

Peripheral Installation Guide



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Sam4POS Peripheral Installation Guide v1.22

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Introduction

About this Guide

This document is a convenient source for connecting various peripheral devices with the Sam4s Sam4POS. It is organized by type of device. Information here includes:

- Settings & mapping for the peripheral device, if necessary.
- Settings or program requirements for the Sam4POS Terminal.
- Helpful video links for devices or operations where applicable.

Every effort has been made to ensure the accuracy of information presented here. At the time this manual was compiled, all devices documented here have been tested and perform as intended. However, since many of the peripherals are obtained from sources other than CRS, CRS does not guarantee any aspect of the performance of those peripheral devices, including their fitness for the intended application, or their availability. Information regarding features, specifications, availability, and/or warranties of peripherals should be directed to the supplier of the peripheral device. Refer to the warranty statement supplied with each CRS product for warranty information about products supplied by CRS, Inc.

Devices that can interface with Sam4POS are:

- Printer
- Scanner
- Line Display
- Scale
- EFT
- Coin Dispenser
- Liquor Dispenser
- Kitchen Video
- Text Inserter
- SRM (*Canada Only*)

Other Resources

The CRS web site has many resources available for dealers including Documents for programming & specific applications, Software, Demo Programs & Utilities as well as helpful Training Videos & more.

- ***Cable_Catalog_SAP-630 & Cable_Catalog_SAP-6600*** – Contains the cable pinouts and CRS part numbers for peripheral devices.
- ***Sam4POS Networking & Installation Guide*** – Basic networking and IRC set up for Sam4POS.
- ***Sam4POS Programming Manual*** – For complete programming information.
- ***Sam4POS Operators Manual*** – Show daily operations information and reporting for customers.
- ***Sam4POS Application Supplements*** – There are many supplements available for connecting different devices to Sam4POS, refer to the CRS website for these documents.
- ***Sam4POS Tutorial Videos*** – [SAM4POS Tutorial Videos - YouTube](#)

Device Programming

Device programming is where all the individual peripheral devices used on the Sam4POS system are configured and mapped (routed) to the all the stations in the system. Serial, Ethernet, USB devices can interface with Sam4POS, there is no support for Bluetooth devices.

The peripheral devices available for use on the Sam4POS are: *Printer, Scanner, Line Display, Scale, EFT, Coin Dispenser, Liquor Dispenser, Kitchen Video, Text Inserter* and *SRM*.

Devices must be added in the Device Setting program area before assigning to the stations in the system. Only program the devices that are actually connected to the terminal. After the devices have been added, use the Device Mapping to assign the devices to be used at the appropriate station.

Other Device programming areas include: KP Group programming, Card Read Format settings and the EFT Operation menus are accessed from here as well but are not discussed in this peripheral guide. Refer to the Sam4POS Program Manual for details about these other categories.

Refer to the *Cable_Catalog_SAP-630 & Cable_Catalog_SAP-6600* for cable pinouts and part numbers for peripheral devices.

Useful Video link for Cable Management on SAP-6600: [Organizing Cables with the SAP 6600 - YouTube](#)

1. Select **DEVICE** from the **PROGRAM MODE** main menu selection screen.



2. The **DEVICE** category menu selection dialog displays. Touch the program category you wish to edit from the menu selections.

Notes:

- Devices can be connected to the ports on the Smart Dock for the HM616/626 tablets and utilized with the Sam4pos application. The tablet must be in the docking station to utilize the peripherals attached to the Smart Dock.
- The HM616/626 must be rebooted each time it is returned to the dock for the peripherals to be recognized again. It is also necessary to reboot the HM616/626 for any changes in the Device programming to take effect.

Device Setting

The Device setting programming area is where all your devices are configured for the port that they will occupy. Serial, Ethernet, USB devices can interface with Sam4POS, there is no support for Bluetooth devices. Each device will have additional parameter option settings specific to the device; *Printer, Scanner, Line Display, Scale, EFT, Coin Dispenser, Liquor Dispenser, Kitchen Video, Text Inserter and SRM.*

Only devices actually connected to the system should be defined. When adding devices, the new device will appear in the Device Setting at all stations in the IRC system. Refer to the device information for specific interface types for each device.

To simplify device mapping when multiple terminals are in an IRC network, it is best to connect your devices to the same port on each terminal. For example: all Receipt Printers on COM2, all EFT devices on COM1, etcetera.

Note: You could use a USB to Serial converter, such as the POSio Serial to USB Adaptor (*CRS Item #: 250119*), then connect a serial device to an available USB port (*Requires v1.1.24 or later*).

However, this option is **NOT recommended** for mission critical devices, such as the integrated credit EFT Device.

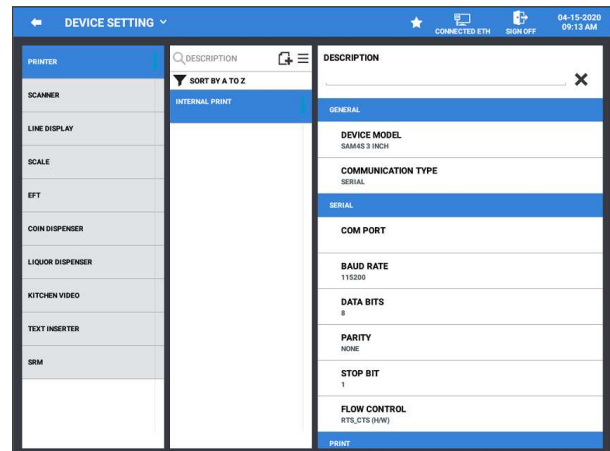
Important! When connecting Ethernet devices, the IP scheme for the device must be the same IP scheme used on the Sam4POS system. The first 3 octets must match; the last octet must be unique.

Wireless Devices can be used, such as wireless scanners, so long as the cradle for the device is connected to an available serial or USB port on the terminal.

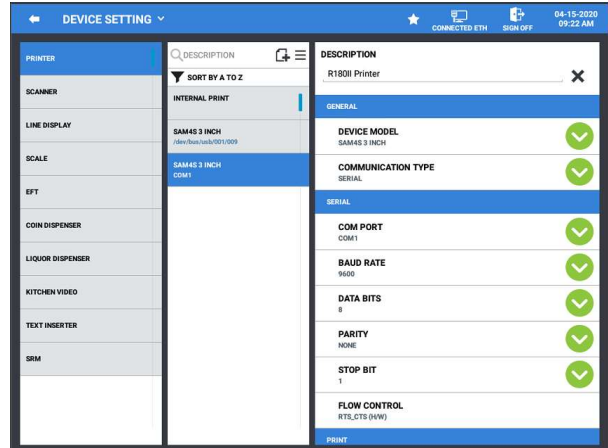


Only set up devices that are actually connected to the Sam4POS system!

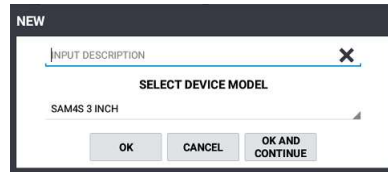
1. Select **DEVICE SETTING** from the **DEVICE** menu selections. The **DEVICE SETTING** programming screen displays.



2. Choose the device type from the selection list you wish to add or edit.
3. The list of programmed devices appears in the middle column.
 - a. If your device list is long, you can use the search field to search by descriptor, only the devices fitting the search criteria will display.



4. Press the Add **NEW** Device icon to add a new device, The **NEW** device dialog displays.
 - a. Type in a **Description** for the device.
 - b. From the **Select Device Model** drop-down list, choose the appropriate selection for your device.
 - c. Press **OK** to add the new device. Press **OK AND CONTINUE** to continue adding additional devices; pressing **CANCEL** will exit without adding a new device.
5. Assign the device to the appropriate **COMMUNICATION TYPE** setting: Serial, Ethernet, USB. **Note:** Different devices will have different communication type selections available.
6. Press the **MENU** icon to Test, Sort, or enter the Edit Mode for the selected device.
 - **TEST** – Tests to operation of the selected device. (Devise Mapping is required prior to testing the device.)
 - **EDIT MODE** – Select devices to delete as necessary.
 - **SORT** – Sort devices alphabetically.

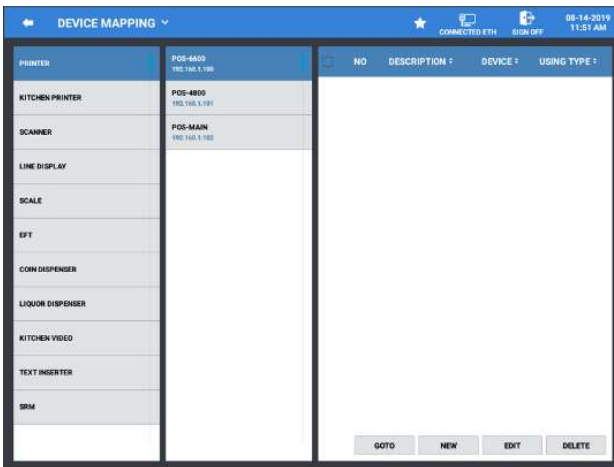


Device Mapping

The Device Mapping programming area is used to assign which devices (Printer, Kitchen Printer, Scanner, Line Display, Scale, EFT, Coin Dispenser, Liquor Display, Kitchen Video, Text Inserter and SRM) will be used on the various stations in the SAM4POS system.

NOTE: The Device Mapping program area was changed beginning at v1.0.80. Kitchen Printer mapping is now a separate selection from the Printer mapping. The Kitchen Printer area is used to assign printers that will be used on each of the stations in the Sam4POS system. This guide shows just the device mapping from v1.0.80 and later.

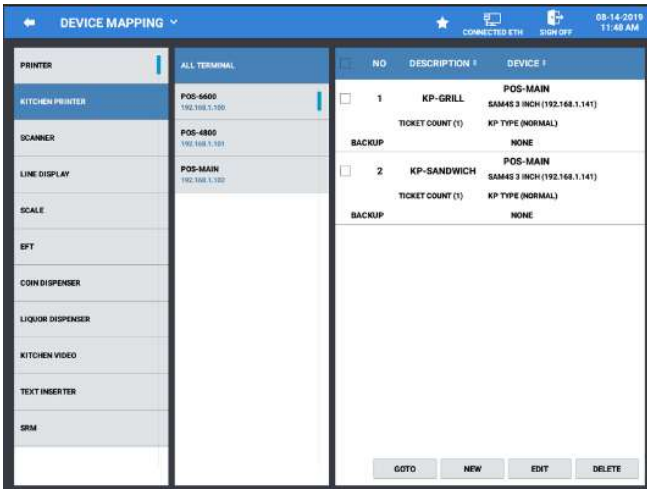
1. From the **Program Mode/Device** menu, select **DEVICE MAPPING** from the available selections. The **DEVICE MAPPING** program screen is displayed.



2. Choose the device from the selection list to map the device to the SAM4POS terminal.
3. Press the **NEW** button to assign a device. The NEW item dialog for the selected device displays. (The NEW item input dialog is specific to the device selected. Refer to the “Device Mapping Setting” chart for details.)



- a. Input a **DESCRIPTION** for the device (up to 30 characters).
 - b. **SELECT DEVICE:** from the list of available devices as set in the Device Setting screens.
 - c. **SELECT FROM TERMINAL:** choose the terminal where the device is connected.
 - d. **SELECT DEVICE USING TYPE:** Select the type for the specified device. Example, for printers choose from the selections: Receipt, KP, Journal, Label and Report.
 - e. **SELECT BACKUP DEVICE:** set if you wish to define a backup device in the case the main device is offline.
 - f. **SELECT BACKUP TERMINAL:** select the terminal where the backup device is connected.
4. Press **OK** when complete to add the device mapping or press OK AND CONTINUE to map more devices. Press CANCEL if you want to exit without mapping devices.
 5. Your mapped devices will display.

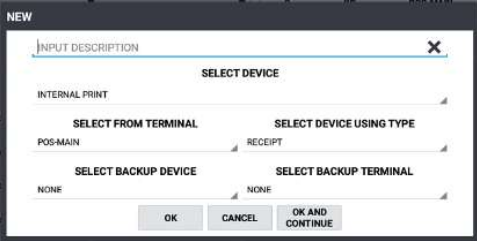
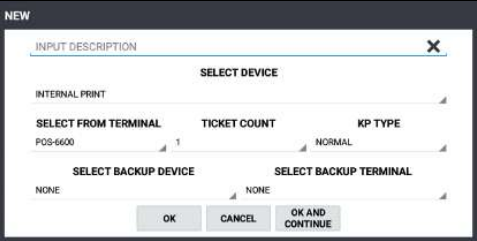
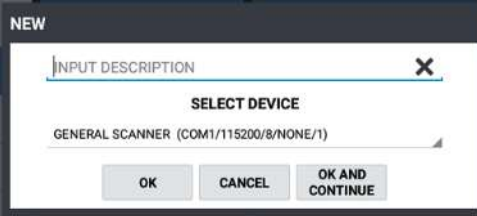
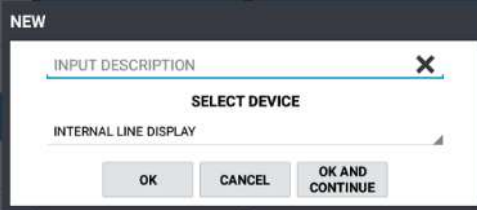


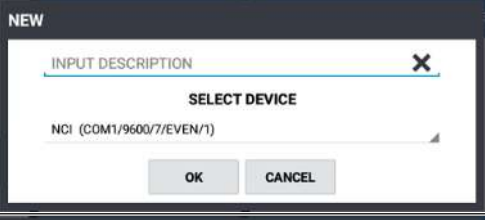
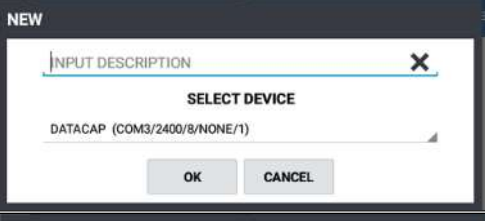
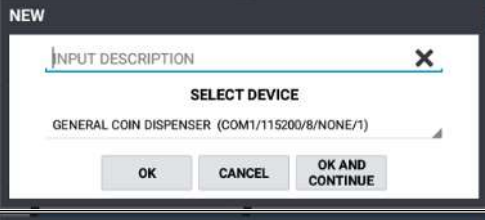
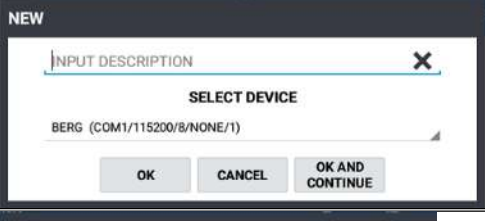
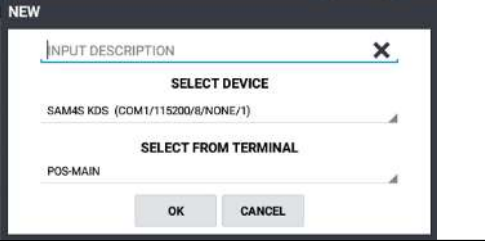
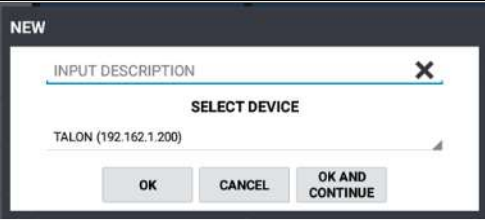
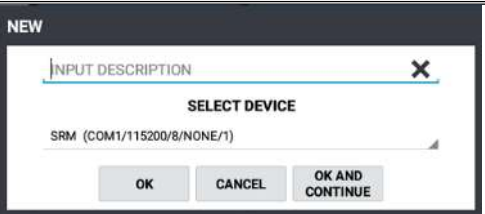
6. You can use the buttons at the bottom of the mapping screen to edit existing mapped devices.
 - **GOTO** – Brings up the Device Setting programming.
 - **NEW** – To add additional devices.
 - **EDIT** – Allows changes to the printer and time period selections.
 - **DELETE** – Will delete the selected device assignment.
7. Select **KITCHEN PRINTER** from the list of available device selections.



8. **ALL TERMINAL** is selected by default. When terminals are set up in an IRC system, you can set up Kitchen Printer mapping to be the same for All Terminals or set differently for individual stations.
 - If all terminals in a system will use the same mapping, use this selection to map the device.
 - If each terminal in a system will use different mapping for devices, we can select the station from the list to add the device mapping for each station.
 - If using the KP Time Period, use kitchen printer mapping for each individual terminal in the system (*not the All Terminal setting*).

Device Mapping Settings

<p><u>PRINTER:</u></p> <p>Input Description – Type a descriptor for the device (up to 30 characters).</p> <p>Select Device: from the list of available devices as set in the Device Setting screens.</p> <p>Select From Terminal – Chose the terminal where the device is connected.</p> <p>Select Device Using Type: Select the type for the specified printer, selections are: Receipt, KP, Journal, Label, and Report.</p> <p>Note: If no Report Printer is configured, reports will print to the Receipt Printer.</p> <p>Select Backup Device: set if you wish to define a backup device in the case the main device is offline.</p> <p>Select Backup Terminal: select the terminal where the backup device is connected.</p>	
<p><u>KITCHEN PRINTER:</u></p> <p>Input Description: type a description for the device (up to 30 characters).</p> <p>Select Device: from the list of available devices as set in the Device Setting screens.</p> <p>Select From Terminal: chose the terminal where the device is connected.</p> <p>Ticket Count: select the number (1-5) of chits you want to print 1-5.</p> <p>KP Type: Select the type for the specified device.</p> <p>Normal – Prints all items on one ticket.</p> <p>Single – Prints each item on a separate ticket; (regardless of the KP Option settings).</p> <p>Normal & Single – Prints all items on one ticket & prints each item separately.</p> <p>Single & Normal – Prints each item on a separate ticket & prints all items on one ticket.</p> <p>Select Backup Device: set if you wish to define a backup device in the case the main device is offline.</p> <p>Select Backup Terminal: select the terminal where the backup device is connected.</p>	
<p><u>SCANNER:</u></p> <p>Input Description: type a description for the device (up to 30 characters).</p> <p>Select Device: from the list of available devices as set in the Device Setting screens.</p>	
<p><u>EFT DEVICE:</u></p> <p>Input Description: type a description for the device (up to 30 characters).</p> <p>Select Device: from the list of available devices as set in the Device Setting screens.</p>	

<p><u>SCALE:</u> Input Description: type a description for the device (up to 30 characters). Select Device: from the list of available devices as set in the Device Setting screens.</p>	
<p><u>EFT:</u> Input Description: type a description for the device (up to 30 characters). Select Device: from the list of available devices as set in the Device Setting screens.</p>	
<p><u>COIN DISPENSER:</u> Input Description: type a description for the device (up to 30 characters). Select Device: from the list of available devices as set in the Device Setting screens.</p>	
<p><u>LIQUOR DISPENSER:</u> Input Description: type a description for the device (up to 30 characters). Select Device: from the list of available devices as set in the Device Setting screens.</p>	
<p><u>KITCHEN VIDEO:</u> Input Description: type a description for the device (up to 30 characters). Select Device: from the list of available devices as set in the Device Setting screens. Select From Terminal: chose the terminal where the device is connected.</p>	
<p><u>TEXT INSERTER:</u> Input Description: type a description for the device (up to 30 characters). Select Device: from the list of available devices as set in the Device Setting screens.</p>	
<p><u>SRM:</u> Input Description: type a description for the device (up to 30 characters). Select Device Model: from the list of available devices as set in the Device Setting screens.</p>	

Mapping Errors

1. Mapping a device to a port that already has a device mapped will result with an error message similar to the message shown below:



2. You will need to select a different port to assign the device to.

Printers

Adding printers to the Sam4POS is a two-step process. You will need to set up the printers in the Device Setting, then assign the printers to your stations in the Device Mapping. Any Printer can use the Serial or Ethernet interfaces, only Sam4s printers can use the USB interface.

You can view a video showing how to add a printer here:

[Sam4POS - How to add a printer - YouTube](#)

Some installation may want to set up a printer just for reporting, here is a video showing this set up:

[Adding a Separate Report Printer in Sam4POS - YouTube](#)

Note: Cable pinouts vary depending on the model printer, Refer to the *Cable_Catalog_SAP-630 & Cable_Catalog_SAP-6600* for cable pinouts and part numbers for peripheral devices.


Device Settings: Printer

To connect printers to the *Sam4POS* terminal you must configure an available port with the appropriate parameters then map the printer to the appropriate stations. Printers can be connected via Serial or Ethernet. Sam4s USB printers can also be connected.

The Device Setting program area is where you will configure the ports where the printers will occupy. Each terminal will have its own device setting programming. To simplify device mapping when multiple terminals are in an IRC network, it is best to program all your receipt, journal, KP printers to the same port on each Sam4POS terminal.

Note 1: If you have the **SAP-630** terminal, the **Internal Printer** is already added & configured. You cannot delete or edit the device settings for the Internal Printer.

Note 2: If you are using the *Chef Tab* kitchen video system, it will set up as a **Kitchen Printer** in device setting & device mapping.

1. From the **PROGRAM MODE** main menu selection screen select **DEVICE** to view the Device menu selection dialog, then select **DEVICE SETTING**.
2. Choose **PRINTER** from the device selection list.
3. Press the **Add Record icon**  to add a new Printer. The Add New Printer dialog displays:
 - **Input Description** – Type a descriptor (*up to 30 characters*) for the new printer connected on this station. For example: *Receipt, Journal, Etc.*
 - **Select Device Model** – Select the compatible printer model from the drop-down list. See all of the printer model selections in the Printer Parameter Settings on the next page.
4. Press **OK** to complete the printer device setting or press **OK AND CONTINUE** to add another printer. Pressing **CANCEL** will exit without adding devices.
5. The new printer(s) will be added to the list:
6. Set the parameters for each printer; Serial, Ethernet, or USB Printer(s) as necessary. See all the Printer Parameter Settings on the next page.

Printer Parameter Settings

Add all the printers to be used in the system for receipt printers, kitchen printers, journal, etc. Printers can connect via Serial, Ethernet or USB as noted below.

Note: USB printer interface only supports Sam4s printers; Any Sam4s USB printer will work such as the Sam4s Giant / GCUBE / Ellix printers (Ellix printers must have the most current firmware installed).

GENERAL

DEVICE MODEL

SAM4S 3 INCH, 2 INCH,
EPSON TMU-2000, TMT88II, TMT88III,
SNBC BTP-L520

COMMUNICATION TYPE

Serial, Ethernet, USB
(Sam4s USB printers only)

SERIAL

COM PORT

COM1 thru COM4
/dev/ttyUSB0 – Only available when a USB to RS-232 converter is connected to the terminal.

BAUD RATE

1200, 2400, 9600, 19200, 38400, 57600, 115200

DATA BITS

7 or 8

PARITY

NONE, EVEN, ODD

STOP BITS

1 or 2

FLOW CONTROL

NONE, XON_XOFF (S/W), RTS_DTS (H/W)

ETHERNET

Connecting Ethernet Printer video: [Connecting to a Printer with an Ethernet Connection with Sam4POS - YouTube](#)

IP ADDRESS

Type in the IP of the printer. *(Must be the same IP Scheme as Sam4POS system.)*

PORT NUMBER

Enter the PORT number used by the printer. *(Check the printer settings for the correct number.)*

USB

Connecting USB Printers in Sam4pos video: [Connecting a USB Printer in Sam4POS - YouTube](#)

Note: USB printer interface only supports Sam4s USB printers such as the Sam4s GCUBE/Giant/Ellix.

DEVICE MODEL

GCUBE-100 (/dev/bus/usb/001/009)

PRINT

PAPER CUTTING AFTER PRINTING

Check if you want the printer to cut after printing is complete.

OPEN DRAWER AFTER PRINTING

For external printers, select this option when a cash drawer is connected to the printer. This flag can also be used to send a signal for a beeper connected to the printer.

FEEDING LINES BEFORE PRINTING

A 2-digit entry is allowed (0-99)

FEEDING LINES AFTER PRINTING


A 2-digit entry is allowed (0-99)

CODE PAGE

Not Used At This Time: NONE – MS949 – GB2312

Device Mapping: Printer

The Device Mapping programming area is used to assign which Printers will be used on the various stations in the Sam4POS system.

1. From the **Program Mode/Device** menu, select **DEVICE MAPPING** from the available selections. Choose **PRINTER** from the selection list to map the device to the station(s).
2. Tap the desired station from the list in the center column to assign a Printer to.
3. Press the **NEW** button (bottom right column) to assign a Printer to the selected station. The **NEW** item dialog displays.
 - a. **INPUT DESCRIPTION:** Type a descriptor for the new printer (up to 30 characters).
 - b. **SELECT DEVICE:** from the list of available devices as set in the Device Setting screens.
 - c. **SELECT FROM TERMINAL:** Chose the terminal where the device is connected.
 - d. **SELECT DEVICE USING TYPE:** Select the type for the specified device. Example, for printers choose from the selections: Receipt, KP, Journal, Label and Report.
 - e. **SELECT BACKUP DEVICE:** set if you wish to define a backup device in the case the main device is offline.
 - f. **SELECT BACKUP TERMINAL:** select the terminal where the backup device is connected.
4. Press **OK** to complete the device mapping or press **OK AND CONTINUE** to map more devices. Press **CANCEL** if you want to exit without mapping devices.
5. Your mapped devices will display; You can use the buttons at the bottom of the mapping screen to edit existing mapped devices.
 - **GOTO** – Brings up the Device Setting programming.
 - **NEW** – To add additional devices.
 - **EDIT** – Allows changes to the printer and time period selections.
 - **DELETE** – Will delete the selected device assignment.
6. Press the **back-arrow icon**  to close and exit the device mapping.

Options

Options programming is used to define the most fundamental parameters of the register system. Options are separated into easily identifiable categories to simplify finding specific options.

1. From the **PROGRAM MODE** select **OPTIONS** → **OPTIONS**. The list of option categories is displayed. Choose the **PRINT OPTION** category from the list on the left to view the printing related options.
2. Each option category is broken down further into smaller sections to aid in programming. Individual options within the sections allow you to choose to make the option setting apply Globally for all stations or apply to the Local station only. *(Available at v1.0.45 and later.)*
3. A search bar is provided at the top header bar of each option category. When you type in a search criterion, only the options that contain the specified criteria within the chosen category will display. *(Available at v1.1.45 and later.)*

Print Option

RECEIPT & JOURNAL

PRINT REPRINT ON A REPRINTED RECEIPT

When a receipt is reprinted, **** REPRINT **** is printed at the top of the reprinted receipt.

PRINT SEAT#

When this option is checked, the seat # will print on the receipt and journal.

PRINT RECEIPT FOR SIGN ON/OFF

If selected, a receipt is printed whenever employees sign on or off.

PRINT RECEIPT FOR TIME CLOCK IN/OUT (Added at v2.0.21)

Check this option if you wish to print a receipt when employees clock in and out.

When this option is checked, and the option “Print Receipt For Time Clock In/Out is selected, the total hours for the pay period will print on the chit when employees clock out.

PRINT TOTAL HOURS FOR TIME CLOCK IN/OUT (Added at v2.0.21)

When this option is checked, and the option “Print Receipt For Time Clock In/Out is selected, the total hours for the pay period will print on the chit when an employee clocks out.

PRINT RECEIPT FOR MANUAL TIME CLOCK EDIT

If selected, a receipt is printed whenever employee time is edited.

PRINT PLU CODE

If selected both the PLU# and descriptor will print when a PLU is registered

PRINT TENDER ON RECEIPT

If selected, the tender will print on the receipt.

PRINT NUMBER OF ITEMS ON RECEIPT

If selected, a count of the number of items will appear on each receipt.

PRINT VOIDED ITEM ON RP

When selected, items voided in the transaction will print on the Receipt Printer.

PRINT SUBTOTAL WHEN SUBTOTAL KEY IS PRESSED

If checked, the receipt will print the subtotal at the point in the transaction when the subtotal key was pressed.

PRINT DESTINATION DESCRIPTION

You can select to print at the TOP or BOTTOM.

PRINT PREAMBLE/POSTAMBLE ON JOURNAL

Select this option to print the Preamble/Postamble message on the Journal (Detail) print.

PRINT LOGO ON JOURNAL (Added at v1.0.83)

Select this option to print the Logo image on the Journal (Detail) print.

PRINT BARCODE ON JOURNAL (Added at v1.0.83)

Select this option to print barcodes on the Journal (Detail) print.

PRINT QR CODE ON JOURNAL (Added at v1.0.83)

Select this option to print QR codes on the Journal (Detail) print.

PRINT GRATUITY ON JOURNAL (Added at v1.0.83)

Select this option to print the gratuity to the Journal (Detail) print.

PRINT RECEIPT FOR RA / PO

If selected, a receipt is printed whenever a Paid-Out or Received on Account is performed.

REPORT PRINTER FOR EOD ONLY (Added at v2.0.25)

Use this option only when a valid Report Printer is configured in Device Mapping. When checked, ONLY the EOD report will print to the Report Printer. When unchecked, ALL reports will print to the Report Printer.

PRINT AGE VERIFIED MESSAGE INSTEAD OF DATE OF BIRTH (Added at v2.0.91)

When selected, AGE VERIFIED will print on receipts and display on the register screen instead of the customer Birth Date.

NO SIGNATURE LINE IF TRANSACTION TOTAL IS LESS THAN (Added at v2.0.160)

When the MISC TEND transaction is less than X.xx the merchant copy of the EFT transaction will not print the signature line. (Default setting = 0.00, signature line always prints.)

DOUBLE

You can choose double-width printing (bold print) for Total, Tender, and Change amounts.

PRINT TOTAL IN DOUBLE

PRINT TENDER IN DOUBLE

PRINT CHANGE IN DOUBLE

ETC

ALLOW MULTIPLE RECEIPTS

If selected, more than one copy of the receipt can be issued after the sale.

ALWAYS PRINT RECEIPT IN VOID MODE

If selected, a receipt will automatically be printed for transactions in VOID mode.

LINES AFTER PREAMBLE

Enter the number of lines (0-99) you wish to feed after the preamble and before the first receipt line.

LINES BEFORE POSTAMBLE

Enter the number of lines (0-99) you wish to after the last receipt line and before the postamble.

PRINT HOME CURRENCY SYMBOL ON LABEL

When selected, the home currency symbol will print in front of the price for the PRICE element on labels.

When not selected, the price is printed without the currency symbol on the labels PRICE element. *(Currency Symbol is set in System Option programming.)*

COPY OF EFT RECEIPT

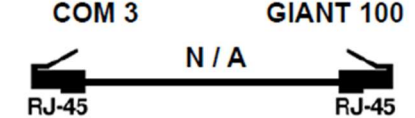
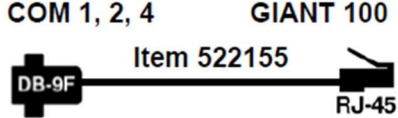
Indicate the number of copies (0-99) of the credit card transaction receipt to be printed when Integrated Payment is utilized. *(If set to "0" and the receipt is OFF in register mode, no EFT draft will print.)*

COPY OF EFT TIP RECEIPT (Added at v2.0.1)

Indicate the number of copies (1-99) of the credit card TIP receipt to be printed. *(Applies when the option Print TIP Receipt in the System Option is checked.)*

Cables

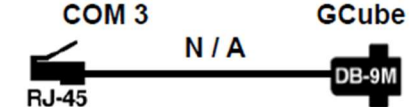
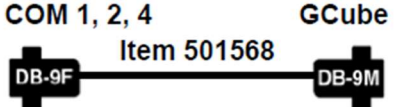
Giant Printer



Terminal		Printer	
N.C.	1	1	+VCC
RXD	2	2	DSR
TXD	3	3	TXD
DTR	4	4	RXD
SGND	5	5	RTS
DSR	6	6	CTS
RTS	7	7	GND
CTS	8	8	DTR
N.C.	9	9	RI
FGRND			FGND

Terminal		Printer	
DCD	1	1	+VCC
DSR	2	2	DSR
TXD	3	3	TXD
RXD	4	4	RXD
RTS	5	5	RTS
CTS	6	6	CTS
GND	7	7	GND
DTR	8	8	DTR
	9	9	RI

GCube Printer



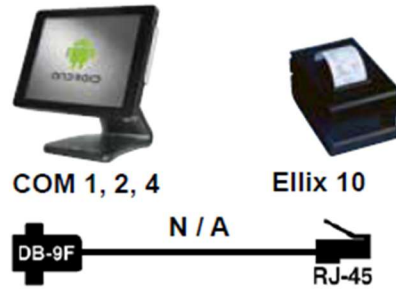
ECR		Printer	
(F.GND)	-----	(F.GND)	
DCD	1	1	DCD
RXD	2	2	RXD
TXD	3	3	TXD
DTR	4	4	DTR
GND	5	5	GND
DSR	6	6	DSR
RTS	7	7	RTS
CTS	8	8	CTS
(RI)	9	9	(RI)

ECR		Printer	
DCD	1	1	DCD
DSR	2	2	RXD
TXD	3	3	TXD
RXD	4	4	DTR
RTS	5	5	GND
CTS	6	6	DSR
GND	7	7	RTS
DTR	8	8	CTS
	9	9	(RI)

Ellix Printers



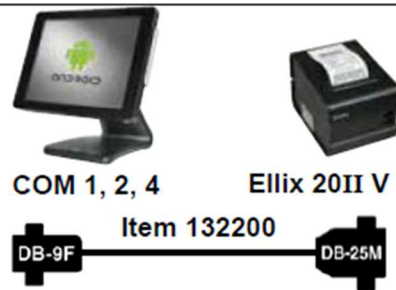
Terminal		Printer	
DCD	1	1	NC
RXD	2	2	TXD
TXD	3	3	RXD
DTR	4	4	RTS
GND	5	5	CTS
DSR	6	6	DSR
RTS	7	7	GND
CTS	8	8	DCD
VCC	9	20	DTR



Terminal		Printer	
N.C.	1	1	+VCC
RXD	2	2	DSR
TXD	3	3	TXD
DTR	4	4	RXD
SGND	5	5	RTS
DSR	6	6	CTS
RTS	7	7	GND
CTS	8	8	DTR
N.C.	9	9	RI
FGRND			FGND



Terminal		Printer	
DCD	1	1	chGND
DSR	2	2	TXD
TXD	3	3	RXD
RXD	4	4	RTS
RTS	5	5	CTS
CTS	6	6	DSR
GND	7	7	GND
DTR	8	8	DCD
		20	DTR



Terminal		Printer	
DCD	1	1	chGND
RXD	2	2	TXD
TXD	3	3	RXD
DTR	4	4	RTS
GND	5	5	CTS
DSR	6	6	DSR
RTS	7	7	GND
CTS	8	8	DCD
VCC	9	20	DTR

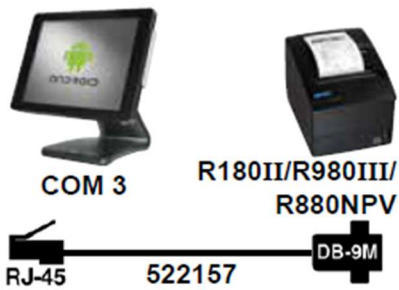
SNBC Printers



Terminal		Printer	
DCD	1	1	chGND
DSR	2	2	TXD
TXD	3	3	RXD
RXD	4	4	RTS
RTS	5	5	CTS
CTS	6	6	DSR
GND	7	7	GND
DTR	8	8	DCD
		20	DTR



Terminal		Printer	
DCD	1	1	chGND
RXD	2	2	TXD
TXD	3	3	RXD
DTR	4	4	RTS
GND	5	5	CTS
DSR	6	6	DSR
RTS	7	7	GND
CTS	8	8	DCD
VCC	9	20	DTR

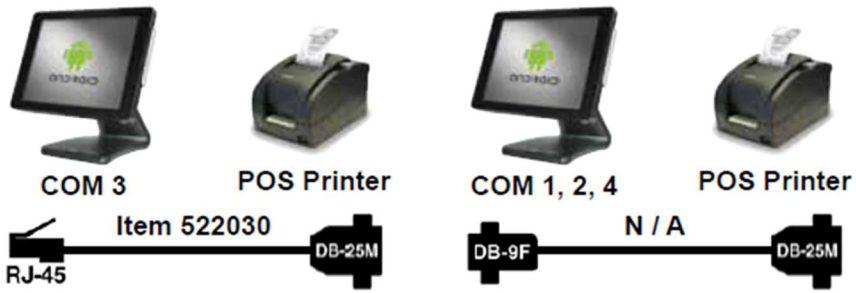


Terminal		Printer	
DCD	1	1	DCD
DSR	2	2	RXD
TXD	3	3	TXD
RXD	4	4	DTR
RTS	5	5	GND
CTS	6	6	DSR
GND	7	7	RTS
DTR	8	8	CTS
		9	VCC



Terminal		Printer	
DCD	1	1	DCD
RXD	2	2	RXD
TXD	3	3	TXD
DTR	4	4	DTR
GND	5	5	GND
DSR	6	6	DSR
RTS	7	7	RTS
CTS	8	8	CTS
VCC	9	9	VCC

POS Printers



Terminal		Printer	
DCD	1	1	chGND
DSR	2	2	TXD
TXD	3	3	RXD
RXD	4	4	RTS
RTS	5	5	CTS
CTS	6	6	DSR
GND	7	7	GND
DTR	8	8	DCD
		20	DTR

Terminal		Printer	
DCD	1	1	chGND
RXD	2	2	TXD
TXD	3	3	RXD
DTR	4	4	RTS
GND	5	5	CTS
DSR	6	6	DSR
RTS	7	7	GND
CTS	8	8	DCD
VCC	9	20	DTR

Kitchen Printer

The printer set up and routing on the Sam4POS terminals is very flexible. We are able to connect Serial or ethernet printers to the terminal. Each station in the system can have the same kitchen printers assigned and mapped or they can be programmed to send to different kitchen printers.

In a multi-terminal set up, each station can have a different KP Receipt with different Header & Footer information and different elements selected to easily identify which station in the system the order originated on and was sent from. Refer to the separate “Sam4POS KP Routing” supplement for complete details about setting up Kitchen Printers.

1. You will need to set up the printers to be used for Kitchen Printers in the **Device Setting: Printer**
2. Map the printers in the **Device Mapping: Kitchen Printer**
3. Set up **KP Group** programming for the items you want to send to the KP
4. Assign your KP Groups to the appropriate **PLU Status Groups** you want to send to the KP
5. Assign the PLU Status Groups to the desired **PLU’s**
6. Set the **KP Option** settings as desired

There are several helpful videos available concerning Kitchen Printing with Sam4POS.

Kitchen Printer set up with Sam4POS v1.0.80 and later:

<https://www.youtube.com/watch?v=HHhXTHE2kiY&list=PLtF-h-a37jHmbhGgLO3nB76hP-avFSW29&index=68>

Adding KP’s to multiple Sam4POS terminals:

<https://www.youtube.com/watch?v=OihSvt90QrA&list=PLtF-h-a37jHmbhGgLO3nB76hP-avFSW29&index=76&t=26s>

KP Options in Sam4POS:

<https://www.youtube.com/watch?v=kMaLMydd9I&list=PLtF-h-a37jHmbhGgLO3nB76hP-avFSW29&index=46>

KP Descriptor feature:

<https://www.youtube.com/watch?v=kK035VXVQag&list=PLtF-h-a37jHmbhGgLO3nB76hP-avFSW29&index=11&t=17s>

Note: If you are using the *Chef Tab* video system, it will set up as a **Kitchen Printer** in device settings and mapping.

Required Programming

The programming areas required to utilize kitchen printing with Sam4POS are:

DEVICE

Device Setting – Set up your printer(s) on an available port on the terminal.

Device Mapping – Set up kitchen printers for all terminals or each individual station in the system.

KP Group – Create kitchen printing groups to be utilized: *i.e. Grill – Beverage – Expediter*, then assign the printer to be used for each group.

PLU

PLU Status Group – Assign PLU Status Groups to the appropriate Kitchen Printer Group.

PLU – Assign the PLU Status Group Link to the appropriate PLU's you want to send to the kitchen. If desired, you can program a separate KP Description for items to print at the kitchen printer.

You can view a video showing this feature here: <https://www.youtube.com/watch?v=kK035VXVQag&list=PLtF-h-a37jHmbhGgLO3nB76hP-avFSW29&index=11>

OPTIONS

KP/KV Options – Program the Kitchen Printing Options as needed.

Here is a video showing different Kitchen Printer Options:

<https://www.youtube.com/watch?v=kMaLMydd9i&list=PLtF-h-a37jHmbhGgLO3nB76hP-avFSW29&index=46>

Optional Programming

The Optional program categories for Kitchen Printing are:

RECEIPT & MESSAGE

KP Receipt Message – A unique receipt Header/Footer message can be assigned to kitchen printers for easy identification if desired.

FUNCTION KEY

KP Route – It may be desirable to set up different routing for orders for different time periods.

For Example: *Normal – Busy – Event*.

Destination Key(s) – You may want separate destination keys for Eat-In, Drive-Thru, etc.

This can be useful for routing orders to specific printers depending on the destination.

TIME SCHEDULE

KP Time Period – You can use the KP Time Period programming to automatically switch the KP Period at specified times. KP Time Periods are used when setting up KP Group programming.

Refer to the separate KP Routing supplement for details about the optional programming for kitchen printing.

Device Setting: Kitchen Printer

The device setting programming for kitchen printers is the same as for any other printer. Refer to the Printer Device Setting chapter on page 17 for details.

To connect printers to the *Sam4POS* terminal you must configure an available port with the appropriate parameters then map the printer to the appropriate stations. Printers can be connected via Serial or Ethernet. Sam4s USB printers can also be connected.

Device Mapping: Kitchen Printer

The device mapping for kitchen printers varies from the mapping for receipt, journal, label & report printers. Refer to the separate KP routing supplement for complete details.

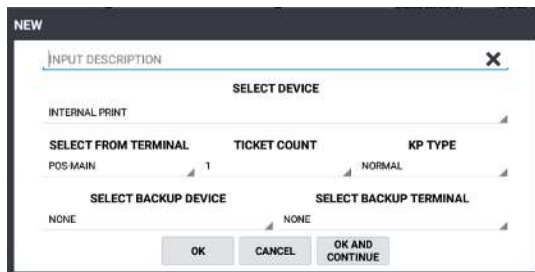
The Device Mapping programming area is used to assign which Printers will be used on the various stations in the Sam4POS system.

Adding Kitchen Printers

Kitchen Printers are listed in the right most column on the Device Mapping Screen. Beginning at v1.0.96, the ability to configure Kitchen Printers by all stations or individual station was added.

Note: If you are using the *Chef Tab KVS* system, set it up as a *Kitchen Printer* in device settings & mapping.

1. Select **ALL TERMINAL** if you want to use the same mapping for all stations in the system or select a specific station from the list to add kitchen printers to.
2. Press the **NEW** button to assign a device. The NEW item dialog displays:



INPUT DESCRIPTION –

Type in a description for the device (up to 30 characters). *i.e.* *KP Grill, Bar, Cold, etc.*

SELECT DEVICE –

Choose the printer from the list of available printers as set in the Device Setting.

SELECT FROM TERMINAL –

Chose the terminal from the list where the device is connected.

TICKET COUNT –

Set the number of KP tickets to be printed.

KP TYPE –

Select the type for the specified device.

- **Normal** – Prints all items on one ticket.
- **Single** – Prints each item on a separate ticket; (regardless of the KP Option settings).
- **Normal & Single** – Prints all items on one ticket & prints each item separately.
- **Single & Normal** – Prints each item on a separate ticket & prints all items on one ticket.

SELECT BACKUP DEVICE –

Set if you wish to define a backup device in the case the main device is offline.

SELECT BACKUP TERMINAL –

Select the terminal where the backup device is connected.

3. Press **OK** when complete to add the device mapping or press **OK AND CONTINUE** to map more printers. Press **CANCEL** if you want to exit without mapping additional kitchen printers.

- Your mapped devices are displayed:



- You can use the buttons at the bottom of the mapping screen to edit existing mapped devices.
 - GOTO** – Brings up the Device Setting programming.
 - NEW** – To add additional Kitchen Printers.
 - EDIT** – Allows changes to the settings for the selected Kitchen Printer. You can select an individual printer or multiple printers to edit all at one time.
 - DELETE** – Will delete the selected Kitchen Printer.

Edit Kitchen Printers

If necessary, you can edit the kitchen printer information.

- Select a **KITCHEN PRINTER** from the list you wish to edit; Press the **EDIT** button to open the EDIT dialog:

EDIT

Soft Drink

SELECT DEVICE

SAM4S 3 INCH (192.168.1.141)

SELECT TERMINAL: POS-MAIN

TICKET COUNT: 1

KP TYPE: NORMAL & SINGLE

SELECT BACKUP DEVICE: NONE

SELECT BACKUP TERMINAL: NONE

OK CANCEL

DESCRIPTION –

You can delete and type in a new description for the device (up to 30 characters) if desired.

SELECT DEVICE –

Choose the printer from the list of available printers as set in the Device Setting.

SELECT FROM TERMINAL –

Choose the terminal from the list where the device is connected.

TICKET COUNT –

Set the number of KP tickets to be printed.

KP TYPE –

Select the type for the specified device.

- Normal** – Prints all items on one ticket.
- Single** – Prints each item on a separate ticket; (regardless of the KP Option settings).
- Normal & Single** – Prints all items on one ticket & prints each item separately.
- Single & Normal** – Prints each item on a separate ticket & prints all items on one ticket.

SELECT BACKUP DEVICE –

Set if you wish to define a backup device in the case the main device is offline.

SELECT BACKUP TERMINAL –

Select the terminal where the backup device is connected.

- Press **OK** when complete to add the device mapping or press **CANCEL** if you want to exit without mapping additional kitchen printers.


KP Group

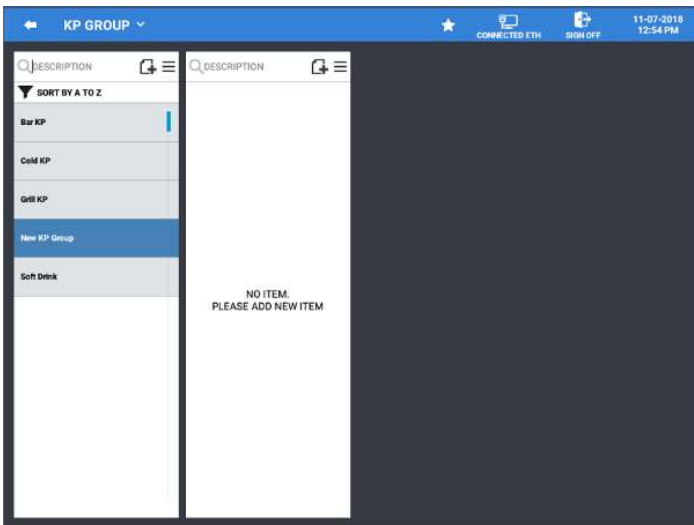
Use this programming area to determine the KP Groups that will be used for assignment in the PLU Status Group programming. You can assign KP Groups to different printers at different time periods if desired.


The KP Group programming was changed beginning at v1.0.80 and later. Use this programming area to determine the KP Groups that will be used for assignment in the PLU Status Group programming. You can assign KP Groups to different printers at different time periods if desired.

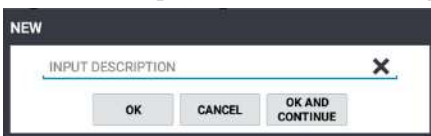
Note: You must define printers in Device Setting and create a Kitchen Printer in Device Mapping before you can create a KP Group.


Note: KP Time Periods must be created prior to assignment here.

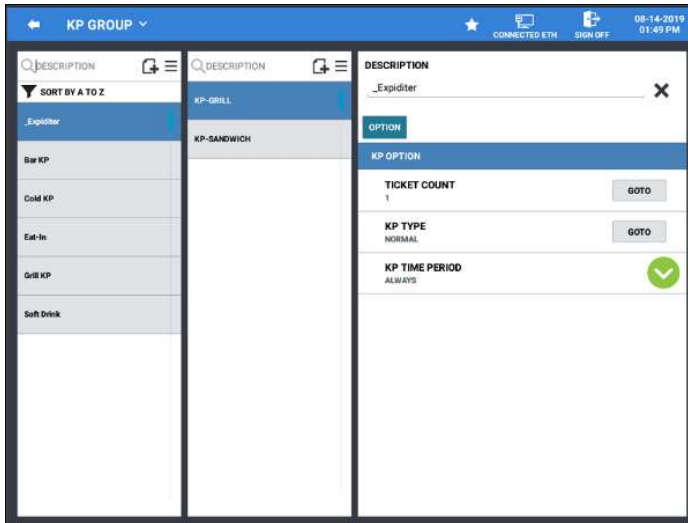
1. From the **Program Mode/Device** menu, select **KP GROUP** from the available selections.
Alternately, you can press the drop-down arrow  on the on the section title on the current Device program screen to view the sub menu selections; then select KP GROUP from the available selections.
2. The **KP GROUP** program screen is displayed:



3. From the **KP GROUP** programming screen press the **Add New**  icon in the LEFT COLUMN to add a new KP Group(s) or select a KP Group list.



4. **INPUT DESCRIPTION** (up to 30 characters) for the KP Group and press **OK** to close the dialog or press **OK AND CONTINUE** to add additional KP Groups. Press **CANCEL** if you wish to exit without adding the new KP Group.
5. After the KP Groups are created, press the **Add New**  icon in the CENTER COLUMN to assign the printers to be used for the selected KP Group and choose the desired KP Time Period for the group.
6. When the printer and time period are selected, the **KP OPTION** selections are displayed.



7. Press the **menu** ☰ icon at the top of the **KP Group List** (*LEFT COLUMN*) to access:
 - **EDIT MODE** to select and delete KP Groups *or select*
 - **SORT** to sort the KP Groups alphabetically.
8. Press the **menu** ☰ icon at the top of the selected **KP Group Printer List** (*CENTER COLUMN*) to access:
 - **EDIT MODE** to select and delete printers from the selected KP Group

KP Group Option Settings

DESCRIPTION

You can press the **X** at the end of the Description field to delete the current descriptor and type-in a new descriptor (*up to 30 characters*) for the KP Group here as desired.

KP OPTION

TICKET COUNT

This is the number of tickets you wish to print. This number initially comes from the Device Mapping setting. Press the **GOTO** button to go to the Device Mapping screen, then select Kitchen Printer to edit the current Ticket Count setting. Available settings are from 1-5.

KP TYPE

This setting comes from the Device Mapping setting. Available selections are: *Normal, Single, Normal Single and Single Normal*.

Press the **GOTO** button to go to the Device Mapping screen, then select Kitchen Printer to edit the current KP Type setting.



KP TIME PERIOD

This setting comes from the Device Mapping setting.

PLU Status Group Programming

Only the PLU Status Group programming related to Kitchen Printing is shown here. Refer the Sam4POS Programming Manual for the complete list of PLU Status Group programming options & definitions.

After programming the PLU Status Groups you will need to assign the appropriate PLU Status Group to the PLUs you want to send to the Kitchen Printer.

1. From the **PROGRAM MODE** touch **PLU** to view the PLU program selection window, touch **PLU STATUS GROUP** to view the PLU status group options.
2. All existing PLU Status Groups are listed. You can edit an existing PLU Status Groups by scrolling through the list to the specific item you wish to edit.
3. If you have a large list, you can sort the status groups in the list alphabetically. Touch the Menu icon  on the PLU Status Group programming screen.
4. Select **SORT** from the available selections. Choose to sort A TO Z, Z TO A.
5. To enter a **NEW PLU STATUS GROUP** into the database, press the **Add New Item icon**  or, you can select an existing status group to copy by pressing and holding the status group.
6. Type the descriptor in the INPUT DESCRIPTION field. Press **OK** to go on to the option programming. Press **OK AND CONTINUE** to add another PLU. Press **CANCEL** to exit without adding the new PLU Status Group.
7. You can delete/edit the descriptor for an existing PLU Status Group by pressing the **X** at the end of the descriptor field and type in a new descriptor.
8. After a PLU Status Group is selected, the programming options are displayed. Scroll through the options and edit as necessary.

PLU Status Group KP Option Settings

Only the options related to Kitchen Printing are shown here. Refer the Sam4POS Programming Manual for the complete list of PLU Status Group programming options & definitions.

KP & KV

KITCHEN PRINTER

Select if PLUs in this group are to be sent to a kitchen printer.

KITCHEN PRINTER GROUP

Select the kitchen printer group or groups to which PLUs in this group are to be sent.

INVERSE \ RED PRINT ON KITCHEN PRINTERS?

Set to Yes if you wish PLUs in this group to print in red on the kitchen printer, *i.e.* condiments might be printed red. Red/black printer must be used.


AUTOMATIC HOLD ITEM

This flag allows PLUs to be placed on HOLD to the KP/KVS automatically.

PRINT PLU PRICE ON KP

(Requires v1.0.79 or later) When selected, the item price for KP items using this status group will be printed with the item on the kitchen printer.

PLU Programming

1. From the **PROGRAM MODE** menu, touch **PLU** to view the PLU program selection window then select **PLU** from the available selections.
2. Select the PLU you want to program,
3. Optionally, you can add a separate **KP Description** if desired; this is not necessary if you want to use the regular/default Description.
4. In the **GENERAL** section for the selected PLU, select the appropriate **PLU STATUS GROUP LINK** for the PLU by pressing the green  to access the selection dialog.
5. Select the appropriate **PLU Status Group** from the list to assign to the KP item.
6. Pressing the **GOTO** button in front the PLU/PLU Status Group Link option will bring up the programming for the PLU status group. You can edit the programming for the status group if desired; press the back arrow to return to the PLU programming screen.

Options

Options programming is used to define the most fundamental parameters of the register system. Options are separated into easily identifiable categories to simplify finding specific options.

Only the options related to Kitchen Printer are shown here. Refer the Sam4POS Programming Manual for the complete list of PLU Status Group programming options & definitions.

1. Select **OPTIONS** from the **PROGRAM MODE** → **OPTIONS** category menu selections. The list of option categories is displayed.
2. Choose the **KP/KV OPTION** category from the list on the left to view the Kitchen Printer related options.
3. Each option category is broken down further into smaller sections to aid in programming. Individual options within the sections allow you to choose to make the option setting apply Globally for all stations or apply to the Local station only. *(Available at v1.0.45 and later.)*
4. A search bar is provided at the top header bar of each option category. When you type in a search criterion, only the options that contain the specified criteria within the chosen category will display. *(Available at v1.1.45 and later.)*

KP/KV Option

PRINT ON KP

You can determine the content of each kitchen printer chit. For each option listed, check the option to add to the kitchen print, uncheck the option to not print on the kitchen printer.

- PRINT TOTAL AMOUNT ON KP**
- PRINT SEAT # ON KP**
- PRINT PLU CODE ON KP**
- PRINT PLU PRICE ON KP**
- PRINT NUMBER OF ITEM ON KP**
- ALPHA TEXT**
- PRINT CONDIMENT QUANTITY ON KP**
- PRINT CONDIMENT ITEMS ON ONE LINE**
- PRINT DEVICE MAPPING DESCRIPTION ON KP**
- PRINT DESTINATION DESCRIPTION (*Added at v1.0.77*)**
 - Select: TOP or BOTTOM

SEND ON KP/KV

PRINT VOIDED ITEM AT KP/KV

If selected, then transaction void orders will not print or display at the appropriate printer/screen.

PRINT ORDER ON KP AT SUBTOTAL

Select if you wish to send/print items on the KP when the subtotal key is pressed, instead of when the sale is finalized.

PRINT ORDER ON KV AT SUBTOTAL

Select if you wish to send items to the KVS when the subtotal key is pressed, instead of when the sale is finalized.

ENABLE SAME ITEM CONSOLIDATION ON KP/KV

If selected, for example, if two hamburgers are entered and sent to the printer, they will print as "2 HAMBURGERS", rather than "1 HAMBURGER" and "1 HAMBURGER" on a second line. If condiments are entered, they will be separated and printed below the items.

REALTIME KV

(Not used for KP) Each item will display at the Kitchen Video screen when the next item is entered (one item delay).

SORT /SPLIT

SORT KP BY KP GROUP#

Use this option to create "priority print"; sorting is performed by KP Group Descriptor. For example, if you wish to group appetizers at the beginning of the chit, then entrees next, place appetizers in a kitchen printer with a lower numeric value than the value of the group to which entrees are reported.

SORT KP BY SEAT #

If seat # system is used, items will be sorted at the kitchen printer orders by seat #, for example:

```
[Seat # : 1]
  1 Scrambled Eggs
  1 Coffee
    Cream
[Seat # : 2]
  1 Poached Eggs
  1 Orange Juice
```

SPLIT KP BY KP GROUP#

Select to produce a separate requisition for each KP Group.

SPLIT KP BY KP ITEM

Select to produce a separate requisition for each main item.

ETC

DEFAULT KP PERIOD

KP Periods must be created in the Time Schedule/KP Time Period before you can assign the default KP Period here. Choose NONE for no selection.

KP ORDER#

Choose from: "COMBINE REG#&CONS#" or "GLOBAL ORDER#".

In the case that order number is Combination of the Reg# and the Consecutive#, Sam4POS makes the order# as follows: TERMINAL DESC + REG# & CONSECUTIVE#

*(The Terminal Descriptor and the Register# as programmed in the NETWORK & REVENUE \ TERMINAL & NETWORK)

For example: TERMINAL DESC is **POS-1**, REG# is **0** (not programmed) and CONS# is **1**

The ORDER# would be **POS-1_001**

If REG# is **0** and CONS# is **100**, the ORDER# is **POS-1_001**

If REG# is **1** (programed), ORDER# would be **POS-1_101**

If REG# is **10** (programed), ORDER# would be **POS-1_1001**

The order number goes from **1** to **99** and resets, the first digit is the Register#

DIGIT OF GLOBAL ORDER # (1-8) (Added in v2.0.128)

When KP ORDER# is set for Global Order#, this setting determines the maximum number of digits (1-8) for the order#. For example: when set as 8, the Order# range will be (1 - 99999999).

OF FEEDING LINES AT START OF KP

OF FEEDING LINES AT END OF KP

Enter the number of lines (0-99) you wish to feed the beginning/end of kitchen printer print.

PRINT ITEM FONT SIZE (Added at v1.1.20)

Select font size for items when sent to the KP. Choose from: Small, Medium or Large.

Select if you want to print items sent to the KP in Bold (Double High/Wide).

PRINT DESTINATION FONT SIZE (Added at v1.1.45)

Select font size for the destination when sent to the KP. Choose from: Small, Medium or Large.

PRINT DESTINATION IN BOLD (Added at v1.1.45)

Select if you want to print the destination sent to the KP in Bold (Double High/Wide).

PRINT ITEM ONE LINE

When selected, KP will only print first line of descriptor; extra characters will be cut off.

When not selected, KP will print entire descriptor even if it wraps to second line.

DISPLAY KP ORDER # (Added at v2.0.25)

When selected the KP order # will be displayed in the upper left of the transaction detail in the register mode.

Scanner

To connect Serial scanners with the SAM4POS terminal, program the Device Setting for the COM port to match the scanner settings. Adding serial scanners to the Sam4POS is a two-step process. You will need to set up the scanner in the Device Setting, then assign the scanner to your stations in the Device Mapping.


USB scanners would require no programming in the Device Setting or the Device Mapping. Simply plug in the USB scanner into an available USB port. Be aware that some scanners, such as Code scanners, may require specific scanner configuration to work properly with Sam4POS.

The standard age verification feature will accept scanned data when the prompt for enter birthdate is displayed. The scanner needs to be configured to send the birthdate. *(Requires v2.0.15 or later.)*

A wireless scanner that has a dock and a serial connection to the terminal can be used. The Voyager 1202 will work: <https://www.honeywellaidc.com/products/barcode-scanners/general-duty/voyager-1200g-1202g>

Note: Code Scanners require additional set up before using with Sam4POS.

Device Setting: Serial Scanner

1. From the **PROGRAM MODE** main menu selection screen select **DEVICE** to view the Device menu selection dialog, then select **DEVICE SETTING**. Choose **SCANNER** from the device selection list.
2. Press the **Add Record icon**  to add a new scanner. The Add New Scanner dialog displays:
 - **Input Description** – Type a descriptor (*up to 30 characters*) for the new.
 - **Select Device Model \ Communication Type** – Select General Scanner from the drop-down list \ choose Serial for the communication type.
 - **SERIAL** – Program the serial settings to match the scanner settings.
3. Press **OK** to complete the device setting for the scanner or press **OK AND CONTINUE** to add another scanner. Pressing **CANCEL** will exit without adding devices.
4. The new scanner will be added to the list. Verify the parameters for each scanner; See all the Scanner Parameter Settings below.

Scanner Parameter Settings

GENERAL

DEVICE MODEL
General Scanner

COMMUNICATION TYPE
Serial

SERIAL

COM PORT

COM1 thru COM4
/dev/ttyUSB0 – Only available when a USB to RS-232 converter is connected to the terminal.

BAUD RATE

1200, 2400, 9600, 19200, 38400, 57600, 115200

DATA BITS

7 or 8

PARITY

NONE, EVEN, ODD

STOP BITS


1 or 2

FLOW CONTROL

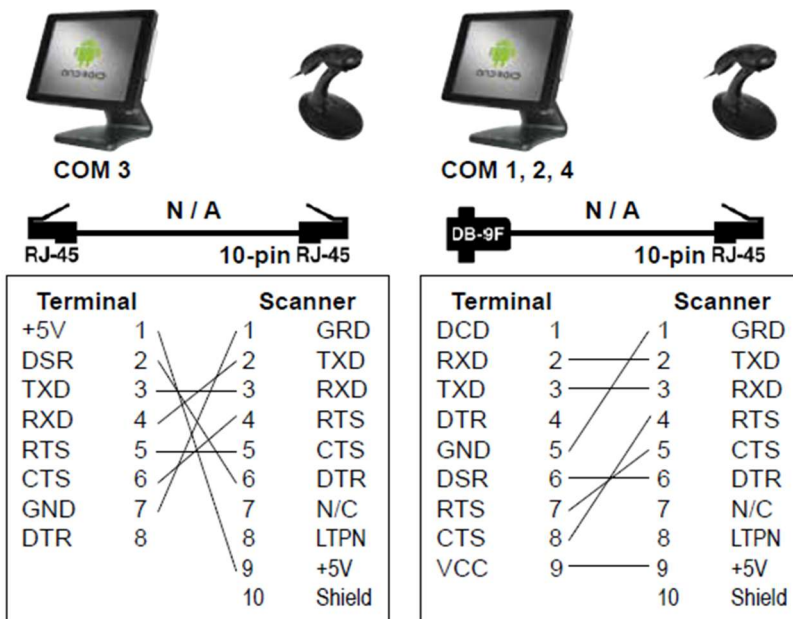
NONE, XON_XOFF (S/W), RTS_DTS (H/W)

Device Mapping: Scanner

The Device Mapping programming area is used to assign which Printers will be used on the various stations in the Sam4POS system.

1. From the **Program Mode/Device** menu, select **DEVICE MAPPING** from the available selections. Choose **SCANNER** from the selection list to map the scanner to the station(s).
2. Tap the desired station from the list in the center column to assign a Scanner to.
3. Press the **NEW** button (bottom right column) to assign a Scanner to the selected station. The NEW item dialog displays:
 - **INPUT DESCRIPTION:** Type a descriptor for the new scanner (up to 30 characters).
 - **SELECT DEVICE:** Chose General Scanner from the list of available devices.
4. Press **OK** to complete the mapping for the scanner or press **OK AND CONTINUE** to map additional scanners. Press **CANCEL** if you want to exit without mapping the device.
5. Your mapped devices will display; You can use the buttons at the bottom of the mapping screen to edit existing mapped devices.
 - **GOTO** – Brings up the Device Setting programming.
 - **NEW** – Used to add new or additional scanners to the selected station.
 - **EDIT** – Allows changes to the scanner descriptor & device selection.
 - **DELETE** – Will delete the selected device assignment.
6. Press the back-arrow icon  to close and exit the device mapping.

Cable



Line Display

Adding a 2-line VFD display to the Sam4POS is a two-step process. You will need to add the line display to be utilized in the system in Device Setting (*integrated VFD customer display or external Pole Display*), then assign the line display to each station in the system in the Device Mapping.

- The Line Display interface can be Serial or USB.
 - The USB interface for line displays is restricted to Sam4s USB Line Displays.
- The COM Port voltage for serial interface 2-line displays should be set to 5V.
 - Refer to the “COM Port Voltage Setting” chapter on page 117 in the appendix for voltage setting information for your model terminal.

Sapphire A60/A70 – Cabinet Mounted Line Display Connects to the rear display mount.

- The cabinet mounted USB 9mm LCD 2 Lines x 20 Characters. (**Item # 503347**)

SAP-630 terminals – Have a built in “Internal Line Display, there is no other “Cabinet Mounted” line display.

- The Internal Line Display cannot be edited or deleted from Device Setting. However, you will still need to use the Device Mapping to Map this display to your SAP-630 station.

SAP-6600(II) terminals – Will require the Dual Bracket (**Item #: 503338**) for the Cabinet Mounted Line Displays.

Cabinet Mounted Line Display

- The Cabinet Mounted Sam4s USB VFD 2-line Line Display. (**Item #: 503132-USB**)
 - Will set up as a serial device: (115200 baud, Parity = None, 8 data bits, 1 stop bit).
- The Cabinet Mounted Sam4s Serial VFD 2-line Line Display RJ-45 connection. (**Item #: 503335**)
 - Will set up as a serial device: (115200 baud, Parity = None, 8 data bits, 1 stop bit).

External Line Display

- The External Sam4s VFD 2-line USB Pole Display (**Item #: 503010**) is set up as a USB device.
- The External Sam4s VFD 2-line Serial Pole Display (**Item #: 50300**) is set up as a serial device:
 - (9600 baud, 8 data bits, No Parity, 1 stop bit).
 - Verify communication settings: settings are displayed when power is applied to the VFD.

Line Display Description

The message that scrolls across the Line Display can be edited from:

PROGRAM MODE > OPTIONS > OPTIONS > GENERAL OPTIONS > ETC:



- **Line Display Description** – Custom message for *external line displays*:
 - Two message lines with up to 20 characters per line.
- **Internal Line Display Description** – Custom message for *Cabinet Mounted & integrated line displays*:
 - Two message lines with up to 16 characters per line.

You can view a video showing the installation of a VFD display, 10” display, and 15” display on the Sapphire terminals here:

[SAM4s SAPPHIRE \(700/710/A60/A70\) Terminals Rear Display Installation \(VFD/10"/15" Displays\)](#)

YouTube Video link for Installing the Rear VFD on SAP-6600: [Installing the Rear VFD on the SAP 6600 - YouTube](#)
For **Rear LCD Monitor** set up, refer to the **Dual Monitor Installation** chapter on page 89 for details.

Device Setting: Line Display

1. From the **PROGRAM MODE** main menu selection screen select **DEVICE** to view the Device menu selection dialog, then select **DEVICE SETTING**. Choose **LINE DISPLAY** from the device selection list.
2. Press the **Add Record icon**  to add a new Line Display; The Add New Line Display dialog displays:
 - **Input Description** – Type a descriptor (*up to 30 characters*) for the new Line Display.
 - **Select Device Model** – Select the appropriate line display model from the drop-down list.
 - SAM4S CDP
 - ML700
3. Press **OK** to complete the device setting for the line display or press **OK AND CONTINUE** to add another scanner. Pressing **CANCEL** will exit without adding devices.
4. The line display will be added to the list. Verify the parameters for each line display.
 - Device Model and Communication Type.
 - Serial or USB settings as required.
5. When the line display is set up, you can press the **Menu Icon**  and select **TEST** from the sub menu selections to verify the terminal communicates with the Line Display. **** TEST OK **** will display on the line display.

Line Display Parameter Settings

GENERAL

DEVICE MODEL

SAM4S CDP, SAM4S ML700

COMMUNICATION TYPE

Serial, USB

SERIAL

COM PORT

COM1 thru COM4

/dev/ttyUSB0 – Only available when a USB to RS-232 converter is connected to the terminal.

BAUD RATE

1200, 2400, 9600, 19200, 38400, 57600,
115200

PARITY

NONE, EVEN, ODD

DATA BITS

7 or 8

STOP BITS

1 or 2

FLOW CONTROL

NONE, XON_XOFF (S/W), RTS_DTS
(H/W)

USB

DEVICE MODEL

SAM4S CDP (/dev/tty/ACM0/1)

Device Mapping: Line Display

The Device Mapping programming area is used to assign the Line Display to the various stations in the Sam4POS system.

1. From the **Program Mode/Device** menu, select **DEVICE MAPPING** from the available selections. Choose **LINE DISPLAY** from the selection list to map a line display to the station(s).
2. Select the desired station from the list in the center column you want to assign a Line Display to.
3. Press the **NEW** button (bottom right column) to assign a Line Display to the selected station. The **NEW** item dialog displays:
 - a. **INPUT DESCRIPTION:** Type a descriptor for the Line Display (up to 30 characters).
 - b. **SELECT DEVICE:** Chose correct Line Display model from the list of available devices.
4. Press **OK** to complete the mapping for the line display or press **OK AND CONTINUE** to map additional line displays. Press **CANCEL** if you want to exit without mapping the device.
5. Your mapped devices will display; You can use the buttons at the bottom of the mapping screen to edit existing mapped devices.
 - **GOTO** – Brings up the Device Setting programming.
 - **NEW** – To add additional devices.
 - **EDIT** – Allows changes to the descriptor & device selection.
 - **DELETE** – Will delete the selected device assignment.
6. Press the back-arrow icon (*upper left of screen*) to close and exit the device mapping.

Options

Only the options related to the Line Display are shown here. Refer the Sam4POS Programming Manual for the complete list of options & definitions.

1. From the **PROGRAM MODE** select **OPTIONS** then select **OPTIONS** from the category menu selections. The list of option categories is displayed.
2. Line Display options can be found in the **GENERAL OPTION** category.

General Option

General Options related to Line-Display.

ETC

LINE DISPLAY DESCRIPTION (Added at v1.0.63)

Program a custom message (two lines, with up to 20 characters per line) to show on a connected **external 2-line VFD display**.

INTERNAL LINE DISPLAY DESCRIPTION (Added at v2.0.17)

This setting is used only on the SAP-630/SAP-530 terminals. Program a custom message (two lines, with up to 16 characters per line) to show on the **integrated customer 2-line VFD Pole Display**.

SECONDS TO DISPLAY TOTAL/CHANGE (0:ALWAYS) ON POLE DISPLAY (Added at v1.1.53)

This setting determines how long the data is displayed on a remote pole display. Allowable settings are from 0 to 99 seconds.

DISPLAY A RUNNING SUBTOTAL ON POLE DISPLAY

Allows the rear customer pole display to show a running subtotal as items are registered.

Other Display Devices

ML700 Graphic Pole Display

The ML700 has been discontinued. If you have an ML700 Graphic Pole Display, you can connect the device to an available serial port on the Sam4POS terminal. Match the Device Settings to the settings on the ML700. Then map the ML700 to the station in the Device Mapping.

Order Confirmation Board

Sam4POS does not have direct integration with any Order Confirmation Board, but any of the leading OCB models should be able to interface with the Sam4POS when set up as an Epson Line Display.

Text Inserter

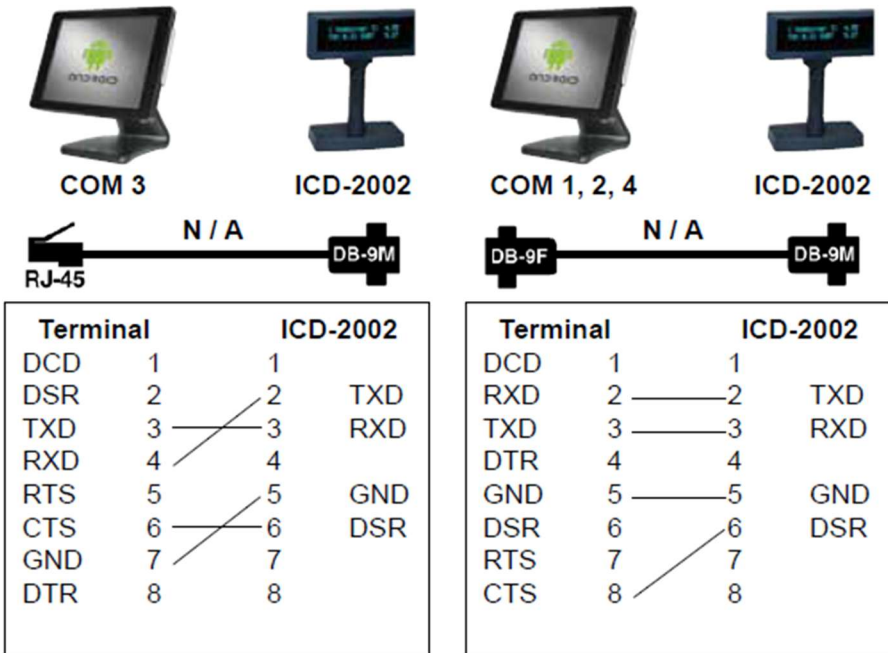
A Text Inserter or DVR can be connected to Sam4POS, refer to the “Text Inserter” chapter on page 80 for details.

Dual Monitor

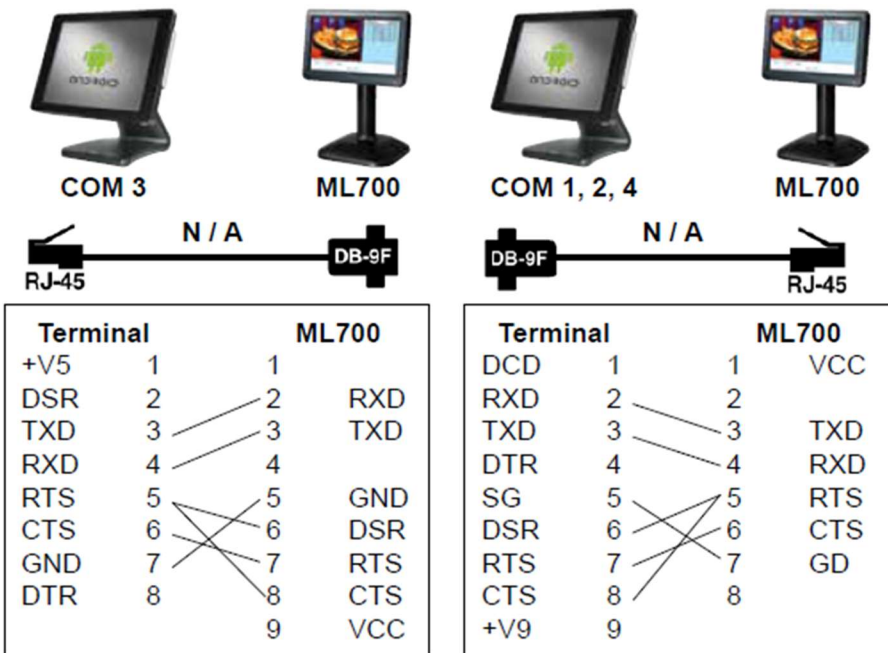
Configuration support for the optional integrated 9.7-inch and 15-inch rear LCD customer display for the Sam4POS application is available for the SAP-6600(II) terminals only. Refer to the “Dual Monitor Installation” chapter on page 89 for details.

Cables

ICD-2002



ML700



Scale

When selling Scale and/or Auto-Scale items use this selection to set up an approved scale for weighted items. The Sam4POS only supports a serial interface for scales. You will need to add the scale to be utilized with the system in Device Setting, then assign the scale to your station in the Device Mapping.

Important: You can have only one scale on the terminal. You must use the same port on all stations for the scale with multiple terminals in IRC as per a Weights and Measures ruling to monitor the scale port.

The “OZ” Device Model setting supports scales which are capable of weighing in ounces (rather than pounds). If weighing by ounces, the price per ounce must be preset in the PLU price. The scale will weigh in ounces and compute the correct price per ounce. The Scale function key must also be set for OZ.

You must add your scale items to be used with the sale. Sam4POS is certified for weights up to 60lbs; the maximum readable weight is 99.999.

The Datalogic Magellan device model selection requires Sam4POS v2.0.37 or later and provides support for the Datalogic Magellan Scanner\Scale combos. Datalogic Magellan Scale\Scanner combo models 9300\9400\9800 can interface with Sam4pos. Separate serial connections are required for the scale and scanner interface.

Note: Cable pinouts vary depending on the scale model, Refer to the *Cable_Catalog_SAP-630* and the *Cable_Catalog_SAP-6600* for cable pinouts and part numbers for peripheral devices.

Requirements

- NCI Compatible Scale – Set as Type 4 (ECR\POS)
- Serial Interface Cable

Required Programming


- Device Programming
 - Device Setting & Device Mapping
- PLU Programming
 - PLU Status Group & PLU
- Function Key
 - Scale

Optional Programming

- Options
 - Options > General Option
 - Tare Weight

Device Setting: Scale

You can only have one scale on each terminal. Use the same port on all stations for the scale with multiple terminals in IRC as per a Weights and Measures ruling to monitor the scale port.

1. From the **PROGRAM MODE** main menu selection screen select **DEVICE** to view the Device menu selection dialog, then select **DEVICE SETTING**. Choose **SCALE** from the device selection list.
2. Press the **Add Record icon**  to add a new Scale; The Add New Scale dialog displays:
 - **Input Description** – Type a descriptor (*up to 30 characters*) for the new Scale.
 - **Select Device Model** – Select the appropriate Scale model from the drop-down list.
3. Press **OK** to complete the device setting for the Scale or press **OK AND CONTINUE** to add another scanner. Pressing **CANCEL** will exit without adding devices.
4. The Scale will be added to the list. Verify the parameters for each Scale.

GENERAL

Device Model = Datalogic, Magellan, NCI, OZ, or CAS (*CAS is typically not used*)
Communication Type = Serial

SERIAL

COM Port = Select port where Scale is connected
Baud Rate = 9600
Data Bits = 7
Parity = Even
Stop Bit = 1
Flow Control = None

Scale Parameter Settings

GENERAL

DEVICE MODEL
NCI, CAS, OZ, Datalogic Magellan, Magellan
CAS C1200 10B, CAS C1200 18B, CAS C1200 22B

COMMUNICATION TYPE
Serial

SERIAL

COM PORT
COM1 thru COM4
/dev/ttyUSB0 – Only available when a USB to RS-232 converter is connected to the terminal.

BAUD RATE
1200, 2400, **9600**, 19200, 38400, 57600, 115200

DATA BITS
7 or 8

PARITY
NONE, EVEN, ODD

STOP BITS
1 or 2

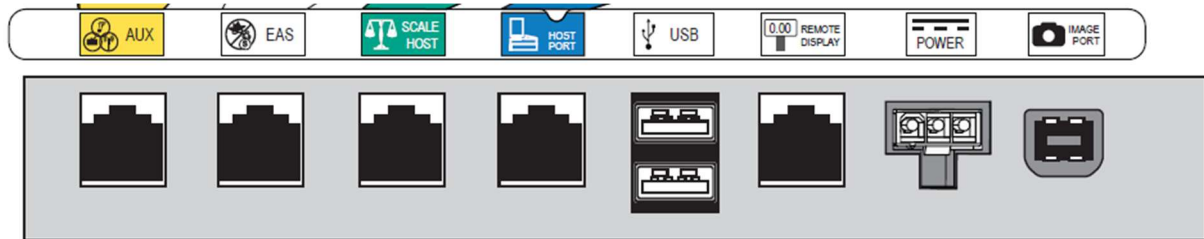
FLOW CONTROL
NONE, XON_XOFF (S/W), RTS_DTS (H/W)

Datalogic Magellan Scale\Scanner Device Setting

The Datalogic Magellan Scale\Scanner combo requires two separate serial ports on the Sam4pos. The cable configuration for the scale and the scanner are the same. When purchasing, dealers will need to order the 2 cable RS232 version of the scale.

The Scale cable plugs into the green Scale Host Port; The Scanner plugs into the Blue Host Port Connection.

- **Serial port settings for the Scale are:** baud rate **9600**, data bits **7**, parity **EVEN**, stop bit **1**
- **Serial port settings for the Scanner are:** baud rate **9600**, data bits **8**, parity **NONE**, stop bit **1**



Device Mapping: Scale



The Device Mapping programming area is used to assign the Scale to the various stations in the Sam4POS system.

1. From the **Program Mode/Device** menu, select **DEVICE MAPPING** from the available selections. Choose **SCALE** from the selection list to map a Scale to the station(s).
2. Select the desired station from the list in the center column you want to assign a Scale to.
3. Press the **NEW** button (bottom right column) to assign a Scale to the selected station. The NEW item dialog displays:
 - a. **INPUT DESCRIPTION:** Type a descriptor for the Scale (up to 30 characters).
 - b. **SELECT DEVICE:** Chose correct Scale model from the list of available devices.
4. Press **OK** to complete the mapping for the Scale or press **OK AND CONTINUE** to map additional Scales. Press **CANCEL** if you want to exit without mapping the device.
5. Your mapped devices will display; You can use the buttons at the bottom of the mapping screen to edit existing mapped devices.
 - **GOTO** – Brings up the Device Setting programming.
 - **NEW** – To add a scale to the station.
Note: Once a scale has been added to the station, the NEW button is grayed out. This is because you can only have one scale assigned to a station.
 - **EDIT** – Allows changes to the descriptor & device selection.
 - **DELETE** – Will delete the selected device assignment.
6. Press the back-arrow icon (*upper left of screen*) to close and exit the device mapping.

PLU Status Group Programming

Only the PLU Status Group programming related to Scale items is shown here. Refer the Sam4POS Programming Manual for the complete list of PLU Status Group programming options & definitions.

After programming the PLU Status Groups you will need to assign the appropriate PLU Status Group to the PLUs you want to be scale items.

1. From the **PROGRAM MODE** touch **PLU** to view the PLU program selection window, touch **PLU STATUS GROUP** to view the PLU status group options.
2. All existing PLU Status Groups are listed. You can edit an existing PLU Status Groups by scrolling through the list to the specific item you wish to edit.
3. If you have a large list, you can sort the status groups in the list alphabetically. Touch the Menu icon  on the PLU Status Group programming screen.
4. Select **SORT** from the available selections. Choose to sort A TO Z, Z TO A.
5. To enter a **NEW PLU STATUS GROUP** into the database, press the **Add New Item icon**  or, you can select an existing status group to copy by pressing and holding the status group.
6. Type the descriptor in the INPUT DESCRIPTION field. Press **OK** to go on to the option programming. Press **OK AND CONTINUE** to add another PLU. Press **CANCEL** to exit without adding the new PLU Status Group.
7. You can delete/edit the descriptor for an existing PLU Status Group by pressing the **X** at the end of the descriptor field and type in a new descriptor.
8. After a PLU Status Group is selected, the programming options are displayed. Scroll through the options and edit as necessary.

PLU Status Group Definitions

DESCRIPTION

Type a description for the status group pressing the **X** will delete the current description and allow you to type a new description.

GENERAL

SCALE

Select **NONE** if no scale needed to register this item, **AUTO SCALE** if you wish to multiply items reporting to this group by a weight from a scale connected to the register, or **OPEN SCALE** which requires pressing the **SCALE** key to enter scale weights.

AUTO TARE

If selected, the tare # indicated here will automatically subtract from the weight from the scale.

- See “Function Key” programming for the **SCALE** key to require tare weights.
- See “Options > Tare Weight” programming to set the individual Tare weights.

Function Key

Scale

Used to manually enter the SCALE weight when a remote scale is used.

GENERAL

Manager Required? – Operation requires input of manager password to complete operation.

MANUAL ENTRY

Allow Manual Entry Of Weight – Select this option for scale operation when scale is not interfaced with the register. Note: You cannot have a scale programmed in Device Setting to use manual entry of weight.

Weight Symbol For Manual Entry – Choose the appropriate weight symbol to be used with this key when manual entry is utilized.

TARE ENTRY

Allow Tare Weight Entry – A tare is the amount of weight accounted for by the container or packaging. By entering a tare weight (as required by law in some areas) the weight of the container is subtracted and only the true weight of the product is measured on the scale.

Tare Entry Is Compulsory – When checked, a Tare Weight must be entered on scale operations.

Allow Manual Entry Of Tare – Select this option only if you want to manually enter a Tare Weight.

Options

Options programming is used to define the most fundamental parameters of the register system. Options are separated into easily identifiable categories to simplify finding specific options.

Only the options related to the Scale items are shown here. Refer the Sam4POS Programming Manual for the complete list of options & definitions.

1. From the **PROGRAM MODE** select **OPTIONS** then select **OPTIONS** from the category menu selections. The list of option categories is displayed.
2. Scale related options can be found in the **GENERAL OPTION** category.

General Option

Scale related General Option settings.

SALE

PRINT CURRENCY SYMBOL ON SCALE PRICE

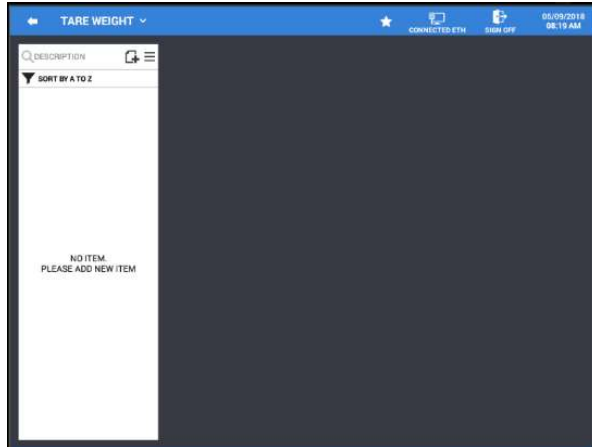
When selected, the programmed currency symbol will print along with the item price on scale items.


Tare Weight

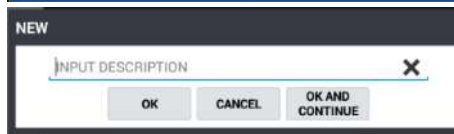
A tare is the amount of weight accounted for by the container or packaging. By entering a tare weight (as required by law in some areas) the weight of the container is subtracted and only the true weight of the product is measured on the scale.

The Tare Weight can be entered manually or, if set in the PLU Status Group Programming, the tare can automatically be applied when the product is registered.

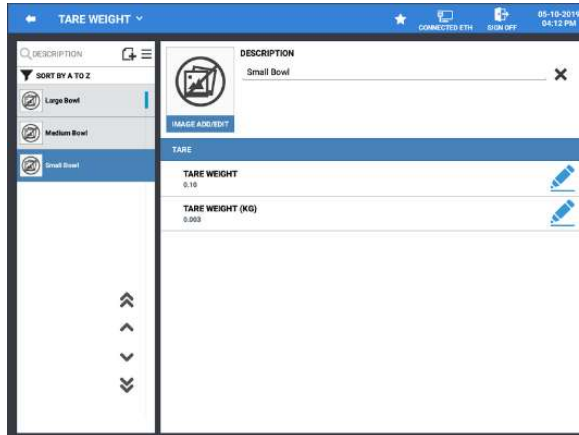
1. From the **PROGRAM MODE** touch **OPTIONS**, then select **TARE WEIGHT** to view the Tare Weight programming.




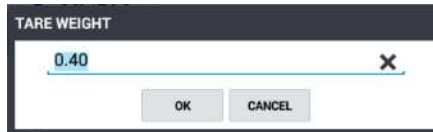
2. Touch the **Add** icon  to add a new tare weight, the **NEW** item entry dialog displays.



3. Input a description (*up to 30 characters*) for the new tare weight and press **OK** to add the tare or press **OK AND CONTINUE** to create additional tares. **CANCEL** will exit without adding the tare. You can use the **X** at the end of the descriptor field to clear the current descriptor.



4. Select a tare from the list, touch the  pencil icon to enter/edit the tare weight. You can use the **X** at the end of the Tare Weight field to clear the current Tare.
5. Press **OK** or the Done key on the keypad to enter the tare.



Registering Scale Items

The Sam4POS allows for registration of scale weighted items. Scale items may be registered manually by entering the item's weight and pressing using the **SCALE** function key. Scale items could also be set to automatically get the scale weight and register the item.

Direct Scale Entry

Scale integrated with Sam4pos terminal.

1. Place the item on the scale.
2. Touch the **SCALE** key to display the weight.
3. Register the open or preset Scalable PLU.

Manual Weight Entry

Scale is not integrated with Sam4pos terminal.

Note: There cannot be a scale programmed in the Device Setting to use manual weight entry.

1. Enter the weight using the decimal key.
2. Touch the **SCALE** key to display the weight.
3. Enter the price if for open price Scalable PLU.
4. Register the Scalable PLU.

Auto Scale Item Entry

1. Place the item on the scale.
2. Touch the **Auto-Scale PLU** item on the touch screen or real-keyboard.

Tare Weight

A tare is the amount of weight accounted for by the container or packaging. By entering a tare weight (as required by law in some areas) the weight of the container is subtracted and only the true weight of the product is measured on the scale. A Tare Weight can be selected and applied to a scalable PLU (not Auto-scale) or a specific Tare can be applied automatically by setting the Auto-Tare in the PLU Status Group for scale items.

Tare weights are programmed in:

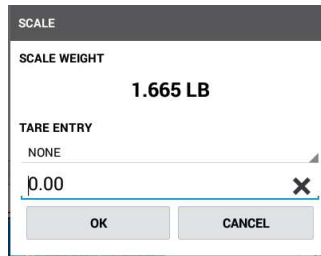
Program Mode** → **Options** → **Tare Weight

Auto Tare Weight

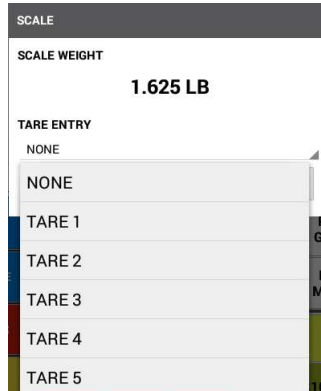
1. Place the item in the container on the scale.
2. Touch the **SCALE** key to display the weight.
3. Register the open or preset Scalable PLU.
4. The PLU is registered (*minus the weight of the Tare*).

Manual Tare Weight Entry

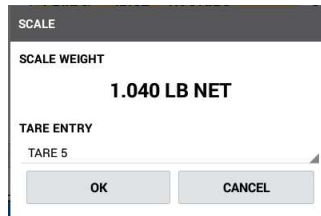
1. Place the item in the container on the scale.
2. Touch the **SCALE** key to display the weight.



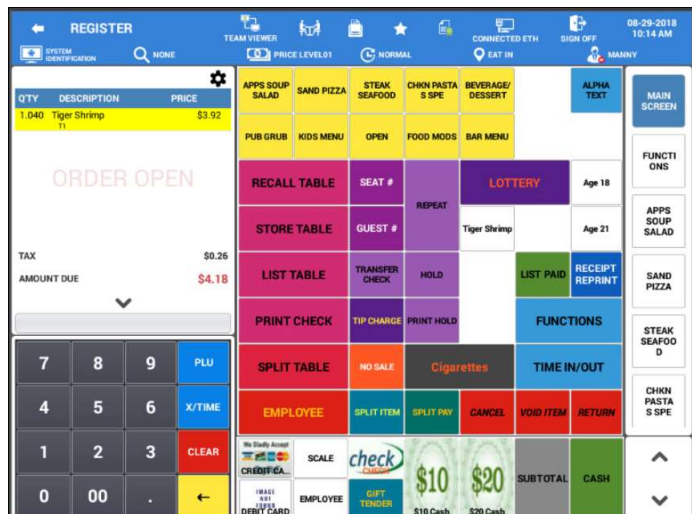
3. Touch the **TARE ENTRY** drop down:



4. Select the appropriate Tare from the list, the weight displays minus the tare:
5. Press **OK**.

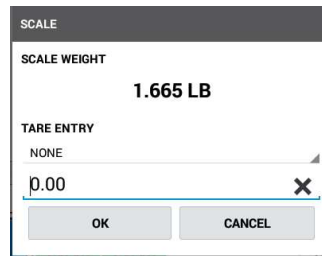


6. Register the open or preset scalable PLU; the item is added to the sale.

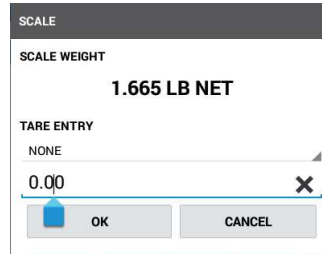


Open Tare Weight Entry

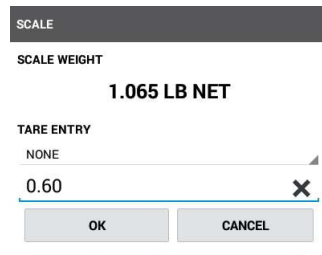
1. Place the item in the container on the scale.
2. Touch the **SCALE** key; the weight is displayed:



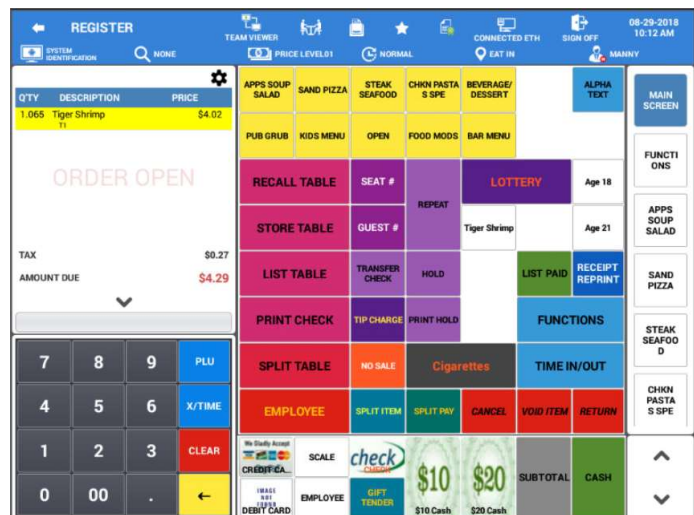
3. Touch the Open **TARE ENTRY** field. Place the cursor to the right of the digit you want to enter.



4. Enter the Tare weight. Note that the weight displays minus the tare weight entered.
5. Touch **OK**:



6. Register the open or preset scalable PLU; the item is added to the sale.

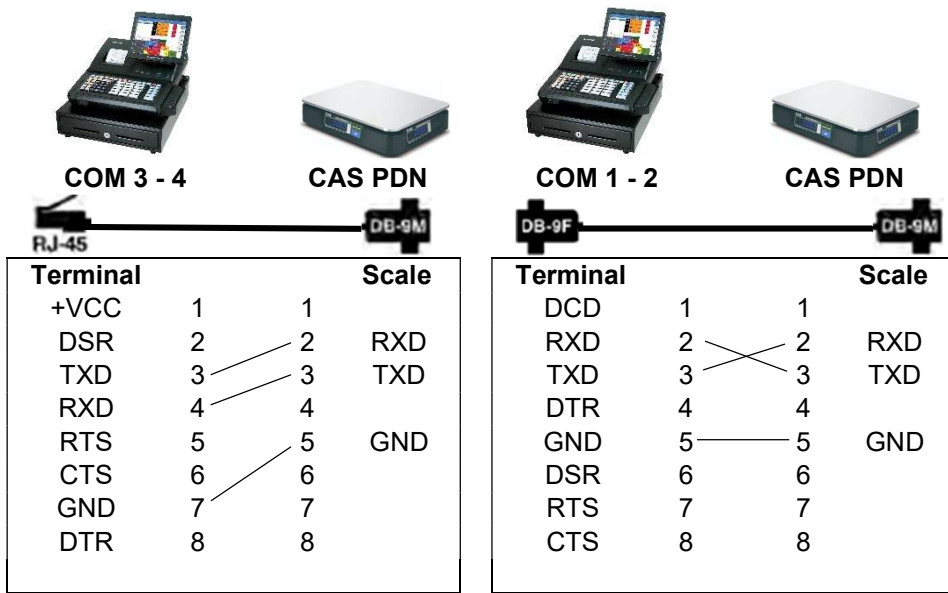


Scale Cables

Note: Cable pinouts vary depending on the scale model, Refer to the *Cable_Catalog_SAP-630* & *Cable_Catalog_SAP-6600* for cable pinouts and part numbers for peripheral devices.

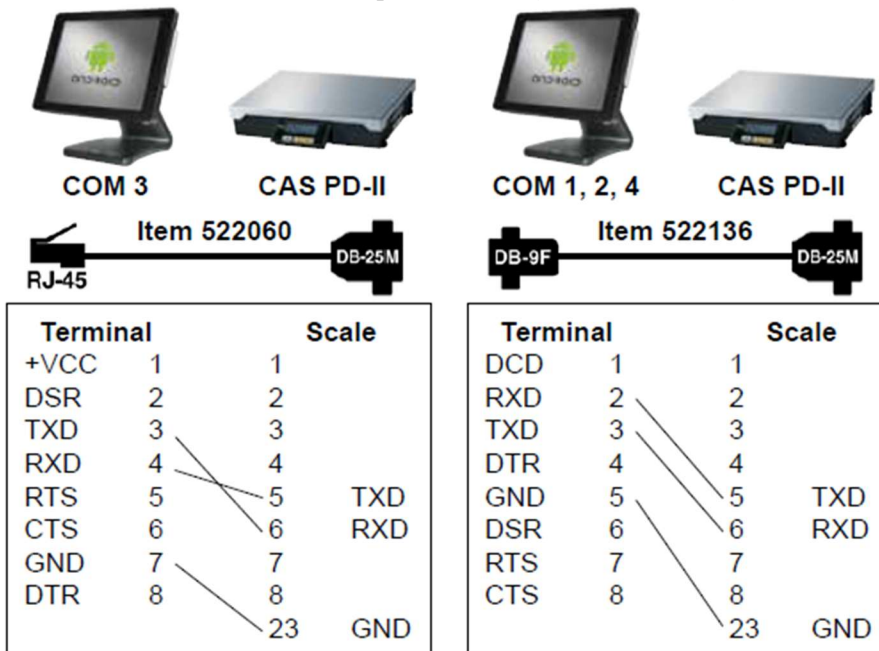
CAS PDN

CAS PDN Scale interface cable CRS part #522160.



CAS PD-II

CAS PD-II Scale PC Interface cable CRS part #522143 (*DB9F to DB25M*) can also be used.



CAS SW Series

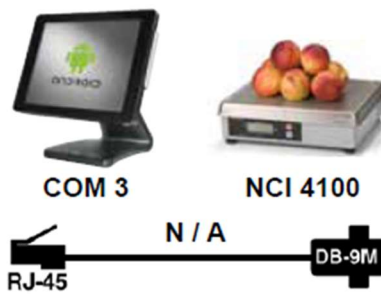


Terminal		Scale	
DCD	1	1	
DSR	2	2	TXD
TXD	3	3	RXD
RXD	4	4	
RTS	5	5	
CTS	6	6	
GND	7	7	GND
DTR	8	8	

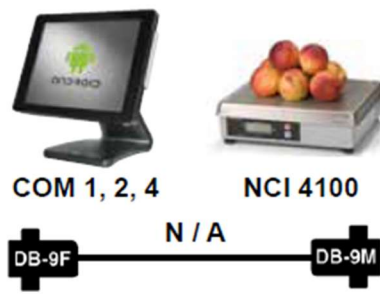


Terminal		Scale	
DCD	1	1	
RXD	2	2	TXD
TXD	3	3	RXD
DTR	4	4	
GND	5	5	
DSR	6	6	
RTS	7	7	GND
CTS	8	8	
VCC	9	9	

NCI - 4100

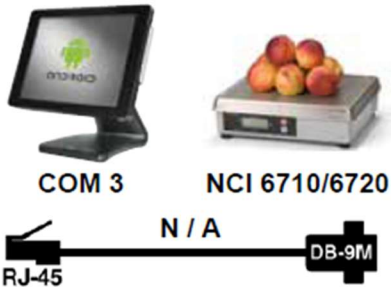


Terminal		Scale	
+VCC	1	1	GND
DSR	2	2	
TXD	3	3	TXD
RXD	4	4	
RTS	5	5	
CTS	6	6	
GND	7	7	
DTR	8	8	
		9	RXD



Terminal		Scale	
DCD	1	1	GND
RXD	2	2	
TXD	3	3	TXD
DTR	4	4	
GND	5	5	
DSR	6	6	
RTS	7	7	
CTS	8	8	
		9	RXD

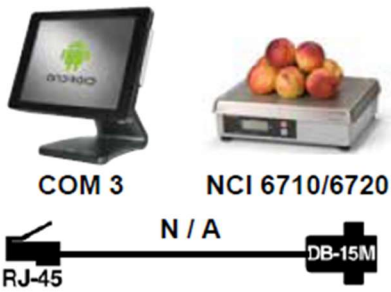
NCI – 6710/6720



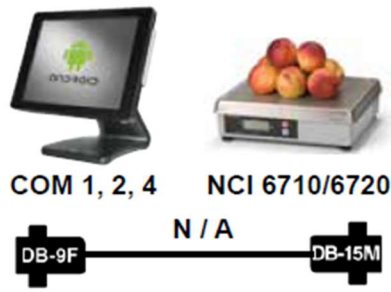
Terminal		Scale	
DCD	1	1	
DSR	2	2	TXD
TXD	3	3	RXD
RXD	4	4	
RTS	5	5	GND
CTS	6	6	
GND	7	7	
DTR	8	8	



Terminal		Scale	
DCD	1	1	
RXD	2	2	TXD
TXD	3	3	RXD
DTR	4	4	
GND	5	5	GND
DSR	6	6	
RTS	7	7	
CTS	8	8	
ShieldFR		9	

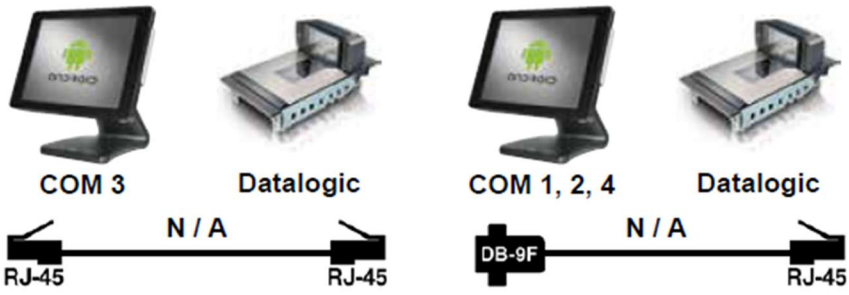


Terminal		Scale	
DCD	1	1	RXD
DSR	2	2	TXD
TXD	3	3	GND
RXD	4	4	
RTS	5	5	
CTS	6	6	
GND	7	7	
DTR	8	8	



Terminal		Scale	
DCD	1	1	RXD
RXD	2	2	TXD
TXD	3	3	GND
DTR	4	4	
GND	5	5	
DSR	6	6	
RTS	7	7	
CTS	8	8	
ShieldFR		9	

Datalogic Magellan 9xxxI Scale/Scanner



Terminal	Host Scale Host Port
5 V 1	1 CTS
CTS 2	2 NC
TXD 3	3 RTS
RXD 4	4 RXD
NC 5	5 TXD
NC 6	6 NC
GND 7	7 NC
RTS 8	8 GND

Terminal	Host Scale Host Port
NC 1	1 CTS
RXD 2	2 NC
TXD 3	3 RTS
DTR 4	4 RXD
GND 5	5 TXD
DSR 6	6 NC
RTS 7	7 NC
CTS 8	8 NC
5 V 9	8 GND

Scale Settings

The scale must emulate NCI to interface to the Sam4s SPS-300 Series ECR's. Most commonly this is a Type 4 (ECR/POS) setting on the scale.

Detecto Scale

Contact Detecto or refer to the Setup Guide for set up details.

CAS PDN

Example: USB ECR Type 4 Setting, RS232 ECR Type 4 Setting.

1. Make sure that power is **OFF**.
2. While pressing the [**ZERO**] key turn on the power; the display will show "**U SET**".
3. Press the [**ZERO**] and then current USB ECR type is shown on the display as "**typ 6**".
4. Press the [**TARE**] key until the display shows "**TYP 4**".
5. Press the [**ZERO**] key to save current ECR type; the display will show "**rECR**".
6. Press the [**ZERO**] and then current RS232 ECR type is shown on the display as "**typ 6**".
7. Press the [**TARE**] key until the display shows "**TYP 4**".
8. Press the [**ZERO**] key again. *<scale will count down>*

CAS SW Series

1. Make sure that power is **OFF**.
2. While pressing the [**ZERO**] key turn on the power; the display will show "**U SET**".
3. Press the [**ZERO**] and then current ECR type is shown on the display as "**TYP 6**".
4. Press the [**TARE**] key until the display shows "**TYP 4**".
5. Press the [**ZERO**] key to save current ECR type; the display will show "**AP OF**".
6. Press the [**ZERO**] key again. *<scale will count down>*

CAS PD-II

1. Make sure the power is **OFF** on the scale.
2. While pressing the "**#**" key, power **ON** the scale. "**EcrSet**" is shown in the display and then the current the current ECR type is shown on the display as "**Type-2**".
3. To change to Type 4, press the "*****" key (**lb / oz** key) until the display shows "**Type-4**".
4. To save the current ECR Type setting, press the **ZERO** key.

CAS PD-1

For Sam4s ECR's

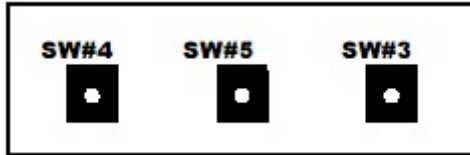
CAPA = 2 (30 lbs)

UNIT = 1 (lbs)

TYPE = 4 (NCI ECR RS-232)

CAS PD-1 CAL MODE OPTION Setting

1. Make sure that the scale is **OFF**. Remove the **Platter**; Remove the **CALIBRATION BOLT** and **Plate** located on the top center front of the scale.
2. After removing the CALIBRATION BOLT and plate you will see 3 black MICRO-SWITCHES.



3. **Press and hold down SW#3**; Turn scale **ON**. The WEIGHT display should flash "CAL" 3 times. **Release SW#3**. By then the display will show "Ad-1".
4. **Place the platter upside down** (with the edges facing up) on the scale platform. Make sure that the platter is pushed back far enough to allow access to all 3 MICRO SWITCHES and forward enough to be able to safely place 30 lb (or 15 kg) on the platter.
5. Make sure that there is nothing on the platter. Press: **SW#3, three times**.
6. After a second the scale will say "**CAPA**" and a number. This number determines the scale's capacity. Using **SW#4** you can select what capacity the scale will be; Select **2** for 30lbs. Once you select your choice press **SW#5** to save the setting.

CAPA #	SETS SCALE CAPACITY TO...
0	6 x 0.002 lb / 3 x 0.001 kg
1	15 x 0.005 lb / 6 x 0.002 kg
2	30 x 0.01 lb / 15 x 0.005 kg

7. The displays will read "**UNIT**" and a number. This number determines the scale's units: (pounds or kilos). Using **SW#4** you can select what unit the scale will use; Select 1 for Pounds (lbs). Once you select your choice press **SW#5** to save your setting.

UNIT #	SETS SCALE UNIT TO...
0	Kilograms (kg)
1	Pounds (lb)

8. The displays will read "**TYPE**" and a number. This number determines the scale's interface type. The scale has 1 Physical Port: it is a 25-pin port. It has 2 logical ports both on the same 25-pin connector: LPT1 & COM1. LPT1 is a Parallel port. COM1 is a serial (RS-232) port. The setting of TYPE changes the output of both the ports. Using **SW#4** you can select what type of interface the scale will use. Select type 4 for NCI ECR RS-232. Once you select your choice press **SW#5** to save your setting.

TYPE #	LPT1 OUTPUTS...	COM1 OUTPUTS...
0	TEC 4 digit 4 Bit Parallel (NEW kg.)	TEC P.O.S. RS-232
1*	TEC 5 digit 4 Bit Parallel (OLD kg.)	TEC P.O.S. RS-232
2	Universal 4 Bit Parallel	TOLEDO 8213 RS-232
3	Universal 4 Bit Parallel	TOLEDO/P.O.S. 8213 Continuous RS-232
4	Universal 4 Bit Parallel	NCI ECR RS-232
5	Universal 4 Bit Parallel	NCI General RS-232

Please use the PD1 Interface Cross Reference Chart.

9. The display will read, “**End**” then flash “**CAL**” 3 times and then it will show “**Ad-1**”.
10. Turn scale **OFF**. Place the platter properly on the platform. Turn the scale **ON**. The scale will do its count up test cycle and then go to **ZERO**.
11. If scale is **OK**:
 - a. Remove platter
 - b. Replace the plate and the CALIBRATION BOLT
 - c. Replace the platter

IF SCALE IS NOT OK, REPEAT STEPS 1 TO 11.

EMV – Integrated Payment

The SAM4POS application only supports EMV enabled devices for integrated payment transactions. There are different EFT Devices that will integrate with Sam4POS, each EFT Device sets up differently.

Please, refer to the appropriate EFT integrated payment supplement for proper set up, Operations and Examples specific to the device you are interfacing with the Sam4POS terminal.

- **DC Direct – Refer to the “Sam4POS DC Direct”** supplement for details. DC Direct integrated payment requires v2.0.148 or later and uses an ethernet interface.
DC Direct embeds payments logic into the PAX Android line of PIN-Pads and to the Ingenico Group Telium TETRA devices to facilitate a direct communication between the integrated payment device and NETePay Hosted™. No Datacap hardware or software is necessary. The POS simply initiates a request through an HTTP or HTTPS POST and DC Direct captures customer cardholder data and securely sends it to Datacap NETePay Hosted platform. PAX devices connect on PORT 8080; Ingenico devices connect on PORT 80.
- **DC Direct Canada – Refer to the “Sam4POS DC Direct Canada”** supplement for details. Install the latest DC Direct Canada compatible Sam4POS application firmware (*v2.0.150 or later*); previous Sam4POS versions will not work with DC Direct Canada.
The Datacap DC Direct Canada embeds payments logic into the PAX A920 Pro Pin-Pad to facilitate a direct communication between the integrated payment device and NETePay Hosted™. No Datacap hardware or software is necessary. The POS simply initiates a request through an HTTP or HTTPS POST and DC Direct Canada captures customer cardholder data and securely sends it to the Datacap NETePay Hosted platform.
- **Datacap – IPTran-LT or TranServer; Refer to the “Sam4POS EMV-Datacap”** supplement” for details.
The Datacap device connects to the Sam4POS terminal via Serial connection. Sam4POS sends the transaction amount to the Integrated Payment device for credit authorization and Sam4POS waits for a response for approved or declined error message. This supplement outlines the programming necessary for integrated payment integration utilizing the latest EMV enabled Datacap EMV Tran Series integrated payment equipment.
- **Ingenico CRS for EVO-Tetra – Refer to the “Sam4POS EVO-Tetra”** supplement for details.
The EVO-Tetra interface is available at v2.0.14 and later and uses the Device Model: Ingenico CRS. Only the Ethernet interface is supported with the EVO-Tetra. Set the device IP within the IP scheme of the system with the PORT set to 5555.
Video showing the set up for the EVO-Tetra:
<https://www.youtube.com/watch?v=-vdqy5HYzKI&list=PLtF-h-a37jHmbhGgLO3nB76hP-avFSW29&index=25>
Beginning at v2.0.25; when using the EVO-Tetra EFT interface (*Ingenico CRS*), the customer name will print on the credit card slip.

Device

EFT Devices must be added in the Device Setting program area before assigning to the stations in the system. After the EFT devices have been added, use the Device Mapping to assign the device to be used at the appropriate station.

Device Setting: EFT

1. From the **PROGRAM MODE** main menu selection screen select **DEVICE** to view the Device menu selection dialog, then select **DEVICE SETTING**. Choose **EFT DEVICE** from the device selection list.
2. Press the **Add Record icon** to add a new EFT Device; The Add New EFT Device dialog displays:
 - **Input Description** – Type a descriptor (up to 30 characters) for the new EFT Device.
 - **Select Device Model** – Select the appropriate EFT Device model from the drop-down list.
3. Press **OK** to complete the device setting for the EFT Device or press **OK AND CONTINUE** to add another scanner. Pressing **CANCEL** will exit without adding devices.
4. The EFT Device will be added to the list. Verify the parameters for each EFT Device; See all the EFT Device Parameter Settings on the next page.

EFT Device Parameter Settings

GENERAL

DEVICE MODEL

DATACAP, DC DIRECT,
DC DIRECT CANADA, INGENICO CRS,
Ingenico NZ, Payment Sense, Verifone ECR C, VL VX

COMMUNICATION TYPE

Serial, Ethernet

SERIAL

COM PORT

COM1 thru COM4
/dev/ttyUSB0 – Only available when a USB to RS-232 converter is connected to the terminal.

BAUD RATE

1200, 2400, 9600, 19200, 38400, 57600, 115200

DATA BITS

7 or 8

PARITY

NONE, EVEN, ODD

STOP BITS

1 or 2

FLOW CONTROL

NONE, XON_XOFF (S/W), RTS_DTS
(H/W)

ETHERNET

IP ADDRESS

Type in the IP of the EFT device. *(IP must be in the same range as Sam4POS system.)*

PORT NUMBER

Type in the PORT number used by the EFT device.

EFT

TERMINAL INFO

(Requires v2.0.123 or later.) Only available when Ingenico CRS (EVO-Tetra) is selected for the Device Model.

Device Mapping: EFT

1. Device Mapping is used to assign the EFT Device to the various stations in the Sam4POS system.
2. From the **Program Mode \ Device** menu, select **DEVICE MAPPING** from the available selections. Choose **EFT** from the selection list to map an EFT Device to the station(s).
3. Select the desired station from the list in the center column you want to assign an EFT Device to.
4. You can use the buttons at the bottom of the mapping screen to edit existing mapped devices.
 - **GOTO** – Brings up the Device Setting programming.
 - **NEW** – To add an EFT Device to the station.
Note: Once an EFT Device has been added to the station, the NEW button is grayed out. This is because you can only have one EFT Device assigned to a station.
 - **EDIT** – Allows changes to the descriptor & device selection.
 - **DELETE** – Will delete the selected device assignment.
5. Press the **NEW** button (bottom right column) to assign an EFT Device to the selected station. The NEW item dialog displays.
 - **INPUT DESCRIPTION:** Type a descriptor for the EFT Device (up to 30 characters).
 - **SELECT DEVICE:** Chose correct EFT Device model from the list of available devices.
6. Press **OK** to complete the mapping for the EFT Device or press **OK AND CONTINUE** to map additional EFT Devices. Press **CANCEL** if you want to exit without mapping the device.
7. Your mapped devices will display.
8. Press the back-arrow icon (*upper left of screen*) to close and exit the device mapping.

EFT Operation

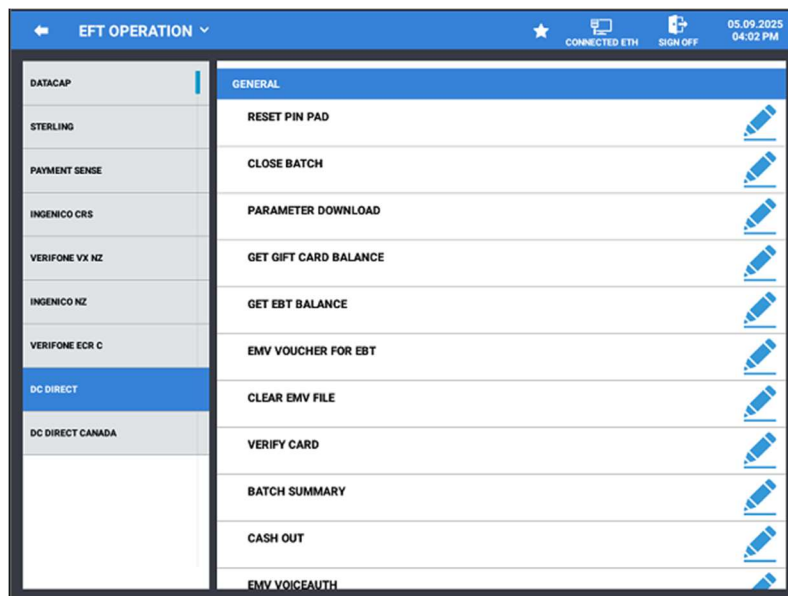
SAM4POS supports integrated credit card processing only with Datacap equipment or with the EVO-Tetra (*Ingenico CRS*) equipment. Integrated credit on Sam4POS uses the EMV protocol only. (*There is no Non-EMV integration.*) Credit Card (*EFT*) maintenance operations can be performed at the SAM4POS terminal from the EFT operations menu or from the EFT function key.

EFT Operation Video: [EFT operations on Sam4POS - YouTube](#)

All interface types are listed on the EFT operation screen, many of these interfaces are not used here in the U.S.A. These unused interface types can be hidden if desired.

See a video of this procedure here: [Hiding Credit Interfaces in Sam4POS - YouTube](#)

1. From the main **PROGRAM MODE** menu, select **DEVICES**, then choose **EFT OPERATION**, from the selections.



2. The **EFT Operation** menu is displayed; The different model EFT devices are listed in the left column. The operations for each model EFT device are displayed in the right column. Choose from the available EFT device selections in the left column..
 - **DATACAP** – Refer to the EMV-Datacap Tran Series supplement for details.
 - **DC DIRECT** – (Requires v2.0.148 or later.) Refer to the EMV-DC Direct supplement for details.
 - **DC DIRECT CANADA** – (Added in v2.0.150) Refer to the EMV-DC Direct Canada supplement for details.
 - **INGENICO CRS** – (Requires v2.0.14 or later.) Refer to the EVO-Tetra supplement for details.
 - **INGENICO NZ** – Not used in the U.S.A.
 - **PAYMENT SENSE** is not used in the U.S.A.
 - **VERIFONE ECR C, VL, and VX** – Not used in the U.S.A.
3. Refer to the Operation Definitions menu below for information on each operation.

Datacap

Refer to the separate EMV Datacap, Supplement for complete set up & operation details.

Operation	Definition
Initialize EFT	Use this function to initialize the Datacap EFT device.
Close Batch	Closes the current batch and opens a new batch.
Void Sales By Record Number Void Return By Record Number	Use these operations to void transactions when the card is not present. CAUTION: These voids will not correct ECR totals (i.e. PLU Sales) but will maintain a total on the Financial Report. <i>(Not available with processor "First Data" Rapid Connect.)</i> Use the Void Mode function at the SAM4POS terminal to perform transaction voids that will correct the appropriate sales totals.
Print Internal EMV File	This prints the internally stored token file that stores the Authorization Response messages that allow the SAM4POS to perform "By Record Number" transactions. Specifically, the Void Transaction by Record Number and Gratuity Entry.
Gratuity Entry	The Gratuity Entry command allows the operator to add a tip to a pre-authorized credit sale. <i>(Not available with processor "First Data" Rapid Connect.)</i>
Post Authorization	If electronic authorization is not approved and the merchant receives voice authorization, the transaction can be entered into the batch with this operation.
Parameter Download	Use this function to get new PIN Pad parameters from Datacap
Get Gift Card Balance	Select Gift Card Balance, the operator will be prompted to slide a gift card. The balance will be printed on the receipt printer
Get EBT Balance	Use to check the EBT food stamp balance
EMV Voucher For EBT	Use to manually enter EBT transactions.
Test Mode	Only used for certification testing.
Self-Initiated Load	Used to load the Datacap EMV device parameters.
Diagnostics	Used to perform various diagnostics. Use as requested by Datacap support.
Clear EMV Value	This clears the internally stored token file that stores the Authorization Response messages that allow the SAM4POS to perform "By Record Number" transactions. Specifically, the Void Transaction by Record Number and Gratuity Entry.
Zero Auth	Use this operation to verify a card is valid, activated, not reported as lost/stolen.
Pin Pad Reset	Use to Initialize\Reset the Pin-Pad connected to the installed Datacap device.
Reprint Batch	Use to reprint previous batch. <i>(Requires v1.0.77 or later.)</i>

DC DIRECT

(DC Direct Requires v2.0.148 or later.)

Refer to the separate Sam4POS EMV Datacap DC-Direct Supplement for complete set up & operation details.

Operation	Definition
Reset Pin Pad	Use to Initialize\Reset the Pin-Pad connected to the installed Datacap device.
Close Batch	Closes the current batch and opens a new batch.
Parameter Download	Use this operation to get new PIN Pad parameters from Datacap
Get Gift Card Balance	Select Get Gift Card Balance, the operator will be prompted to slide a gift card. The balance remaining on the gift card will be printed on the receipt printer
Get EBT Balance	Use to check the EBT food stamp balance on the customers EBT Card. The balance remaining on the EBT card will be printed on the stations receipt printer.

Operation	Definition
EMV Voucher For EBT	Use to manually enter EBT transactions.
Clear EMV Value	This clears the internally stored token file that stores the Authorization Response messages that allow the SAM4POS to perform “By Record Number” transactions. Specifically, the Void Transaction by Record Number and Gratuity Entry.
Verify Card	Use this operation to verify a card is valid, activated, not reported as lost/stolen.
Batch Summary	Prints a Summary report for the current batch.
Cash Out	Allows the customer to receive CASH OUT payment for the remaining balance on a Gift Card.
EMV Voice Auth	If electronic authorization is not approved and the merchant receives voice authorization, the transaction can be entered into the batch with this operation.
EMV Return (Add Balance)	Use to return funds to the customer’s credit card.
Get EBT Cash Balance	Select Get EBT Cash Balance, the operator will be prompted to slide the EBT card. The remaining Cash Balance will be printed on the stations receipt printer.
Gratuity Entry	(Added in v2.0.174) Use to enter gratuity (TIP) amounts. Pop-Up entry for Invoice #, Auth Code and TIP amount.

DC Direct Canada

(Requires v2.0.150 or later.) Used with Datacap DC Direct Canada integrated payment.

Refer to the separate Sam4POS DC DIRECT Canada Supplement for set up & operation details.

Operation	Definition
Reset Pin Pad	Use to Initialize\Reset the Pin-Pad connected to the installed Datacap device.
Close Batch	Closes the current batch and opens a new batch.
Parameter Download	Use this operation to get new PIN Pad parameters from Datacap
Get Gift Card Balance	Select Get Gift Card Balance, the operator will be prompted to slide a gift card. The balance remaining on the gift card will be printed on the receipt printer
EMV Voucher For EBT	Use to manually enter EBT transactions.
Clear EMV Value	This clears the internally stored token file that stores the Authorization Response messages that allow the SAM4POS to perform “By Record Number” transactions. Specifically, the Void Transaction by Record Number and Gratuity Entry.
Verify Card	Use this operation to verify a card is valid, activated, not reported as lost/stolen.
Batch Summary	Prints a Summary report for the current batch.
EMV Voice Auth	If electronic authorization is not approved and the merchant receives voice authorization, the transaction can be entered into the batch with this operation.

Ingenico CRS

(Used for EVO-Tetra; Requires v2.0.14 or Later.)

Refer to the separate EVO-Tetra Supplement for complete set up & operation details.

Operation	Definition
Close Batch	Close Batch Closes the current batch and opens A NEW BATCH
Void Sales By Record Number	Use these operations to void transactions when the card is not present. CAUTION: These voids will not correct ECR totals (i.e. PLU Sales) but will maintain a total on the Financial Report. Use the Void Mode function at the Sam4POS terminal to perform transaction voids that will correct the appropriate sales totals.
Gratuity Entry	Tips can be entered here. Tip Entry is much easier using the LIST PAID function key.
Get Gift Card Balance	The operator will be prompted to slide a Gift Card. The balance will be printed on the receipt printer.
Get EBT Balance	The operator will be prompted to slide an EBT Card. The balance will be printed on the receipt printer.
Get Credit Balance	The operator will be prompted to slide a Prepaid Credit Card. The balance will be printed on the receipt printer.
Get Debit Balance	The operator will be prompted to slide a Debit Card. The balance will be printed on the receipt printer.
Software Update	Loads the IPTran-LT software to the device.

EFT Operations Not Used

The EFT Operations listed below are not used, it may be desirable to disable (*remove/hide from view*) these specific categories so they do not appear in the list for your customer. You can sign on as the System Admin and hide any of the EFT Operations that are not used. Refer to the separate “Admin Guide” supplement for details about Disabling Menu Categories in Sam4POS.

PAYMENT SENSE

(Not Used in USA.)

INGENICO NZ

(Not Used in USA.)

VERIFONE ECR C, VERIFONE VX, and VERIFONE NZ

(Not Used in USA.)

Cables

The Cables for each of the specific integrated payment equipment types are available from the distributor, Datacap or EVO as necessary.

Coin Dispenser Set up

The Sam4POS only supports a serial interface for the coin changer, adding a coin changer to the Sam4POS is a two-step process. You will need to add the coin changer to be utilized with the system in Device Setting, then assign the coin changer to your stations in the Device Mapping.


Note: The T-Flex Coin Dispenser is produced by Crane Payment Innovations (CPI); Telequip joined CPI in 2006. Verify the EPROM in the coin dispenser is appropriate for the Sam4POS terminals.

Device Settings: Coin Dispenser

To connect a coin dispenser with a *Sam4POS* terminal you must configure an available port with the appropriate parameters for the coin dispenser then map the coin dispenser to the appropriate station.

Device programming is where all the individual peripheral devices used on the Sam4POS system are configured and mapped (routed) to the all the stations in the system.

The Device Setting program area is where you will configure the port that the coin dispenser will occupy. Each terminal will have its own device setting programming. To simplify device mapping when multiple terminals are in an IRC network, it is best to program your coin dispenser to the same port on each Sam4POS terminal.

1. From the **PROGRAM MODE** main menu selection screen select **DEVICE** to view the Device menu selection dialog, then select **DEVICE SETTING**.
2. Choose **COIN DISPENSER** from the device selection list.
3. Press the **Add Record icon**  to add a new coin dispenser. The Add New Coin Dispenser dialog displays:
 - **Input Description** – Type a descriptor for the new coin dispenser.
 - **Select Device Model** – General Coin Dispenser
4. Press **OK** to add the coin changer or press **OK AND CONTINUE** to add another coin changer. Pressing **CANCEL** will exit without adding devices.
5. The new Coin Dispenser(s) will be added to the list, verify the parameter settings:

DESCRIPTION

Can be deleted/edited as desired.

GENERAL

Device Model = General Coin Dispenser
Communication Type = Serial

SERIAL

Com Port = COM1 thru COM4
Baud Rate = 9600
Data Bits = 7
Parity = EVEN
Stop Bits = 1
Flow Control = NONE

6. Set the **General & Serial** parameters for the coin dispenser(s).
7. Additional programming for *Coin Changer Port #* is required on the tender keys.

Coin Dispenser Parameter Settings

Additional programming for *Coin Changer Port #* is required on the tender keys.

GENERAL

DEVICE MODEL

GENERAL COIN DISPENSER

COMMUNICATION TYPE

Serial

SERIAL

COM PORT

COM1 thru COM4

/dev/ttyUSB0 – Only available when a USB to RS-232 converter is connected to the terminal.

BAUD RATE

1200, 2400, **9600**, 19200, 38400, 57600, 115200

DATA BITS

7 or 8

PARITY

NONE, **EVEN**, ODD

STOP BITS


1 or 2

FLOW CONTROL

NONE, XON_XOFF (S/W), RTS_DTS (H/W)

Device Mapping: Coin Dispenser

The Device Mapping programming area is used to assign the coin dispenser to the various stations in the Sam4POS system.

1. From the **Program Mode/Device** menu, select **DEVICE MAPPING** from the available selections. Choose **COIN DISPENSER** from the selection list to map the device to the station(s).
2. Tap the desired station from the list in the center column to assign a coin dispenser to.
3. Press the **NEW** button (bottom right column) to assign a coin dispenser to the selected station. The **NEW** item dialog displays.
 - Input a **DESCRIPTION** for the coin dispenser (up to 30 characters).
 - **SELECT DEVICE:** Press the drop down to choose the appropriate coin dispenser from the list.
4. Press **OK** to complete the device mapping or press **OK AND CONTINUE** to map more devices. Press **CANCEL** if you want to exit without mapping devices.
5. Your mapped devices will display:
6. You can use the buttons at the bottom of the mapping screen to edit existing mapped devices.
 - **GOTO** – Brings up the Device Setting programming.
 - **NEW** – To add additional devices.
 - **EDIT** – Allows changes to the printer and time period selections.
 - **DELETE** – Will delete the selected device assignment.
7. Press the back-arrow icon  to close and exit the device mapping.

Tender Keys

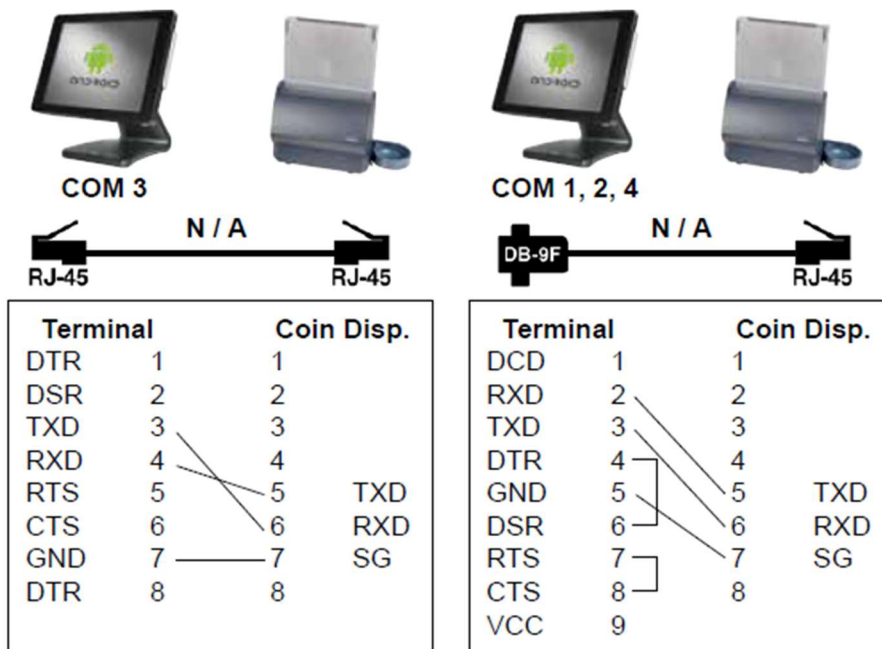
There are four general tender types available in SAM4POS, *Cash*, *Check*, *Food Stamp* and *Misc*. Each Tender type has additional programming associated with that specific type of tender. On the Cash, Check and MISC tender keys, you will need to define the port where the coin dispenser is connected.

Cash – Check – MISC Tender Keys

Coin Changer Port # - Enter the port # where the coin dispenser is connected.

Cable


Cables for the coin dispenser would be obtained from the distributor.



Liquor Dispenser

Adding a Liquor Dispenser system to the Sam4POS is a two-step process. You will need to add the liquor dispenser to be utilized with the system in Device Setting, then assign the liquor dispenser to your stations in the Device Mapping. The liquor dispenser interface must be serial to be used with the Sam4POS terminals.

Device Settings: Liquor Dispenser

1. From the **PROGRAM MODE** main menu selection screen select **DEVICE** to view the Device menu selection dialog, then select **DEVICE SETTING**. Choose **LIQUOR DISPENSER** from the device selection list.
2. Press the **Add Record icon**  to add a new Liquor Dispenser; The Add New Liquor Dispenser dialog displays:
 - **Input Description** – Type a descriptor (*up to 30 characters*) for the new Liquor Dispenser.
 - **Select Device Model** – Select the appropriate Liquor Dispenser model from the drop-down list.
3. Press **OK** to complete the device setting for the Liquor Dispenser or press **OK AND CONTINUE** to add another scanner. Pressing **CANCEL** will exit without adding devices.
4. The Liquor Dispenser will be added to the list. Verify the parameters for each Liquor Dispenser; See all the Liquor Dispenser Parameter Settings below.

Liquor Dispenser Parameter Settings

GENERAL

DEVICE MODEL
BERG

COMMUNICATION TYPE
Serial

SERIAL

COM PORT

COM1 thru COM4
/dev/ttyUSB0 – Only available when a USB to RS-232 converter is connected to the terminal.

BAUD RATE

1200, 2400, 9600, 19200, 38400, 57600, 115200

PARITY

NONE, EVEN, ODD

DATA BITS

7 or 8

STOP BITS

1 or 2

FLOW CONTROL

NONE, XON_XOFF (S/W), RTS_DTS (H/W)

Device Mapping: Liquor Dispenser

The Device Mapping programming area is used to assign the Liquor Dispenser to the various stations in the Sam4POS system.

1. From the **PROGRAM MODE / DEVICE** menu, select **DEVICE MAPPING** from the available selections. Choose **LIQUOR DISPENSER** from the selection list to map a Liquor Dispenser to the station(s).
2. Select the **STATION** from the list in the center column you want to assign a Liquor Dispenser to.
3. Press the **NEW** button (bottom right column) to assign a Liquor Dispenser to the selected station. The NEW item dialog displays:
 - a. **INPUT DESCRIPTION:** Type a descriptor for the Liquor Dispenser (up to 30 characters).
 - b. **SELECT DEVICE:** Chose correct Liquor Dispenser model from the list of available devices.
4. Press **OK** to complete the mapping for the Liquor Dispenser or press **OK AND CONTINUE** to map additional Liquor Dispensers. Press **CANCEL** if you want to exit without mapping the device.
5. Your mapped devices will display; You can use the buttons at the bottom of the mapping screen to edit existing mapped devices.
 - **GOTO** – Brings up the Device Setting programming.
 - **NEW** – Used to add new or additional Liquor Dispenser to the station.
 - **EDIT** – Allows changes to the descriptor & device selection.
 - **DELETE** – Will delete the selected device assignment.
6. Press the back-arrow icon (*upper left of screen*) to close and exit the device mapping.

PLU \ PLU Status Group

The PLU Status Group option settings to allow Void, Return and Cancel also work with Liquor Dispenser PLU's.

ALLOW VOID & RETURN

Select this option if Voids & Returns are to be allowed for this item. (*Also works with Liquor Dispenser.*)

ALLOW CANCEL

Check to allow cancel operations when item assigned this PLU Status Group are registered. If unchecked, the error message 'Canceling of this item is not allowed' displays. (*Also works with Liquor Dispenser.*)

Operation

When the liquor item is poured, the liquor system sends the PLU # to Sam4POS and the item is added to the sale.

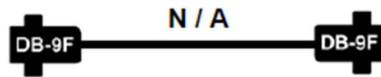
Cable

Cables for the liquor system would be obtained from the distributor for your liquor system.

Berg



COM 1, 2, 4



Terminal		Berg Liq.	
	1	1	
RXD	2	2	RXD
TXD	3	3	TXD
DTR	4	4	DTR
GND	5	5	GND
DSR	6	6	DSR
RTS	7	7	CTS
CTS	8	8	RTS

Kitchen Video

Adding kitchen video to the Sam4POS is a two-step process. You will need to add the KVS to be utilized in the system in Device Setting, then assign the KVS to your stations in the Device Mapping. The Kitchen Video interface to Sam4POS uses a serial interface.

Sam4POS supports the Micro Plus E-Pad KVS and the Chef Tab KVS. Separate E-PAD KVS controllers are required for each video needed in a system, up to 8 E-PAD controllers can be connected with the Kitchen Video Router for the Microplus E-PAD.

Note: If you are using the *Chef Tab KVS*, it will be set up as a Kitchen Printer, *not* as a Kitchen Video device.

Refer to the Sam4POS E-PAD Manual for details about programming and using the Micro-Plus kitchen video system.

The E-Pad must be updated to version v1.05 07/25/2018 or later to have the Sam4POS selection in the E-Pad Setup.


Information provided in this supplement includes:

- **Device** (*Setting and Mapping*)
- **Terminal & Network** (*Register no.*)
- **PLU Status Group** programming: KP & KV program area (*Kitchen Video related options*)
- **KP/KV Options:** Send On KP/KV program area (*Kitchen Video related options*)
- **Function Keys** (*Destination, Guest, Hold/Print Hold, Return, Seat#*)

Utilizing Kitchen Video: [SAM4POS - Utilizing Kitchen Video - YouTube](#)

Split Video By Destination: [Split Video By Destination in Sam4POS - YouTube](#)

Device Setting: Kitchen Video

1. From the **PROGRAM MODE** main menu selections select **DEVICE** to view the Device menu selection dialog, then select **DEVICE SETTING**. Choose **KITCHEN VIDEO** from the device selection list.
2. Press the **Add Record icon**  to add a new Kitchen Video; The Add New Kitchen Video dialog displays:
 - **Input Description** – Type a descriptor (*up to 30 characters*) for the new Kitchen Video.
 - **Select Device Model** – Select the Kitchen Video model from the drop-down list.
3. Press **OK** to complete the device setting for the Kitchen Video or press **OK AND CONTINUE** to add another scanner. Pressing **CANCEL** will exit without adding devices.
4. The Kitchen Video will be added to the list. Verify the parameters for each Kitchen Video; See all the Kitchen Video Parameter Settings below. Set the Serial settings appropriately:
 - Baud Rate = 9600
 - Data Bits = 8
 - Parity = NONE
 - Stop Bit = 1
 - Flow Control = RTS_CTS (H/W)

Kitchen Video Parameter Settings

GENERAL

DEVICE MODEL
SAM4S KDS

COMMUNICATION TYPE
Serial

SERIAL

COM PORT

COM1 thru COM4
/dev/ttyUSB0 – Only available when a USB to RS-232 converter is connected to the terminal.

BAUD RATE

1200, 2400, 9600, 19200, 38400, 57600, 115200

PARITY

NONE, EVEN, ODD

DATA BITS

7 or 8

STOP BITS

1 or 2

FLOW CONTROL

NONE, XON_XOFF (S/W), RTS_DTS (H/W)

Device Mapping: Kitchen Video

The Device Mapping programming area is used to assign the Kitchen Video to the various stations in the Sam4POS system.

1. From the **Program Mode/Device** menu, select **DEVICE MAPPING** from the available selections. Choose **KITCHEN VIDEO** from the selection list to map a Kitchen Video to the station(s).
2. Select the desired station from the list in the center column you want to assign a Kitchen Video to.
3. Press the **NEW** button (bottom right column) to assign a Kitchen Video to the selected station. The **NEW** item dialog displays:
 - **INPUT DESCRIPTION:** Type a descriptor for the Kitchen Video (up to 30 characters).
 - **SELECT DEVICE:** Chose correct Kitchen Video model from the list of available devices.
4. Press **OK** to complete the mapping for the Kitchen Video or press **OK AND CONTINUE** to map additional Kitchen Videos. Press **CANCEL** if you want to exit without mapping the device.
5. Your mapped devices will display; You can use the buttons at the bottom of the mapping screen to edit existing mapped devices.
 - **GOTO** – Brings up the Device Setting programming.
 - **NEW** – To add a Kitchen Video to the station.
 - **Note:** Once a Kitchen Video has been added to the station, the **NEW** button is grayed out. This is because you can only have one Kitchen Video assigned to a station.
 - **EDIT** – Allows changes to the descriptor & device selection.
 - **DELETE** – Will delete the selected device assignment.
6. Press the **back-arrow icon** (*upper left of screen*) to close and exit the device mapping.

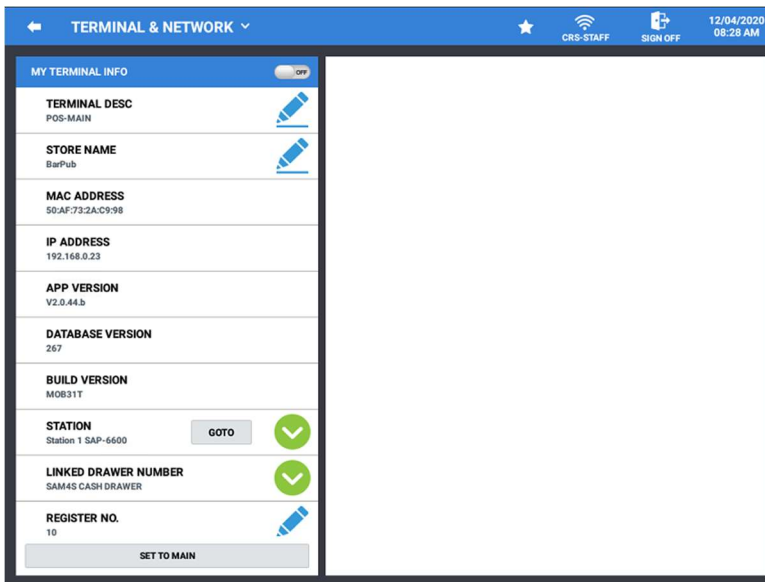
Terminal & Network

This program area is used to view the current Terminal Information and to establish IRC (*Inter-Register Communication*) for the system. It is also used to identify the “Register Number” when using the Kitchen Video feature. For the E-Pad KVS, you must set the REGISTER NO. for each station.

1. From the main **PROGRAM MODE** category menu selection, select **NETWORK & REVENUE**, then choose the **TERMINAL & NETWORK** selection menu. The terminal information will REFRESH each time this area is accessed:



2. When the data has been refreshed, the Terminal Info screen is displayed:



3. Press the **SET TO MAIN** or **RELEASE MAIN** button as needed.
 - **SET TO MAIN** – will set the current station as the Main terminal when setting up an IRC configuration. Only use this designation when establishing an IRC, do not use this setting if only one station is installed.
 - **RELEASE MAIN** – changes the current station as a standalone terminal.
4. Scroll down to the bottom of the My Terminal Info section; at the **REGISTER NO.** field, Enter a Register Number for this station.

Note: IRC must be turned off on all substations before the current MAIN station can be released.

MY TERMINAL INFO

Displays the current settings for the station. The 'My Terminal Info' slide switch is used to add the current station to an IRC network. For the E-Pad KVS, you must set the REGISTER NO. for each station.

TERMINAL DESC

Description for the terminal

STORE NAME

Enter a name for the store (In an IRC network, the Store Name must be exactly the same on all stations within the network.)

MAC ADDRESS

This is the MAC address of the current terminal.

IP ADDRESS

Internet Protocol address for the current terminal.

APP VERSION

SAM4POS application version installed on the current terminal. This version information also appears on the lower right corner on the main sign on screen.

DATABASE VERSION

This is the database version for the current terminal.

BUILD VERSION

This is the Android build version currently installed.

STATION

Select the station the employee will be assigned to.

If STATION is set to STATION BY TERMINAL, assignment follows STATION of TERMINAL.

If STATION setting is a specific station, it will follow the STATION assigned for the EMPLOYEE.

(Also see 'Employee Option Definitions' 'General Options'.)

Priority is: STATION of EMPLOYEE is first, STATION of TERMINAL is next

LINKED DRAWER NUMBER

There is also an option in Employee programming for Linked Drawer Number. If the setting in the Employee program is set for 'Drawer By Terminal', the drawer assignment will follow the setting as set here. Select the drawer for this station: *No Drawer, Sam4s Cash Drawer, Sam4s Cash Drawer II or Printer Drawer*. If no drawer is assigned, the employee can only perform check track postings (not payments).

SYNCH TYPE

* This setting appears on the *MAIN* terminal only *

Real-Time Synchronization – All sale\transaction data is synchronized with all stations in the system as the sales\transactions are performed (*Real-Time*). The more stations there are in a system, the busier the system will be.

Synchronize Before Report Operation – Sale\transaction data is not synchronized in Real-Time. All sales transaction data is synchronized before reports are performed on main terminal. (*Program Data is Real-Time Sync for all stations.*)

⇒ Sales & transaction data is saved to each individual stations own database only.

⇒ Guest Check operations will be available only at the station they are registered on.

⇒ Data is synchronized when a report (*EOD, Financial, PLU, Summary, Calendar, etc.*) is generated on the POS-Main terminal. (*Program Data is Real-Time Sync for all stations.*)

Sync Type Recommendation –

⇒ **Real Time Sync:**

– Multiple stations in system and using a floating clerk (Clerk Interrupt) system.

⇒ **Synchronize Before Report Operation:**

– Multiple stations in system and not using guest check tracking.

– Multiple stations in system and using guest check tracking but *not using* a floating clerk (Clerk Interrupt) system.



REGISTER NO.

Used for KVS operation and for order numbers. (*Available at v1.0.45 and later.*)

PLU Status Group Programming

Only the PLU Status Group programming related to Kitchen Video is shown here. Refer the Sam4POS Programming Manual for the complete list of PLU Status Group programming options & definitions.

After programming the PLU Status Groups you will need to assign the appropriate PLU Status Group to the PLUs you want to send to the Kitchen Video in the PLU Status Group Link.

1. From the **PROGRAM MODE** touch **PLU** to view the PLU program selection window, touch **PLU STATUS GROUP** to view the PLU status group options.
2. All existing PLU Status Groups are listed. You can edit an existing PLU Status Groups by scrolling through the list to the specific item you wish to edit.
3. If you have a large list, you can sort the status groups in the list alphabetically. Touch the Menu icon  on the PLU Status Group programming screen.
4. Select **SORT** from the available selections. Choose to sort A TO Z, Z TO A.
5. To enter a **NEW PLU STATUS GROUP** into the database, press the **Add New Item icon**  or, you can select an existing status group to copy by pressing and holding the status group.
6. Type the descriptor in the **INPUT DESCRIPTION** field. Press **OK** to go on to the option programming. Press **OK AND CONTINUE** to add another PLU. Press **CANCEL** to exit without adding the new PLU Status Group.
7. You can delete/edit the descriptor for an existing PLU Status Group by pressing the **X** at the end of the descriptor field and type in a new descriptor.
8. After a PLU Status Group is selected, the programming options are displayed. Scroll through the options and edit as necessary.

PLU Status Group KV Option Settings

Only the options related to Kitchen Video are shown here. Refer the Sam4POS Programming Manual for the complete list of PLU Status Group programming options & definitions.

KP & KV

KITCHEN VIDEO

Select Yes if PLUs in this group are to be sent to a kitchen video.

KITCHEN VIDEO GROUP #

Select the kitchen video group # to which PLUs in this group are to be sent. Condiment PLUs with a "0" status here will "follow" the last main item.

COLOR TO DISPLAY ON KV (0-31)

The color code set here will control the color or screen format displayed on an optional kitchen video system requisition screen. Color codes vary by KVS system. Refer to the documentation for your video system for specific information.

AUTOMATIC HOLD ITEM

This flag allows PLUs to be placed on HOLD to the KP/KVS automatically.

Options

Options programming is used to define the most fundamental parameters of the register system. Options are separated into easily identifiable categories to simplify finding specific options.

1. From the **PROGRAM MODE** select **OPTIONS** → **OPTIONS**. The list of option categories is displayed. Choose the **KP/KV OPTION** category from the list on the left to view the option settings related to Kitchen Video.
2. Each option category is broken down further into smaller sections to aid in programming. Individual options within the sections allow you to choose to make the option setting apply Globally for all stations or apply to the Local station only. *(Available at v1.0.45 and later.)*
3. A search bar is provided at the top header bar of each option category. When you type in a search criterion, only the options that contain the specified criteria within the chosen category will display. *(Available at v1.1.45 and later.)*

KP/KV Option

Only the options related to Kitchen Video are shown here. Refer the Sam4POS Programming Manual for the complete list of PLU Status Group programming options & definitions.

SEND ON KP/KV

PRINT VOIDED ITEM AT KP/KV

If selected, then transaction void orders will not print or display at the appropriate printer/screen.

PRINT ORDER ON KV AT SUBTOTAL

Select if you wish to send items to the KVS when the subtotal key is pressed, instead of when the sale is finalized.

ENABLE SAME ITEM CONSOLIDATION ON KP/KV

If selected, for example, if two hamburgers are entered and sent to the printer they will print as: "2 HAMBURGERS", rather than "1 HAMBURGER" and "1 HAMBURGER" on a second line.

If condiments are entered, they will be separated and printed below the items.

REALTIME KV

Each item will display at the Kitchen Video screen when the next item is entered (one item delay).

ETC

DISPLAY KP ORDER # *(Added at v2.0.25)*

When selected the KP order # will be displayed in the upper left portion of the transaction detail in the register mode.

Training Option

Only the training options related to Kitchen Video are shown here. Refer the Sam4POS Programming Manual for the complete list of training options & definitions.

GENERAL

PRINT ORDER ON KP/KV FOR TRAINING EMPLOYEE

Select to send orders to the kitchen printer and/or kitchen video during training.

Function Key

Only the options related to Kitchen Video are shown here. Refer the Sam4POS Programming Manual for the complete list of function keys, options & definitions.

Destination

DESTINATION

Kitchen Video – Select the KVS routing from the available list: UNSPECIFIED, EAT IN, TAKE OUT, TRACK 1, TRACK 2.

Guest

Use to record the number of guests served by a transaction. The entry appears on receipts and the kitchen printer/KVS.

GUEST#

Compulsory For All Sales? – When checked, the number of guests must be entered for all sales.

Hold

Use to identify an individual item, or an entire transaction so the designated items will not print/display at the kitchen printer/KVS at the current finalization. "Hold" items will display on the screen with an "H".

GENERAL

Manager Required? – Operation requires input of manager password to complete operation.

List Held Items

Use the LIST HELD ITEMS key to display all items in the current order designated as "hold" items (*with an "H"*).

GENERAL

Manager Required? – Operation requires input of manager password to complete operation.

Print Hold

Use to remove the "Hold" designation from an item or order, so that the items and their instructions are now sent to the kitchen printer/KVS at finalization.

GENERAL

Manager Required? – Operation requires input of manager password to complete operation.

Return

The Return key allows items to be returned and the funds refunded to a customer. Touch the RETURN key prior to registering each item to be returned, then finalize with the appropriate tender. (Merchandise Return)

RETURN OPTION

Not Send the Returned Item To The KP Or KVS – If checked, then returned items will not print or display at the designated printer/screen.

Seat

Use to identify a specific SEAT # (or person) within a transaction. Facilitates separate payment by seat and identifies to the food preparation staff (through the kitchen printer/KVS) how to assemble meals. Seat numbers may be assigned at the time of entry or, if necessary, later in the transaction.

GENERAL

Manager Required? - Operation requires input of manager password to complete operation.

OPTION

Function Is? –

POPUP: The selected Seat # remains active for the remainder of the transaction, then will return to the default seat # when the transaction is finalized.

STAY DOWN: The selected Seat # will remain active until the next choice.

Text Inserter

Adding a text inserter to the Sam4POS is a two-step process. You will need to add the text inserter to be utilized in the system in Device Setting, then assign the text inserter to your stations in the Device Mapping.

The Text Inserter interface to Sam4POS can be serial or ethernet.

Requirements

- Text Inserter \ DVR
- Serial Interface Cable

Required Programming


- Device Programming
 - Device Setting & Device Mapping

Optional Programming

- Options
 - Options > General Option
 - Tare Weight

Device Setting: Text Inserter

Connect the Text Inserter/ DVR to a Serial Port on the Sam4POS terminal with the cable supplied by your distributor or connect the Text Inserter/ DVR with the Sam4POS terminal via Ethernet using a switch.

1. From the **PROGRAM MODE** main menu selection screen select **DEVICE** to view the Device menu selection dialog, then select **DEVICE SETTING**. Choose **TEXT INSERTER** from the device selection list.
2. Press the **Add Record icon**  to add a new Text Inserter. The Add New Text Inserter dialog displays:
 - **Input Description** – Type a descriptor (*up to 30 characters*) for the new Text Inserter connected on this station.
 - **Select Device Model** – Select the compatible Text Inserter model from the drop-down list.
 - TALON
 - EYEONET
 - INTEKBOX
3. Press **OK** to complete the Text Inserter device setting or press **OK AND CONTINUE** to add another Text Inserter. Pressing **CANCEL** will exit without adding devices.
4. The new Text Inserter(s) will be added to the list.
5. Set the parameters for each Text Inserter: Serial, Ethernet, as necessary. See all the Text Inserter Parameter Settings on the next page.

Text Inserter Parameter Settings

GENERAL

DEVICE MODEL

TALON, EYEONET, INTEKBOX

COMMUNICATION TYPE

Serial, Ethernet

SERIAL

COM PORT

COM1 thru COM4

/dev/ttyUSB0 – Only available when a USB to RS-232 converter is connected to the terminal.

BAUD RATE

1200, 2400, 9600, 19200, 38400, 57600, 115200

PARITY

NONE, EVEN, ODD

DATA BITS

7 or 8

STOP BITS

1 or 2

FLOW CONTROL

NONE, XON_XOFF (S/W), RTS_DTS (H/W)

ETHERNET


IP ADDRESS

Type in the IP of the text inserter (*IP must be in the same range as Sam4POS system.*)

PORT NUMBER

Type in the PORT number for the text inserter (*Must be set to PORT 5000 for the EYEONET Text-Inserter*)

Device Mapping: Text Inserter

1. From the **Program Mode/Device** menu, select **DEVICE MAPPING** from the available selections. Choose **TEXT INSERTER** from the selection list to map the device to the station(s).
2. Tap the desired station from the list in the center column to assign a Text Inserter to.
3. Press the **NEW** button (bottom right column) to assign a Text Inserter to the selected station. The NEW item dialog displays.
 - **INPUT DESCRIPTION:** Type a descriptor for the new Text Inserter (up to 30 characters).
 - **SELECT DEVICE:** from the list of available devices as set in the Device Setting screens.
 - **SELECT FROM TERMINAL:** Chose the terminal where the device is connected.
4. Press **OK** to complete the device mapping or press **OK AND CONTINUE** to map more devices. Press **CANCEL** if you want to exit without mapping devices.
5. Your mapped devices will display; You can use the buttons at the bottom of the mapping screen to edit existing mapped devices.
 - **GOTO** – Brings up the Device Setting programming.
 - **NEW** – To add additional devices.
 - **EDIT** – Allows changes to the Text Inserter and time period selections.
 - **DELETE** – Will delete the selected device assignment.
6. Press the **back-arrow icon**  to close and exit the device mapping.

Cables


Cables for the text inserter would be obtained from the distributor.

SRM

Sales Recording Module (SRM). A device that records all transactions on a cash register or a POS (Point of Sale). The device records transaction information such as sales and tax data in a secure memory. After data transmission begins, the SRM device sends the necessary information to a printer which prints a customer receipt with a unique barcode with information about the restaurant to ensure accuracy and retention of business records.

Device Setting: SRM

Connect the SRM device to a Serial Port on the Sam4POS terminal the appropriate cable.

1. From the **PROGRAM MODE** main menu selection screen select **DEVICE** to view the Device menu selection dialog, then select **DEVICE SETTING**. Choose **SRM** from the device selection list.
2. Press the **Add Record icon**  to add a new SRM. The Add New SRM dialog displays:
 - **Input Description** – Type a descriptor (*up to 30 characters*) for the new SRM connected on this station.
 - **Select Device Model** – Select the compatible SRM model from the drop-down list. See all of the SRM model selections in the SRM Parameter Settings on the next page.
3. Press **OK** to complete the SRM device setting or press **OK AND CONTINUE** to add another SRM. Pressing **CANCEL** will exit without adding devices.
4. The new SRM(s) will be added to the list:
5. Set the parameters for each SRM: Serial, Ethernet, as necessary. See all the SRM Parameter Settings on the next page.

SRM Parameter Settings

GENERAL

DEVICE MODEL

SRM

COMMUNICATION TYPE

Serial

SERIAL

COM PORT

COM1 thru COM4

/dev/ttyUSB0 – Only available when a USB to RS-232 converter is connected to the terminal.

BAUD RATE

1200, 2400, 9600, 19200, 38400, 57600, 115200

PARITY

NONE, EVEN, ODD

DATA BITS

7 or 8

STOP BITS

1 or 2

FLOW CONTROL

NONE, XON_XOFF (S/W), RTS_DTS (H/W)

Device Mapping: SRM

The Device Mapping programming area is used to assign the SRM to the various stations in the Sam4POS system.

1. From the **Program Mode/Device** menu, select **DEVICE MAPPING** from the available selections. Choose **SRM** from the selection list to map an SRM to the station(s).
2. Select the desired station from the list in the center column you want to assign an SRM to.
3. Press the **NEW** button (bottom right column) to assign an SRM to the selected station. The NEW item dialog displays:
 - **INPUT DESCRIPTION:** Type a descriptor for the SRM (up to 30 characters).
 - **SELECT DEVICE:** Chose correct SRM model from the list of available devices.
4. Press **OK** to complete the mapping for the SRM or press **OK AND CONTINUE** to map additional SRM's. Press **CANCEL** if you want to exit without mapping the device.
5. Your mapped devices will display; You can use the buttons at the bottom of the mapping screen to edit existing mapped devices.
 - **GOTO** – Brings up the Device Setting programming.
 - **NEW** – Used to add new or additional SRM to the station.
 - **EDIT** – Allows changes to the descriptor & device selection.
 - **DELETE** – Will delete the selected device assignment.
6. Press the back-arrow icon (*upper left of screen*) to close and exit the device mapping.

Cables

Cables for the SRM equipment would be obtained from the distributor.

Polling

Tri-Tech PC-Poll is polling and programming software that connects to Sam4POS. Program data can be brought back to the PC and PC-Poll can be used to make additions and changes quickly and easily. Those changes can then be sent automatically to one or more stores. Report data can be collected, viewed, printed and even exported to other software modules.

The PC-Poll software is optional, contact Tri-Tech / PC-Poll for details & current pricing.

<https://www.tritechretail.com/t-pcpoll.aspx>

Here is a helpful video showing the polling set up & operations:

<https://www.youtube.com/watch?v=1nKP2hqfJBY&list=PLtF-h-a37jHmbhGgLO3nB76hP-avFSW29&index=1&t=36s>

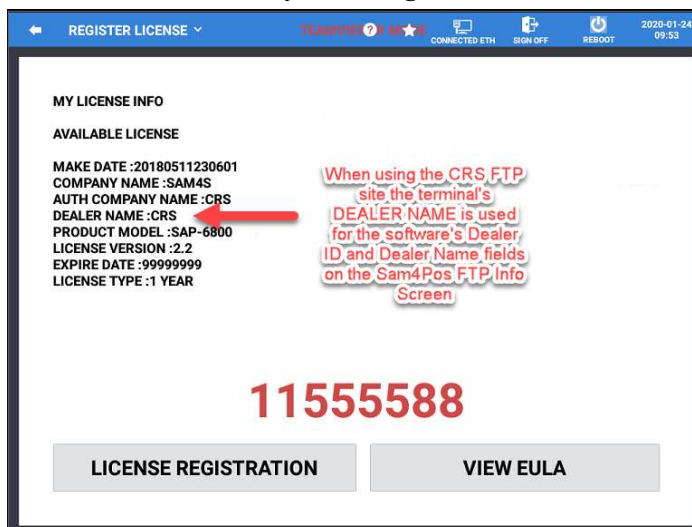
Refer to the Sam4POS PC-Poll Guide for Set up details.

FileZilla Server

INFO NEEDED:

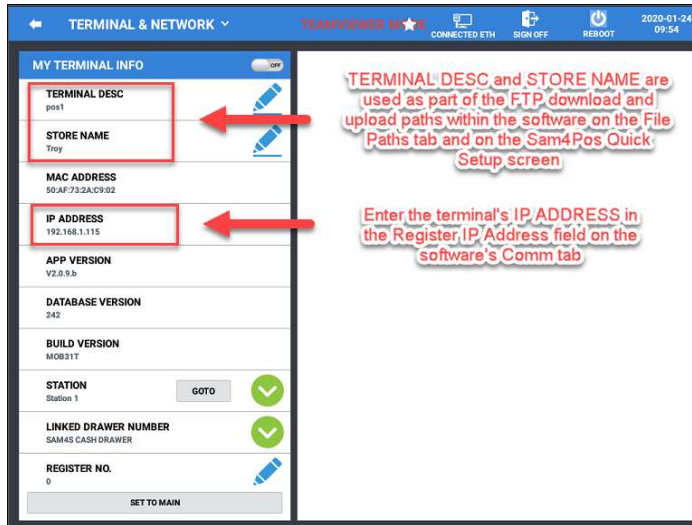
- Register IP address (ideally the register is on the same LAN as the PC)
- Password for Zip files (this password is created by CRS)
- Password for FTP site (if you are using the CRS FTP site, which is the easiest way to set things up, it is the same password as the zip files)
- Username for FTP site (if you are using the CRS FTP site the username matches the Dealer Name on the license)

From the Sam4POS terminal: System \ Register License \ Dealer Name:



From the Sam4POS terminal: *System | Network & Revenue | Terminal & Network |*

- *Terminal Desc*
- *Store Name*
- *IP Address*



FileZilla Server with PC-Poll

The CRS FTP site can be used for polling, however:

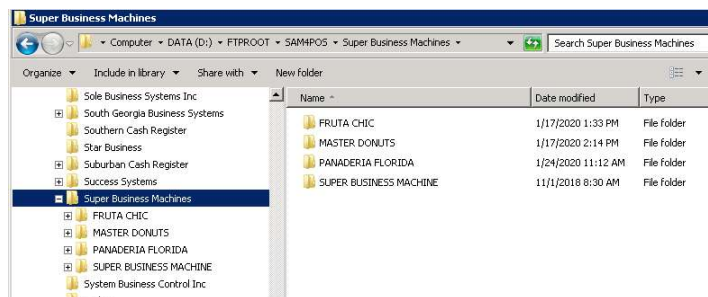
- CRS does not guarantee any uptime for our FTP server
- The dealer must maintain their folders and delete un-needed files.



If polling is a critical feature, customers should use a professionally administered FTP server.

Store Folders Must be configured to the correct directory on the FTP.

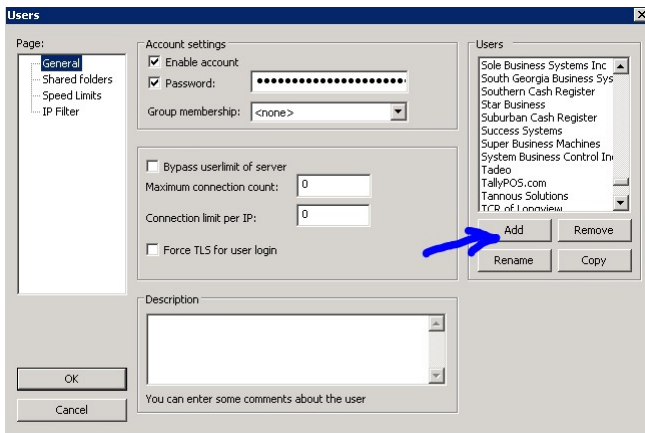
1. You will need a Folder set up for **"Your Business Name"**. The business name must be exactly the same as used by CRS.



2. In Filezilla Server: click **USERS**.



3. Click **Add**:

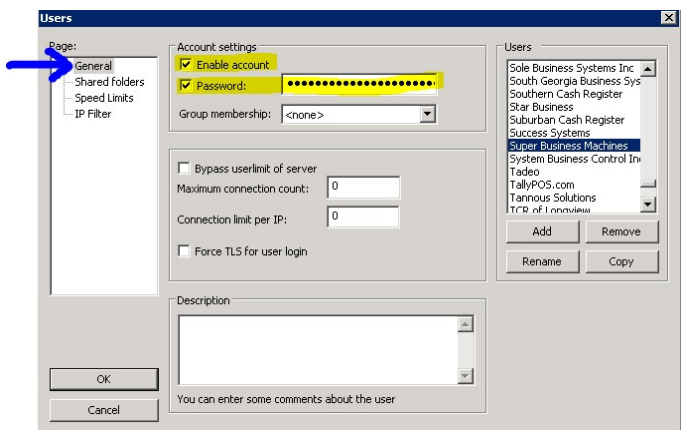


4. User must be “Your Store Name” **Name must be exactly the same as used by CRS**

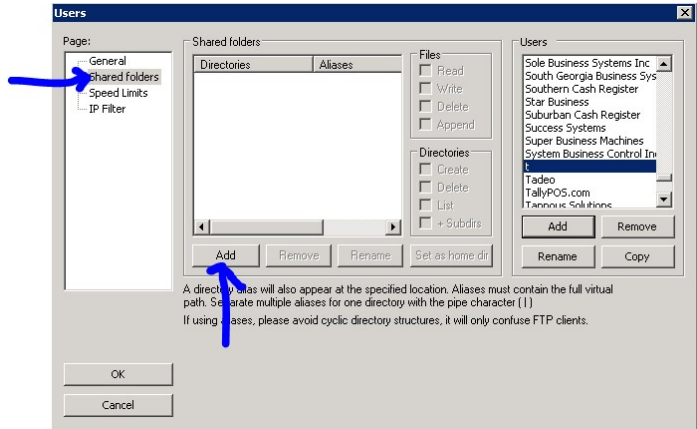
5. Click **OK**.



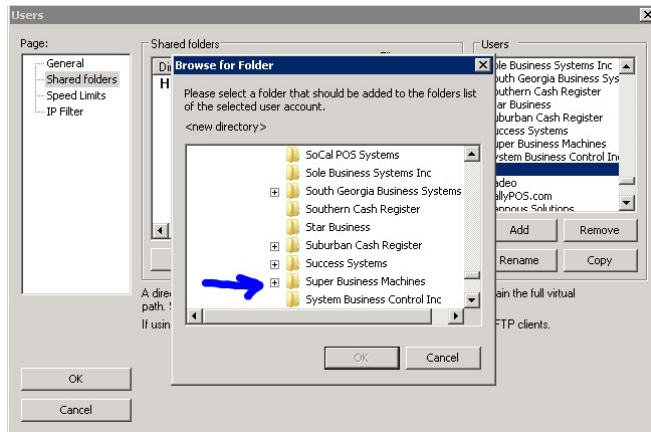
6. From the **PAGE:** window; Select **General**. Click **Enable account & Password:** enter your dealer password (obtain from CRS). The password must be the same as obtained from CRS and is case sensitive.



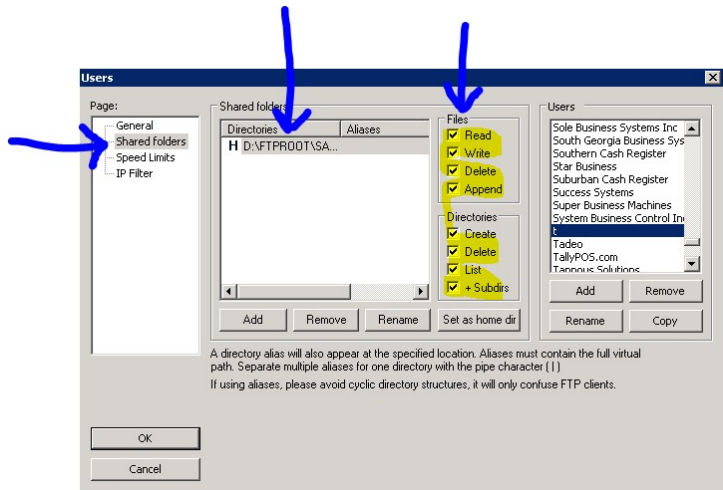
7. Click **Shared folders**:
8. Select **Add**



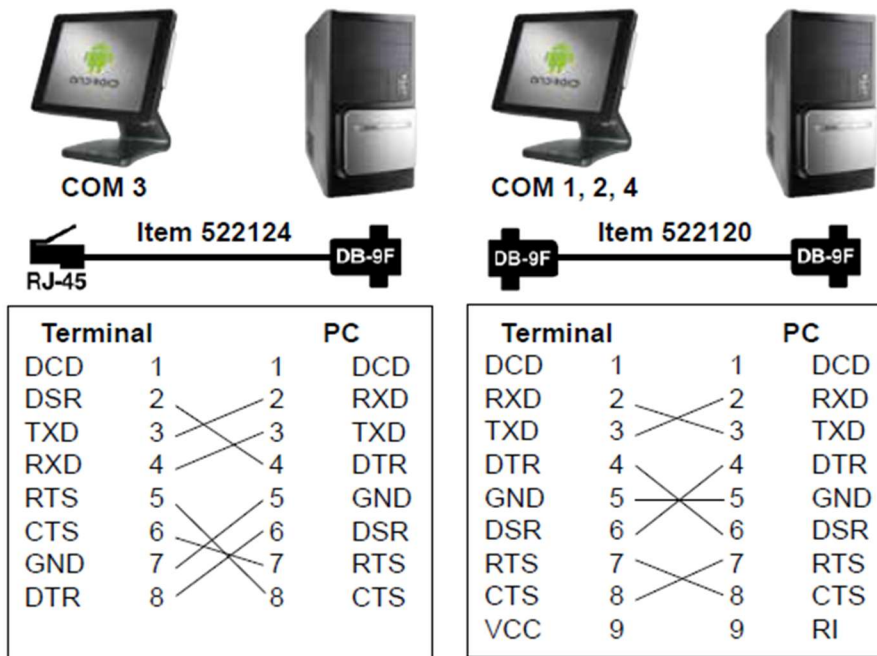
9. **Browse** to the folder that you previously set up:



10. Must Click **All Boxes** for your folder:



Cables



Dual Monitor Installation

A 2nd Rear LCD Dual Monitor can be connected to the Sapphire A60/A70 terminals or the SAP-6600(II) terminals. Configuration support for the optional integrated 9.7-inch and 15-inch rear LCD customer display for the Sam4POS application running on the SAP-6600(II) was added beginning at v1.1.11. This enhancement allows you to set up multiple layouts for the rear LCD display with different elements as desired.

- **Note:** The Rear Display application is not necessary with the Sapphire A60 & A70 terminals.
- There is no Dual Monitor setup available on the SAP-630 terminals or the Histone tablets.

The rear LCD Display layout can be configured to display text messages, images, menu suggestions and more. Configuration settings for the rear display can be found in the Program Mode \ Screen Edit \ Rear Display.

When Sam4POS version v1.1.11 or later is installed on the SAP-6600(II) terminals, a prompt to install the Rear Display App will appear. You must select to install the Rear Display App to utilize the feature.

This document is intended as a supplement to the main Sam4POS programming manual. Refer to the Sam4POS programming manual as necessary.

Note: The Rear Display Application version corresponds with the Sam4POS version, if the Sam4POS version is downgraded the Rear Display APP is also downgraded, there is no way around the downgrade of the rear display app.

For example: Sam4POS v1.1.57 with the corresponding Rear Display App v1.0 & Sam4POS v2.0.25 with the corresponding Rear Display App v2.0 (*just as an example*).

If the terminal has Sam4POS v2.0.25 installed (Rear Display App v2.0) the Rear Display App has some functions that only Sam4POS v2.0.25 knows about.

If the terminals are downgraded to v1.1.57 but the corresponding Rear Display App is not downgraded to v1.0, the rear display may not work as expected because the versions will not be corresponding.

You can review an installation video for the 15” LCD monitor & the old style 9.7” LCD monitor in the video gallery:

<https://www.youtube.com/playlist?list=PLtF-h-a37jHmbhGgLO3nB76hP-avFSW29>

The mounting bracket for the 9.7” monitor has changed; You can review the installation video for the new style 9.7” LCD monitor from the video gallery:

https://www.youtube.com/watch?v=6ntt9hwijHs&ab_channel=CRSinc&fbclid=IwAR09XGO9B_zTO1-QC6q8ZH7nKDCI3kRKIxwdXbp5C_uD8LGcFdIPuA03pjC

Equipment Required

CRS has LCD Rear displays for integration with the Sapphire terminals and the SAP-6600(II) terminals. However, any LCD display could be connected to the Sam4POS terminals.

- Sapphire A60/A70 terminals running Sam4POS application software v2.0.165 or later. These terminals have a modular DP port.
 - ⇒ A60 Terminals:
 - 9.7" Rear LCD Non Touch (Item #: 503348)
 - * 9.7" Rear LCD with Touch (Item#: 503349)
 - 15" Rear LCD Non Touch (Item #: 503350)
 - * 15" Rear LCD with Touch (Item#: 503351)
 - ⇒ A70 Terminals:
 - 10.1" Rear LCD with Touch (Item #: 503362)
 - 15.6" Rear LCD with Touch (Item #: 503363)
- SAP-6600(II) running Sam4POS application software v1.1.11 or later. These terminals have a VGA port.
 - 15" Display P/N 503337
 - Bracket Dual Hinge Assembly P/N 503270
 - 9.7" Display P/N 503336 (*New Style Rear LCD Display*)
 - 9.7" Display P/N 503130 (*Old Style Rear LCD display*)

} 15" Display also requires the Mounting Bracket

SAP-6600(II) Rear LCD Notes:

When installing the 15" inch rear LCD display (Item #: 503337), the mounting bracket (Item #: 503270) is sold separately.

The new style 9.7" inch rear LCD display comes with the mounting bracket attached.

After connecting the Rear LCD Display, you will need to reboot the SAP-6600(II) terminal for the terminal to recognize the 2nd display.

When the terminal is powered on, the OS attempts to talk to the VGA port, if no device is present the terminal will not attempt to communicate to that device again. This is why the terminal needs to be rebooted after the VGA display is connected.

You can review an installation video for the 15" LCD monitor & the old style 9.7" LCD monitor here:

<https://www.youtube.com/playlist?list=PLtF-h-a37jHmbhGgLO3nB76hP-avFSW29>

The mounting bracket for the 9.7" monitor has changed; You can review the installation video for the 15" LCD and the new style 9.7" LCD monitor from here:

<https://www.youtube.com/watch?v=fCZkI2SBLq4&list=PLtF-h-a37jHmbhGgLO3nB76hP-avFSW29&index=26>

Sapphire

CRS has Rear LCD Displays for integration with the Sapphire A60 terminals, a 9.7" display and a 15" display. The A70 terminals have the 10.1" and the 15.6" displays. These displays use a modular connection to connect to the DP port on the terminal.



A60 Rear LCD

9.7" Rear LCD



Non-Touch (Item #: **503348**)
With Touch (Item #: **503349**)

15" Rear LCD



Non-Touch (Item #: **503350**)
With Touch (Item #: **503351**)

A70 Rear LCD

10.1" Rear LCD



With Touch (Item #: **503362**)

15.6" Rear LCD

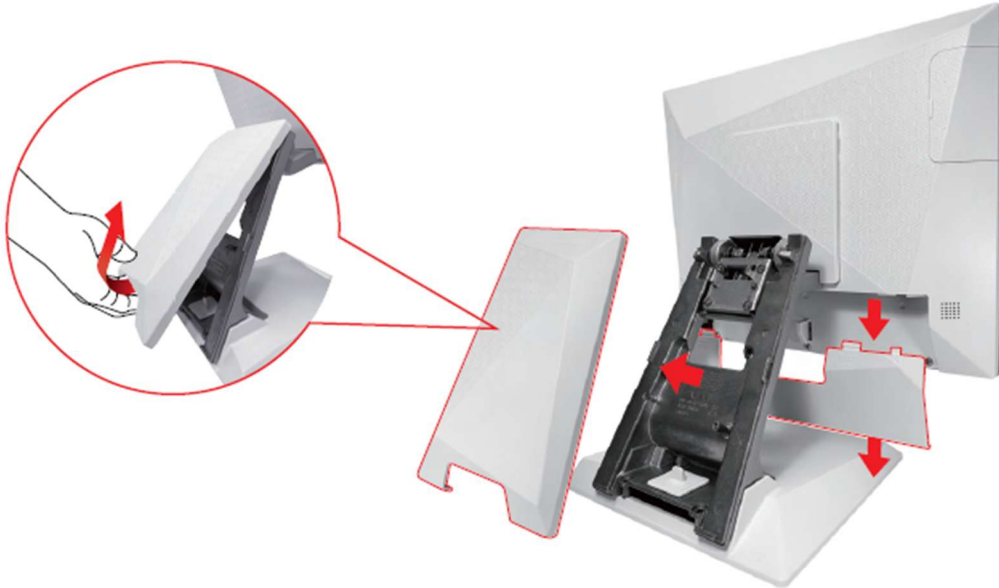


With Touch (Item #: **503363**)

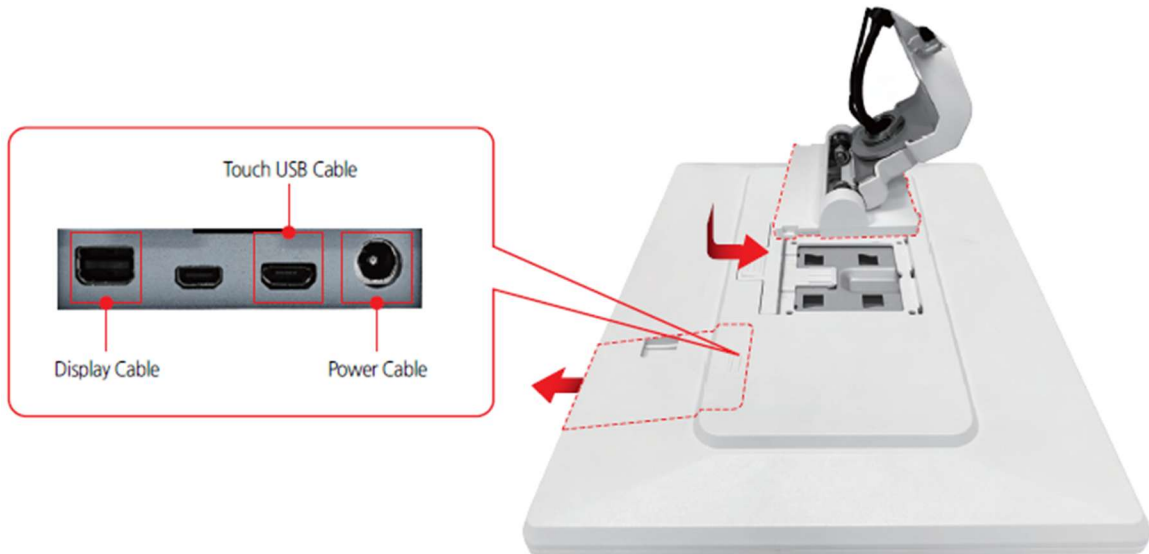
Rear LCD Dual Display Installation

You can view a video showing the Sapphire installation of a VFD display, 10" display, and 15" display here: [SAM4s SAPPHIRE \(700/710/A60/A70\) Terminals Rear Display Installation \(VFD/10"/15" Displays\)](#)

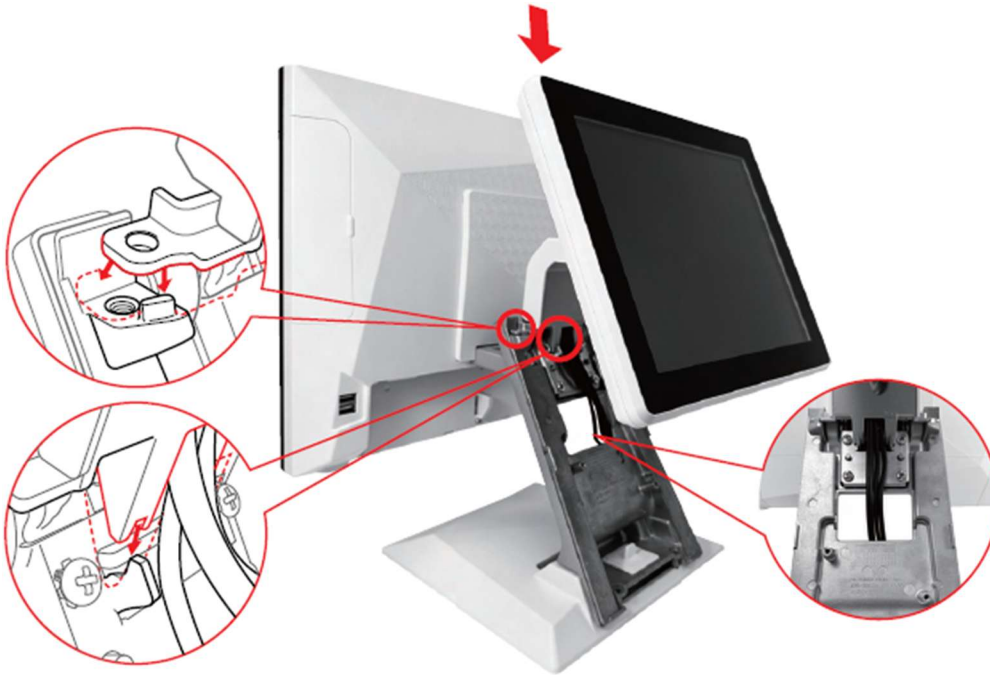
1. Power off the system and peripherals.
2. Disassemble the interface cover and the cable cover as you see in below picture.



3. In the case of the 15" dual display, assemble the display unit and hinge.
 - a. Disassemble the interface cover on the dual display and connect the cables.



4. Arrange the cables as shown below and assemble the dual display.



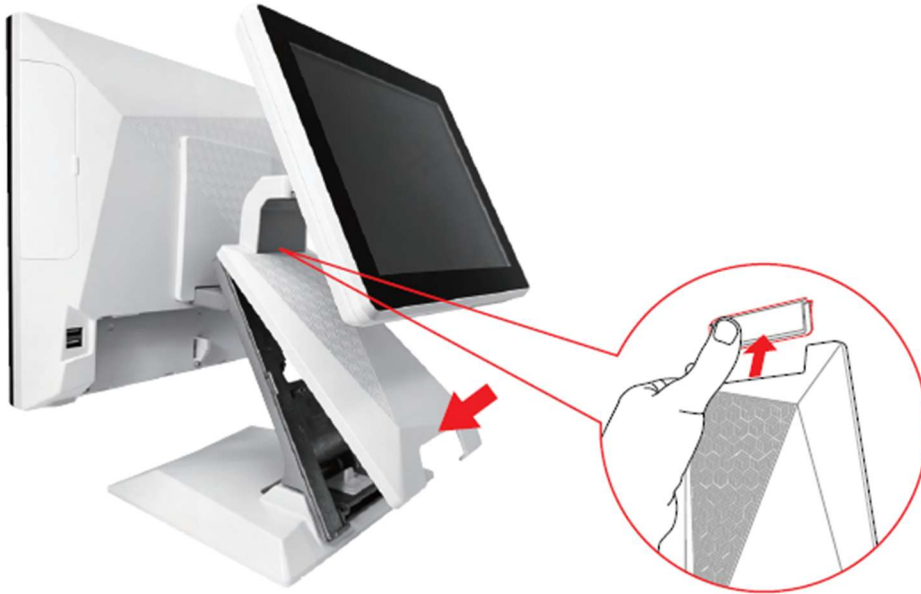
5. Fasten the dual display by fastening the 2 screws as you see in below picture.



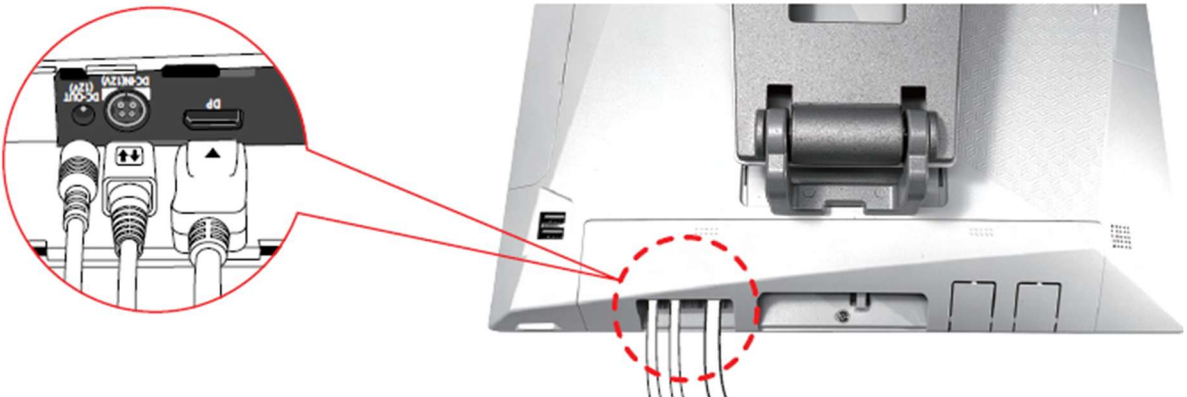
6. Connect the power cable and display cable to the connector.
 - a. If the dual display is a touch type, connect the USB cable.



7. Disassemble the cable cover dummy as you see in below picture.
8. Reassemble the cable cover after removing the dummy as you see in below picture.



9. In the case of the 15.6" main display, remove the cable access knock-out from the interface cover and organize the cables.



10. Power ON the Sapphire terminal.

SAP-6600(II)

CRS has two rear LCD displays for integration with the SAP-6600(II), a 9.7" display and a 15" display. These terminals have a 15-Pin VGA connection to connect to the VGA port on the terminal.

9.7" Rear LCD



Non-Touch (Item #: 503336)
With Touch (Item #: 503349)

15" Rear LCD



Non-Touch (Item #: 503337)
With Touch (Item #: 503294)

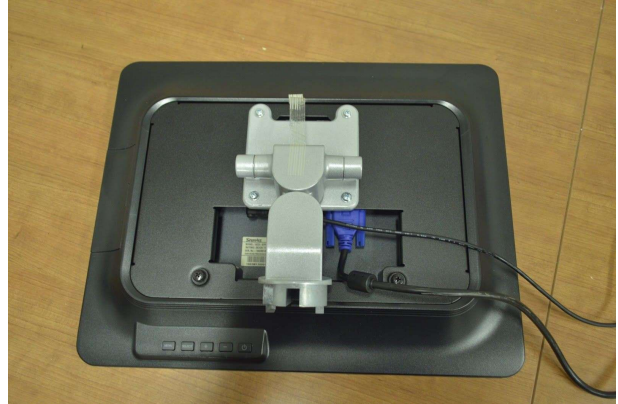
15" Rear LCD Installation

When installing the 15" inch rear LCD display (503337), the mounting bracket (503270) is sold separately.

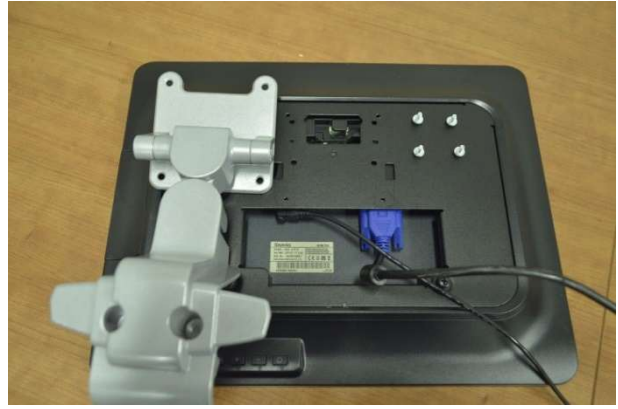
You can review the SAP-6600 installation video for the 15" LCD monitor & the old style 9.7" LCD monitor:

<https://www.youtube.com/playlist?list=PLtF-h-a37jHmbhGgLO3nB76hP-avFSW29>

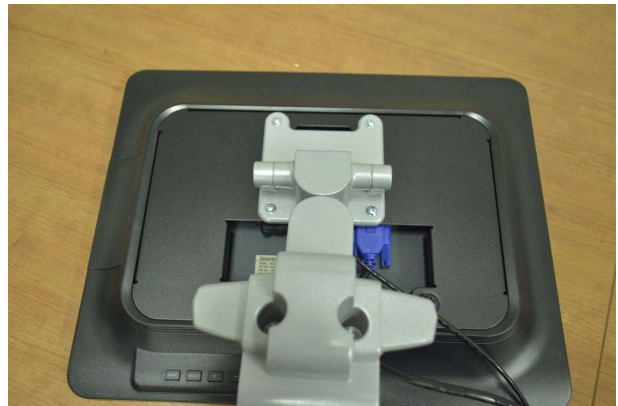
1. Open the rear display and lay on a flat protected surface.



2. Remove the default out-of-the-box bracket from the rear LCD display.



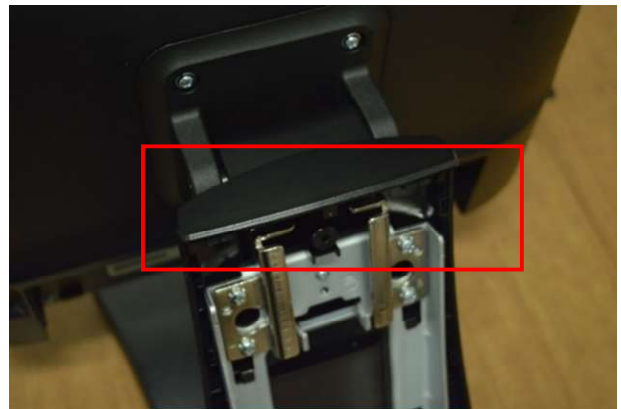
3. Use the screws from the default bracket to attach the SAP-6600(II) Hinge-Bracket in the same position.



4. Power OFF the SAP-6600(II) terminal.
5. Remove the cable cover from the back of the SAP-6600(II) terminal.



6. Remove the plastic top cover piece at the screen joint to access the hinge-bracket mounting frame.



7. Remove the SAM4S logo insert, the rear LCD display cable will feed through this access.



8. Feed the cables through the gap on the hinge-bracket.



9. Thread the cables through the back cover and the base of the terminal





10. Reconnect the cable cover to the SAP-6600(II), position the hinge-bracket on the mounting frame.



11. Position the 2nd monitor hinge-bracket.



12. Insert the two screws in the top of the hinge-bracket and tighten to secure it to the terminal.



13. Connect the VGA and power cables to the SAP-6600(II)\Sam4POS terminal.

9.7” Rear LCD Installation

New Style 9.7” LCD

The mounting bracket for the 9.7” monitor has changed; Here is the installation video for the new style 9.7” LCD:
https://www.youtube.com/watch?v=6ntt9hwijHs&ab_channel=CRSinc&fbclid=IwAR09XGO9B_zTO1-QC6q8ZH7nKDCI3kRKIxwdXbp5C_uD8LGcFdIPuA03pjc

1. Remove the cable cover and top mount cover.
2. Route the cables through the display stand and position the display bracket on the display mount.
3. Secure the display with the two screws provided.
4. Connect VGA & PWR cables. Route the cables through the display stand.
5. Reconnect the cable cover.
6. Program the Rear Display settings in Sam4POS.

Old Style 9.7” LCD

The original “Old Style” 9.7” rear LCD display connects to the cable cover.

You can review an installation video for the 15” LCD monitor & the **old style 9.7”** LCD monitor in the Video Gallery: <https://www.youtube.com/playlist?list=PLtF-h-a37jHmbhGgLO3nB76hP-avFSW29>

1. Remove the Sam4s logo insert in cable cover
2. Mount LCD to cable cover
3. Route the cable and connect cable cover to terminal
4. Connect VGA & PWR cables
5. The remaining installation is the same.

Activate Rear Display

Rear Display APK

You will need to load the most current Sam4POS firmware version for rear display support, (*v1.1.11 or later*). Follow the update procedure as outlined in the Sam4POS programming manual.

When the latest Sam4POS firmware is installed on the SAP-6600(II) terminal, you will see a confirmation dialog to install the Rear Display application; select **INSTALL** to load the rear display application support.

(This Dialog only displays the first time the firmware is installed.)

When the Rear Display has been installed, press **DONE**.

After connecting the Rear Monitor, you will need to reboot the SAP-6600(II) terminal for the terminal to recognize the 2nd display.

Important! When the terminal is powered on, the OS attempts to talk to the VGA port, if no device is present the terminal will not attempt to communicate to that device again. This is why the terminal needs to be rebooted after the VGA display is connected.

Note: The Rear Display application is not necessary with the Sapphire A60 & A70 terminals.

Note: The Rear Display Application version corresponds with the Sam4POS version, if the Sam4POS version is downgraded the Rear Display APP is also downgraded, there is no way around the downgrade of the rear display app.

For example: Sam4POS v1.1.57 with the corresponding Rear Display App v1.0 & Sam4POS v2.0.25 with the corresponding Rear Display App v2.0 (*just as an example*).

If the terminal has Sam4POS v2.0.25 installed (Rear Display App v2.0) the Rear Display App has some functions that only Sam4POS v2.0.25 knows about.

If the terminals are downgraded to v1.1.57 but do not downgrade to the corresponding Rear Display App v1.0, the rear display may not work as expected because the versions will not be corresponding.

The programming required on the Sam4POS includes:

- **Screen Edit**
 - **Rear Display**
- **Time Schedule**
 - **Rear Display Periods**
- **Android Settings**
 - **Device / Display / Second Display Settings**

Android Settings

Specific Android settings are required for the SAP-6600(II) terminals. These settings are NOT required for the Sapphire A60/A70 terminals.

The required Android settings for using the rear display (dual monitor) are discussed here. With the latest Sam4POS firmware installed and the 2nd Display (VGA Monitor) connected; you will need to configure the Android settings for the rear display. If the Second Display options are not shown, reboot the Sam4POS SAP-6600(II) for the terminal to recognize the 2nd display.

SAP-6600(II) Second Display Settings

These settings are only required for the SAP-6600(II) terminals.

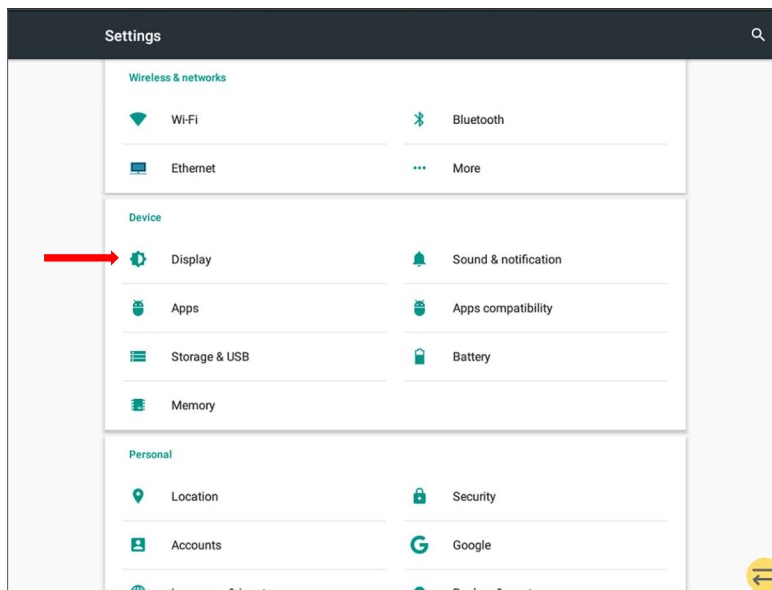
- *These settings are NOT required for the Sapphire A60/A70 terminals.*

With the latest Sam4POS firmware installed and the 2nd Display (VGA Monitor) connected; you will need to configure the Android settings for the rear display. If the Second Display options are not shown, reboot the Sam4POS SAP-6600(II) for the terminal to recognize the 2nd display.

Here is a Video showing the set up for the Rear Display Feature in Sam4POS:

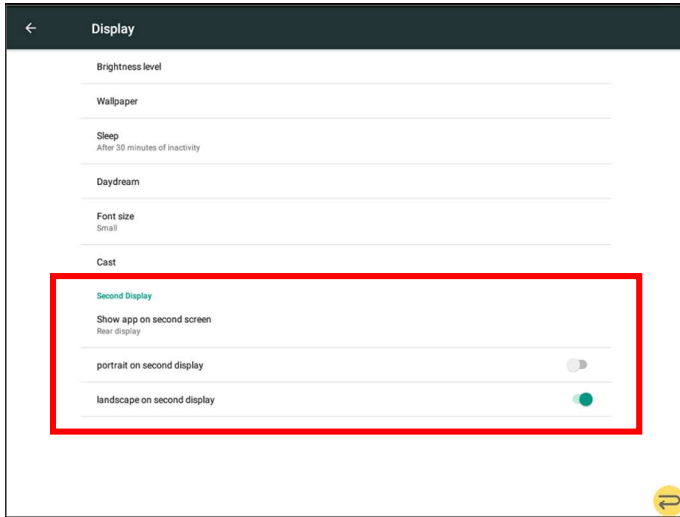
[Rear Display Feature with Sam4POS - YouTube](#)

1. Go to **PROGRAM MODE \ SYSTEM \ SETTINGS \ DEVICE**
 - a. Select the **Device: Display** area.

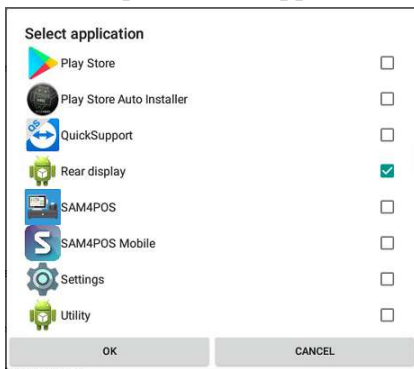


2. Go to the **Second Display** settings:

If the Second Display options are not shown, reboot the Sam4POS SAP-6600(II) for the terminal to recognize the 2nd display.





3. Click or tap on **“Show app on second screen”** to open the **Select Application** dialog:



4. Scroll down the list to **Rear Display**;
 - a. **Press and hold** to select the app. Then press **OK**.
5. Select either: **Portrait on Second Display** or **Landscape on Second Display**



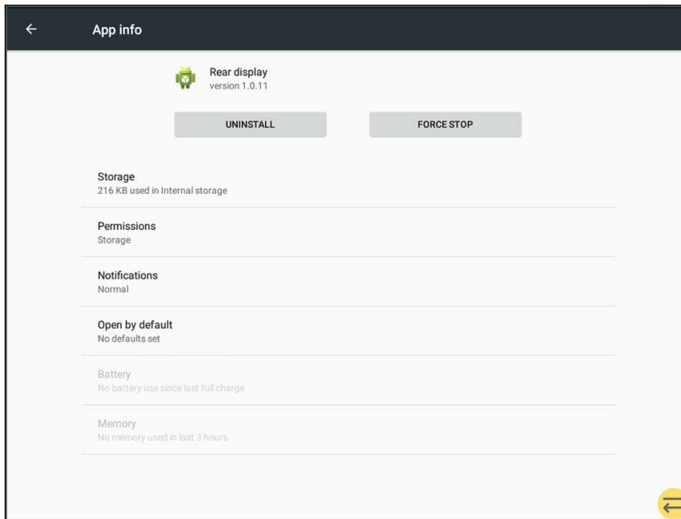
6. Press the back arrow  at the top left of the screen to Exit the Display settings.
 - a. Press the return icon  to go back to the Sam4POS application.
7. Go to **PROGRAM MODE \ SCREEN EDIT**, select **REAR DISPLAY** (*only available on the Sapphire A60/A70 and the SAP-6600(II) terminals*).

Rear Display Settings

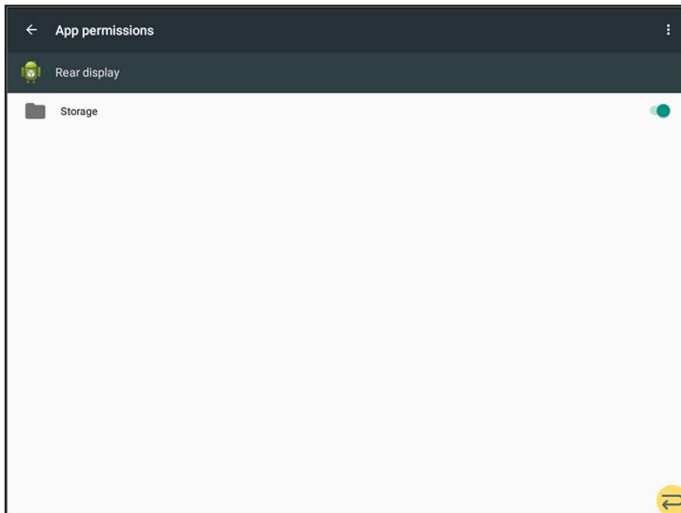
These settings are only required for the SAP-6600(II) terminals.



➤ **These settings are NOT required for the Sapphire A60/A70 terminals.**

1. Go to **PROGRAM MODE \ SYSTEM \ SETTINGS** to view the Android Settings screen.
2. In the **Device** selections choose the **Apps** category area:
 - a. Scroll down the Apps list to the **Rear Display App**.
 - b. Tap **Rear Display** to view the **App Info** dialog screen.



3. Tap on the **Permissions** selection, be sure that **Storage** is turned on.



4. Press the back arrow  at the top left of the screen to Exit the APP Permissions settings.
5. Press the return icon  on the main Android Settings screen to return to the Sam4POS application.

Reboot Terminal

You will need to reboot the Sam4POS terminal (*Power Off / Power On*) for the settings to take effect.

Required Sam4POS Programming

Configuration support for the optional integrated 9.7-inch and 15-inch rear LCD customer display for the Sam4POS application running on the SAP-6600(II) was added beginning at v1.1.11. This enhancement allows you to set up multiple layouts for the rear LCD display with different elements as desired.

When Sam4POS version v1.1.11 or later is installed on the SAP-6600(II) terminals, a prompt to install the Rear Display App will appear. You must select to install the Rear Display App to utilize the feature.

You can view a video showing the Sapphire installation of a VFD display, 10" display, and 15" display here:

[SAM4s SAPPHIRE \(700/710/A60/A70\) Terminals Rear Display Installation \(VFD/10"/15" Displays\)](#)

You can review an SAP-6600 installation video for the 15" LCD monitor & the old style 9.7" LCD monitor:

<https://www.youtube.com/playlist?list=PLtF-h-a37jHmbhGgLO3nB76hP-avFSW29>

The mounting bracket for the 9.7" monitor has changed; You can review the installation video for the new style 9.7" LCD monitor from the video gallery:

https://www.youtube.com/watch?v=6ntt9hwijHs&ab_channel=CRSinc&fbclid=IwAR09XGO9B_zTO1-QC6q8ZH7nKDCI3kRKlxwdXbp5C_uD8LGcFdIPuA03pjc

A 2nd Rear LCD Dual Monitor can also be connected to the Sapphire A60/A70 terminals.

There is no Dual Monitor setup available on the SAP-630 terminals or the Histone tablets.

The rear LCD Display layout can be configured to display text messages, images, menu suggestions and more. Configuration settings for the rear display can be found in the Program Mode \ Screen Edit \ Rear Display.

The programming required on the Sam4POS includes:

- **Screen Edit**
 - **Rear Display**
- **Time Schedule**
 - **Rear Display Periods**
- **SAP-6600(II) Android Settings**
 - **Device / Display / Second Display Settings**
- **Reboot the terminal**
 - **You need to reboot the terminal for the Rear Display to operate properly.**

Screen Edit

The Screen Edit program area is used to set up the Table Map, Menu Lookup (MLU Edit) and Function Lookup (FLU Edit) screens that will be used to complete register operations on the SAM4POS.

The Screen Edit program is separated into five program categories, the specific categories will depend on the terminal type you have. Only the SAP-6600 can connect a Rear Display (LCD Monitor).

Screen Edit Categories

SAP-6600(II)

Table Map, MLU Edit, FLU Edit, **Rear Display**, KIOSK

SAPPHIRE A60 & A70

Table Map, MLU Edit, FLU Edit, **Rear Display**, KIOSK

Rear Display

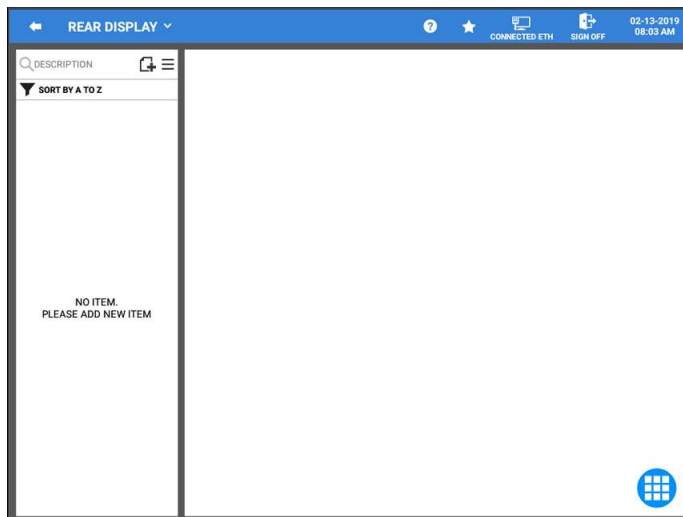
You can create separate rear display layouts for normal times and for when orders are being registered.

The Rear Display Period settings in the Time Schedule settings are used to select the desired layout for Normal display (*between orders*) and the Order display. Setting for the start & end times for the rear display are also set here.

Rear Display Layout



Rear Display Layouts are used to determine what will be shown on the rear display when orders are being registered and normal times when the terminal is idle.



1. Select **Screen Edit** from the **Program Mode** category selections, then select **REAR DISPLAY**; The Rear Display Edit screen displays.



Creating New Rear Display Layouts

Choose the element to be added to each rear display layouts, multiple elements may be selected as desired.

1. Press the add record  icon to add a new Rear Display Layout configuration.
2. Type a descriptor for the new layout; Press **OK** to add the new layout to the list. Alternately you can press **OK AND CONTINUE**, to add additional layouts; pressing **CANCEL** will exit without adding any layouts to the list.
3. Choose a Rear Display Layout from the list to add elements to the layout.
4. Press the menu  icon to select an element for the rear display. More than one element can be added as desired; available elements include:

Add Text	Add Photo	Add Slide Show	Add Video
Add Order List	Add Clock	Add Recommended Menu	Change Background Color
Preview	Full Screen		
5. Elements can be removed from the display by pressing and holding the element, then press the trash can icon  to delete the element from the display layout.
6. Use the Menu  icon to **SORT** the Rear Display list alphabetically or choose **EDIT MODE** to select and delete selected rear display layouts.

Notes:

- **ADD PHOTO** – The best image size is 1024 x 768; Any picture format will work: .jpg, .bmp, .png, etc.
- **ADD VIDEO** – After adding the video, press & hold in the video area until the edit option displays, then close the edit screen.

Customize Rear Display Layouts




As stated earlier, each element can be edited individually, specific editing selections depends on the type of element. Refer to the Sam4POS Tutorial Video for a demonstration on editing the elements within a Rear Display Layouts.

<https://www.youtube.com/watch?v=7RAFulYxgtc&index=3&list=PLtF-h-a37jHmbhGgLO3nB76hP-avFSW29&t=0s>

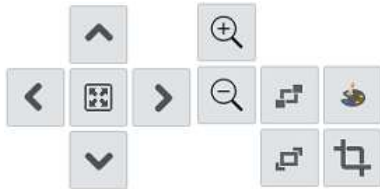
1. Select the desired rear display layout from the list in the left column you wish to edit.
 - a. **Click & Drag** elements to position them as desired - or -
 - b. **Press & Hold** on an element you wish to edit; The operation icons shown below appear at the top right of the display.










Operation Icon Definitions

	Loads the editing icons
	Deletes the selected element
	Exits the element editing

2. When you select the **Edit** icon, additional element editing icons are provided:

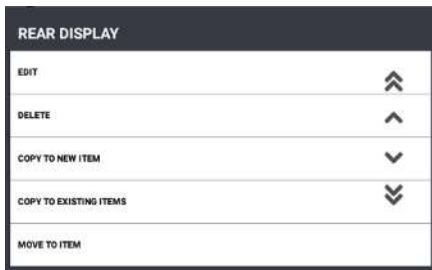


Element Editing Icons Definitions

	Moves the image Up, Down, Left, Right one point at a time to fine-tune the positioning of the selected element.
	Maximizes the image to Full Screen.
	Enlarge, Reduce the selected element size.
	Locks the element selection.
	Releases the element selection.
	Only available on certain elements. When an element is selected, this allows for changing or editing of the selected element. Edit selections vary depending on the element selected.
	Opens the 25-color palette; Only appears with certain element selections.

Copy\Delete Displays

1. Select a rear display layout from the list you wish to edit, **Press & Hold** on your selection to open the sub menu edit options:




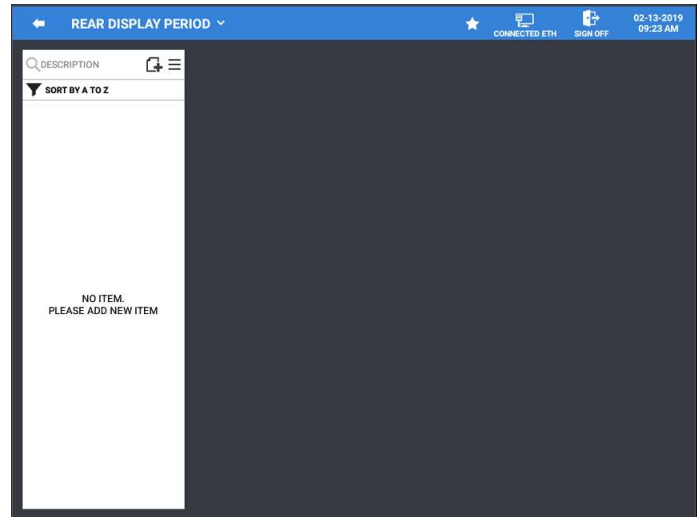
Operation	Description
EDIT	Edit the DISPLAY Descriptor
DELETE	Delete the selected DISPLAY
COPY TO NEW ITEM	Copies the currently selected DISPLAY to a new DISPLAY
COPY TO EXISTING ITEMS	Copy the currently selected MLU to an existing DISPLAY
MOVE TO ITEM	Not used with Rear Display


Time Schedule

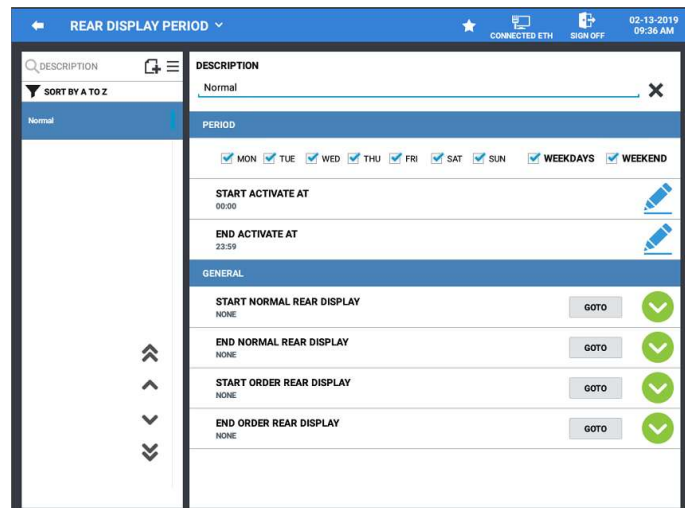
Rear Display Period

The Time Schedule \ Rear Display Period is available on the SAP-6600(II) only, beginning at v1.0.99. In this program area, we will choose the active time for the rear display and choose which layouts will appear during active orders and when no orders are active.

1. From the **Time Schedule** menu screen, touch **Rear Display Period** to view/add/edit automated Rear Display selections.
2. Press the **Add Record icon**  to add a new time activated setting for the Rear Display schedule to the list.



3. Define the **Start/End Activate** settings for the new Rear Display schedule.
4. Select the rear display layouts for the **Start/End Normal & Start/End Order** settings.
5. Press the menu icon  to access the edit mode and the sort options.
6. **Edit Mode** – allows you to select multiple web views for deletion
7. **Sort** – allows you to sort the schedules alphabetically



Rear Display Period Settings

DESCRIPTION

Type in a description (up to 30 characters) for the scheduled auto reboot. Use the **X** at the end of the field to clear the current description.

PERIOD

Determine the specific days of the week for the scheduled auto reboot to occur, or Choose WEEKDAYS, WEEKENDS or check both to select all the days of the week.

Start Activate At – Enter the time for the Auto Reboot to occur.

GENERAL

Start Normal Rear Display – Choose the Rear Display Layout from the list you wish to see during normal/idle operations.

End Normal Rear Display – Choose the Rear Display Layout from the list to display.

Start Order Rear Display – Choose Rear Display Layout from the list you wish to display when orders are being registered.

End Order Rear Display – Choose Rear Display Layout from the list to display.

Appendix

Technician Installation Checklist & Troubleshooting

The purpose of this guide is to document the sequence of steps a technician should take from the first site survey to the after-care troubleshooting & service of a Sam4POS installation.

STEP 1 – Pre-installation Site Survey: Review the proposed locations for all system equipment. Consider heat, light, proximity to contaminants and liquids, power and other needed connections such as DSL/Internet. Verify that each component will be located so that it can perform effectively and reliably.

1. AC Power Requirement
 - a. Inform end user of requirements or meet with electrician
2. Power Conditioning
 - a. Recommend and use power conditioning, such as the POWERVAR ABC 065 conditioner.
 - b. Provide common, isolated grounding or install POWERVAR ground guard conditioners.
3. SAM4POS ECR
4. Cash Drawers
5. Printers
 - a. Keep thermal printers away from heat or heat lamps.
6. Scanners
7. Kitchen Video
8. Electronic Payment via DataTran appliance
9. Switch
 - a. Each SAM4POS must network directly to only one switch in the system (not a hub or router).
10. Cable Routing
 - a. Quantity and type needed from each device in the system.
11. PC (Optional for Polling)

STEP 2 – Site Cable Installation

1. Determine responsibility for cable installation: Customer's contractor/electrician or Dealer.
2. Provide Cable Specifications.
3. Installing Cables
 - a. SAM4POS network
 - b. Peripherals
 - c. Cable Routing
 - d. Power Crossings
 - e. Inside wall installation
 - f. Video Cables
 - g. Credit Card Internet and/or phone modem connections and cables
4. Pretest all cables and connectors after installation.
 - a. Cat 5 Cable Tester

STEP 3 – System Set-up (*prior to installation*): Receive, un-box, assemble and prepare all system components

1. Number of Sam4pos Terminals
2. Cash Drawers
3. Printers
4. Scanners
5. Scales
6. Video
7. Switch

8. PC
9. Programming Software Version Installation.
10. Program Customer's Application.
 - a. Consider network traffic and "master" functions for check tracking, Datacap processing equipment, timekeeping, polling, global order, delivery files, etc. CRS Tech Support recommends that these functions not be assigned to a single ECR in a multi-ECR installation.

STEP-4 – Final test: After complete system is configured, connected and programmed (at Dealer's location)

1. Attach all ECRs to switch and test.
2. Attach all Printers and test.
3. Attach all Cash Drawers and test.
4. Attach Kitchen Video and test.
5. Attach Credit Authorization and test by running \$1 test transactions for each electronic payment method. Verify with payment processor that funds are deposited appropriately.
6. Attach PC for Polling and test.
7. Enter sample transactions that will test all ECRs and all peripherals are working correctly.
8. Run Daily, Weekly and Monthly Reports and/or String Reports and verify they are correct.

STEP-5 – Installation of System at Customer's Location

1. Before disconnecting the system at the dealer's location, carefully label all ECRs, Peripherals and cables with their future location at the site.
2. At the site, check all existing and new AC outlets for your products
3. Test all AC outlets for correct wiring using an AC tester for correct wiring and ground
4. Install power conditioning
5. Install Credit ECR
6. Install Switch
7. Install Video System
8. Install Cash Drawers
9. Install SAM4POS ECRs
10. Install Printers
11. Install Scanners
12. Install Scales
13. Install PC (polling)
14. Test network IRC between ECRs
15. Test printers and cash drawers
16. Test Video
17. Test Credit
18. Test Polling

STEP-6 – Training of Customer

1. Have customer designate the key contact who will be responsible for all programming, operation and future training of customer's employees.
2. Have customer's owner verify all operations and programming prior to installation and go-live date

STEP 7 – Debug or Troubleshoot System

1. Check SAM4POS Network
 - a. IRC network communication errors can be constant or intermittent; intermittent errors may be more difficult to isolate. Network communication error symptoms could possibly include:
 - i. System Runs slow – ECRs are trying to communicate and may have to constantly request and resend data. Try manual Sales Data Split & delete IRC SYNC DATA (Admin Operation); refer to the Admin manual for details.
 - ii. Incorrect data - Missing, duplicate or incorrect data on transactions, tracking files, receipts or end of day reports could be caused by network failures. Perform SYNC DATA: PROGRAM MODE/NETWORK & REVENUE/TERMINAL & NETWORK; press the SYNC DATA button.
 - iii. Inconsistent operation - SAM4POS to SAM4POS or SAM4POS to attached peripherals (Kitchen Video, Kitchen Printers, Credit Processing, PC Polling, etc.). Failures may occur at peak times if too many communication activities are causing data to not get through or time-out trying to communicate.
 - iv. The SAM4POS or peripherals may appear to lock up when attempting to communicate or re-trying.
 - b. Check IRC network communications.

- i. Overview: You can confirm the SAM4POS network is running smoothly with no IRC errors by performing an IRC PING Test (PROGRAM MODE/NETWORK & REVENUE/TERMINAL & NETWORK). Remember, your network may appear to function but with constant or intermittent communication errors your Kitchen Video, Kitchen Printing, Credit Authorization and Polling operations can malfunction.
 - ii. Determine if the problem is with the SAM4POS application programming, the SAM4POS ECR and its LAN port, the cable and its connectors, the switch port or the switch itself.
 - c. Check Switch and Cables
 - i. Overview: If only two SAM4POSs are directly connected together, they may be connected with a crossover cable. If three or more SAM4POSs are being networked together, each SAM4POS should be connected using a straight thru cable directly to the switch (one switch per network).
 - ii. Check that the switch power LED is lit. If it is not lit, check the power to the switch and/or replace the switch itself.
 - iii. Check all SAM4POSs are powered on. Then, check that each port on the switch with a cable installed has its LED lit.
 - iv. If one port with a cable is not lit, move the cable to a different port. If there is still no light, check that the cable is properly installed in the SAM4POS “LAN” port.
 - v. If the cable is connected to both a known good port on the switch and the SAM4POS “LAN” port and still no LED is lit, check the cable with a CAT5 cable tester or use a test cable and run it across the floor from the switch to the SAM4POS to verify if it’s the cable. If the cable or connectors are bad, replace and retest. Always do a visual check of cables whenever possible. Damaged cables could have tears in the jacket of the cable, heat damage, or some other type of damage.
 - vi. If the cable tests OK, then the problem is with the SAM4POS Ethernet communication port or possible programming error.
- 2. Check AC power
 - a. Overview: AC power problems (AC inductive motors kicking on/off or shorting) and improper ground (circuits or outlets not wired correctly or having different loads) can cause consistent or intermittent operation problems, lost or duplicate data, lock-ups, etc., as well as early degradation and failure of components in the system. Both clean AC power and a solid ground are critical for dependable operation of the CPUs in all the devices in your system. It can be difficult to determine the cause of intermittent problems when you are working with an unstable powered and improperly grounded system.
 - b. Check that power is being supplied to all circuits your system and that the outlets are wired correctly using an AC circuit tester. If there is no power to an outlet, check the circuit breaker in the power panel.
 - c. Check that all SAM4POSs and all devices in the system are properly protected from power interference and static electricity. Your complete system, SAM4POSs, printers, Video PC, Credit Authorization and all other peripheral devices should be on isolated circuits and all on a dedicated ground installed and wired by an electrician.
 - d. Check that no other customer owned equipment is installed on the same circuits the SAM4POS system is using or plugged into the same outlets the system is using.
 - e. Alternate Power Conditioning: If your installation is not electrically wired by an electrician to specifically protect your system by having isolated circuits (only your products are on the circuit) and all the isolated circuits are tied to a dedicated ground, we recommend that all system components use POWERVAR “Ground Guard” power conditioning. ALL devices must use POWERVAR “Ground Guard” conditioning. Just one device not connected to the power conditioning can be the device that is causing the problems.
- 3. Printer Error
 - a. Check that power is good. If power is good, will printer turn on? If not, check power supply.
 - b. Check that printer performs self-test successfully.
 - c. Check paper is installed properly. If thermal paper is installed upside down, it will not print.)
 - d. Check that cable is OK. If not, replace.
 - e. Check SAM4POS is programmed correctly. Perform a TEST print from PROGRAM MODE/DEVICE/DEVICE SETTING/PRINTER. Select the printer, press the Menu icon and select TEST.
 - f. If printer still does not function, move printer to known printer location that works to test at that location or replace with known good printer.
- 4. Scale Error
 - a. (Dead)
 - i. Check that power is good. If power is good, will the scale turn on? If not, check power supply.
 - ii. Check battery.
 - b. (Data not received)
 - i. Won’t receive data from scale – check SAM4POS and port programming.
 - ii. Check cable is OK. If not, replace. (Need good working scale to properly test the cable.)
- 5. Polling (PC-Poll)

- a. Won't connect to SAM4POS. Check SAM4POS programming.
 - b. Check cable and connectors.
 - c. Check program in PC-Poll for proper set-up and program.
 - d. Check FTP connection, username and password.
 - e. Use laptop with PC-Poll software installed to test.
6. Pole Display
- a. Won't power on.
 - i. Check power supply and power switch on display.
 - b. Does power on but does not receive data.
 - i. Check Comm. Port.
 - ii. Check SAM4POS Port programming.
 - iii. Check cable and connectors.
7. Kitchen Video
- a. Verify what type of problem first.
 - b. Orders not going to the video. Possible comm. Error between Video PC and SAM4POS or, SAM4POS programming error on what goes to which video.
 - c. Test network communication between SAM4POS ECRs to eliminate network communication problems.
 - d. Check cable and connections between Video Controller and SAM4POS.
 - e. Check programming in Video Controller.
8. Credit Authorization
- a. Won't authorize a sale from all ECRs. Specific error will help determine where issue is.
 - i. Check power to the integrated credit device.
 - ii. Check cable and connectors internet to the integrated credit device.
 - iii. Check cable from integrated credit device to SAM4POS.
 - iv. Check processing network.
 - v. Reload Parameters to integrated credit device & pin-pad on the ECR.
 - vi. Check SAM4POS programming.
 - b. Won't authorize a sale from only one ECR.
 - i. Check SAM4POS IRC network.
 - ii. Check SAM4POS credit authorization programming.
 - c. If you have a laptop PC, test Internet to verify the Internet is working.
 - d. Check with credit card processor, internet provider.
9. Scanner
- a. Won't scan. Check for LED used for scanning and power.
 - b. Check if scanner beeps when scanning.
 - c. Check if program is correct for scanner at SAM4POS.
 - d. Replace scanner or scanner cable.
10. SAM4POS
- a. Overview: A good working knowledge of the Sam4POS functions of the test "UTILITY" (Utility.apk) is very beneficial in helping to diagnose Sam4POS hardware. The main guide to troubleshooting is in the Service Manuals for the specific terminal model available on the CRS web site dealer only area.
 - b. From the test UTILITY, you can verify all hardware is running properly.
 - i. An explanation of all menu selections is in the applicable Service Manual.
 - ii. Make your own loop-back connectors to test all communication ports as described in the Service Manual.
 - c. Process of Elimination
 - i. If you have a back-up Sam4POS terminal, using the process of elimination by swapping components, you can determine which of the four major components are defective.
 - 1. Power board
 - 2. Main logic Board
 - 3. LCD touch panel assembly
 - 4. Magnetic Stripe Reader (MSR)
 - ii. Power Problem
 - 1. Checking AC power cord.
 - 2. Checking the power switch whether it is on or not. It is located the right side of product.
 - 3. Checking the fuse (250V, 3.15A) on IO BOARD.

4. Separate the power harness between SMPS and IO BOARD. And measure the DC output voltage on SMPS (+24V)
 5. If it does not go out, please replace the SMPS.
- iii. Touch Problems Tips
1. Check for cuts or deep scratches in the touch membrane of the screen.
 2. Check for debris between the bezel and the touch panel (older units).
 3. Try new touch panel.
- iv. LCD Problem Tips
1. Dark contrast. Try to adjust brightness level to high; Android Settings/Device/Display.
 2. Check LCD cables from main board to be sure they are OK and making good connection.
 3. Replace LCD to test.
- v. MSR Tips
1. Won't read cards. Test MSR using the test "UTILITY".
 2. Check cable on MSR that connects to internal cable to see if it is damaged or the wires are pinched.
 3. Replace MSR.

The Universal Serial Bus (USB) specification stipulates five data transfer rates:

USB 1.0/Low-Speed: 1.5 Megabits per second (Mbps)

USB 1.1/Full-Speed: 12 Mbps

USB 2.0/Hi-Speed: 480 Mbps

USB 3.0/SuperSpeed: 5 Gbps

USB 3.1/SuperSpeed: 10 Gbps

RS-232 Transfer Speeds

Basically RS232 can transfer a single byte of data over a serial cable having between 3 to 22 signals and running at speeds from 100 to 20k baud. Common baud rates used are 2.4k, 9.6k, 19.2k; the cable length can be up to 50ft.

Higher baud rates are used but not covered by the standard they still work though e.g. 38400, 57600 Baud (bits/s).

COM Port Voltage Setting

Sapphire A60/A70

COM Port Voltage settings on the Sapphire A60/A70 terminals is enabled in the Android settings.

1. In the Sam4POS application, go to **Program Mode > System > Settings**. Enter the **MANAGER PASSWORD** at the prompt if required.
2. On the Settings menu, scroll down the category list to: **> Device Status > COM Settings**.
 - Available settings for **COM 1 ~ COM 4** are: **NONE, 5V** or **12V**.

SAP-6600/SAP-630

Enabling the COM Ports and voltage settings on the SAP-6600/630 is done in the bios settings. An external Keyboard may be required to access the BIOS settings. Use the external keyboard to edit and save changes.

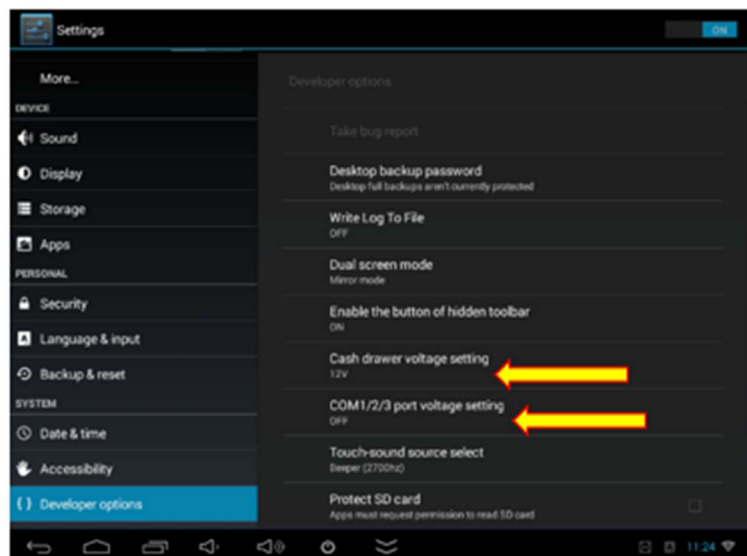
Video showing Enable Com Port/Setting Com Port Voltage: <https://youtu.be/NIWbZ4zZ8MU>

1. **Power Off** the SAM4POS ECR and connect a USB keyboard.
2. **Power On** the SAM4POS ECR; press **Delete** when the terminal begins loading to access BIOS settings. Alternately, you can double-tap **SET UP** in the upper right of display to access the BIOS settings.
3. Using the arrow keys on the keyboard, arrow over to the **Advanced** tab and select **F81960 Super IO Configuration**; press **ENTER**.
4. Arrow down to the desired **COM1/2/3 Power Select** and press **ENTER**.
5. Select the appropriate voltage setting (**5V** or **12V**) for the connected device; press **ENTER**.
6. Press **F10** to **Save & Exit** the BIOS settings.
7. The SAM4POS ECR APPLICATION will reload to the main sign on screen.

SAP-4800 II/SAP-530 - Cash Drawer / COM Port Voltage Setting

COM Port voltage on the SAP-4800II/530 terminals is enabled in the Android settings.

1. In the Sam4POS application, go to **Program Mode > System > Settings**. Enter the **MANAGER PASSWORD** at the prompt.
2. On the Settings menu, scroll down the category list on the left-side menu to the **SYSTEM** category.
3. Select **Developer Options** from the available selections. The developer options must be **ON** to allow editing.
4. Select the **Cash Drawer Voltage Setting** or select **COM1/2/3 Port Voltage Setting**.
 - Choose the value for each setting as desired.
5. Press the **↶** icon to return to the Sam4POS application.



Bluetooth Cable Eliminator

LM048ASP2 Set up Instructions

Bluetooth Cable Eliminator

The LM048SPA2 Cable Eliminator is a Serial to Bluetooth adaptor that may be used to connect serial devices to Sam4POS. Use the LM Serial\Bluetooth Adapter anywhere you would ordinarily run a serial (RS-232C) cable. In many applications equipment is located in environments that would normally require a cable run under a floor or through a ceiling. The expense of an electrician or qualified cable installer may be significantly more than the cost of this simple, reliable wireless device.

The LM Cable Eliminator Serial to Bluetooth wireless adaptor works with many different makes and models of ECRs and POS systems including Sam4POS. If the device uses an RS232 serial connection, the Cable Eliminator LM048SPA2 Serial\Bluetooth adaptor may work well for you.

The LM048SPA2 Kit Includes everything needed for most applications. (If the host device does not have a powered serial or USB port, an additional AC Power Supply, p/n 130260, is required.)

- ⇒ Run Remote Printers and Other RS-232 Devices Without Wiring
- ⇒ Compact, Affordable, and Easy-to-Install
- ⇒ Uses Reliable Bluetooth Wireless Technology
- ⇒ Range of Up To 328 Feet (100M) Without Obstructions
- ⇒ The Only Wireless Adaptor That Supports “Out of Paper / Cover Open” Printer Status to the ECR

Equipment List

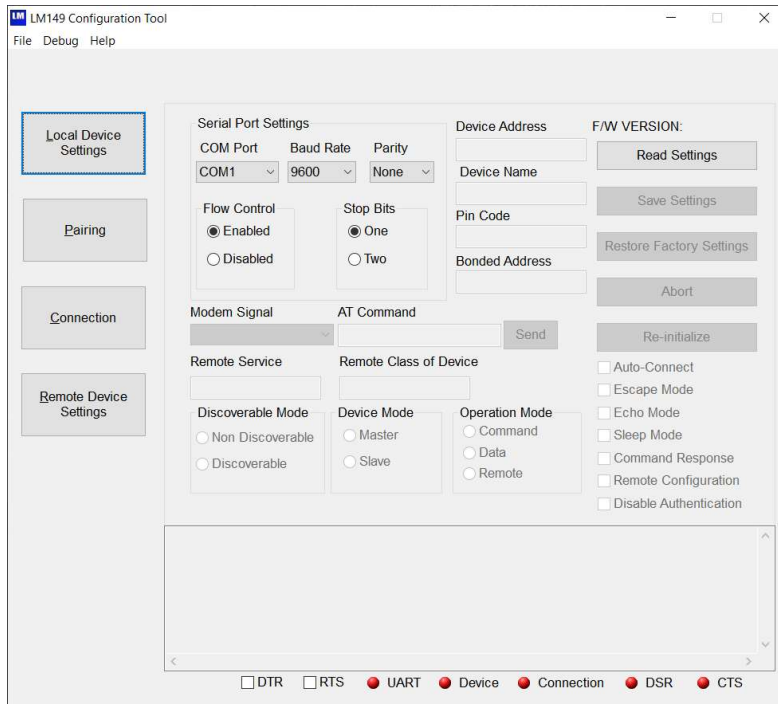
Item #: 130250	Model LM048SPA2 Cable Eliminator Kit
Item #: 130261	Cable USB-Mini USB
Item #: 130260	Power Supply
Item #: 130262	Serial port Adaptor to Convert DB25 to DB9 PIN
-----	LM149 Configuration Tool (PC set up utility for the LM device.)

You can view a YouTube Video of the Pairing Procedure for the LM Devices here:

<https://www.youtube.com/watch?v=z-MvYPO22G4&list=PLtF-h-a37jHIVjIKUmgxmoxue0JjFTlh&index=1>

Download & Install LM Configuration Tool

1. Log on the dealer area of www.crs-usa.com; go to *ECR/POS Peripherals* and click on the Cable Eliminator. [Cable Eliminator Model LM048SPA2 Bluetooth for Wireless Serial \(crs-usa.com\)](http://www.crs-usa.com)
2. Under the “Software” heading on the cable eliminator page, locate and download the current version LM Configuration Tool (LM149_Configuration_Set up.zip) and the LM048SPA2 Set up Instructions.
3. Unzip the configuration tool and install on your PC (double click the LM149 Config v1.5 Set up.exe).
4. When installed, open the LM149 Configuration Tool, the default screen displays.



Local Device Settings

5. Connect one of the LM048SPA2 devices to the PC com port, connect and apply power. The DCE DTE switch on the LM device should be in the **DCE** position (towards the DB-9 RS-232 connection).

Read Settings

6. Click the **Read Settings** button. The utility should find the LM048SPA and display the device version and settings. The LM Device
 - * UART initialized successfully
 - * Checking support for firmware version . . .
 - * Firmware version supported
 - * Connecting to Device . . .
 - * Local Device initialized successfully
 - * Reading Device Settings . . .
 - * Device Settings read complete

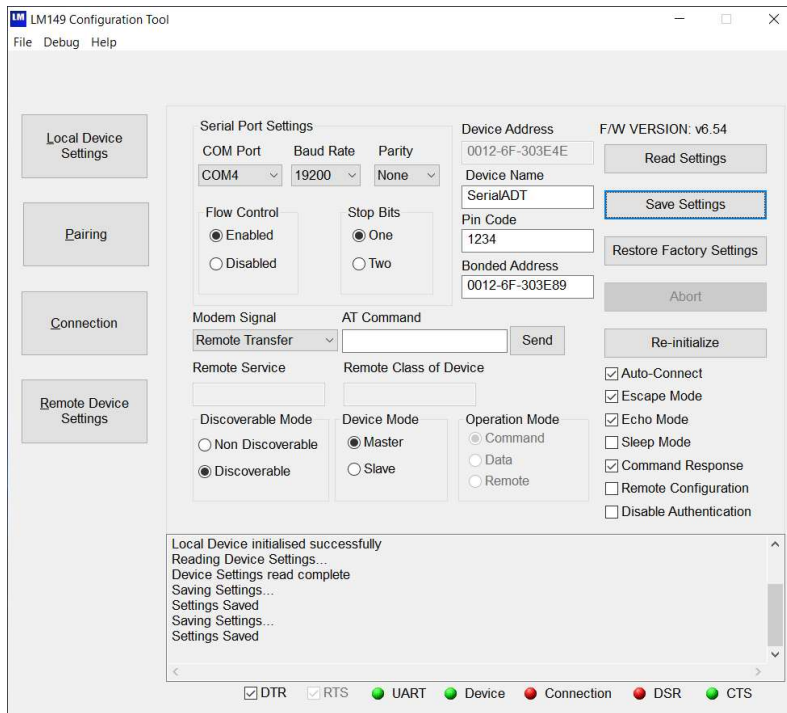
Note: If the LM configuration utility is not able to connect with the LM device, the message “Local Device Installed Successfully” will not display.

- a. Verify the COM Port settings:
 - Baud Rate = **19,200**
 - Data Bits = **8**
 - Parity = **None**
 - Stop Bit = **1**
 - Flow Control = **Enabled**
 - Discoverable Mode = **Discoverable**
 - Modem Signal = **Remote Transfer**

(Without Modem Signal set for Remote Transfer, if for some reason the LM149 on the printer side is not connected or loses power, your print job will be lost with no indication on the ECR/POS terminal.)

- b. Verify DCE DTE is in **DCE** position
- c. Try different Port, Cable, etc.
- d. Reconnect LM Device and Read Settings again

7. When the “**Read Settings**” operation is successful, you will see the Device Settings:
 - Device Address
 - Device Name
 - PIN Code
 - Bonded Address
 - F/W Version



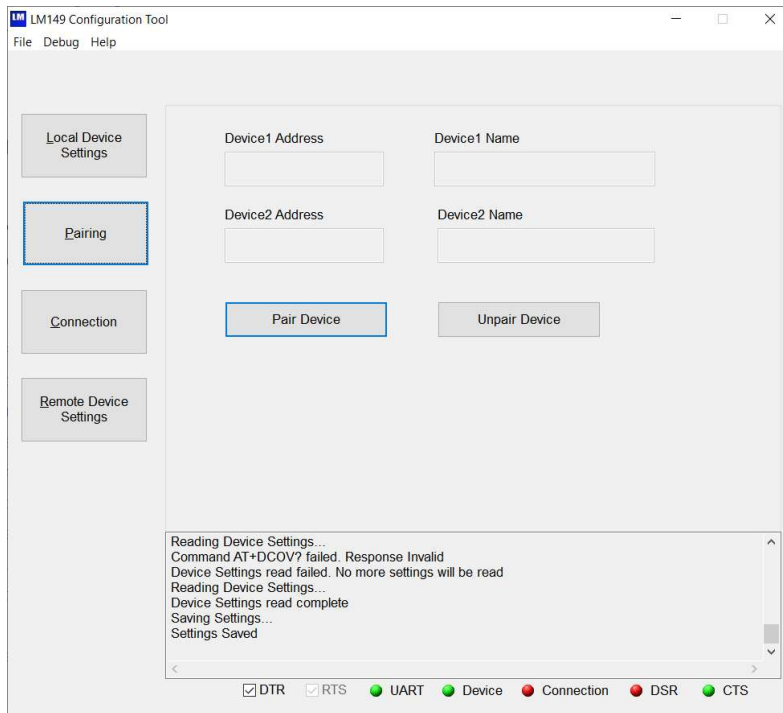
8. You will need to set up the LM Devices for the same parameter settings as the peripheral device you intend to use the LM devices with. Make any changes necessary for your specific requirements; click the **Save Settings** button to load those changes to the LM Device.

Note: Be sure to match the settings on both of your LM devices before pairing.

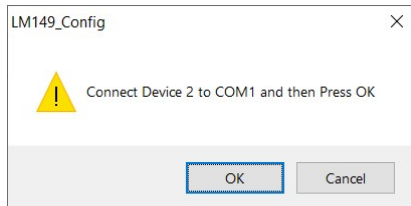
Pairing the Devices

After both LM device settings are set to the same parameters, you can “Pair” the devices to work together.

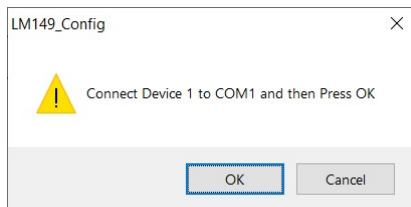
- To “Pair” the LM048SPA2 with its mate, select the **Pairing** button on the left.



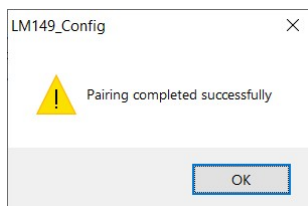
- With the LM Device still connected, click the **Pair Device** button. The dialog below is displayed.



- Disconnect the first LM device. Connect the second LM device to the PC and apply power. Click **OK**. The dialog below displays.



- Reconnect Device #1 to the PC and click **OK**. The dialog below is displayed.



13. The LM devices are now paired with the communications settings (which are: **19,200, 8, None, 1** and flow control **Enabled**). The devices that will use the LM048SPA2's also need to be set to these same settings. (If you choose to use settings other than the default settings, use the utility at step 3 above to change the LM048 settings. The satellite device settings must match.)
14. The device # 1 will be set as the Master (Cash Register device) and the device #2 will be set as the Slave (Printer device).

Testing

Test the peripheral device using a cable to verify the device is operating properly. If the device tests OK with a cable, swap out the cable for the LM Devices and test again. If the LM Device settings are correct your device will operate properly.

NOTE: If for any reason, the devices do not communicate, you can reset the LM devices by pressing and holding the reset button located on the top of the device. Reset both devices and start again from step 1.

Default LM149 Settings:

- Baud Rate: 19200
- Data Bits: 8
- Parity: None
- Stop Bit: 1
- Flow Control: None

Tutorial Videos

Cable Organization SAP-6600:

[Cable Organization with the SAP-6600 - YouTube](#)

Setting up the Smart Dock

HM616/626 Tablet:

[Setting up the Smart Dock with Sam4POS - YouTube](#)

Display Connection

Cabinet Mounted Rear VFD:

[Installing the Rear VFD on the SAP 6600 - YouTube](#)

Rear Display (LCD Dual-Monitor):

[Rear Display Feature in Sam4POS - YouTube](#) 9.7" LCD

[Rear Display Feature with Sam4POS - YouTube](#) 15" LCD

Connecting Printers

How to Add a Printer:

<https://www.youtube.com/watch?v=uIt7B8Sfbxw&list=PLtF-h-a37jHmbhGgLO3nB76hP-avFSW29&index=113&pp=iAQB>

Serial Printer with Sam4POS:

[SAM4POS - How to add a printer - YouTube](#)

USB Printer with Sam4POS:

[Connecting a USB Printer in Sam4POS - YouTube](#)

Ethernet Printer with Sam4POS:

[Connecting to a Printer with an Ethernet Connection with Sam4POS - YouTube](#)

Kitchen Printer Setup

<https://www.youtube.com/watch?v=HHhXTHE2kiY&list=PLtF-h-a37jHmbhGgLO3nB76hP-avFSW29&index=79&pp=iAQB>

KP Printer to Multiple Terminals

<https://www.youtube.com/@crsinc1147>

Kitchen Video

EPAD

https://www.youtube.com/watch?v=5ZOGDU_ULZY&list=PLtF-h-a37jHmbhGgLO3nB76hP-avFSW29&index=81&pp=iAQB

Networking Terminals (IRC)

A video showing how to network terminals & tablets can be viewed on the CRS YouTube page:

<https://www.youtube.com/watch?v=NTKCrAyJYWI&list=PLtF-h-a37jHmbhGgLO3nB76hP-avFSW29&index=62&pp=iAQB>

Additional networking information can be found in the Sam4POS Networking & Installation Guide available on the CRS Website:

<https://www.crs-usa.com/products/sam4pos-android-software-5-year-license->

Dual Monitor

Dual Monitor 9.7" Setup with Sam4POS:

Another useful video, Cable Organization with SAP-6600:

<https://www.youtube.com/watch?v=J6hEmGfmgI4&list=PLtF-h-a37jHmbhGgLO3nB76hP-avFSW29&index=12&pp=iAQB>

Dual Monitor 15" Setup with Sam4POS:

<https://www.youtube.com/watch?v=0tFJqPUOzSs&list=PLtF-h-a37jHmbhGgLO3nB76hP-avFSW29&index=28&pp=iAQB>

Manual Revision Record

Revision Number	Date Published	Revision Contents
v1.0	08/25/2020	Preliminary
v1.1	12/10/2020	Added Video links where applicable; Polling-PC/POLL general information
v1.2	06/23/2021	Added Datalogic Magellan Scale\Scanner info
v1.3	10/15/2021	Updated Dual Monitor Installation
v1.4	12/06/2021	Updated VFD Line display information
v1.5	05/20/2022	Device Setting; Scale Info
v1.6	06/14/2022	Datalogic Magellan Scale\Scanner Cable Spec
v1.7	12/12/2022	HM616/626 reference, LM Bluetooth Cable Eliminator, Cable Pinouts
v1.8	02/27/2023	COM Port Voltage Settings
v1.9	04/24/2023	Line Display Voltage; EFT Device & EFT Operation: DC Direct
v1.10	03/08/2024	Added DC Direct Canada; Com Port Voltage, Line Display; Ethernet LAN Cable
v1.11	12/31/2024	Updated Tutorial Videos
v1.12	01/31/2025	Updated Print Option, KP/KV Option.
v1.13	05/09/2025	Updated EFT – Integrated Payment
v1.14	05/21/2025	Added: Sapphire information. Updated Dual Monitor Installation
v1.15	08/12/2025	Scale: Device Models
v1.16	09/08/2025	EFT: Device Models
v1.17	11/21/2025	Serial Scanner Device Setting
v1.18	12/05/2026	Scale Settings:
v1.19	01/08/2026	Scale Cables: CAS PDN
v1.20	1/20/2026	Printers
v1.21	3/16/2026	CAS PDN cable Item#
v1.22	6/23/2026	Dual Monitor-Sapphire