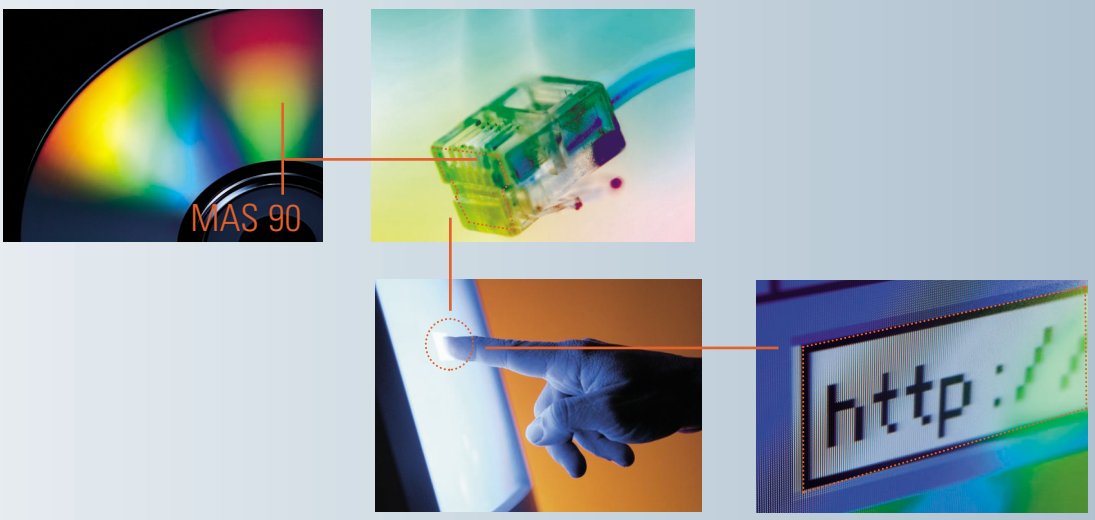
Our tech-knowledge-e Is Your Solution

HighTower



Welcome to the Point of Sale Professional Hardware Configuration Manual for Version 4.05

How to Use This Guide

Go to the How to Use This Guide page (this page).

Go to the Contents.

Go to the previous page.

Go to the next page.

Go back to the previous link.

Go to the Index.

Text on page...

Indicates a jump to a topic.

Bookmarks appear in the overview window to the left of the document window. These bookmarks are similar to a table of contents.

Note: This manual is best viewed using Acrobat Reader 5.0, which can be installed from the CD-ROM. For best printing results, print to a PostScript printer.

This manual was written for Point of Sale Professional version 4.05. It was last updated on 07/20/2005.

Contents

Contents

Introduction

> **NOTE:** The following subject matter relates to both MAS 90® and MAS 200®. However, to save space, references in this manual are made to MAS 90® only.

The HighTower Ideal

At HighTower, we are committed to delivering superior accounting, time management, manufacturing and distribution solutions to small and mid-sized businesses.

HighTower is a Best Software Master Developer for MAS 90® and MAS 200® software with titles such as Food Distribution, MICR Encoded Laser Checks, Multi-Bin® Advanced Distribution, Point of Sale® Professional, Remote Salesperson PDA, Remote Salesperson Laptop, ScanBlaster, Time and Billing®, Time and Billing® Professional, and Timekeeper® to our credit.

HighTower uses a unique **Patch Installation** system, which installs the HighTower enhancements without overwriting your original Best Software program. Our patch installation method makes our products attractive to users installing enhancements from multiple Best Software Master Developers.

Our promise of exceptional technical products is only exceeded by our commitment to customer service. Our success is measured in customer satisfaction.

Using the Point of Sale Professional Hardware Manual

This manual provides the information necessary for setting up hardware for the Point of Sale Professional module. The hardware discussed in this manual includes printers, bar code scanners, cash drawers, credit card readers, check readers, and pole displays for registers. Before completing the installation and configuration of your hardware, you must have MAS 90 or MAS 200 installed and you must have the Point of Sale Professional module installed.

Graphic Conventions

The following icons are used throughout this manual to indicate different types of information.

Graphic	Description
	The **Note** symbol is followed by additional information about a topic.

Graphic	Description
	The **Helpful Hint** symbol is located in the left margin and contains additional information about an option.
	The **Warning** symbol is followed by information to help you avoid costly mistakes.

Text Conventions

The following table describes the text conventions used in this manual.

Text Convention	Explanation
Field font	Indicates a field name, list box name, options in a list, column name, or check box.
Italic font	Indicates directory names or references to other manuals.

This concludes *Chapter 1: Introduction* of the Point of Sale Professional Hardware Configuration manual.

Getting Started

NOTE: The following subject matter relates to both MAS 90® and MAS 200®. However, to save space, references in this manual are made to MAS 90® only.

Steps You Will Take

Complete the following steps for a fully functional point of sale system.

1 Install the hardware using the manual provided by the manufacturer.

2 Configure the hardware in the Point of Sale Professional module.

3 Test the hardware using test materials provided by the manufacturer.

4 If your company plans to accept credit card payments and will use a product such as PCCharge for automatic authorization codes, you **must** have the merchant numbers for each type of credit card accepted. Merchant numbers are provided by your bank/processing company. It may take several weeks to receive all merchant numbers. **You will not be able to process or test automatic authorization codes without this information.**

WARNING: At this time Point of Sale Professional receipt printers, cash drawers, and pole displays are not supported in Microsoft® Terminal Services, unless using Terminal Services in a Citrix® environment. Review the documentation provided by the manufacturer to setup devices in this environment.
Currently, Microsoft Terminal Services does not support static port mapping in Terminal Service sessions. Terminal Service ports are mapped using the current session number, and this session number is used in the naming of the printer, cash drawer, or pole display. This session number changes from login to login, meaning the device name changes as well. Point of Sale Professional searches for a specific printer, cash drawer, or pole display name during the print, open, or display process. If this name changes, the print job, opening of the cash drawer, or pole display will fail. Citrix Metaframe XP supports static port mappings, allowing the device name to remain the same across logins.

Recommended Hardware

There are specific hardware brands that HighTower recommends for the Point of Sale Professional module. These brands are focused on throughout the manual. The documentation and manufacturer information for these hardware brands are listed on the HighTower Hardware Website located on www.hightowerinc.com/products/enhancements/hardware.asp?code=P2. Before installing any hardware, make sure you have the latest copies of the manuals for the hardware and any materials required for testing.

Receipt Printers

We recommend Star® Micronics' Thermal Printer (TSP600™). Before installing the hardware for the computer, make sure you have the manual provided by the manufacturer.

Chapter 3: Receipt Printers contains installation instructions and configuration instructions.

Cash Drawers

There are no brand specific recommendations for cash drawers. You can have a cash drawer that connects to a printer, or a cash drawer that connects to the workstation serial port.

Chapter 4: Cash Drawers contains installation instructions, configuration settings, and procedures on how to test the hardware.

Bar Code Scanners

There are no brand specific recommendations for bar code scanners, however the Point of Sale Professional module works with keyboard interrupt scanners only. Keyboard interrupt scanners connect to the workstation with a wedge cable, where one end connects to the keyboard and the other end connects to the back of the workstation.

Chapter 5: Bar Code Scanners contains installation instructions and testing procedures for the bar code scanners.

Credit Card Readers

HighTower recommends MiniMag™ by ID Technologies, Inc.® and Welch Allyn® SCANTEAM® (for both checks and credit cards) by Hand Held Products, Incorporated (HHP™). The Point of Sale Professional module works with mag-stripe credit card readers for keyboards only - not with serial port readers. Before installing the hardware, make sure you have a copy of the manual provided by the manufacturer.

Chapter 6: Credit Card Readers contains installation instructions, configuration settings, and procedures on how to test the hardware.

> **NOTE:** If you use PCCharge and the Credit Card module, you will need to have an Activation Key provided by Best Software.

Check Readers

Before installing the hardware for a check reader, make sure you have the manual provided by the manufacturer. HighTower recommends Welch Allyn SCANTEAM by Hand Held Products, Inc. The manufacturer also provides testing materials for the hardware.

Chapter 7: Check Readers contains installation instructions, configuration procedures and instructions on how to test the hardware.

Pole Displays

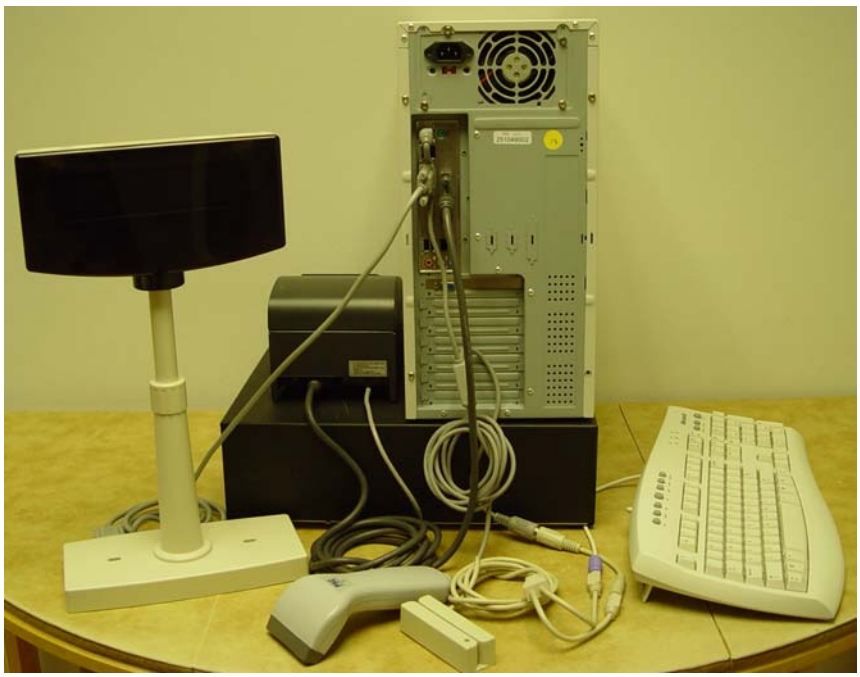
HighTower recommends an EMAX™ (by EMAX International, Inc.), Epson® (by Seiko Epson Corporation), or Logic Controls PD 3000/PD 6000 (by Logic Controls, Inc.) pole display. Make sure you have the installation instructions from the manufacturer.

Chapter 8: Pole Displays contains installation instructions, configuration settings, and test procedures.

Hardware Connections

CONTENTS
BACK
INDEX

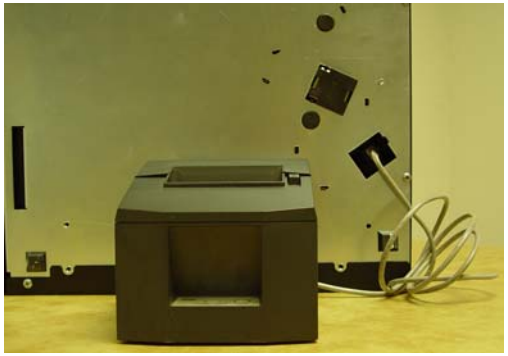
The beginning of each chapter contains brief instructions on how to connect the hardware to your computer. Always review the manuals provided by the manufacturers for complete installation instructions.



This concludes *Chapter 2: Getting Started* of the Point of Sale Professional Hardware Configuration manual.

Printer Hardware Connections - This section contains brief instructions to guide you through the hardware connections. Review the documentation provided by the manufacturer for more detailed information.

1. The printer is packaged with three cables - (from left to right) a parallel printer cable, a cable to connect to the cash drawer (if one is used - this cable resembles a telephone connector), and a power cord. Connect the cables to the back of the printer. Plug the power cord into the power source.



2. If the printer connects to a cash drawer, insert the cable into the bottom of the cash drawer.

3. Plug the parallel printer cable into the computer. Complete the instructions in *Chapter 3: Receipt Printers* to configure the printer to work with the Point of Sale Professional module.

Receipt Printers

NOTE: The following subject matter relates to both MAS 90® and MAS 200®. However, to save space, references in this manual are made to MAS 90® only.

Chapter 3: Receipt Printers contains instructions on how to configure receipt printers for use with the Point of Sale Professional module. These printers are specially designed for printing customer receipts.

The examples in this chapter were created using a Star600™ Thermal Printer by Star® Micronics Co., LTD., with the Star Raster driver on a Windows® 2000 system. Different drivers and operating systems may slightly change the instructions. If using a printer by another company, review the installation instructions provided by the manufacturer.

WARNING: At this time Point of Sale Professional receipt printers are not supported in Microsoft® Terminal Services, unless using Terminal Services in a Citrix® environment. Review the documentation provided by the manufacturer to setup devices in this environment.
Currently, Microsoft Terminal Services does not support static port mapping in Terminal Service sessions. Terminal Service ports are mapped using the current session number, and this session number is used in the naming of the printer. This session number changes from login to login, meaning the printer name changes as well. Point of Sale Professional's print feature searches for a specific printer name during the print process. **If this name changes, the print job will fail.** Citrix Metaframe XP supports static port mappings, allowing the printer name to remain the same across logins.

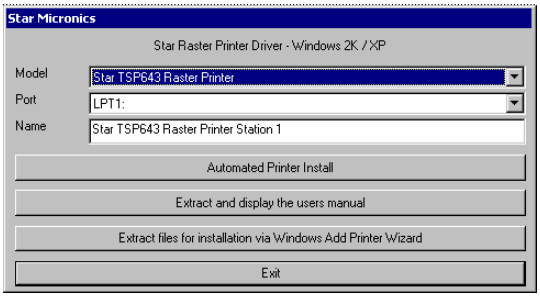
Prior to Setup

Prior to installing or creating printer devices in Point of Sale Professional, complete the following steps.

1. Setup the Point of Sale Professional module, except the cash drawer and printer devices. Read the *Point of Sale Professional* manual for more details.
2. Have all necessary hardware, accompanying installation software, and manuals readily available.
3. Make a backup copy of the MAS90.ini file (available in \MAS90\home\MAS90.ini on the computer). This file contains a list of all the devices currently available in MAS 90.

4 If using the HighTower recommended Star® Micronics' Thermal Printer (TSP600™), download and install the correct Star Raster program. See the HighTower website (www.hightowerinc.com) for the latest driver and manual.

WARNING: When installing the latest version of the printer, be sure to select **Star TSP643 Raster Printer** as the model.



5 After installing the printer with the correct driver, reboot the workstation and print a test page through the Control Panel. If the test page fails, contact the manufacturer to troubleshoot the issue.

Windows Setup

After installing the printer and successfully printing a test page, configure the printer settings through Windows. Configuring a printer is different for each version of the Windows operating system and for different brands of printers. This section contains instructions for printer brands that work with Point of Sale Professional under different operating systems. Follow the instructions for your printer for the correct Windows version.

NOTE: When a printer's Windows configuration changes, you must reselect the printer in the Point of Sale Professional module.

Star Thermal Printer Setup

This section contains the instructions for configuring the Star Thermal Printer TSP600 series. Different operating systems require different versions of the Star Raster driver. Verify that the correct version is installed.

Windows 2000 and XP Operating System Setup

Windows 2000 and XP operating systems require the Raster driver RasterDrv_2K-XP. This driver must be fully installed and a test page must successfully print before completing the following setup. The pictures in this section were created using a Windows 2000 operating system.

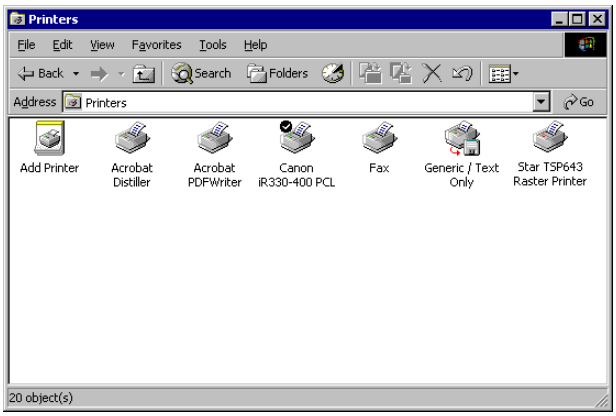
Windows 95, 98, and ME Operating Systems

Windows 95, 98, and ME operating systems require the Raster driver RasterDrv_95-98-ME. This driver must be fully installed and a test page must successfully print before completing the following setup. The pictures in this section were created using a Windows 2000 operating system, however the setup instructions are the same for Windows 95, 98, and ME operating systems.

Configuring the Printer to Print Receipts

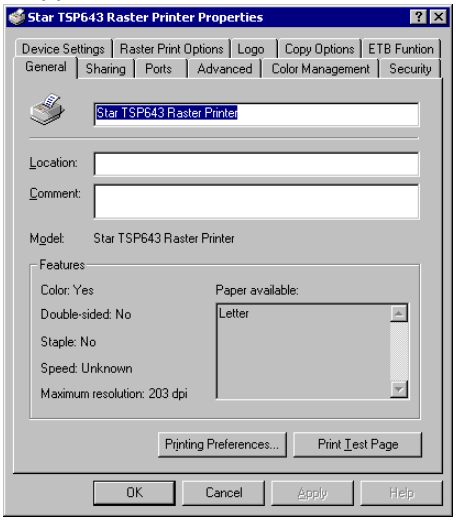
Configure the printer to print receipts through the Windows operating system before adding the printer to MAS 90.

1 From the Windows **Start** button, select **Settings**/**Printers**. The Printers window appears.



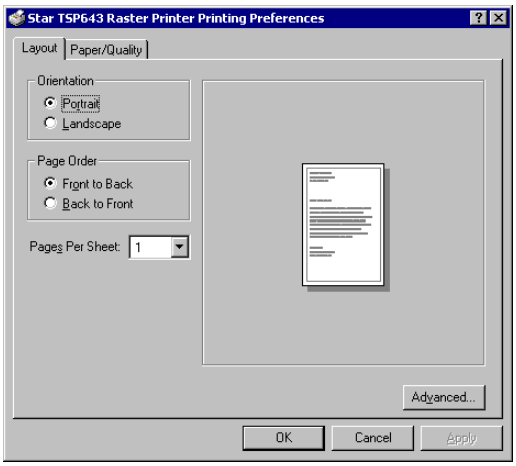
Printers Window

2 Right-click on the printer and select **Properties**. The Printer Properties window appears.



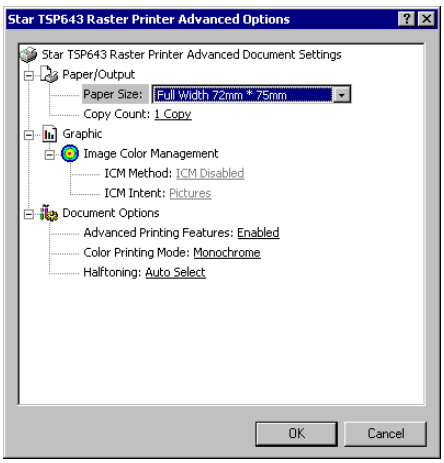
Printer Properties Window

3 Click the **Printing Preferences** button. The Printing Preferences window appears.



Printing Preferences Window

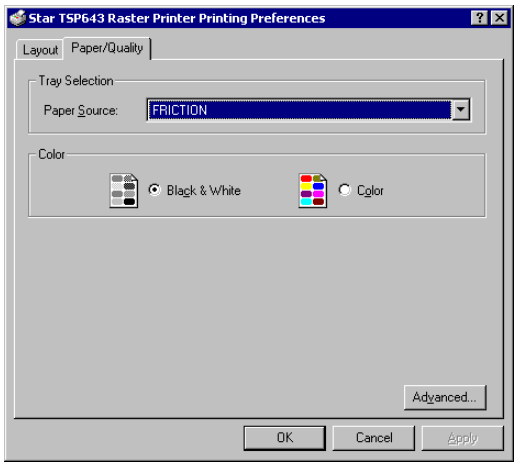
4 On the Layout tab, click the **Advanced** button. The Printer Advanced Options window appears.



Printer Advanced Options Window

5 Select **Full Width 72mm * Receipt** in the **Paper Size** field. Click the **OK** button to save the change.

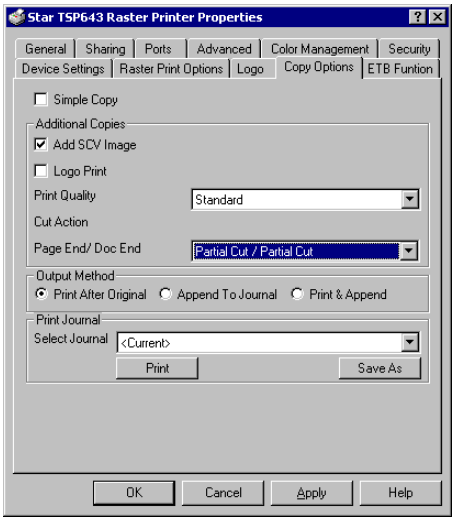
6 Click on the **Paper/Quality** tab to change the printer settings as displayed in the following picture.



Printing Preferences Window - Paper/Quality Tab

7 Select **FRICTION** in the **Paper Source** field and click the **OK** button.

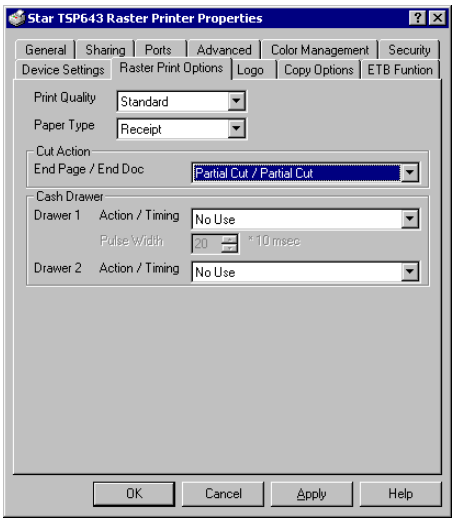
8 Click on the **Copy Options** tab to change the paper cut options as displayed in the following picture.



Printer Properties Window - Copy Options Tab

9 Uncheck **Simple Copy** and select **Partial Cut/Partial Cut** in the **Cut Action** field.

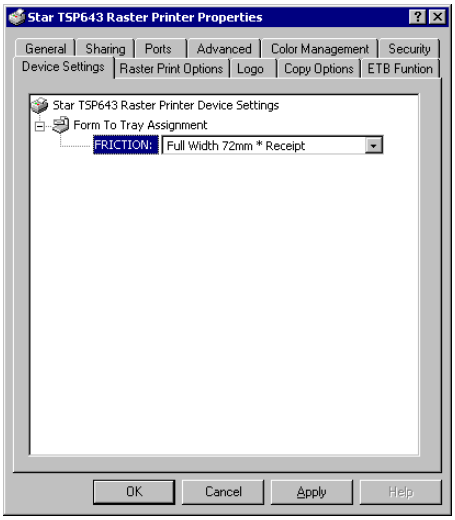
10 Click on the **Raster Print Options** tab to change the cut options as displayed in the following picture.



Printer Properties Window - Raster Print Options Tab

11 Select **Receipt** in the **Paper Type** field, and select **Partial Cut/Partial Cut** in the **Cut Action** field.

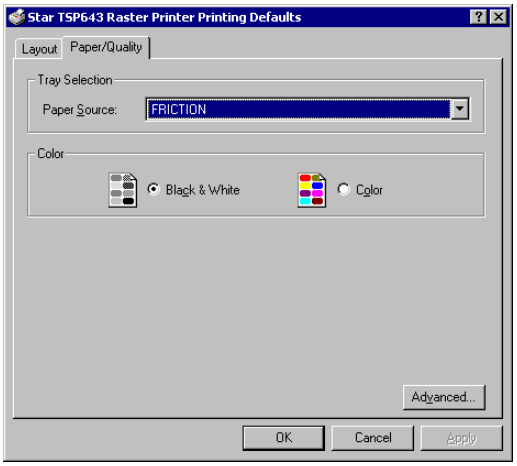
12 Click on the **Device Settings** tab to change the friction option as displayed in the following picture.



Printer Properties Window - Device Settings Tab

13 Select **Full Width 72mm * Receipt** in the **Friction** field.

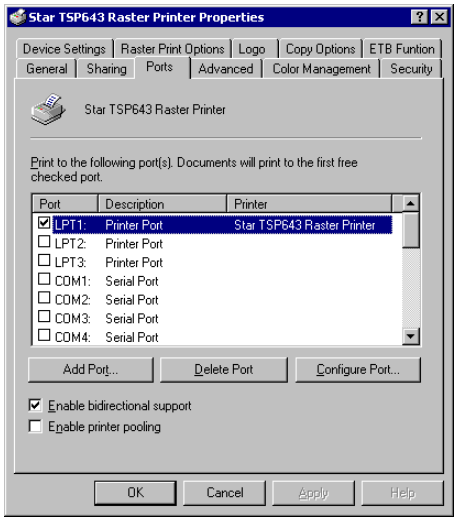
14 Click on the **Advanced** tab and click the **Printing Defaults** button. The system displays the Printing Defaults window. Click on the **Paper/Quality** tab to change the printer settings as displayed in the following picture.



Printing Defaults Window - Paper/Quality Tab

15Choose **FRICTION** in the **Paper Source** field and click the **OK** button.

16Click on the **Ports** tab and make sure the printer is configured on a port.



Printer Properties Window - Port Tab

17Click the **OK** button on the Printer Properties window to save all changes.

After changing the printer settings in Windows, you must also reselect the settings in MAS 90. See the Select the Printer in the Point of Sale Professional Module section.

MAS 90 Setup

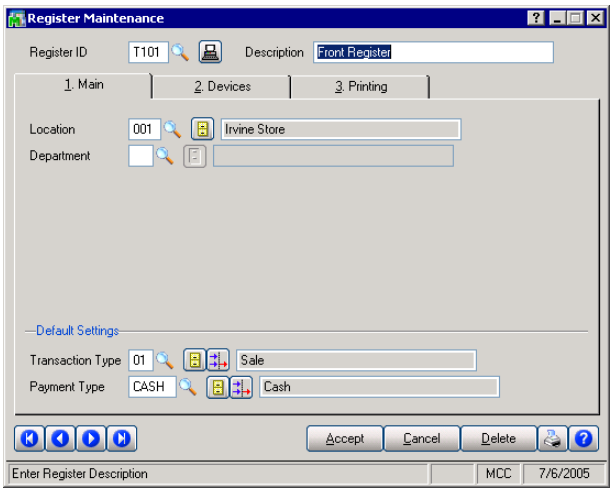
After installing the printer, you must configure it to work with the Point of Sale module in MAS 90. Log into MAS 90 before completing the following tasks.

Select the Printer in the Point of Sale Professional Module

After configuring the printer in Windows, select it in the Point of Sale Professional module in Register Maintenance. This section contains instructions for selecting a printer for a register; it does not contain full instructions for creating a register. See the *Point of Sale Professional* manual for more details.

> **NOTE:** When a printer's Windows configuration changes, you must reselect the printer in the Point of Sale Professional module.

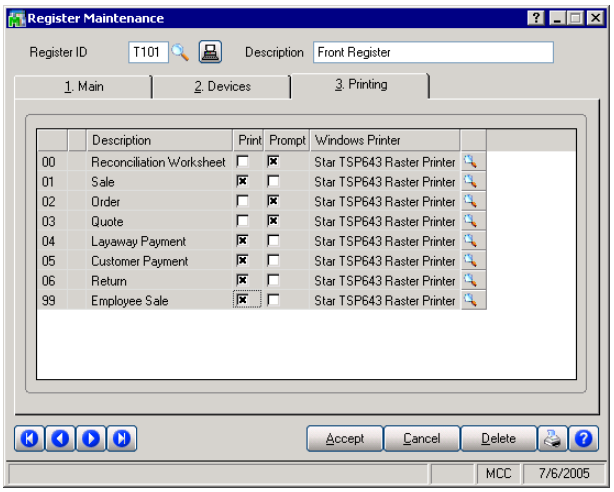
1 From the **Setup** menu in the **Point of Sale Professional** module, select **Register Maintenance**. The Register Maintenance window appears.



Register Maintenance Window

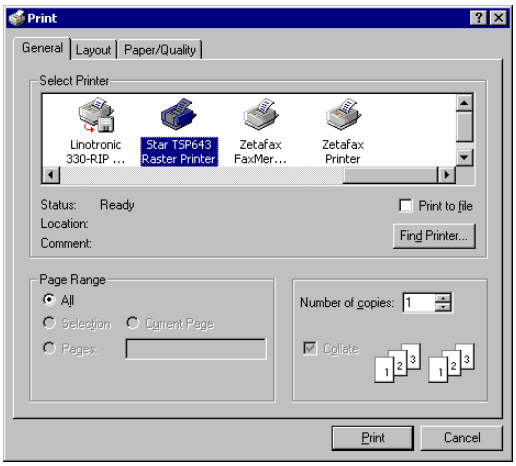
2 Select the terminal that will be using the receipt printer in the **Register ID** field. Click the button to select a terminal from a list, or click the **Current Terminal** ( ) button for the default terminal.

3 Click on the **Printing** tab to select a printer for each transaction type. Transactions are created in Transaction Type Maintenance of the Point of Sale Professional module.



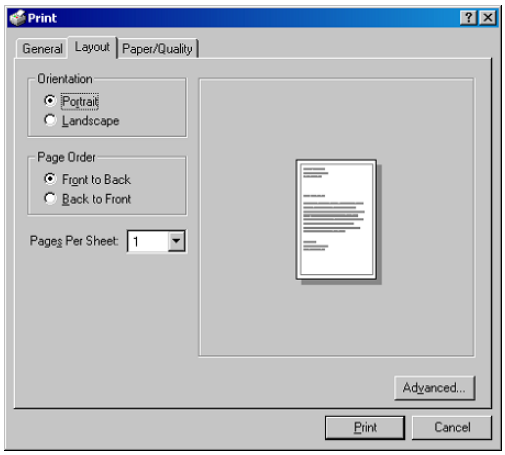
Register Maintenance Window - Printing Tab

4 For each transaction you want to print to the receipt printer, click the button to the right of the **Windows Printer** field. The Print window appears.



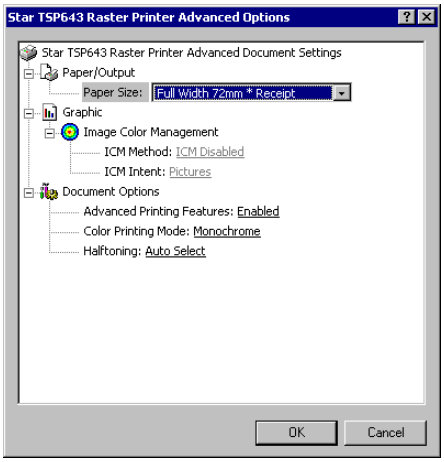
Print Window

5 Click on the name of your printer on the **General** tab, and then click on the **Layout** tab.



Print Window - Layout Tab

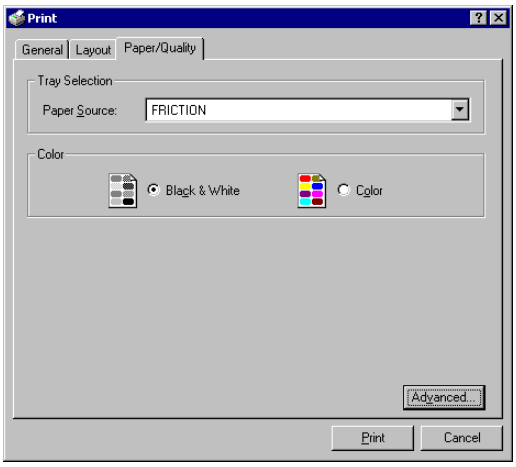
6 Click on the **Advanced** button to open the Advanced Options window.



Advanced Options Window

7 Select **Full Width 72mm * Receipt** in the **Paper Size** field. Click the **OK** button to save the change.

8 Click on the **Paper/Quality** tab to change the printer settings as displayed in the following picture.



Paper/Quality Tab

9 Choose **FRICTION** in the **Paper Source** field and click the **Print** button.

10 Repeat steps 4-9 for each transaction type. Click **Accept** when finished to save all changes.

NOTE: You may have to adjust the Crystal Report forms in the Location Maintenance window (access this window from the Point of Sale Professional Setup menu). Change the size of the receipt in the Forms tab if the printing is off-centered.

Troubleshooting Printers

If the receipt is not printing correctly (for example if its too long or does not look like an actual receipt) complete the steps in the Windows Setup section and reselect the printers in Point of Sale Professional. If problems continue, contact the printer manufacturer.

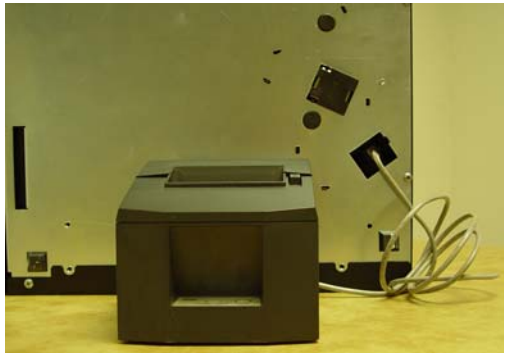
This concludes *Chapter 3: Receipt Printers* of the Point of Sale Professional Hardware Configuration manual.

Cash Drawer Hardware Connections - This section contains brief instructions to guide you through the hardware connections.

Review the documentation provided by the manufacturer for more detailed information.

1. The cash drawer does not connect directly to the computer. Connect the cash drawer to the printer. The printer will connect to the computer.

2. The printer is packaged with a cable to connect to the cash drawer. This cable resembles a telephone connector. Insert the cable into the back of the printer.



3. Insert the cable from the printer into the bottom of the cash drawer.

4. Connect the printer to the computer with the parallel printer cable (see *Chapter 3: Receipt Printers* for more information). Complete the instructions in *Chapter 4: Cash Drawers* to configure the cash drawer to work with the Point of Sale Professional module.

Cash Drawers

> **NOTE:** The following subject matter relates to both MAS 90® and MAS 200®. However, to save space, references in this manual are made to MAS 90® only.

Chapter 4: Cash Drawers contains instructions on how to configure a cash drawer for use with the Point of Sale Professional module. Many retail companies use cash drawers.

This chapter does not contain any brand-specific cash drawer installation instructions. Cash drawers are usually connected to printers. This chapter does focus on cash drawers that connect to printers, however there are some details on cash drawers connected by serial port. Complete the instructions in *Chapter 3: Receipt Printers* before configuring the cash drawer.

The examples in this chapter were created using a cash drawer connected to a Star600™ Thermal Printer by Star® Micronics Co., LTD., with the Star Raster driver on a Windows® 2000 system. Different drivers and operating systems may slightly change the instructions.

> **WARNING**: At this time Point of Sale Professional cash drawers are not supported in Microsoft® Terminal Services, unless using Terminal Services in a Citrix® environment. Review the documentation provided by the manufacturer to setup devices in this environment.
> Currently, Microsoft Terminal Services does not support static port mapping in Terminal Service sessions. Terminal Service ports are mapped using the current session number, and this session number is used in the naming of the cash drawer. This session number changes from login to login, meaning the cash drawer name changes as well. Point of Sale Professional searches for a cash drawer name during the open process. **If this name changes, the opening of the cash drawer will fail.** Citrix Metaframe XP supports static port mappings, allowing the device name to remain the same across logins.

Prior to Setup

Prior to installing cash drawers in Point of Sale Professional, complete the following steps.

1. Setup the printer to be used with Point of Sale Professional, following the instructions in *Chapter 3: Receipt Printers.*
2. Have all necessary hardware, accompanying installation software, and manuals readily available.
3. Make a backup copy of the MAS90.ini file (available in \MAS90\home\MAS90.ini on the computer). This file contains a list of all the devices currently available in MAS 90.

Windows Setup

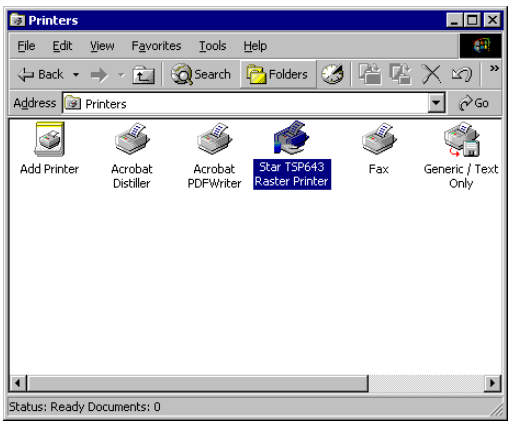
There are optional Windows settings you can configure to open the cash drawer whenever a document or receipt is printed. If you do not want to open the cash drawer every time a document is printed, do not complete the following instructions. Complete these instructions for a cash drawer connected to a printer; not for a cash drawer connected directly to the workstation's serial port.

Star Thermal Printer Setup

Configuring a printer is different for each version of the Windows operating system and for different brands of printers. This section contains instructions for a Star600™ Thermal Printer by Star® Micronics Co., LTD., with the Star Raster driver on a Windows® 2000 system. Different drivers and operating systems may slightly change the instructions. Follow the instructions for your printer for the correct Windows version.

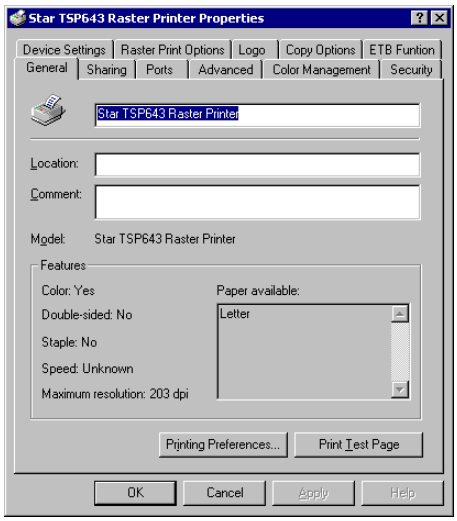
> **NOTE:** When a printer's Windows configuration changes, you must reselect the printer in the Point of Sale Professional module. See the Select the Printer in the Point of Sale Professional Module section.

1 From the Windows **Start** button, select **Settings**/**Printers**. The Printers window appears.



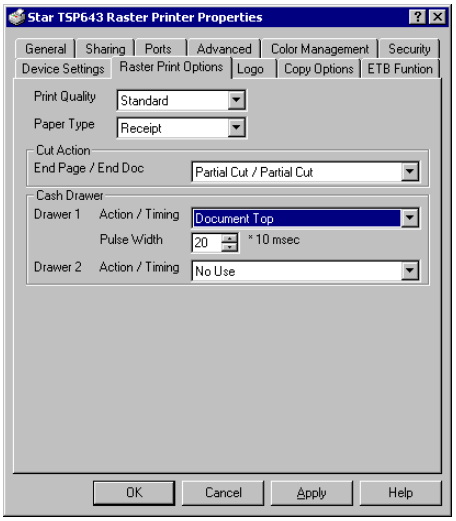
Printers Window

2 Right-click on the printer and select **Properties**. The Printer Properties window appears.



Printer Properties Window

3 Click on the **Raster Print Options** tab to change the Cash Drawer options.



Printer Properties Window - Raster Print Options Tab

4 Select when to open the cash drawer in the **Cash Drawer Action/Timing** (**Drawer 1** and **Drawer 2**) field. Select **Document Top** to open the drawer before printing, **Document Bottom** to open the drawer after printing, or **Page Top** to open the drawer before each page in a document is printing.

5 Enter the pulse duration sent by the printer to the cash drawer on open in the **Pulse Width** field. You can keep the default value of **20**.

6 Click the **OK** button on the Printer Properties window to save all changes.

MAS 90 Setup

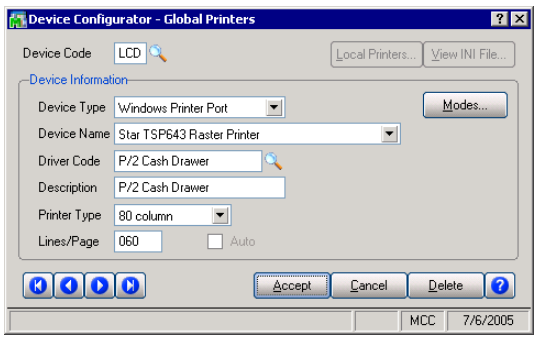
After installing the cash drawer, you must configure it to work with the Point of Sale Professional module in MAS 90. The configuration is different for cash drawers connected to a printer and cash drawers connected to the workstation directly by serial port. Complete the instructions for your cash drawer connection. Log into MAS 90 before completing the following tasks.

Adding a Cash Drawer Connected to a Receipt Printer

Add the Cash Drawer to the Library Master Module

Review the Library Master online help by Best Software for full instructions on adding devices to MAS 90. The following steps provide brief details on how to add the cash drawer to MAS 90. The pictures in this section were created in MAS 90 using a Star TSP643 Raster printer connection.

1 From the **Setup** menu in the **Library Master** module, select **Device Configurator**. The Device Configurator - Global Printers window appears.



Device Configurator - Global Printers Window

2 Enter a new three-digit device code starting with **L** or **P** in the **Device Code** field. It is recommended that you create a new device instead of changing existing device codes.

3 Select **Windows Printer Port** in the **Device Type** field.

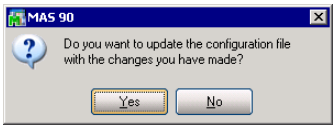
4 Select the name of your printer in the **Device Name** field.

5 Click the button in the **Driver Code** field to select the cash drawer driver.

6 Enter a description for the cash drawer in the **Description** field.

7 Keep the default value **80 column** in the **Printer Type** field and **060** in the **Lines/Page** field.

8 Click **Accept** to save the configuration. When you close the Device Configurator - Global Printers window, the following message appears.



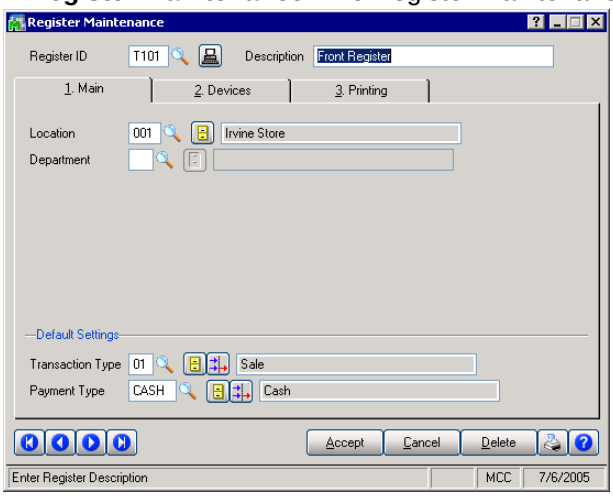
MAS 90 Dialog

9 Click **Yes** to save all changes.

Select the Cash Drawer in the Point of Sale Professional Module

After adding the cash drawer in the Library Master module, configure it in the Point of Sale Professional module in Register Maintenance. This section contains instructions for adding a cash drawer to a register; it does not contain full instructions for creating a register. See the *Point of Sale Professional* manual for more details.

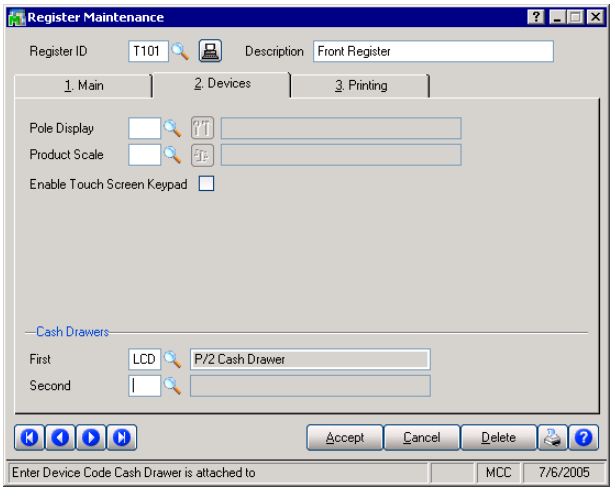
1 From the **Setup** menu in the **Point of Sale Professional** module, select **Register Maintenance**. The Register Maintenance window appears.



Register Maintenance Window

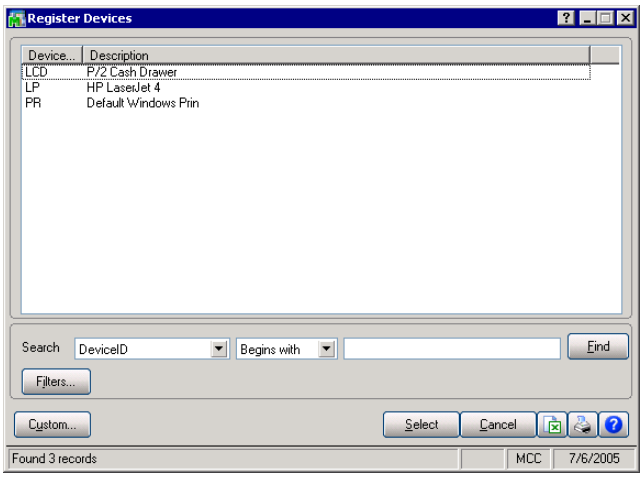
2 Select the terminal that will be using the cash drawer in the **Register ID** field. Click the button to select a terminal from a list, or click the **Current Terminal** ( ) button for the default terminal.

3 Click on the **Devices** tab to select a cash drawer to connect to a printer.



Register Maintenance Window - Devices Tab

4 Click the button in the **Cash Drawers - First** field to view a list of devices. The Register Devices window appears.



Register Devices Window

5 Select the cash drawer from the list and click the **Select** button. The Devices tab displays the name of the cash drawer in the **Cash Drawers - First** field.

6 Click the **Accept** button to save the cash drawer configuration.

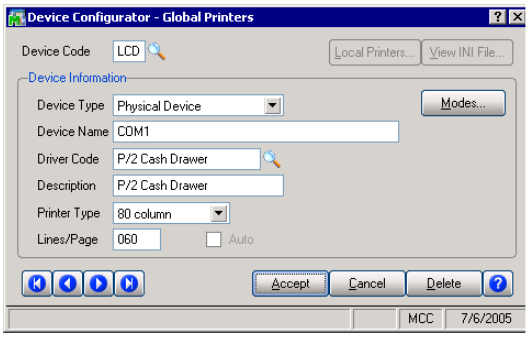
After selecting the cash drawer, test it to make sure it opens. See the Testing a Cash Drawer section for more details.

Adding a Cash Drawer Connected by Serial Port

Add the Cash Drawer to the Library Master Module

Review the Library Master online help by Best Software for full instructions on adding devices to MAS 90. The following steps provide brief details on how to add the cash drawer to MAS 90.

1 From the **Setup** menu in the **Library Master** module, select **Device Configurator**. The Device Configurator - Global Printers window appears.



Device Configurator - Global Printers Window

2 Enter a new three-digit device code starting with **L** or **P** in the **Device Code** field. It is recommended that you create a new device instead of changing existing device codes.

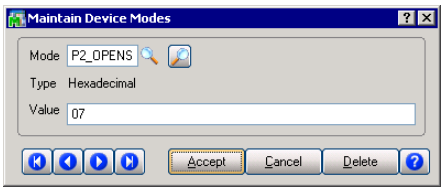
3 Select **Physical Device** in the **Device Type** field.

4 Enter the correct COM Port number in the **Device Name** field.

5 Click the button in the **Driver Code** field to select the cash drawer driver.

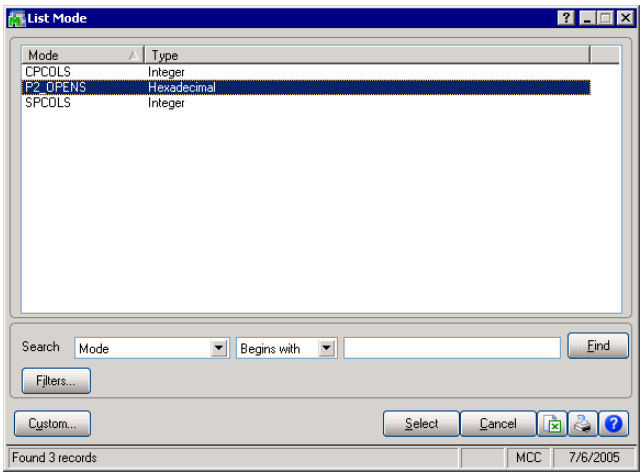
6 Enter a description for the cash drawer in the **Description** field.

7 Click the **Modes** button to set the cash drawer to open. The Maintain Device Modes window appears.



Maintain Device Modes Window

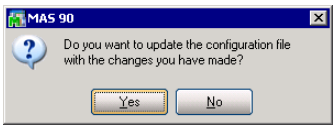
8 Click the button in the **Mode** field to select the open mode for the cash drawer. The List Modes window appears.



Register Devices Window

9 Select the **P2_OPENS** mode and click the **Select** button. The **Mode** field displays the name of the mode, and the **Value** field usually defaults to **07** or **0707**. If the manufacturer supplies a different value, enter the information in the Value field in hexidecimal format. See the Using the Manufacturer's Value to Open the Cash Drawer section for more information.

10 Click **Accept** to save the configuration. When you close the Device Configurator - Global Printers window, the following message appears.



MAS 90 Dialog

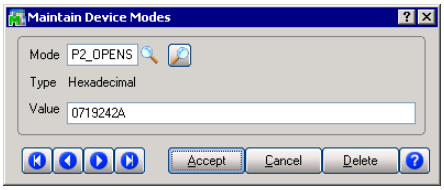
11 Click **Yes** to save all changes.

After adding the cash drawer, test it to make sure it opens. See the Testing a Cash Drawer section for more details.

Using the Manufacturer's Value to Open the Cash Drawer

Each cash drawer has a hexadecimal code that opens the drawer. The Value field in the Maintain Device Modes window defaults to 07 or 0707. The Value field determines what code is sent to the serial port open the cash drawer.

The manufacturer may supply a different value for the open code. If the code is in decimal format, you must convert it into hexidecimal format. Use the ASCII Conversion Table on the following page to convert the decimal code into hexidecimal. After you convert the number, enter the hexidecimal code in the Value field on the Maintain Device Modes window. For example, if the manufacturer provides the decimal code 07 25 36 42, using the table this code converted into hexidecimal is 07 19 24 2A, which is entered in the Value field.



Maintain Device Modes Window

CONTENTS
BACK
INDEX

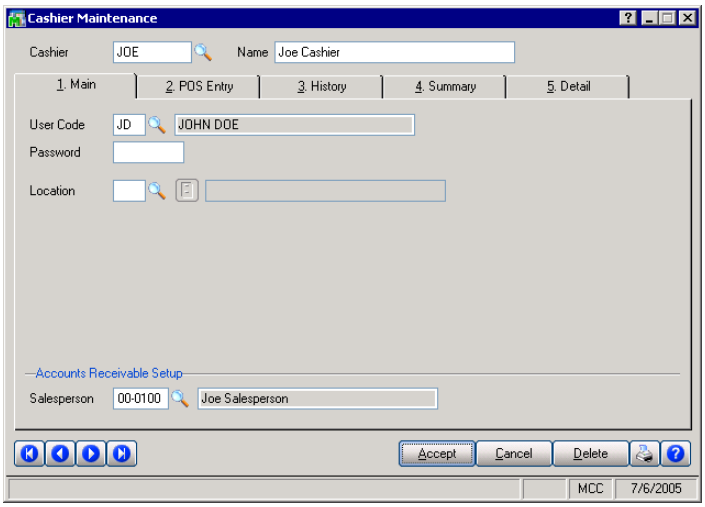
ASCII Conversion Chart

Dec	Hex	Dec	Hex	Dec	Hex	Dec	Hex	Dec	Hex	Dec	Hex	Dec	Hex
00	00	19	13	38	26	55	37	74	4A	93	5D	115	73
01	01	20	14	37	27	56	38	75	4B	94	5E	116	74
02	02	21	15	38	26	57	39	76	4C	95	5F	117	75
03	03	22	16	39	27	58	3A	77	4D	96	60	118	76
04	04	23	17	40	28	59	3B	78	4E	97	61	119	77
05	05	24	18	41	29	60	3C	79	4F	98	62	120	78
06	06	25	19	42	2A	61	3D	80	51	99	63	121	79
07	07	26	1A	43	2B	62	3E	81	52	100	64	122	7A
08	08	27	1B	44	2C	63	3F	82	53	101	65	123	7B
09	09	28	1C	45	2D	64	40	83	54	102	66	124	7C
10	0A	29	1D	46	2E	65	41	84	55	103	67	125	7D
11	0B	30	1E	47	2F	66	42	85	56	104	68	126	7E
12	0C	31	1F	48	30	67	43	86	57	108	69	127	7F
13	0D	32	20	49	31	68	44	87	58	109	6D	128	80
14	0E	33	21	50	32	69	45	88	59	110	6E		
15	0F	34	22	51	33	70	46	89	60	111	6F		
16	10	35	23	52	34	71	47	90	5A	112	70		
17	11	36	24	53	35	72	48	91	5B	113	71		
18	12	37	25	54	36	73	49	92	5C	114	72		

Testing a Cash Drawer

This section contains instructions on how to configure the cash drawer to open without a transaction, and how to open the cash drawer using the Point of Sale Entry window. This section does not contain details about using the Point of Sale Professional module. See the *Point of Sale Professional User Manual* for more information.

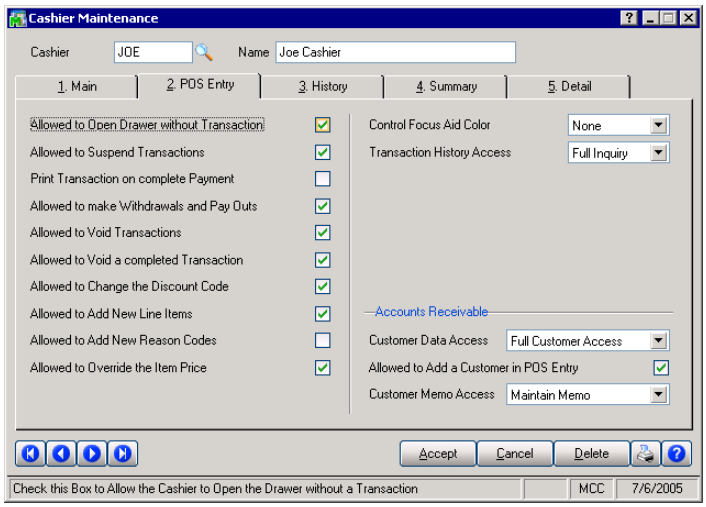
1 From the **Setup** menu in the **Point of Sale Professional** module, select **Cashier Maintenance**. The Cashier Maintenance window appears.



Cashier Maintenance Window

2 Create a test cashier in the **Main** tab. Enter the name of cashier in the **Cashier** field, and select a user in the **User Code** field.

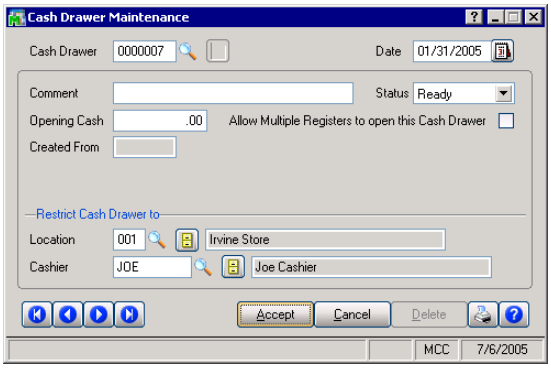
3 Click on the **POS Entry** tab to configure the cash drawer to open without a transaction. The POS Entry tab appears.



Cashier Maintenance Window - POS Entry Tab

4 Check the **Allowed to Open Drawer without Transaction** option and click the **Accept** button to save the changes.

5 From the **Main** menu in the **Point of Sale Professional** module, select **Cash Drawer Maintenance**. The Cash Drawer Maintenance window appears.

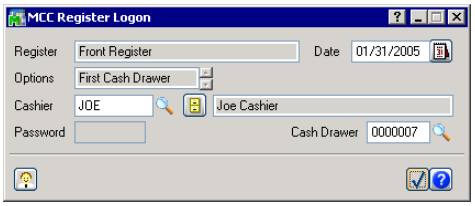


Cash Drawer Maintenance Window

6 Create a test cash drawer. Click the button to create the next cash drawer in the **Cash Drawer** field, select the location in the **Location** field, and select the test cashier in the **Cashier** field.

7 Click the **Accept** button. The system saves the changes.

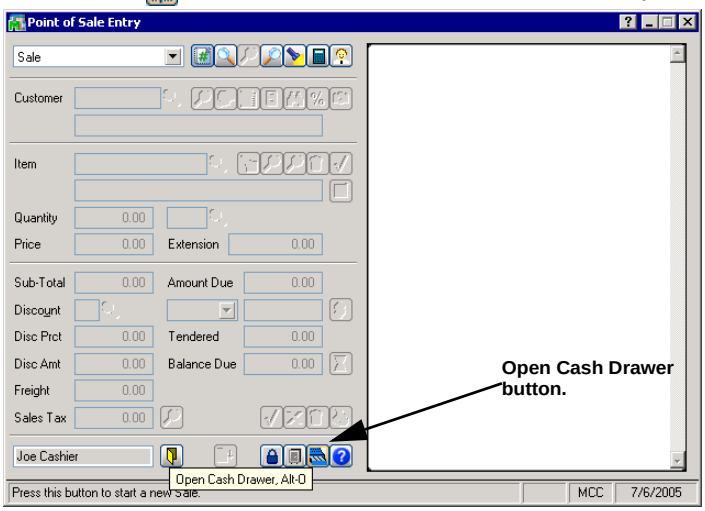
8 From the **Main** menu in the **Point of Sale Professional** module, select **Point of Sale Entry**. The Register Logon window appears.



Register Logon Window

9 Select the test cashier in the **Cashier** field, and select the test cash drawer in the **Cash Drawer** field.

10Click the button to access the Point of Sale Entry window.



Point of Sale Entry Window

11Click the **Open Cash Drawer** ( ) button. Make sure the drawer opens.

12For cash drawers connected to a printer, finish the transaction to print the information. Make sure the drawer opens when the transaction is printed.

Troubleshooting Cash Drawers

Cash Drawers Connected to Printers

If the receipts begin printing too long or are not cutting correctly, then reselect the cash drawer device in Register Maintenance (see Select the Cash Drawer in the Point of Sale Professional Module for more information). If the receipt is still not printing correctly (too long, does not look like an actual receipt, etc.) reselect the printer following the steps in *Chapter 3: Receipt Printers*.

Cash Drawers Connected by Serial Port

If the cash drawer will not open, change the information in the Value field of the Maintain Device Modes window (see the Add the Cash Drawer to the Library Master Module section for more information). Change the value from 07 to 0707 and retest.

If changing the default Value to 0707 does not work, then contact the manufacturer and obtain the decimal code that opens the cash drawer. Convert the code to a hexadecimal code so that you can enter it in the Value field in the Maintain Device Modes window (see the Using the Manufacturer's Value to Open the Cash Drawer section for more information).

This concludes *Chapter 4: Cash Drawers* of the Point of Sale Professional Hardware Configuration manual.

Bar Code Scanner Hardware Connections - This section contains brief instructions to guide you through the hardware connections. Review the documentation provided by the manufacturer for more detailed information

1. The bar code scanner is packaged with a keyboard connector cable. This cable is used to connect the bar code scanner to a keyboard.

2. Insert one end of the keyboard connector cable to the scanner, and insert the other end to the keyboard. (See Note.)

3. Plug the scanner into the keyboard port on the back of the computer. Complete the instructions in *Chapter 5: Bar Code Scanners* to configure the bar code scanner to work with the Point of Sale Professional module.

☑ **Note:** The bar code scanner is usually connected to a credit card reader or a check reader. It usually does not connect directly to the keyboard. If you are using a credit card reader, see *Chapter 6: Credit Card Readers* for the connection instructions. If you are using a check reader, see *Chapter 7: Check Readers* for the connection instructions.

Bar Code Scanners

> **NOTE:** The following subject matter relates to both MAS 90® and MAS 200®. However, to save space, references in this manual are made to MAS 90® only.

Chapter 5: Bar Code Scanners contains instructions on how to configure bar code scanners for use with the Point of Sale Professional module. These scanners read a product's bar code label (or UPC) and enters the item information into the Point of Sale Professional module. Bar code scanners allow cashiers to scan an item instead of manually entering the item into the P/2 Entry window.

This chapter does not contain any brand-specific bar code installation instructions. The Point of Sale Professional module works with keyboard interrupt scanners only. Keyboard interrupt scanners connect to the workstation with a wedge cable, where one end connects to the keyboard and the other end connects to the back of the workstation.

Prior to Setup

Prior to installing the bar code scanner for Point of Sale Professional, complete the following steps.

- Have all necessary hardware, accompanying installation software, and manuals readily available.

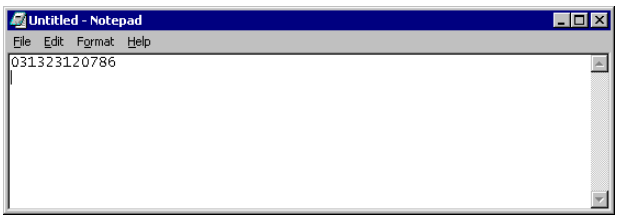
Hardware Configuration

This section contains brief details on how to install and test a bar code scanner. There are no configuration settings required in MAS 90 to use a bar code scanner. Configure the device through the installation program provided by the manufacturer.

Testing the Bar Code Scanner

After following the manufacturer's instructions for installing the bar code scanner, complete the following to test to make sure the hardware can scan a bar code.

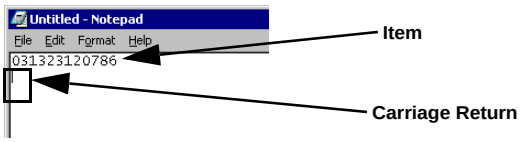
1 Open **Notepad** by Microsoft (usually available from the **Start** button **Programs**/**Accessories**/**Notepad**).



Notepad Window

2 Scan the following bar code (the following picture is copyrighted by HHP™).

3 Review the item in Notepad. Make sure the item scans into Notepad as *031323120786*, with a hard, carriage return after the first line as displayed in the following picture.



The cursor must be located on the second line in Notepad. The bar code scanner is programmed to enter a carriage return, or hard return, after a scanned item. The carriage return is very important to the interface with MAS 90. If after scanning the bar code the cursor does not automatically enter a carriage return, you will have to re-program the scanner. For information on how to program your specific bar code scanner, review the manual provided by the manufacturer.

If you encounter any problems with the bar code scanner, contact the manufacturer.

This concludes *Chapter 5: Bar Code Scanners* of the Point of Sale Professional Hardware Configuration manual.

Credit Card Reader Hardware Connections - This section contains brief instructions to guide you through the hardware connections. Review the documentation provided by the manufacturer for more detailed information.

1. The credit card reader connects to a bar code scanner and a keyboard. The bar code scanner is packaged with a keyboard connector cable.

2. Plug one end of the keyboard connector cable to the bar code scanner.

3. Plug the other end of the keyboard connector cable to the credit card reader.

4. Connect the credit card reader to the keyboard.

5. The bar code scanner, credit card reader, and keyboard are connected.

6. Insert the bar code scanner into the keyboard port on the back of the computer. Complete the instructions in *Chapter 6: Credit Card Readers* to configure the credit card reader to work with the Point of Sale Professional module.

Credit Card Readers

> **NOTE:** The following subject matter relates to both MAS 90® and MAS 200®. However, to save space, references in this manual are made to MAS 90® only.

Chapter 6: Credit Card Readers contains instructions on how to configure credit card swipers/readers for use with the Point of Sale Professional module. These readers are used when a customer pays for a purchase with a credit card. The credit card reader reads the card number and enters it into the Point of Sale module, so your staff does not have to manually enter the number during a sale.

The Point of Sale Professional module works with mag-stripe credit card readers for keyboards only - not with serial port readers. The examples in this chapter were created using a MiniMag™ reader by ID Technologies, Inc.® and a Welch Allyn® SCANTEAM® reader by Hand Held Products, Incorporated (HHP™). The configuration information may vary for different hardware. If you are using a credit card reader by another company, review the installation instructions provided by the manufacturer.

This chapter also contains brief information about PCCharge™ by GO Software, Incorporated. PCCharge automatically provides authorization codes for credit card purchases. This software is not required, but is highly recommended. Without this software, a company can contact their credit card processing company for authorization codes during credit card purchases.

Prior to Setup

Prior to using credit card readers with Point of Sale Professional, complete the following steps.

1. If your company plans to use a product such as PCCharge for automatic authorization codes, you **must** have the merchant numbers for each type of credit card accepted. Merchant numbers are provided by your bank/processing company. It may take several weeks to receive all merchant numbers. **You will not be able to process or test automatic authorization codes without this information.**

2. Have all necessary hardware, accompanying installation software, and manuals readily available. If using the HighTower recommended MiniMag by ID Technologies, Inc. or Welch Allyn SCANTEAM by Hand Held Products, Incorporated (HHP), see the HighTower website (www.hightowerinc.com) for the latest manual.

3. For PCCharge users, the PCCharge software must be installed and configured with MAS 90. Review the PCCharge manual by GO Software, and the Accounts Receivable and Credit Processing online help files by Best Software. After configuring PCCharge, test the module using the credit cards provided by the credit card processing company. PCCharge must work before configuring Point of Sale Professional.

PCCharge

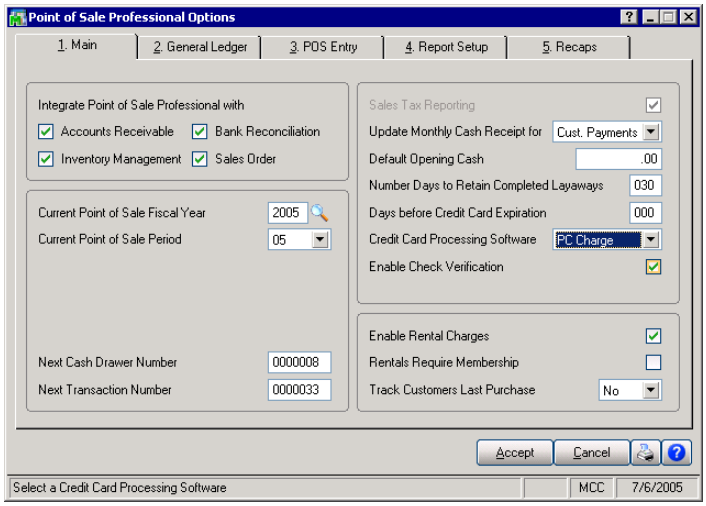
The PCCharge application provides real-time credit card authorization from within MAS 90 software. Without this software, a company must contact their credit card processing company for authorization codes. This section contains instructions for configuring the Point of Sale Professional module to use PCCharge.

> **WARNING**: When integrating PCCharge with MAS 90, you will need a 1000 user license. To increase the maximum user license, contact GO Software for a new license key.
> To check the number of licenses you currently have available, access the PCCharge Payment Server, select the User option from the Setup menu and the system displays the maximum user license across the top of the screen..

Configure PCCharge in the Point of Sale Professional Module

This section contains brief instructions for configuring the Point of Sale Professional module to use PCCharge.

1 From the **Setup** menu in the **Point of Sale Professional** module, select **Point of Sale Options**. The Point of Sale Professional Options window appears.

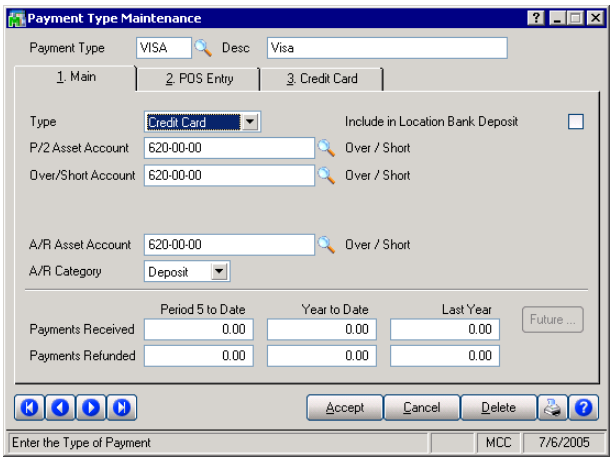


Point of Sale Professional Options Window

2 Select **PCCharge** from the **Credit Card Processing Software** field on the Main tab. If you are using check verification, select the **Check Verification** check box.

3 Click the **Accept** button to save all changes.

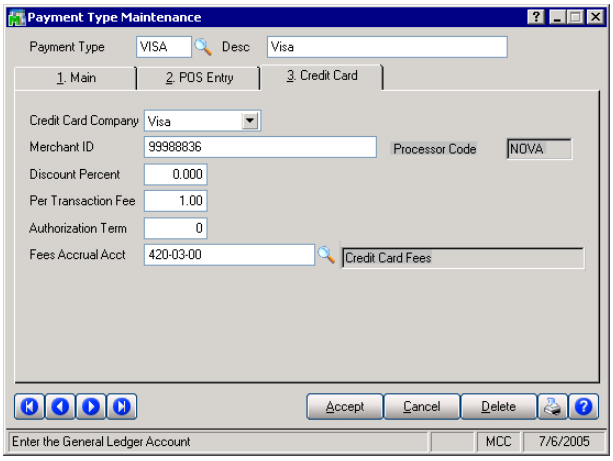
4 From the **Setup** menu in the **Point of Sale Professional** module, select **Payment Type Maintenance**. The Payment Type Maintenance window appears.



Payment Type Maintenance Window

5 Select the credit card payment type that will be using PCCharge authorization codes in the **Payment Type** field. Click the button to select the credit card. Select **Credit Card** from the **Type** field on the **Main** tab.

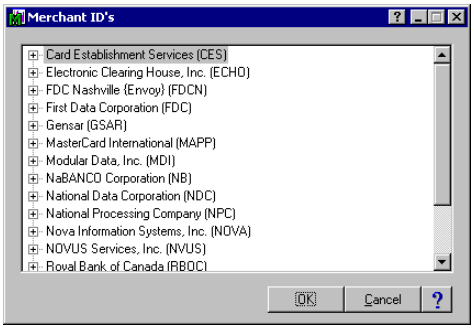
6 Click on the **Credit Card** tab to select a merchant number as displayed in the following picture.



Payment Type Maintenance Window - Credit Tab

7 Select the credit card company in the **Credit Card Company** field.

8 Click the button in the **Merchant ID** field to search for a merchant ID. **DO NOT MANUALLY ENTER THE MERCHANT NUMBER.** The Merchant ID's window appears.



Merchant ID's Window

Select the correct ID and click the OK button. The processor code will automatically display in the Processor Code field.

9 Click the **Accept** button to save all changes.

Hardware Configuration

This section contains brief details on how to install and test a credit card reader. There are no configuration settings required in MAS 90 to use a credit card reader. Configure the device through the installation program provided by the manufacturer.

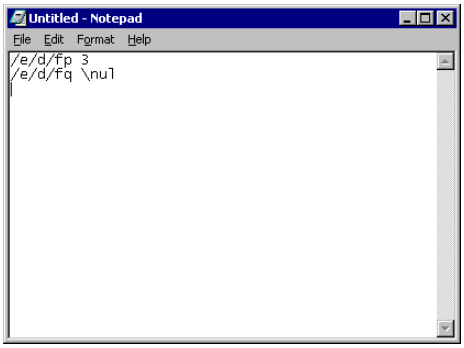
MiniMag Credit Card Readers

This section contains brief details on how to program and test a MiniMag credit card reader. Review the documentation provided by the manufacturer for further information.

NOTE: This section contains the directions for connecting the MiniMag credit card reader to Point of Sale Professional. The MiniMag reader can connect using a USB connection. Visit the HighTower website (www.hightowerinc.com) to contact the manufacturer.

Programming the MiniMag Credit Card Reader

1 Open **Notepad** by Microsoft (usually available from the **Start** button **Programs**/**Accessories**/**Notepad**).



Notepad Window

2 Enter the following lines to program the credit card reader to only read tracks 1 and 2 and to show up on the same line. Add the line to set the format:

/e/d/fp 3

3 Press **Enter** and the MinMag credit card reader will beep once.

4 Add the next line to save the format:

/e/d/fq \nul

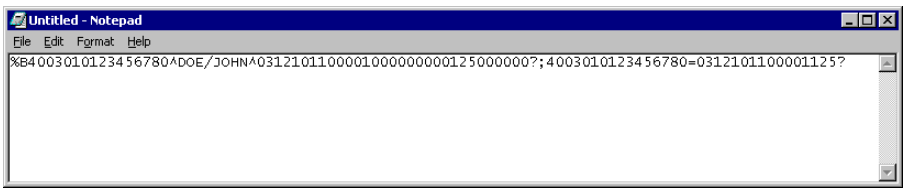
5 Press **Enter** and the MinMag credit card reader will beep once.

If you encounter any errors while programming the credit card reader, contact the manufacturer.

Testing the MiniMag Credit Card Reader

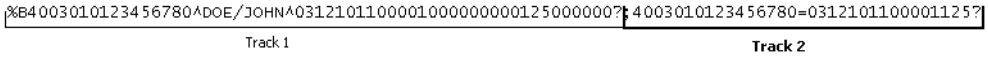
The manufacturer provides test credit card information for testing the credit card reader.

1 Open **Notepad** by Microsoft (usually available from the **Start** button **Programs**/**Accessories**/**Notepad**).



Notepad Window

2 Swipe a credit card through the MiniMag credit card reader. Notepad displays the result that will look similar to the example below. The following result is for a Visa credit card.



The information between the percent mark (%) and the first question mark (?) is track 1, and the information between the semi colon (;) and second question mark (?) is track 2.

If you encounter any errors while testing the credit card reader, contact the manufacturer.

SCANTEAM Credit Card/Check Readers

This section contains brief details on how to install and test a SCANTEAM credit card reader. Review the documentation provided by the manufacturer for further information.

Follow the arrows on the scanner to line up the checks.

Picture is copy-righted by HHP™

Programming the SCANTEAM Credit Card/Check Reader

There is no software needed to program the SCANTEAM readers if you have the two sets of programming checks that come with your hardware. Follow the instructions on the scanner to line up the checks so the MICR code is read properly (just as you would if you were scanning a real check through). Review the manual for full details.

This section contains brief instructions on how to configure the credit card reader. Each check has a name printed on the top. Scan the checks in the correct order to configure the credit card reader.

> **NOTE:** You will hear a series of beeps while scanning each check, which is normal. If an error occurs, scan the EXIT and END PROGRAMMING checks and start over, or simply unplug the power and plug back in.

If you encounter any errors while programming the credit card reader, contact the manufacturer.

Program the Credit Card Reader to the System Default

To program the credit card reader to contain the system default configurations, scan the following checks in the correct sequence.

1 OUTPUT PARAMETERS ENTER

2 DEFAULT

3 EXIT

4 END PROGRAMMING

Program the Credit Card Reader for Credit Cards

To program the reader for credit cards, scan the following checks in the correct sequence.

1 OUTPUT PARAMETERS ENTER

2 XI

3 7

4 9

5 0

6 D

7 F

8 F

9 EXIT

10END PROGRAMMING

Program the Reader for Checks

To configure the reader to scan checks, scan the program checks in the following sequence.

1 MICR FORMATTER ENTER

2 IV

3 0

4 2

5 EXIT

6 END PROGRAMMING

Program the Check Reader NOT to Transmit the LRC Character

You can program the check reader not to transmit the LRC character of a check. Scan the following checks in the correct sequence.

1 DATA FORMATTER ENTER

2 III

3 B

4 1

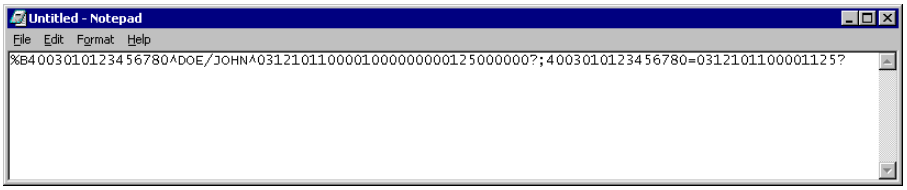
5 EXIT

6 END PROGRAMMING

Testing the SCANTEAM Credit Card/Check Reader

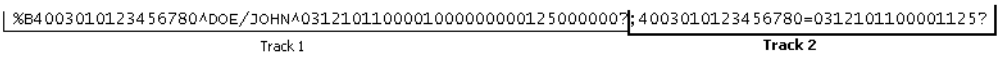
The manufacturer provides test credit card information for testing the credit card reader.

1 Open **Notepad** by Microsoft (usually available from the **Start** button **Programs**/**Accessories**/**Notepad**).



Notepad Window

2 Swipe a credit card using the SCANTEAM credit card reader. Notepad displays the result that will look similar to the example below. The following result is for a Visa credit card.



The information between the percent mark (%) and the first question mark (?) is track 1, and the information between the semi colon (;) and second question mark (?) is track 2. %

If you encounter any errors while testing the credit card reader, contact the manufacturer.

This concludes *Chapter 6: Credit Cards Reader* of the Point of Sale Professional Hardware Configuration manual.

Check Reader Hardware Connections - This section contains brief instructions to guide you through the hardware connections.

Review the documentation provided by the manufacturer for more detailed information.

1. The check reader is packaged with two connection cables - a host connector cable and a power cord. Connect the cables to the back of the check reader. Plug the power cord into the power source.

2. The check reader connects to a bar code scanner and a keyboard. The bar code scanner is packaged with a keyboard connector cable. Plug one end of the keyboard connector cable to the bar code scanner.

3. Plug the other end of the keyboard connector cable to the check reader.

4. Connect the check reader to the keyboard.

5. The bar code scanner, check reader, and keyboard are connected.

6. Plug the bar code scanner into the keyboard port on the back of the computer. Complete the instructions in *Chapter 7: Check Readers* to configure the check reader to work with the Point of Sale Professional module.

Check Readers

> **NOTE:** The following subject matter relates to both MAS 90® and MAS 200®. However, to save space, references in this manual are made to MAS 90® only.

Picture is copyrighted by HHP™

Chapter 7: Check Readers contains instructions on how to configure check readers for use with the Point of Sale Professional module. These readers are used when a customer pays for a purchase with a check. The check reader reads the bank number and enters it in the Point of Sale Professional module, so your staff does not have to manually enter the number during a sale.

The Point of Sale Professional module works with readers that format the check data in the <TRANSIT#>T<ACCOUNT#>A<CHECK SERIAL#> format. The examples in this chapter were created using a Welch Allyn® SCANTEAM® check reader by Hand Held Products, Incorporated (HHP™). The configuration information may vary for different hardware. If you are using a reader by another company, review the installation instructions provided by the manufacturer.

Prior to Setup

Prior to using credit card readers with Point of Sale Professional, complete the following steps.

1. Have all necessary hardware, accompanying installation software, and manuals readily available. If using the HighTower recommended Welch Allyn SCANTEAM by Hand Held Products, Incorporated (HHP), see the HighTower website (www.hightowerinc.com) for the latest manual. The manufacturer will also provide testing materials for testing the hardware.

2. You **must** program the check reader to transmit the account number, check number, and routing number data in the **<TRANSIT#>T<ACCOUNT#>A<CHECK SERIAL#>** format. **You will not be able to process checks without this format.**

Hardware Configuration

This section contains brief details on how to install and test a check reader. There are no configuration settings required in MAS 90 to use a check reader. Configure the device through the installation program provided by the manufacturer. The Point of Sale Professional module works with readers with T/A codes between routing numbers, account numbers, and check numbers.

SCANTEAM Check Readers

This section contains brief details on how to install and test a SCANTEAM credit card reader. Review the documentation provided by the manufacturer for further information.

Follow the arrows on the scanner to line up the checks.

Picture is copy-righted by HHP™

Programming the SCANTEAM Check Reader

There is no software needed to program the SCANTEAM readers if you have the two sets of programming checks that come with your hardware. Follow the instructions on the scanner to line up the checks so the MICR code is read properly (just as you would if you were scanning a real check through). Review the manual for full details.

This section contains brief instructions on how to configure the check reader. Each check has a name printed on the top. Scan the checks in the correct order to configure the check reader.

> **NOTE:** You will hear a series of beeps while scanning each check, which is normal. If an error occurs, scan the EXIT and END PROGRAMMING checks and start over, or simply unplug the power and plug back in.

If you encounter any errors while programming the check reader, contact the manufacturer.

Program the Check Reader to the System Default

To program the check reader to contain the system default configurations, scan the following checks in the correct sequence.

1 OUTPUT PARAMETERS ENTER

2 DEFAULT

3 EXIT

4 END PROGRAMMING

Program the Reader for Checks

To configure the reader for checks, scan the program checks in the following sequence.

1 MICR FORMATTER ENTER

2 IV

3 0

4 2

5 EXIT

6 END PROGRAMMING

Program the Check Reader NOT to Transmit the LRC Character

You can program the check reader not to transmit the LRC character of a check. Scan the following checks in the correct sequence.

1 DATA FORMATTER ENTER

2 III

3 B

4 1

5 EXIT

6 END PROGRAMMING

Program the Check Reader for Credit Cards

If you are using the credit card scanner that is available on some models of the check reader, scan the following checks in the correct sequence.

1 OUTPUT PARAMETERS ENTER

2 XI

3 7

4 9

5 0

6 D

7 F

8 F

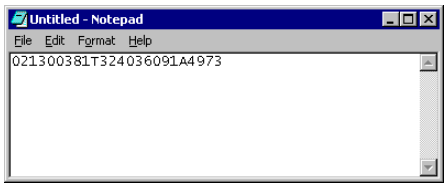
9 EXIT

10END PROGRAMMING

Testing the SCANTEAM Check Reader

The manufacturer provides test check information for testing the check reader.

1 Open **Notepad** by Microsoft (usually available from the **Start** button **Programs**/**Accessories**/**Notepad**).

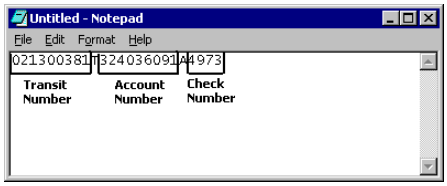


Notepad Window

2 Scan a check using the SCANTEAM check reader. Make sure the results are in the T/A format. For example, if the check numbers are similar to the next picture:

Picture is copyrighted by HHP™

Notepad will display results that will look similar to the following example.



Notepad Window

If you encounter any errors while testing the check reader, contact the manufacturer.

This concludes *Chapter 7: Check Readers* of the Point of Sale Professional Hardware Configuration manual.

Pole Displays Hardware Connections - This section contains brief instructions to guide you through the hardware connections.

Review the documentation provided by the manufacturer for more detailed information.

1. The pole display is packaged with two cables (from left to right) - a power cord and a serial cable. Connect the cables to the back of the pole display. Plug the power cord into the power source.

2. Plug the serial cable into the computer. Complete the instructions in *Chapter 8: Pole Displays* to configure the pole display to work with the Point of Sale Professional module.

Pole Displays

NOTE: The following subject matter relates to both MAS 90® and MAS 200®. However, to save space, references in this manual are made to MAS 90® only.

Chapter 8: Pole Displays contains instructions on how to configure pole displays for use with the Point of Sale Professional module. Many retail companies use pole displays to allow customers to view purchase information and amounts during a sale.

The examples in this chapter were created using an EMAX™ pole display by EMAX International, Inc., an Epson® DM-D110 pole display by Seiko Epson Corporation, and a Logic Controls PD 3000/PD 6000 by Logic Controls, Inc. The configuration information may vary for different hardware. If you are using a pole display by another company, review the installation instructions provided by the manufacturer.

WARNING: At this time Point of Sale Professional pole displays are not supported in Microsoft® Terminal Services, unless using Terminal Services in a Citrix® environment. Review the documentation provided by the manufacturer to setup devices in this environment.
Currently, Microsoft Terminal Services does not support static port mapping in Terminal Service sessions. Terminal Service ports are mapped using the current session number, and this session number is used in the naming of the pole display. This session number changes from login to login, meaning the pole display name changes as well. Point of Sale Professional searches for a specific pole display name during the display process. **If this name changes, the pole display will fail.** Citrix Metaframe XP supports static port mappings, allowing the pole display name to remain the same across logins.

Prior to Setup

Prior to installing or creating pole displays in Point of Sale Professional, complete the following steps.

1 Have all necessary hardware, accompanying installation software, and manuals readily available. If using the HighTower recommended EMAX pole display by EMAX International, Inc., Epson DM-D110 pole display by Seiko Epson Corporation, or Logic Controls PD 3000/PD 6000 by Logic Controls Inc., see the HighTower website (www.hightowerinc.com) for the latest manual.

2 Make a backup copy of the MAS90.ini file (available in \MAS90\home\MAS90.ini on the computer). This file contains a list of all the devices currently available in MAS 90.

Hardware Configuration

This section contains brief details on how to connect and program a pole display to workstation. Configure the device through the installation program provided by the manufacturer. Configuring a pole display is different for different brands of pole displays. This section contains instructions for pole display brands that work with Point of Sale Professional.

EMAX Pole Displays

This section explains how to setup and configure an EMAX Pole Display in EMAX mode to work with Point of Sale Professional. Complete the instructions provided by the manufacturer, then complete the following instructions to add the pole display for Point of Sale Professional.

Changing the Dipswitch Configuration

The EMAX pole display has eight dispswitches on the bottom of the pole display. The pole display arrives with the factory default configuration with dipswitches one, seven, and eight turned on. Complete the following steps to set the dipswitches where only dipswitch one and seven are turned on.

1 Turn off or unplug the pole display.

2 Turn the display upside down and find the opening at the bottom of the display.

3 Turn on dipswitch 1 and 7 and turn off all other dipswitches to set the display in EMAX mode. Use the chart below to ensure the dipswitches are configured correctly.

1	2	3	4	5	6	7	8
On	Off	Off	Off	Off	Off	On	Off

4 Plug the display back in once configured.

Connecting the Pole Display to the Workstation

This section contains instructions for connecting the pole display to the workstation and how to test the connection. When connecting a pole display to a workstation, use a COM port. If a device is already connected to COM port 1, then use COM port 2. Throughout the following example, COM port 2 is used.

1 Connect the cable from the pole display to a COM port.

2 Restart the workstation for the device to be recognized. After restarting the workstation, the pole display will display:

Line 1: EMAX MODE

Line 2: serial std 00:01

3 If the display does not return the correct lines, especially if Line 1 does not display *EMAX MODE*, reconfigure the dipswitches.

> **NOTE:** If the pole display is not in EMAX mode, the EMAX default expressions in the Point of Sale Professional module will not work correctly.

4 If problems continue, contact the manufacturer.

Once the display is connected to the workstation and displays *EMAX MODE*, the next step is to add the hardware to MAS 90.

Epson DM-D110 Pole Display

This section explains how to setup and configure an Epson DM-D110 Pole Display in Epson Standard Emulation mode to work with Point of Sale Professional. Complete the instructions provided by the manufacturer, then complete the following instructions to add the pole display for Point of Sale Professional.

Connecting the Pole Display to the Workstation

This section contains instructions for connecting the pole display to the workstation and how to test the connection. When connecting a pole display to a workstation, use a COM port. If a device is already connected to COM port 1, then use COM port 2. Throughout the following example, COM port 2 is used.

1 Connect the cable from the pole display to the COM port.

2 Restart the workstation for the new device to be recognized.

3 Follow the instructions provided by Epson to configure the pole display to the Epson Standard Emulation Mode version 2.00.

4 After configuring the display to the Epson Standard Emulation, restart the workstation. The pole display will display:

Line 1: Boot: V2.00 Epson

Line 2: Firmware: V2.01

5 If the display does not return the correct lines, complete the instructions provided by Epson again to configure the pole display to the Epson Standard Emulation Mode version 2.00.

> **NOTE:** If the pole display is not in Standard Emulation mode, the Epson default expressions in Point of Sale Professional will not work correctly.

6 If problems continue, contact the manufacturer.

Once the display is connected to the workstation and displays *Boot: V2.00 Epson Firmware: V2.01*, the next step is to add the hardware to MAS 90.

Logic Controls Pole Display

This section explains how to setup and configure a Logic Controls PD 3000/PD 6000 Pole Display to work with Point of Sale Professional. Complete the instructions provided by the manufacturer, then complete the following instructions to add the pole display to the Point of Sale Professional module.

Connecting the Pole Display to the Workstation

This section contains instructions for connecting the pole display to the workstation and how to test the connection. When connecting a pole display to a workstation, use a COM port. If a device is already connected to COM port 1, then use COM port 2. Throughout the following example, COM port 2 is used.

1 Connect the cable from the pole display to the COM port.

2 Restart the workstation in order for the new device to be recognized.

3 After rebooting the computer the device will display:

Line 1: LOGIC CONTROLS

Line 2: POS COMPONENTS

4 If the display does not return the correct lines, complete the instructions provided by Logic Controls, Inc. again to configure the pole display.

5 If problems continue, contact the manufacturer.

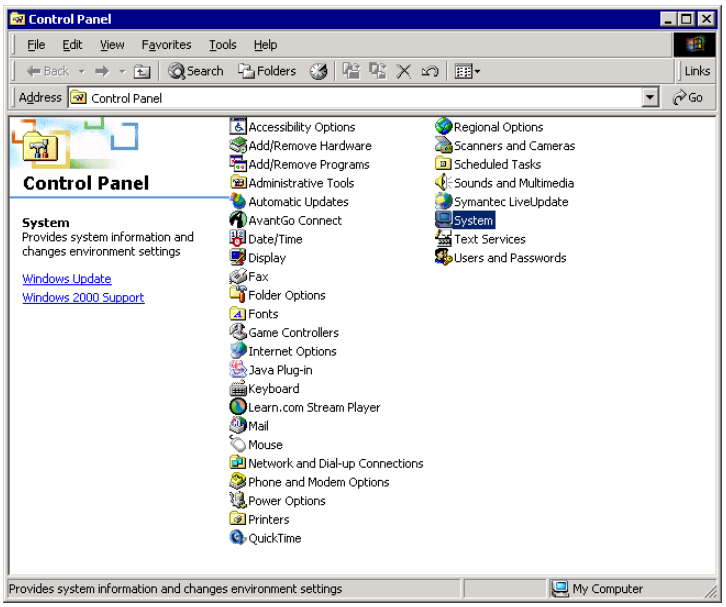
Once the display is connected to the workstation and displays *Line 1: Logic Controls* and *Line 2: POS COMPONENTS*, the next step is to verify that the pole display will print correctly in DOS mode from the COMMAND prompt.

Verify the Logic Controls Device Can Print to the Display

1 Following the instructions provided by the manufacturer, print to the display in DOS mode using the COMMAND prompt.

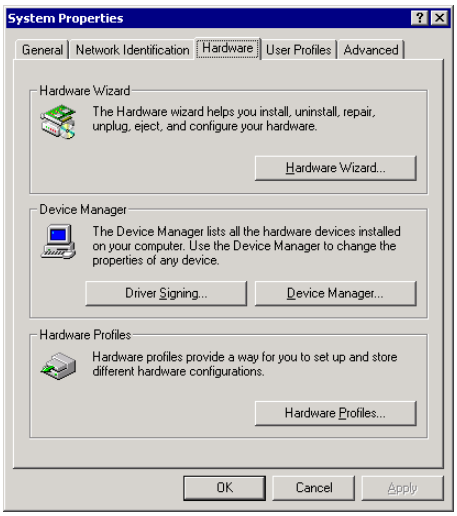
2 After printing to the display in DOS mode, verify the device properties. Complete the following steps:

- From the Windows **Start** button, select **Settings**/**Control Panel**.



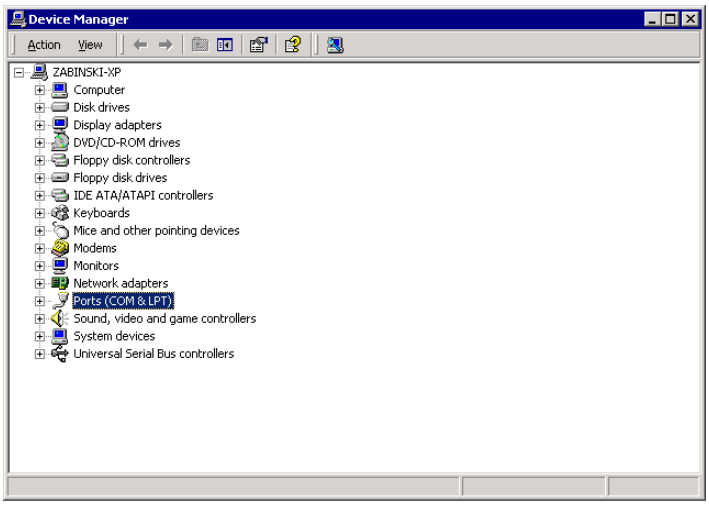
Control Panel

- Double-click on **System** and then click on the **Hardware** tab.



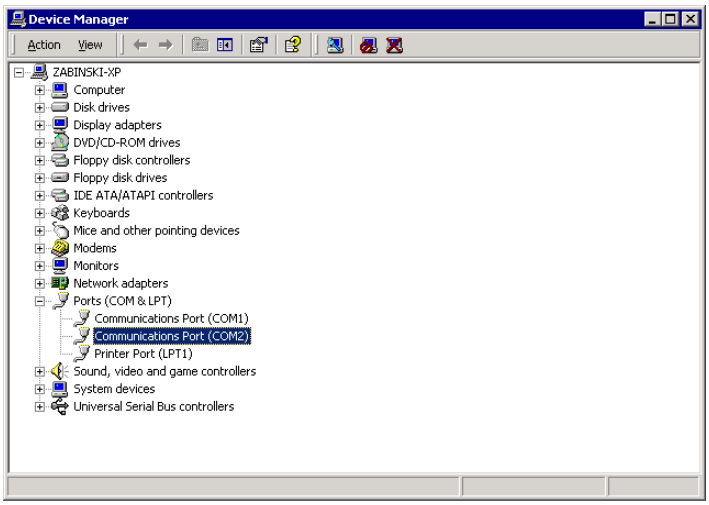
System Properties - Hardware Tab

- Click on the **Device Manager** button, to view the workstation's devices.



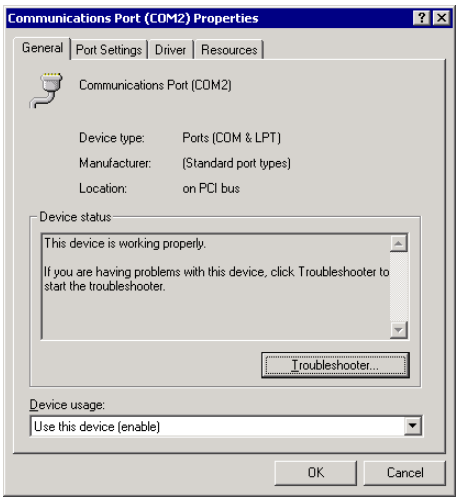
Device Manager

- Click on the **Ports (COM & LPT)** option to display the list of ports.



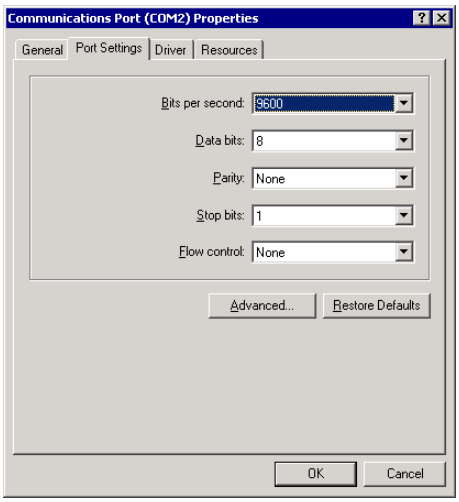
Device Manager

- Double-click on the COM port that your pole display is connected to. For this example, COM port 2 was used.



Communications Port (COM2) Properties

- Click on the **Port Settings** tab. Write the settings that appear in the fields on this window before making any changes.



Communications Port (COM2) Properties - Port Settings Tab

- Ensure the **Bits per second** field is set to 9600, the **Data bits** field is set to 8, the **Parity** field is set to None, the **Stop bits** field is set to 1, and the **Flow control** field is set to None.
- Click **OK** to save the changes.

Once the display is correctly installed, prints from DOS mode, and has the correct port settings, the next step is to add the hardware to MAS 90.

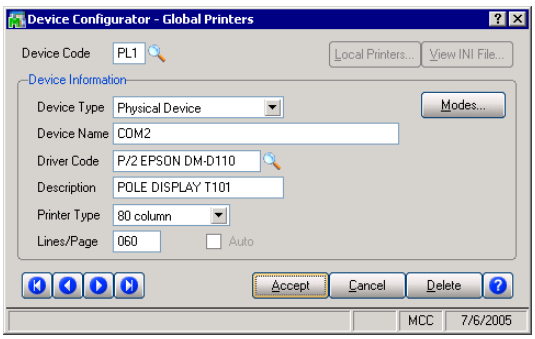
MAS 90 Setup

After installing the pole display, you must add it to work with the Point of Sale Professional module in MAS 90. Log into MAS 90 before completing the following tasks.

Add the Pole Display to the Library Master Module

Review the Library Master online help by Best Software for full instructions on adding devices to MAS 90. The following steps provide brief details on how to add the pole display to MAS 90. The pictures in this section were created in MAS 90 using an Epson DM-D110 pole display.

1 From the **Setup** menu in the **Library Master** module, select **Device Configurator**. The Device Configurator - Global Printers window appears.



Device Configurator - Global Printers Window

2 Enter a new three-digit device code starting with **L** or **P** in the **Device Code** field. It is recommended that you create a new device, instead of changing existing device codes.

3 Select **Physical Device** in the **Device Type** field.

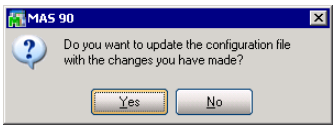
4 Enter the COM port the pole display is connected to in the **Device Name** field.

5 Click the button in the **Driver Code** field to select the correct driver. Select either the **EMAX**, **Epson**, or **Logic Controls** driver.

6 Enter a description for the pole display in the **Description** field. Enter a description to differentiate between displays for different terminals.

7 Keep the **Printer Type** and the **Lines/Page** fields set to the default.

8 Click **Accept** to save the configuration. When you close the Device Configurator - Global Printers window, the following message appears.



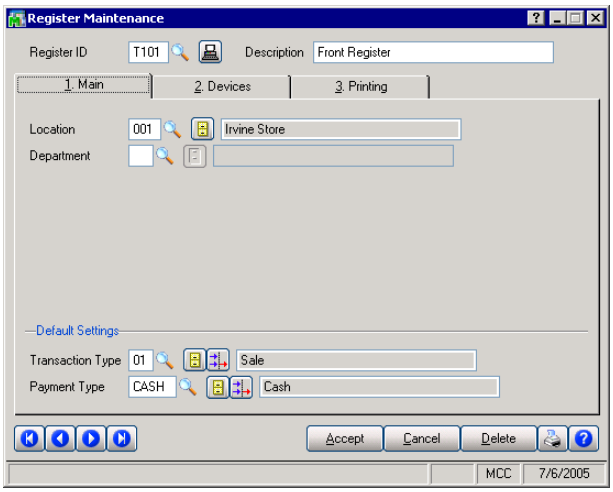
MAS 90 Dialog

9 Click **Yes** to save all changes.

Select the Pole Display in the Point of Sale Professional Module

After adding the pole display in the Library Master module, select it in the Point of Sale Professional module with the Register Maintenance window. This section contains instructions for adding a pole display to a register; it does not contain full instructions for creating a register. See the *Point of Sale Professional* user manual for more details.

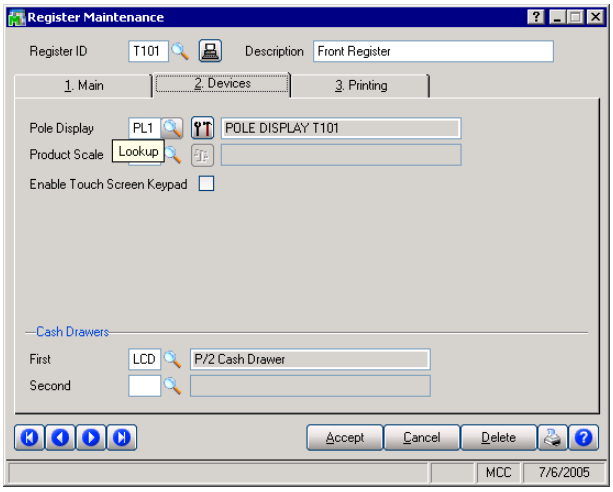
1 From the **Setup** menu in the **Point of Sale Professional** module, select **Register Maintenance**. The Register Maintenance window appears.



Register Maintenance Window

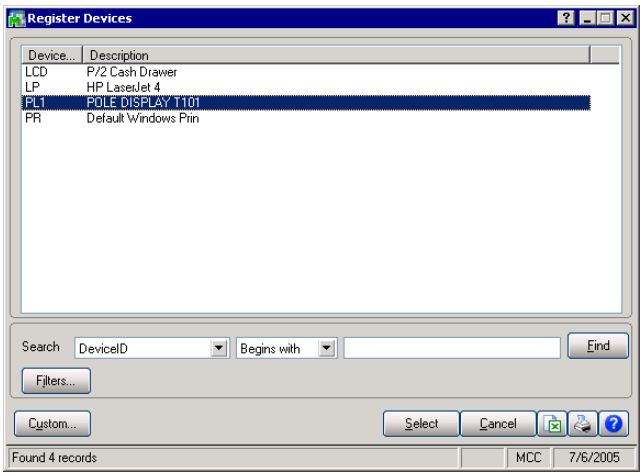
2 Select the terminal that will be using the pole display in the **Register ID** field. Click the button to select a terminal from a list, or click the **Current Terminal** ( ) button for the default terminal.

3 Click on the **Devices** tab to select a pole display for the terminal.



Register Maintenance Window - Devices Tab

4 Click the button in the **Pole Display** field to view a list of devices. The Register Devices window appears.



Register Devices Window

5 Select the pole display from the list and click the **Select** button. The Devices tab displays the name of the pole display in the **Pole Display** field.

6 Click the **Build Expressions** button to add pole display expressions. See the Pole Display Expressions section for more information.

7 Click the **Accept** button to save the pole display configuration.

Pole Display Expressions

After selecting the pole display, you can create expressions for the pole display. Pole display expressions are the lines of data that appear on the pole display during a customer transaction. For example, when a cashier starts a new transaction, the word "Welcome" can be displayed.

Pole display expressions are created in Register Maintenance with the Expression Builder with Fieldnames window. You can create a different expression for each transaction event. Build your own expressions with the tools provided, or use the default expressions included with your pole display.

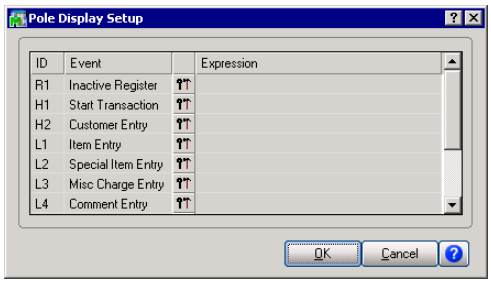
The following sections contain instructions for using the default expressions and for building your own expressions.

HINT: The first time entering expressions, enter one at a time and test it from Point of Sale Entry to ensure the expression works correctly.

Entering a Default Expression

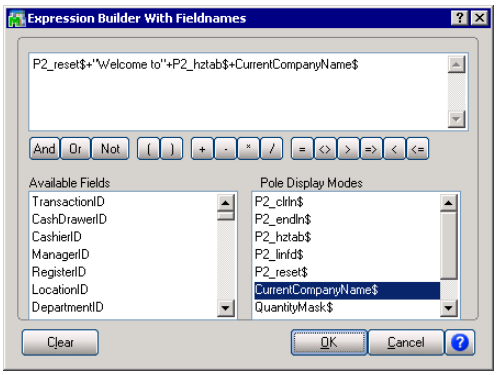
There are different default expressions for each brand of pole displays. This chapter includes a table of default EMAX, Epson, and Logic Controls expressions. Complete the following instructions when using a default expression.

1 From the **Devices** tab of the **Register Maintenance** window in the **Point of Sale Professional** module, click the **Build Expressions** button in the **Pole Display** field. The Pole Display Setup window appears.



Pole Display Setup Window

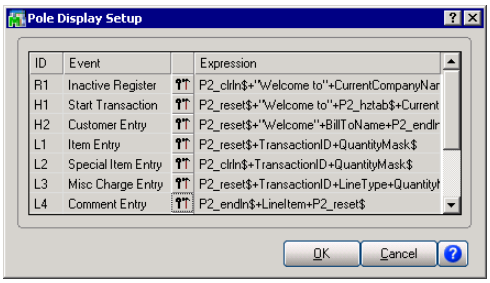
2 Click the **Build Expressions** button in between the **Event** and **Expression** fields for the event that requires an expression. For example, to build an expression for the start of a transaction, click the Build Expressions button next to the Start Transaction event. The Expression Builder With Fieldnames window appears.



Expression Builder With Fieldnames Window

3 Copy a default expression for your pole display and event in the text field. The default expressions for EMAX is available in the Default EMAX Expression Table section, the default expressions for Epson is available in the Default Epson Expression Table section, and the default expressions for Logic Controls is available in the Default Logic Controls Expression Table.

4 Click the **OK** button. The Pole Display Setup window appears with the expression.



Pole Display Setup Window with Expressions

5 Repeat steps 3-4 for each event. Click the **OK** button on the Pole Display Setup window when finished.

6 Click the **Accept** button on the Register Maintenance window to save all changes.

Default EMAX Expression Table

The following table contains the default EMAX expressions for each event type. Copy the correct default expression for the event in the text field of the Expression Builder With Fieldnames window.

ID	Event	Default Expression	Display Result
R1	Inactive Register	P2_scrll$+"Welcome to "+CurrentCompanyName$+"..." +P2_endln$+P2_begn2$+P2_endln$+P2_clock $+STR(INT(TIM):"00")+":"+STR((TIM- INT(TIM)) *60:"00")+P2_endln$	Line 1 • Company Name will scroll across the pole display. Line 2 • The Current Time from workstation will appear.
H1	Start Transaction	P2_begn1$+"Welcome"+P2_endln$+P2_begn2 $+""+P2_endln$	Line 1 •"Welcome" will appear.
H2	Customer Entry	P2_scrll$+"Welcome"+" "+BillToName+P2_endln$	Line 1 • “Welcome” and the AR Customer Name will scroll across the pole display. • The “ “ places a space between “Welcome” and the Customer Name.
L1	Item Entry	P2_begn1$+MID(Description,1,13)+STR(Extens ion:MID(AmountMask$,-7) ,"****")+P2_endln$ +P2_begn2$+P2_endln$	Line 1 • Item Description will appear on the first 13 positions of the pole display. • The Item Price will appear on the last seven positions of the pole display. Line 2* • "Amount Due” and the total of transaction will appear on the last seven positions, including all other charges (e.g. Taxes).

ID	Event	Default Expression	Display Result
L2	Special Item Entry	P2_begn1$+MID(Description,1,13)+STR(Extension:MID(AmountMask$,-7) ,"****")+P2_endln$ +P2_begn2$+P2_endln$	Line 1 • Item Description will appear. (* Item) on the first 13 positions of the pole display. • The Item Price will appear on the last seven positions of the pole display. Line 2* • “Amount Due” and the total of transaction will appear on the last seven positions, including all other charges (e.g. Taxes).
L3	Misc Charge Entry	P2_begn1$+MID(Description,1,13)+STR(Extension:MID(AmountMask$,-7) ,"****")+P2_endln$ +P2_begn2$+P2_endln$	Line 1 • Miscellaneous Charge Description will appear (/ Item) on the first 13 positions of the pole display. • Price of Item will appear on the last seven positions of the pole display. Line 2* • “Amount Due” and the total of transaction will appear on the last seven positions, including all other charges (e.g. Taxes).
L4	Comment Entry	P2_begn1$+MID(Comment1,1,20)+P2_endln$ +P2_begn2$+P2_endln$	Line 1 • Comment Line 1 Description will appear on the 20 positions of the pole display.
L5	Misc Item Entry	P2_begn1$+MID(Description,1,13)+STR(Extension:MID(AmountMask$,-7) ,"****")+P2_endln$ +P2_begn2$+P2_endln$	Line 1 • Miscellaneous Item Description will appear (/ Item) on the first 13 positions of the pole display. • Price of Item will appear on the last seven positions of the pole display. Line 2* • “Amount Due” and the total of transaction will appear on the last seven positions, including all other charges (e.g. Taxes)
T1	Amount Due	P2_begn2$ + "Amount Due" + STR(AmountDue:MID(AmountMask$,-10) ,"****") + P2_endln$	Line 2* • “Amount Due” will appear on the first 10 positions of the pole display. • The amount due for the transaction will appear on last 10 positions of the pole display.

CONTENTS
BACK
INDEX

ID	Event	Default Expression	Display Result
T2	Change Due	P2_begn1$ + "Payment " + STR(TotalCurrentPayments:MID(AmountMask$,-10) ,"****") + P2_endln$+P2_begn2$ + "Change Due" + STR(ChangeDue:MID(AmountMask$,-10) ,"****") + P2_endln$	Line 1 • Once payment is made, the “Payment” and the amount in the Tendered field from P2 Entry will appear. Line 2 • “Change Due” will appear. • The amount from the Change Due field from P2 Entry. (The text label changes from Balance Due to Change Due once the payments exceed the Amount Due total.)
Z1	Closed	P2_begn1$+"Closed"+P2_endln$+P2_begn2$+P2_endln$+P2_clock$+STR(INT(TIM):"00")+":"+STR((TIM-INT(TIM))*60:"00")+P2_endln$ * For this expression to work correctly, you must enter the Amount Due expression, which is ID T1.	Line 1 • “Closed” will display. Line 2 • Current Time from workstation will appear.

Default Epson Expression Table

The following table contains the default Epson expressions for each event type. Copy the correct default expression for the event in the text field of the Expression Builder With Fieldnames window.

ID	Event	Default Expression	Display Result
R1	Inactive Register	P2_reset$+"Welcome to"+P2_hztab$+CurrentCompanyName$	Line 1 • “Welcome to “ and "Company Name” will appear. Line 2 • “Company Name” continued.
H1	Start Transaction	P2_reset$+"Welcome"	Line 1 • “Welcome” will appear.
H2	Customer Entry	P2_reset$+"Welcome"+P2_linfd$+P2_clrln$+BillToName(1,19)	Line 1 • “Welcome” will appear. Line 2 • The Customer’s Bill To Name will appear.

ID	Event	Default Expression	Display Result
L1	Item Entry	P2_reset$+MID(Description,1,12)+STR(Extension:MID(AmountMask$,-7) ,"****")	Line 1* • Item Description will appear on the first 12 positions of the pole display. • The Item Price will appear on the last 7 positions of the pole display. Line 2* • “Amount Due” will appear on the nine positions. • The total of the transaction will appear on the last nine positions, including all other charges (e.g. Taxes).
L2	Special Item Entry	P2_reset$+MID(Description,1,12)+STR(Extension:MID(AmountMask$,-7) ,"****")	Line 1* • Item Description will appear (*Item) on the first 12 positions of the pole display. ² The Item Price will appear on the last 7 positions of the pole display. Line 2* ² “Amount Due” will appear on the nine positions. ² The total of the transaction will appear on the last nine positions, including all other charges (e.g. Taxes).
L3	Misc Charge Entry	P2_reset$+P2_clrln$+MID(Description,1,12)+STR(Extension:MID(AmountMask$,-7) ,"****")	• Item Description will appear (/Item) on the first 12 positions of the pole display. • The Item Price will appear on the last 7 positions of the pole display. Line 2* • “Amount Due” will appear on the nine positions. • The total of the transaction will appear on the last nine positions, including all other charges (e.g. Taxes).
L4	Comment Entry	P2_reset$+MID(Comment1,1,19)	Line 1* • The Comment from line 1 will appear on the first 19 characters. Line 2* • “Amount Due” will appear on the nine positions. • The total of the transaction will appear on the last nine positions, including all other charges (e.g. Taxes).

CONTENTS
BACK
INDEX

ID	Event	Default Expression	Display Result
L5	Misc Item Entry	P2_reset$+MID(Description,1,12)+STR(Extension:MID(AmountMask$,-7) ,"****")	Line 1* • Item Description will appear (/M) on the first 12 positions of the pole display. • The Item Price will appear on the last 7 positions of the pole display. Line 2* • “Amount Due” will appear on the nine positions. • The total of the transaction will appear on the last nine positions, including all other charges (e.g. Taxes).
T1	Amount Due	P2_linfd$+P2_clrln$+"Amount Due" + STR(AmountDue:MID(AmountMask$,-9) ,"****")	Line 2* • “Amount Due” will appear on the nine positions. • The total of the transaction appear on the last nine positions, including all other charges (e.g. Taxes).
T2	Change Due	P2_reset$+ "Payment " + STR(TotalCurrentPayments:MID(AmountMask$,-10)) + "Change Due" + STR(ChangeDue:MID(AmountMask$,-10) ,"****")	Line 1 • Once payment is made, “Payment” and the Amount Tendered field from P/2 Entry will appear. Line 2 • “Change Due” will appear on the first nine positions. • The amount from the Change Due field from P2 Entry. (The text label changes from Balance Due to Change Due once the payments exceed the Amount Due total.)
Z1	Closed Register	P2_reset$+"Closed Register"	Line 1 • “Closed Register” will appear.

Default Logic Controls Expression Table

The following table contains the default Logic Controls expressions for each event type. Copy the correct default expression for the event in the text field of the Expression Builder With Fieldnames window.

ID	Event	Default Expression	Display Result
R1	Inactive Register	P2_reset$ + P2_scrll$ + "Welcome to " + CurrentCompanyName$ + P2_endln$	Line 1 • The message "Welcome to" and current MAS 90 company name will be displayed. Line 2 • Blank.

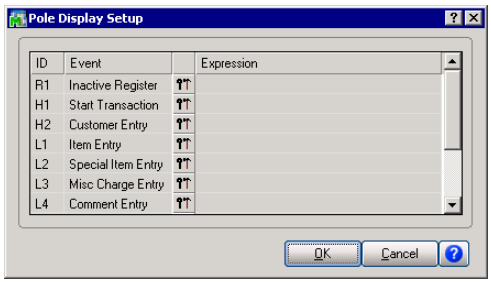
ID	Event	Default Expression	Display Result
H1	Start Transaction	P2_reset$ + P2_firln$ + "Thanks for shopping with us today" + P2_ndmod$ + P2_secln$ + P2_scrll$+P2_reset$ + "Thanks for shopping with us today" + P2_endln$ + P2_ndmod$	Line 1 •The message "Thanks for shopping with us today!" will scroll. (Scrolling lines can contain up to 45 characters.) Line 2 • Amount Due with "0.00" will be displayed. The Amount Due expression must be added.
H2	Customer Entry	P2_reset$ + P2_firln$ + P2_scrll$ + "Welcome " + BillToName + P2_endln$	Line 1 •The message "Welcome" and the customer's Bill to Name will scroll across the first line. Line 2 •Blank
L1	Item Entry	P2_reset$ + P2_firln$ + PAD(MID(Description,1,5),5) + P2_hztab$ + STR(Quantity:"###0","****") + P2_hztab$ + STR(Extension:MID(AmountMask$,-9) ,"****") + P2_ndmod$ + P2_endln$	Line 1 • The item description, the quantity, and the line extension will be displayed. Line 2 • "Amount Due" as well as the calculated total amount due will be displayed.
L2	Special Item Entry	P2_reset$ + P2_firln$ + PAD(MID(Description,1,9),9) + P2_hztab$ + STR(Extension:MID(AmountMask$,-10) ,"****") + P2_ndmod$ + P2_endln$	Line 1 • The item description, the quantity, and the line extension will be displayed. Line 2 • "Amount Due" as well as the calculated total amount due will be displayed.
L3	Misc Charge Entry	P2_reset$ + P2_firln$ + PAD(MID(Description,1,9),9) + P2_hztab$ + STR(Extension:MID(AmountMask$,-10) ,"****") + P2_ndmod$ + P2_endln$	Line 1 • The item description, the quantity, and the line extension will be displayed. Line 2 • "Amount Due" as well as the calculated total amount due will be displayed.
L4	Comment Entry	P2_reset$ + P2_firln$ + MID(Comment1,1,19) + P2_ndmod$ + P2_endln$	Line 1 • The comment entry will be displayed up to 19 characters. Line 2 • "Amount Due" as well as the calculated total amount due will be displayed.

ID	Event	Default Expression	Display Result
L5	Misc Item Entry	P2_reset$ + P2_firln$ + PAD(MID(Description,1,9),9) + P2_hztab$ + STR(Extension:MID(AmountMask$,-10) ,"****") + P2_ndmod$ + P2_endln$	Line 1 • The item description, the quantity, and the line extension will be displayed. Line 2 • "Amount Due" as well as the calculated total amount due will be displayed.
T1	Amount Due	P2_secln$ + "Amount Due" + STR(AmountDue:MID(AmountMask$,-10),"****") + P2_endln$	Line 1 • Blank Line 2 • "Amount Due" as well as the calculated total amount due will be displayed.
T2	Change Due	P2_reset$ + P2_firln$ + "Payment " + STR(TotalCurrentPayments:MID(AmountMask$,-12)) + P2_ndmod$ + P2_secln$ + "Change Due" + STR(ChangeDue:MID(AmountMask$,-10) ,"****") + P2_ndmod$ + P2_endln$	Line 1 •"Payment" with the total payment collected will be displayed. Line 2 • The amount from the Change Due field from Point of Sale entry. (The text label changes from Balance Due to Change Due once the payments exceed the Amount Due total.)
Z1	Closed	P2_reset$ + P2_scrll$ + "Register Closed" + P2_endln$	Line 1 • “Register Closed” will scroll across the display. Line 2 • Blank

Designing Pole Display Expressions

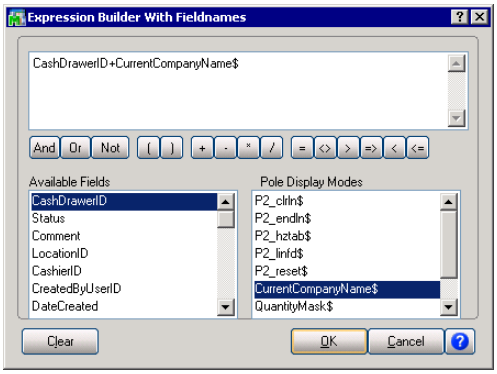
Designing pole display expressions requires basic programming knowledge. You should also have experience with MAS 90 Data Dictionaries, creating formulas, and creating conditional expressions to help in the understanding of building expressions. Build your own expressions with the Expression Builder With Fieldnames window.

1 From the **Devices** tab of the **Register Maintenance** window in the **Point of Sale Professional** module, click the **Build Expressions** button in the **Pole Display** field. The Pole Display Setup window appears.



Pole Display Setup Window

2 Click the **Build Expressions** button in between the **Event** and **Expression** fields for the event that requires an expression. For example, to build an expression for the start of a transaction, click the Build Expressions button next to the Start Transaction event. The Expression Builder With Fieldnames window appears.

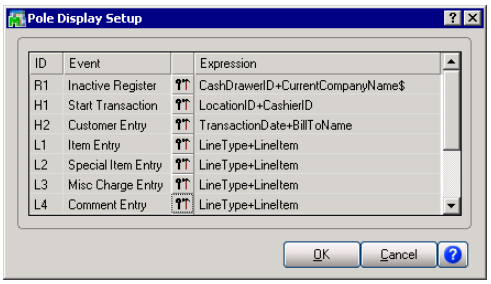


Expression Builder With Fieldnames Window

3 To build your own expression, double-click on any data from the **Available Fields** and **Pole Display Modes** to add to the expression. Use the buttons to further build expressions and enter data in the text field.

For details about the button fields, see the Button Table section. For descriptions of the Available Fields, see the Available Fields Table section. The data in the Pole Display Modes field depends upon your brand of pole display. For descriptions of the Pole Display Modes for the EMAX display, see the EMAX Pole Display Modes Table section. For the Epson Pole Display Modes, see the Epson Pole Display Modes Table section. For the Logic Controls Pole Display Modes, see the Logic Controls Pole Display Modes Table section.

4 Click the **OK** button. The Pole Display Setup window appears with the expression.



Pole Display Setup Window with Expressions

5 Repeat steps 3-4 for each event. Click the **OK** button on the Pole Display Setup window when finished.

6 Click the **Accept** button on the Register Maintenance window to save all changes.

Button Table

The following table contains explanations of the buttons in the Expression Builder With Fieldnames window. Use the buttons to help build expressions.

Button	Function within the Expression
And	Used to check for conditions for an expression. If all conditions are true then the expression will appear.
Or	Used to check if conditions for an expression. If at least one condition is true then the expression will appear.
Not	Used to check if a condition is not true for an expression. If the condition is not true the expression will appear.
( )	Used to hold arguments for a function, define a string segment or to group expressions.
+	Used to add values in mathematical equations or to append a string.
-	Used to subtract values in mathematical equations or to negate a value.
*	Used to multiply values in mathematical equations.
/	Used to divide values in mathematical equations.
=	Used to assign a value to a variable or to check if two values are equal.
<>	Used to check if left value is not equal to right value.
>	Used to check if left value is greater than right value.
=>	Used to check if left value is greater or equal to right value.
<	Used to check if left value is less than right value.
<=	Used to check if left value is less than or equal to right value.

Available Fields Table

The following table contains explanations for some of the Available Fields in Expression Builder With Fieldnames screen. Use the fields to help build expressions.

Field	Meaning	Example
Status	Cash Drawer Status from Cash Drawer Maintenance.	Open, Closed, Ready
Comment	Comment from Cash Drawer Maintenance.	Front Register
CashierID	Cashier selected in Cash Drawer Maintenance.	Jane Salesperson
DateCreated	Date Created field from Cash Drawer Maintenance.	11/25/05
NextCashDrawerID	The Next Cash Drawer from P2 Options.	0000001
AllowMultipleRegisters	Allow Multiple Registers is checked in Cash Drawer Maintenance.	Y or N
OpeningCash	The amount of opening cash in Cash Drawer Maintenance.	100.00
NumberOfTransactions	The number of transactions in a cash drawer.	25
NumberOfVoids	The number of void transactions in a cash drawer.	3
NumberOfOpens	The number of open transactions in a cash drawer.	15
NumberOfDeposits	The number of deposits in a cash drawer.	2

EMAX Pole Display Modes Table

The following table contains explanations of the EMAX Pole Display Modes in the Expression Builder With Fieldnames screen. Use the modes to help build expressions.

Mode (Strings)	Description Definition	Example	Result
P2_begn1$ (The EMAX Customer Display has two lines, 1 indicates that this is line 1.)	Start the first line expression for a display with 2 lines.	**P2_begn1$**+"Welcome"+P2_endln$ +P2_begn2$+""+P2_endln$	P2_begn1$ begins the first line display, the word “Welcome” is on the first line of the pole display.
P2_begn2$ (The EMAX Customer Display has two lines, the 2 indicates that this is line 2.)	Start the second line expression for a display with 2 lines.	**P2_begn2$**+""+P2_endln$	P2_begn2$ begins the second line display, the “” indicates that nothing will print on the second line of the pole display.
P2_endln$	End expression	P2_begn2$ + "Amount Due" + STR(AmountDue:MID(Amount Mask$,-10) ,"****") + **P2_endln$**	P2_endln$ ends any line display.
P2_scrll$	Start a scrolling expression	**P2_scrll$**+"Welcome"+" "+BillToName+P2_endln$	The word “Welcome” + the Customer Bill To Name will scroll.

Mode (Strings)	Description Definition	Example	Result
P2_sngle$	Start a single line expression	**P2_sngle$**+CurrentCompany Name$+" "+P2_endln$+	The current company code's description will appear.
CurrentCompany Name$	Current Company Name	P2_scrll$+**CurrentCompanyName$**+" "+P2_endln$+	The current company code's description will scroll across display.
Quantity Mask$	Quantity	P2_begn1$+MID(Description, 1,13)+STR(Extension:MID(**Quantity Mask$**,-7) ,"****")+ P2_endln$	The quantity of the item will appear on the first line in the last seven positions of the line.
PriceMask$	Price	P2_begn1$+MID(Description, 1,13)+STR(Extension:MID(**PriceMask$**,-3) ,"****")+ P2_endln$	The Price of the item will appear on the first line in the last three positions of the line.
AmountMask$	Amount	P2_begn1$+MID(Description, 1,13)+STR (Extension:MID (**AmountMask$**,-5) ,"****")+P2_endln$	The amount of the transaction will appear in the last five positions on the line.

NOTE: The expression line is limited to and cannot exceed 19 characters, which is determined by the physical display. For example, when using the AmountMask$, the description of the item appears on the first 13 characters and the extension will display at 14th position.

Epson Pole Display Modes Table

The following table contains explanations of the Epson Pole Display Modes in the Expression Builder With Fieldnames screen. Use the modes to help build expressions.

Mode (Strings)	Description Definition	Example	Result
P2_clrln$	Clears line expression.	P2_reset$+"Welcome"+**P2_linfd$**+**P2_clrln$**+BillToName(1,19)	Mode used in conjunction with P2_linfd$ to clear out second line expression.
P2_endln$	Ends expression.	P2_reset$+"Welcome"+**P2_endln$**	Mode can be used to end an expression.
P2_hztab$	Continues expression to line 2 on the pole display.	P2_reset$+"Welcome to"+P2_hztab$+CurrentCompanyName$	"Welcome to My Candy Company Demo Data" will appear.
P2_linfd$	Begins second line on the pole display.	P2_reset$+"Welcome"+**P2_linfd$**+P2_clrln$+BillToName(1,19)	The customer's bill to name will print on the second line of the pole display.

Mode (Strings)	Description Definition	Example	Result
P2_reset$	Clears entire previous expression, primarily used to begin a new expression.	**P2_reset$**+"Closed Register"	When the register becomes closed, all expressions will be removed and Closed Register will appear.
CurrentCompany Name$	Current Company Name	P2_reset$+"Welcome to"+P2_hztab$+ CurrentCompanyName$	The current company code's description will appear.
Quantity Mask$	Quantity	MID(Description,1,12)+STR(Extension:MID(**Quantity Mask$**,-7))	The quantity of the item will appear on the first line in the last seven positions of the line.
PriceMask$	Price	MID(Description,1,12)+STR(Extension:MID(**PriceMask$**,-7))	The Price of the item will appear on the first line in the last three positions of the line.
P2_clock$	Displays the time from the workstation.	P2_reset$+"Closed Register"+P2_linfd$+P2_clrln$+**P2_clock$**+STR(INT(TIM):"00")+":"+STR((TIM- INT(TIM)) *60:"00")	The time from the workstation will appear on the second line of the pole display.
AmountMask$	Amount	MID(Description,1,13)+STR (Extension:MID (**AmountMask$**,-6))	The amount of the transaction will appear in the last five positions on the line.

NOTE: Each expression line is limited to and cannot exceed 20 characters, which is determined by the physical display. For example, when using the PriceMask$, as seen above, the description of the item is displayed on the first 12 characters and the extension will be displayed at 20+(-3)= 17th position.

Logic Controls Pole Display Modes Table

The following table contains explanations of the Logic Controls Pole Display Modes in the Expression Builder With Fieldnames screen. Use the modes to help build expressions.

Mode (Strings)	Description Definition	Example	Result
P2_2pole$	To Pole Display	Not applicable for Point of Sale Professional.	Used to send information to display.
P2_2prph$	To Peripheral	Not applicable for Point of Sale Professional.	Used to send information to display.
P2_bcksp$	Backspace	Not applicable for Point of Sale Professional.	Used to backspace.
P2_brght$	Brightness Control	Not applicable for Point of Sale Professional.	Used to change the brightness on the display.

Mode (Strings)	Description Definition	Example	Result
P2_crsof$	Cursor Off	Not applicable for Point of Sale Professional.	Used to hide the cursor on the pole display.
P2_crson$	Cursor On	Not applicable for Point of Sale Professional.	Used to display the cursor on the pole display.
P2_digit$	Digit Select	Not applicable for Point of Sale Professional.	Used to display information on a specific position on the pole display.
P2_dlfnt$	Down Load Font	Not applicable for Point of Sale Professional.	Used to download font.
P2_endln$	End Line	P2_reset$+P2_scrll$+"Register Closed"+**P2_endln$**	P2_endln$ ends a line expression.
P2_firln$	Start First Line	P2_reset$+**P2_firln$**+MID(Description, 1,12) +STR (Extension:MID(AmountMask$,-10), "****")+P2_ndmod$+P2_endln	P2_firln$ starts a line expression.
P2_hztab$	Horizontal Tab Mode function changes by display mode (DC1 or DC2) used in line expression.	P2_reset$+P2_firln$+MID(Description,1,5)+ **P2_hztab$** + STR(Quantity:"###0","****")+P2_hztab$+ STR (Extension:MID(AmountMask$,-9) ,"****") +P2_ndmod$ +P2_endln$	The P2_hztab$ mode places a hard space between two expressions. This mode is best used when building strings that could have various lengths (for example, prices or quantities).
P2_linfd$	Line Feed Mode function changes by display mode (DC1 or DC2) used in line expression.	Not applicable for Point of Sale Professional.	Used to start another line.
P2_ndmod$	Normal Display Mode Referred to as DC1 by manufacturer.	P2_reset$+P2_firln$+MID(Description,1,10)+ P2_hztab$+STR (Extension:MID(AmountMask$,-10) ,"****")+ **P2_ndmod$** +P2_endln$	The P2_ndmod$ mode is used to write data to a line, and not to scroll the data vertically.
P2_reset$	Reset Display	**P2_reset$**+ P2_firln$+"Welcome to " +CurrentCompanyName$+P2_endln $	Used to reset (or clear) a previous event pole display expression. This mode is useful when beginning a new line expression.
P2_scrll$	Start Scrolling Line	P2_reset$+**P2_scrll$**+ "Register Closed" + P2_endln$	The words “Register Closed” will scroll across the first line.
P2_secln$	Start Second Line	**P2_secln$** + "Amount Due" +STR(AmountDue:MID(AmountMask$,-10),"****") + P2_endln$	The P2_secln$ begins a second line display.
P2_vsmod$	Vertical Scroll Mode Referred to as DC2 by manufacturer.	Not applicable for Point of Sale Professional.	The P2_vsmod$ mode is used to write data to line one, and if data limit is exceeded then the display information is continued on the same line with a vertical scroll.
CurrentCompany Name$	Current Company Name	P2_reset$+ P2_firln$+"Welcome to " + **CurrentCompanyName$** + P2_endln$	The current company code's description will appear.

Mode (Strings)	Description Definition	Example	Result
QuantityMask$	Quantity	MID(Description,1,12)+STR(Extension:MID(**Quantity Mask$**,-7))	Used to build string to show quantity.
PriceMask$	Price	MID(Description,1,12)+STR(Extension:MID(**PriceMask$**,-7))	Used to build string to show price.
AmountMask$	Amount Due	P2_secln$ + "Amount Due" +STR(AmountDue:MID(AmountMask$,-10),"****") + P2_endln$	Used to build a string calculating amount due total.

Configuring Pole Display Expressions for Older Pole Display Models

Pole displays have control codes to place the cursor and the text anywhere on the pole display. These codes are normally available in the manual provided by the manufacturer. If you are not using a proper device to select pole display expressions in the Device Configurator window, this section contains alternate instructions for designing pole display expressions.

Typical pole display units will display 40 characters with two lines in the expression of 20 characters on each line. By sending a 40 character expression through the serial port, you will completely replace the existing characters and build the expression you want to display. By creating 20 character segments, you can replace the expressions with your own custom expressions. For example:

The first event in Pole Display Setup is Inactive Register. This expression displays when the register is first started and after every transaction. You can build a 20 character expression using the dim(number of spaces) statement to create a "Welcome to My Company" expression. Examine the following expression.

"Welcome to "+dim(9)+"My Company"+dim(10)

'Welcome to' is exactly 11 characters. The 'dim' statement adds another 9 spaces for a total of 20 on the first line. With this expression being 20 characters, the remainder of the expression is added to the next line. The next line of twenty characters consists of 'My Company' plus another 10 spaces. If your company name is longer or shorter than 10 characters, you can adjust the number in the 'dim' statement to set the line to 20 characters.

You can still create more advanced pole display expressions using the control commands. Examine the following expression.

dim(40)+"Welcome"+chr(13)+chr(10)+P2_linfd$+MID(BillToName$,1,20)

The first 'dim' statement completely clears the pole display. The 'Welcome' is displayed on the first line followed by the carriage return and line feed commands. This return places the cursor to the beginning of the next line. The 'mid' statement displays the first 20 characters of the bill to name. If the display was not cleared with the 'dim(40)' command, characters may have been left on the first line because we only printed 7 characters.

This concludes the Point of Sale Professional Hardware Configuration manual.

Index

R

S

T

W