997-3919

INTERNET: www.dcap.com

Email: datacap@dcap.com or support@dcap.com

1. Types of Configurations

The selection for either the Data Tran 162SL or ML is determined by the Machine Configuration outlined in the chart below;

Model	Configuration	Credit Card Auth.	(+) Debit w/ PIN entry
UP-600/700	Standalone	Data Tran 162SL *includes cable	PDC (Peripheral Device Controller) *cable is separate Verifone PIN pad-1000
	Inline System	Data Tran 162ML *includes cable	
	High Speed Processing	Data Tran 162SL *includes cable Data Tran 162ML *includes cable • IPTran - high speed w/o PC or • IPEnabler - high speed w/ PC	

Note: For the specific part number and pricing of Data Cap supplied equipment, please refer to Data Cap's order sheet.

2. Types of Networks Involved

Basically there are 2 Types of networks involved:

- i. Host based
- ii. Terminal based

Important:

The actual network supported is determined by the merchant's (end user) account and is preset in the parameter settings of the Data Tran 162SL or ML.

Section-2: Data Tran Dial Up Processing Configurations:

The Data Tran equipment configuration may vary based on the UP-600/700 configuration. The available configuration options are described within the following sections.

Installation is simple. For DataTran installs connect the DataTran 162 SL to the register serial port or DataTran 162 ML to the master register serial port, attach a phone line and power everything up. If Merchant Parameter factory load was not ordered, arrange or do a download. Change the register set-up to address DataTran. Run a few test transactions and verify the results, and ring transactions.

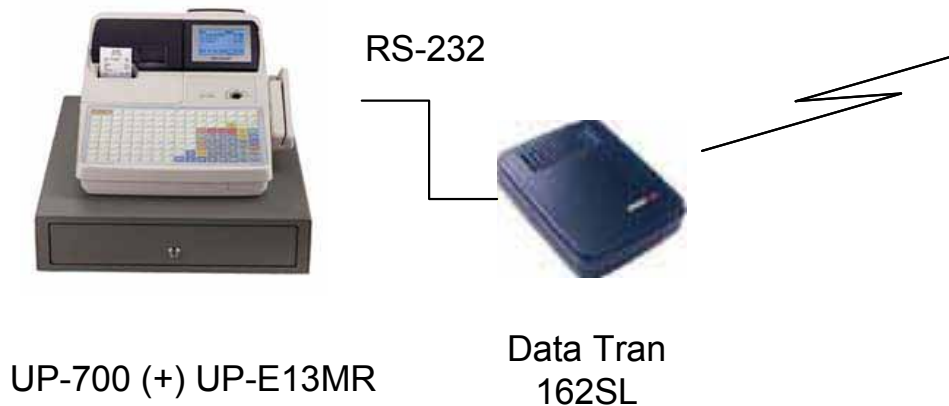
For all register configurations requiring a PIN pad for debit card PIN entry, when setting up the system, plug the PDC into the register serial port, and plug the PIN pad into the PDC.

When a sale is rung up at the cash register, the customer's card is swiped on the register card reader. Authorization-related messages are displayed on the register display and the sale draft (signature receipt) is printed on the register printer. Info is collected for reconciliation by register number, and for easy end-of-day closing. Additional information is in the register User Guides, and Datacap install guides.

1. Standalone Configuration – Credit only

Equipment List			
Provider	Dial Up - Standalone Configuration	Model / Part No.	Qty
Sharp	POS Terminal	UP-600/700	1
	Magnetic Card Reader	UP-E13MR	1
	Memory Option *As required by File Allocation	UP-S02MB UP-S04MB	
Local Procurement	Data Cap Data Tran 162SL • Build File – Merchant Parameter Factory Load	1800.10 *Connection cables are included	1

Configuration Diagram



IMPORTANT:

The UP-600/700 incorporates Batch operations, Reporting functions and Remote merchant parameter setup through Dial Out and Dial In functions

Please consider the general rules listed below when using this feature:

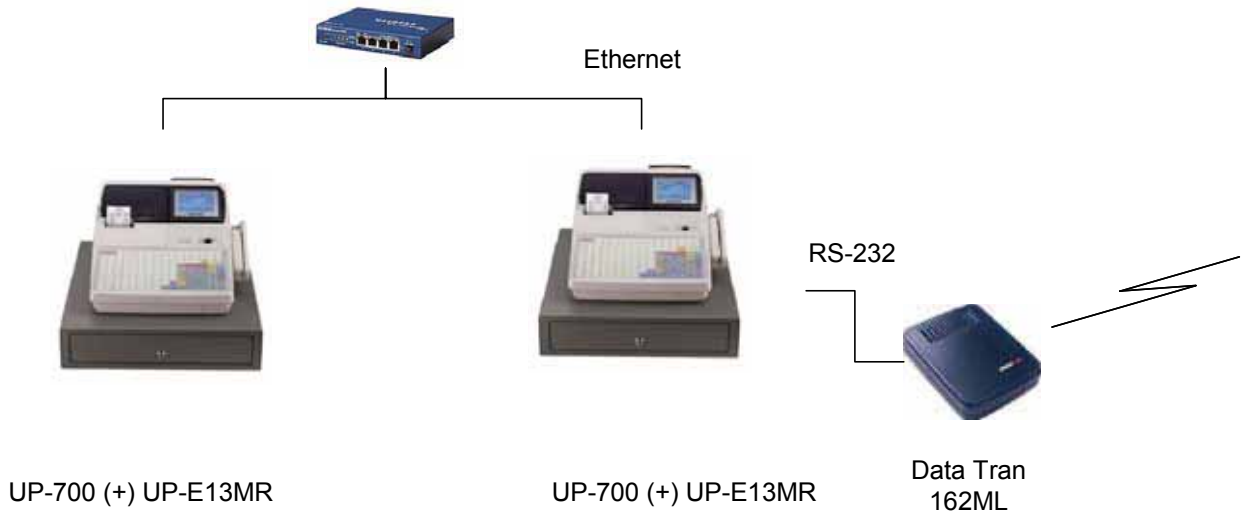
- The telephone line used for credit card processing should not be shared with any other device

2. Inline Configuration – Credit only

Equipment List			
Provider	Dial Up – IRC Configuration	Model / Part No.	Qty
Sharp	POS Terminal	UP-600/700	(x)
	Magnetic Card Reader	UP-E13MR	(x)
	Memory Option *As required by File Allocation	UP-S02MB UP-S04MB	
	Ethernet Hub	ER-Hub1 or ER-Hub2	1
Local Procurement	Data Cap Data Tran 162ML • Build File – Merchant Parameter Factory Load	1800.20 *Connection cables are included	1

(x) = No. Terminals in system

Configuration Diagram



IMPORTANT:

The UP-600/700 incorporates Batch operations, Reporting functions and Remote merchant parameter setup through Dial Out and Dial In functions. The Data Tran 162 ML may be connected to either the Master or Satellite

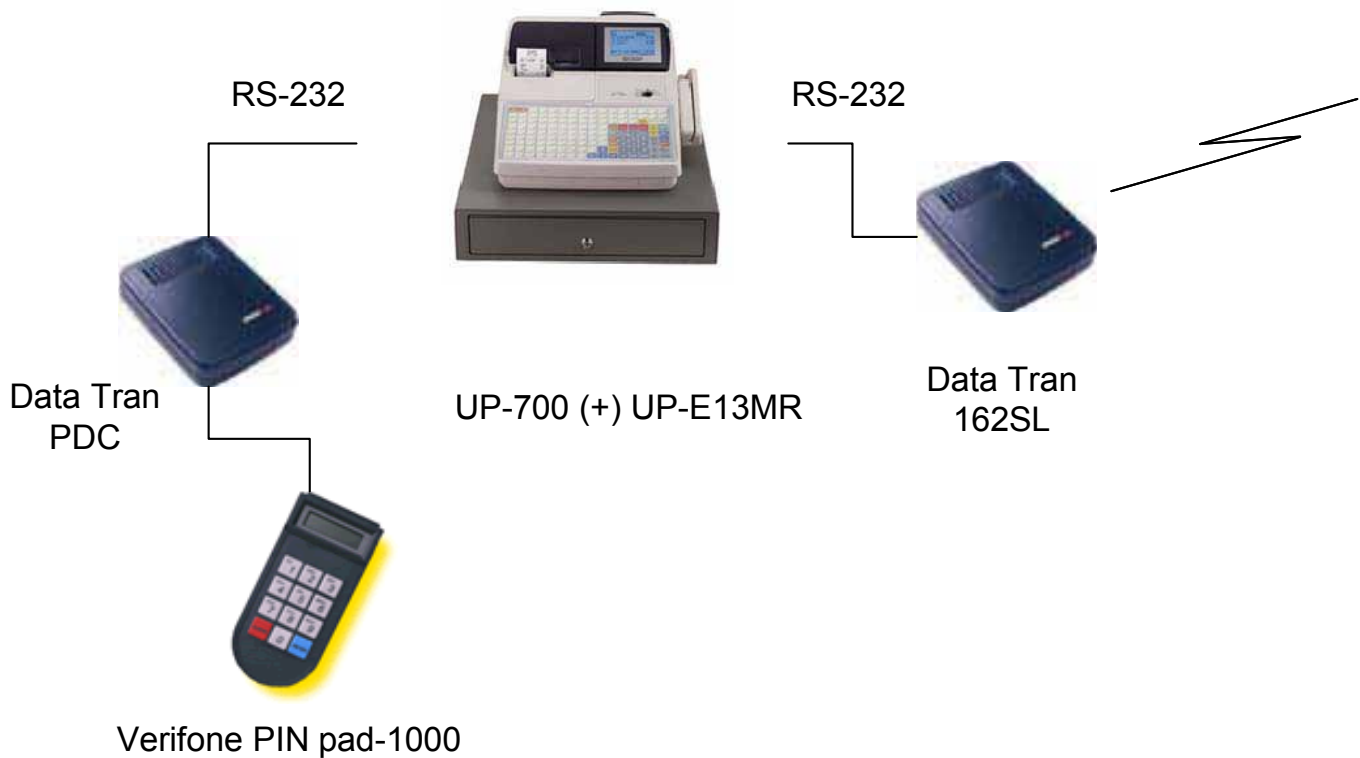
Please consider the general rules listed below when using this feature:

- The telephone line used for credit card processing should not be shared with any other device
- The Data Tran 162ML should be set for FTS MODE = Enabled for Inline operations

3. Standalone Configuration – Credit and Debit

Equipment List			
Provider	Dial Up - Standalone Configuration	Model / Part No.	Qty
Sharp	POS Terminal	UP-600/700	1
	Magnetic Card Reader	UP-E13MR	1
	Memory Option *As required	UP-S02MB UP-S04MB	
Local Procurement - Datacap	Data Cap Data Tran 162SL	1800.10	1
	• Build File – Merchant Parameter Factory Load	*Connection cables are included	
	Peripheral Device Controller includes cable	1713.00	1
	Verifone PIN pad 1000	7020.01	1
	Cable-A (ECR → PDC)	7866.01	1
Cable B (PDC → PIN pad 1000)	1332.10	1	

Configuration Diagram



IMPORTANT:

The UP-600/700 incorporates Batch operations, Reporting functions and Remote merchant parameter setup through Dial Out and Dial In functions

Please consider the general rules listed below when using this feature:

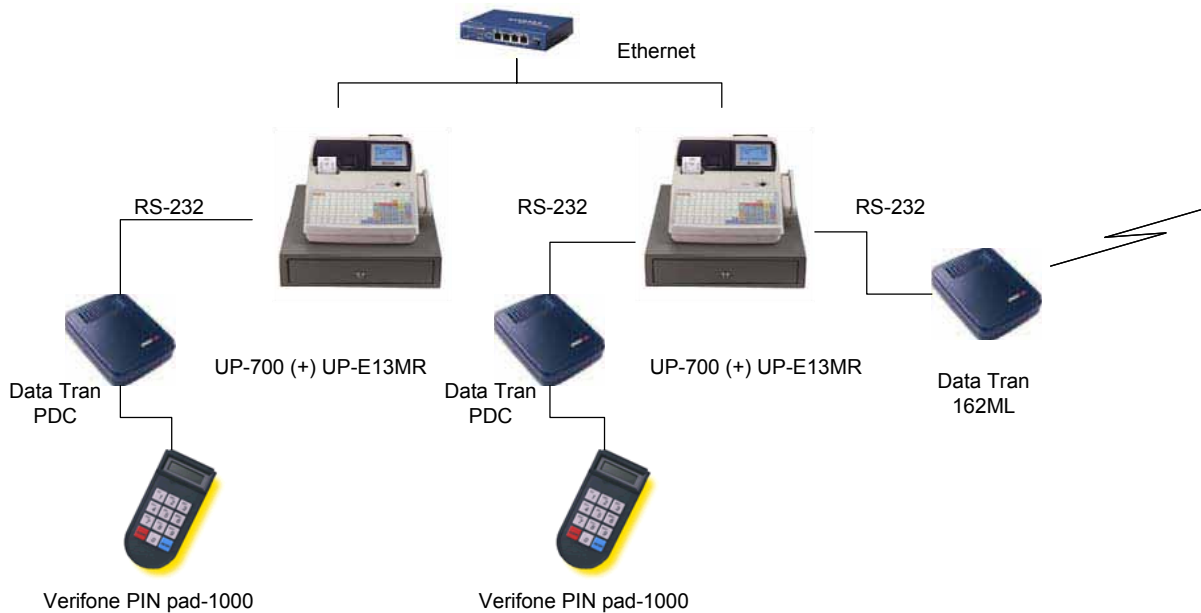
- The telephone line used for credit card processing should not be shared with any other device
- The Verifone 1000 PIN pad must be setup by Data Cap for the type encryption method

4. Inline Configuration – Credit and Debit

Equipment List			
Provider	Dial Up - IRC Configuration	Model / Part No.	Qty
Sharp	POS Terminal	UP-600/700	(x)
	Magnetic Card Reader	UP-E13MR	(x)
	Memory Option *As required	UP-S02MB UP-S04MB	
	Ethernet Hub	ER-HUB1 or ER-HUB2	1
Local Procurement - Datacap	Data Cap Data Tran 162ML • Build File – Merchant Parameter Factory Load	1800.10 *Connection cables are included	1
	Peripheral Device Controller includes cable	1713.00	(x)
	Verifone PIN pad 1000	7020.01	(x)
	Cable-A (ECR → PDC)	7866-01	(x)
	Cable B (PDC → PIN pad 1000)	1332-10	(x)

(x) = No. Terminals in system

Configuration Diagram



IMPORTANT:

The UP-600/700 incorporates Batch operations, Reporting functions and Remote merchant parameter setup through Dial Out and Dial In functions. The Data Tran 162 ML may be connected to either the Master or Satellite

Please consider the general rules listed below when using this feature:

- The telephone line used for credit card processing should not be shared with any other device
- The Data Tran 162ML should be set for FTS MODE = Enabled for Inline operations
- The Verifone 1000 PIN pad must be setup by Data Cap for the type encryption method

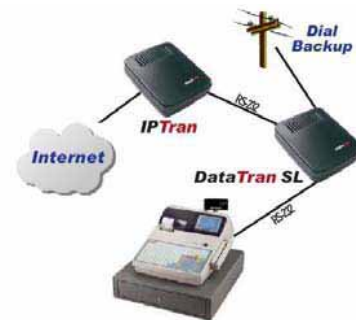
Section-3: Data Tran High Speed Processing Configurations

IPTran Overview

For **IPTran** installs, make sure the DataTran is programmed to use IPTran (or arrange for it to be reprogrammed to do so), plug IPTran to the DataTran and into the IP connection. Power everything up. Change the register set-up to send electronic payments to DataTran/IPTran. Run a few test transactions and verify that the transactions are processed and funds deposited correctly, and you're ready to ring transactions.

Payment Processing IP Appliance

- Adds fast (2-6 sec) IP transactions to dial-up payment systems
- Supports up to three DataTrans
- Plug-and-Play implementation for existing DataTran users
- Dial backup during Internet outages is transparent & automatic



IPTran™ allows POS systems that use DataTran™ to process transactions via IP with automatic direct dial back up. Integrators can offer fast IP transactions over the Internet without any code changes in their systems. Resellers can upgrade customers to fast transactions without other systems upgrades. Since DataTran continues its functions, store operations are unchanged and automatic direct dial backup to the processor provides the most reliable backup possible. Authorizations and settlements are IP fast!

IPTran IP Wrapper Software requires a DataTran 162 SL/ML/LT/ND model with an AUX serial port. IPTran is cabled from the DataTran serial port to an IPTran COM port. DataTran network load version is 4.03 or later is required and the merchant parameters must be set to use IPTran as the primary means of processing.

IPTran relies on the availability of a persistent IP connection (typically Internet) either through cable, DSL, dedicated line or even dial-and-hold service. A DHCP server must be available to provide the IPTran with an IP address (typically provided by an on-site router or switch). For most current DataTran installations, simply attaching the IPTran and updating the DataTran software is all that's required.

Equipment List			
Provider	Multi POS IPTran w/ DataTran Dial Up Backup	Model / Part No.	Qty
Sharp	POS Terminal	UP-600/700	(x)
	Magnetic Card Reader	UP-E13MR	(x)
	Memory Option *As required by File Allocation	UP-S02MB UP-S04MB	
	Ethernet Hub	ER-Hub1 or ER-Hub2	1
Local Procurement - Datacap	Data Cap Data Tran 162ML • Build File – Merchant Parameter Factory Load	1800.20 *Connection cables are included	1
	1900.00/9000.01 IPTran/Vital. IPTran includes cable and power transformer	IPTran for Mercury Pay/Sterling Pay (retail non-tip)	1
(x) = No. Terminals in system			

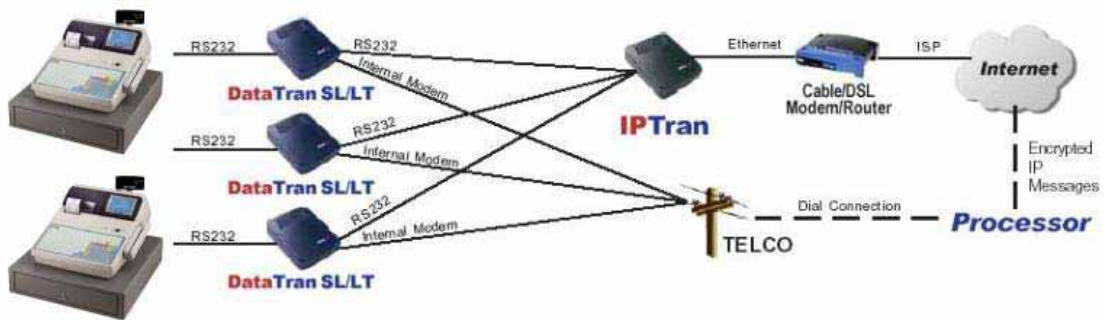
Equipment List			
Provider	Multi POS IPTran upgrade to existing DataTran ML location (Easy Migration)	Model / Part No.	Qty
Sharp	POS Terminal	UP-600/700	(x)
	Magnetic Card Reader	UP-E13MR	(x)
	Memory Option *As required by File Allocation	UP-S02MB UP-S04MB	
	Ethernet Hub	ER-Hub1 or ER-Hub2	1
Local Procurement - Datacap	Upgrade Data Cap Data Tran 162ML parameters using Dial Download System (Build File and store on Download System)	1800.20 *Connection cables are included	1
	1900.00/9000.01 IPTran/Vital. IPTran includes cable and power transformer	IPTran for Mercury Pay/Sterling Pay (retail non-tip)	1
(x) = No. Terminals in system			

Equipment List			
Debit Pin Pad and Adapter for any of the above configurations			
Provider	Description	Model / Part No.	QTy
Datacap	Peripheral Device Controller includes cable	1713.00	(x)
Datacap	Verifone PIN pad 1000	7020.01	(x)
Datacap	Cable-A (ECR → PDC)	7866-01	(x)
Datacap	Cable B (PDC → PIN pad 1000)	1332-10	(x)

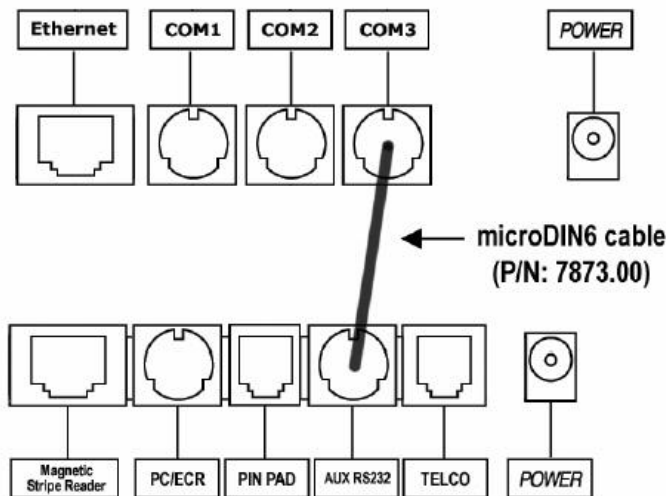
IPTran / DataTran ML/ND



IPTran / DataTran SL/LT



IPTran



DataTran

IPTEabler Overview

For **IPTEabler** installs, load IPTEabler, DSIClientx (included with IPTEabler) and if required load NETePay Store Server (for Vital, FDMS, Heartland and Nova) on the Windows PC using the easy auto-installer, and inputting the customer’s merchant id and merchant info provided by the payment service. Connect the register or master register serial port to the PC running IPTEabler that is also on an Internet connection, and power everything up. Change the register set-up to address electronic payments to IPTEabler (DataTran). Run a few test transactions and verify that the transactions are processed and funds deposited correctly, and you’re ready to ring transactions.

For all register configurations requiring a PIN pad for debit card PIN entry, when setting up the system, plug the PDC into the register serial port, and plug the PIN pad into the PDC.

When a sale is rung up at the cash register, the customer’s card is swiped on the register card reader. Authorization-related messages are displayed on the register display and the sale draft (signature receipt) is printed on the register printer. Info is collected for reconciliation by register number, and for easy end-of-day closing. Additional information is in the register User Guides, and Datacap install guides.

Equipment List			
Provider	IPTEabler Internet transaction to Mercury Payments or Sterling Payments	Model / Part No.	Qty
Sharp	POS Terminal	UP-600/700	(1)
	Magnetic Card Reader	UP-E13MR	(1)
	Memory Option *As required by File Allocation	UP-S02MB UP-S04MB	
	Ethernet Hub	ER-Hub1 or ER-Hub2	1
Local Procurement	IPTEabler (includes DSIClientx)	8673.00	1
	IPTEabler Sharp 600/700 cable (6foot) (longer RS232 cable may be desired/required)	7470.10	1
(x) = No. Terminals in system			

Equipment List			
Provider	IPTEabler Single POS Internet Transactions to Other Payment Services (Vital, FDMS, Nova, Heartland)	Model / Part No.	Qty
Sharp	POS Terminal	UP-600/700	(x)
	Magnetic Card Reader	UP-E13MR	(x)
	Memory Option *As required by File Allocation	UP-S02MB UP-S04MB	
	Ethernet Hub	ER-Hub1 or ER-Hub2	1
Local Procurement	IPTEabler (includes DSIClientx)	8673.00	1
	NETePay SL Store Server	8660.xx	
	IPTEabler Sharp 600/700 cable (6 feet) (longer RS232 cable may be desired/required)	7470.10	1
(x) = No. Terminals in system			

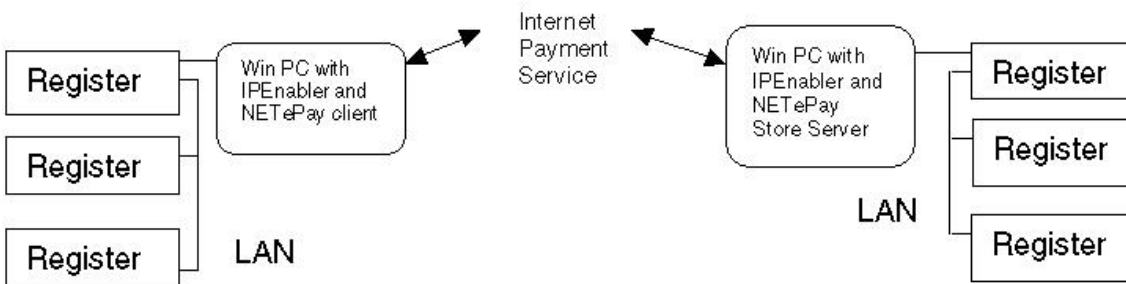
Equipment List			
Provider	IPEnabler Multi-POS Internet Transactions to Other Payment Services (Vital, FDMS, Nova, Heartland)	Model / Part No.	Qty
Sharp	POS Terminal	UP-600/700	(x)
	Magnetic Card Reader	UP-E13MR	(x)
	Memory Option *As required by File Allocation	UP-S02MB UP-S04MB	
	Ethernet Hub	ER-Hub1 or ER-Hub2	1
Local Procurement	IPEnabler (includes DSIClientx)	8673.00	1
	NETePay SL Store Server	8660.xx	
	IPEnabler Sharp 600/700 cable (6 feet) (longer RS232 cable may be desired/required)	7470.10	1

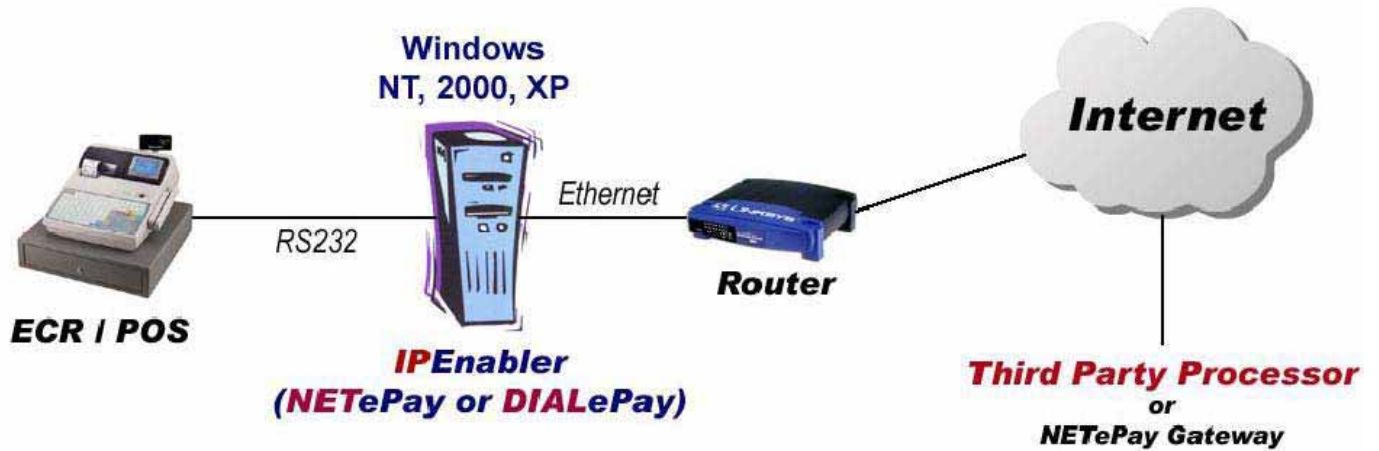
(x) = No. Terminals in system

Equipment List			
Debit Pin Pad and Adapter for any of the above configurations			
Provider	Description	Model / Part No.	QTty
Datacap	Peripheral Device Controller includes cable	1713.00	(x)
Datacap	Verifone PIN pad 1000	7020.01	(x)
Datacap	Cable-A (ECR → PDC)	7866-01	(x)
Datacap	Cable B (PDC → PIN pad 1000)	1332-10	(x)

IPEnabler Internet to Mercury Payments or Sterling Payments

IPEnabler Internet to other payment services (Visanet, FDMS, Heartland, Nova)





UP-600/700 Supported Functions

The UP-600/700 POS terminal will support the following functions:

No.	Procedure	Function Supported
1	Batch Execute	Open Batch
		Close Batch
		Clear Batch
		Change Batch
		Initialize
		Dial Out
		Dial In
2	Reports	Local Summary
		Local Inquiry
		Local Total
		Batch Status

Sales Functions:

Function	Normal Sale	Refund Sale	VOID Mode Sale	VOID Mode Refund	Edit Tip
Credit: Dial	O	O	O	O	O
Credit: Authorization only	O	O	X	X	X
Credit: Post Authorization	O	X	X	X	X
Debit	O	O	X	X	X
Check	O	X	X	X	X

O = Yes, X = No

Assignment Method:

Each function is initiated through the Media key preset. The corresponding Function key must be accessible in order to execute entries and provide reporting totals.

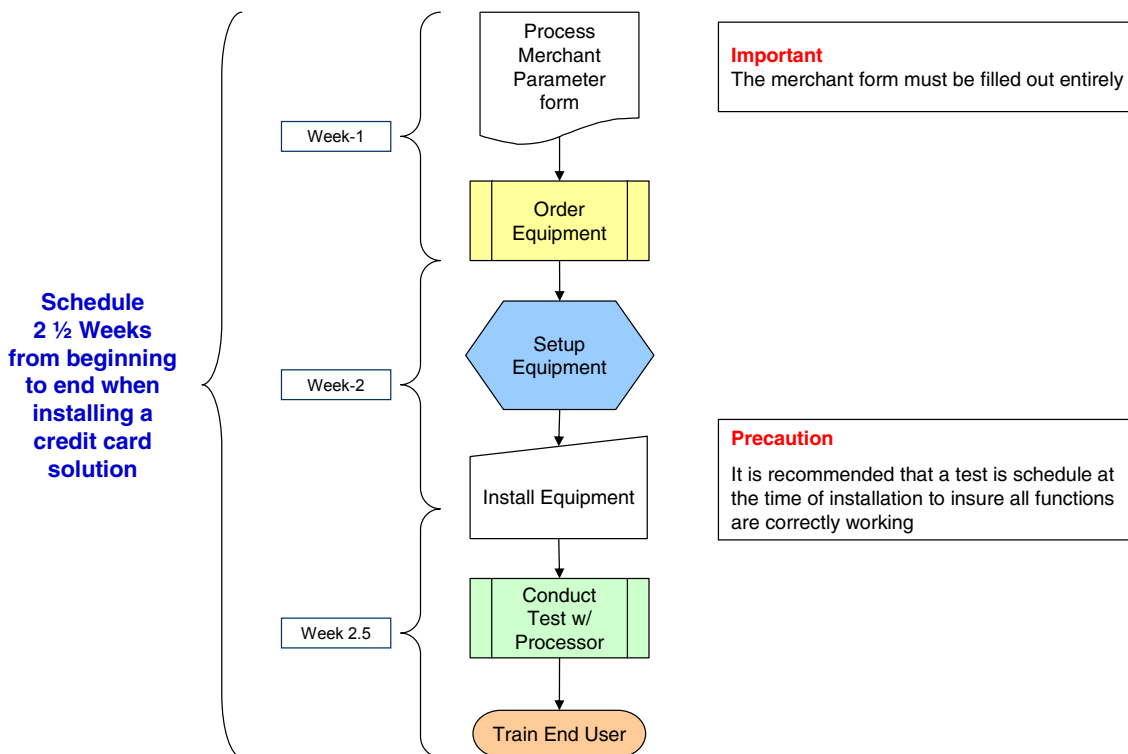
Please consider the general rules listed below when using this feature:

- Charge Tips may be entered for Normal and Guest Check entries
- The Closed Check file must be allocated to Edit Tips
- When using Split-Tender the Charge Tip amount must be settled first (the Tip can not be split)
- When a Guest Check is to be paid with multiple medias, then the [BS] function must be used
- Check Tender is w/o MICR (manual data entry)

General Guidelines

The general guideline for implementing a successful installation is outlined below

Selling Credit Card Solution



NOTE:

Do not remove the previous credit card solution until it is certain that the integrated solution is proven.

IMPORTANT:

To simplify the installation and training process it is important to avoid taking shortcuts in procuring the product and/or taking shortcuts in the process













Please consider the general rules listed below when using this feature:

- Assist the store owner with obtaining the necessary information from the bank
- Allow at least 1 week to obtain the merchant parameters – especially new accounts
- Always set up new merchant accounts - verify each card type to be used
- Schedule a test day with the processor to verify sales and batch operations

Section-3: Programming Principles

The UP-600/700 POS terminal incorporates the use of certain function keys to be used when making changes in PGM-mode.

To simplify programming, please review the below list of function keys and usages listed below:

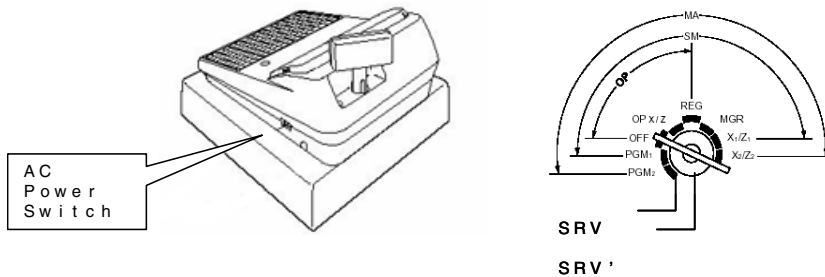
<u>Function</u>	<u>Description</u>
	
	
	The UP, DOWN, LEFT and RIGHT arrow keys are used to navigate within the specified menu and/or preset entry field.
	
	Used to scroll the programming window back to the previous page
	Used to scroll the programming window to the next page
	Used to “toggle” between fixed selections within a preset entry field when it is applicable
	The SUBTOTAL key is used to “List” available fixed selections within a present entry field when it is applicable
	Used to “set” each preset entry field
	Used to “finalize” each preset entry
	Used to clear the last setting you have programmed or clear an error state
	Used to “cancel” programming and return to the previous screen

1. Entering the SRV-Mode

To enter SRV-mode programming, you must turn the SRV key counter clock wise to the 6 o'clock position wait five seconds and turn the SRV key to the 7 o'clock position

Procedure:

- ⑱ Turn the AC Power Switch “OFF”
- ⑲ Set the mode switch to (SRV) position
- ⑳ Turn on the AC Power Switch “ON”



The SRV-mode Main Menu will appear:

CAUTION:

Never place the Service key to the SRV' or SRV position while AC power is applied – severe damage may result to the RAM and program contents

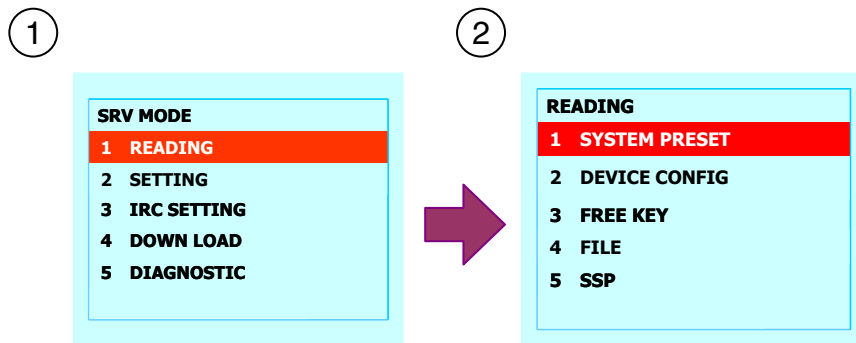
2. SRV-mode Program Readings:

List of SRV-mode Program Reports:

CAT#2 Related Jobs		
Mode	Main Menu	Sub Menu
SRV-Mode	1 READING	1 SYSTEM PRESET
		2 DEVICE CONFIG

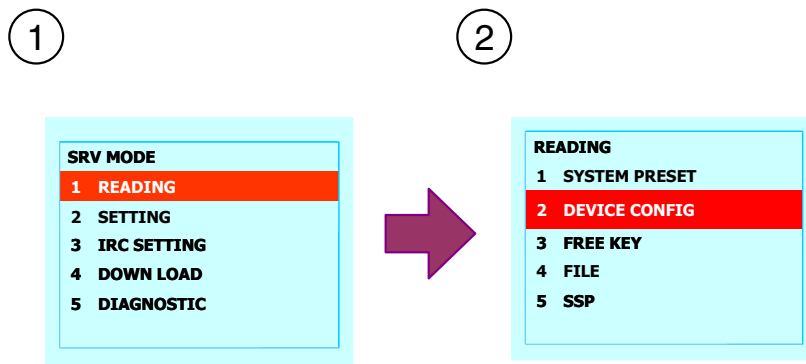
Procedure – System Preset:

- ① Enter the SRV-Mode as previously outlined
- ② Select [1 READING]
- ③ Select [1 SYSTEM PRESET]
- ④ This will automatically start to print.



Procedure – Device Assign:

- ① Enter the SRV-Mode as previously outlined
- ② Select [1 READING]
- ③ Select [2 DEVICE CONFIG]
- ④ This will automatically start to print.



Caution:

When adding Credit Card devices, it is critical not to assign more than 1-type device to the same channel no. Please verify that multiple type devices are not assigned to the same channel no.

Example: CAT#2 and Printers “**CANNOT**” share the same Channel No. Assignment

3. PGM-mode Program Readings:

The PGM mode readings for credit card devices are also associated to the other presets readings (ex: Media Keys, etc.) that may be found within each section.

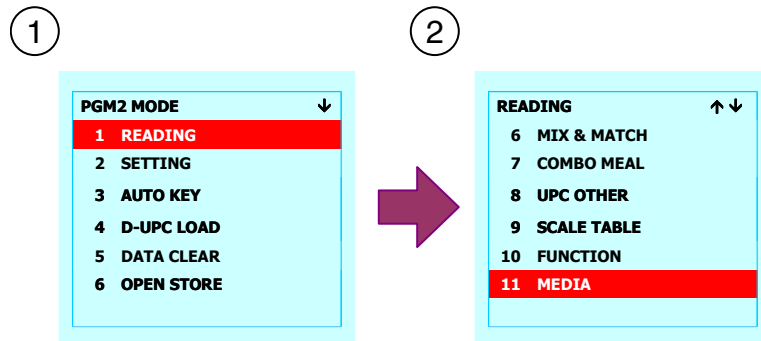
List of PGM2-mode Program Reports:

CAT#2 Related Jobs		
Mode	Main Menu	Sub Menu
PGM2-Mode	1 READING	11 MEDIA
	11 CAT READING	

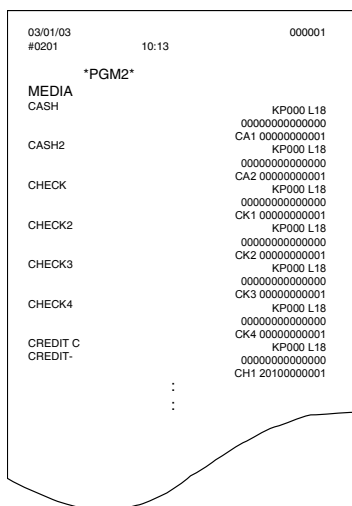
Procedure – Media:

Enter the PGM2-Mode by depressing the [MODE] key

- ⑦ Select [9 PGM2 MODE]
- ⑧ Select [1 READING]
- ⑨ Select [11 MEDIA]
- ⑩ This will automatically start to print.



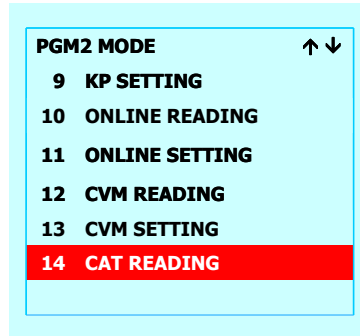
Print Example:



Procedure – CAT:

Enter the PGM2-Mode by turning the MA key counter clock wise to the PGM2 position

- ① Select [9 PGM2 MODE]
- ② Select [14 CAT READING]
- ③ This will automatically start to print.



Print Example:

03/01/03		000001
#0202	10:13	
PGM2		
CAT READING		
CAT PRESET#1		
TIME OUT1		180
TIME OUT2		099
BAUD RATE		9600 bps
CAT PRESET#2		
TIME OUT1		010
TIME OUT2		180
TIME OUT3		300
TEL NO.		0
TEL ID		0
TEL MODE		0
FTS MODE	0	0
AMOUNT%	0.00%	0
CAT PRESET#3		
TIME OUT1		010
TIME OUT2		099
BAUD RATE		9600 bps
PRODUCT CODE		0
PIN PAD		
TIME OUT1		010
TIME OUT2		099
BAUD RATE		9600 bps

} The Data Tran interface uses CAT PRESET#2

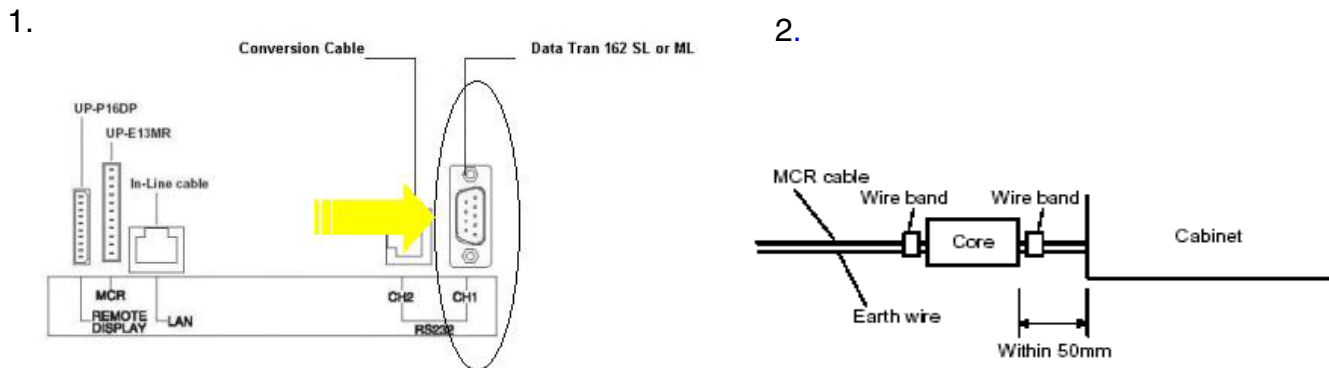
Section-4: Cable Connection

Prior to programming, it is important to insure that the hardware connections necessary for each device are accomplished. As a basic rule, the following steps may be used for each device:

1. Connecting the UP-600/700:

Procedure:

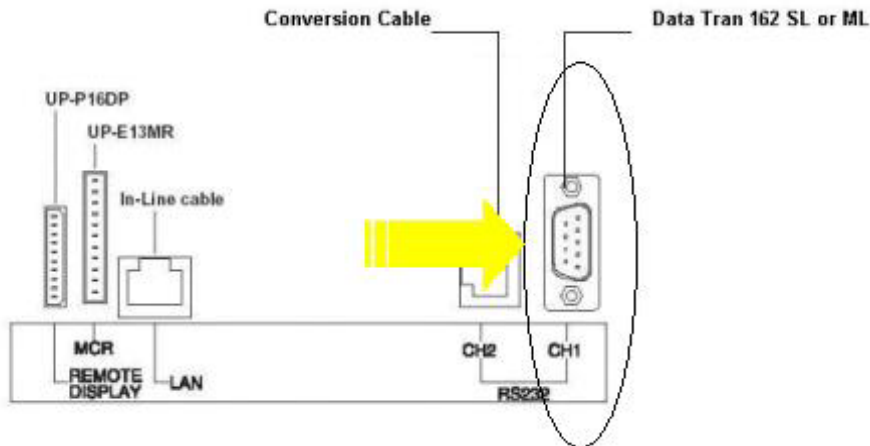
4. Connect the specified RS232 cable to Channel #1
5. Install a ferrite core (part no. RCORF6699BHZZ) within 50 cm of the connector on the connection cable to reduce interference



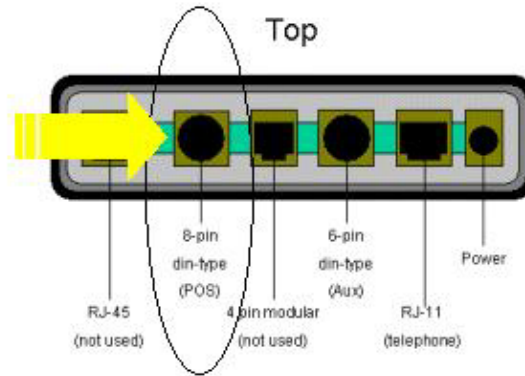
2. Connecting the Datacap Data Tran 162 Modem – Dial Up Processing

The Datacap DataTran Modem is required for credit card authorization. For single terminal sites either the DataTran 162 SL or 162 ML Modem may be used. Two or more terminal installations require the 162 ML model.

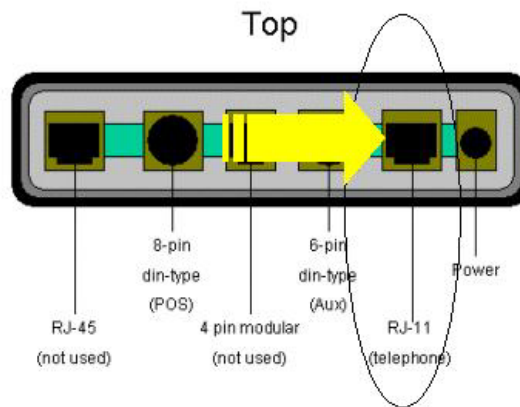
1. Locate the Datacap cable (part no. SPCB-990805)
2. Insure that the AC power is disconnected from the UP-700
3. Connect the DB9 end to CH#1 of the UP-700.



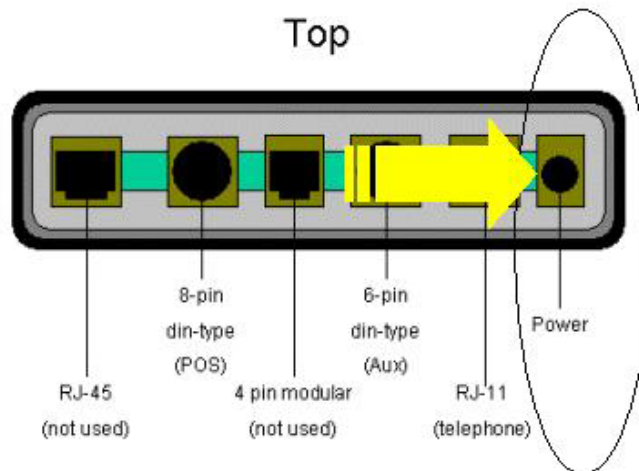
4. Connect the 8-pin DIN connector to the DataTran 162 modem as indicated below.



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



6. Connect the external power supply to the receptacle of the DataTran 162 modem.



7. Plug the external power supply to the AC power outlet.

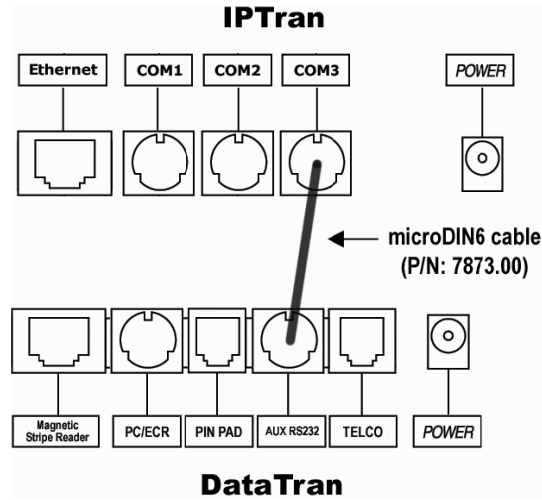
Note:

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

3. DataTran™/IPTran™/IPEabler™ EFT Payments for Sharp UP-600/700 Registers

Procedure:

- ① Connect the specified RS232 cable to the 8-pin Din-type connector on the Data Tran 162 unit



- ② If using Debit Card operations connect the UP-600/700 to the 8-pin Din-type connector on the Peripheral Device Controller

NOTE:

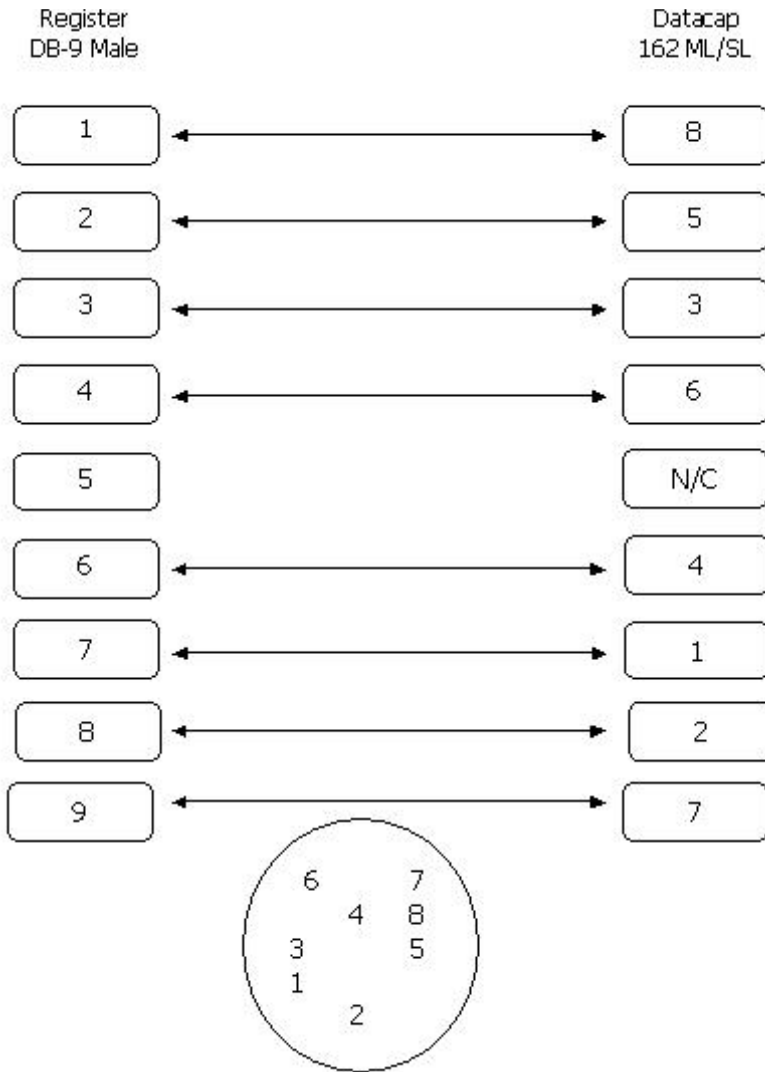
The illustrations above are based on the current Data Tran 162 SL and ML units

4. Cabling Specifications

As a general rule, each peripheral's manufacturer should provide their recommended specifications for cabling to the peripheral device. Data Cap supplies the necessary cables between their product and the UP-600/700.

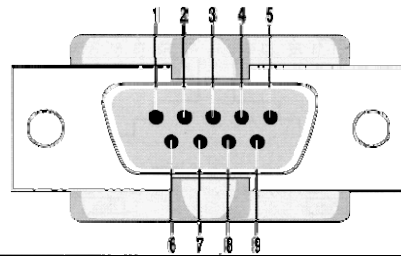
Protocol:

Description	Specification
Operation Mode	Half Duplex
Line Configuration	Direct connection
Data Rate	2400 bps
Transmission Technique	Asynchronous
Connection	Initiated by UP-600/700
Checking	1 Start bit
	8 Data bits
	No Parity
	1 Stop bit
Code	ASCII
Bit Sequence	LSB first



5. Standard D-Sub 9 Pin Connector:

CH1 utilizes a standard PC-type COM Port - EIA-574 RS-232 pin out on a DB-9 pin used for Asynchronous Data



Pin	Signal	Pin	Signal
1	Data Carrier Detect	6	Data Set Ready
2	Received Data	7	Request to Send
3	Transmitted Data	8	Clear to Send
4	Data Terminal Ready	9	Ring Indicator
5	Signal Ground		

Section-5: EFT Related Programming

EFT (Electronic Funds Transfer) related programming includes Credit, Check and Debit card authorization setup, which consist of service-mode and PGM-mode programming jobs, which define the UP-600/700 system capabilities.

Recommendations:

Prior to programming the UP-600/700, it is recommended to upgrade to the latest version ROM object by using the POSUTILITY.exe PC utility.

Recommended Sequence for programming:

Please complete the SRV-mode and PGM-mode sections in the order outlined below:

- ① Always back up your existing program with the 02FD.EXE Utility prior to adding Credit and/or Debit Card Authorization.
- ② Set the Device Configuration:
 - a. CAT#2
 - b. PIN Pad
- ③ Set any applicable SRV Mode - System Presets
- ④ Place the necessary Function keys on the keyboard SRV Mode - Free Key Layout
- ⑤ Allocate any Memory Files SRV Mode – File Allocation
- ⑥ Perform a Program Reset (SRV Reset)
- ⑦ Set related presets in PGM2 mode
 - a. CAT Settings
 - b. Media Key presets
- ⑧ Initialize the Data Tran
- ⑨ Conduct a Test with the merchant's processor
 - a. Credit Card sales
 - b. Check Card sales
 - c. Check sale (if applicable)
 - d. Debit sale (if applicable)

Related Programming Jobs: CAT#2 System

System Presets:

SRV Menu / Job#		Description
SRV Mode - Device Config		CAT#2
		PIN Pad
SRV Mode – System Presets	902-C	Void mode operations: AT&UI6 command is sent to the Data Tran
SRV Mode – Free Key		Function No. 059 CH TIP (Charge Tip)
		Function No. 111 CHK (Check)
		Function No. 112 CHK2 (Check2)
		Function No. 113 CH K3 (Check3)
		Function No. 114 CHK4 (Check4)
		Function No. 115 CHK5 (Check5)
		Function No. 116 CH1 (Charge1)
		Function No. 117 CH2 (Charge2)
		Function No. 118 CH3 (Charge3)
		Function No. 119 CH4 (Charge4)
		Function No. 120 CH5 (Charge5)
		Function No. 121 CH6 (Charge6)
		Function No. 122 CH7 (Charge7)
		Function No. 123 CH8 (Charge8)
		Function No. 124 CH9 (Charge9)
SRV Mode – File Allocation		Function No. 172 ED TIP (Edit Tip)
		Function No. 167 RCP. SW [Receipt On/Off]
		File Group No.38 GLU/PBLU (All)
		File Group No.39 Close GLU
		File Group No. 40 Auto GLU Gen.
		File Group No.48 Ind. Pay Buffer

Note: These are minimal settings related to credit card function for the terminals. More programming may be necessary as per end user specifications.

Caution:

Making changes to the Systems Presets that are related to Inline System control will require the execution of the IRC SETTING job.

Please consider the general rules listed below when using this feature:

- An IRC SETTING is required after modification to memory file allocation
- A PROGRAM RESET is required upon modification

PGM2 Mode

PGM Job #	Selection	Description	Options
2.Setting	5. Media	1. Cash	CAT operation, CAT2 Action Code, CAT2 Type, Card# Print, Card# Format, Signature Line Print, Card Holder Print, Expiration Print, Number of Receipts
		2. Check	
		3. Charge	
		4. Employee Charge	
		7. Service	
		8. Final	
15.CAT Setting	2.CAT Preset#2	Time Out1	010
		Time Out2	180
		Time Out3	3000
		Tel No.	12 digits
		Tel ID	8 digits
		Tel Mode	Tone/Pulse
		FTS Mode	Disable/Enable
		Amount%	000.00% - 100.00%
	3.PIN Pad	Time Out1	000 – 255 (recommended 010)
		Time Out2	000 – 255 (recommended 099)
		Baud Rate	300/1200/2400/4800/9600/19200

1. Device Assign Settings

The SRV-mode programming of the UP-600/700 consists of Device Assignment, System Presets, Free Key layout and File Allocation. The recommended settings are described below:

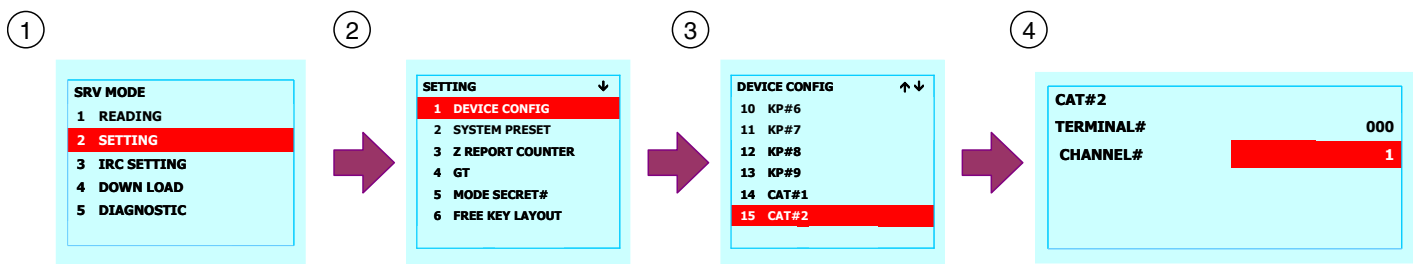
CAT#2

The CAT#2 device may be added to the UP-600/700 configuration when EFT functions are required. The Data Tran modem is used for the CAT#2 device and may be setup as outlined below:

Procedure

Enter the SRV-Mode as outlined in Section -1

- ⑫ Select [2 SETTING]
- ⑬ Select [1 DEVICE CONFIG]
- ⑭ Select [15 CAT#2]
- ⑮ Enter the desired parameters followed by depressing the [ENTER] key



- ⑯ Depress the [CASH] key when all settings are completed
The menu will return to the Device Config Sub-Menu
- ⑰ Depress the [CANCEL] key to return to the SRV Mode Setting Sub-Menu

NOTE:
When the CAT#2 device is assigned to the desired Channel No., it is recommended that a PROGRAM Reset be performed.

Assignment Method:
The CHANNEL NO. assignment is required at the machine where the CAT#2 device is physically connected. For the Inline configuration – the TERMINAL and CHANNEL of the machine where the Data Tran modem is physically located is required

Please consider the general rules listed below when using this feature:

- No other device can be assigned to a Channel where a the CAT#2 device is already assigned (ex: SCALE)

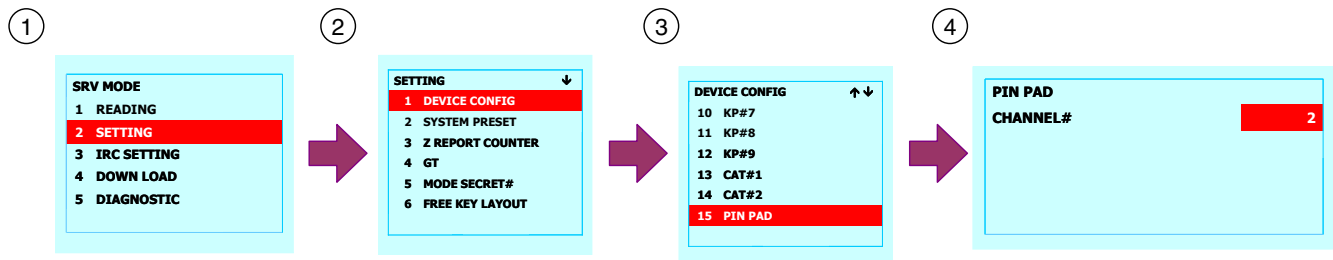
PIN Pad

The PIN Pad device may be added to the UP-600/700 configuration when Debit Card w/ PIN entry functions are required. The Data Cap Peripheral Device Controller and Verifone PIN pad 1000 is used for the PIN entry device and may be setup as outlined below:

Procedure

Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [1 DEVICE CONFIG]
- ③ Select [16 PIN PAD]
- ④ Enter the desired Channel# followed by depressing the [ENTER] key



- ⑤ Depress the [CASH] key when all settings are completed
The menu will return to the Device Config Sub-Menu
- ⑥ Depress the [CANCEL] key to return to the SRV Mode Setting Sub-Menu

NOTE:

When the PIN Pad device is assigned to the desired Channel No., it is recommended that a PROGRAM Reset be performed.

Assignment Method:

The CHANNEL NO. assignment is required at every machine where the PIN Pad device (Peripheral Device Controller) is physically connected.

Please consider the general rules listed below when using this feature:

- No other device can be assigned to a Channel where a the Peripheral Device Controller is already assigned (ex: SCALE)

2. System Preset Settings

There are System Preset jobs that should be preset with recommended values based on the requirements of UP-600/700 system configuration and are described below:

Procedure

Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [2 SYSTEM PRESET]
- ③ Enter the desired parameters:
 - 42. SRV#902 = xx2x: when the Network is Host-based
= xxxx: when the Network is Terminal-based (Batch operations)
 - 43. SRV#916 = x4xx, SRV#918 = xxx1 and SRV#921 = xxx4



- ④ Depress the [CASH] key when all settings are completed
- ⑤ Depress the [CANCEL] key to return to the SRV Mode Setting Sub-Menu

NOTE:

SRV#918 and #921 are related to the Server Tip Paid function, which impacts the usage of the Edit Tip entry used for Credit Card Authorization.

3. Free Key Layout Settings

The Function keys required and the description for recommended usage are shown below:

Recommended Function Keys

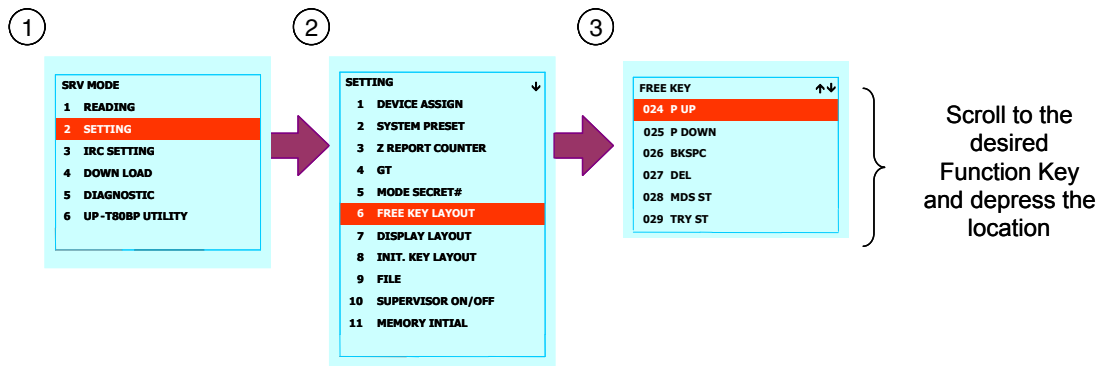
<u>Function</u>	<u>Description</u>
CA2	The CA2 (Cash2) media key is preset for Debit settlement
CHK1-4	The Check1 – 4 media keys are preset for Checks and/or Check-Card settlements (w/o MICR)
CH1-8	The Charge1 -8 media keys are preset for Credit Card and/or Check Card settlements
PAY MENT	Used to organize all payments within a single keyboard
CH TIP	The Charge Tip function is used to enter Tips included in Credit Card sales prior to finalization
ED TIP	The Edit Tip function key is used in conjunction with the Closed Check file and may only be used for modifying a Tip entry for Guest Check transaction
RCPT	The Receipt Copy key is used to issue a receipt or generate 2 nd or subsequent copies of the sales transaction.

Example Free Key Layout Programming

Procedure

Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [6 FREE KEY]
- ③ Using the UP and DOWN arrow keys, scroll to the desired Function key and depress the desired location on the keyboard



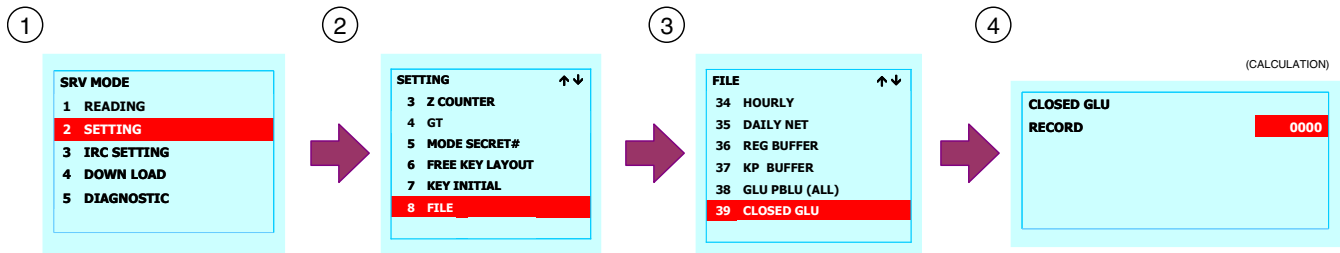
- ④ Depress the [ENTER] key located on the Receipt-Window when all settings are completed
- ⑤ Depress the [CANCEL] key to return to the SRV Mode Setting Sub-Menu

NOTE:

When placing Function keys on the keyboard please refer to the Section 2: Free Key Layout for further information

- ⑥ Select [39 CLOSED GLU] and input the number of closed checks (ex: 300)
- ⑦ Enter the desired parameters:
46. Index: = No. Closed Checks per day
- ⑧ Depress the [ENTER] key to finalize the settings

Example – CLOSED GLU:



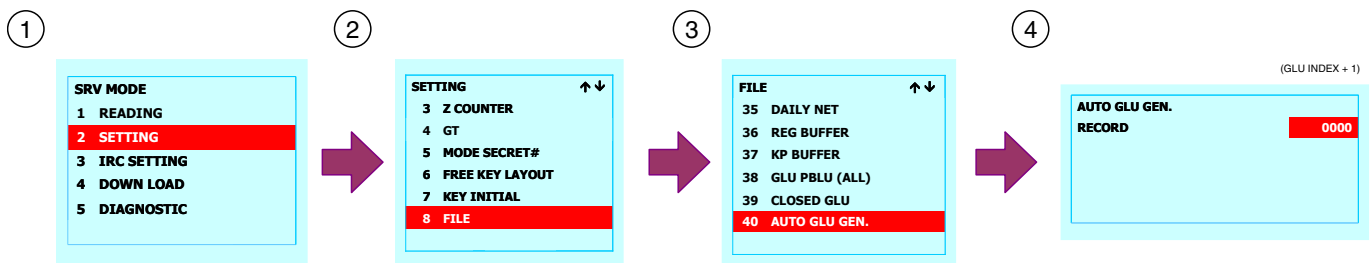
Allocation Method:

File Group #36: CLOSED GLU is to be allocated at the Standalone, Master and Backup Master (based on SRV Job#920-B and SRV Job #921-B)

Please refer to Section – 3: File Allocation when allocating memory for the guest check function

- ⑨ Select [39 AUTO GLU GEN] and input the number of open checks
- ⑩ Enter the desired parameters:
47. Index: = GLU Index (+) 1
- ⑪ Depress the [ENTER] key to finalize the settings
- ⑫ Depress the [CANCEL] key to return to the SRV mode Main Menu

Example – AUTOGLU GEN:



Allocation Method:

File Group #40: AUTO GLU GEN. Allocated at the Standalone, Master, Satellite and Backup Master (based on SRV Job #921-B).

Please refer to Section – 3: File Allocation when allocating memory for the guest check function

5. PGM2 mode programming:

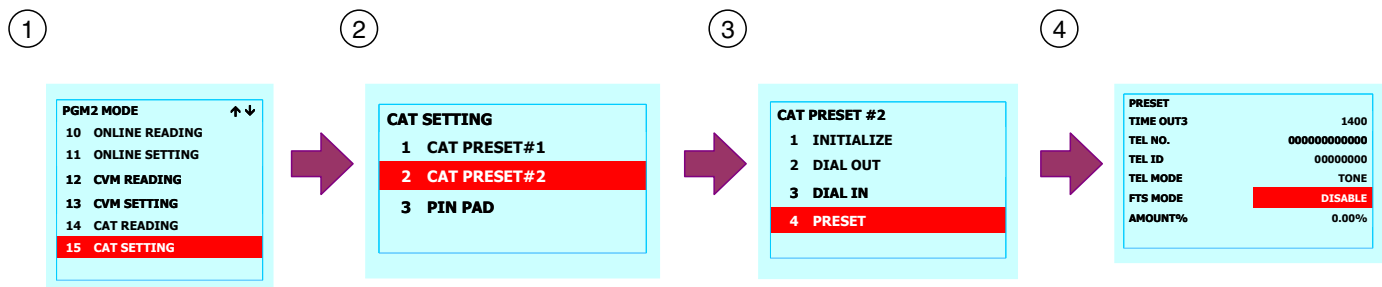
The PGM2 mode-programming settings outlined in this section are recommended settings for a typical implementation of the UP-600/700 CAT#2 function for credit card, debit card and/or personal checks.

CAT#2 Settings:

Procedure:

Place the mode key to the PGM2 position

- ① Select [15 CAT SETTING]
- ② Select [2 CAT PRESET#2]
- ③ Set the following parameters time-out values as shown below followed by depressing the [ENTER] key
 - o TIMEOUT1 = 010
 - o TIMEOUT2 = 180
 - o TIMEOUT3 = 3000
- ④ Set the TEL NO. as instructed for DIAL OUT purposes – using the [TEXT] keyboard
 - o Example: TEL NO. = 1,2159973963
- ⑤ Set the TEL ID to the designated number provided by Data Cap for that merchant file or DIAL OUT purposes
- ⑥ Set TEL MODE to the desired setting followed by depressing the [ENTER] key
- ⑦ Set FTS MODE = ENABLE for Inline systems or DISABLE for Stand-alone machines
- ⑧ Set the AMOUNT% only when CH. Tips are used
- ⑨ Depress the [ENTER] key to finalize the settings
- ⑩ Depress [CANCEL] when at the CAT SETTING sub-menu to exit to the PGM2 Main-Menu



NOTE:

The AMOUNT% is used as a calculation basis for Data Tran’s Authorization Amount parameter. It is recommended to set this parameter = 15.00% - 50.00% when using the CH Tip function

Assignment Method:

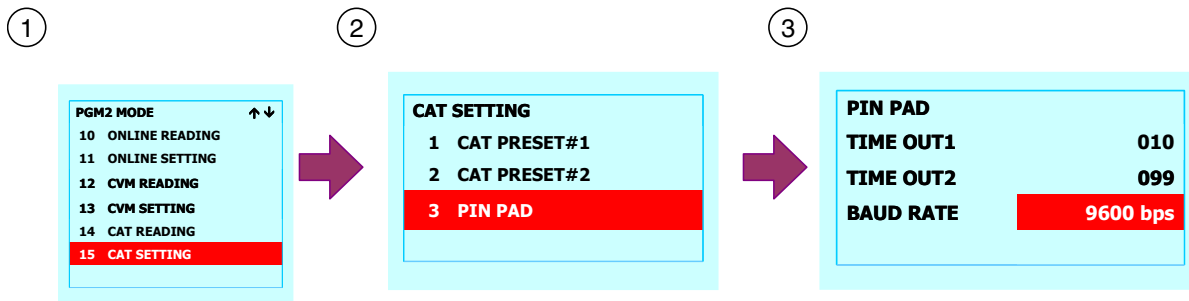
When using Nova or any other Host-based service, the Amount% should be preset to %0. 00

PIN Pad Settings:

Procedure:

Place the mode key to the PGM2 position

- ① Select [15 CAT SETTING]
- ② Select [3 PIN PAD]
- ③ Set the following parameters time-out values as shown below followed by depressing the [ENTER] key
 - o TIMEOUT1 = 010
 - o TIMEOUT2 = 099
 - o BAUD RATE = 9600 bps
- ④ Depress the [ENTER] key to finalize the settings
- ⑤ Depress [CANCEL] when at the CAT SETTING sub-menu to exit to the PGM2 Main-Menu



NOTE:

The PIN Pad settings are preset to the recommended settings from MRS Defaults

6. Media Key programming:

The media key initiates communications to the Data Tran unit based on the presets entered during setup. The below procedures are separated by the type media key:

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 Data Tran terminal to track the individual credit card's totalizers

Method-2: for detailed operations:

It is possible to provide a media key for each type of credit card at the POS terminal and cross check the machine's totalizers against the Data Tran.

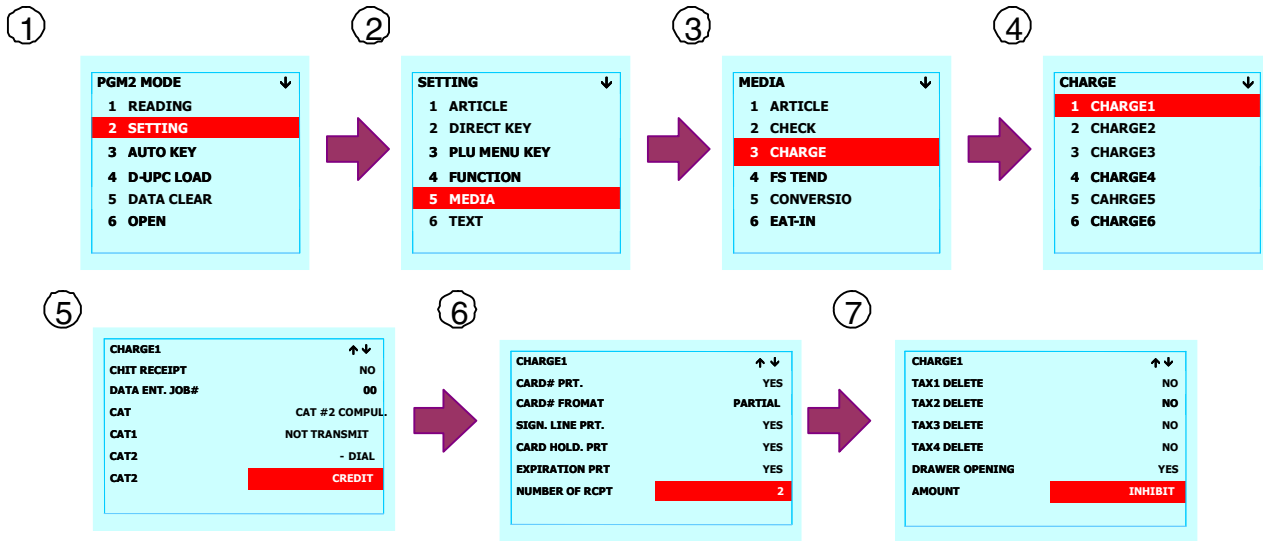
Procedure:

Enter the PGM2-Mode by turning the MA key counter clock wise to the PGM2 position

- ① Select [2 SETTING]
- ② Select [5 MEDIA]
- ③ Select [3 CHARGE]
- ④ Select the desired Charge media key(s) to be used for Credit Cards (CHARGE1 – CHARGE9)
- ⑤ Enter the desired parameters:
 - CAT: CAT2 Compulsory
 - CAT2: Dial
 - CAT2: Credit
 - Card# Print: Yes or No
 - Card# Format: Full or Partial
 - Sign. Line Print: Yes or No
 - Card Holder Print: Yes or No
 - Expiration Date Print: Yes or No
 - Number of Receipts: 0 – 9 (usually 2)
- ⑥ Depress [CA/AT] when all settings are completed to exit to the PGM2 Charge Sub-Menu
- ⑦ Depress [CANCEL] to exit the Charge Sub-Menu and return to the Media preset menu

NOTE:

Repeat steps 4 thru 7 for each subsequent charge card to be programmed as a credit card finalization key. Only one charge media is required.



Assignment Method:

For terminal-based host systems (batch operations required), it is recommended to select a single CHARGE media key when settling credit cards to simplify operations for the operator. The individual Credit Card totals are provided upon the CAT#2 reports.

Please consider the general rules listed below when using this feature:

- When the Tip Line is not desired, then preset Sign. Line Print = No
- Preset the Footer Print related programming in SRV Job#911-C = "+1"
- Enable Footer Print = Enable for the Media key preset
- Partial tenders are required, the Charge media key must be preset as 'Amount Tender = Compulsory'

Check Card Finalization Keys:

The Check card is actually a form of debit, but is processed in a similar fashion to credit cards when using the Data Tran unit. Additionally, some requirements that exist for Credit cards (ex: signature, adding tips, etc.) are also a requirement when this type of card finalizes the sales transaction.

Assignment Method:

To keep the system balancing simple, we recommend that a single Charge media key be preset for all Check cards. Settings for Check Cards are identical to Credit Cards with the exception of the Text parameters

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

The UP-600/700 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.

Method: The method used for Check finalization is with data entry. This model POS terminal does not support the MICR interface.

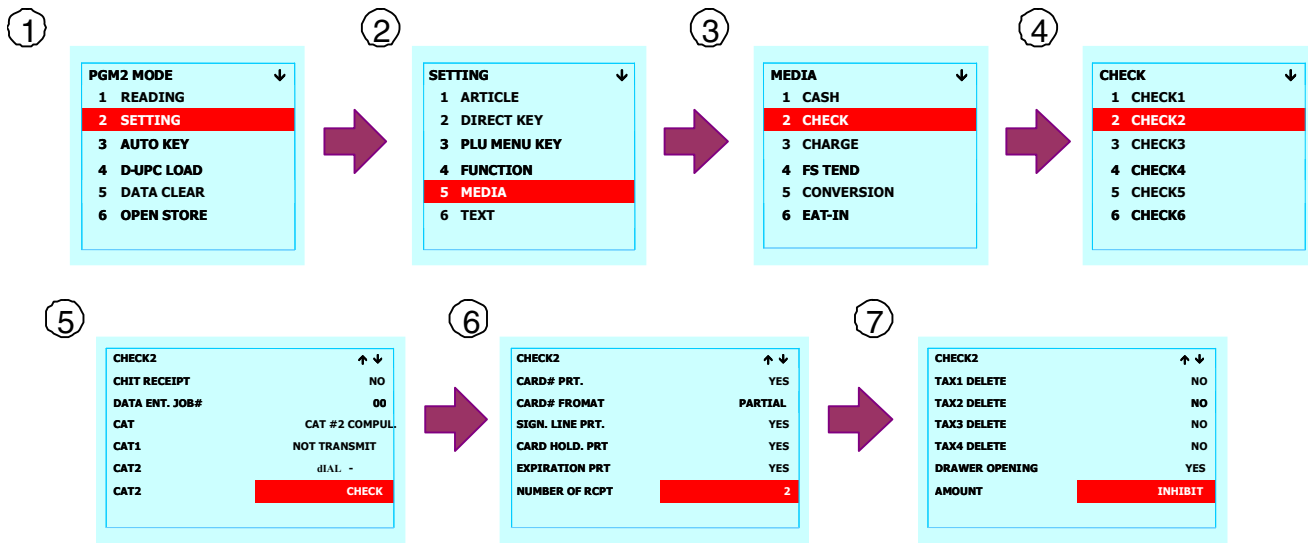
Procedure:

Enter the PGM2-Mode by turning the MA key counter clock wise to the PGM2 position

- ① Select [2 SETTING]
- ② Select [5 MEDIA]
- ③ Select [2 CHECK]
- ④ Select the desired Check media key(s) to be used for Check payments (CHECK1 – CHECK4)
- ⑤ Enter the desired parameters:
 - CAT: CAT2 Compulsory
 - CAT2: Dial
 - CAT2: Check
 - Card# Print: YES (Driver's License)
 - Card# Format: Full
 - Sign. Line Print: No
 - Card Holder Print: No
 - Expiration Date Print: No
 - Number of Receipts: 0 – 9 (usually 2)
- ⑥ Depress [CA/AT] when all settings are completed to exit to the PGM2 Check Sub-Menu
- ⑦ Depress [CANCEL] to exit the Charge Sub-Menu and return to the Media preset menu

NOTE:

Repeat steps 4 thru 7 for each subsequent check settlement key to be programmed as a check finalization key



Assignment Method:

For terminal-based host systems (batch operations required), it is recommended to select a single CHECK media key when settling personal checks to simplify operations for the operator.

Please consider the general rules listed below when using this feature:

- When the Tip Line is not desired, then preset Sign. Line Print = No
- Preset the Footer Print related programming in SRV Job#911-C = "+1"
- Enable Footer Print = Enable for the Media key preset

Debit Finalization Keys (w/ PIN entry):

The UP-600/700 can support end user requirements that also include processing debit card transactions that require PIN data entry using Data Cap's Peripheral Device Controller in conjunction with the Verifone 1000 PIN pad.

For this example in programming a media key to be used as a Debit settlement, a CASH2 media key will be used.

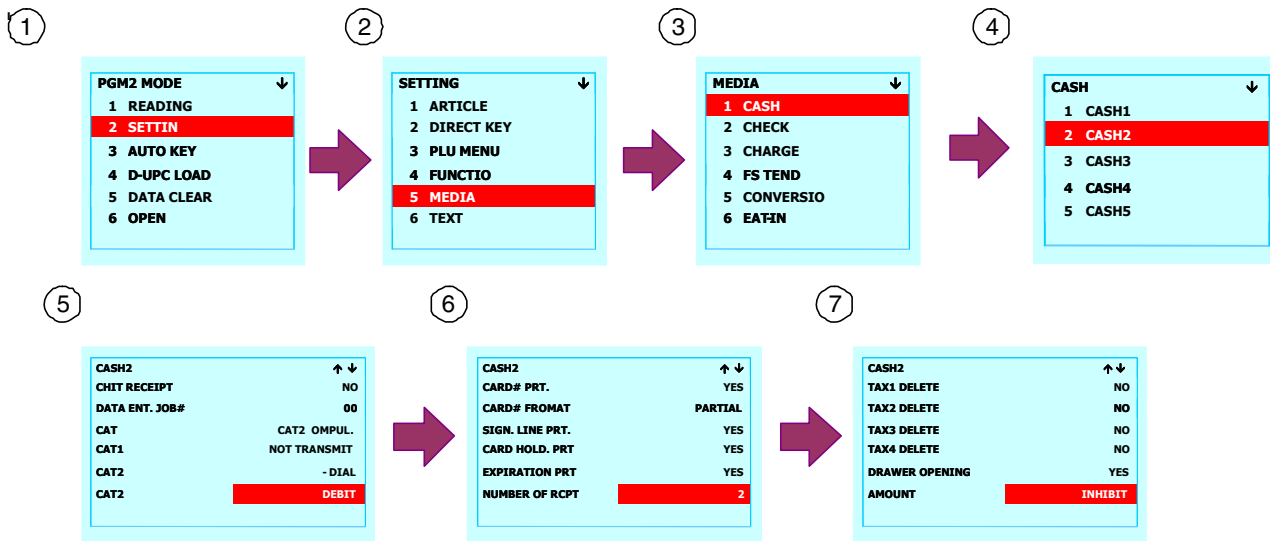
Procedure:

Enter the PGM2-Mode by turning the MA key counter clock wise to the PGM2 position

- ① Select [2 SETTING]
- ② Select [5 MEDIA]
- ③ Select [1 CASH]
- ④ Select the [2 CASH2] media key to be used for Debit payments
- ⑤ Enter the desired parameters:
 - CAT: CAT2 Compulsory
 - CAT2: Dial
 - CAT2: Debit
 - Card# Print: Yes or No
 - Card# Format: Full or Partial
 - Sign. Line Print: Yes or No
 - Card Holder Print: Yes or No
 - Expiration Date Print: Yes or No
 - Number of Receipts: 0 – 9 (usually 2)
- ⑥ Depress [CA/AT] when all settings are completed to exit to the PGM2 Cash Sub-Menu
- ⑦ Depress [CANCEL] to exit the Cash Sub-Menu and return to the Media preset menu

NOTE:

Repeat steps 4 thru 7 for each subsequent cash settlement key to be programmed as a debit finalization key



Assignment Method:

Debit transactions are immediate and are not part of any batch operations.

Please consider the general rules listed below when using this feature:

- When the Tip Line is not desired, then preset Sign. Line Print = No
- Preset the Footer Print related programming in SRV Job#911-C = "+1"
- Enable Footer Print = Enable for the Media key preset

Print Example:

```

03/01/03          10:13          000001
#0201
*PGM2*
MEDIA
CASH                KP000 L18
                   0000000000000000
DEBIT              CA1 000000000001
                   KP000 L18
                   0000000000000000
CHECK              CA2 201100000002
                   KP000 L18
                   20120101112
CHECK2             CK1 000000000001
                   KP000 L18
                   0000000000000000
CHECK3             CK2 000000000001
                   KP000 L18
                   0000000000000000
CHECK4             CK3 000000000001
                   KP000 L18
                   0000000000000000
CREDIT            CK4 000000000001
                   KP000 L18
CREDIT-           CH1 201000000001
                   0000000000000000
                   :
                   :
    
```

Auth-Only / Post-Auth Finalization Keys:

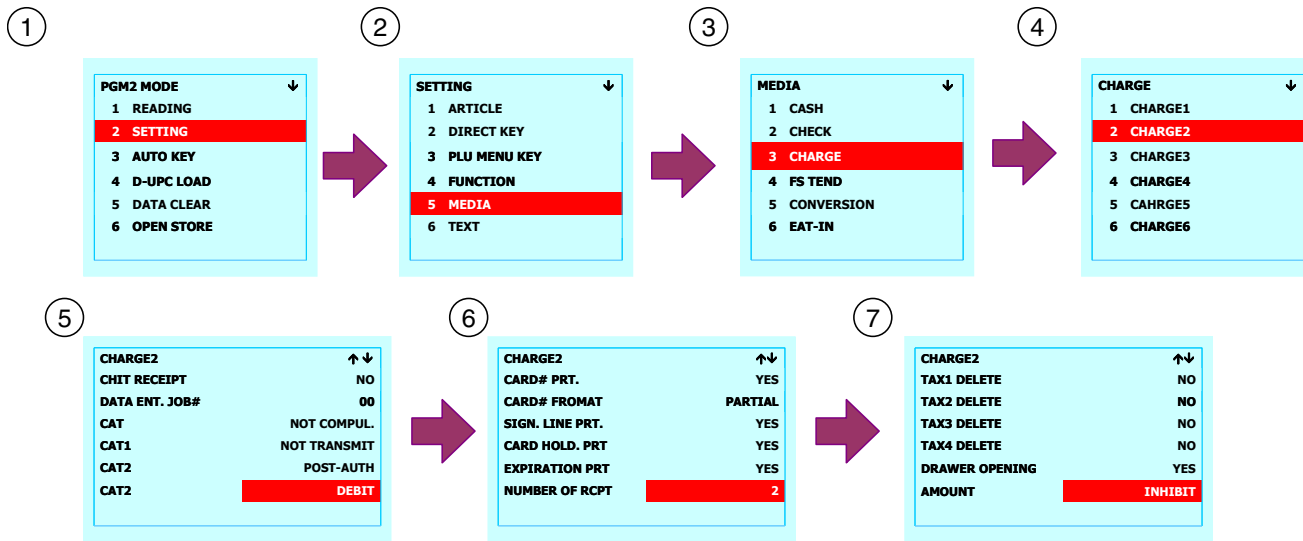
The UP-600/700 can support end user requirements that include posting advances against a patron's credit card. For this example in programming a media key to be used for an Auth-only request, a CH 2-9 media key will be used.

Procedure:

Enter the PGM2-Mode by turning the MA key counter clock wise to the PGM2 position

- ① Select [2 SETTING]
- ② Select [5 MEDIA]
- ③ Select [3 CHARGE]
- ④ Select the [2 CHARGE2 and 3 CHARGE 3] media key to be used for AUTH-ONLY and POST-AUTH payments
- ⑤ Enter the desired parameters:
 - CAT Operation: CAT2 Compulsory
 - CAT2 Action Code: Dial
 - CAT2 Type: AUTH-ONLY / POST-AUTH*
 - Card# Print: Yes or No
 - Card# Format: Full or Partial
 - Sign. Line Print: Yes or No
 - Card Holder Print: Yes or No
 - Expiration Date Print: Yes or No
 - Number of Receipts: 0 – 9 (usually 2)
- ⑥ Depress [CA/AT] when all settings are completed to exit to the PGM2 Cash Sub-Menu
- ⑦ Depress [CANCEL] to exit the Cash Sub-Menu and return to the Media preset menu

NOTE: A POST-AUTH finalization key is required to settle the Auth-Only transaction.



Assignment Method:

Debit transactions are immediate and are not part of any batch operations.

Please consider the general rules listed below when using this feature:

- When the Tip Line is not desired, then preset Sign. Line Print = No
- Preset the Footer Print related programming in SRV Job#911-C = "+1"
- Enable Footer Print = Enable for the Media key preset

Print Example:

```

03/01/03          000001
#0201             10:13

*PGM2*
MEDIA
CASH              KP000 L18
                  00000000000000
DEBIT             CA1 000000000001
                  KP000 L18
                  00000000000000
CHECK            CA2 201100000002
                  KP000 L18
                  20120101112
CHECK2           CK1 000000000001
                  KP000 L18
                  00000000000000
CHECK3           CK2 000000000001
                  KP000 L18
                  00000000000000
CHECK4           CK3 000000000001
                  KP000 L18
                  00000000000000
CREDIT          CK4 000000000001
                  KP000 L18
CREDIT-         CH1 201000000001
                  00000000000000
                  :
                  :
    
```

Section-6: Data Tran Functions

When implementing the Data Tran modem, select functions have been incorporated to allow for remote support and management of EFT enabled terminals.

Incorporated Functions:

The following list of functions has been implemented in the UP-600/700 POS terminal:

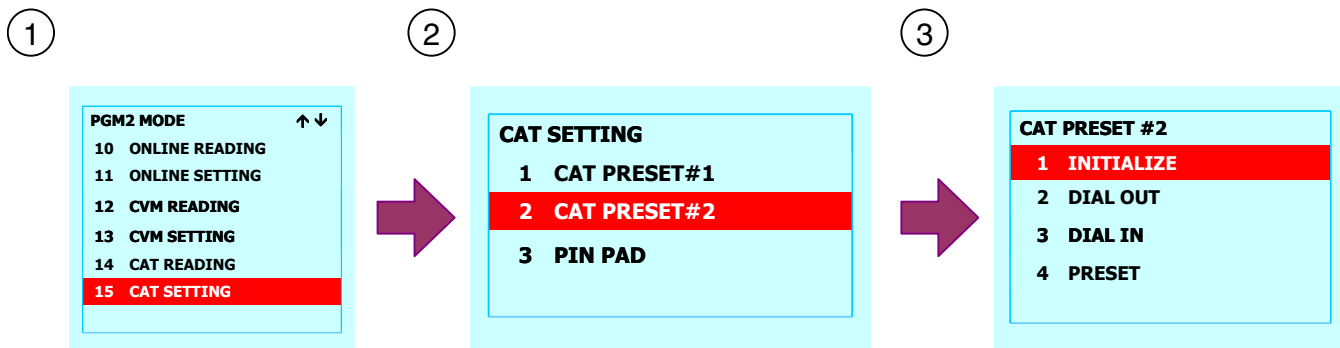
Function	Description for Usage
Initialization	Used after installation is complete
	Used to initialize the Data Tran whenever power is removed
Open Batch	When terminal-based processors used: must be accomplished daily prior to accepting credit cards for that business day
Close Batch	When terminal-based processors used: must be accomplished daily in order to settle credit card sales transaction at the host
Dial Out	When the Tel No. and Tel ID are preset: this is used to dial out to Data Cap's host to download the merchant parameter file
Dial In	Places the Data Tran into an access state where remotely Data Cap may dial into the terminal to load a merchant parameter file

1. Data Tran Initialization:

Procedure:

Enter the CAT#2 by turning the manager key to the pgm2 position.

- ① Select [15 CAT SETTING]
- ② Select [2 CAT PRESET#2]
- ③ Select [1 INITIALIZE]
- ④ Depress [CANCEL] to exit and return to REG-mode



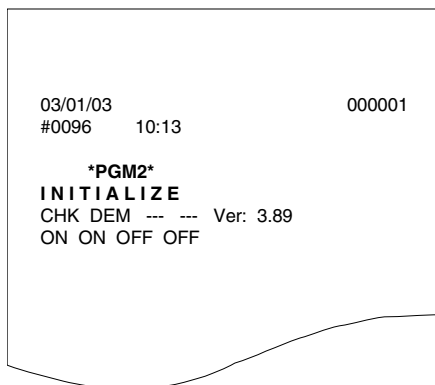
NOTE:

The Initialize operation does not affect the Data Tran totals and may be executed whenever necessary to insure proper operations

IMPORTANT:

Once the POS and CAT#2 settings have been completed and the equipment is connected, it is important that the Data Tran unit be initialized. It is also important to remember that the Initialization function should be conducted every time AC power is removed from the Data Tran unit.

Print Example:



Name of different Network Services provided and Version Application Status of each service provided

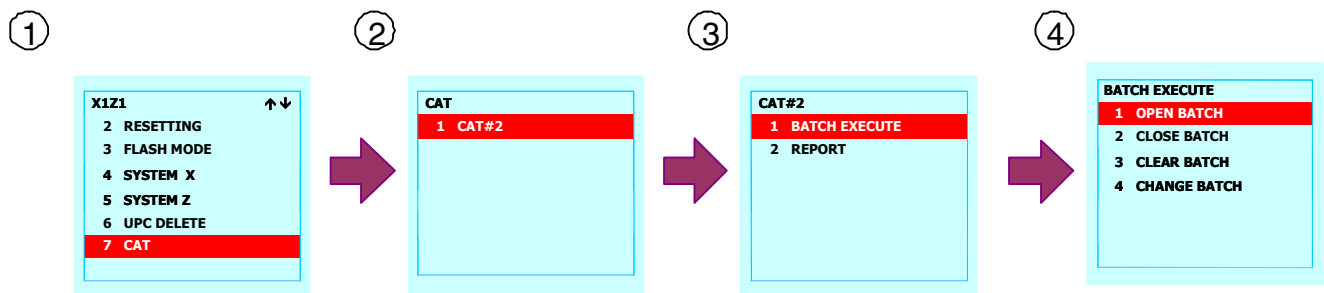
2. Data Tran Open Batch:

Required at the start of each day, this procedure prepares the Data Tran for processing credit cards.

Procedure:

Enter the CAT#2 by turning the manager key to the X1/Z1 position.

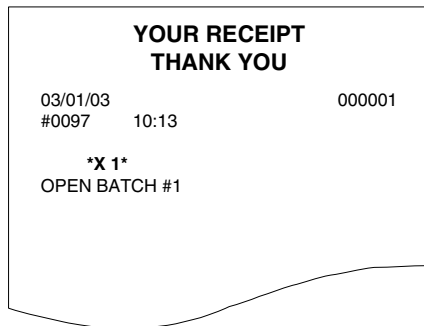
- ① Select [7 CAT]
- ② Select [1 CAT#2]
- ③ Select [1 BATCH EXECUTE]
- ④ Select [1 OPEN BATCH] to print a receipt chit
- ⑤ Depress [CANCEL] to exit and return to REG-mode



NOTE:

When the Open Batch operation is executed when the batch is already open, the “Batch Already Open” message will be returned.

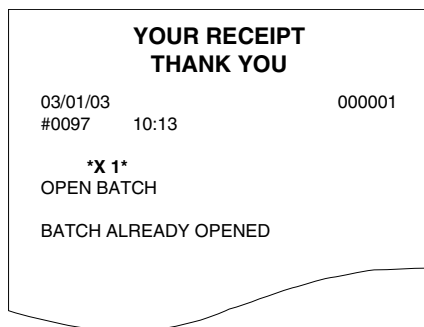
Print Example:



OPEN BATCH message and Batch No. is printed

In case the batch is already opened:

Print Example:



BATCH ALREADY OPENED message is printed

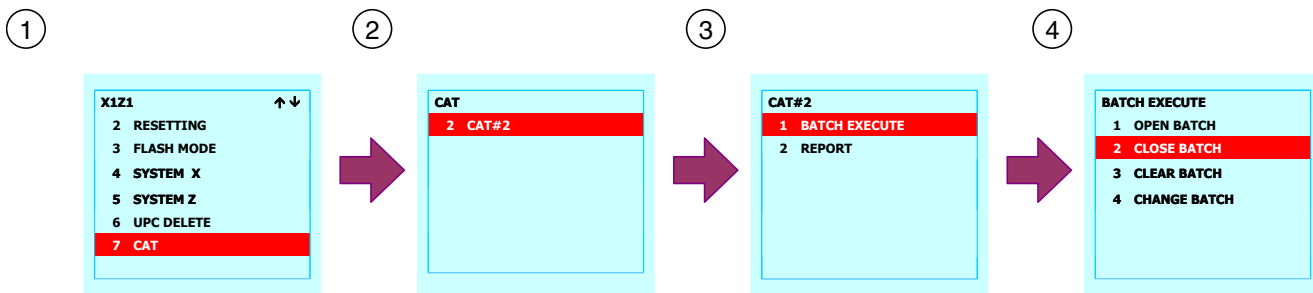
3. Data Tran Close Batch:

Required at the end of each day, this procedure posts the credit, check and debit transactions to the clearinghouse.

Procedure:

Enter the CAT#2 by turning the manager key to the X1/Z1 position.

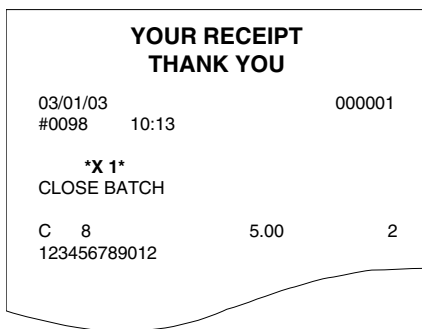
- ① Select [7 CAT]
- ② Select [1 CAT#2]
- ③ Select [1 BATCH EXECUTE]
- ④ Select [2 CLOSE BATCH] this will automatically start to print a chit.
- ⑤ Depress [CANCEL] to exit and return to REG-mode



NOTE:

When the Close Batch operation is executed when the batch is already open, the “Batch Already Open” message will be returned.

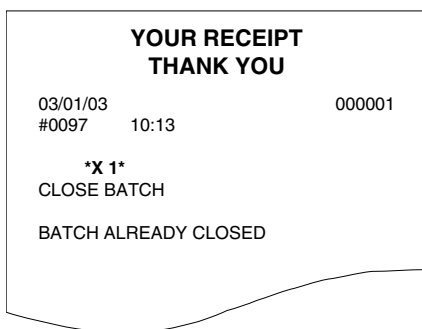
Print Example:



CLOSE BATCH message, Batch No., Total Amount, Number of Credit card sales settled is printed

In case the batch is already closed:

Print Example:



BATCH ALREADY CLOSED message is printed

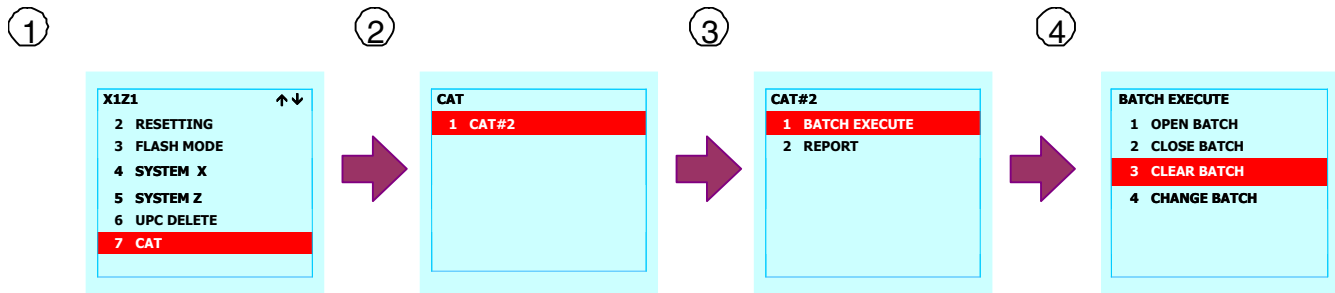
4. Data Tran Clear Batch:

This procedure should only be used under the direction of Sharp or authorized dealer. All Transaction in the Data Tran will be erased.

Procedure:

Enter the CAT#2 by turning the manager key to the X1/Z1 position.

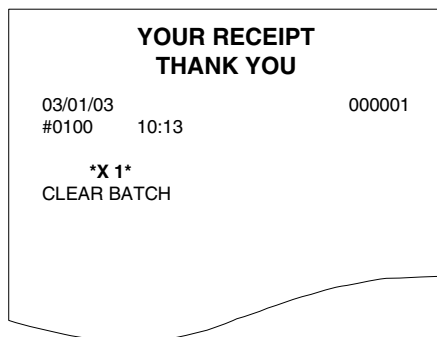
- ① Select [7 CAT]
- ② Select [1 CAT#2]
- ③ Select [1 BATCH EXECUTE]
- ④ Select [3 CLEAR BATCH] This will automatically start to print a chit.
- ⑤ Depress [CANCEL] to exit and return to REG-mode



CAUTION:

When the Clear Batch operation is executed the totals within the batch are eliminated. Only execute this job when informed to do during troubleshooting instructions.

Print Example:



CLEAR BATCH message is printed

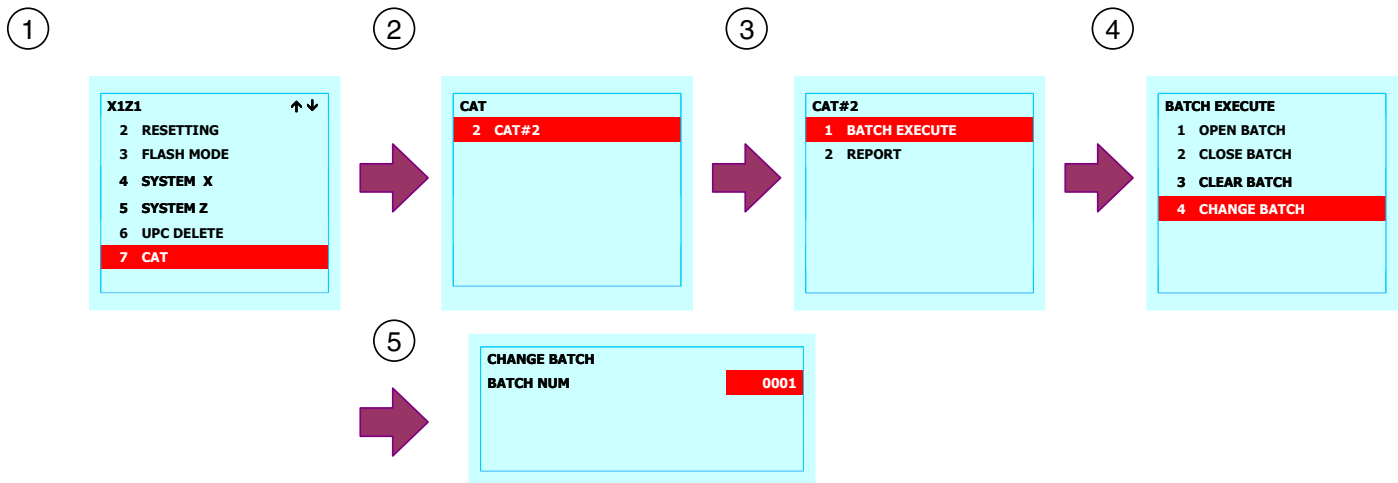
5. Data Tran Change Batch:

This procedure should only be used under the direction of Sharp or authorized dealer. All Transaction in the Data Tran will be erased.

Procedure:

Enter the CAT#2 by turning the manager key to the X1/Z1 position.

- ① Select [7 CAT]
- ② Select [1 CAT#2]
- ③ Select [1 BATCH EXECUTE]
- ④ Select [4 CHANGE BATCH]
- ⑤ Enter the informed Batch Number followed by depressing the [ENTER] key
- ⑥ This will automatically start to print a record of the change
- ⑦ Depress [CANCEL] to exit and return to REG-mode



CAUTION:

The Change Batch operation is executed under certain circumstances such as when the storeowner changes the type processor to be used for settlements. Only execute this job when informed to do so.

Print Example:

```

YOUR RECEIPT
  THANK YOU

09/01/2001      000001
#0148   9:33PM

  * X 1 *

CHANGE BATCH _____
CHANGE BATCH _____
    
```

Name of Inquiry Report
New Batch No.

CHANGE BATCH message is printed

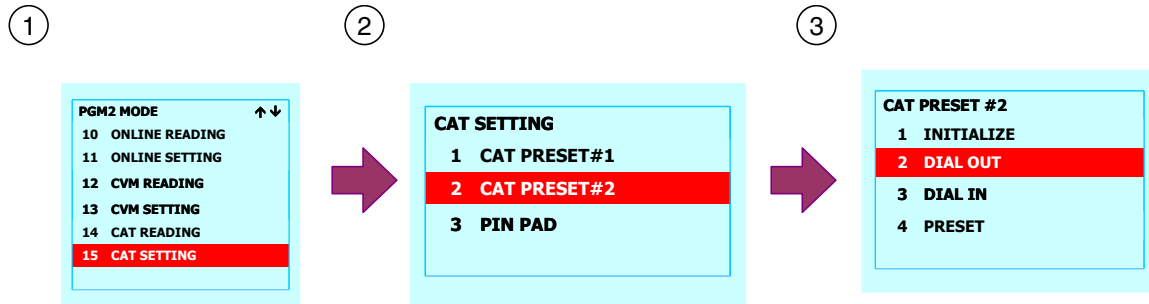
ations subject to change without notice: Revision date 10/07

6. Data Tran Dial Out:

Procedure:

Enter the CAT#2 by turning the manager key to the pgm2 position.

- ① Select [15 CAT SETTING]
- ② Select [2 CAT PRESET#2]
- ③ Select [2 DIAL OUT] The UP-600/700 will initiate the Dial Out operation
When the load is complete the version message is printed on the journal; printer
- ④ Depress [CANCEL] to exit and return to REG-mode



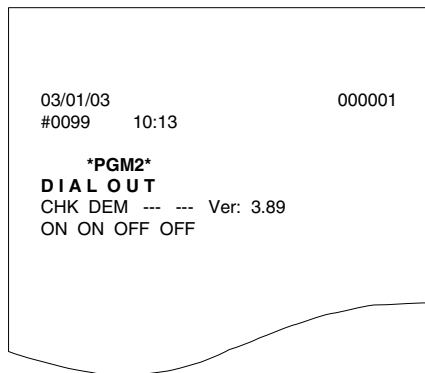
NOTE:

The Dial Out operation may be executed when the merchant's file (TEL ID) is preset in the memory of the UP-600/700.

IMPORTANT:

Extra charges may apply - please verify the type of service you are eligible for.

Print Example:



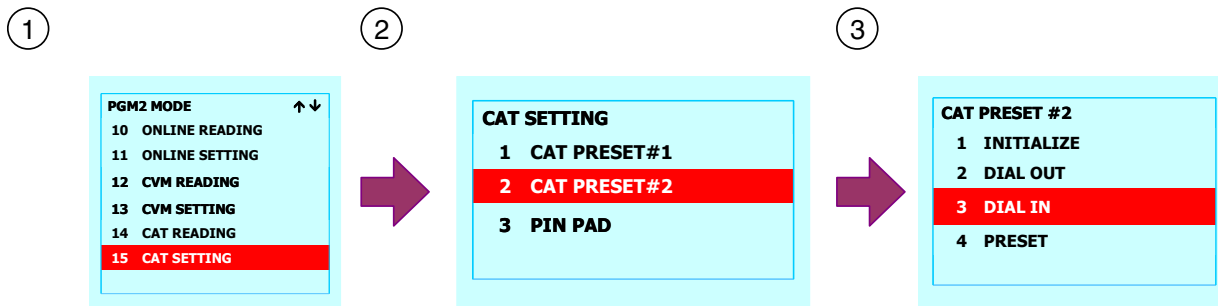
Name of different Network Services provided and Version Application
Status of each service provided

7. Data Tran Dial In:

Procedure:

Enter the CAT#2 by turning the manager key to the pgm2 position.

- ① Select [15 CAT SETTING]
- ② Select [2 CAT PRESET#2]
- ③ Select [3 DIAL IN] – the UP-600/700 will initiate the Dial In operation
o When the load is complete the version message is printed on the journal; printer
- ④ Depress [CANCEL] to exit and return to REG-mode



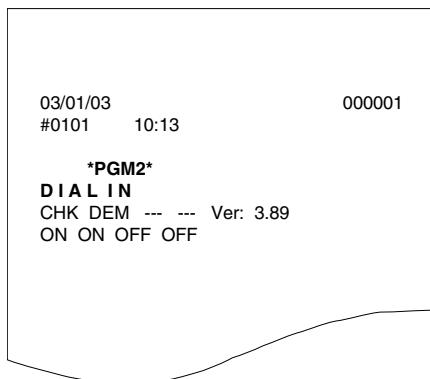
NOTE:

The Dial In operation may be executed when prior notification to Data Cap has been arranged and the merchant parameters are prepared.

IMPORTANT:

Extra charges may apply - please verify the type of service you are eligible for.

Print Example:



Name of different Network Services provided and Version Application
 Status of each service provided

Section-7: Sales Operations

There are three basic sales operations in REG-mode, which may or may not be settled by the EFT Finalization method outlined in the next section. They are 1-Normal, 2-Guest Check and 3-Employee Sales

UP-600/700 Sales Finalization Methods

Finalization of sales entries that require "Electronics Funds Transfer" (EFT) may be accomplished using one of the following methods outlined in the chart below.

Type Sales Entry Type	Type Finalization					
	Credit Card	Check Card	Check	Debit (W/PIN)	Auth/Post Auth	Edit Tip
Normal Sales	O	O	O	O	X	X
Guest Check (GLU)	O	O	O	O	O	O
Customer Sales	O	O	O	O	X	X

O = Yes, X = No

Additional Notes:

- Edit Tips

The [Edit Tip] function is designated for use when entering "CH-Tips" after the patron has indicated the tip amount while the patron is signing the restaurant's copy of the approval draft.

Because the UP-600/700 terminal provides 2 types of number generation systems (Auto & Table#) for opening the guest check, a unique "Bill No." is generated at the time of media payment and is stored into the "Closed Check" file for future reference when "Tip" entries are made using the [Edit Tip] function.

- Guest Check Payments

Based on the system setup, guest checks may be settled by either a single payment or 2-types of multiple payment methods. (1) Single payment: when a single person pays a guest check or (2) when the guest check may be split into multiple checks.

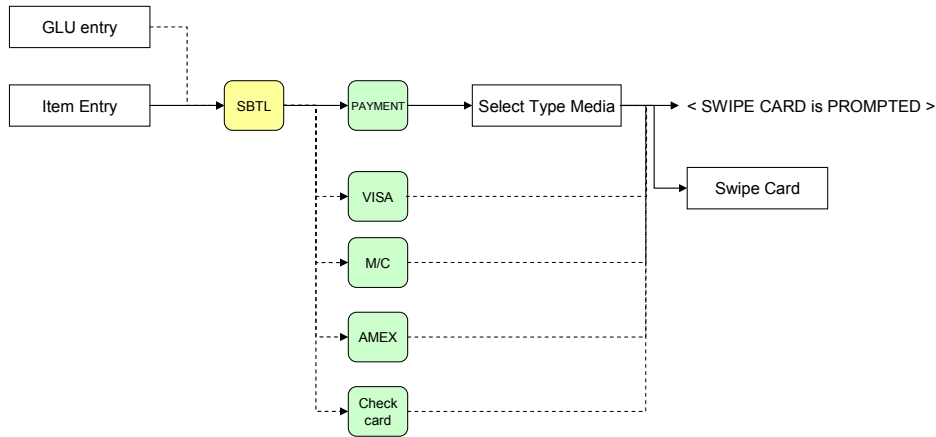
1. Finalization with a Credit Card

Finalizations of sales entries are accomplished with two methods through the Charge media keys.

Credit Cards Finalization - MCR

Example Operation:

Card Swipe Method



NOTE:

When a [CH TIP] entry exists, the sale must be finalized to the Charge media key by the amount of the Tip at a minimum in order to complete the sale.

Example: Item entry= \$10.00 [CH TIP] = \$ 2.00

* \$2.00 must be finalized to a Charge media key minimally before any other media type is selected

Usage Method:

For further details on making sales entries, please refer to the UP-600/700's Instruction Manual

Example Receipt:

```

YOUR RECEIPT
THANK YOU

03/01/03          000001
#0001  9:21AM  SERV.  0010001

aaaaaaaa          $15.00
***TOTAL          $15.00
VISA
CHANGE
VISA              08/09
#5499990123456781
000005
010297
VISA              $15.00
TIP AMOUNT _____
TOTAL            _____
GUEST SIGNATURE _____
X _____

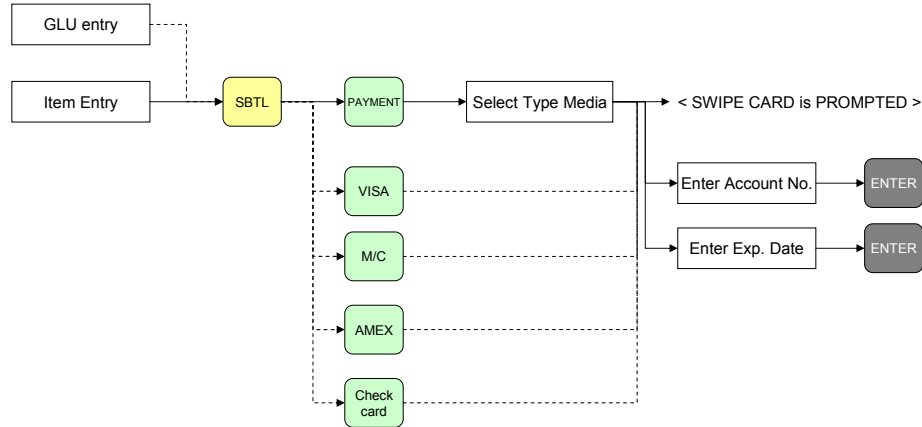
I AGREE TO PAY ABOVE
TOTAL AMOUNT ACCORDING
TO CARD ISSUER AGREEMENT
(MERCHANT AGREEMENT IF
CREDIT VOUCHER)
    
```

Machine's media key text
 Card Type and Expiration Date
 Card Account Number
 Approval No.
 Reference No.
 Card and Approved Amount
 Tip entry line
 Signature Line

Credit Cards Finalization – Manual Entry

Example Operation:

Manual Entry Method



NOTE:

When a [CH TIP] entry exists, the sale must be finalized to the Charge media key by the amount of the Tip at a minimum in order to complete the sale.

Example: Item entry= \$10.00 [CH TIP] = \$ 2.00

* \$2.00 must be finalized to a Charge media key minimally before any other media type is selected

Usage Method:

For further details on making sales entries, please refer to the UP-600/700's Instruction Manual

Example Receipt:

YOUR RECEIPT THANK YOU	
03/01/08	000001
#0001 9:21AM SERV.	0010001
*****	\$15.00
***TOTAL	\$15.00
VISA	
CHANGE	
CARD	08/09
#5499990123456781	
000005	
010297	
VISA	\$15.00
TIP AMOUNT	
TOTAL	
GUEST SIGNATURE	
X _____	
I AGREE TO PAY ABOVE TOTAL AMOUNT ACCORDING TO CARD ISSUER AGREEMENT (MERCHANT AGREEMENT IF CREDIT VOUCHER)	

Machine's media key text

Generic term "CARD" and Expiration Date
Card Account Number
Approval No.
Reference No.
Card and Approved Amount
Tip entry line

Signature Line

2. More on Guest Check Finalization with Credit Cards

When using the Guest Check function of the UP-600/700, if multiple persons in the party wish to make payments using their individual credit cards, two methods are available for credit card settlement.:

- Bill Separate
- Individual Payment

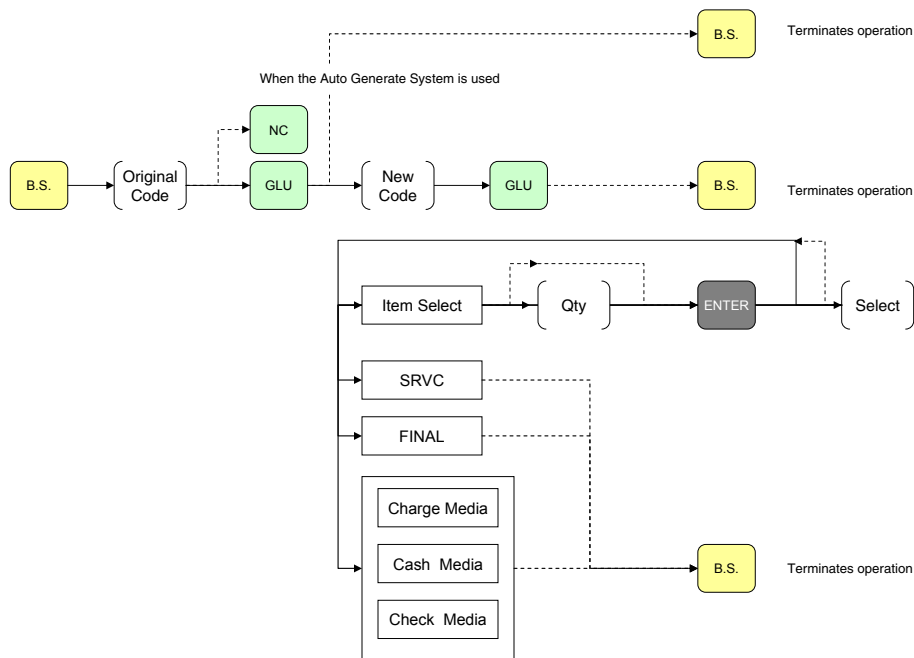
NOTE:

A "Split-Tender" will not be sufficient nor recommended in the above situation because the Bill# is only generated upon the generation of a Guest Check.

Guest Check Entry – with Bill Separate

It is possible to "split" the items from the original guest check to separate checks before or during payment operations.

Example Operation:



NOTE:

In the above cases, it is possible to utilize the [EDIT TIP] for Charge Tips when the "Tip" has not been entered, the Closed Check File exists, and the sale has been finalized through the "Charge media" which has been programmed to "Retain" the check.

Usage Method:

For further details on making sales entries, please refer to the UP-600/700 Instruction Manual

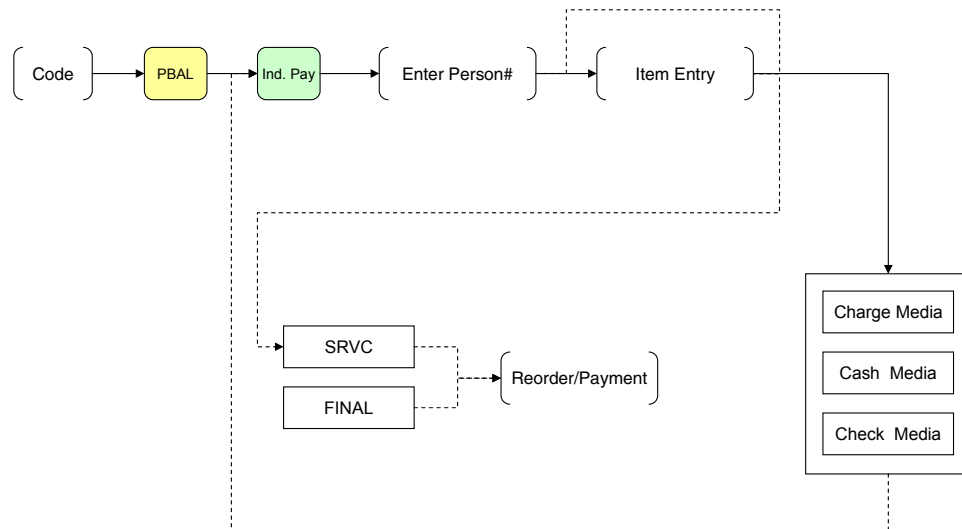
Please consider the general rules listed below when using this feature:

- When item separation to the new guest check is followed by depression of the [Service] or [Final] key, then reorder and media payment is possible
- If the entry of [B.S.] key immediately follows the first depression of the [GLU] key, the Bill Separation function is terminated without change to the Guest Check
- When item separation to the new check is followed by media payment, the “CH-Tip” entry may be entered using the “Edit Tip” function.

Guest Check Entry – with Individual Payment

When guest check entries have been entered using [COVER COUNT] and [PERSON#] entries, it is possible to individually pay by the person, which separates the Bill into multiple payments.

Example Operation:



NOTE:

In the above cases, repeat each sequence by 1st depressing the [Ind. Pay] function key until each person(s) has paid their portion of the bill.

Usage Method:

For further details on making sales entries, please refer to the UP-600/700 Instruction Manual

Please consider the general rules listed below when using this feature:

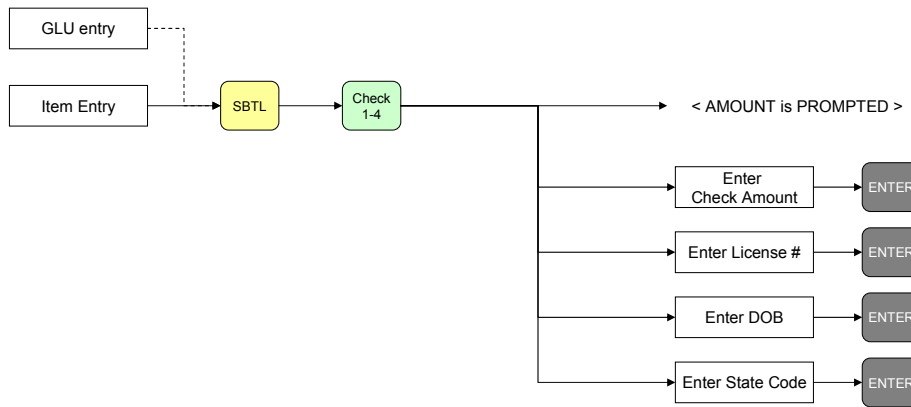
- If the entry of [B.S.] key immediately follows the first depression of the [GLU] key, the Bill Separation function is terminated without change to the Guest Check
- When Individual Payment of a new check is followed by media payment, the “CH-Tip” entry may be entered using the “Edit Tip” function
- When Individual Payment is followed by depression of the [Service] or [Final] key, reorder and media payment is possible.

3. Finalization with a Check

Finalizations of sales entries are accomplished with manual data entry when using the Check media keys.

Example Operation:

Check Entry Method



Usage Method:

For further details on making sales entries, please refer to the UP-600/700 Instruction Manual

Example Receipt:

```

YOUR RECEIPT
THANK YOU

03/01/08          000001
#0002  9:22AM  SERV. 0010001

aaaaaaaa          $10.00
***TOTAL          $10.00
CHECK             $10.00
CHANGE            $0.00

#P66677744285592
000002

CHECK             $10.00
  
```

Machine's media key text

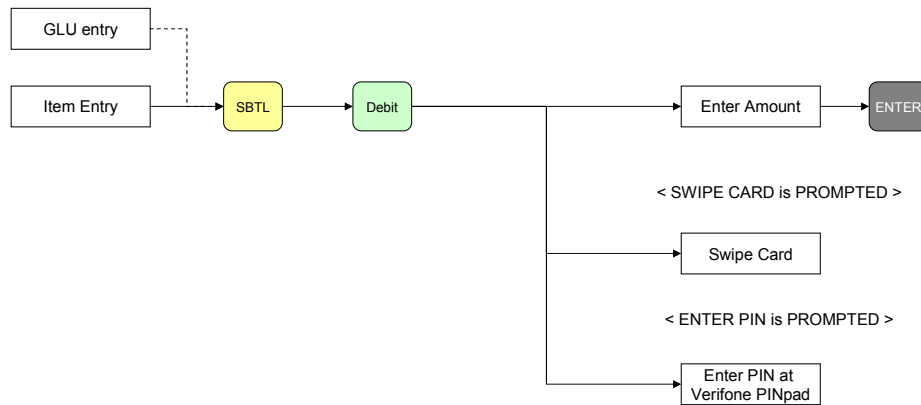
Driver's License No.
Approval No.

4. Finalization with a Debit

Finalization of sales entries with a Debit media will require PIN data entry when using the Debit media keys.

Example Operation:

Debit Entry Method



Usage Method:

For further details on making sales entries, please refer to the UP-600/700 Instruction Manual

Example Receipt:

YOUR RECEIPT THANK YOU	
03/01/08	000001
#0008 9:23AM SERV.	0010001
aaaaaaa	\$5.00
***TOTAL	\$5.00
DEBIT	\$5.00
CHANGE	\$0.00
CARD	
#*****6781	
*	
900002	
DEBIT	\$5.00
TIP AMOUNT	_____
TOTAL	_____
GUEST SIGNATURE	_____
X	
I AGREE TO PAY ABOVE TOTAL AMOUNT ACCORDING TO CARD ISSUER AGREEMENT (MERCHANT AGREEMENT IF CREDIT VOUCHER)	

Machine's media key text

Generic text "CARD"
Partial Card Account No.

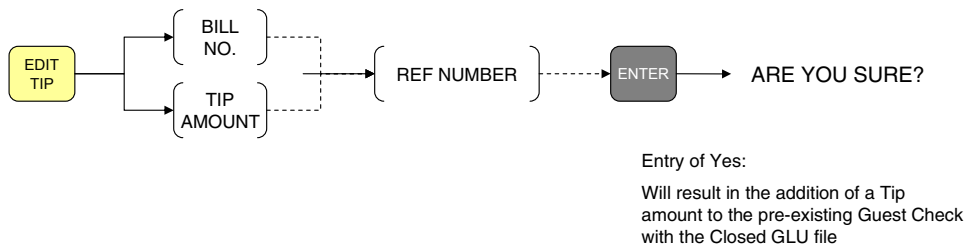
Approval No.

5. Edit Tip Function

The Edit Tip function is provided when a Guest Check has been finalized through a Media key which has been preset to “Retain” the Closed Check with the Closed GLU file.

To modify/add a Tip Amount is to be added/modified the below procedure may be used:

Example Operation:



NOTE:
Media payments must be programmed to retain the guest check sale in order to use the Edit Tip function.

Usage Method:
For further details on making sales entries, please refer to the UP-600/700 Instruction Manual

Please consider the general rules listed below when using this feature:

- The Bill Number and Reference Number is obtained from the original Bill printed at the time of authorization
- If necessary, the Closed Check Report and the CAT#2 Report: Local Summary report may be used to determine the Bill Number and Reference Number

Example Receipt:

YOUR RECEIPT THANK YOU		
03/01/08	0000 01	BILL#0002
#0006	9:26AM	SERV. 0010001
	G L U # 0 0 0 0 0 0 5	
CHTIP		\$10.00
#5499990123456781		
VISA		\$10.00

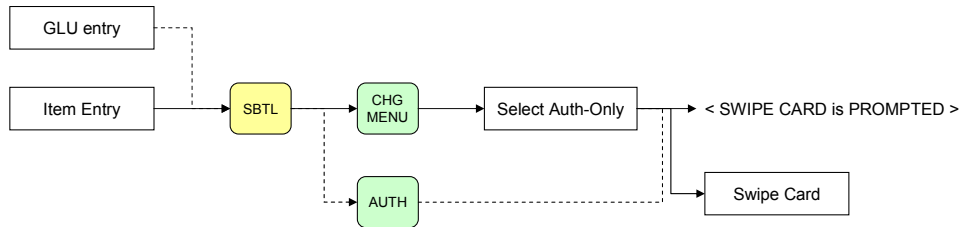
Original Guest Check No.
Charge Tip Label Text and Amount
Card Account Number

Card and Approved Amount

6. Auth-only Sales

The UP-600/700 allows support for Authorization only requests, which may be used advances, will be made against a credit card (i.e. bar tab, etc).

Example Operation:



Usage Method:

For further details on making sales entries, please refer to the UP-600/700 Instruction Manual

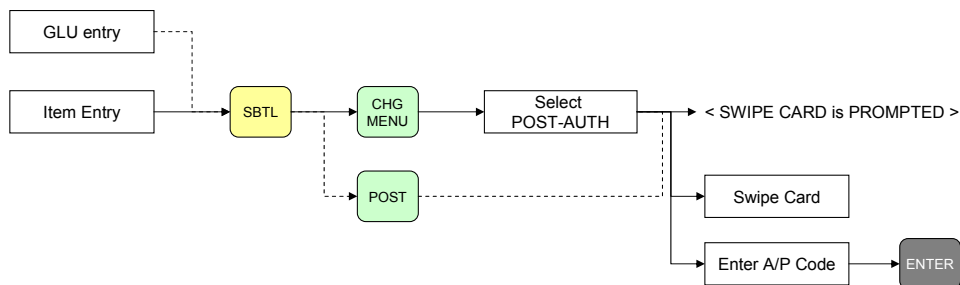
Please consider the general rules listed below when using this feature:

- [DEPOSIT] and [DEPOSIT RF] functions of the UP-600/700 are methods that may be used in relationship to Guest Check entries to provide credit balances for sales entries to work against.

7. Post - Auth Sales

The Post-Auth Sales may only be entered against a sale that has been previously finalized through the "Auth-only" process.

Example Operation:



Usage Method:

For further details on making sales entries, please refer to the UP-600/700 Instruction Manual

Please consider the general rules listed below when using this feature:

- The Post-Auth allows the Auth-only sales transaction to clear during the batch process at the end-of-day

Section-8: Correction Operations

In order to provide the operator with the functions necessary to correct or adjust over rings and invalid entries, it is important to understand the correction functions available and is indicated in the chart below.

UP-600/700 Sales Correction Chart				
Type Sales	Type Correction			
Finalization Type	Direct Void	Past Void	Mgr Void	Refund
Credit Card	X	X	O	O
Check Card	X	X	O	O
Check	X	X	O	O
Debit (w/PIN)	X	X	X	X
Auth/Post Auth	X	X	O	X
O = Yes, X = No				

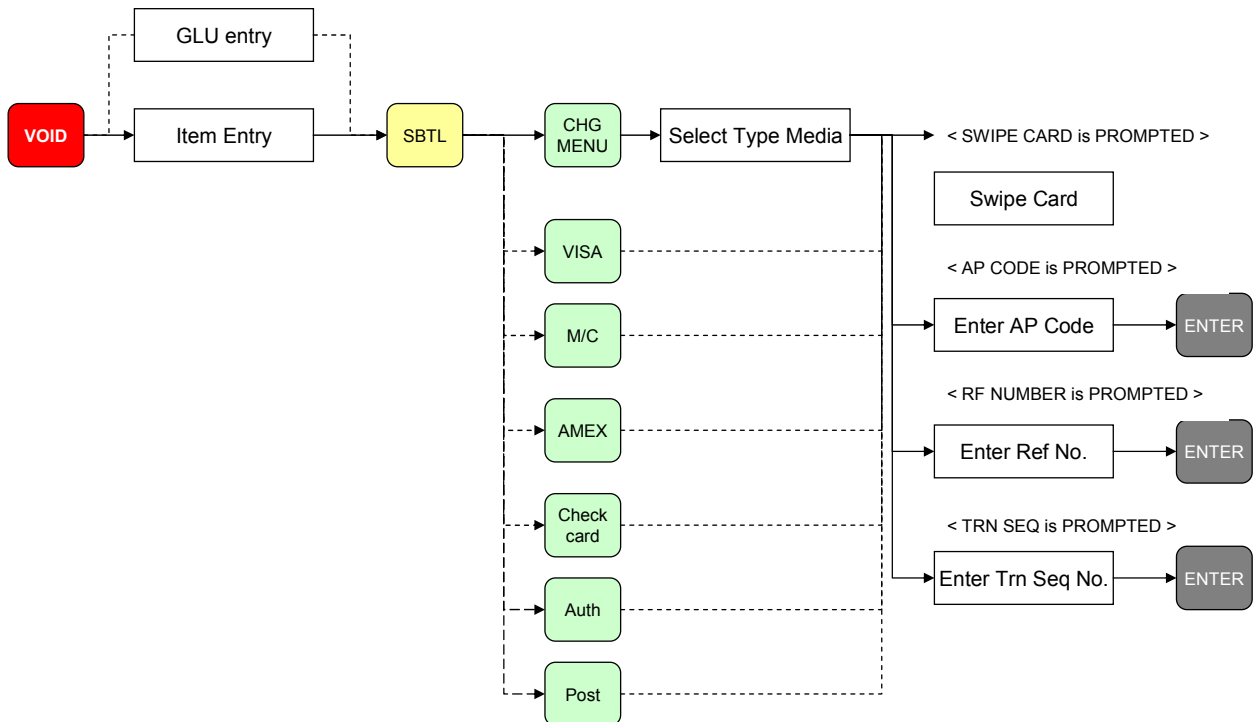
1. Void Corrections

In the event that a sales entry was incorrectly settled, it is possible to VOID that entry.

IMPORTANT:

Prior to making a VOID-mode entry, it is recommended that you execute the CAT#2: Report – Local Inquiry report and locate the original receipt/bill so that all pertinent information is available

Example Operation:



NOTE:

The following type settlements are valid for VOID-mode corrections:

- Credit Card, Check Card, Auth-Only and Post-Auth Sales

Usage Method:

For further details on making sales entries, please refer to the UP-600/700 Instruction Manual

Please consider the general rules listed below when using this feature:

- The Approval code may be obtained from the original receipt or the Data Tran report
- The Reference Number may be obtained from the original receipt or the Data Tran Local Inquiry report

Example Receipts

Example:

Original Receipt:

```

YOUR RECEIPT
THANK YOU

03/01/03          000001
#0001    9:21AM    SERV.  0010001

aaaaaaaa          $15.00
***TOTAL          $ 1 5 . 0 0
VISA
CHANGE
VISA              08/09
#5499990123456781
000005
010297
VISA              $15.00
TIP AMOUNT _____
T O T A L _____
GUEST SIGNATURE
X _____
I AGREE TO PAY ABOVE
TOTAL AMOUNT ACCORDING
TO CARD ISSUER AGREEMENT
(MERCHANT AGREEMENT IF
CREDIT VOUCHER)
    
```

Machine's media key text
 Card Type and Expiration Date
 Card Account Number
 Approval No.
 Reference No.
 Card and Approved Amount
 Tip entry line
 Signature Line

Receipt - Voided

```

YOUR RECEIPT
THANK YOU

03/01/03          000001
#0001    9:21AM    SERV.  0010001

                *VOID*

aaaaaaaa          $15.00
***TOTAL          $ 1 5 . 0 0
VISA
CHANGE
VISA              08/09
#5499990123456781
000005
010297
VISA              $15.00
TIP AMOUNT _____
T O T A L _____
GUEST SIGNATURE
X _____
I AGREE TO PAY ABOVE
TOTAL AMOUNT ACCORDING
TO CARD ISSUER AGREEMENT
(MERCHANT AGREEMENT IF
CREDIT VOUCHER)
    
```

Reference- Local Inquiry

```

YOUR RECEIPT
THANK YOU

03/01/03          000001
#0137    9:21PM

                * X 1 *

LOCAL INQUIRY _____
1          A
372319051421000 _____
0208 _____
000001 _____
000021 _____
                10.00
                0.00

010901          232100
2          A
4430710010048805 _____
0303 _____
000003 _____
000024 _____
                25.00
                0.00

010901          232200
3          C
                :
    
```

Name of Inquiry Report
 Transaction Code No.
 Account Number
 Expiration Date
 Approval Code
 Reference No.
 Transaction Sales Amount
 Gratuity
 Status within the Batch A: Active (modifiable), C: Closed (not modifiable)
 V: Voided, X: Settled (transmitted to network)
 Date (yy/mm/dd) and Time (hh:mm:ss)

2. Refund Corrections

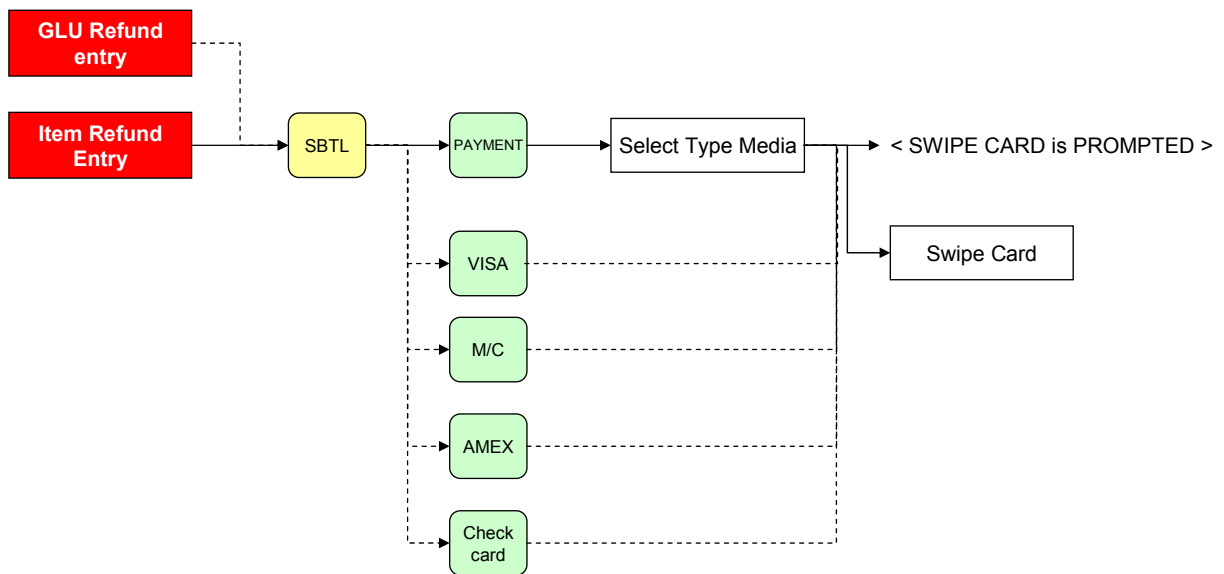
In the event that a sales item is returned, it is possible to refund that entry or sales transaction.

IMPORTANT:

Prior to making a Refund entry, it is recommended that you execute the CAT#2: Report – Local Inquiry report and locate the original receipt/bill so that all pertinent information is available prior to operation.

Example Operation – Credit Card:

Card Swipe Method



NOTE:

The following type settlements are valid for Refund corrections:

- Credit Card, Check Card and Debit Card

Usage Method:

For further details on making sales entries, please refer to the UP-600/700 Instruction Manual

Please consider the general rules listed below when using this feature:

- Manual Account number entry is not permitted for Debit-type corrections
- A duplicate receipt may be obtained by depressing the [RCPT] key or the media key presets

Example Receipt

Example Receipts:

```

YOUR RECEIPT
THANK YOU

03/01/08          000001
#0001      9:21AM  SERV.  0010001

aaaaaaaa          $15.00
***TOTAL          $15.00
VISA
CHANGE
VISA              08/09
#5499990123456781
000005
010297
VISA              $15.00
TIP AMOUNT _____
TOTAL            _____
GUEST SIGNATURE
X _____

I AGREE TO PAY ABOVE
TOTAL AMOUNT ACCORDING
TO CARD ISSUER AGREEMENT
(MERCHANT AGREEMENT IF
CREDIT VOUCHER)
    
```

Machine's media key text
 Card Type and Expiration Date
 Card Account Number
 Approval No.
 Reference No.
 Card and Approved Amount
 Tip entry line
 Signature Line

Refund - Debit

```

YOUR RECEIPT
THANK YOU

03/01/08          000001
#0002      9:22AM  SERV.  0010001

aaaaaaaa          R-7.50
***TOTAL          -7.50
DEBIT              -7.50
CHANGE            $0.00

CARD
*
900002
DEBIT              -7.50

TIP AMOUNT _____
TOTAL            _____
GUEST SIGNATURE
X _____

I AGREE TO PAY ABOVE
TOTAL AMOUNT ACCORDING
TO CARD ISSUER AGREEMENT
(MERCHANT AGREEMENT IF
CREDIT VOUCHER)
    
```

Machine's media key text
 Type Card and Expiration Date
 Reference No.
 Card and Approved Amount
 Tip entry line
 Signature Line

Section-9: Reports Operations

The UP-600/700 interface provides certain commands so the contents of the Data Tran may be printed in a format allowing reconciliation between the POS terminal and the Data Tran prior to executing the batch operations for closing the business day.

An important factor to keep in mind is which network provider is being used and the type of service that is being provided. The results from issuing Inquiry commands will vary depending upon whether the service provided is Host-based or Terminal based.

Report Command Functions:

The following command functions are provided:

- Local Transaction Summary
- Local Transaction Inquiry
- Local Status
- Batch Status

Report Command Functions – by Type Processor

Function by Type Processor

Command Function	Host-Based	Terminal-Based
Local Summary	X	O
Local Inquiry	X	O
Local Status (Totals)	O	O
Batch Status	O	O
O = Yes, X = No		

NOTE:

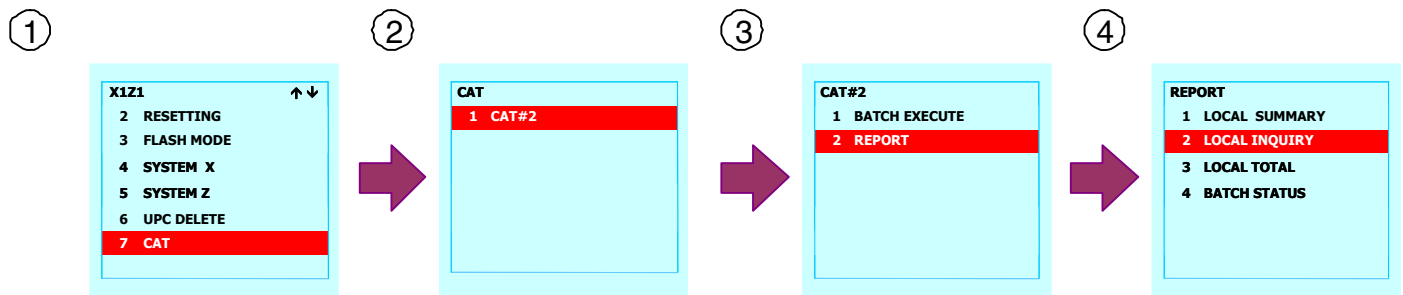
The above chart indicates the typical scenario and may not hold true for all networks.

Local Inquiry:

Procedure:

Enter the CAT#2 by turning the manager key to the X1Z1 position.

- ① Select [7 CAT]
- ② Select [1 CAT#2]
- ③ Select [2 REPORT]
- ④ Select [2 LOCAL INQUIRY] to print a hard copy of the Data Tran data
- ⑤ Depress [CANCEL] to exit and return to REG-mode
 - o After the Local Inquiry report finishes, the menu returns to the CAT#2 REPORT Sub-menu.



Example Report:

YOUR RECEIPT THANK YOU	
03/01/03	000001
#0137 9:21PM	
* X 1 *	
LOCAL INQUIRY	Name of Inquiry Report
1 A	Transaction Code No.
37231 9051421000	Account Number
0203	Expiration Date
000001	Approval Code
000021	Reference No.
	Transaction Sales Amount
	Gratuity
010901 232100	Status within the Batch
4430710010048805	A: Active (modifiable), C: Closed (not modifiable)
0303	V: Voided, X: Settled (transmitted to network)
000008	
000024	
	Transaction Sales Amount
	Gratuity
010901 232200	Date (yy/mm/dd) and Time (hh:mm:ss)
.3 C	
442780641004797	
0312	
*	
000001	
010162	

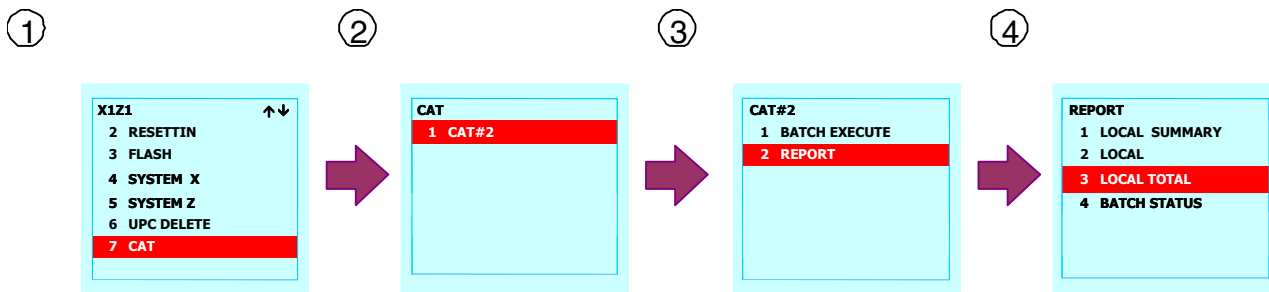
Local Totals:

Procedure:

Enter the CAT#2 by turning the manager key to the X1Z1 position.

- ① Select [7 CAT]
- ② Select [1 CAT#2]
- ③ Select [2 REPORT]
- ④ Select [LOCAL TOTAL] This will automatically start to print a hard copy of the Data Tran data
- ⑤ Depress [CANCEL] to exit and return to REG-mode

o After the Local Total report finishes, the menu returns to the CAT#2 REPORT Sub-menu.



Example Report:

YOUR RECEIPT THANK YOU	
03/01/03	000001
#0138	9:22PM
* X 1 *	
LOCAL TOTAL	Name of Inquiry Report
LOCAL TOTAL REPORT	Name/Type of Card (based on PAN-code)
AMEX	10.00
	1
VISA	26.07
	3
M/C	0.00
	0
DISCOVER	0.00
	0
P/L	0.00
	0
DCLB	0.00
	0
JCB	0.00
	0
DEBIT	41.07
	2
TOTAL	77.14
	6

Transaction Sales Amount
Qty totalizer
Total of all Transaction Sales Amounts
Total Qty

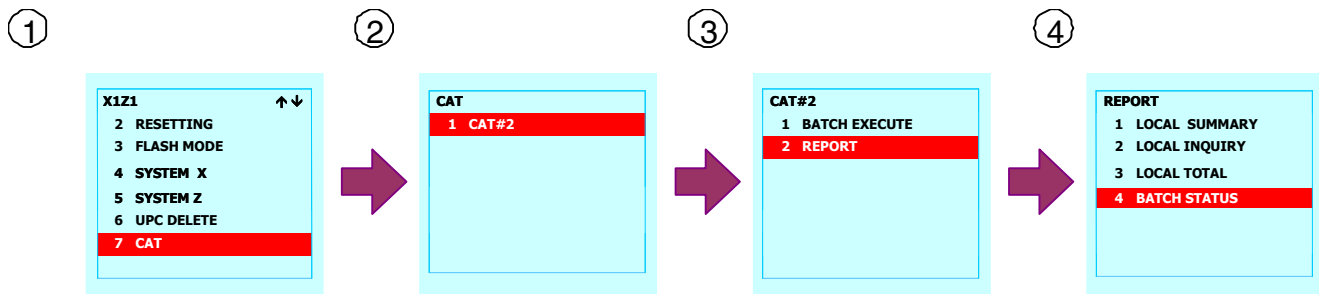
Batch Status

Procedure:

Enter the CAT#2 by turning the manager key to the X1Z1 position.

- ① Select [7 CAT]
- ② Select [1 CAT#2]
- ③ Select [2 REPORT]
- ④ Select [4 BATCH STATUS] this will automatically start to print a hard copy of the Data Tran data
- ⑤ Depress [CANCEL] to exit and return to REG-mode

o After the Batch Status report finishes, the menu returns to the CAT#2 REPORT Sub-menu.



Example Report:

YOUR RECEIPT THANK YOU		
03/01/03	000001	
#0139	9:23PM	
* X 1 *		
BATCH STATUS		Name of Inquiry Report
OPEN		Status of Batch
1		Batch No.
	6	Gross Qty Totalizer
	6	Net Qty Totalizer (within the Data Tran)
	77.14	Total Sales (within the Data Tran)
	0	
	0.00	

YOUR RECEIPT THANK YOU		
03/01/03	000001	
#0140	9:24PM	
* X 1 *		
BATCH STATUS		Name of Inquiry Report
CLOSED		Status of Batch
1		Batch No.
	6	Gross Qty Totalizer
	6	Net Qty Totalizer (within the Data Tran)
	77.14	Total Sales (within the Data Tran)
	6	Net Qty Totalizer (settled to the Network)
	77.14	Total Sales (settled to the Network)

2. Associated UP-600/700 Report Examples

Depending on the UP-600/700 system configuration, the procedure will vary for taking the related reports used to cross-balance the system against the Data Tran reports.

Transaction Report

For this example the UP-600/700 Standalone report is shown below:

Procedure:

Enter the UP-600/700 Report menu by turning the manager key to the X1Z1 position.

- ① Select [2 RESETTING]
- ② Select [8 TRANSACTION]
- ③ This will automatically start to print.
- ④ Depress [CANCEL] to exit and return to REG-mode
 - o After the Transaction report finishes, the menu returns to the CAT#2 REPORT Sub-menu.

Example Report:

YOUR RECEIPT THANK YOU		
03/01/03	000001	
#0141	0:26PM	
#0130	* X 1 *	
TRANSACTION		Report Name
TR	\$000000000000.00	Training GT
(-)	00 \$0.00	
ST(-) TI	00 \$0.00	
%1	00 \$0.00	
ST % TL	00 \$0.00	Discounts & Markdowns
N F T 1	\$369.30	Net1 Sales Total
TAX1 ST	\$7.00	
NET3	\$359.79	Net3 Sales Total
WASTE TL	\$0.00	
CASH	00 \$137.26	
DEBIT	130 \$41.07	
CASH TL	40 \$178.35	Total Cash Sales
VISA	170 \$168.44	
VISA-M/C	110 -\$5.00	
M/C-	20 \$25.00	
CHR TL	1 \$169.44	Total Charge Sales
CHECK	160 \$12.00	
CHECK TL	20 \$12.00	Total Check Sales
CA+CH ID	20 \$190.35	Cash & Charge
****CID	\$178.35	Cash in Drawer
TIP PAID	00 \$0.00	
CH TIP	40 \$15.00	Total Charge Tips

Server Report – Individual or All

For this example the UP-600/700 Standalone report is shown below:

Procedure:

Enter the UP-600/700 Report menu by turning the manager key to the X1Z1 position.

- ① Select [2 RESETTING]
- ② Select [11 IND. SERVER]
- ③ This will automatically start to print.
- ④ Depress [CANCEL] to exit and return to REG-mode
 - o After the Individual Server report finishes, the menu returns to the CAT#2 REPORT Sub-menu.

Example Report:

YOUR RECEIPT THANK YOU		
03/01/03		000001
#0142	9:27PM	
#0141	* X 1 *	
IND. SERVER		Report Name
SRV# 0001	SERV.001	Server Code & Name
NET 1	\$369.30	Net1 Sales Totalizer
CATIP	00 \$0.00	Cash Tips
CH TIP	4Q \$15.00	Charge Tips
TIP PAID	0Q \$0.00	Tip Paid
NET 3	\$359.79	Net3 Sales Totalizer
CASH	13Q \$137.28	Total Cash Sales
DEBIT	4Q \$41.07	Debit Cash Sales
VISA	11Q \$163.44	Charge Sales
VISA-M/C	2Q -35.00	
M/C-	1Q \$25.00	
CHECK	2Q \$12.00	Check Sales Totalizer
CA+CH ID	\$190.35	Cash & Charge
***CID	\$178.35	Cash in Drawer
GROUP1	0Q \$0.00	Server Group Totalizers
GROUP2	0Q \$0.00	
GROUP3	0Q \$0.00	
GROUP4	0Q \$0.00	
GROUP5	0Q \$0.00	
GROUP6	0Q \$0.00	
GROUP7	0Q \$0.00	
GROUP8	0Q \$0.00	
GROUP9	0Q \$0.00	

Closed GLU Report

For this example the UP-600/700 Standalone report is shown below:

Procedure:

Enter the UP-600/700 Report menu by turning the manager key to the X1Z1 position.

- ① Select [2 RESETTING]
- ② Select [15 CLOSED GLU]
- ③ This will automatically start to print.
- ④ Depress [CANCEL] to exit and return to REG-mode
 - o After the Closed GLU report finishes, the menu returns to the CAT#2 REPORT Sub-menu.

Example Report:

YOUR RECEIPT THANK YOU		
03/01/03		000001
#0143	9:27PM	
#0182	* X 1 *	
CLOSED GLU		0001 - 9999
0002#		0 0 0 1
000000005#		
COVER CT	1 Q	
CREDIT		\$6.00
TIP AMT		\$2.00
FIN.BAL		
***TOTAL		
COVER CT	1 Q	
CREDIT	1 Q	\$6.00
TIP AMT	1 Q	\$2.00
FIN.BAL	1 Q	\$8.00

Report Name
Bill Range
BILL number and Server Code
GLU Number
Cover Count
Charge Amount
Tip Amount
Total Covers
Total Charges - by type card
Total Tips
Total Sales + Tips

Glossary of Terms

The interface for credit and debit card authorization for the UP-600/700 will introduce new terminology, which you should understand prior to installing the EFT solution. For those not already familiar with the terminology associated to processing payments electronically, the definition below may be helpful.

Terminology

1. Network Programming

Involves the Merchant Set Up information stored within the Data Tran unit. The Merchant parameters in the Data Tran may be loaded via the UP-600/700 DIAL OUT or DIAL IN commands.

2. Initialization

Used to synchronize/ initialize the Data Tran unit upon installation, after setting changes at the UP-600/700 and for unexplained occurrences when the Data Tran ceases to function normally.

3. Batch Execution

There are four (4) commands supported in the UP-600/700 interface.

- (1) Open Batch used to start the business day
- (2) Close Batch is used to settle the credit transaction at the end of day
- (3) Clear Batch is used to erase all current batch transactions when batch settlement can not be achieved
- (4) Change Batch No. is used to change the existing batch number when replacement (loaner) units are installed and/ or when there is a conflict at the processor and network advises you to change the batch number.

4. Reports

There are four (4) different reports to be used with the Data Tran interface

- (1) Local Summary report is used to indicate the summary information pertaining to each processed
- (2) Local Inquiry report retrieves each record from Data Tran in detail (ex: Date, time, etc.)
- (3) Local Total report summarizes the Data Tran's totalizers by Credit Card company
- (4) Batch Status report is used to determine the status of the Data Tran at that specific time the report is initiated.

Data Tran Command Reference

The following table cross-references the POS functions to the Data Tran command functions:

Category	ECR Function	Data Tran Command	Comments
Setup	Dial In	AT&UF1, AT&UH	"Switches in/out of FTS Mode"
	Dial Out	AT&UF1, AT&UH, AT&UP96	
	Initialize	AT&UF1, AT&C1, AT&UT0, AT&UT1, AT&UP98, AT&UP96	
Operations	Credit	AT&UM4	"Auth amount is calculated using AMOUNT% preset in CAT#2 setting"
	Check	AT&UM2	
	Debit	AT&UM4, AT&US1, AT&UV3	
	Auth	AT&UM1	
	Post Auth	AT&UM13	
Corrections	VOID Credit	AT&UI6, AT&UI8, AT&UM9	
	Refund Credit	AT&UM8	
	Refund Debit	AT&UM8, AT&US1, AT&UV3	
Tips	Edit Tip	AT&UM19	Must Have Closed GLU file allocated
Reports	Local Summary	AT&UI5	"Should take these reports prior to and after closing the batch"
	Local Inquiry	AT&UI8	
	Local Total	AT&UI7	
	Batch Status	AT&UI9	
Batch Execution	Open Batch	AT&UB1	"Beginning and Ending Day procedures should include these jobs"
	Close Batch	AT&UB3	
	Clear Batch	AT&UB6	
	Change Batch	AT&UB7	

Quick Setup

The following table summarizes the quick set up procedure for the UP-600/700. It assumes that the Data Tran has been received with the merchant parameters loaded or that the Data Tran has been loaded with a Demo program.

Step	ECR Mode	Action	Related Preset
1	Off	Install all Options (RAM, Etc.)	
2		Connect all Peripherals (Data Tran, etc.)	
3	SRV	Master Reset	Depress [MASTER RESET1] and enter the password: "11111111" and wait for to SRV.
4		Set Device Configuration	2 SETTING, 01 DEVICE CONFIG. 15 CAT#2, 16 PINPAD
5		Set System Presets	2 SETTING, 02 SYSTEM PRESETS, JOB#902, JOB#916, JOB#918, JOB#921
6		Set Free Key Layout	2 SETTING, 06 FREE KEY, FUNC#058, 060, 061, 111~124, 129 ~ 136, 155, 157, 162 AND 228
7		Allocate Memory	2 SETTING, FILE GROUP #39 (Closed GLU)
8	PGM2	Set CAT #2 presets	15 CAT SETTING, 2 CAT PRESET#2
9		Set Pin Pad presets	15 CAT SETTING, 3 PIN PAD
10		Set Media Key presets	2 SETTING, 05 MEDIA, 01 CASH, 02 CHECK, 03 CHARGE
11	Mode Menu	Initialize Data Tran	15 CAT SETTING, 2 CAT PRESET #2, 1 INITIALIZE

YOUR RECEIPT THANK YOU		
03/01/03		000001
#0142	8:27PM	
#0141	* X 1 *	
ND.SERVER		Report Name
SRV# 0001	SERV.001	Server Code & Name
NET :	\$369.30	Net Sales Totalizer
CASH TIP	00 \$0.00	Cash Tips
CH TIP	40 \$15.00	Charge Tips
TIP PAID	00 \$0.00	Tip Paid
NET :	\$369.30	Net Sales Totalizer
CASH	130 \$137.28	Total Cash Sales
DEBIT	40 \$41.07	Debit Cash Sales
VISA	110 \$163.44	Charge Sales
VISA-M/C	20 -35.00	
M/C-	10 \$25.00	
CHECK	20 \$12.00	Check Sales Totalizer
CASH+CH ID	\$190.35	Cash & Charge
****CID	\$178.35	Cash in Drawer
GROUP1	00 \$0.00	Server Group Totalizers
GROUP2	00 \$0.00	
GROUP3	00 \$0.00	
GROUP4	00 \$0.00	
GROUP5	00 \$0.00	
GROUP6	00 \$0.00	
GROUP7	00 \$0.00	
GROUP8	00 \$0.00	
GROUP9	00 \$0.00	

Section – 8: UTILITIES

Section-1: Overview

The ER02FD.exe PC utility provides the ability to send / receive RAM data for easy storage or duplication for the UP-600/700 POS Terminal. The Backup send / receive command can also be used to transfer the program directly from one UP-600/700 to another UP-600/700.

1. Types of RAM data supported:

- | | | |
|-----|-------------------------------------|---------------------|
| i. | SSP data (only) | Sending / receiving |
| ii. | Ram image data (including SSP data) | Sending / receiving |

2. Functions Supported:

- | | | |
|-----|-----------|-------------------------|
| (1) | Upload: | UP-600/700 → PC |
| (2) | Download: | PC → UP-600/700 |
| (3) | Direct: | UP-600/700 → UP-600/700 |

3. Recommended Sequence:

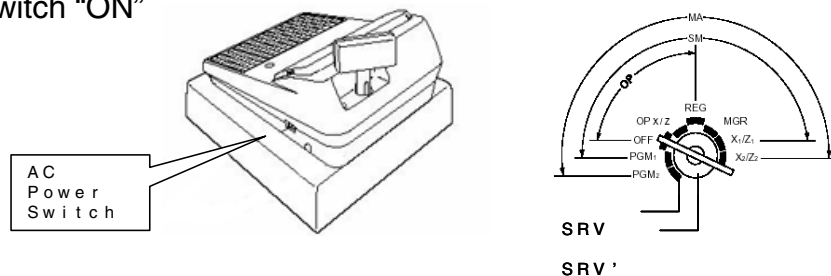
- (1) Always prepare the receiving equipment prior to initiating the sending device.
- (2) Once the receiving equipment is properly set, invoke the sending device.
- (3) Upon completion of receiving the RAM image it is necessary to perform a “Program Reset”.

4. Program Reset:

To enter SRV-mode programming, you must turn the SRV key counter clock wise to the 6 o'clock position wait five seconds and turn the SRV key to the 7 o'clock position.

Procedure:

- 21 Turn the AC Power Switch “OFF”
- 22 Set the mode switch to (SRV) position
- 23 Turn on the AC Power Switch “ON”



The SRV-mode Main Menu will appear.

CAUTION:

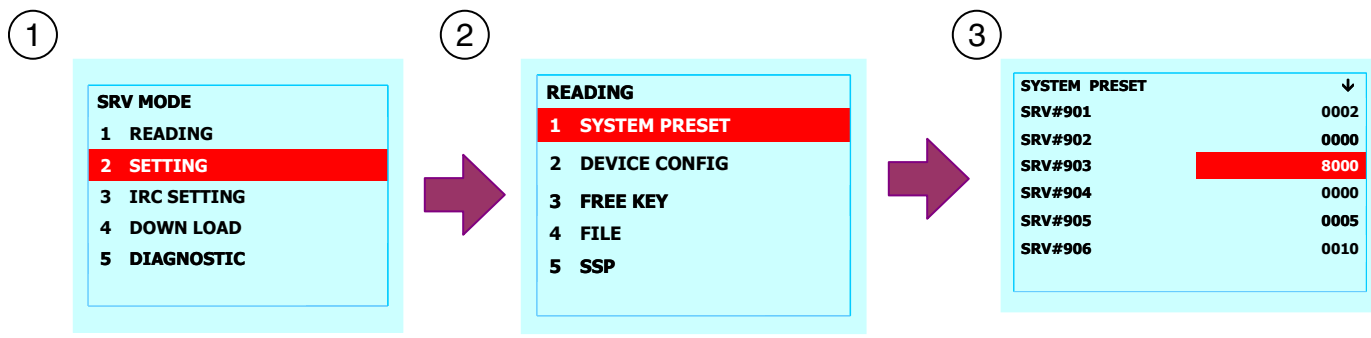
Never place the Reset-switch in the “ON” position while AC power is applied – severe damage may result to the RAM and program contents.

5. UP-600/700 Baud Rate Setting:

To set the Baud Rate for communications between UP-600/700 units or between UP-600/700 and a PC set the 903A bit as outlined below.

Procedure:

- ① Program Reset the UP-600/700 as previously outlined
- ② Choose [2 SETTINGS]
- ③ Select [2 SYSTEM PRESET]
- ④ Highlight the 903 code and set the A bit to the desired communication speed as outlined in the chart below.



④

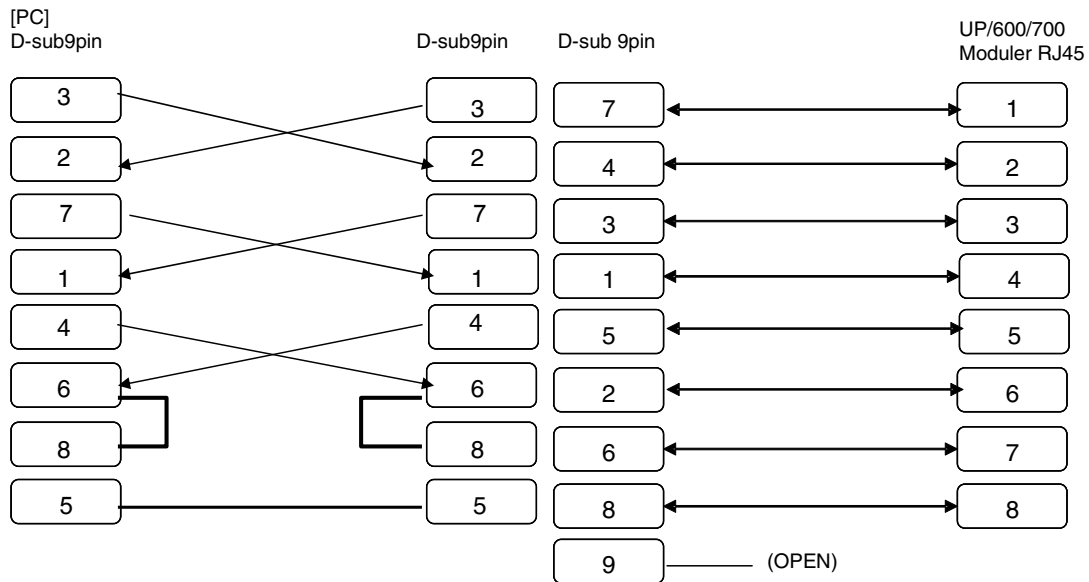
SRV Job#903-A	
Setting	Value
8	115200bps
7	57600bps
6	38400bps
5	19200bps
4	9600bps
3	4800bps
2	2400bps
0	1200bps

6. Hardware / Software Required:

- (1) ER02FD.exe utility software
- (2) Connection cable (PC to UP-600/700)
- (3) Connection cable (UP-600/700 to UP-600/700)

7. Cable Specifications:

- (1) Cable: Shielded, Twisted Pair
- (2) Connector (PC): D-Sub 9 pin (Female type)
- (3) Baud Rates: 115200, 38400, 19200, 9600, 4800, 2400, 1200



Section-2: 02FD.exe Installation/Usage

The UP-600/700 does not support the ER-02FD for saving program data. The 02FD.exe replaces the ER-02FD Loader/Dumper device.

1. ER02FD.exe Installation

The ER02FD.exe utility has been created to work within the Windows 98SE® environment.

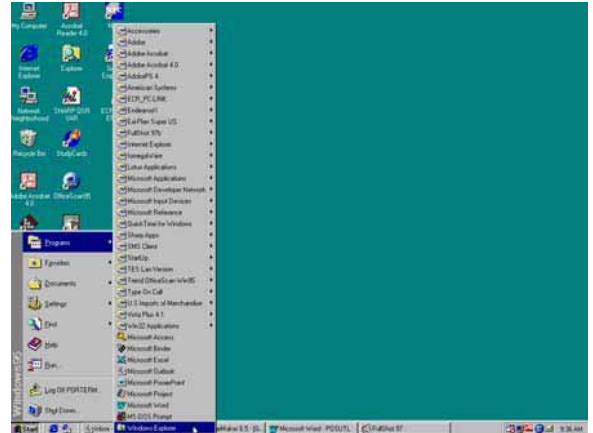
NOTE: The ER02FD.exe program can be downloaded from Sharp Net www.Sharp-Service.com

Procedure:

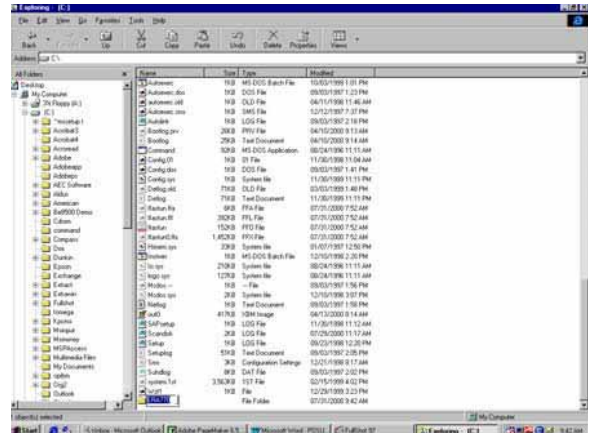
- 1. Create a new folder on your desktop labeled ER02FD.
 - (1) Open the Windows Explorer program (Fig. 1).
 - (2) Under File, select NEW, then FOLDER.
 - (3) Label the folder as ER02FD (Fig. 2).
 - (4) Create the additional Sub-Folders if desired.

example:

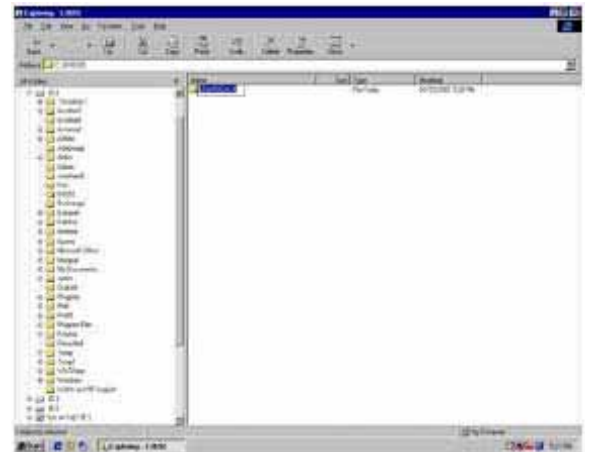
- Create a Sub folder for each applicable program (example: UP600/700) (Fig. 3)
- 2. Copy the ER02FD.exe file to the ER02FD folder.
- 3. Place an ER02FD.exe shortcut onto the desktop for easy reference.



(Fig. 1)



(Fig. 2)



(Fig. 3)

2. Upload: UP-600/700 to PC

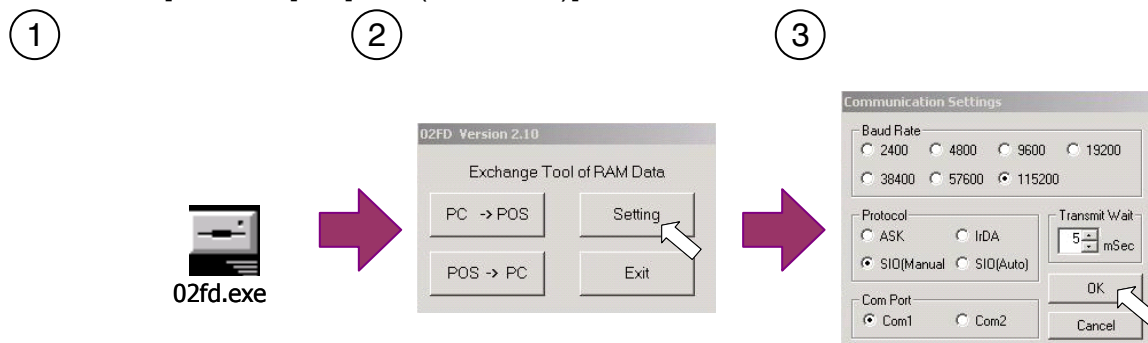
It is recommended that when programming a UP-600/700 for installation that you program the unit as a standalone and then save the program prior to initializing the IRC SETTING procedure.

Invoking the Receiving PC

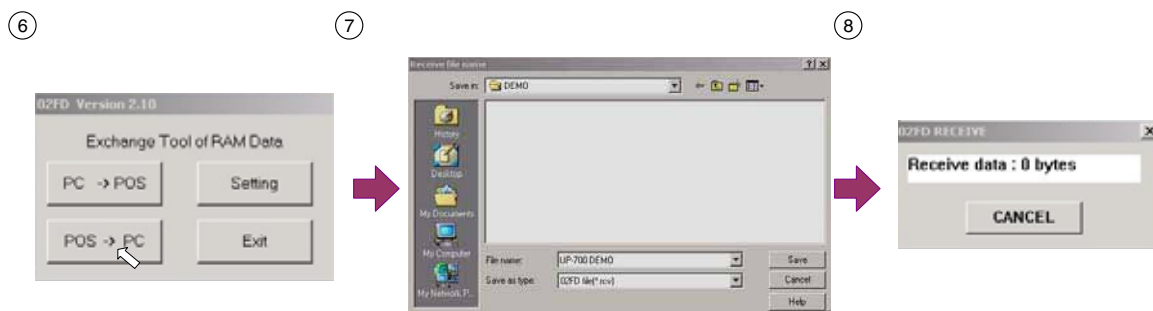
Procedure:

Enter the SRV-Mode as outlined in Section -1

- ① Start the ER02FD.exe application.
- ② Choose [SETTING]
- ③ Set the [Baud Rate] to [115200]
- ④ Set the [Protocol] to [SIO (MANUAL)]



- ⑤ Set [Com Port] to the correct Com Port being used on your PC and select [OK]
- ⑥ Choose [POS → PC]
- ⑦ Type in the desired name for this program (ex. "UP600/700Demo) and select [SAVE]



- ⑧ The PC is now waiting to receive the data from the UP-600/700

Usage Method:

Insure that you know whether or not the optional Memory (UP-S02MB/UP-S04MB) is installed prior to saving the ALL RAM data for future reference.

Please consider the general rules listed below when using this feature:

- For the In-Line Configuration please insure the system is idle prior to saving the ALL RAM data

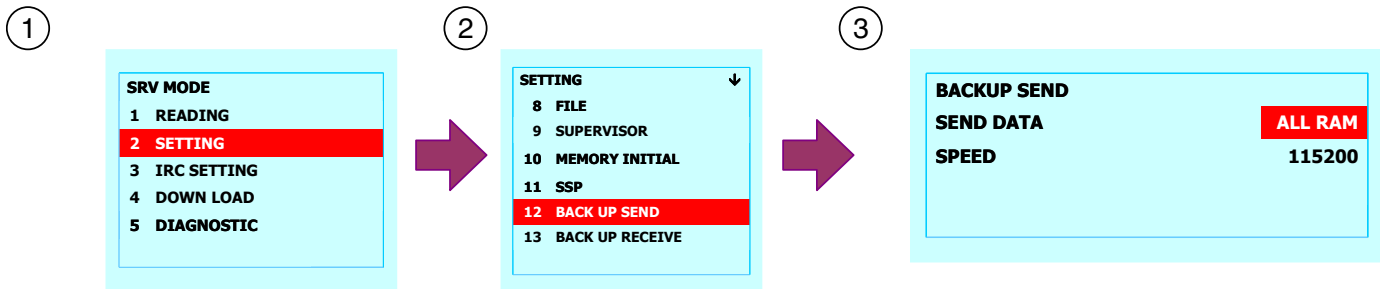
Invoking the Sending UP-600/700

Insure the SYSTEM PRESET for SRV Job#903-A has been properly set (MRS Default = 8). Once the receiving PC is properly set, invoke the sending UP-600/700

Procedure:

Enter the SRV-Mode as outlined in Section -1

- ⑱ Select [2 SETTING]
- ⑲ Select [12 BACKUP SEND]
- ⑳ Select “ALL RAM” and “115200” followed by depressing the [ENTER] key



CAUTION:

Insure that ALL Guest Checks have been properly closed and that ALL Servers are signed off prior to saving the data

Usage Method:

Insure ALL Guest Checks are closed and ALL Servers are signed-off prior to sending the ALL RAM data

Please consider the general rules listed below when using this feature:

- For the In-Line Configuration please insure the system is idle prior to saving the ALL RAM data

3. Download: PC to UP-600/700

When a program has been previously saved using the 02FD.exe utility, it is possible to transmit this data into other UP-600/700 terminals.

CAUTION:

Please insure that the receiving UP-600/700 has the equivalent or a greater memory capacity and that the ROM version is compatible

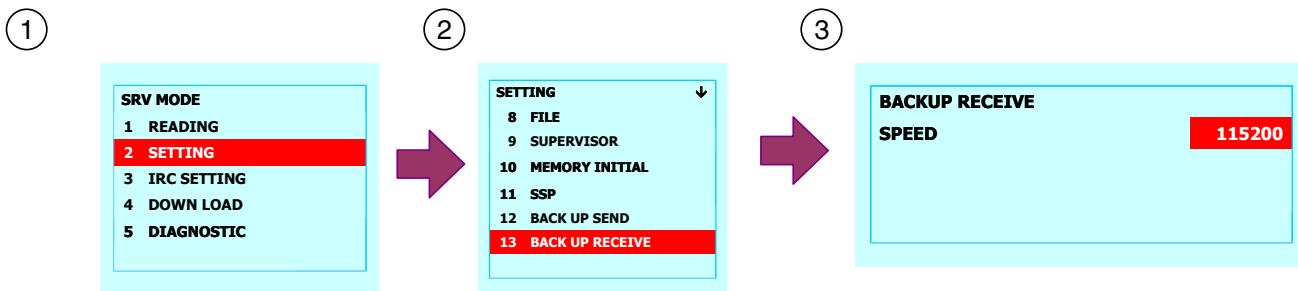
Invoking the Receiving UP-600/700

Insure the SYSTEM PRESET for SRV Job#903-A has been properly set (MRS Default = 8). Once the receiving UP600/700 is properly set, invoke the sending PC.

Procedure:

Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [13 BACKUP RECEIVE]
- ③ Select "SPEED 115200" followed by depressing the [ENTER] key



Usage Method:

Insure that you know whether or not the optional Memory (UP-S02MB/UP-S04MB) is installed prior to receiving the ALL RAM data

Please consider the general rules listed below when using this feature:

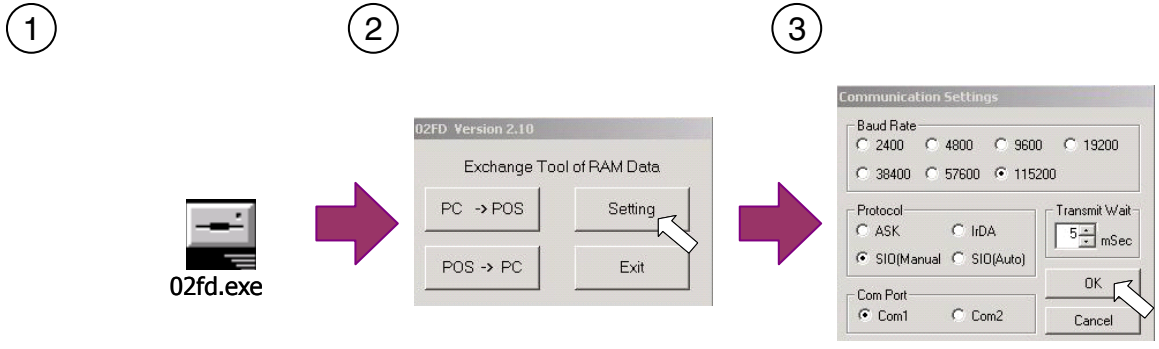
- For the In-Line Configuration please insure the terminal receiving the data is not connected to an active LAN system during transmission of the All RAM data

Invoking the Sending PC

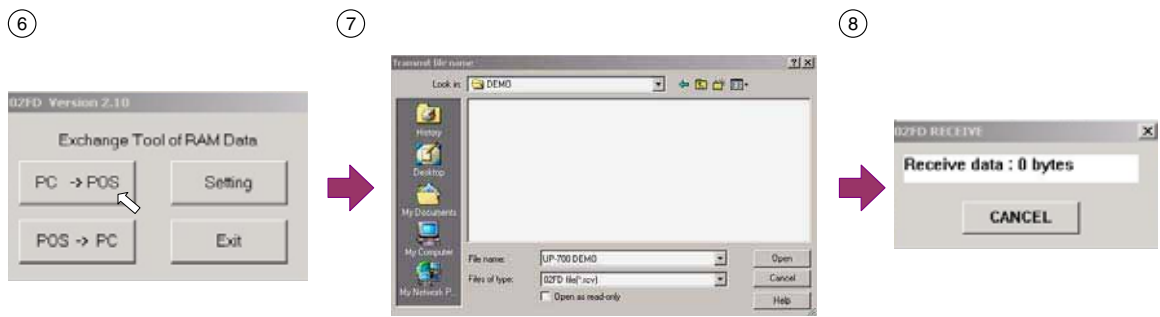
Procedure:

Enter the SRV-Mode as outlined in Section -1

- ① Start the ER02FD.exe application.
- ② Choose [SETTING]
- ③ Set the [Baud Rate] to [115200]
- ④ Set the [Protocol] to [SIO (Manual)]



- ⑤ Set [Com Port] to the correct Com Port being used on your PC and select [OK]
- ⑥ Choose [PC → POS]
- ⑦ Select the desired program from the (ex. "UP600/700Demo) and select [OPEN]



- ⑧ Transmission will occur immediately to the UP-600/700.

Usage Method:

Insure that you know whether or not the optional Memory was installed when this program was initially saved prior to sending the ALL RAM data

Please consider the general rules listed below when using this feature:

- For the In-Line Configuration please insure the system is not physically connected to a network during transmission

IMPORTANT:

A PROGRAM RESET is MANDATORY after the completion of this function

Section-3: UP-600/700 to UP-600/700

The Program may be transferred from one UP-600/700 to another UP-600/700 using the Data Send/Receive function, which is standard in the firmware.

Invoking the Receiving and Sending UP-600/700 terminals

Insure the SYSTEM PRESET for SRV Job#903-A has been properly set (MRS Default = 8).

Procedure – Receiving UP-600/700:

Enter the SRV-Mode as outlined in Section -1

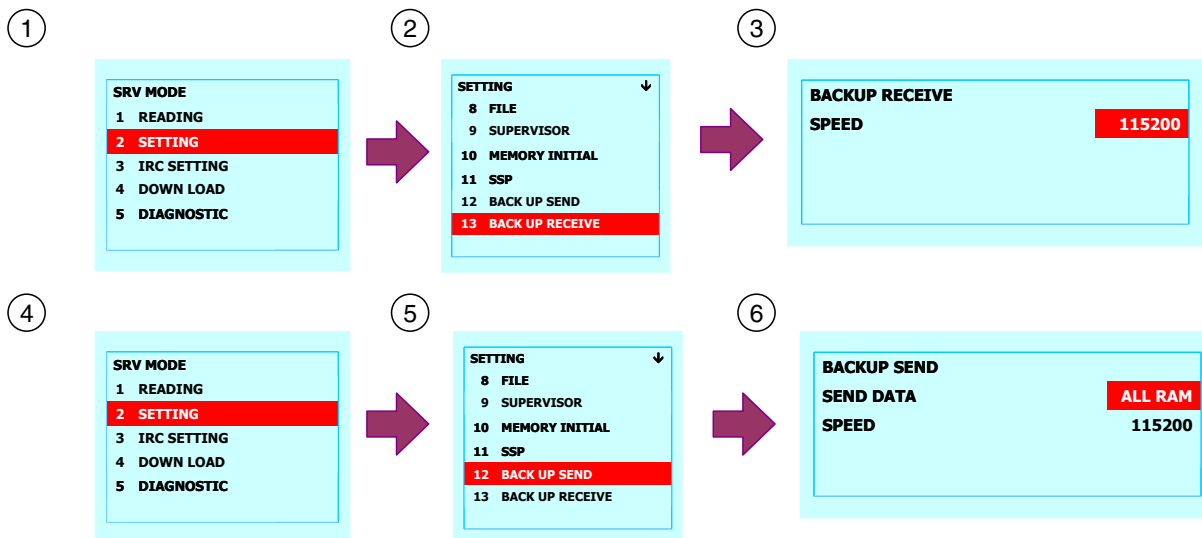
- ① Select [2 SETTING]
- ② Select [13 BACKUP RECEIVE]
- ③ Select “SPEED 115200” followed by depressing the [ENTER] key

Once the receiving UP-600/700 is properly set, invoke the sending UP-600/700

Procedure – Sending UP-600/700:

Enter the SRV-Mode as outlined in Section -1

- ① Select [2 SETTING]
- ② Select [13 BACKUP SEND]
- ③ Select “ALL RAM” and “SPEED 115,200” followed by depressing the [ENTER]

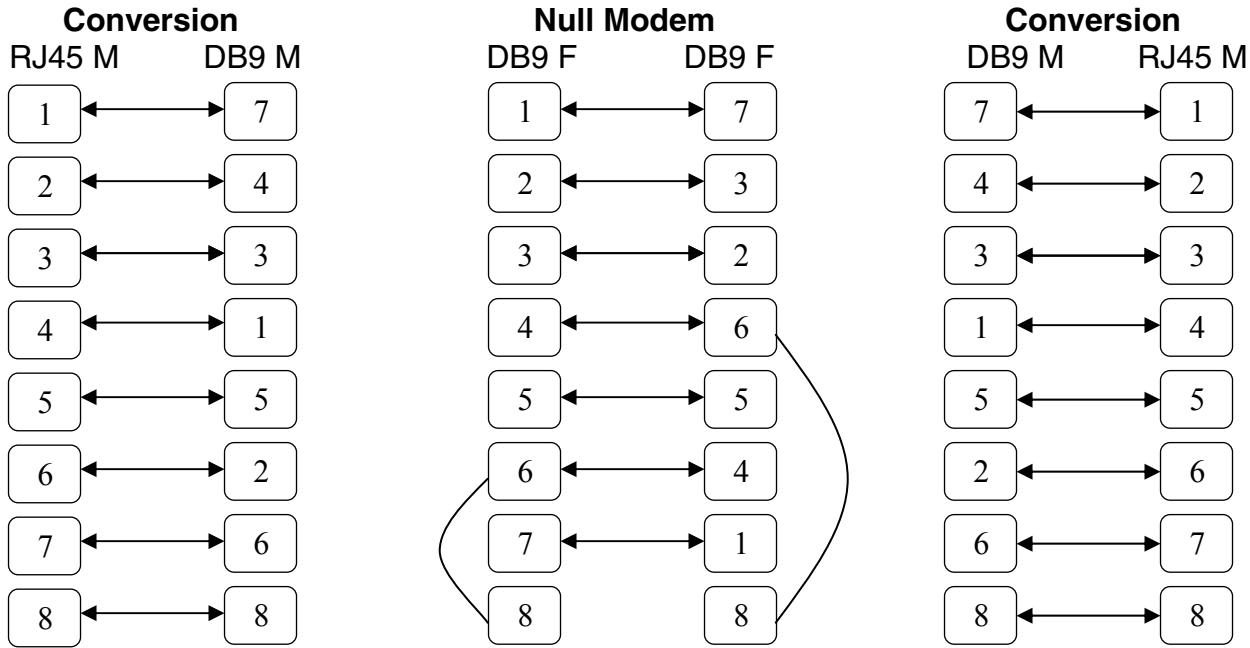


IMPORTANT:

A PROGRAM RESET is MANDATORY on the Receiving unit after the completion

To download the program from 1 UP600/700 to another UP600/700 requires 3 cables.

Each conversion cable is attached to Ch2 of a UP600/700. The Null Modem cable is connected between the two Conversion cables.



These cables can be purchased if you do not wish to make them yourself.
 Null Modem – PCM-1960-06 – Cables Unlimited 925-609-7550 / www.cablesun.com
 Conversion Cable – DCN100226-3E – Datacomm 800-544-4627

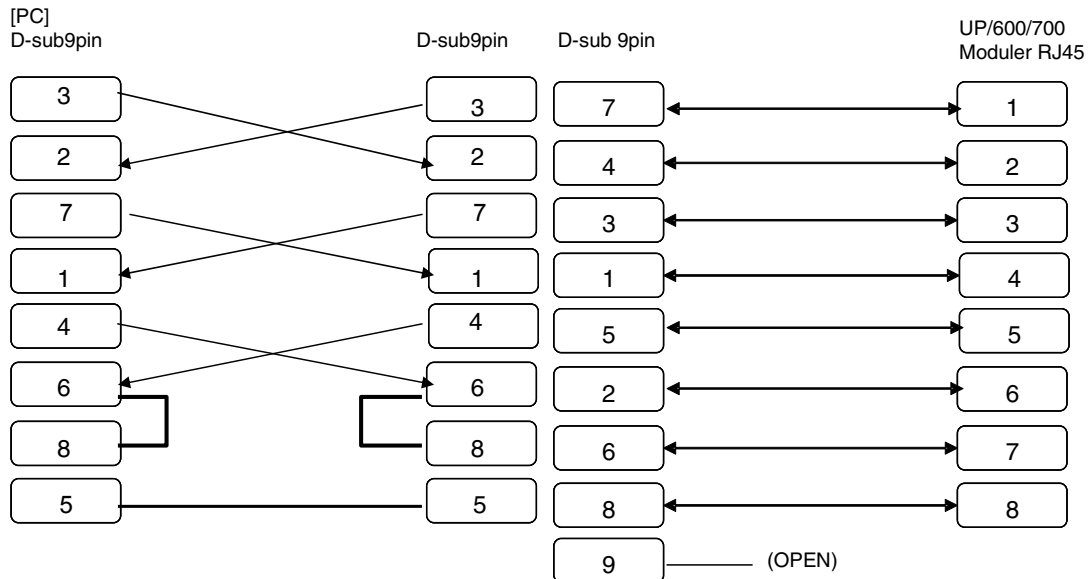
Section-4: Upgrading the ROMs – POS Utility

The POS Utility and Initial Program Loading function is required to upgrade the ROMs. **See page 3-2 of the Sharp Service Manual for detailed instructions and cable requirements.**

- Make sure to save your program prior to upgrading the ROMs. Procedure and requirements are detailed above.
- CN2 must be used on the UP-600/700.

Cable Specifications:

- | | |
|---------------------|--|
| (1) Cable: | Shielded, Twisted Pair |
| (2) Connector (PC): | D-Sub 9 pin (Female type) |
| (3) Baud Rates: | 115200, 38400, 19200, 9600, 4800, 2400, 1200 |



Where to Find? POS Utility Instructions, ROMs, SSP and Utilities:

Description	Sharp NPC Part# www.sharp-service.com	SHARPNET Download File www.sharp-service.com
UP-600 Service Manual – POS Utility	SM-UP600 incl. parts guide	UP600SM
UP-700 Service Manual	SM-UP700 incl. parts guide	SM-UP-700
ROMs, SSP, Bulletins See Sharp Net - Technical Link - Download	N/A	See Technical Link
POSUTILITY.EXE - POS Utility Program - Flashing ROMS on the UP-600/700, ER-A771 and UP-3301	N/A	POSUtility.exe
ER02FD.EXE - 02FD Loader Utility Program - Saving/Loading Programs for ER-A410/420, ER-A450T, ER-A520/530, UP-600/700, ER-A771, UP-3301	N/A	02FD1219.EXE

Section – 9: SRV and PGM2 Menu Options

Section-1: SRV Mode Overview

SRV-mode programming consists of service programming jobs, which define the system capabilities. The service program settings may be printed on the RECEIPT/JOURNAL printer or displayed on the operator display.

SRV-mode Program Main Menu:

Main Menu	Description
1 READING	Print or view system preset, device configuration, free key, file, and SSP settings.
2 SETTING	Program device configuration, system preset, Z counter, GT, mode secret #, free key, file, supervisor, memory initial, SSP settings or perform backup send and backup receive operations.
3 IRC SETTING	Program satellite, master, and backup master, standalone with IRC and stand alone terminal settings or perform an IRC reset.
4 DOWN LOAD	In an IRC system, transfer SRV parameters (system presets) and free key program settings from a master terminal to all or an individual satellite terminal on the existing IRC network.
5 DIAGNOSTIC	Perform product&test, ram&rom&ssp, lock&key&switch, serial I/O, display&printer, mcr&drawer, TCP/IP diagnostic testing. Please refer to the Service Manual for requirements and possible results.

SRV-mode SETTING Jobs:

Job No.	Description
945	Device Configuration - R/J, Bill(Slip), Report Printer(X,Z), Validation, KP1-9, CAT1-2, Pin Pad, Scanner, Scale, Coin Disp, Online (PC), CVM Data I/F, Prepaid Card, ONL Acct Bal
901 - 981	System Preset
930 - 941	Z-Counters - Trans. Z1/Z2, Cons. Tran Z1/Z2, Server Z1/Z2, Hourly Z1, PLU/UPC Z1/Z2, GLU Z1, Trans Z2, Cons. Tran. Z2, Daily Net Z2 Department Z1/Z2
942, 943, 969	GT – positive, negative, training
944	Mode Secret# - OP XZ, X1, Z1, X2, Z2, PGM1 and PGM2
950	Free Key – Function keys
(n/a)	Key Initial – returns the keyboard to master reset settings
971	File – memory allocation
985	Supervisor mode On/Off
989	Memory Initial - returns the file/memory allocation to master reset settings
990	Special Service Patch
996	Backup Send
998	Backup Receive

SRV Mode Menu

UP-600/700	
<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> <p>SRV MODE</p> <p>1 READING</p> <p>2 SETTING</p> <p>3 IRC SETTING</p> <p>4 DOWN LOAD</p> <p>5 DIAGNOSTIC</p> </div>	
<p>(1) Reading</p> <ul style="list-style-type: none"> 1. System Preset 2. Device Config 3. Free Key <p>4. File</p> <p>5. SSP</p>	<p>(3) IRC Setting</p> <ul style="list-style-type: none"> 1 Terminal Setting 2 IRC Reset
<p>(2) Setting</p> <ul style="list-style-type: none"> 01 Device Config <ul style="list-style-type: none"> 01 R/J Printer 02 Bill (Slip) 03 Report Printer 04 Validation 05-13 KP# 1-9 14-15 CAT#1 and CAT#2 16-17 BCR (Scanner) 18 Scale 19 Coin Dispenser 20 On-Line 21 CVM Data I/F 22-23 Reserved 02 System Preset 03 Z Counter 04 GT 05 Mode Secret# 06 Free Key 07 Key Initial 08 File/Memory Allocation 09 Supervisor 10 Memory Initial 11 SSP 12 Backup Send 13 Backup Receive 	<p>(4) Download</p> <ul style="list-style-type: none"> 1 SRV Parameter 2 Free Key <p>(5) Diagnostics</p> <ul style="list-style-type: none"> Product & Test Diagnostics RAM&ROM&SSP Diagnostics CLOCK&KEY&Switch Serial I/O Display&Printer MCR&Drawer TCP/IP

PGM2 Menu Screen

UP-600/700 Standalone	UP-600/700 IRC
PGM2 MODE	PGM2 MODE
1 READING	1 READING
2 SETTING	2 SETTING
3 AUTO KEY	3 AUTO KEY
4 D-UPC	4 D-UPC
5 DATA CLEAR	5 DATA CLEAR
6 OPEN STORE	6 OPEN STORE
7 CLOSE STORE	7 CLOSE STORE
8 KP READING	8 KP READING
9 KP SETTING	9 KP SETTING
10 ONLINE READING	10 ONLINE READING
11 ONLINE SETTING	11 ONLINE SETTING
12 CVM READING	12 CVM READING
13 CVM SETTING	13 CVM SETTING
14 CAT READING	14 CAT READING
15 CAT SETTING	15 CAT SETTING
16 ACCT READING	16 ACCT READING
17 ACCT SETTING	17 ACCT SETTING
18 MWS READING	18 MWS READING
19 MWS SETTING	19 MWS SETTING
	20 INLINE READING
	21 INLINE SETTING
	22 INITIAL D/L
	23 MAINT. D/L
	24 DECLARATION

PGM2 Mode Menu

UP-600/700 Turn the Key to PGM2		
(01) Reading	06 Text	16 Customer
(02) Setting	1 Function	17 Negative#
01 Article	2 Dept. Group	18 Positive#
01 Department	3 PLU Group	19 Macro Key
02 PLU/UPC	4 Server Group	20 Func. Menu Key
03 Dynamic UPC	5 Message Text	21 Capture Key
04 PLU Range	07 Personnel	22 Capture Job
05 PLU Stock	1 Server	23 Tax
06 Link PLU Table	08 Terminal	24 Training
07 Condiment Table	1 Machine#	25 Backup Send
08 Mix & Match	2 Consecutive#	26 Backup Receive
09 Combo Meal	3 Interval Timer	
10 Scale Table	4 Def. Menu Level	(03) Auto Key
11 UPC Non-PLU	5 Available GLU#	(04) D-UPC Load
12 UPC Delete	6 Bill Number	(05) Data Clear
02 Direct Key	09 Date/Time	1 T-Log
03 PLU Menu Key	10 Optional	2 Capture Data
04 Function	1 Func. Prohibit	3 Transaction
01 (-)	2 Func. Select1	4 Hourly
02 (%)	3 Func. Select2	5 Daily Net
03 Group Disc %	4 Print Select	6 Sign On Flag
04 GAS Discount	11 Secret Code	7 GLU Used Flag
05 Gratuity	12 Report	(06) Open Store
06 Tip	1 0 Skip	(07) Close Store
07 RA	2 Hourly	(08) KP Reading
08 PO	3 Stacked Report	(09) KP Setting
09 Manual Tax	13 Logo Text	(10) Online Reading
10 Tax Delete	1 Receipt Logo	(11) Online Setting
11 No Sale	2 VP Logo	(12) CVM Reading
12 Void	3 Bill Logo	(13) CVM Setting
13 Refund	14 Device Config	(14) CAT Reading
05 Media	01 R/J Printer	(15) CAT Setting
01 CASH	02 Bill (Slip)	(16) ACCT Reading
02 CHECK	03 Report Printer	(17) ACCT Setting
03 CHARGE	04 Validation	(18) MWS Reading
04 FS TEND	05-13 KP# 1-9	(19) MWS Setting
05 CONVERSION	14 BCR (Scanner)	(20) Inline Reading
06 EAT-IN	15 GLU Code	(21) Inline Setting
07 SERVICE	1 GLU	(22) Initial Download
08 FINAL		(23) Mainte. D/L
09 CID		
10 CH/CG		
11 CA/CK		

Section – 10: Documentation and Utilities

UP-600/700 Documentation, ROMs, SSP and Utilities:

POS MODEL	Description	Sharp NPC Part #	SHARPNET Download File
		SHARPNET www.sharp-service.com - Parts & Technical Link (Manuals, Download)	
UP-600	UP-600 Service Manual	SM-UP600 incl. parts guide	UP600SM
UP-600	UP-600 Instruction Manual	n/a	INS-UP-600
UP-600	UP-600 dot matrix DP750 Printer Manual	SM-DP750	n/a
UP-700	UP-700 Service Manual	SM-UP700 incl. parts guide	SM-UP-700
UP-700	UP-700 Instruction Manual	n/a	INS-UP-700
UP-700	UP-700 thermal PR59 Printer Manual	SM-PR58HM	n/a
UP-700	UP-700 Stamp Logo Utility Manual	n/a	U700LOGO_CONV_LG70u1_1.exe and
UP-700	UP-700 Stamp Logo Utility Program	n/a	LG70u1_2.exe
UP-600/700	UP-600/700 Installation Manual	IM-UP600	IM-UP600_700
UP-600/700	UP-600/700 Program Manual	PM-UP600	PM-UP600/700
UP-600/700	UP-600/700 Inter Register Communication Manual	n/a	IRC-UP-600/700
UP-600/700	UP-600/700 UP13MR Mag Card Reader	SM-UPE13MR	SM-UPER13MR
UP-600/700	UP-600/700 UPS02/UPS04 Expansion RAM	SM-UPS02MB	n/a
UP-600/700	UP-600/700 Parts Guide	n/a	UP67UPG
UP-600/700	UP-600/700 Credit Card Installation Rom Ver 1.E	n/a	UP67EFTINS
UP-600/700	UP-600/700 Credit Card Operations Rom Ver 1.E	n/a	UP67EFTOPS

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