



HP Point of Sale (POS) Peripherals Configuration Guide

Document Version 3.30
January 2011

© Copyright 2007-2010 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice.

Microsoft, MS-DOS, Windows, WEPOS, POSReady and Windows NT are trademarks of Microsoft Corporation in the U.S. and other countries.

The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

HP Point of Sale (POS) Peripherals Configuration Guide
Document Version 3.30.0003

January 2011

Contents

1	Introduction.....	10
2	List of Peripherals and General Information	14
2.1.1	Hardware	14
2.1.2	OPOS and CCO Drivers/Application	14
2.1.3	Where to obtain the latest drivers for the HP POS Peripherals	15
3	Port Information.....	16
3.1.1	Ports for HP ap5000.....	16
3.1.2	Ports for HP rp3000.....	17
3.1.3	Ports for HP rp5700.....	19
3.1.4	Ports for HP rp5000.....	20
4	HP rp3000 Optical Door	21
5	OPOS Name for HP Point of Sale Peripherals	22
6	OPOS Logical Device Name Utility	23
6.1	Main GUI	23
6.2	Obtain OPOS Logical Device Name(s)	27
6.2.1	Overview Steps	27
6.2.2	Detail Steps	27
6.3	Change OPOS Logical Device Name(s)	30
6.3.1	Overview Steps	30
6.3.2	Detail Steps	30
6.4	Set HP branded device to factory default OPOS logical name.....	34
6.4.1	Overview Steps	34
6.4.2	Detail Steps	34
6.4.3	Default INI File.....	41
6.4.4	Adding non-HP Peripherals to the default drop down	41
7	Peripherals Connection and Software Installation	44
7.1	Cash Drawer and Flip-Top Cash Drawer	44
7.1.1	Key lock position	44
7.1.2	Connection	45
7.1.3	Windows Drivers for the Cash Drawer Drivers.....	48
7.1.4	Cash Drawer Decimal Commands.....	48
7.1.5	Dual Cash Drawer Connection.....	49
7.1.5.1	Cash Drawer Cable Info.....	49
7.1.6	OPOS Drivers for the Cash Drawer	50
7.1.7	OPOS Test Applet for the Cash Drawer	50
7.1.7.1	Cash Drawer Only Utility	50
7.1.7.2	Cash Drawer and Printer Utility.....	54
7.1.8	Cash Drawer Signal	57
7.1.9	Cash Drawer Signal Change.....	57
7.1.10	JPOS Drivers for the Cash Drawer Drivers.....	58
7.2	Receipt Printer.....	62
7.2.1	Connection	62
7.2.2	Powered USB Cable	64
7.2.3	NATIVE mode	66
7.2.4	PRINTER CLASS Mode.....	67

7.2.5	COMM CLASS Mode	67
7.2.6	USB Mode Selector Utility	69
7.2.6.1	Set printer to NATIVE mode.....	71
7.2.6.2	Set printer to PRINTER CLASS mode (default).....	72
7.2.6.3	Set printer to COMM CLASS mode (virtual serial port)	73
7.2.7	Serial Printer.....	74
7.2.8	Windows Drivers for the Receipt Printer Drivers.....	75
7.2.8.1	Install Windows Printer Driver (USB)	75
7.2.8.2	Install Windows Printer Driver (Serial)	80
7.2.8.3	Test Receipt Printer in Windows Environment (non-OPOS)	86
7.2.9	Knife Cut Commands	88
7.2.10	OPOS Drivers for the Receipt Printer	89
7.2.10.1	OPOS Installation - USB.....	89
7.2.10.2	OPOS Installation – Serial Port.....	92
7.2.10.3	OPOS Test Applet for the Receipt Printer	97
7.2.10.4	Receipt Printer and Cash Drawer Utility – Receipt Printer Testing.....	97
7.2.10.5	Bitmap / Barcode Testing.....	104
7.2.10.6	Receipt Printer and Cash Drawer Utility – Cash Drawer Testing	107
7.2.11	OPOS Test Applet for the MICR	111
7.2.12	OPOS Test Applet for the CheckScan	119
7.2.13	Receipt Printer Cash Drawer Signal	131
7.2.13.1	Cash Drawer Signal	131
7.2.13.2	Cash Drawer Signal Change.....	131
7.2.14	JPOS Drivers for the Receipt Printer Drivers – Serial Port Setting.....	132
7.2.15	JPOS Drivers for the Receipt Printer Drivers	133
7.2.16	JPOS Drivers for the Receipt Printer Drivers - CheckScanner	141
7.2.17	JPOS Drivers for the Receipt Printer Drivers - MICR	150
7.2.18	JPOS Drivers for the Receipt Printer Drivers - Slip.....	160
7.2.19	JPOS Drivers for the Receipt Printer Drivers – Slip Printing.....	170
7.2.20	HP Font Utility (ASIAN Font Download) – Single Station (A799) Printer.....	180
7.2.20.1	HP Font Utility (Asian Font Download Utility).....	180
7.3	MSR (Magnetic Stripe Reader) – Standalone.....	185
7.3.1	Connection	185
7.3.2	Windows Drivers for the MSR	185
7.3.3	Utility to switch MSR Mode.....	187
7.3.3.1	Set MSR to HID KB mode.....	187
7.3.3.2	Set MSR to HID KB mode with no “CR”	189
7.3.3.3	Set MSR to HID mode.....	191
7.3.4	OPOS Drivers for the MSR	193
7.3.5	Testing MSR.....	193
7.3.5.1	Testing MSR in USB-HID-KB mode (non-OPOS).....	193
7.3.5.2	Testing MSR in USB-HID or USB-HID-KB mode with OPOS.....	193
7.3.6	JPOS Drivers for the MSR	197
7.4	Barcode Scanner (1D).....	204
7.4.1	Connection	204
7.4.2	Windows Drivers for the Barcode Scanner	204
7.4.3	OPOS Drivers for the Barcode Scanner	206
7.4.4	Testing the Barcode Scanner	206
7.4.4.1	Testing Barcode Scanner in non-OPOS	206
7.4.4.2	Testing the Barcode Scanner in OPOS	206
7.4.5	JPOS Drivers for the Barcode Scanner	209
7.5	Imaging Barcode Scanner (2D).....	216
7.5.1	Connection	216
7.5.2	Windows Drivers for the Imaging Barcode Scanner	216

7.5.3	OPOS Drivers for the Imaging Barcode Scanner	218
7.5.4	Testing the Imaging Barcode Scanner	219
7.5.4.1	Testing Imaging Barcode Scanner in non-OPOS	219
7.5.4.2	Testing the Imaging Barcode Scanner in OPOS	219
7.5.5	JPOS Drivers for the Imaging Barcode Scanner	231
7.5.6	Imaging Testing.....	241
7.6	Point of Sale Keyboard.....	247
7.6.1	Connection	247
7.6.2	Windows Drivers for the Point of Sale Keyboard	247
7.6.3	OPOS Drivers for the Point of Sale Keyboard	250
7.6.4	Testing the Point of Sale Keyboard.....	250
7.6.5	JPOS Drivers for the Point of Sale Keyboard	250
7.7	Point of Sale Keyboard with integrated MSR	251
7.7.1	Connection	251
7.7.2	Windows Drivers for the Point of Sale Keyboard	251
7.7.3	Enable OPOS/JPOS for the MSR	256
7.7.4	OPOS Drivers for the Point of Sale Keyboard with integrated MSR - Keyboard	261
7.7.5	OPOS Drivers for the Point of Sale Keyboard with integrated MSR - MSR	261
7.7.6	Testing the Point of Sale Keyboard with integrated MSR	261
7.7.6.1	Keyboard	261
7.7.6.2	MSR OPOS	261
7.7.7	JPOS Drivers for the Point of Sale Keyboard	266
7.7.7.1	Keyboard	266
7.7.7.2	MSR JPOS	266
7.8	Pole Display.....	269
7.8.1	Connection	269
7.8.2	Windows Drivers for the Pole Display	269
7.8.3	Utility to change power-on message	270
7.8.3.1	Utility to Change Default Power-On Message	270
7.8.4	OPOS Drivers for the Pole Display	274
7.8.5	Testing Pole Display.....	274
7.8.5.1	Testing pole display in non-OPOS environment	274
7.8.5.2	Testing pole display in OPOS environment	276
7.8.6	JPOS Drivers for the pole display	284
7.9	Touch Screen – HP L5006tm	290
7.9.1	Connection	290
7.9.2	Windows Drivers for the Touch Screen.....	290
7.9.3	Touch Screen Alignment	302
7.9.4	OPOS Drivers for the Touch Screen.....	305
7.9.5	Testing the Touch Screen	305
7.9.6	JPOS Drivers for the Touch Screen.....	305
7.10	Touch Screen – HP L5009tm	306
7.10.1	Connection	306
7.10.2	Windows Drivers for the Touch Screen.....	306
7.10.3	Touch Screen Alignment	315
7.10.4	OPOS Drivers for the Touch Screen.....	318
7.10.5	Testing the Touch Screen	318
7.10.6	JPOS Drivers for the Touch Screen.....	318
7.11	If prompted for native driver location (New Hardware Wizard)	319
8	HP ap5000 Point of Sale System.....	322
8.1	HP ap5000 Touch Screen	322
8.1.1	Connection	322

8.1.2	Windows Drivers for the Touch Screen.....	322
8.1.3	OPOS Drivers for the ap5000 Touch Screen.....	329
8.1.4	Testing the Touch Screen	329
8.1.5	JPOS Drivers for the ap5000 Touch Screen.....	329
8.2	HP ap5000 MSR (Magnetic Stripe Reader)	330
8.2.1	Connection	330
8.2.2	Windows Drivers for the HP ap5000 MSR	330
8.2.3	OPOS Drivers for the HP ap5000 MSR	330
8.2.4	Testing HP ap5000 MSR.....	330
8.2.4.1	Testing HP ap5000 MSR in non-OPOS mode.....	330
8.2.4.2	Testing HP ap5000 MSR in OPOS mode	335
8.2.5	JPOS Drivers for the HP ap5000 MSR	339
8.3	HP ap5000 VFD (Vacuum Fluorescent Display).....	348
8.3.1	Connection	348
8.3.2	Windows Drivers for the HP ap5000 VFD	348
8.3.3	OPOS Drivers for the HP ap5000 VFD	348
8.3.4	Testing HP ap5000 VFD	349
8.3.4.1	Testing HP ap5000 VFD in non-OPOS mode.....	349
8.3.4.2	Testing HP ap5000 VFD in OPOS mode	352
8.3.5	JPOS Drivers for the HP ap5000 VFD	363
8.3.6	Utility to change power-on message	369
8.3.6.1	Utility to Change Default Power-On Message	369
8.3.6.2	Enable the VFD Default Power-On Message	372
8.4	HP ap5000 VFD BIOS Power Setting	374
8.4.1	F10 BIOS Method.....	374
8.4.2	Windows Graphical Method	374
8.5	HP ap5000 10" Display	378
8.5.1	Connection	378
8.5.2	Windows Drivers for the HP ap5000 10" display.....	378
8.5.3	OPOS Drivers for the HP ap5000 10" Display	378
8.5.4	Testing the HP ap5000 10" Display	378
8.5.5	JPOS Drivers for the HP ap5000 10" Display	378
8.5.6	HP ap5000 Clone Mode Setup	378
8.5.6.1	Quick Setup.....	378
8.5.6.2	Detail Setup.....	379
8.5.7	HP ap5000 Extended Desktop Setup	382
8.5.7.1	Quick Setup.....	382
8.5.7.2	Detail Setup.....	382
9	Q & A.....	386
9.1	General.....	386
9.2	HP Cash Drawer	387
9.3	HP USB Receipt Printer	388
9.4	HP USB Barcode Scanner	390
9.5	HP Touch Screen	395
9.6	HP MSR.....	397
9.7	HP Font Loader	399
9.8	HP rp3000 Optical Door	401
9.9	HP Pole Display	401

9.10	HP OPOS Logical Device Name Utility	403
9.11	HP ap5000 VFD	404
9.12	HP ap5000 VFD (non-OPOS)	404
9.13	HP ap5000 VFD (JPOS)	405
9.14	HP ap5000 VFD (OPOS)	406
9.15	HP ap5000 MSR	407
9.16	HP ap5000 MSR (JPOS/OPOS)	407
9.17	Imaging Scanner - JPOS.....	408

Version Change History

Document Version	Description of Change(s)
3.30	<ul style="list-style-type: none"> Added HP Imaging Barcode scanner information. Updated OPOS logical name to include HP Imaging Scanner. Updated receipt printer HP Font Utility screen captures (previously called Asian Font Utility). Updated 1D Barcode scanner screen captures in the JPOS section. Clarified dual cash drawer cable configuration. Fixed grammatical errors.
3.23	<ul style="list-style-type: none"> Added flip-top cash drawer picture and information. Added key lock position information for cash drawers. Added stand alone USB MSR picture in section 1 showing the MSR not attached to HP touch screen monitor. Added peripheral pictures in each section. Added ap5000 10" display (section 8.5). Added USB mode selector (section 7.2.6) Added information about cash drawer signal. Added JPOS slip printing test procedure (section 7.2.19) Added HP ap5000 MSR Q&A section. Added HP ap5000 VFD generic Q&A section. Changed heading title in MSR standalone to reflect mode setting of the utility (7.3.3.1 / 7.3.3.2 / 7.3.3.3). Updated the Y-Adapter cable information for dual cash drawer in the Dual Cash Drawer Connection (7.1.4) Updated OPOS name table (section 5) to reflect flip-top cash drawer. Updated ap5000 MSR information. Updated ap5000 VFD information. Updated screen capture of USB pole OPOS test utility. Updated screen captures in various peripheral sections Updated OPOS receipt printer screen capture. Updated dual cash drawer cable information. Updated receipt printer mini-Windows GUI screen capture.
3.22	<ul style="list-style-type: none"> Not released.
3.21	<ul style="list-style-type: none"> Added tab barcodes for scanner in Q&A section. Added knife cut command in Q&A section and in section 7.2.7. Updated screen capture for OPOS Logical name utility (section 6.4.4). Updated screen capture ASIAN Font Utility (section 7.2.15.1 and 9.7).
3.20	<ul style="list-style-type: none"> Added HP ap5000 MSR and VFD section. Added HP ap5000 MSR and VFD to Q&A section. Updated OPOS device name table. Updated OPOS test utility for the HP Pole display (USB) Updated single station receipt printer section to reflect serial printer. Updated touch screen section to reflect the update driver that supports both L5006tm and L5009tm monitor. Changed version number of document to reflect version number of CD/ISO file.
2.10	<ul style="list-style-type: none"> Corrected MSR OPOS name for POS Keyboard MSR to OPOS name table. Added OPOS device name to OPOS name table. Added JPOS testing method for CheckScanner/MICR / SLIP in the receipt printer section. Added HP OPOS logical name utility to documentation.

	<ul style="list-style-type: none"> • Added to HP OPOS logical name utility to the Q&A section. • Renamed the “Touch Screen” to “Touch Screen – HP L5006tm” • Added the “Touch Screen – HP L5009tm” section to the document.
2.00	<ul style="list-style-type: none"> • Reformatted documentation layout. • Updated OPOS Name section. • Updated introduction which pictures of HP Point of Sale peripherals. • Added JPOS sections • Added HP USB Line Display sections. • Added HP POS Keyboard with integrated MSR sections. • Added MSR HID utility to MSR section. • Added Font Downloader utility information for the receipt printer.
2.02	<ul style="list-style-type: none"> • Updated JPOS receipt printer screen capture.
2.01	<ul style="list-style-type: none"> • Added “POSReady” to several paragraphs. • Changed Windows mini-driver installation steps to reflect GUI install.
1.30	<ul style="list-style-type: none"> • Updated table accessory driver version in table 1.0.2 • Updated MSR section in regards to USB HID and USB HID-KB. • Updated HP Receipt printer section in regards to native and printer class. Added section 4.2.1 and 4.2.2. • Update MSR and PRINTER Q&A section.
1.25	<ul style="list-style-type: none"> • Added rp5700 IO picture.
1.20	<ul style="list-style-type: none"> • Added version change history table to document. • Added information for the HP touch screen monitor in various sections. • Updated OPOS HP peripherals table name with scanner info (section 5.1.0) • Updated OPOS section for the handheld scanner (Section 5.6.0 section).
1.19	<ul style="list-style-type: none"> • Added name of OPOS HP peripherals (section 5.1.0). • Broke the Q&A section by HP peripherals.
1.10	<ul style="list-style-type: none"> • Updated wording to reflect POS CD and factory image.
1.00	<ul style="list-style-type: none"> • Initial release of document.
1.31	<ul style="list-style-type: none"> • Added rp3000 IO picture.

1 Introduction

This document contains setup and quick testing information in regards to HP Point of Sale (POS) systems and HP Point of Sale (POS) peripherals.

Note: All HP peripherals devices are not available worldwide; please check with the HP reseller in your area for the available HP peripherals.

This document covers the following HP Point of Sale peripherals:



Barcode Scanner



Imaging Barcode Scanner



POS Keyboard



POS Keyboard with integrated MSR



Cash Drawer



Flip Top Cash Drawer



Stand alone USB MSR



Stand alone MSR attached to HP
touch screen monitor



Line (pole) display



Single Station Thermal Receipt Printer



Hybrid Receipt Printer



Hybrid Receipt Printer with imaging



HP rp5000



HP rp3000



HP rp5700 (shown in the tower position)



HP ap5000 (front/side view)



HP ap5000 (rear view showing VFD)



HP ap5000 (rear view showing 10" Display)

2 List of Peripherals and General Information

2.1.1 Hardware

The following table shows the connection type (i.e. USB / Serial, etc.) for the peripherals:

HP Product Name	Description	Connector Type
HP Cash Drawer	Cash Drawer	RJ45 from printer.
HP Flip Top Cash Drawer	Flip Top Cash Drawer	RJ45 from printer.
HP USB POS Keyboard	POS keyboard with touchpad.	USB
HP USB POS Keyboard with MSR	POS keyboard with touchpad and integrated MSR.	USB
HP USB Receipt Printer	Thermal Printer	Serial / USB USB – Powered USB 24V
HP USB Receipt Printer (Hybrid Printer MICR)	Hybrid Printer MICR	USB – Powered USB 24V
HP USB Receipt Printer (Hybrid Printer MICR with Imager)	Hybrid Printer MICR with Imager	USB – Powered USB 24V
HP USB Barcode Scanner	Scanner	USB
HP USB Imaging Barcode Scanner	HP USB Imaging Barcode Scanner	USB
HP USB Mini-MSR	Magnetic Strip Reader (MSR)	USB
HP L5006tm	Touch Screen	VGA / USB or Serial
HP L5009tm	Touch Screen	VGA / USB
HP ap5000 MSR (integrated)	HP ap5000 MSR	Serial
HP ap5000 Line Display (VFD)	HP ap5000 VFD	Serial – Powered 5V

2.1.2 OPOS and CCO Drivers/Application

On the HP Point of Sale System that have HP's Microsoft Windows operating image, the OPOS drivers for the HP branded peripherals have been installed in the image (thermal receipt printers / stand alone MSR / hand scanner / POS keyboard with integrated MSR / pole display). The Common Control Object (CCO) version 1.9.000 (or later) have also been installed/registered in the HP Windows operating system image.

The OPOS and Windows drivers for the peripherals may be installed from the "HP POS Software and Documentation CD" that is included in the peripherals after market option kit or from the Windows image of an HP Point of Sale System if they are not already present.

2.1.3 **Where to obtain the latest drivers for the HP POS Peripherals**

The latest released version of the drives for the HP peripherals are available on the HP.COM web site. Once you have navigated to your HP Point of Sale platform on the HP.COM web site and have selected the operating system you will see the “download by category” section (as shown below). Please go to the appropriate category to obtain the driver package.

- Quick jump to downloads by category...
- » BIOS
 - » Diagnostic
 - » Driver - Audio
 - » Driver - Chipset
 - » Driver - Graphics
 - » Driver - Keyboard, Mouse and Input Devices
 - » Driver - Modem
 - » Driver - Network
 - » Driver - Storage
 - » Operating System - Enhancements and QFEs
 - » Software - Multimedia
 - » Software - PoS
 - » Software - PoS - Keyboard
 - » Software - PoS - MSR
 - » Software - PoS - Pole Line Display
 - » Software - PoS - Receipt Printer
 - » Software - PoS - Scanner
 - » Software - Solutions
 - » Software - System Management
 - » Utility - Tools

The “Software – POS” section is a generic section that is used for HP POS drivers that do not have their own category section on the web site. For example the “HP Point of Sale Driver and Documentation CD ISO” softpaq (Common Control Object softpaq, etc.) would be found in the “Software – POS” category section where as in the “Software – POS – Receipt Printer” category would contain all the drivers associated with the HP receipt printers.

3 Port Information

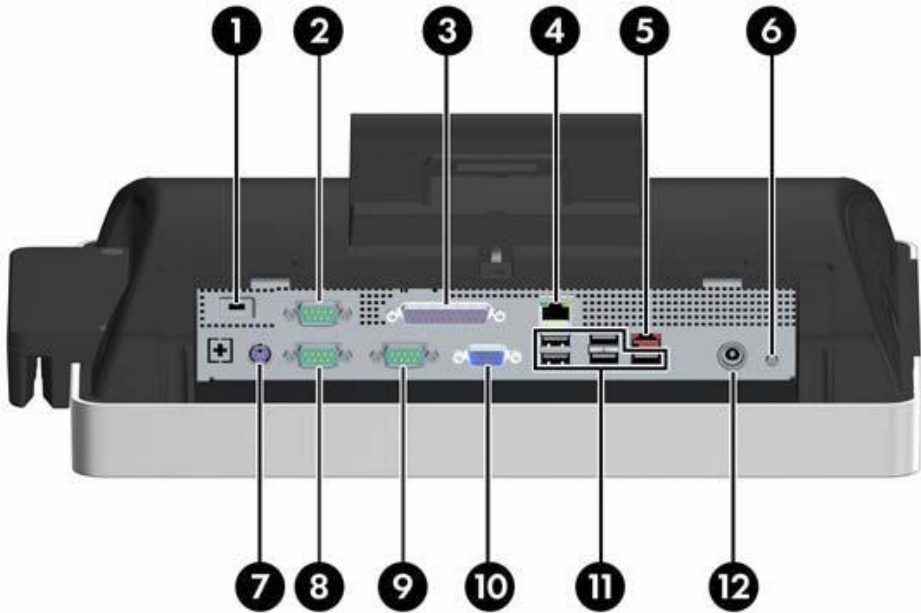
3.1.1 Ports for HP ap5000

The HP ap5000 has an expansion card for 1 powered USB ports (one 24V USB port).

The following table reflects the connectors on the bottom and side of the unit:

Qty	Description
1	PS2 Keyboard
5	USB (non-powered) 4 Below the display and one on the side of the unit.
1	Power USB (USB+Power) 1 - 24V USB port
3	Integrated Serial Port (power configurable) HP ap5000 VFD (attached to COM2 or COM1)
1	HP ap5000 MSR
1	VGA (second monitor connection)
1	Line-In
1	Line-Out
1	NIC

The following are the I/O connectors on the bottom of the ap5000 unit:



1	Kensington Lock Slot	7	PS/2 Keyboard Connector
2	Serial Connector (COM2, 5V)	8	Serial Connector (COM1, 5V)
3	Parallel Connector	9	Serial Connector (COM3, 12V)
4	RJ-45 Network Connector	10	VGA Connector
5	24V USB+POWER Connector	11	Universal Serial Bus (USB) Connectors
6	Power Button	12	Power Cord Connector

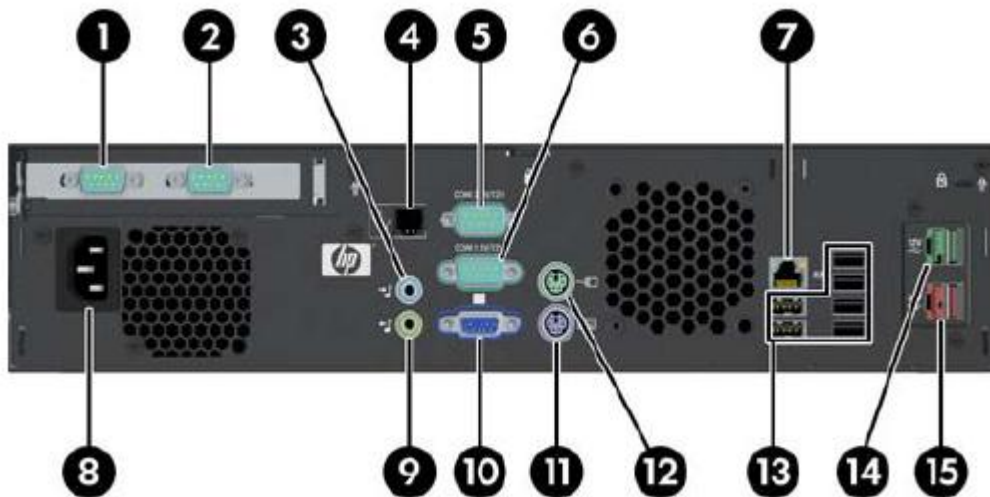
3.1.2 Ports for HP rp3000

The HP rp3000 has an expansion card for 2 powered USB ports (one 12V USB port and one 24V USB port).

The following table reflects the connectors on the back of the unit:

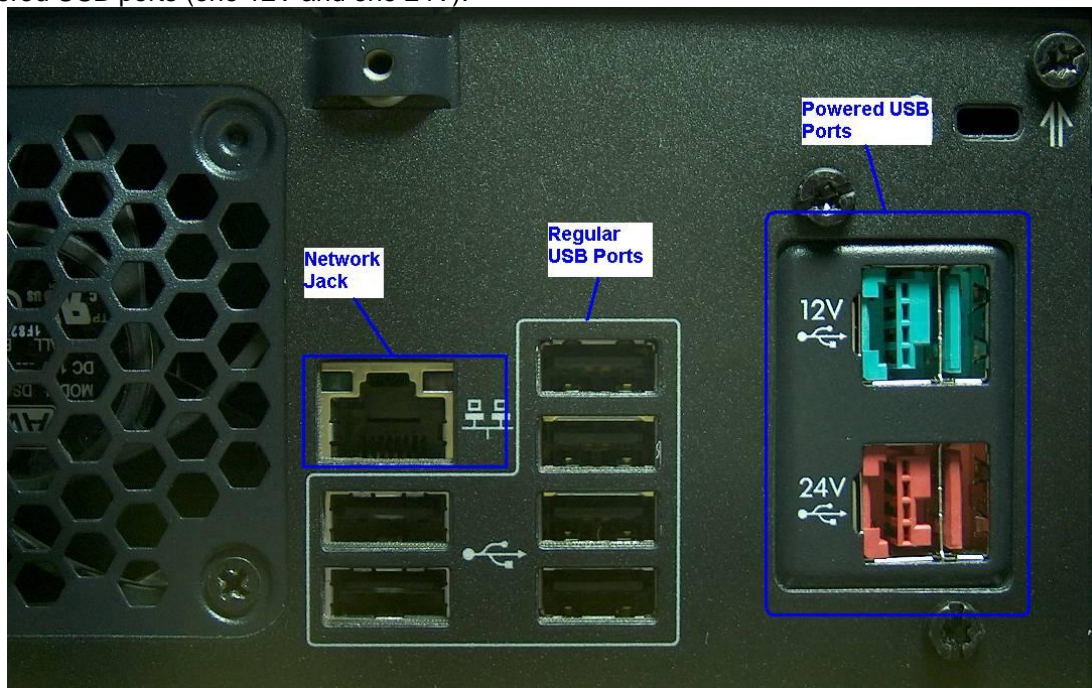
Qty	Description
2	PS2 Mouse & KB
6	USB (non-powered)
2	Power USB (USB+Power) 1 - 12V USB port 1 - 24V USB port
2	Integrated Serial Port (power configurable)
2	Serial Port (power configurable) via expansion card.
1	VGA
1	Line-In
1	Line-Out
1	NIC
1	Integrated modem (factory option)

The following are the I/O connectors on the back of the rp3000 unit:



1	Serial Connector (COM3) (optional)	9	Line-Out Connector
2	Serial Connector (COM4) (optional)	10	Monitor Connector
3	Line-In Audio Connector	11	PS/2 Keyboard Connector
4	RJ11/Integrated Modem (optional)	12	PS/2 Mouse Connector
5	Serial Connector (COM2)	13	USB Connectors
6	Serial Connector (COM1)	14	Powered USB 12v (optional)
7	RJ-45 Network Connector	15	Powered USB 24v (optional)
8	Power Cord Connector		

The 12V and 24V powered USB connectors are keyed differently. The following is a close up of 2 powered USB ports (one 12V and one 24V):



The following is a close up of 2 integrated serial ports / VGA / keyboard / mouse / audio and optional modem:



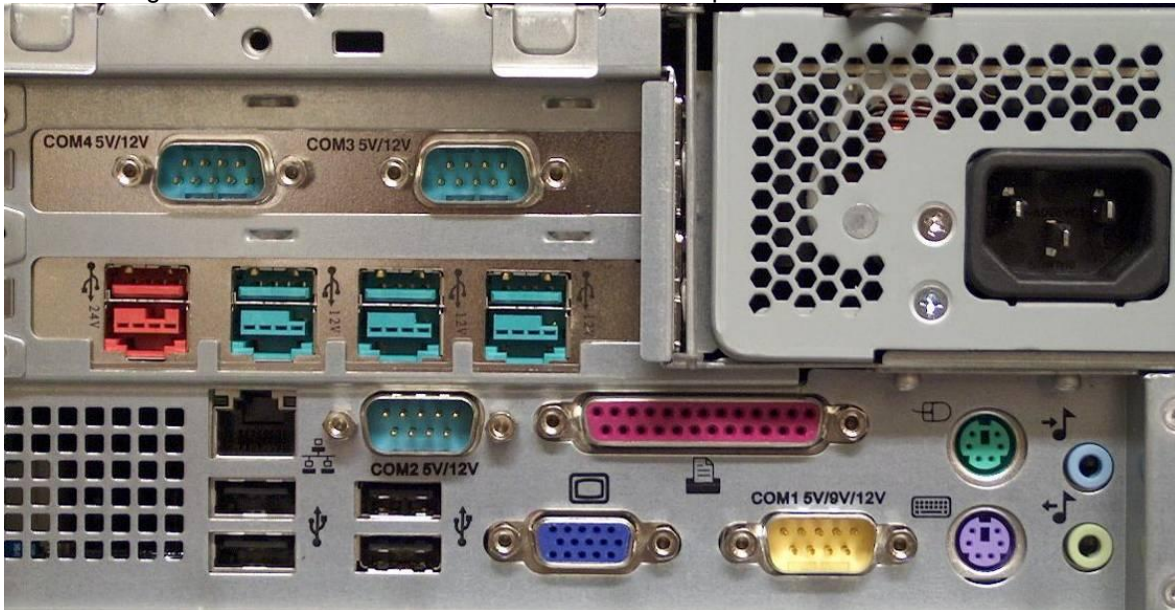
3.1.3 Ports for HP rp5700

The HP rp5700 uses an expansion board for the powered USB ports (three 12V USB ports & one 24V USB port).

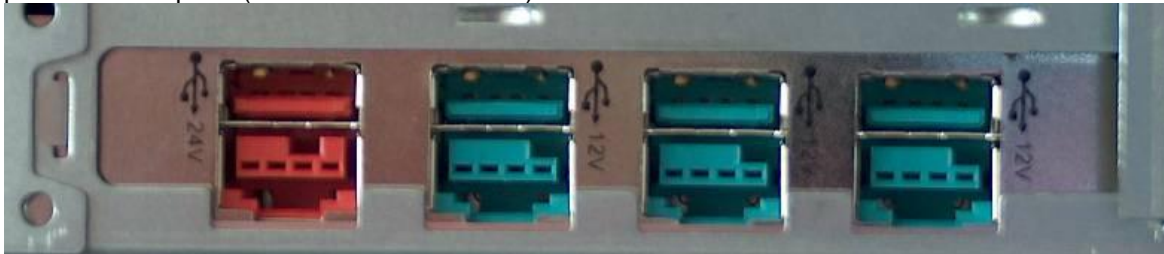
The following table reflects the connectors on the back of the unit:

Qty	Description
2	PS2 Mouse & KB
10	USB 6 - 5V USB port (two ports in front) 3 - 12V USB port 1 - 24V USB port
1	LPT1
4	Serial {power configurable}
1	VGA
2	Line-In Line-Out
1	NIC

The following are the I/O connectors on the back of the HP rp5700 unit:



The 12V and 24V powered USB connectors are keyed differently. The following is a close up of powered USB ports (three 12V and one 24V):



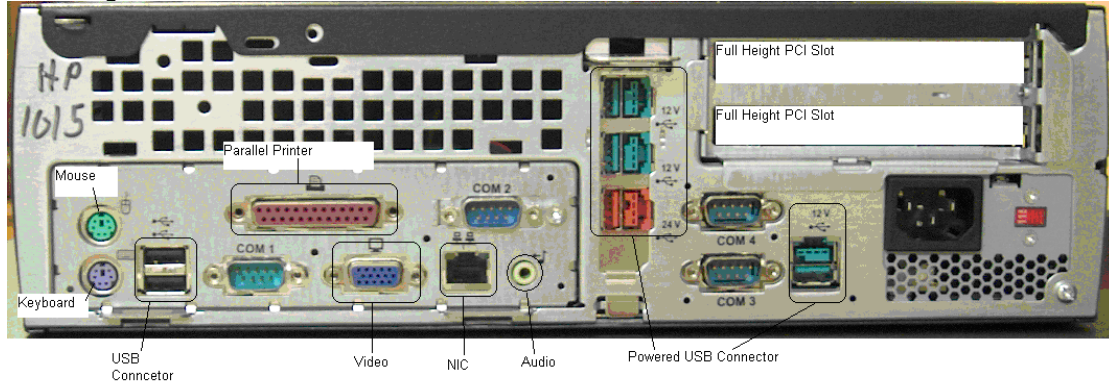
3.1.4 Ports for HP rp5000

The HP rp5000 uses a board in place of an expansion slot for 3 powered USB ports (two 12V USB ports & one 24V USB port); the fourth powered USB board is on the motherboard.

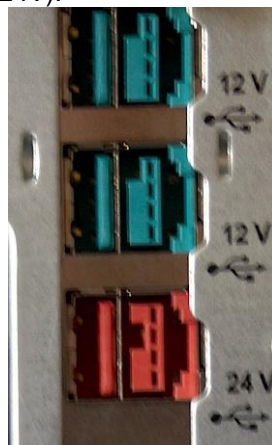
The following table reflects the connectors on the back of the unit:

Qty	Description
2	PS2 Mouse & KB
6	USB 2 - 5V USB port 3 - 12V USB port 1 - 24V USB port
1	LPT1
4	Serial {power configurable}
1	VGA
1	Line-In
1	NIC

The following are the I/O connectors on the back of the unit:



The 12V and 24V powered USB connectors are keyed differently. The following is a close up of 3 powered USB ports (two 12V and one 24V):

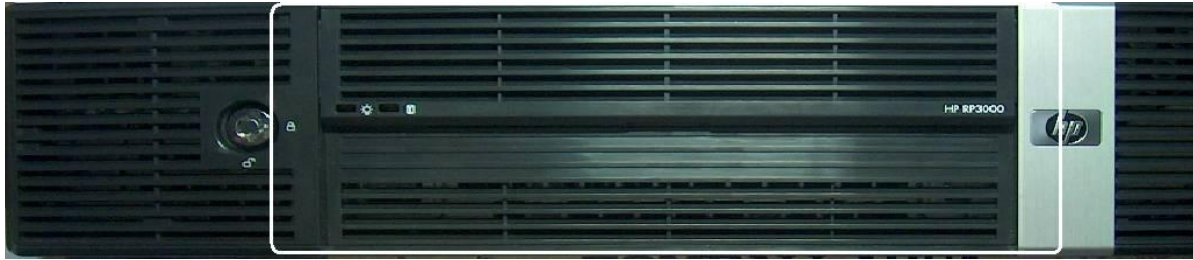


4 HP rp3000 Optical Door

The HP rp3000 unit has a sliding door that can prevent user from accessing the optical drive or the unit's power switch. In the HP image a utility may be installed that prevents soft ejection of the optical driver when the door is in the up position.



Optical Door shown in the down position



Optical Door shown in the up position

With the door in the up position, access to the optical drive and access to the power switch is not available since they are located behind the optical door on the unit. With the HP Windows image, when the optical door is in the up position, the user is NOT able to eject the optical drive either via the optical button or soft eject in the operating system if the optical drive is present in the unit.

With the door in the up position, soft eject of the optical drive does not occur. Under Windows XP / WEPOS / POSReady when user does soft eject nothing happens occurs (no ejection of the optical drive or dialog box). Under Vista/Win7 when user does soft eject, after few seconds one receives an error message indicating an error with the optical drive but the drive will not eject.

The optical eject is prevented by the "HPODDDoorCoverMonitor.EXE or ODDDoorCoverMonitor.EXE", which run as a service in the image. If one creates their own Windows image the optical door service can be added to the image, the utility is available via HP.COM web site.

5 OPOS Name for HP Point of Sale Peripherals

The following are the OPOS logical names for the HP Point of Sale Peripherals:

Device	OPOS Logical Name
HP POS Pole Display	HP POS Pole Display
HP ap5000 Line Display (VFD)	HPap5000LineDisplay
HP USB Barcode Scanner	HP_USBSCANNER (underscore between each word)
HP Imaging Barcode Scanner	HPImageScanner
HP USB Mini-MSR	HPUSBMiniMSR
HP ap5000 MSR	HPap5000MSR
HP POS Keyboard	HPPOSKeyboard
HP POS Keyboard with MSR	HPKBMSR
HP CheckScanner	A776
HP MICR	A776
HP USB Receipt Printer (A794)	A794
HP Cash Drawer or Flip Top Cash Drawer attached to (A794)	A794-1 (first cash drawer or first flip top cash drawer)
HP Cash Drawer or Flip Top Cash Drawer attached to (A794)	A794-2 (second cash drawer or second flip top cash drawer)*
HP USB Receipt Printer (A799) – USB and Serial model(s) of the printer	A799
HP Cash Drawer or Flip Top Cash Drawer attached to (A799)	A799-1 (first cash drawer or first flip top cash drawer)
HP Cash Drawer or Flip Top Cash Drawer attached to (A799)	A799-2 (second cash drawer or second flip top cash drawer)*
HP USB Receipt Printer (A776 - Hybrid Printer MICR)	A776
HP Cash Drawer or Flip Top Cash Drawer attached to (A776)	A776-1 (first cash drawer or first flip top cash drawer)
HP Cash Drawer or Flip Top Cash Drawer attached to (A776)	A776-2 (second cash drawer or second flip top cash drawer)*
HP USB Receipt Printer (A776 - Hybrid Printer MICR with Imager)	A776
HP Cash Drawer or Flip Top Cash Drawer attached to (A776 - Hybrid Printer MICR with Imager)	A776-1 (first cash drawer or first flip top cash drawer)
HP Cash Drawer or Flip Top Cash Drawer attached to (A776 - Hybrid Printer MICR with Imager)	A776-2 (second cash drawer or second flip top cash drawer)*

* Requires a Y-Adapter and the second cash drawer requires a separate cash drawer cable.

6 OPOS Logical Device Name Utility

The “HP OPOS Logical Device Name Utility” can be used to obtain the logical name of the OPOS drivers that are installed on the unit. The utility also provides the ability to change the OPOS logical name of the device. For the HP Point of Sale (POS) peripherals the utility also provides the ability to set the HP POS peripherals back to the factory default logical name.

Note: In order to use this utility, the utility must be run from a location that has read/write access and one must have administrator privileges on the unit where the utility is being run on.

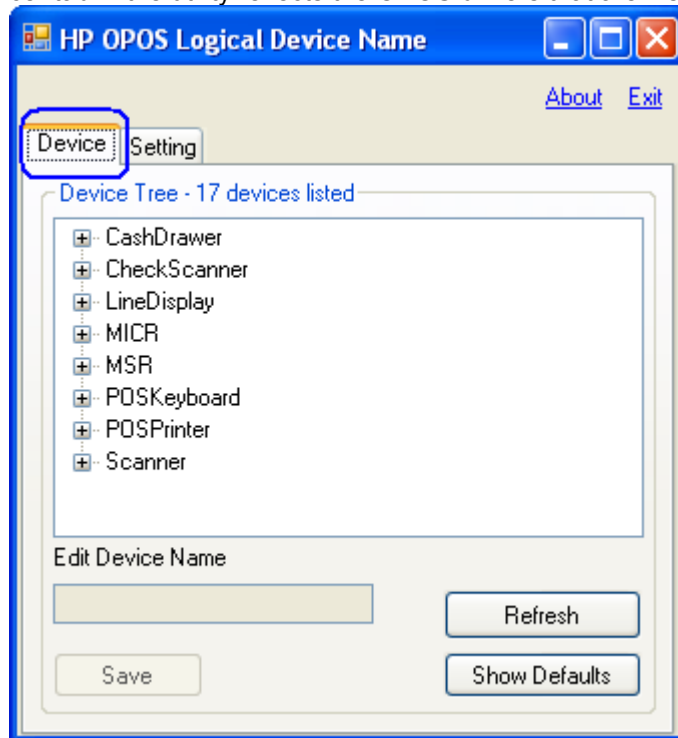
Please consult your point of sale application support center or your IT support department before making any changes to the OPOS device name.

6.1 Main GUI

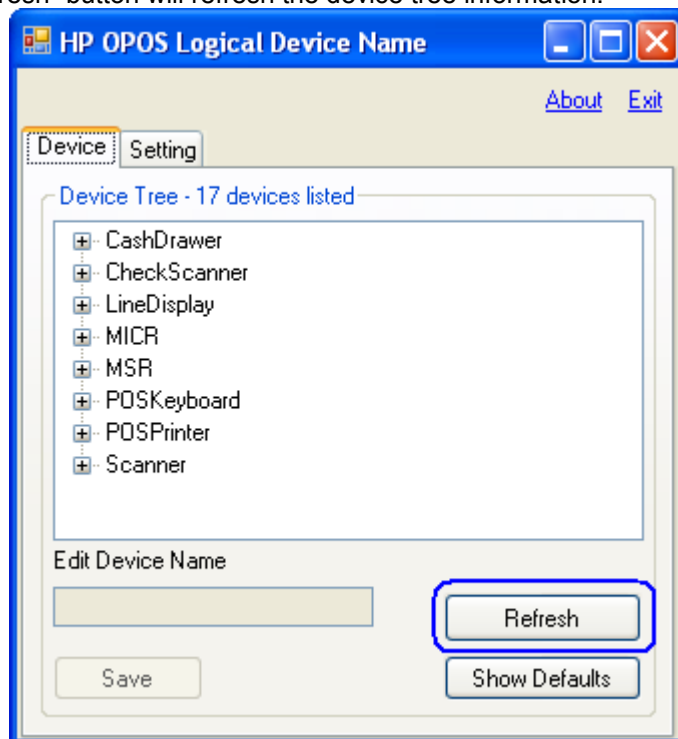
The following is the GUI of the “HP OPOS Logical Device Name Utility” when the utility is launched:



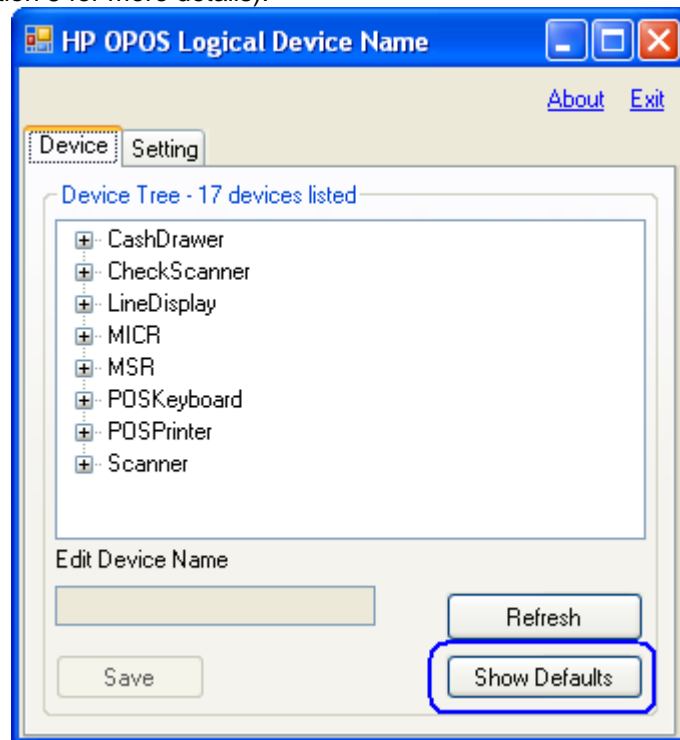
- The “Device” tab in the utility reflects the OPOS drivers that are installed on the unit:



- The “Refresh” button will refresh the device tree information:



- The “Show Default” button will allow one to set the HP peripherals to default factory name (see section 5 for more details):



- The “Setting” tab in the utility reflects the registry location where the utility obtains the data that is displayed in the “device” tab:



- The “About” tab provides version information on the utility:



- Either the “Exit” or “X” can be used to exit the application:



6.2 Obtain OPOS Logical Device Name(s)

The following section describes how to obtain the OPOS logical device names that are installed on the unit.

6.2.1 Overview Steps

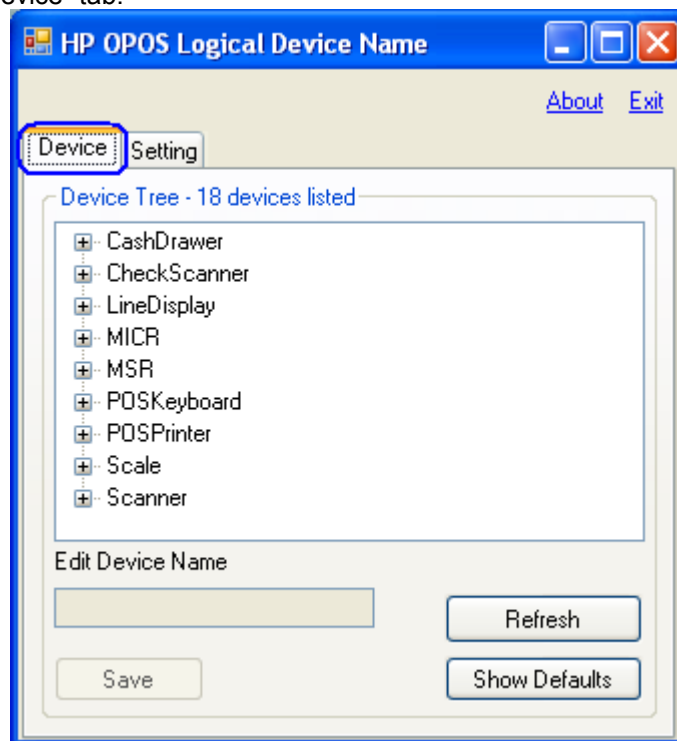
The following is an overview of the steps to obtain the OPOS device name:

1. Launch the utility.
2. Select the "Device" tab.
3. Expand the device tree for which you would like to obtain the OPOS device name.

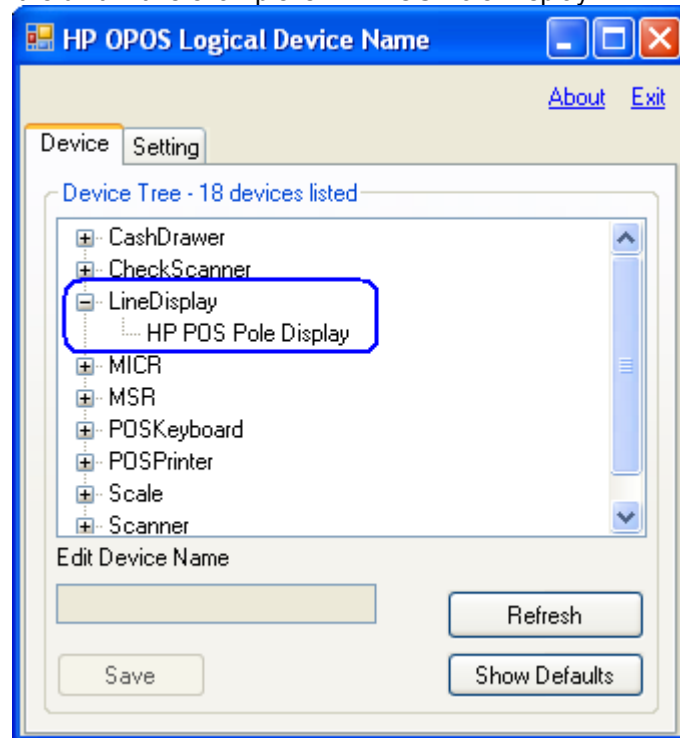
6.2.2 Detail Steps

The following is detail steps to obtain the OPOS device name:

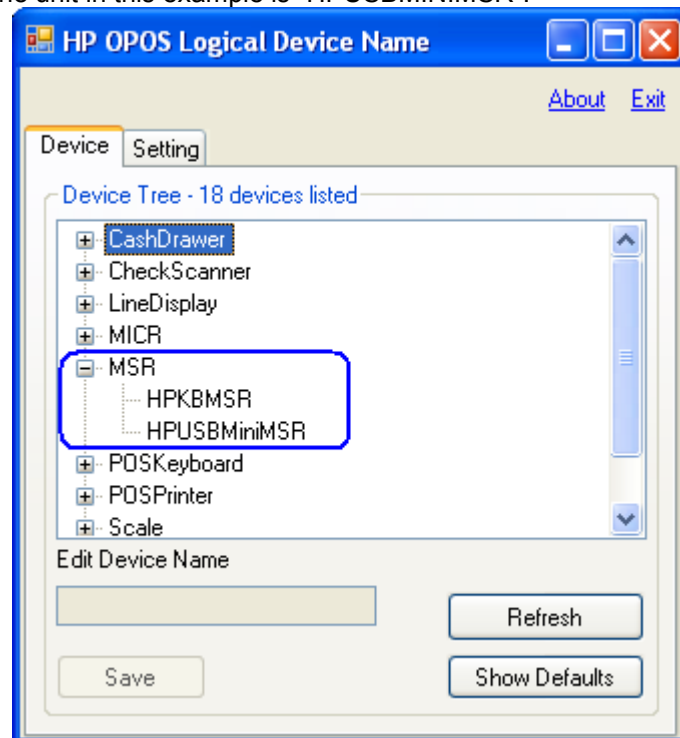
1. Launch the utility.
2. Select the "Device" tab.



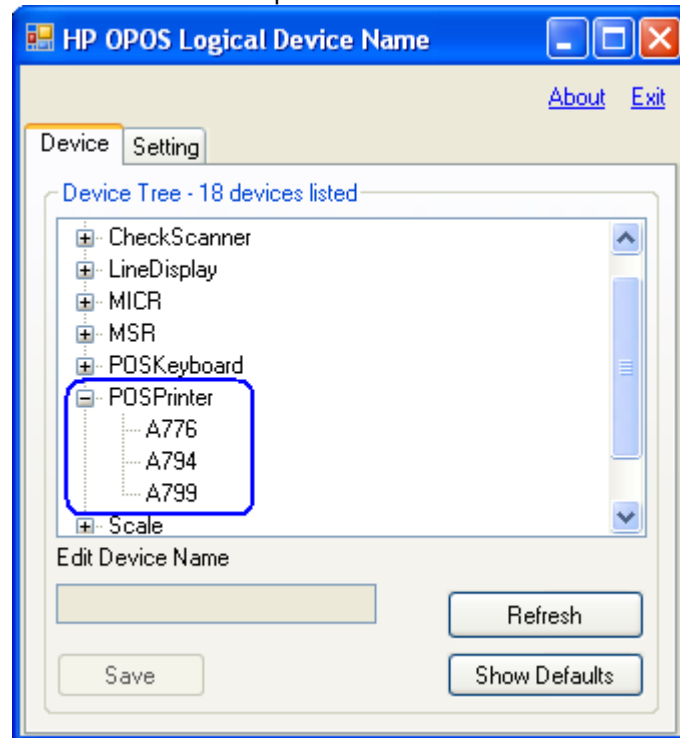
3. Expand the device tree for which you would like to obtain the OPOS device name.
 - The following shows the “LineDisplay” tree expanded. The OPOS device name that is installed on the unit in this example is “HP POS Pole Display”



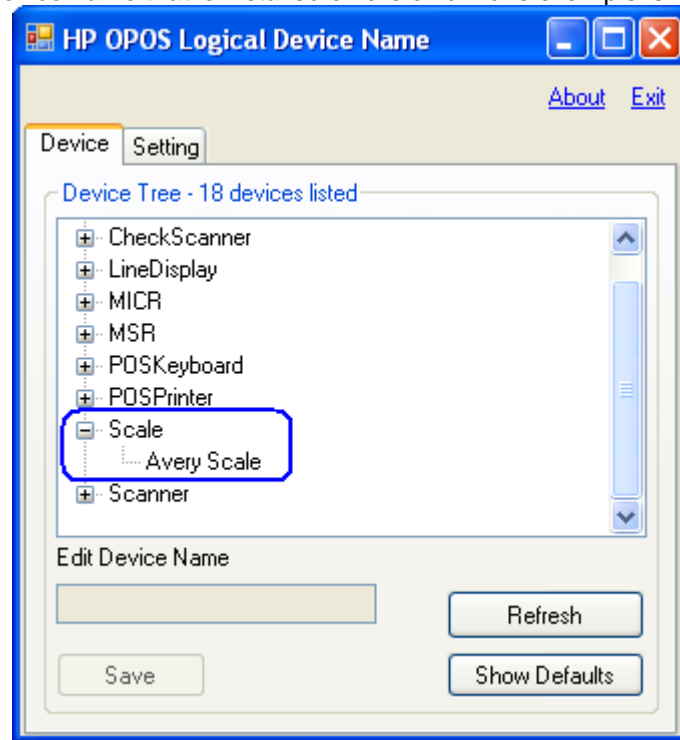
- The following shows the “MSR” tree expanded. The OPOS device name that is installed on the unit in this example is “HPUSBMINIMSR”:



- The following shows the “POSPrinter” tree expanded. The OPOS device names that are installed on the unit in this example are “A776 / A794 / A799”:



- The following shows the “Scale” tree expanded which is a non-HP branded device. The OPOS device name that is installed on the unit in this example is “avery scale”:



6.3 **Change OPOS Logical Device Name(s)**

The following section describes how to change the OPOS logical device names that are installed on the unit.

6.3.1 **Overview Steps**

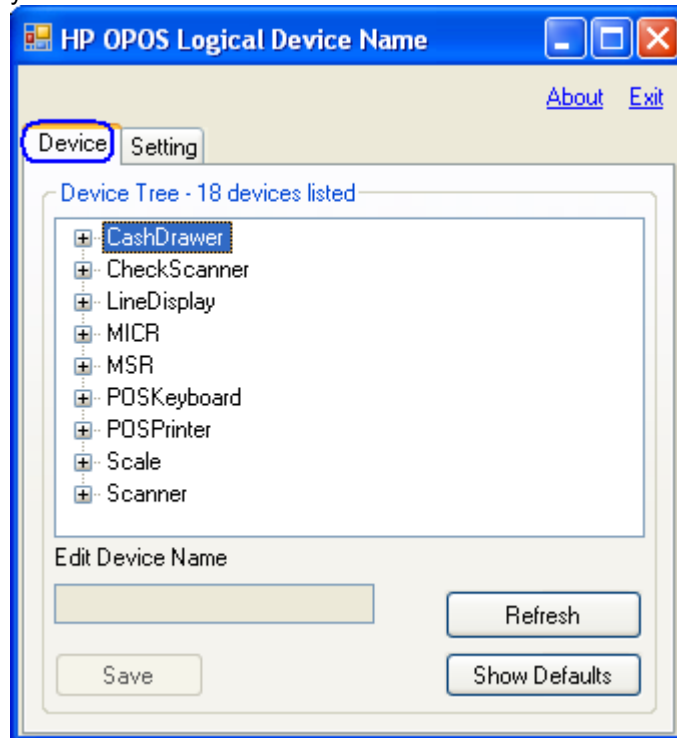
The following is an overview of the steps to change the OPOS device name:

1. Once the utility is launched select the “Device” tab.
2. Expand the device tree for which you would like to change the OPOS device name.
3. Select the device name; it should also appear in the “Edit Device Name” box.
4. Enter the OPOS name that you wish the device to be.
5. Once the device name has been entered click on the “SAVE” button.
6. You will be asked to confirm that you want to make the change.

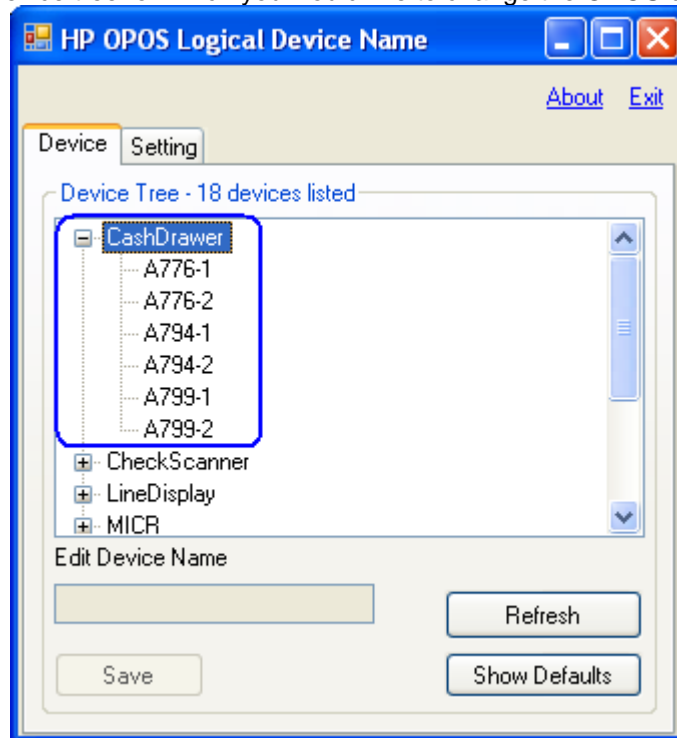
6.3.2 **Detail Steps**

The following are detail steps on how to change the OPOS device name:

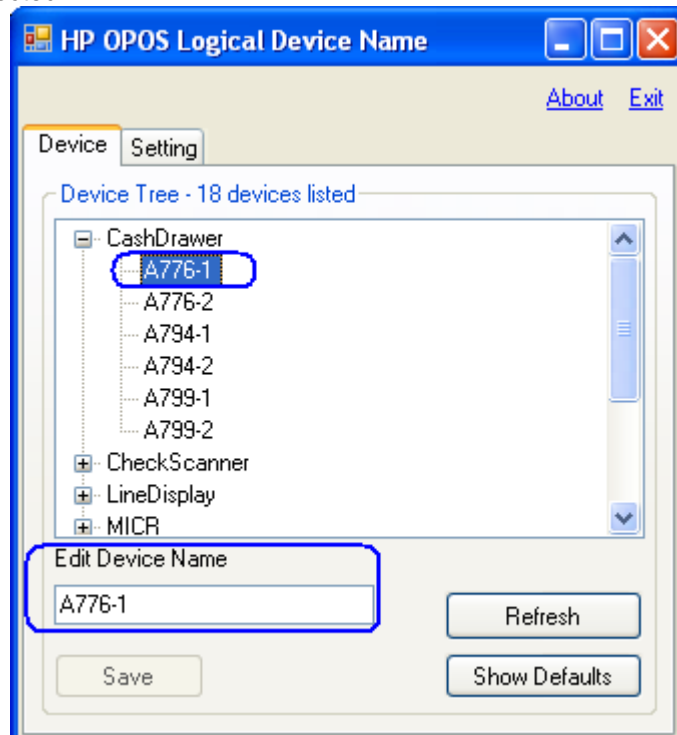
1. Once the utility is launched select the “Device” tab.



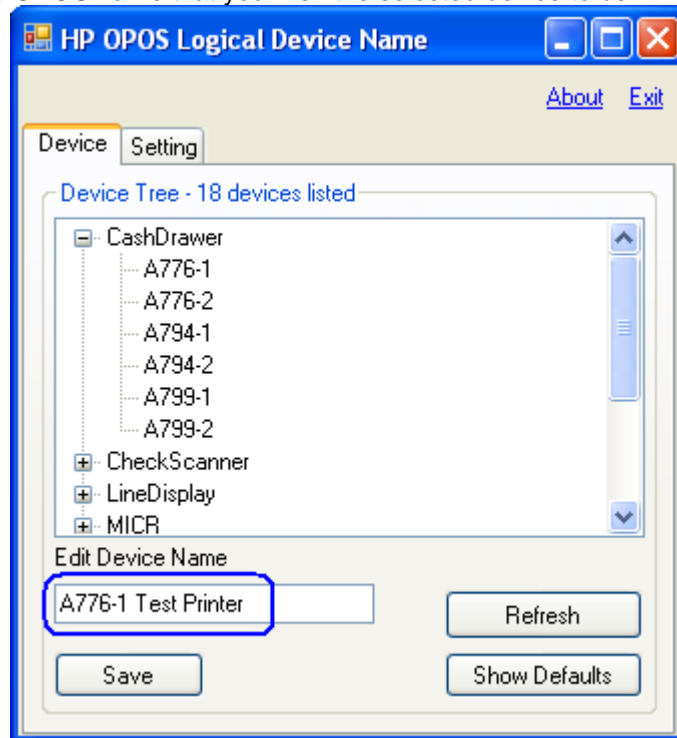
2. Expand the device tree for which you would like to change the OPOS device name.



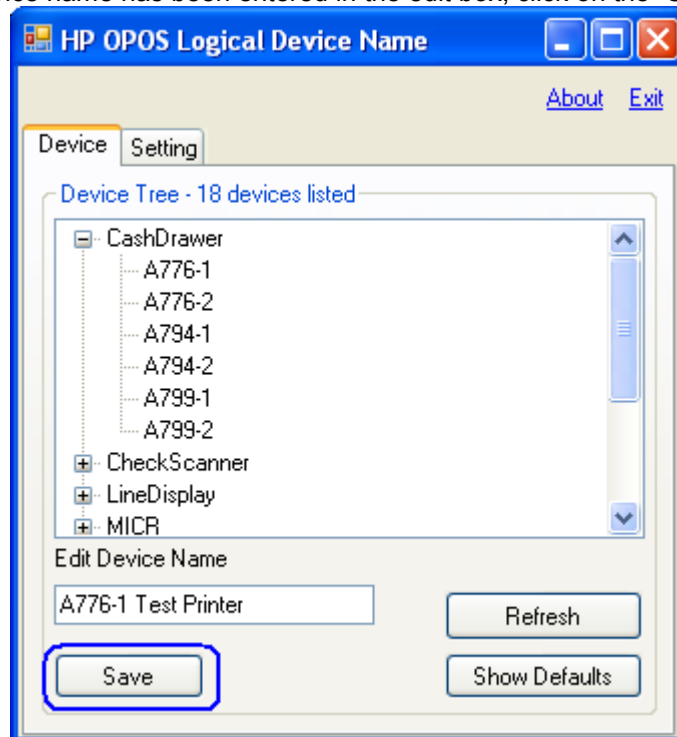
3. Select the device name. The name should also appear in the "Edit Device Name" box once it is selected:



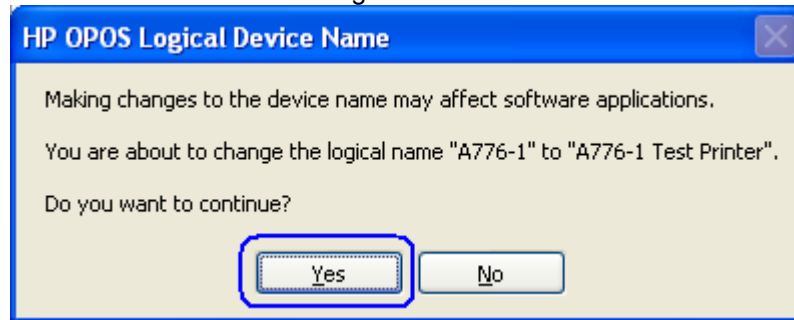
4. Enter/edit the OPOS name that you wish the selected device to be:



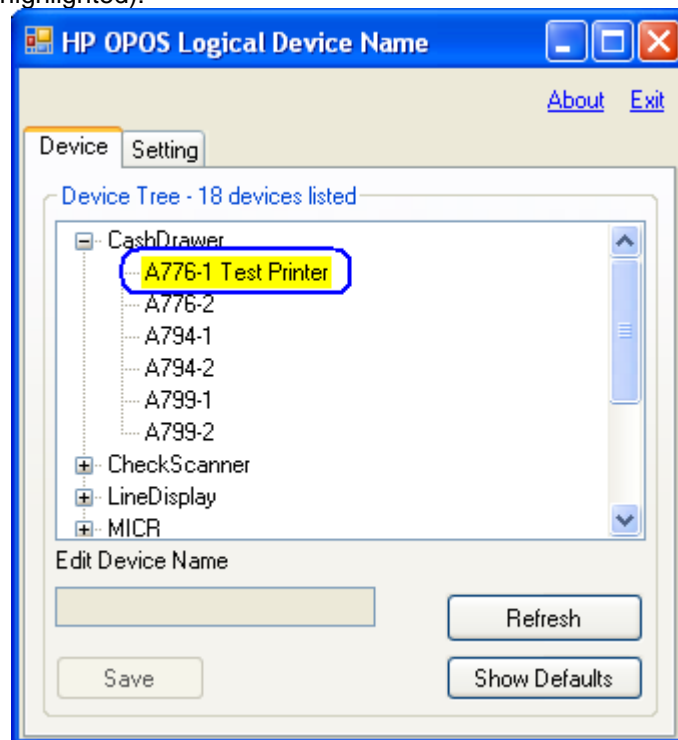
5. Once the device name has been entered in the edit box, click on the “SAVE” button:



After clicking the “SAVE” button you will be prompted to confirm that you want to make the changes, click on “YES” to make the changes:



Once you have confirmed you want to make the changes the utility will refresh and close all the device trees. When one re-opens the particular tree that was changed, the device name that was changed is now highlighted (if you exit and re-launch the application the device name will not be highlighted):



6.4 Set HP branded device to factory default OPOS logical name

The following section describes how to set the HP branded peripherals back to the factory default OPOS logical name.

Note: By default this utility will only set the HP branded peripherals to the factory default name if selected. Please refer to section 6 for non-HP branded peripherals being added to INI file.

6.4.1 Overview Steps

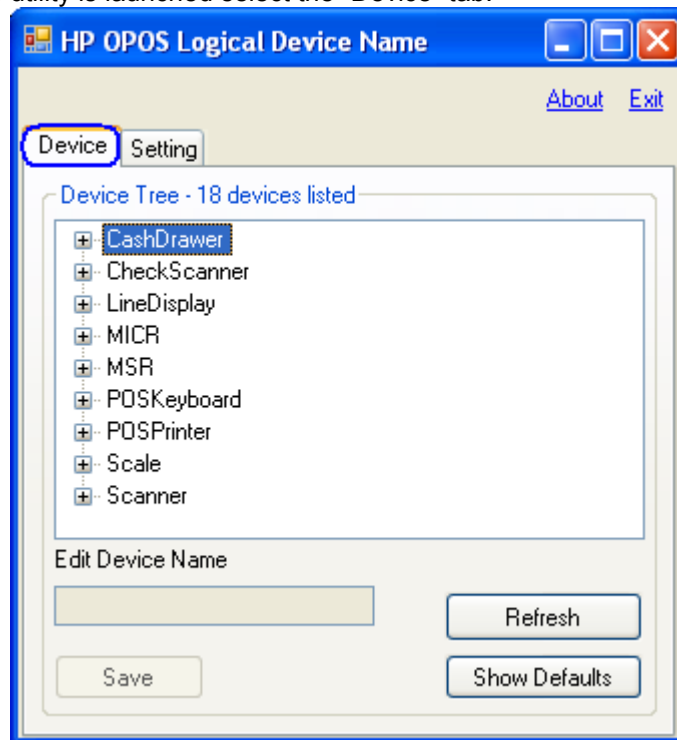
The following is an overview of the steps to change the OPOS device name:

1. Once the utility is launched select the "Device" tab.
2. Select the device you wish to change back to the factory default name.
3. Click on the "Show Default" button.
4. Select the category of the device that you would like to set back to the factory default OPOS name.
5. Select the device of the device that you would like to set back to the factory default OPOS name.
6. Click on "Set Default" button and you will be asked to confirm that you want to make the change.

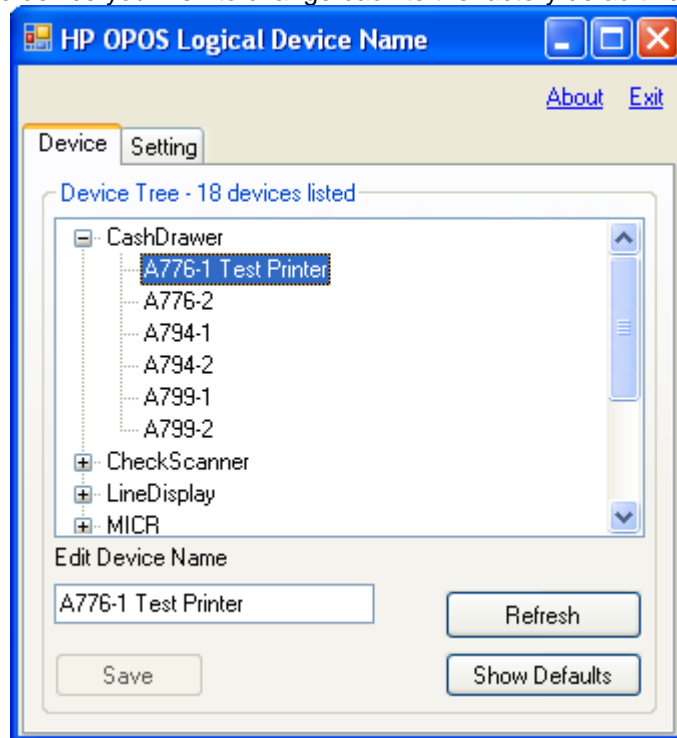
6.4.2 Detail Steps

The following are detail steps to change the OPOS device name:

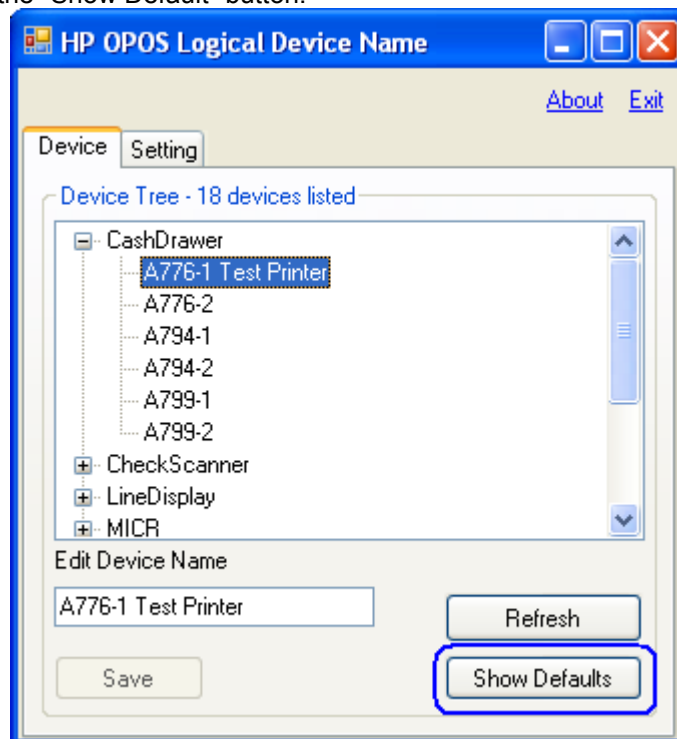
1. Once the utility is launched select the "Device" tab.



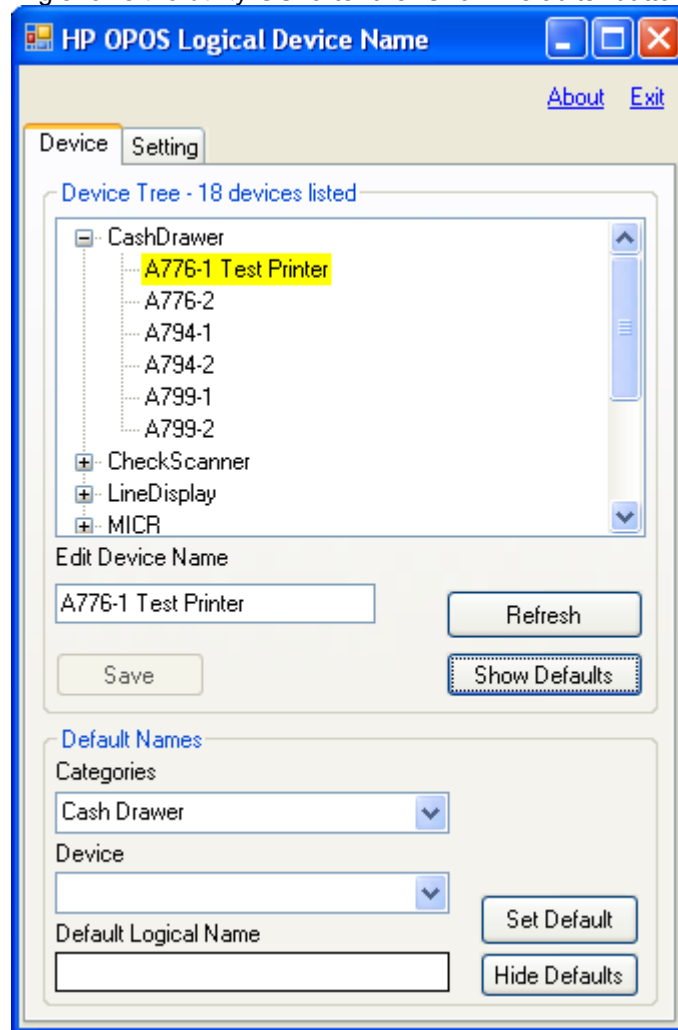
2. Select the device you wish to change back to the factory default name:



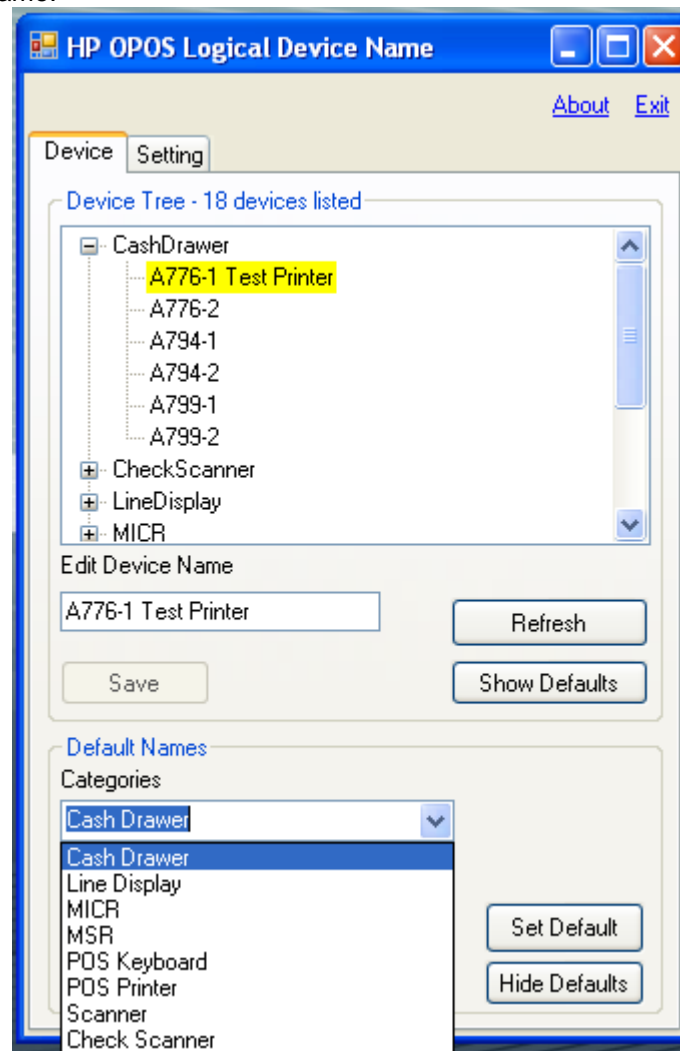
3. Click on the “Show Default” button:



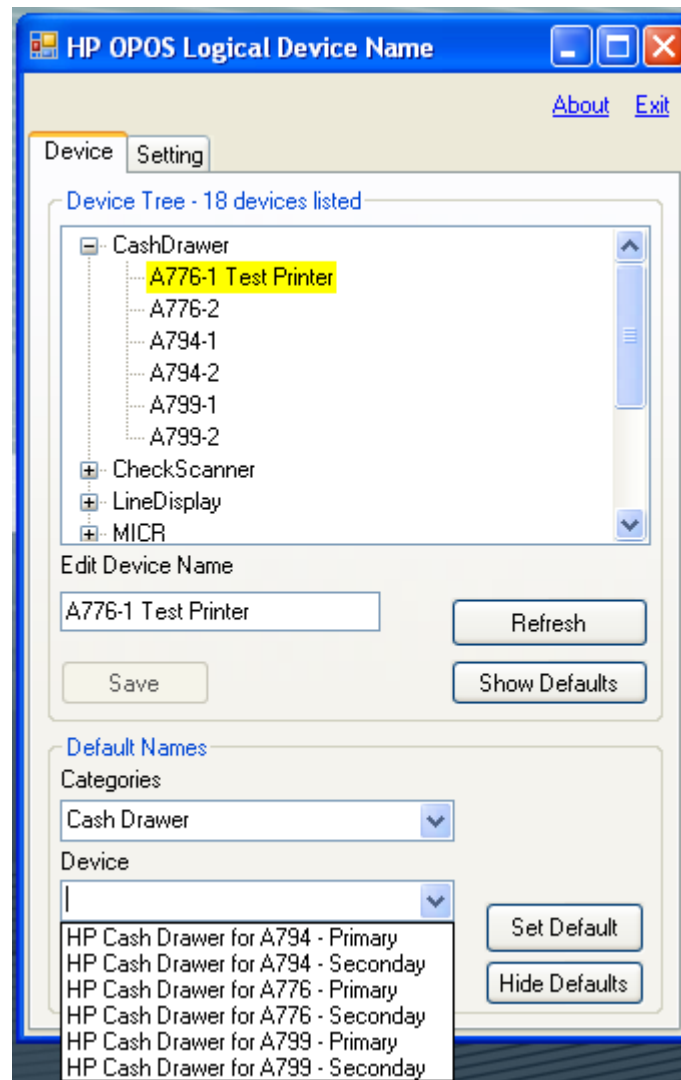
The following shows the utility GUI after the “Show Defaults” button has been clicked:



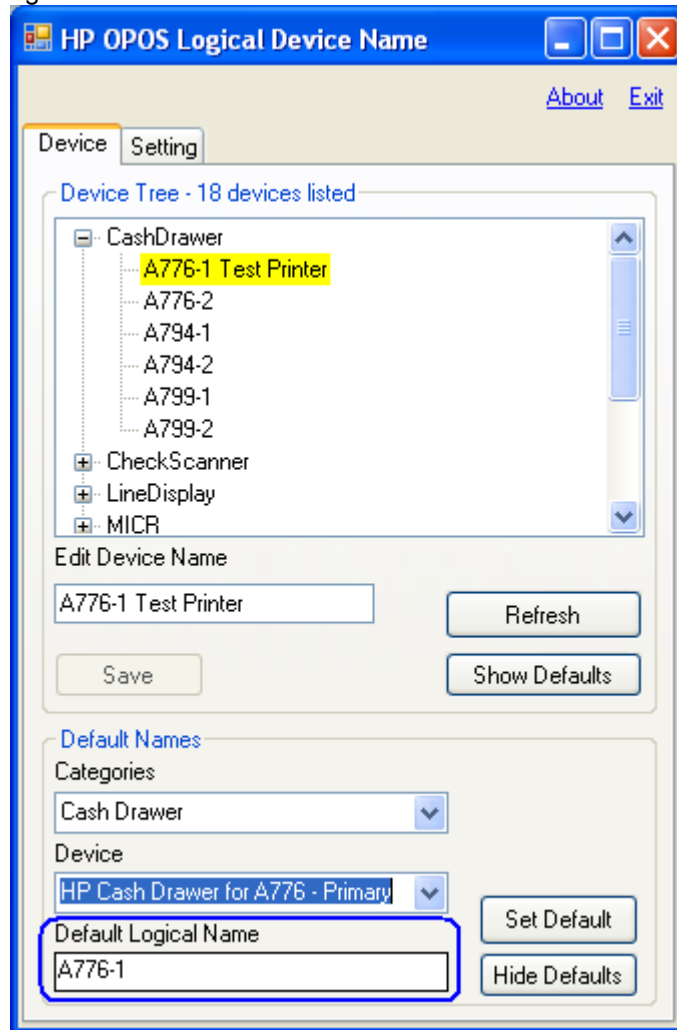
4. Select the category of the device that you would like to set back to the factory default OPOS name.



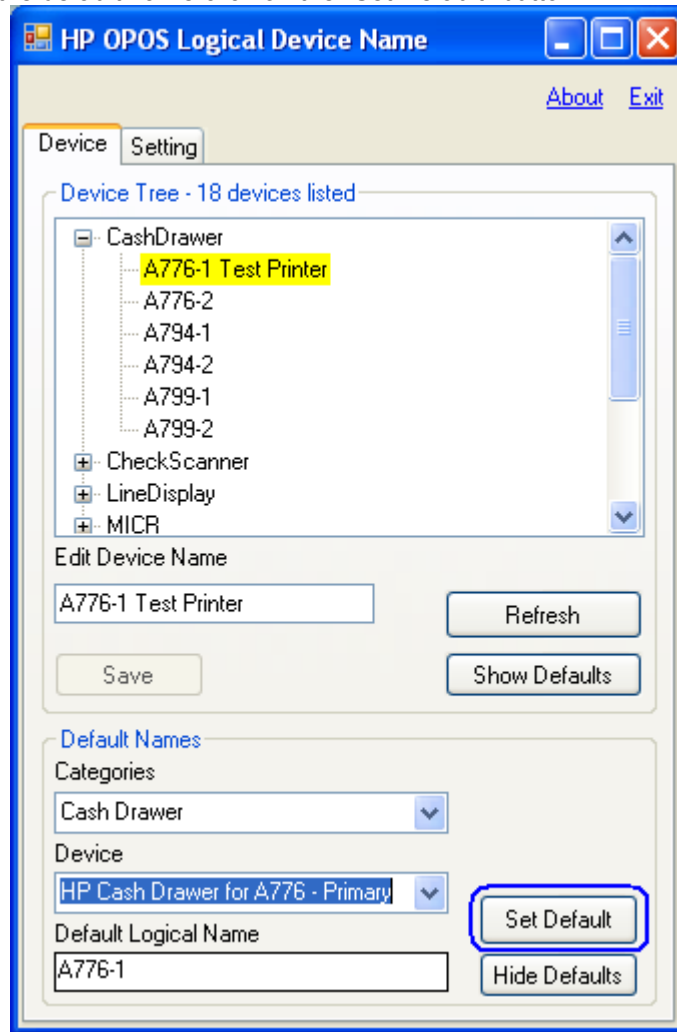
5. Select the device of the device that you would like to set back to the factory default OPOS name.



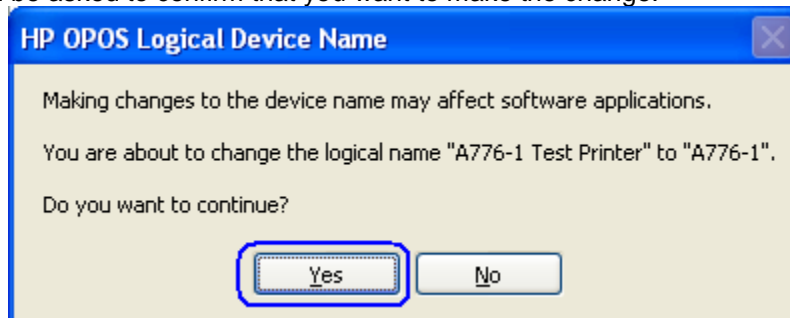
- Once you have selected the device the factory default name will be entered into the "Default Logical Name" box.



- To save the default name click on the “Set Default” button:



6. You will be asked to confirm that you want to make the change:



6.4.3 Default INI File

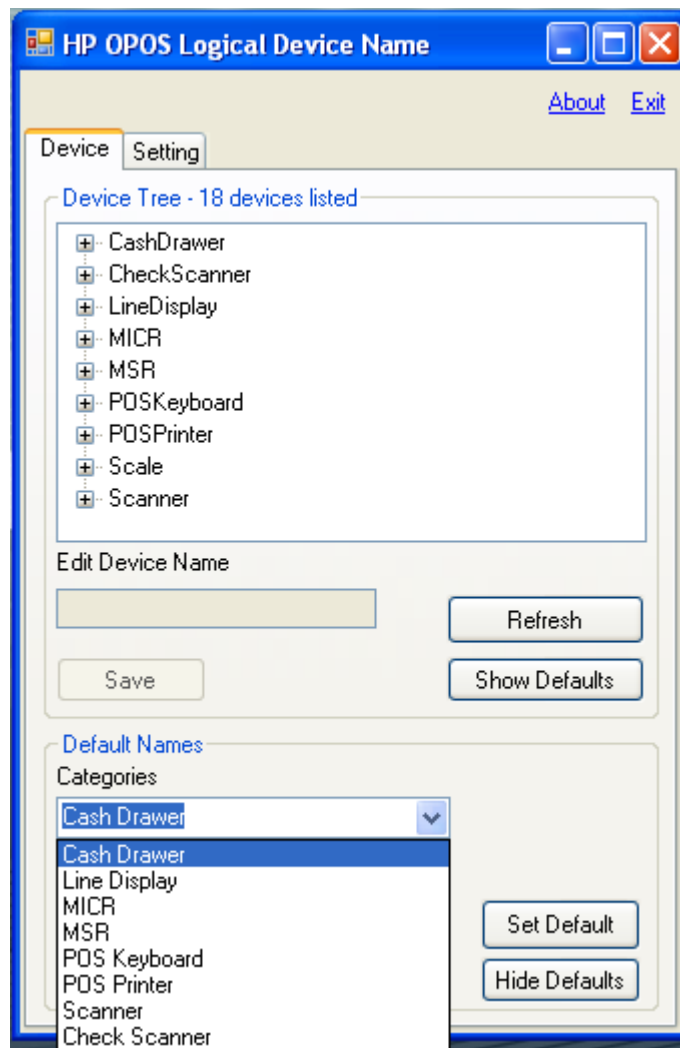
When the “HP OPOS Logical Device Name” utility is launched a default INI file is created if it does not already exist. The “default.ini” file is used by the utility for the default names of the HP peripherals in the default drop box section of the utility. If the “default.ini” is modified for non-HP peripherals those should appear in the default drop box section of the utility.

6.4.4 Adding non-HP Peripherals to the default drop down

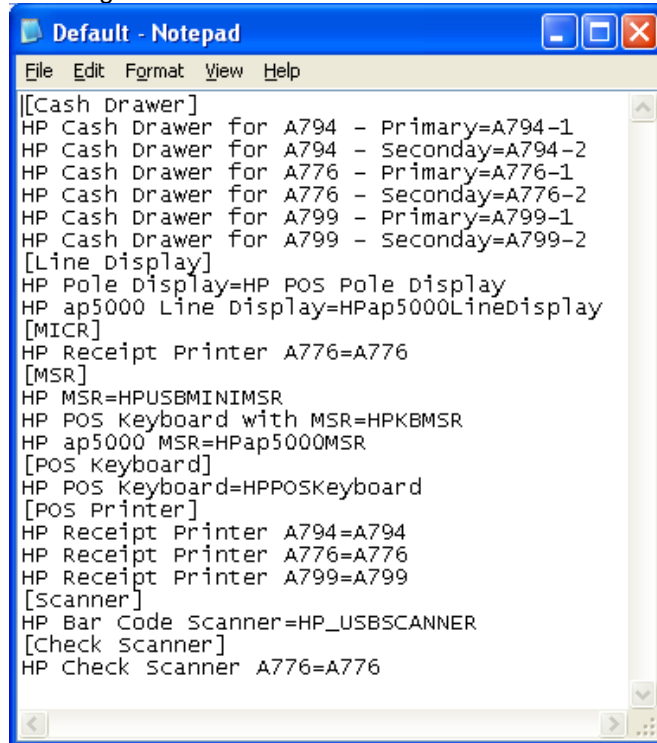
One can add non-HP peripherals to the default INI file in order to have the device appear as a selectable device in the drop down menu in the default name section of the utility.

The following is example of adding a scale to the “default.ini” file so the name appears in the drop down menu.

The following is showing the drop down menu in the default state (no modification to the INI file):

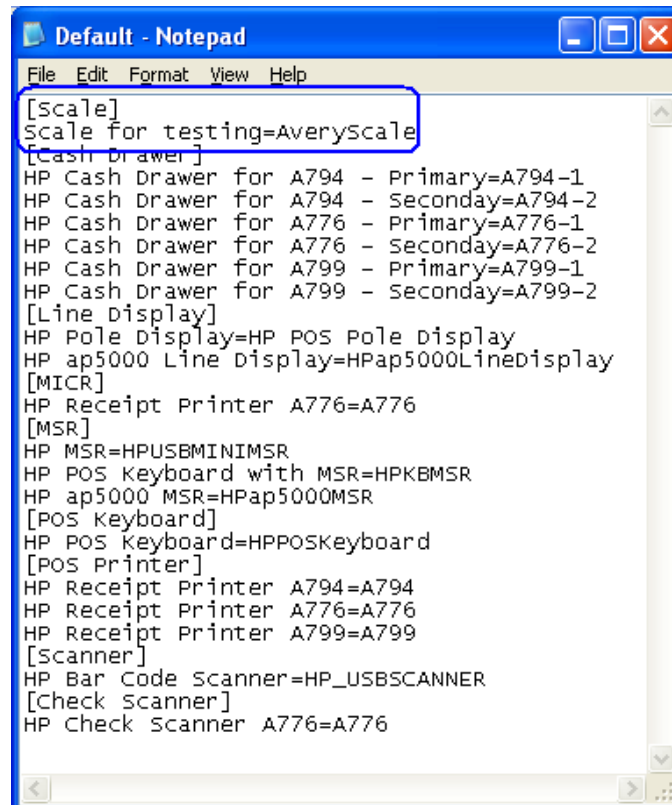


The following is showing the default INI file which reflects the above screen capture:



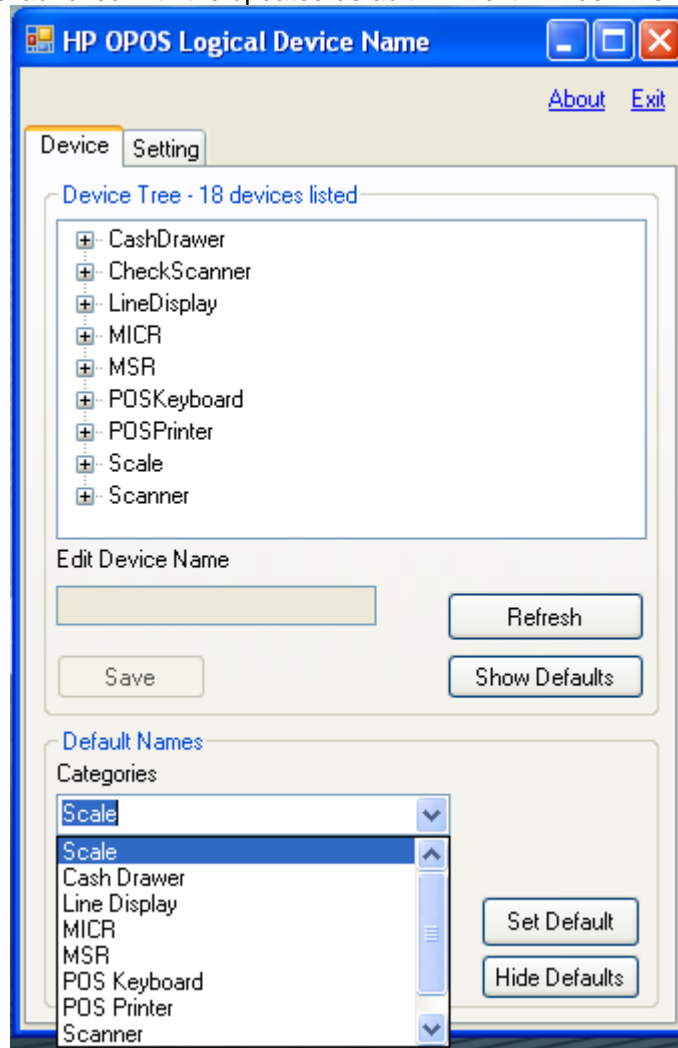
```
Default - Notepad
File Edit Format View Help
[[Cash Drawer]
HP Cash Drawer for A794 - Primary=A794-1
HP Cash Drawer for A794 - Secondday=A794-2
HP Cash Drawer for A776 - Primary=A776-1
HP Cash Drawer for A776 - Secondday=A776-2
HP Cash Drawer for A799 - Primary=A799-1
HP Cash Drawer for A799 - Secondday=A799-2
[Line Display]
HP Pole Display=HP POS Pole Display
HP ap5000 Line Display=HPap5000Linedisplay
[MICR]
HP Receipt Printer A776=A776
[MSR]
HP MSR=HPUSBMINIMSR
HP POS Keyboard with MSR=HPKBMSR
HP ap5000 MSR=HPap5000MSR
[POS Keyboard]
HP POS Keyboard=HPPOSKeyboard
[POS Printer]
HP Receipt Printer A794=A794
HP Receipt Printer A776=A776
HP Receipt Printer A799=A799
[Scanner]
HP Bar Code Scanner=HP_USBSCANNER
[Check Scanner]
HP Check Scanner A776=A776
```

If the “default.ini” file is modified to add a device (i.e. scale) the default INI file would look something like the following:



```
Default - Notepad
File Edit Format View Help
[Scale]
Scale for testing=AveryScale
[[Cash Drawer]
HP Cash Drawer for A794 - Primary=A794-1
HP Cash Drawer for A794 - Secondday=A794-2
HP Cash Drawer for A776 - Primary=A776-1
HP Cash Drawer for A776 - Secondday=A776-2
HP Cash Drawer for A799 - Primary=A799-1
HP Cash Drawer for A799 - Secondday=A799-2
[Line Display]
HP Pole Display=HP POS Pole Display
HP ap5000 Line Display=HPap5000Linedisplay
[MICR]
HP Receipt Printer A776=A776
[MSR]
HP MSR=HPUSBMINIMSR
HP POS Keyboard with MSR=HPKBMSR
HP ap5000 MSR=HPap5000MSR
[POS Keyboard]
HP POS Keyboard=HPPOSKeyboard
[POS Printer]
HP Receipt Printer A794=A794
HP Receipt Printer A776=A776
HP Receipt Printer A799=A799
[Scanner]
HP Bar Code Scanner=HP_USBSCANNER
[Check Scanner]
HP Check Scanner A776=A776
```

When the utility is launched with the updated default.INI file it will look like:



Note: If the OPOS drivers for the device are re-installed this may change the device name.
The "HP OPOS Logical Device Name" utility does not install any OPOS drivers or any registry entries to the OPOS drivers.

7 Peripherals Connection and Software Installation

The USB peripherals should be installed after the Windows operating system has been unbundled. Installing one peripheral at a time, will help determine which peripheral has an issue if a peripheral does not function. By installing one peripheral at a time, Windows may install the native drivers with very little user interaction needed during the native driver installation.

Please note the drivers for the HP peripherals can be located on the HP.COM web site as well as the HP Point of Sale System Software and Documentation CD that comes with each of the peripherals. The CD contains the drivers for all the HP POS peripherals; use the latest version of the CD if you have multiple copies of HP Point of Sale System Software and Documentation CD.

In the following sections substitute “Compaq” or “SWSetup” for “xxxxx” when reference are made to the HP Windows image. For example when one sees “C:\xxxxx\Point of Sale\Receipt Printer\Cash Drawer” one would use “C:\Compaq\Point of Sale\Receipt Printer\Cash Drawer” for Windows XP Pro operating system and “C:\SWSetup\Point of Sale\Receipt Printer\Cash Drawer” for Vista / WEPOS / POSReady / Win7 operating system.

7.1 Cash Drawer and Flip-Top Cash Drawer



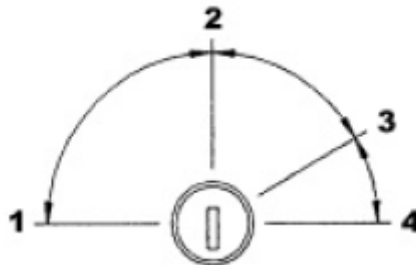
or

In the reminder of this document “cash drawer” will be used to refer to both cash drawers that are shown above.

7.1.1 Key lock position

The follow shows the key lock position for the HP cash drawer and flip-top cash drawer.

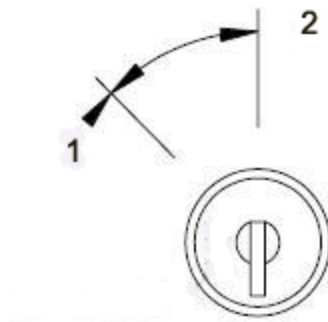
Heavy Duty Cash Drawer



Lock Option	Description
1	Prevents the cash drawer from being opened by

(Locked Closed)	electrical signal from the printer.
2 (Online)	Operation of the cash drawer is driven electronically by the printer.
3 (Manual Open)	Allow manual access to the contents of the cash drawer.
4 (Locked Open)	Prevents the cash drawer being latched closed.

Flip Top Cash Drawer (below)



Lock Option	Description
1 (Manual Open)	Allow manual access to the contents of the cash drawer.
2 (Online)	Operation of the cash drawer is driven electronically by the printer.

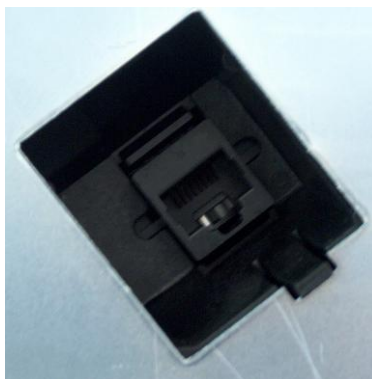
7.1.2 Connection

The cash drawer is attached to the back of the printer using a RJ12 type connector (the smaller connector).

The smaller connector connects to the back of the printer, the larger connector connects to the bottom of the cash drawer. The following are the cash drawer cable connectors:



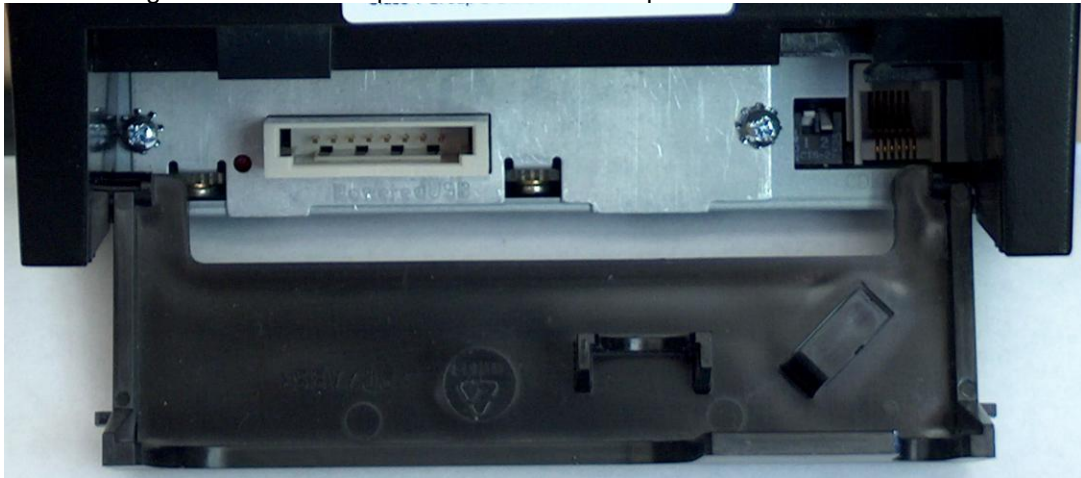
The following is the bottom of the cash drawer where the bigger end of the cash drawer cable connects into:



The following is the back of the printer with the cover closed:



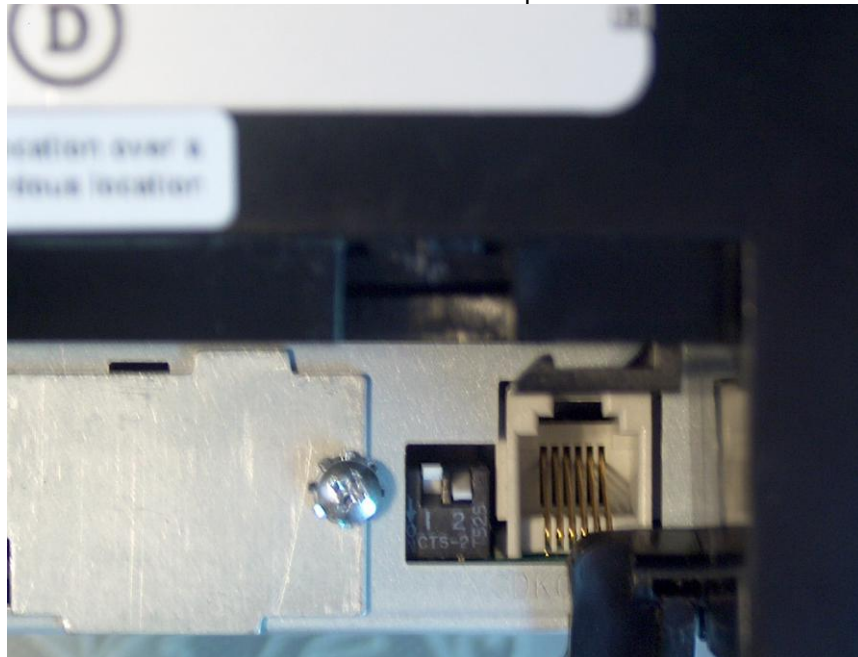
The following is the back of the printer with the cover open:



Close-up of powered USB connector on back of the printer:



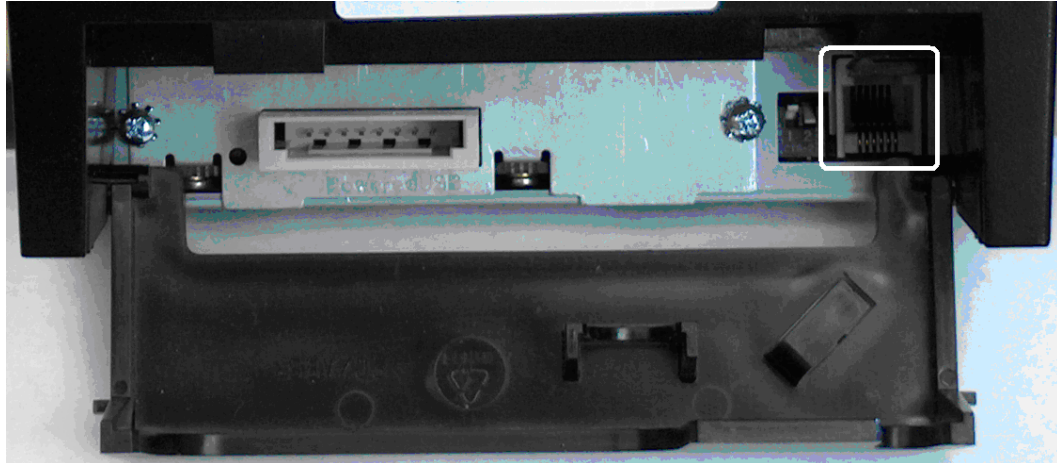
Close-up of cash drawer connector on the back of the printer:



7.1.3 Windows Drivers for the Cash Drawer Drivers

There are no Windows drivers for the cash drawer. The cash drawer is controlled by the printer Windows mini-drivers thus the printer drivers need to be installed to electronically open the cash drawer.

Confirm that the cash drawer is connected to the back of the printer via the cash drawer cable.



7.1.4 Cash Drawer Decimal Commands

Some POS application that use the Windows mini-drivers request the cash drawer open command so the application can open the cash drawer (i.e. No Sale). The following the decimal commands:

Cash drawer 1	Cash Drawer 2
27 112 0 8 8	27 112 1 8 8

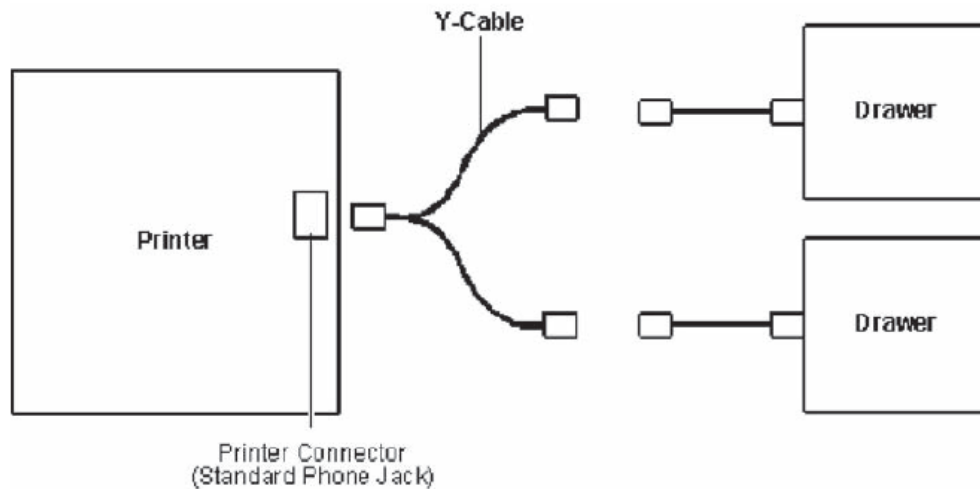
Detail explanation of the cash drawer command:

Generate pulse to open cash drawer

ASCII	ESC p n p1 p2
Hexadecimal	1B 70 n p1 p2
Decimal	27 112 n p1 p2
Value of n:	00, 48 (Decimal) = Drawer 1; 01, 49 (Decimal) = Drawer 2
Value of p1:	0-255
Value of p2:	0-255

7.1.5 Dual Cash Drawer Connection

Dual cash drawer is possible with the HP Receipt printer. In order to have dual cash drawer configuration a Y-Cable is needed, and with this cable both the cash drawers are attached to the printer.



7.1.5.1 Cash Drawer Cable Info

In order to use dual cash drawer, one will need a Y-Adapter attached to the printer and will need to exchange one of the cash drawer cable with the 2nd cash drawer cable.

The following is the cash drawer cable part numbers for single cash drawer configuration:

1st Drawer**
CD-001A

The following are the cash drawer cable part numbers for dual cash drawer configuration when the cash drawers are attached to HP receipt printer:

1st Drawer**	2nd Drawer	Y-Adapter
CD-001A	CD-001B	CD-D1D2

** This cable is shipped with the HP Cash drawer.

The following are the cash drawer cable part numbers for dual cash drawer configuration when the cash drawers are directly to HP point of sale system that have integrated cash drawer port:

1st Drawer**	2nd Drawer	Y-Adapter
CD-001A	CD-001B	CD-D1D2EP

7.1.6 **OPOS Drivers for the Cash Drawer**

The OPOS drivers for the cash drawer are included in the printer OPOS driver installation. Confirm that the cash drawer is connected to the back of the printer via the cash drawer cable.

7.1.7 **OPOS Test Applet for the Cash Drawer**

The cash drawer may be tested with one of two utilities. The first utility will only test the cash drawer; the second utility will allow you to test both the cash drawer and the printer.

7.1.7.1 **Cash Drawer Only Utility**

The following is overview of the steps to test the cash drawer followed by details steps:

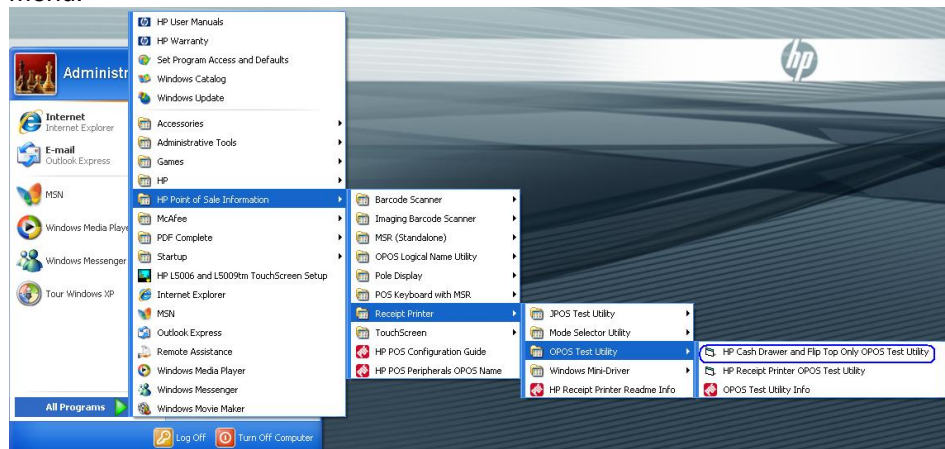
1. Start the “HP_OPOS_SampleApp.exe” application.
2. Enter name for the cash drawer in the GUI.
3. Click on “Open Cash Drawer”
4. Close the cash drawer and the GUI should give the status that the cash drawer is closed.
5. To exit the application click on the EXIT button.

Starting the OPOS printer sample application

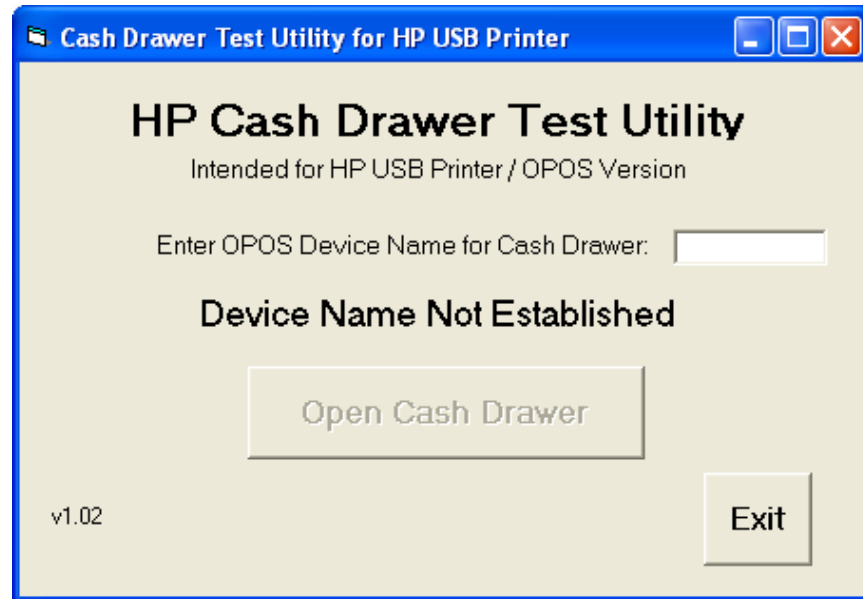
The cash drawer installation may also be tested using the OPOS printer sample application which is covered later in this document.

Details

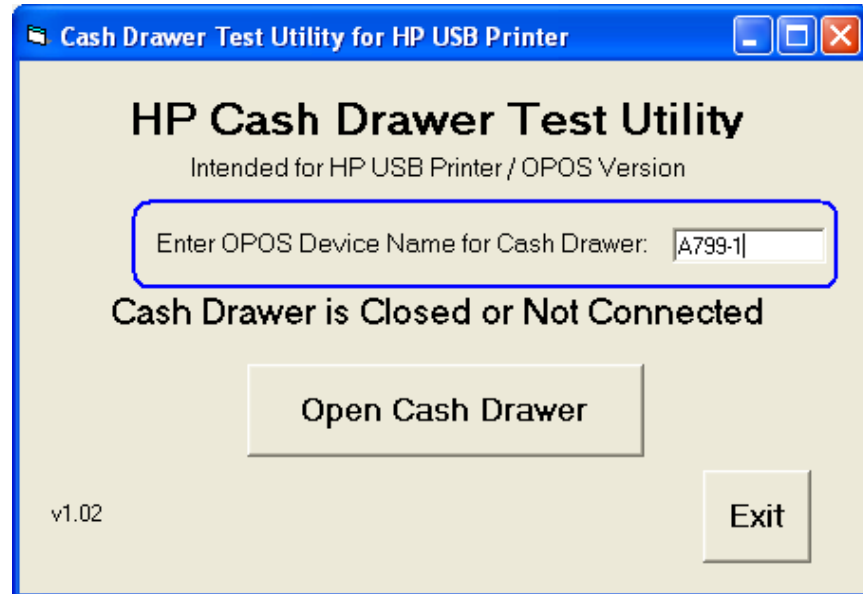
1. Start the “HP_OPOS_SampleApp.exe” application that can found in the start menu:



The following is the main GUI of the HP_OPOS_SampleApp application when it is launched:



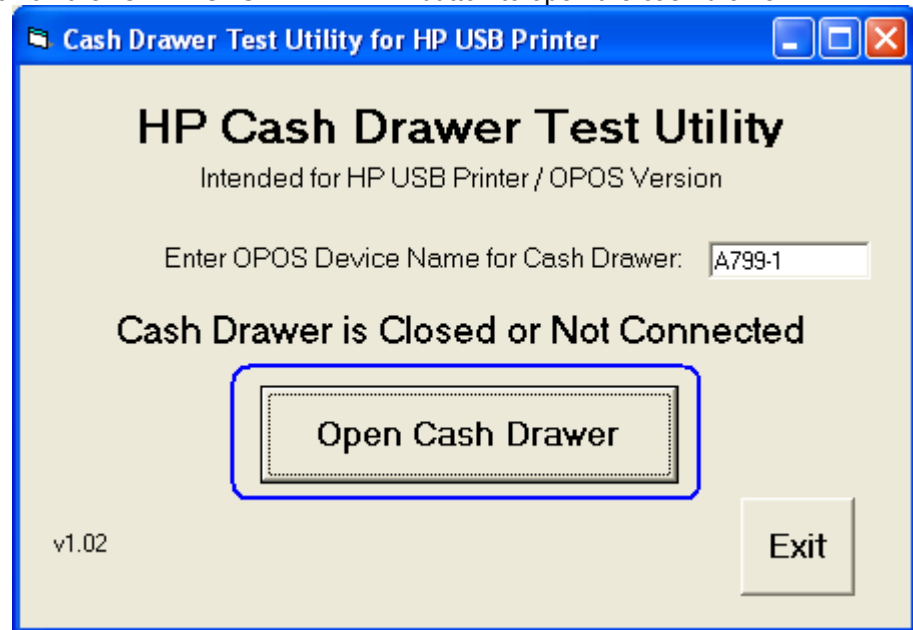
2. Enter name for the cash drawer in the GUI:



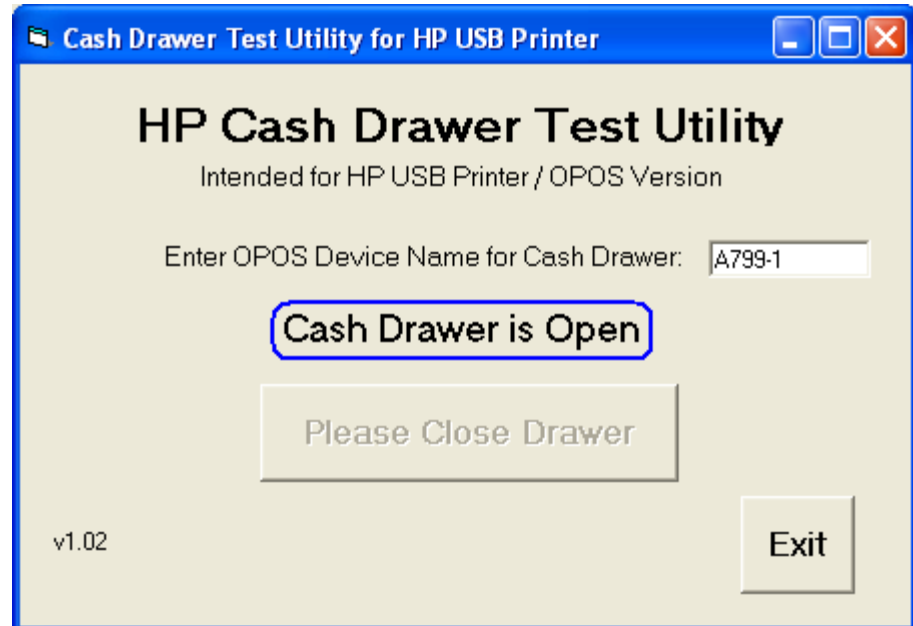
The following are the valid OPOS names for the cash drawer:

OPOS Name
A794-1 (first cash drawer or flip top cash drawer)
A794-2 (second cash drawer or flip top cash drawer)
A799-1 (first cash drawer or flip top cash drawer)
A799-2 (second cash drawer or flip top cash drawer)
A776-1 (first cash drawer or flip top cash drawer)
A776-2 (second cash drawer or flip top cash drawer)
A776-1 (first cash drawer or flip top cash drawer)
A776-2 (second cash drawer or flip top cash drawer)

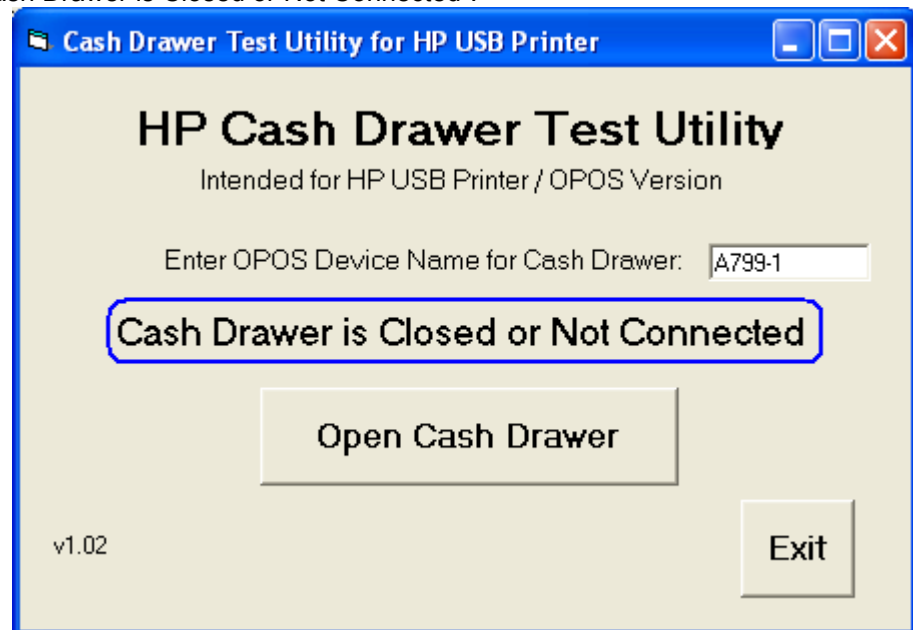
3. Click on the "OPEN CASH DRAWER" button to open the cash drawer.



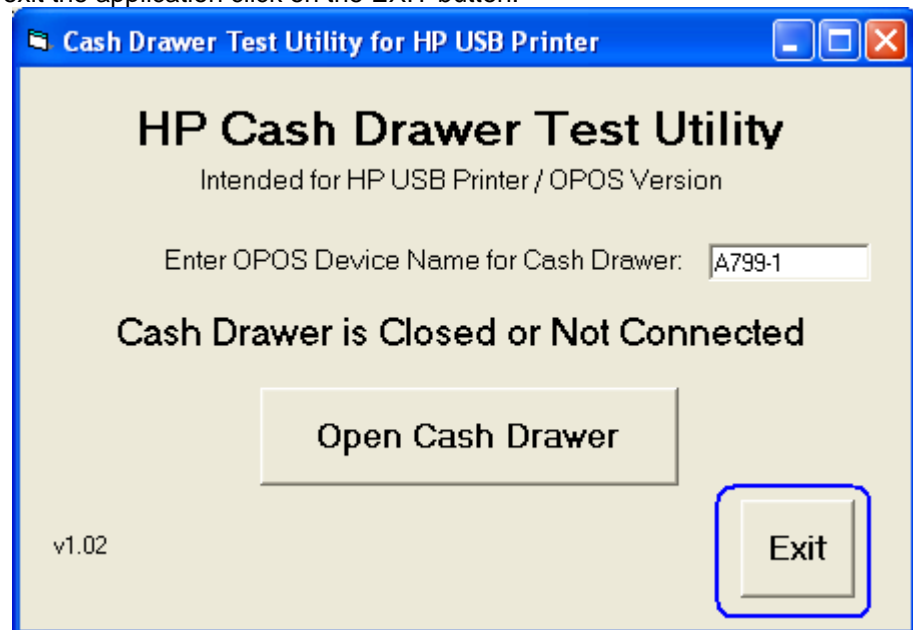
After clicking "OPEN CASH DRAWER" button the utility should open the cash drawer and show the status of "CASH DRAWER IS OPEN":



4. After closing the cash drawer the utility will show the status of the cash drawer as “Cash Drawer is Closed or Not Connected”.



5. To exit the application click on the EXIT button:



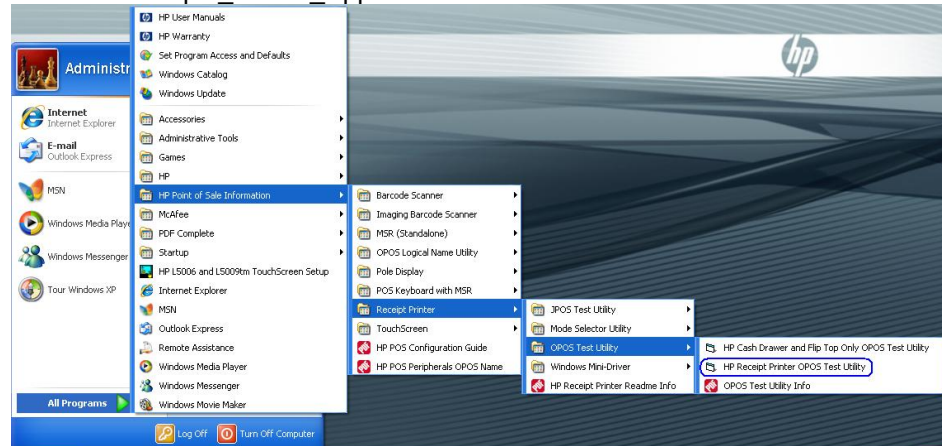
7.1.7.2 Cash Drawer and Printer Utility

The following is overview of the steps to test the cash drawer followed by details steps:

1. Start the “Sample_OPOS_Application.EXE” that can be found in the start menu or in the program file folder.
2. Click “CashDrawer”
3. Select correct device name for the cash drawer to be tested.
4. Click “OPEN”
5. Click “ENABLE”
6. Click “OPEN Drawer” and the cash drawer should open. The GUI should also show status that the cash drawer is open.
7. Close the cash drawer and the GUI should give the status that the cash drawer is closed.
8. Exit the test utility.

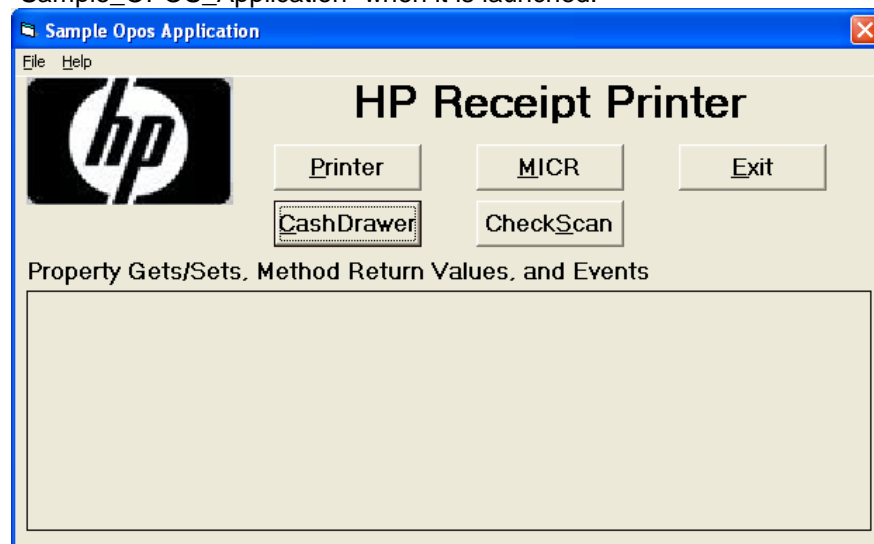
Details

1. Start the “Sample_OPOS_Application.EXE” that can be found in the start menu

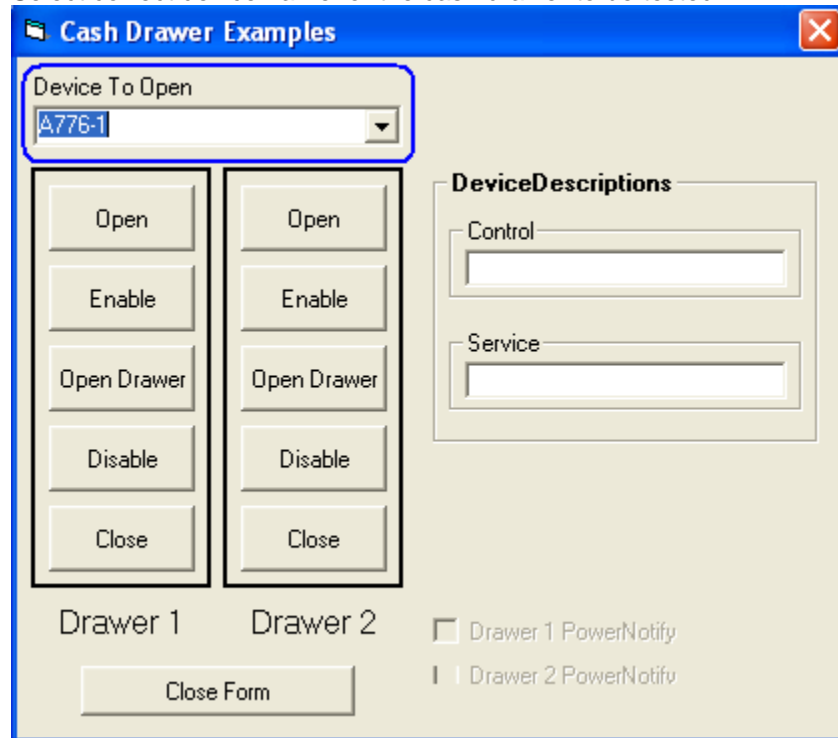


or in the “C:\xxxxxx\ Point of Sale\Receipt Printer\OPOS Test Utility” subfolder.

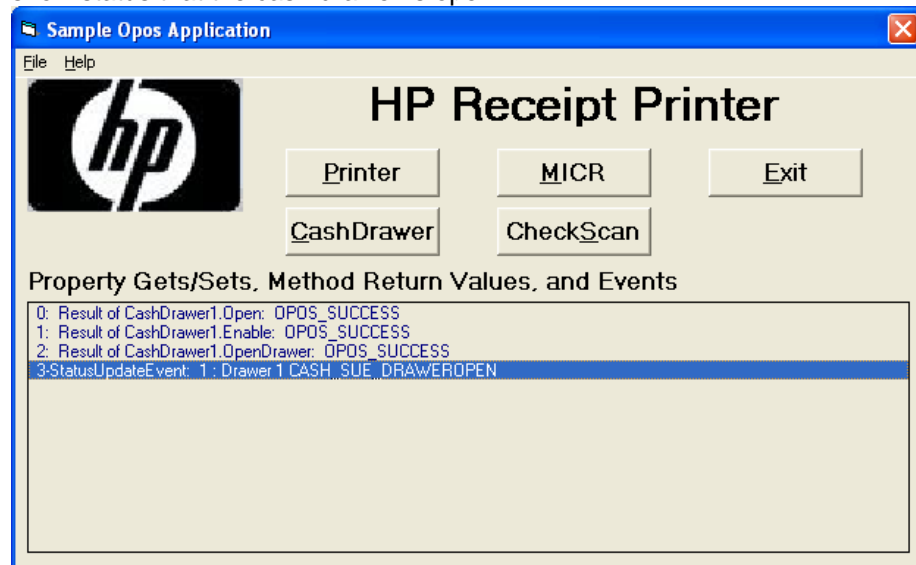
2. Click “CashDrawer”. The following is the main GUI of the “Sample_OPOS_Application” when it is launched:



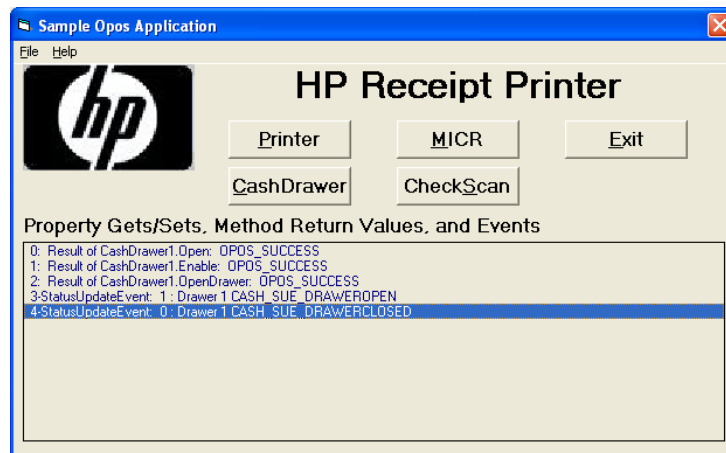
3. Select correct device name for the cash drawer to be tested.



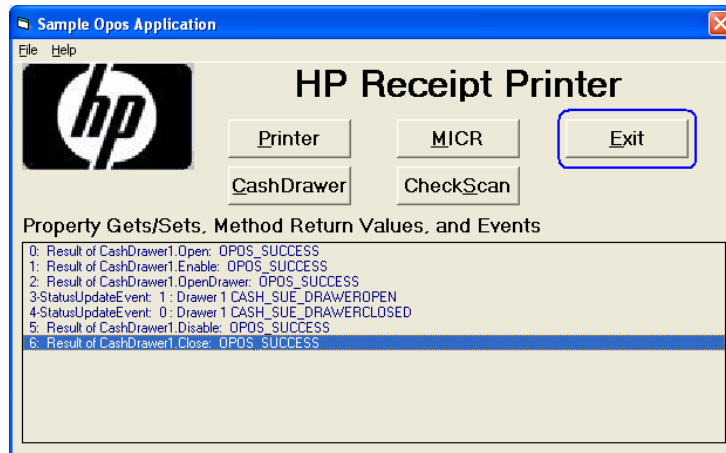
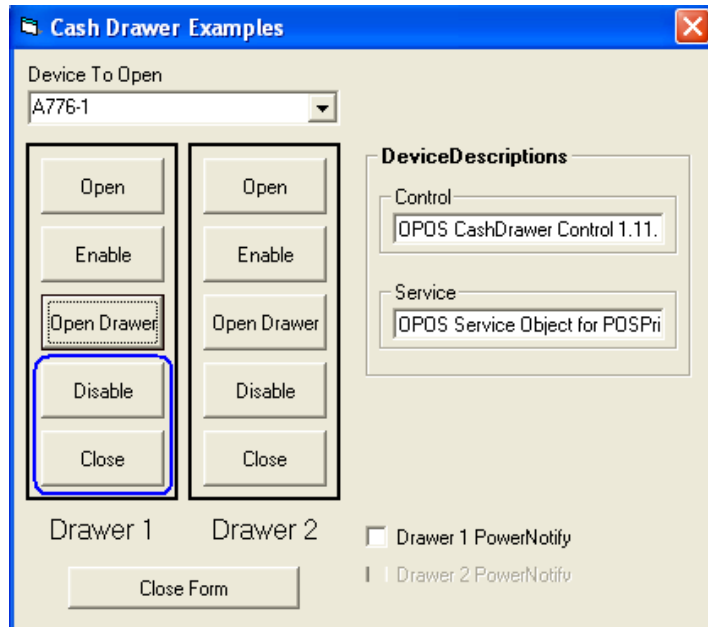
4. Click "OPEN"
5. Click "ENABLE"
6. Click "OPEN Drawer" and the cash drawer should open. The GUI should also show status that the cash drawer is open.



7. Close the cash drawer and the GUI should give the status that the cash drawer is closed.



8. Exit the test utility by clicking on DISABLE/CLOSE/CLOSE FORM and then click on EXIT.



7.1.8 **Cash Drawer Signal**

The cash drawer is attached to the back of the printer using an RJ12 or similar connector (the smaller connector). On HP cash drawers, this connector sends a HIGH signal from the printer to open the cash drawer. The HIGH signal is the default setting for the HP OPOS receipt printer drivers installation.

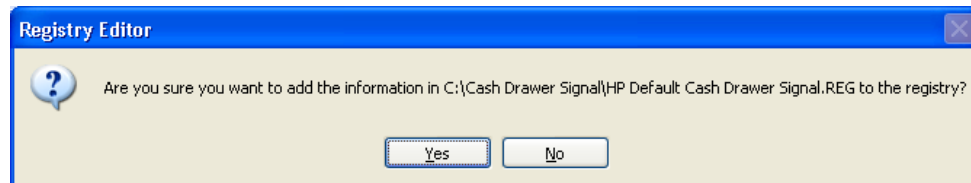
However, there are other cash drawers that may be using an opposite LOW signal to open the cash drawer. In this case, a user may need to configure the driver to also send a low signal in order for the cash drawer to open correctly (steps provided later). If the user has tried both settings and the cash drawer is still not opening, a different cash drawer cable may be needed. Check with the cash drawer vendor or the cash drawer vendor's documentation in regards to the LOW and HIGH signal setting.

7.1.9 **Cash Drawer Signal Change**

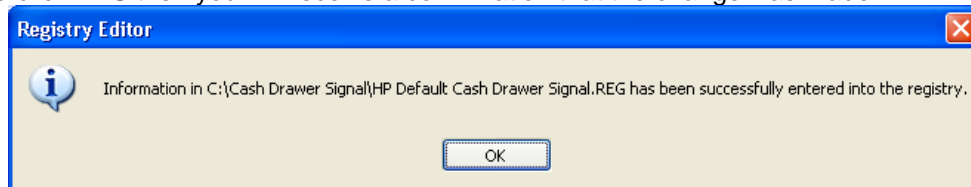
There is a folder called "Cash Drawer Signal" that contains the registry files needed to change the cash drawer signal option. The "Cash Drawer Signal" folder can be found on the "HP Point of Sale System Software and Documentation CD" in the receipt printer folder. The following is the description of the files:

- "HP Default Cash Drawer Signal.REG" file will change the cash drawer registry value to HIGH which is the default value when the OPOS drivers are installed and the value that is needed when the HP cash drawer is attached to the HP Receipt printer.
- "HP Non-Default Cash Drawer Signal.REG" file will put the cash drawer registry value to LOW which may be tried for non-HP cash drawer if default HIGH option does not open the cash drawer.

You must have administrator right in order to make the change. When you double click on the file you will receive a prompt for confirmation that you want to make the changes.



If you click YES then you will receive a confirmation that the change was made.



7.1.10 JPOS Drivers for the Cash Drawer Drivers

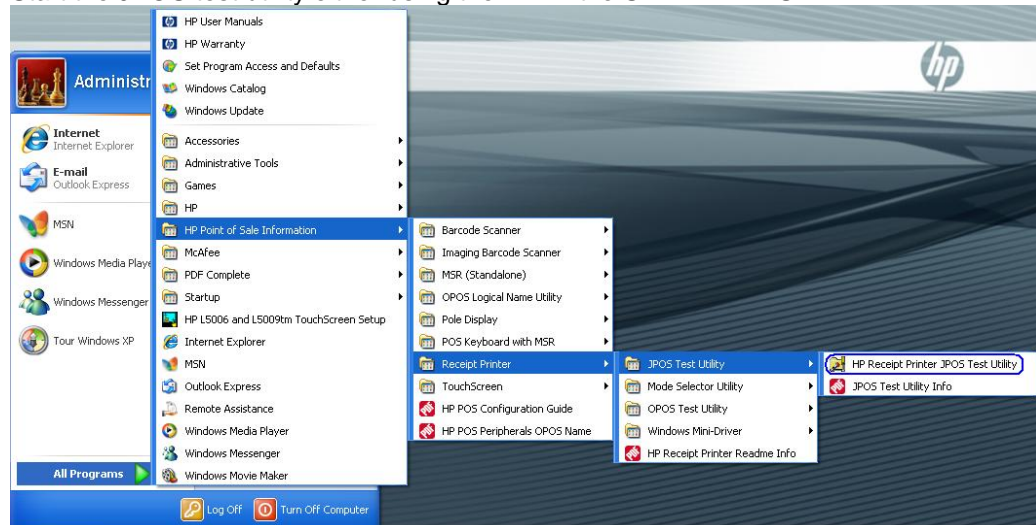
The JPOS drivers are included in the HP Point of Sale image or can be obtained from HP POS Drivers and Documentation CD or from the HP.COM web site.

The following is an overview of the steps to test the receipt printer followed by detailed steps:

1. Start the JPOS test utility.
2. Click on the "CASH DRAWER" tab.
3. Select the "CashDrawer" model in the profile drop down box:
4. Click on the "OPEN" button.
5. Click on the "CLAIM" button.
6. Click on the "ENABLE" button.
7. To exit the application:
 - a. Click on "DISABLE"
 - b. Click on "RELEASE"
 - c. Click on "CLOSE"
 - d. Click on the "X" in the upper right hand corner of the application.

Detail Steps

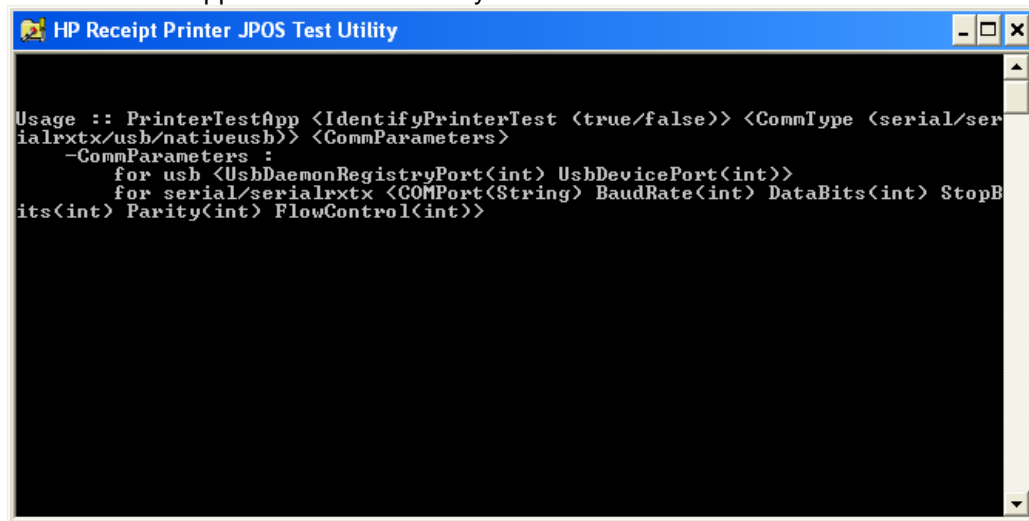
1. Start the JPOS test utility either using the link in the START MENU:



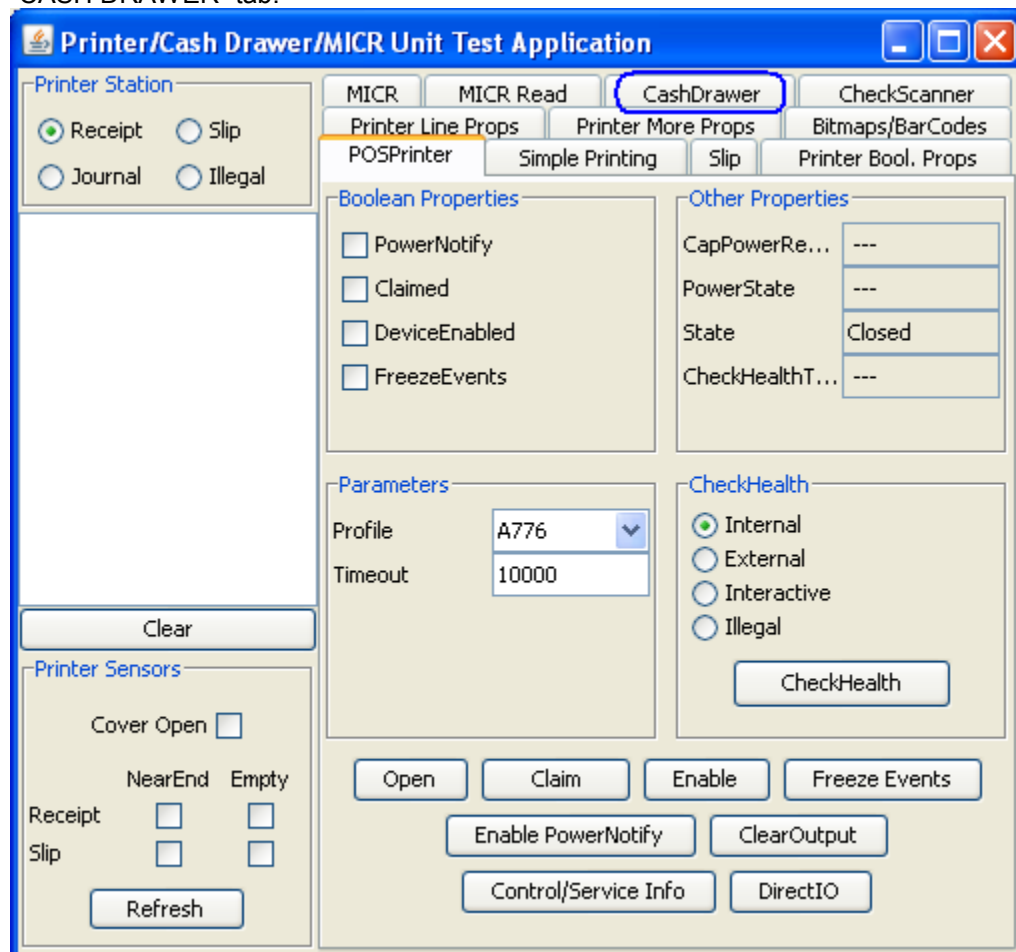
or

by launching the POSTEST.BAT file that is located in the JPOS folder within the receipt printer folder.

Depending on your screen resolution the following screen will be in the background before the GUI appears for the test utility:



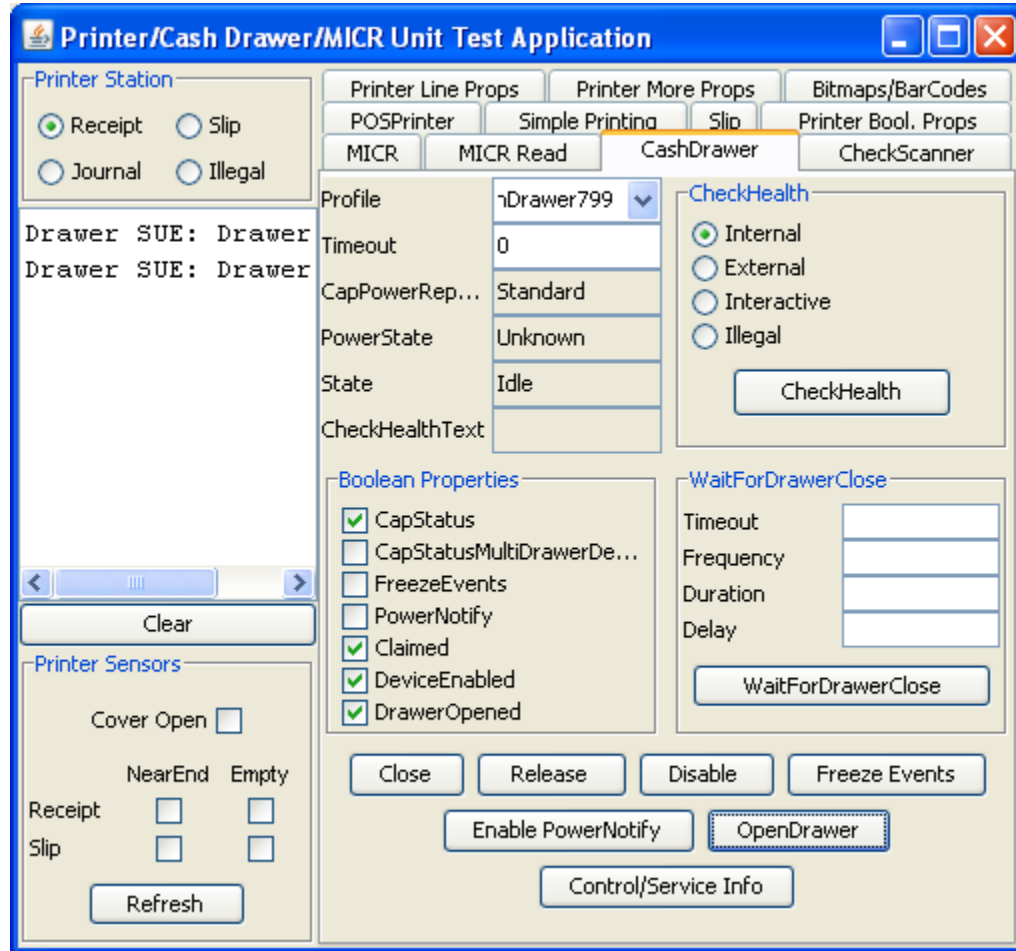
- After a few seconds the JPOS test utility GUI will appear as shown below; click on the "CASH DRAWER" tab.



-
- Printer/Cash Drawer/MICR Unit Test Application
- Printer Station
- ☒ Receipt ☐ Slip
- ☐ Journal ☐ Illegal
- Printer Line Props
- Printer More Props
- Bitmaps/BarCodes
- POSPrinter Simple Printing Slip Printer Bool. Props
- MICR MICR Read CashDrawer CheckScanner
- Profile
- CashDrawer
- CashDrawer776
- CashDrawer794
- CashDrawer799
- Timeout
- CapPowerRep...
- PowerState
- State
- Closed
- CheckHealthText
-
- CheckHealth
- ☒ Internal
- ☐ External
- ☐ Interactive
- ☐ Illegal
- CheckHealth
- Boolean Properties
- ☐ CapStatus
- ☐ CapStatusMultiDrawerDe...
- ☐ FreezeEvents
- ☐ PowerNotify
- ☐ Claimed
- ☐ DeviceEnabled
- ☐ DrawerOpened
- WaitForDrawerClose
- Timeout
- Frequency
- Duration
- Delay
- WaitForDrawerClose
- Printer Sensors
- Cover Open ☐
- NearEnd Empty
- Receipt ☐ ☐
- Slip ☐ ☐
- Refresh
- Open Claim Enable Freeze Events
- Enable PowerNotify OpenDrawer
- Control/Service Info

- 60 -

6. Click on the “ENABLE” button.



When you click on the “OpenDrawer” button the cash drawer should pop open. When the “Timeout” value set to “0”, if the cash drawer is not closed within 10 seconds a “JPOSEXCEPTION CAUGHT” error message will appear, this is OK since the cash drawer is open.

7. To exit the application:
 - Click on “DISABLE”
 - Click on “RELEASE”
 - Click on “CLOSE”
 - Click on the “X” in the upper right hand corner of the application.

7.2 Receipt Printer



7.2.1 Connection

The HP receipt printer is installed in the 24V powered USB port on the HP POS system. The following show the back of the various HP POS units showing where the 24V power USB port is located.

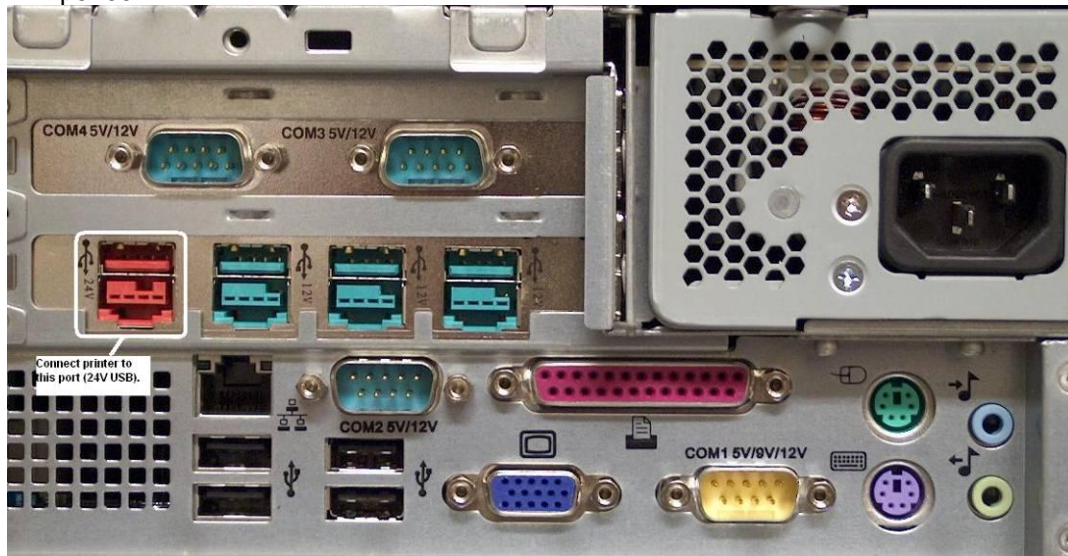
HP ap5000:



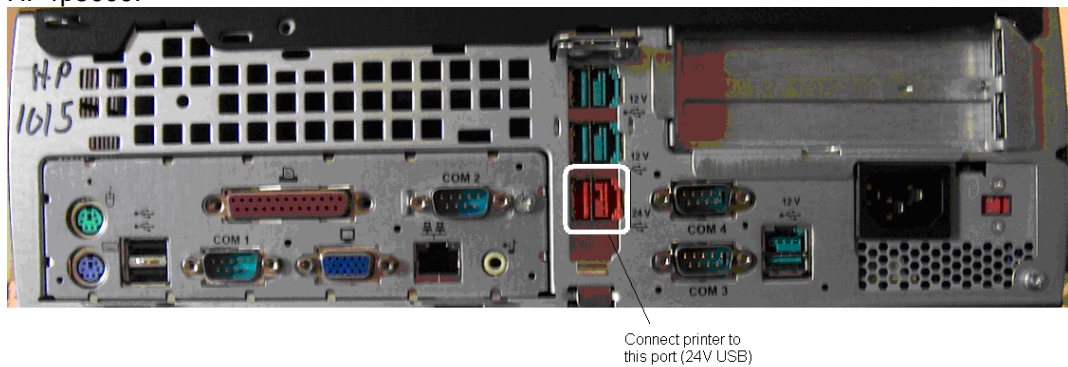
HP rp3000:



HP rp5700:



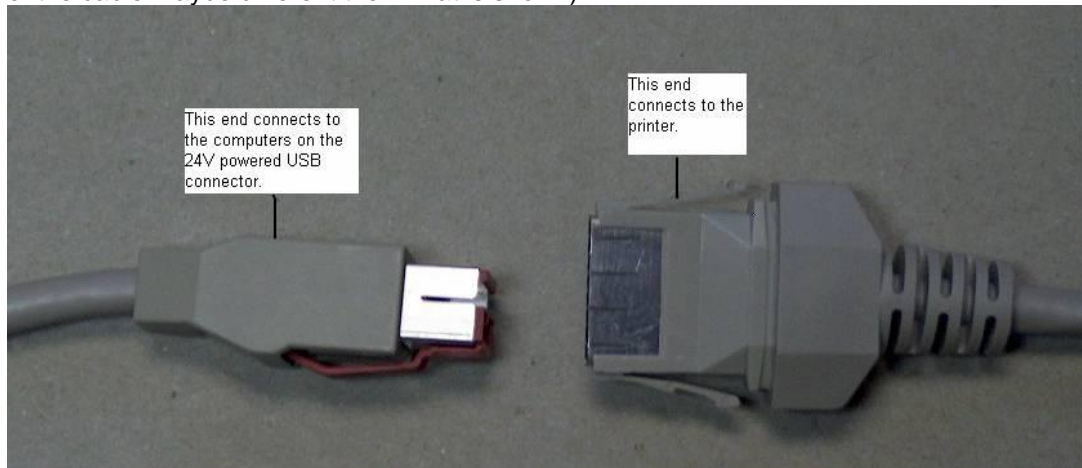
HP rp5000:



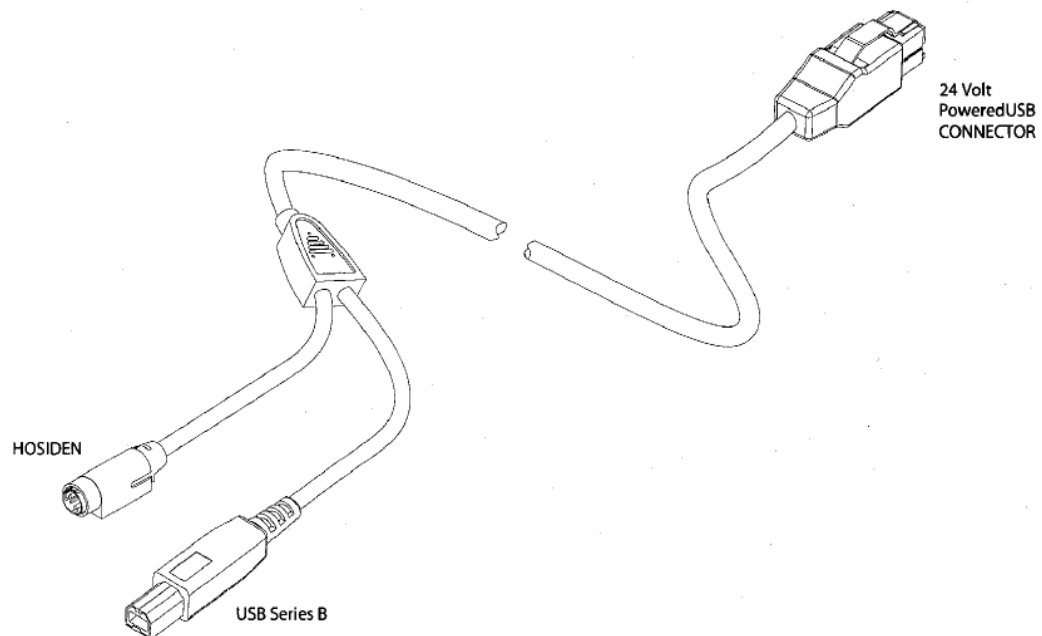
Note: The 24V powered USB port and cable are keyed differently than 12V powered USB connector, as well as the color.

7.2.2 **Powered USB Cable**

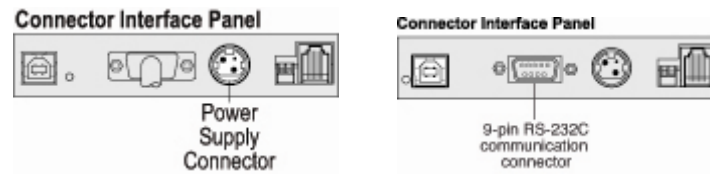
The following is the powered USB cable for single station printer and the hybrid printer (color of the cable maybe different then what is shown):



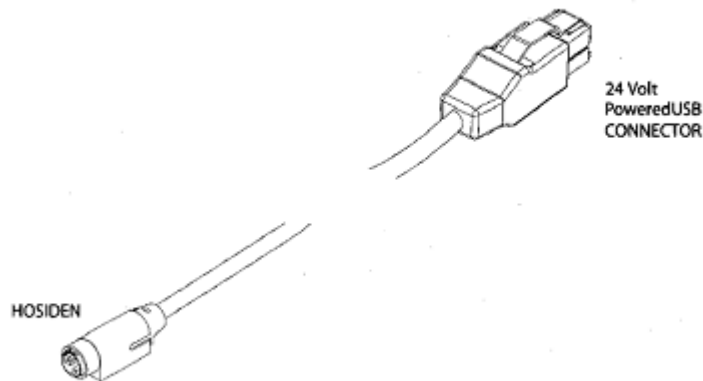
The following is the powered USB cable for the hybrid printer with imager:



The single station printer with serial interface requires two cables: power (hosiden) and serial data cable.



The following is the powered (hosiden) cable for the single station printer with serial interface:



The serial data cable is standard null modem cable and the following is the pin out of the cable:

Pin #	Pin #
1	NC (no connect)
2	3
3	2
4	6
5	5
6	4
7	8
8	7
9	NC (no connect)
Shield	Frame Ground

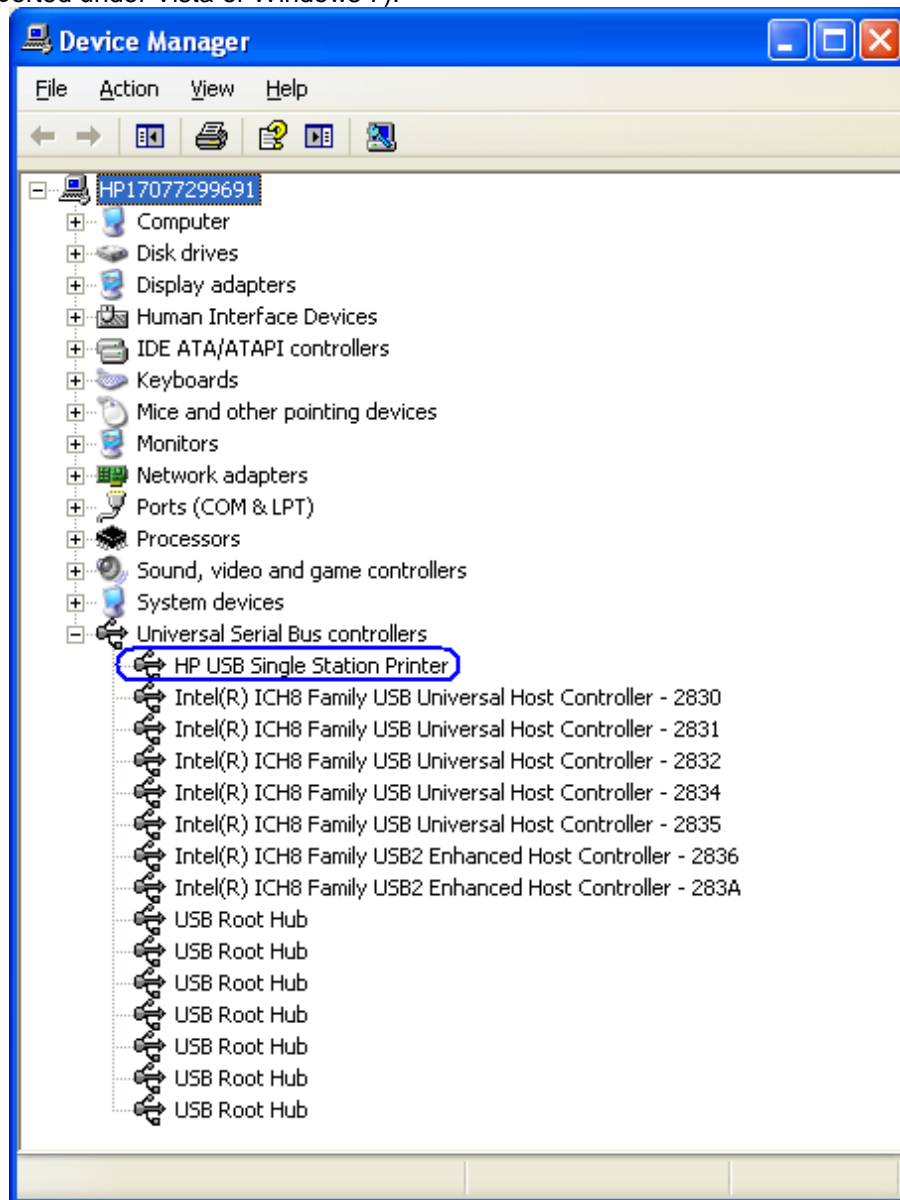
7.2.3 **NATIVE mode**

Please note that PRINTER CLASS is the default mode of the printer; please see next section for more details on PRINTER CLASS.

On the HP Point of Sale units with Windows operating system, the drivers for Windows device manager are installed on the image from the HP factory. When the printer is attached to the unit via the powered USB connection, Windows will load the drivers for the HP POS printer.

If the Windows USB drivers are needed for Device Manager when the printer is in native mode they can be found on the “HP Point of Sale System Software and Documentation CD” included with the peripherals.

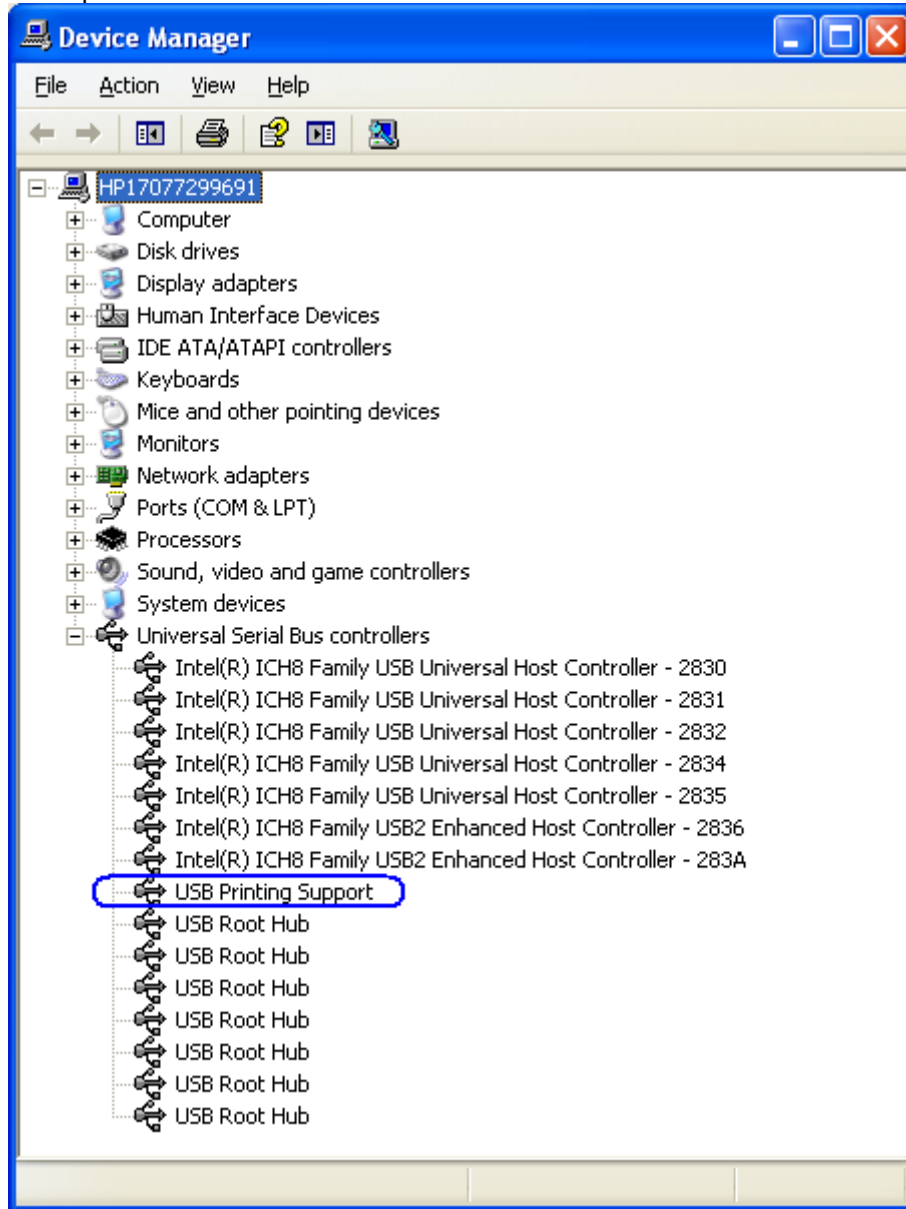
The following is showing what appears in Windows Device Manager after the driver has been loaded for the printer in NATIVE mode (under XP / WEPOS / POSReady; NATIVE mode is not supported under Vista or Windows 7):



7.2.4 **PRINTER CLASS Mode**

When the printer is in PRINTER CLASS mode, the Microsoft Windows native drivers are loaded by operating system for device manager. PRINTER CLASS mode must be used when the POS application does not use OPOS driver to communicate the receipt printer.

The following is showing what appears in Windows Device Manager after the driver has been loaded for the printer in PRINTER CLASS mode:



7.2.5 **COMM CLASS Mode**

If the correct boot and flash firmware level are present on the printer (see table below) the printer can be put into COMM CLASS. When the printer is in COMM CLASS mode a virtual COM port is assigned to the printer USB interface for application that only communicate to the printer via serial port. One can look in Windows Device Manager → PORTS to determine the virtual com port that Windows assigned to the virtual printer COM port. Steps to change COMM class are covered in [USB MODE SELECTOR](#) section of the document).

Note: The COMM CLASS option is available only on the A799 powered USB model and A776 printer. The following are minimum version of the firmware that supports the COMM CLASS option:

Firmware Version	A776	A799
Boot Firmware Version	1.25	1.06
Flash Firmware Version	2.00	1.08

Note: If the printer has later versions then what is listed in the above table, the printer firmware does not need to be downgraded to the version in the table.

In order to obtain the firmware that is installed on the printer, perform the following steps when you are in front of the printer:

1. Open the printer cover that holds the thermal receipt paper.
2. Hold down the printer form feed button and close the printer cover.
3. Release the form feed button on the printer and a diagnostics printout will be printed.

The following are examples of the diagnostics printout:

HP Single Station Printer (A799)

```

*** A799 - Diagnostics Form ***
ReceiptWare Enabled

Model number       : A799-C40W-HN00
Serial number      : K084602682

Boot Firmware
Revision           : V1.06
CRC                : 2E66
P/N                : 189-7940248A

Flash Firmware
Revision           : V1.08
CRC                : 35DB
P/N                : 189-7940253B

H/W parameters
Flash Memory Size  : 4 Mbytes
Flash Logos/Fonts  : 64 kbytes
Flash User Storage : 64 kbytes

```

HP Hybrid Thermal Printer (A776)

```

*** A776 / B780 - Diagnostics Form ***
ReceiptWare Enabled

Model number       : A776-C21W-H000
Serial number      : K084905284

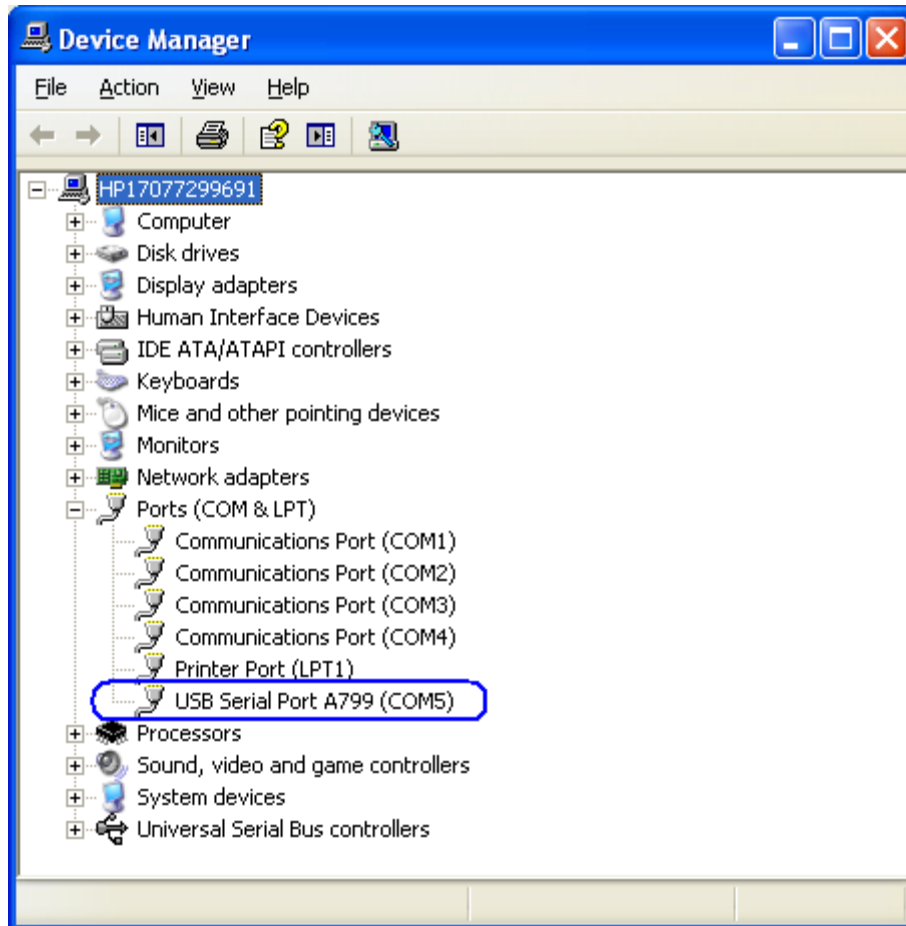
Boot Firmware
Revision           : V1.25
CRC                : FC97
P/N                : 189-7760899A

Flash Firmware
Revision           : V2.00
CRC                : 8910
P/N                : 189-7760897A

H/W parameters
Flash Memory Size  : 2 Mbytes
Flash Logos/Fonts  : 896 kbytes
Flash User Storage : 64 kbytes

```

The following is showing what appears in Windows Device Manager after the driver has been loaded for the printer in COMM CLASS mode:

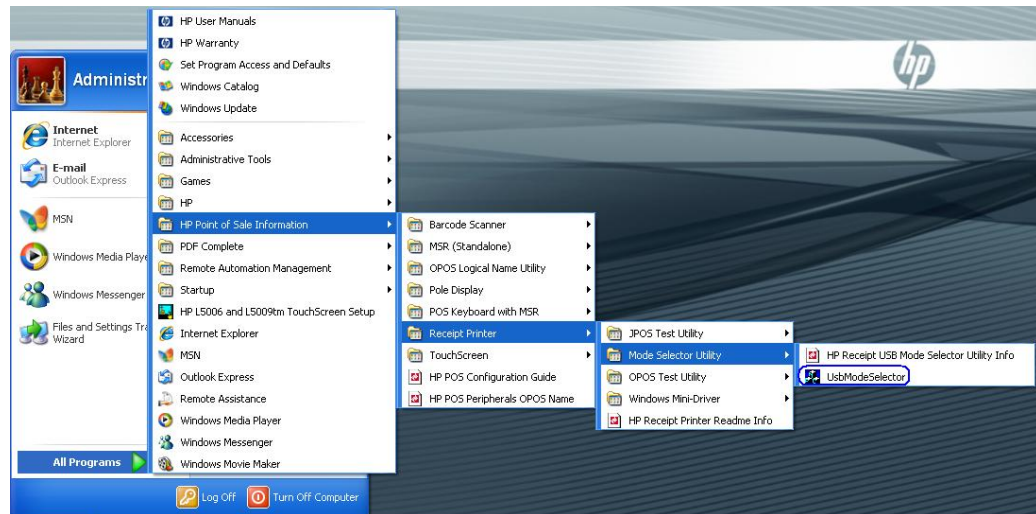


7.2.6 **USB Mode Selector Utility**

If the proper level of firmware is present on the receipt printer the USB MODE SELECTOR utility can be used to switch the printer between NATIVE / PRINTER / COMM Class mode. The HP USB receipt printer must be attached to the desktop computer and all Microsoft Windows device drivers must be loaded (no yellow exclamation marks in Device Manager) in order for the utility to work correctly.

The following is an overview of the steps to use the USB Mode Selector Utility:

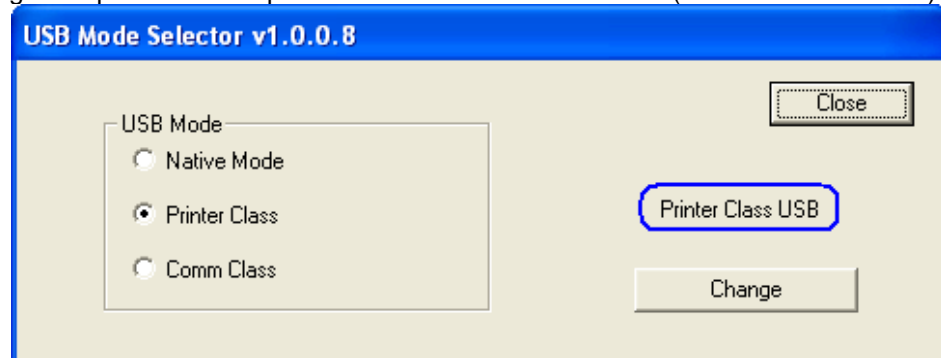
1. Launch the `UsbModeSelector.exe` program from the START MENU. The utility can be found in the HP image in the "C:\xxxxx\Point of Sale\Receipt Printer\HP Receipt Printer USB Mode Selector Utility" folder or on the "HP Point of Sale System Software and Documentation CD" in the "x:\Receipt Printer\HP Receipt USB Mode Selector Utility" folder.



2. A dialog appears which reflects the mode the printer is currently set to.
 - a. Select the desired mode of the printer. If the printer is in COMM CLASS mode, the GUI will display the virtual com port that is assigned to the printer on the unit that utility is run on.
 - b. Click on the change button.
 - c. Exit the utility.

Note: The first time the printer is changed to a different mode, Windows may take a few minutes to completely load and enable the driver for the selected mode.

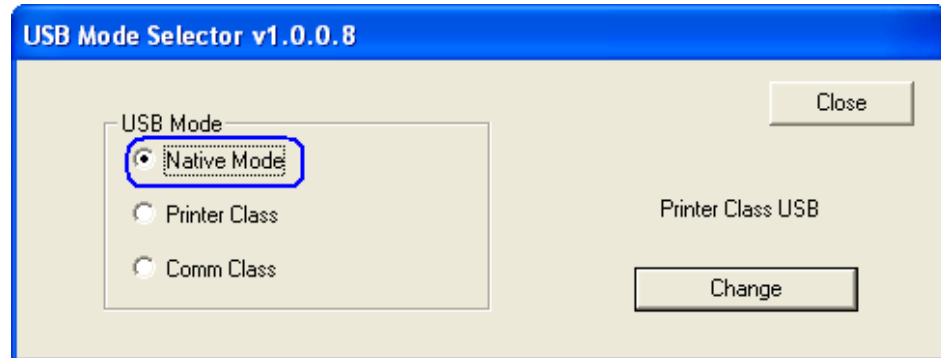
The following example shows the printer in PRINTER CLASS mode (item is circled in blue):



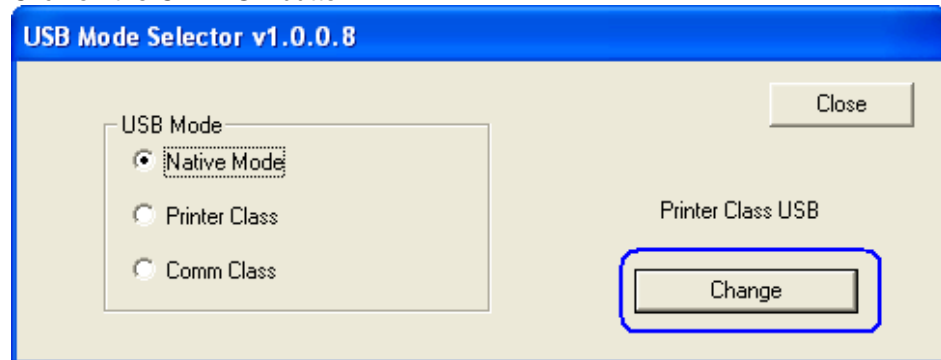
7.2.6.1 Set printer to NATIVE mode

The following are the steps to switch the printer to NATIVE MODE (not supported in Vista or Windows 7 operating system):

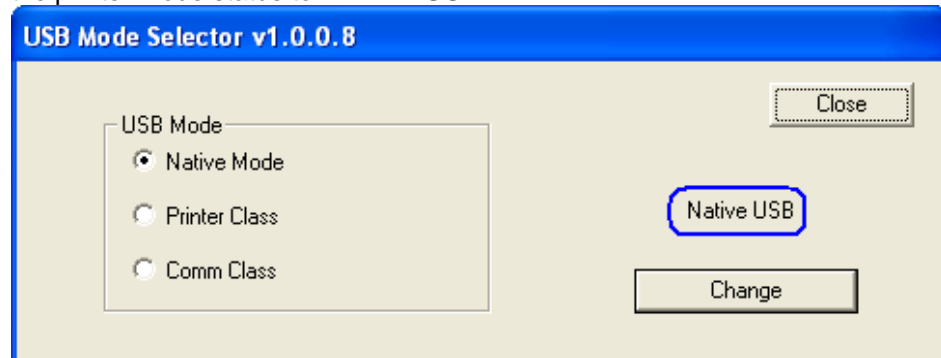
1. Select NATIVE MODE in the GUI.



2. Click on the CHANGE button.



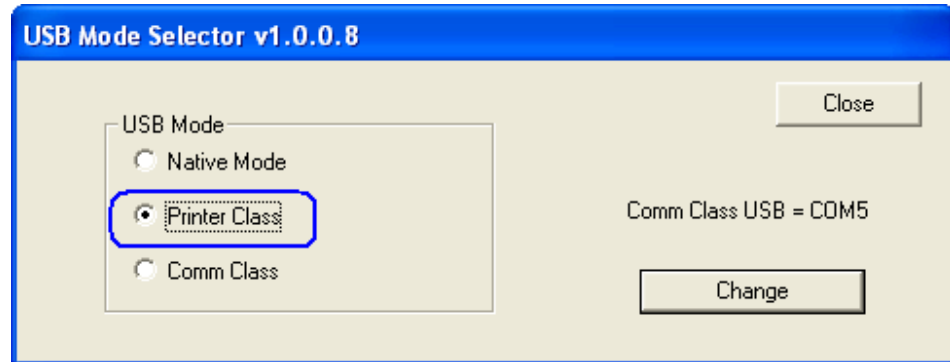
3. Once the printer has loaded the drivers and changed modes, the GUI will change the printer mode status to NATIVE USB.



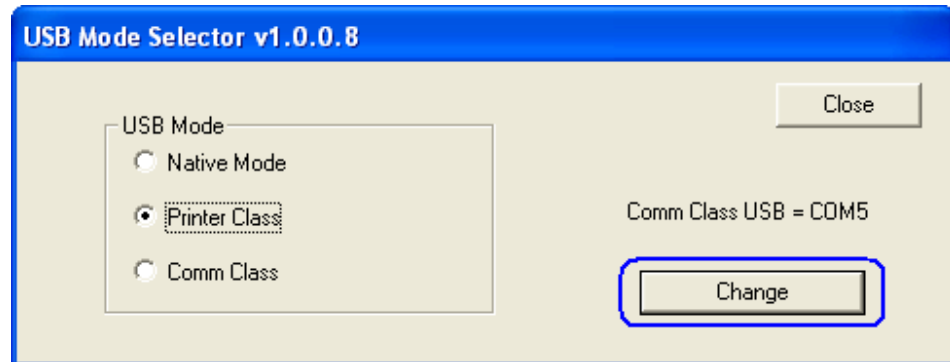
7.2.6.2 Set printer to PRINTER CLASS mode (default)

The following are the steps to switch the printer to PRINTER CLASS MODE (printer default):

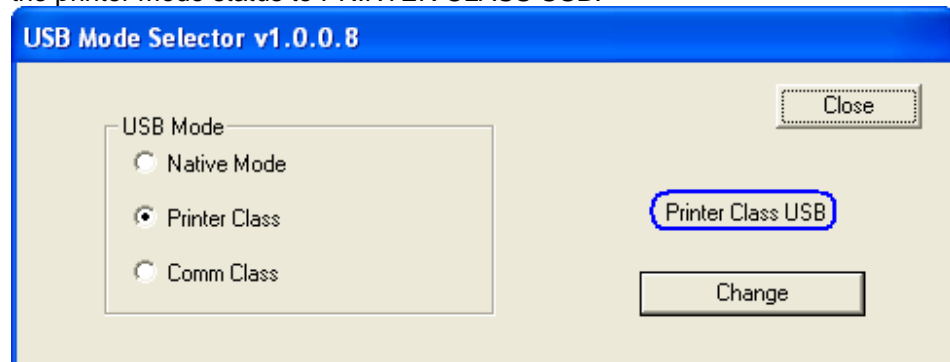
1. Select PRINTER CLASS in the GUI.



2. Click on the CHANGE button.



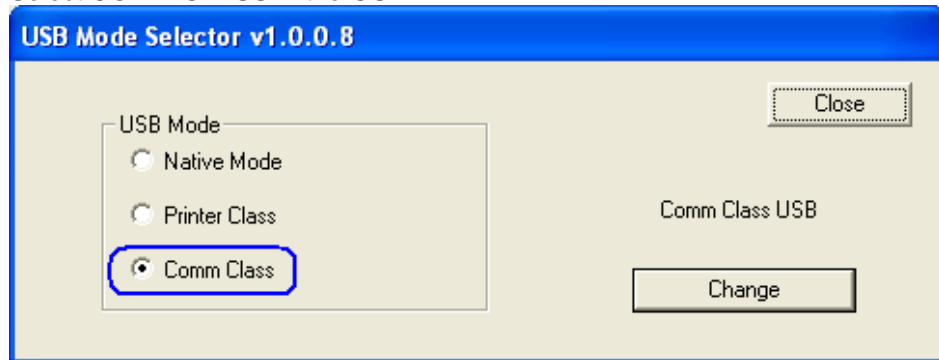
3. Once the printer has loaded the drivers and changed modes, the GUI will change the printer mode status to PRINTER CLASS USB.



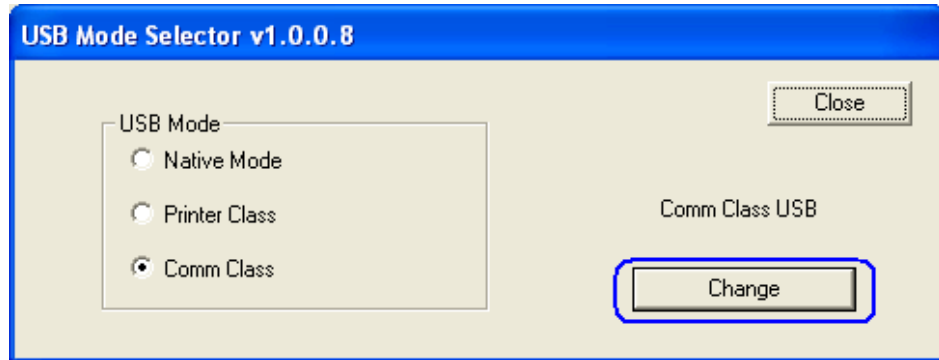
7.2.6.3 Set printer to COMM CLASS mode (virtual serial port)

The following are the steps to switch the printer to COMM CLASS MODE:

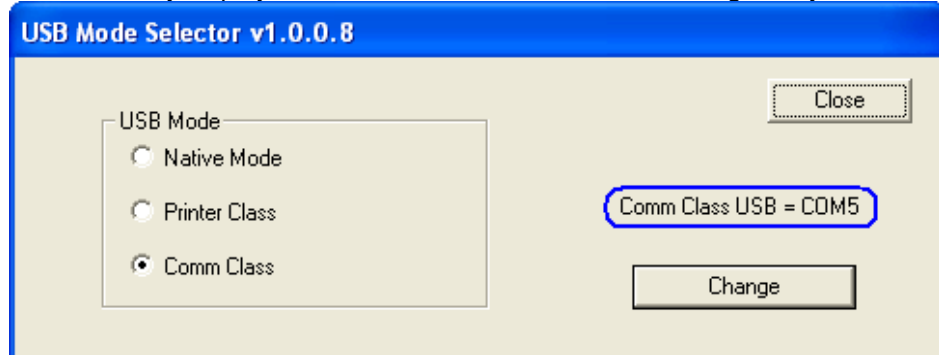
1. Select COMM CLASS in the GUI.



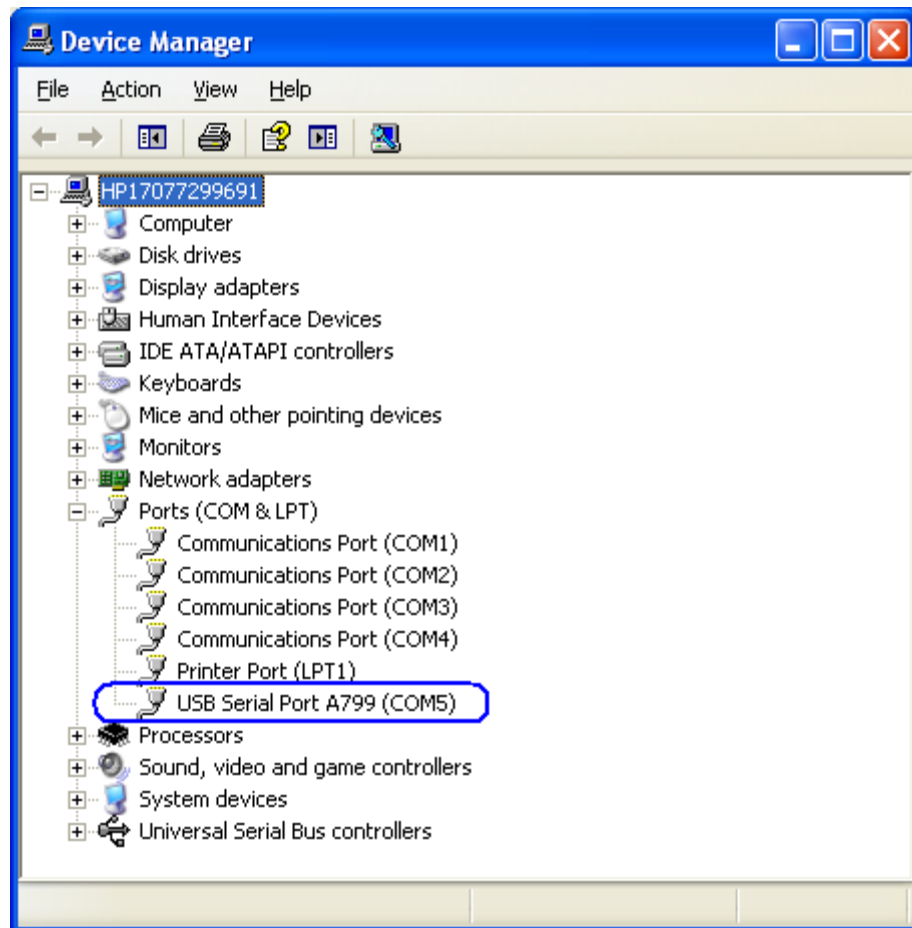
2. Click on the CHANGE button.



3. Once the printer has loaded the drivers, close and re-launch the utility in order to have the utility display the virtual COMM PORT that was assigned by Windows.



One may also look in Windows Device Manager → PORTS to see the virtual COMM PORT assignment.



7.2.7 **Serial Printer**

The serial version of the printer will not show as a unique device in Windows device manager. Ensure that the serial port in device manager is present and does not have yellow bang.

7.2.8 Windows Drivers for the Receipt Printer Drivers

The printer has two modes: NATIVE and PRINTER CLASS. PRINTER CLASS is the default mode of the printer.

The PRINTER CLASS mode is used with POS application that use Windows printer driver to print, they do not use OPOS to communicate to the printer.

Note: The Windows mini-drivers and the OPOS drivers cannot be set to the same COM port.

7.2.8.1 Install Windows Printer Driver (USB)

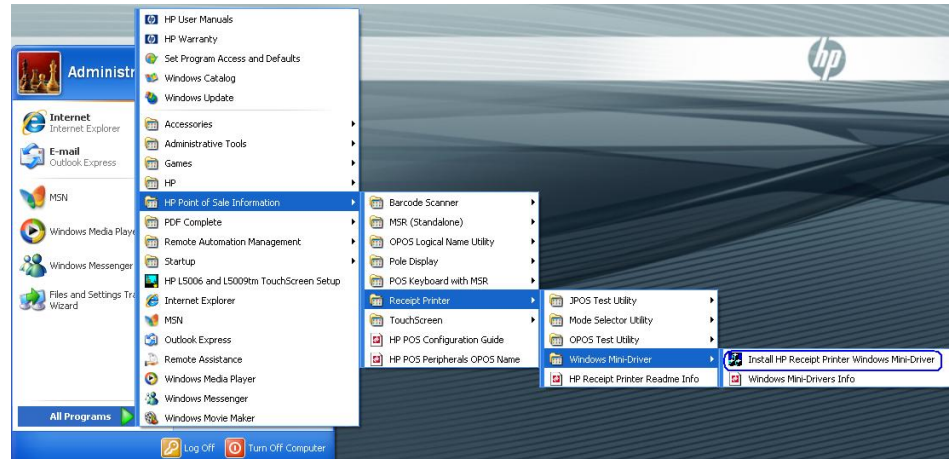
The following is an overview of the steps to test the receipt printer followed by detailed steps:

1. Start the setup program for the Windows mini-drivers by launching the “HPSETUP.EXE” program and click “OK” on the main GUI (graphical user interface).
2. Select if running 32-Bit or 64-Bit operating system.
3. Select the printer model that you wish to install.
4. Select the printer driver option that you wish to install from the drop down menu.
5. Select the USBxxx (Virtual Printer Port of USB) printer port from the drop menu (towards the bottom of the menu).
6. Click “OK” to install the printer driver and a small test print out will occur if the option was selected.

Detail Steps

1. Start the setup program for the Windows mini-drivers by double clicking on “HPSETUP.EXE” file and click “OK”.

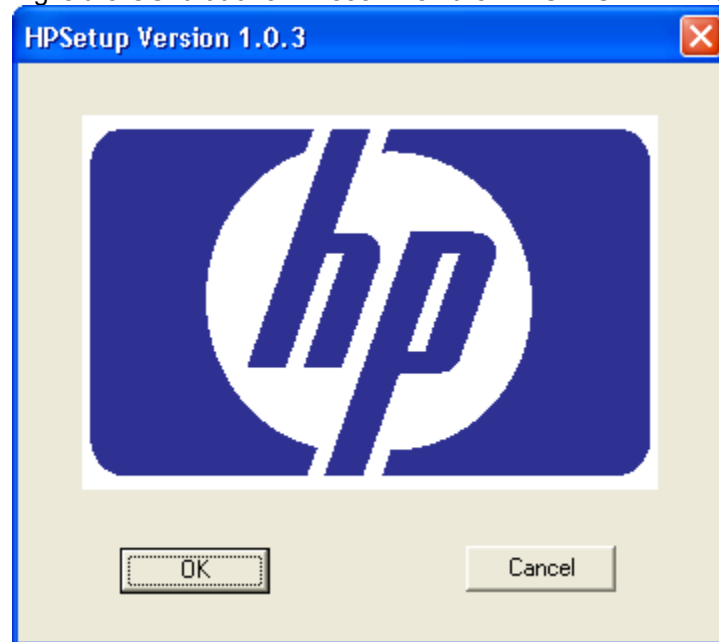
One can launch the “HPSETUP.EXE” file from the start menu:



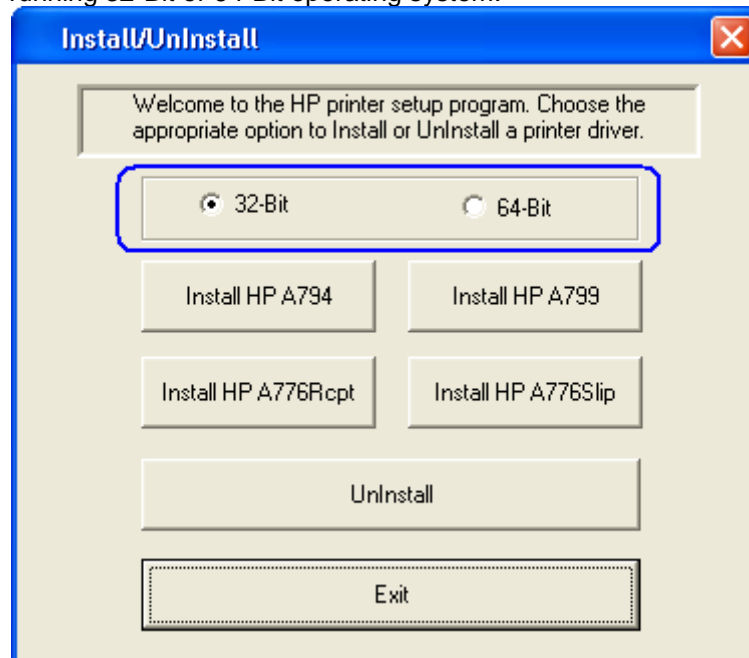
or

go to the “C:\xxxxx\Point of Sale\Receipt Printer\Windows Receipt Printer Drivers” folder and double click on the “HPSETUP.EXE” file.

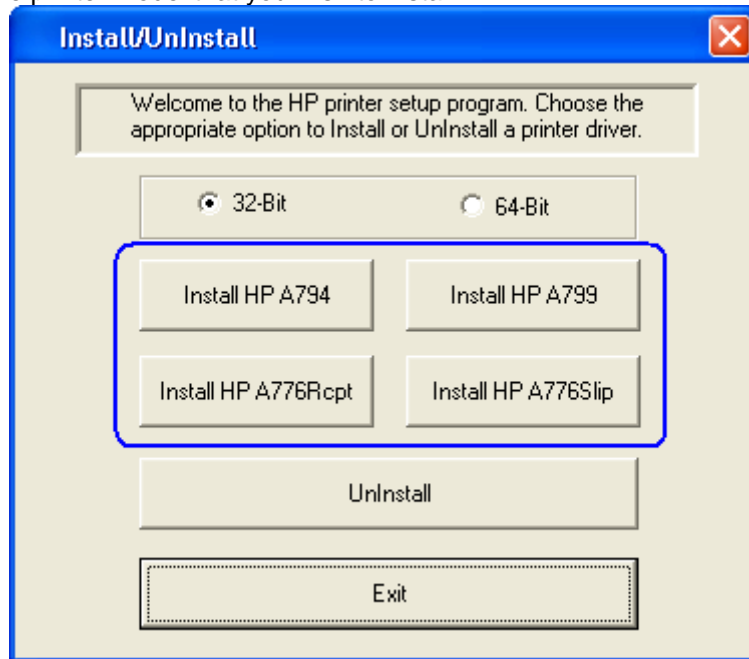
The following is the GUI that one will see when the “HPSETUP.EXE” is launched:



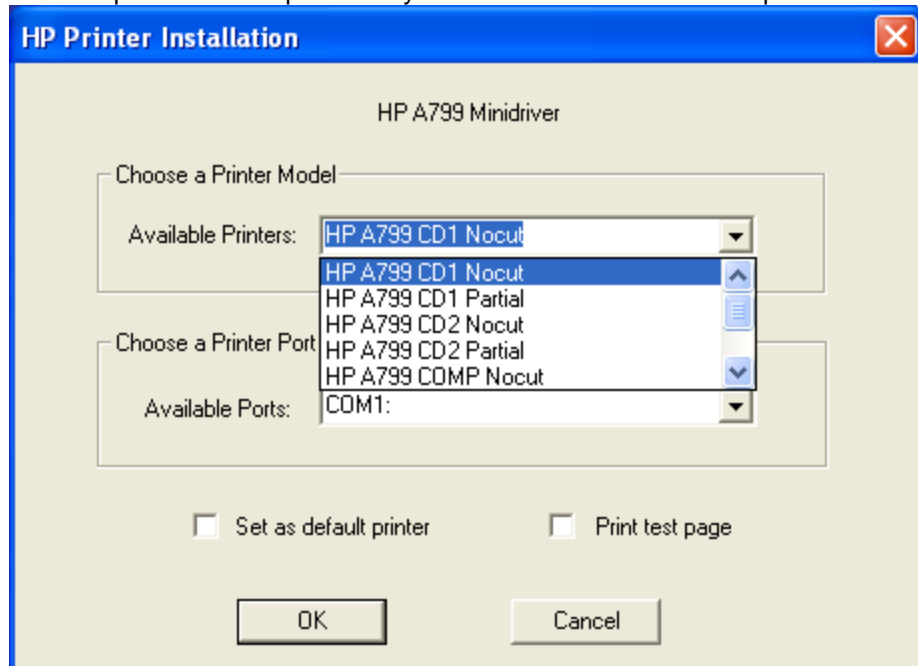
2. Select if running 32-Bit or 64-Bit operating system.



3. Select the printer model that you wish to install.



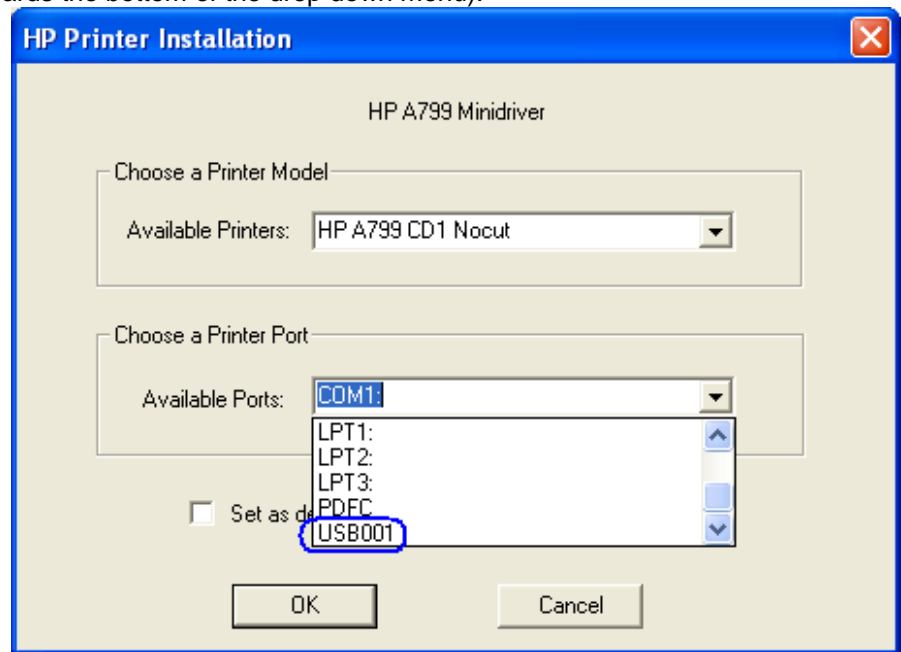
4. Select the printer driver option that you wish to install from the drop down menu.



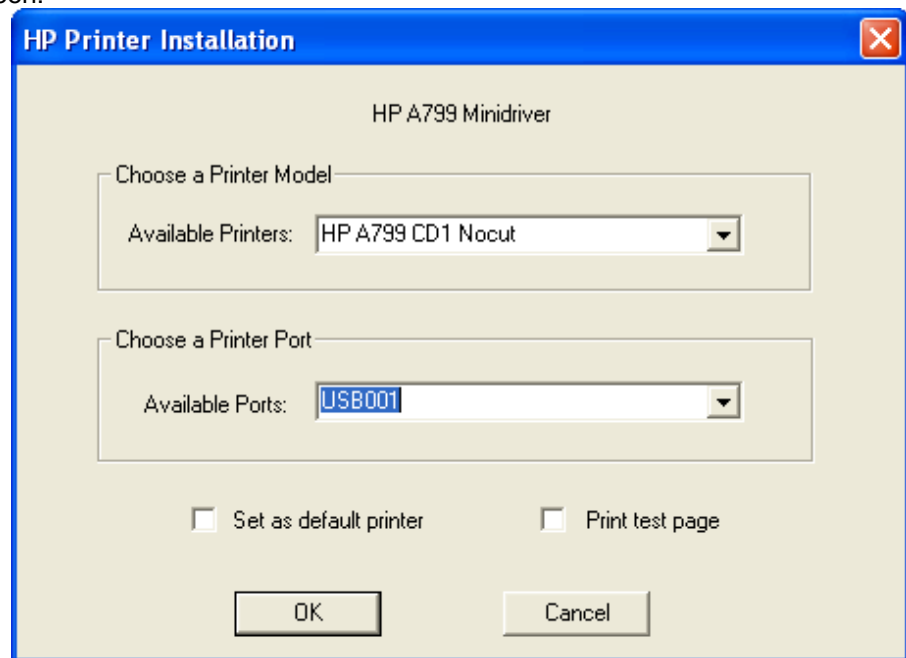
- The HP A7xx CD#1 and HP A7x CD#2 versions generate a pulse to open cash drawer 1 or 2, respectively after each document. The HP A7xx COMP version does not send the reset command at the start of every document.

Note: "xx" is the complete model number of the printer, (i.e. A794 / A799 / A776).

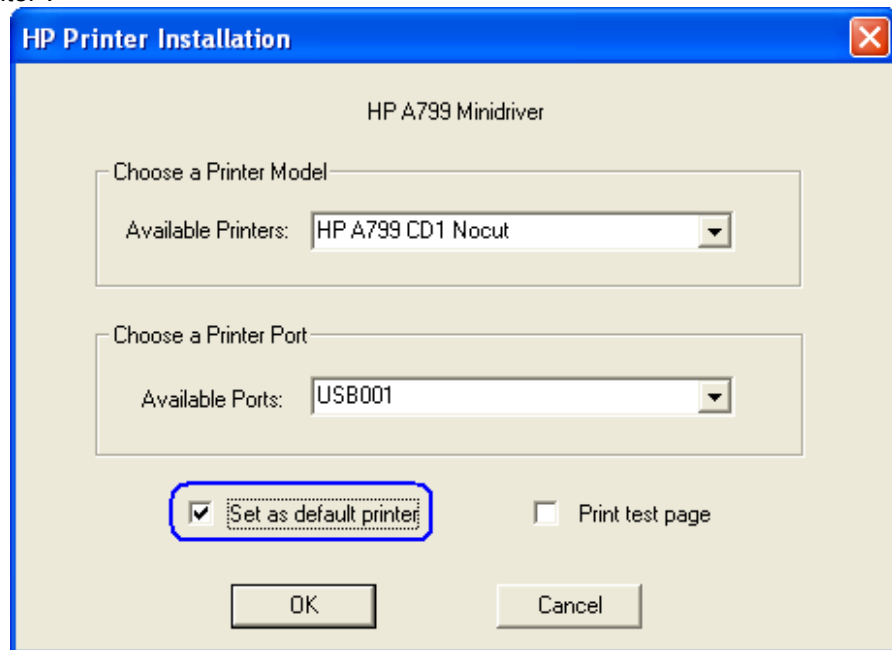
5. Select the USBxxx (Virtual Printer Port of USB) printer port from the drop menu (towards the bottom of the drop down menu).



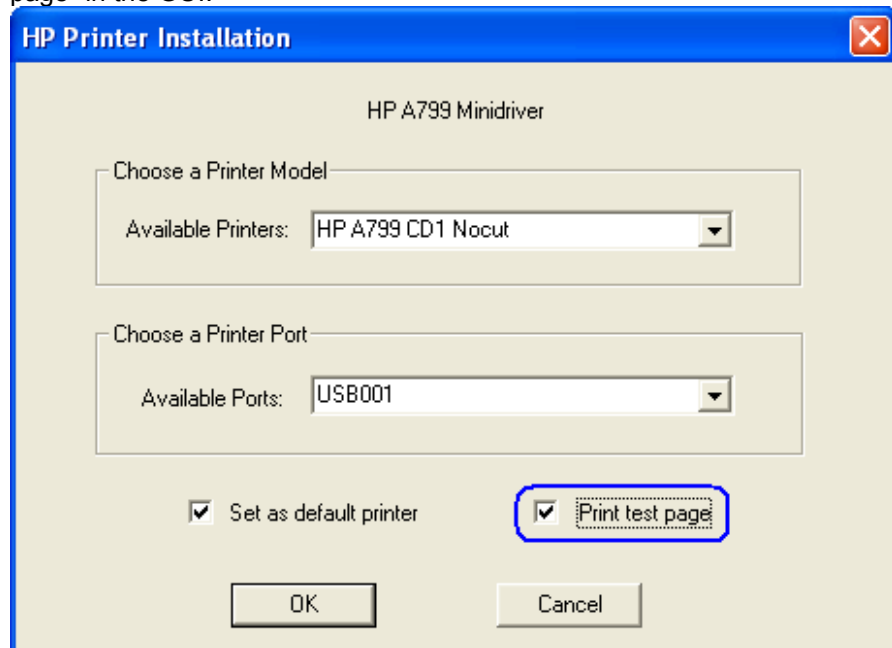
When the selections are made, the selection should be similar to the following screen:



In order to make the printer the default printer select the option “Set as default printer”.



If one wishes to print a very small test page, select the option “Print test page” in the GUI.



6. Click “OK” to install the printer driver and a small test print out will occur if the option was selected.

Note: If the option was selected to install the printer driver with “NoCut” when “Print Test Page” is selected during the driver install process, the test print out will print and it will cut the receipt paper.

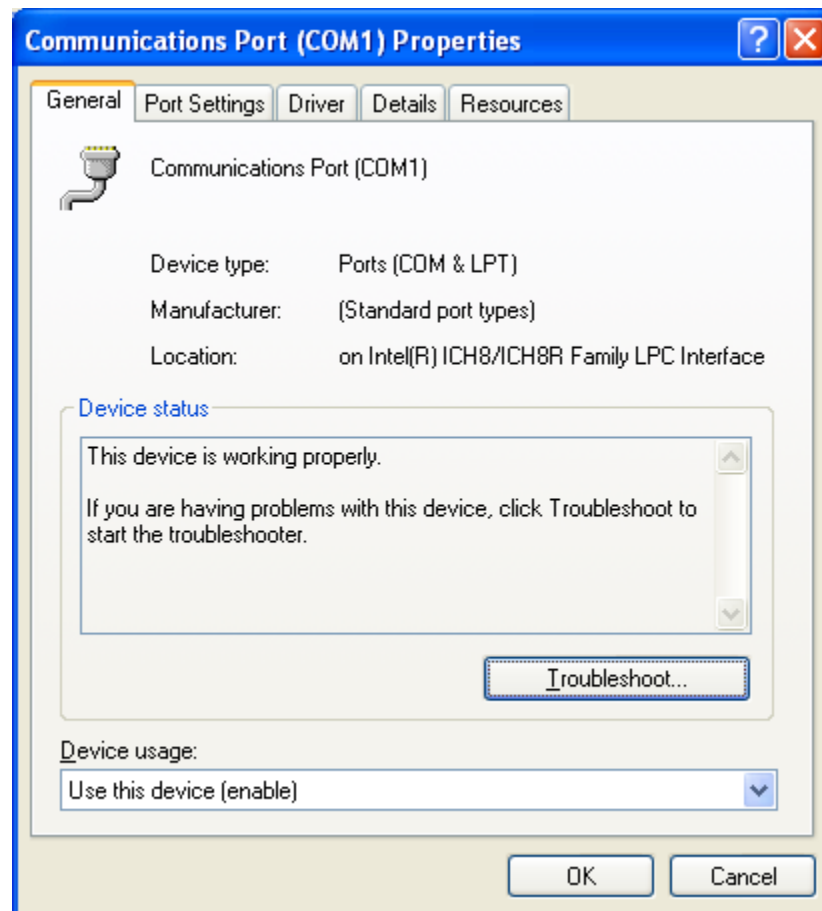
7.2.8.2 Install Windows Printer Driver (Serial)

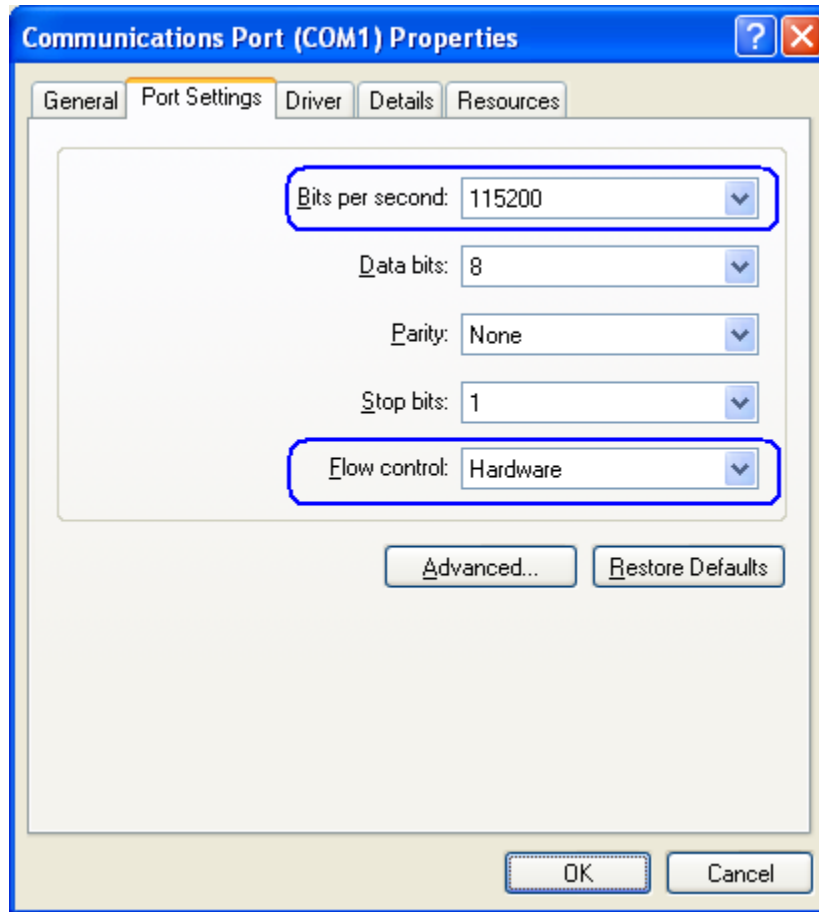
The following is an overview of the steps to test the receipt printer followed by detailed steps:

1. Go into the communication port properties to change the Windows baud rate to the "115200" and flow control to "Hardware" for port that the printer is attached.
2. Start the setup program for the Windows mini-drivers by launching the "HPSETUP.EXE" program and click "OK" on the main GUI (graphical user interface).
3. Select the printer model that you wish to install.
4. Select the printer driver option that you wish to install from the drop down menu.
5. Select the COM (serial) port the printer is attached to.
6. Click "OK" to install the printer driver and a small test print out will occur if the option was selected.

Detail Steps

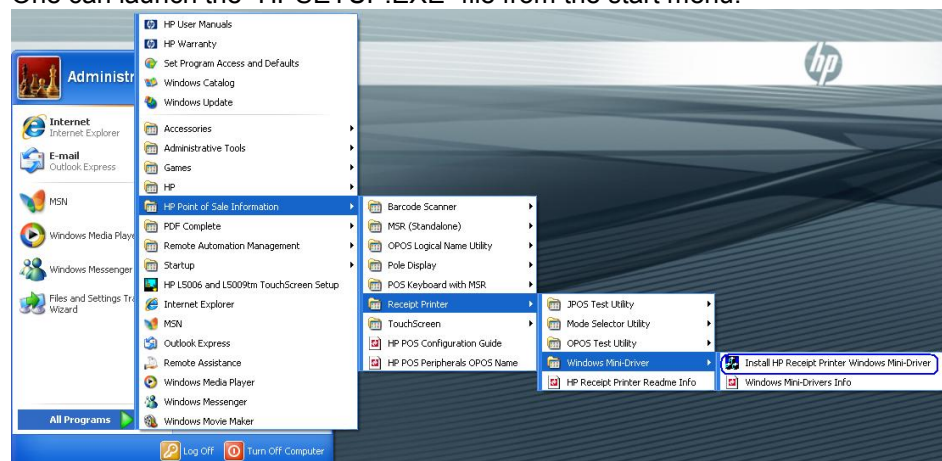
1. Go into the communication port properties to change the Windows baud rate to the "115200" and flow control to "Hardware" for port that the printer is attached.





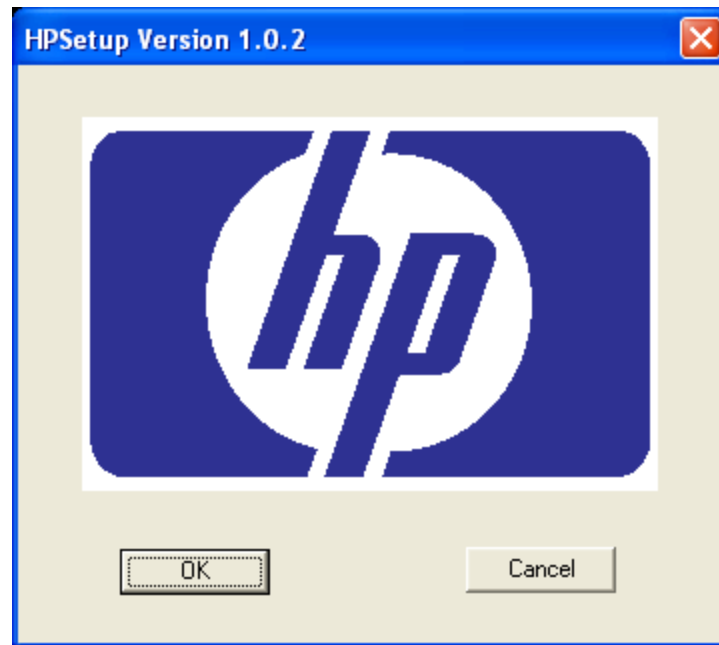
2. Start the setup program for the Windows mini-drivers by double clicking on "HPSETUP.EXE" file and click "OK".

One can launch the "HPSETUP.EXE" file from the start menu:

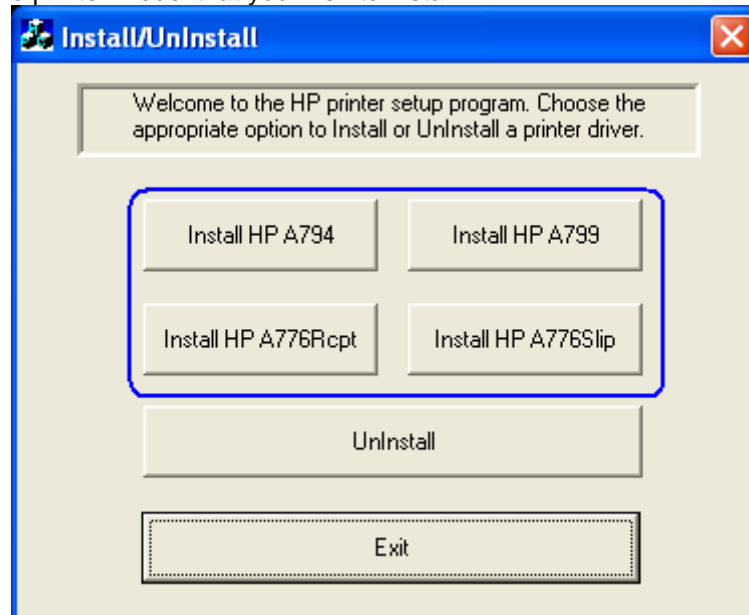


or go to the "C:\xxxxx\Point of Sale\Receipt Printer\Windows Receipt Printer Drivers" folder and double click on the "HPSETUP.EXE" file.

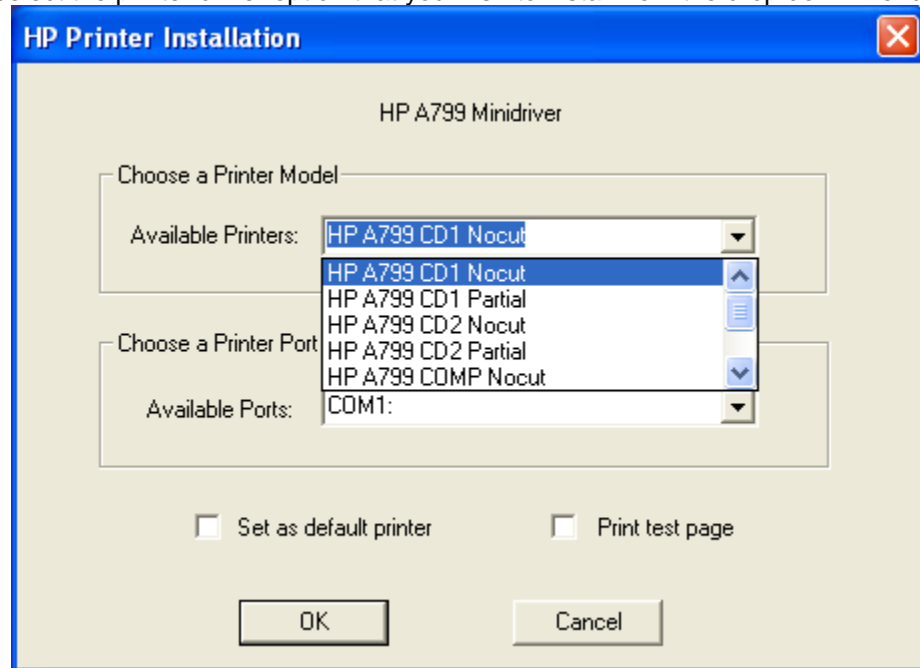
The following is the GUI that one will see when the "HPSETUP.EXE" is launched:



3. Select the printer model that you wish to install.



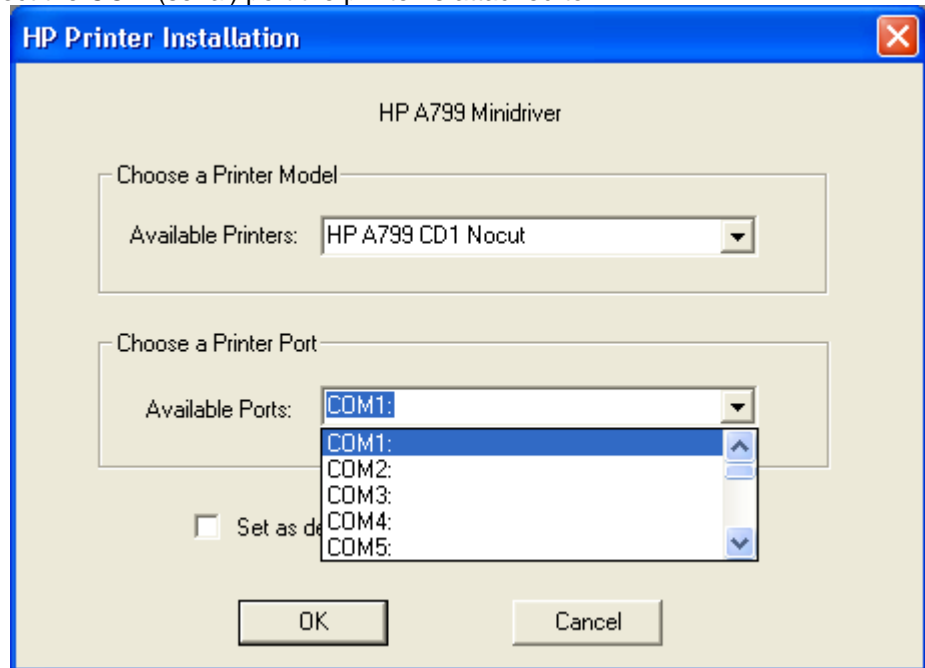
4. Select the printer driver option that you wish to install from the drop down menu.



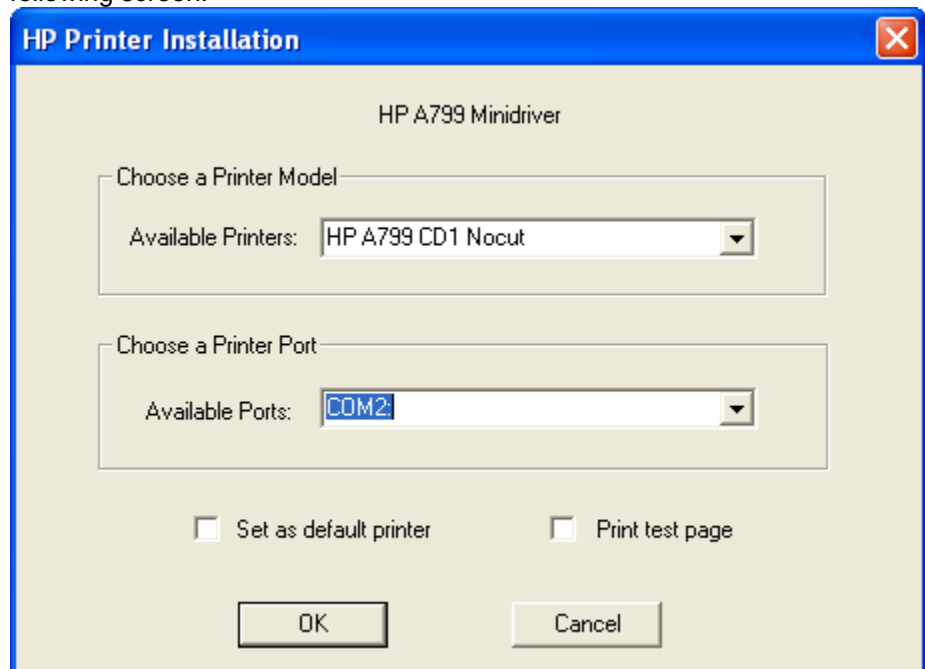
- The HP A7xx CD#1 and HP A7x CD#2 versions generate a pulse to open cash drawer 1 or 2, respectively after each document. The HP A7xx COMP version does not send the reset command at the start of every document.

Note: "xx" is the complete model number of the printer, (i.e. A794 / A799 / A776).

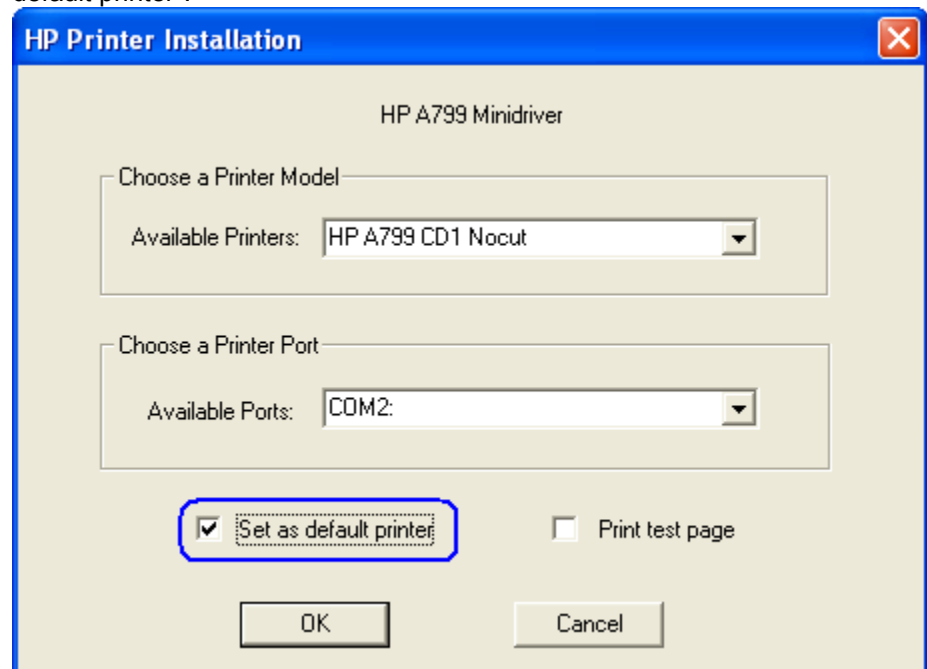
5. Select the COM (serial) port the printer is attached to.



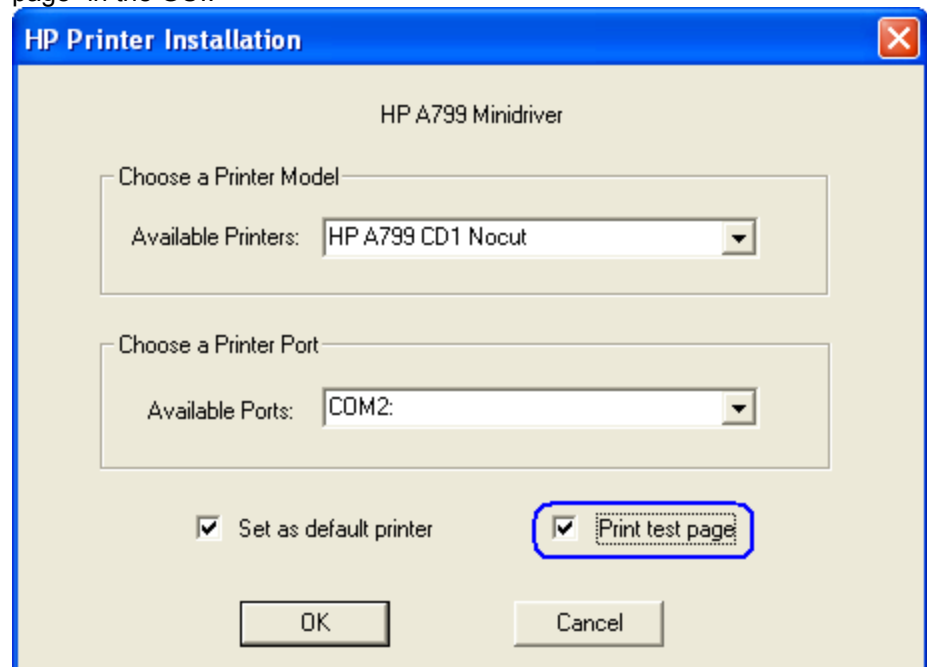
When the selections are made, the selection should be similar to the following screen:



In order to make the printer the default printer select the option “Set as default printer”.



If one wishes to print a very small test page, select the option “Print test page” in the GUI.



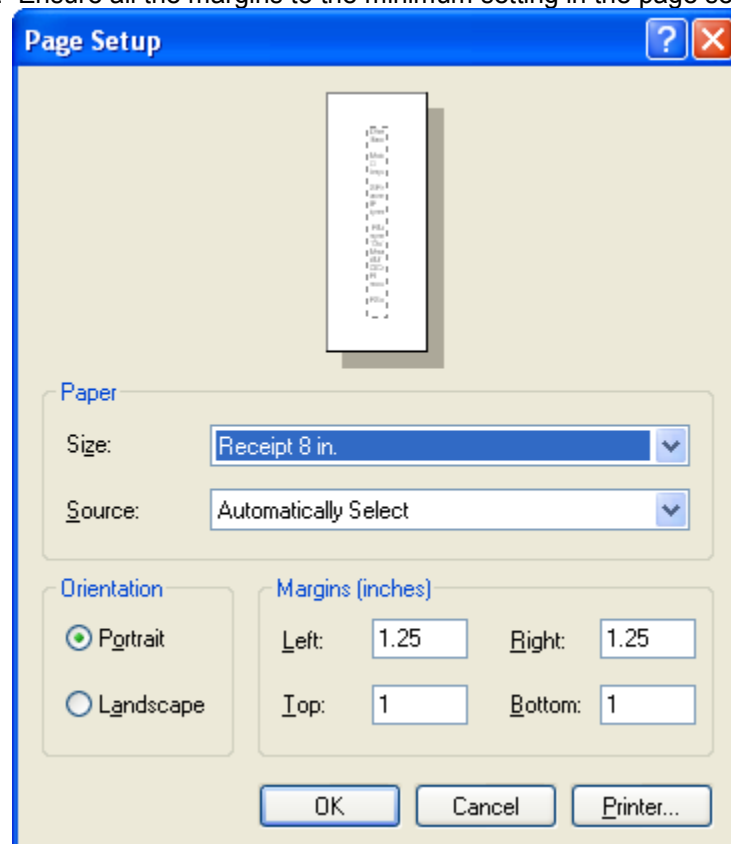
6. Click “OK” to install the printer driver and a small test print out will occur if the option was selected.

Note: If the option was selected to install the printer driver with “NoCut” when “Print Test Page” is selected during the driver install process, the test print out will print and it will cut the receipt paper.

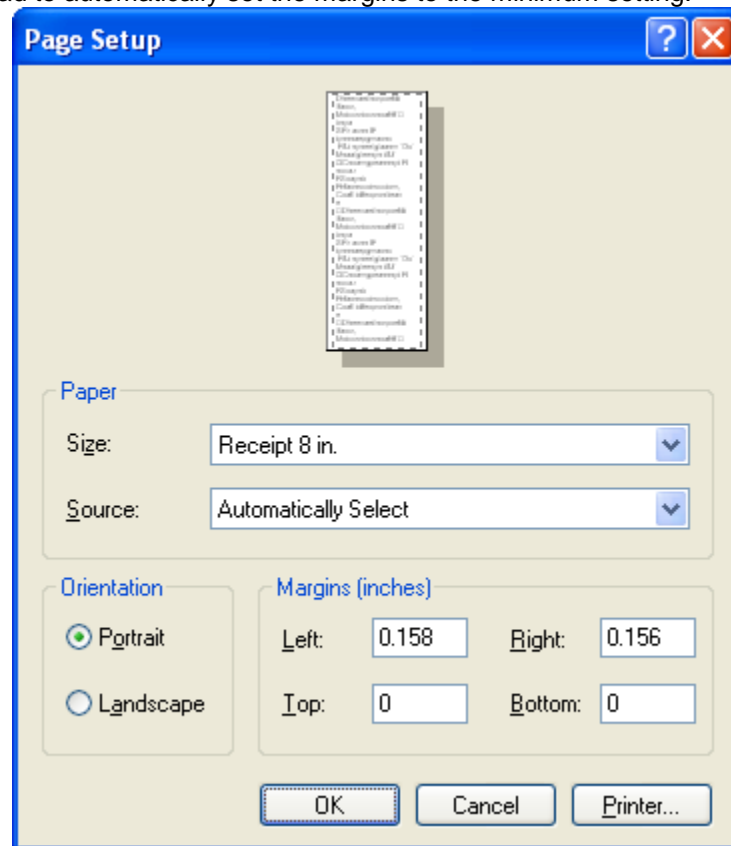
7.2.8.3 Test Receipt Printer in Windows Environment (non-OPOS)

In addition to the test option during the Windows mini-drivers installation, once the printer driver is loaded one may use notepad (or WordPad) to confirm the drivers are loaded and communicating to the printer. Type in a sentence or two in Notepad/WordPad and select the option to print; what was type should appear on the print out. If the Windows mini-driver with “CD#1” was selected, the cash drawer should also open.

Included with the mini drivers is a file that can be used for testing using WordPad; this test file will have barcodes on the printout. The file can be found in the in the following location “C:\xxxxx\Point of Sale\Receipt Printer\Windows Receipt Printer Driver”. Ensure all the margins to the minimum setting in the page setup



or one can set all the margins to zero "0". By setting the margins to zero "0", WordPad to automatically set the margins to the minimum setting.



The following is a partial example of appears on the print out using the file that is included with mini-drivers:

HP A799 Minidriver
Fonts & Barcodes

```
123456789.....12345 tab tab
23456789 12345 tab tab
3456789 12345 tab tab
456789 12345 font change!
56789 12345 height
change
6789 12345 width chg
789 12345 pitch change
89 12345
9 12345
```

Codabar Plain &
HRI:

E0D57+9\$32:A



Code 39 Plain &
HRI:



ITF Plain & HRI:



Jan8 Plain & HRI:



Jan13 Plain & HRI:



7.2.9 Knife Cut Commands

Some POS application that use the Windows mini-drivers request the knife cut command so the application can perform a cut after something is printed (i.e. No Sale). The following the decimal commands:

Perform full knife cut

ASCII	EM	ESC i
Hexadecimal	19	1B 69
Decimal	25	27 105

Perform partial knife cut

ASCII	SUB	ESC m
Hexadecimal	1A	1B 6D
Decimal	26	27 109

The partial knife cut leaves 5mm (0.20 inch) of paper on the left edge.

7.2.10 OPOS Drivers for the Receipt Printer

The receipt printer OPOS drivers can be found on the “HP Point of Sale System Software and Documentation CD”. On the HP POS factory image the drivers are installed in the image for the USB printer, for reference the drivers are located “C:\xxxxx\Point of Sale\Receipt Printer\Receipt Printer OPOS” sub-directory.

Note: If you are using the serial printer, one will need to uninstall the OPOS drivers and then re-install the OPOS driver (see details below of installation). HP OPOS driver version 1.0.1.34 (or later) supports the serial receipt printer.

OPOS driver 1.0.1.21 (or later) for the receipt printer will work with the printer in either NATIVE or PRINTER CLASS mode. During the installation process of the OPOS driver one will be prompted for which mode the printer is in (PRINTER CLASS is selected by default).

The Windows mini-drivers and the OPOS drivers cannot be set to the same COM port.

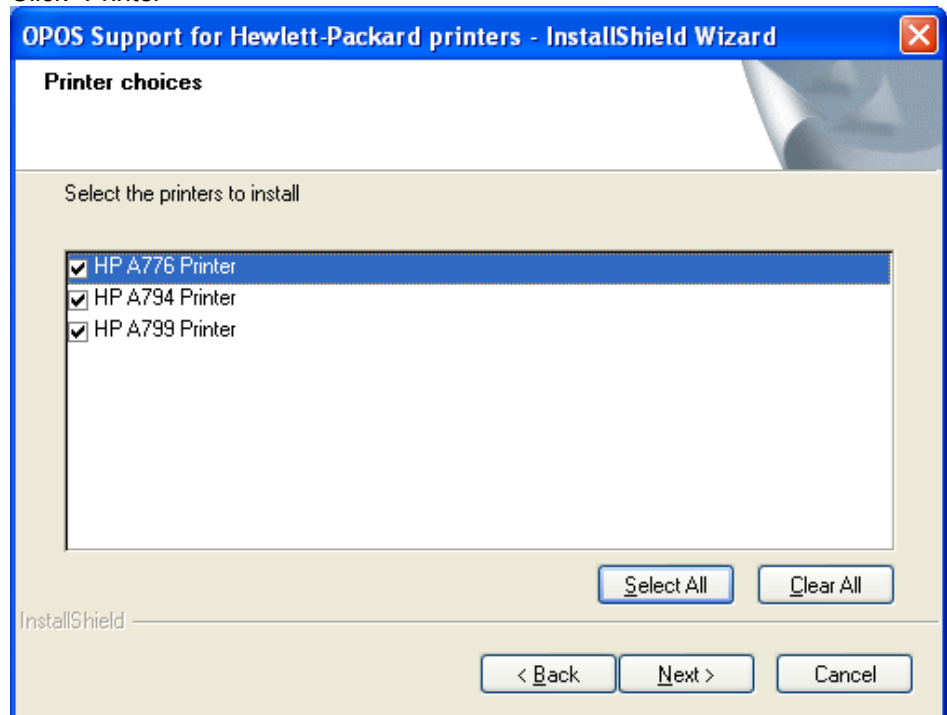
7.2.10.1 OPOS Installation - USB

The following is an overview of the steps to test the receipt printer followed by detailed steps:

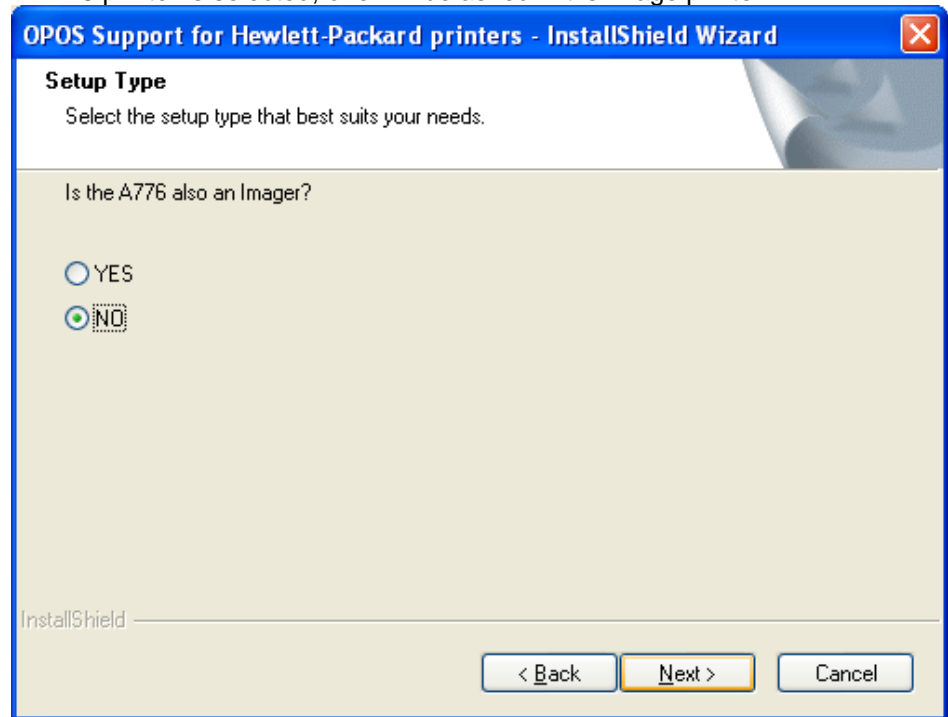
1. Start the HP Receipt Printer OPOS executable.
2. Click “Printer”
3. Select YES or NO to install OPOS control object.
4. Select USB for the communication method.
5. Select the USB connection method (printer class is the default).
6. For the remaining option the default can be used until the installation is complete.

Detail Steps

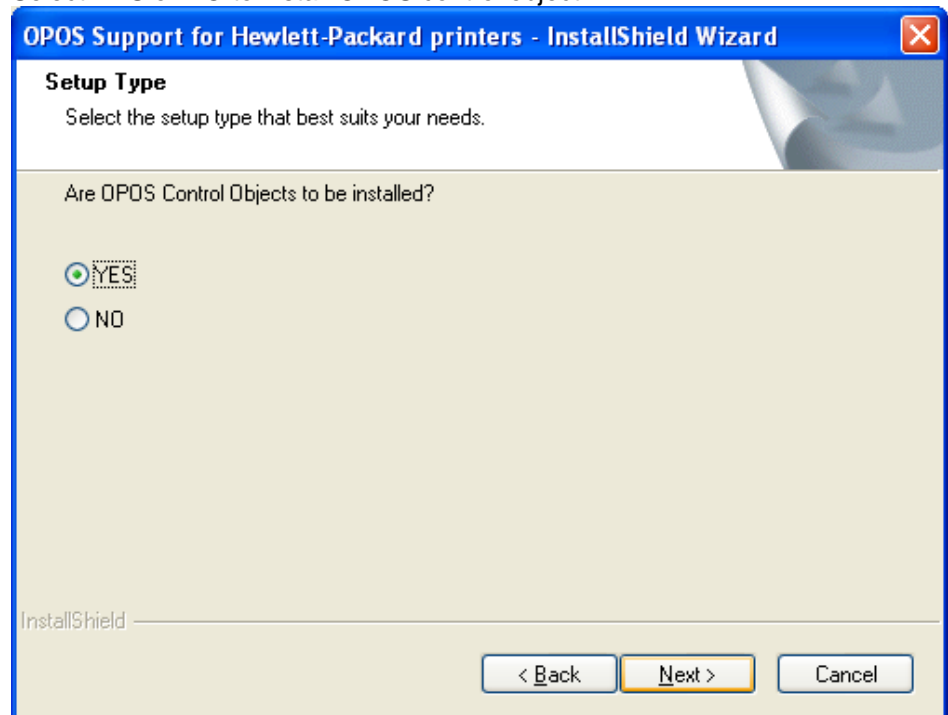
1. Start the HP Receipt printer OPOS executable.
2. Click “Printer”



If A776 printer is selected, one will be asked if it is image printer.

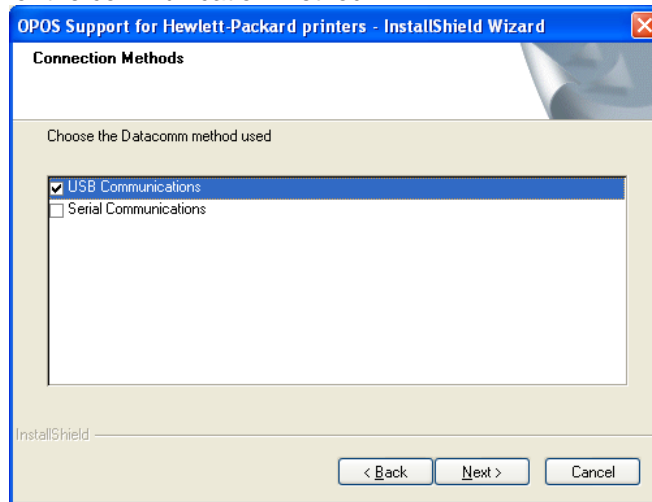


3. Select YES or NO to install OPOS control object.

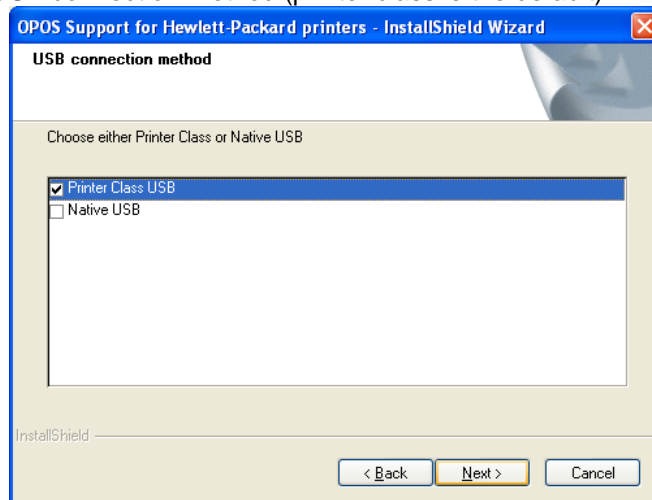


If "NO" is selected for "Are OPOS Control Objects to be installed?" please ensure the CCO driver package is installed prior to using the OPOS test program or a point of sale application. The CCO package can be found on the "HP Point of Sale System Software and Documentation CD".

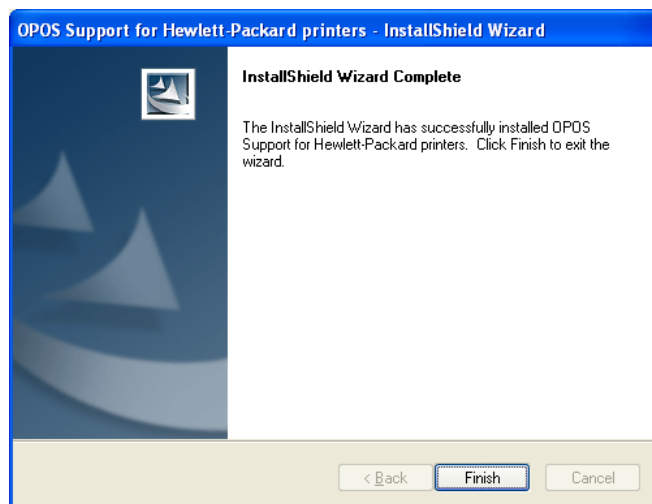
4. Select USB for the communication method.



5. Select the USB connection method (printer class is the default).



6. For the remaining option the default can be used until the installation is complete.



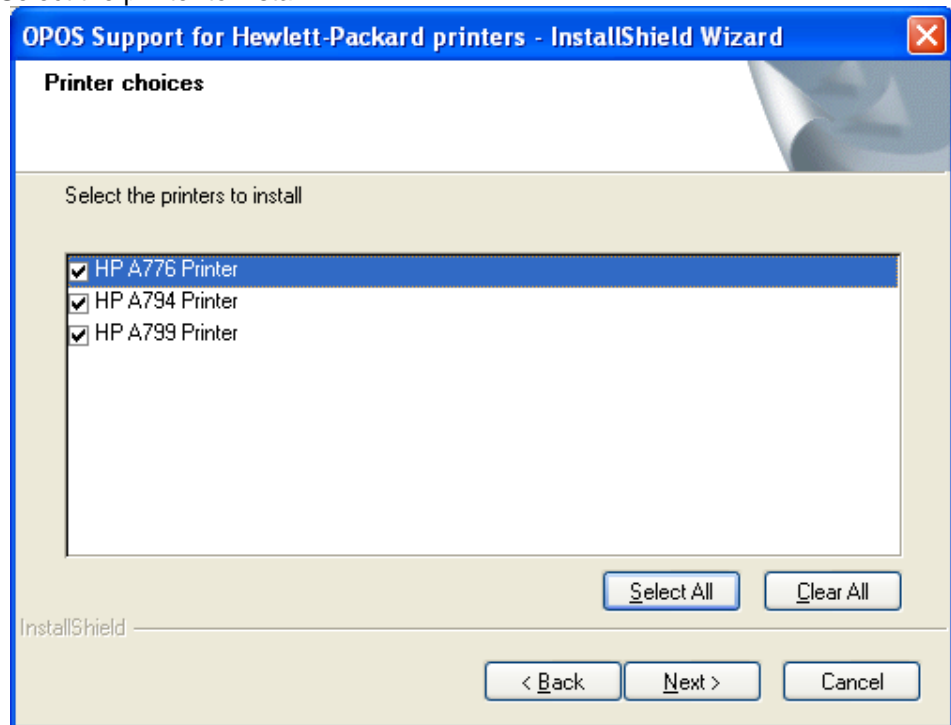
7.2.10.2 **OPOS Installation – Serial Port**

The following is overview of the steps to test the receipt printer followed by details steps:

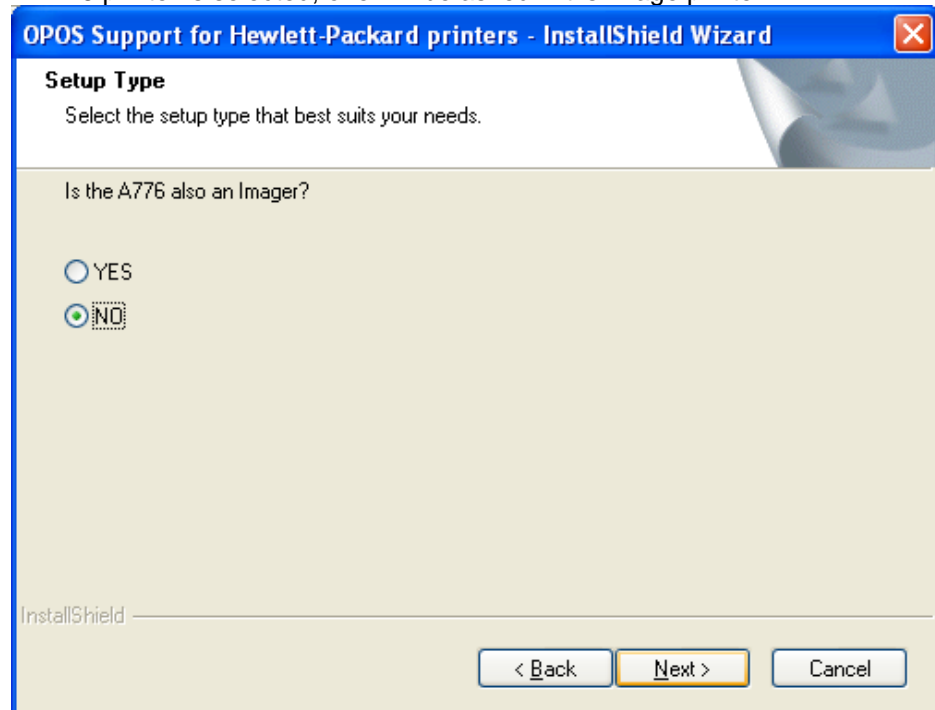
1. Start the HP Receipt printer OPOS executable.
2. Select the printer(s) to install.
3. Select YES or NO to install OPOS control object.
4. Select “Serial Communications” for the communication method.
5. Select the COM (serial) port that the printer is attached.
6. Select the baud rate for serial communications.
7. Select the parity for the serial communication.
8. Select the flow control.
9. For the remaining option the default can be used until the installation is complete.

Detail Steps

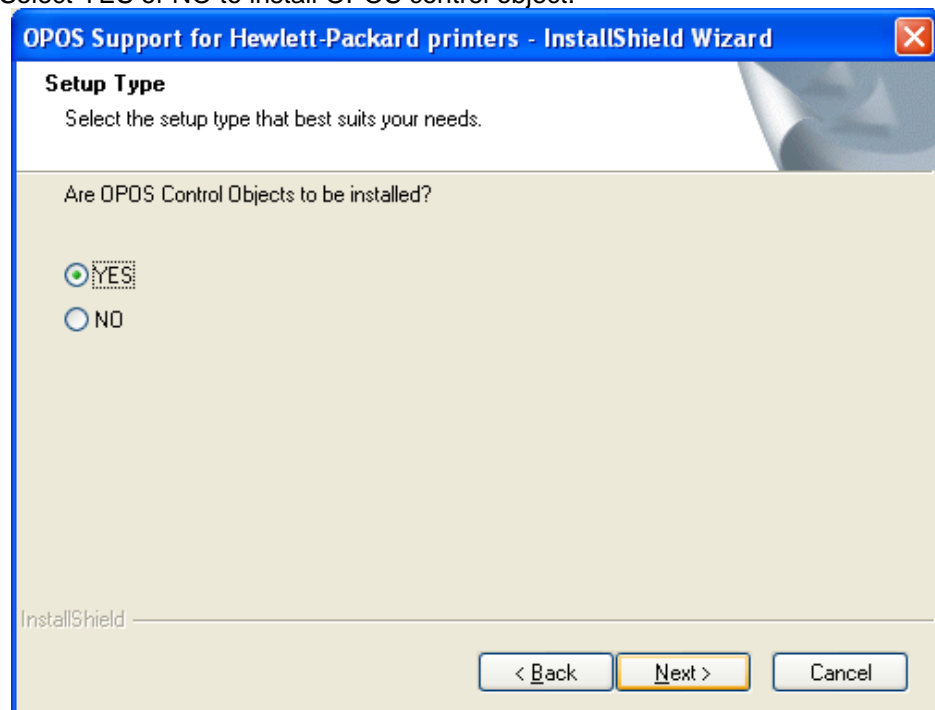
1. Start the HP Receipt printer OPOS executable.
2. Select the printer to install.



If A776 printer is selected, one will be asked if it is image printer.

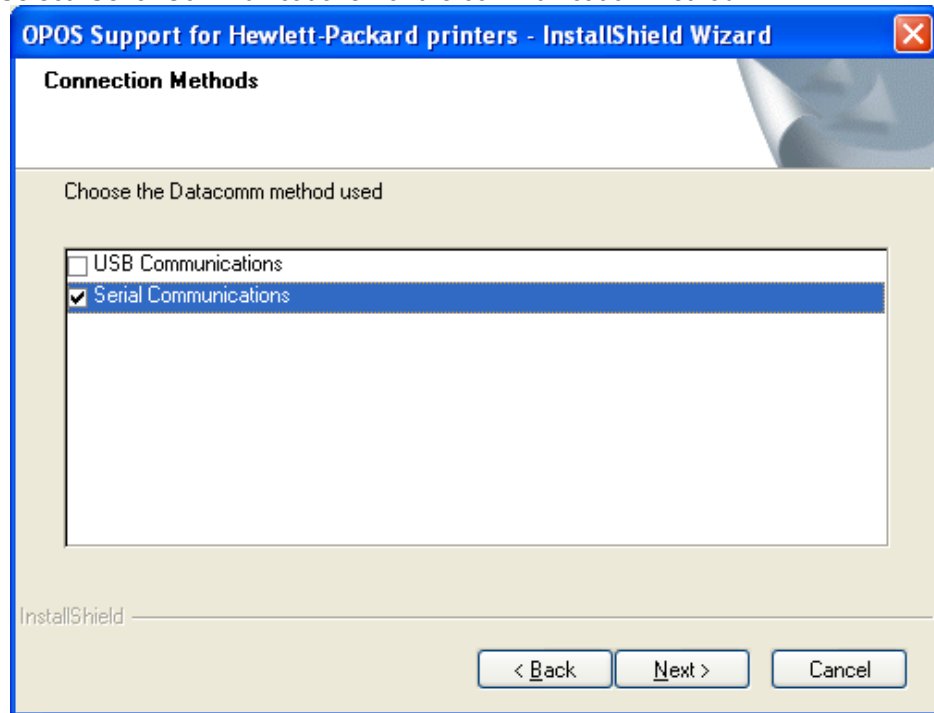


3. Select YES or NO to install OPOS control object.

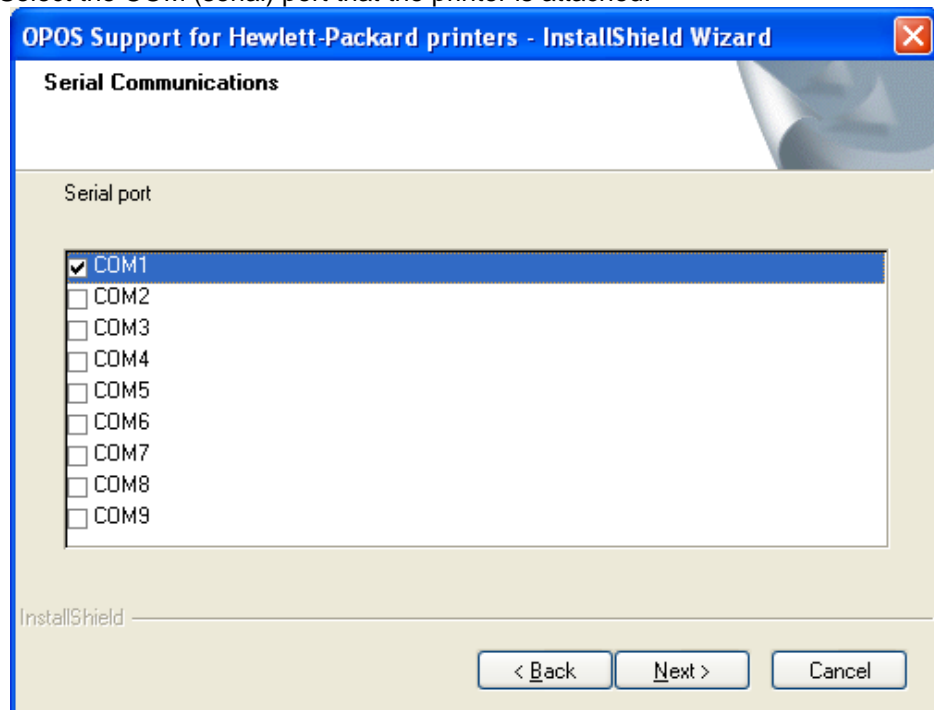


If "NO" is selected for "Are OPOS Control Objects to be installed?" please ensure the CCO driver package is installed prior to using the OPOS test program or a point of sale application. The CCO package can be found on the "HP Point of Sale System Software and Documentation CD".

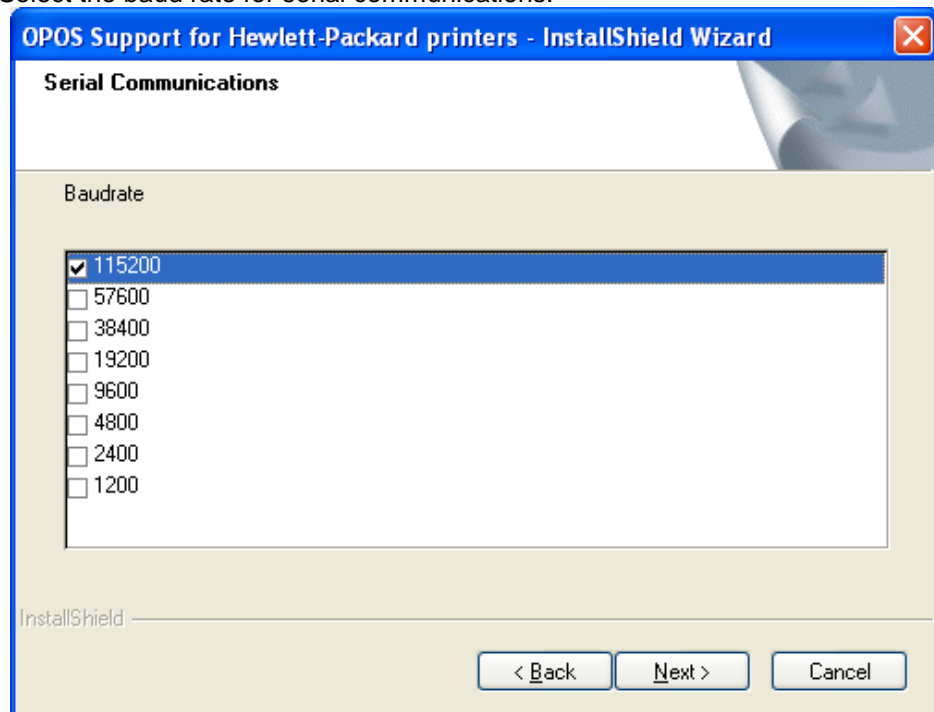
4. Select "Serial Communications" for the communication method.



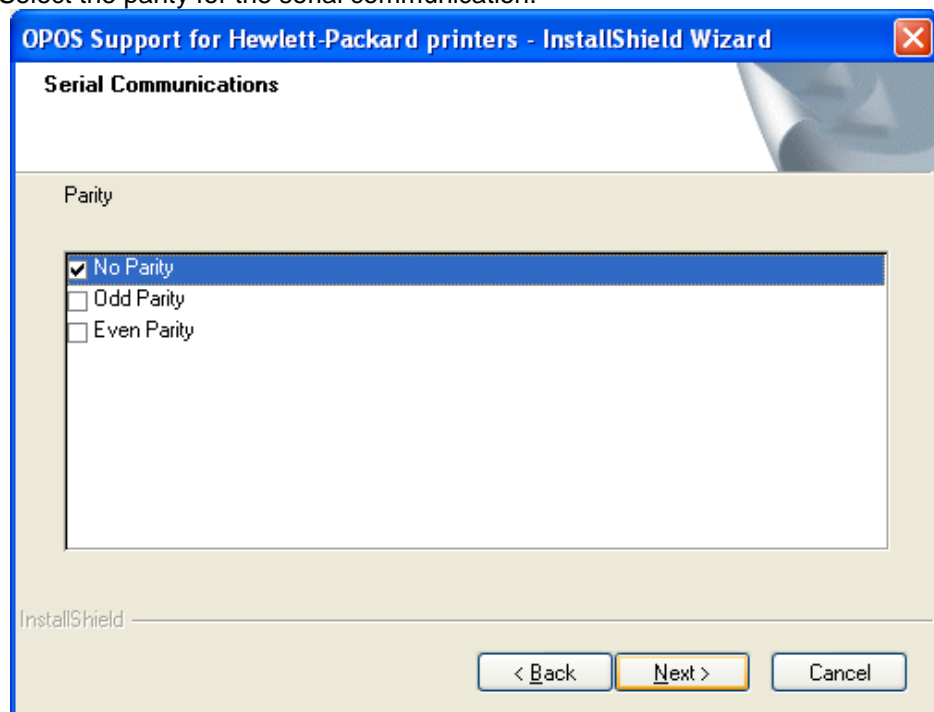
5. Select the COM (serial) port that the printer is attached.



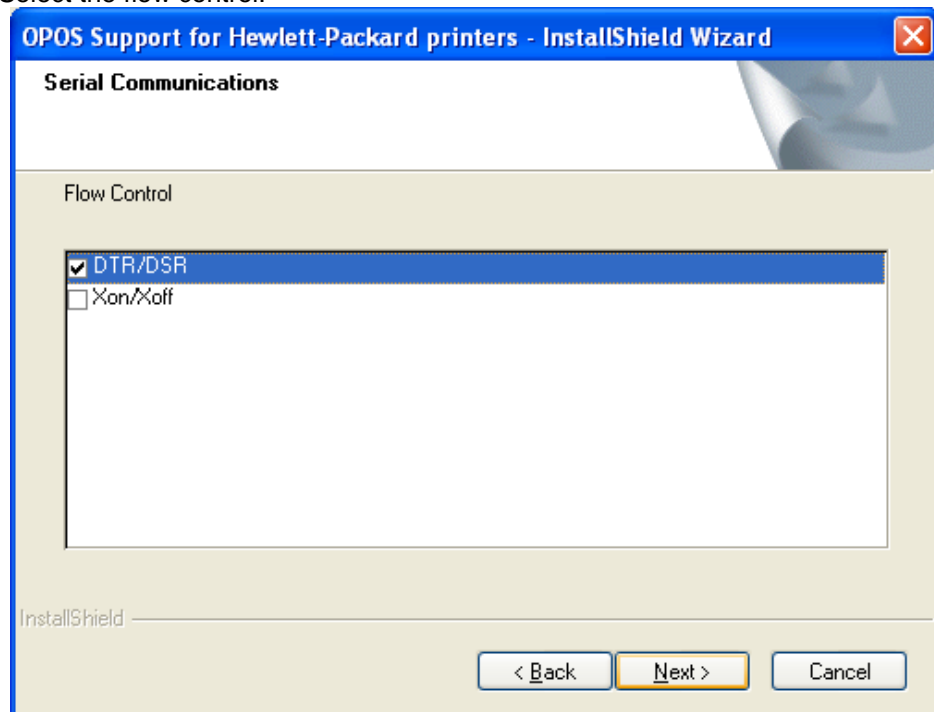
6. Select the baud rate for serial communications.



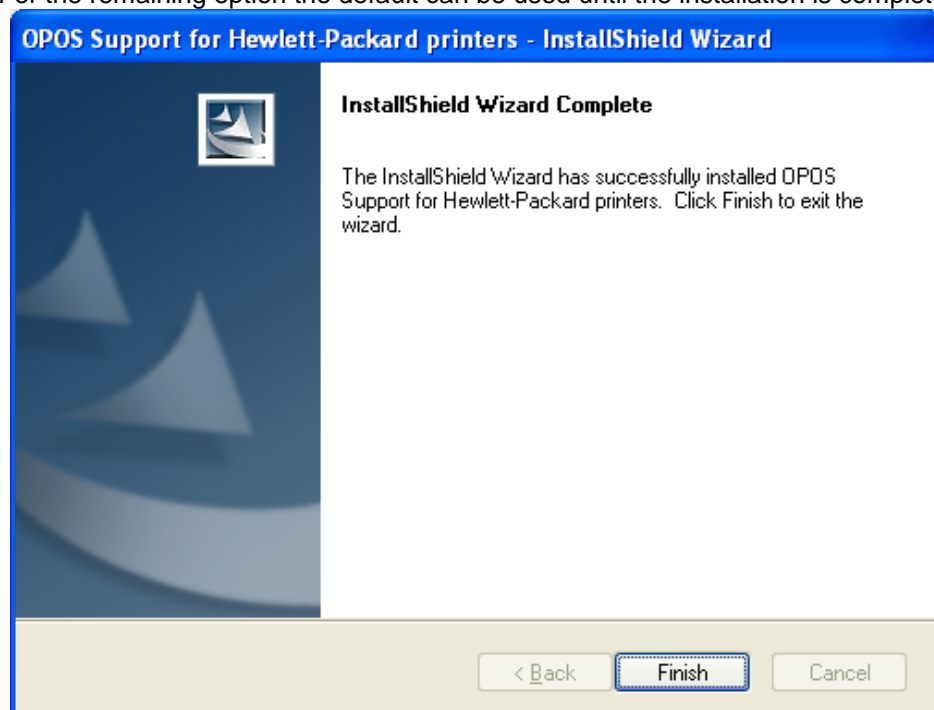
7. Select the parity for the serial communication.



8. Select the flow control.



9. For the remaining option the default can be used until the installation is complete.



7.2.10.3 OPOS Test Applet for the Receipt Printer

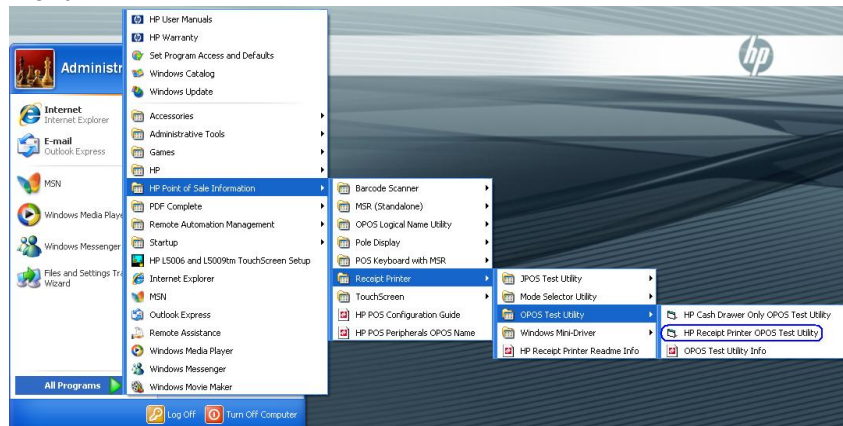
7.2.10.4 Receipt Printer and Cash Drawer Utility – Receipt Printer Testing

The following is overview of the steps to test the receipt printer followed by details steps:

1. Start the “Sample_OPOS_Application.EXE” that can be found in the start menu or in the program file folder.
2. Click “Printer”
3. Select printer from the drop down menu.
4. Click “Open Printer”
5. Click “Claim Printer”
6. Click “Enable Printer”
7. What is type in the sample text to print box will be sent and printed on the receipt printer when one clicks “PRINT”.
8. Click “Feed” to advance the paper in the receipt printer.
9. Click “Cut” to cut the receipt.
10. Exit the test application.

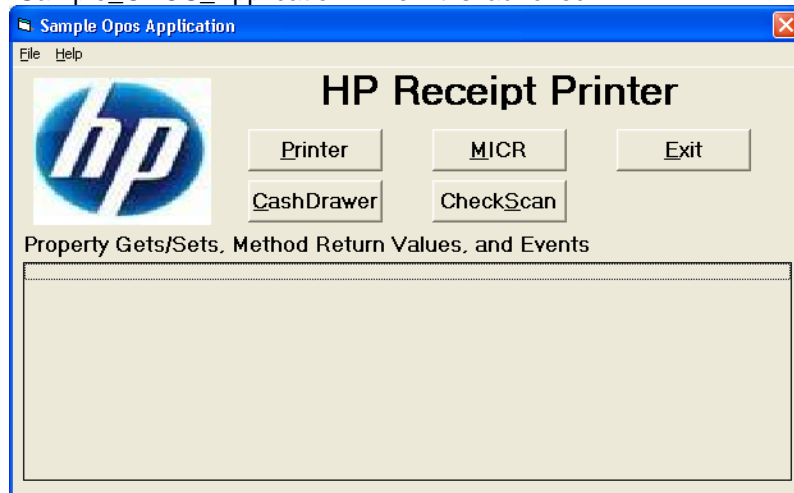
Detail Steps

1. Start the “Sample_OPOS_Application.EXE” that can be found in the start menu:



or in the “C:\xxxxxx\ Point of Sale\Receipt Printer\OPOS Test Utility” subfolder.

2. Click “Printer”. The following is the main GUI of the “Sample_OPOS_Application” when it is launched:



3. Select printer from the drop down menu.

The screenshot shows the 'Printer Examples' application window. It features a 'Device:' dropdown menu with a list containing 'A776', 'A794', and 'A799'. The 'A776' option is currently selected. Below the dropdown, there are several functional buttons organized into groups: 'Open', 'Claim Printer', 'Enable Printer', 'Disable Printer', 'Release Printer', 'Close Printer', 'End Insertion', 'Begin Removal', 'End Removal', 'Rotate Left', and 'Rotate Normal'. To the right of these buttons, there is a 'Select Station' section with radio buttons for 'Receipt', 'Slip', and 'Journal'. Below this, a text field displays the value '10000', followed by buttons for 'Print OPOS Properties' and 'Bitmap & BarCode Tests'. A checkbox labeled 'AsyncMode' is also present. Further down, there are buttons for 'Set Character Set' and 'Print Character Set'. Below these, a section titled 'Available Char Sets' contains radio buttons for 'Trad. Chinese CP 950', 'Simp. Chinese CP 936', 'Thai CP 874', 'Kanji (Japanese) CP 932', and 'Hangul (Korean) CP 949'. At the bottom of the window, there is a 'PRINT' button, an 'Add Asian Data' button, and buttons for 'Cut', 'Feed', and 'Clear'. A large text area contains the text 'Type something here\0a'. At the very bottom, there are checkboxes for 'Scanner' and 'Enable Power Notify', and a 'Close Form' button.

4. Click "Open Printer", in the main GUI one will receive status. If successful the status will say SUCCESS.

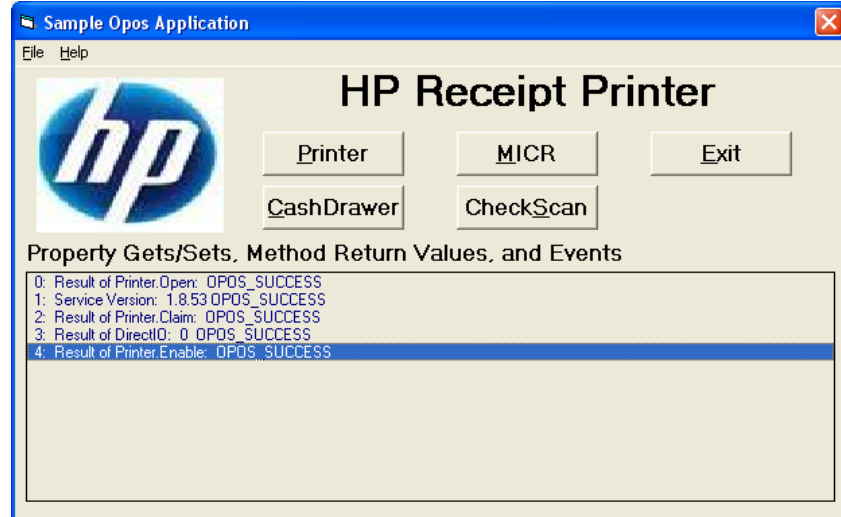
If failure occurs at this point make sure the printer is plugged in and the LED is on solid and the OPOS drivers are installed on the computer.

5. Click "Claim Printer", in the main GUI one will receive status. If successful the status will say SUCCESS.

If failure occurs at this point confirm that the CCO 1.9 (or later) files are installed on this unit. If the CCO file needs to be installed they can be found on the "HP Point of Sale System Software and Documentation CD". On the HP POS factory image the CCO installation package can be found at the following location "C:\xxxxx\Point of Sale\Common Control Object (CCO)" sub-directory.

6. Click "Enable Printer", in the main GUI one will receive status.

If successful the status will say SUCCESS as shown below for "Open Printer" / "Claim Printer" / Enable Printer".



7. What is typed in the sample text to print box will be sent to the printer to be printed on the receipt printer when one clicks on “PRINT” button.

Printer Examples

Device: A799

Open Printer
Claim Printer
Enable Printer

Begin Insertion
End Insertion
Begin Removal
End Removal

Disable Printer
Release Printer
Close Printer

Rotate Left
Rotate Normal

Select Station
☒ Receipt
☐ Slip
☐ Journal

10000

Print OPOS Properties

Bitmap & BarCode Tests

☐ AsyncMode

Set Character Set

Print Character Set

Available Char Sets

☒ Trad. Chinese CP 950
☐ Simp. Chinese CP 936
☐ Thai CP 874

☐ Kanji (Japanese) CP 932
☐ Hangul (Korean) CP 949

PRINT

Add Asian Data

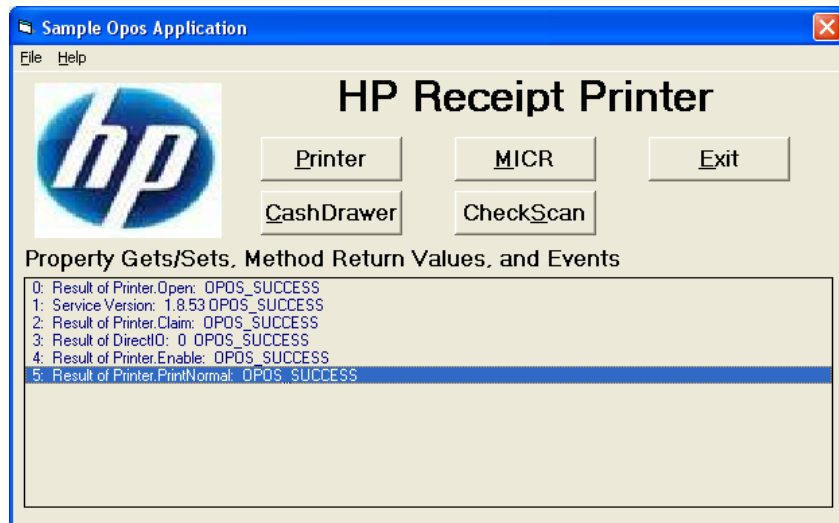
Print Data

Cut Feed Clear

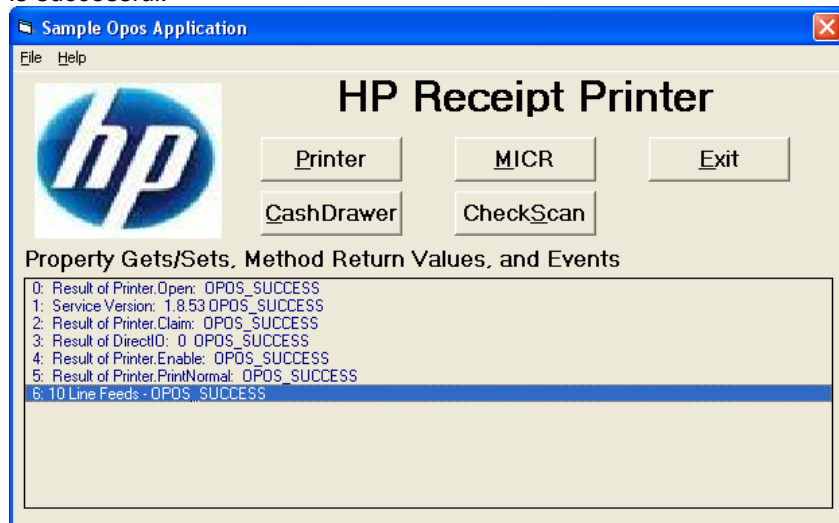
Type something here\0a

☐ Scanner ☐ Enable Power Notify

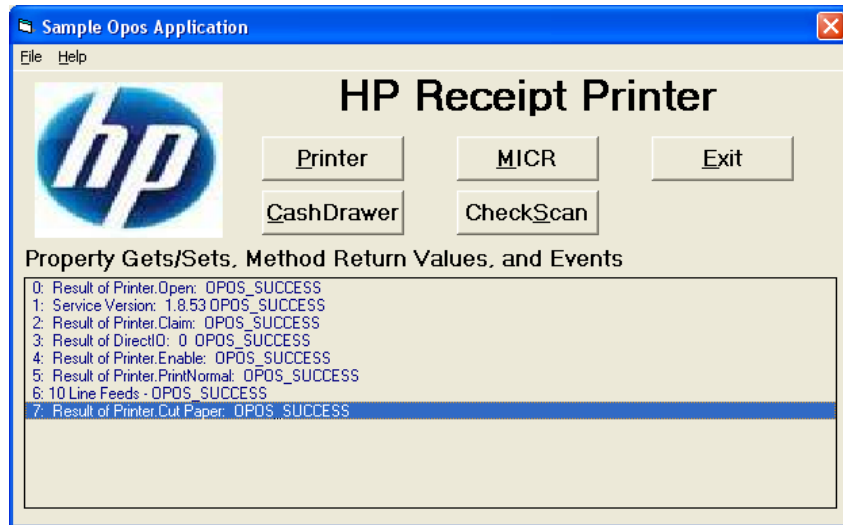
Close Form



8. Click “Feed” to advance the paper 10 line feed that is in the receipt printer. In the GUI success status should appear after the “Feed” button is successful:

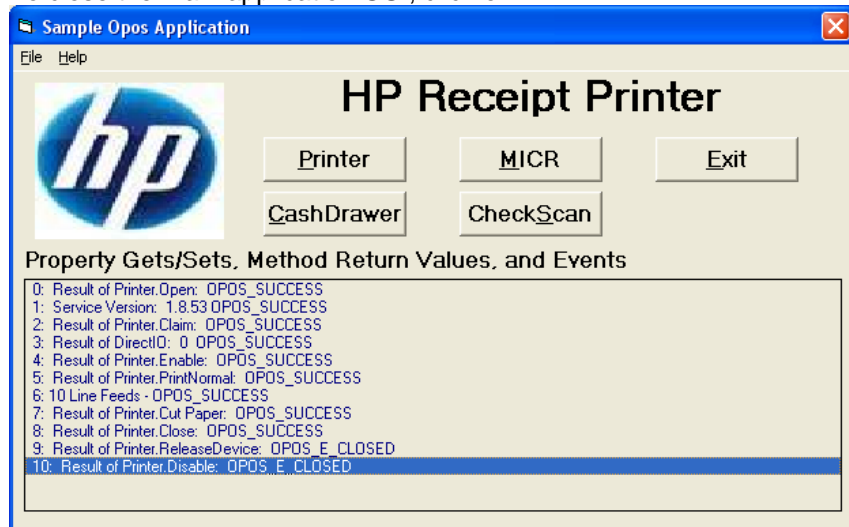


9. Click “Cut” to cut the receipt. In the GUI success status should appear after the “Cut” button is successful:



10. To exit the application clicking on “DISABLE PRINTER” / “Release Printer” / “Close Printer” and “Close Form”.

11. To close the main application GUI, click on EXIT.



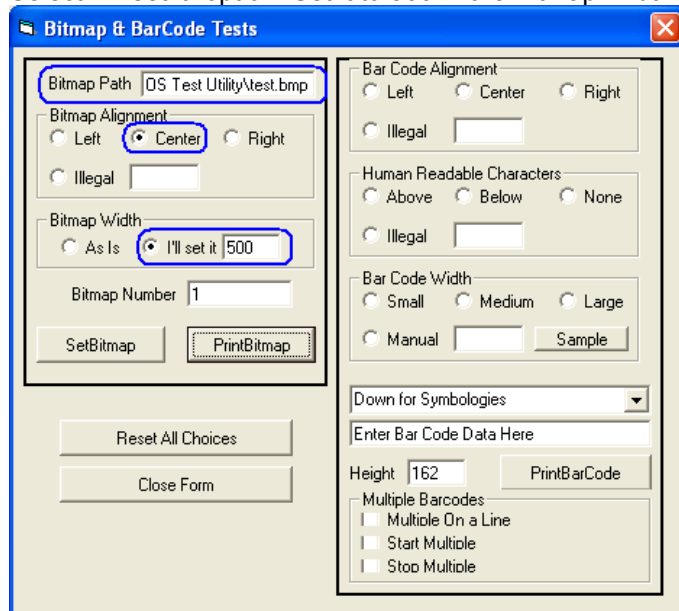
7.2.10.5 Bitmap / Barcode Testing

1. The following are the steps to test bitmap or barcode on the receipt printer:

- If you have not enabled the printer, please complete steps in the previous section.
- Click on “Bitmap & Barcode Tests”

Bitmap

- There are three test bitmaps (GRID.BMP / HP.BMP / TEST.BMP) that can be used. These bitmaps are located in the “C:\xxxxx\Point of Sale\Receipt Printer\OPOS Test Utility.”
- Select the bitmap alignment (left / center / right).
- Select “I’ll set it” option. Set it to 500 in the Bitmap Width.



- Click on “PrintBitmap” button. The printer should have printed the selected bitmap.

Bitmap & BarCode Tests

Bitmap Path:

Bitmap Alignment:
☐ Left ☒ Center ☐ Right
☐ Illegal

Bitmap Width:
☐ As Is ☒ I'll set it:

Bitmap Number:

Bar Code Alignment:
☐ Left ☐ Center ☐ Right
☐ Illegal

Human Readable Characters:
☐ Above ☐ Below ☐ None
☐ Illegal

Bar Code Width:
☐ Small ☐ Medium ☐ Large
☐ Manual

Down for Symbolologies:

Enter Bar Code Data Here:

Height:

Multiple Barcodes:
☐ Multiple On a Line
☐ Start Multiple
☐ Stop Multiple

- v. Click on "CLOSE FORM" button.

- vi. Click on DISABLE PRINTER / RELEASE PRINTER / CLOSE PRINTER and CLOSE FORM button.

Printer Examples

Device: A799

Open Printer
Claim Printer
Enable Printer
Disable Printer
Release Printer
Close Printer

Begin Insertion
End Insertion
Begin Removal
End Removal
Rotate Left
Rotate Normal

Select Station
☒ Receipt
☐ Slip
☐ Journal
10000
Print OPDS Properties
Bitmap & BarCode Tests
☐ AsyncMode

Set Character Set
Print Character Set

Available Char Sets

☒ Trad. Chinese CP 950
☐ Kanji (Japanese) CP 932
☐ Simp. Chinese CP 936
☐ Hangul (Korean) CP 949
☐ Thai CP 874

PRINT
Add Asian Data
Cut Feed Clear

Print Data
Type something here\0a

☐ Scanner ☐ Enable Power Notify
Close Form

Barcode

- i. Select the bar code alignment (left / center / right).
- ii. Select "Human Readable Characters" (Above / Below / None).
- iii. Select Bar Code Width (Small / Medium / Large)
- iv. Select Interleaved 2 of 5 in the drop down box.
- v. Type in the text.
- vi. Click on "PrintBarCode". The printer should have printed the barcode.

7.2.10.6 Receipt Printer and Cash Drawer Utility – Cash Drawer Testing

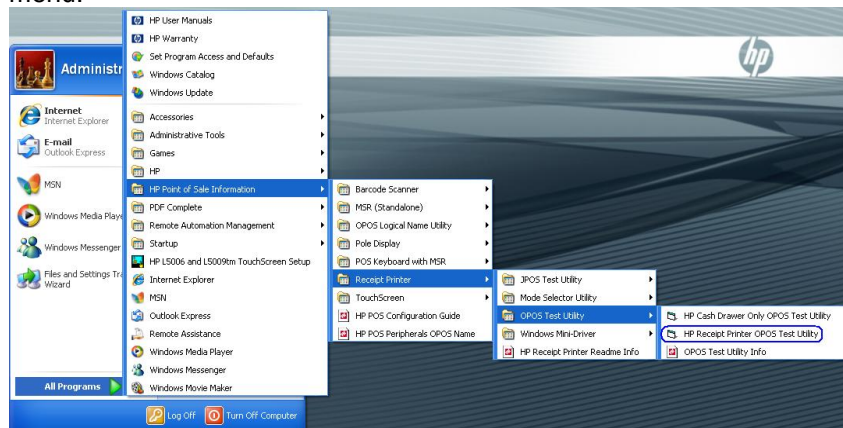
The following is an overview of the steps to test the cash drawer followed by details steps:

1. Start the "Sample_OPOS_Application.EXE" that can be found in the start menu or in the program file folder.
2. Click "CashDrawer"
3. Select correct device name for the cash drawer to be tested.
4. Click "OPEN"
5. Click "ENABLE"
6. Click "OPEN Drawer" and the cash drawer should open. The GUI should also show status that the cash drawer is open.
7. Close the cash drawer and the GUI should give the status that the cash drawer is closed.
8. Exit the test application.

Detail Steps

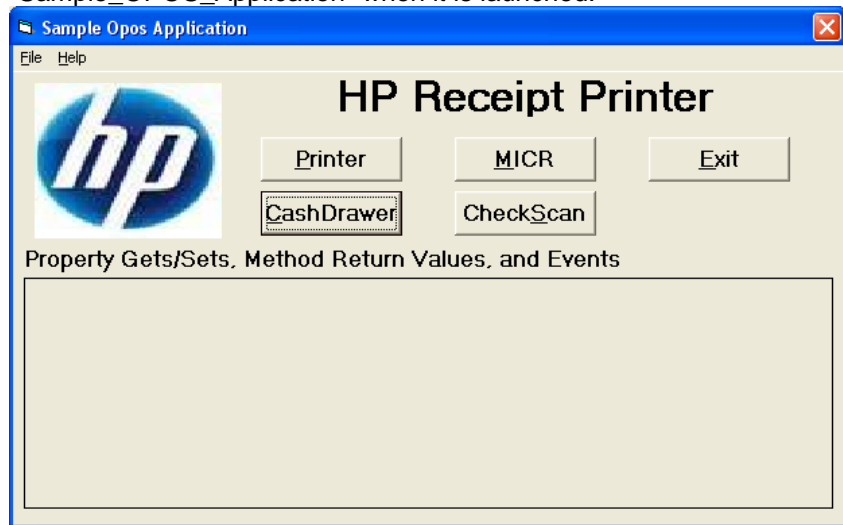
Starting the OPOS printer sample application

1. Start the “Sample_OPOS_Application.EXE” that can be found in the start menu:

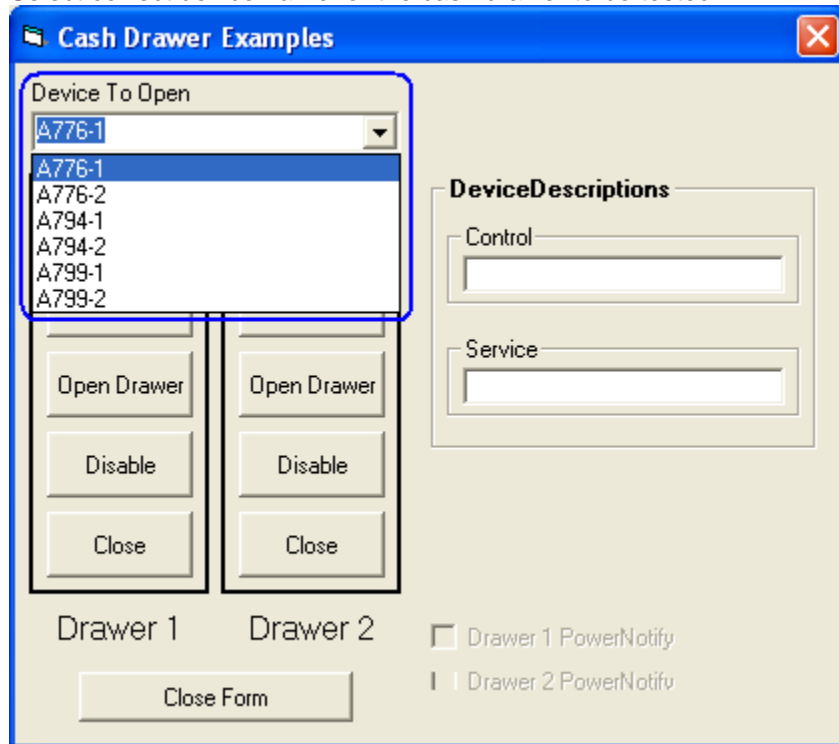


or in the “C:\xxxxxx\ Point of Sale\Receipt Printer\OPOS Test Utility” subfolder.

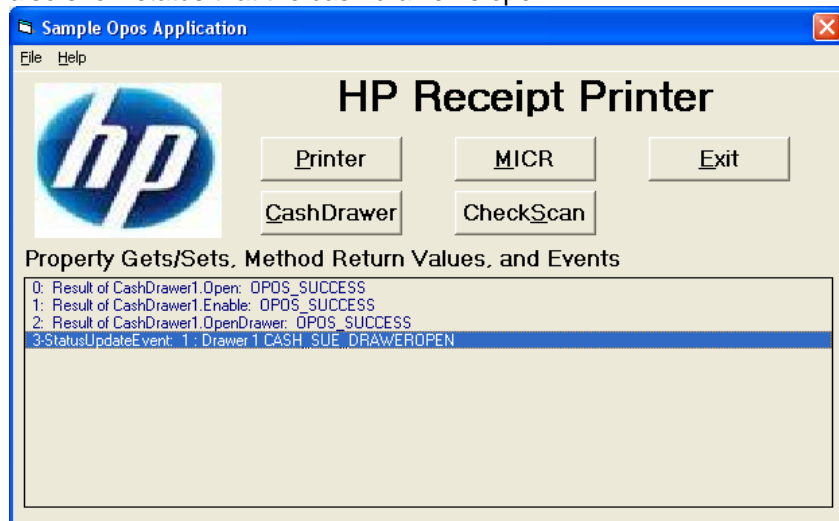
2. Click “CashDrawer”. The following is the main GUI of the “Sample_OPOS_Application” when it is launched:



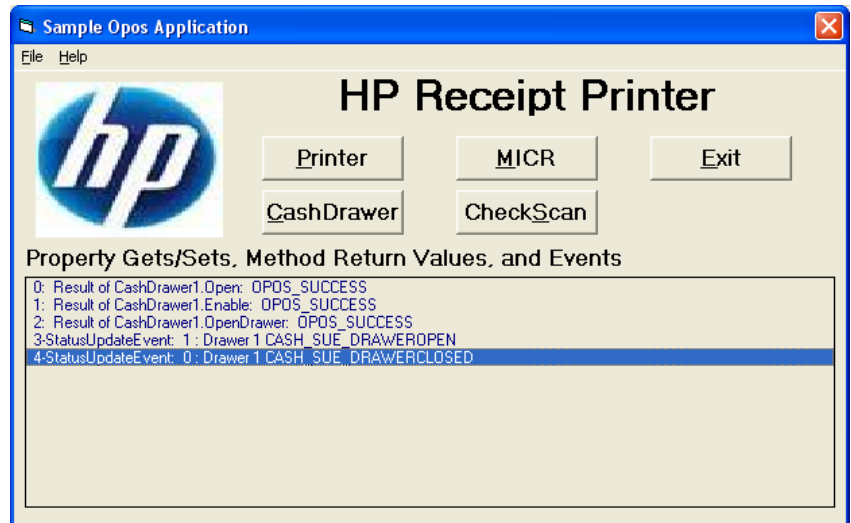
3. Select correct device name for the cash drawer to be tested.



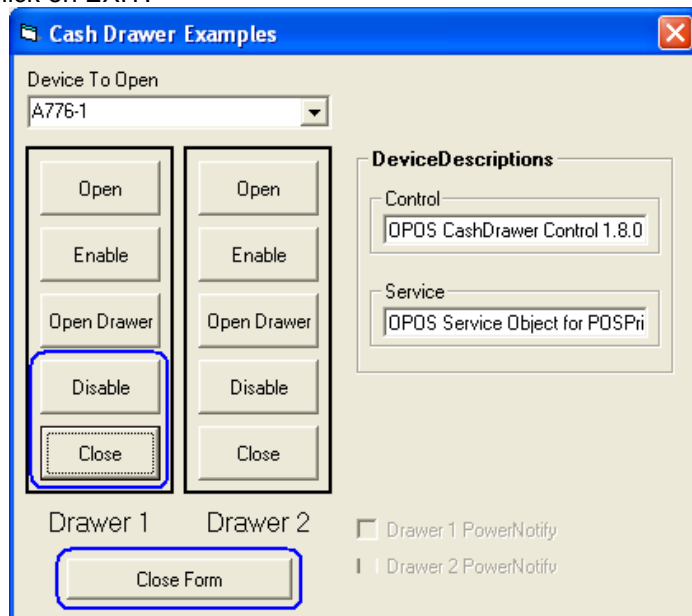
4. Click "OPEN"
5. Click "ENABLE"
6. Click "OPEN Drawer" and the cash drawer should open. The GUI should also show status that the cash drawer is open.

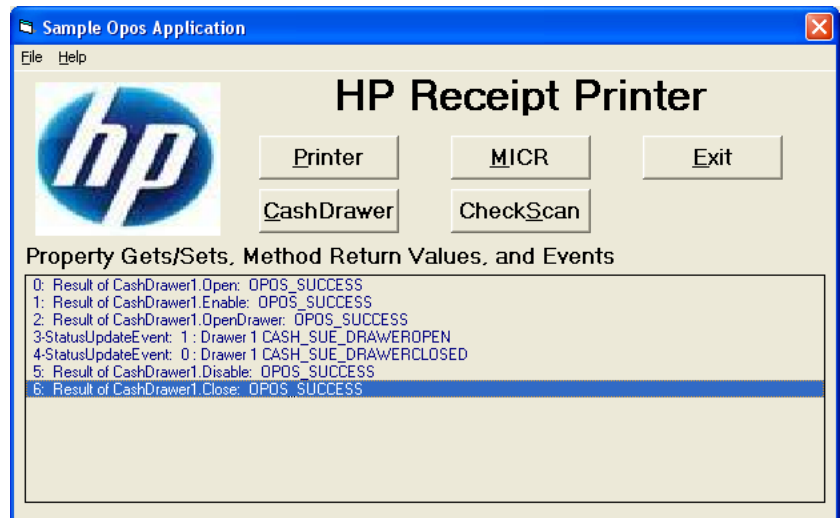


7. Close the cash drawer and the GUI should give the status that the cash drawer is closed.



8. Exit the test utility the clicking on DISABLE/CLOSE/CLOSE FORM and then click on EXIT.





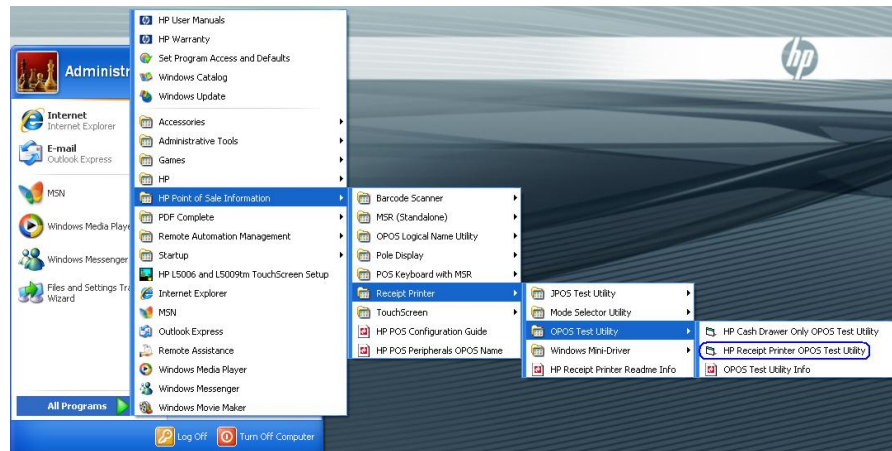
7.2.11 **OPOS Test Applet for the MICR**

The following is overview of the steps to test the receipt printer followed by details steps:

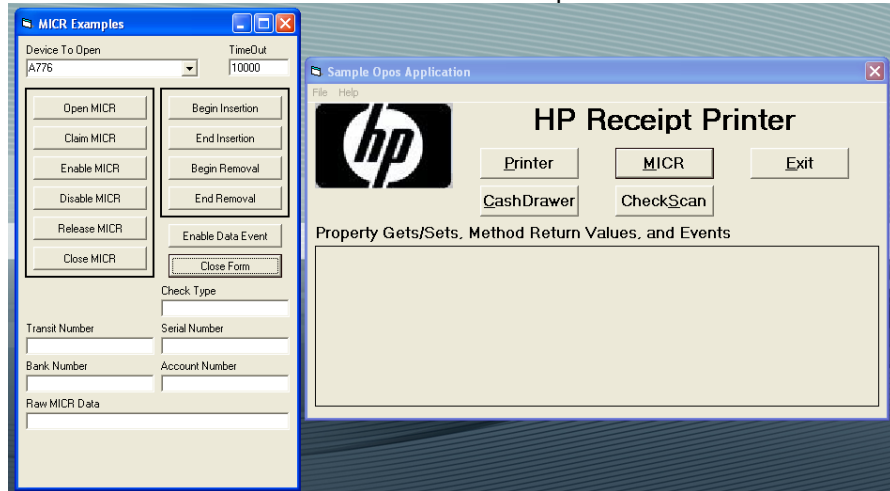
1. Start the "Sample_OPOS_Application.EXE".
2. Click the "MICR" button.
3. Click the "Open MICR" button.
4. Click the "Claim MICR" button.
5. Click the "Enable MICR" button.
6. Insert the check in the front of the printer until the front LED comes on.
7. Click the "Begin Insertion" button.
8. Click the "End Insertion" button. At this point the printer will perform the MICR operation; the document should come out the front and then will be returned back to the bottom portion of the printer.
9. Click the "Enable Data Event". The data from the check scan should appear in the bottom of the GUI.
10. Click on "Begin Removal" and remove the check from the printer when it has been ejected.
11. Click on "End Removal" button.
12. Close the MICR.
13. Close the form.

Detail Steps

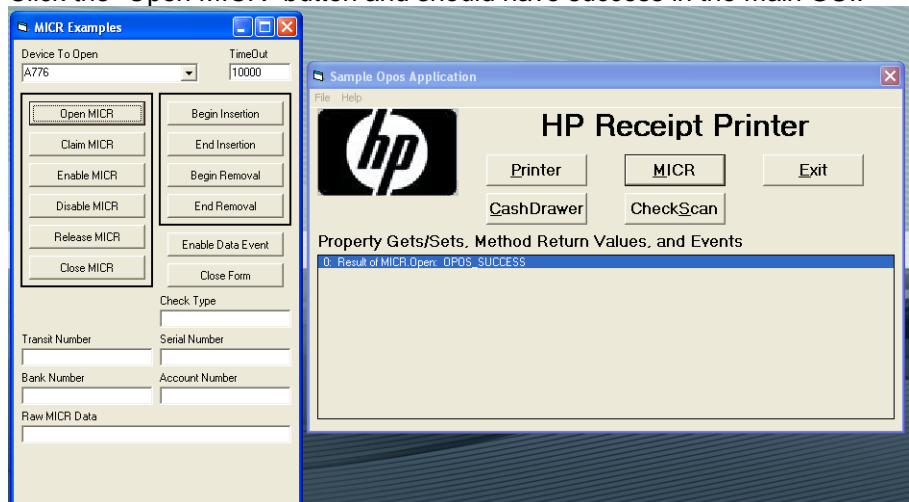
1. Start the "Sample_OPOS_Application.EXE" that can be found in the start menu or in the "C:\xxxxxx\ Point of Sale\Receipt Printer\OPOS Test Utility" subfolder.



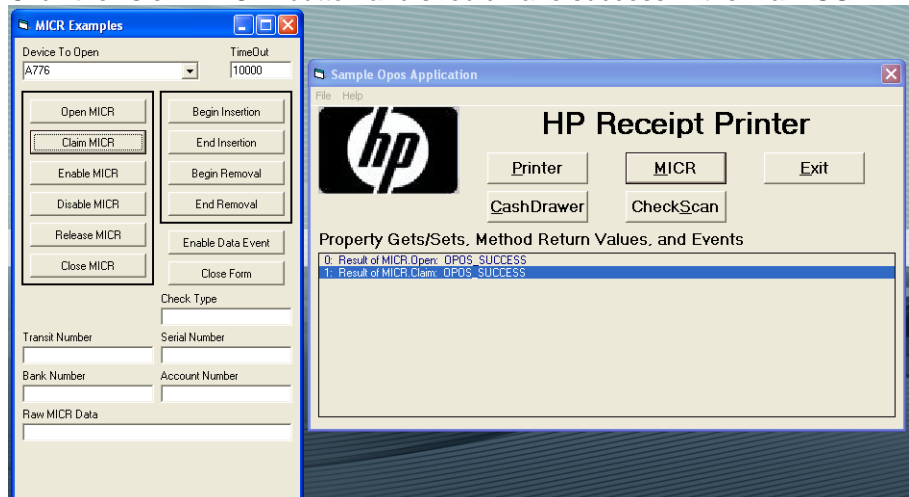
2. Click the “MICR” button and another GUI will open as shown below:



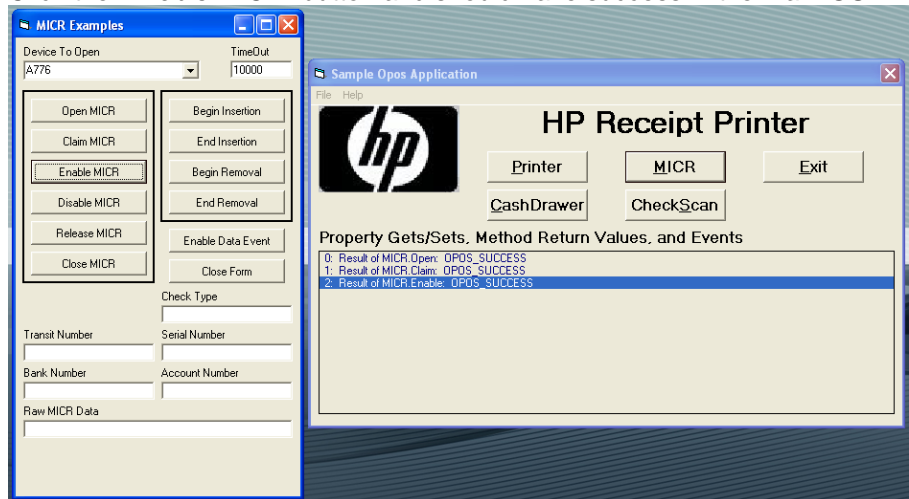
3. Click the “Open MICR” button and should have success in the main GUI:



4. Click the “Claim MICR” button and should have success in the main GUI:

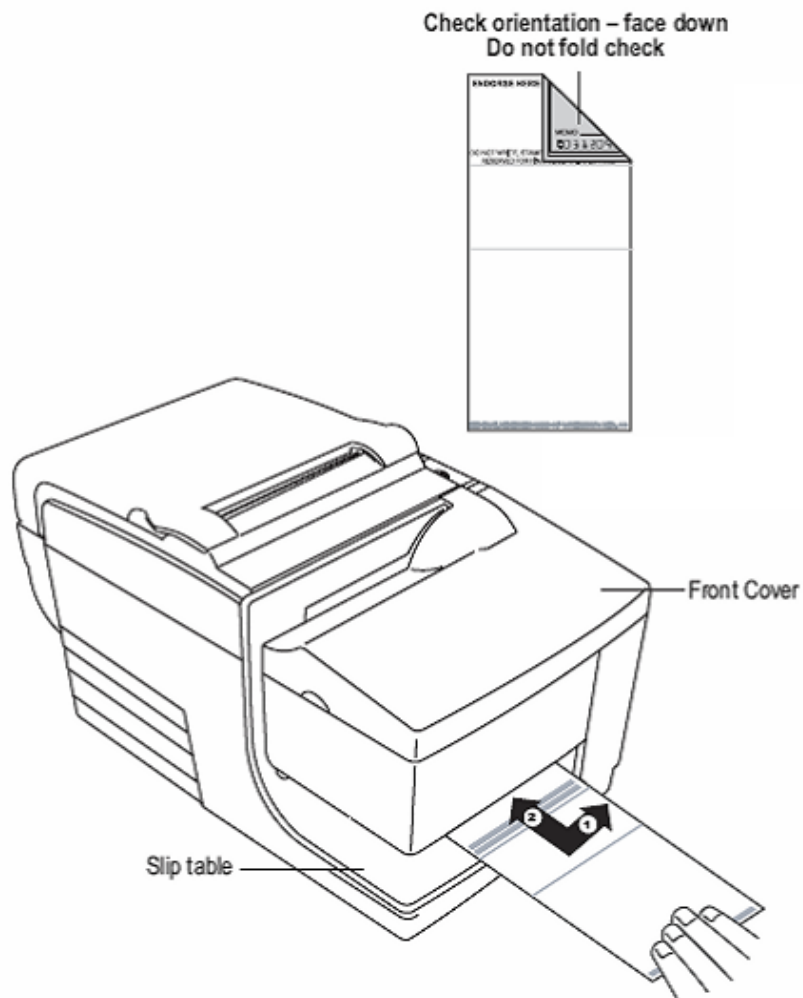


- Click the “Enable MICR” button and should have success in the main GUI.

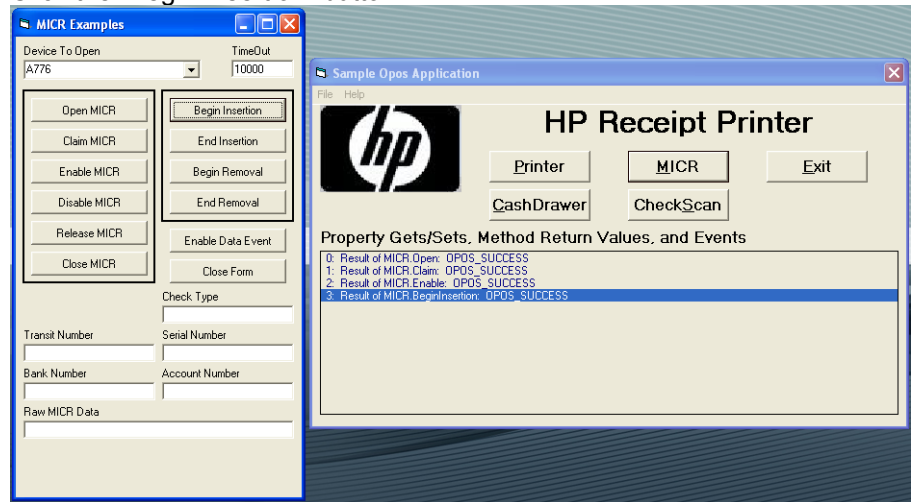


If one receives a message stating “NO Hardware” and the LED is blinking on the printer, please ensure that there is not a paper jam.

- Insert the check in the front of the printer until the front LED comes on.

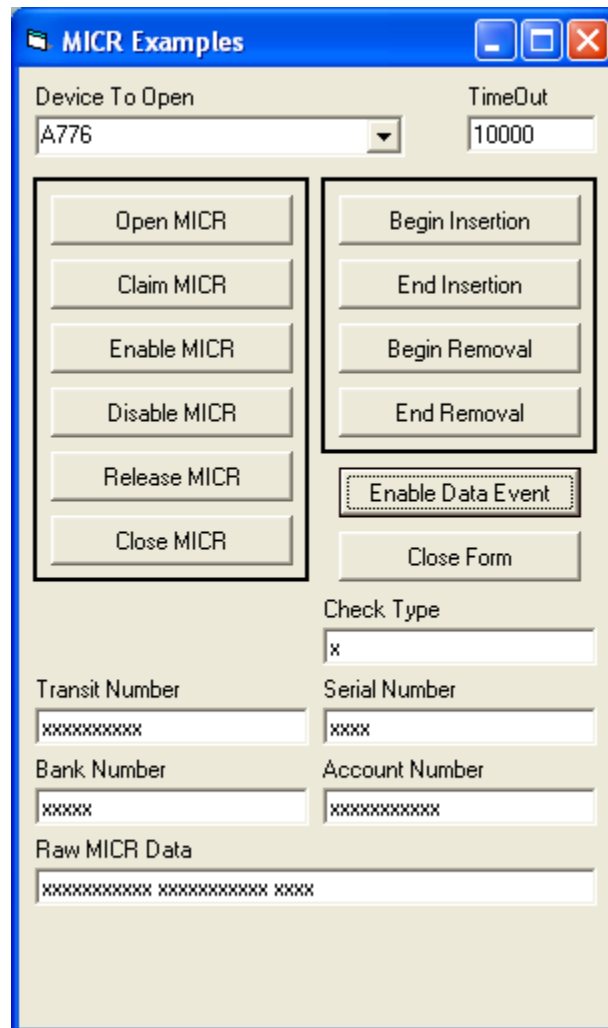
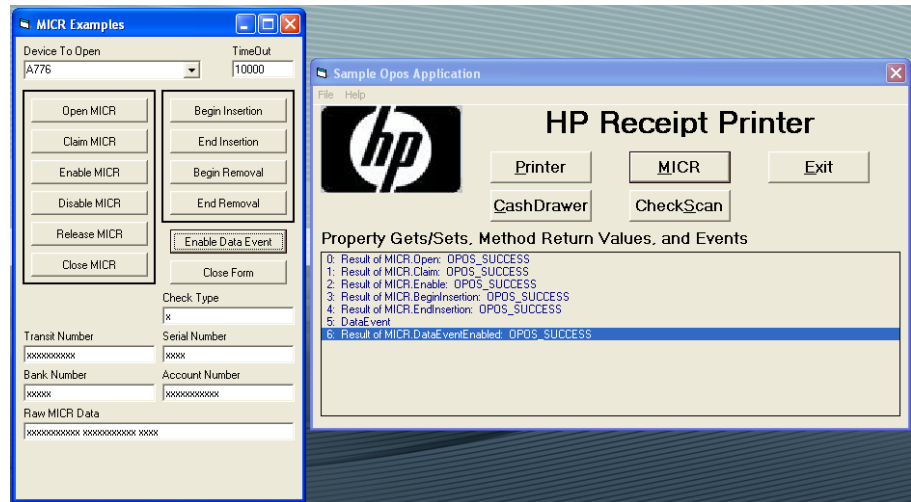


7. Click the “Begin Insertion” button.



8. Click the “End Insertion” button. At this point the printer will perform the MICR operation; the document should come out the front and then will be returned back to the bottom portion of the printer.

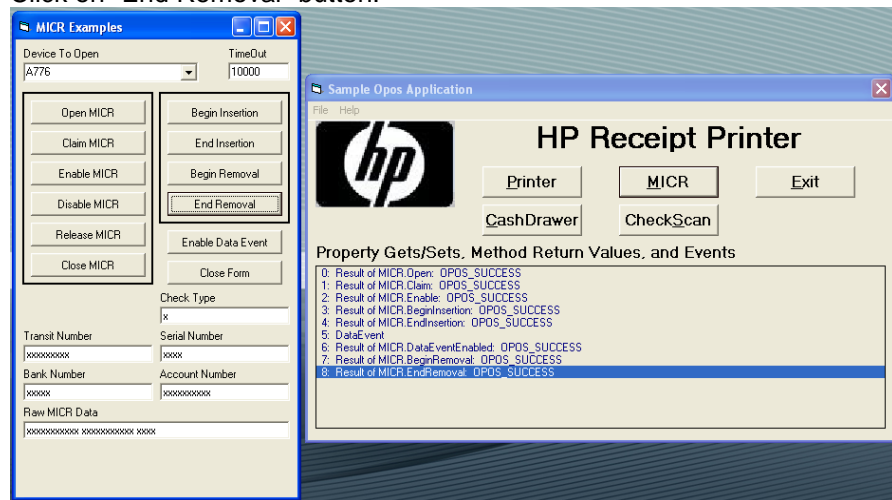
9. Click the “Enable Data Event”. The data from the MICR should appear in the bottom of the GUI.



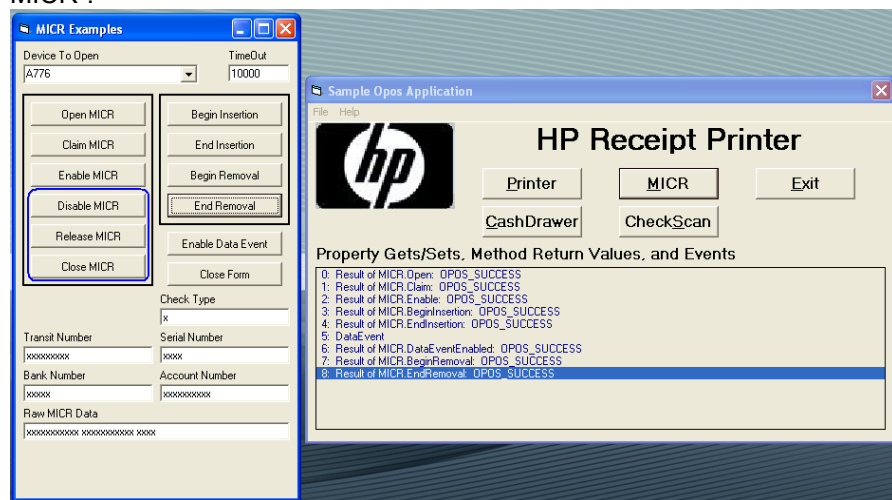
Note in the above example the actual number have been replaced the “x”.

10. Click on "Begin Removal" and remove the check from the printer when it has been ejected.

11. Click on "End Removal" button.



12. To exit the application "Disable the MICR" / "Release the MICR" / "Close the MICR".



13. Click on “Close Form” button.

The screenshot shows a Windows-style application window titled "MICR Examples". At the top, there are standard window controls (minimize, maximize, close). Below the title bar, there are two fields: "Device To Open" with a dropdown menu showing "A776" and "TimeOut" with a text box containing "10000". The main area of the window is divided into two columns of buttons. The left column contains: "Open MICR", "Claim MICR", "Enable MICR", "Disable MICR", "Release MICR", and "Close MICR". The right column contains: "Begin Insertion", "End Insertion", "Begin Removal", "End Removal", "Enable Data Event" (which has a dashed border), and "Close Form" (which is highlighted with a red rectangle). Below the buttons, there are several input fields: "Check Type" with a text box containing "x", "Transit Number" with a text box containing "xxxxxxxx", "Serial Number" with a text box containing "xxxx", "Bank Number" with a text box containing "xxxxx", and "Account Number" with a text box containing "xxxxxxxxxxx". At the bottom, there is a label "Raw MICR Data" followed by a text box containing "xxxxxxxxxx xxxxxxxxxxxx xxxxx".

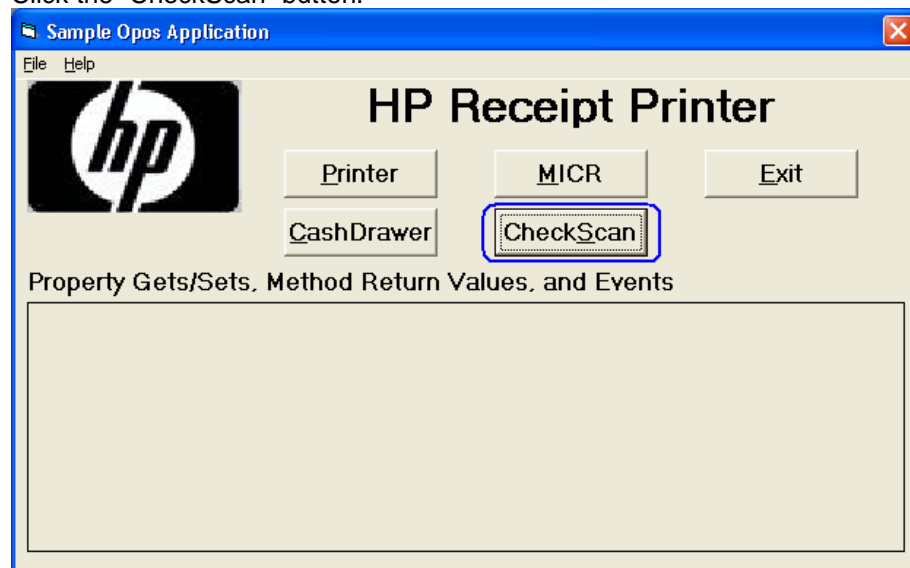
7.2.12 **OPOS Test Applet for the CheckScan**

The following is overview of the steps to test the receipt printer followed by details steps:

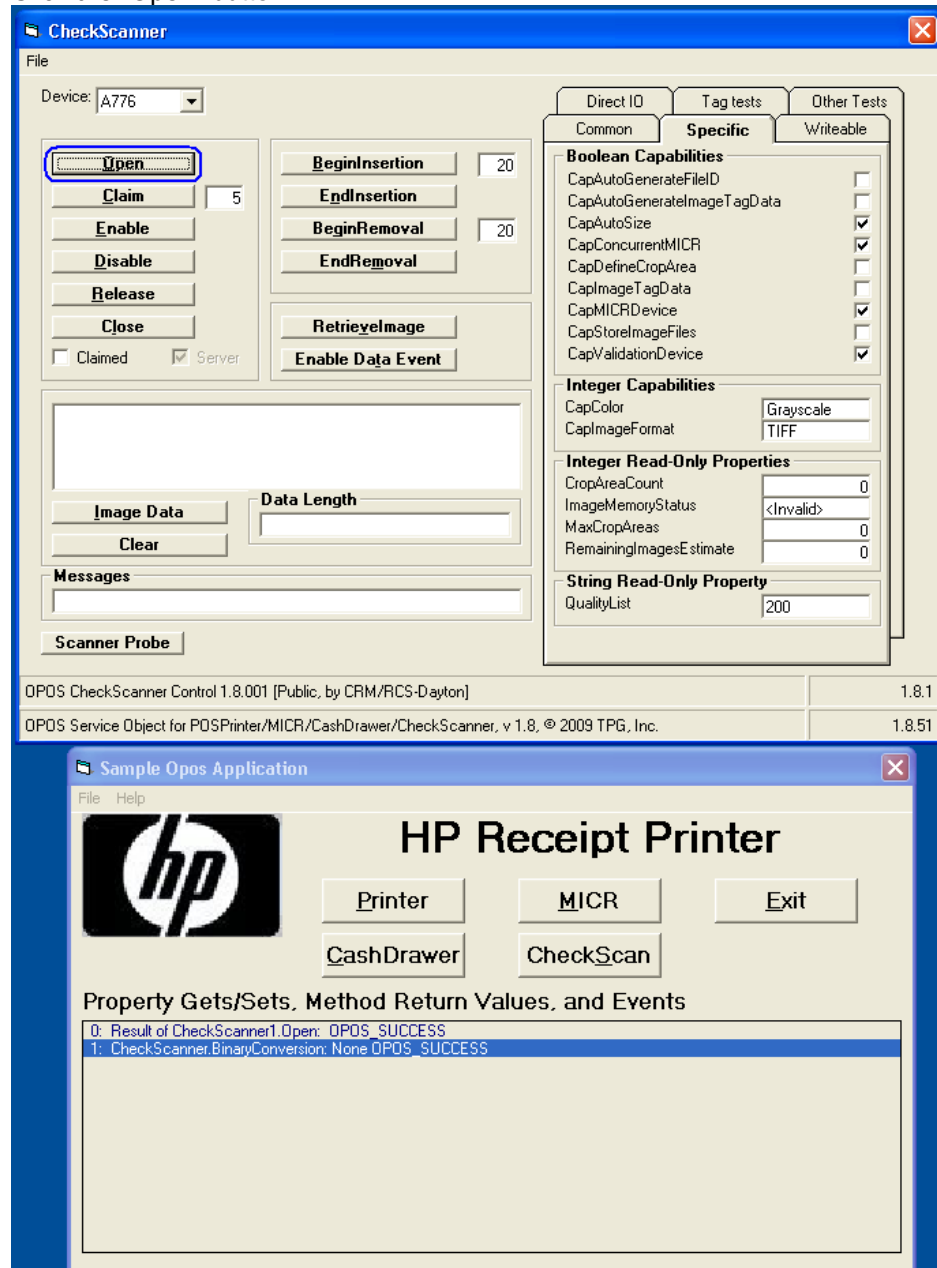
1. Start the "Sample_OPOS_Application.EXE".
2. Click the "CheckScan" button.
3. Click the "Open" button.
4. Click the "Claim" button.
5. Click the "Enable" button.
6. Click the "Begin Insertion" button. You should hear a click noise from the printer.
7. Insert the check face up in the front of the printer until the front LED comes on.
8. Click the "End Insertion" button. At this point the printer will perform the "CheckScan" operation; the document should come out the front and then will be returned back to the bottom portion of the printer.
9. Click the "Enable Data Event" button.
10. Click the "Retrieve Image" button.
11. Click on "SAVE AS" under "FILE" to save the image that was captured. Save the file with "TIF" extension. After the file is save in the message box will state "File Written".
12. Click on "BEGINREMOVAL" button.
13. Click on "EndREMOVAL" button.
14. Close the "CheckScan".
15. Close the form.

Detail Steps

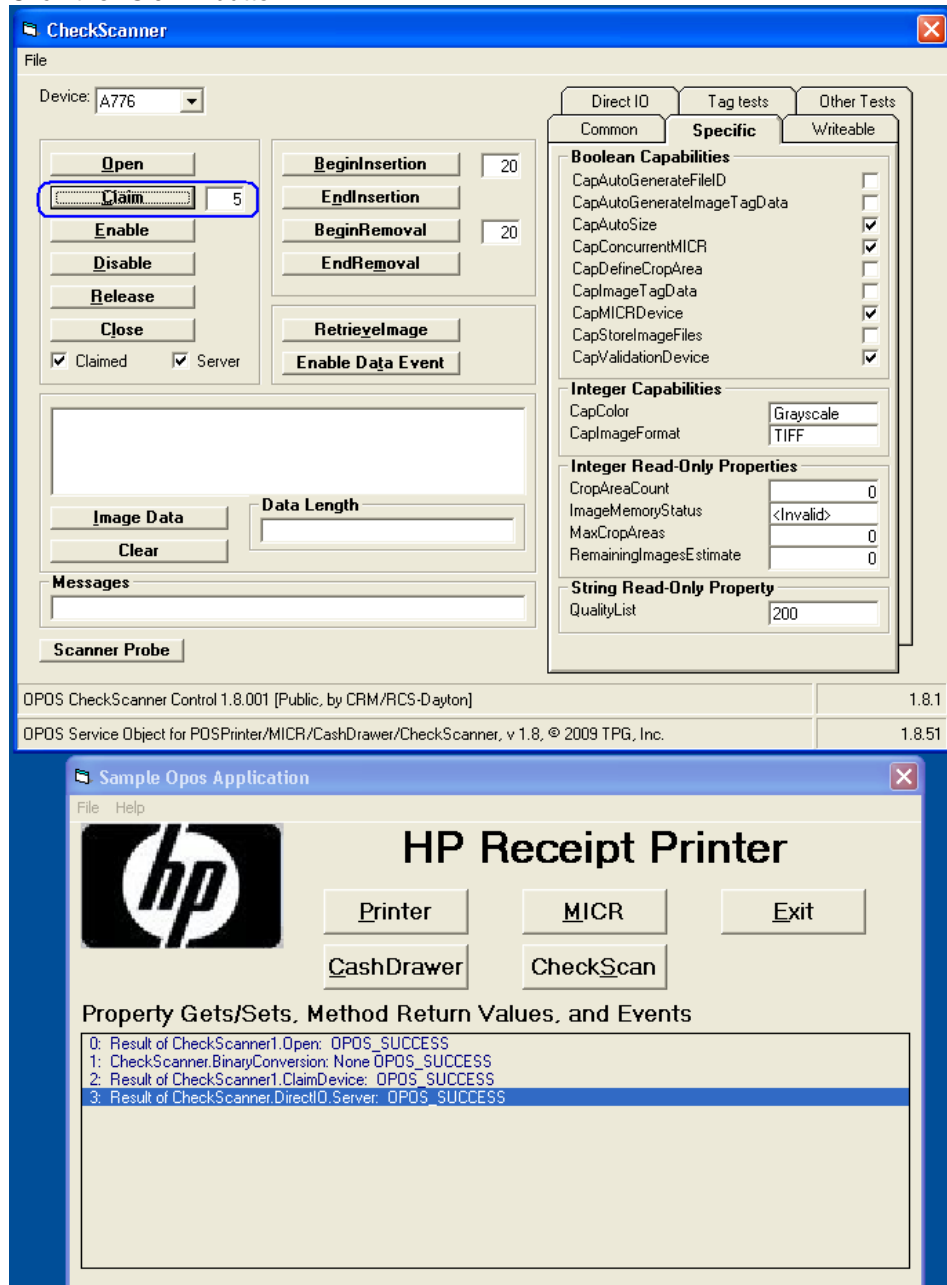
1. Start the "Sample_OPOS_Application.EXE" that can be found in the start menu or in the "C:\xxxxxx\ Point of Sale\Receipt Printer\OPOS Test Utility" subfolder.
2. Click the "CheckScan" button.



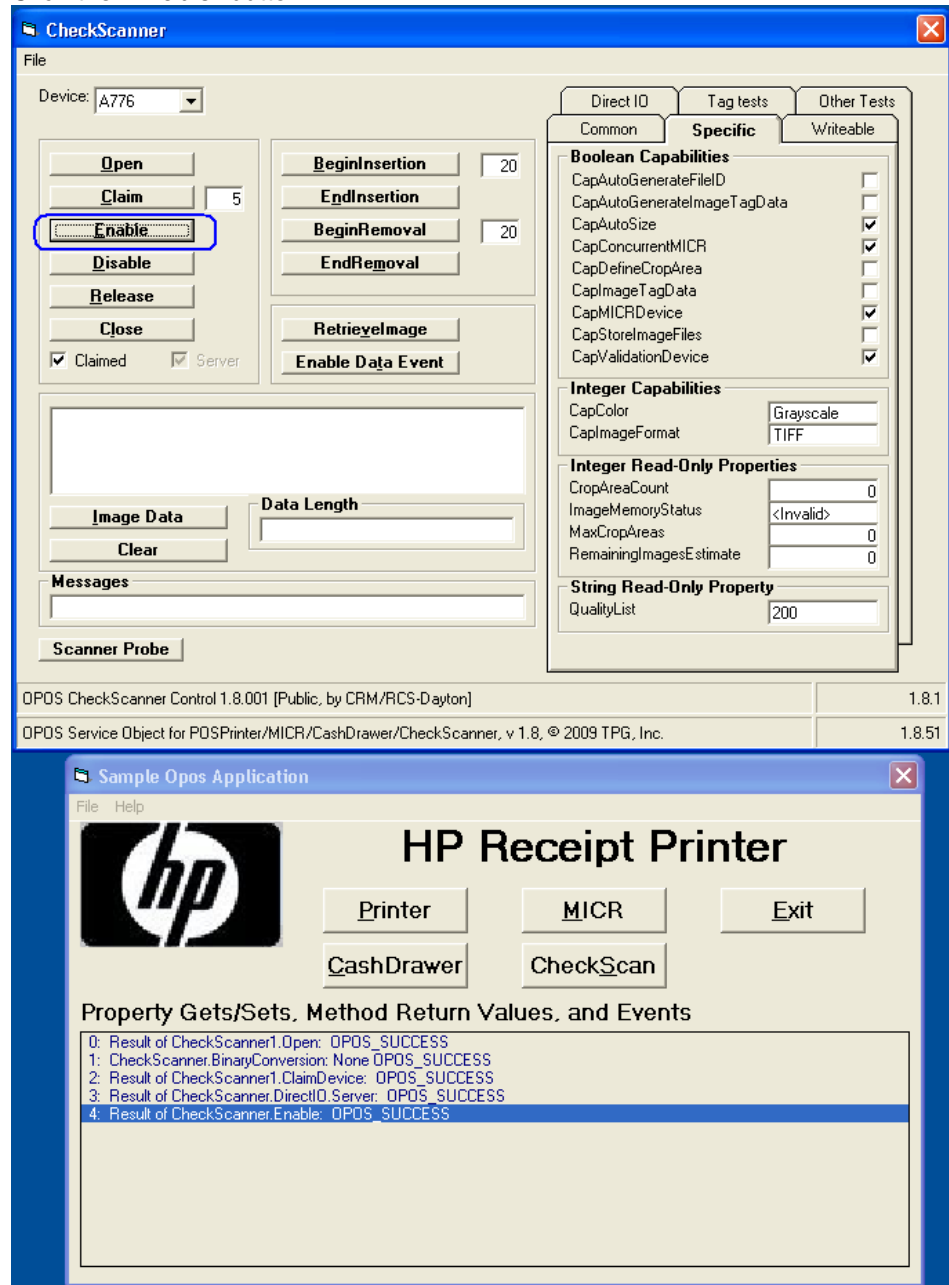
3. Click the “Open” button.



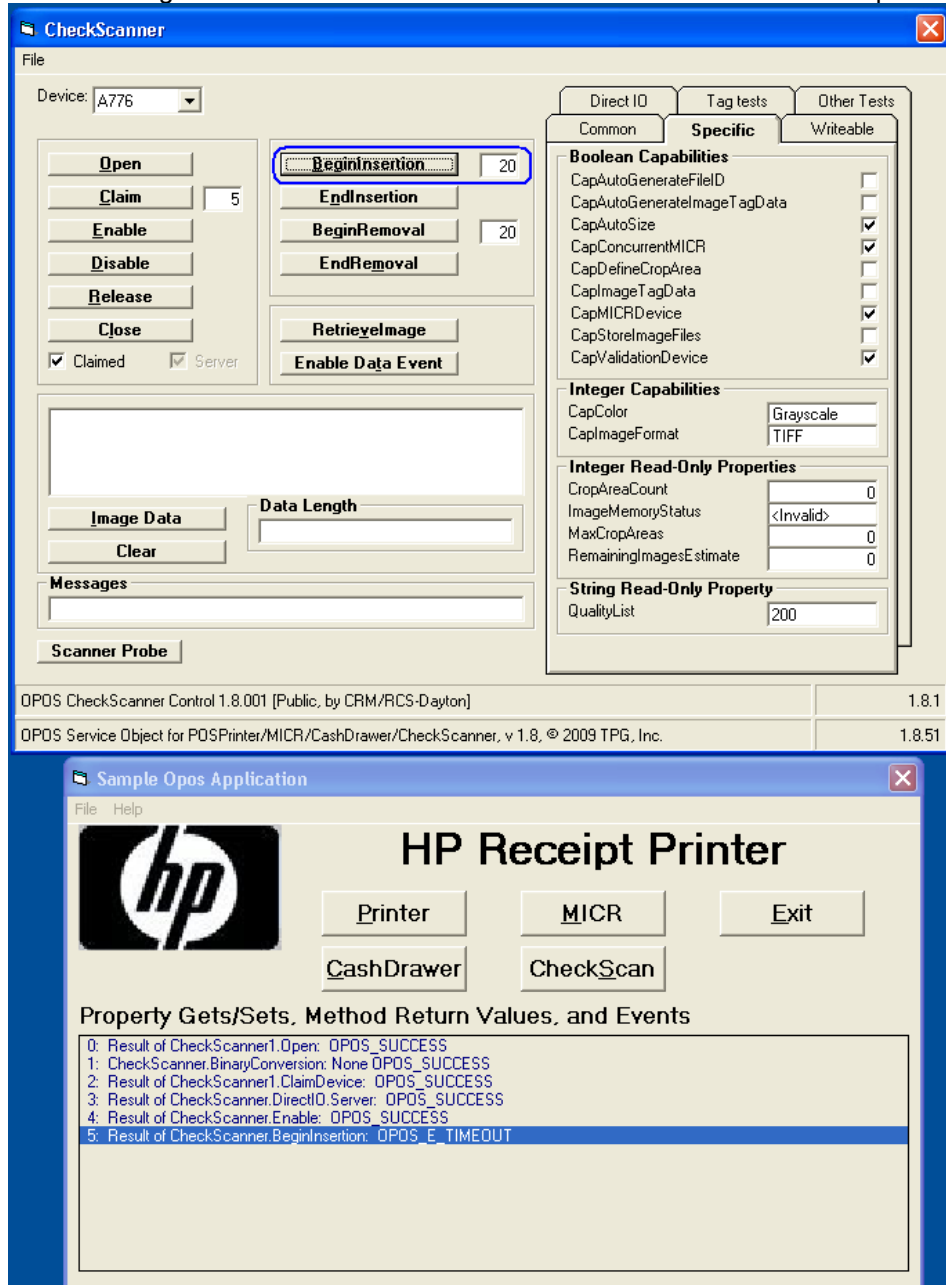
4. Click the “Claim” button.



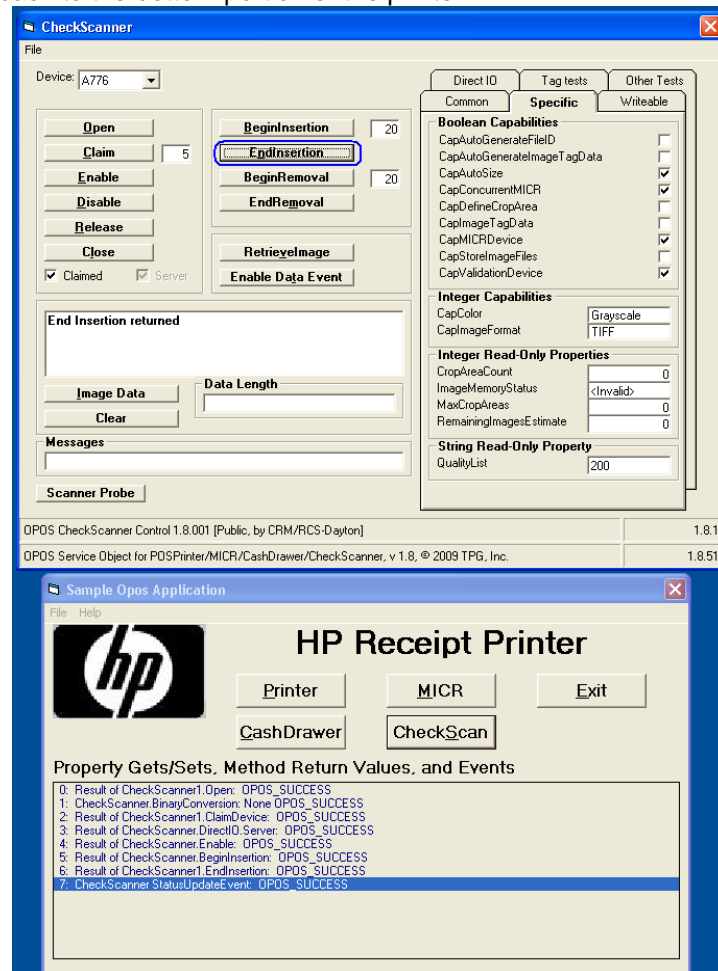
5. Click the “Enable” button.



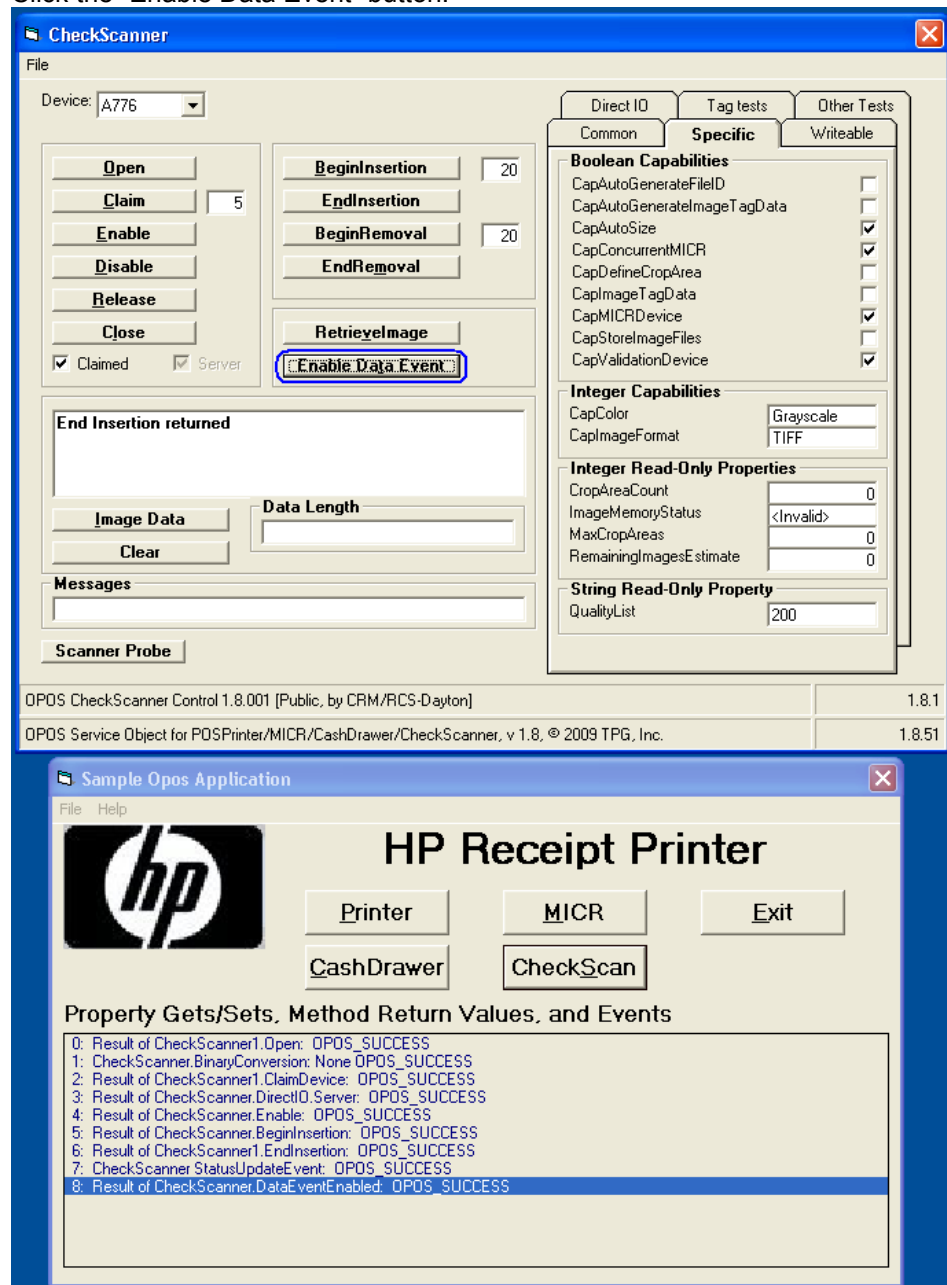
6. Click the “Begin Insertion” button. You should hear a click noise from the printer.



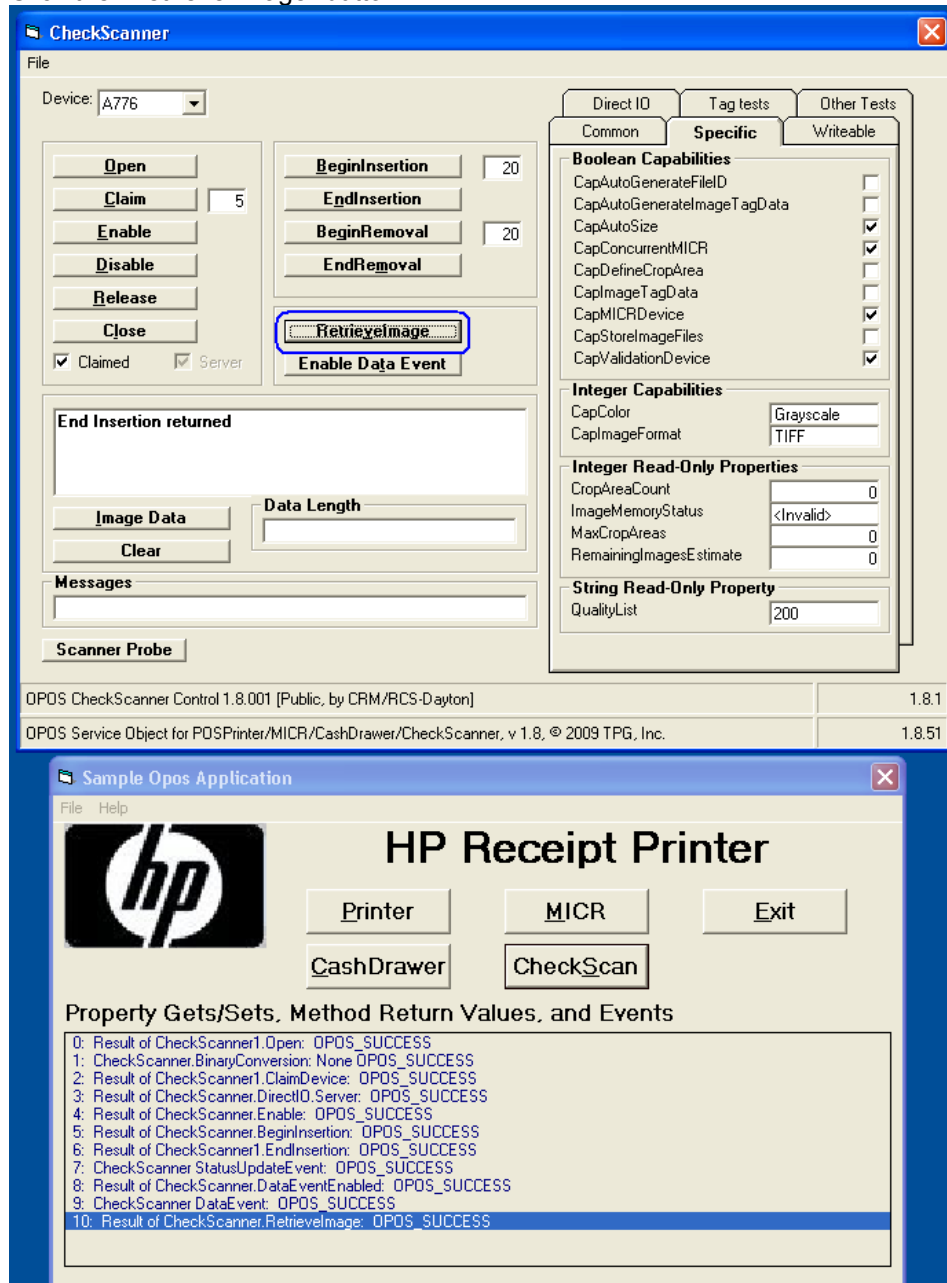
7. Insert the check face up in the front of the printer until the front LED comes on.
8. Click the “End Insertion” button. At this point the printer will perform the “CheckScan” operation; the document should come out the front and then will be returned back to the bottom portion of the printer.



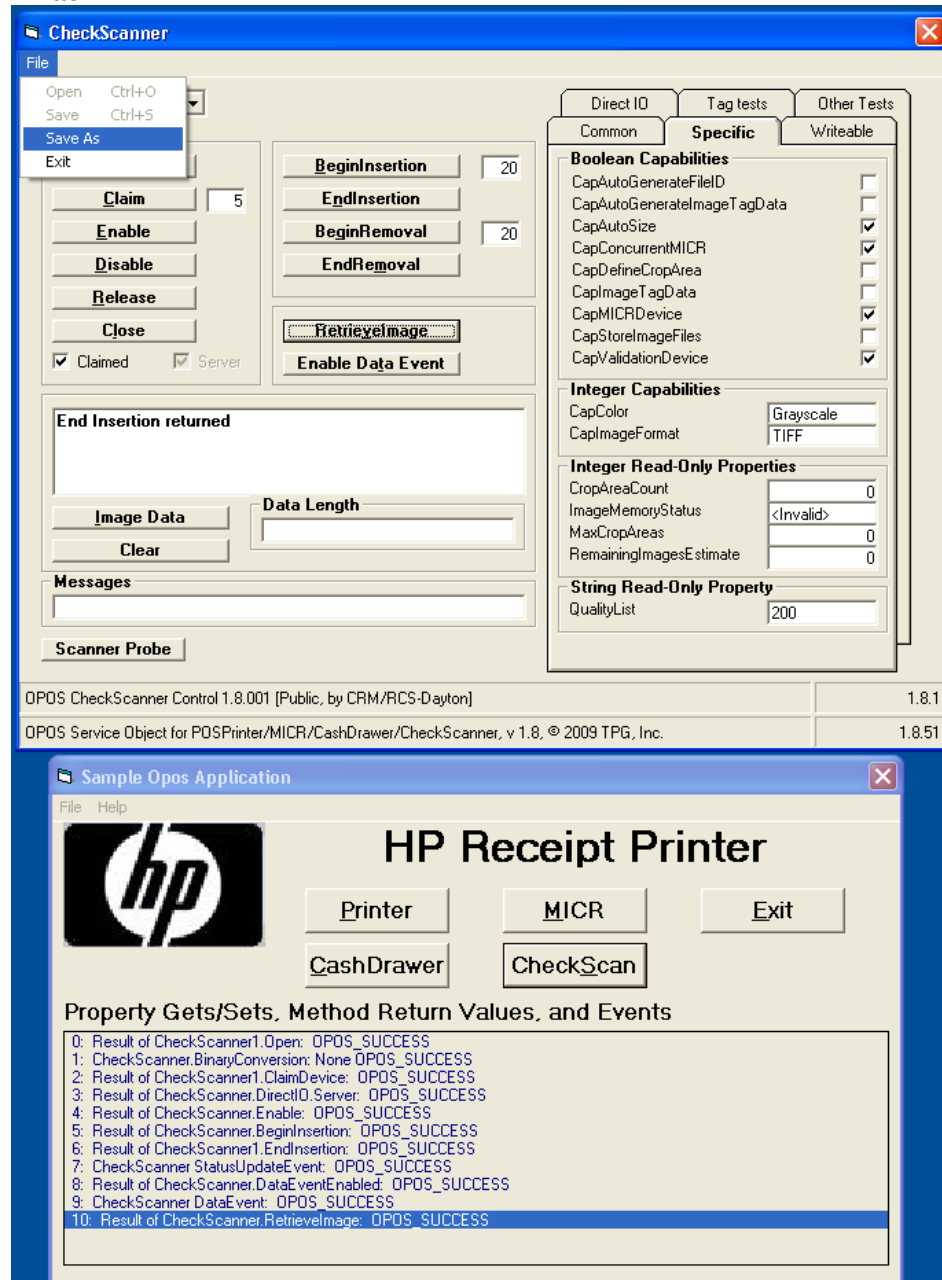
- Click the "Enable Data Event" button.

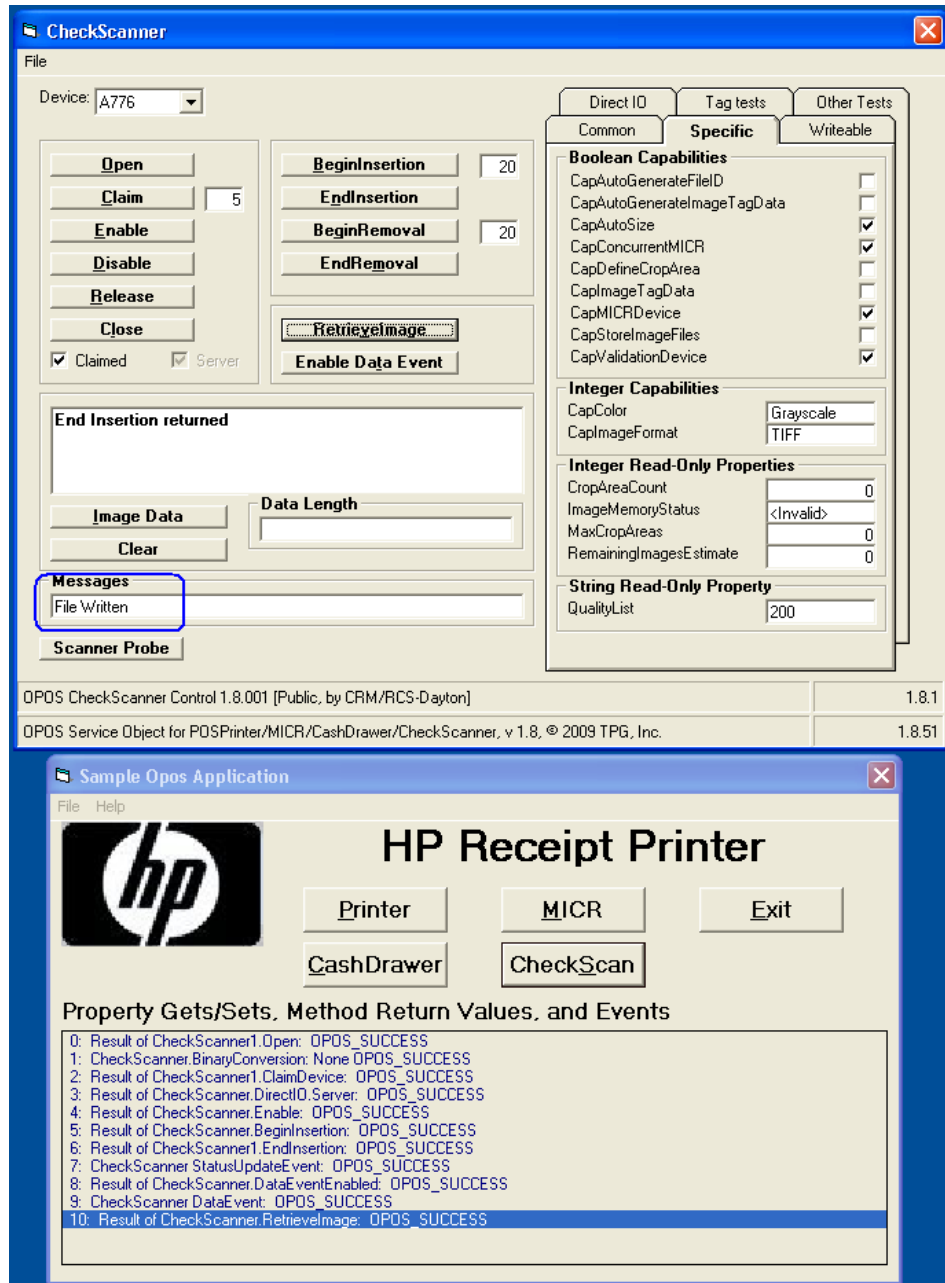


10. Click the "Retrieve Image" button.



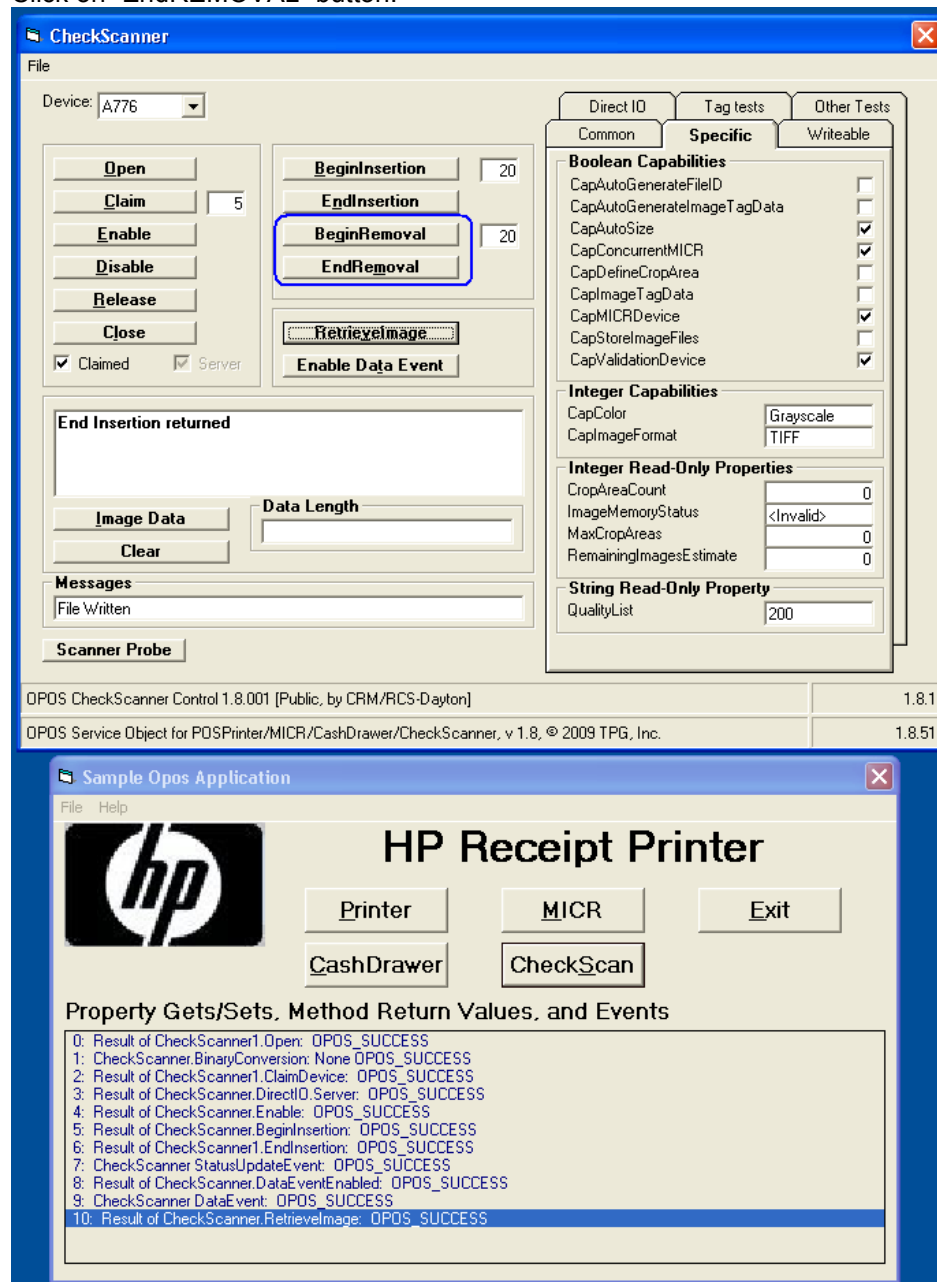
11. Click on "SAVE AS" under "FILE" to save the image that was captured. Save the file with "TIF" extension. After the file is save in the message box will state "File Written".



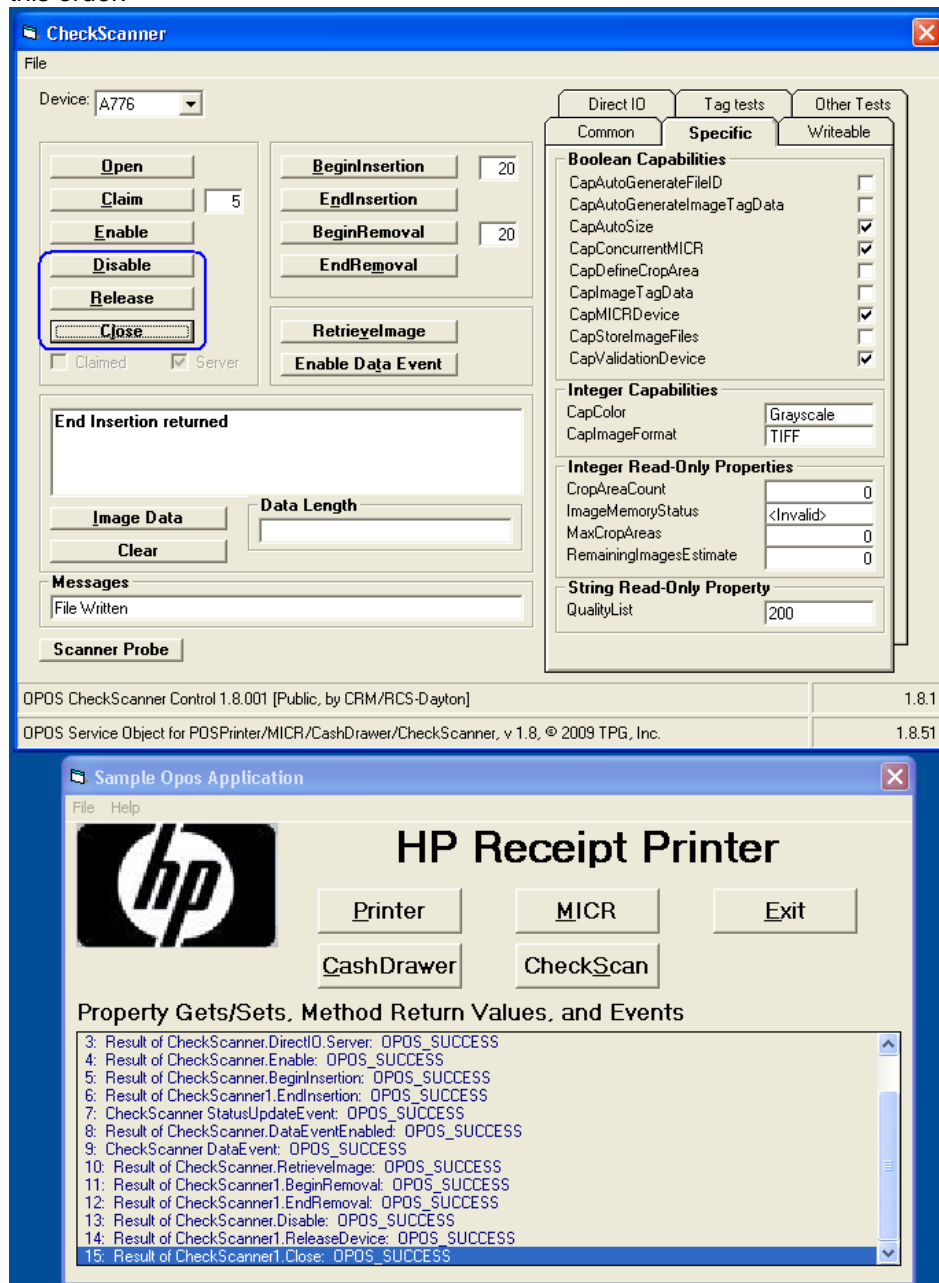


12. Click on “BEGINREMOVAL” button.

13. Click on “EndREMOVAL” button.



14. Close the “CheckScan” by clicking on DISABLE / RELEASE / CLOSE button in this order.



15. Close the form.

7.2.13 Receipt Printer Cash Drawer Signal

7.2.13.1 Cash Drawer Signal

The cash drawer is attached to the back of the printer using an RJ12 or similar connector (the smaller connector). On HP cash drawers, this connector sends a HIGH signal from the printer to open the cash drawer. The HIGH signal is the default setting for the HP OPOS receipt printer drivers installation.

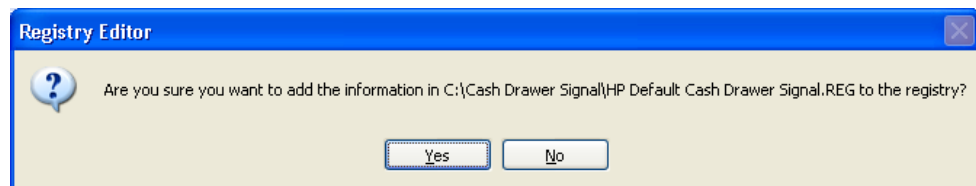
However, there are other cash drawers that may be using an opposite LOW signal to open the cash drawer. In this case, a user may need to configure the driver to also send a low signal in order for the cash drawer to open correctly (steps provided later). If the user has tried both settings and the cash drawer is still not opening, a different cash drawer cable may be needed. Check with the cash drawer vendor or the cash drawer vendor's documentation in regards to the LOW and HIGH signal setting.

7.2.13.2 Cash Drawer Signal Change

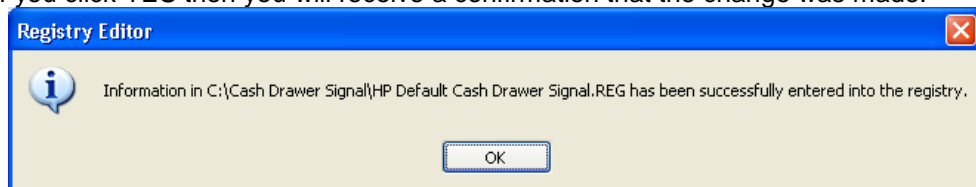
There is a folder called "Cash Drawer Signal" that contains the registry files needed to change the cash drawer signal option. The "Cash Drawer Signal" folder can be found on the "HP Point of Sale System Software and Documentation CD" in the receipt printer folder. The following is the description of the files:

- "HP Default Cash Drawer Signal.REG" file will change the cash drawer registry value to HIGH which is the default value when the OPOS drivers are installed and the value that is need when the HP cash drawer is attached to the HP Receipt printer.
- "HP Non-Default Cash Drawer Signal.REG" file will put the cash drawer registry value to LOW which may be tried for non-HP cash drawer if default HIGH option does not open the cash drawer.

You must have administrator right in order to make the change. When you double click on the file you will receive a prompt for confirmation that you want to make the changes.



If you click YES then you will receive a confirmation that the change was made.

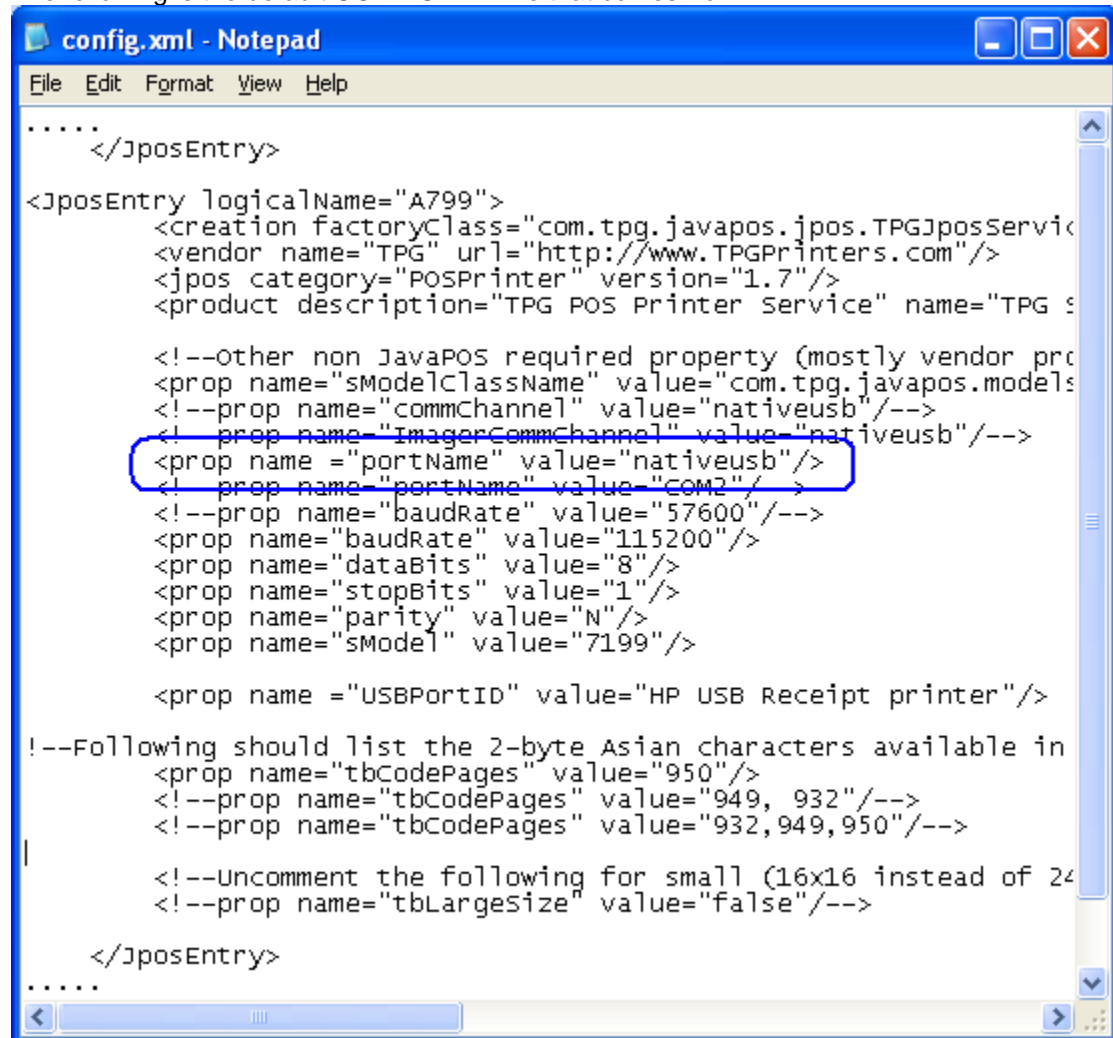


In order to test the signal cash, please refer to the cash drawer test section ([OPOS Test Applet for the Cash Drawer](#)) of this guide.

7.2.14 JPOS Drivers for the Receipt Printer Drivers – Serial Port Setting

If you are using the serial version of the receipt printer, the entry in the CONFIG.XML must be edited to reflect the COM (serial) port to which the printer is attached. The CONFIG.XML from HP is located in the “..\\Receipt Printer JPOS\\JPOS\\jpos\\res” folder, the location will most likely be in a different location for your point of sale application. Please contact your administrator or POS application provider to assist on making changes to the configuration setting.

The following is the default CONFIG.XML file that comes from HP:



```
.....
</JposEntry>
<JposEntry logicalName="A799">
  <creation factoryClass="com.tpg.javapos.jpos.TPGJposService" />
  <vendor name="TPG" url="http://www.TPGPrinters.com"/>
  <jpos category="POSPrinter" version="1.7"/>
  <product description="TPG POS Printer Service" name="TPG :

  <!--Other non JavaPOS required property (mostly vendor pro
  <prop name="sModelClassName" value="com.tpg.javapos.models
  <!--prop name="commChannel" value="nativeusb"/-->
  <!-- prop name="ImagerCommChannel" value="nativeusb"/-->
  <prop name="portName" value="nativeusb"/>
  <!-- prop name="portName" value="COM2"/-->
  <!--prop name="baudRate" value="57600"/-->
  <prop name="baudRate" value="115200"/>
  <prop name="dataBits" value="8"/>
  <prop name="stopBits" value="1"/>
  <prop name="parity" value="N"/>
  <prop name="sModel" value="7199"/>

  <prop name="USBPortID" value="HP USB Receipt printer"/>

  !--Following should list the 2-byte Asian characters available in
  <prop name="tbCodePages" value="950"/>
  <!--prop name="tbCodePages" value="949, 932"/-->
  <!--prop name="tbCodePages" value="932, 949, 950"/-->
  |
  <!--Uncomment the following for small (16x16 instead of 24
  <!--prop name="tbLargeSize" value="false"/-->

</JposEntry>
.....
```


If the printer is attached to COM1, one needs to comment out the USB entry / enable the COM port entry and enter the correct COM port. The following is an example of what the changes would look like:

```

.....
</JposEntry>
<JposEntry logicalName="A799">
  <creation factoryClass="com.tpg.javapos.jpos.TPGJposService" />
  <vendor name="TPG" url="http://www.TPGPrinters.com"/>
  <jpos category="POSPrinter" version="1.7"/>
  <product description="TPG POS Printer Service" name="TPG POS Printer Service" />

  <!--Other non JavaPOS required property (mostly vendor specific) />
  <prop name="sModelClassName" value="com.tpg.javapos.models.TPGModel" />
  <!--prop name="commChannel" value="nativeusb"/-->
  <!--prop name="imagerCommChannel" value="nativeusb"/-->
  <!--prop name="portName" value="nativeusb"/-->
  <prop name="portName" value="COM1"/>
  <!--prop name="baudRate" value="57600"/-->
  <prop name="baudRate" value="115200"/>
  <prop name="dataBits" value="8"/>
  <prop name="stopBits" value="1"/>
  <prop name="parity" value="N"/>
  <prop name="sModel" value="7199"/>

  <prop name="USBPortID" value="HP USB Receipt printer"/>

  <!--Following should list the 2-byte Asian characters available in the printer's font />
  <prop name="tbCodePages" value="950"/>
  <!--prop name="tbCodePages" value="949, 932"/-->
  <!--prop name="tbCodePages" value="932, 949, 950"/-->

  <!--Uncomment the following for small (16x16) instead of 24x24 font />
  <!--prop name="tbLargeSize" value="false"/-->

</JposEntry>
.....

```

Note: Make sure the other communication parameters (Baudrate / DataBits, etc) all match your Windows setting.

7.2.15 JPOS Drivers for the Receipt Printer Drivers

The JPOS drivers are included in the HP Point of Sale image or can be obtained from HP POS Drivers and Documentation CD or from the HP.COM web site.

The following is an overview of the steps to test the receipt printer followed by detailed steps:

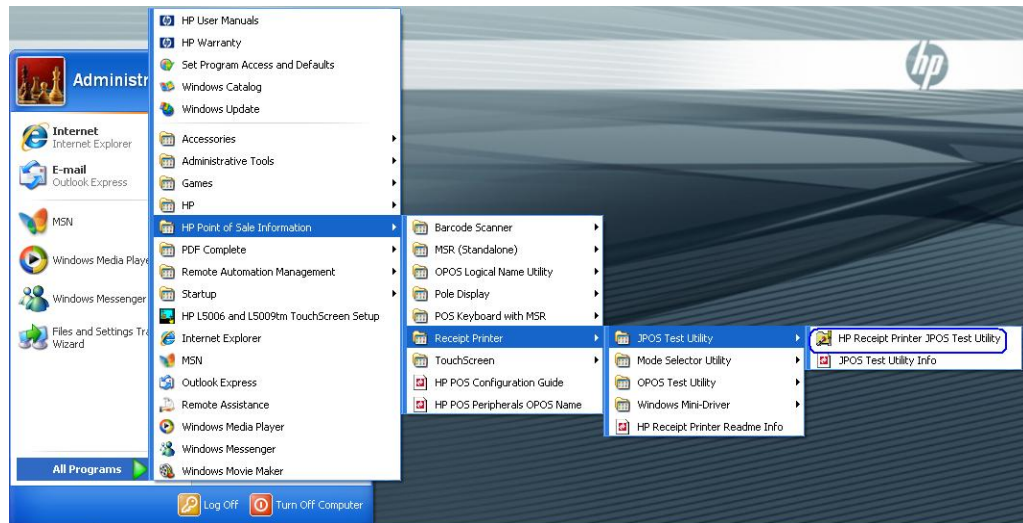
1. Start the JPOS test utility.
2. After a few seconds the JPOS test utility GUI will appear.
3. Select the printer model in the profile drop down box.
4. Click on the "OPEN" button.
5. Click on the "CLAIM" button.
6. Click on the "ENABLE" button.
7. Click on the "SIMPLE PRINTING" tab.
8. Type some text in the "PRINT DATA" area; this is the text that should print on the receipt printer:

9. After you have entered the text that you wish to print, click on the “PRINTNORMAL” button and the receipt printer will print the text.

Note: In order to see the text you will need to press the line feed button on the printer unless you added several carriage returns to your text.

Detail Steps

1. Start the JPOS test utility either using the link in the START MENU:



OR

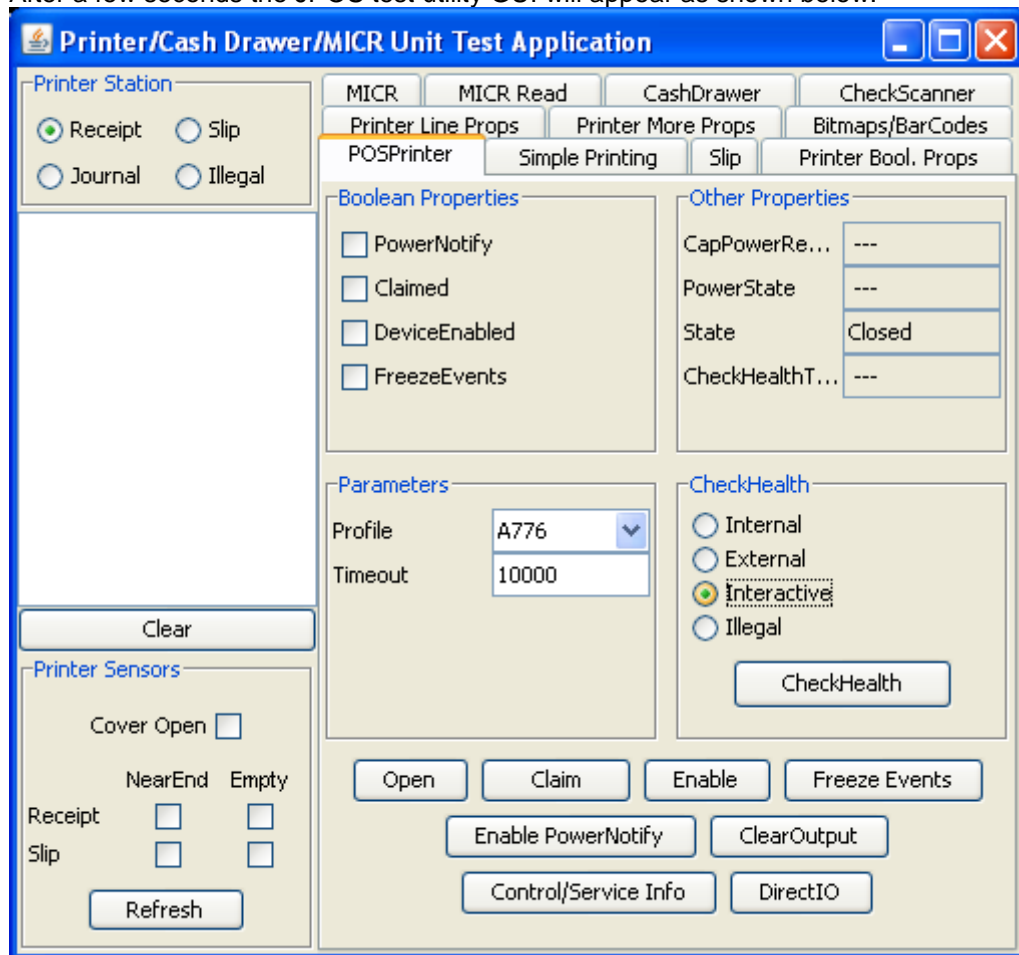
by launching the POSTEST.BAT file that is located in the JPOS folder within the receipt printer folder.

In the location the files were found execute the POSTEST.BAT file. Depending on your screen resolution the following screen will be in the background before the GUI appears for the test utility:

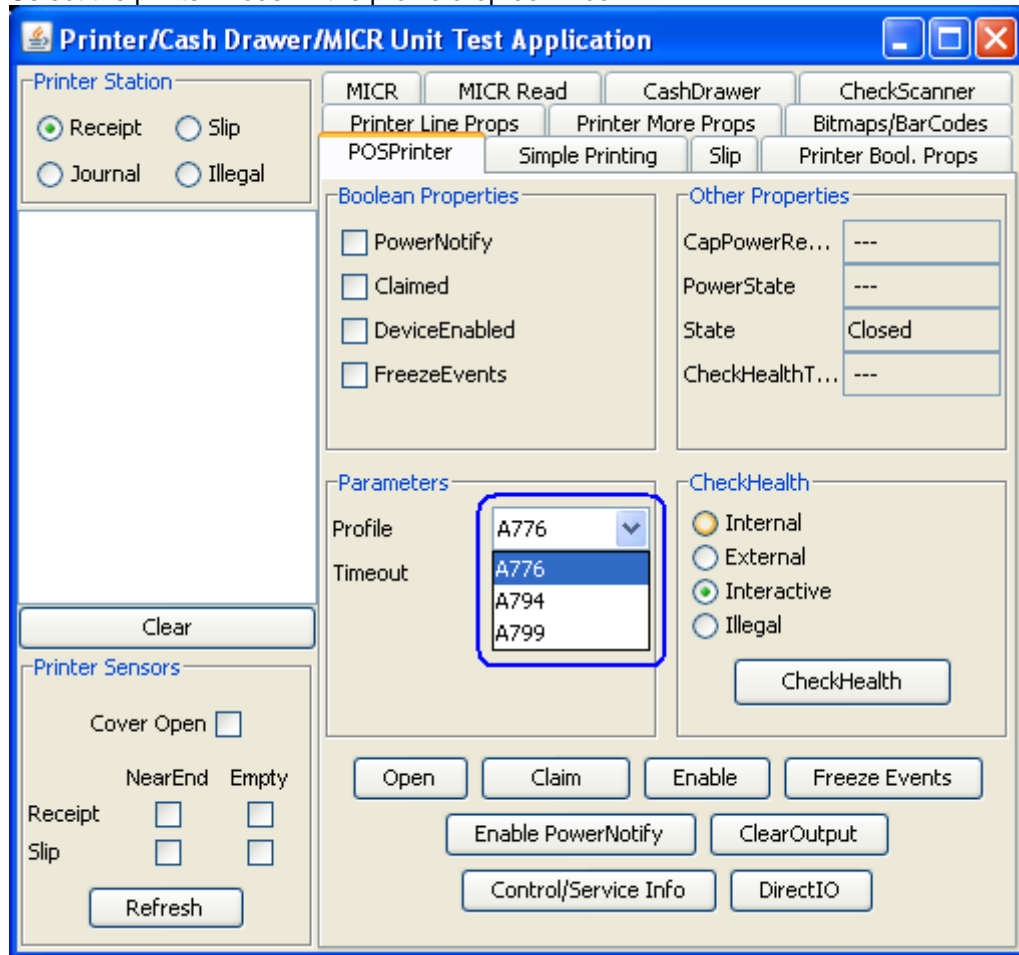
```
C:\WINDOWS\system32\cmd.exe

Usage :: PrinterTestApp <IdentifyPrinterTest <true/false>> <CommType <serial/serialrxtx/usb/nativeusb>> <CommParameters>
        -CommParameters :
            for usb <UsbDaemonRegistryPort<int> UshDevicePort<int>>
            for serial/serialrxtx <COMPort<String> BaudRate<int> DataBits<int> StopBits<int> Parity<int> FlowControl<int>>
            for serial/serialrxtx <COMPort<String> BaudRate<int> DataBits<int> StopBits<int> Parity<int> FlowControl<int>>
```

2. After a few seconds the JPOS test utility GUI will appear as shown below:

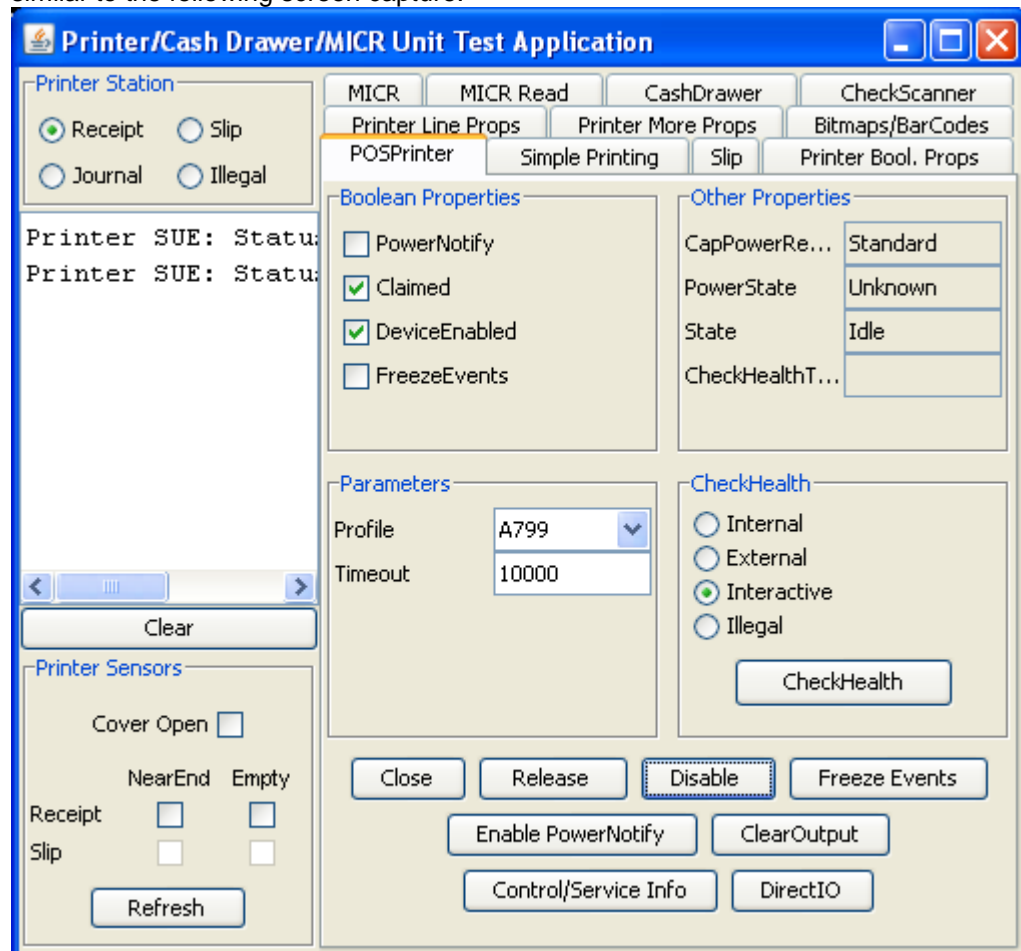


3. Select the printer model in the profile drop down box:

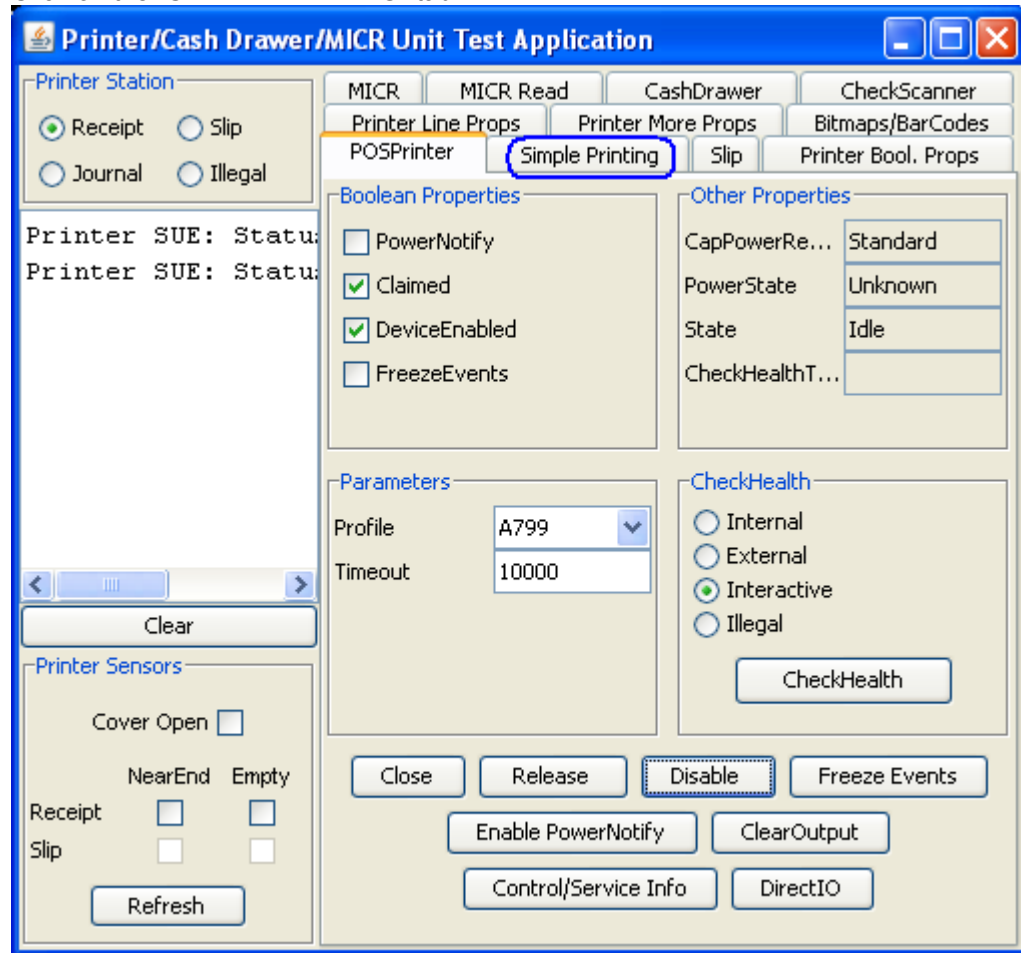


4. Click on the "OPEN" button.
5. Click on the "CLAIM" button.

- Click on the “ENABLE” button. After all three buttons are clicked the screen will look similar to the following screen capture:



7. Click on the "SIMPLE PRINTING" tab:



8. Type some text in the “PRINT DATA” area; this is the text that should print on the receipt printer:

Printer/Cash Drawer/MICR Unit Test Application

Printer Station

☒ Receipt ☐ Slip
☐ Journal ☐ Illegal

Printer SUE: Status
Printer SUE: Status

Printer Sensors

Cover Open ☐
NearEnd Empty
Receipt ☐
Slip ☐
Refresh

String Data

A-Z

Escape Sequences

Paper cut: ESC|#P

Print Data

Type in the text that you would like to have printed in this box.

☐ AsyncMode
☐ FlagWhenIdle

9. After you have entered the text that you wish to print, click on the “PRINTNORMAL” button and the receipt printer will print the text.

Note: In order to see the text you will need to press the line feed button on the printer unless you added several carriage returns to your text.

Printer/Cash Drawer/MICR Unit Test Application

Printer Station

☒ Receipt ☐ Slip

☐ Journal ☐ Illegal

Printer SUE: Statu

Printer SUE: Statu

Clear

Printer Sensors

Cover Open ☐

NearEnd Empty

Receipt ☐ ☐

Slip ☐ ☐

Refresh

MICR MICR Read CashDrawer CheckScanner

Printer Line Props Printer More Props

POSPrinter Simple Printing Slip

Bitmaps/BarCodes Printer Bool. Props

String Data

A-Z Add Data

Escape Sequences

Paper cut: ESC|#P Parameter Add Seq

Print Data

Type in the text that you would like to have printed in this box.

Clear Add CR Add LF CR LF

AsyncMode FlagWhenIdle

PrintNormal PrintImmediate

Validate Data SetLogo (Top) SetLogo (Btm)

7.2.16 JPOS Drivers for the Receipt Printer Drivers - CheckScanner

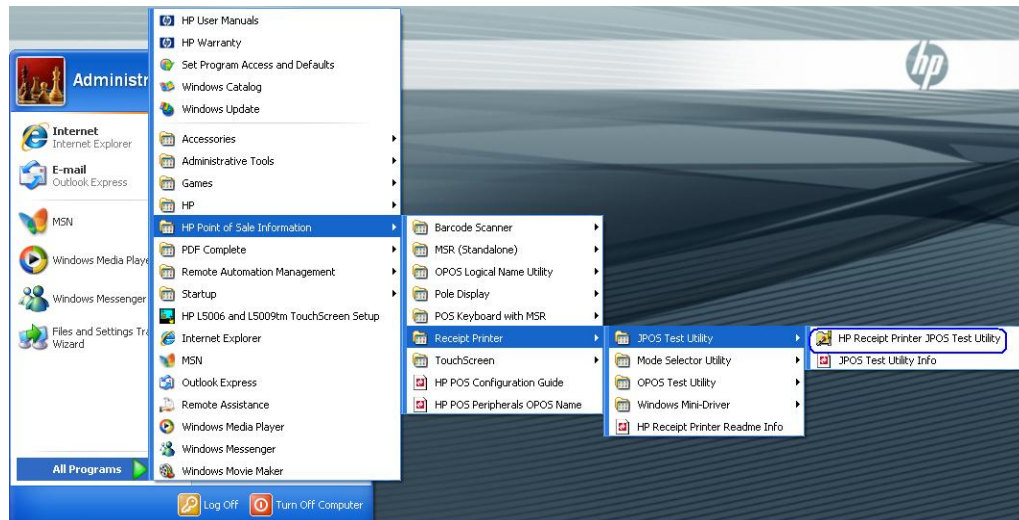
The JPOS drivers are included in the HP Point of Sale image or can be obtained from HP POS Drivers and Documentation CD or from the HP.COM web site.

The following is an overview of the steps to test the receipt printer followed by detailed steps:

1. Start the JPOS test utility
2. After a few seconds the JPOS test utility GUI will appear.
3. Select the "CheckScanner" tab.
4. Click on the "OPEN" button.
5. Click on the "CLAIM" button.
6. Click on the "ENABLE" button.
7. Insert a piece of paper face up that you wish to capture an image of during this test in the front of the printer until the LED comes on. The paper should be inserted face up in the slip portion of the printer. Click on "Begin" button in the left "TransactionPrint" box.
8. Click on "END" button, the printer will make some noise and move the paper through the imager.
9. Enable the "Data Events Enabled" by click on the option in the GUI.
10. Click on the "RetrieveImage" button. After the button is pressed the status will be updated and some information will be filled about the image.
11. To view the image that was scanned click on "DisplayImage" button.
12. To Exit the application one needs to "Disable/Release/Close" the printer and then click on the "X" to close the application.
13. The piece of paper that was inserted in step 7 can be removed from the imager portion of the printer by pulling on the paper; there will be slight force needed when the paper is pulled.

Detail Steps

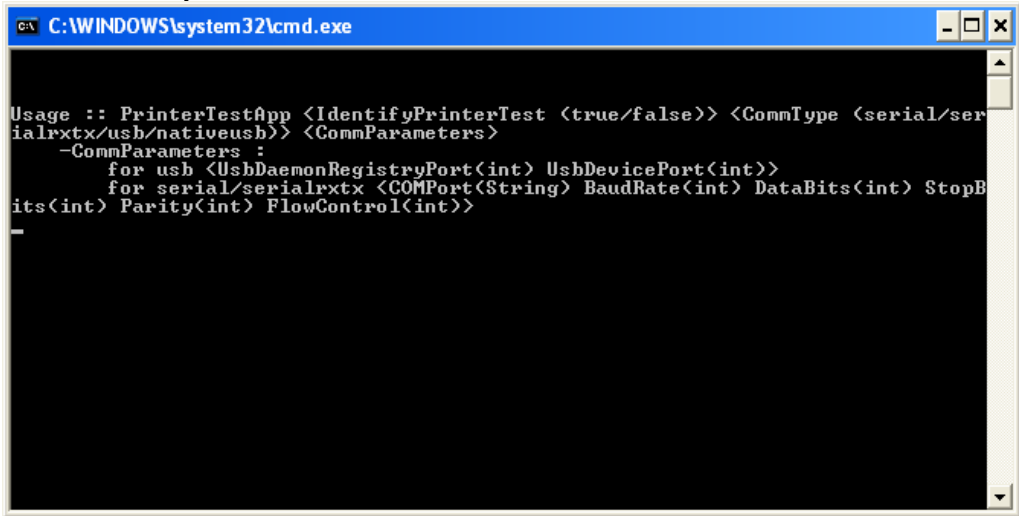
1. Start the JPOS test utility either using the link in the START MENU:



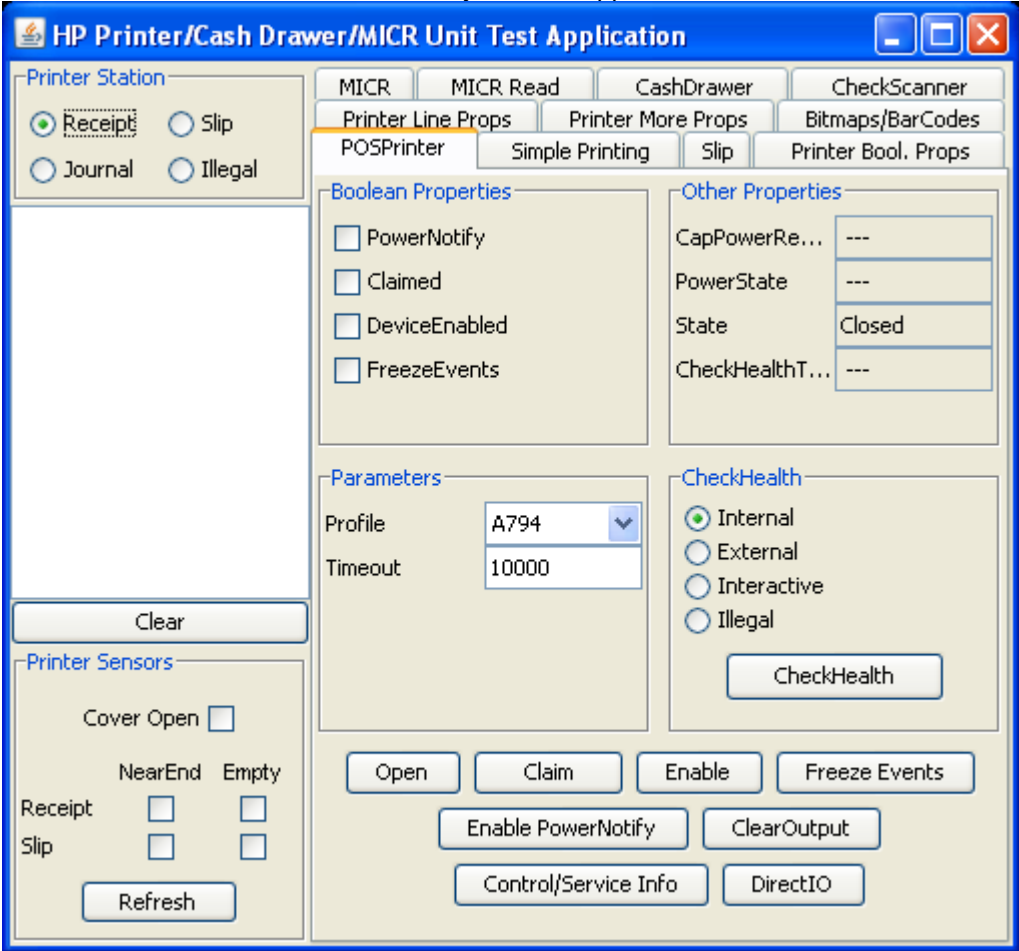
OR

by launching the POSTEST.BAT file that is located in the JPOS folder within the receipt printer folder.

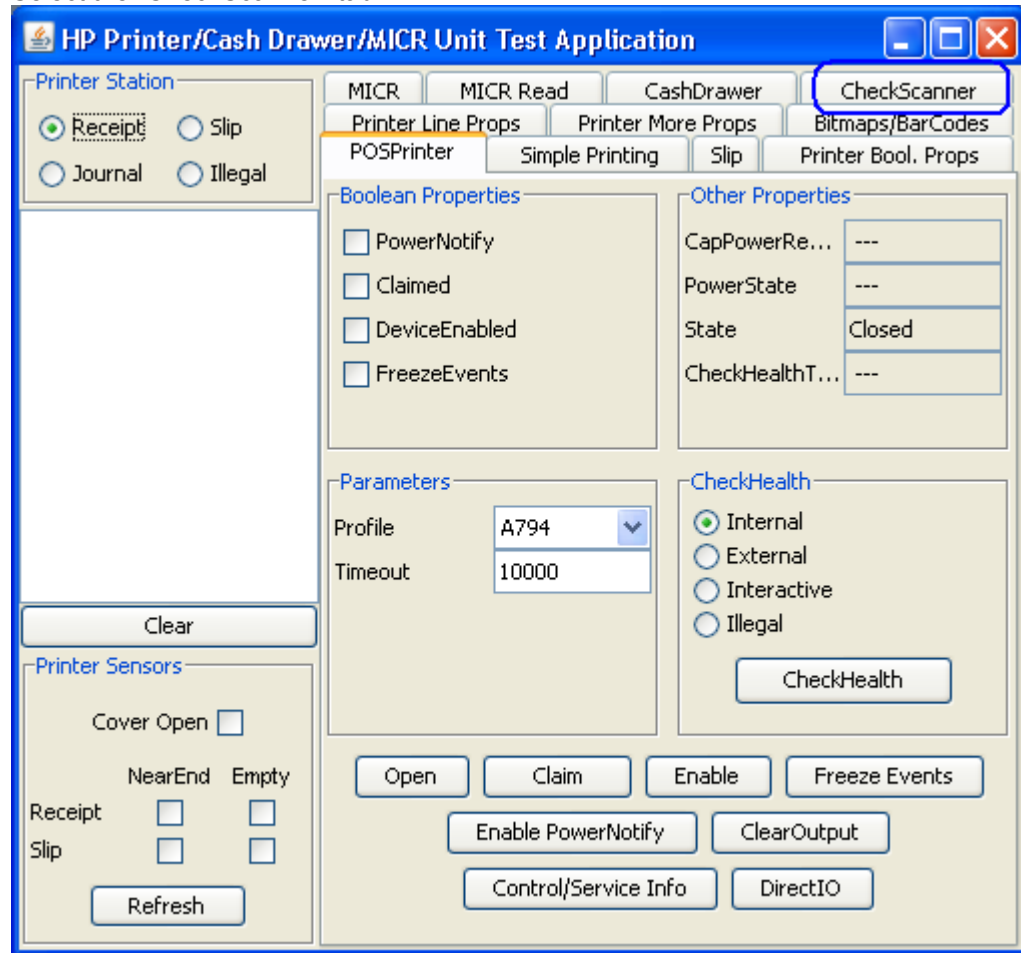
In the location the files were found execute the POSTEST.BAT file. Depending on your screen resolution the following screen will be in the background before the GUI appears for the test utility:



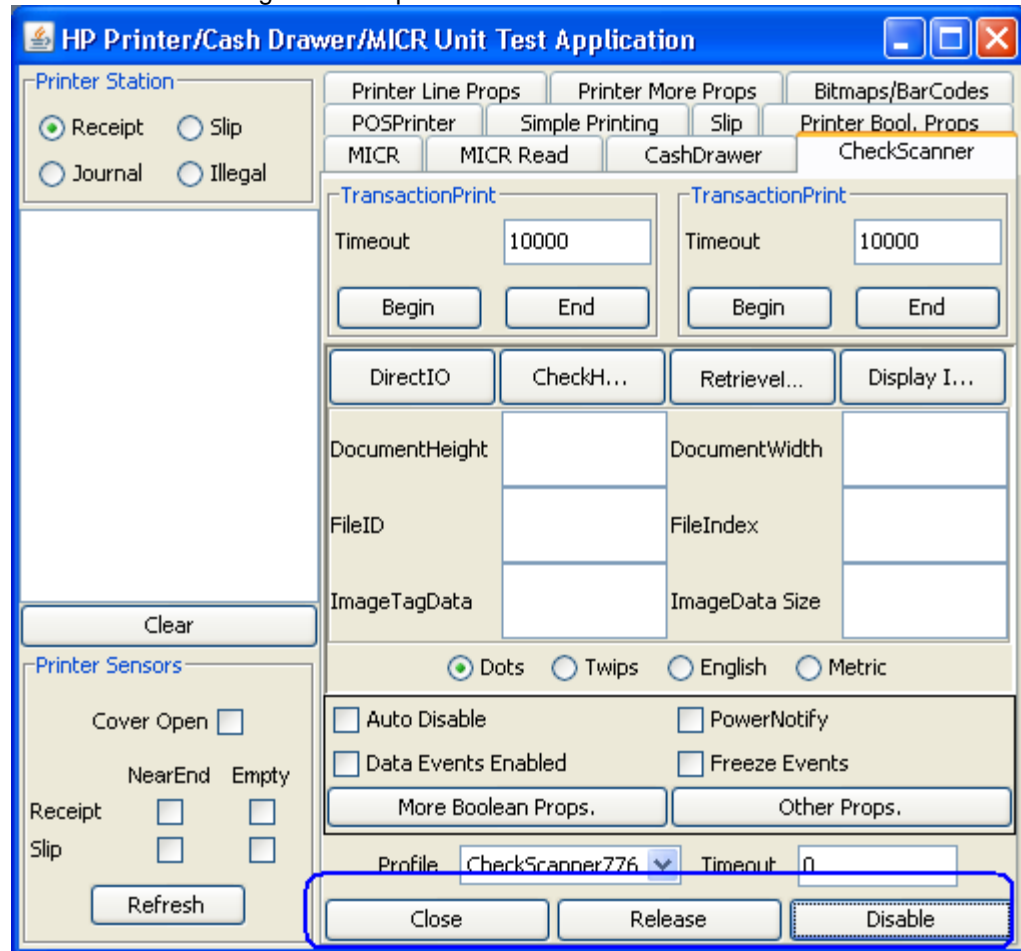
2. After a few seconds the JPOS test utility GUI will appear as shown below:



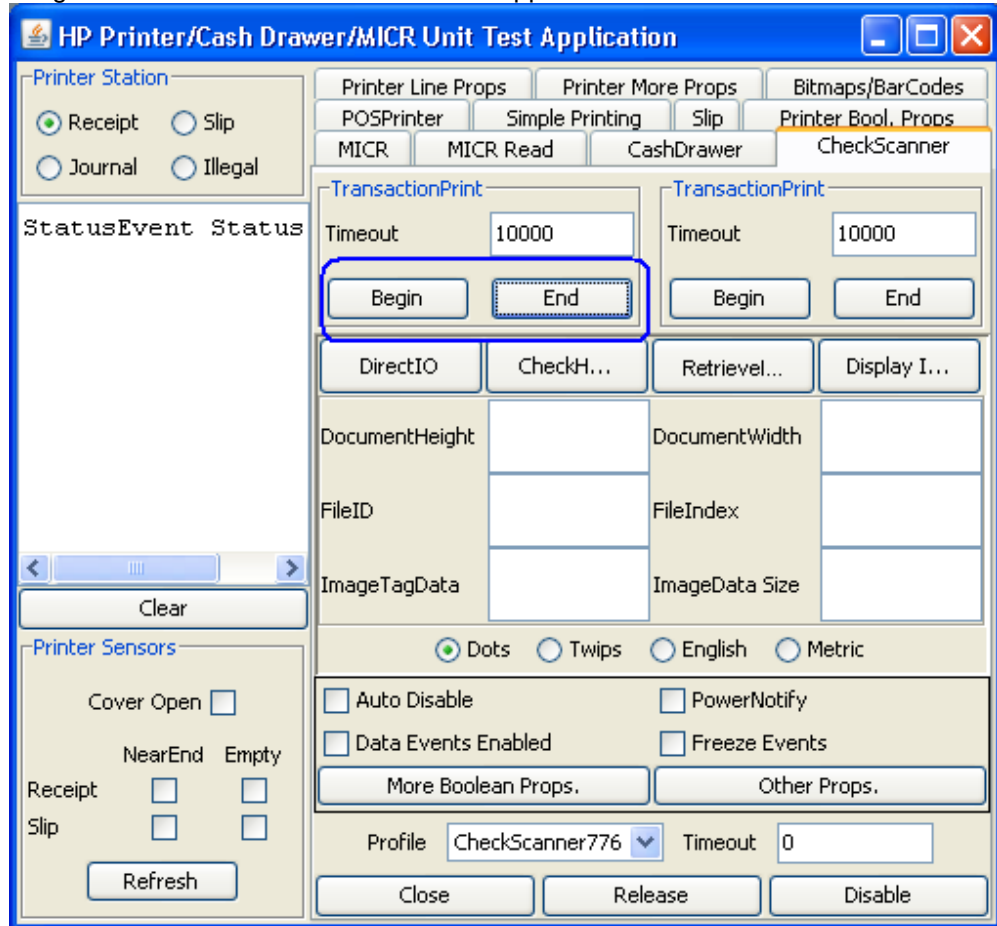
3. Select the "CheckScanner" tab.



4. Click on the "OPEN" button.
5. Click on the "CLAIM" button.
6. Click on the "ENABLE" button. After all three buttons are clicked the screen will look similar to the following screen capture:



7. Insert a piece of paper face up that you wish to capture an image of during this test in the front of the printer until the LED comes on. The paper should be inserted face up in the slip portion of the printer. Click on "Begin" button in the left "TransactionPrint" box.
8. Click on "END" button, the printer will make some noise and move the paper through the imager. After a few seconds a status will appear in the status box.

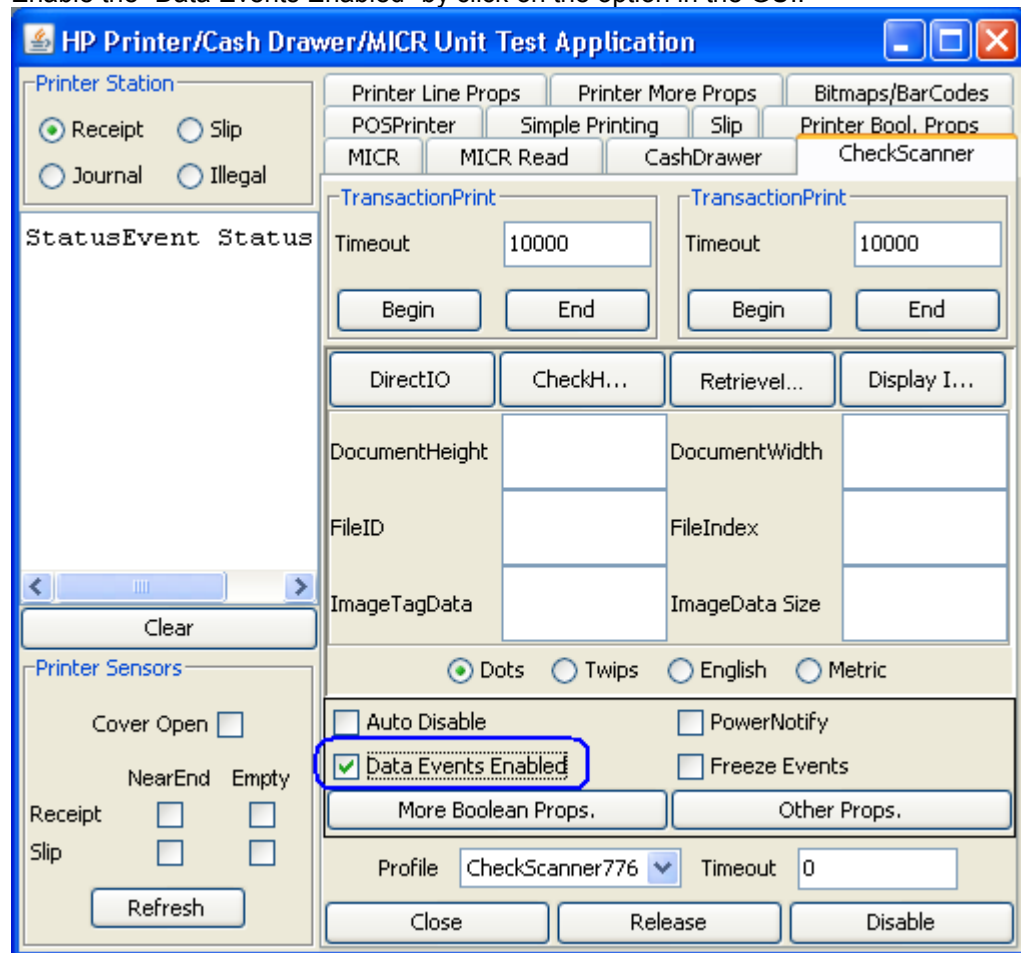


In the open CMD box, it will note the amount of time it took to for the image transfer. The following is an example of the box (the time will vary):

```

Usage :: PrinterTestApp <IdentifyPrinterTest <true/false>> <CommType <serial/ser
ialrxtx/usb/nativeusb>> <CommParameters>
-CommParameters :
    for usb <UsbDaemonRegistryPort<int> UsbDevicePort<int>>
    for serial/serialrxtx <COMPort<String> BaudRate<int> DataBits<int> StopB
its<int> Parity<int> FlowControl<int>>
Image Transmission <millisec> = 829
  
```

9. Enable the “Data Events Enabled” by click on the option in the GUI:



- Click on the "RetrieveImage" button. After the button is pressed the status will be updated and some information will be filled about the image.

HP Printer/Cash Drawer/MICR Unit Test Application

Printer Station

☒ Receipt ☐ Slip
☐ Journal ☐ Illegal

StatusEvent Status
CheckScanner Image:

Printer Line Props **Printer More Props** **Bitmaps/BarCodes**
POSPrinter Simple Printing Slip **Printer Bool. Props**
MICR MICR Read CashDrawer CheckScanner

TransactionPrint Timeout 10000
Begin End

TransactionPrint Timeout 10000
Begin End

DirectIO CheckH... Retrieval... Display I...

DocumentHeight 535 DocumentWidth 1344

FileID FileIndex 2
ImageTagData ImageData Size 26538

☒ Dots ☐ Twips ☐ English ☐ Metric

☐ Auto Disable ☐ PowerNotify
☐ Data Events Enabled ☐ Freeze Events

More Boolean Props. Other Props.

Profile CheckScanner776 Timeout 0

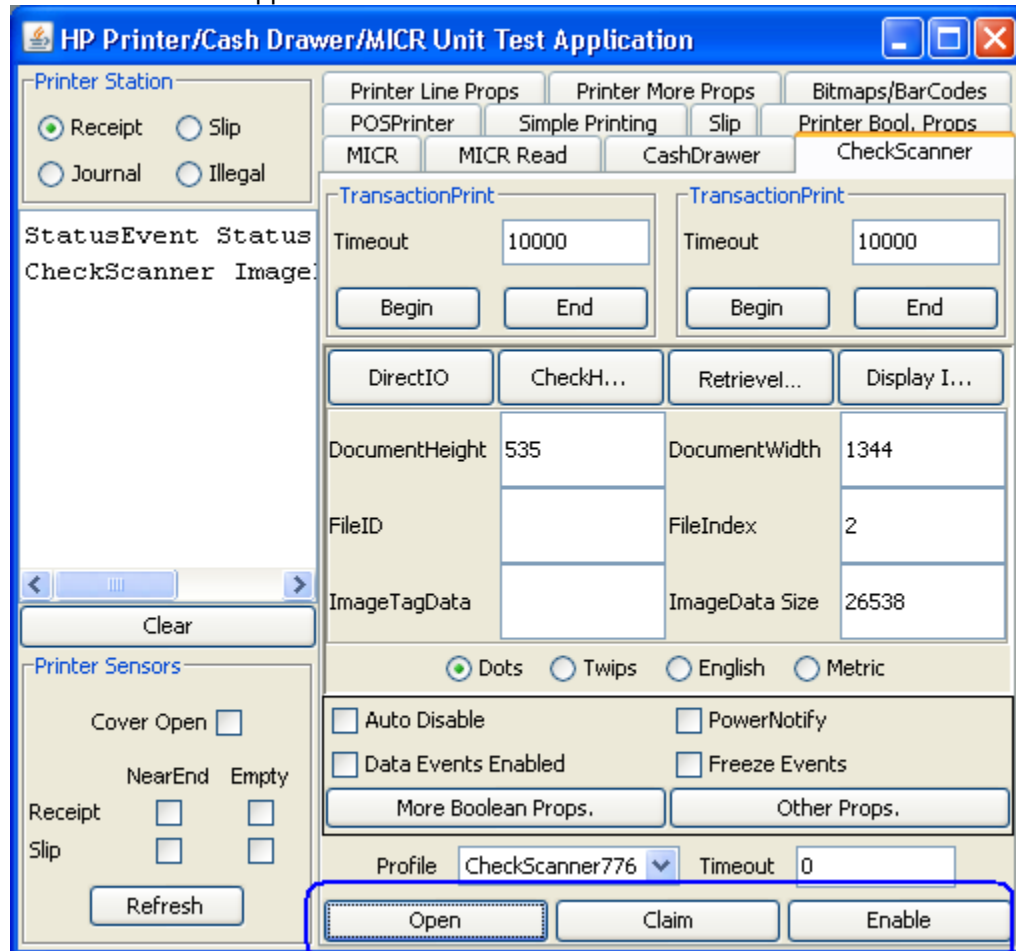
Close Release Disable

Printer Sensors

Cover Open ☐
NearEnd Empty
Receipt ☐ ☐
Slip ☐ ☐
Refresh

11. To view the image that was scanned click on “DisplayImage” button.

12. To Exit the application one needs to “Disable/Release/Close” the printer and then click on the “X” to close the application.



13. The piece of paper that was inserted in step 7 can be removed from the imager portion of the printer by pulling on the paper; there will be slight force needed when the paper is pulled.

7.2.17 JPOS Drivers for the Receipt Printer Drivers - MICR

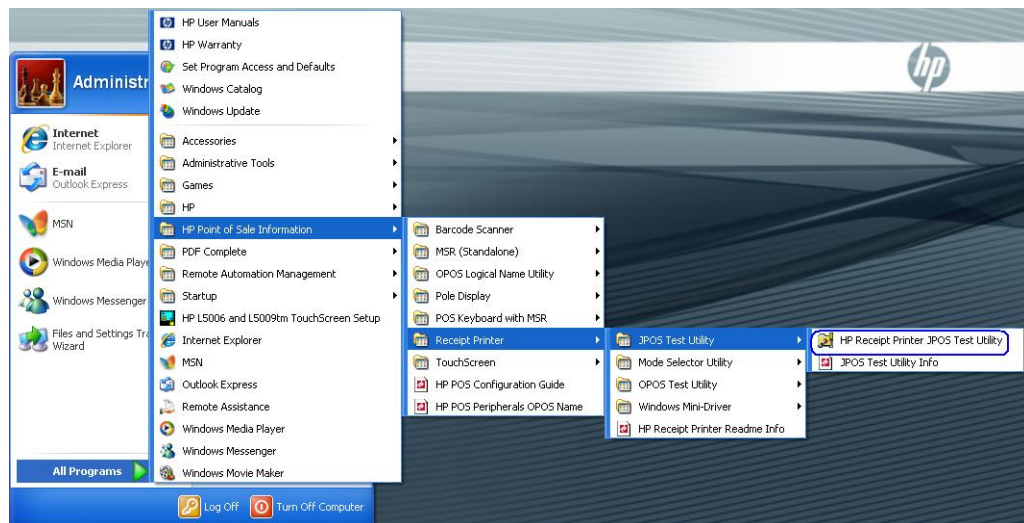
The JPOS drivers are included in the HP Point of Sale image or can be obtained from HP POS Drivers and Documentation CD or from the HP.COM web site.

The following is an overview of the steps to test the receipt printer followed by detailed steps:

1. Start the JPOS test utility.
2. After a few seconds the JPOS test utility GUI will appear.
3. Click on the MICR tab.
4. Click on the "OPEN" button.
5. Click on the "CLAIM" button.
6. Click on the "ENABLE" button.
7. Click on the "MICR READ" tab.
8. Slide the check facing down into the MICR until the LED on comes on.
9. Click on "Enable Data Events".
10. Click on "Begin" in the "Insertion" section of the GUI.
11. Click on "End" in the "Insertion" section of the GUI.
12. Exit the application (ensure the device is closed and released).
13. The piece of paper that was inserted in step 8 can be removed from the imager portion of the printer by pulling on the paper; there will be slight force needed when the paper is pulled.

Detail Steps

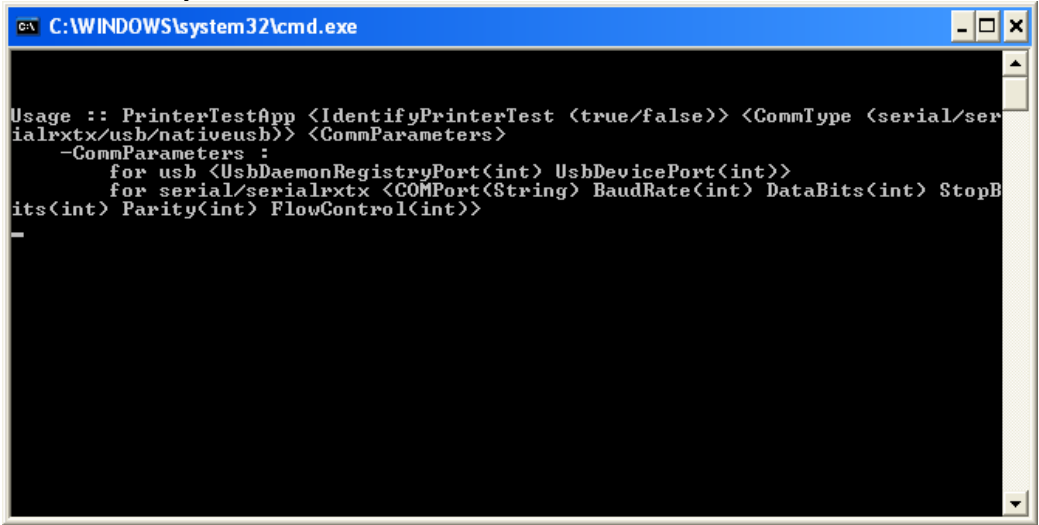
1. Start the JPOS test utility either using the link in the START MENU:



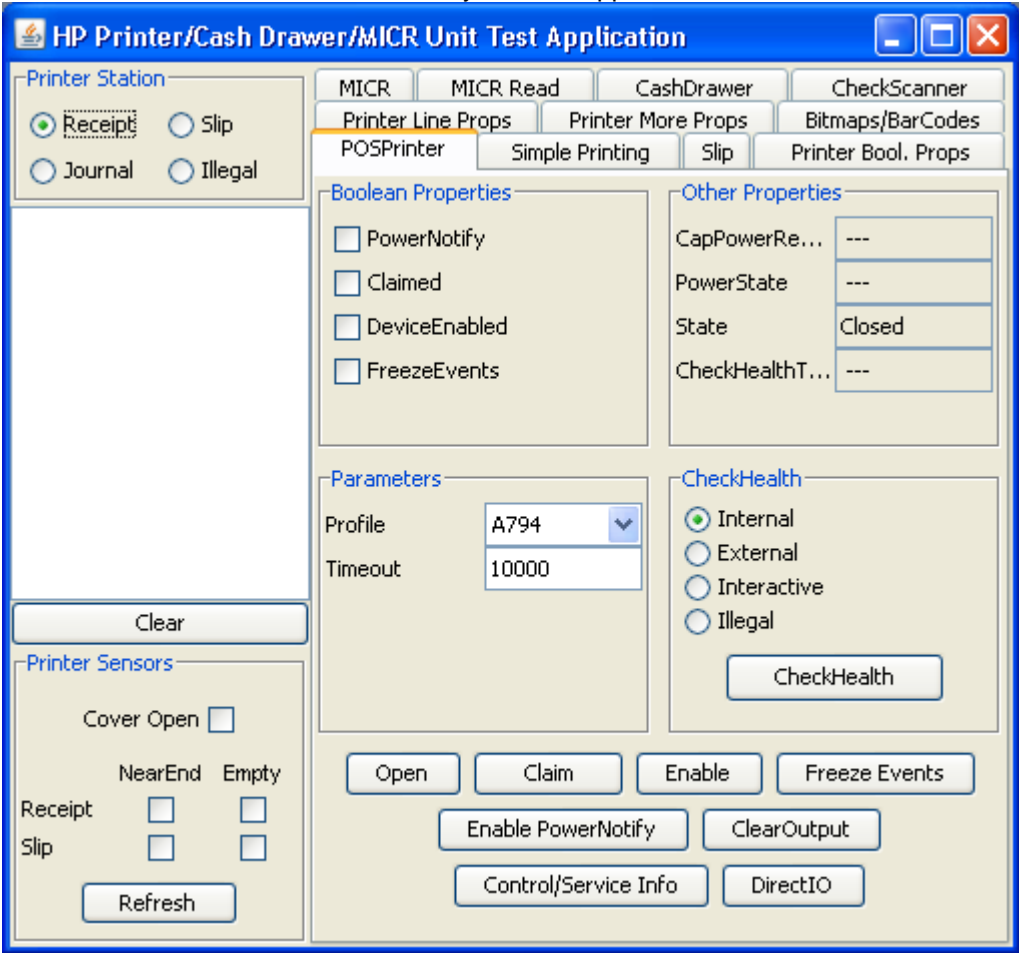
OR

by launching the POSTEST.BAT file that is located in the JPOS folder within the receipt printer folder.

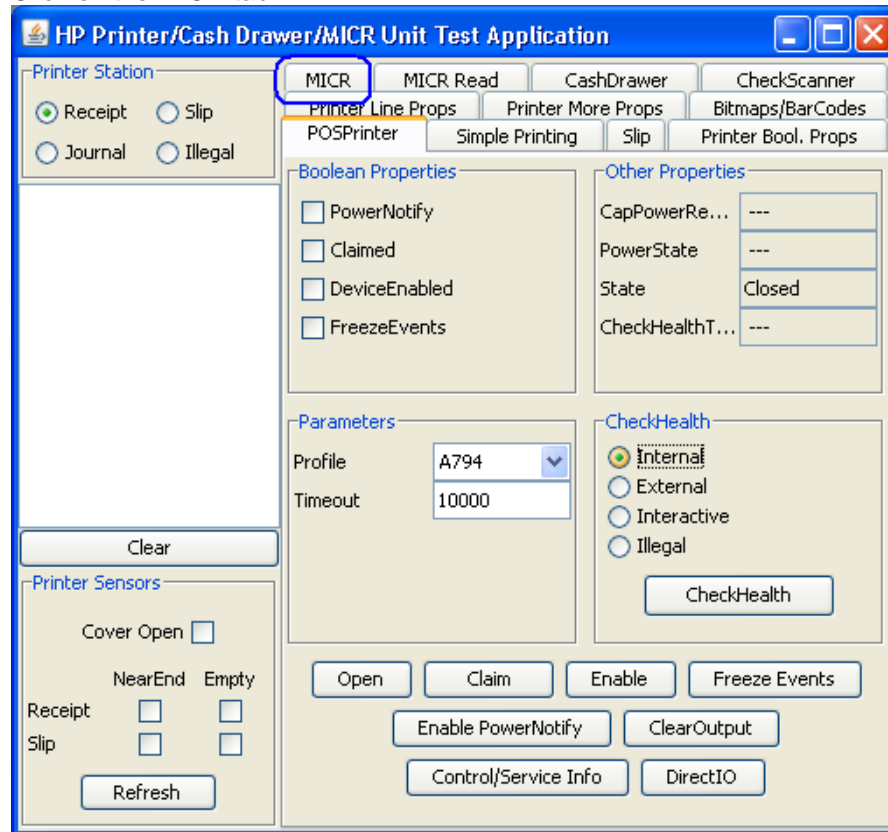
In the location the files were found execute the POSTEST.BAT file. Depending on your screen resolution the following screen will be in the background before the GUI appears for the test utility:



2. After a few seconds the JPOS test utility GUI will appear as shown below:

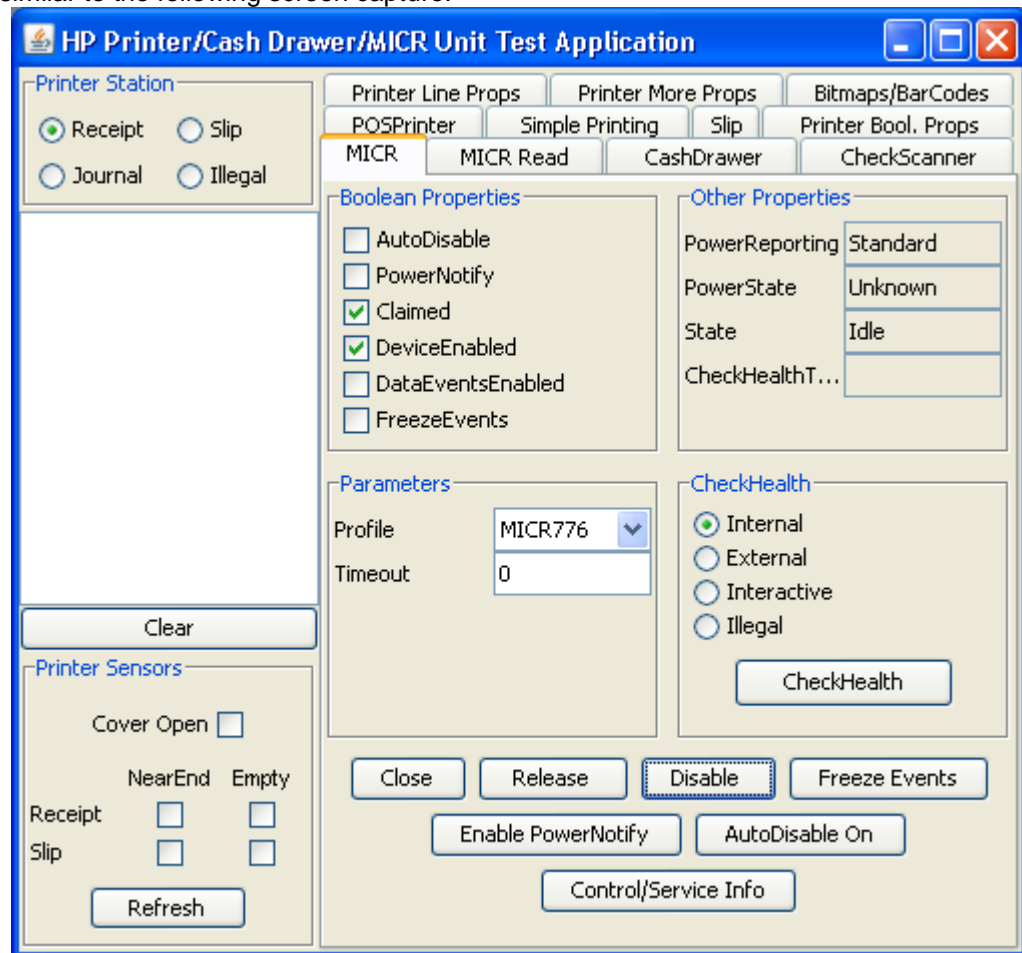


3. Click on the MICR tab:

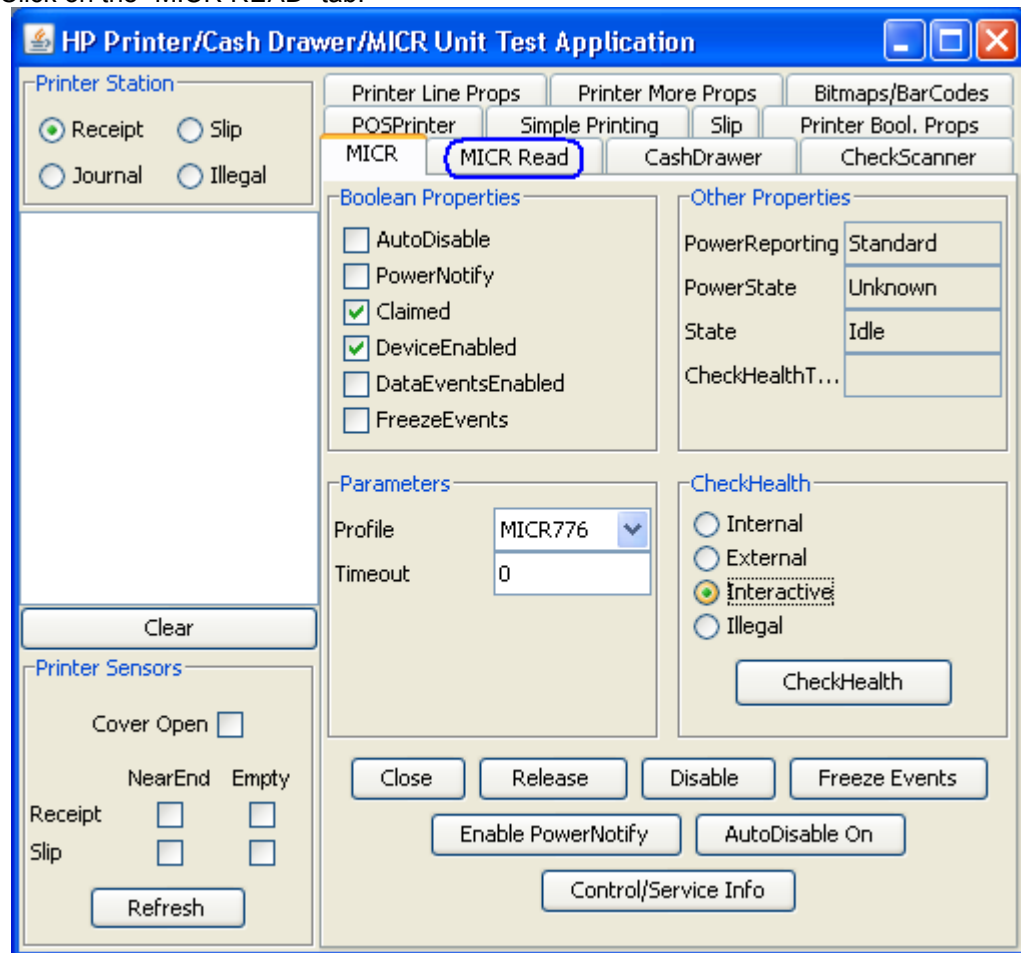


4. Click on the "OPEN" button.
5. Click on the "CLAIM" button.

6. Click on the “ENABLE” button. After all three buttons are clicked the screen will look similar to the following screen capture:



7. Click on the “MICR READ” tab:



8. Slide the check facing up into the MICR until the LED on comes on.
9. Click on "Enable Data Events":

HP Printer/Cash Drawer/MICR Unit Test Application

Printer Station

☒ Receipt ☐ Slip
☐ Journal ☐ Illegal

Printer Line Props **Printer More Props** **Bitmaps/BarCodes**
POSPrinter **Simple Printing** **Slip** **Printer Bool. Props**
MICR **MICR Read** **CashDrawer** **CheckScanner**

Data Handling

DataCount: 0

Enable Data Events **ClearInput**

Capabilities

☒ CapValidationDevice

Insertion

Timeout: 10000

Begin **End**

Removal

Timeout: 10000

Begin **End**

MICR Data

RawData:
AccountNumber:
Amount:
BankNumber:
EPC:
SerialNumber:
TransitNumber:
CheckType: 99
CountryCode: 99

Printer Sensors

Cover Open ☐

NearEnd Empty
Receipt ☐ ☐
Slip ☐ ☐

Refresh

Clear

10. Click on “Begin” in the “Insertion” section of the GUI:

The screenshot shows the 'HP Printer/Cash Drawer/MICR Unit Test Application' window. The interface is divided into several sections:

- Printer Station:** Contains radio buttons for 'Receipt' (selected), 'Slip', 'Journal', and 'Illegal'.
- Printer Line Props:** Includes tabs for 'POSPrinter', 'Simple Printing', 'MICR', 'MICR Read', 'CashDrawer', and 'CheckScanner'. 'Simple Printing' is currently selected.
- Data Handling:** Features a 'DataCount' field set to '0', and buttons for 'Enable Data Events' and 'ClearInput'.
- Capabilities:** Includes a checked checkbox for 'CapValidationDevice'.
- Insertion:** Contains a 'Timeout' field set to '10000' and a 'Begin' button, which is highlighted with a blue rectangle. An 'End' button is also present.
- Removal:** Contains a 'Timeout' field set to '10000' and 'Begin' and 'End' buttons.
- MICR Data:** A table displaying various data fields:

MICR Data	
RawData	
AccountNumber	
Amount	
BankNumber	
EPC	
SerialNumber	
TransitNumber	
CheckType	99
CountryCode	99

Below the MICR Data table, there is a 'Printer Sensors' section with checkboxes for 'Cover Open', 'NearEnd', 'Empty', 'Receipt', and 'Slip', along with a 'Refresh' button.

11. Click on “End” in the “Insertion” section of the GUI:

The screenshot shows the 'HP Printer/Cash Drawer/MICR Unit Test Application' window. The 'Printer Station' section on the left has radio buttons for 'Receipt' (selected), 'Slip', 'Journal', and 'Illegal'. The top navigation bar includes tabs for 'Printer Line Props', 'Printer More Props', 'Bitmaps/BarCodes', 'POSPrinter', 'Simple Printing', 'Slip', 'Printer Bool. Props', 'MICR', 'MICR Read', 'CashDrawer', and 'CheckScanner'. The 'Data Handling' section contains a 'DataCount' field with the value '0', and 'Enable Data Events' and 'ClearInput' buttons. The 'Capabilities' section has a checked checkbox for 'CapValidationDevice'. The 'Insertion' section features a 'Timeout' field with '10000' and 'Begin' and 'End' buttons, with the 'End' button highlighted by a red rectangle. The 'Removal' section also has a 'Timeout' field with '10000' and 'Begin' and 'End' buttons. The 'MICR Data' section at the bottom lists fields: 'RawData', 'AccountNumber', 'Amount', 'BankNumber', 'EPC', 'SerialNumber', 'TransitNumber', 'CheckType' (with value '99'), and 'CountryCode' (with value '99'). A 'Clear' button is located above the 'Printer Sensors' section, which includes checkboxes for 'Cover Open', 'NearEnd', 'Empty', 'Receipt', and 'Slip', along with a 'Refresh' button.

When the “End” is clicked, the printer will engage and read the MICR information on the check.

The data that was read will appear in the “MICR Data” section of the GUI (“x” represent where data would appear that is read):

HP Printer/Cash Drawer/MICR Unit Test Application

Printer Station

Receipt

Slip

Journal

Illegal

MICR Data Event oc

Clear

Printer Sensors

Cover Open

NearEnd

Empty

Receipt

Slip

Refresh

Printer Line Props

Printer More Props

Bitmaps/BarCodes

POSPrinter

Simple Printing

Slip

Printer Bool. Props

MICR

MICR Read

CashDrawer

CheckScanner

Data Handling

DataCount0

Enable Data Events

ClearInput

Capabilities

CapValidationDevice

Insertion

Timeout10000

Begin

End

Removal

Timeout10000

Begin

End

MICR Data

RawData

AccountNumber

Amount

BankNumber

EPC

SerialNumber

TransitNumber

CheckType

CountryCode

xxxxxxxxxx xxxxxxxxxxxxxx xxxx

xxxxxxxxxx

xxxxx

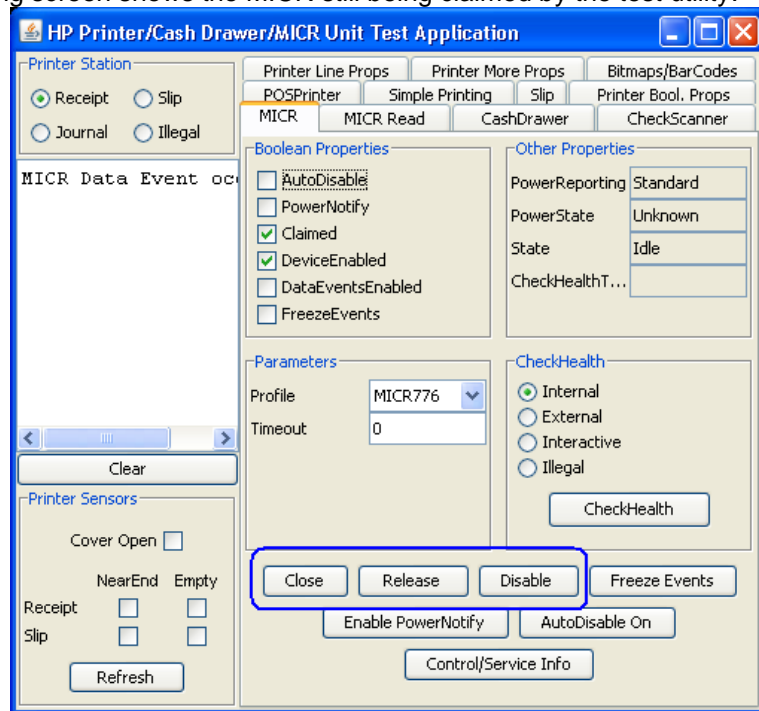
xxxx

xxxxxxxxxx

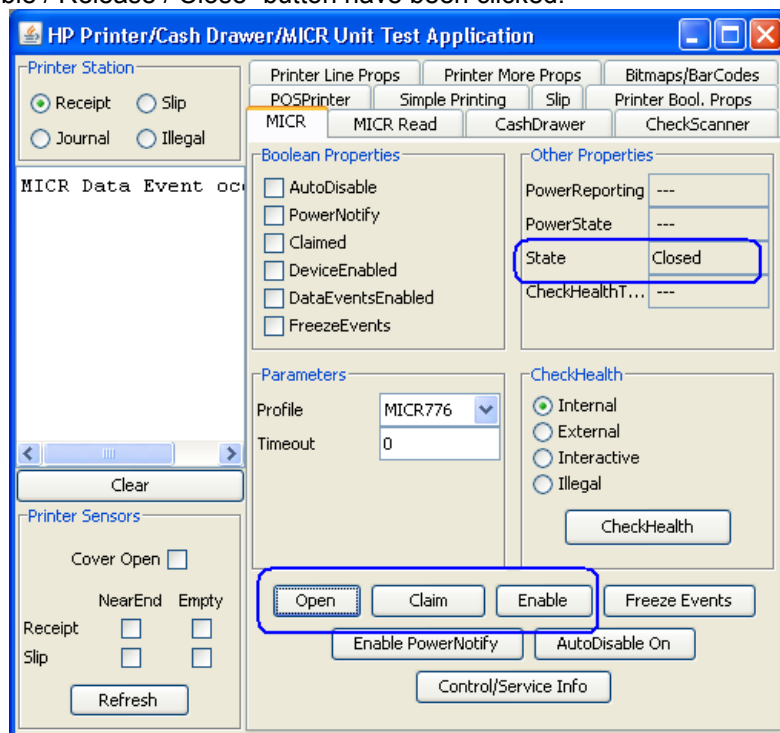
1

1

12. To exit the application, need to disable/release and close the MICR from the MICR tab. The following screen shows the MICR still being claimed by the test utility:



The following shows the device has been released and is available for other application after "Disable / Release / Close" button have been clicked:



13. The piece of paper that was inserted in step 7 can be removed from the imager portion of the printer by pulling on the paper; there will be slight force needed when the paper is pulled.

7.2.18 JPOS Drivers for the Receipt Printer Drivers - Slip

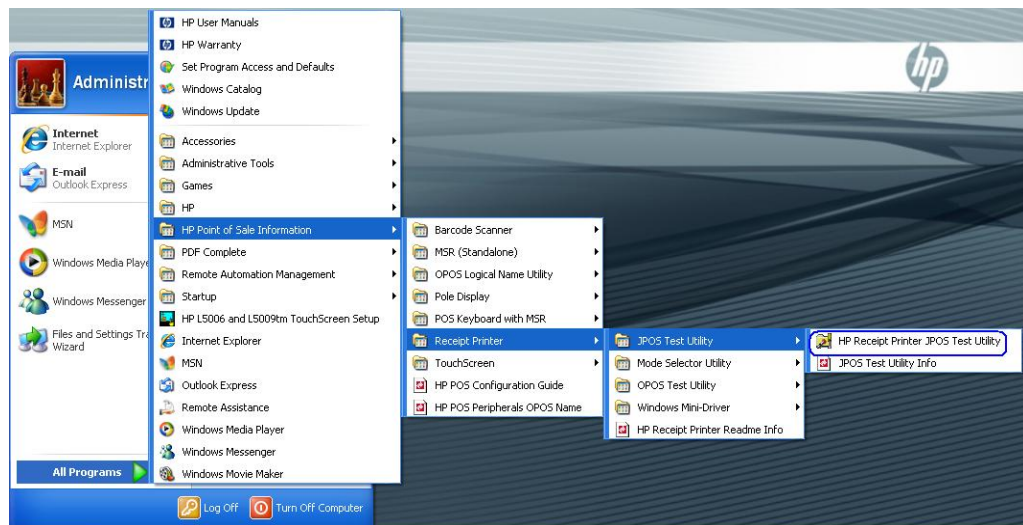
The JPOS drivers are included in the HP Point of Sale image or can be obtained from HP POS Drivers and Documentation CD or from the HP.COM web site.

The following is an overview of the steps to test the receipt printer followed by detailed steps:

1. Start the JPOS test utility
2. After a few seconds the JPOS test utility GUI will appear.
3. Select the A776 printer from the dropdown menu in "POSPrinter" tab.
4. Click on the "OPEN" button.
5. Click on the "CLAIM" button.
6. Click on the "ENABLE" button.
7. Click on the SLIP tab.
8. Select the "SLIP" option in the "Printer Station" section.
9. Click on the "Begin" button in the "Insertion" of the GUI and slide the paper in front of the printer until the LED comes on.
10. Click on "END" button.
11. Click on the "Begin" button in the "Removal" of the GUI.
12. Remove the paper from the printer.
13. Click on the "End" button in the "Removal" of the GUI.
14. Exit the application (ensure the device is closed and released).

Detail Steps

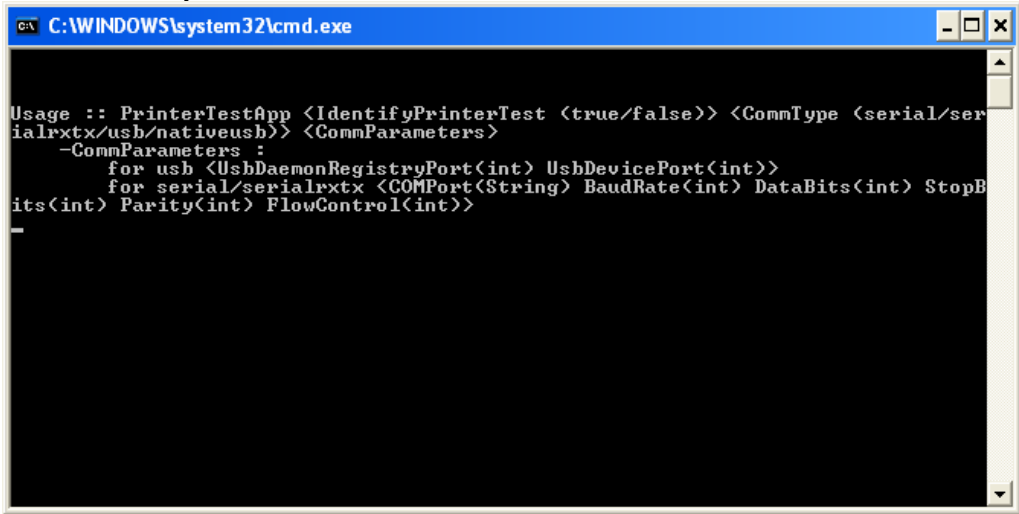
1. Start the JPOS test utility either using the link in the START MENU:



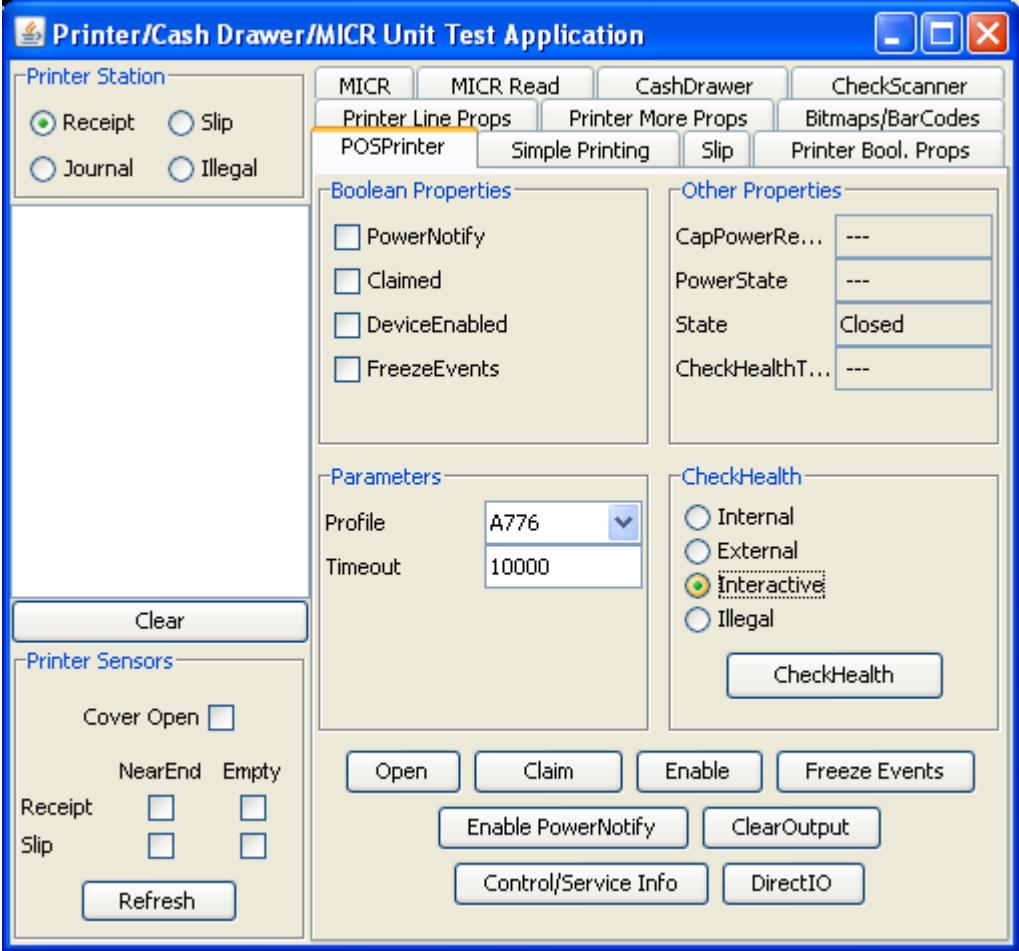
or

by launching the POSTEST.BAT file that is located in the JPOS folder within the receipt printer folder.

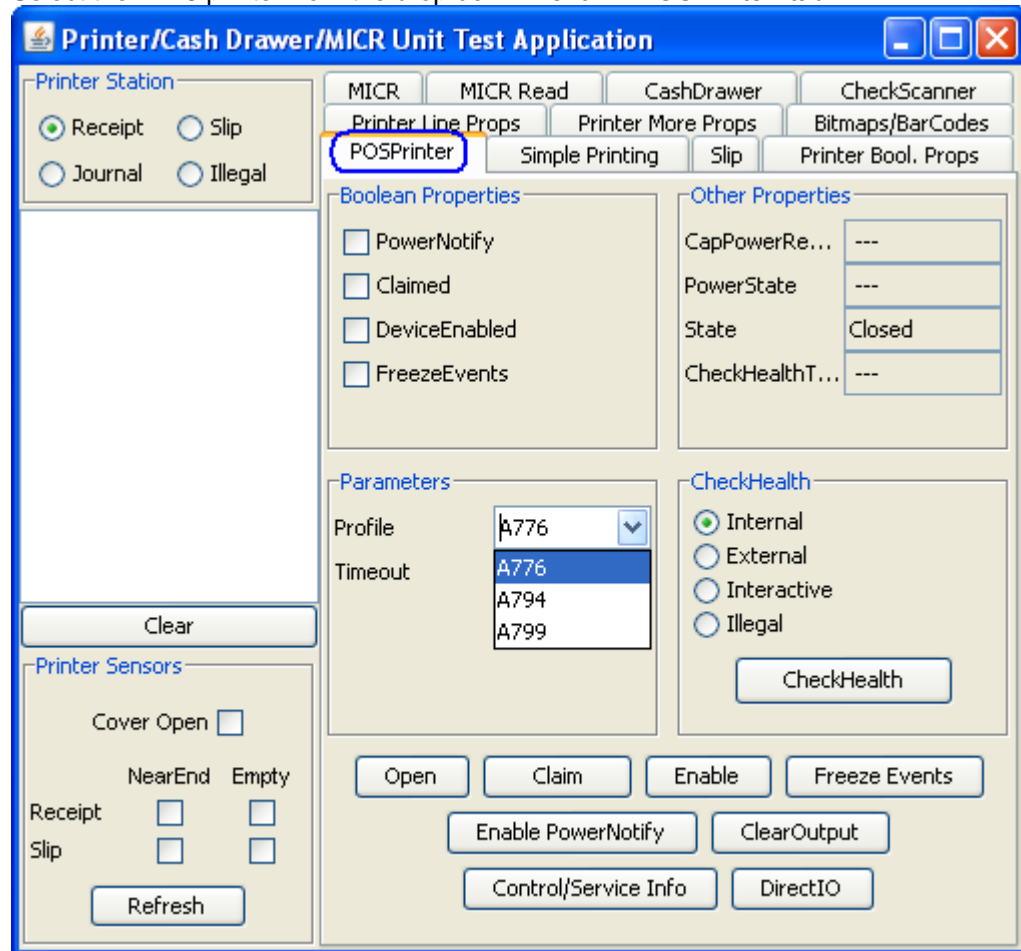
In the location the files were found execute the POSTEST.BAT file. Depending on your screen resolution the following screen will be in the background before the GUI appears for the test utility:



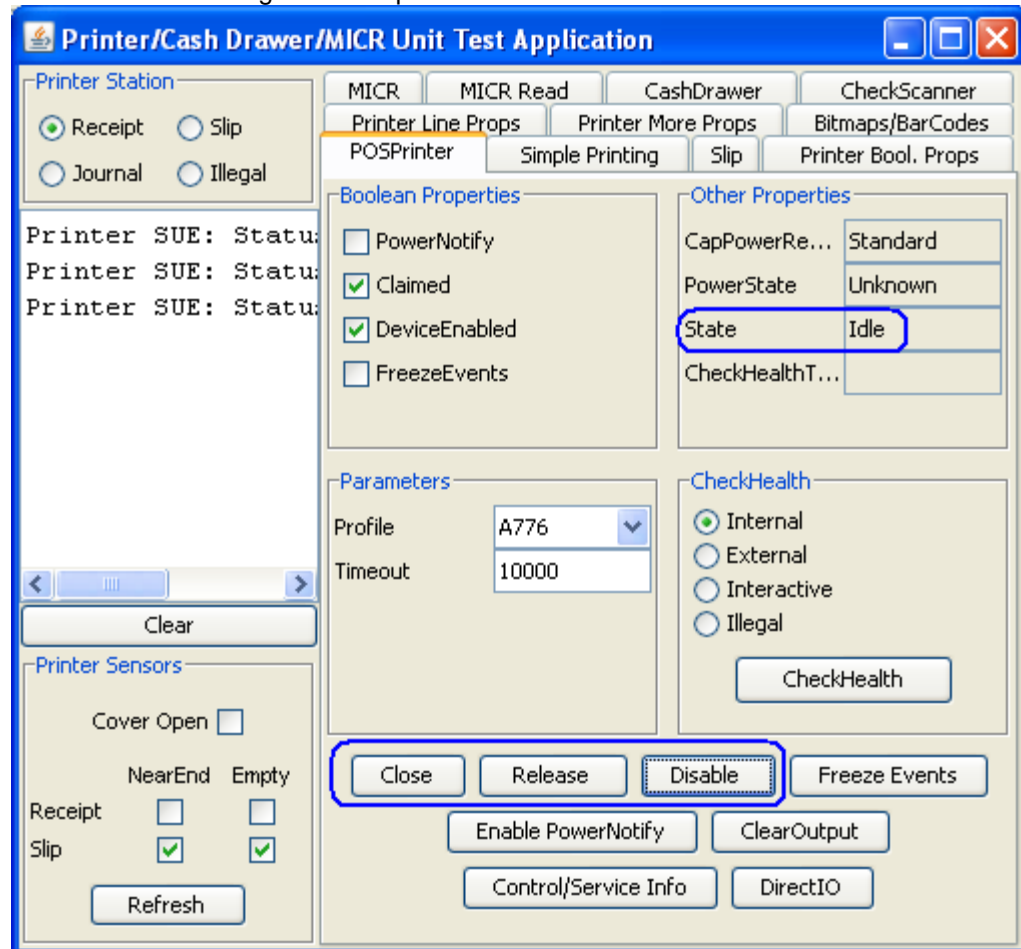
2. After a few seconds the JPOS test utility GUI will appear as shown below:



3. Select the A776 printer from the drop down menu in “POSPrinter” tab.



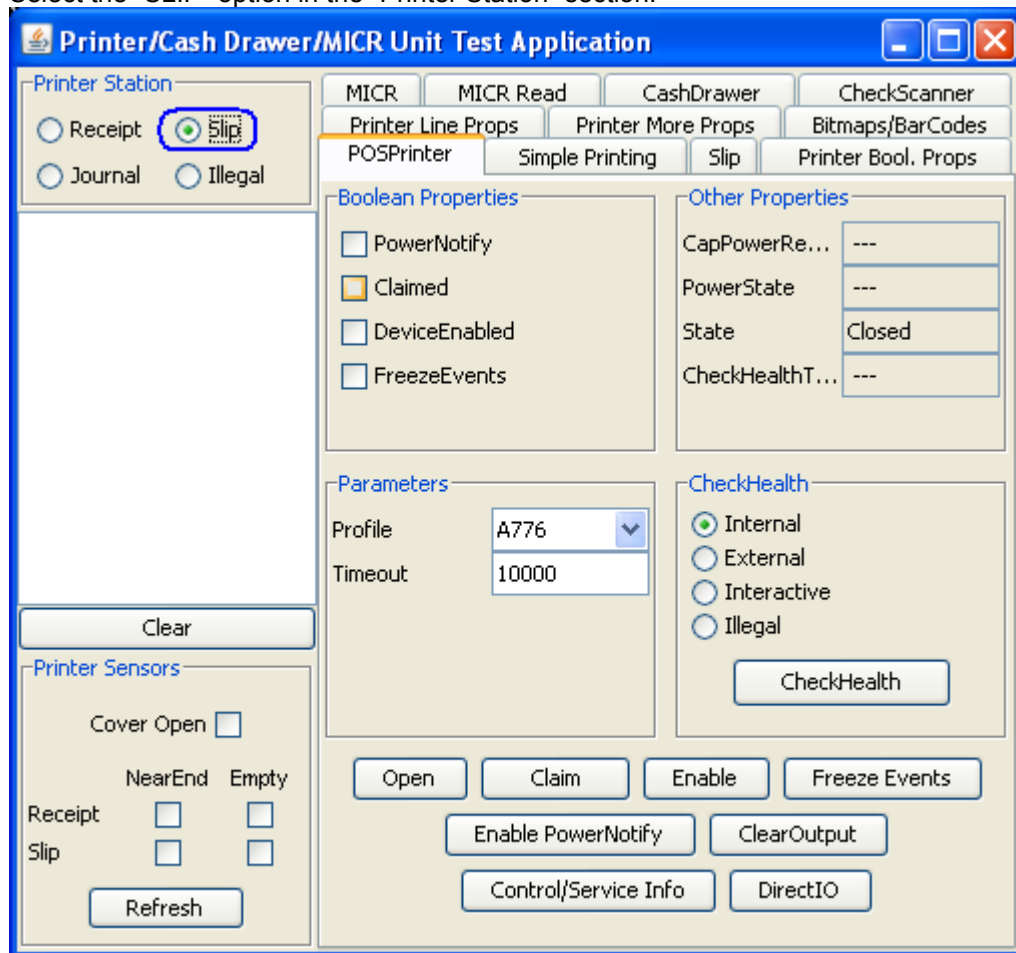
4. Click on the "OPEN" button.
5. Click on the "CLAIM" button.
6. Click on the "ENABLE" button. After all three buttons are clicked the screen will look similar to the following screen capture:



7. Click on the SLIP tab:

The screenshot shows a Windows application titled "Printer/Cash Drawer/MICR Unit Test Application". The interface includes a top menu bar with tabs: MICR, MICR Read, CashDrawer, CheckScanner, Printer Line Props, Printer More Props, Bitmaps/BarCodes, and Printer Bool. Props. The "Slip" tab under "Printer More Props" is selected and highlighted with a red circle. On the left, the "Printer Station" section has radio buttons for Receipt (selected), Slip, Journal, and Illegal. Below this, a text area displays "Printer SUE: Statu" three times. At the bottom left, the "Printer Sensors" section includes checkboxes for Cover Open, NearEnd, Empty, Receipt, and Slip (checked), along with a Refresh button. The main area is divided into four panels: "Boolean Properties" with checkboxes for PowerNotify, Claimed (checked), DeviceEnabled (checked), and FreezeEvents; "Other Properties" with dropdowns for CapPowerRe... (Standard), PowerState (Unknown), State (Idle), and CheckHealth...; "Parameters" with a Profile dropdown (A776) and a Timeout text box (10000); and "CheckHealth" with radio buttons for Internal (selected), External, Interactive, and Illegal, and a CheckHealth button. At the bottom, there are several control buttons: Close, Release, Disable (highlighted with a red dashed border), Freeze Events, Enable PowerNotify, ClearOutput, Control/Service Info, and DirectIO.

8. Select the "SLIP" option in the "Printer Station" section.



9. Click on the “Begin” button in the “Insertion” of the GUI and slide the paper in front of the printer until the LED comes on.

The screenshot shows the 'Printer/Cash Drawer/MICR Unit Test Application' window. The title bar is blue with standard Windows window controls. The main area is divided into several sections:

- Printer Station:** Contains radio buttons for 'Receipt', 'Slip' (selected), 'Journal', and 'Illegal'. Below this is a list of status messages: 'Printer SUE: Statu...', 'Printer SUE: Statu...', 'Printer SUE: Statu...', 'Printer SUE: Statu...', 'Printer SUE: Statu...', 'Printer SUE: Statu...'.
- Navigation Tabs:** A row of tabs at the top right includes 'MICR', 'MICR Read', 'CashDrawer', 'CheckScanner', 'Printer Line Props', 'Printer More Props' (selected), 'Bitmaps/BarCodes', 'POSPrinter', 'Simple Printing', 'Slip', and 'Printer Bool. Props'.
- Insertion:** A section with a 'Timeout' field set to '10000' and two buttons: 'Begin' (highlighted with a blue dashed box) and 'End'.
- Removal:** A section with a 'Timeout' field set to '10000' and two buttons: 'Begin' and 'End'.
- Slip Flip:** Contains radio buttons for 'Side 1', 'Side 2', and 'Opposite' (selected), and a 'Slip Flip' button.
- Slip Info:** Contains a 'Side' field with the value 'Unknown'.
- Printer Sensors:** Located at the bottom left, it includes a 'Cover Open' checkbox, a table for 'NearEnd' and 'Empty' status for 'Receipt' and 'Slip', and a 'Refresh' button.

10. Click on “END” button, the printer will make some noise and move the paper slightly.

Printer/Cash Drawer/MICR Unit Test Application

Printer Station

☐ Receipt ☒ Slip ☐ Journal ☐ Illegal

Printer SUE: Statu
Printer SUE: Statu
Printer SUE: Statu
Printer SUE: Statu
Printer SUE: Statu
Printer SUE: Statu

Printer Sensors

Cover Open ☐

NearEnd Empty
Receipt ☐ ☐
Slip ☐ ☐

Refresh

Insertion

Timeout 10000

Begin End

Removal

Timeout 10000

Begin End

Slip Flip

☐ Side 1 ☐ Side 2 ☒ Opposite

Slip Flip

Slip Info

Side Side 1

11. Click on the “Begin” button in the “Removal” of the GUI. When the button is pressed the printer will move the paper.
12. Remove the paper from the printer. If the paper is not removed in time, one will receive a JPOSEException error.
13. Click on the “End” button in the “Removal” of the GUI.

Printer/Cash Drawer/MICR Unit Test Application

Printer Station

☐ Receipt ☒ Slip

☐ Journal ☐ Illegal

Printer SUE: Statu:
Printer SUE: Statu:
Printer SUE: Statu:
Printer SUE: Statu:
Printer SUE: Statu:
Printer SUE: Statu:

Printer Sensors

Cover Open ☐

NearEnd Empty

Receipt ☐ ☐

Slip ☐ ☐

Refresh

MICR MICR Read CashDrawer CheckScanner

Printer Line Props Printer More Props Bitmaps/BarCodes

POSPrinter Simple Printing Slip Printer Bool. Props

Insertion Removal

Timeout 10000 Timeout 10000

Begin End Begin End

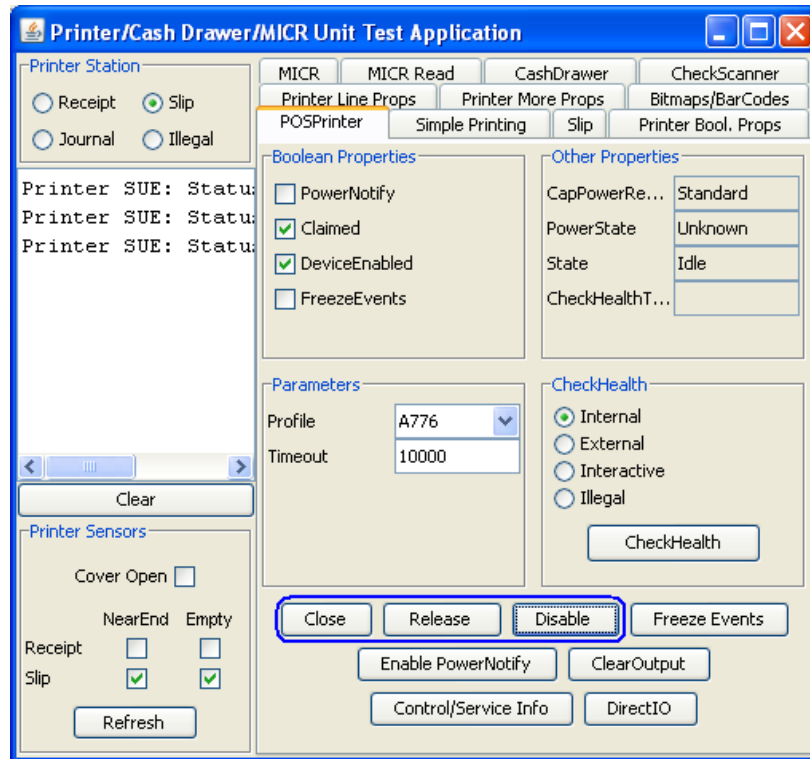
Slip Flip Slip Info

☐ Side 1 ☐ Side 2 ☒ Opposite

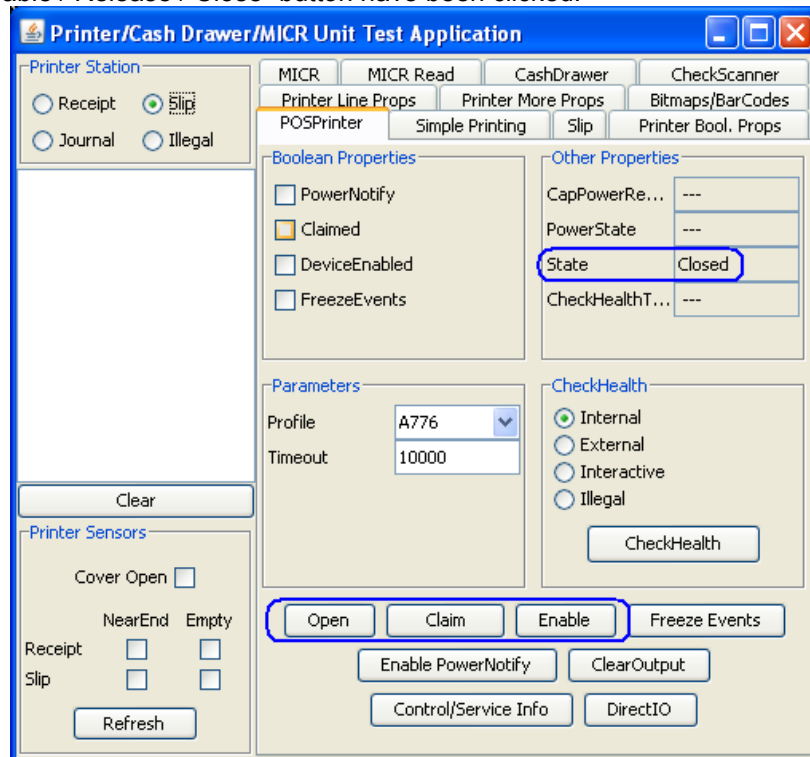
Slip Flip

Side Side 1

14. To exit the application, need to disable/release and close the printer from the “POSPrinter” tab. The following screen shows the printer still being claimed by the test utility:



The following shows the printer has been released and is available for other application after “Disable / Release / Close” button have been clicked:



7.2.19 JPOS Drivers for the Receipt Printer Drivers – Slip Printing

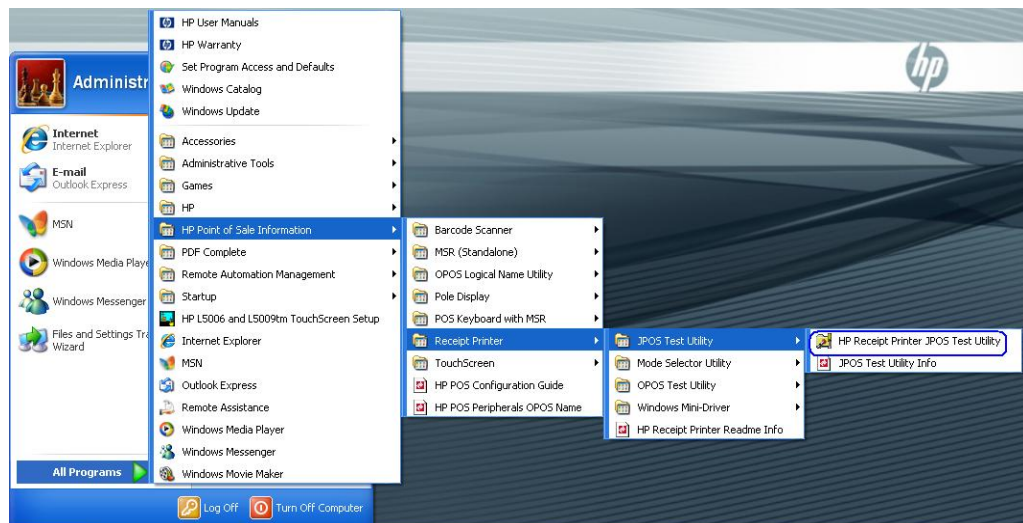
The JPOS drivers are included in the HP Point of Sale image or can be obtained from HP POS Drivers and Documentation CD or from the HP.COM web site.

The following is an overview of the steps to test the receipt printer followed by detailed steps:

1. Start the JPOS test utility.
2. After a few seconds the JPOS test utility GUI will appear as shown below:
3. Select the A776 printer from the dropdown menu in “POSPrinter” tab.
4. Click on the “OPEN” button.
5. Click on the “CLAIM” button.
6. Click on the “ENABLE” button.
7. Select the “SLIP” option in the “Printer Station” section.
8. Click on the “Simple Printing” tab:
9. Slide the paper in the front of the printer until the LED comes on.
10. Type some text in the “PRINT DATA” area; this is the text that should print on the receipt printer and click on the “PRINTNORMAL” button.
11. Click on the SLIP tab:
12. Click on “Begin” then click on “End” button in the “Removal” of the GUI to have the paper ejected.
13. Exit the application (ensure the device is closed and released).

Detail Steps

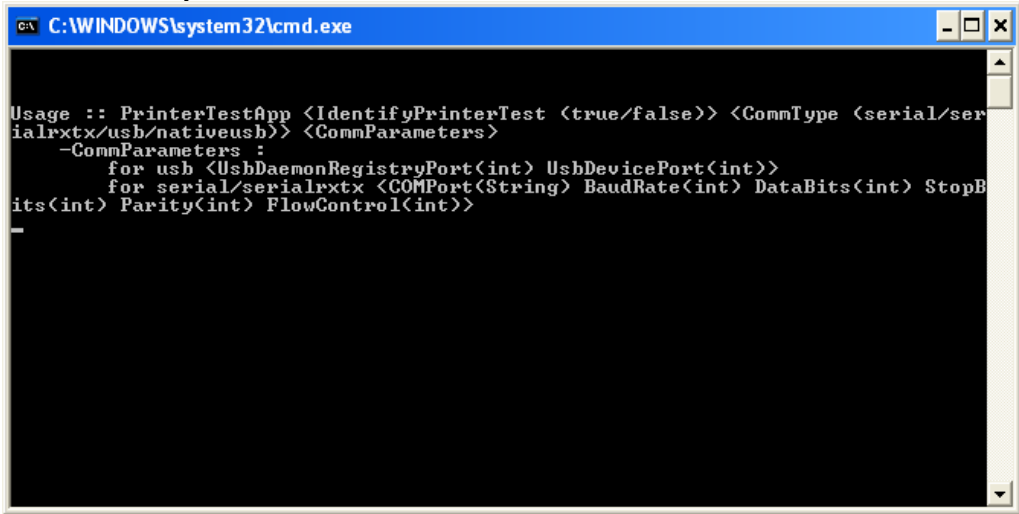
1. Start the JPOS test utility either using the link in the START MENU:



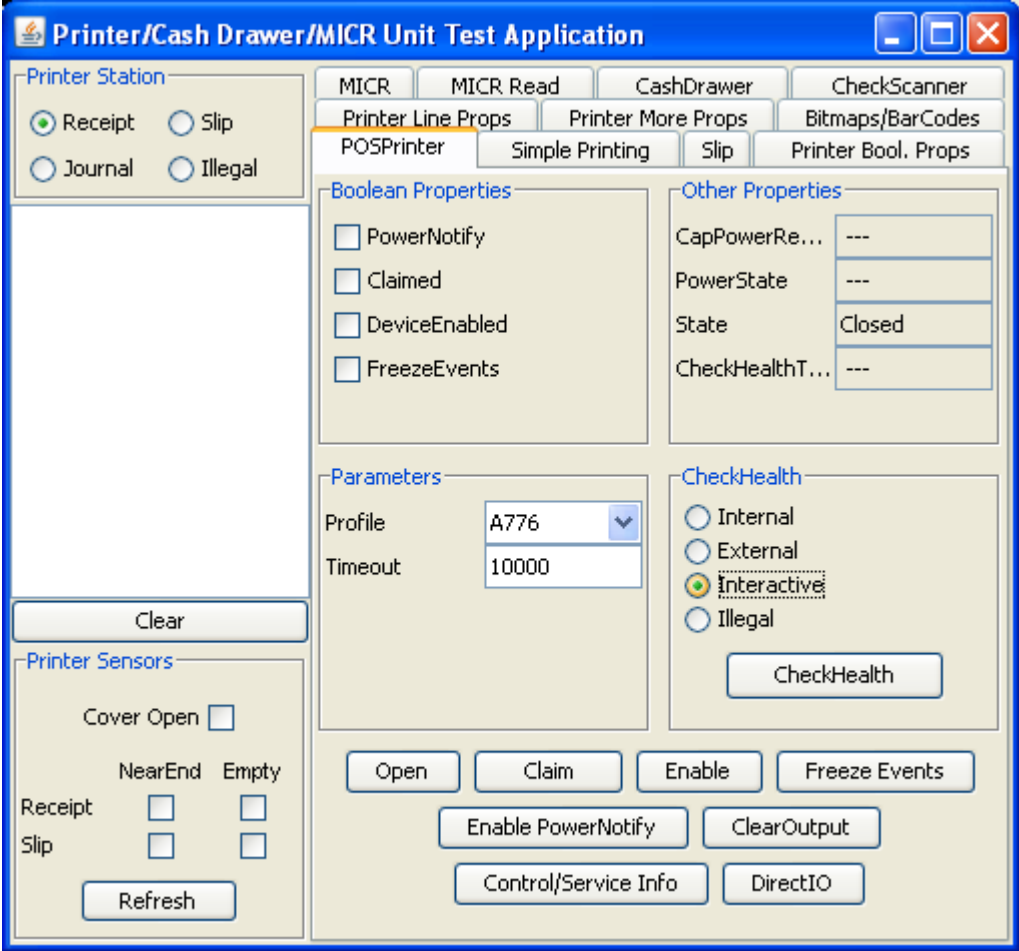
or

by launching the POSTEST.BAT file that is located in the JPOS folder within the receipt printer folder.

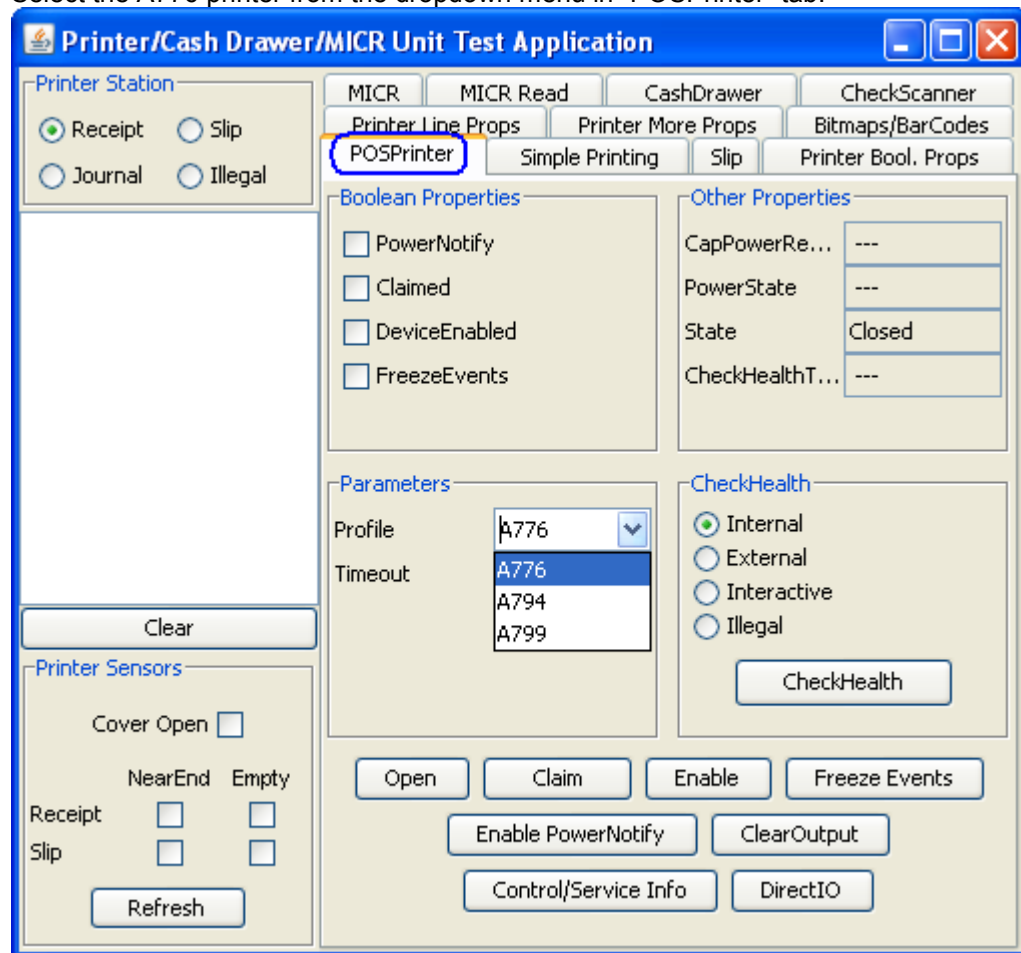
In the location the files were found execute the POSTEST.BAT file. Depending on your screen resolution the following screen will be in the background before the GUI appears for the test utility:



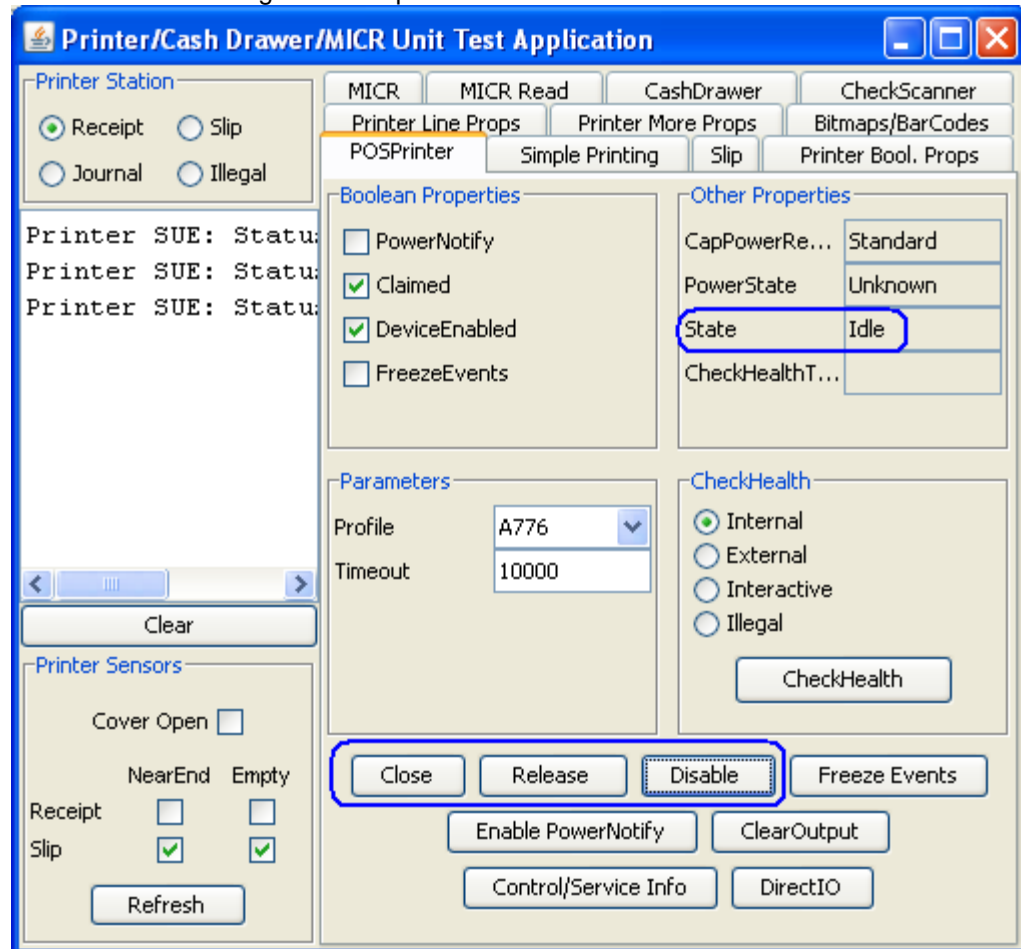
2. After a few seconds the JPOS test utility GUI will appear as shown below:



3. Select the A776 printer from the dropdown menu in “POSPrinter” tab.



4. Click on the "OPEN" button.
5. Click on the "CLAIM" button.
6. Click on the "ENABLE" button. After all three buttons are clicked the screen will look similar to the following screen capture:



7. Select the "SLIP" option in the "Printer Station" section.

Printer/Cash Drawer/MICR Unit Test Application

Printer Station

☐ Receipt ☒ Slip ☐ Journal ☐ Illegal

Printer Line Props **Printer More Props** **Bitmaps/BarCodes**

POSPrinter **Simple Printing** **Slip** **Printer Bool. Props**

Boolean Properties

☐ PowerNotify
☒ Claimed
☐ DeviceEnabled
☐ FreezeEvents

Other Properties

CapPowerRe... ---
PowerState ---
State Closed
CheckHealthT... ---

Parameters

Profile A776
Timeout 10000

CheckHealth

☒ Internal
☐ External
☐ Interactive
☐ Illegal

CheckHealth

Printer Sensors

Cover Open ☐

NearEnd Empty

Receipt ☐ ☐
Slip ☐ ☐

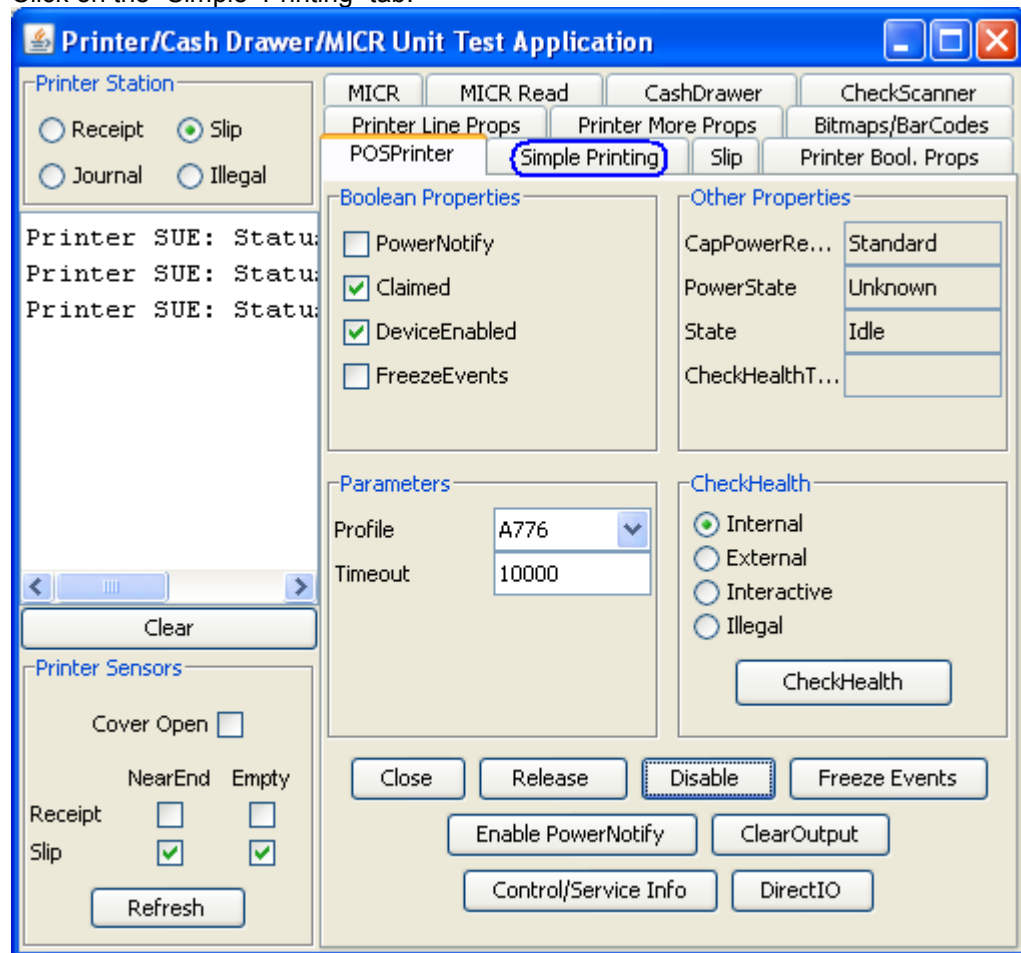
Refresh

Open Claim Enable Freeze Events

Enable PowerNotify ClearOutput

Control/Service Info DirectIO

8. Click on the “Simple Printing” tab:



9. Slide the paper in the front of the printer until the LED comes on.
10. Type some text in the "PRINT DATA" area; this is the text that should print on the receipt printer and click on the "PRINTNORMAL" button.

Printer/Cash Drawer/MICR Unit Test Application

Printer Station

☐ Receipt ☒ Slip
☐ Journal ☐ Illegal

Printer SUE: Status
Printer SUE: Status
Printer SUE: Status

Printer Sensors

Cover Open ☐

NearEnd ☐ Empty ☐

Receipt ☐ AsyncMode ☐
Slip ☒ FlagWhenIdle ☐

Refresh

String Data

A-Z

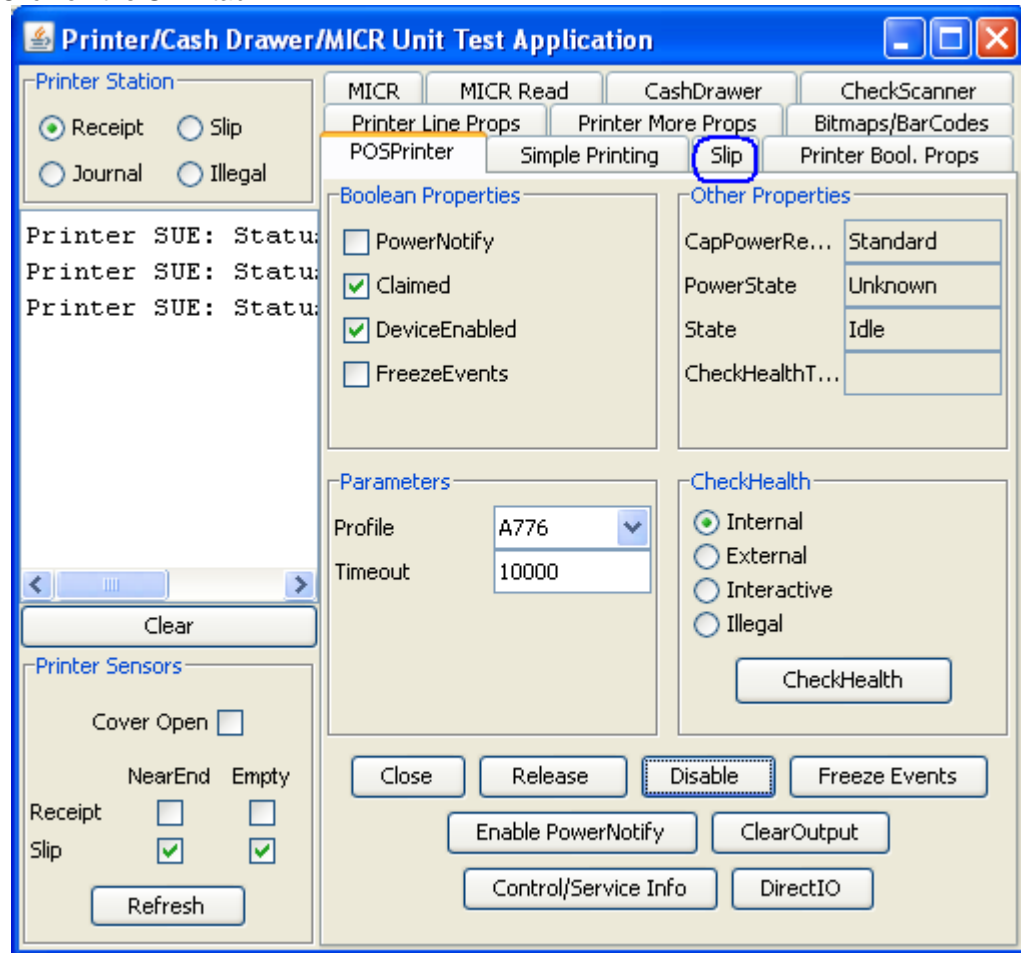
Escape Sequences

Paper cut: ESC|#P

Print Data

Type in the text that you would like to have printed in this box.

11. Click on the SLIP tab:



12. Click on “Begin” then click on “End” button in the “Removal” of the GUI to have the paper ejected.

Printer/Cash Drawer/MICR Unit Test Application

Printer Station

☐ Receipt ☒ Slip

☐ Journal ☐ Illegal

Printer SUE: Statu
Printer SUE: Statu
Printer SUE: Statu
Printer SUE: Statu
Printer SUE: Statu
Printer SUE: Statu

Printer Sensors

Cover Open ☒

NearEnd Empty

Receipt ☐ ☐

Slip ☐ ☐

Refresh

MICR MICR Read CashDrawer CheckScanner

Printer Line Props Printer More Props

POSPrinter Simple Printing Slip Printer Bool. Props

Insertion

Timeout 10000

Begin End

Removal

Timeout 10000

Begin End

Slip Flip

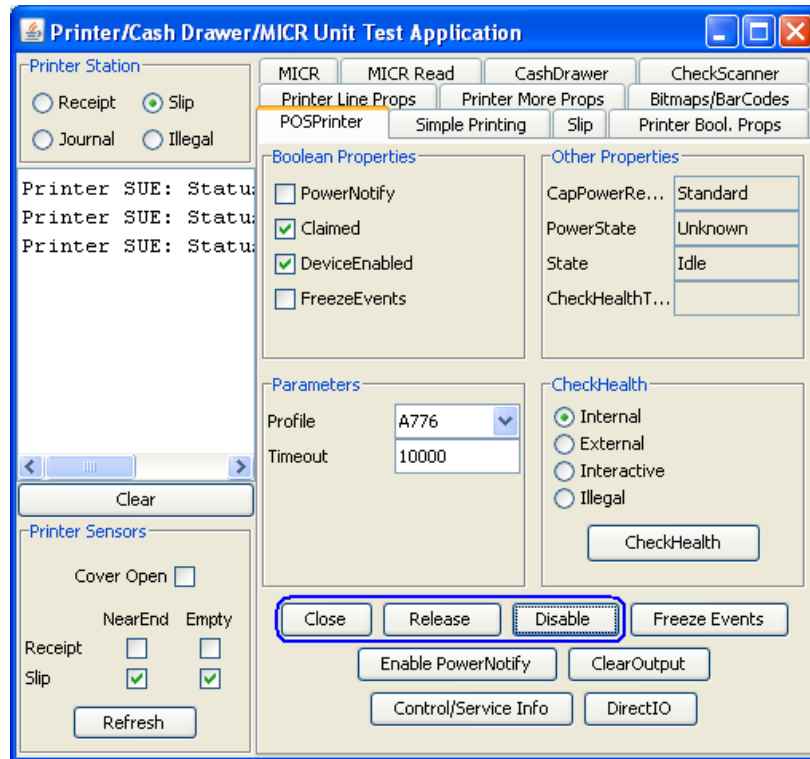
☐ Side 1
☐ Side 2
☒ Opposite

Slip Flip

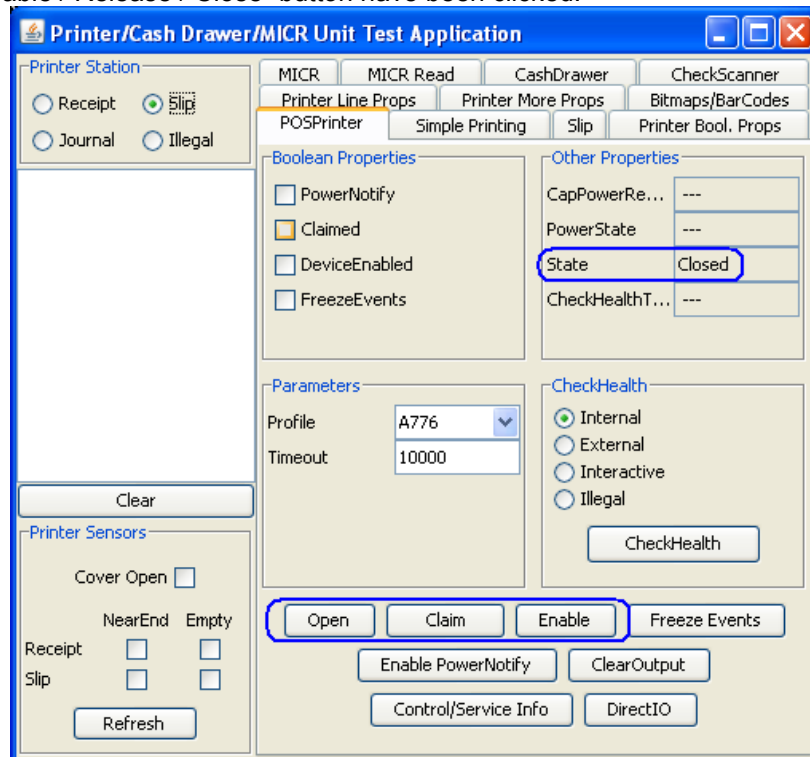
Slip Info

Side Side 1

13. To exit the application, need to disable/release and close the printer from the “POSPrinter” tab. The following screen shows the printer still being claimed by the test utility:



The following shows the printer has been released and is available for other application after “Disable / Release / Close” button have been clicked:



7.2.20 HP Font Utility (ASIAN Font Download) – Single Station (A799) Printer

The single station printer can have an additional font downloaded to the printer via the HP Font Download utility. The English font will always be present in the printer even when an additional font is downloaded to the printer. The following fonts can be downloaded to the printer: Chinese / Kanji / Korean.

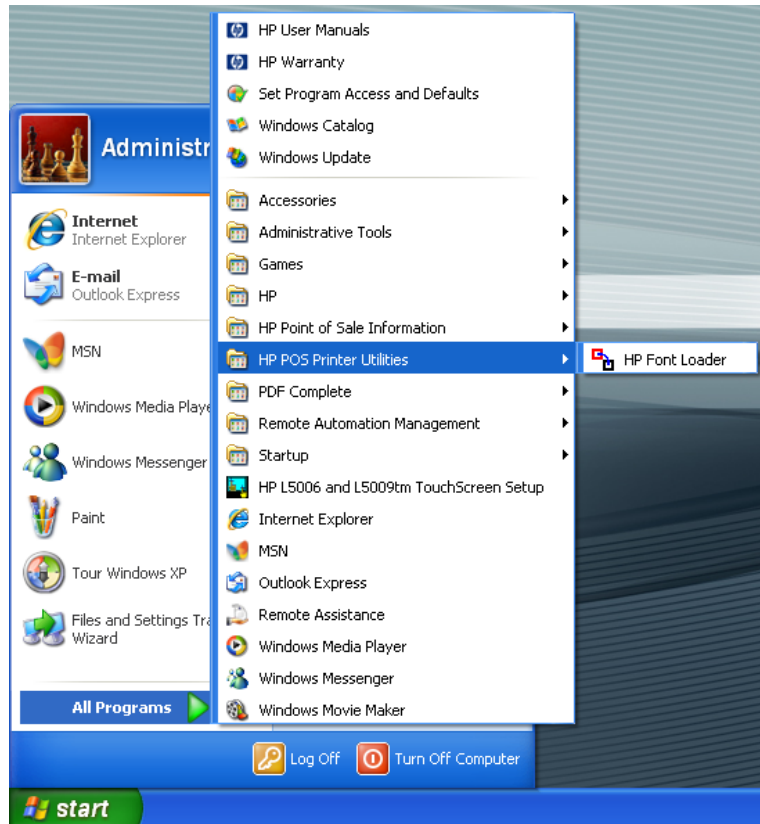
7.2.20.1 HP Font Utility (Asian Font Download Utility)

The following is overview of the steps to test the receipt printer followed by details steps:

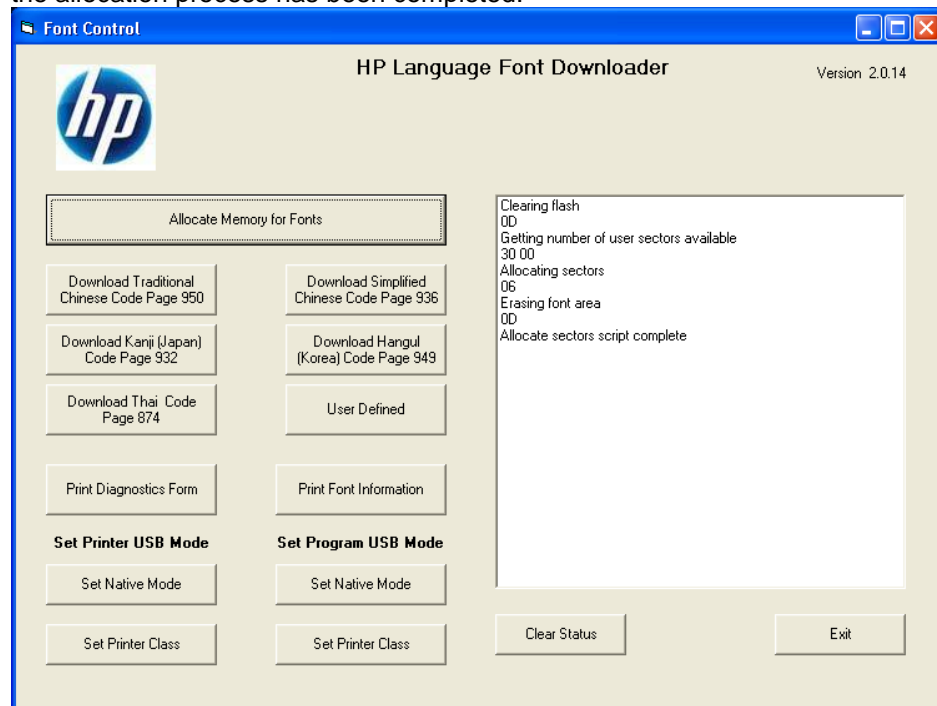
1. Install the HP Asian Font Downloader utility, the SETUP.EXE can be found "C:\xxxxx\Point of Sale\Receipt Printer\Asian Font Utility for A799". After the installation is complete, launch the "HP FONT LOADER" from the Windows START menu.
2. Click on the "Allocate Memory for Fonts" button. The status box will indicate that the allocation process has been completed.
3. Click on the language that you would like to download to the printer. This process can take 10 minutes to complete; during the download process the LED on the printer will blink. When the process has completed downloading, the font the status box will indicate that is it complete.
4. Click on "Print Sample/Diagnostics" to confirm you are able to get a print out after the font download. Note the print out will be in English.
5. Click on "Exit" to leave and close the application.

Detail Steps

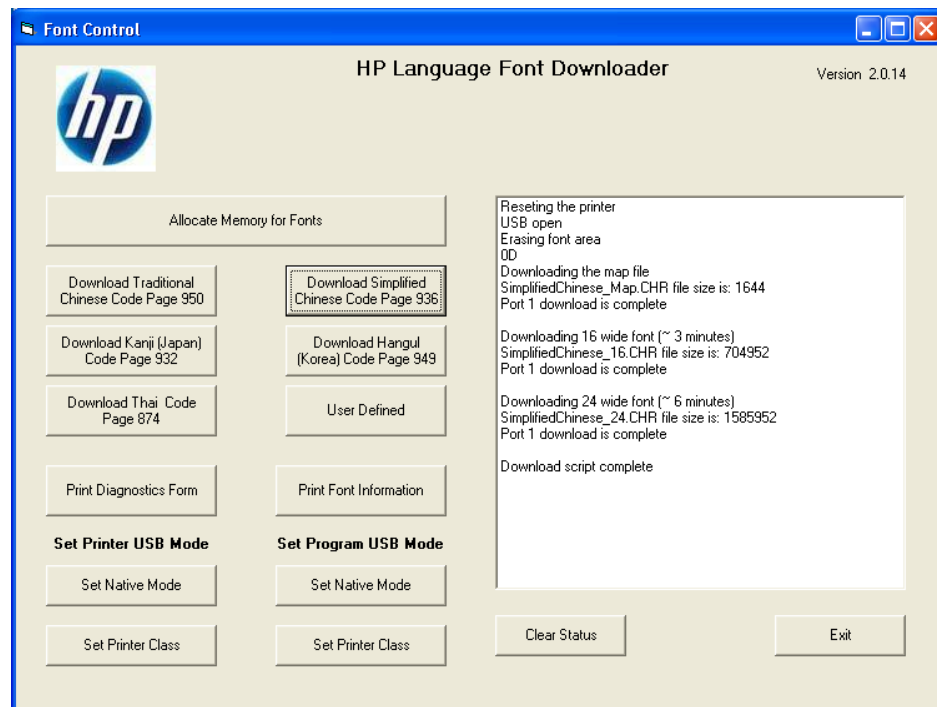
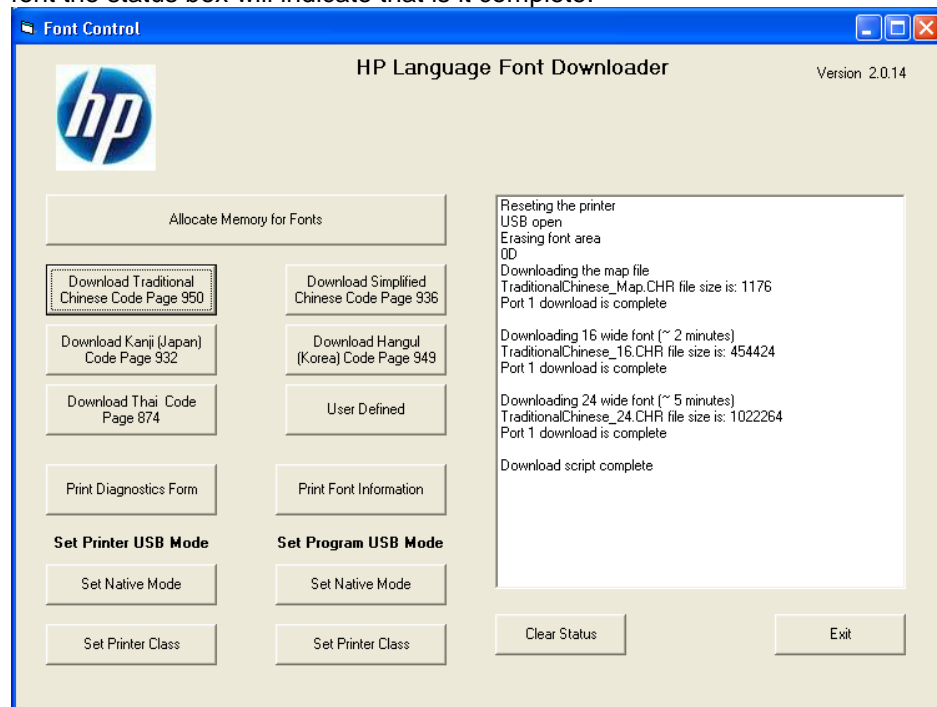
1. Install the HP Asian Font Downloader utility, the SETUP.EXE can be found "C:\xxxxx\Point of Sale\Receipt Printer\Asian Font Utility for A799". After the installation is complete, launch the "HP FONT LOADER" from the Windows START menu.

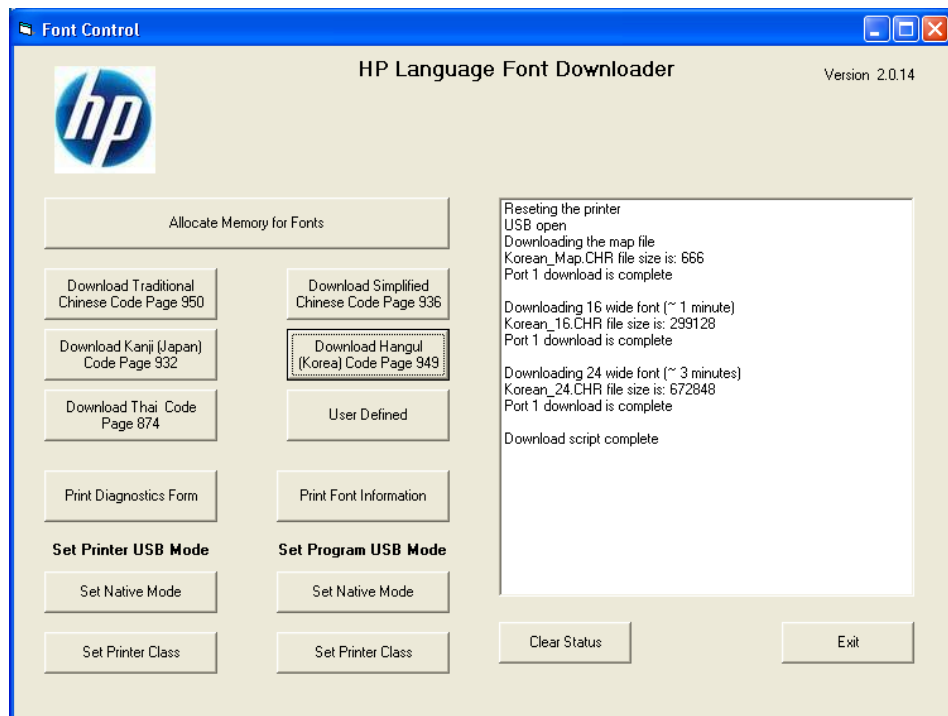
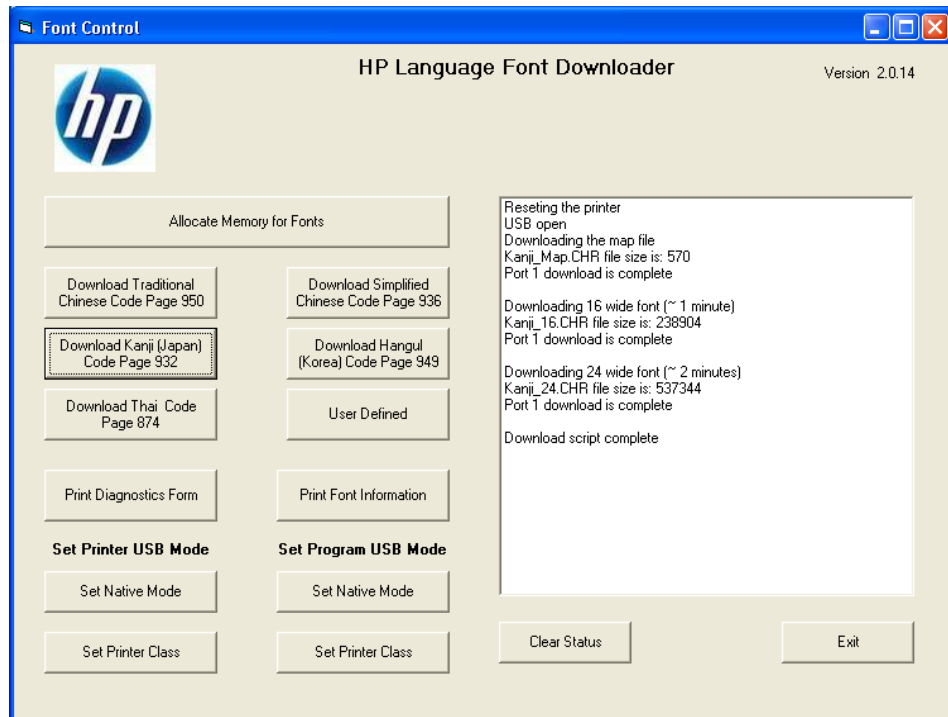


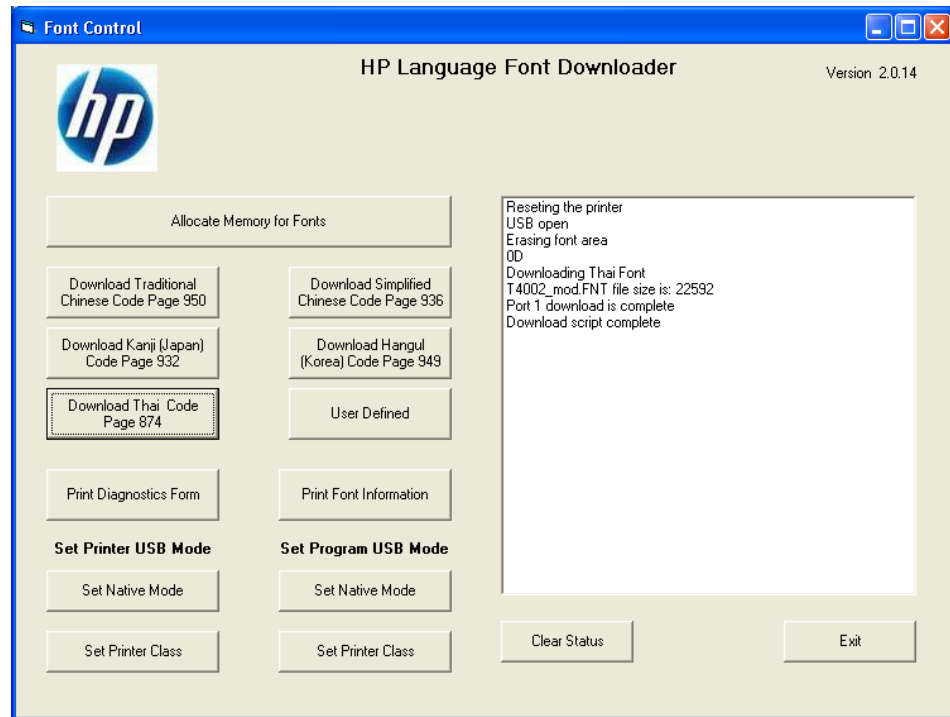
2. Click on the “Allocate Memory for Fonts” button. The status box will indicate that the allocation process has been completed.



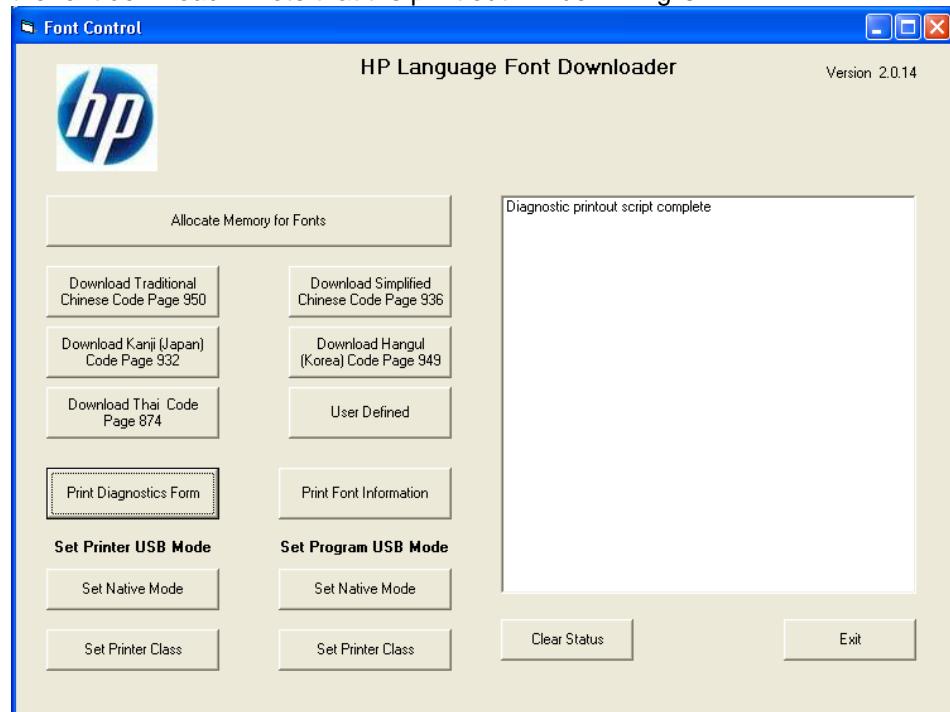
3. Click on the language that you would like to download to the printer. This process can take up to 10 minutes to complete; during the download process the LED on the printer will blink. When the process has completed downloading, the font the status box will indicate that is it complete.





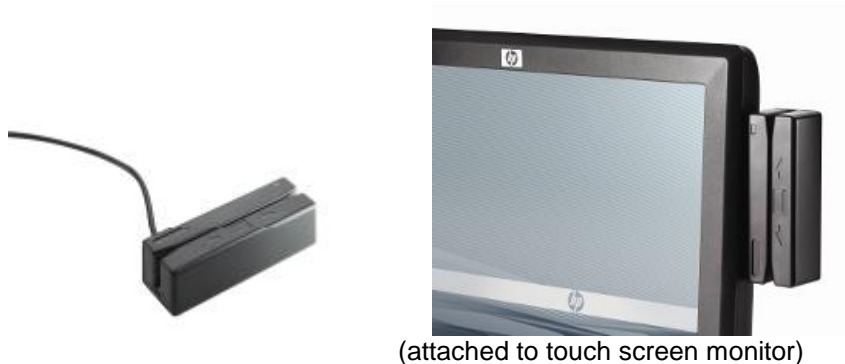


4. Click on “Print Sample/Diagnostics” to confirm you are able to get a print out after the font download. Note that the print out will be in English.



5. Click on “Exit” to leave and close the application.

7.3 MSR (Magnetic Stripe Reader) – Standalone



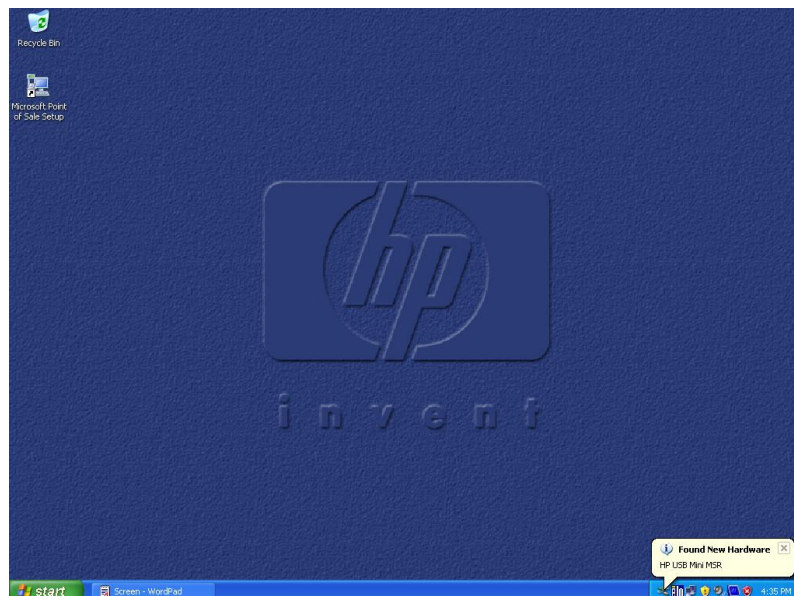
7.3.1 Connection

The MSR may be plugged into any free USB port. One may plug the MSR into the power USB port in the 5V part of USB port, when plugged in this configuration the power portion of USB port is not utilized.

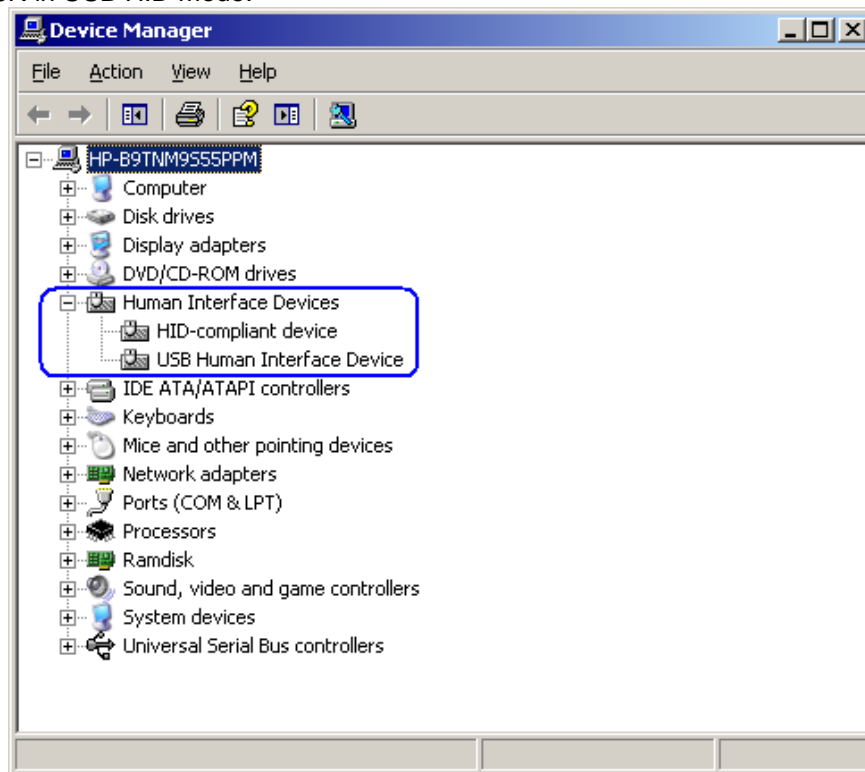
The MSR can either be in USB HID-KB or USB HID mode. The MSR is shipped from HP in USB-HID mode as the default. The OPOS driver will understand the scanner in either mode. If your application requires the MSR to be in USB HID-KB mode this can be changed either using the MSR configuration utility or the using the stand alone utility that are included in the HP POS image as well on the “HP Point of Sale System Software and Documentation CD”. These utilities are also available on the HP.COM web site under the HP POS product.

7.3.2 Windows Drivers for the MSR

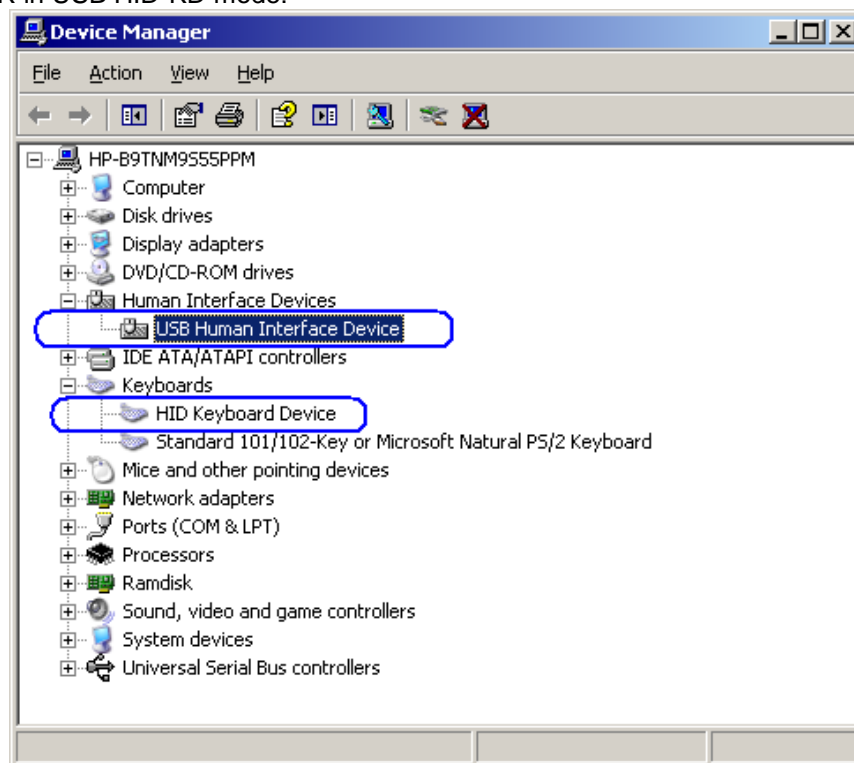
The MSR is natively supported by Windows operating system as a Human Interface Device (HID). If during the driver installation Windows displays the new hardware wizard, the user needs to accept the defaults that appear during the hardware wizard GUI (for the first screen you may select the no option) and the native drivers will be loaded. Please refer to “[If prompted for native driver location \(New Hardware Wizard\)](#)” section.



The following is the Windows device manager after all the drivers are loaded for the HP USB Mini MSR in USB HID mode:



The following is the Windows device manager after all the drivers are loaded for the HP USB Mini MSR in USB HID-KD mode:



7.3.3 **Utility to switch MSR Mode**

7.3.3.1 **Set MSR to HID KB mode**

The MSR HID Utility can be found on the "HP Point of Sale System Software and Documentation CD". On the HP POS factory image the drivers are installed in the image, for reference the drivers are located "C:\xxxxx\Point of Sale\MSR (Standalone)\MSR HID Utility" sub-directory.

Graphical Utility

1. Execute "HPHIDKBConfig.exe". When the utility is running you should see a graphical GUI similar to the following:



2. The reader emits three long beeps to confirm that the settings have been changed.
3. The application displays a message to indicate a successful installation and the application exits automatically and the process is complete.

When the HP USB reader is properly connected to the host, the application sends "Default Settings," "Set USB HID Keyboard format," and "Review setting" commands to the reader.

If there is no HP USB reader connected to the host, the application shows a warning message, asking user to connect the USB reader. After connecting the reader, run application again.

Silent Utility

1. Execute "HPConfig.exe 1". When the utility is running there will be no graphical GUI that appears on the screen. The following are the parameters that are available for the utility:

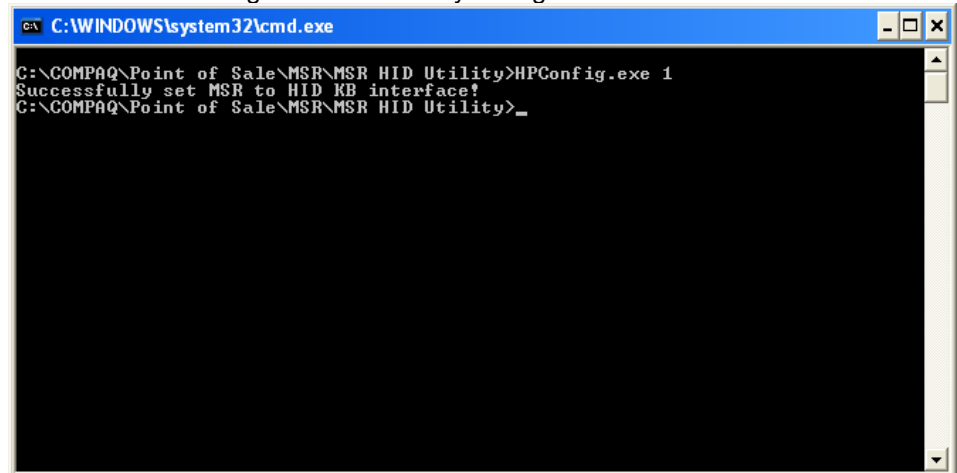
HPConfig.exe: set MSR to HID interface mode.

HPConfig.exe 0: set MSR to HID interface mode.

HPConfig.exe 1: set MSR to HID KB interface mode.

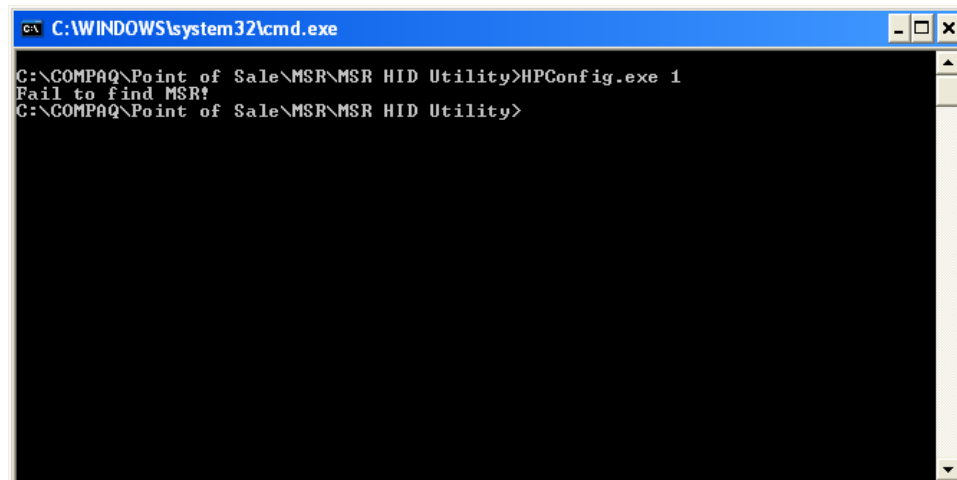
HPConfig.exe 2: set MSR to HID KB mode with no "CR", where "CR" is short for Carriage Return.
HPConfig.exe v: display the application version.

2. The reader emits three long beeps to confirm that the settings have been changed. There will be a message that is displayed (if run in a DOS session) that states the setting was successfully changed.



```
C:\WINDOWS\system32\cmd.exe
C:\COMPAQ\Point of Sale\MSR\MSR HID Utility>HPConfig.exe 1
Successfully set MSR to HID KB interface!
C:\COMPAQ\Point of Sale\MSR\MSR HID Utility>_
```

If the MSR is not found or connected to the unit, a message appears indicating the MSR was not found:



```
C:\WINDOWS\system32\cmd.exe
C:\COMPAQ\Point of Sale\MSR\MSR HID Utility>HPConfig.exe 1
Fail to find MSR!
C:\COMPAQ\Point of Sale\MSR\MSR HID Utility>
```


7.3.3.2 Set MSR to HID KB mode with no “CR”

The MSR HID Utility can be found on the “HP Point of Sale System Software and Documentation CD”. On the HP POS factory image the drivers are installed in the image, for reference the drivers are located “C:\xxxxx\Point of Sale\MSR (Standalone)\MSR HID Utility” sub-directory.

Graphical Utility

1. Execute "HPHIDKBNoCRConfig.exe". When the utility is running you should see a graphical GUI similar to the following:



2. The reader emits three long beeps to confirm that the settings have been changed.
3. The application displays a message to indicate a successful installation and the application exits automatically and the process is complete.

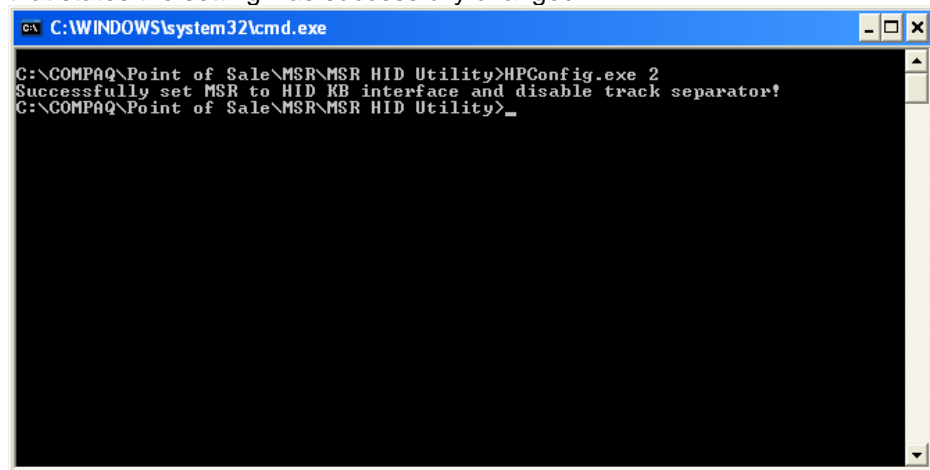
When the HP USB reader is properly connected to the host, the application sends "Default Settings", "Disable track separator", "Set USB HID Keyboard format," and "Review setting" commands to the reader.

If there is no HP USB reader connected to the host, the application shows a warning message, asking user to connect the USB reader. After connecting the reader, run application again.

Silent Utility

1. Execute "HPConfig.exe 2". When the utility is running there will be no graphical GUI that appears on the screen. The following are the parameters that are available for the utility:
 - HPConfig.exe: set MSR to HID interface mode.
 - HPConfig.exe 0: set MSR to HID interface mode.
 - HPConfig.exe 1: set MSR to HID KB interface mode.
 - HPConfig.exe 2: set MSR to HID KB mode with no “CR”, where “CR” is short for Carriage Return.
 - HPConfig.exe v: display the application version.

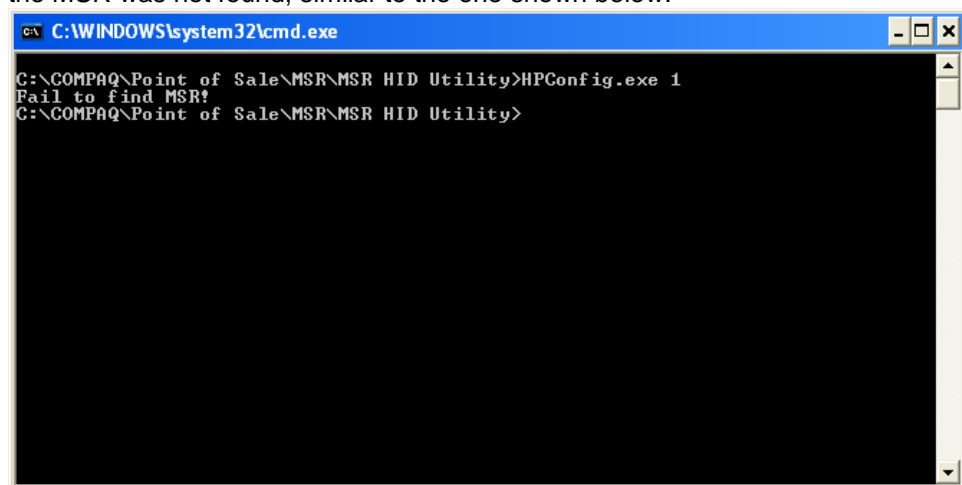
2. The reader emits three long beeps to confirm that the settings have been changed. There will be a message that is displayed (if run in a DOS session) that states the setting was successfully changed.



```
C:\WINDOWS\system32\cmd.exe

C:\COMPAQ\Point of Sale\MSR\MSR HID Utility>HPConfig.exe 2
Successfully set MSR to HID KB interface and disable track separator!
C:\COMPAQ\Point of Sale\MSR\MSR HID Utility>_
```

If the MSR is not found or connected to the unit, a message appears indicating the MSR was not found, similar to the one shown below:



```
C:\WINDOWS\system32\cmd.exe

C:\COMPAQ\Point of Sale\MSR\MSR HID Utility>HPConfig.exe 1
Fail to find MSR!
C:\COMPAQ\Point of Sale\MSR\MSR HID Utility>
```

7.3.3.3 Set MSR to HID mode

The MSR HID Utility can be found on the “HP Point of Sale System Software and Documentation CD”. On the HP POS factory image the drivers are installed in the image, for reference the drivers are located “C:\xxxxx\Point of Sale\MSR (Standalone)\MSR HID Utility” sub-directory.

Graphical Utility

1. Execute "HPHIDConfig.exe". When the utility is running you should see a graphical GUI similar to the following:



2. The reader emits three long beeps to confirm that the settings have been changed.
3. The application displays a message to indicate a successful installation and the application exits automatically and the process is complete.

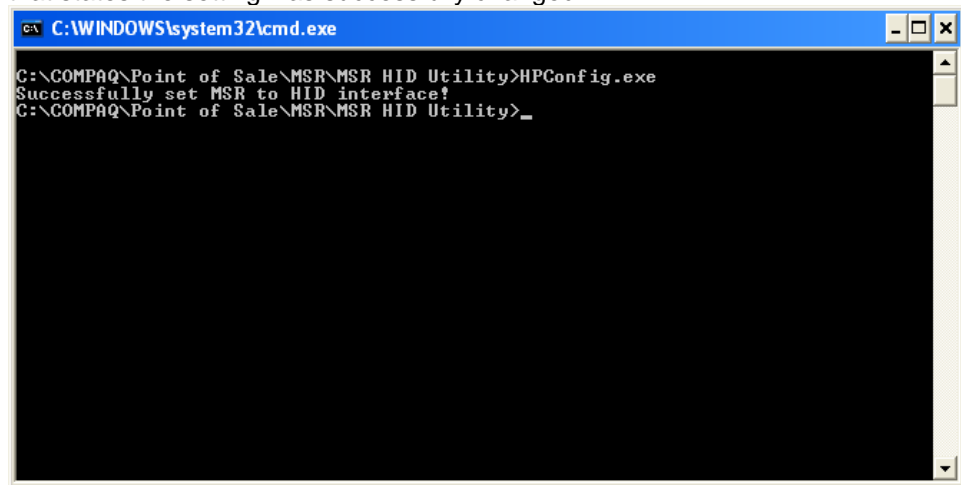
When the HP USB reader is properly connected to the host, the application sends "Default Settings", "Set USB HID format," and "Review setting" commands to the reader.

If there is no HP USB reader connected to the host, the application shows a warning message, asking user to connect the USB reader. After connecting the reader, run application again.

Silent Utility

1. Execute "HPConfig.exe 0 or HPConfig.exe". When the utility is running there will be no graphical GUI that appears on the screen. The following are the parameters that are available for the utility:
 - HPConfig.exe: set MSR to HID interface mode.
 - HPConfig.exe 0: set MSR to HID interface mode.
 - HPConfig.exe 1: set MSR to HID KB interface mode.
 - HPConfig.exe 2: set MSR to HID KB mode with no "CR", where "CR" is short for Carriage Return.
 - HPConfig.exe v: display the application version.

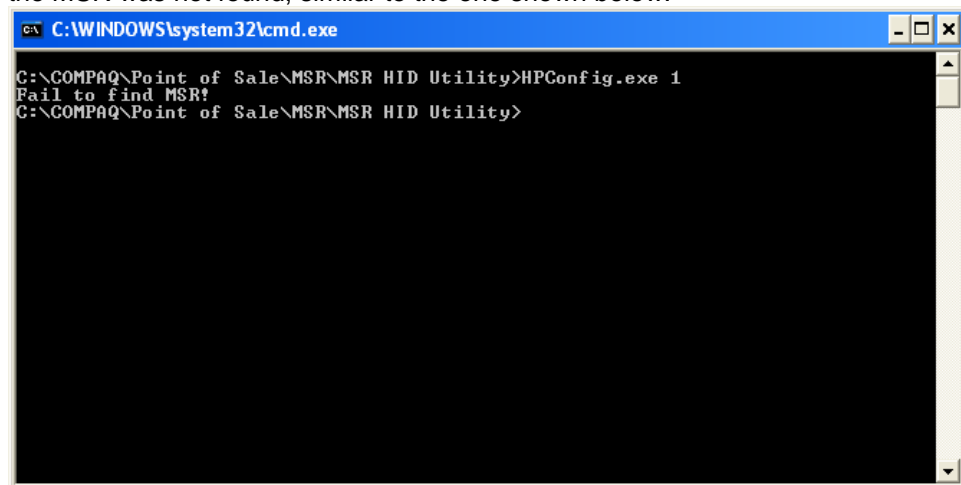
2. The reader emits three long beeps to confirm that the settings have been changed. There will be a message that is displayed (if run in a DOS session) that states the setting was successfully changed.



```
C:\WINDOWS\system32\cmd.exe

C:\COMPAQ\Point of Sale\MSR\MSR HID Utility>HPConfig.exe
Successfully set MSR to HID interface!
C:\COMPAQ\Point of Sale\MSR\MSR HID Utility>
```

If the MSR is not found or connected to the unit, a message appears indicating the MSR was not found, similar to the one shown below:



```
C:\WINDOWS\system32\cmd.exe

C:\COMPAQ\Point of Sale\MSR\MSR HID Utility>HPConfig.exe 1
Fail to find MSR!
C:\COMPAQ\Point of Sale\MSR\MSR HID Utility>
```

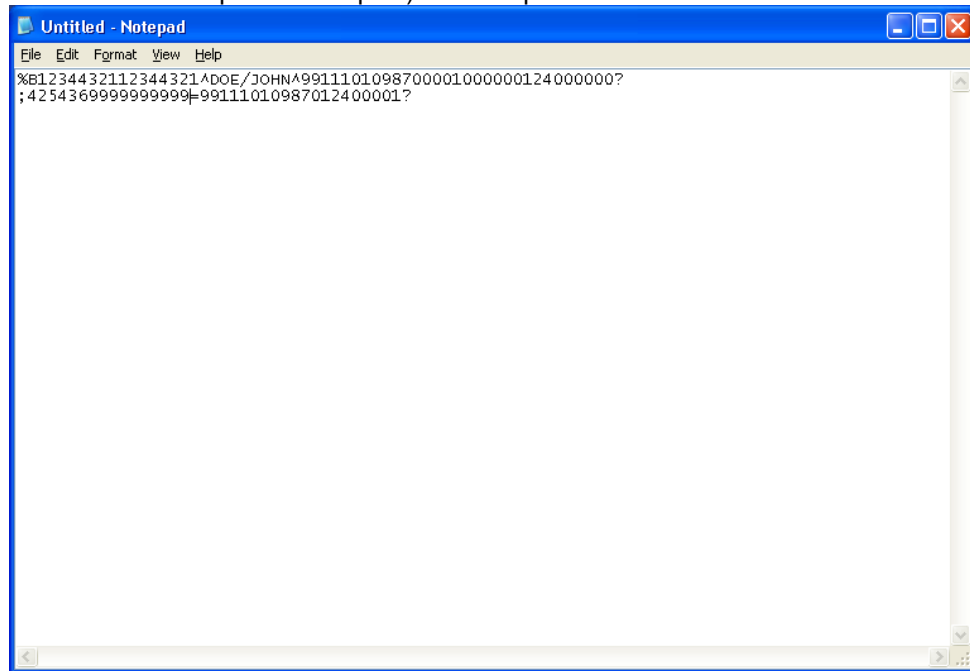
7.3.4 **OPOS Drivers for the MSR**

The MSR OPOS drivers can be found on the “HP Point of Sale System Software and Documentation CD”. On the HP POS factory image the drivers are installed in the image, for reference the drivers are located “C:\xxxxx\Point of Sale\MSR (Standalone)\MSR OPOS” sub-directory.

7.3.5 **Testing MSR**

7.3.5.1 **Testing MSR in USB-HID-KB mode (non-OPOS)**

Open Microsoft Notepad and scan a credit card. In Notepad you will receive what appears as garbage (nonsense) characters along with credit card information (%B, ^ characters are couple of examples). In Notepad this is OK.



If nothing appears in Notepad, please confirm that the MSR is in USB-HID-KB mode. This can be accomplished by running the utility mentioned in the [MSR Utility section](#) or by running the MSR Configuration utility.

7.3.5.2 **Testing MSR in USB-HID or USB-HID-KB mode with OPOS**

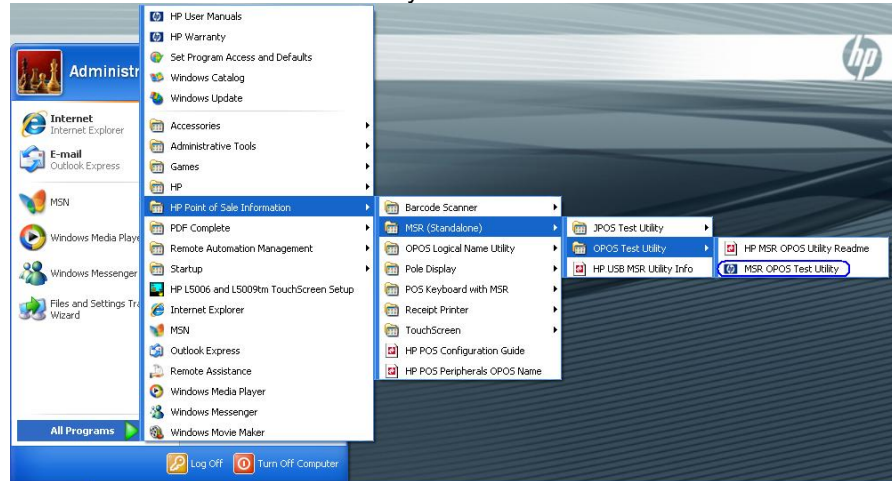
The OPOS drivers for the MSR will work with the MSR in either USB HID mode or USB HID-KB mode. In order to test the MSR, the MSR OPOS driver must be installed. In order to test the MSR when it is in USB-HID mode you will need an OPOS aware application that interfaces with the MSR OPOS drivers in order to confirm that MSR is able to read the data from a card.

The following is overview of the steps to test the MSR followed by details steps:

1. Launch the MSR OPOS Test utility from Windows start menu
2. Click “Start”
3. Swipe a credit card.
4. Click on “Stop” to close the test application.

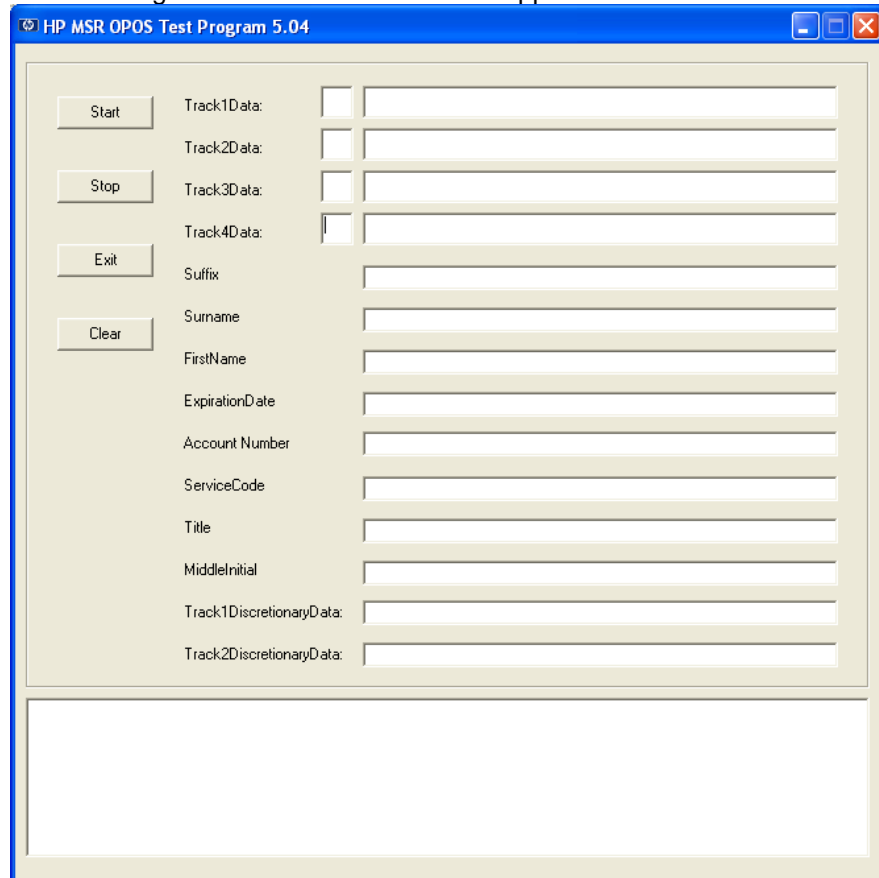
Detail Steps

1. Launch the MSR OPOS Test utility from Windows start menu



If there is no option for the MSR OPOS Test Utility, the utility is located on the "HP Point of Sale System Software and Documentation CD". On the HP POS factory image the MSR OPOS test application is located "C:\xxxxx\Point of Sale\MSR (Standalone)\MSR OPOS Test Program" sub-directory or it may be launched from the Windows start menu.

The following is the GUI of the MSR Test Application:



2. Click "Start". The MSR will beep several times and if successful will receive and OPOS_SUCCESS message.

HP MSR OPOS Test Program 5.04

Start

Stop

Exit

Clear

Track1Data: ☐

Track2Data: ☐

Track3Data: ☐

Track4Data: ☐

Suffix

Surname

FirstName

ExpirationDate

Account Number

ServiceCode

Title

MiddleInitial

Track1DiscretionaryData:

Track2DiscretionaryData:

OPOS_SUCCESS

3. Swipe a credit card.

HP MSR OPOS Test Program 5.04

Start Stop Exit Clear

Track1Data: 61 %B3724 496353 11003^10./A ^0512941116203?

Track2Data: 31 ;372449635311003=0512941116203?

Track3Data: 0 ;

Track4Data: 0 ;

Suffix: ;

Surname: 10.

FirstName: A

ExpirationDate: 0512

Account Number: 372449635311003

ServiceCode: 941

Title: ;

MiddleInitial: ;

Track1DiscretionaryData: 116203

Track2DiscretionaryData: 116203

OPOS_SUCCESS
OPOS_SUCCESS
DataEvent receive

In order to test another card click on the “Clear” button to remove all the data that appears in the test application.

4. To close the MSR OPOS test application click on “Stop” and then “Exit”

7.3.6 JPOS Drivers for the MSR

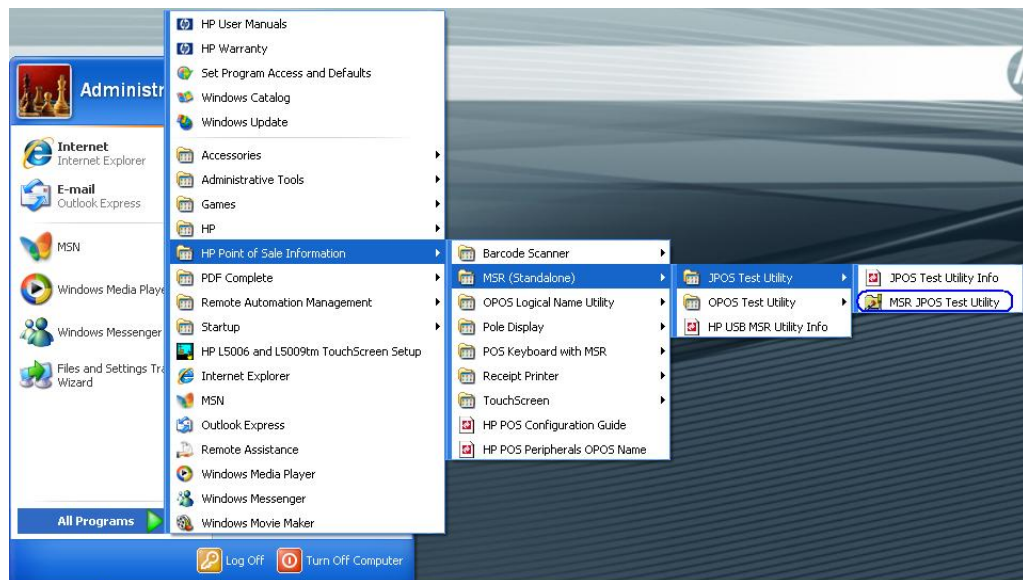
The JPOS drivers are included in the HP Point of Sale image or can be obtained from HP POS Drivers and Documentation CD or from the HP.COM web site.

The following is overview of the steps to test the receipt printer followed by details steps:

1. Start the JPOS test utility.
2. Click on the “MSR” tab.
3. Click on the “OPEN” button.
4. Click on the “CLAIM” button and there will be four beeps from the MSR.
5. Check the “DATA EVENT ENABLED” so there is a check box.
6. Check the “DEVICE ENABLED” so there is a check box.
7. Swipe a credit card and text should appear in the field.
8. Click on “RELEASE” and then click “EXIT” to exit the JPOS test utility.

Detail Steps

1. Start the JPOS test utility either using the link in the START MENU:



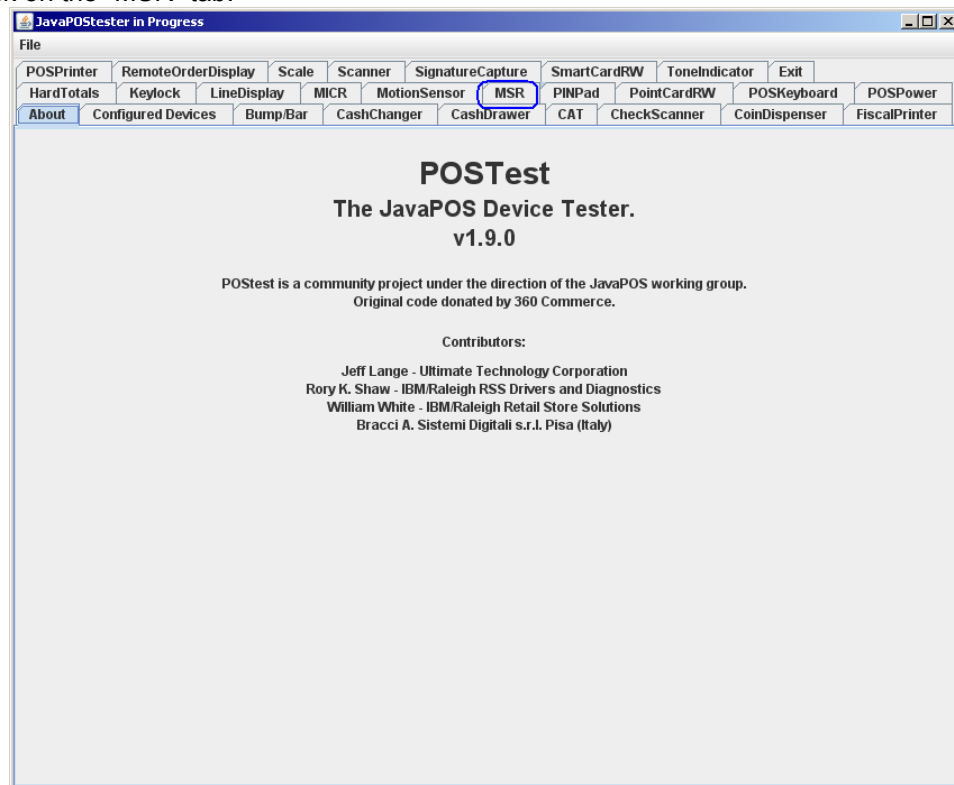
or

by launching the POSTEST.BAT file that is located in the JPOS folder within the MSR (standalone) folder.

After a few seconds the JPOS test utility GUI will appear as shown below:



2. Click on the "MSR" tab:



After clicking on the “MSR” tab the screen should look like:

The screenshot shows the 'JavaPOSTester in Progress' application window. The 'MSR' tab is selected in the top menu bar. The window contains a 'Logical name' field with 'defaultMSR' entered. Below this are buttons for 'Open', 'Claim', 'Release', 'Close', 'Info', 'Statistics', 'Firmware', 'O/C/E', and 'EXIT'. The status 'JPOS_S_CLOSED' is displayed. On the left, there is a list of checkboxes for various settings: 'Auto disable', 'Data event enabled', 'Device enabled', 'Freeze events', 'Decode data', 'Parse decode data', 'Transmit sentinels', 'Per-track error reporting', 'Track 1 enabled', 'Track 2 enabled', 'Track 3 enabled', and 'Track 4 enabled'. A 'Clear Input' button is at the bottom left. On the right, there are input fields for 'Track 1 Data:', 'Track 2 Data:', 'Track 3 Data:', 'Track 4 Data:', 'Account number:', 'Expiration date:', 'Title:', 'First name:', 'Middle initial:', 'Surname:', 'Suffix:', 'Service Code:', 'Track 1 discretionary data:', 'Track 2 discretionary data:', and 'Data Count:'. A 'Clear Fields' button is at the bottom right.

The logical name of the device is “HPUSBMiniMSR” but you can use “defaultMSR” that appears in the logical name box. If one clicks on the “Configured Device” tab, the names for the device will appear that will be used in the test utility.

Note: In JPOS utility, the name is case sensitive.

- Click on the “OPEN” button; the MSR will beep several times.
- Click on the “CLAIM” button; the MSR will beep several times.

The screenshot shows the 'JavaPOS tester in Progress' window. The 'MSR' tab is selected in the menu bar. The 'Logical name' is set to 'defaultMSR' and the status is 'JPOS_S_IDLE'. The 'Open', 'Claim', 'Release', 'Close', 'Info', 'Statistics', 'Firmware', 'O/C/E', and 'EXIT' buttons are visible. On the left, there are checkboxes for various settings: 'Auto disable', 'Data event enabled', 'Device enabled', 'Freeze events', 'Decode data' (checked), 'Parse decode data' (checked), 'Transmit sentinels', 'Per-track error reporting', 'Track 1 enabled' (checked), 'Track 2 enabled' (checked), 'Track 3 enabled' (checked), and 'Track 4 enabled'. The 'Clear Input' button is at the bottom left. On the right, there are input fields for 'Track 1 Data' through 'Track 4 Data', 'Account number', 'Expiration date', 'Title', 'First name', 'Middle initial', 'Surname', 'Suffix', 'Service Code', 'Track 1 discretionary data', 'Track 2 discretionary data', and 'Data Count: 0'. The 'Clear Fields' button is at the bottom right.

5. Check the “DATA EVENT ENABLED” so there is a check box.
6. Check the “DEVICE ENABLED” so there is a check box.

The screenshot shows the 'JavaPOSTester in Progress' window. The 'Configured Devices' tab is active, displaying a list of devices including POSPrinter, RemoteOrderDisplay, Scale, Scanner, SignatureCapture, SmartCardRW, ToneIndicator, Exit, HardTotals, Keylock, LineDisplay, MICR, MotionSensor, MSR, PINPad, PointCardRW, POSKeyboard, POSPower, About, BumpBar, CashChanger, CashDrawer, CAT, CheckScanner, CoinDispenser, and FiscalPrinter. The 'Logical name' is set to 'defaultMSR'. The 'JPOS_S_IDLE' status is shown. The 'Open' button is highlighted. The 'Data event enabled' and 'Device enabled' checkboxes are checked and highlighted with a red box. The 'Clear Input' button is visible at the bottom left.

Logical name: defaultMSR

JPOS_S_IDLE

Open Claim Release Close Info Statistics Firmware O/C/E EXIT

☐ Auto disable

☒ Data event enabled

☒ Device enabled

☐ Freeze events

☒ Decode data

☒ Parse decode data

☐ Transmit sentinels

☐ Per-track error reporting

☒ Track 1 enabled

☒ Track 2 enabled

☒ Track 3 enabled

☐ Track 4 enabled

Clear Input

Track 1 Data: 0

Track 2 Data: 0

Track 3 Data: 0

Track 4 Data: 0

Account number:

Expiration date:

Title:

First name:

Middle initial:

Surname:

Suffix:

Service Code:

Track 1 discretionary data:

Track 2 discretionary data:

Data Count: 0

Clear Fields

7. Swipe a credit card and text should appear in the field. Depending on the type of card there may or may not be information displayed in all the tracks field.

JavaPOSTester in Progress

File

POSPrinter RemoteOrderDisplay Scale Scanner SignatureCapture SmartCardRW ToneIndicator Exit

HardTotals Keylock LineDisplay MICR MotionSensor MSR PINPad PointCardRW POSKeyboard POSPower

About Configured Devices Bump/Bar CashChanger CashDrawer CAT CheckScanner CoinDispenser FiscalPrinter

Logical name: defaultMSR JPOS_S_IDLE

Open Claim Release Close Info Statistics Firmware O/C/E EXIT

☐ Auto disable

☐ Data event enabled

☒ Device enabled

☐ Freeze events

☒ Decode data

☒ Parse decode data

☐ Transmit sentinels

☐ Per-track error reporting

☒ Track 1 enabled

☒ Track 2 enabled

☒ Track 3 enabled

☐ Track 4 enabled

Clear Input

Track 1 Data: 59 B0000 000000 00000^DATA TEST/DATA TEST ^0512941116203

Track 2 Data: 29 373235387881007=0512941116203

Track 3 Data: 0

Track 4 Data: 0

Account number: 0000000000000000

Expiration date: 0512

Title: MR

First name: TEST

Middle initial: A.

Surname: DATA

Suffix:

Service Code: 941

Track 1 discretionary data: 116203

Track 2 discretionary data: 116203

Data Count: 0

Clear Fields

8. Click on “RELEASE” and then click “EXIT” to exit the JPOS test utility.

JavaPOS Tester in Progress

File

POSPrinter RemoteOrderDisplay Scale Scanner SignatureCapture SmartCardRW ToneIndicator Exit

HardTotals Keylock LineDisplay MICR MotionSensor MSR PINPad PointCardRW POSKeyboard POSPower

About Configured Devices BumpBar CashChanger CashDrawer CAT CheckScanner CoinDispenser FiscalPrinter

Logical name: defaultMSR JPOS_S_IDLE

Open Claim **Release** Close Info Statistics Firmware O/C/E **EXIT**

☐ Auto disable
☐ Data event enabled
☒ Device enabled
☐ Freeze events
☒ Decode data
☒ Parse decode data
☐ Transmit sentinels
☐ Per-track error reporting
☒ Track 1 enabled
☒ Track 2 enabled
☒ Track 3 enabled
☐ Track 4 enabled

Track 1 Data: 59 B0000 000000 00000^DATA TEST/DATA TEST ^0512941116203

Track 2 Data: 29 373235387881007=0512941116203

Track 3 Data: 0

Track 4 Data: 0

Account number: 0000000000000000

Expiration date: 0512

Title: MR

First name: TEST

Middle initial: A

Surname: DATA

Suffix:

Service Code: 941

Track 1 discretionary data: 116203

Track 2 discretionary data: 116203

Data Count: 0

Clear Input

Clear Fields

7.4 Barcode Scanner (1D)

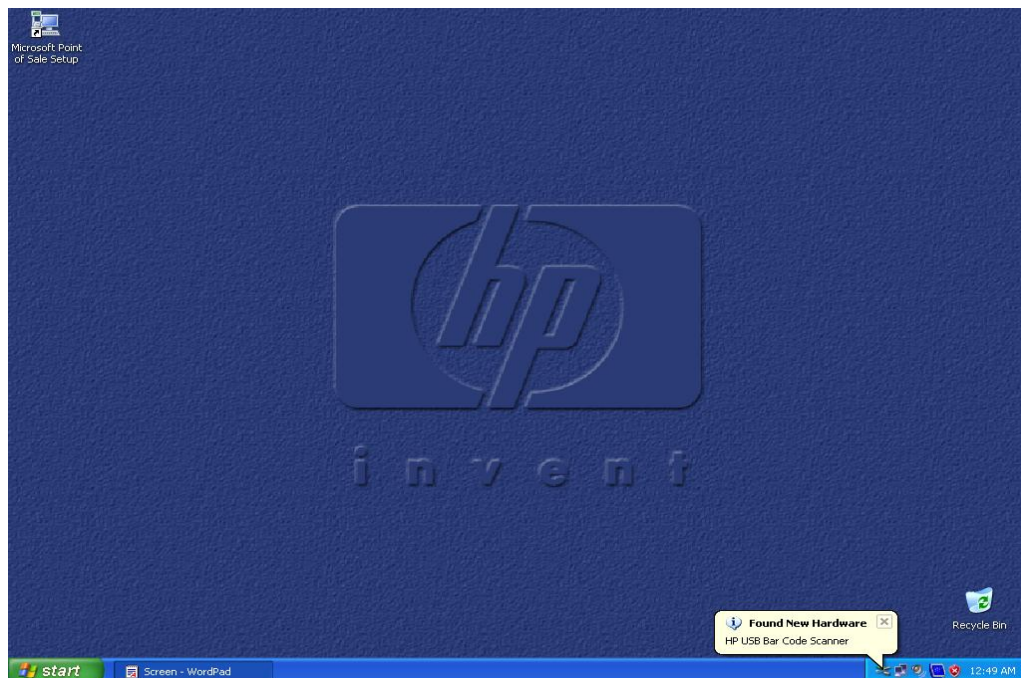


7.4.1 Connection

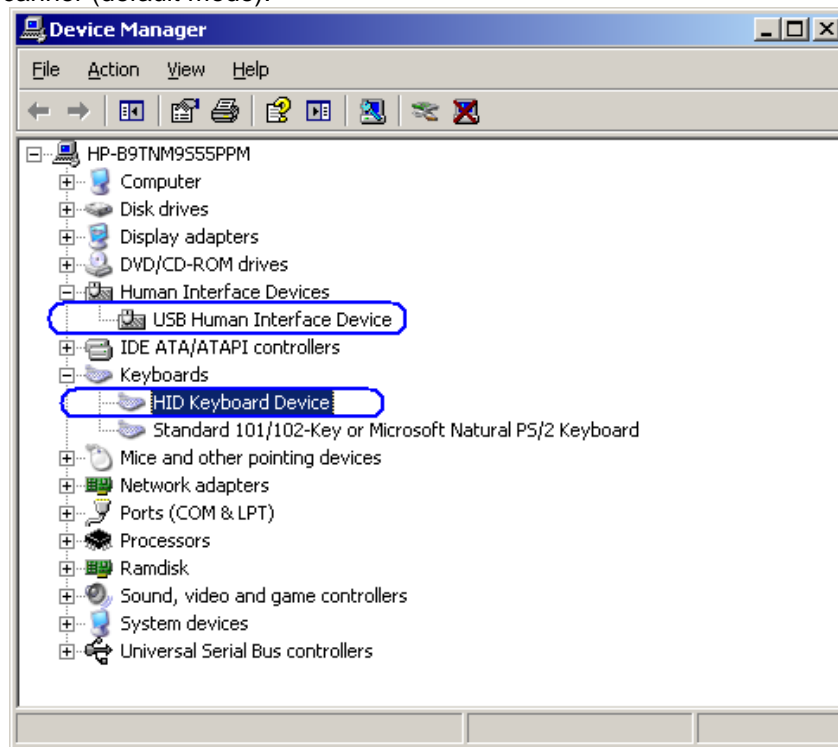
The barcode scanner may be plugged into any free USB port. One may plug the barcode scanner into the power USB port in the 5V part of USB port, when plugged in this configuration the power portion of USB port is not utilized.

7.4.2 Windows Drivers for the Barcode Scanner

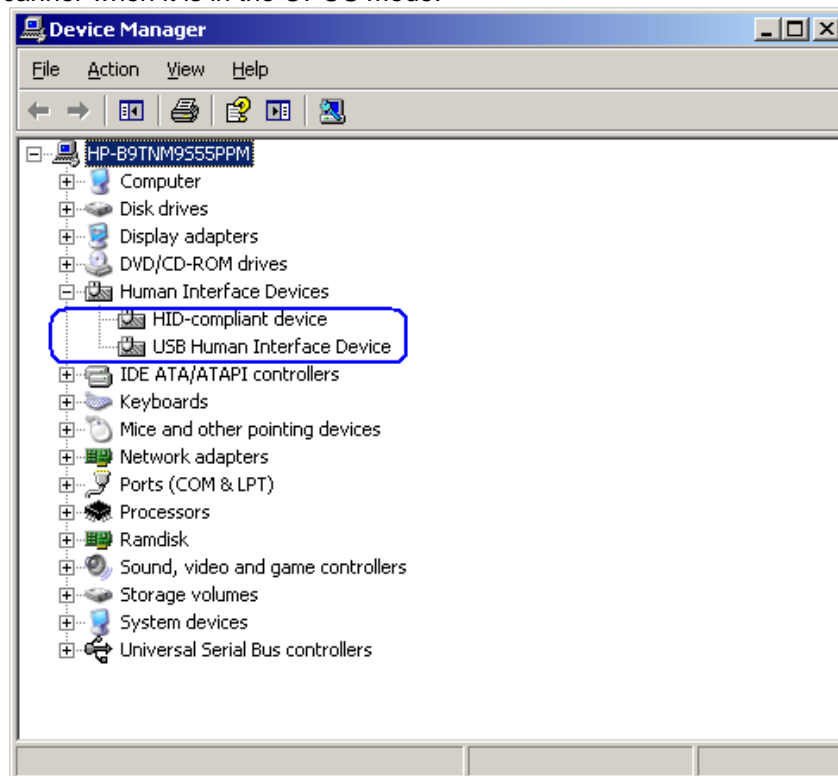
The HP POS scanner uses native drivers for Windows operating system. If during the driver installation Windows displays the new hardware wizard, the user needs to accept the defaults that appear during the hardware wizard GUI (for the first screen you may select the no option) and the native drivers will be loaded. Please refer to "[If prompted for native driver location \(New Hardware Wizard\)](#)" section.



The following is the Device Manager window after all the drivers are loaded for the HP USB Barcode Scanner (default mode):



The following is the Device Manager window after all the drivers are loaded for the HP USB Barcode Scanner when it is in the OPOS mode:



7.4.3 OPOS Drivers for the Barcode Scanner

There are no OPOS drivers needed for this device if the device is used in the human interface device (HID) keyboard emulation mode (default mode as shipped from the factory).

If the POS application needs the OPOS drivers, the barcode OPOS drivers can be found on the "HP Point of Sale System Software and Documentation CD". On the HP POS factory image the drivers are installed in the image, for reference the drivers are located "C:\xxxxx\Point of Sale\Barcode Scanner\Barcode Scanner OPOS" sub-directory.

7.4.4 Testing the Barcode Scanner

7.4.4.1 Testing Barcode Scanner in non-OPOS

The default mode of the scanner is non-OPOS mode when shipped from HP. In order to test the scanner in non-OPOS mode one can open an application like Microsoft Notepad and scan a barcode when the scanner is in default scanner mode.

You may use one of the barcodes below for testing if you do not have an item with a barcode handy.



7.4.4.2 Testing the Barcode Scanner in OPOS

The Barcode Scanner must be in OPOS mode (IBM Hand-Held USB mode). If one is not sure what mode the scanner is in, open an application like notepad and scan a barcode. If the scanner is in OPOS mode, when you scan a barcode in Notepad nothing will appear in Notepad. If something appears in Notepad the scanner is HID Keyboard emulation mode.

To put the scanner in OPOS mode one needs to scan the barcode below:



On the HP Point of Sale System Software and Documentation CD" and on the HP POS factory image ("C:\xxxxx\Point of Sale\Barcode Scanner\Barcode Scanner

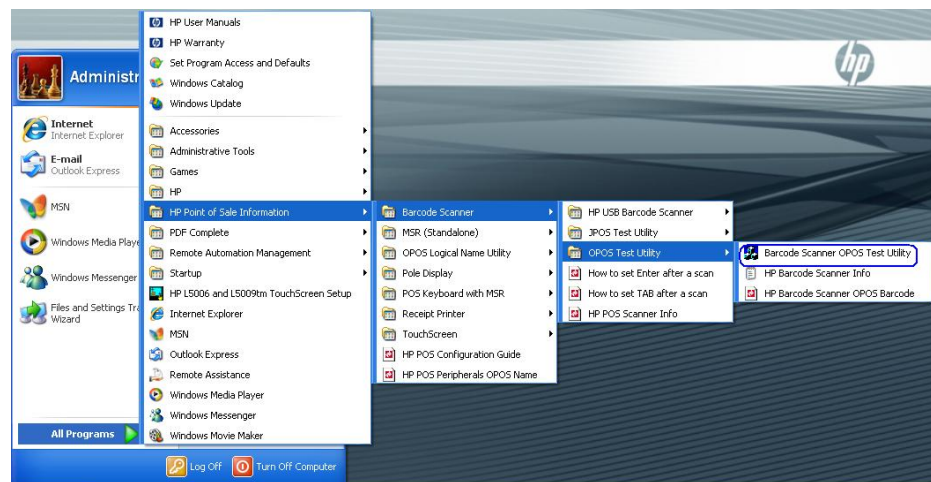
OPOS) there is a PDF file with the barcode to put the scanner into OPOS mode as well as in the HID keyboard emulation mode.

The following is an overview of the steps to test the Barcode Scanner followed by details steps:

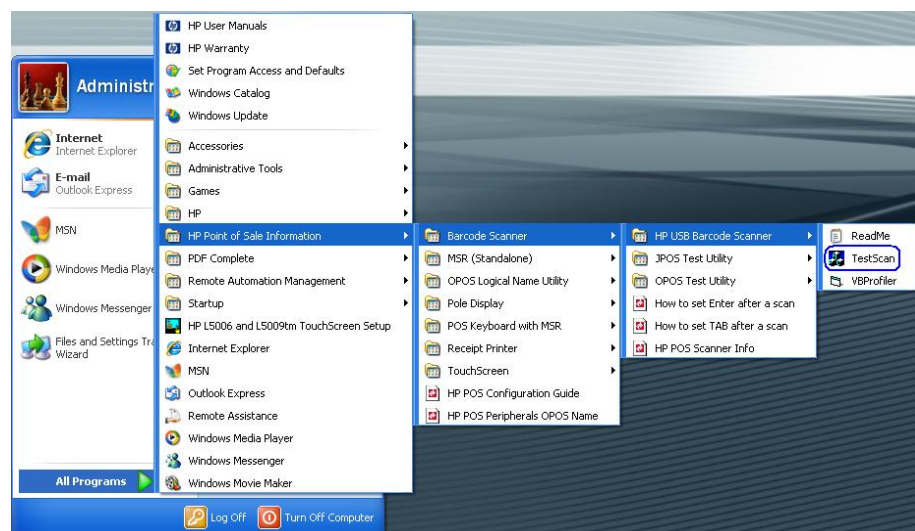
1. Launch the barcode scanner OPOS Test utility from Windows start menu
2. Click “Open Service Object”
3. Click on OK after confirming “HP_USBSCANNER” is shown for the service object name.
4. Click on “Enable Scan”
5. Scan a barcode.
6. Click on “Disable Scan” to stop scanning with the OPOS test utility.
7. Click on “Close” to close the test application.

Detail Steps

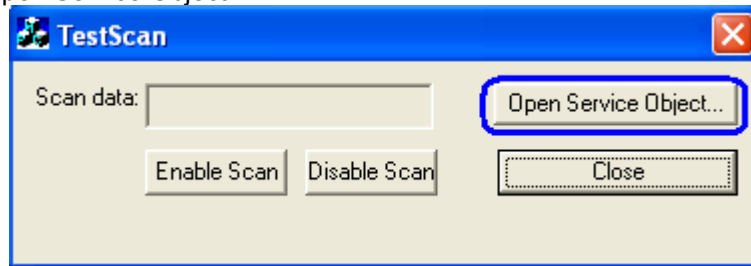
1. Launch the barcode scanner OPOS Test utility from Windows start menu from the “HP USB Barcode Scanner” or from the “HP Point of Sale Information” menu.



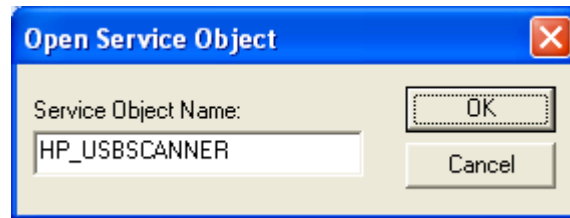
or



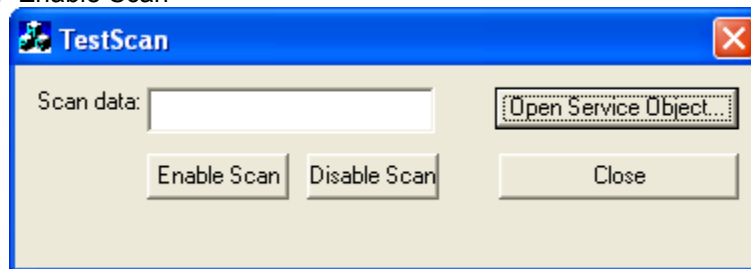
2. Click "Open Service Object"



3. Click on OK after confirming "HP_USBSCANNER" is shown for the service object name.



4. Click on "Enable Scan"



5. Scan a barcode.
6. Click on "Disable Scan" to stop scanning with the OPOS test utility.
7. Click on "Close" to close the test application.

7.4.5 JPOS Drivers for the Barcode Scanner

The JPOS drivers are included in the HP Point of Sale image or can be obtained from HP POS Drivers and Documentation CD or from the HP.COM web site.

In order for the scanner to work with JPOS driver, the scanner must be programmed into the "IBM HAND-HELD USB" / OPOS mode. In order to put the scanner into this mode, scan the barcode below:



IBM Hand-Held USB

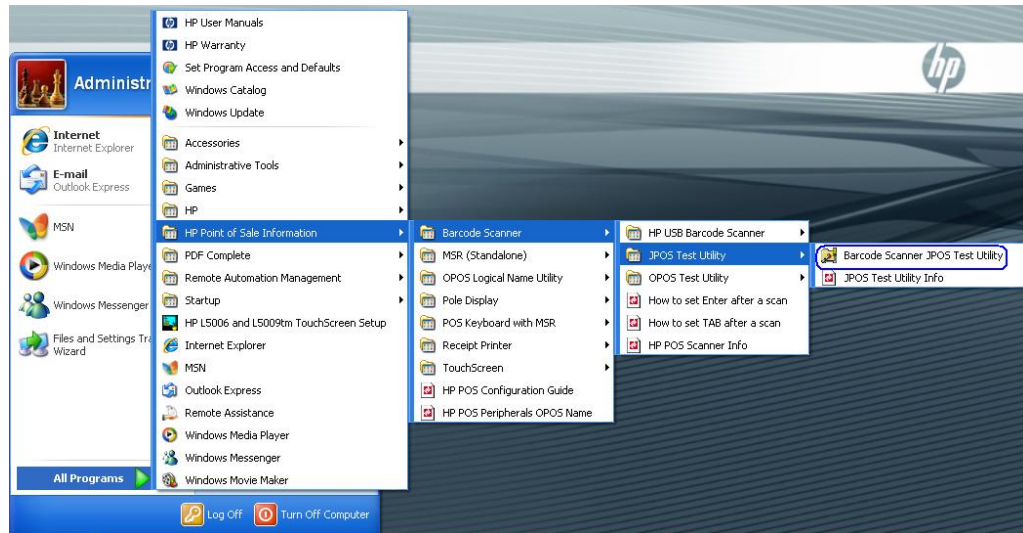
Note: The HIDScanWin32.DLL is copied to working JAVA directory "C:\Program Files\Java\xxxx\bin" when the test utility is launched. An example of JAVA directory is "C:\Program Files\Java\jre1.6.0_01\bin", "jre1.6.0_01" reflects the version that is installed on the unit.

The following is overview of the steps to test the barcode scanner followed by details steps:
Start the JPOS test utility.

1. Start the JPOS test utility using the link in the START MENU:
2. Click on the "Scanner" tab.
3. Click on the "OPEN" button.
4. Click on the "CLAIM" button. After clicking on the "CLAIM" button a check should appear next to the "CLAIMED" box.
5. Check the "DEVICE ENABLED" so there is a check box.
6. Check the "AUTO DATA EVENT ENABLE" so there is a check box.
7. Check the "DATA EVENT ENABLED" so there is a check box.
8. Check the "DECODE DATA" so there is a check box.
9. Scan a bar code.
10. Click on "RELEASE" or "CLOSE" to exit the JPOS test utility.

Detail Steps

1. Start the JPOS test utility either using the link in the START MENU:

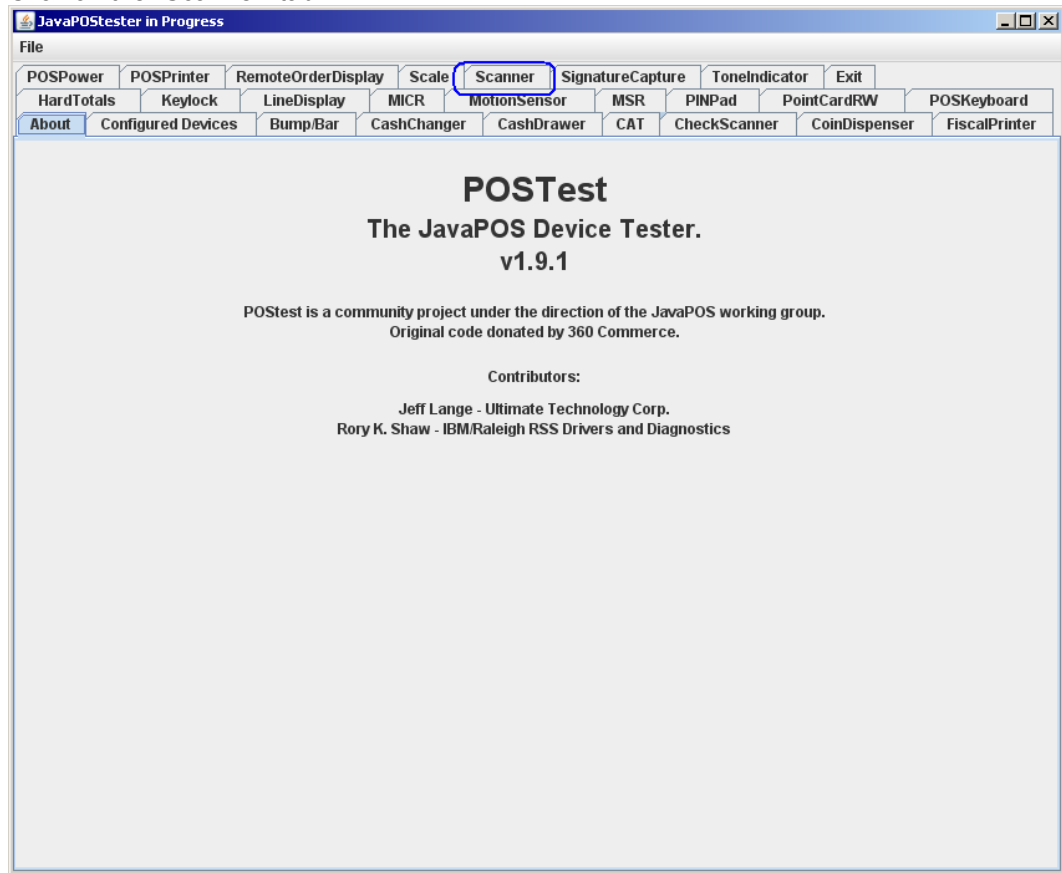


OR

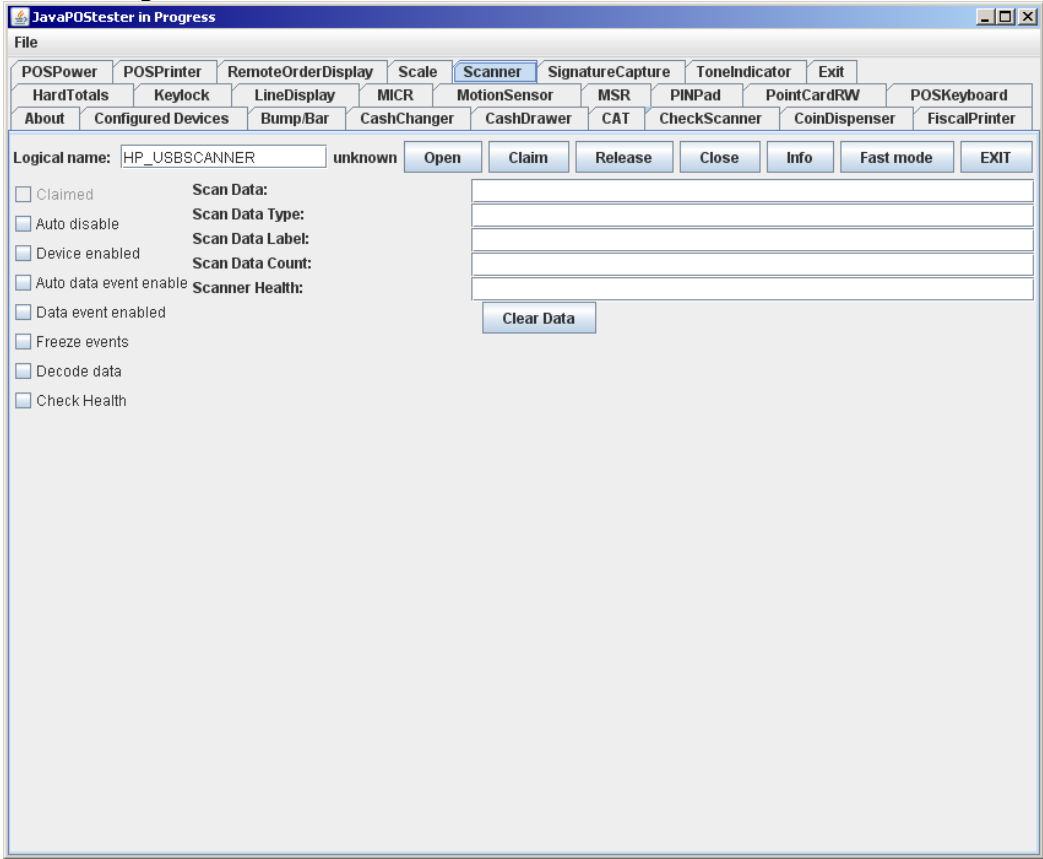
by launching the POSTEST.BAT file that is located in the JPOS folder for barcode scanner (C:\xxxxx\Point of Sale\Barcode Scanner\Barcode Scanner JPOS" folder). After a few seconds the JPOS test utility GUI will appear as shown below:



2. Click on the “Scanner” tab:



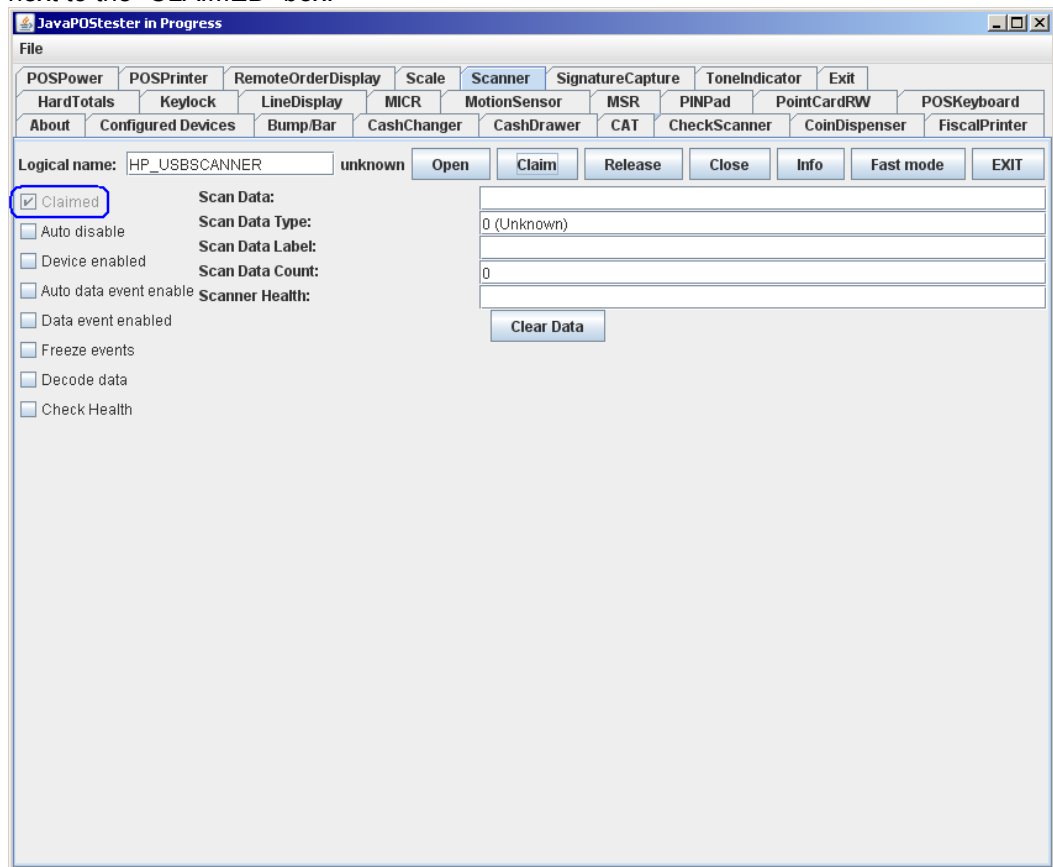
After clicking on the “Scanner” tab the screen should look like:



The logical name of the device is “HP_USBSCANNER”. If one clicks on the “Configured Device” tab, the names for the device will appear that will be used in the test utility.

3. Click on the “OPEN” button.

4. Click on the “CLAIM” button. After clicking on the “CLAIM” button a check should appear next to the “CLAIMED” box.

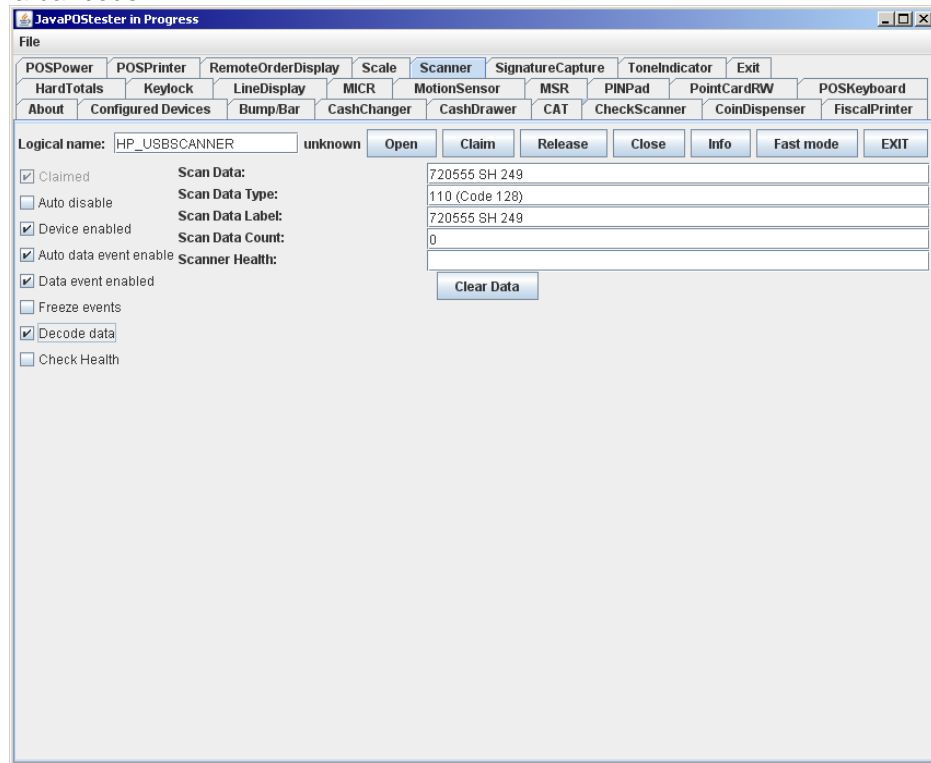


5. Check the “DEVICE ENABLED” so there is a check box.
6. Check the “AUTO DATA EVENT ENABLE” so there is a check box.

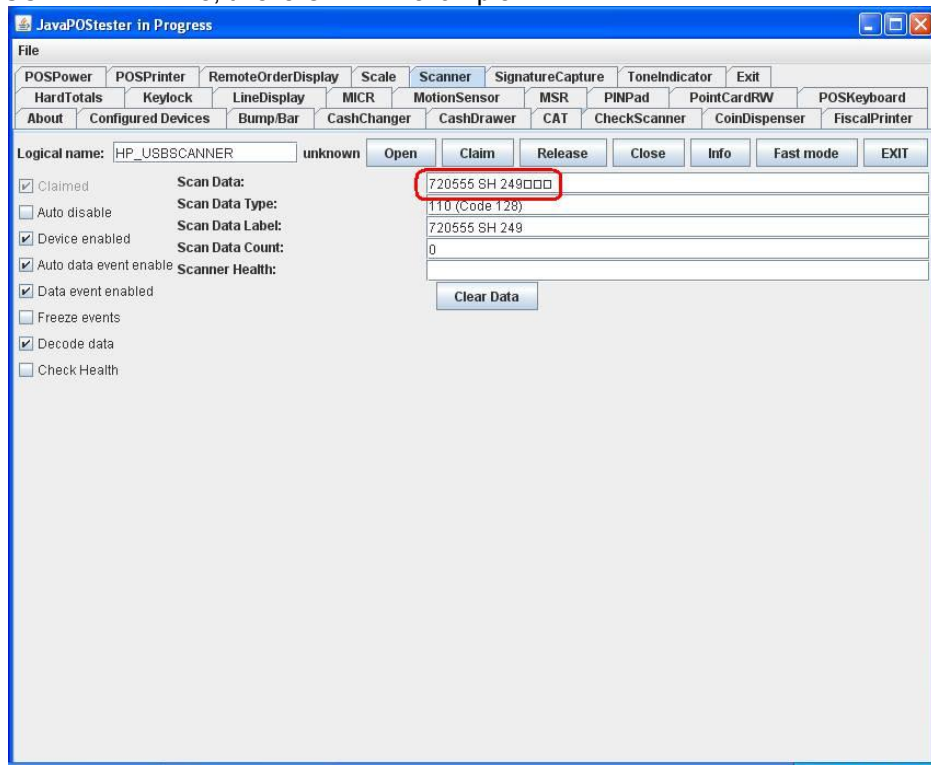
7. Check the “DATA EVENT ENABLED” so there is a check box.
8. Check the “DECODE DATA” so there is a check box.

The screenshot shows the 'JavaPOStester in Progress' application window. The 'Scanner' tab is selected in the top menu. Below the menu, there are buttons for 'Open', 'Claim', 'Release', 'Close', 'Info', 'Fast mode', and 'EXIT'. The 'Logical name' is set to 'HP_USBSCANNER' and the status is 'unknown'. On the left, there are several checkboxes: 'Claimed' (checked), 'Auto disable' (unchecked), 'Device enabled' (checked), 'Auto data event enable' (checked), 'Data event enabled' (checked), 'Freeze events' (unchecked), 'Decode data' (checked), and 'Check Health' (unchecked). A blue box highlights the 'Device enabled', 'Auto data event enable', 'Data event enabled', and 'Decode data' checkboxes. On the right, there are fields for 'Scan Data Type' (0 (Unknown)), 'Scan Data Label', and 'Scan Data Count' (0). A 'Clear Data' button is located below these fields.

9. Scan a bar code:



Depending on the fonts installed you may see some block character at the end of the “SCAN DATA” line, this is OK. An example



10. Click on “RELEASE” or “CLOSE” to exit the JPOS test utility.

7.5 Imaging Barcode Scanner (2D)

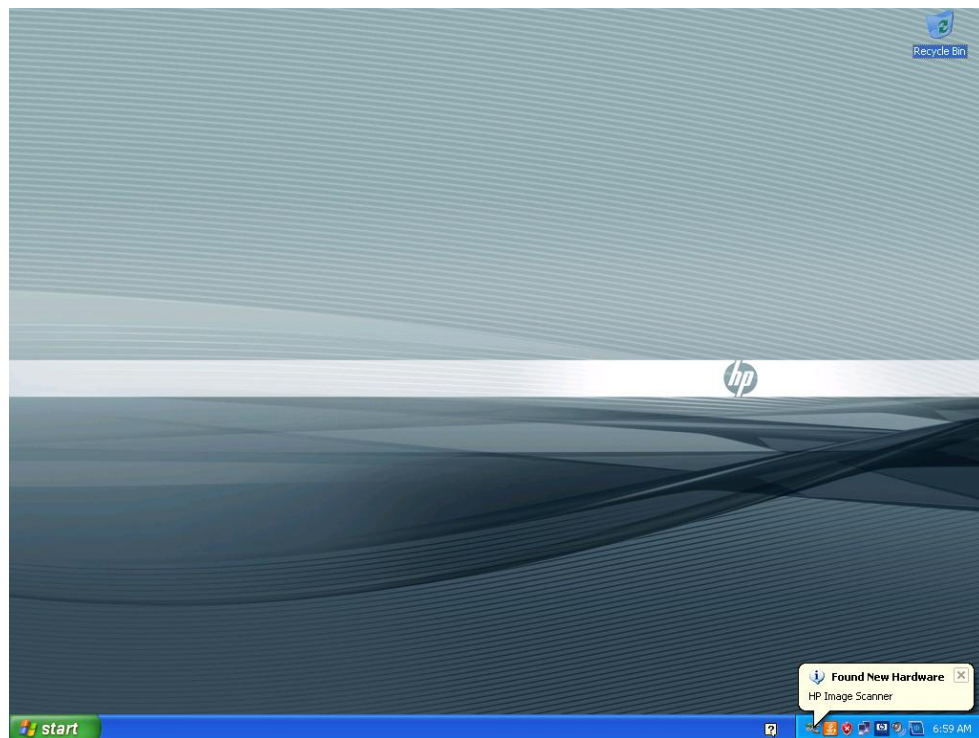


7.5.1 Connection

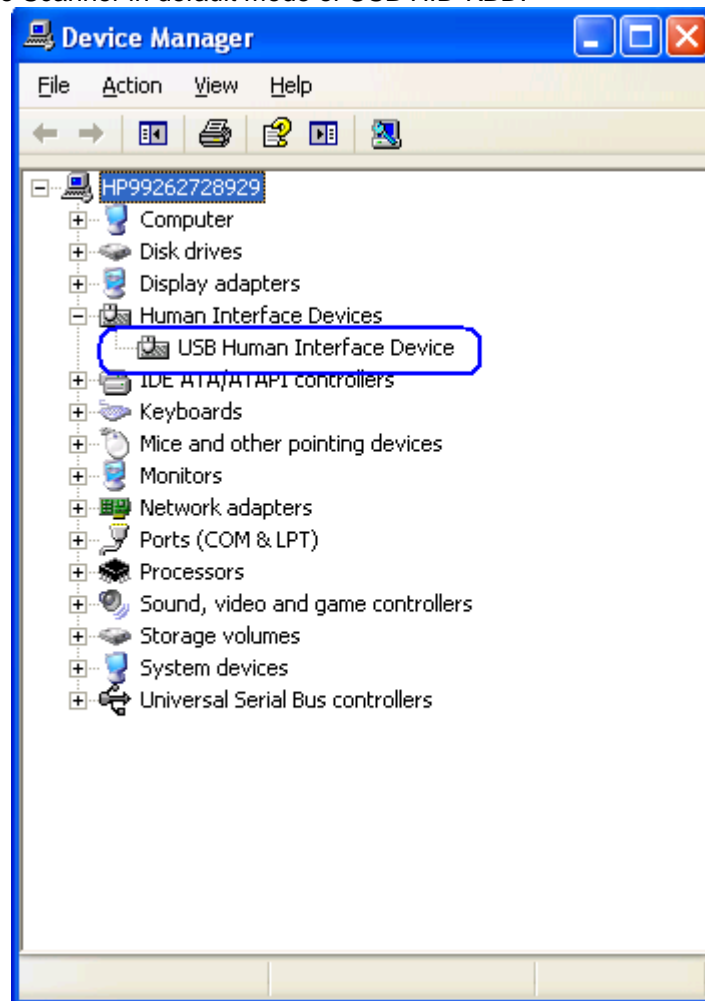
The barcode scanner may be plugged into any free USB port. One may plug the barcode scanner into the power USB port in the 5V part of USB port, when plugged in this configuration the power portion of USB port is not utilized.

7.5.2 Windows Drivers for the Imaging Barcode Scanner

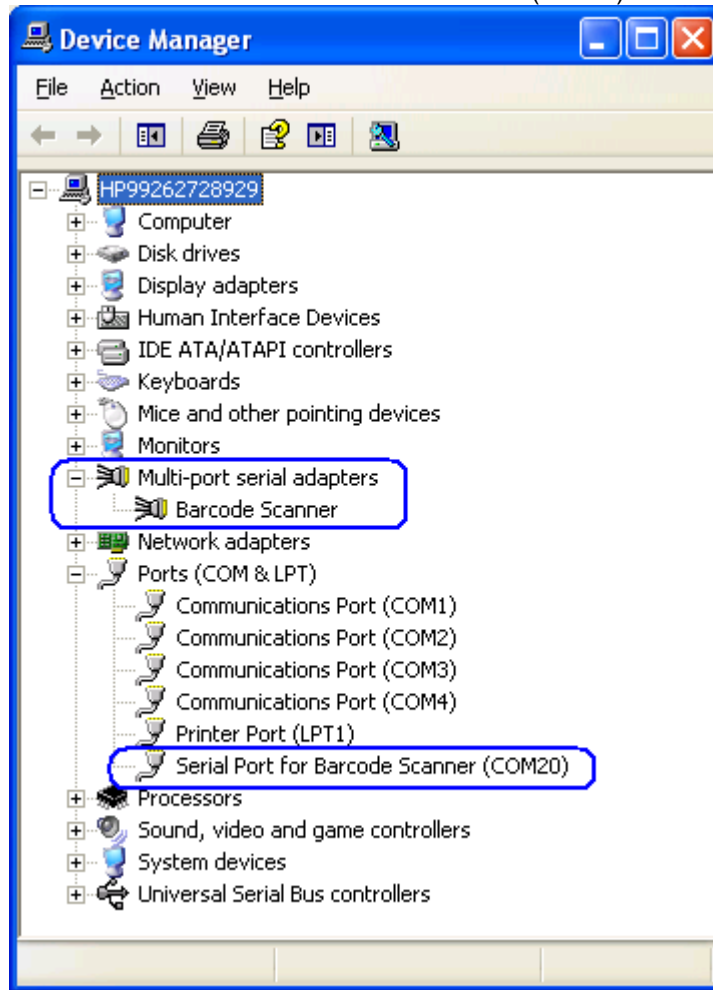
The HP Imaging scanner uses native drivers for Windows operating system in the default USB HID-KBD mode. If during the driver installation Windows displays the new hardware wizard, the user needs to accept the defaults that appear during the hardware wizard GUI (for the first screen you may select the no option) and the native drivers will be loaded. Please refer to "[If prompted for native driver location \(New Hardware Wizard\)](#)" section.



The following is the Device Manager window after all the drivers are loaded for the HP Imaging Barcode Scanner in default mode of USB HID-KBD:



The following is the Device Manager window after all the drivers are loaded for the HP Imaging Barcode Scanner when it is in the USB-COM mode (OPOS):



Note: For Windows XP Professional / WePOS / POSReady operating systems the virtual COM port for the scanner is assigned COM20. For Vista / Windows 7 the virtual COM port is assigned the next available COM port on the system. The virtual COM port assignment for the Imaging Barcode Scanner can be changed by going to the properties page of the scanner COM port.

When the Imaging Barcode Scanner is in USB-COM mode (OPOS) a Windows device driver is required. The required device drivers is included in HP factory image that support this scanner, maybe found on HP.COM or can be obtained from "HP Point of Sale System Software and Documentation CD" starting with version 3.30 of the media.

7.5.3 OPOS Drivers for the Imaging Barcode Scanner

There are no OPOS drivers needed for this device if the device is used in the human interface device (HID) keyboard emulation mode (default mode as shipped from the factory).

If the POS application needs the OPOS drivers, the barcode OPOS drivers can be found on the "HP Point of Sale System Software and Documentation CD" starting with version 3.30 of the media. On the HP POS factory image the drivers are installed in the image, for reference the drivers are located "C:\xxxxx\ Point of Sale\Imaging BarCode Scanner\Imaging Barcode Scanner OPOS" sub-directory.

7.5.4 Testing the Imaging Barcode Scanner

7.5.4.1 Testing Imaging Barcode Scanner in non-OPOS

The default mode of the scanner is non-OPOS mode when shipped from HP. In order to test the scanner in non-OPOS mode one can open an application like Microsoft Notepad and scan a barcode when the scanner is in default scanner mode.

You may use one of the barcodes below for testing if you do not have an item with a barcode handy.



7.5.4.2 Testing the Imaging Barcode Scanner in OPOS

The Imaging Barcode Scanner must be in USB-COM mode (OPOS). If one is not sure what mode the scanner is in, open an application like notepad and scan a barcode. If the scanner is in OPOS mode, when you scan a barcode in Notepad nothing will appear in Notepad. If something appears in Notepad the scanner is USB HID Keyboard emulation mode.

To put the scanner in USB-COM mode (OPOS) mode one needs to scan the barcode below:



USB-COM mode (OPOS)

On the "HP Point of Sale System Software and Documentation CD" starting with version 3.30 of the media and on the HP POS factory image ("C:\xxxxx\Point of Sale\Imaging Barcode Scanner\Imaging Barcode Scanner OPOS") there is a PDF file with the barcode to put the scanner into USB-COM mode (OPOS) mode as well as in the HID keyboard emulation mode.

The following is an overview of the steps to test the Imaging Barcode Scanner followed by details steps:

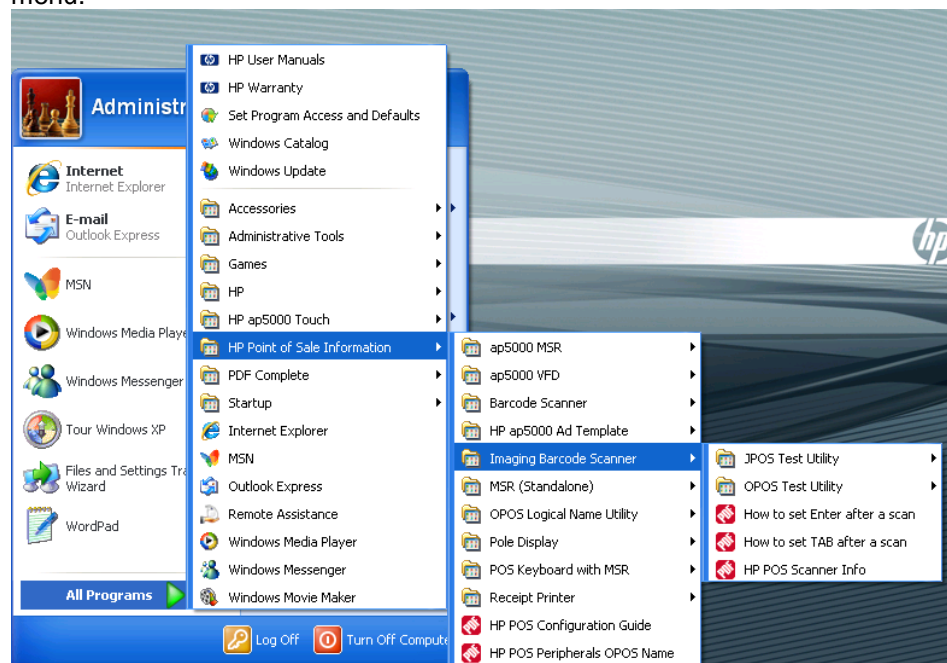
1. Launch the Imaging Barcode scanner OPOS Test utility from Windows start menu.
2. Select "HPImagerScanner" in the scanner device box.
3. Click "Open Scanner" button.
4. Click "Claim" button.
5. Click "Enable" button.
6. Click "Data Event Enable" button or select "Auto Data Event Enable" so the status states "Ready to scan a label".
7. Scan a barcode.
8. After scan is complete click on "Disable" button.

Note: When the imaging scanner is disabled the LED on the scanner will blink to indicate that it has been disabled. When an OPOS application has been setup to use the imaging scanner in OPOS (USB COM) mode when the application is started the scanner will be enabled. When the application is exited then the imaging scanner will be disabled (LED on the scanner will blink).

9. Click "Release" button.
10. Click "Close Scanner" button.
11. Exit the application.

Detail Steps

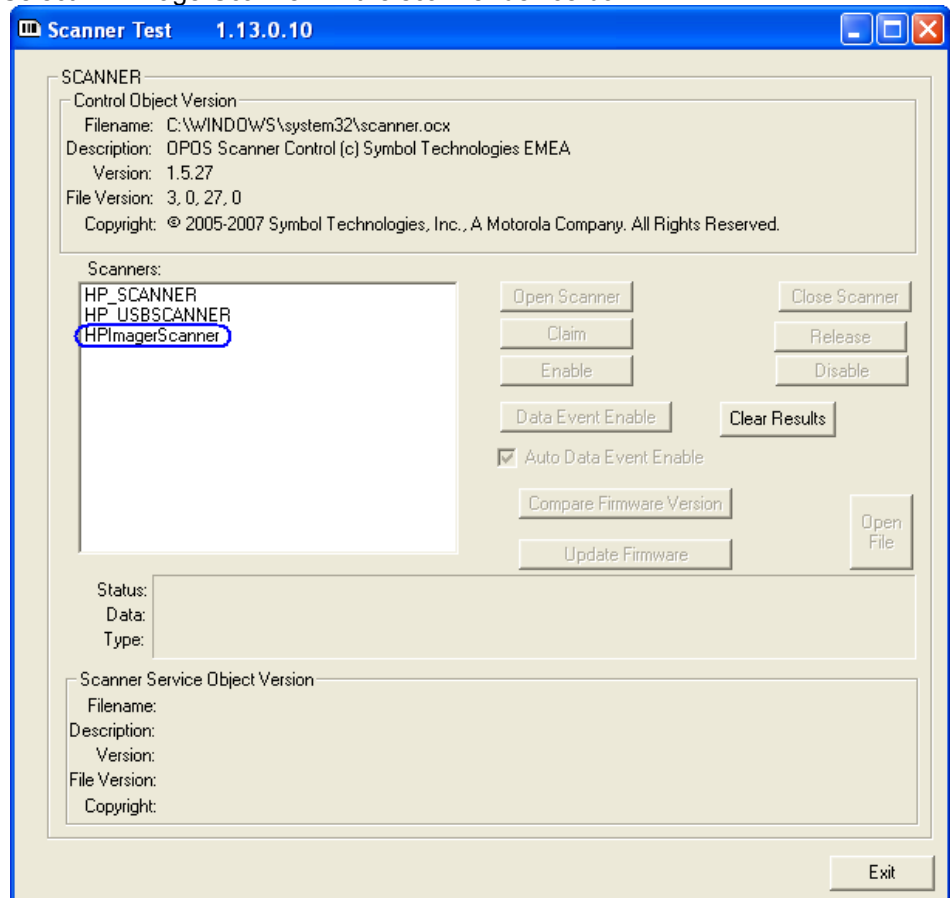
1. Launch the Imaging Barcode scanner OPOS Test utility from Windows start menu.



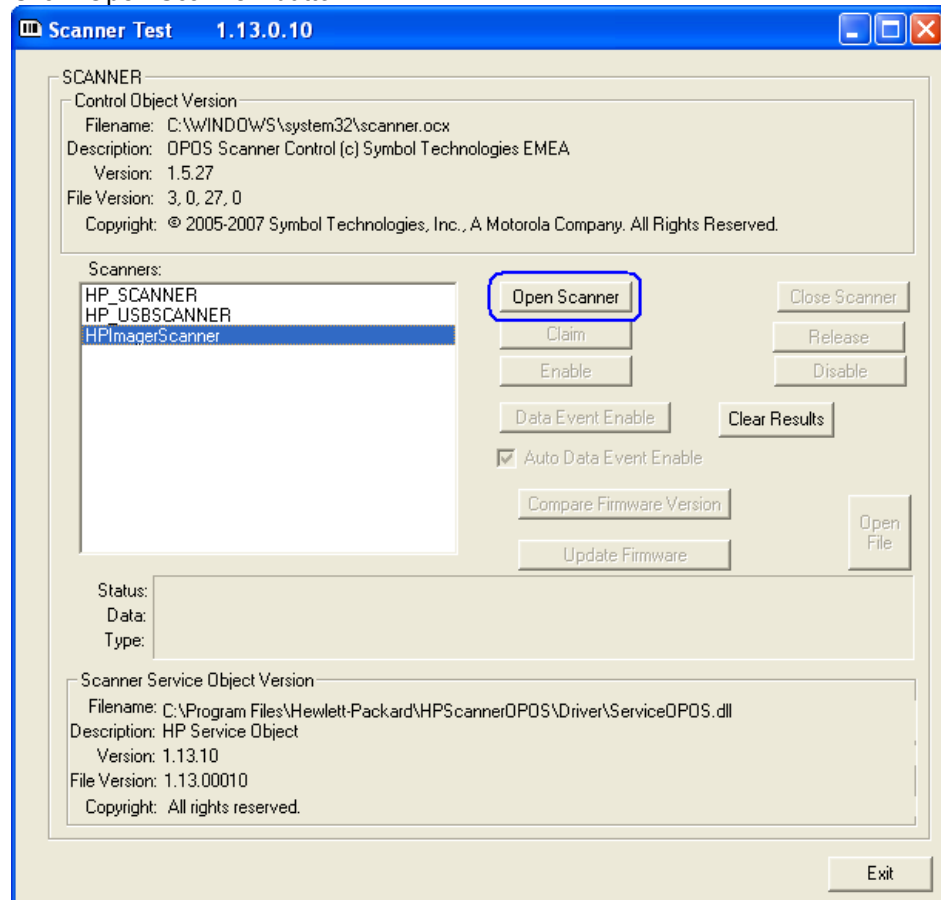
or

the imaging OPOS test utility (ScannerTest.exe) maybe launched from "C:\Program Files\Hewlett-Packard\HPScannerOPOS" folder.

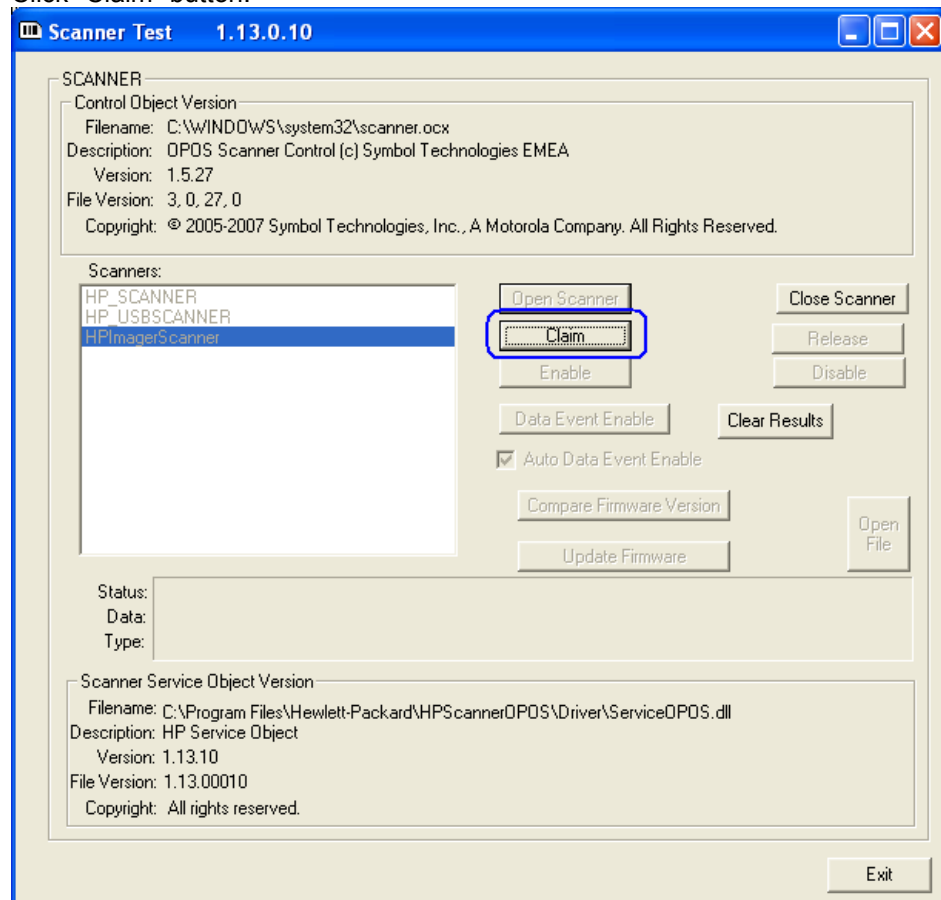
2. Select "HPImagerScanner" in the scanner device box.



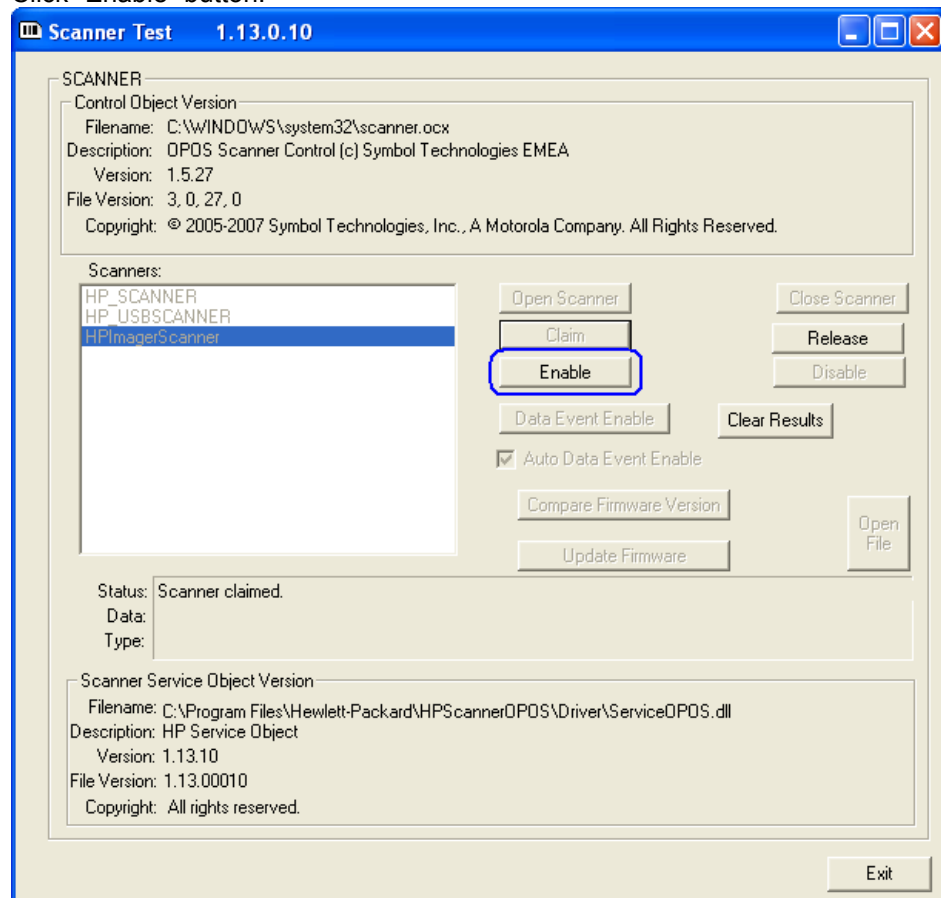
3. Click “Open Scanner” button.



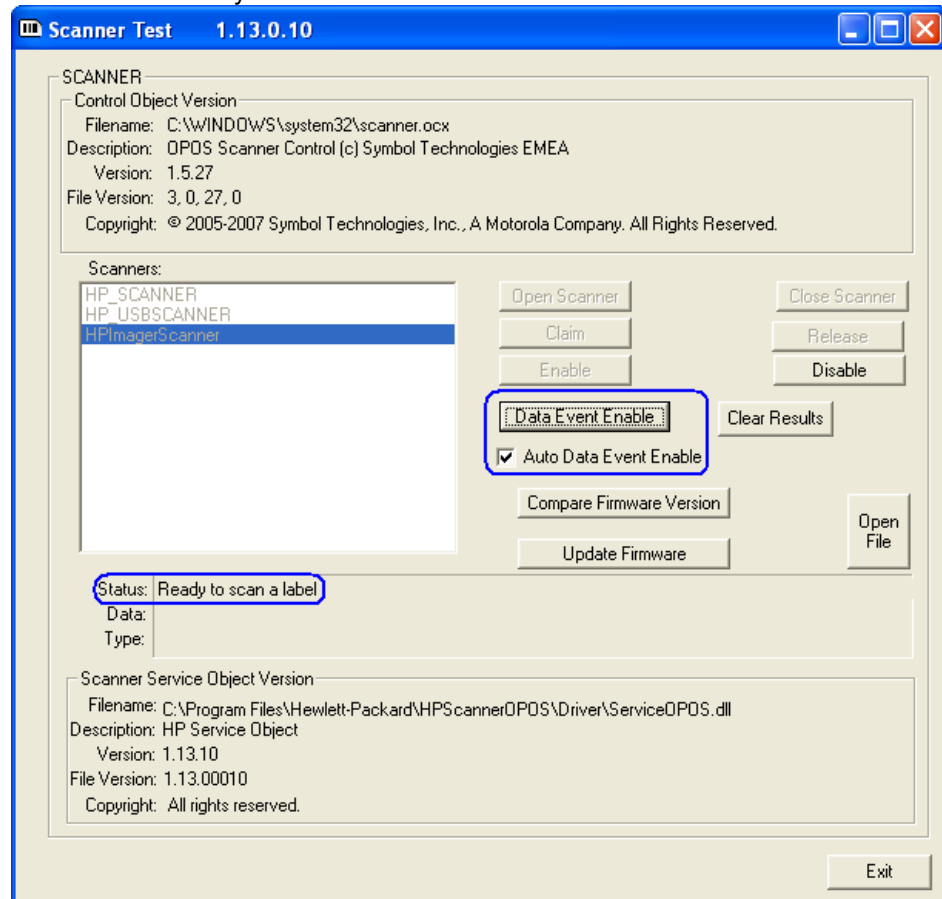
4. Click "Claim" button.



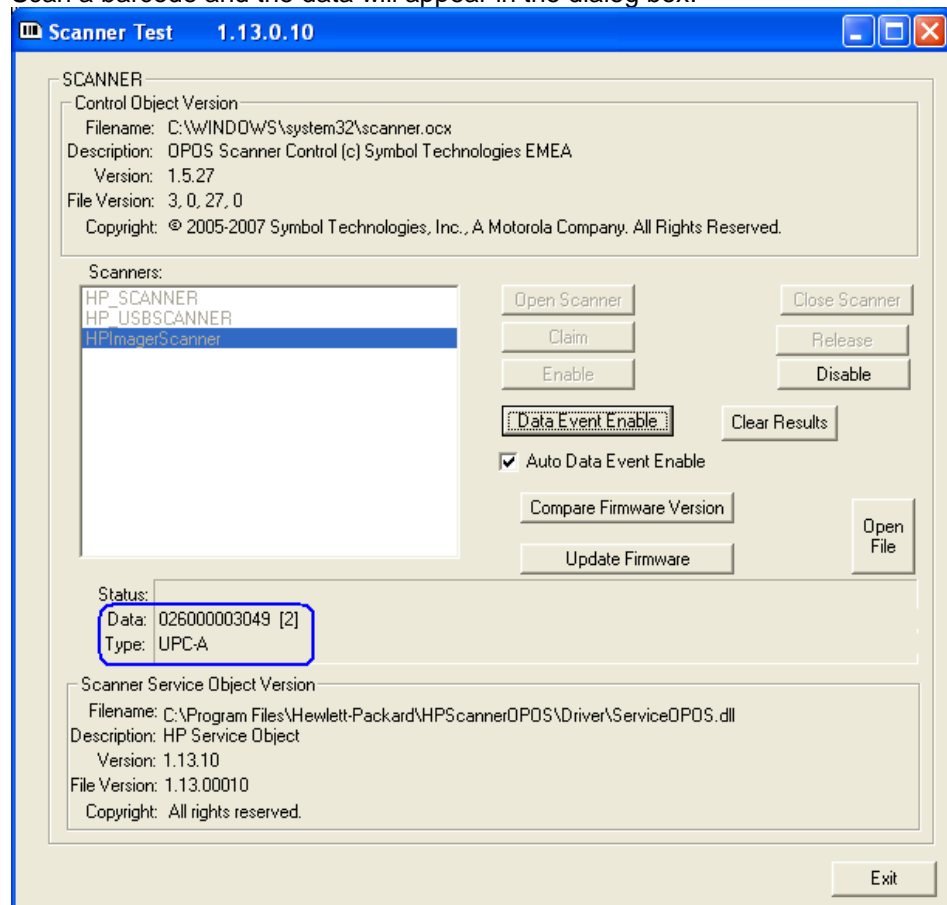
5. Click "Enable" button.



- Click “Data Event Enable” button or select “Auto Data Event Enable” so the status states “Ready to scan a label”.

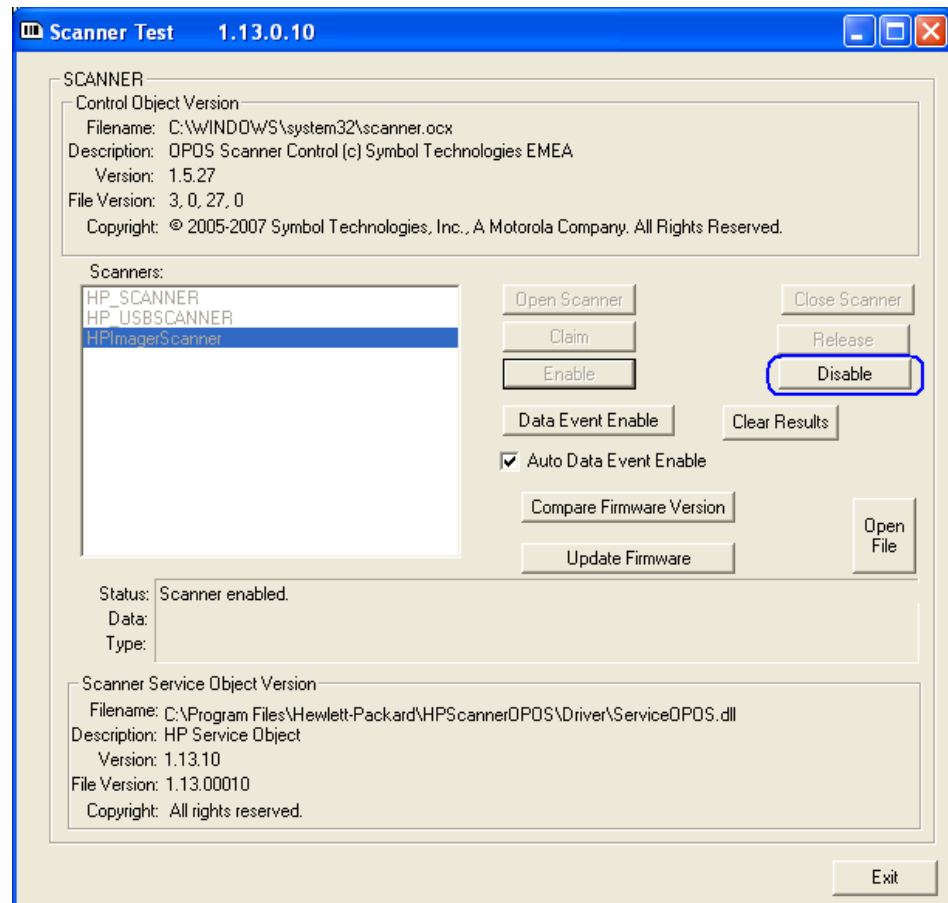


7. Scan a barcode and the data will appear in the dialog box.

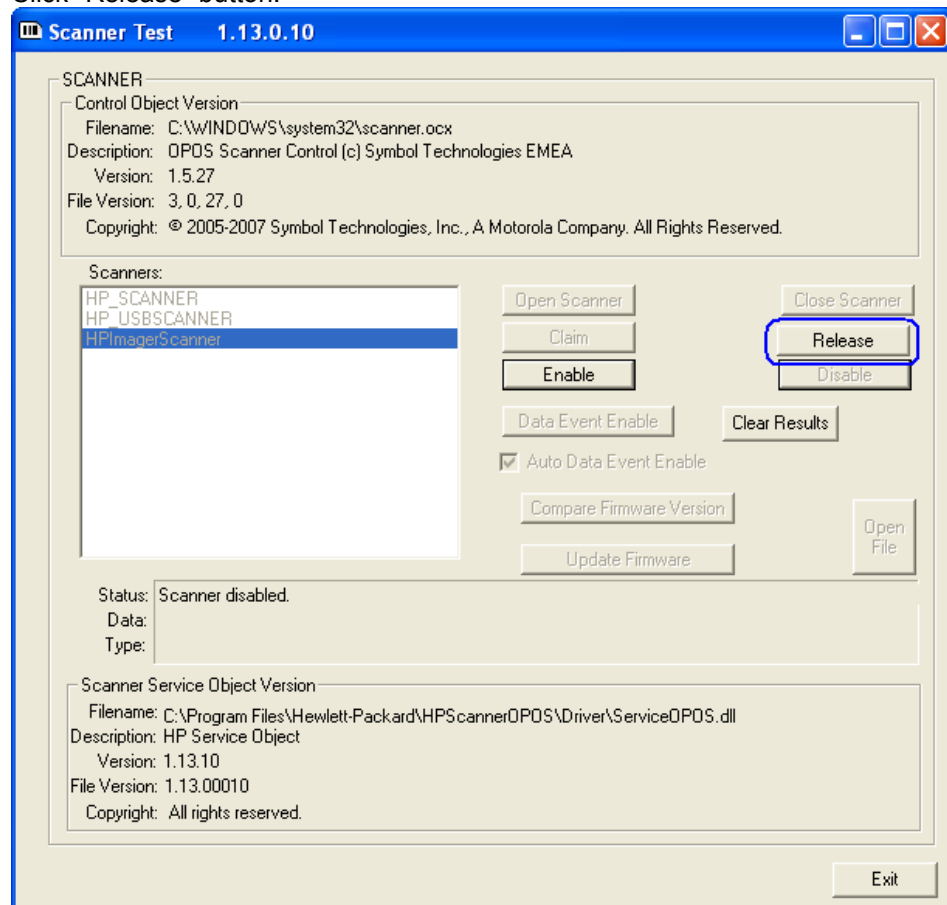


8. After scan is complete click on “Disable” button.

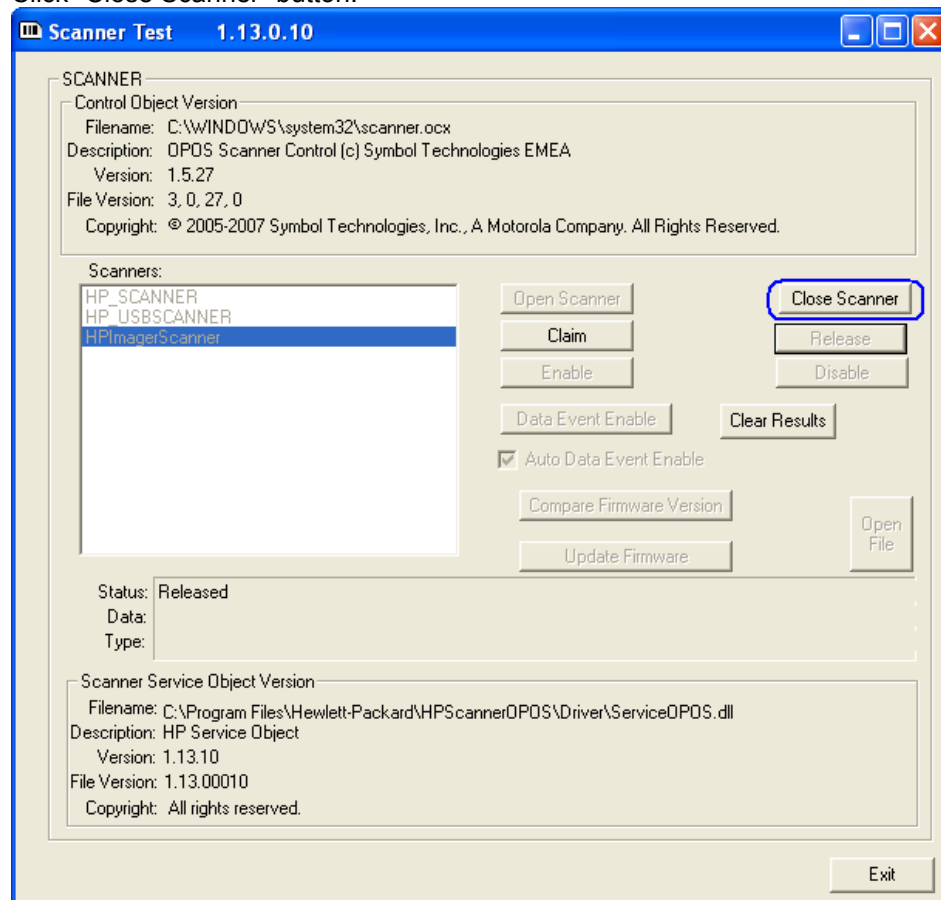
Note: When the imaging scanner is disabled the LED on the scanner will blink to indicate that it has been disabled. When an OPOS application has been setup to use the imaging scanner in OPOS (USB COM) mode when the application is started the scanner will be enabled. When the application is exited then the imaging scanner will be disabled (LED on the scanner will blink).



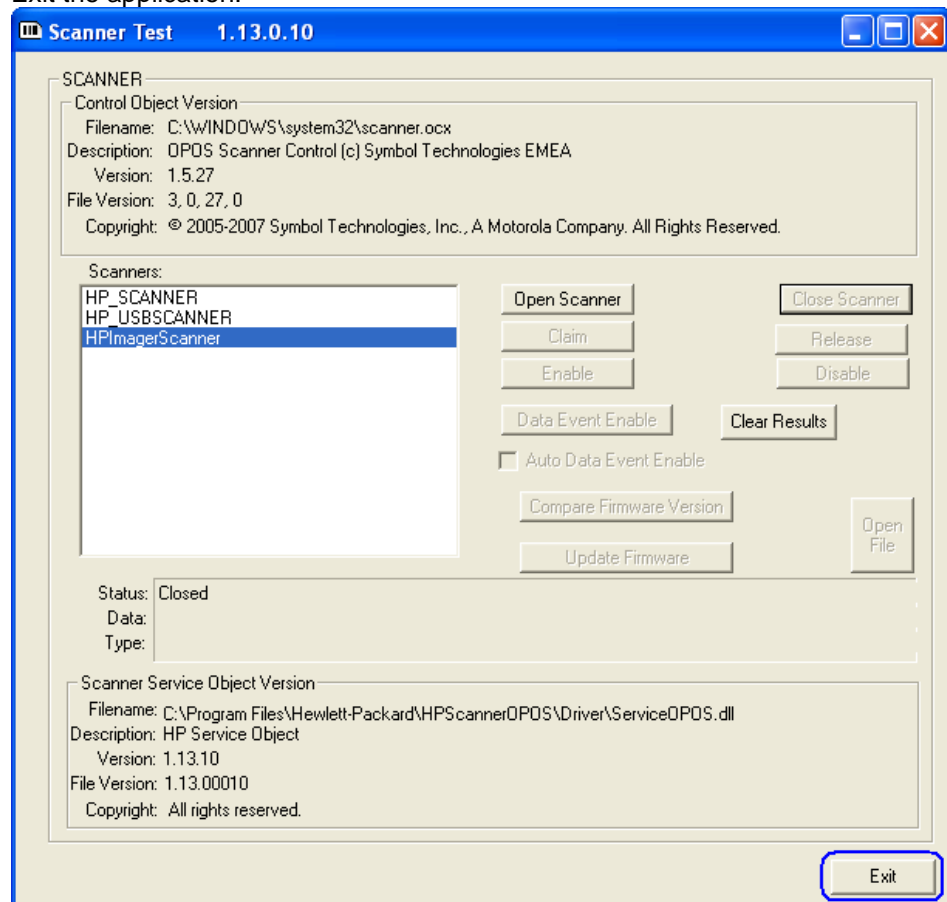
9. Click “Release” button.



10. Click “Close Scanner” button.



11. Exit the application.



7.5.5 JPOS Drivers for the Imaging Barcode Scanner

The JPOS drivers are located in "C:\xxxxx\ Point of Sale\Imaging BarCode Scanner\Imaging Barcode Scanner JPOS" sub-directory in the HP Point of Sale image, or can be obtained from "HP POS Drivers and Documentation CD" starting with version 3.30.

In order for the scanner to work with JPOS driver, the scanner must be programmed into the USB-COM mode (OPOS). In order to put the scanner into this mode, scan the barcode below:



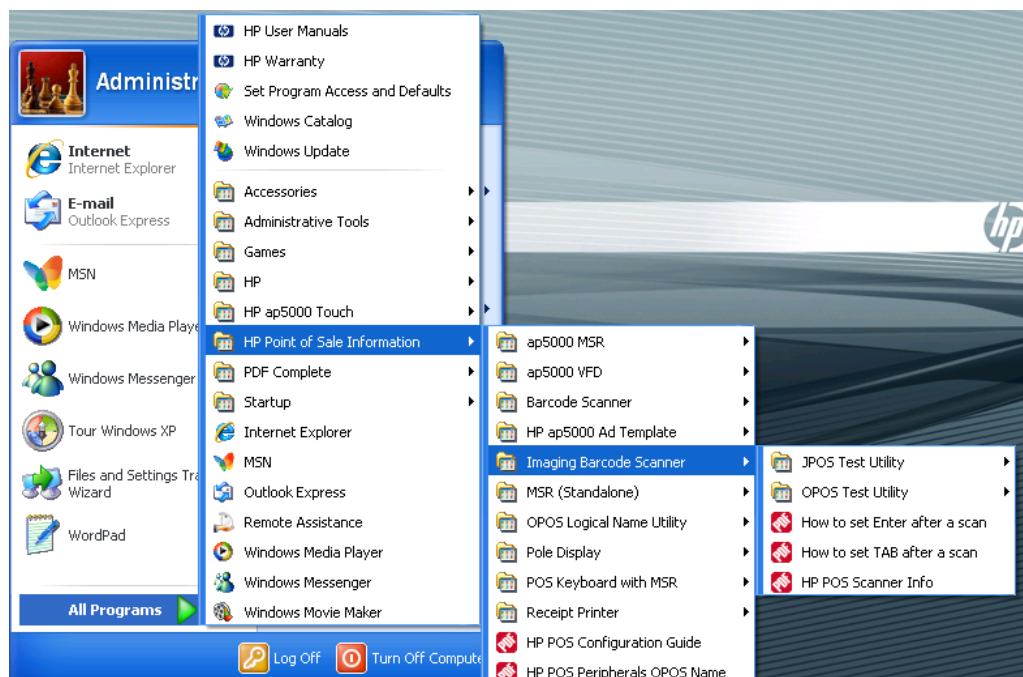
USB-COM mode (OPOS)

The following is overview of the steps to test the imaging barcode scanner followed by details steps:

1. Start the JPOS test utility using the link in the START MENU.
2. Click on the "Scanner" tab.
3. Click on the "OPEN" button. After the imaging scanner is opened a check will appear in the "Data event enabled" box.
4. Click on the "CLAIM" button. After clicking on the "CLAIM" button a few seconds later a check should appear next to the "Device enabled" box.
5. Check the "Decode Data" so there is a check box.
6. Scan a barcode and the data will appear in the "Scan Data" and "Scan Data Label" boxes.
7. After scan is complete click on "Release" button.
8. Click on "Close" button.
9. Click on "Exit" to close the test application.

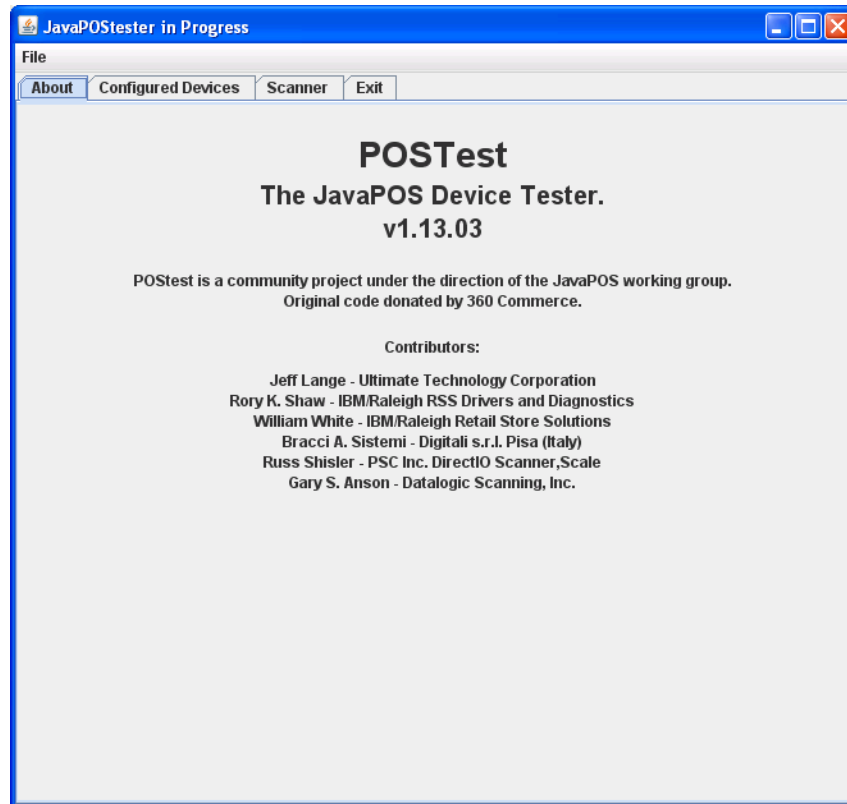
Detail Steps

1. Start the JPOS test utility either using the link in the START MENU:

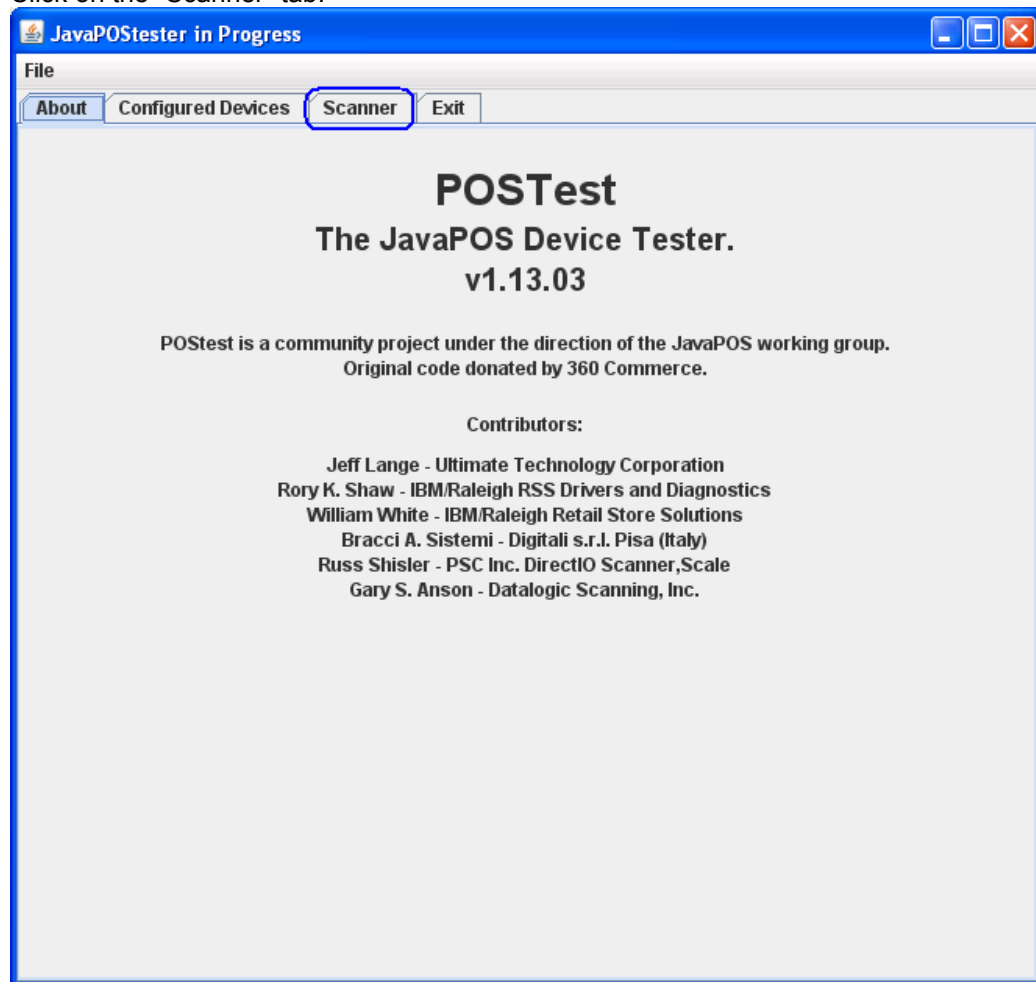


or

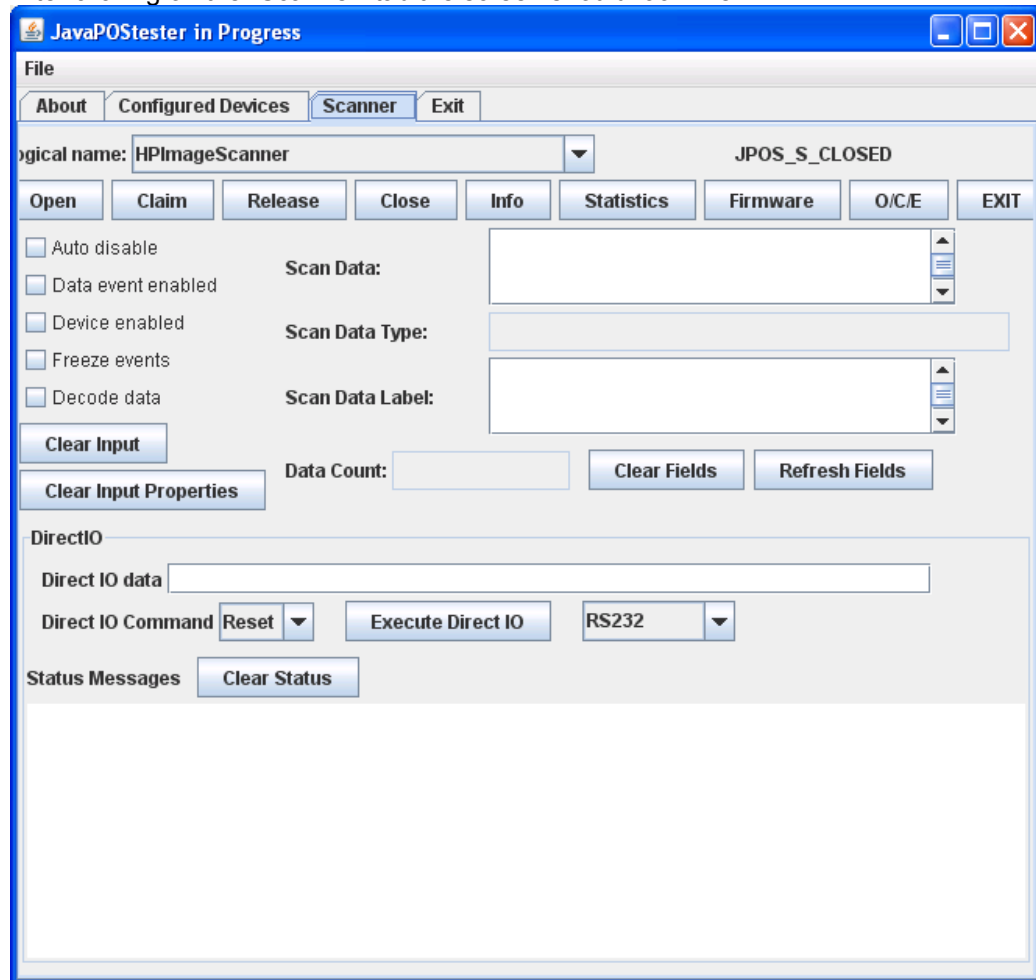
by launching the POSTEST.BAT file that is located in the JPOS folder for barcode scanner (C:\xxxxx\Point of Sale\Imaging Barcode Scanner\Imaging Barcode Scanner JPOS" folder). After a few seconds the JPOS test utility GUI will appear as shown below:



2. Click on the "Scanner" tab:

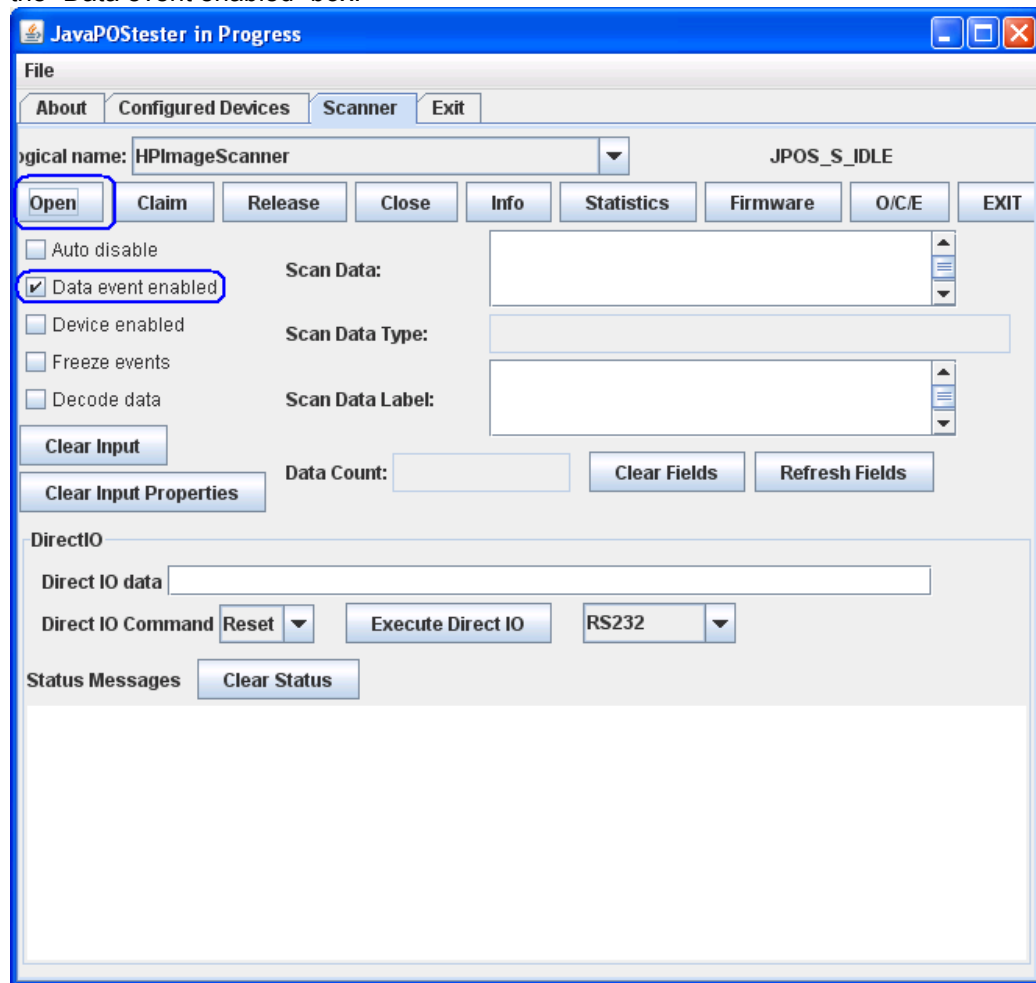


After clicking on the “Scanner” tab the screen should look like:

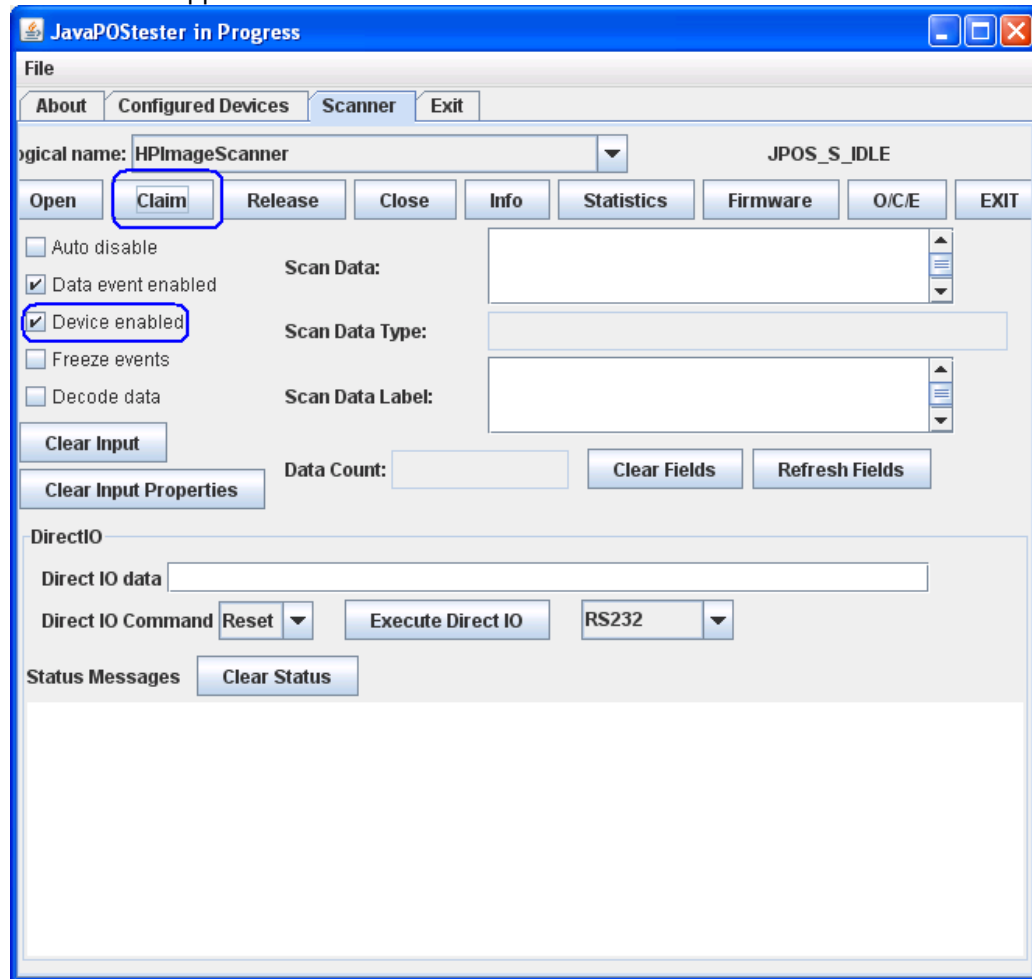


The logical name of the device is “HPImageScanner”. If one clicks on the “Configured Devices” tab, the names for the device will appear that will be used in the test utility as well in the “Logical Name” drop down box.

3. Click on the “OPEN” button. After the imaging scanner is opened a check will appear in the “Data event enabled” box.



- Click on the "CLAIM" button. After clicking on the "CLAIM" button a few seconds later a check should appear next to the "Device enabled" box.



5. Check the “Decode Data” so there is a check box.

JavaPOSTester in Progress

File

About Configured Devices Scanner Exit

logical name: HPIImageScanner JPOS_S_IDLE

Open Claim Release Close Info Statistics Firmware O/C/E EXIT

☐ Auto disable
☒ Data event enabled
☒ Device enabled
☐ Freeze events
☒ Decode data

Clear Input
Clear Input Properties

Scan Data:
Scan Data Type:
Scan Data Label:

Data Count: Clear Fields Refresh Fields

DirectIO

Direct IO data

Direct IO Command Reset Execute Direct IO RS232

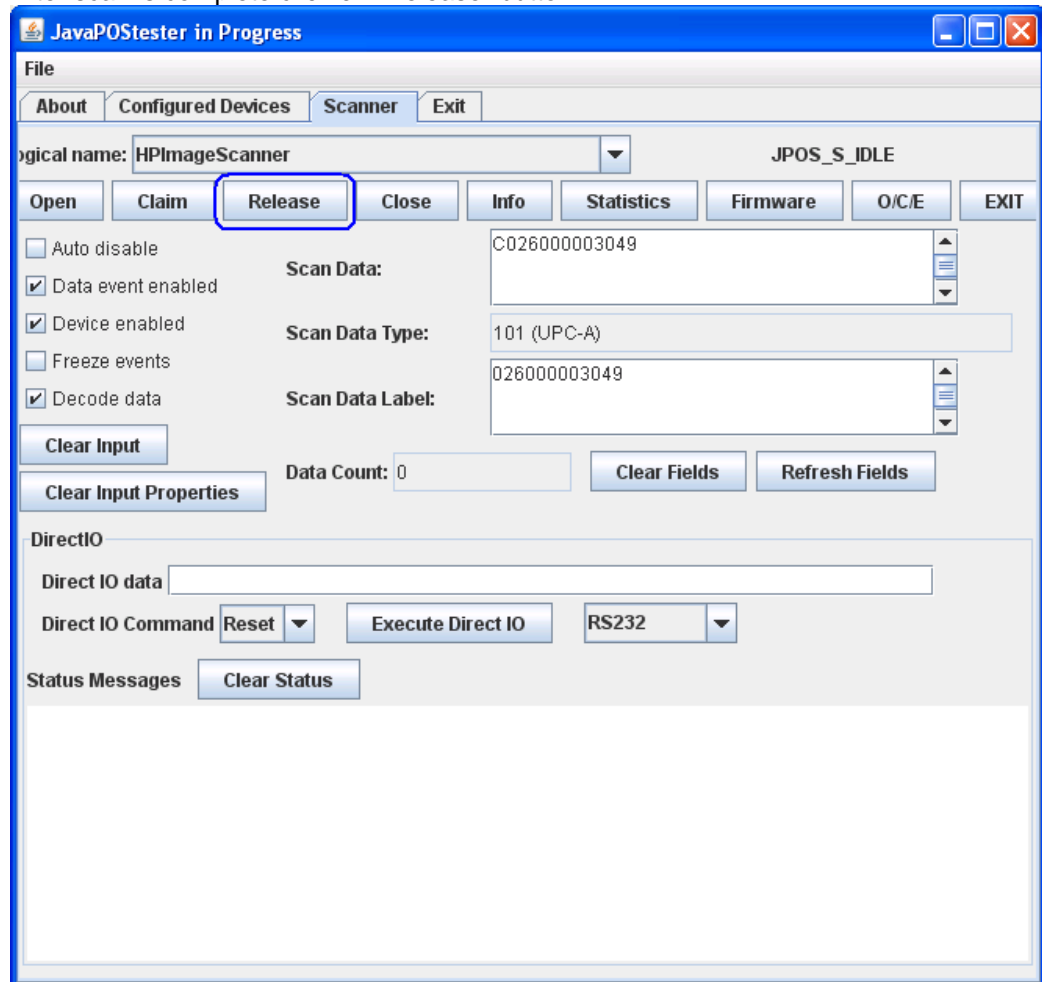
Status Messages Clear Status

6. Scan a barcode and the data will appear in the “Scan Data” and “Scan Data Label” boxes.

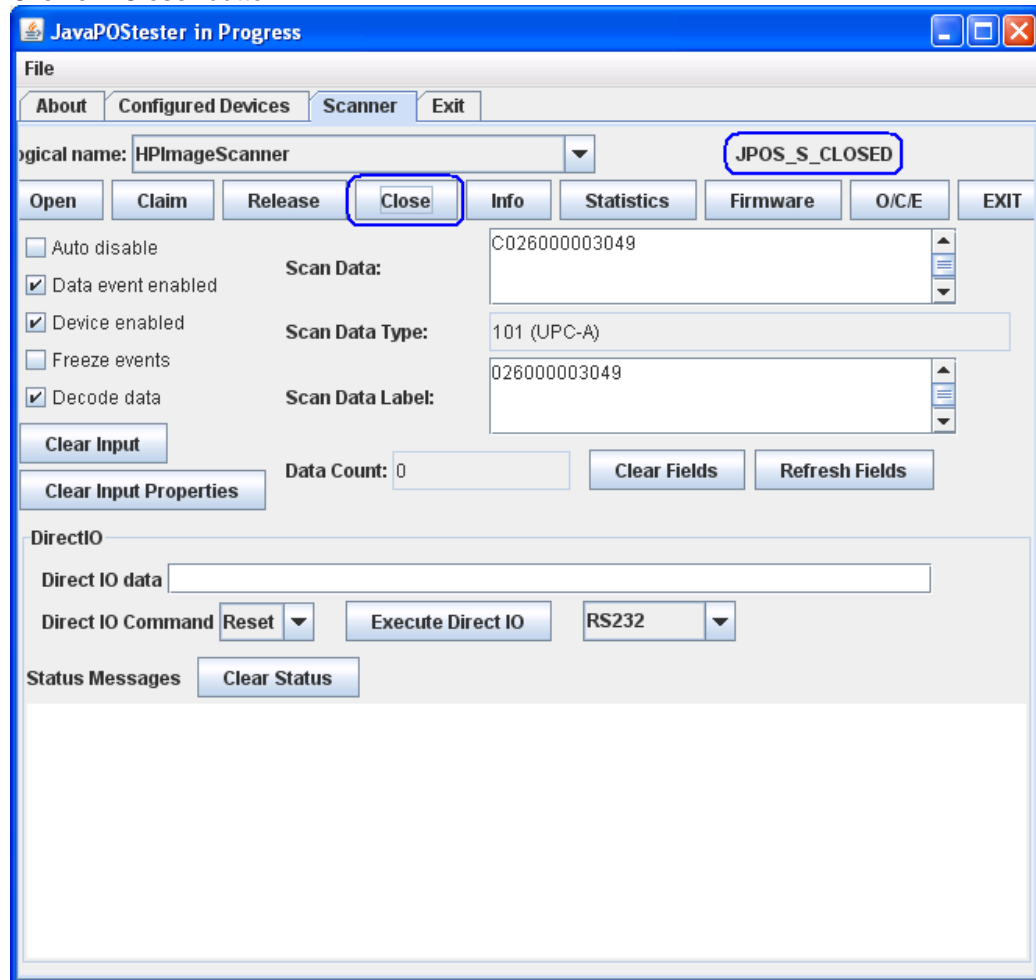
The screenshot shows the 'JavaPOStester in Progress' application window. The 'Scanner' tab is selected, displaying the following interface:

- File** menu: About, Configured Devices, Scanner, Exit
- Logical name:** HPImageScanner (dropdown)
- Status:** JPOS_S_IDLE
- Buttons:** Open, Claim, Release, Close, Info, Statistics, Firmware, O/C/E, EXIT
- Checkboxes:**
 - ☐ Auto disable
 - ☒ Data event enabled
 - ☒ Device enabled
 - ☐ Freeze events
 - ☒ Decode data
- Buttons:** Clear Input, Clear Input Properties
- Scan Data Section (highlighted with a blue box):**
 - Scan Data:** C026000003049
 - Scan Data Type:** 101 (UPC-A)
 - Scan Data Label:** 0260000003049
- Data Count:** 0
- Buttons:** Clear Fields, Refresh Fields
- DirectIO Section:**
 - Direct IO data:** (text field)
 - Direct IO Command:** Reset (dropdown)
 - Execute Direct IO** (button)
 - RS232** (dropdown)
- Status Messages:** Clear Status (button)
- Status Messages Area:** (large empty text area)

7. After scan is complete click on “Release” button.



8. Click on “Close” button.



9. Click on “Exit” to close the test application.

7.5.6 **Imaging Testing**

In order for the scanner to capture a image, the scanner must be programmed into the USB-COM mode (OPOS). In order to put the scanner into this mode, scan the barcode below or when prompted scan the barcode when it appears in the test utility:



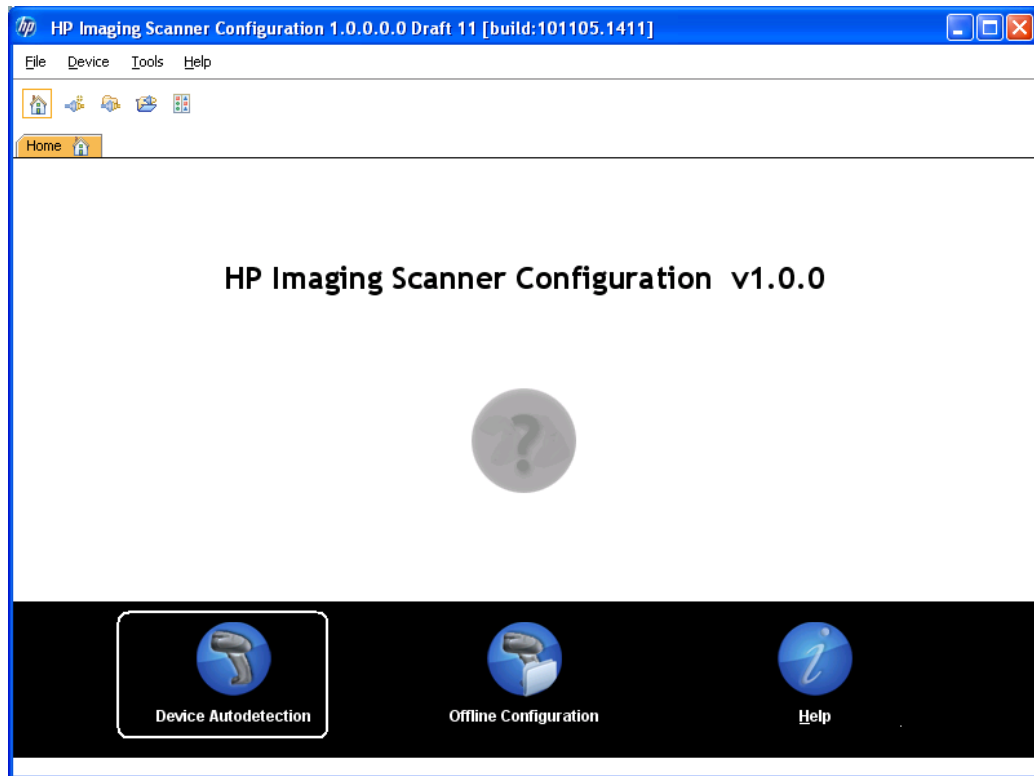
USB-COM mode (OPOS)

The following is overview of the steps to test the imaging barcode scanner followed by details steps:

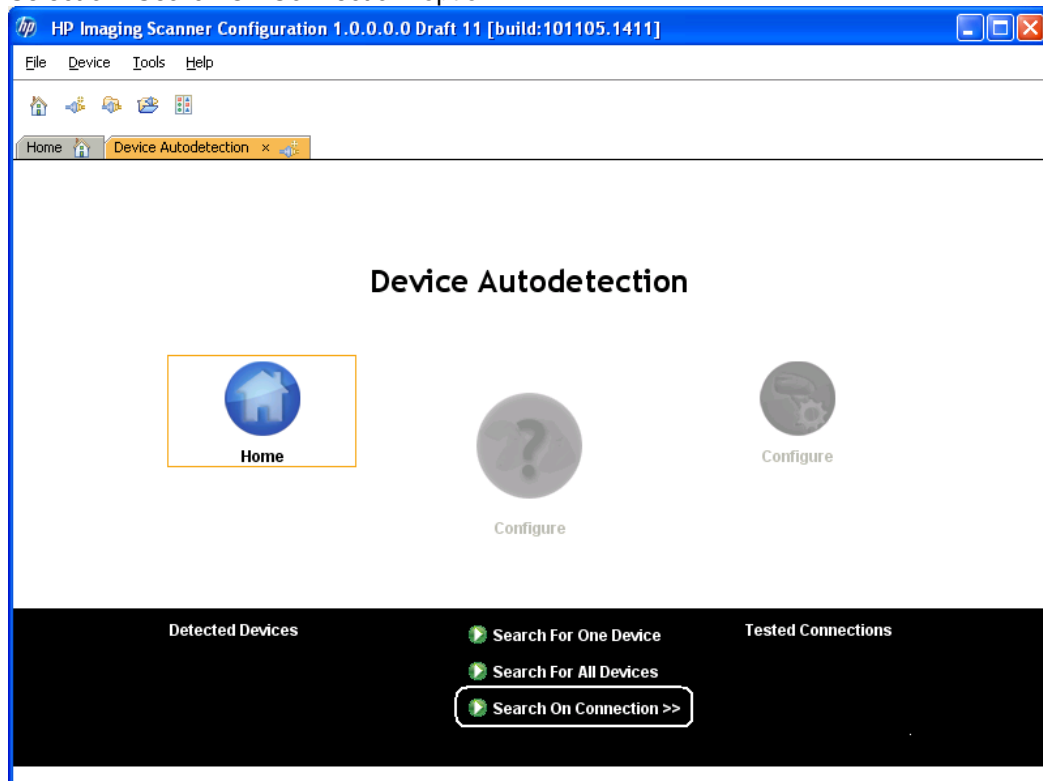
1. Install the “HP Imaging Scanner Configuration” on the system. This may be found on HP.COM web site or “HP POS Drivers and Documentation CD” starting with version 3.30.
2. After installation is complete launch the “HP Imaging Scanner Configuration”.
3. Detect the scanner attached to the unit by selecting “Device Autodetection” option
4. Select on “Search On Connection” option.
5. Select the COM port that the scanner is attached to. If the scanner is not in USB-COM mode scan the barcode on the previous page or scan the barcode that appears on the screen and then select your COM port that the scanner is assigned to when in USB-COM mode:
6. Click on the scanner picture until the menu appears (will see a message that it is retrieving data from the scanner).
7. Click on the eyeglass icon (view image) in the menu bar to put the scanner into capture mode. When this option is selected the scanner will beep.
8. Select “Capture on Trigger” option located at the bottom of the screen.
9. Point the scanner to the item that one wishes to scan and pull the trigger to capture the image.
10. Exit the application.

Detail Steps

1. Install the “HP Imaging Scanner Configuration” on the system. This may be found on HP.COM web site or “HP POS Drivers and Documentation CD” starting with version 3.30.
2. After installation is complete launch the “HP Imaging Scanner Configuration”.
3. Detect the scanner attached to the unit by selecting “Device Autodetection” option



4. Select on "Search On Connection" option.



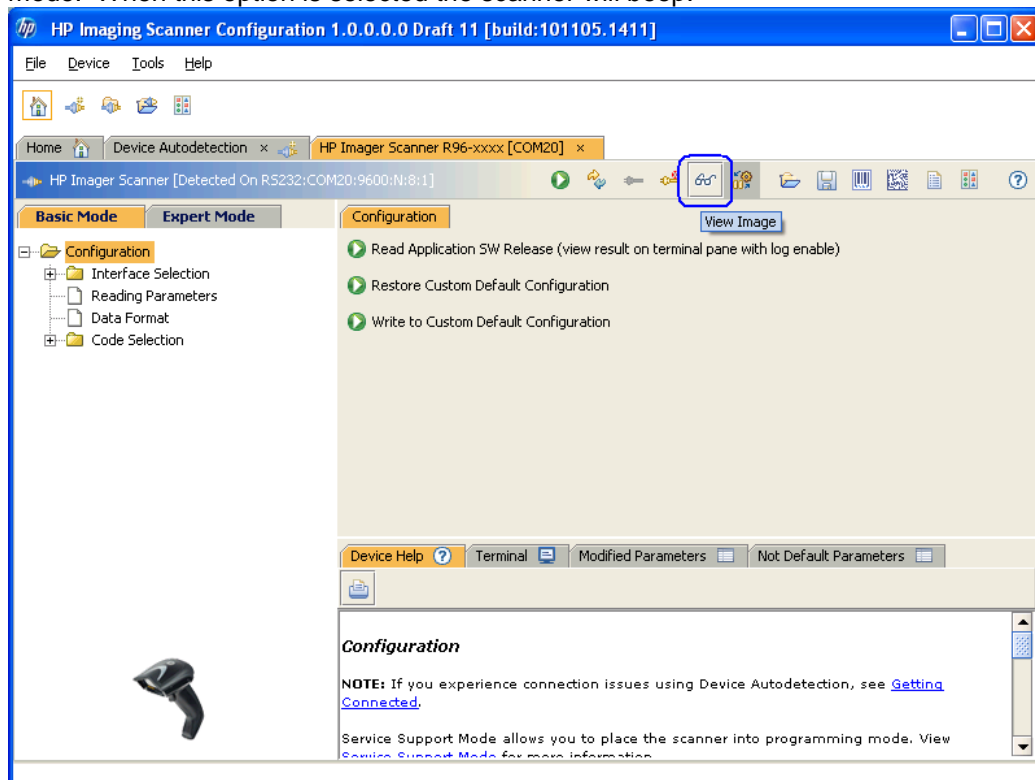
5. Select the COM port that the scanner is attached to. If the scanner is not in USB-COM mode scan the barcode on the previous page or scan the barcode that appears on the screen and then select your COM port that the scanner is assigned to when in USB-COM mode:



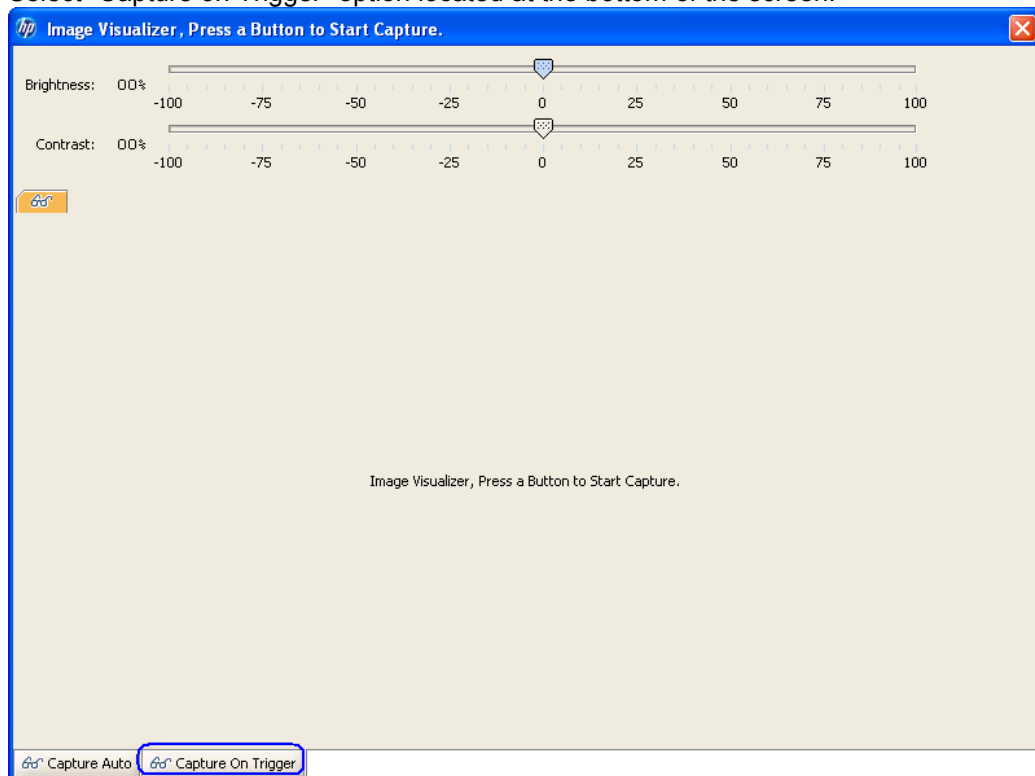
6. Click on the scanner picture until the menu appears (will see a message that it is retrieving data from the scanner).



7. Click on the eyeglass icon (view image) in the menu bar to put the scanner into capture mode. When this option is selected the scanner will beep.



8. Select "Capture on Trigger" option located at the bottom of the screen.



7.6 Point of Sale Keyboard



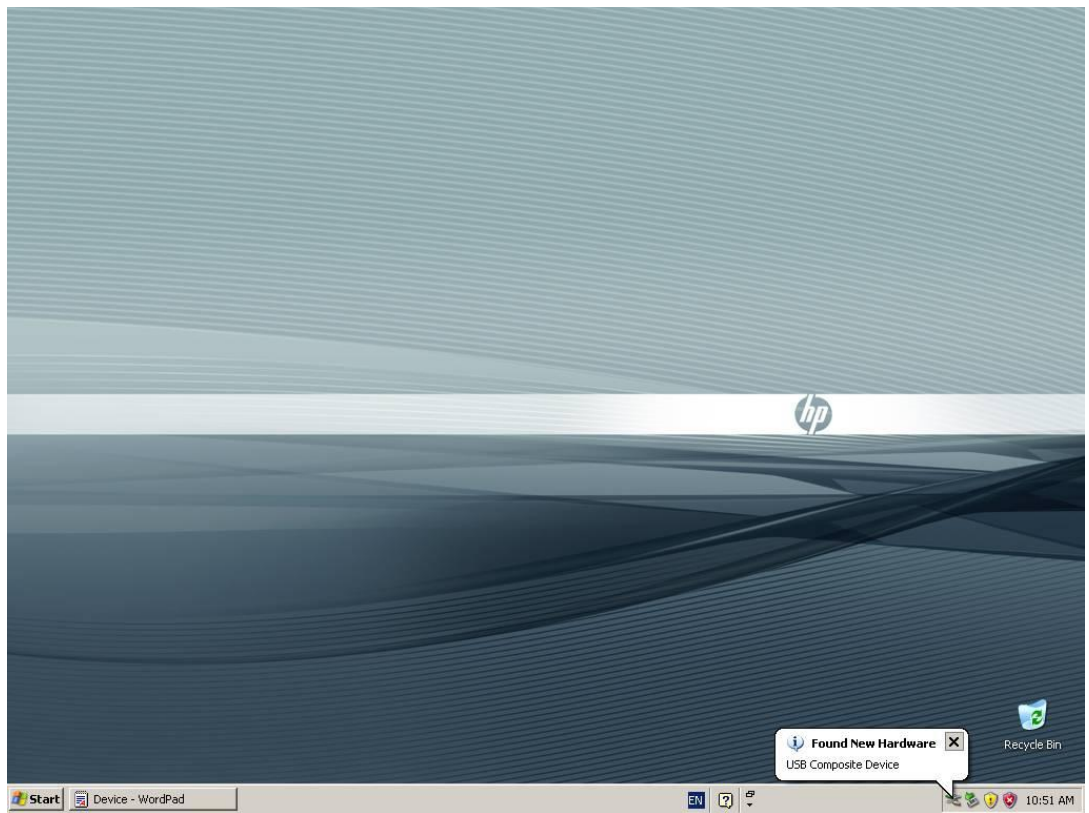
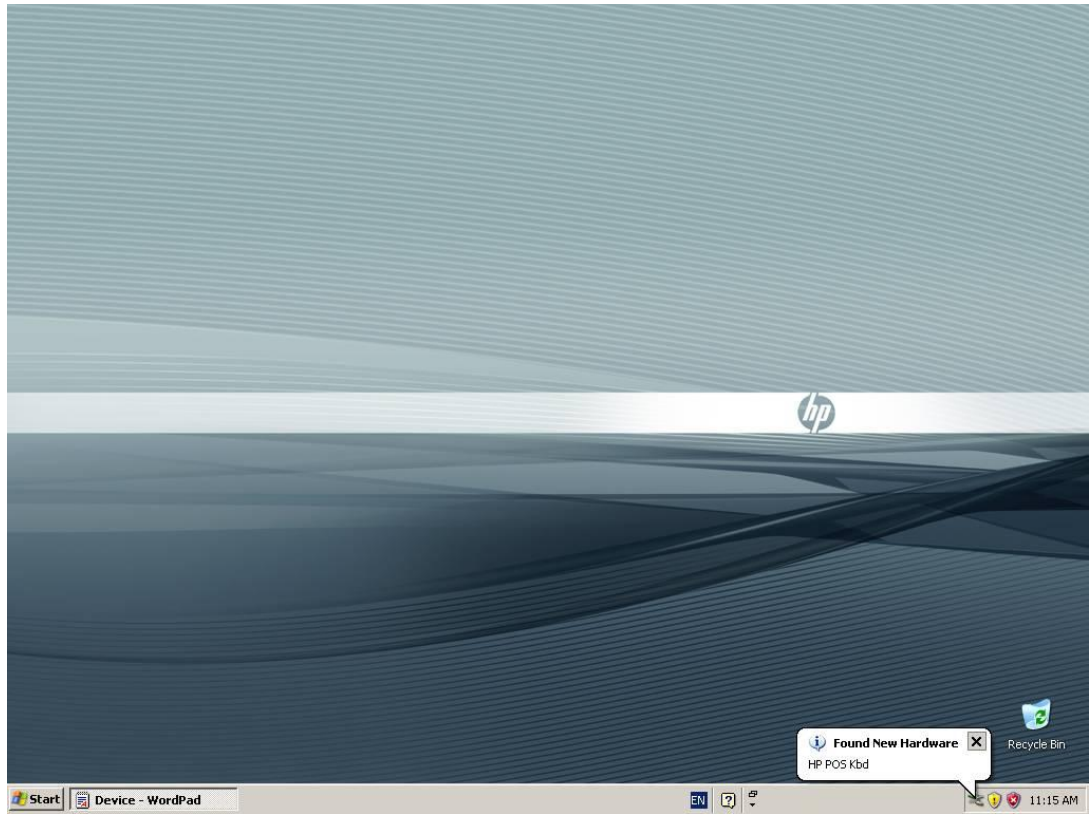
7.6.1 Connection

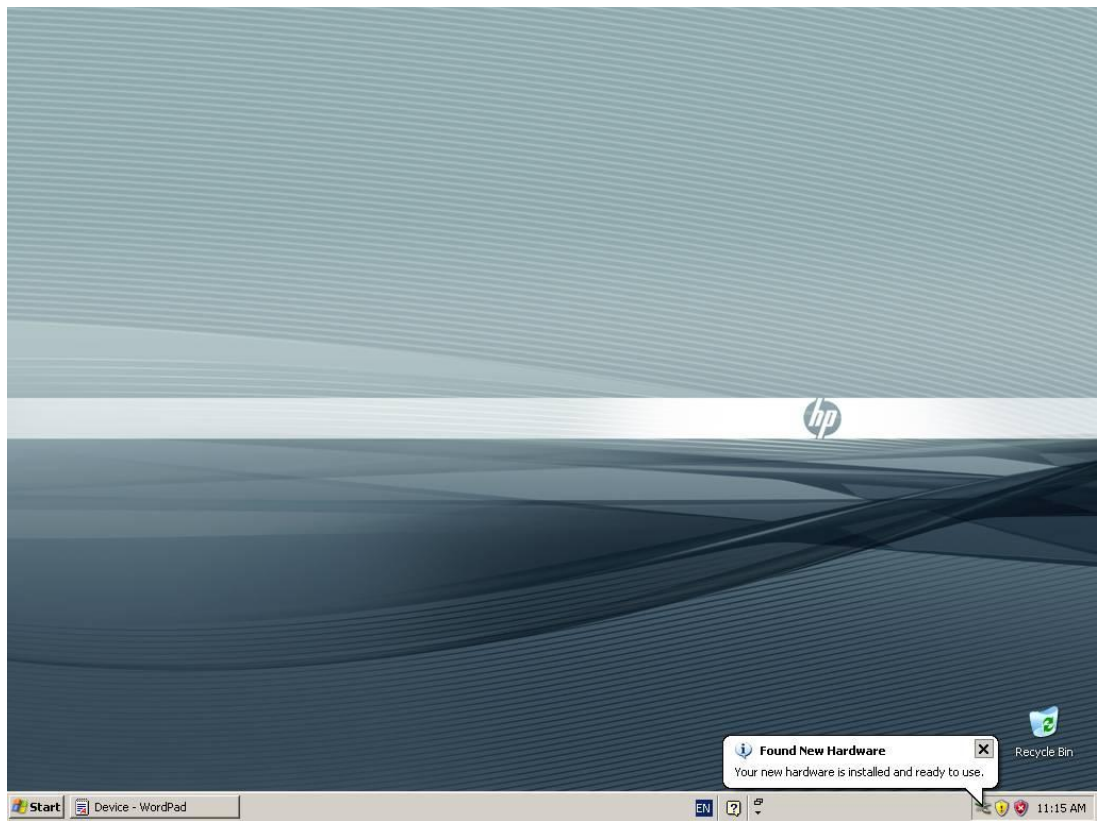
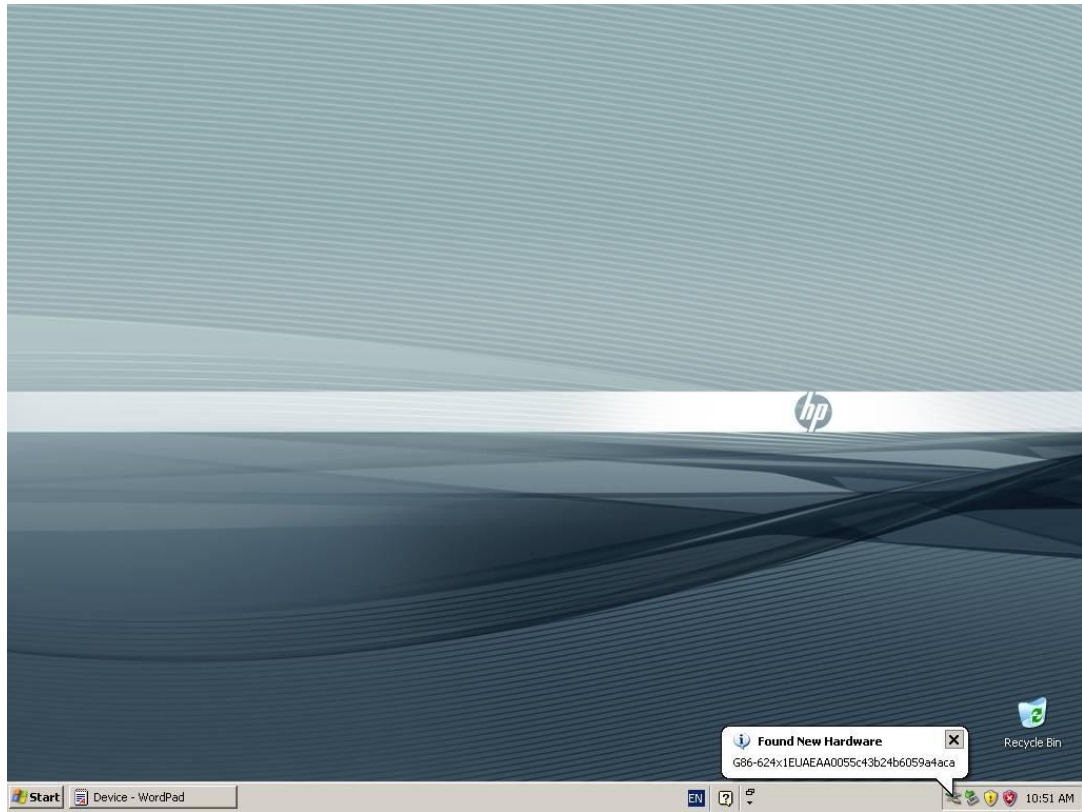
The POS keyboard may be plugged into any free USB port. One may plug the POS keyboard into the power USB port in the 5V part of USB port, when plugged in this configuration the power portion of USB port is not utilized.

7.6.2 Windows Drivers for the Point of Sale Keyboard

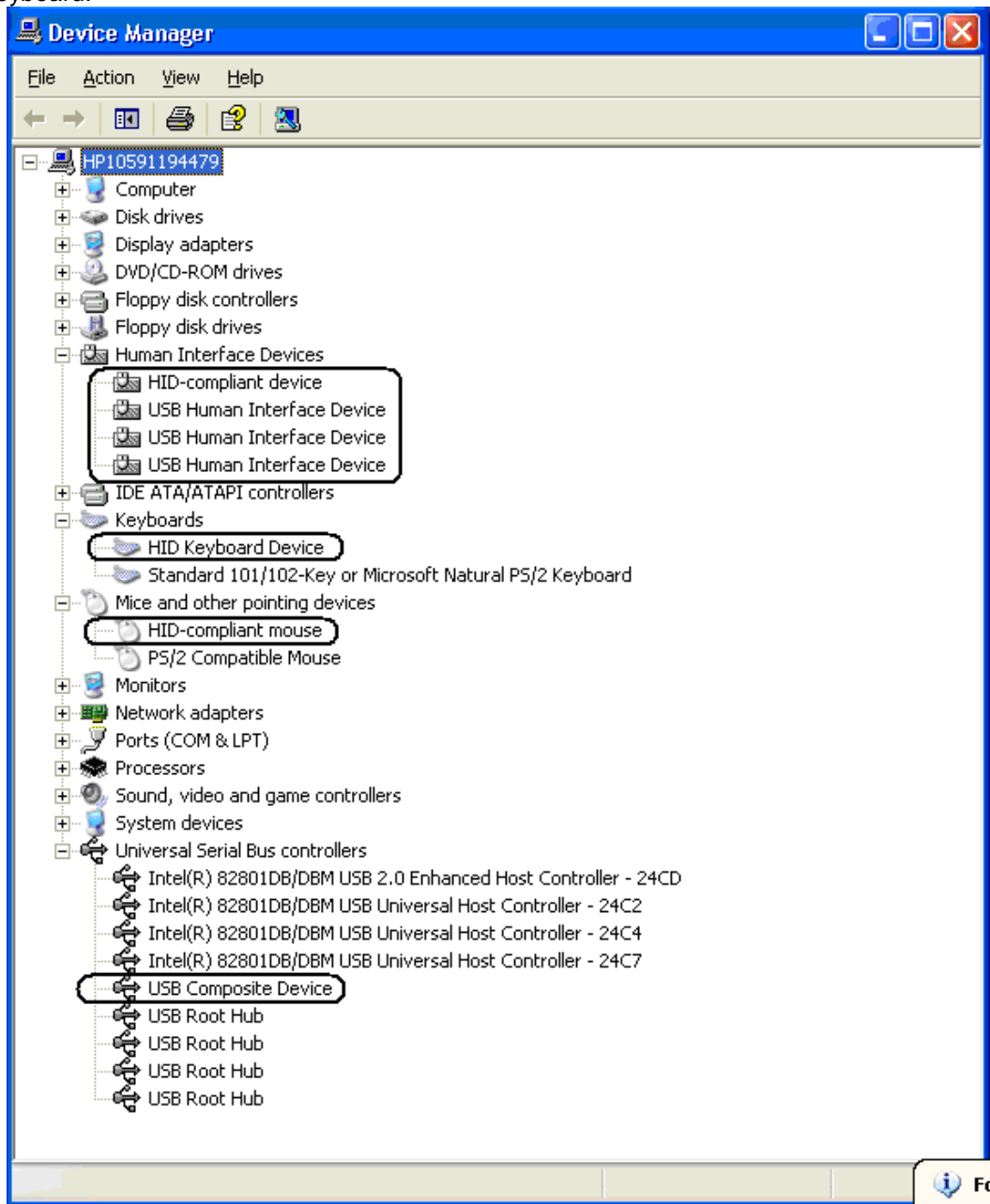
The HP POS keyboard uses native drivers for Windows operating system. Windows will load several drivers for the keyboard and touch pad. If during the driver installation, Windows displays the new hardware wizard, the user needs to accept the defaults that appear during the hardware wizard GUI (for the first screen you may select the no option) and the native drivers will be loaded. Please refer to "[If prompted for native driver location \(New Hardware Wizard\)](#)" section. If prompted for the driver installation you may need to go through the new hardware wizard 5 or 6 times to load the Windows HID drivers.

The following shows some of the dialog boxes that will appear while Windows is installing the drivers for this device:





The following is the Device Manager window after all the drivers are loaded for the HP POS keyboard:



7.6.3 OPOS Drivers for the Point of Sale Keyboard

No OPOS drivers are needed for the keyboard.

7.6.4 Testing the Point of Sale Keyboard

Open Notepad, what is typed on the keyboard should appear in Notepad.

7.6.5 JPOS Drivers for the Point of Sale Keyboard

No JPOS drivers are needed for the keyboard.

7.7 Point of Sale Keyboard with integrated MSR



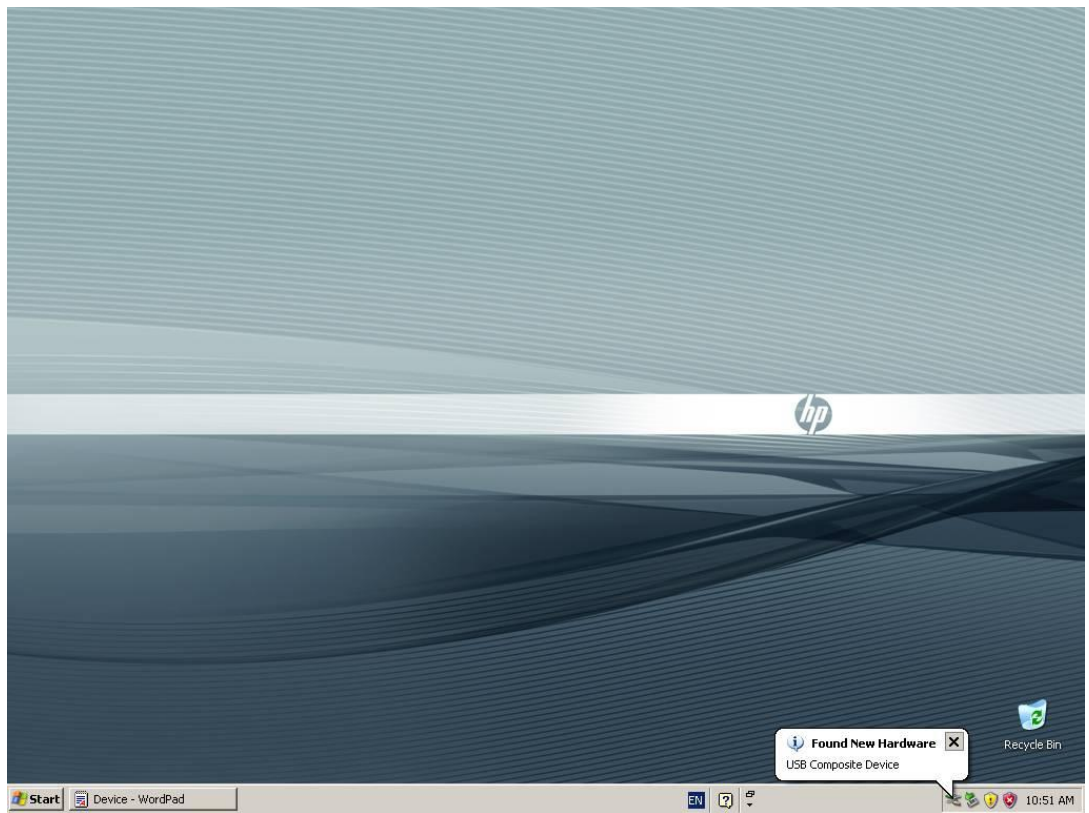
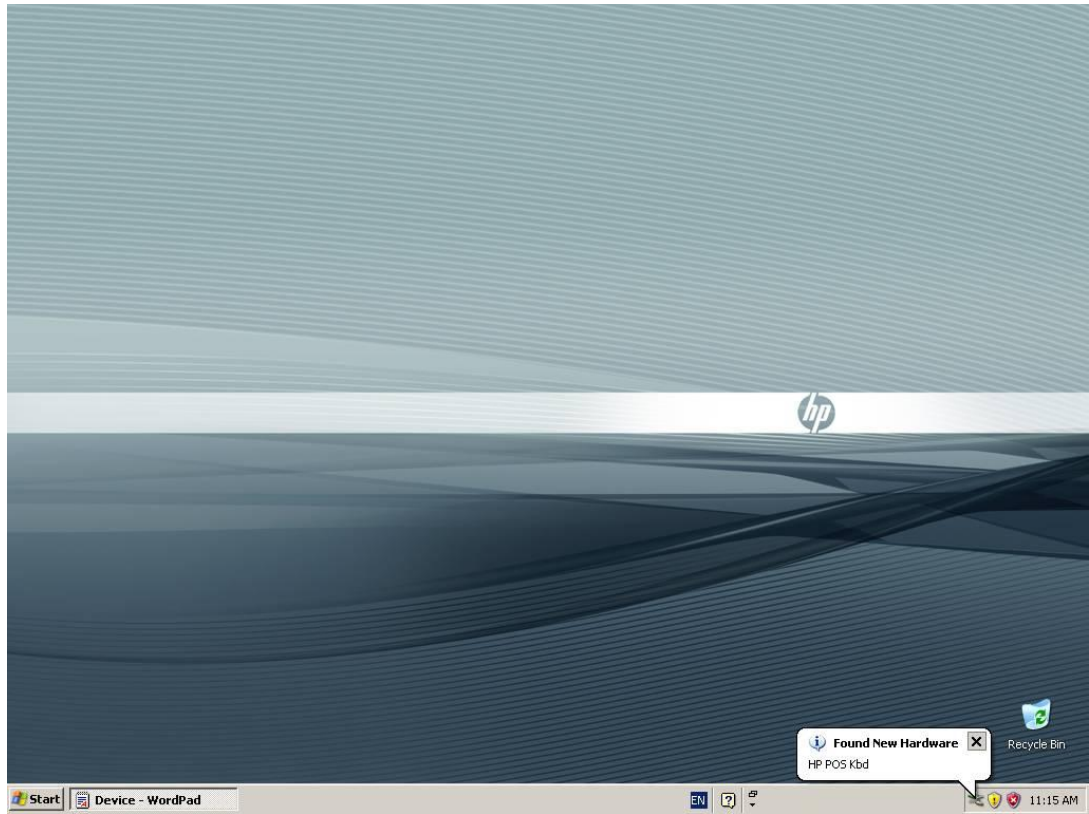
7.7.1 Connection

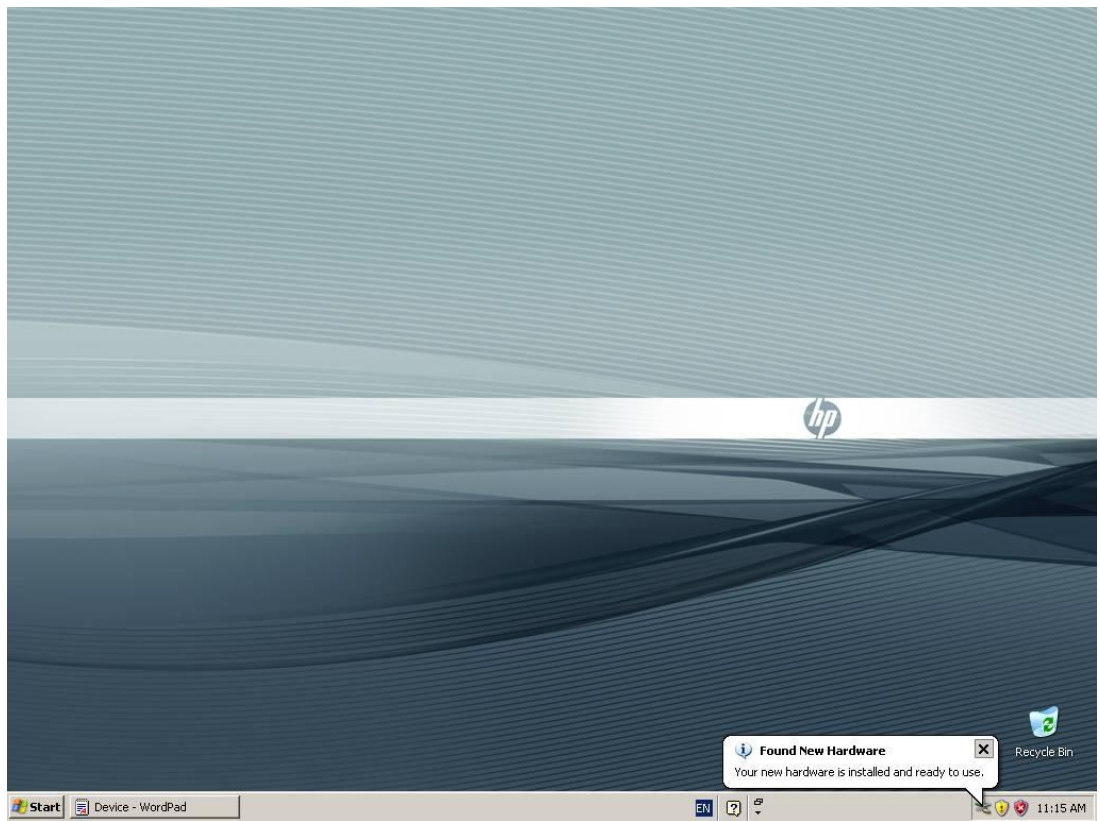
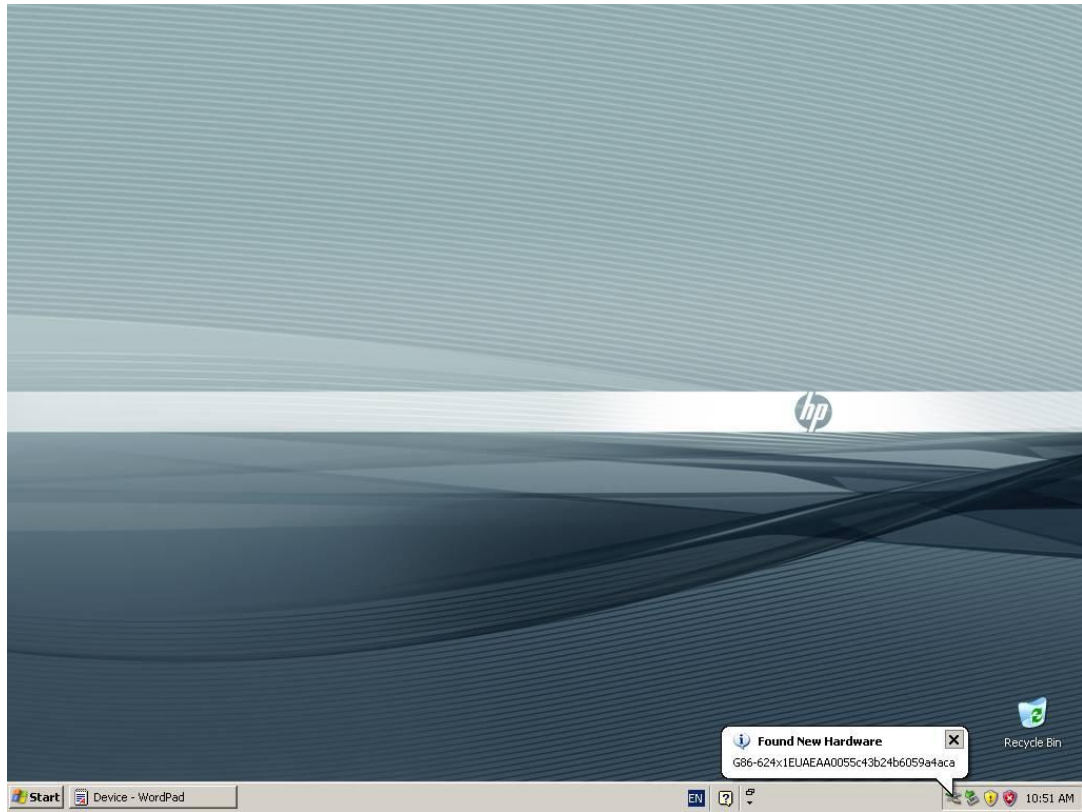
The POS keyboard may be plugged into any free USB port. One may plug the POS keyboard into the power USB port in the 5V part of USB port, when plugged in this configuration the power portion of USB port is not utilized.

7.7.2 Windows Drivers for the Point of Sale Keyboard

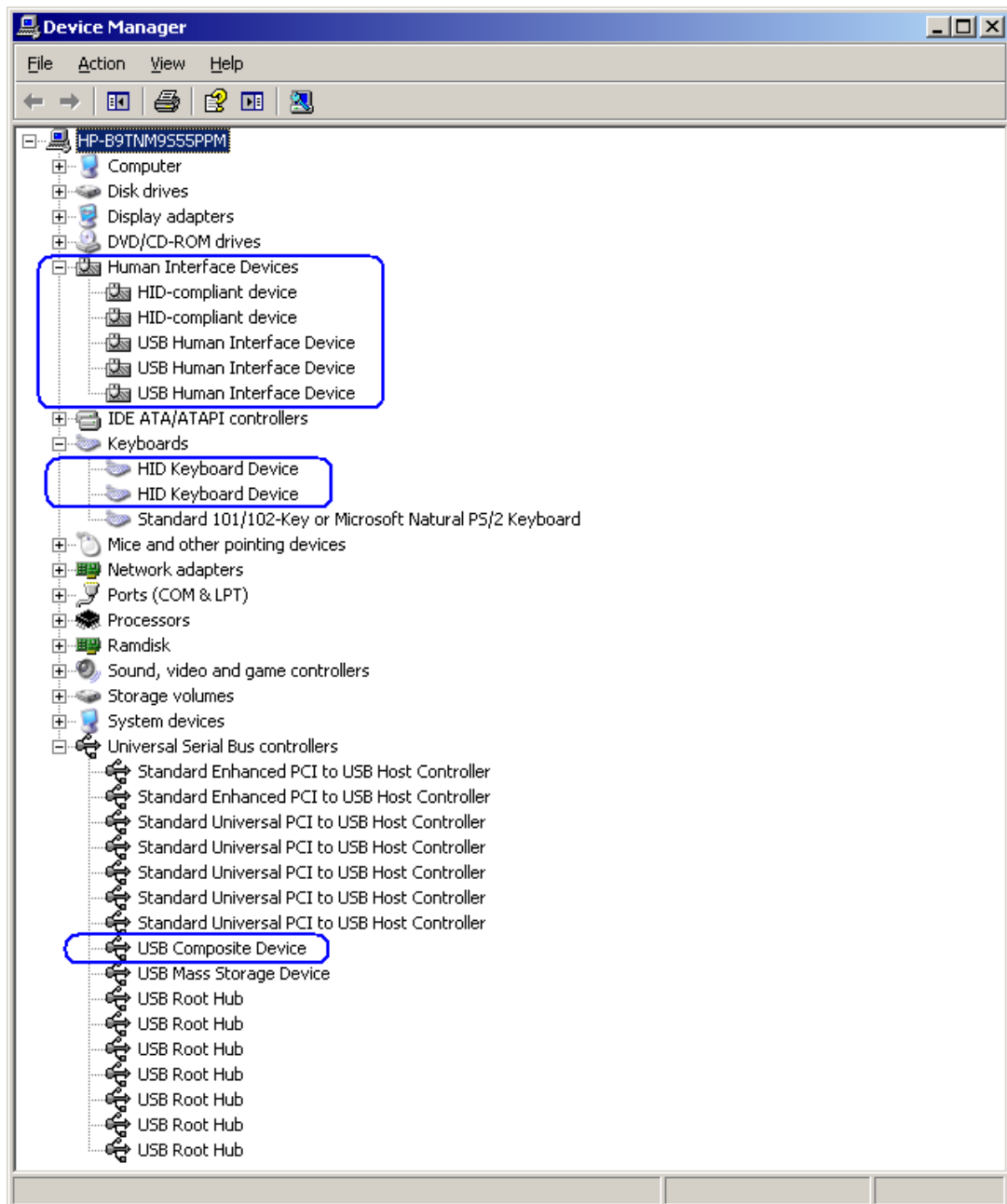
The HP POS keyboard uses native drivers for Windows operating system. Windows will load several drivers for the keyboard and touch pad. If during the driver installation, Windows displays the new hardware wizard, the user needs to accept the defaults that appear during the hardware wizard GUI (for the first screen you may select the no option) and the native drivers will be loaded. Please refer to "[If prompted for native driver location \(New Hardware Wizard\)](#)" section. If prompted for the driver installation you may need to go through the new hardware wizard 5 or 6 times to load the Windows HID drivers.

The following shows some of the dialog boxes that will appear while Windows is installing the drivers for this device:

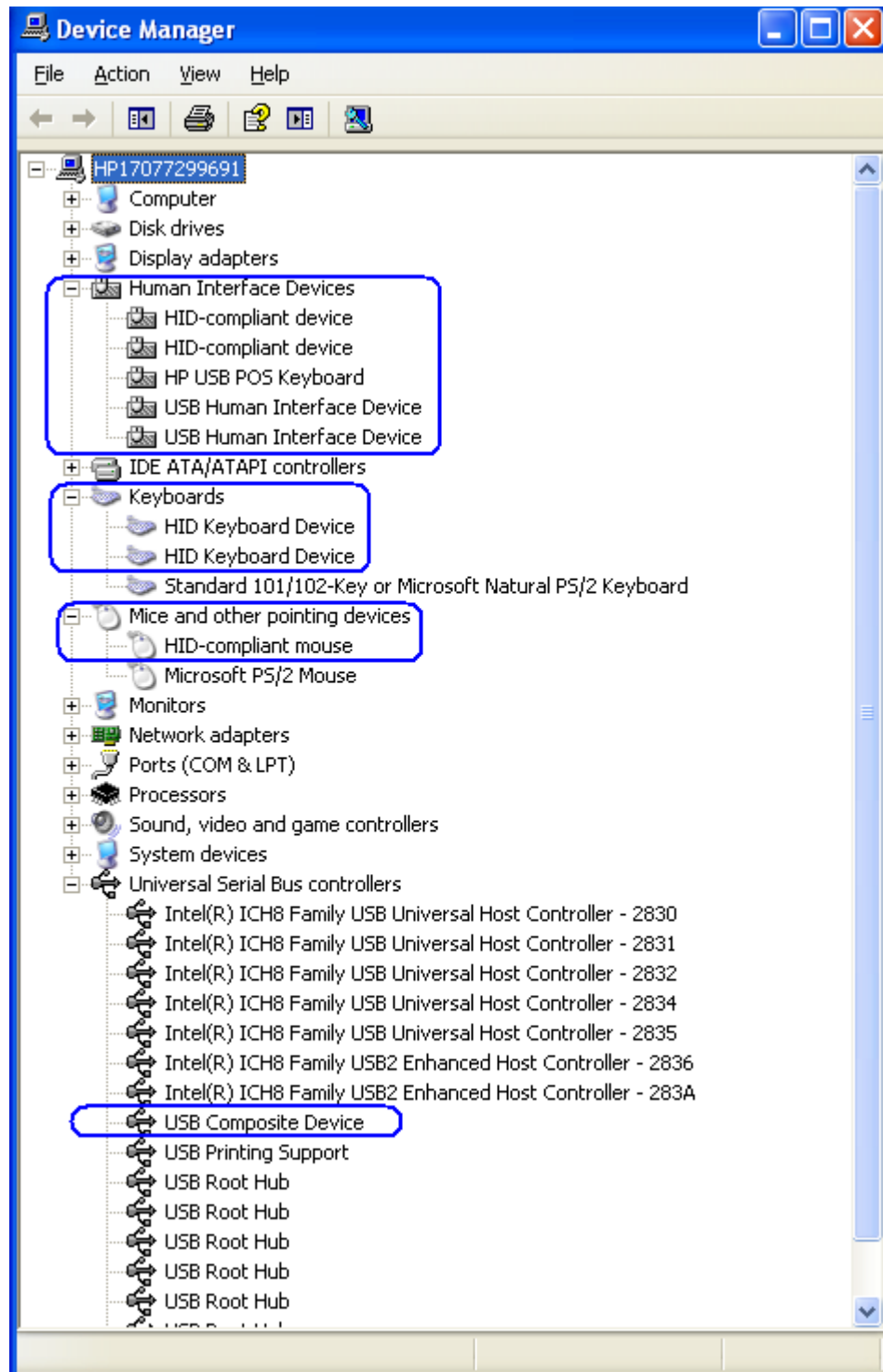




The following is the Device Manager window after all the drivers are loaded for the HP POS keyboard with integrated MSR:



The following is the Device Manager window after all the drivers **and** the keyboard configuration software is installed on the unit for the HP POS keyboard with integrated MSR:



7.7.3 Enable OPOS/JPOS for the MSR

In order to use OPOS/JPOS drivers for the MSR on the HP Point of Sale Keyboard with the integrated MSR one will need to enable this option.

Enable MSR OPOS/JPOS

The following is an overview of the steps to test the MSR followed by details steps:

1. Must have the HP POS Keyboard configuration utility package, run the EXE and the unit will need to be restarted after the utility has completed installation.

Note: In the HP factory image the HP POS Keyboard configuration utility is already installed so step 1 can be skipped, proceed to step 2. If the configuration utility is already installed on the unit and setup is launched one will be prompted to modify / repair / remove the version that is installed, cancel the installation process and proceed to step 2.

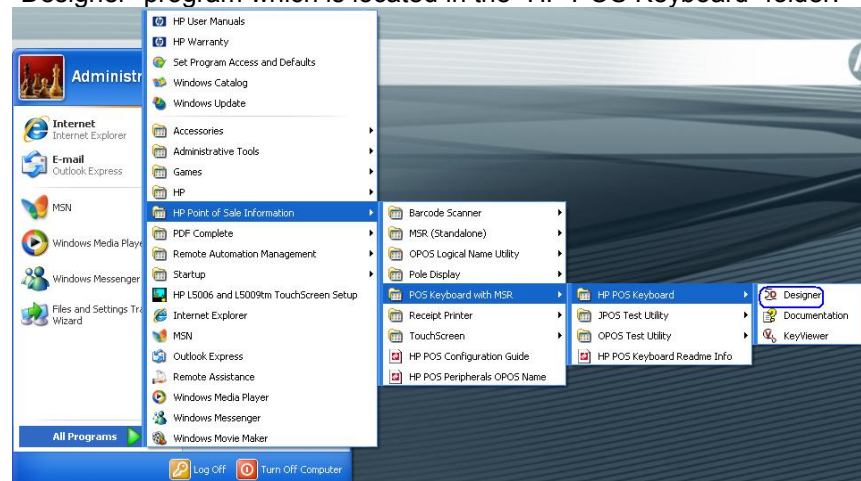
2. After the unit has completed the restart and is back at the Windows desktop, launch “Designer” program which is located in the “HP POS Keyboard” folder.
3. Accept the default once “Designer” is launched.
4. Once the application has read the configuration you will see keyboard layout in the GUI and click on the MSR icon.
5. Click on the “Enable OPOS/JavaPOS settings:
6. Close the application and you will be prompted to save the setting to keyboard, click “YES”.

Enable MSR OPOS/JPOS (Details)

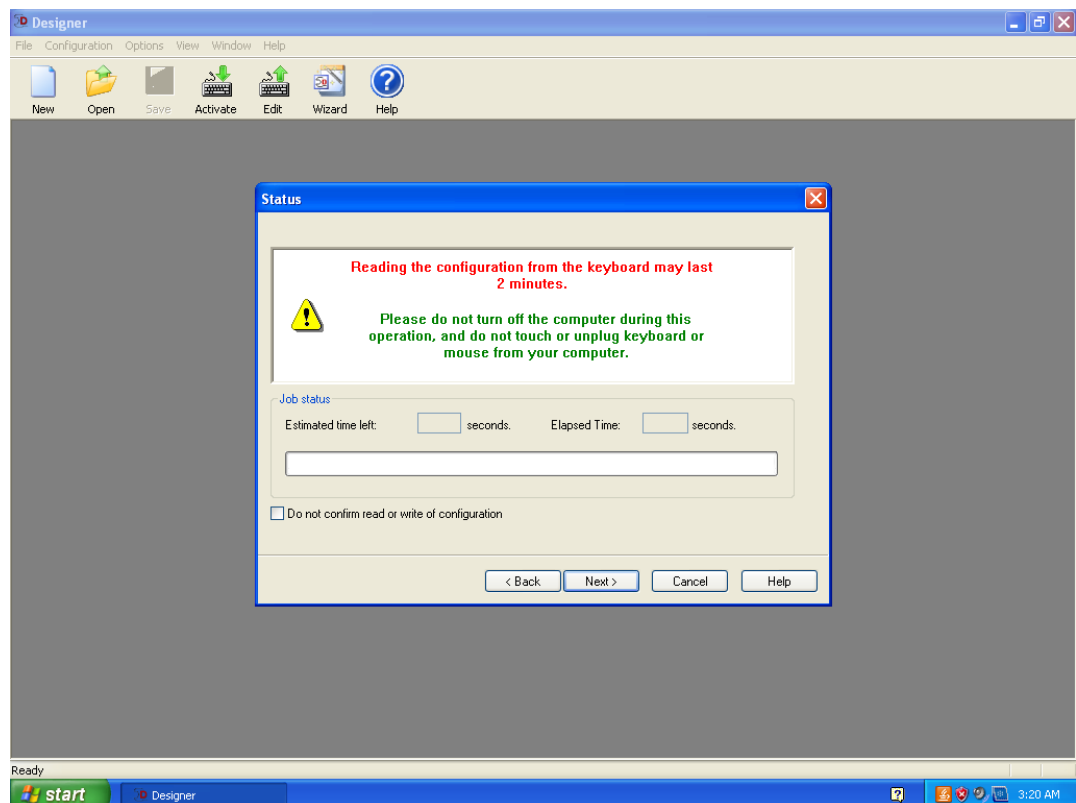
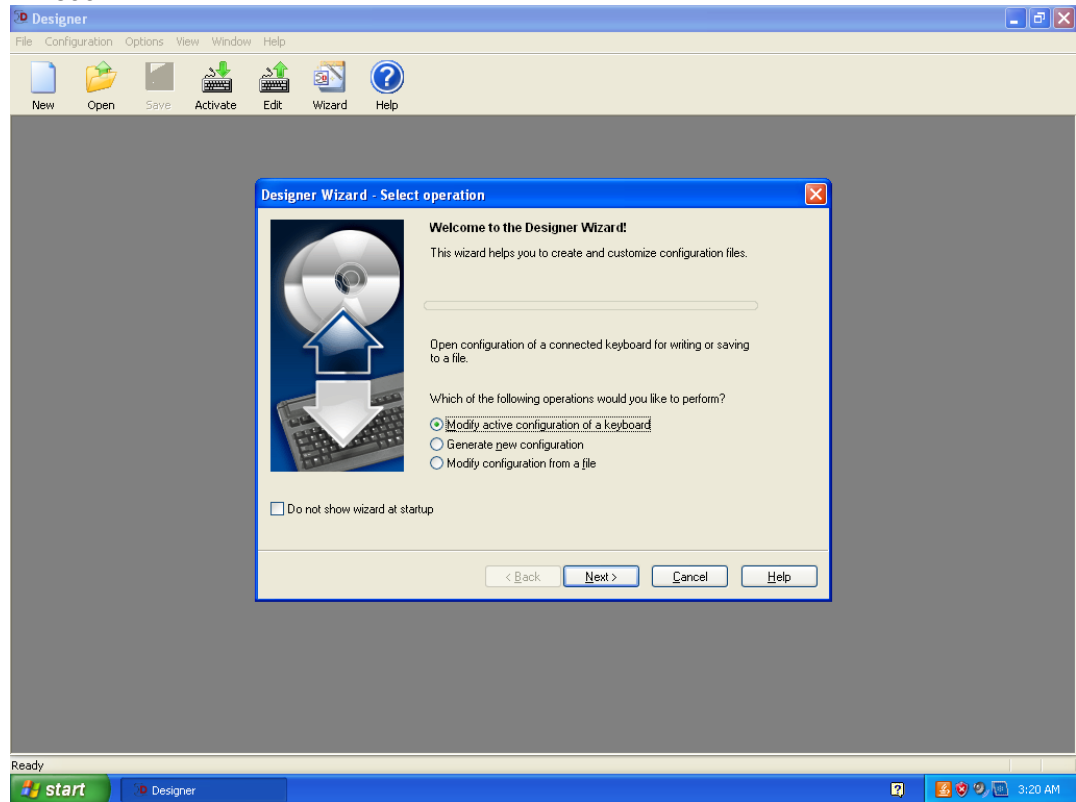
1. Must have the HP POS Keyboard configuration utility package, run the EXE and the unit will need to be restarted after the utility has completed installation. This utility is available on the “HP Point of Sale System Software and Documentation CD”. On the HP POS factory image the drivers are installed in the image, for reference the drivers are located “C:\xxxxx\Point of Sale\Keyboard with MSR\Configuration Utility” sub-directory.

Note: In the HP factory image the HP POS Keyboard configuration utility is already installed so step 1 can be skipped, proceed to step 2. If the configuration utility is already installed on the unit and setup is launched one will be prompted to modify / repair / remove the version that is installed, cancel the installation process and proceed to step 2.

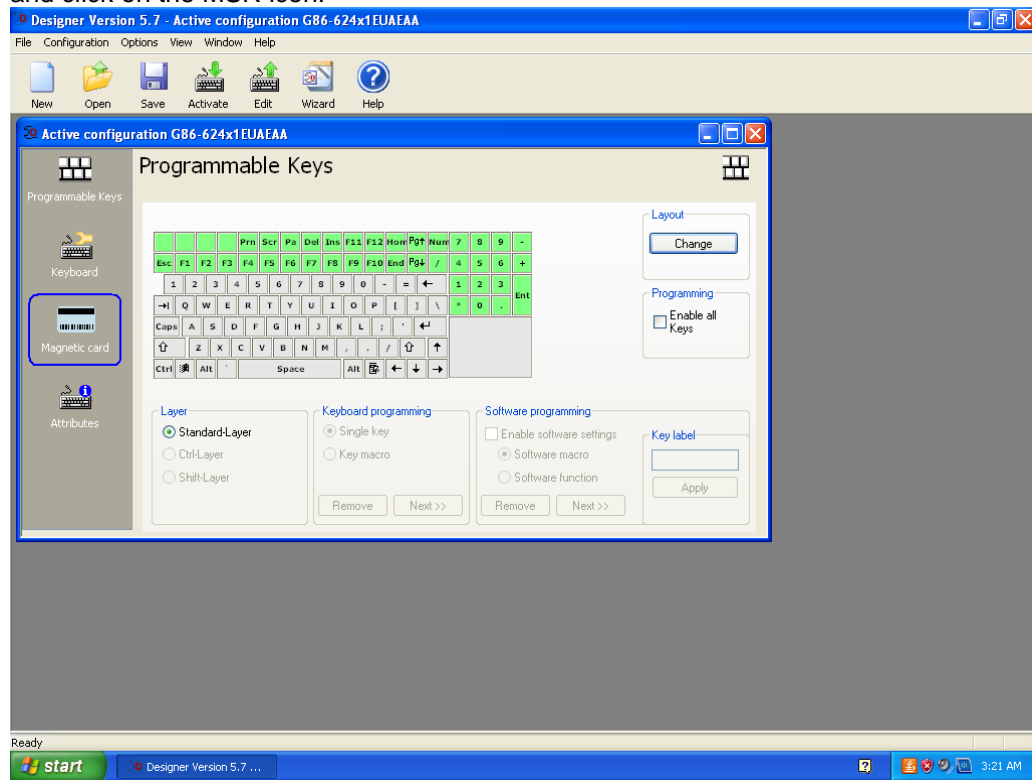
2. After the unit has completed the restart and is back at the Windows desktop, launch “Designer” program which is located in the “HP POS Keyboard” folder.



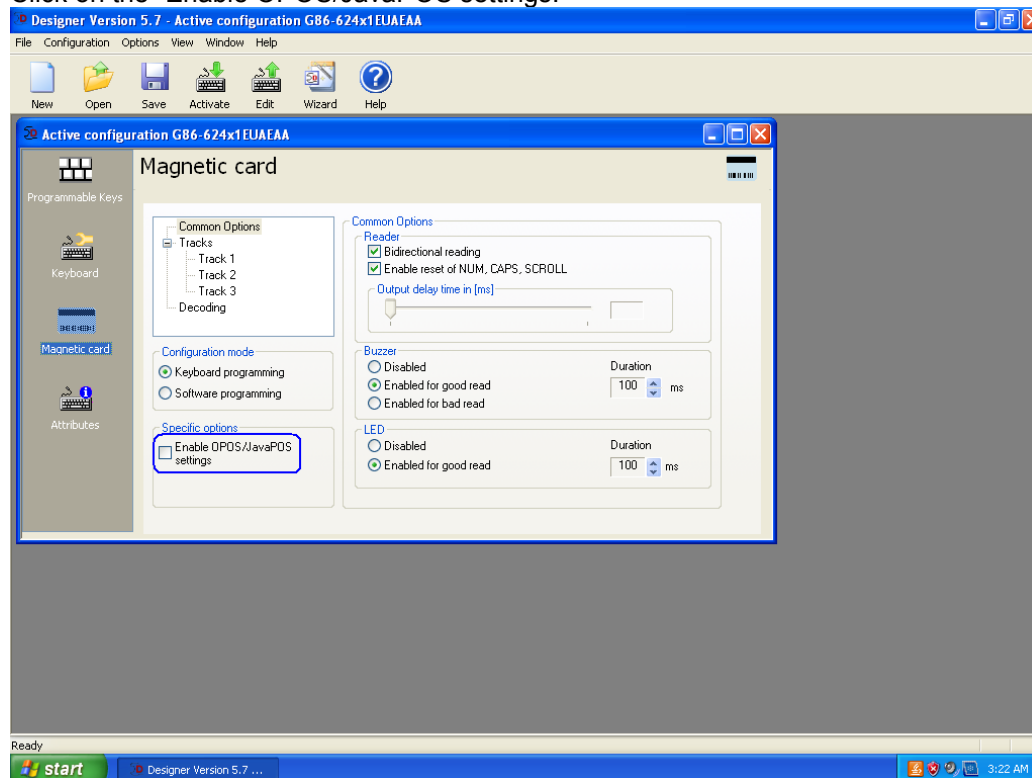
3. Accept the default once “Designer” is launched. The following are some screens that you will see:



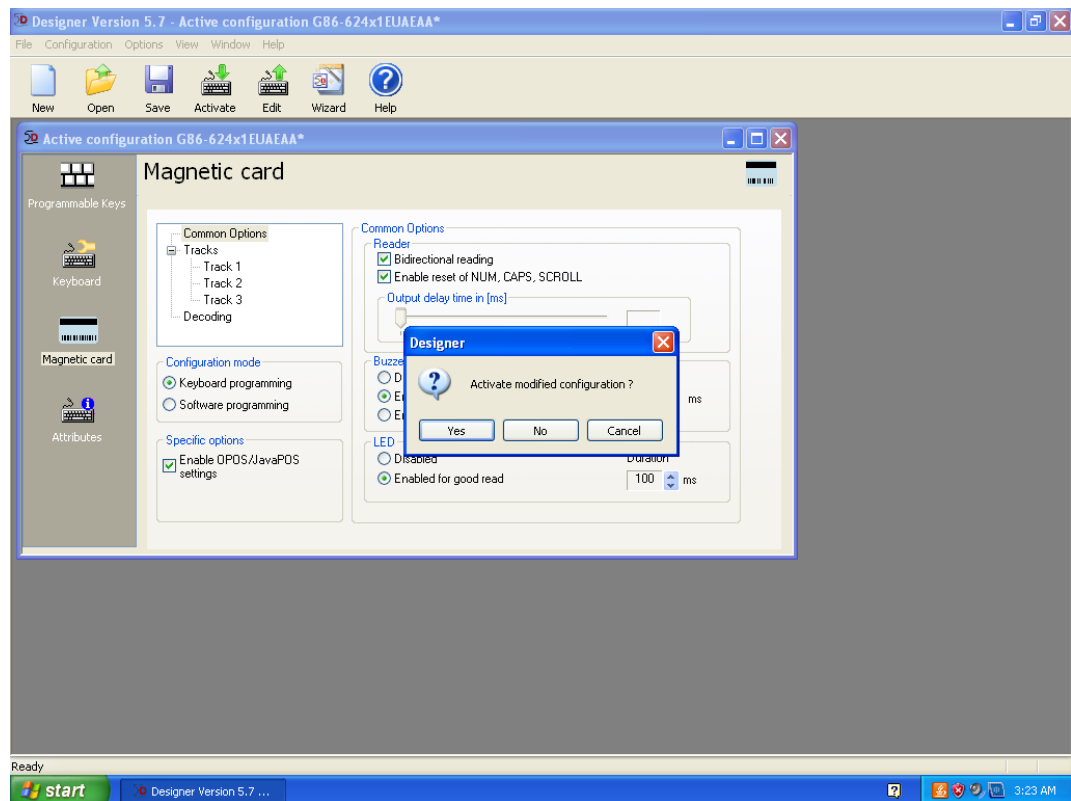
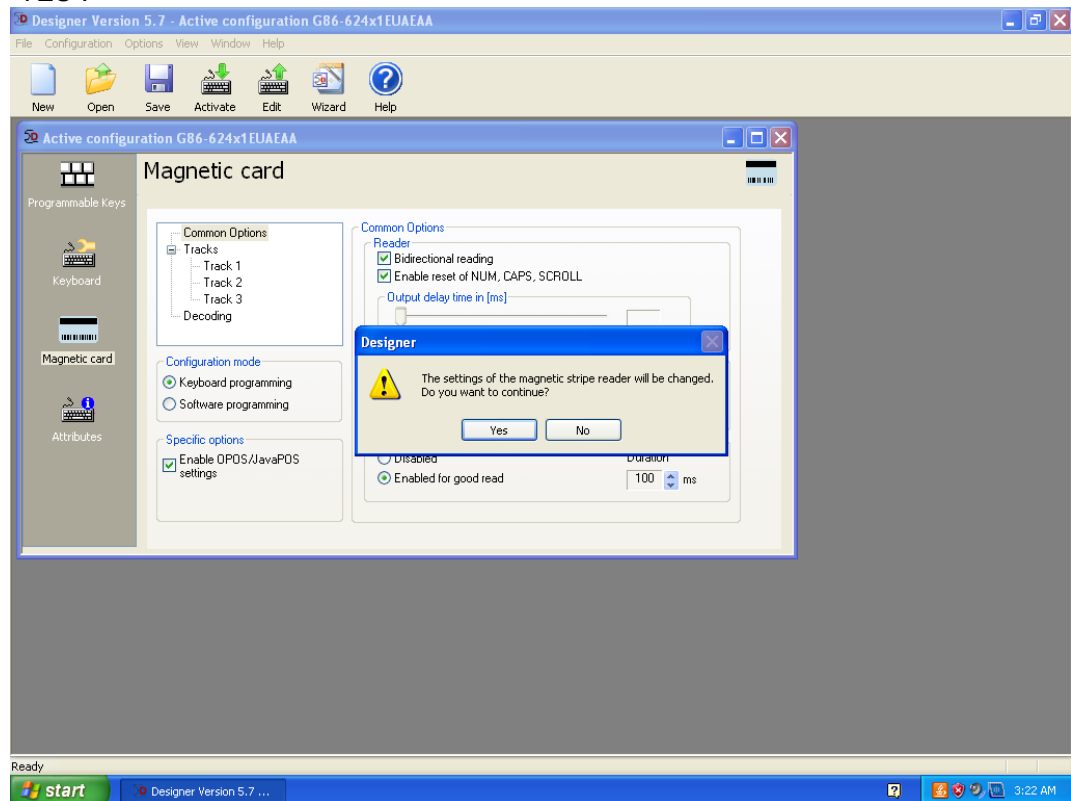
- Once the application has read the configuration you will see keyboard layout in the GUI and click on the MSR icon:

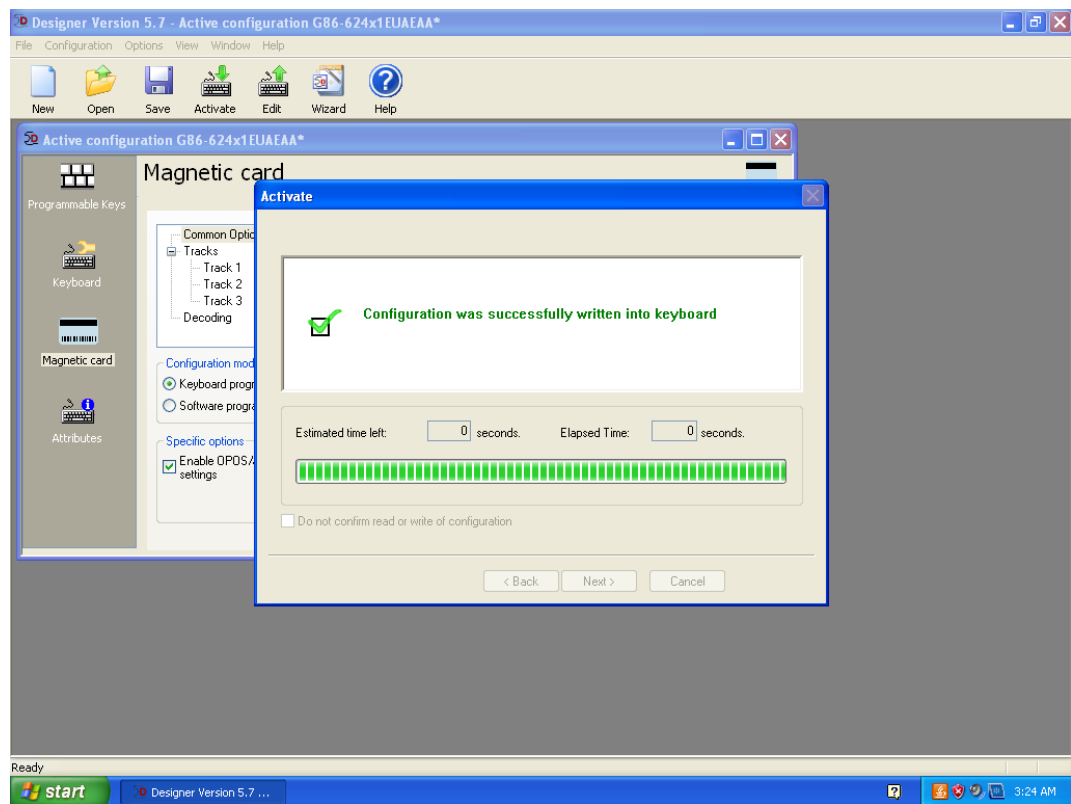
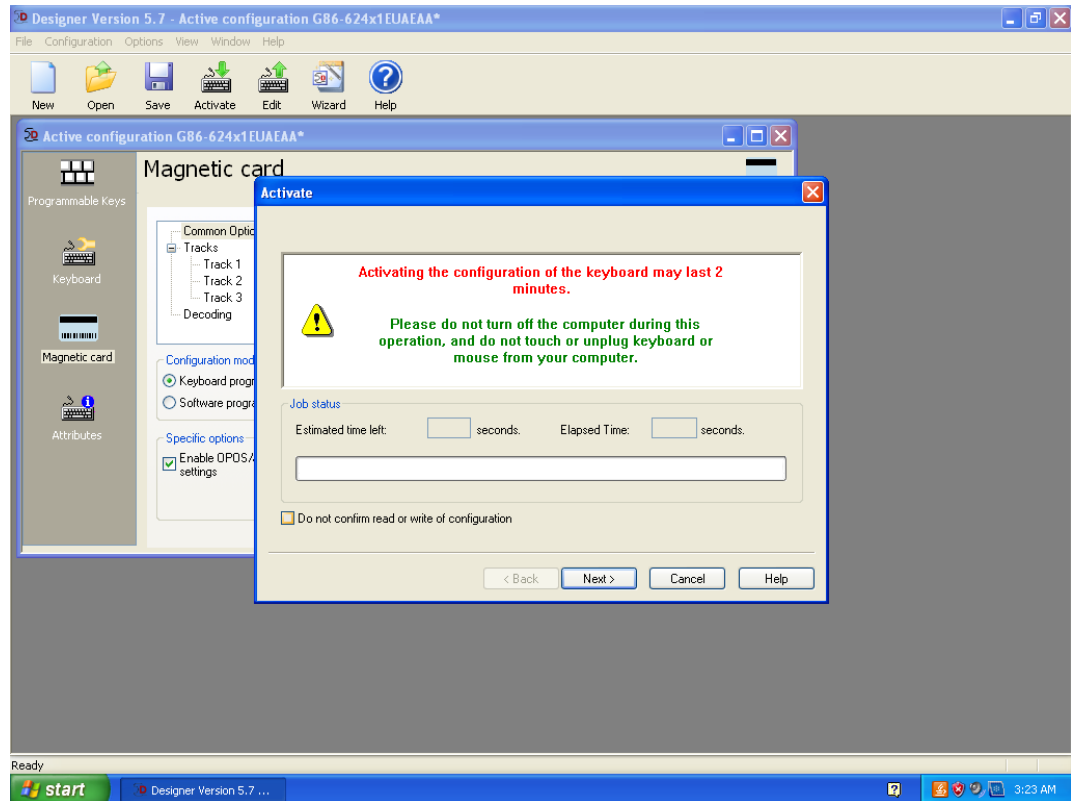


- Click on the “Enable OPOS/JavaPOS settings:



6. Close the application and you will be prompted to save the setting to keyboard, click “YES”.





7.7.4 **OPOS Drivers for the Point of Sale Keyboard with integrated MSR - Keyboard**

No OPOS drivers are needed for the keyboard.

7.7.5 **OPOS Drivers for the Point of Sale Keyboard with integrated MSR - MSR**

The HP POS keyboard OPOS drivers can be found on the “HP Point of Sale System Software and Documentation CD”. On the HP POS factory image the drivers are installed in the image, for reference the drivers are located “C:\xxxxx\Point of Sale\Keyboard with MSR\JPOS” sub-directory.

7.7.6 **Testing the Point of Sale Keyboard with integrated MSR**

7.7.6.1 **Keyboard**

Open Notepad, what is typed on the keyboard should appear in Notepad.

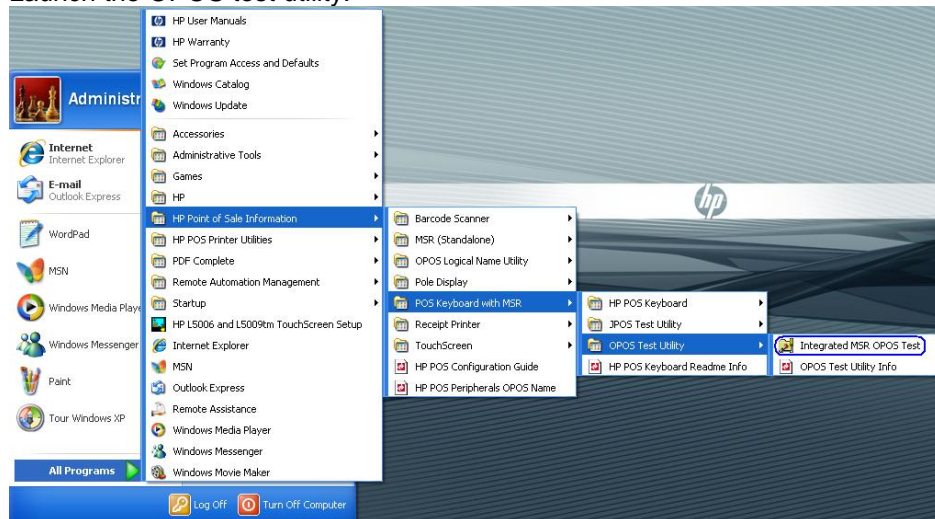
7.7.6.2 **MSR OPOS**

The following is overview of the steps to test the MSR followed by details steps:

1. Launch the OPOS test utility from the start menu.
2. Select the device name, need to select “HPKBMSR” for the MSR that is located on the HP POS Keyboard with integrated MSR.
3. Click on “BEGIN” and swipe a card.

Details

1. Launch the OPOS test utility.

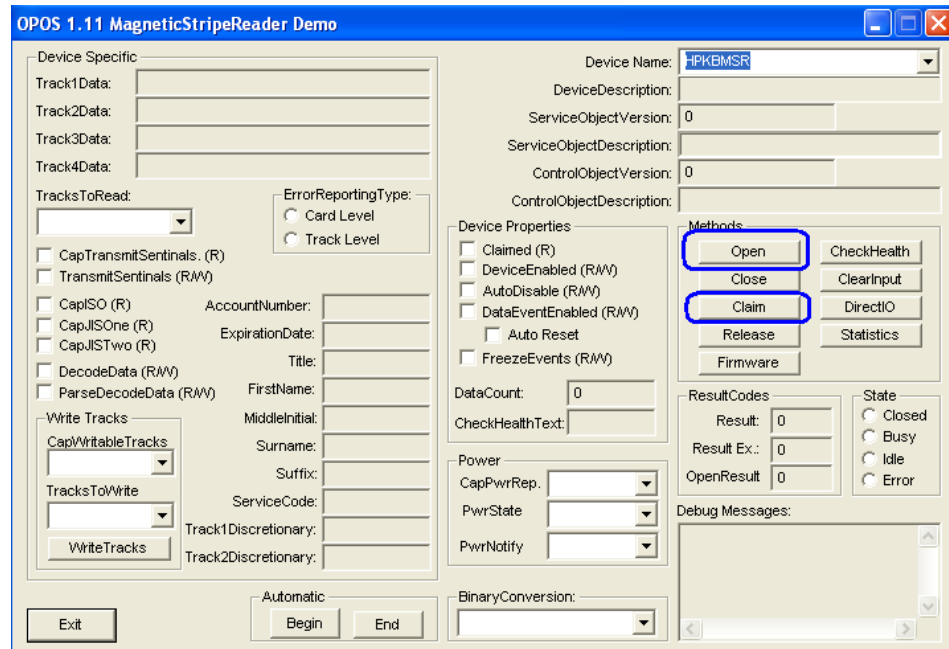


2. Select the device name, need to select “HPKBMSR” for the MSR that is located on the HP POS Keyboard with integrated MSR.

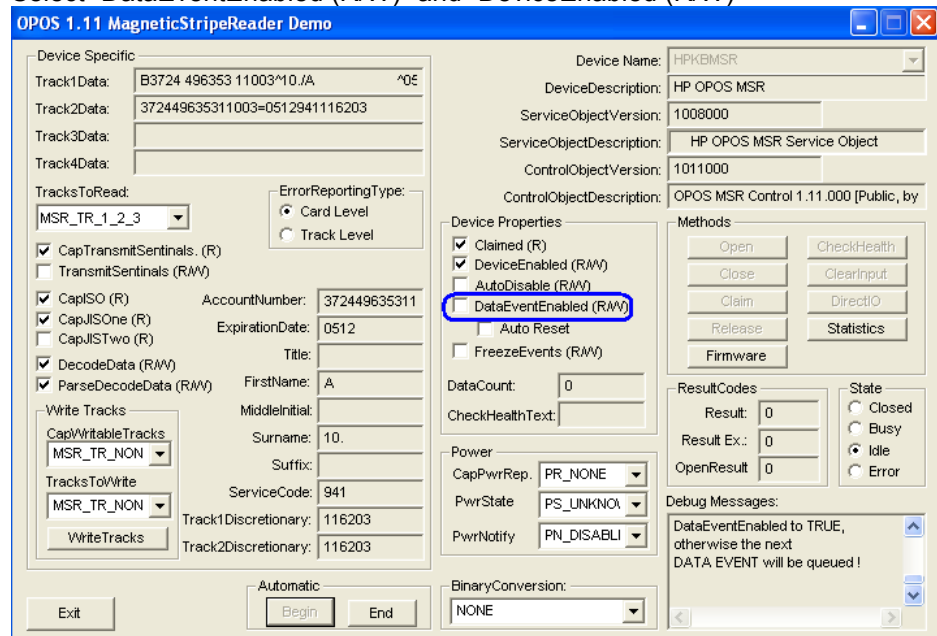
If one does not want to use the “AUTOMATIC” method, the following are the steps to use when manually test using the OPOS test applet.

1. Launch the OPOS test utility.
2. Select the device name, need to select “HPKBMSR” for the MSR that is located on the HP POS Keyboard with integrated MSR.

3. Click on “OPEN”
4. Click on “CLAIM”



5. Select "DataEventEnabled (R/W)" and "DeviceEnabled (R/W)"



6. Swipe a credit card and the data should appear in the test applet.

OPOS 1.11 MagneticStripeReader Demo

Device Specific Track1Data: B3724 496353 11003*10.A ^05 Track2Data: 372449635311003=0512941116203 Track3Data: Track4Data:		Device Name: HPKBMSR DeviceDescription: HP OPOS MSR ServiceObjectVersion: 1008000 ServiceObjectDescription: HP OPOS MSR Service Object ControlObjectVersion: 1011000 ControlObjectDescription: OPOS MSR Control 1.11.000 [Public, by	
TracksToRead: MSR_TR_1_2_3 <input checked="" type="checkbox"/> CapTransmitSentinals (R) <input type="checkbox"/> TransmitSentinals (RAW) <input checked="" type="checkbox"/> CapISO (R) <input checked="" type="checkbox"/> CapJISOne (R) <input type="checkbox"/> CapJISTwo (R) <input checked="" type="checkbox"/> DecodeData (RAW) <input checked="" type="checkbox"/> ParseDecodeData (RAW)		Device Properties <input checked="" type="checkbox"/> Claimed (R) <input checked="" type="checkbox"/> DeviceEnabled (RAW) <input type="checkbox"/> AutoDisable (RAW) <input type="checkbox"/> DataEventEnabled (RAW) <input type="checkbox"/> Auto Reset <input type="checkbox"/> FreezeEvents (RAW)	
Write Tracks CapWritableTracks: MSR_TR_NON TracksToWrite: MSR_TR_NON WriteTracks		Methods Open CheckHealth Close ClearInput Claim DirectIO Release Statistics Firmware	
AccountNumber: 372449635311 ExpirationDate: 0512 Title: FirstName: A MiddleInitial: Surname: 10. Suffix: ServiceCode: 941 Track1Discretionary: 116203 Track2Discretionary: 116203		DataCount: 0 CheckHealthText: Power CapPwrRep: PR_NONE PwrState: PS_UNKNOW PwrNotify: PN_DISABLI BinaryConversion: NONE	
Exit		Automatic Begin End	

ResultCodes
Result: 0
Result Ex.: 0
OpenResult: 0
State
☐ Closed
☐ Busy
☒ Idle
☐ Error

Debug Messages:
DataEventEnabled to TRUE, otherwise the next DATA EVENT will be queued !

7.7.7 JPOS Drivers for the Point of Sale Keyboard

7.7.7.1 Keyboard

No JPOS drivers are needed for the keyboard.

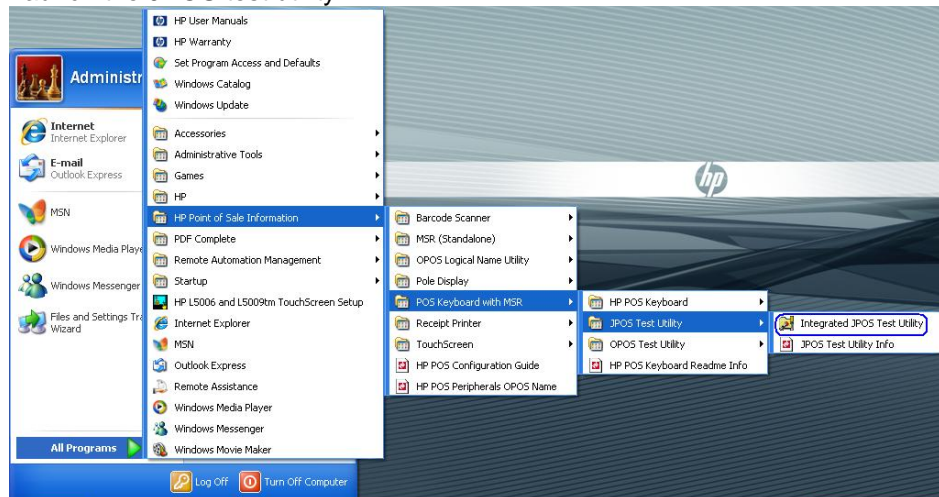
7.7.7.2 MSR JPOS

The following is overview of the steps to test the MSR followed by details steps:

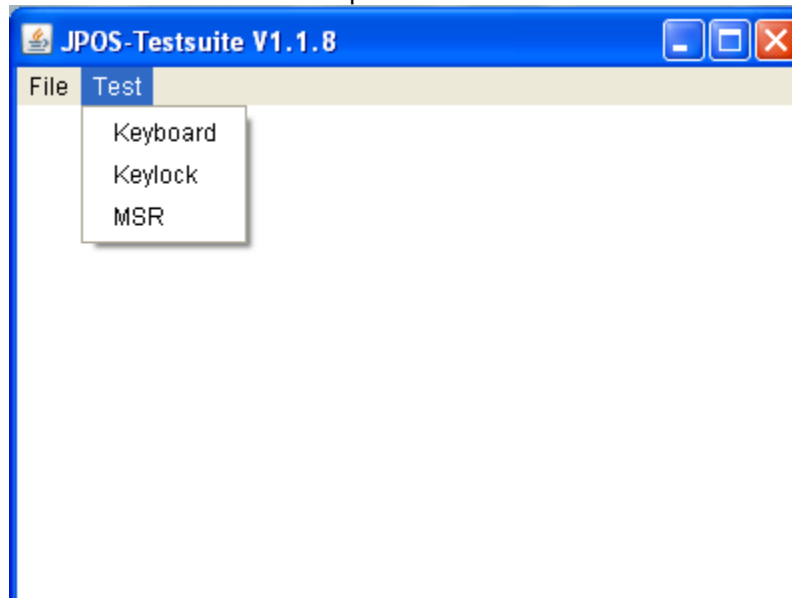
1. Launch the JPOS test utility.
2. Select MSR from “TEST” drop down box.
3. Click “OPEN”
4. Click “CLAIM”
5. Click on “DataEventEnabled (R/W)”
6. Click on “DeviceEnabled (R/W)”
7. Swipe a card.

Details

1. Launch the JPOS test utility.



2. Select MSR from “TEST” drop down box.



3. Click "OPEN"

4. Click "CLAIM"

The screenshot shows the 'POS MSR Test' application window. At the top, there are two rows of buttons: 'open', 'claim', 'clearInput', 'checkHealth' in the first row, and 'close', 'release', 'clearOutput', 'directIO' in the second row. A blue rectangle highlights the 'open' and 'claim' buttons. Below the buttons, the interface is divided into several sections. On the left, there are checkboxes for 'TransmitSentinels (R/W)', 'AutoDisable (R/W)', 'Claimed (R)', 'DataEventEnabled (R/W)', 'DeviceEnabled (R/W)', 'FreezeEvents (R/W)', and 'PowerNotify (R/W)'. Below these are fields for 'CapPowerReporting' (set to 'STANDARD'), 'DataCount' (set to '0'), 'PowerState' (set to 'PS_UNKNOWN'), and 'CheckHealthText'. At the bottom left, there is a 'State' section with radio buttons for 'Closed', 'Idle' (selected), 'Busy', and 'Error', and an 'End' button. In the center, there are fields for 'DeviceControlDescription' (set to 'JavaPOS MSR Device Control'), 'DeviceControlLabel' (set to '1010000'), 'DeviceServiceDescription' (set to 'HP POS JPOS MSR Device Sen'), 'DeviceServiceLabel' (set to '11010001'), 'PhysicalDeviceDescription' (set to 'HP POS MSR-Device (HP-Keybo'), and 'PhysicalDeviceName' (set to 'MSR'). On the right, there is a 'TracksToRead (R/W)' dropdown menu set to 'MSR_TR_1_2_3_4', followed by four text input fields for 'Track1Data', 'Track2Data', 'Track3Data', and 'Track4Data'. Below these are checkboxes for 'DecodeData (R/W)', 'ParseDecodeData (R/W)', 'CardLevel (Error R/W)', and 'TrackLevel (Error R/W)'. At the bottom right, there are text input fields for 'AccountNumber', 'ExpirationDate', 'Title', 'FirstName', 'MiddleInitial', 'Surname', 'Suffix', 'ServiceCode', 'Track1Discr.data', and 'Track2Discr.data'.

5. Click on "DataEventEnabled (R/W)"

6. Click on "DeviceEnabled (R/W)"

The screenshot shows the 'POS MSR Test' application window after clicking 'DataEventEnabled (R/W)' and 'DeviceEnabled (R/W)'. The 'DataEventEnabled (R/W)' and 'DeviceEnabled (R/W)' checkboxes are now checked and highlighted with a blue rectangle. The rest of the interface remains the same as in the previous screenshot.

8. Swipe a card. The data from the card should appear in the test applet.

The screenshot shows the 'POS MSR Test' application window. It contains several sections for configuring the device and viewing card data. The 'DeviceControlDescription' is 'JavaPOS MSR Device Control'. The 'DeviceServiceDescription' is 'HP POS JPOS MSR Device Sen'. The 'PhysicalDeviceDescription' is 'HP POS MSR-Device (HP-Keybo'. The 'PhysicalDeviceName' is 'MSR'. The 'State' is 'Idle'. The 'CapPowerReporting' is 'STANDARD'. The 'DataCount' is '0'. The 'PowerState' is 'PS_UNKNOWN'. The 'CheckHealthText' is empty. The 'TracksToRead (R/W)' is 'MSR_TR_1_2_3_4'. The 'Track1Data' is '83724 496353 11003*10./A ^0512'. The 'Track2Data' is '372449635311003=0512941116203'. The 'Track3Data' is empty. The 'Track4Data' is empty. The 'DecodeData (R/W)' is checked. The 'CardLevel (Error R/W)' is checked. The 'ParseDecodeData (R/W)' is checked. The 'TrackLevel (Error R/W)' is unchecked. The 'AccountNumber' is '372449635311003'. The 'ExpirationDate' is '0512'. The 'Title' is empty. The 'FirstName' is 'A'. The 'MiddleInitial' is empty. The 'Surname' is '10.'. The 'Suffix' is empty. The 'ServiceCode' is '941'. The 'Track1Discr.data' is '116203'. The 'Track2Discr.data' is '116203'.

Track	Data
Track1Data	83724 496353 11003*10./A ^0512
Track2Data	372449635311003=0512941116203
Track3Data	
Track4Data	

Field	Value
AccountNumber	372449635311003
ExpirationDate	0512
Title	
FirstName	A
MiddleInitial	
Surname	10.
Suffix	
ServiceCode	941
Track1Discr.data	116203
Track2Discr.data	116203

To test another card, click on "DataEventEnabled (R/W)" so it is checked and then swipe the card that one wishes to test.

7.8 **Pole Display**



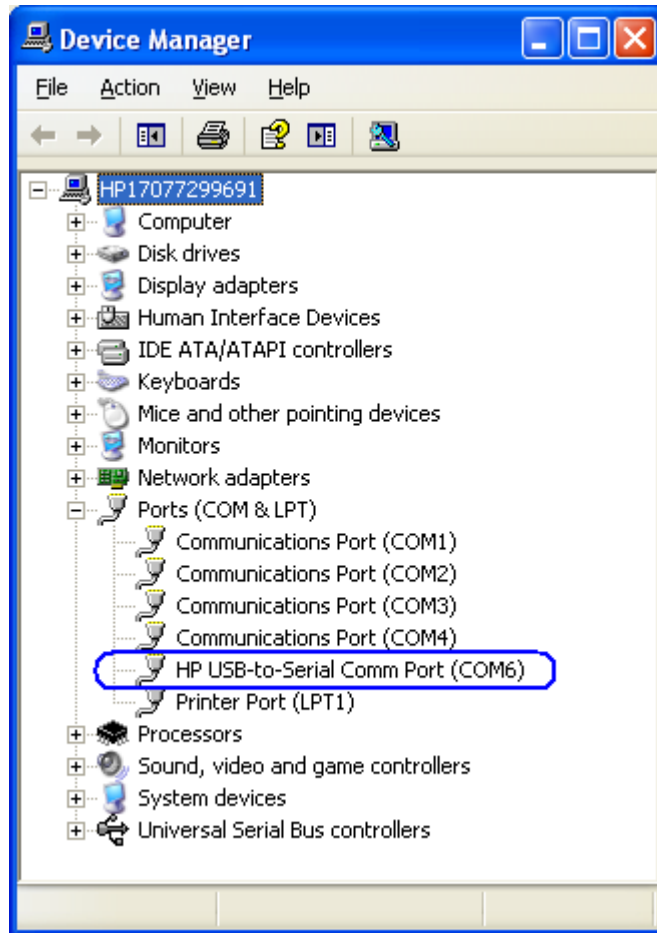
7.8.1 **Connection**

The HP Pole Display may be plugged into any free USB port. One may plug the HP Pole Display into the power USB port in the 5V part of USB port, when plugged in this configuration the power portion of USB port is not utilized.

7.8.2 **Windows Drivers for the Pole Display**

The HP Pole Display device drivers for Windows device manager may be installed using the Windows driver's package or by using the OPOS package for this device. The OPOS package will install both the Windows drivers for the device and the OPOS drivers for the device.

The following is the Windows Device Manager after all the drivers are loaded for the HP USB Pole Display:



Note: The pole display driver will automatically assign the next available virtual port in the system.

7.8.3 **Utility to change power-on message**

When the pole display has power the following message is scrolled on the display until an application takes control the pole display. There are two lines that are scrolled at different speed, the default message that is scrolled on the display is:

** VFD DISPLAY LD220P**
 ** HAVE A NICE DAY AND THANK YOU**

If one wishes to change the power on message one may do so by running "HP Pole Display Setup" program. This program can be found on the "HP Point of Sale System Software and Documentation CD".

Please note this only changes the scrolling message on the pole display; once the POS application has started, the POS application will control what is being displayed on the pole display.

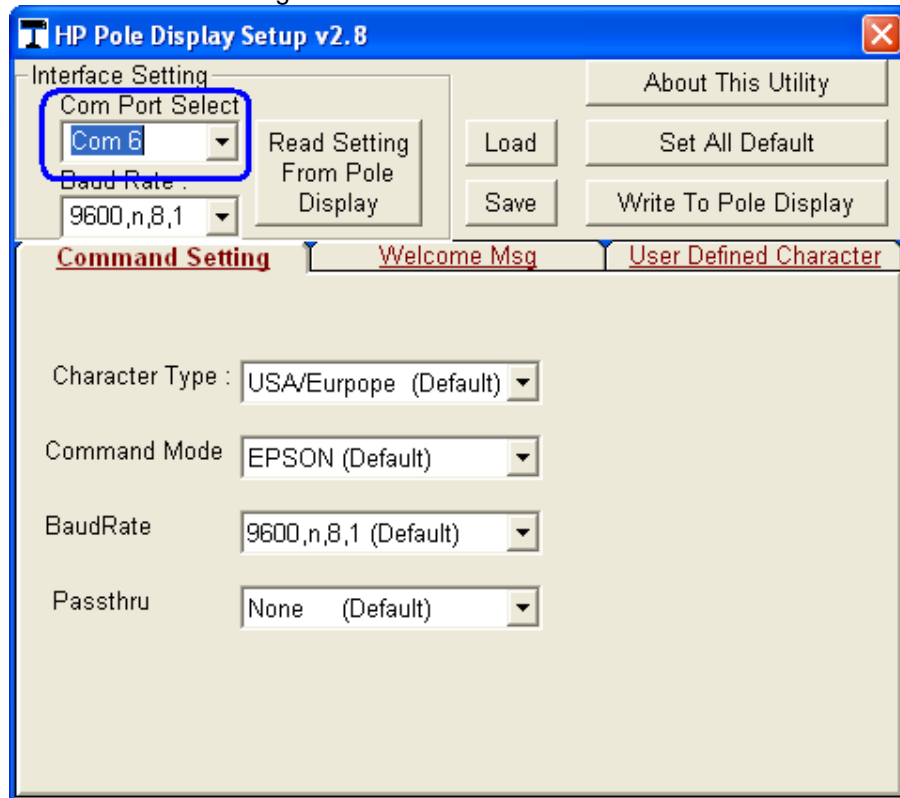
7.8.3.1 **Utility to Change Default Power-On Message**

The following is an overview of the steps to test the power-on message utility followed by details steps:

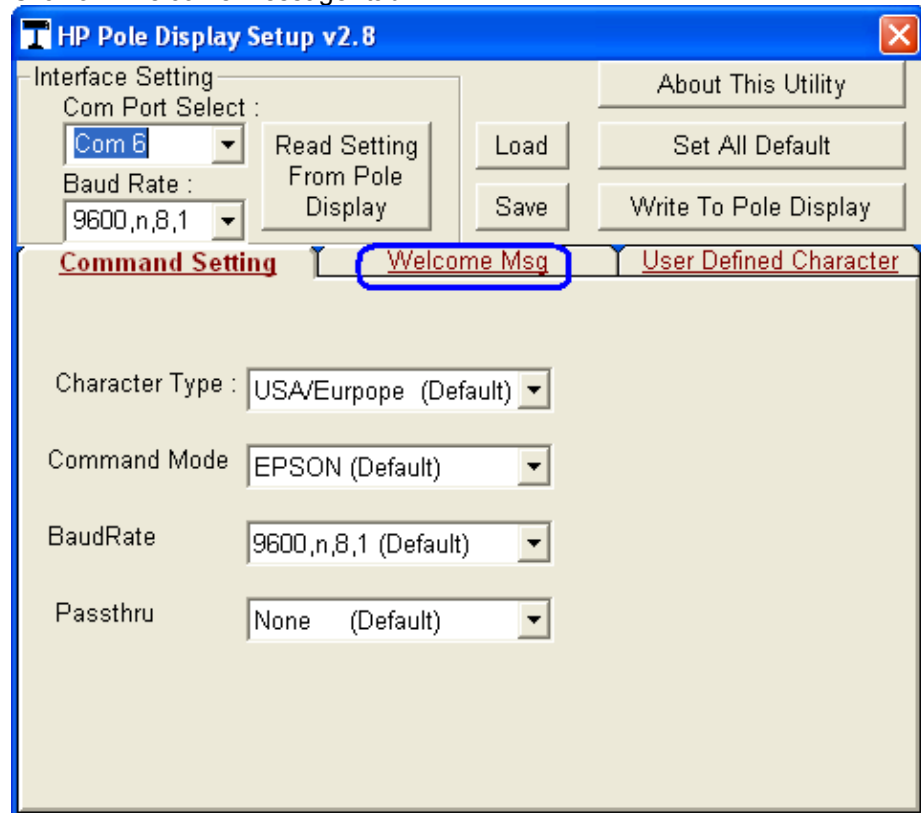
1. Start the "HP Pole Display Setup" application.
2. Select the correct virtual COM port that has been assigned to the pole display.
3. Click on "Welcome Message" tab.
4. Enter you message that you wish to be displayed.
5. Click on the "Write to Pole Display" to save the message to the pole.
6. After receiving the message that it has successfully written the message to the pole, either unplug and re-plug the pole into the USB port or restart the computer to active the new message.

Details

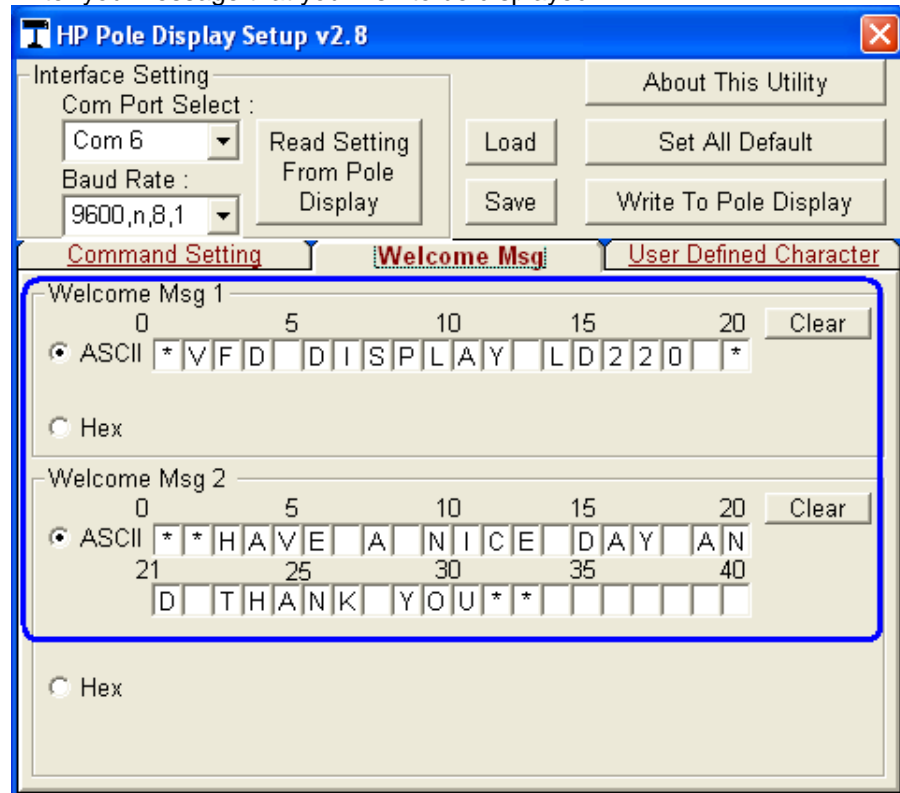
1. Start the "HP Pole Display Setup" application which is available on "HP Point of Sale System Software and Documentation CD", this utility is not included on the HP factory image.
2. Select the correct virtual COM port that has been assigned to the pole display. The COM port that has been assigned to the pole display can be obtained from Windows device manager.



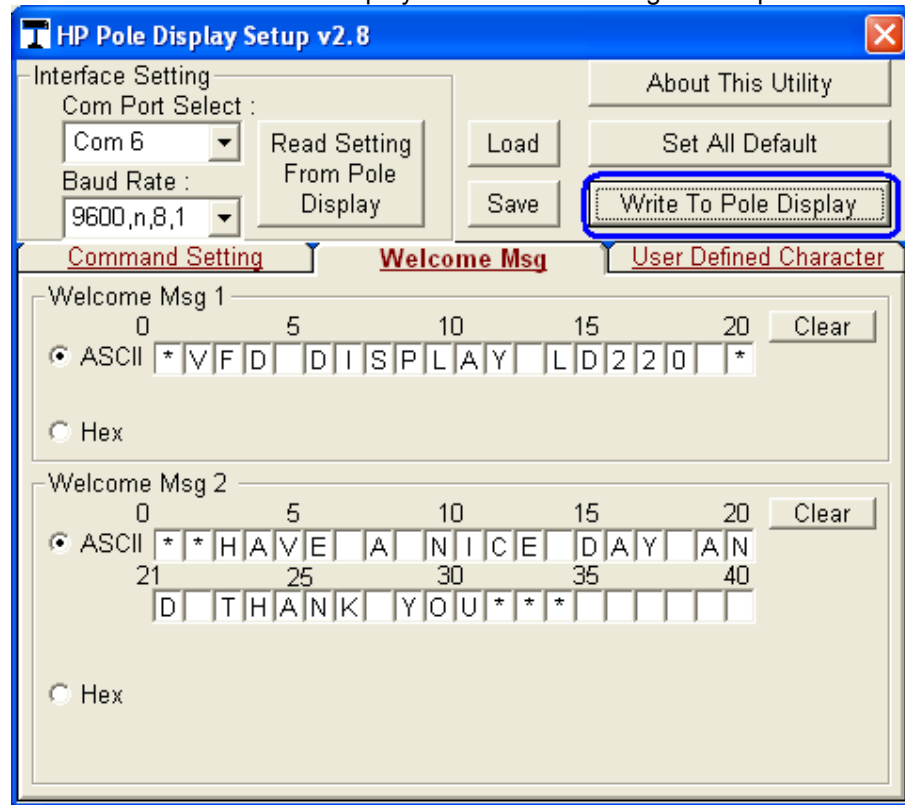
3. Click on "Welcome Message" tab.



4. Enter you message that you wish to be displayed.

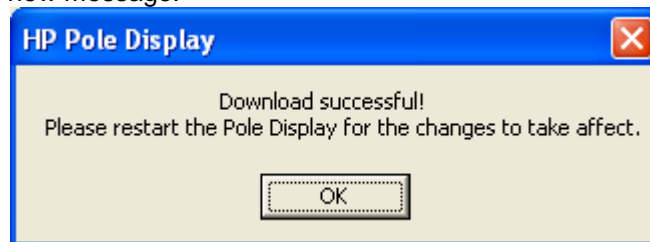


5. Click on the “Write to Pole Display” to save the message to the pole.



After clicking on “Write to Pole Display” you may notice the GUI change briefly from ASCII to HEX, this is normal.

6. After receiving the message that it has successfully written the message to the pole, either unplug and re-plug the pole into the USB port or restart the computer to active the new message.



7.8.4 OPOS Drivers for the Pole Display

The HP Pole Display OPOS drivers can be found on the “HP Point of Sale System Software and Documentation CD”. On the HP POS factory image the drivers are installed in the image, for reference the drivers are located “C:\xxxxx\Point of Sale\Pole Display\Pole Display OPOS” sub-directory.

7.8.5 Testing Pole Display

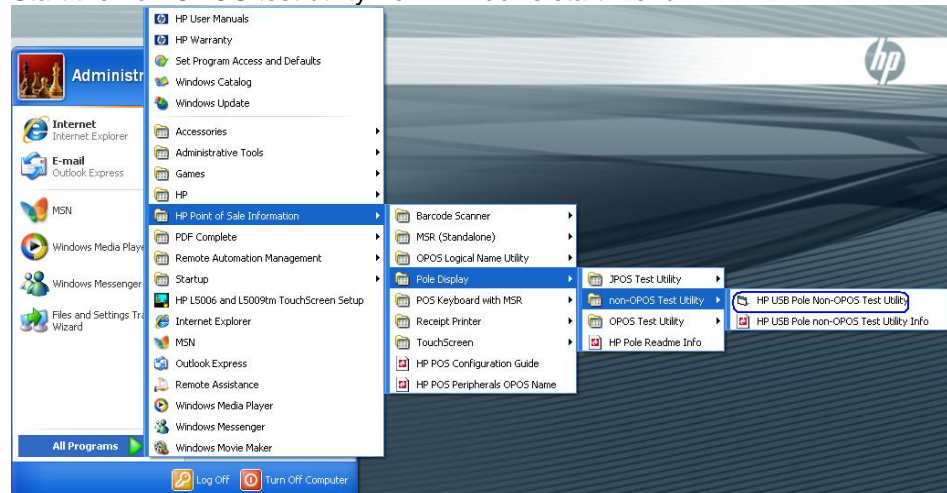
7.8.5.1 Testing pole display in non-OPOS environment

The following is overview of the steps to test the pole display followed by details steps:

1. Start the non-OPOS test utility.
2. After clicking on “Display Point Test” this message will appear on the pole display.
3. One can display other text for testing purpose by entering the text in the box. After entering the text in the box, click on “Display Text” and what is entered in the text box will be displayed on the pole display.
4. Click “Exit” to close the non-OPOS test applet.

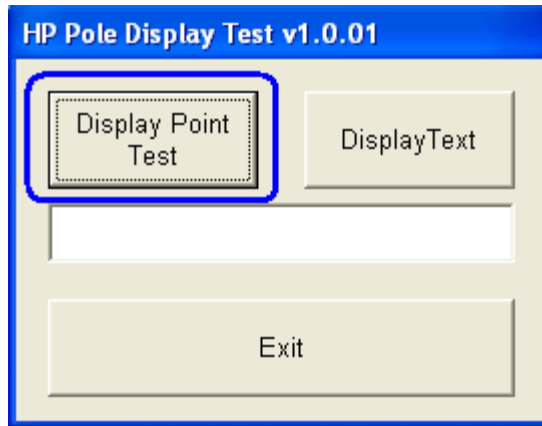
Details

1. Start the non-OPOS test utility from Windows start menu.

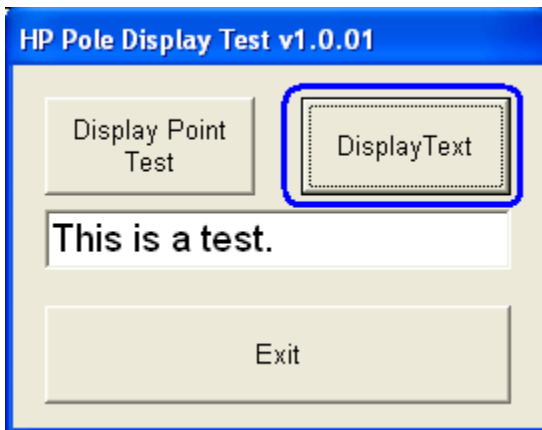
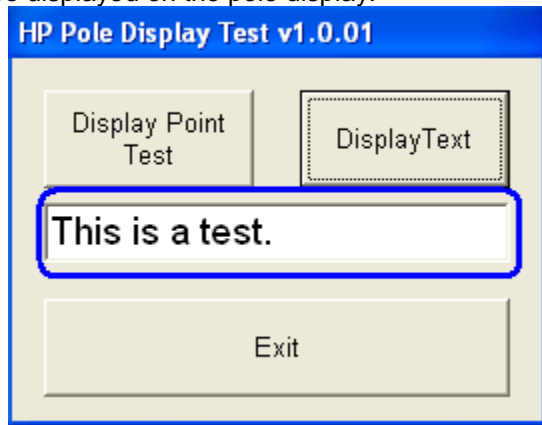


or from “C:\Program Files\Hewlett-Packard\Pole Display Test” folder.

2. Several seconds will pass before the test GUI appears on the screen. After clicking on “Display Point Test” button this message will appear on the pole display with other block characters. When the test is complete the word “Finish...” will appear on the pole display.



3. One can display other text for testing purpose by entering the text in the box. After entering the text in the box, click on "Display Text" and what is entered in the text box will be displayed on the pole display.



4. Click "Exit" to close the non-OPOS test applet.

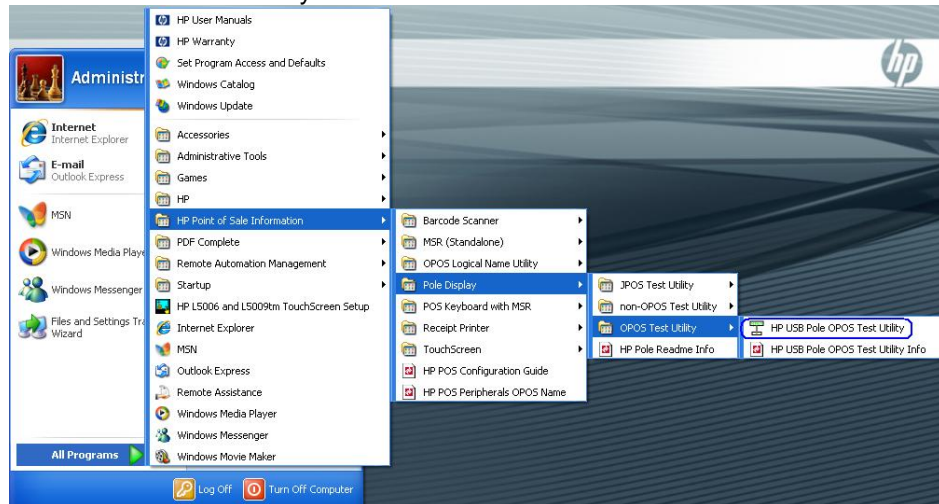
7.8.5.2 Testing pole display in OPOS environment

The following is overview of the steps to test the pole display followed by detailed steps:

1. Start the OPOS test utility.
2. Click on "Clear Text" button to clear any text on the pole display (VFD). To display a test message on the pole, enter a message in the text box and click on "Display Text".
3. To display a test message on different ROW or Column:
 - a. Enter the test message.
 - b. Enter column and row you which that is supported by the display.
 - c. Click "Display Text At" button.
4. To cause a message to blink on the pole:
 - a. Click on the "Blink Characters" button which will cause "!!! Blinking !!!" to appear on the pole display.
5. To cause message to scroll (test #1):
 - a. Click on "Scrolling Text Line 1" button. The pole will scroll a message and the following message "Scrolling Text Line 1" appears on the pole until exiting the test applet or performing a different test function.
6. To cause message to scroll (test #2):
 - a. Click on "Scrolling Text Line 2" button. The pole will scroll a message and the following message "<<<Scrolling Text Line 2 >>> ..." appears on the pole until exiting the test applet or performing a different test function.
7. To display a test message on with delay:
 - a. Enter a test message.
 - b. Enter different value (if so desired) for the delay time.
 - c. Click on the "CharacterDelayTime" button.
 - d. Click on the "Display Text" button.
 - e. The test message will display on the pole display with a delay between characters.
8. To exit the OPOS test applet, click on the "EXIT" button or click on the "x" in the upper right corner of the test applet.

Details

1. Start the OPOS test utility from the START MENU



or “x:\Point of Sale\Pole Display\OPOS Test Utility” folder which is located on the “HP Point of Sale System Software and Documentation CD”.

When the HP Pole Display OPOS test applet has successfully established communication with the pole display, the following message will appear briefly on the pole before it is cleared:

HP POS Pole Display
Open Success

2. Click on “Clear Text” button to clear any text on the pole display. To display a test message on the pole, enter a message in the text box and click on “Display Text”.

HP Pole Display OPOS Test v4.0.0.3

Display Text

€ £

Display Text At

Display Text At

Column Row

1 1

1~20 1~2

Blink Characters

Scrolling Text Line 1

Scrolling Text Line 2

Character Delay Time 1 x 100 ms

Clear Text

Exit

3. To display a test message on different ROW or Column:
 - a. Enter the test message.
 - b. Enter column and row supported by the display.
 - c. Click "Display Text At" button.

HP Pole Display OPOS Test v4.0.0.3

Display Text € £

Display Text At

	Column	Row
Display Text At	1	1
	1~20	1~2

Blink Characters

Scrolling Text Line 1

Scrolling Text Line 2

Character Delay Time 1 x 100 ms

Clear Text

Exit

4. To cause a message to blink on the pole:
 - a. Click on the “Blink Characters” button which will cause “!!! Blinking !!!” to appear on the pole display.

HP Pole Display OPOS Test v4.0.0.3

Display Text € £

Display Text At

Column Row

Display Text At 1 1

1~20 1~2

Blink Characters

Scrolling Text Line 1

Scrolling Text Line 2

Character Delay Time 1 x 100 ms

Clear Text Exit

5. To cause message to scroll (test #1):
 - a. Click on “Scrolling Text Line 1” button. The pole will scroll a message and the following message “Scrolling Text Line 1” appears on the pole until exiting the test applet or performing a different test function.

HP Pole Display OPOS Test v4.0.0.3

Display Text € £

Display Text At

Display Text At Column Row

1 1

1~20 1~2

Blink Characters

Scrolling Text Line 1

Scrolling Text Line 2

Character Delay Time 1 x 100 ms

Clear Text Exit

6. To cause message to scroll (test #2):
 - a. Click on “Scrolling Text Line 2” button. The pole will scroll a message and the following message “<<<Scrolling Text Line 2 >>> ...” appears on the pole until exiting the test applet or performing a different test function.

HP Pole Display OPOS Test v4.0.0.3

Display Text € £

Display Text At

Column Row

Display Text At 1 1

1~20 1~2

Blink Characters

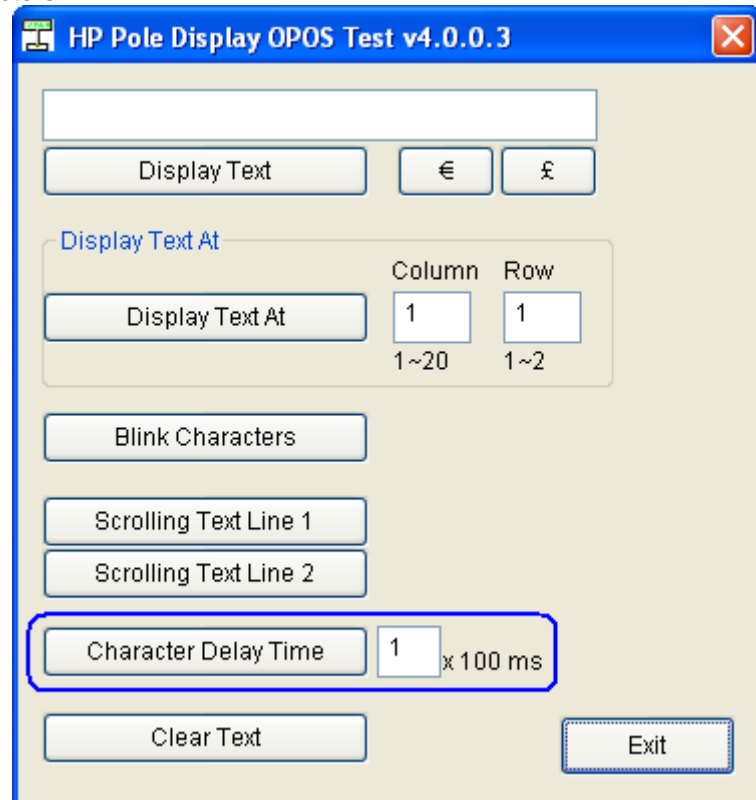
Scrolling Text Line 1

Scrolling Text Line 2

Character Delay Time 1 x 100 ms

Clear Text Exit

7. To display a test message on with delay:
 - a. Enter a test message.
 - b. Enter different value (if so desired) for the delay time.
 - c. Click on the “CharacterDelayTime” button.
 - d. Click on the “Display Text” button.
 - e. The test message will display on the pole display with a delay between characters.



8. To exit the OPOS test applet, click on the “EXIT” button or click on the “x” in the upper right corner of the test applet.

7.8.6 JPOS Drivers for the pole display

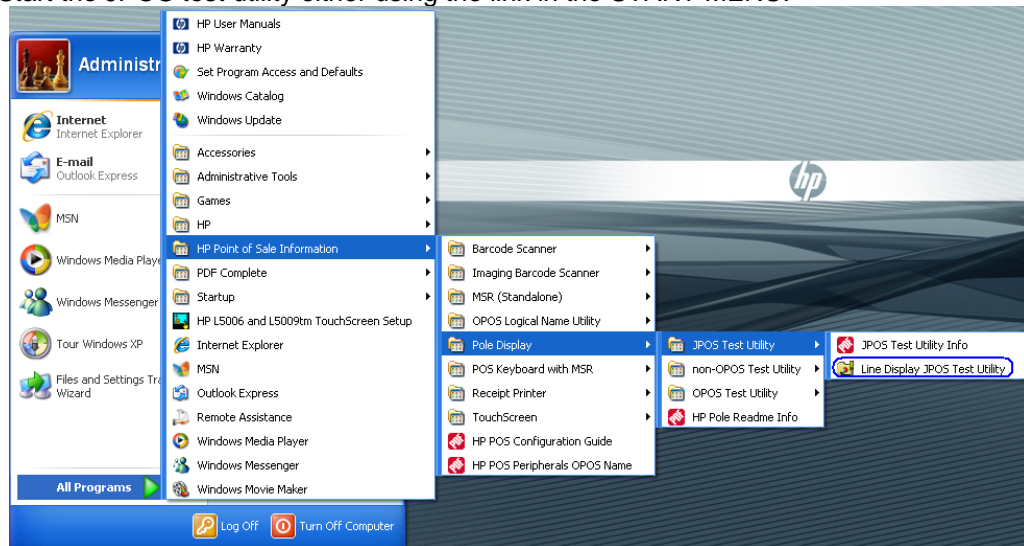
The JPOS drivers are included in the HP Point of Sale image or can be obtained from HP POS Drivers and Documentation CD or from the HP.COM web site.

The following is an overview of the steps to test the pole display followed by details steps:
Start the JPOS test utility.

1. Start the JPOS test utility either using the link in the START MENU:
2. Click on the "LineDisplay" tab.
3. Click on the "OPEN" button.
4. Click on the "CLAIM" button.
5. Check the "DEVICE ENABLED" so there is a check box.
6. Press the "CLEAR TEXT" button.
7. Type in the test message in the "Send to line display" box and click on "Display Text"
8. Click on "RELEASE" / "CLOSE" / "EXIT" to exit the JPOS test utility.

Detail Steps

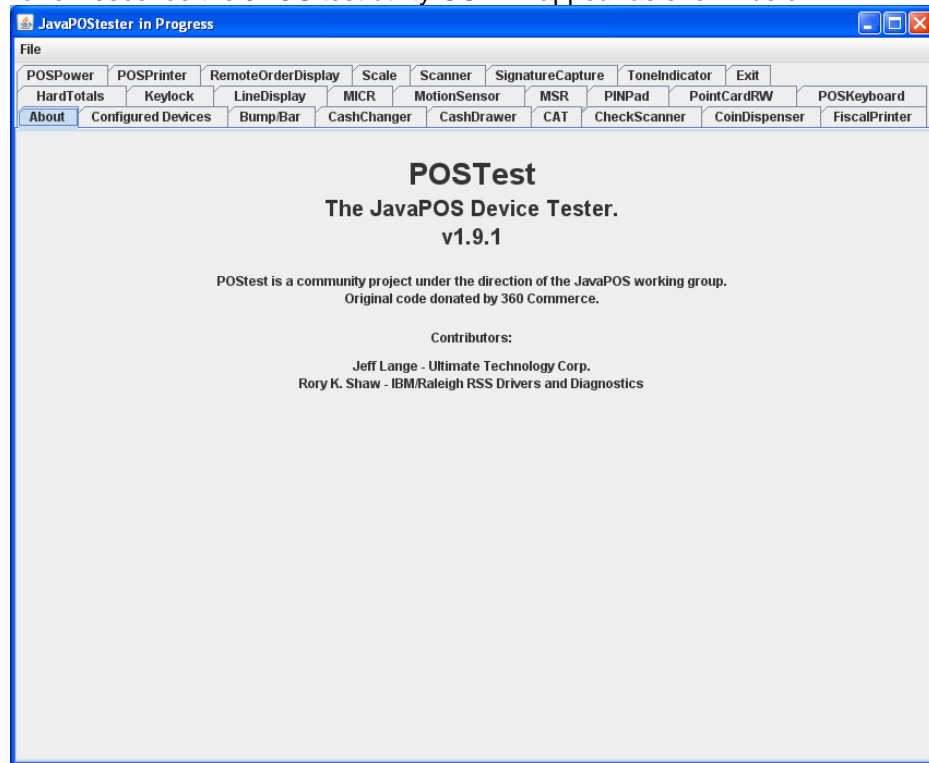
1. Start the JPOS test utility either using the link in the START MENU:



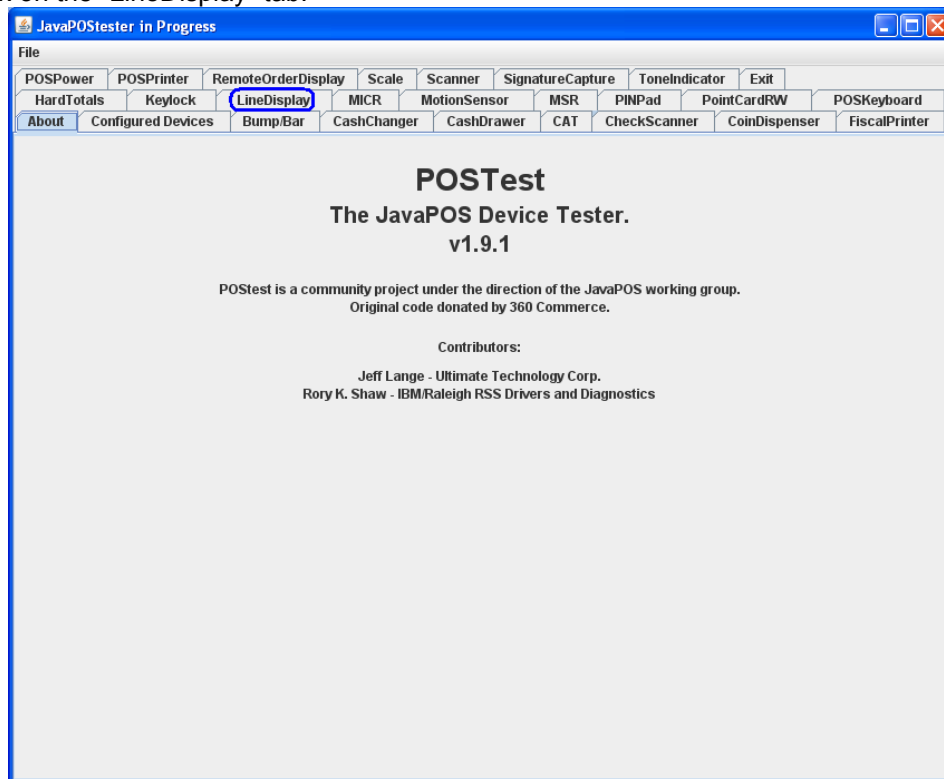
OR

by launching the POSTEST.BAT file that is located in the JPOS folder within the POLE DISPLAY folder.

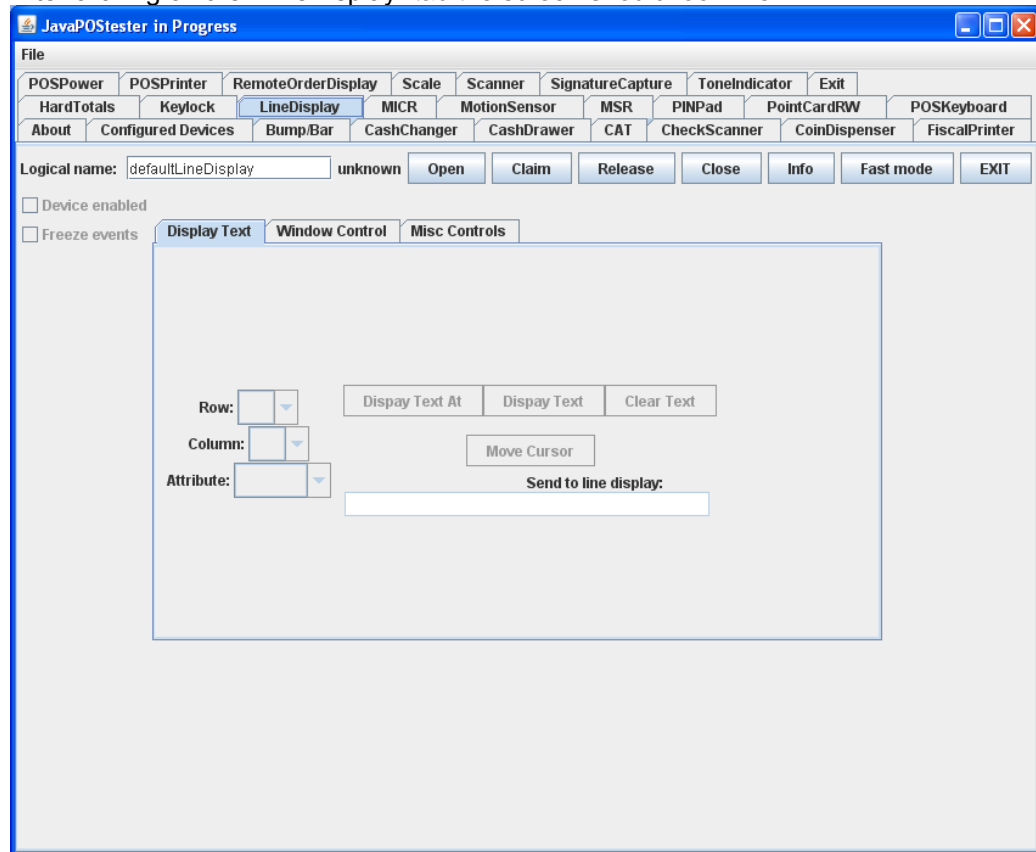
After a few seconds the JPOS test utility GUI will appear as shown below:



2. Click on the "LineDisplay" tab:



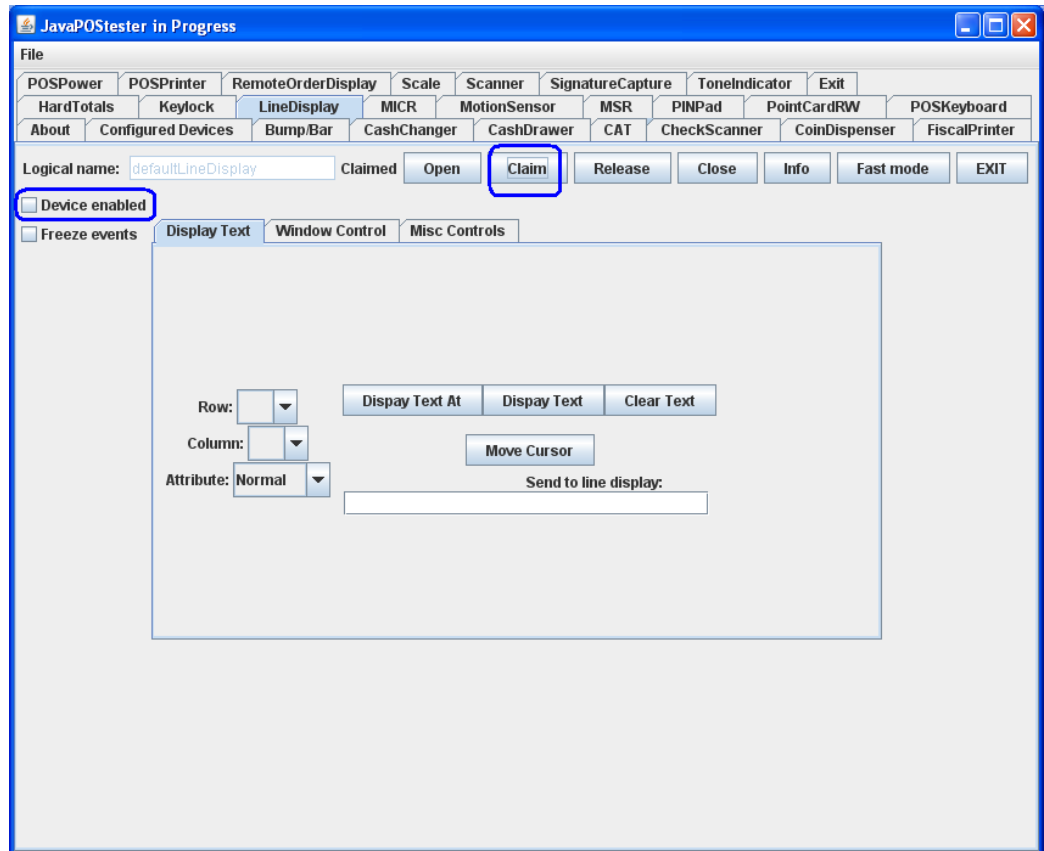
After clicking on the “LineDisplay” tab the screen should look like:



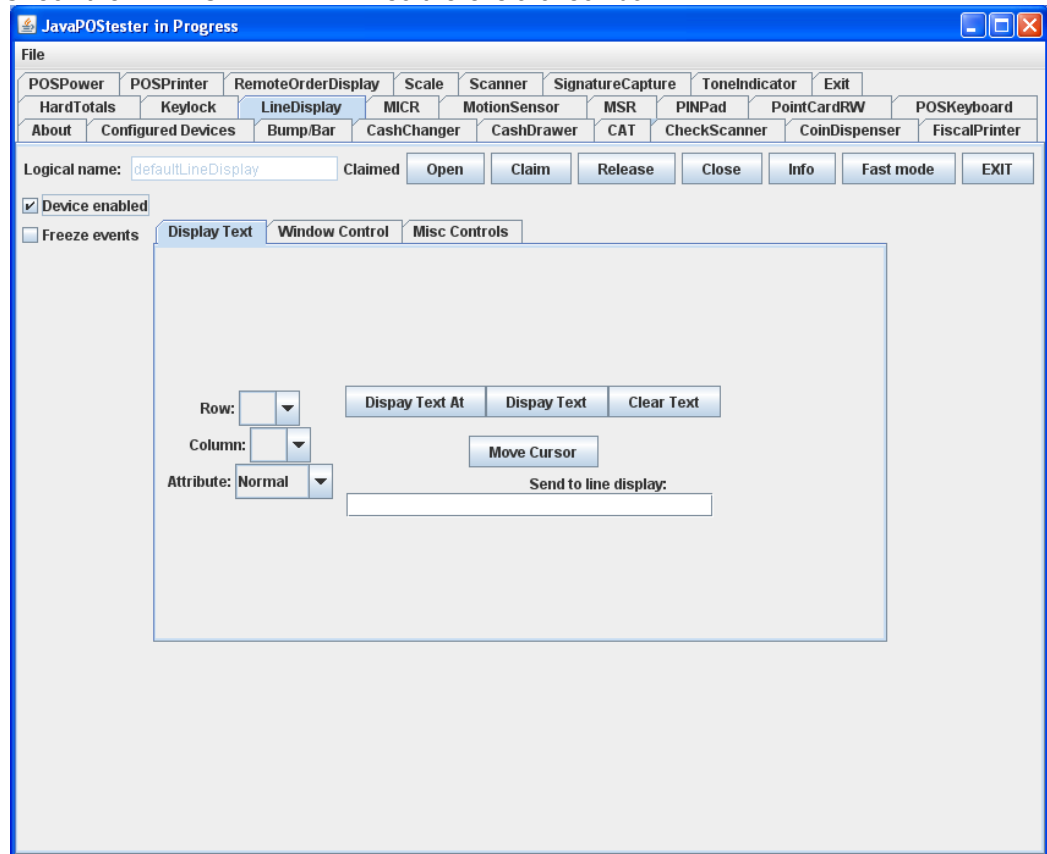
Note: The logical name of the device is “HP_POLE_DISPLAY” but you can use “defaultLineDisplay” that appears in the logical name box. If one clicks on the “Configured Device” tab, the names for the device will appear that will be used in the test utility.

- Click on the “OPEN” button. If the test applet has successfully established communication with the pole display, the following message will appear on the pole display: [HP_POS_Pole Display Open Success](#)

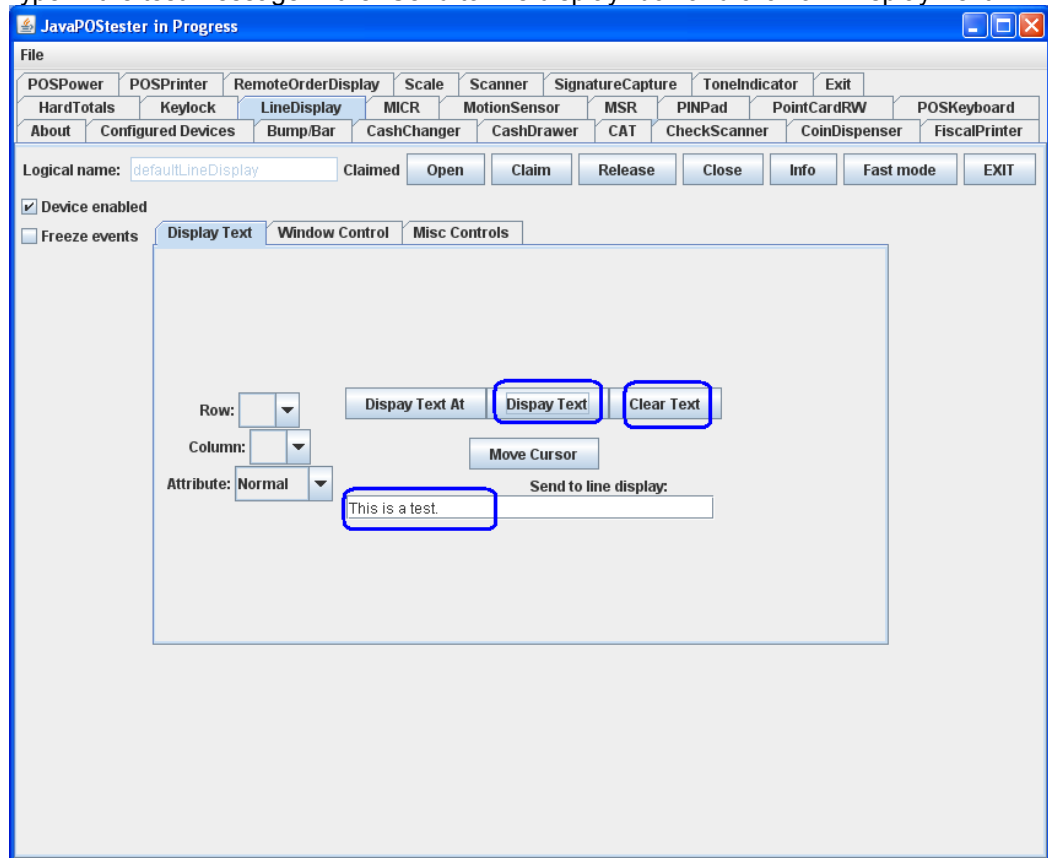
- Click on the "CLAIM" button. After clicking the "CLAIM" button, the "Device Enabled" is available.



5. Check the “DEVICE ENABLED” so there is a check box.



6. Press the “CLEAR TEXT” button.
7. Type in the test message in the “Send to line display” box and click on “Display Text”



Note: On the JPOS tester utility when “INFO” button is pressed one will receive an exception. The exception error can be safely ignored; all the functions of the pole display under JPOS are working correctly.

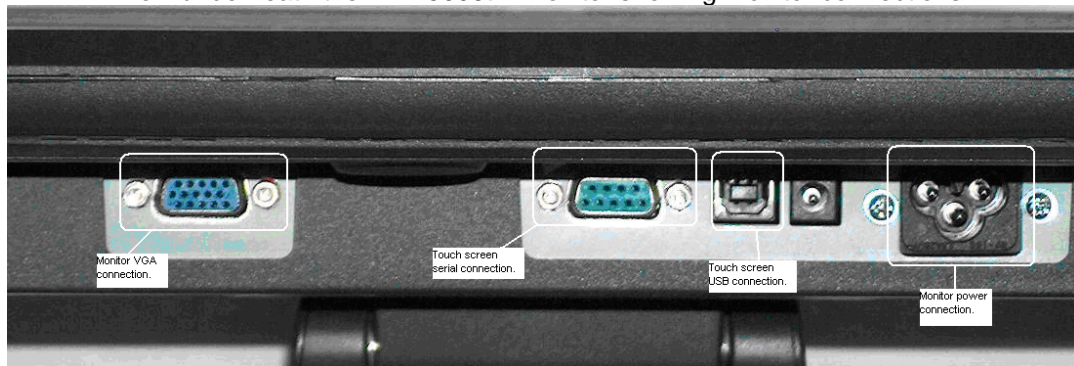
8. Click on “RELEASE” / “CLOSE” / “EXIT” to exit the JPOS test utility.

7.9 Touch Screen – HP L5006tm

7.9.1 Connection

The HP L5006tm touch screen monitor has two (2) connections that need to be made on the back of the unit. One connector will plug into the VGA connector on the back of the unit and the second connection which is for the touch screen can be connected either via USB connector or serial connector. The USB connection will plug into one of the free USB ports on the back of the unit. If the serial connection is chosen, please note which serial port on the back of the unit that you connect the monitor touch screen port; this information will be needed later.

View underneath the HP L5006tm monitor showing monitor connections:



7.9.2 Windows Drivers for the Touch Screen

The drivers for HP touch screen may be obtained from the HP.COM web site / from the “HP Point of Sale System Software and Documentation CD” or the HP factory image. CD that ship with the monitor HP touch screen monitor.

Note: The touch screen install process must be run with ADMINISTRATOR privileges.

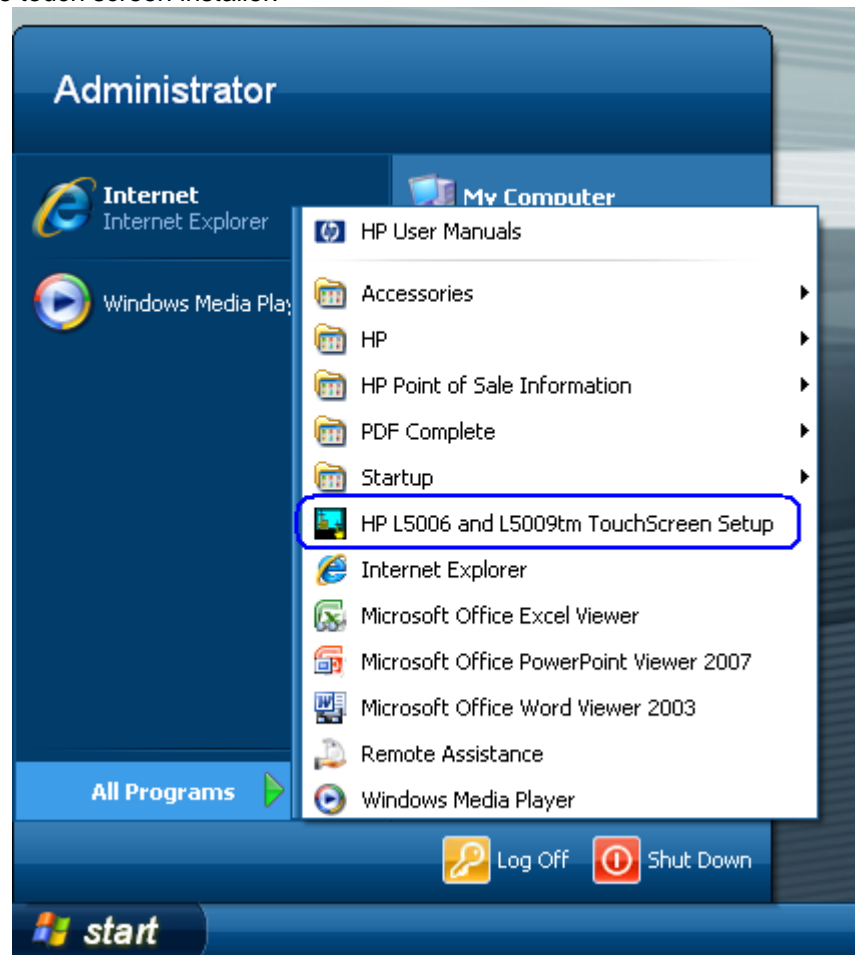
The following is an overview of the steps to install the touch screen drivers and applets:

1. Start the touch screen installer.
2. Select your language.
3. Select the interface that you will use for the touch screen.
4. After the drivers are installed, please select the option to calibrate the touch screen monitor and follow the instructions on the screen.

For the L5006tm and L5009tm touch screen, after the drivers are installed please restart the operating system.

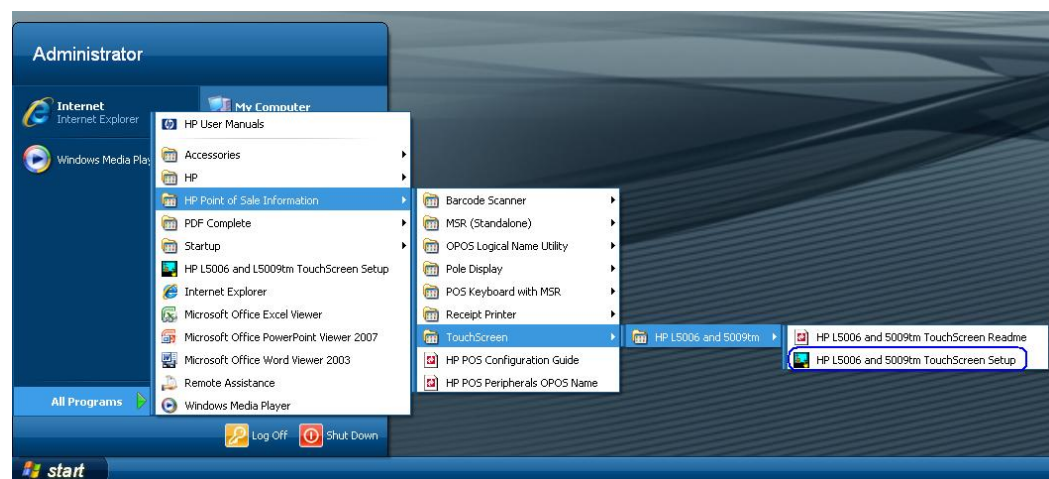
Details installation instructions

1. Start the touch screen installer.

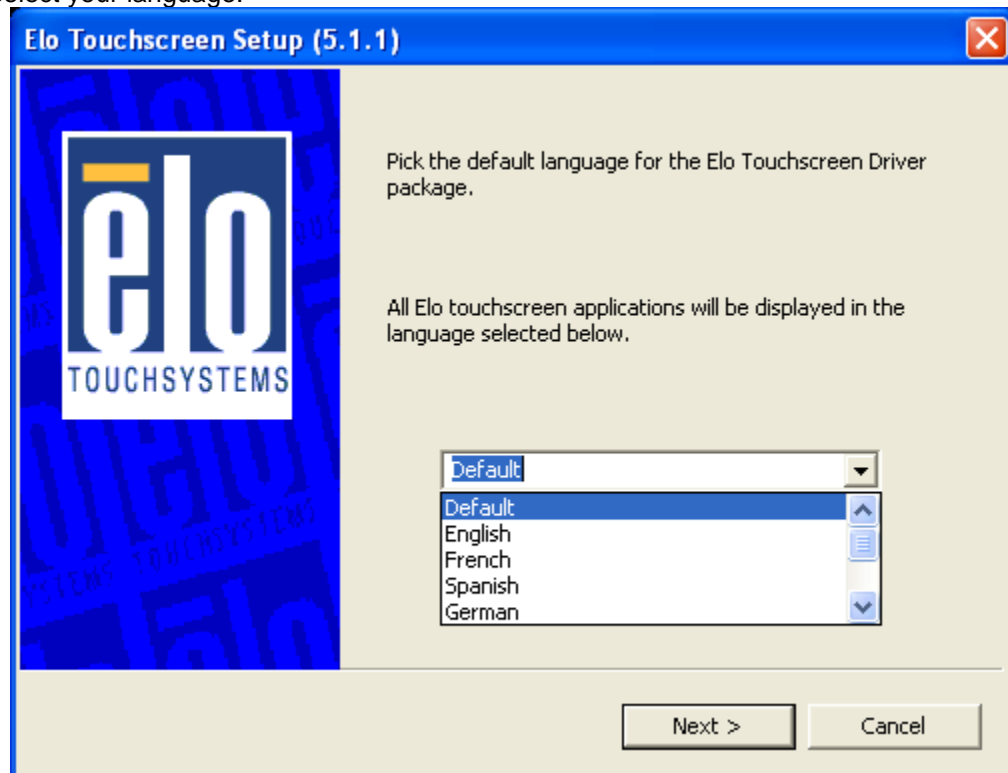


Note: Once the touch screen setup is launched from this location, this shortcut is automatically removed from the start menu. Another shortcut link is still available to launch the setup once the link in the above screen capture is removed, see below.

or

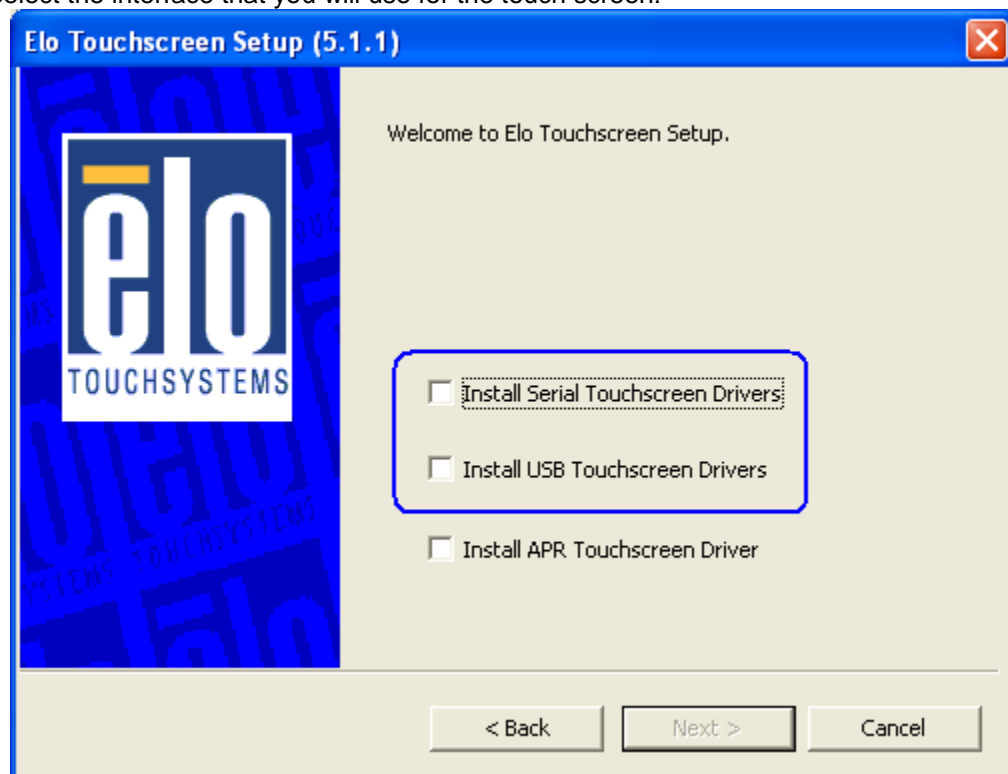


2. Select your language:



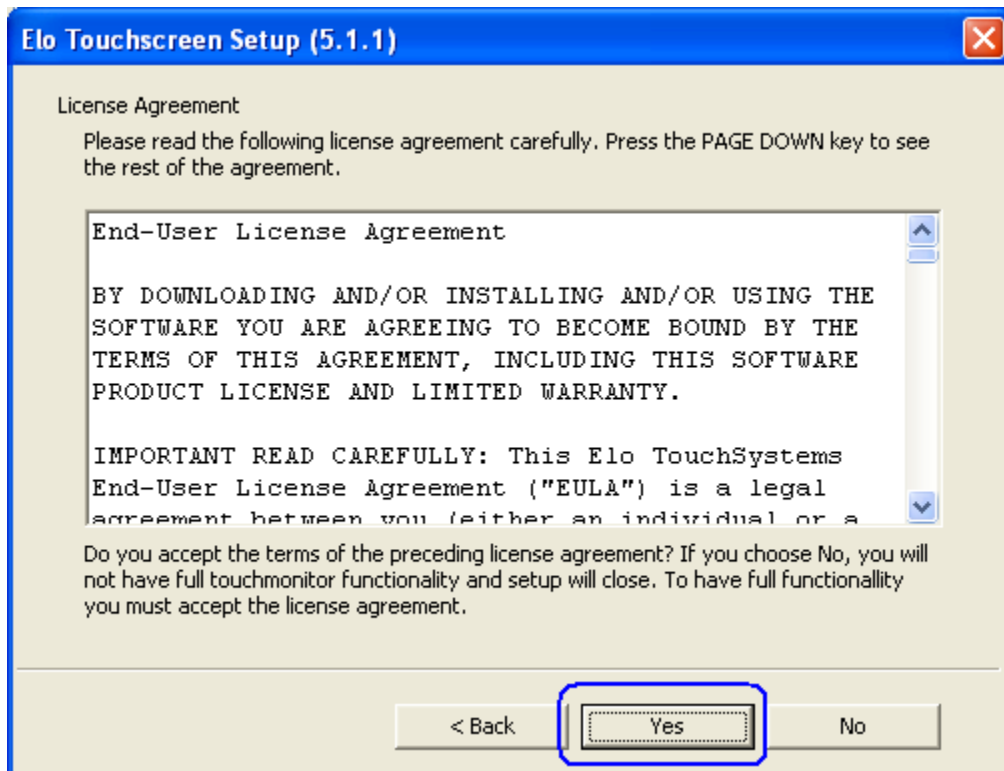
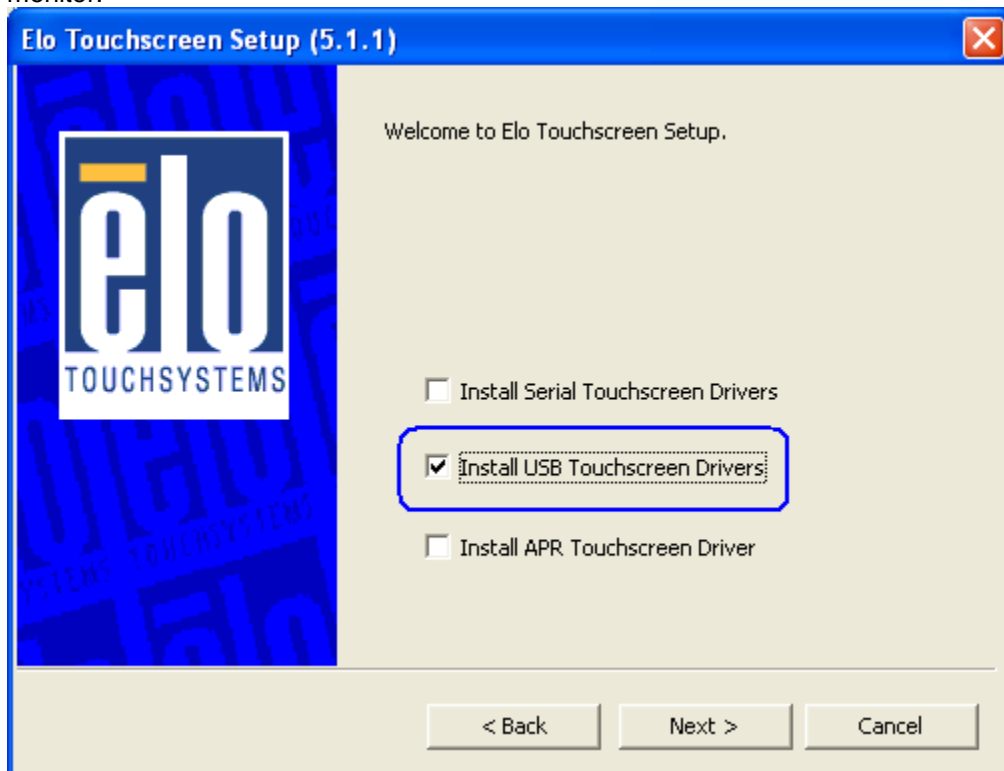
Selecting default will use the language that the operating system is running.

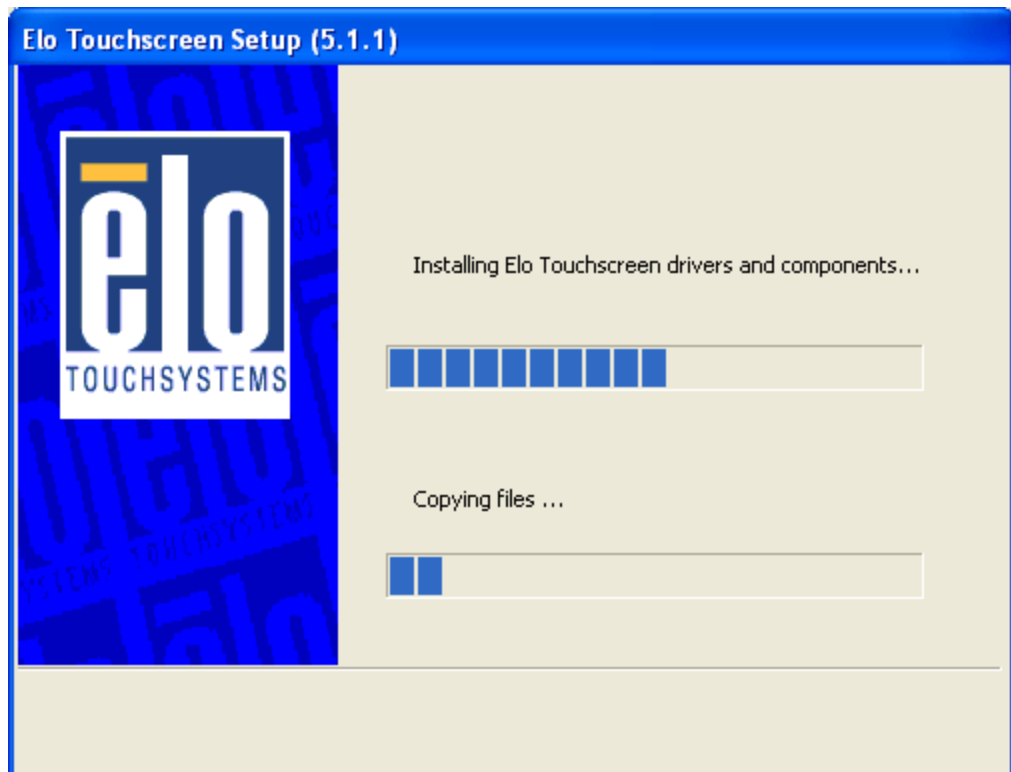
3. Select the interface that you will use for the touch screen:



USB Connection

If USB drivers are selected the installation package will search the USB ports for the monitor.



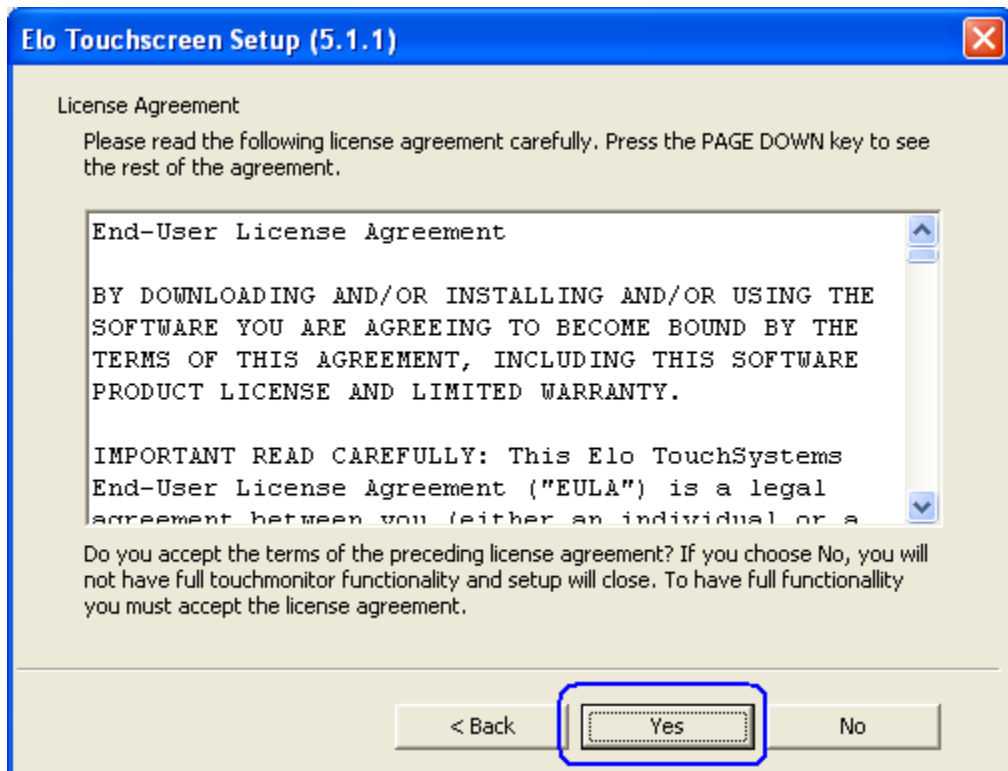
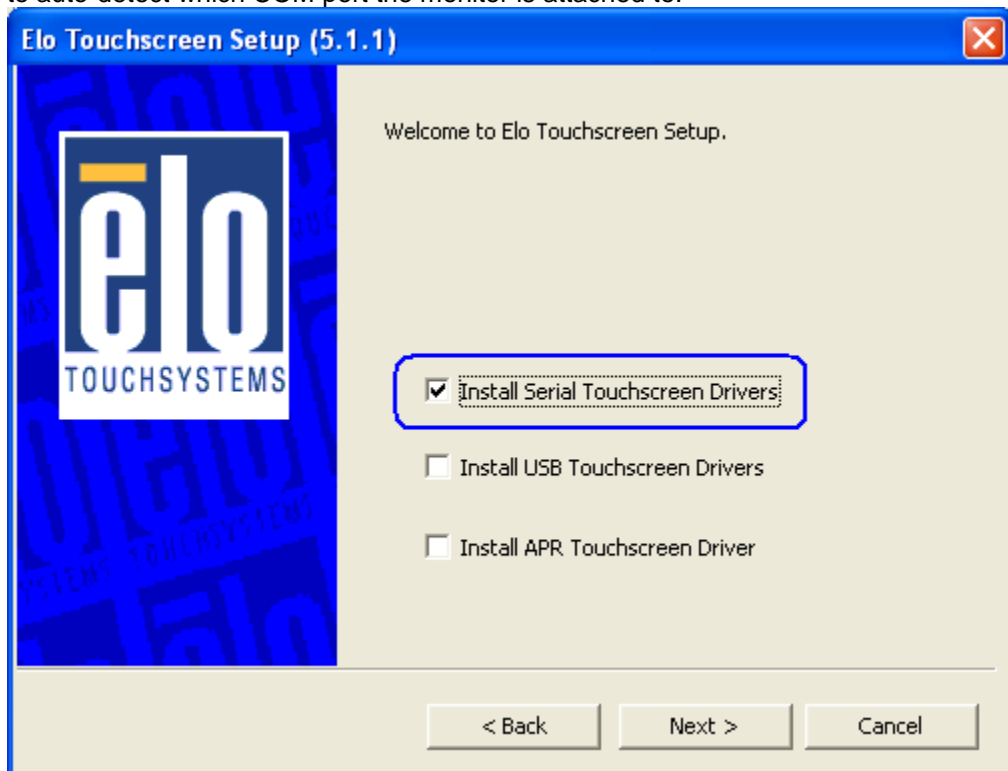


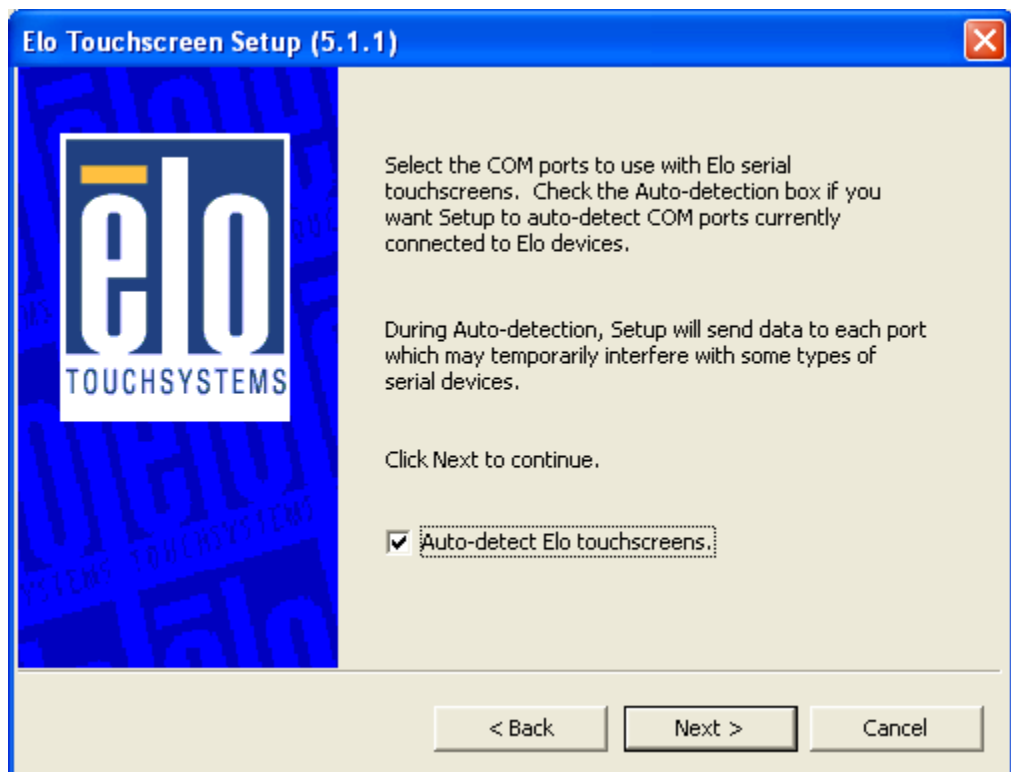
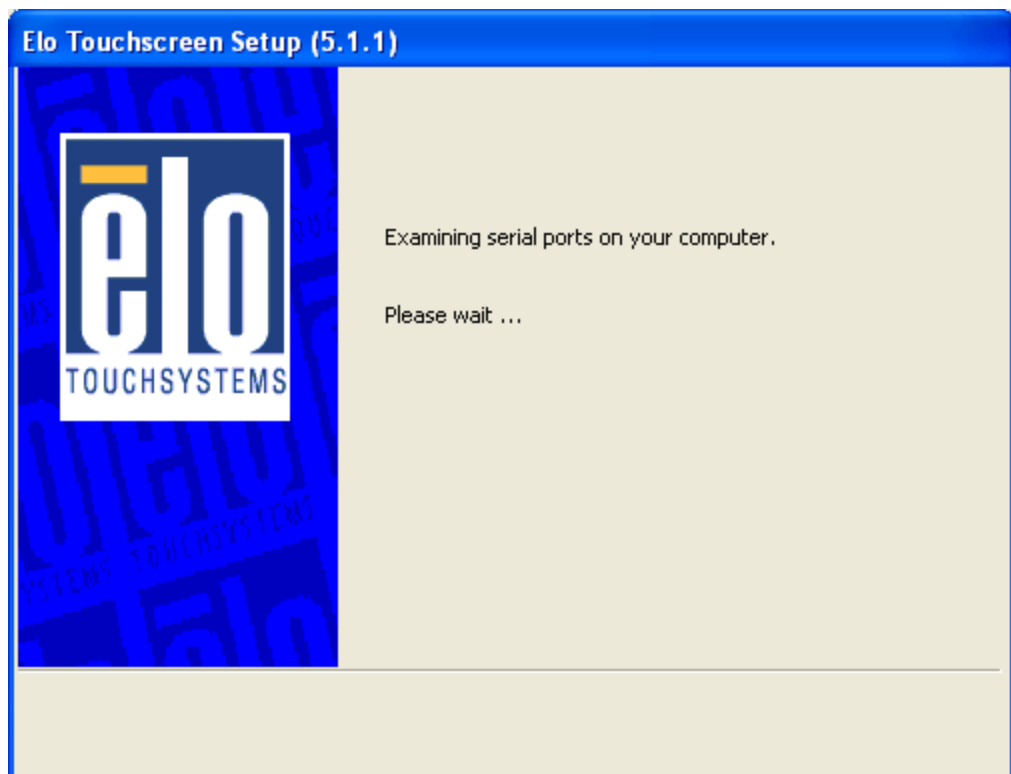
4. After the drivers are installed, please select the option to calibrate the touch screen monitor and follow the instructions on the screen.

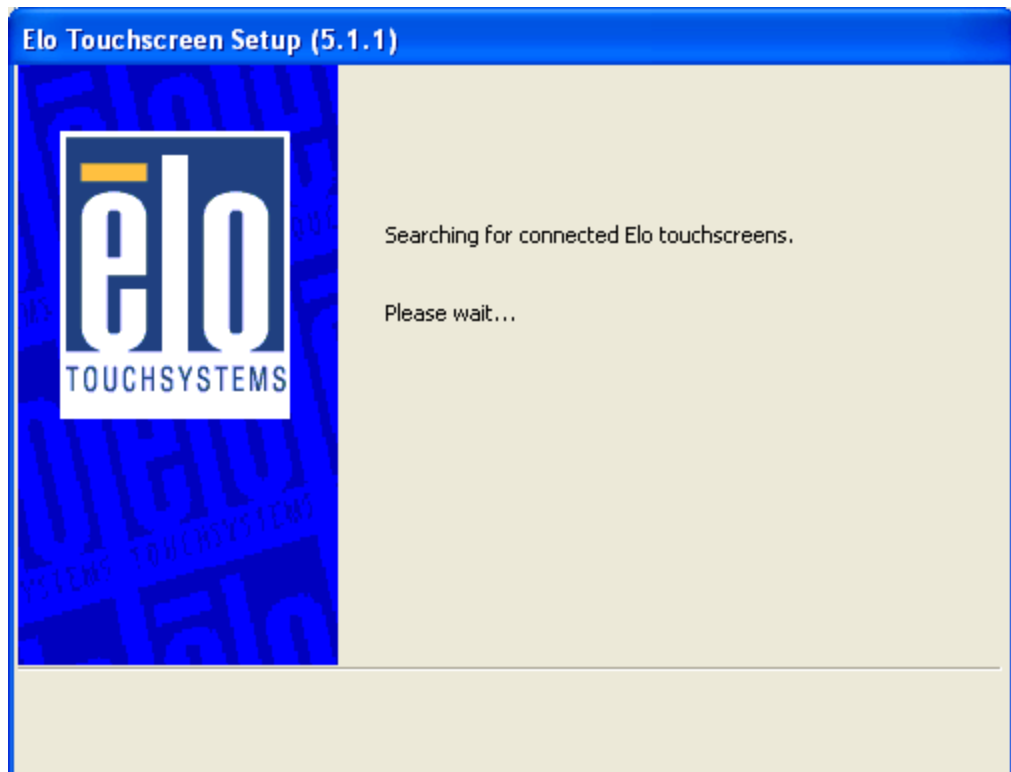


Serial Connection

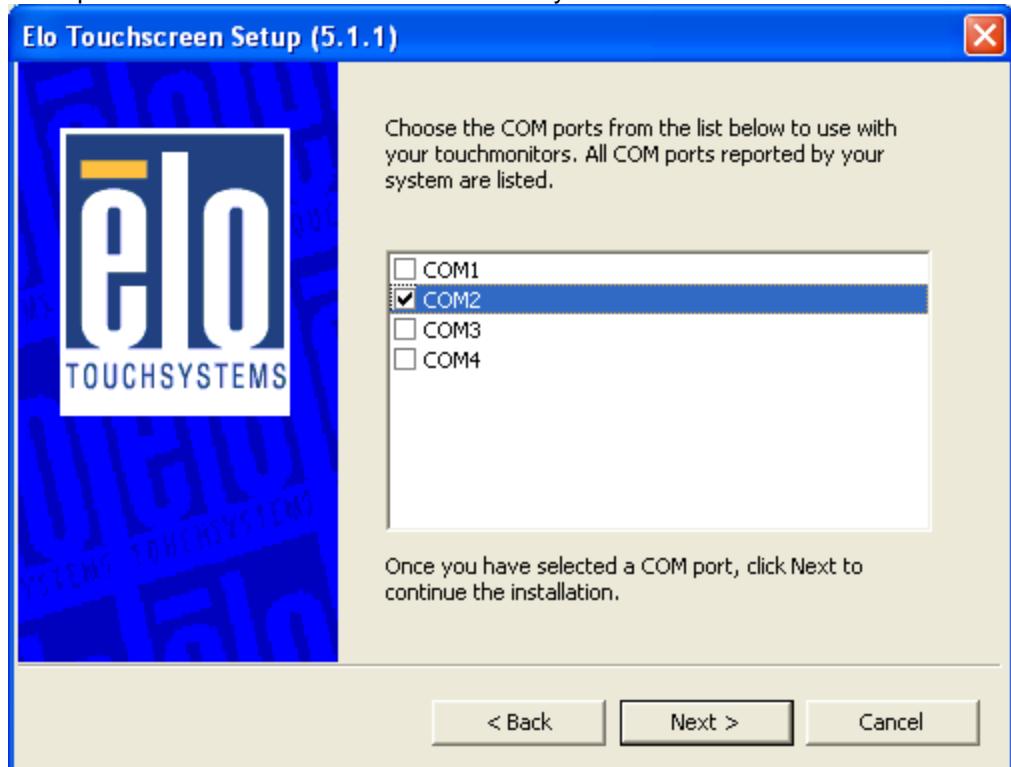
If Serial Touchscreen drivers are selected you may have the installation package try to auto-detect which COM port the monitor is attached to.



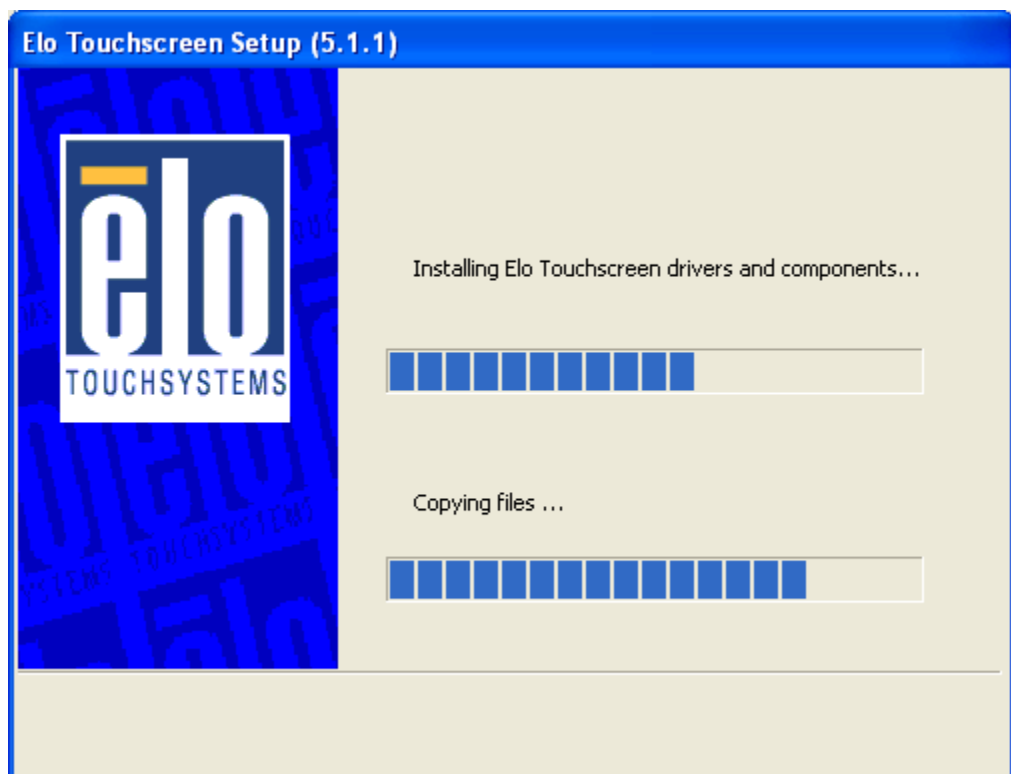
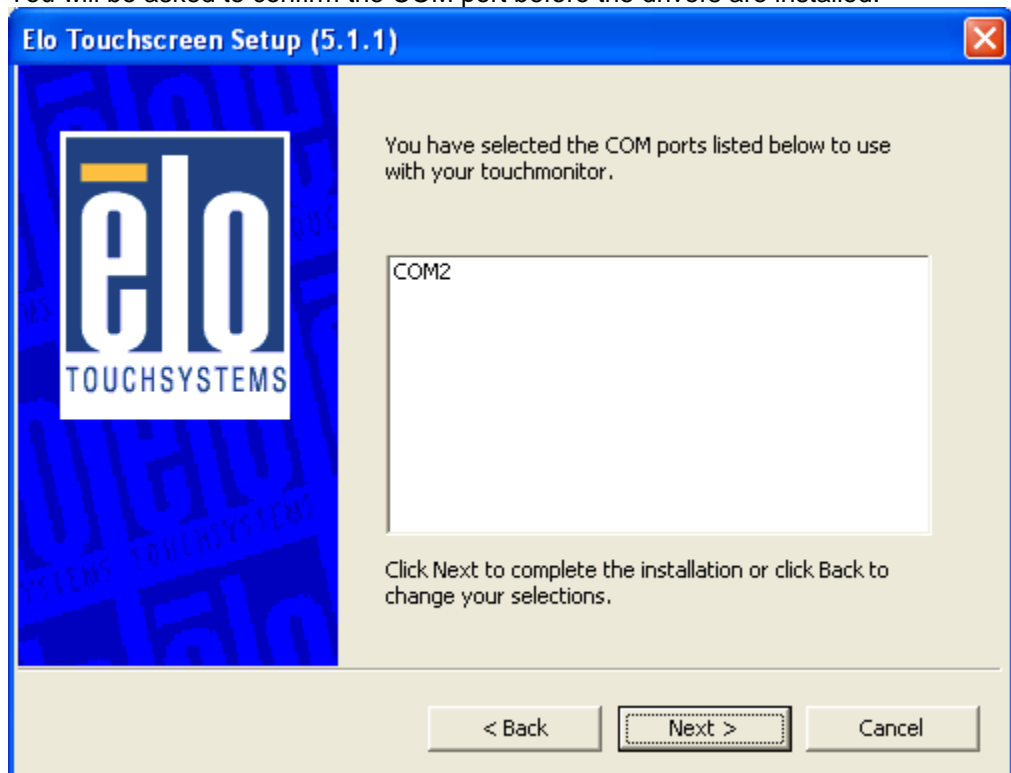




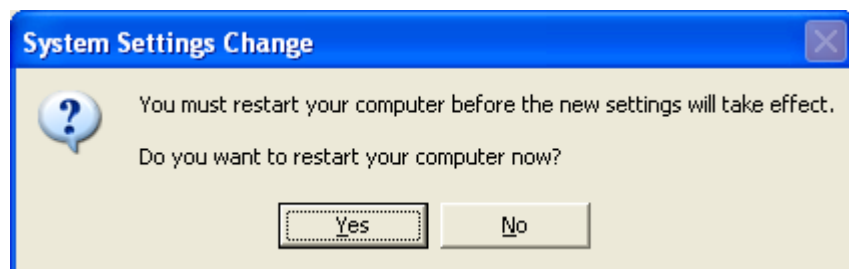
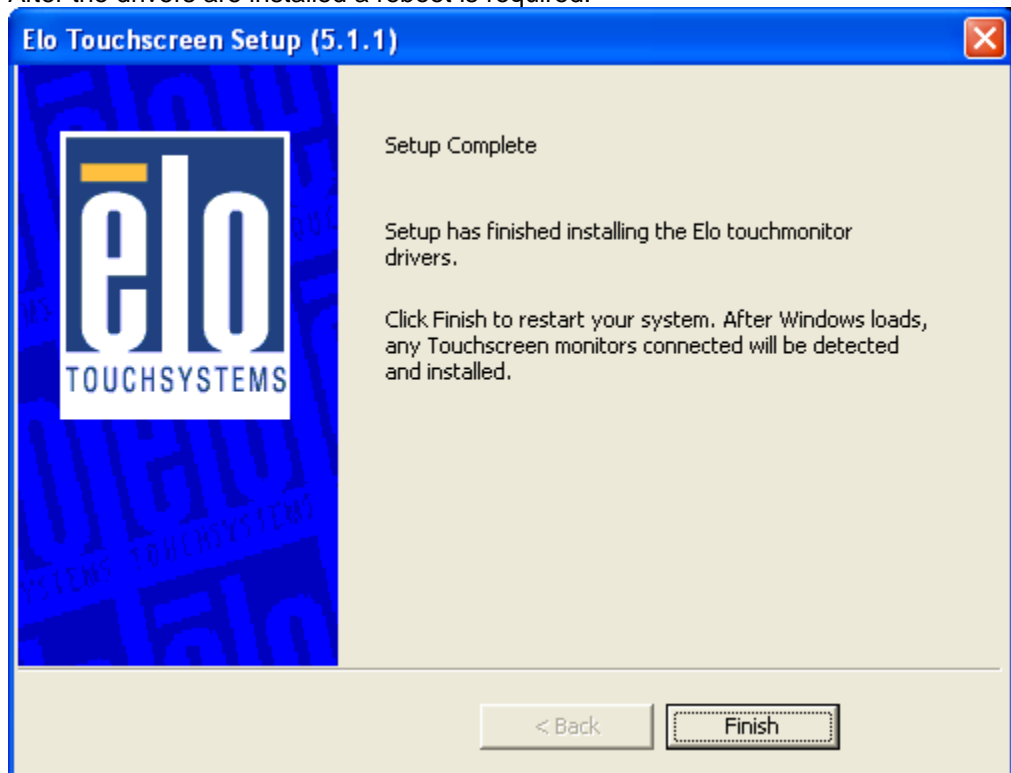
The following screen appears that shows the com ports that were found in unit. The COM port that is selected where were the utility found the touch screen monitor.



You will be asked to confirm the COM port before the drivers are installed.

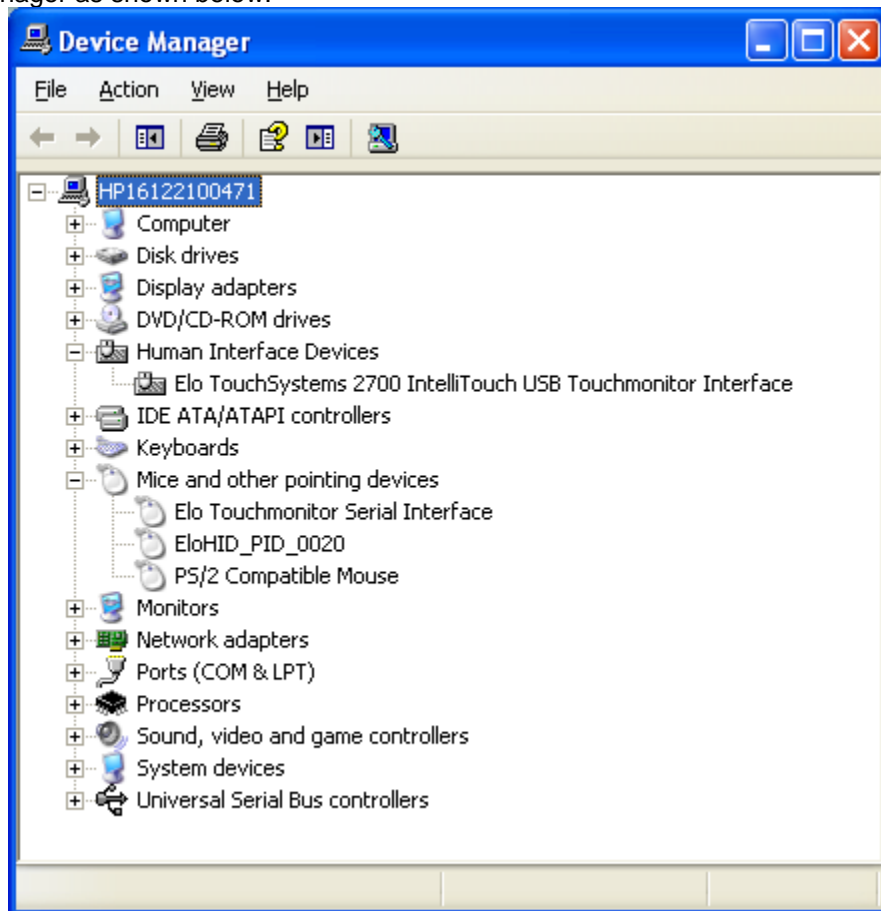


After the drivers are installed a reboot is required.

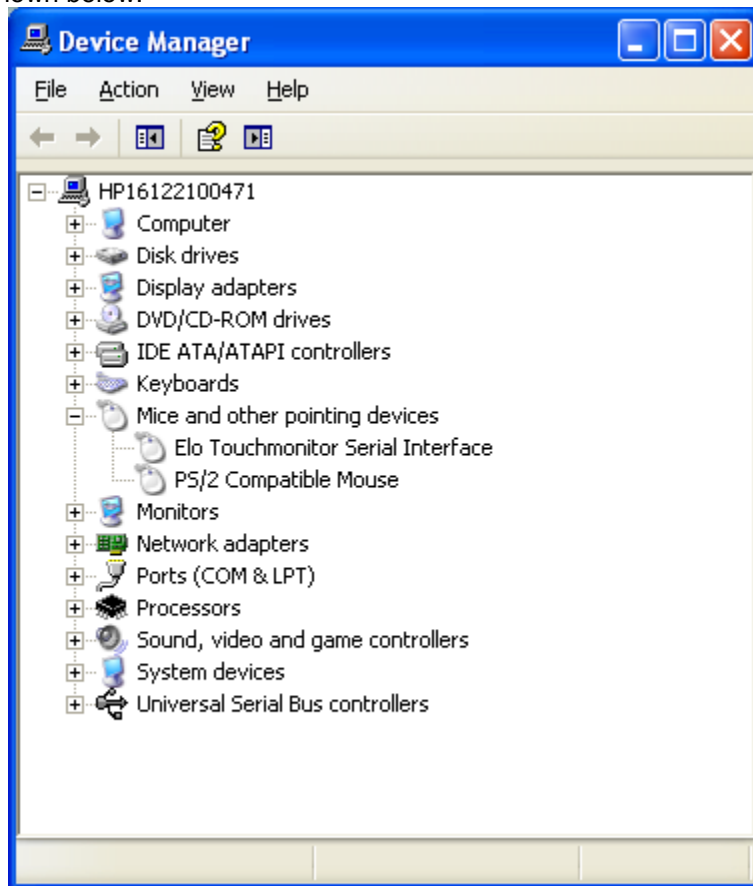


For the L5006tm and L5009tm touch screen, after the drivers are installed please restart the operating system.

The following screen is showing Windows device manager when the touch screen is connected to the unit via the USB cable. After the Windows has loaded the device drivers for the touch screen there will be an entry in “Human Interface Devices” and “Mice and other pointing device” section in device manager as shown below:



The following screen is showing Windows device manager when the touch screen is connected to the unit via the COM port. After the Windows has loaded the device drivers for the touch screen there will be an entry in "Mice and other pointing device" section in device manager as shown below:



After Windows has loaded the device drivers for the touch screen there will be an Elo icon in the system tray:

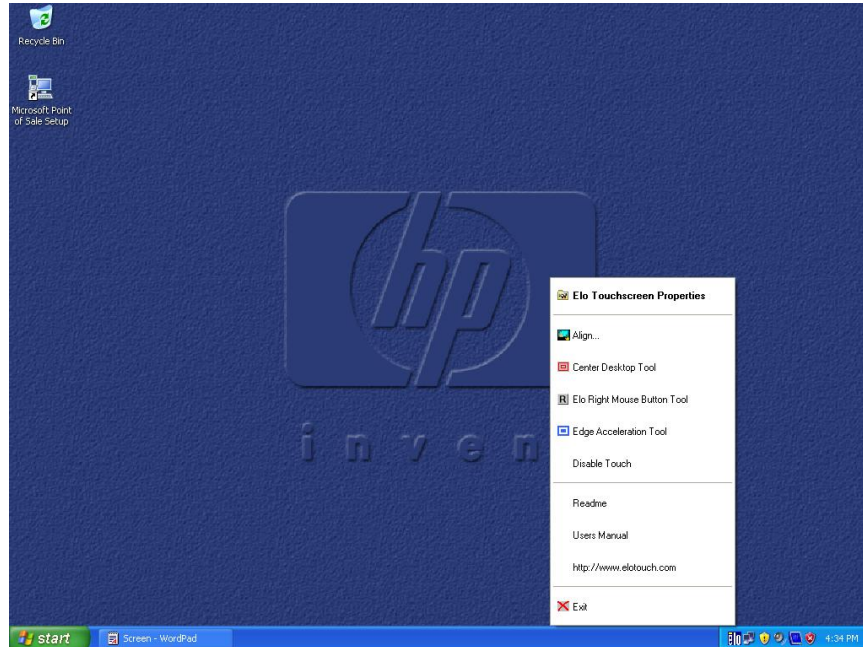


7.9.3 **Touch Screen Alignment**

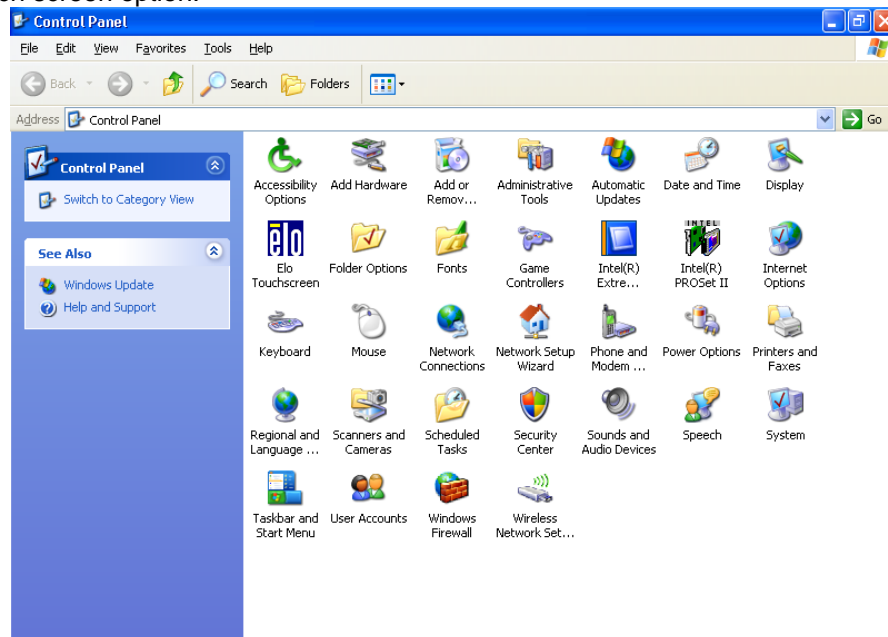
You will need to run the touch screen alignment program the first time you use the touch screen.

There are couple methods to get to the alignment program for the touch screen. You can access this program either via the Elo ICON in the system tray or control panel.

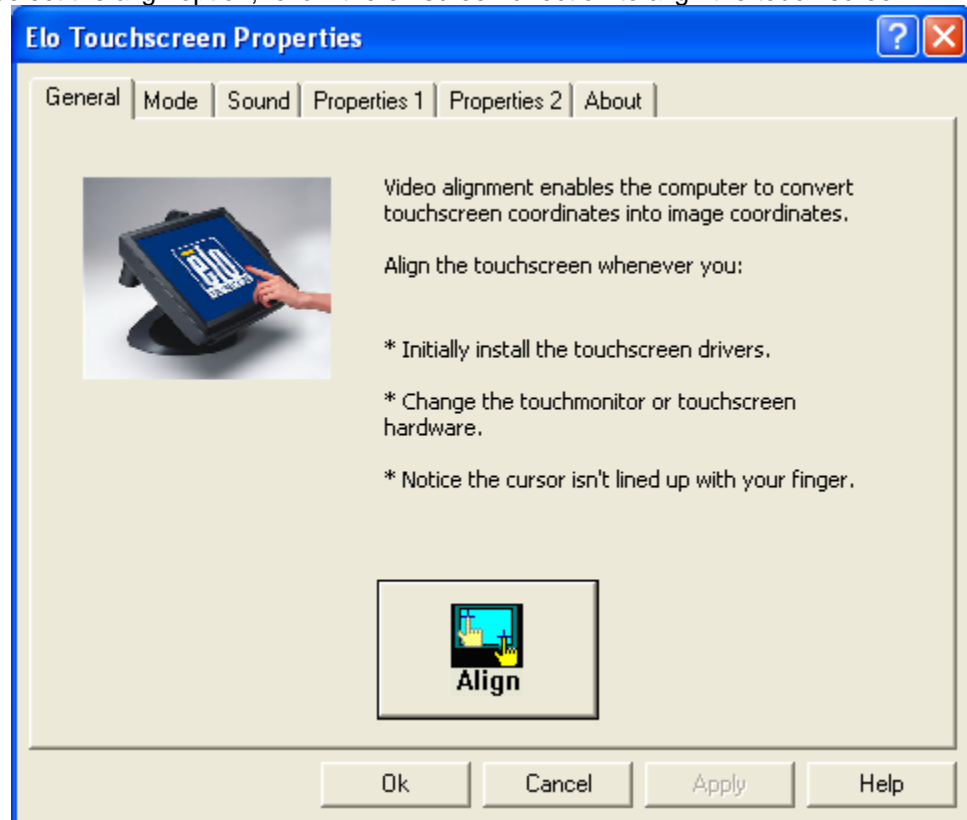
Method1: On the Elo icon in the system tray, click on the icon and select “Align”
Option:



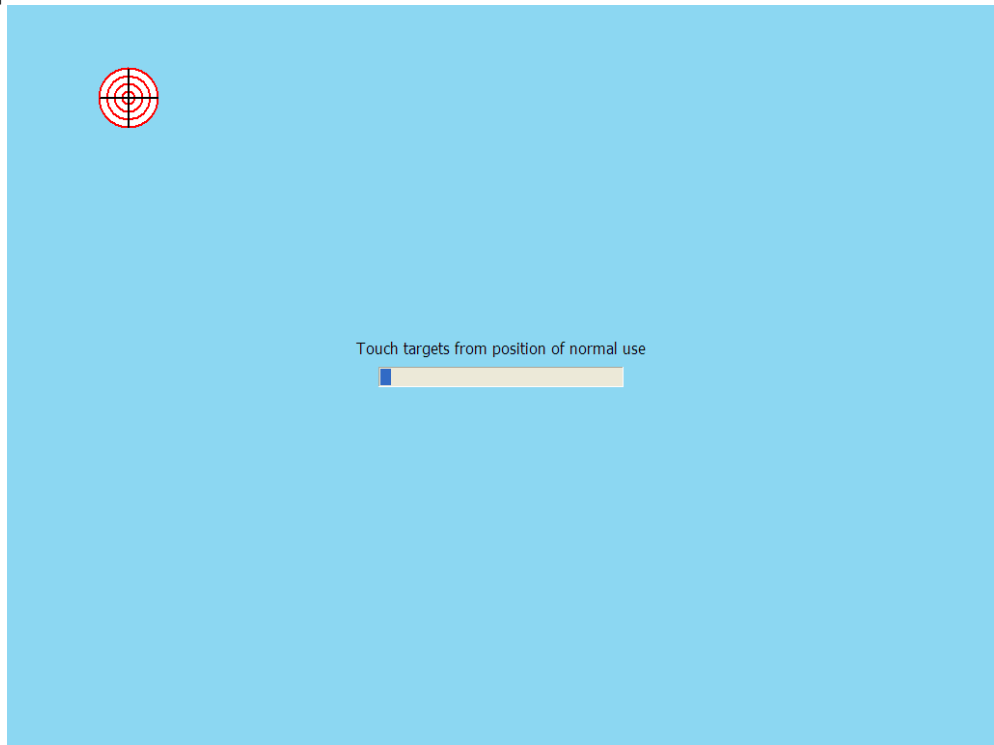
Method 2: Need to switch to classic view in control panel in order to see the Elo Touch screen option.



Select the align option; follow the on screen direction to align the touch screen:



During the alignment of the touch screen you will be presented with three targets to press:



The fourth screen presented will accept the calibration that was performed:



7.9.4 OPOS Drivers for the Touch Screen

No OPOS drivers are needed for the touch screen.

7.9.5 Testing the Touch Screen

Touch several places on the monitor screen and the mouse cursor should be present where the monitor was touched.

7.9.6 JPOS Drivers for the Touch Screen

No JPOS drivers are needed for the touch screen.

7.10 Touch Screen – HP L5009tm

7.10.1 Connection

The HP L5009tm touch screen monitor has two (2) connections that need to be made on the back of the unit. One connector will plug into the VGA connector on the back of the unit and the second connection which is for the touch screen via USB connector. The USB connection will plug into one of the free USB ports on the back of the unit.

View underneath the HP L5009tm monitor showing monitor connections:



Note: For the HP L5009tm, there is **no** serial connection for the touch screen, it is only USB.

7.10.2 Windows Drivers for the Touch Screen

The drivers for HP touch screen may be obtained from the HP.COM web site / from the “HP Point of Sale System Software and Documentation CD” or the HP factory image. CD that ship with the monitor HP touch screen monitor.

Note: When one attaches the USB cable for the touch screen on the HP L5009tm monitor, one may receive a Windows Hardware Wizard screen; select the CANCEL option on this screen. During the next few steps the drivers will be installed on the unit.

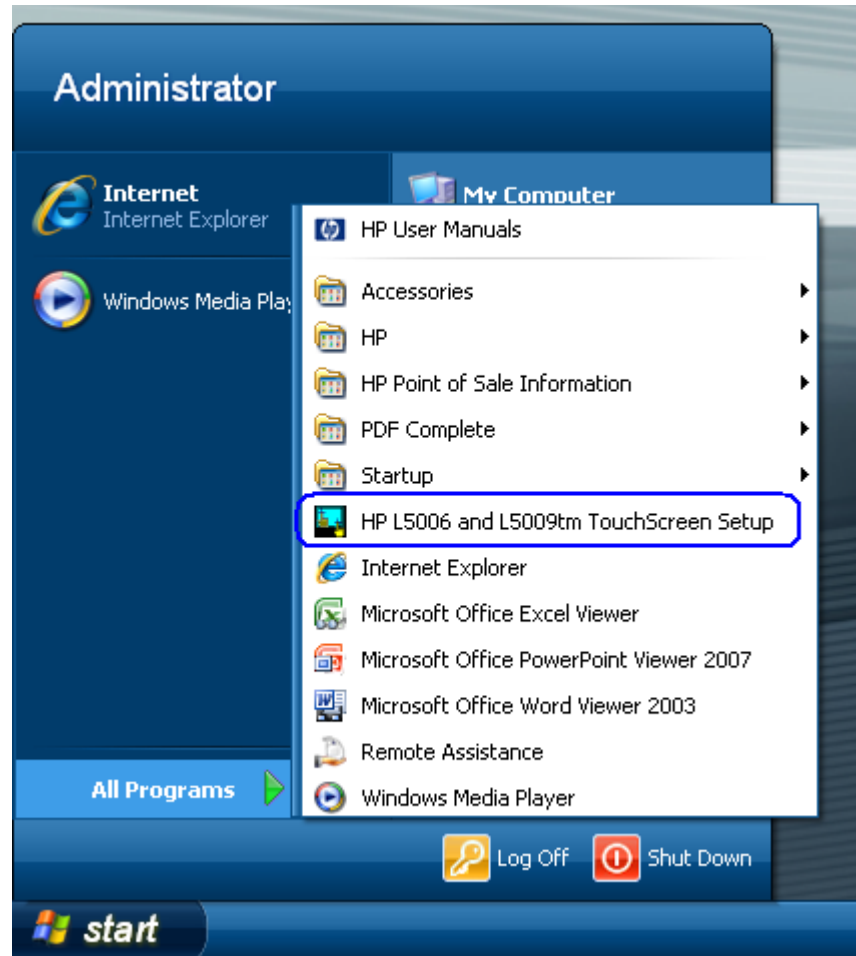
The touch screen install process must be run with ADMINISTRATOR privileges.

The following is overview of the steps to install the touch screen drivers and applets:

1. Start the touch screen installer.
2. Select your language.
3. Select the interface that you will use for the touch screen.
4. Agree to the license agreement.
5. Depending on whether the touch screen part of the monitor is attached to the unit or not, two different behaviors will be seen.

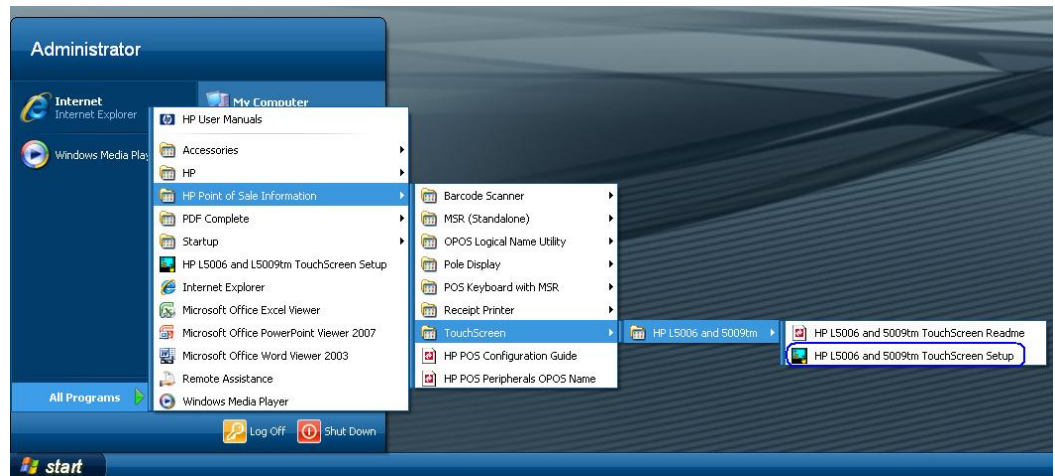
Details installation instructions

1. Start the touch screen installer.

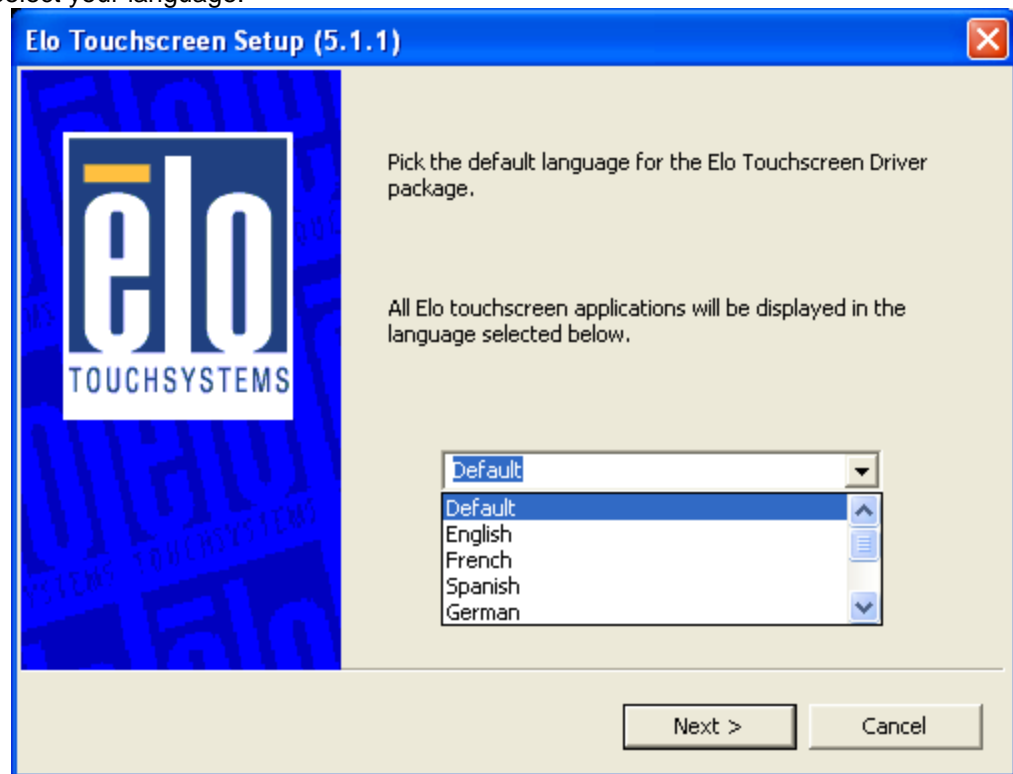


Note: Once the touch screen setup is launched from this location, this shortcut is automatically removed from the start menu. Another shortcut link is still available to launch the setup once the link in the above screen capture is removed, see below.

or



2. Select your language:

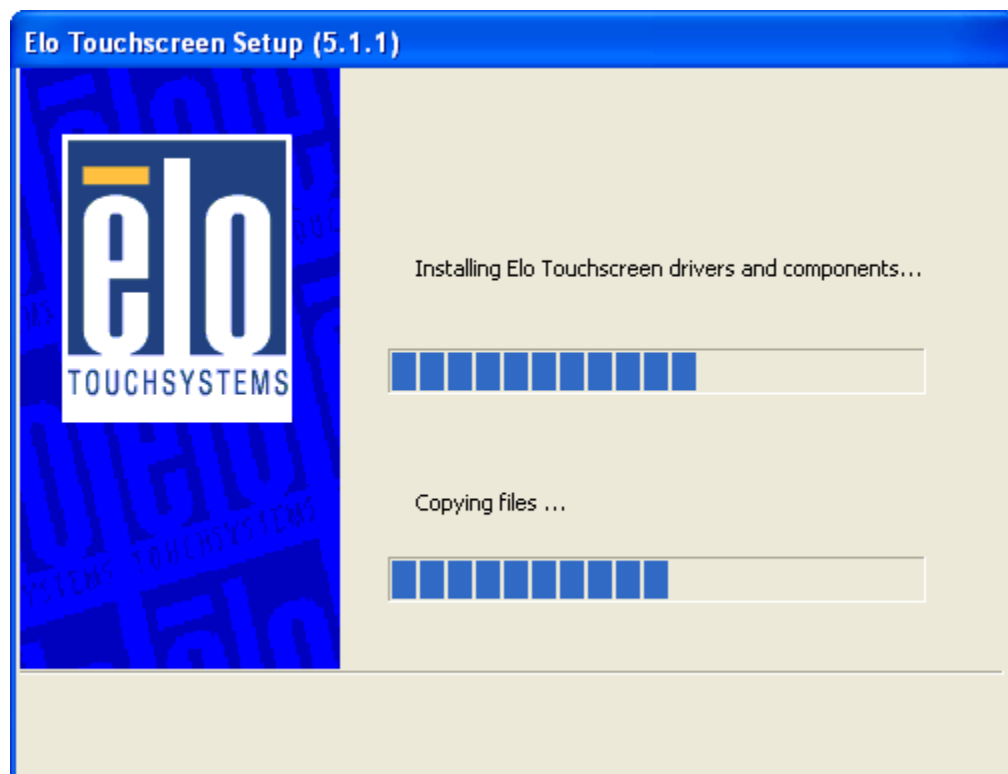
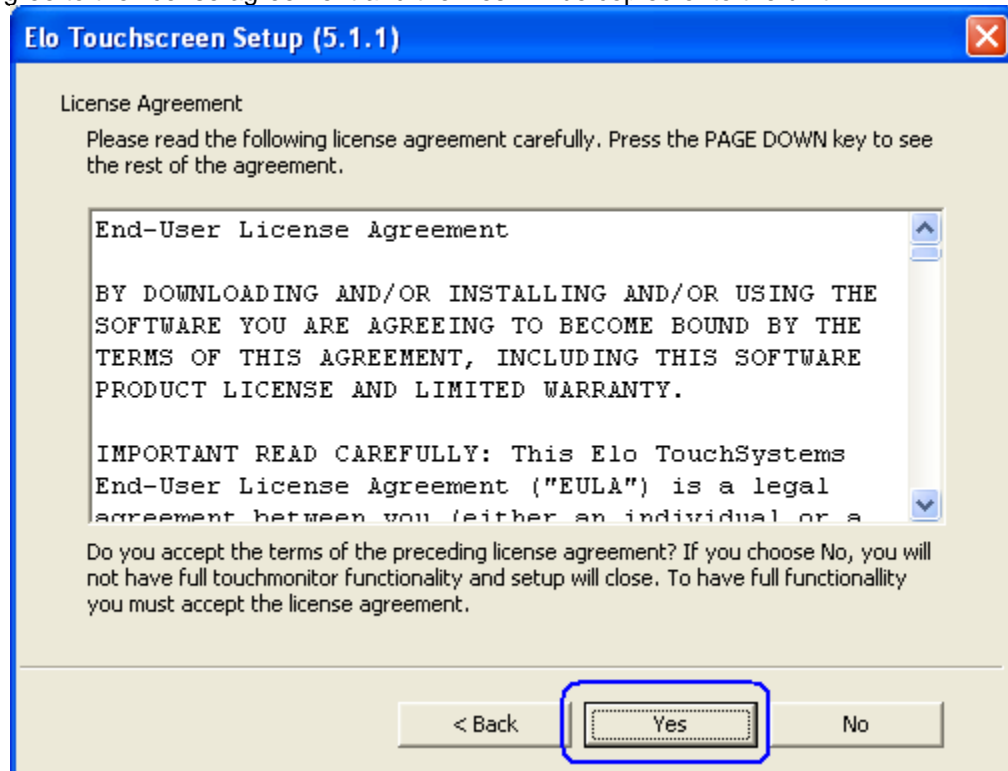


Selecting default will use the language that the operating system is running.

3. Select the interface that you will use for the touch screen:



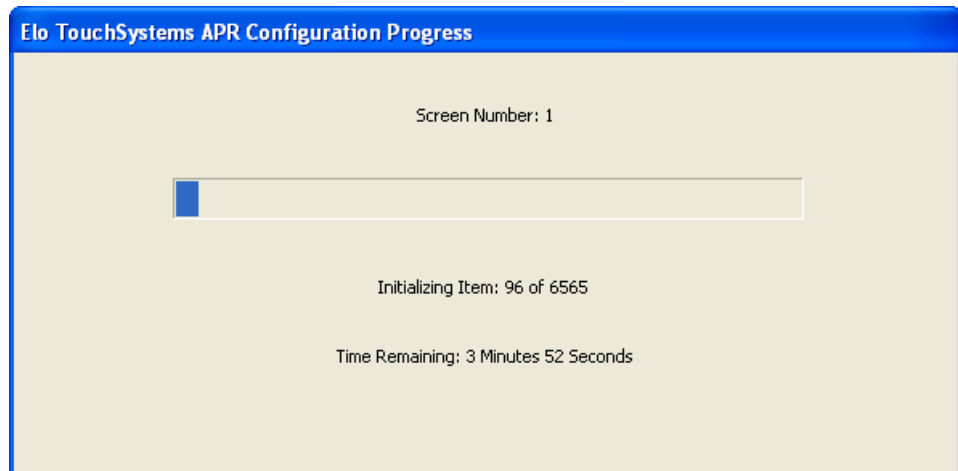
4. Agree to the license agreement and the files will be copied onto the unit:



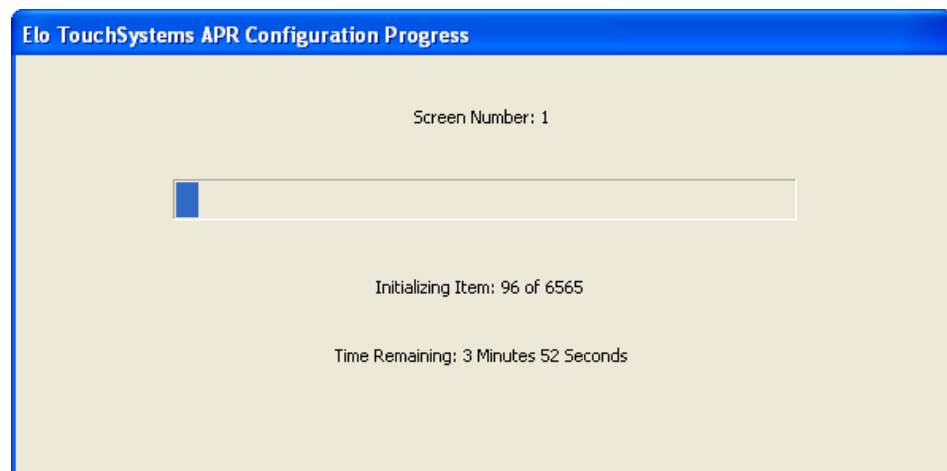
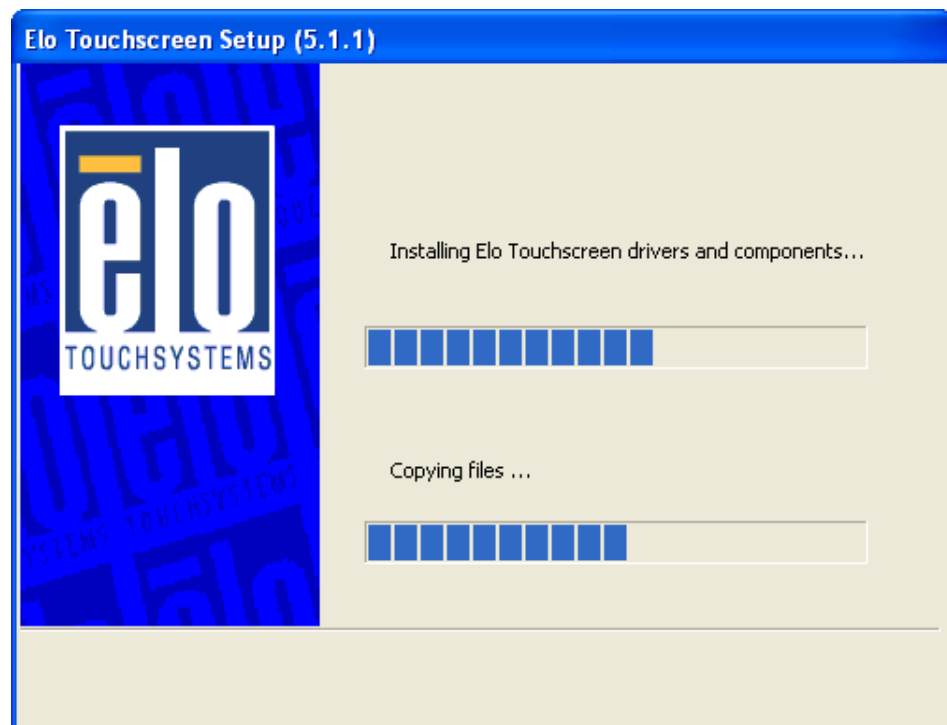
5. Depending if one does or does not have the touch screen part of the monitor attached to the unit, one of the following behaviors will be seen.
 - a. After the drivers are installed and the HP L5009tm monitor touch screen (USB cable) is **not** attached to the unit, the installation process is completed as indicated by the setup and one may view the readme file.



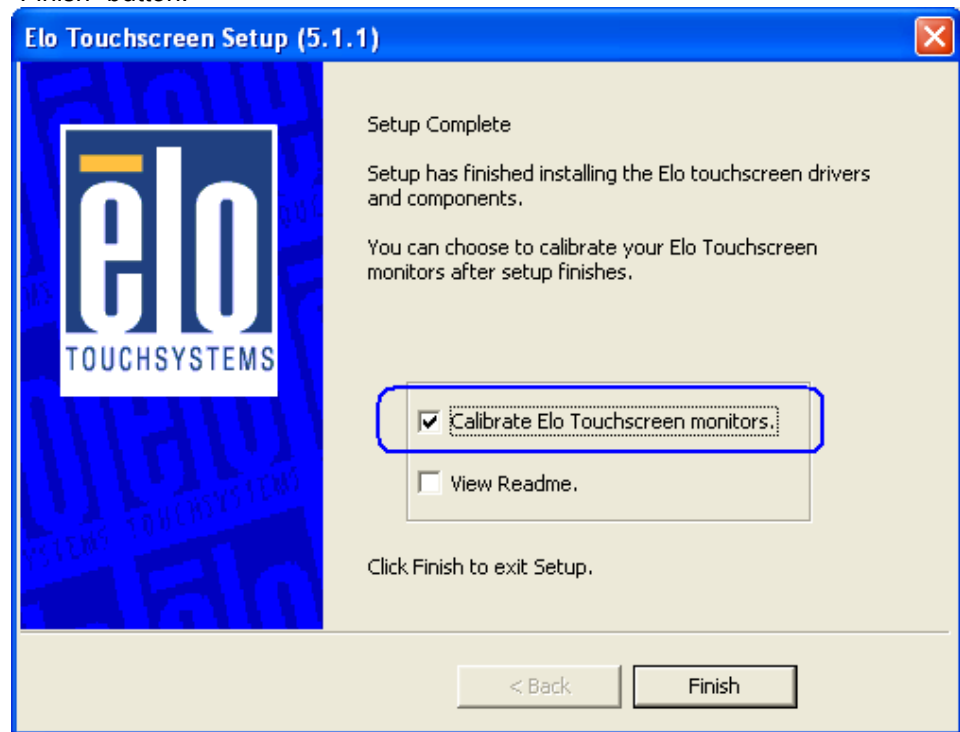
When one attaches the HP L5009tm monitor touch screen the APR configuration process will start, it will copy files to the hard drive (this process will take several minutes).



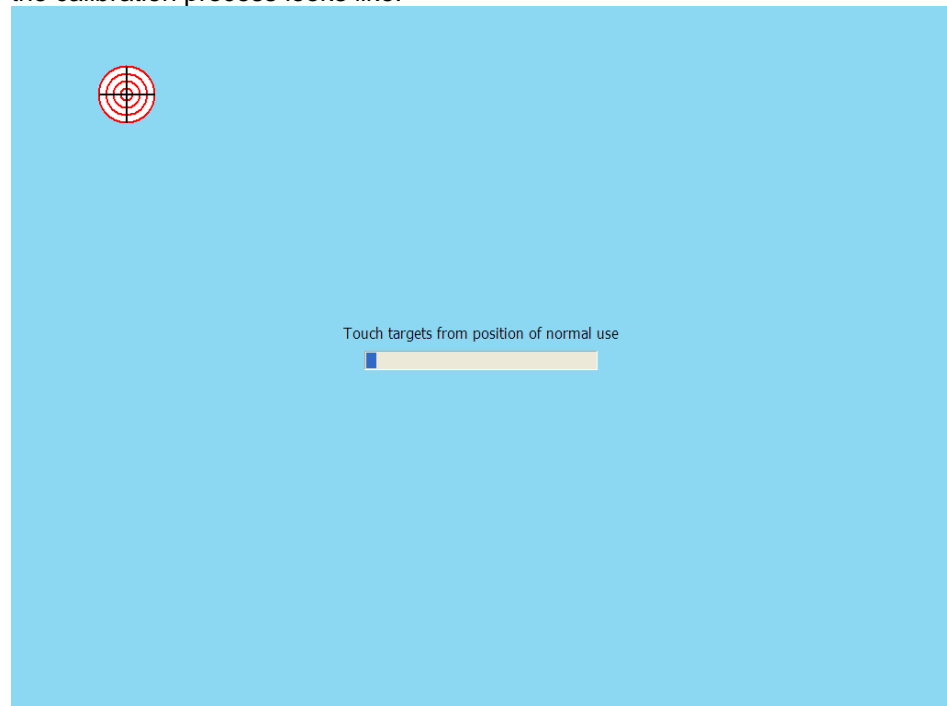
- b. With the HP L5009tm monitor touch screen (USB cable) attached to the unit and one has agreed to the license agreement the installation process for the driver will start and one will see some of the following screens:



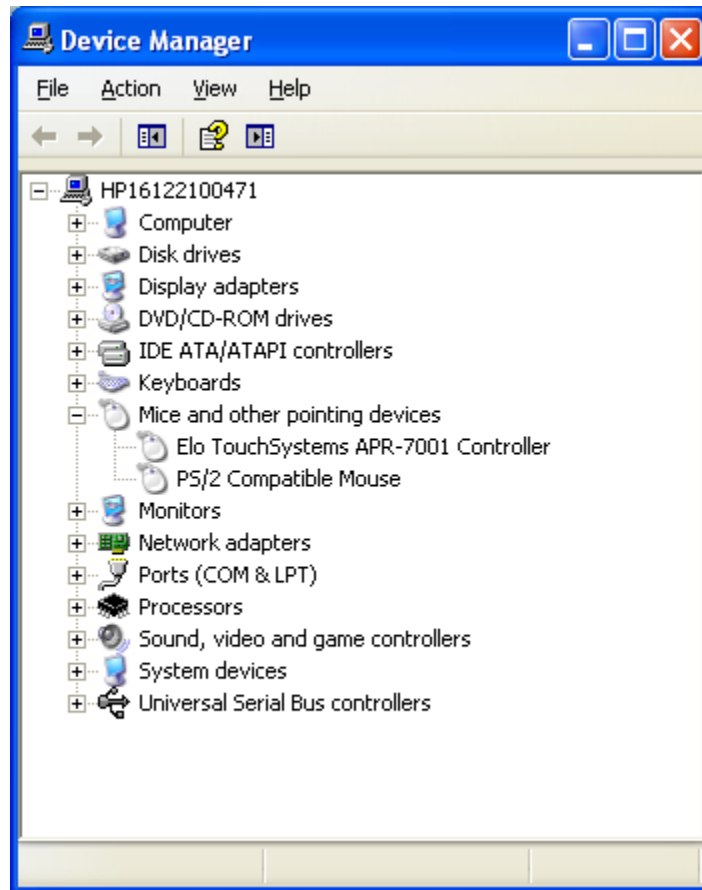
Select the option to “Calibrate Elo Touchscreen monitors” and click on the “Finish” button:



The calibrate option for HP L5009tm is a one point calibration, the screen during the calibration process looks like:



The following screen is showing Windows device manager after the HP L5009tm drivers are installed and when the touch screen is connected to the unit via the USB cable. After the Windows has loaded the device drivers for the touch screen there will be an entry in “Human Interface Devices” and “Mice and other pointing device” section in device manager as shown below:



After Windows has loaded the device drivers for the touch screen there will be an Elo icon in the system tray:

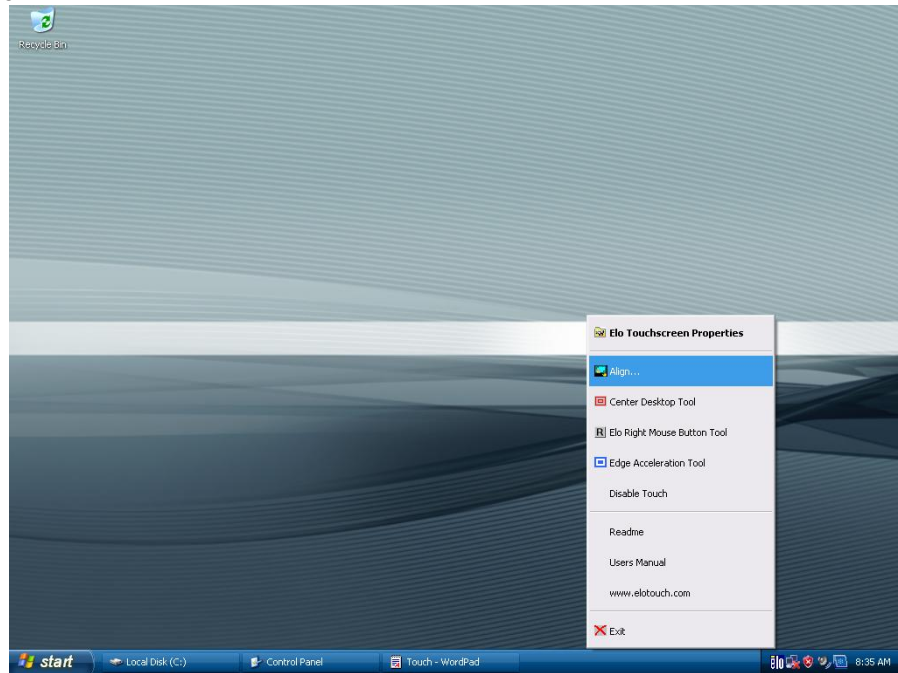


7.10.3 **Touch Screen Alignment**

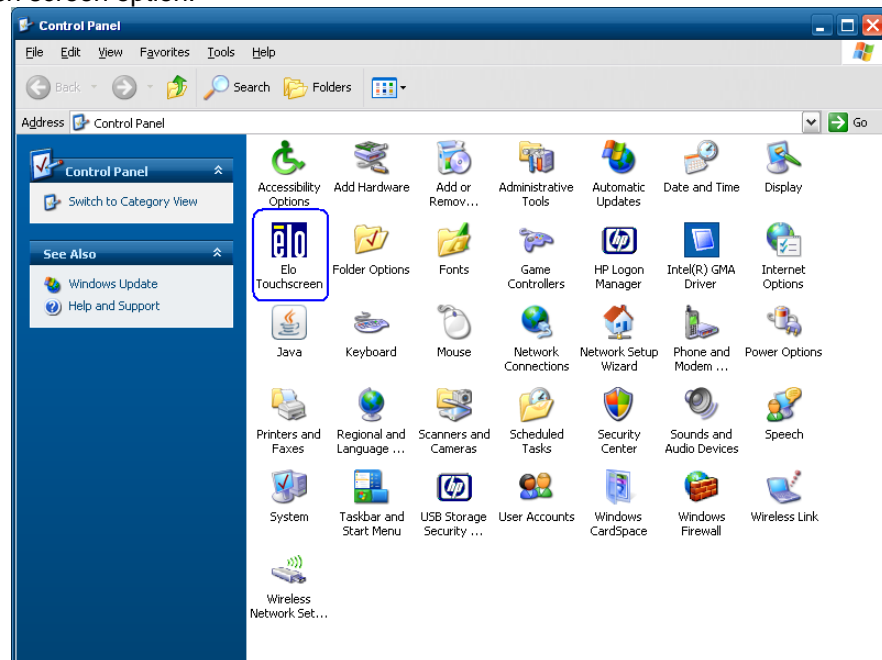
You will need to run the touch screen alignment program the first time you use the touch screen.

There are couple of methods to get to the alignment program for the touch screen. You can access this program either via the Elo ICON in the system tray or control panel.

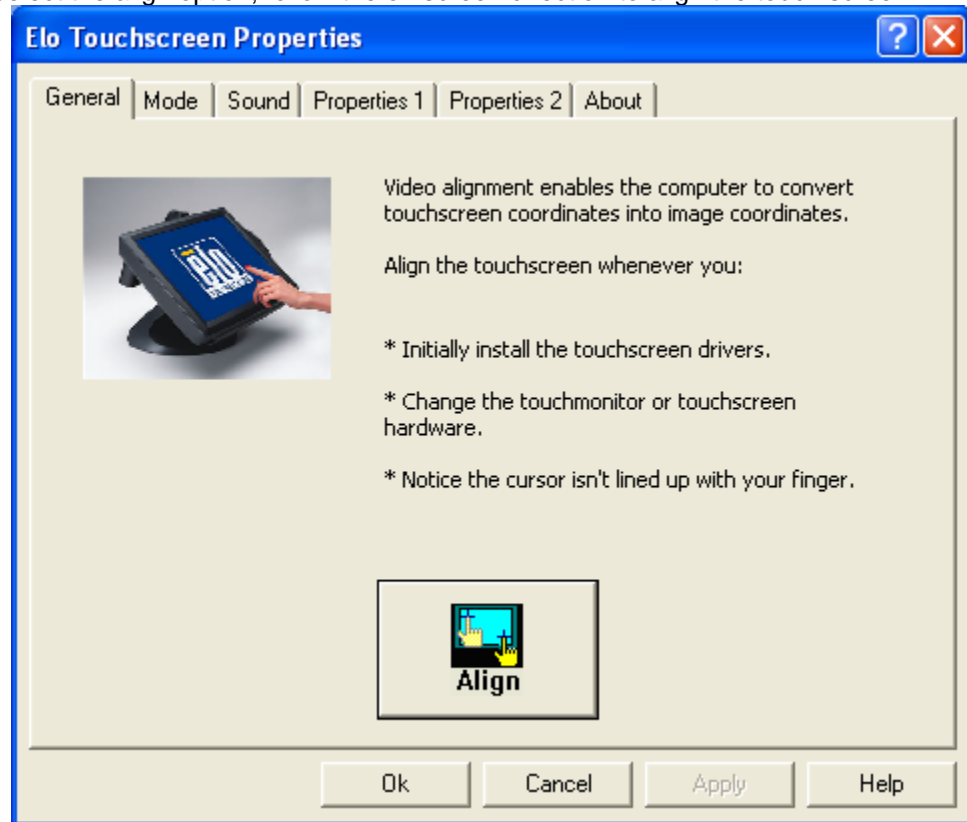
Method1: On the Elo icon in the system tray, click on the icon and select “Align” Option:



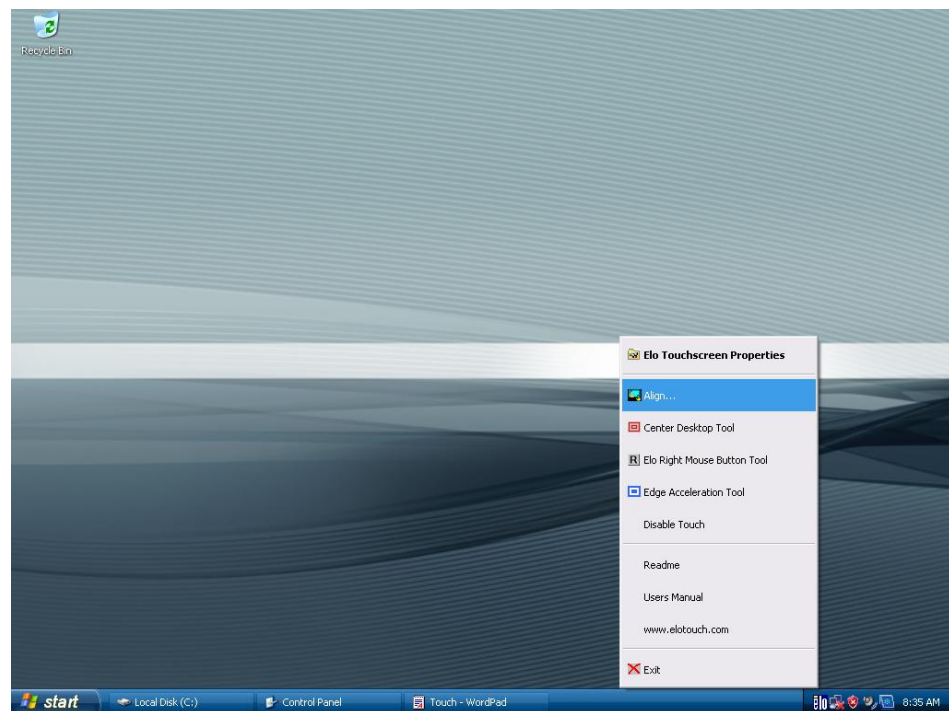
Method 2: Need to switch to classic view in control panel in order to see the Elo Touch screen option.



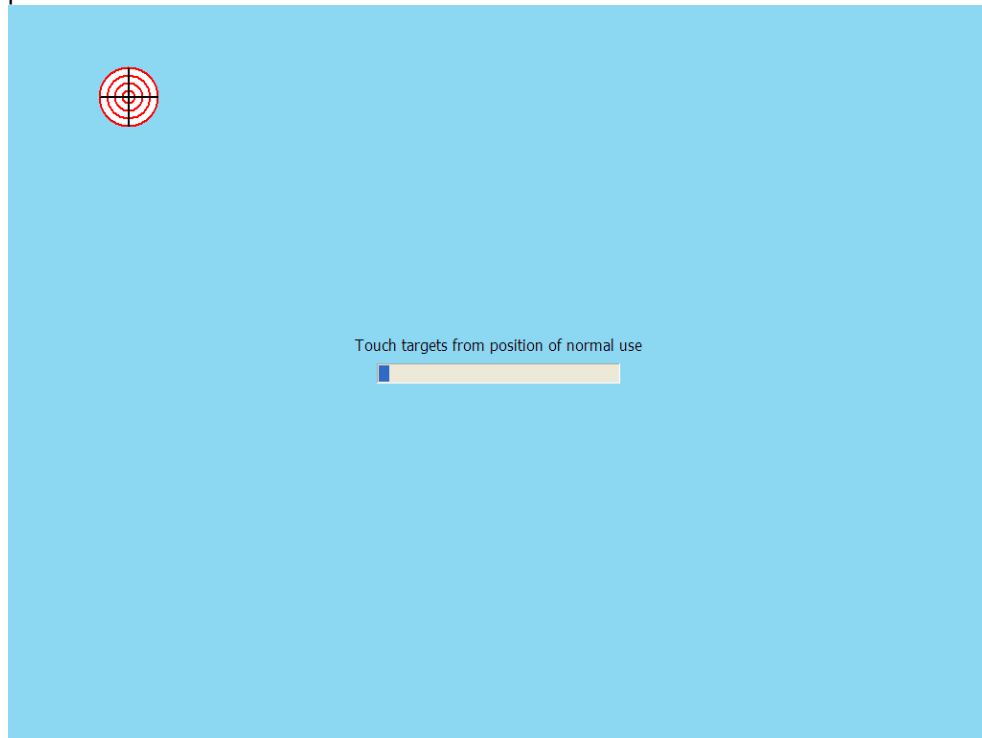
Select the align option; follow the on screen direction to align the touch screen:



or



During the alignment of the touch screen you will be presented with one target to press:



7.10.4 OPOS Drivers for the Touch Screen

No OPOS drivers are needed for the touch screen.

7.10.5 Testing the Touch Screen

Touch several places on the monitor screen and the mouse cursor should be present where the monitor was touched.

7.10.6 JPOS Drivers for the Touch Screen

No JPOS drivers are needed for the touch screen.

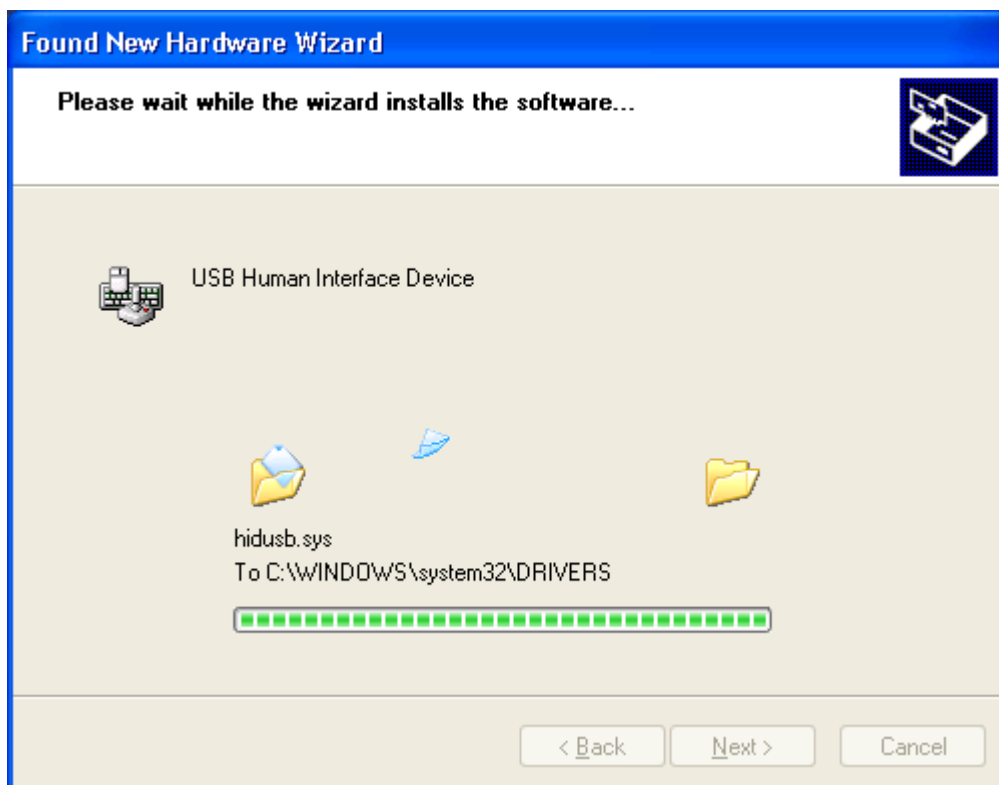
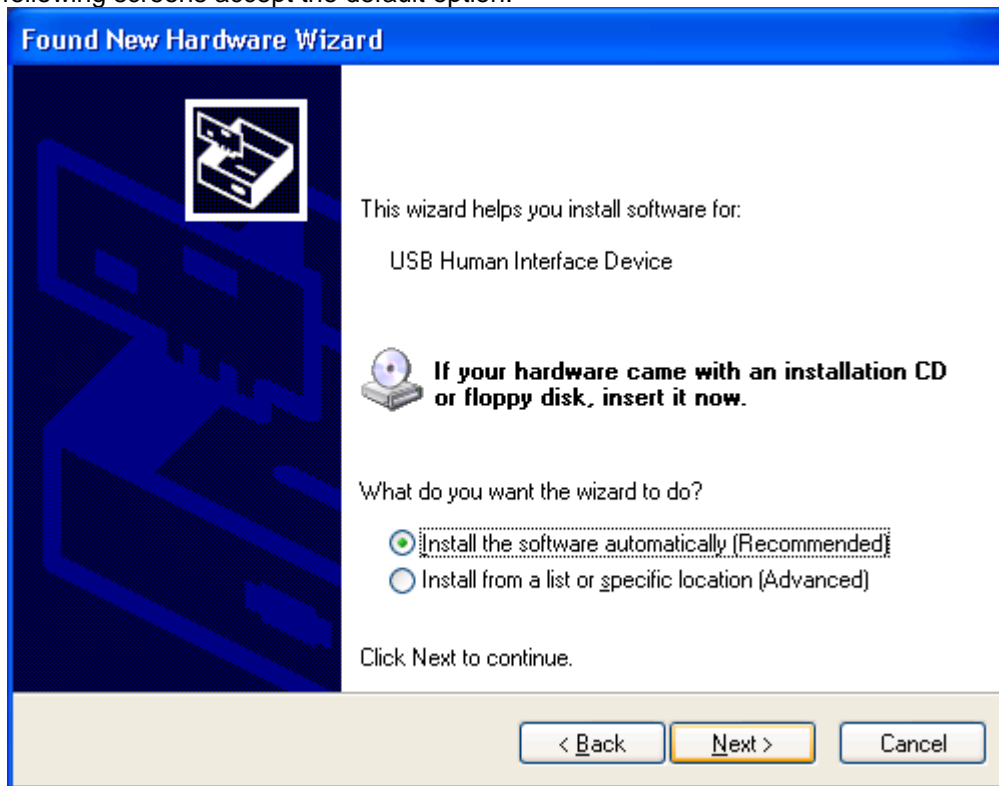
7.11 If prompted for native driver location (New Hardware Wizard)

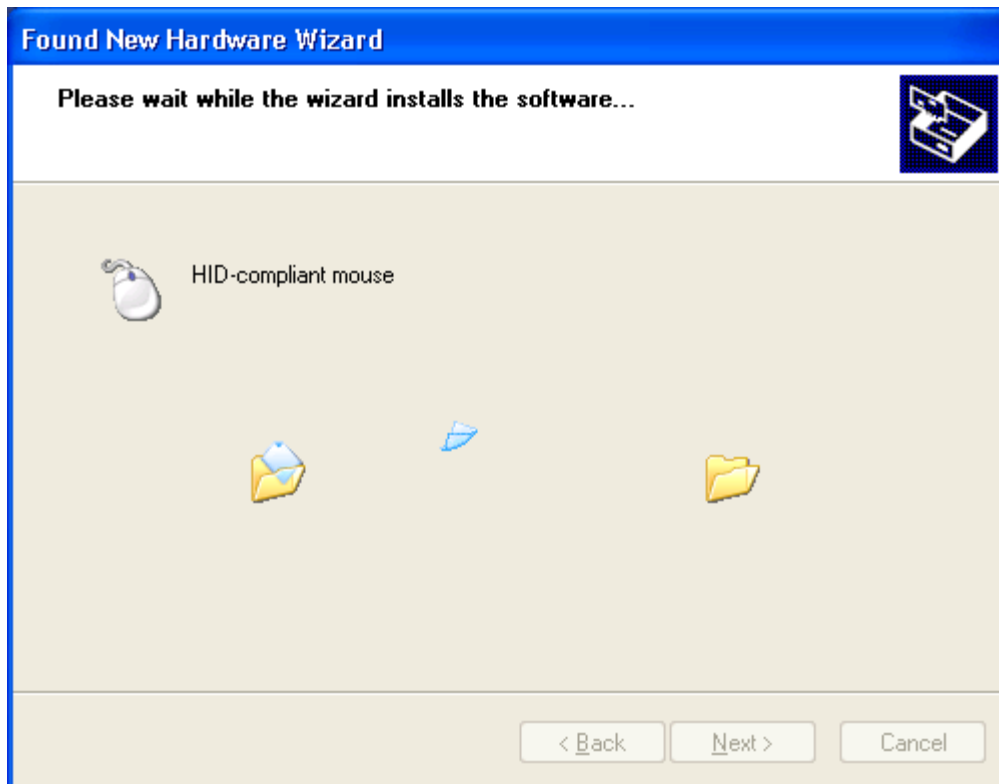
The MSR / Scanner / POS keyboard use the native driver that comes with Windows operating system. When you plug in one of these devices you receive the Windows' New Hardware Wizard dialog. The user needs to accept the defaults to install the drivers. Depending on the device you may not receive all the screens that are shown below to load the native drivers.

For the question "Can Windows connect to Windows Update to search for software?" user should select the option "NO, not this time":



For the following screens accept the default option:





When finished, click "FINISH" to complete the installation of the native drivers.

8 HP ap5000 Point of Sale System

The following section covers the peripherals that are integrated on the HP ap5000 point of sale system (touch screen / MSR / vacuum fluorescent display (VFD).

8.1 HP ap5000 Touch Screen



8.1.1 Connection

The touch screen on the HP ap5000 system is integrated into the system which is connected internally via PS/2 interface. There is no user connection required for this device.

8.1.2 Windows Drivers for the Touch Screen

The drivers for HP ap5000 touch screen may be obtained from the HP.COM web site / from the "HP Point of Sale System Software and Documentation CD" or the HP factory image. In the HP factory image, the touch screen drivers are located "C:\xxxx\ap5000 Touch Drivers" folder.

Note: Under Microsoft Vista, the touch screen install process must be run with ADMINISTRATOR privileges.

The following is an overview of the steps to install the touch screen drivers and applets:

1. Start the touch screen installer from the location that was mentioned in the beginning of this section.

Note: On the ap5000 unit with a Microsoft Windows image, the drivers for the ap5000 touch screen are pre-installed in the image.

2. Follow the prompts that appear on the screen.
3. After the drivers are installed, please select the option to calibrate the touch screen monitor and follow the instructions on the screen.

Details installation instructions

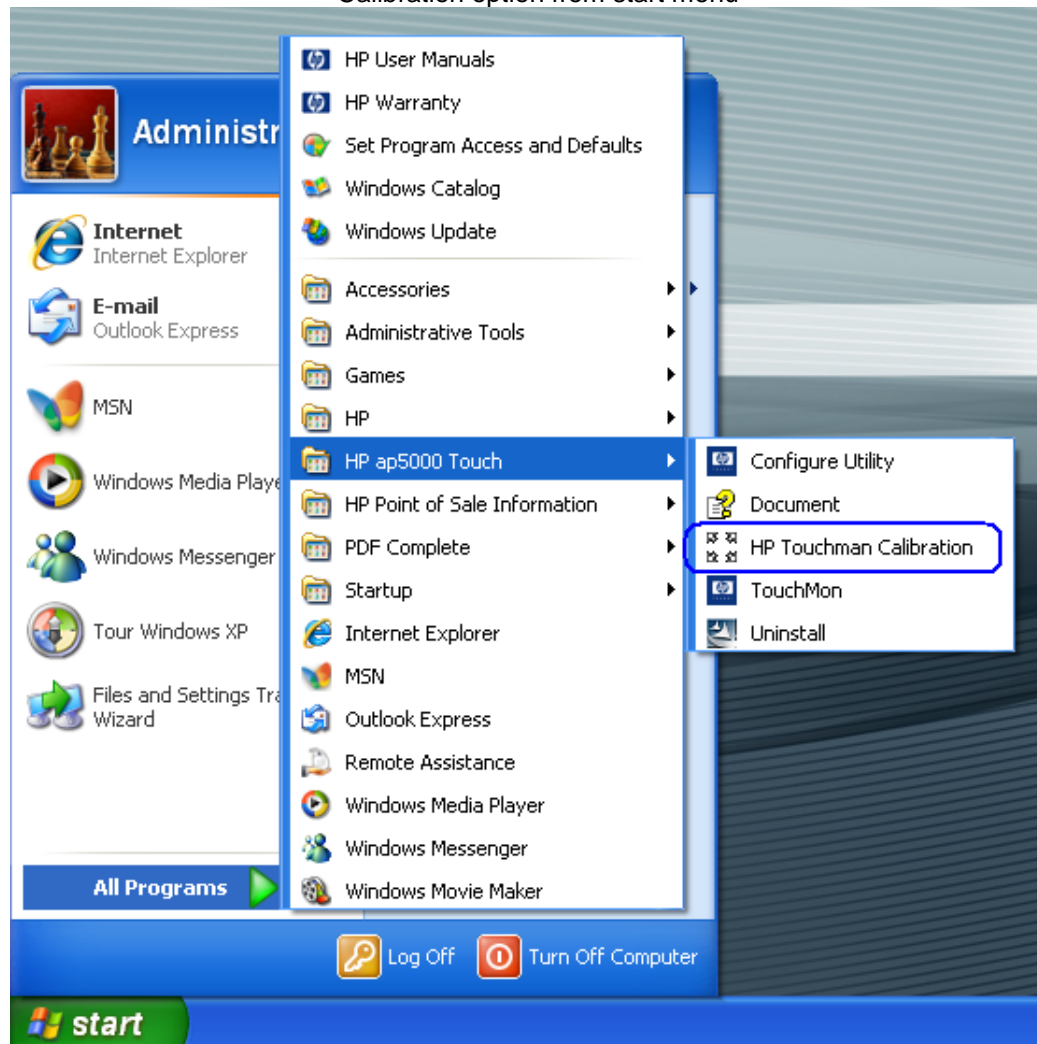
1. Start the touch screen installer from the location that was mentioned in the beginning of this section.

Note: On the ap5000 unit with a Microsoft Windows image, the drivers for the ap5000 touch screen are pre-installed in the image.

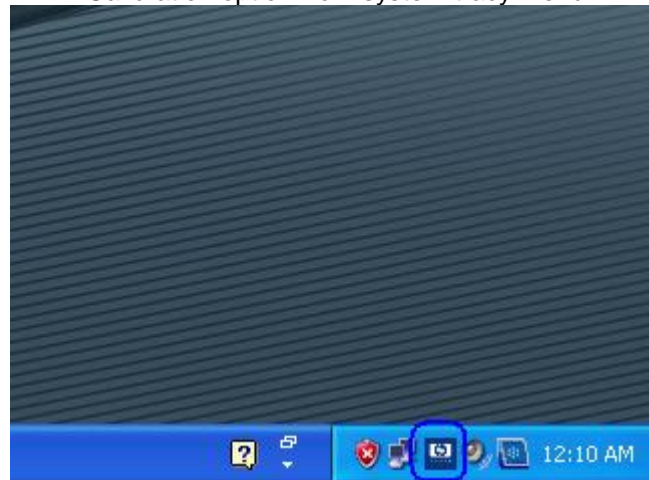
One must have ADMINISTRATOR privileges in order to install the drivers.

2. Follow the prompts that appear on the screen.
3. After the drivers are installed, please select the option to calibrate the touch screen monitor and follow the instructions on the screen by launching the calibration option in the start menu or from the system tray.

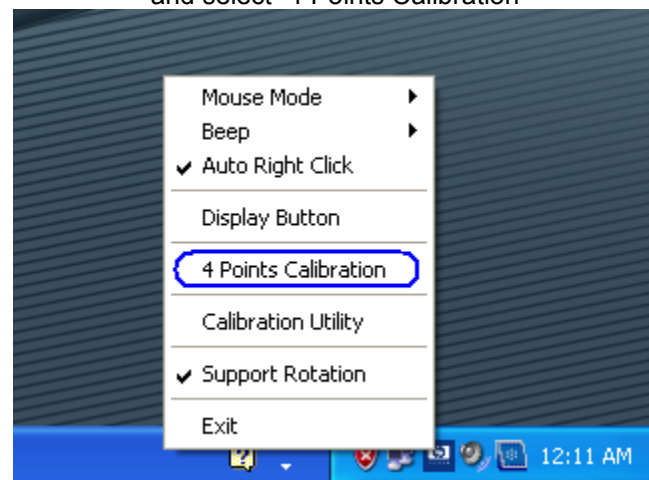
Calibration option from start menu



Calibration option from system tray menu



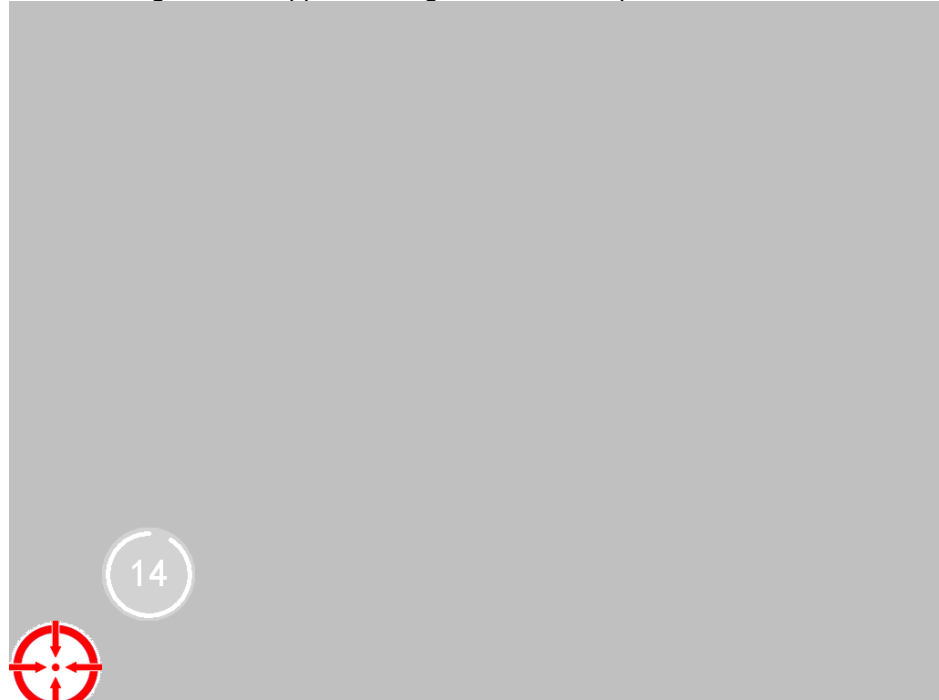
Right click on the touch screen option
and select "4 Points Calibration"



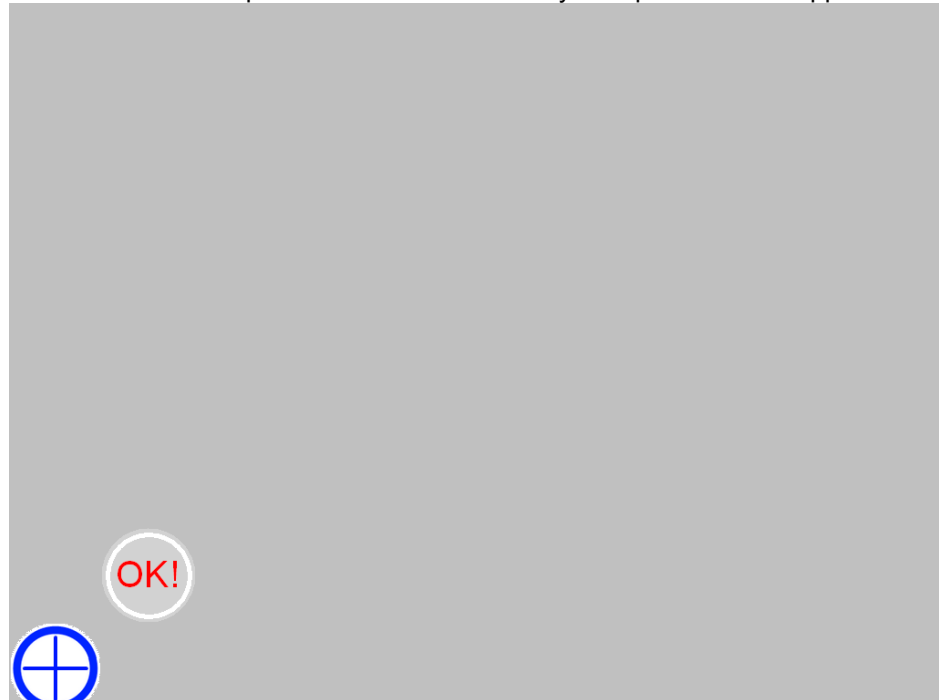
The calibrate option for HP ap5000 is four button calibration; one button appearing in each corner of the screen.

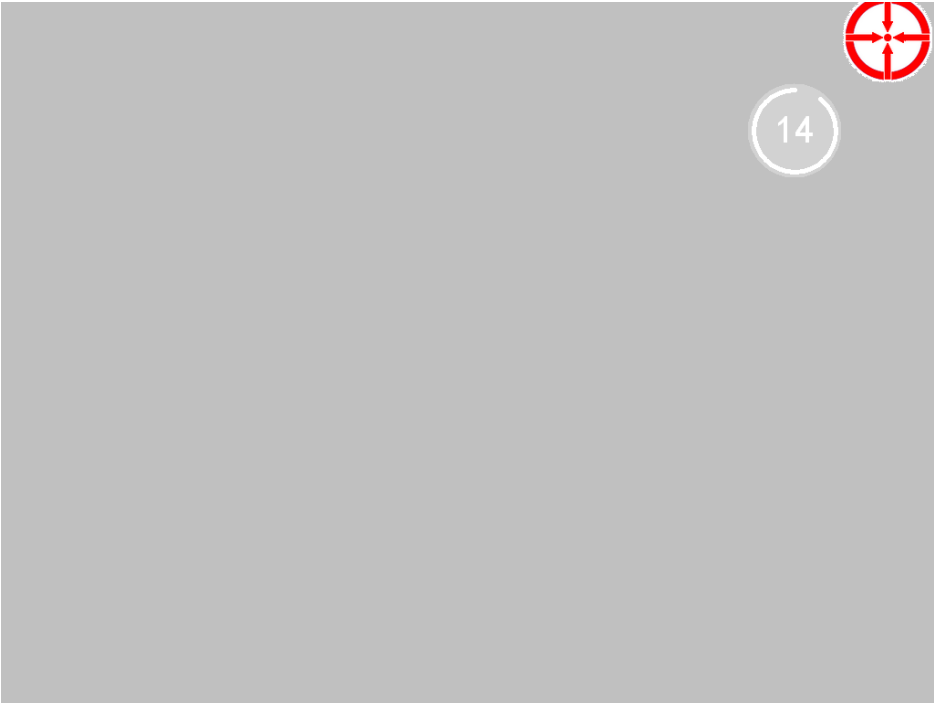
Note: When the red circle appear on the display, touch and hold the center of the red circle until it says OK.

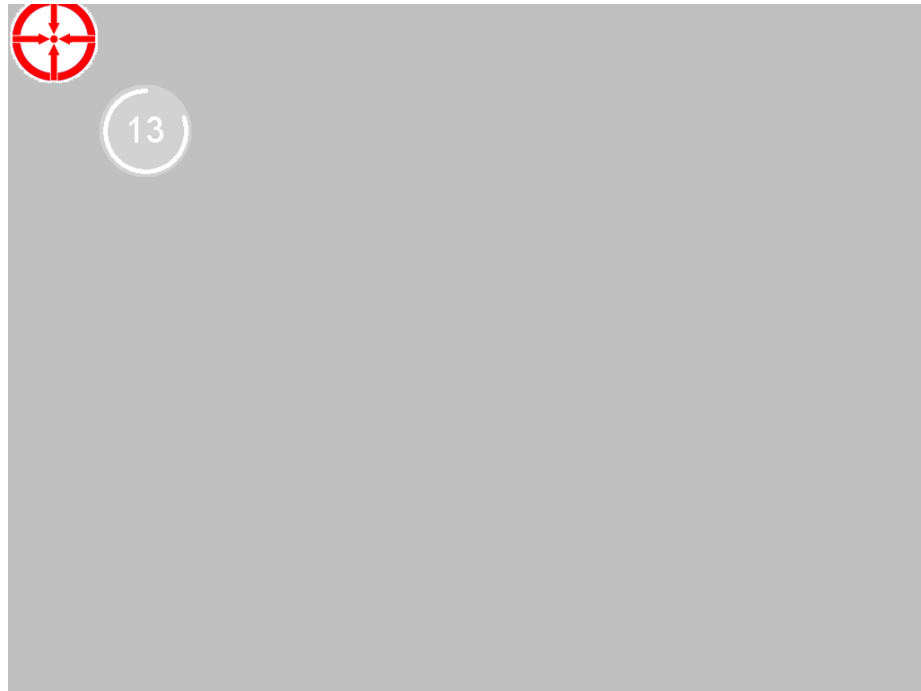
The following screens appear during the calibration process:



After the calibration point has been successfully accepted an “OK” appears:



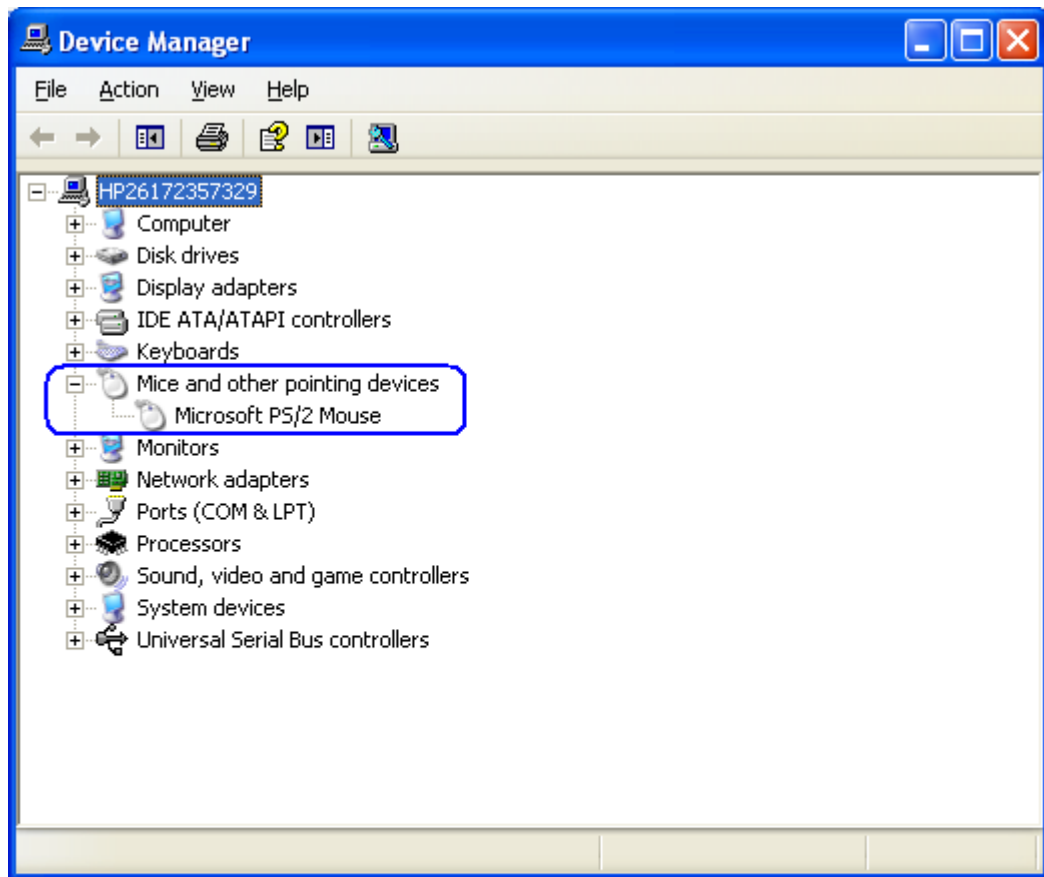




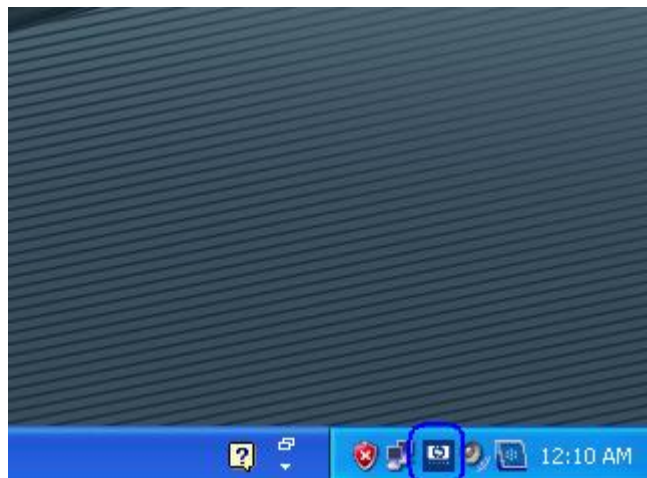
After all four points have been successfully calibrated, several screens will appear that read and write the calibration parameters. The following is a screen capture of the read screen that will appear:



The following screen is showing Windows device manager after the HP ap5000 drivers are installed:



After Windows has loaded the device drivers for the touch screen there will be an HP icon in the system tray:



8.1.3 OPOS Drivers for the ap5000 Touch Screen

No OPOS drivers are needed for the touch screen.

8.1.4 Testing the Touch Screen

Touch several places on the monitor screen and the mouse cursor should be present where the monitor was touched.

8.1.5 JPOS Drivers for the ap5000 Touch Screen

No JPOS drivers are needed for the touch screen.

8.2 HP ap5000 MSR (Magnetic Stripe Reader)



8.2.1 Connection

The MSR on the HP ap5000 system is integrated into the system which is connected internally via serial interface; default is COM4. There is no user connection required for this device.

	ap5000 MSR
Port	COM4
Baud Rate	19200
Data Bit	8
Parity	None
Stop Bit	1
Flow Control	None

8.2.2 Windows Drivers for the HP ap5000 MSR

Windows operating system supports serial port COM4, so no extra drivers are needed to be installed.

8.2.3 OPOS Drivers for the HP ap5000 MSR

The HP ap5000 OPOS drivers can be found on the "HP Point of Sale System Software and Documentation CD". On the HP POS factory image the drivers are installed in the image, for reference the drivers are located "C:\xxxxx\Point of Sale\ MSR HP ap5000\ap5000 MSR OPOS" sub-directory.

8.2.4 Testing HP ap5000 MSR

8.2.4.1 Testing HP ap5000 MSR in non-OPOS mode

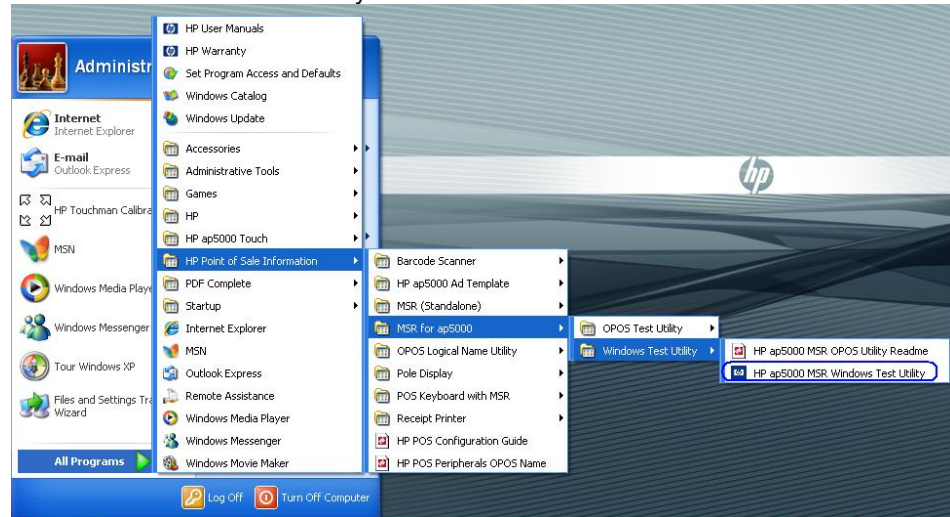
The following is overview of the steps to test the ap5000 MSR followed by details steps:

1. Start the non-OPOS test utility from Windows start menu.

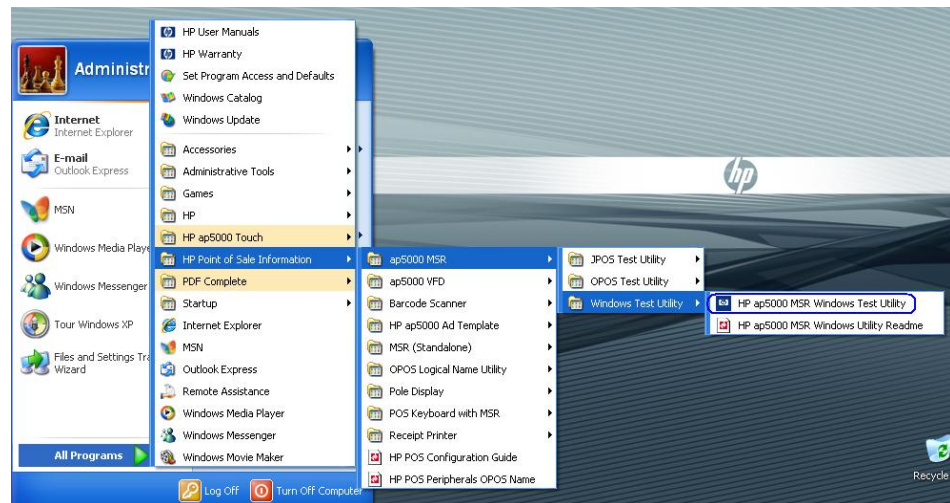
2. Select the COM port from the drop down box or keep the default option of “Auto” which will search for the ap5000 MSR device. Click on the “Test Mode” button to start the test.
3. When the “Test Mode” has been selected the COM port will appear and in the GUI title bar “(Test Mode)” will appear. At this point when one swipes a card in the ap5000 MSR, the data will appear in the test utility.
4. To exit the application:
 - a. Click “Test Mode” so “(Test Mode)” does not appear in the title of the GUI.
 - b. Click on “Exit” to close test applet.

Detail Steps

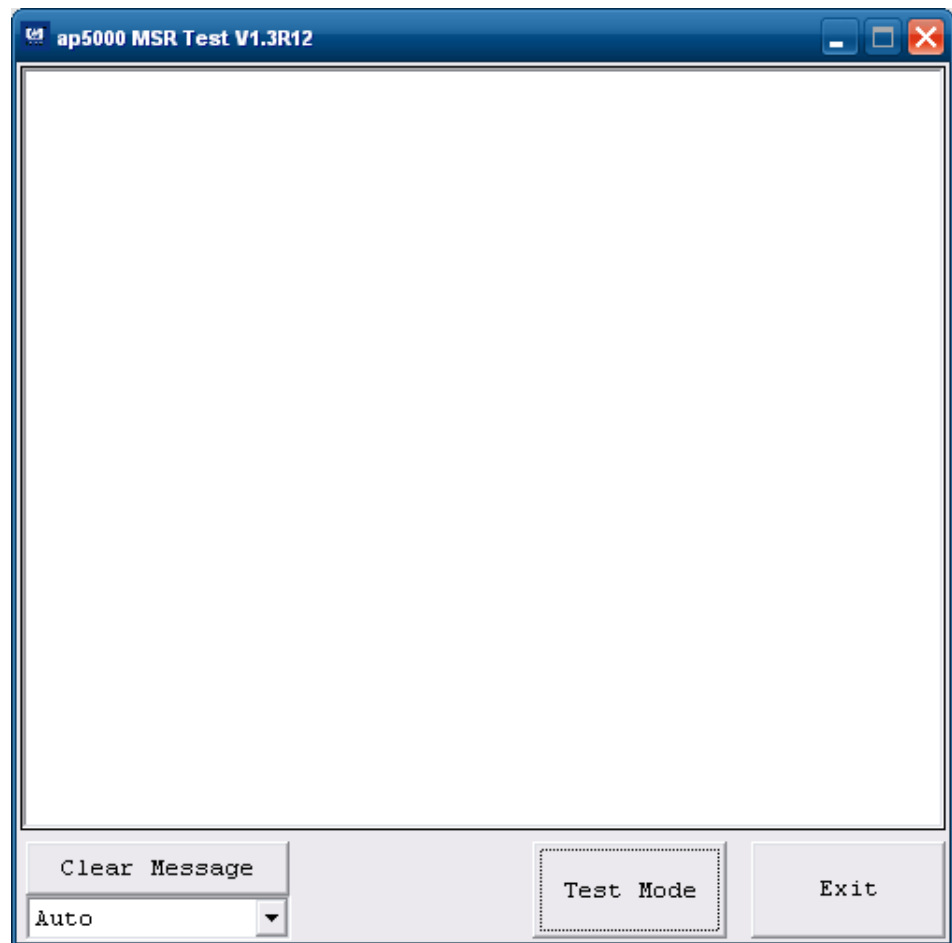
1. Start the non-OPOS test utility from Windows start menu.



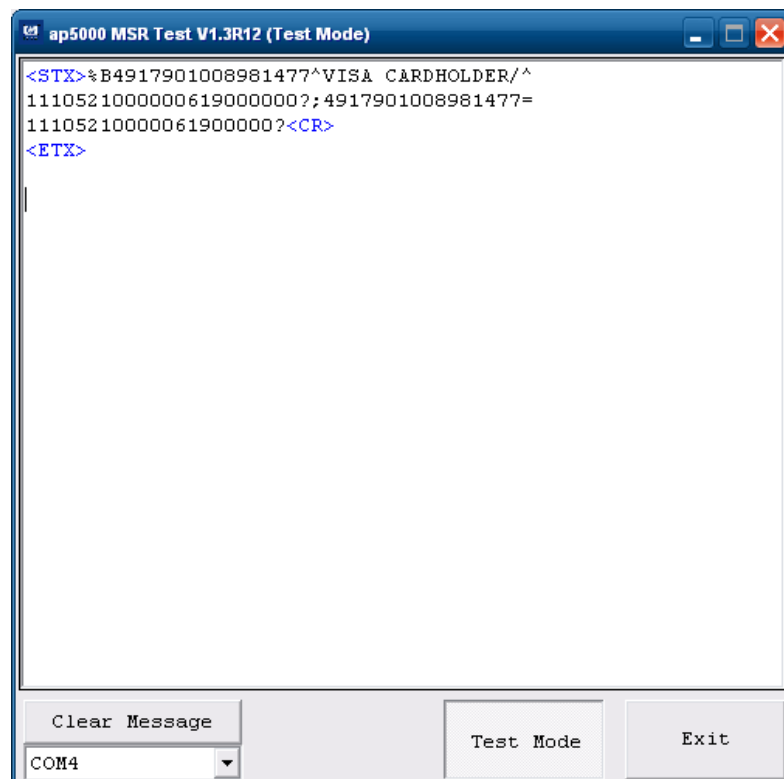
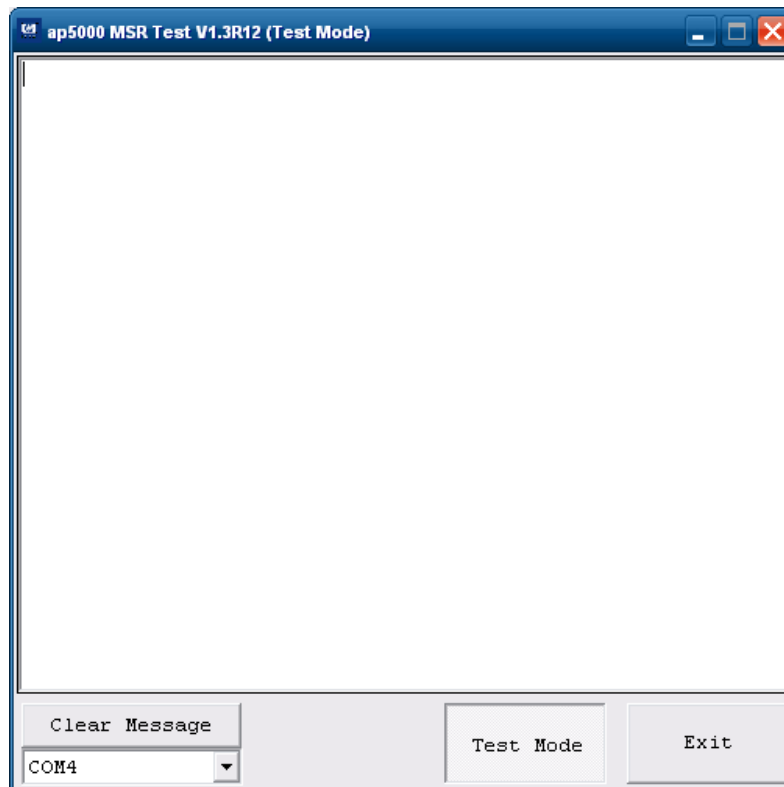
or



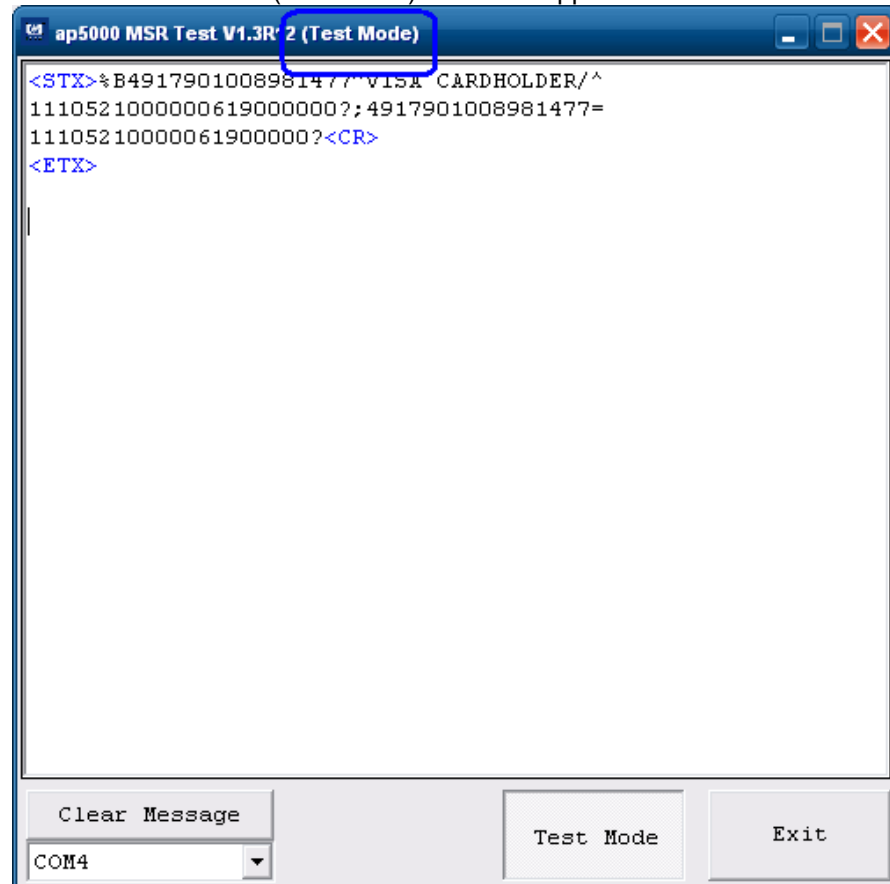
2. Select the COM port from the drop down box or keep the default option of “Auto” which will search for the ap5000 MSR device. Click on the “Test Mode” button to start the test.



3. When the “Test Mode” has been selected the COM port will appear and in the GUI title bar “(Test Mode)” will appear. At this point when one swipes a card in the ap5000 MSR, the data will appear in the test utility.



4. To exit the application:
 - a. Click "Test Mode" so "(Test Mode)" does not appear in the title of the GUI.



- b. Click on "Exit" to close test applet.

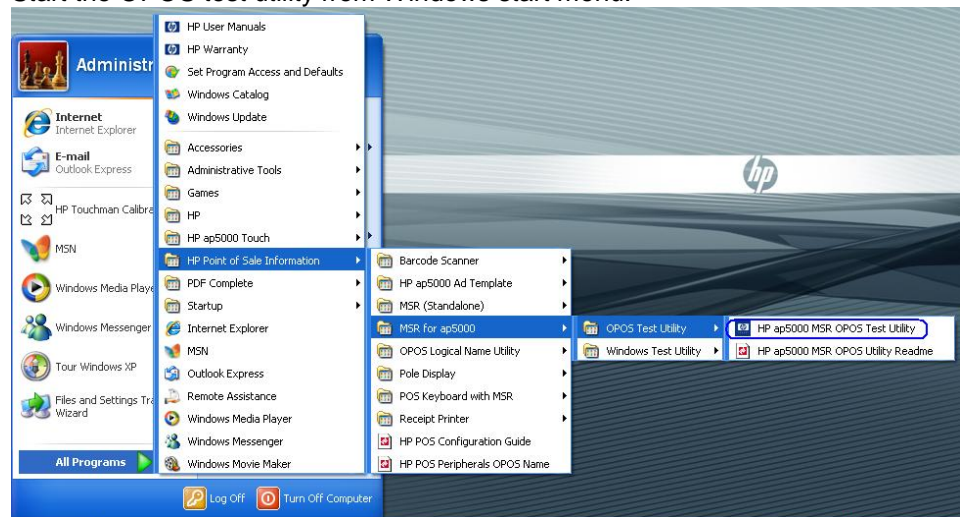
8.2.4.2 Testing HP ap5000 MSR in OPOS mode

The following is overview of the steps to test the ap5000 MSR followed by details steps:

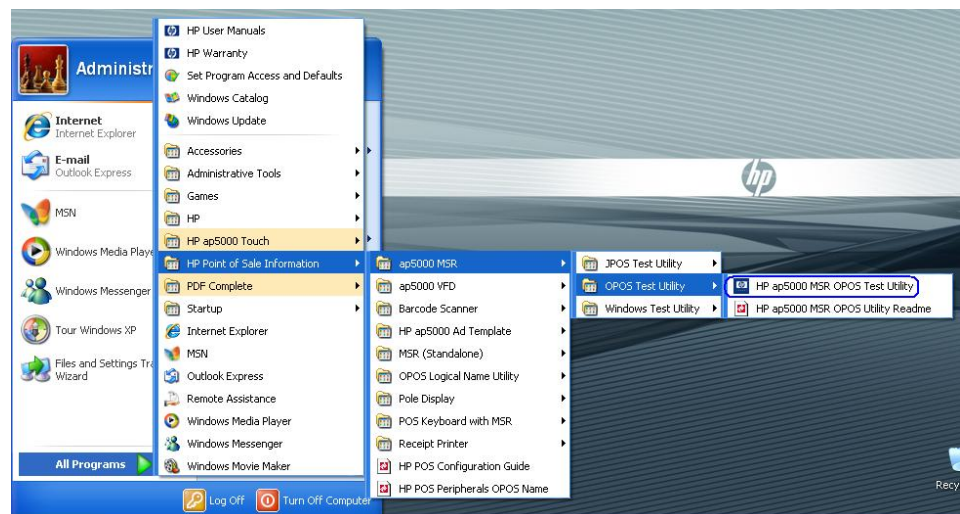
1. Start the OPOS test utility from Windows start menu.
2. Click on the "OPEN" button to start the test, should receive "Open Success" status message.
3. When one swipes a valid card in the ap5000 MSR data should appear in the test utility. The "x" represent will be replaced by the data that is read from the card that is swiped.
4. To exit the application:
 - a. Click "CLOSE" button.
 - b. Click on "X" in the upper right hand corner to close the test applet.

Detail Steps

1. Start the OPOS test utility from Windows start menu.



or



When the utility is launched the following is the GUI that will appear:

hp ap5000 MSR OPOS Test Utility V1.0.4

Please swipe a card.

Account number:

Expiration date:

First Name:

Surname:

Middle initials:

Track1:

Track2:

Track3:

Track4:

Clear Open Close

2. Click on the “OPEN” button to start the test, should receive “Open Success” status message.

hp ap5000 MSR OPOS Test Utility V1.0.4

Please swipe a card.

Account number:

Expiration date:

First Name:

Surname:

Middle initials:

Track1:

Track2:

Track3:

Track4:

Clear Open Close

13:24:08: Open: Success
13:24:08: Claim: Success

3. When one swipes a valid card in the ap5000 MSR data should appear in the test utility. The "x" represent will be replaced by the data that is read from the card that is swiped.

The screenshot shows a Windows-style application window titled "hp ap5000 MSR OPOS Test Utility V1.0.4". The window has a blue title bar with a close button in the top right corner. The main area is a light beige color. At the top, it says "Please swipe a card." Below this, there are several input fields for card data: "Account number:" (with a placeholder of 15 'x' characters), "Expiration date:" (with "1301"), "First Name:" (with "YOU"), "Surname:" (with "A"), "Middle initials:" (with "GIFT FOR"), "Track1:" (with "Bxxxxxxxxxxxxxx^A GIFT FOR YOU/ ^13xxxxxxxxxx"), "Track2:" (with "xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx"), "Track3:" (empty), and "Track4:" (empty). Below these fields are three buttons: "Clear", "Open", and "Close". At the bottom of the window is a log area with a vertical scrollbar, containing the following text: "13:24:08: Open: Success", "13:24:08: Claim: Success", and "13:24:33: DataEvent Count: 1".

hp ap5000 MSR OPOS Test Utility V1.0.4

Please swipe a card.

Account number: xxxxxxxxxxxxxxxxx

Expiration date: 1301

First Name: YOU

Surname: A

Middle initials: GIFT FOR

Track1: Bxxxxxxxxxxxxxx^A GIFT FOR YOU/ ^13xxxxxxxxxx

Track2: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

Track3:

Track4:

Clear Open Close

13:24:08: Open: Success
13:24:08: Claim: Success
13:24:33: DataEvent Count: 1

4. To exit the application:
 - a. Click "CLOSE" button.
 - b. Click on "X" in the upper right hand corner to close the test applet.

hp ap5000 MSR OPOS Test Utility V1.0.4

Please swipe a card.

Account number:

Expiration date:

First Name:

Surname:

Middle initials:

Track1:

Track2:

Track3:

Track4:

Clear Open Close

13:24:08: Open: Success
13:24:08: Claim: Success

8.2.5 JPOS Drivers for the HP ap5000 MSR

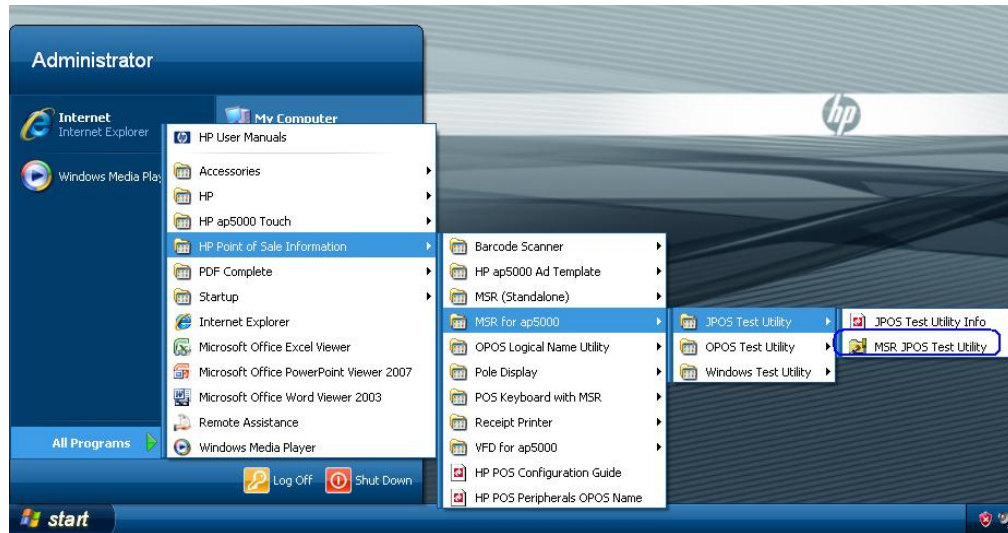
The JPOS drivers are included in the HP Point of Sale image or can be obtained from HP POS Drivers and Documentation CD or from the HP.COM web site.

The following is overview of the steps to test the ap5000 MSR followed by details steps:

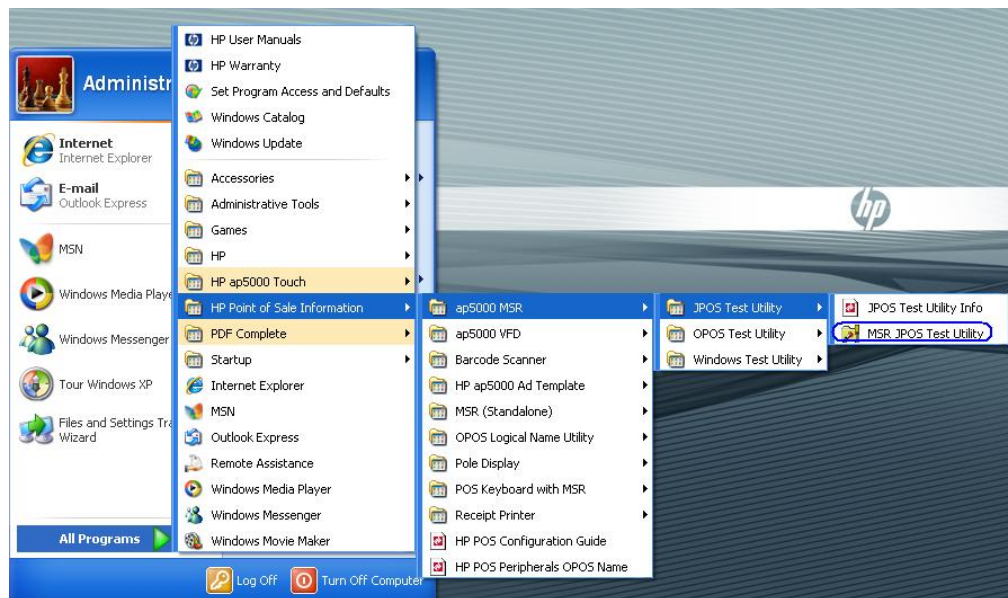
1. Start the JPOS test utility either using the link in the START MENU or by launching the POSTEST.BAT file locate in the JPOS folder in the ap5000 MSR folder.
2. Click on the "MSR" tab.
3. After clicking on the "MSR" tab.
4. Click on the "OPEN" button.
5. Click on the "CLAIM" button.
6. Check the "DATA EVENT ENABLED" so there is a check box.
7. Check the "DEVICE ENABLED" so there is a check box.
8. Swipe a credit card and text should appear in the field.
9. Click on "RELEASE" / "CLOSE" and then click "EXIT" to exit the JPOS test utility.

Detail Steps

1. Start the JPOS test utility either using the link in the START MENU:

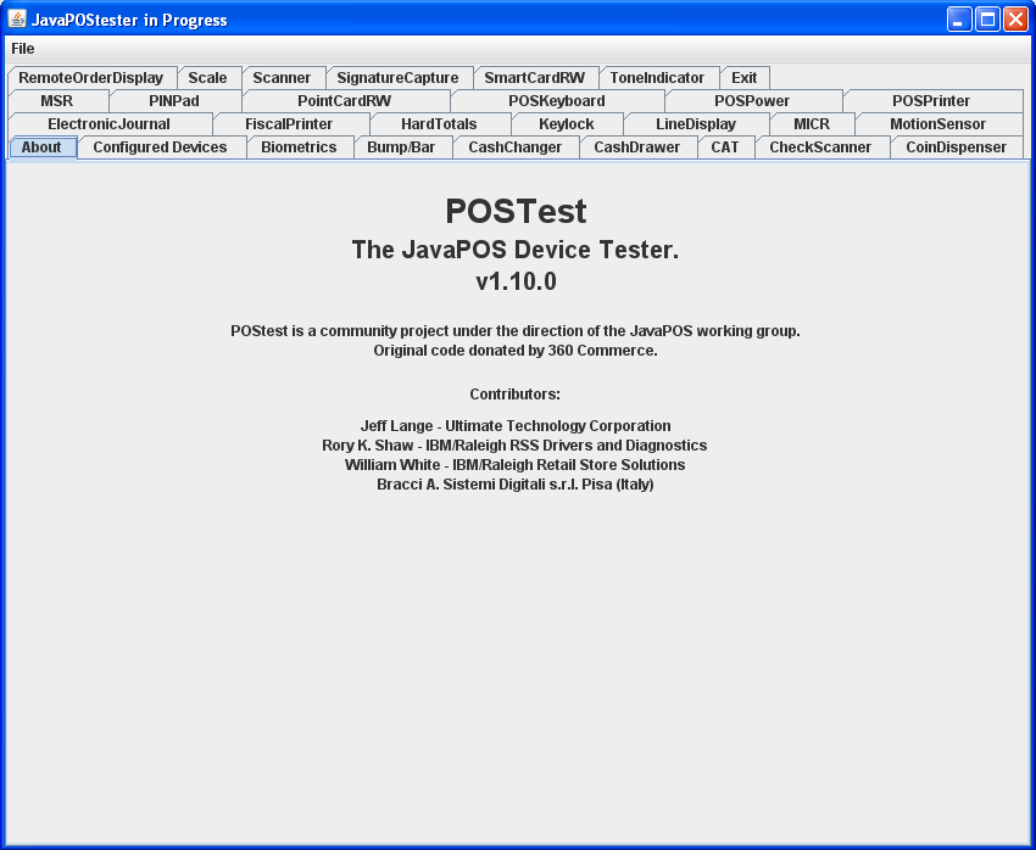


OR

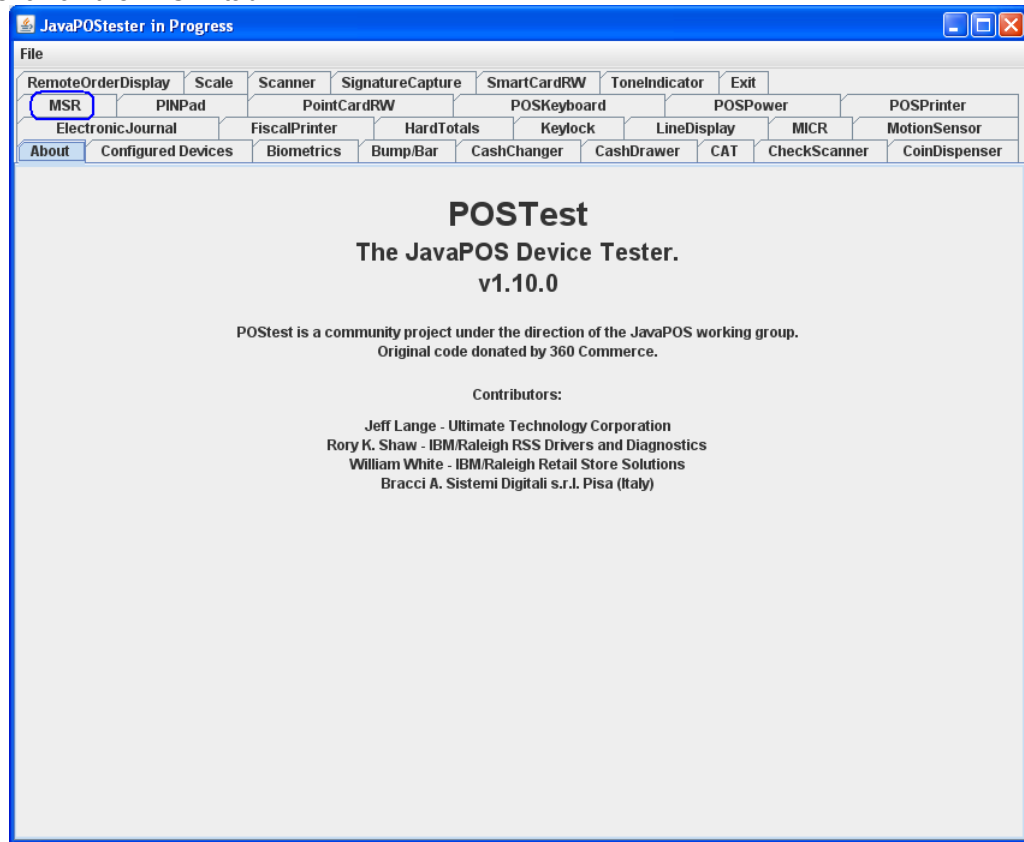


or by launching the POSTEST.BAT file that is located in the JPOS folder within the ap5000 MSR folder.

After a few seconds the JPOS test utility GUI will appear as shown below:



2. Click on the “MSR” tab:



3. After clicking on the “MSR” tab the screen should look like:

The screenshot shows the JavaPOSTester in Progress application window. The title bar reads "JavaPOSTester in Progress". The menu bar includes "File". The toolbar contains buttons for "RemoteOrderDisplay", "Scale", "Scanner", "SignatureCapture", "SmartCardRW", "ToneIndicator", and "Exit". The "MSR" tab is selected, and other tabs include "PINPad", "PointCardRW", "POSKeyboard", "POSPower", "POSPrinter", "ElectronicJournal", "FiscalPrinter", "HardTotals", "Keylock", "LineDisplay", "MICR", "MotionSensor", "About", "Configured Devices", "Biometrics", "Bump/Bar", "CashChanger", "CashDrawer", "CAT", "CheckScanner", and "CoinDispenser". Below the tabs, the "Logical name:" field displays "HPap5000MSR". To its right, the status "JPOS_S_CLOSED" is shown. A row of buttons includes "Open", "Claim", "Release", "Close", "Info", "Statistics", "Firmware", "O/C/E", and "EXIT". On the left, a list of checkboxes includes "Auto disable", "Data event enabled", "Device enabled", "Freeze events", "Decode data", "Parse decode data", "Transmit sentinels", "Per-track error reporting", "Track 1 enabled", "Track 2 enabled", "Track 3 enabled", and "Track 4 enabled". A "Clear Input" button is below these. The "MSR Reading" section contains labels for "Track 1 Data:", "Track 2 Data:", "Track 3 Data:", "Track 4 Data:", "Account number:", "Expiration date:", "Title:", "First name:", "Middle initial:", "Surname:", "Suffix:", "Service Code:", "Track 1 discretionary data:", "Track 2 discretionary data:", and "Data Count:". Each label is followed by a text input field. At the bottom right of this section are "Clear Fields" and "Refresh Fields" buttons.

The logical name of the device is “HPap5000MSR” which should appear in the logical name field. If another name is present, change the logical name to “HPap5000MSR”. If one clicks on the “Configured Device” tab, the names for the device will appear that will be used in the test utility.

4. Click on the “OPEN” button.
5. Click on the “CLAIM” button.

JavaPOSTester in Progress

File

RemoteOrderDisplay Scale Scanner SignatureCapture SmartCardRW ToneIndicator Exit

MSR PINPad PointCardRW POSKeyboard POSPower POSPrinter

ElectronicJournal FiscalPrinter HardTotals Keylock LineDisplay MICR MotionSensor

About Configured Devices Biometrics Bump/Bar CashChanger CashDrawer CAT CheckScanner CoinDispenser

Logical name: HPap5000MSR JPOS_S_IDLE

Open Claim Release Close Info Statistics Firmware O/C/E EXIT

☐ Auto disable

☐ Data event enabled

☐ Device enabled

☐ Freeze events

☒ Decode data

☒ Parse decode data

☐ Transmit sentinels

☐ Per-track error reporting

☐ Track 1 enabled

☐ Track 2 enabled

☐ Track 3 enabled

☐ Track 4 enabled

Clear Input

MSR Reading

Track 1 Data: 0

Track 2 Data: 0

Track 3 Data: 0

Track 4 Data: 0

Account number:

Expiration date:

Title:

First name:

Middle initial:

Surname:

Suffix:

Service Code:

Track 1 discretionary data:

Track 2 discretionary data:

Data Count: 0

Clear Fields Refresh Fields

6. Check the "DATA EVENT ENABLED" so there is a check box.
7. Check the "DEVICE ENABLED" so there is a check box.

JavaPOSTester in Progress

File

RemoteOrderDisplay Scale Scanner SignatureCapture SmartCardRW ToneIndicator Exit

MSR PINPad PointCardRW POSKeyboard POSPower POSPrinter

ElectronicJournal FiscalPrinter HardTotals Keylock LineDisplay MICR MotionSensor

About Configured Devices Biometrics Bump/Bar CashChanger CashDrawer CAT CheckScanner CoinDispenser

Logical name: HPap5000MSR JPOS_S_IDLE

Open Claim Release Close Info Statistics Firmware O/C/E EXIT

☐ Auto disable

☒ Data event enabled

☒ Device enabled

☐ Freeze events

☒ Decode data

☒ Parse decode data

☐ Transmit sentinels

☐ Per-track error reporting

☐ Track 1 enabled

☐ Track 2 enabled

☐ Track 3 enabled

☐ Track 4 enabled

Clear Input

MSR Reading

Track 1 Data: 0

Track 2 Data: 0

Track 3 Data: 0

Track 4 Data: 0

Account number:

Expiration date:

Title:

First name:

Middle initial:

Surname:

Suffix:

Service Code:

Track 1 discretionary data:

Track 2 discretionary data:

Data Count: 0

Clear Fields Refresh Fields

8. Swipe a credit card and text should appear in the field. Depending on the type of card there may or may not be information displayed in all of the track field.

The screenshot shows the 'JavaPOSTester in Progress' application window. The 'MSR' tab is selected in the top menu. The 'Logical name' is 'HPap5000MSR' and the status is 'JPOS_S_IDLE'. Below this are buttons for 'Open', 'Claim', 'Release', 'Close', 'Info', 'Statistics', 'Firmware', 'O/C/E', and 'EXIT'. On the left, there are checkboxes for various settings: 'Auto disable' (unchecked), 'Data event enabled' (checked), 'Device enabled' (checked), 'Freeze events' (unchecked), 'Decode data' (checked), 'Parse decode data' (checked), 'Transmit sentinels' (unchecked), 'Per-track error reporting' (unchecked), 'Track 1 enabled' (unchecked), 'Track 2 enabled' (unchecked), 'Track 3 enabled' (unchecked), and 'Track 4 enabled' (unchecked). A 'Clear Input' button is at the bottom of this list. The 'MSR Reading' section displays the following data:

Track 1 Data:	0	XXXXXXXXXXXXXXXXXXXX*TEST/P	XXXXXXXXXXXXXXXXXXXX
Track 2 Data:	0	XXXXXXXXXXXXXXXXXXXX=XXXXXXXXXXXXXXXXXXXX	
Track 3 Data:	0		
Track 4 Data:	0		
Account number:		XXXXXXXXXXXXXXXXXXXX	
Expiration date:		XXXX	
Title:			
First name:		TEST	
Middle initial:			
Surname:		P	
Suffix:			
Service Code:			
Track 1 discretionary data:			
Track 2 discretionary data:			
Data Count:	0		

At the bottom right of the MSR Reading section are 'Clear Fields' and 'Refresh Fields' buttons.

-
- JavaPOSTester in Progress
- File
- RemoteOrderDisplay Scale Scanner SignatureCapture SmartCardRW ToneIndicator Exit
- MSR PINPad PointCardRW POSKeyboard POSPower POSPrinter
- ElectronicJournal FiscalPrinter HardTotals Keylock LineDisplay MICR MotionSensor
- About Configured Devices Biometrics Bump/Bar CashChanger CashDrawer CAT CheckScanner CoinDispenser
- Logical name: HPap5000MSR JPOS_S_CLOSED
- Open Claim Release Close Info Statistics Firmware O/C/E EXIT
- ☐ Auto disable
- ☒ Data event enabled
- ☒ Device enabled
- ☐ Freeze events
- ☒ Decode data
- ☒ Parse decode data
- ☐ Transmit sentinels
- ☐ Per-track error reporting
- ☐ Track 1 enabled
- ☐ Track 2 enabled
- ☐ Track 3 enabled
- ☐ Track 4 enabled
- Clear Input
- MSR Reading
- | | | | |
|---------------|---|---|----------------------|
| Track 1 Data: | 0 | XXXXXXXXXXXXXXXXXXXXTEST/P | XXXXXXXXXXXXXXXXXXXX |
| Track 2 Data: | 0 | XXXXXXXXXXXXXXXXXXXX=XXXXXXXXXXXXXXXXXXXX | |
| Track 3 Data: | 0 | | |
| Track 4 Data: | 0 | | |
- Account number: XXXXXXXXXXXXXXXXXXXX
- Expiration date: XXXX
- Title:
- First name: TEST
- Middle initial:
- Surname: P
- Suffix:
- Service Code:
- Track 1 discretionary data:
- Track 2 discretionary data:
- Data Count: 0
- Clear Fields Refresh Fields

8.3 HP ap5000 VFD (Vacuum Fluorescent Display)



8.3.1 Connection

The VFD on the HP ap5000 system is connected via serial interface. When attached at the HP factory the VFD is installed on COM2 as the default location. The HP ap5000 VFD can be connected either on COM2 or COM1 on the ap5000 unit; it **cannot** be used on COM3.

If the VFD is moved to factory default location, please go to into the BIOS and enable 5V on the COM2 and disable 5V on COM1.

	ap5000 VFD
Port	COM2 (default) or COM1
Baud Rate	38400
Data Bit	8
Parity	None
Stop Bit	1
Flow Control	None

8.3.2 Windows Drivers for the HP ap5000 VFD

Windows operating system supports serial port COM1/COM2, so no extra drivers are needed to be installed.

8.3.3 OPOS Drivers for the HP ap5000 VFD

The HP ap5000 OPOS drivers can be found on the "HP Point of Sale System Software and Documentation CD". On the HP POS factory image the drivers are installed in the image, for reference the drivers are located "C:\xxxxx\Point of Sale\VFD HP ap5000\ap5000 VFD OPOS" sub-directory.

8.3.4 Testing HP ap5000 VFD

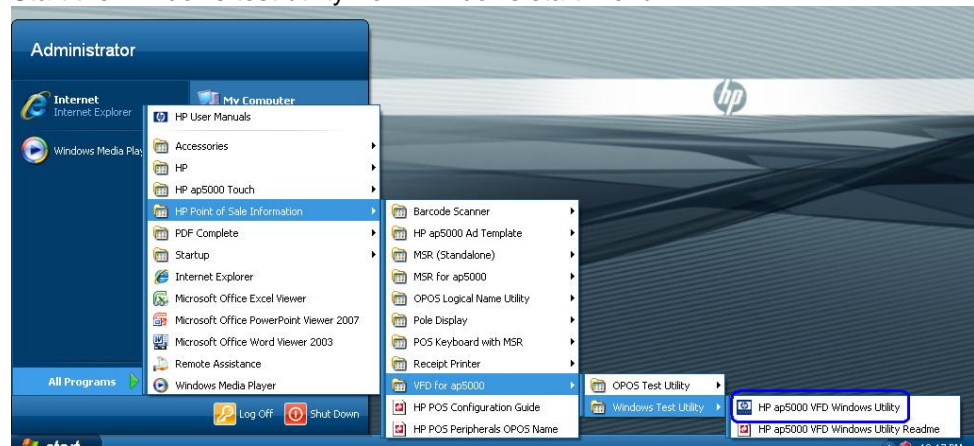
8.3.4.1 Testing HP ap5000 VFD in non-OPOS mode

The following is an overview of the steps to test the ap5000 VFD followed by detailed steps:

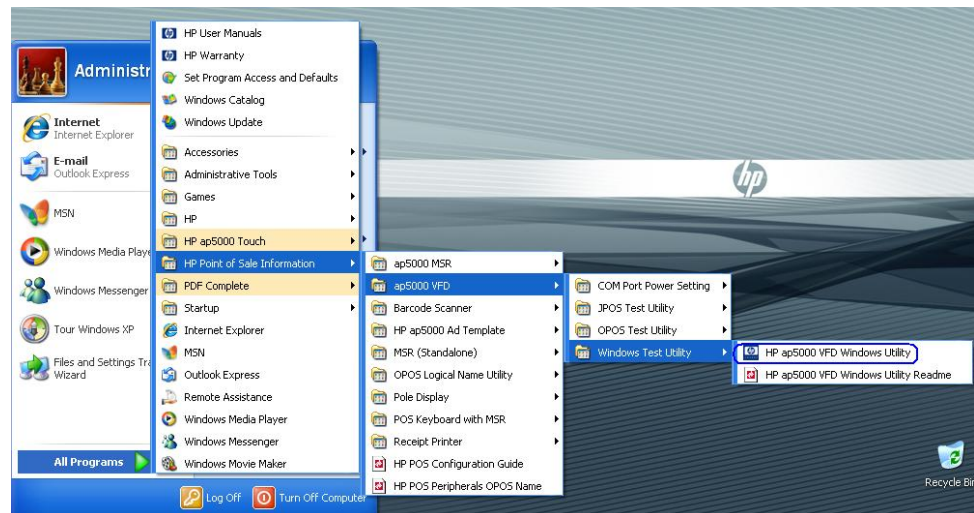
1. Start the Windows test utility from Windows start menu.
2. Select the COM port from the drop down box or keep the default option. The ap5000 VFD is shipped by default on COM2 from the HP factory.
3. Click on the “Test” button once “READY” appears in the status box.
4. To exit the application:
 - a. Click on “Exit” to close test applet.

Detail Steps

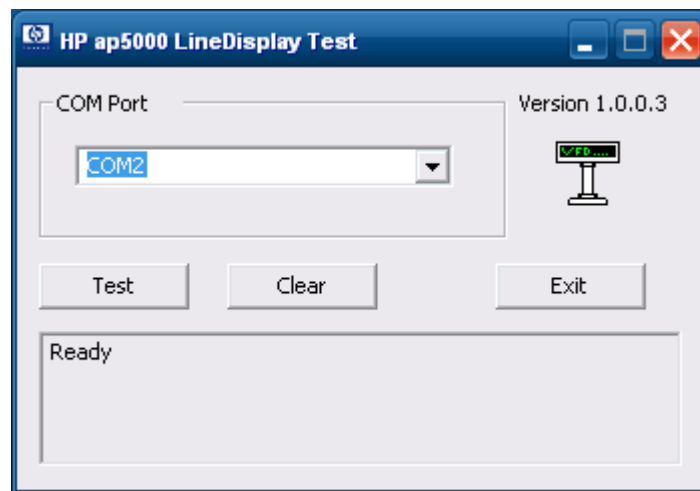
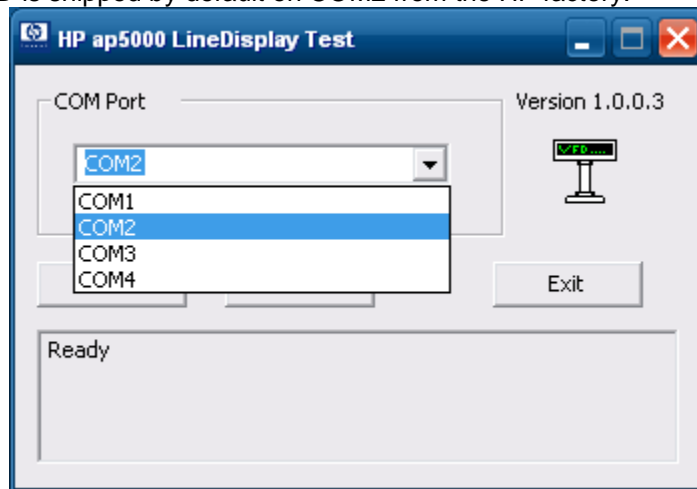
1. Start the Windows test utility from Windows start menu.



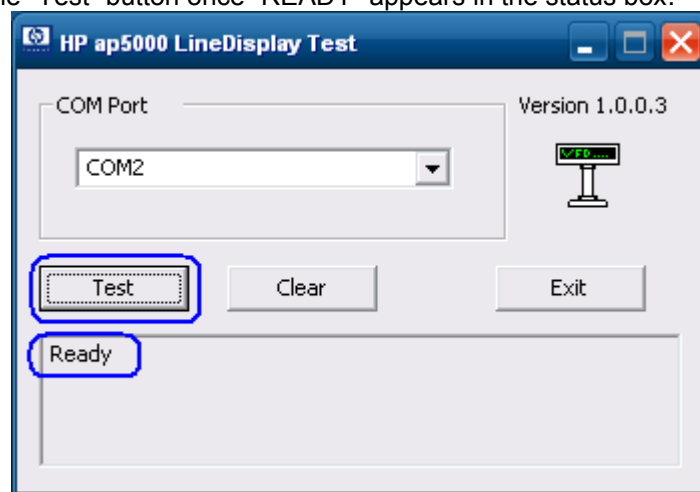
or



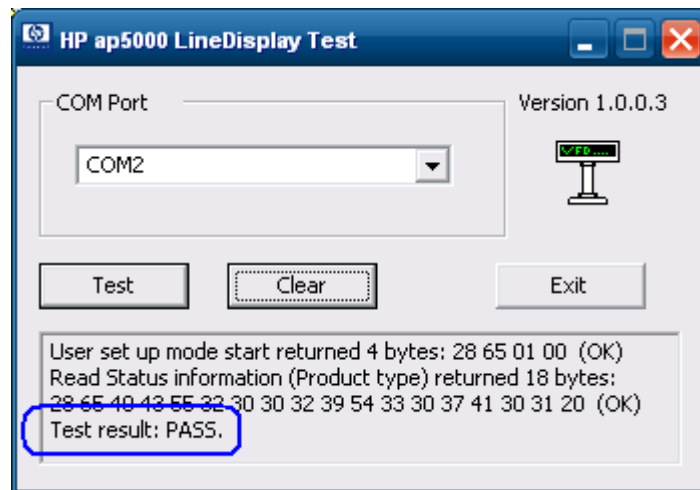
2. Select the COM port from the drop down box or keep the default option. The ap5000 VFD is shipped by default on COM2 from the HP factory.



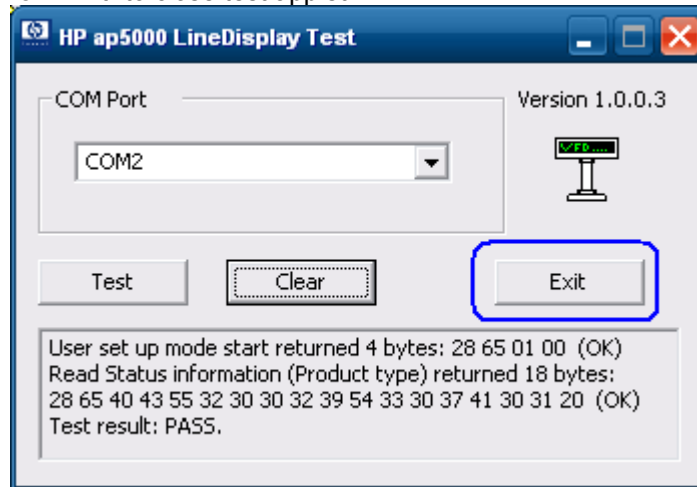
3. Click on the "Test" button once "READY" appears in the status box.



Once the test is complete and passes, the VFD will display "Test OK" and the test utility will provide some status information and the test results.



4. To exit the application:
 - a. Click on "Exit" to close test applet.



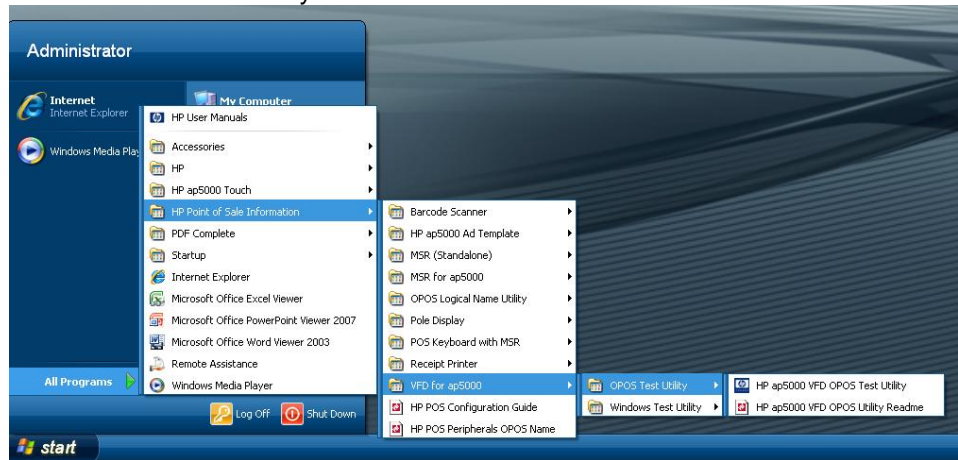
8.3.4.2 Testing HP ap5000 VFD in OPOS mode

The following is overview of the steps to test the ap5000 MSR followed by details steps:

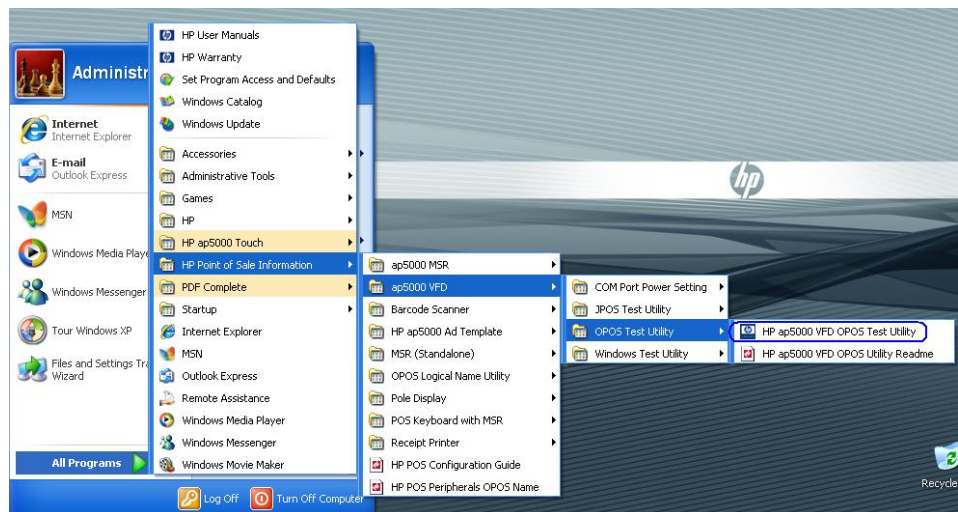
1. Start the OPOS test utility.
2. Click on "Clear Text" to clear the text on the pole display. To display a test message on the pole, enter a message in the text box or use the default message that appear "Display this text" and click on "Display Text"
3. To blink a test message:
 - a. Enter the test message.
 - b. Check the "Blink" box
 - c. Click "Display Text" button.
4. To "Reverse" a test message:
 - a. Enter the test message.
 - b. Check the "Reverse" box
 - c. Click "Display Text" button.
5. To display a test message on different ROW or Column:
 - a. Enter the test message.
 - b. From the drop down menu select the column and row where you would like the message to be displayed.
 - c. Click "Display Text At" button.
6. To cause message to scroll (test #1):
 - a. Click on "Scrolling Text Test #1" button. The pole will scroll a message and the following message "Scrolling" appears on the VFD bottom line.
7. To cause message to scroll (test #2):
 - a. Click on "Scrolling Text Test #2" button. The pole will scroll a message and the following message "Longer scroll message (37 characters)" appears on the VFD bottom line.
8. To display a test message with delayed character appearing:
 - a. Enter different value (if so desired) for the delay time.
 - b. Click "Set CharacterDelayTime" button.
 - c. Enter a text message and click "Display Text" button.
9. To exit the OPOS test applet, click on the "EXIT" button or click on the "x" in the upper right corner of the test applet.

Detail Steps

1. Start the OPOS test utility.



or

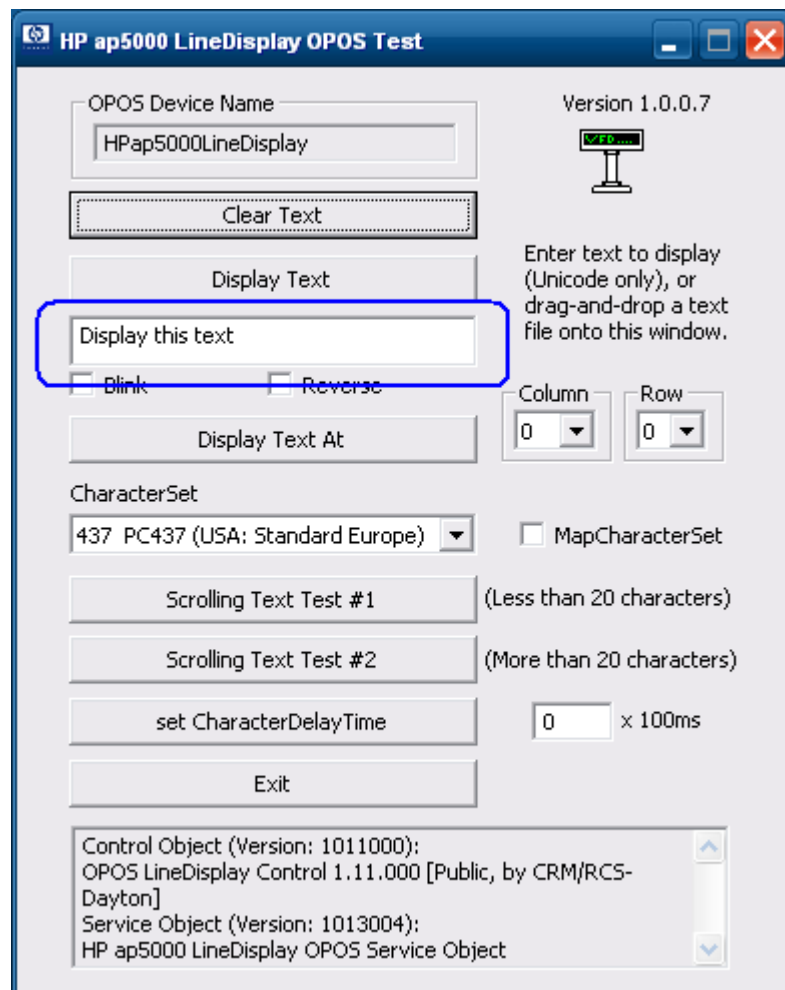


or from “C:\xxxxx\Point of Sale\VFD HP ap5000\ap5000 VFD OPOS Test Program” folder.

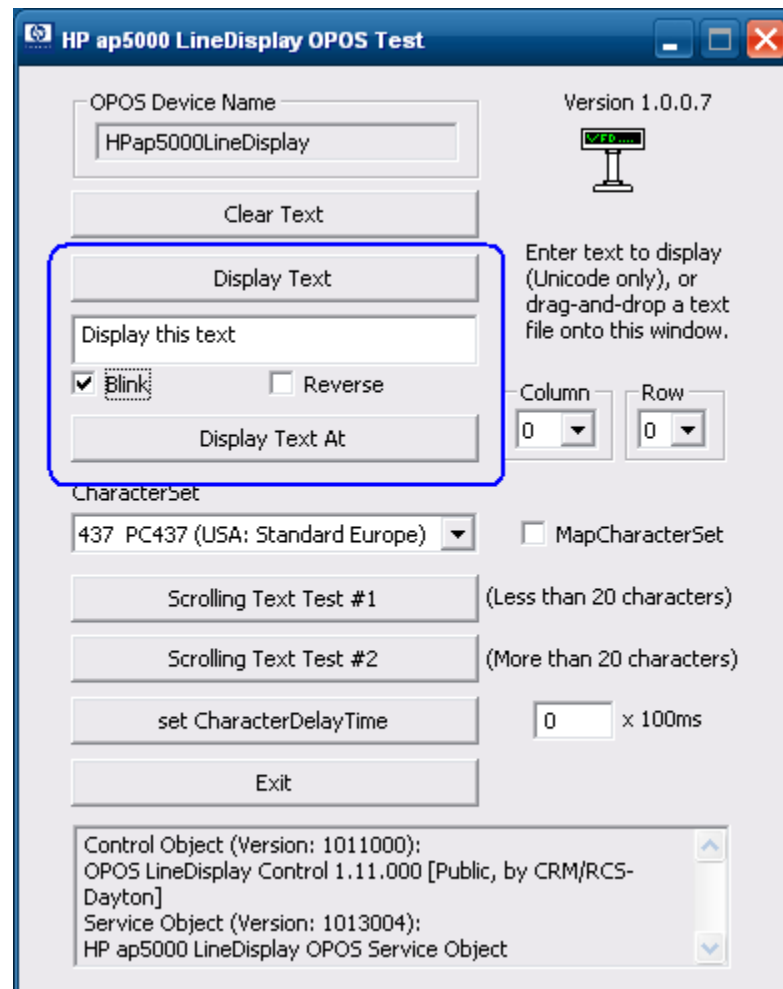
When the HP Pole Display OPOS test applet has successfully established communication with the pole display, the following message will appear on the pole:

HPap5000LineDisplay
OPOS Test OK!

2. Click on "Clear Text" to clear the text on the pole display. To display a test message on the pole, enter a message in the text box or use the default message that appear "Display this text" and click on "Display Text".



3. To blink a test message:
 - a. Enter the test message.
 - b. Check the “Blink” box
 - c. Click “Display Text” button.



4. To “Reverse” a test message:
 - a. Enter the test message.
 - b. Check the “Reverse” box
 - c. Click “Display Text” button.

HP ap5000 LineDisplay OPOS Test

OPOS Device Name: HPap5000LineDisplay

Version 1.0.0.7

Clear Text

Display Text

Display this text

☐ Blink ☒ Reverse

Display Text At

Column: 0 Row: 0

Enter text to display (Unicode only), or drag-and-drop a text file onto this window.

CharacterSet: 437 PC437 (USA: Standard Europe) ☐ MapCharacterSet

Scrolling Text Test #1 (Less than 20 characters)

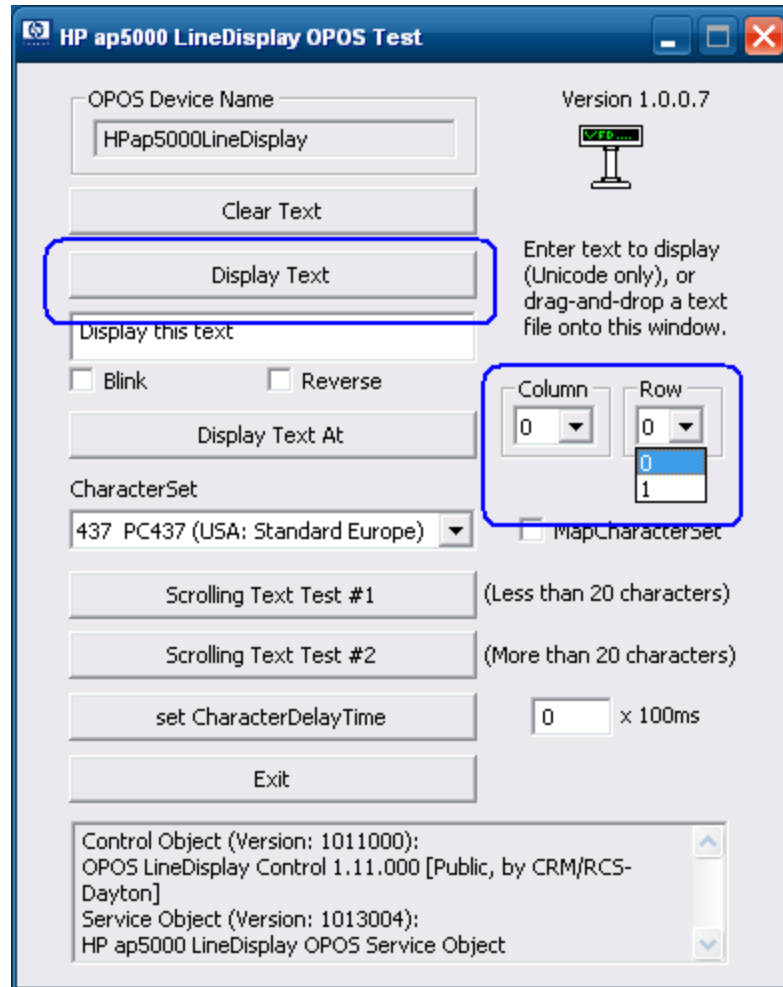
Scrolling Text Test #2 (More than 20 characters)

set CharacterDelayTime 0 x 100ms

Exit

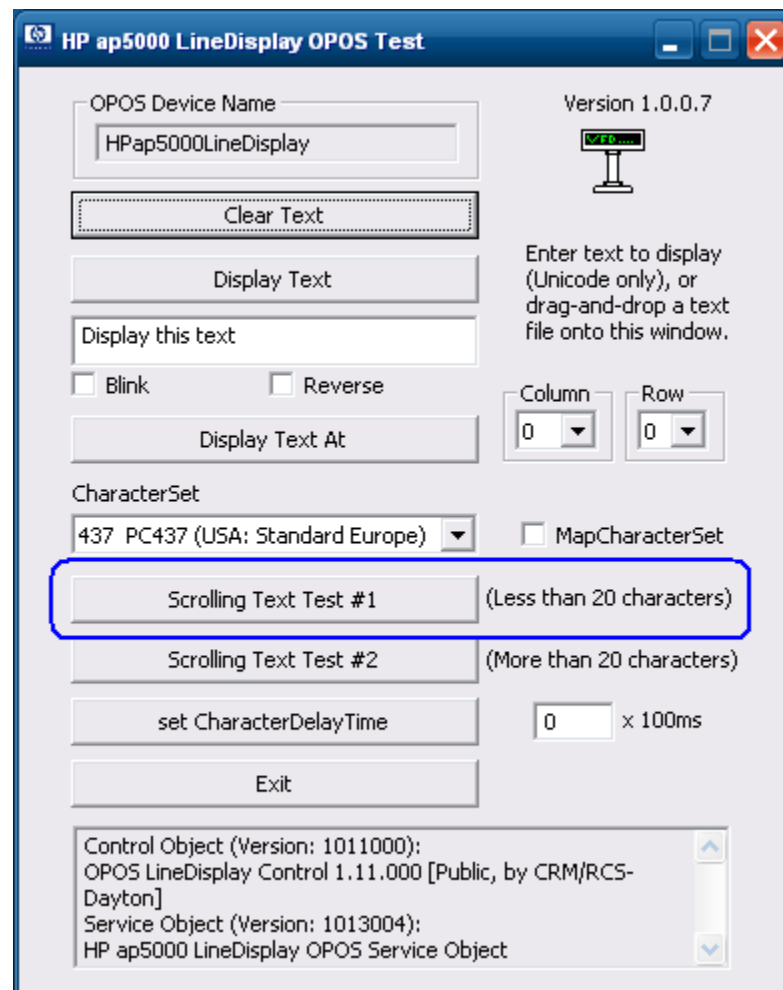
Control Object (Version: 1011000):
OPOS LineDisplay Control 1.11.000 [Public, by CRM/RCS-Dayton]
Service Object (Version: 1013004):
HP ap5000 LineDisplay OPOS Service Object

5. To display a test message on different ROW or Column:
 - a. Enter the test message.
 - b. From the drop down menu select the column and row where you would like the message to be displayed.
 - c. Click “Display Text At” button.

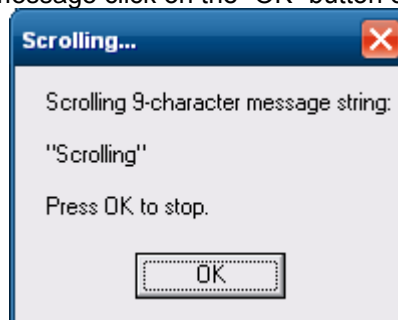


Note: In the column drop down box, the option shown are from 0 – 20 which is per the OPOS specification.

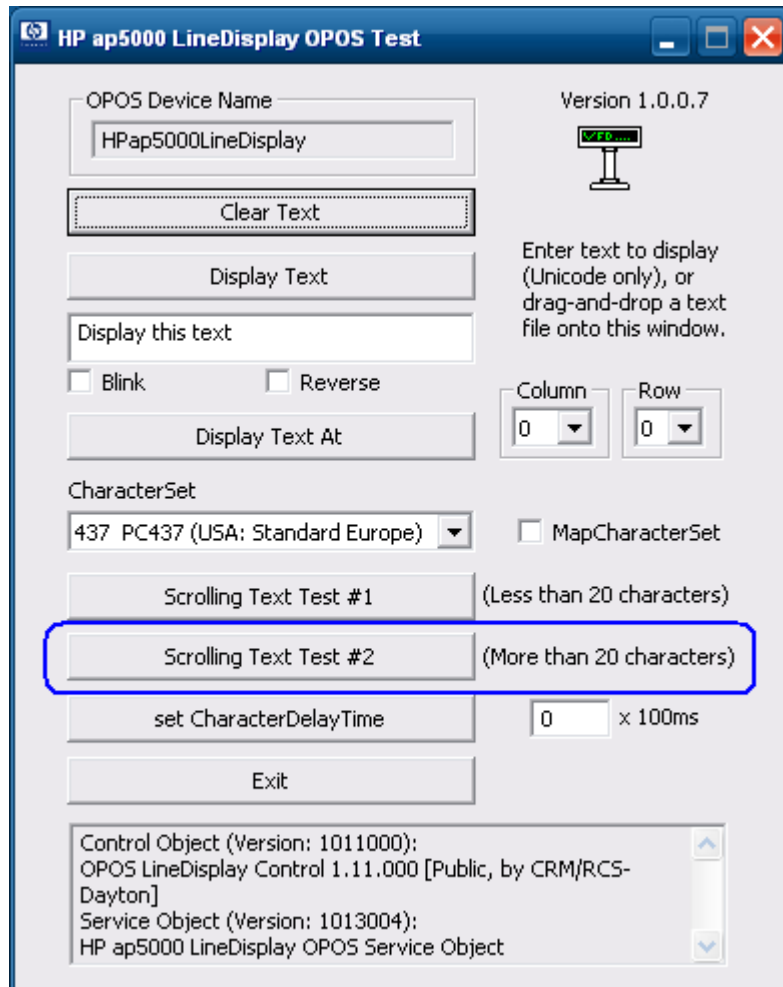
6. To cause message to scroll (test #1):
 - a. Click on “Scrolling Text Test #1” button. The pole will scroll a message and the following message “Scrolling” appears on the VFD bottom line.



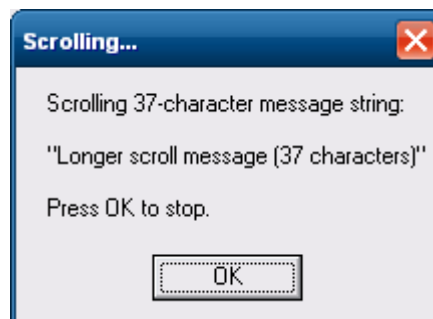
To stop the scrolling message click on the “OK” button on the following box:



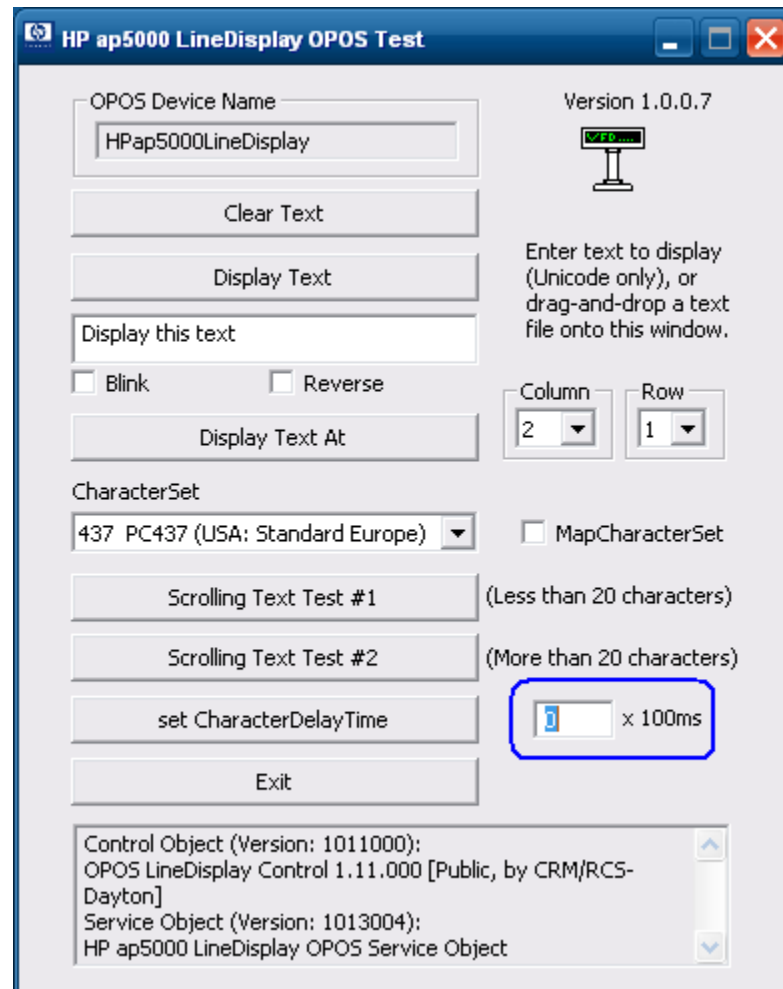
7. To cause message to scroll (test #2):
 - a. Click on “Scrolling Text Test #2” button. The pole will scroll a message and the following message “Longer scroll message (37 characters)” appears on the VFD bottom line.



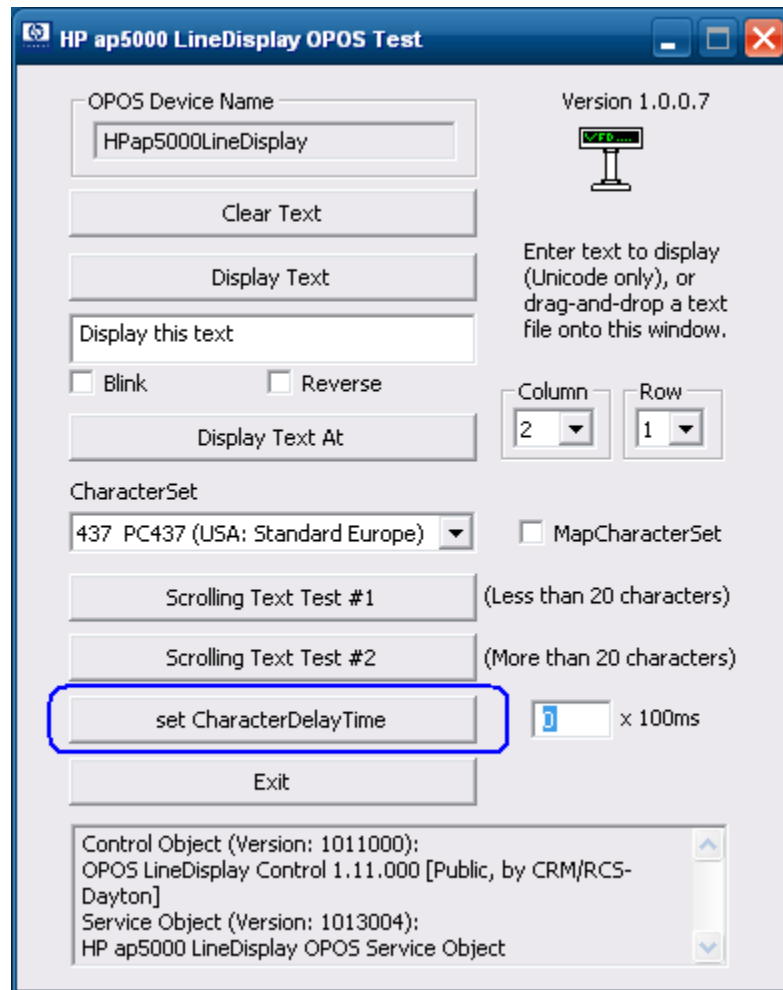
To stop the scrolling message click on the “OK” button on the following box:



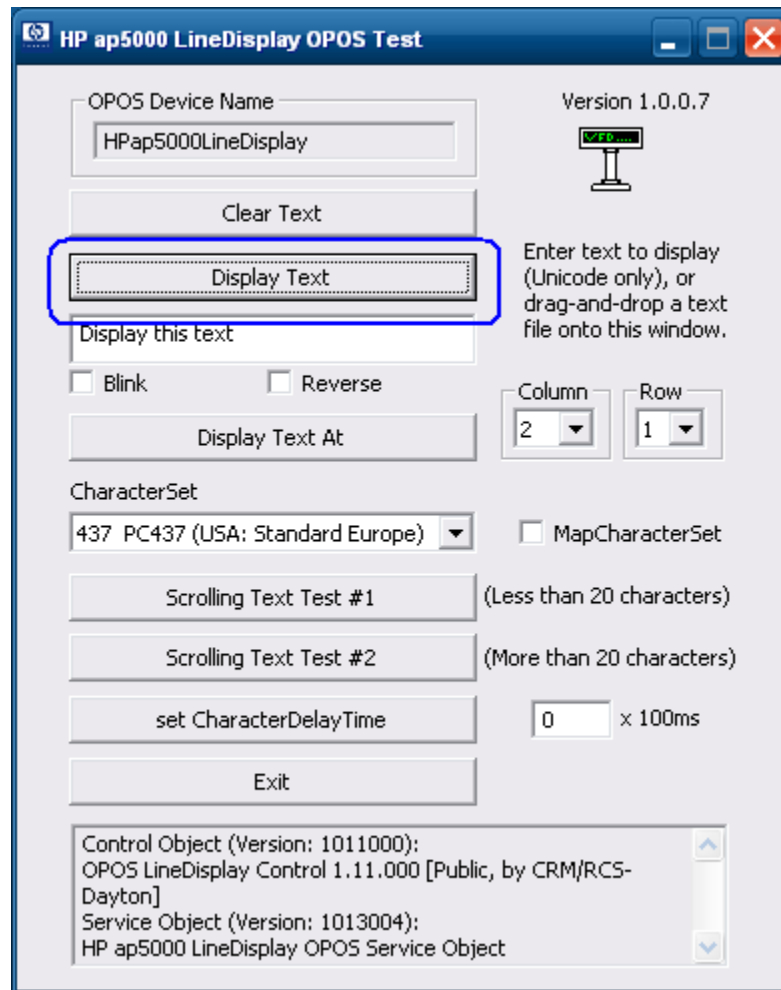
8. To display a test message with delayed character appearing:
 - a. Enter different value (if so desired) for the delay time.



- b. Click “Set CharacterDelayTime” button.



- c. Enter the test message and click “Display Text” button.



9. To exit the OPOS test applet, click on the “EXIT” button or click on the “x” in the upper right corner of the test applet.

8.3.5 JPOS Drivers for the HP ap5000 VFD

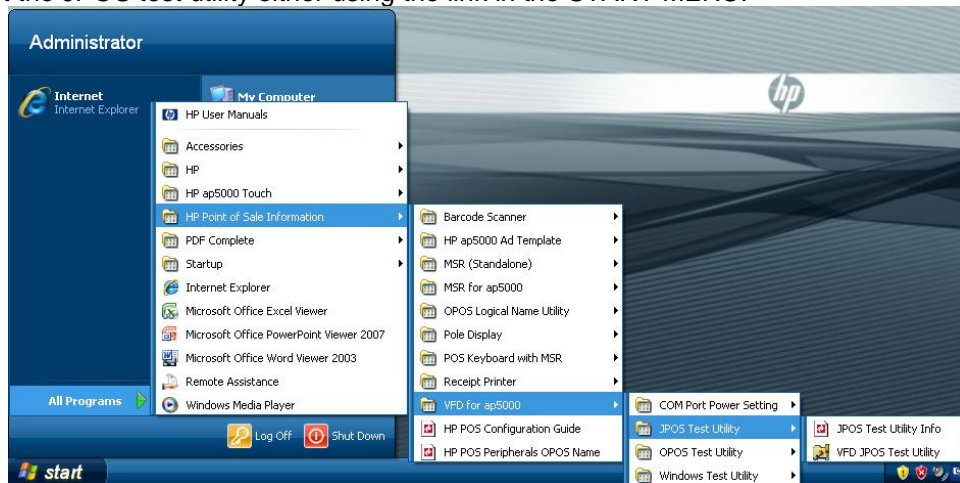
The JPOS drivers are included in the HP Point of Sale image or can be obtained from HP POS Drivers and Documentation CD or from the HP.COM web site.

The following is an overview of the steps to test the receipt printer followed by details steps:
Start the JPOS test utility.

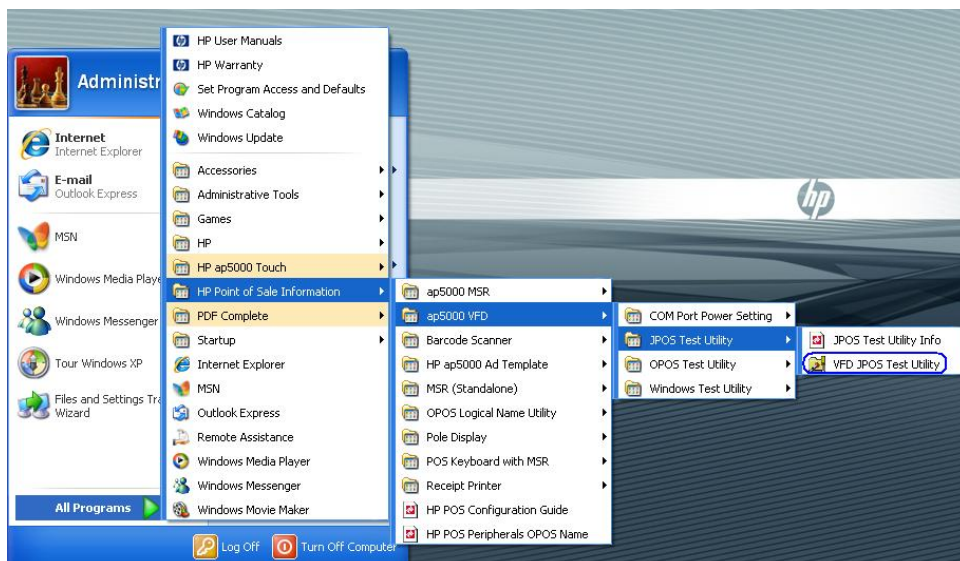
1. Start the JPOS test utility either using the link in the START MENU:
2. Click on the "LineDisplay" tab.
3. Replace the "defaultLineDisplay" that appears in the logical name box with "HPap5000LineDisplay".
4. Click on the "OPEN" button.
5. Click on the "CLAIM" button.
6. Check the "DEVICE ENABLED" so there is a check box.
7. Press the "CLEAR TEXT" button.
8. Type in the test message in the "Send to line display" box and click on "Display Text"
9. Click on "RELEASE" / "CLOSE" / "EXIT" to exit the JPOS test utility.

Detail Steps

1. Start the JPOS test utility either using the link in the START MENU:



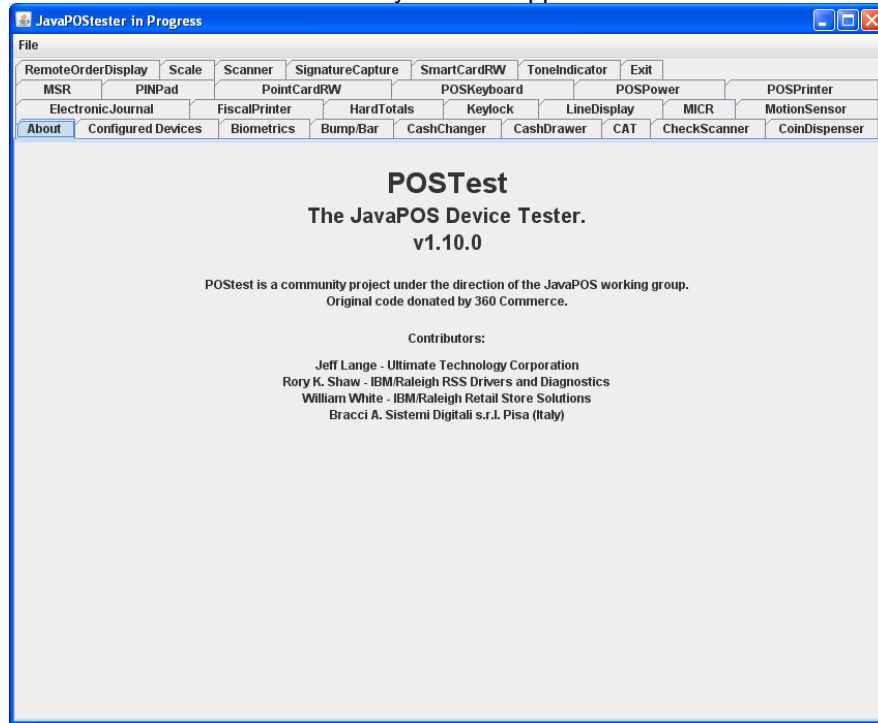
OR



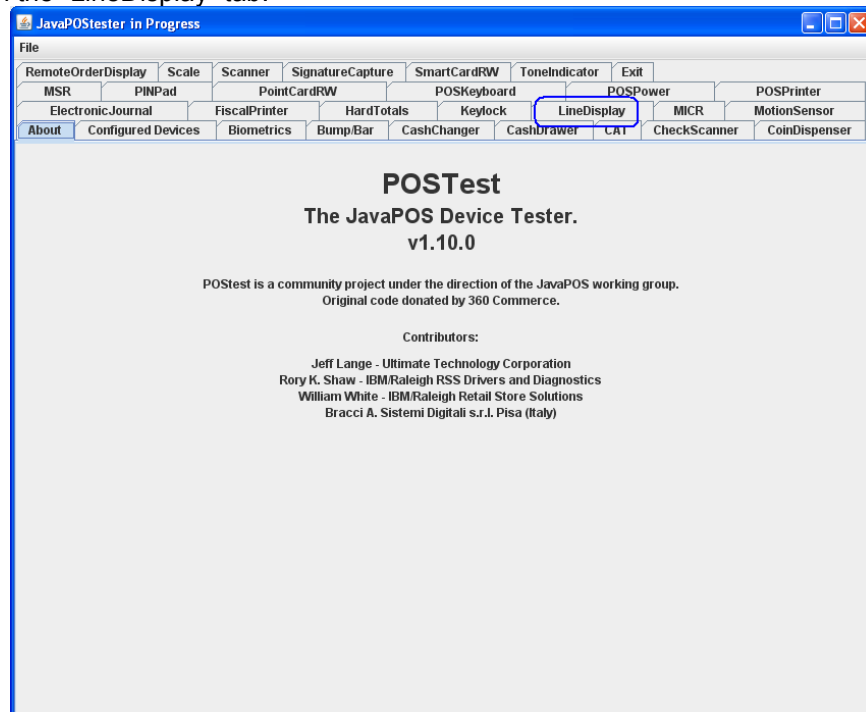
OR

by launching the POSTEST.BAT file that is located in the JPOS folder within the ap5000 VFD JPOS folder.

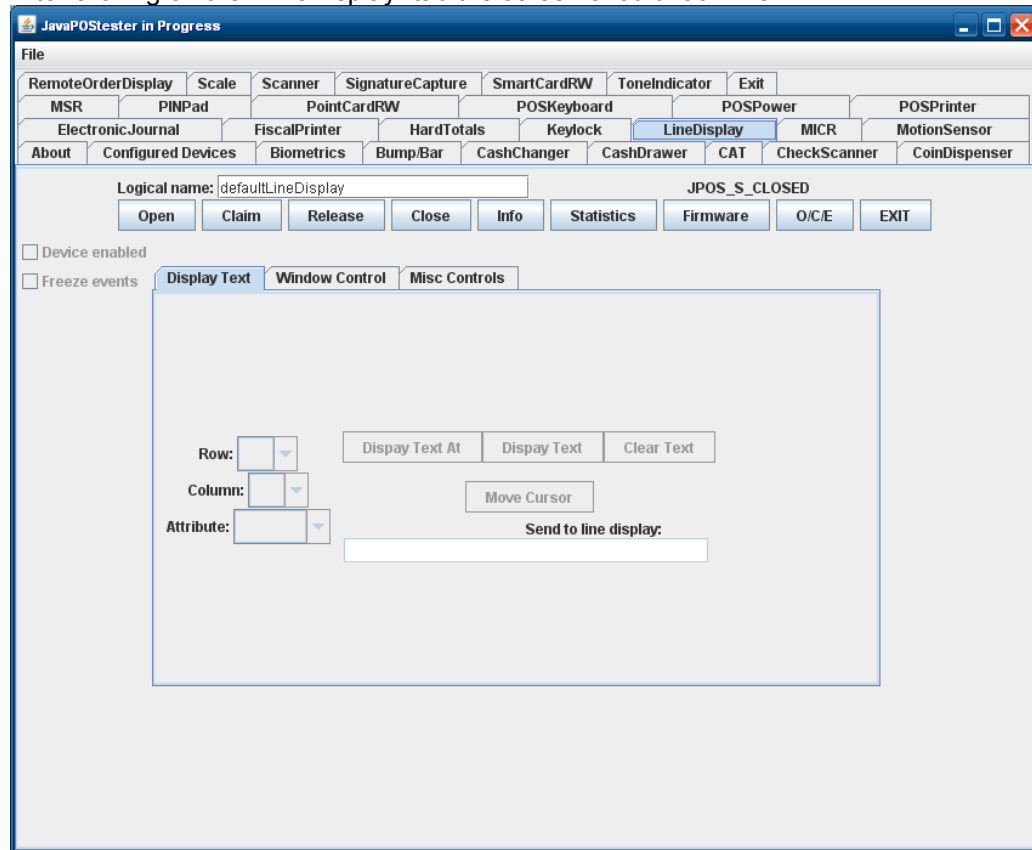
After a few seconds the JPOS test utility GUI will appear as shown below:



2. Click on the "LineDisplay" tab:

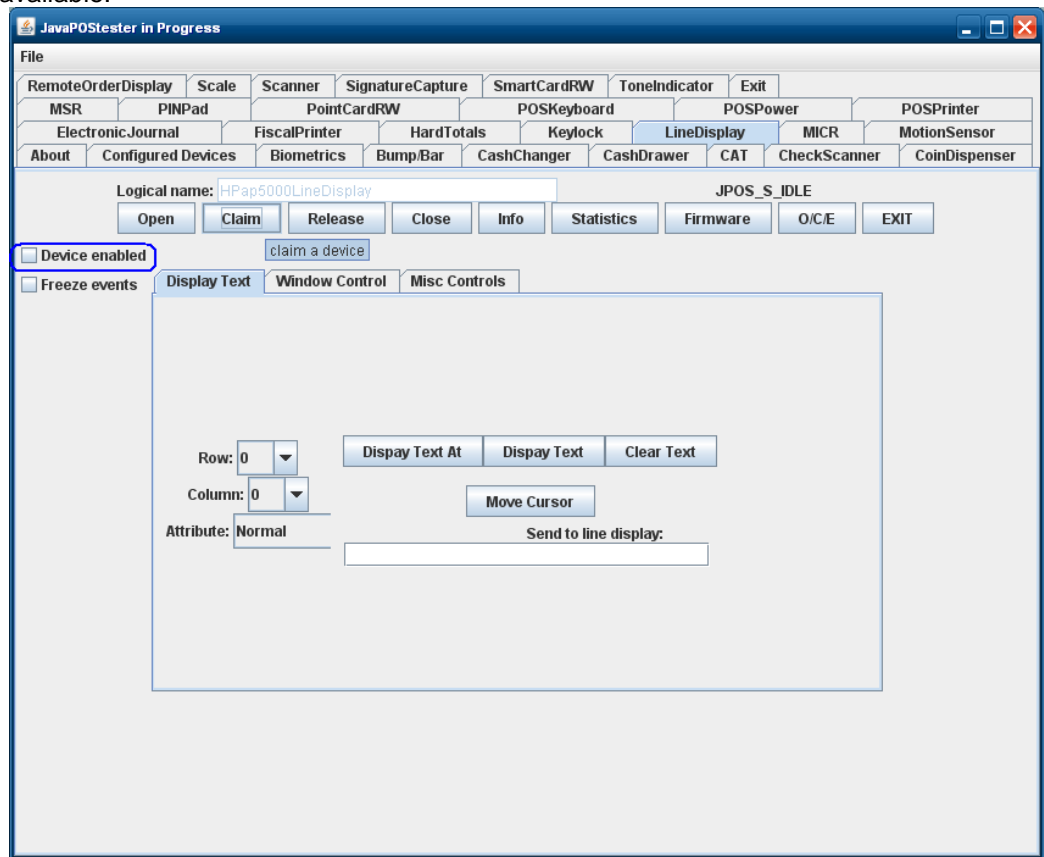


After clicking on the “LineDisplay” tab the screen should look like:

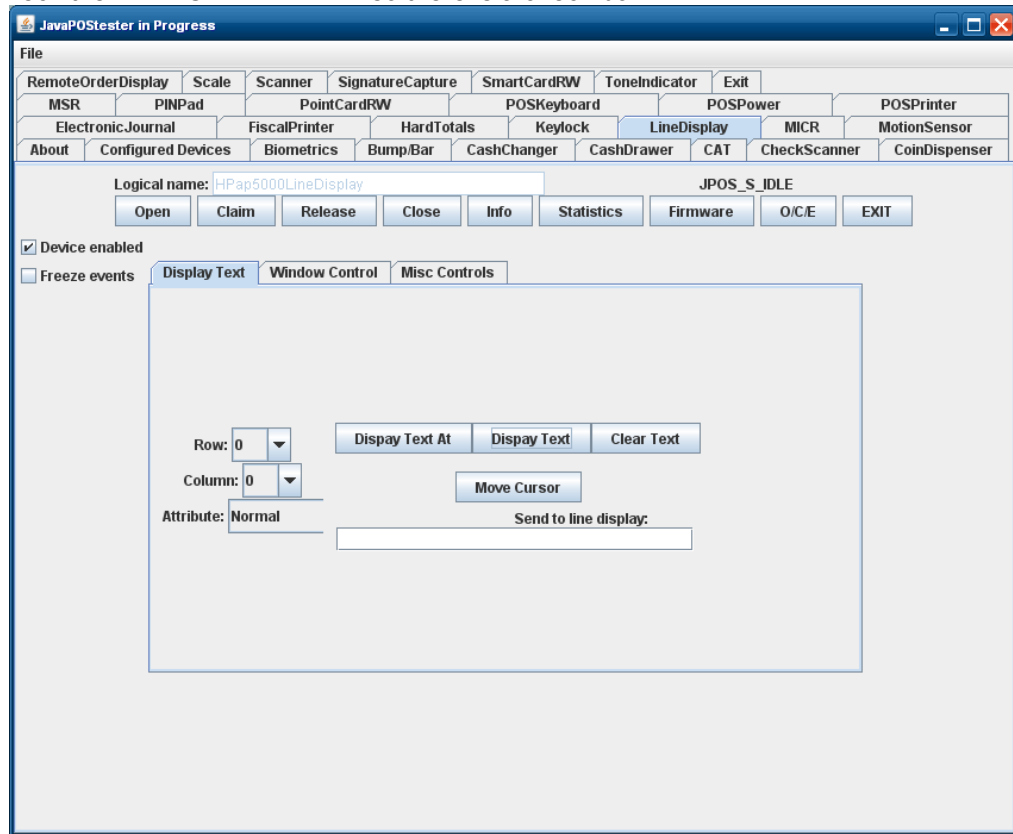


3. The logical name of the device is “HPap5000LineDisplay”. Replace the “defaultLineDisplay” that appears in the logical name box with “HPap5000LineDisplay”. If one clicks on the “Configured Device” tab, the names for the device will appear that will be used in the test utility.

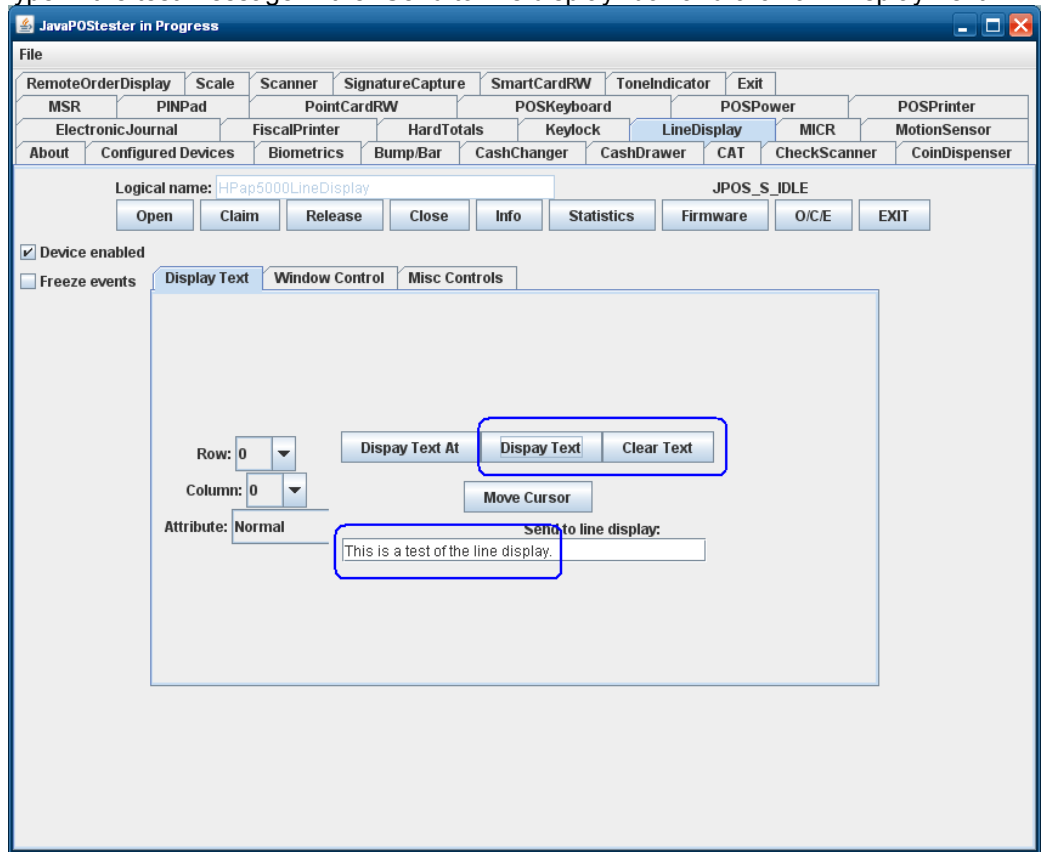
4. Click on the “OPEN” button.
5. Click on the “CLAIM” button. After clicking the “CLAIM” button, the “Device Enabled” is available.



6. Check the “DEVICE ENABLED” so there is a check box.



7. Press the “CLEAR TEXT” button.
8. Type in the test message in the “Send to line display” box and click on “Display Text”



Note: On the JPOS tester utility when “INFO” button is pressed one will receive an exception. The exception error can be safely ignored; all the functions of the pole display under JPOS are working correctly.

9. Click on “RELEASE” / “CLOSE” / “EXIT” to exit the JPOS test utility.

8.3.6 Utility to change power-on message

When the HP ap5000 is powered on the following message is scrolled on the display until an application takes control the pole display. There are two lines that are scrolled, the default message that is scrolled on the display is:

HP ap5000 All-in-One Point of Sale System
.... Thank You and Have a Nice Day

If one wishes to change the power on message one may do so by running "HP ap5000 LineDisplay Startup Message" program. This program can be found on the "HP Point of Sale System Software and Documentation CD".

Please note this only changes the scrolling message on the pole display; once the POS application has started, the POS application will control what is being displayed on the pole display.

8.3.6.1 Utility to Change Default Power-On Message

The following is an overview of the steps to test the power-on message utility followed by details steps:

1. Start the "HP ap5000 LineDisplay Startup Message" application which is available on "HP Point of Sale System Software and Documentation CD". This utility is not included on the HP factory image.
2. Select the correct COM port where the ap5000 VFD is attached if the utility does not find the correct COM port. (COM2 is the factory default).
3. Enter the message(s) that one wishes to display on the VFD.
4. From the drop down box, select the scroll speed of the message.
5. Click on the "Write to VFD" to save the message to the pole.
6. Click on "Exit" to leave the application.

Details

1. Start the "HP ap5000 LineDisplay Startup Message" application which is available on "HP Point of Sale System Software and Documentation CD". This utility is not included on the HP factory image.

2. Select the correct COM port where the ap5000 VFD is attached if the utility does not find the correct COM port. (COM2 is the factory default).

HP ap5000 Line Display Startup Message

Version 1.0.0.3

COM Port
COM2

Set to factory default

Row 0 (Top)
HP ap5000 All-in-One Point of Sale System

Row 1 (Bottom)
.... Thank You and Have a Nice Day

Scroll speed
300ms / character

Write to VFD

Exit

3. Enter the message(s) that one wishes to display on the VFD.

HP ap5000 Line Display Startup Message

Version 1.0.0.3

COM Port
COM2

Set to factory default

Row 0 (Top)
HP ap5000 All-in-One Point of Sale System

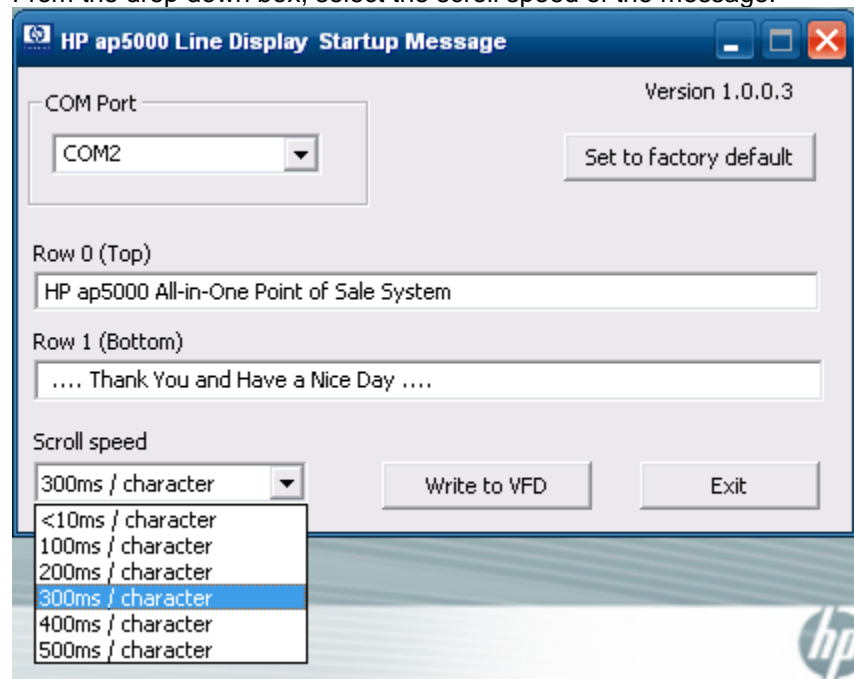
Row 1 (Bottom)
.... Thank You and Have a Nice Day

Scroll speed
300ms / character

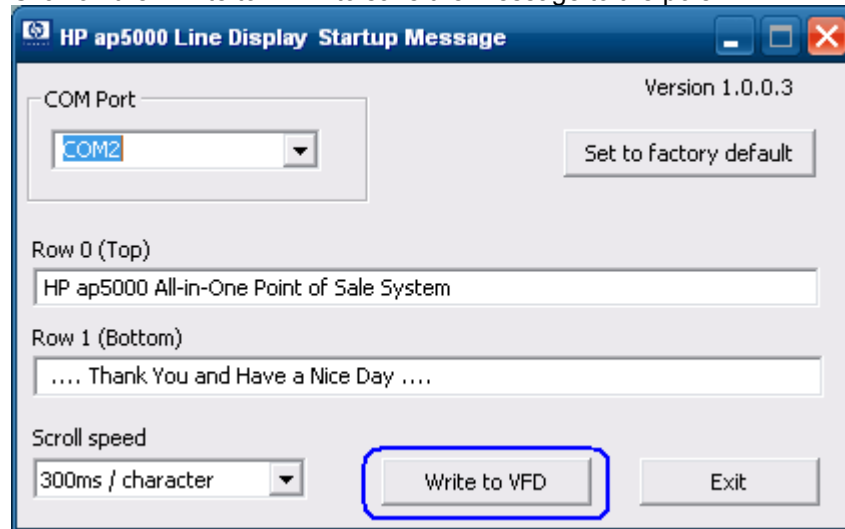
Write to VFD

Exit

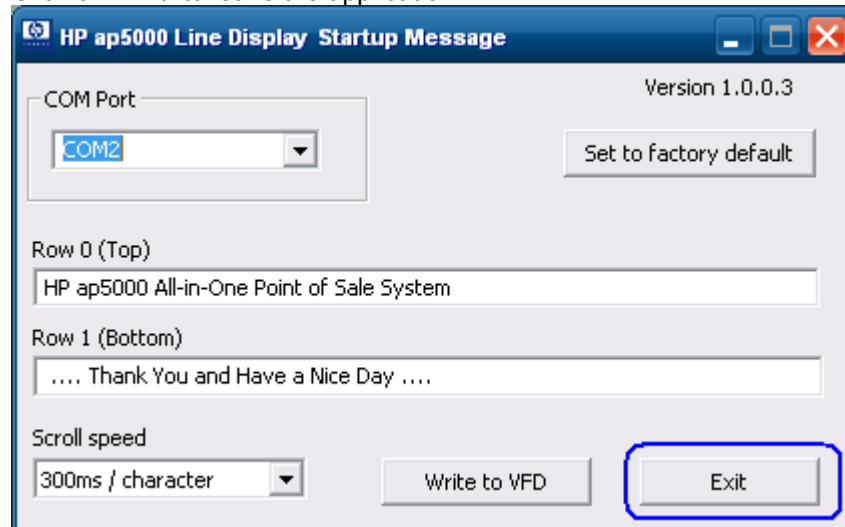
4. From the drop down box, select the scroll speed of the message.



5. Click on the “Write to VFD” to save the message to the pole.



6. Click on “Exit” to leave the application.



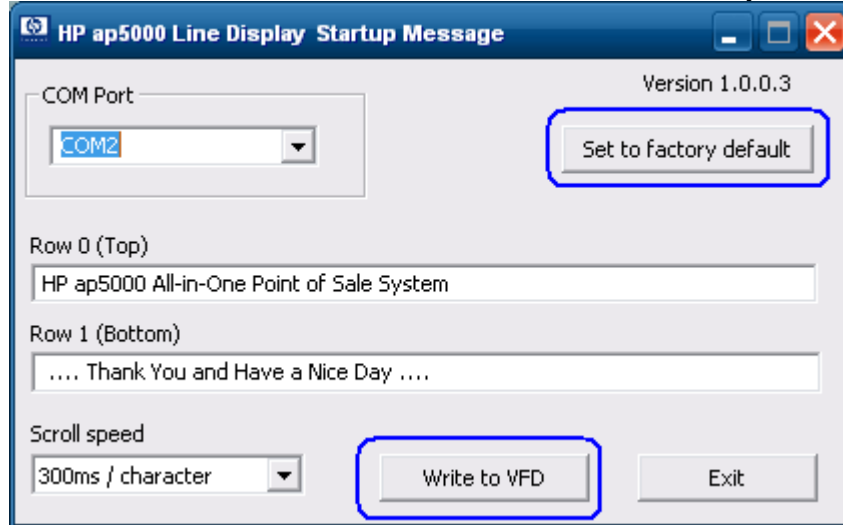
8.3.6.2 Enable the VFD Default Power-On Message

The following is an overview of the steps to test the power-on message utility followed by details steps:

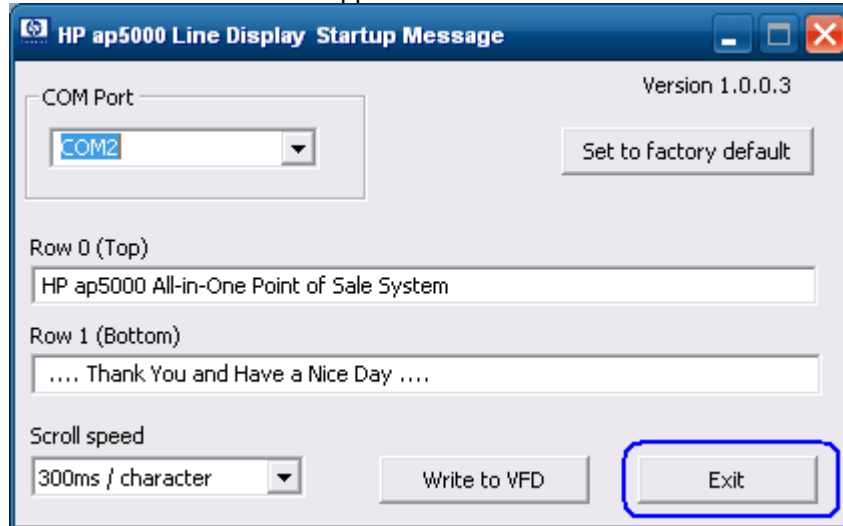
1. Start the “HP ap5000 LineDisplay Startup Message” application which is available on “HP Point of Sale System Software and Documentation CD”. This utility is not included on the HP factory image.
2. When the utility is launched the default HP factory message appears in the GUI. One can either click on “Write to VFD” or click on “Set to factory default” button.
3. Click on “Exit” to leave the application.

Details

1. Start the “HP ap5000 LineDisplay Startup Message” application which is available on “HP Point of Sale System Software and Documentation CD”. This utility is not included on the HP factory image.
2. When the utility is launched the default HP factory message appears in the GUI. One can either click on “Write to VFD” or click on “Set to factory default” button.



3. Click on “Exit” to leave the application.



8.4 **HP ap5000 VFD BIOS Power Setting**

The 5 volt power that is needed for the HP ap5000 VFD is supplied via the serial port (pin 9). When the ap5000 VFD is attached to the unit on COM2 from the HP factory and a Windows operating system is installed, the 5 volt for COM2 will be enabled natively. If the user has the need to move the VFD from COM2 to COM1 then the 5 volt for COM1 will need to be enabled by the steps outlined below. In addition, it is recommended that the 5 volt for COM2 should be disabled. This will prevent any possible damage to future serial devices inserted into COM2 but not rated for 5 volt.

There are two ways one can enable the voltage on COM1 on the HP ap5000 unit. One method is to go into F10 BIOS and enable the voltage on the serial port. The second method under Windows is by using the graphical utility to change the setting.

8.4.1 **F10 BIOS Method**

- Press F10 to enter BIOS setup at the post screen. If power-on or password option is enabled, enter the password in order to continue.
- Press the right arrow key to highlight “Advanced” option.
- Press the down arrow key to highlight “SuperIO Configuration” option and press the “ENTER” key.
- Press the down arrow key to go the serial port that you wish to change the power setting and press the “ENTER” key.
- Once the menu appears select the setting the power option for the port to be set to. “Standard Mode” means no power on the serial port.

Note: The ap5000 VFD **cannot** be installed on COM3, it only be used on COM1 or COM2.

8.4.2 **Windows Graphical Method**

In order to use the Windows graphical utility no BIOS password (power-on or Setup) must be enabled and one must have administrator privilege.

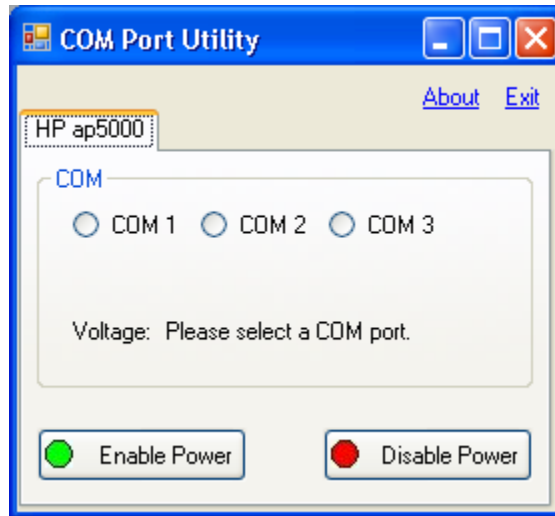
Note: The ap5000 VFD **cannot** be installed on COM3, it only be used on COM1 or COM2

The following is an overview of the Windows graphical utility for the COM port setting:

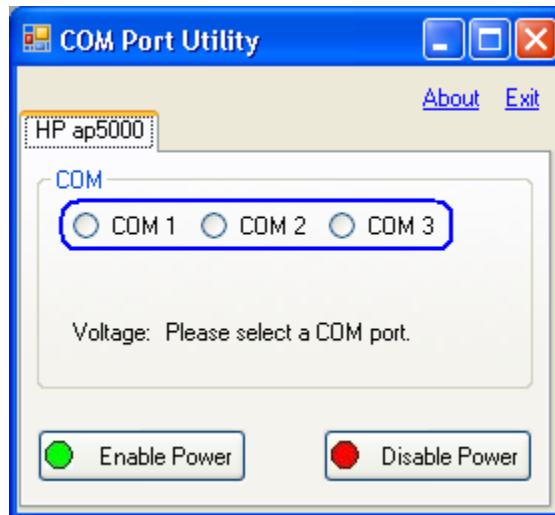
1. Close any open application or document.
2. Launch the “HP Com Port Utility.EXE” which is located on the “HP POS Software and Documentation CD” that is included in the peripherals after market option kit.
3. Select the COM port that you which to change.
4. Select the option that you wish for the COM port (Enable Power or Disable Power).
5. After the COM port setting is changed, restart Windows operating system for the BIOS changes to take effect.

Detail Steps

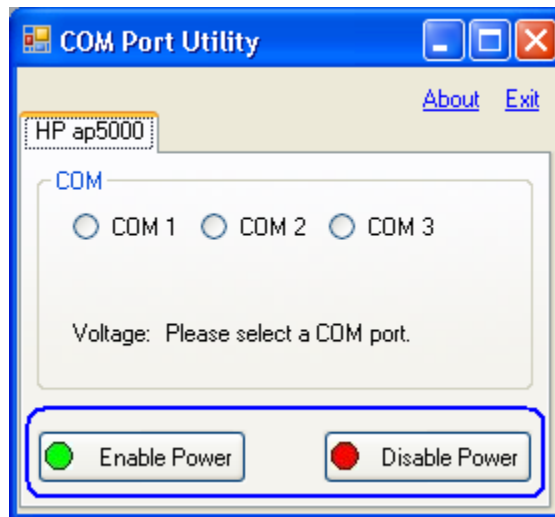
1. Close any open application or document.
2. Launch the "HP Com Port Utility.EXE" which is located on the "HP POS Software and Documentation CD" that is included in the peripherals after market option kit. The following is the GUI that will appear when the utility is launched:



3. Select the COM port that you would like to change..



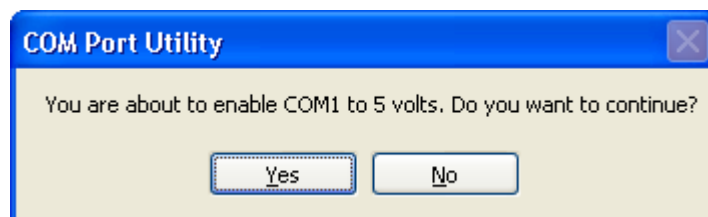
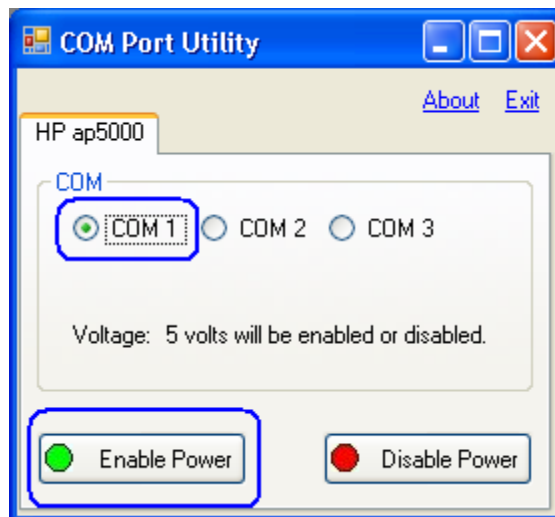
4. Select from the two options for the COM port (Enable Power or Disable Power).



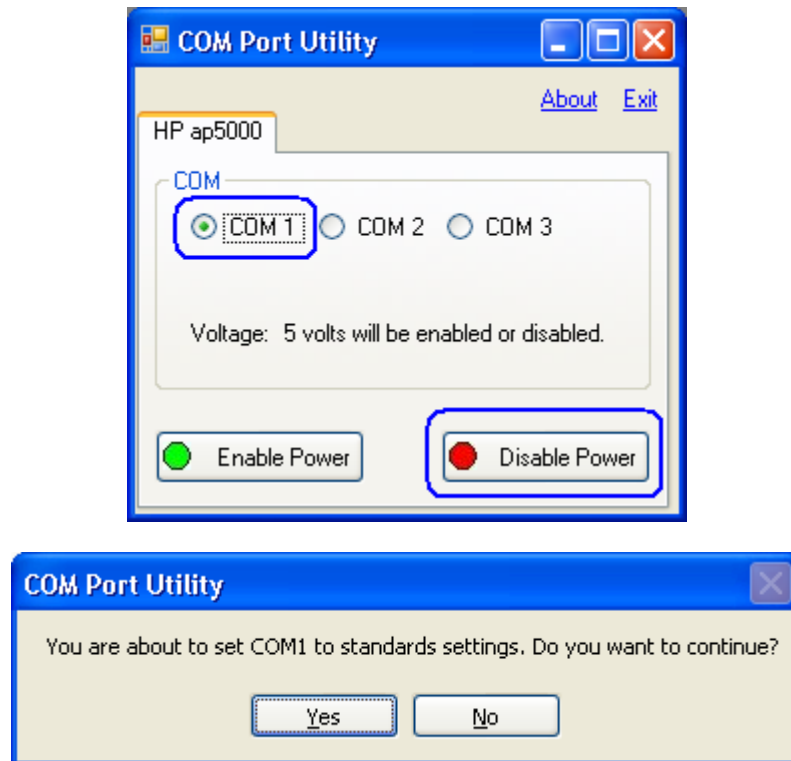
When power is enabled for COM1 or COM2, 5V will be enabled. When power is enabled for COM3, 12V will be enabled.

When "Enable Power" is selected, a prompt window to confirm the action will be shown.

The following is an example of the prompt screens that will appear when COM1 is enabled.



The following prompt appears when the “Disable Power” option is clicked:



5. After the COM port setting is changed, restart Windows operating system for the BIOS changes to take effect.

Note: The ap5000 VFD **cannot** be installed on COM3, it only be used on COM1 or COM2.

8.5 **HP ap5000 10" Display**



8.5.1 **Connection**

The HP ap5000 10" display can be attached to the back of the ap5000 unit by replacing VFD. The ap5000 10" display is connected via VGA connector on the I/O panel of the unit.

8.5.2 **Windows Drivers for the HP ap5000 10" display**

No additional drivers are necessary. The Intel video drivers that are used for the ap5000 integrated (touch screen) video are drivers that are needed to drive the 10" display.

8.5.3 **OPOS Drivers for the HP ap5000 10" Display**

No OPOS drivers are needed for the touch screen.

8.5.4 **Testing the HP ap5000 10" Display**

Once the second monitor is enabled in the Windows operating system, video should appear on the 10" display.

8.5.5 **JPOS Drivers for the HP ap5000 10" Display**

No JPOS drivers are needed for the touch screen.

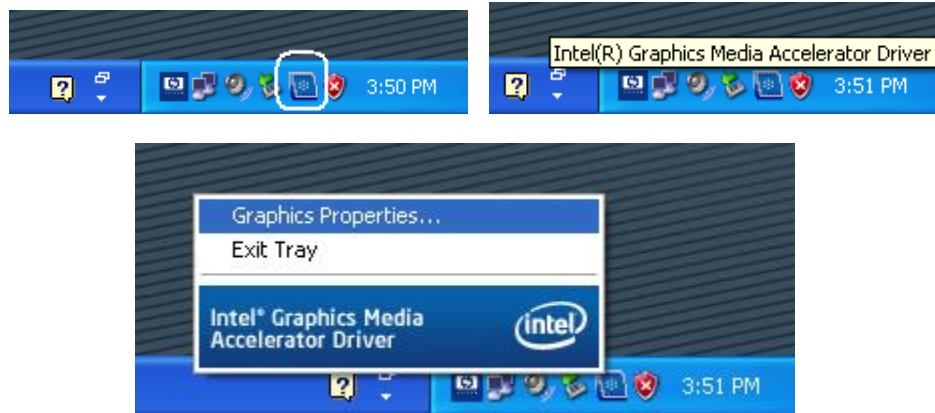
8.5.6 **HP ap5000 Clone Mode Setup**

8.5.6.1 **Quick Setup**

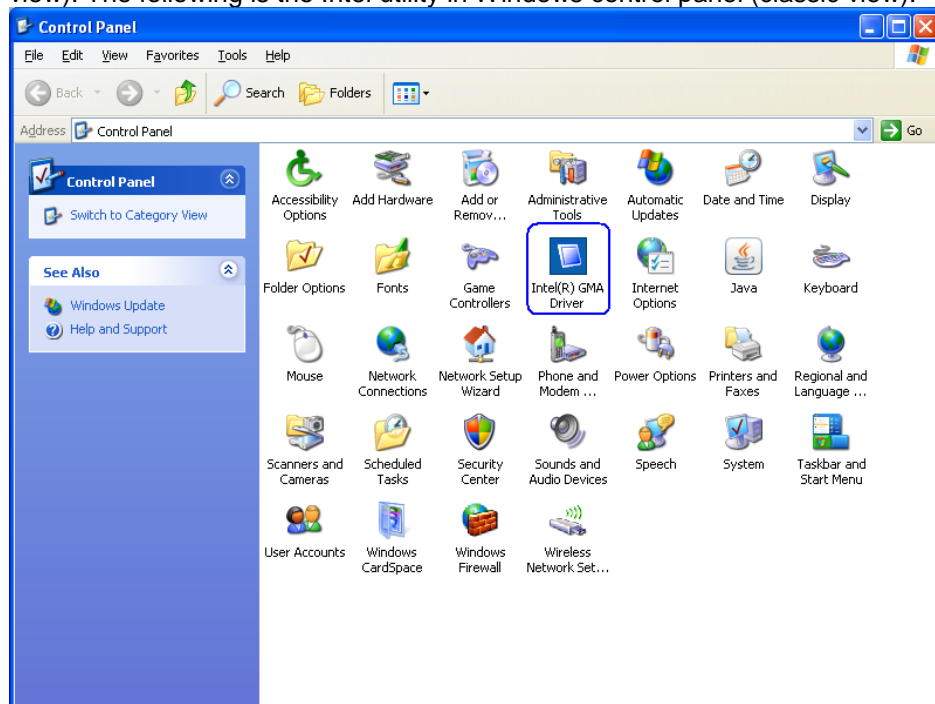
1. Launch the Intel Graphics utility from the system tray by right clicking on the Intel Graphics icon and selecting "Graphics Properties" or launch the Intel GMA driver utility from Windows control panel (classic view).
2. In the operating mode drop down box select "Intel® Dual Display Clone" option.
3. Confirm that two monitor option appears in the "Display Section"
4. Click the OK button in the Intel Graphics utility.
5. Confirm you want to keep the desktop changes. If this is not confirmed the changes will not take affect and in 15 seconds the video will revert back to the older setting.
6. After confirming this selection the same video will appear on both screens.

8.5.6.2 Detail Setup

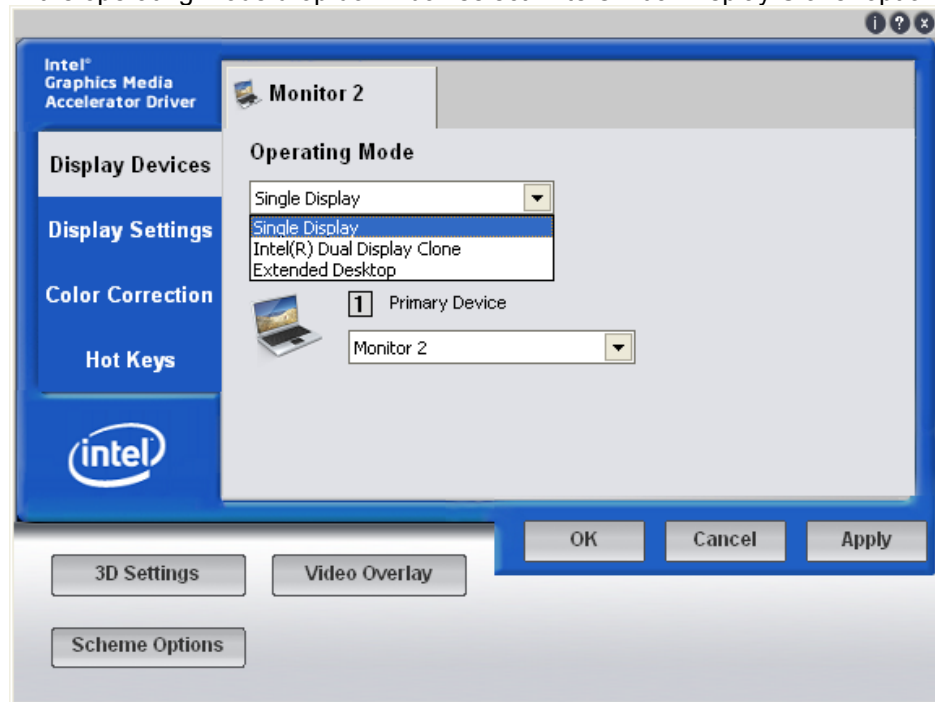
1. Launch the Intel Graphics utility from the system tray by right clicking on the Intel Graphics icon and selecting "Graphics Properties" or from control panel (classic view)



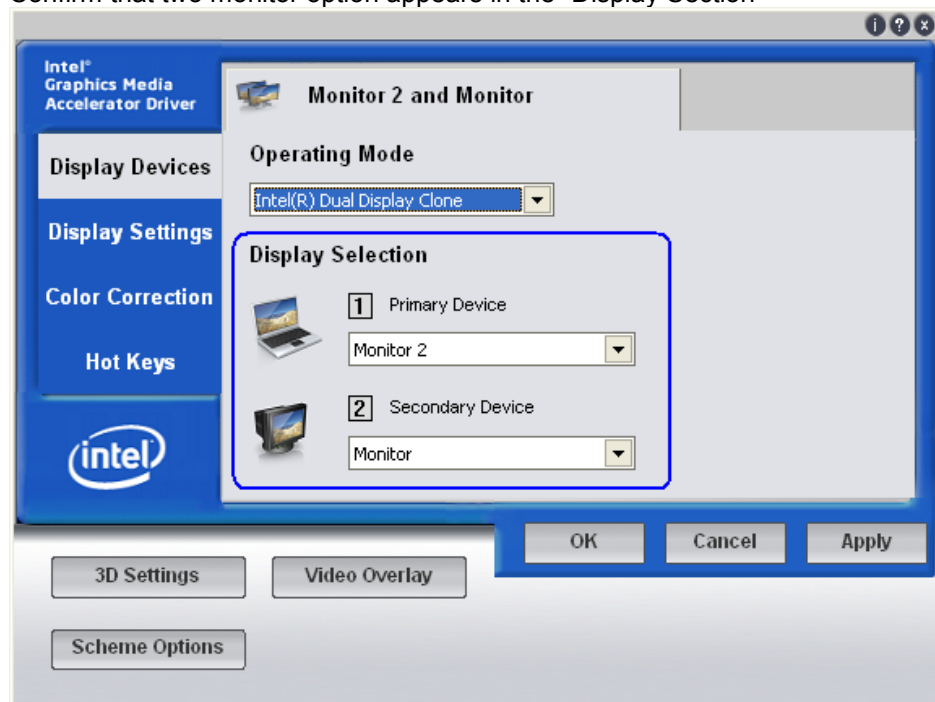
or launching the Intel GMA driver utility from Windows control panel (classic view). The following is the Intel utility in Windows control panel (classic view):



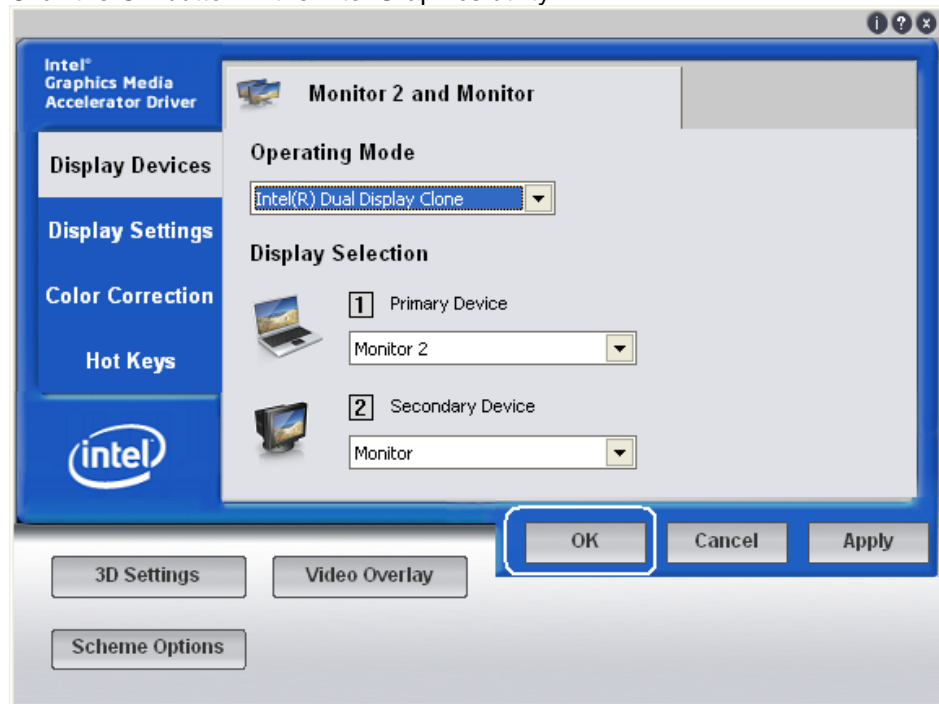
2. In the operating mode drop down box select “Intel® Dual Display Clone” option.



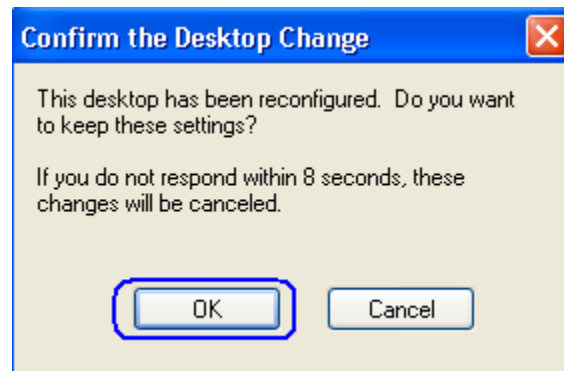
3. Confirm that two monitor option appears in the “Display Section”



4. Click the OK button in the Intel Graphics utility.



5. Confirm you want to keep the desktop changes. If this is not confirmed the changes will not take affect and in 15 seconds the video will revert back to the older setting.



6. After confirming this selection the same video will appear on both screens.

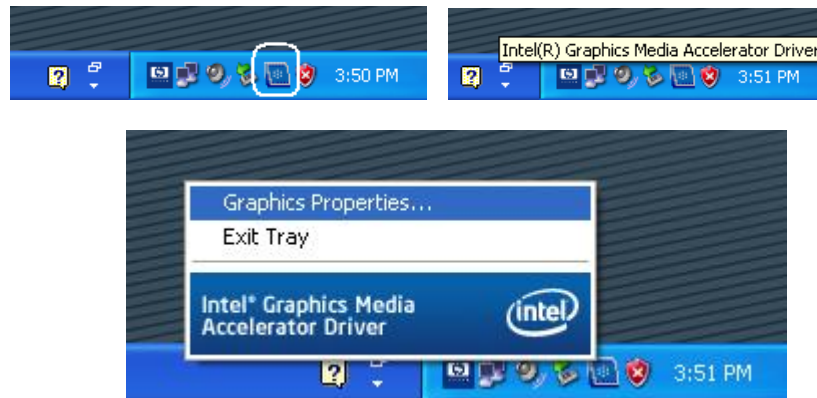
8.5.7 **HP ap5000 Extended Desktop Setup**

8.5.7.1 **Quick Setup**

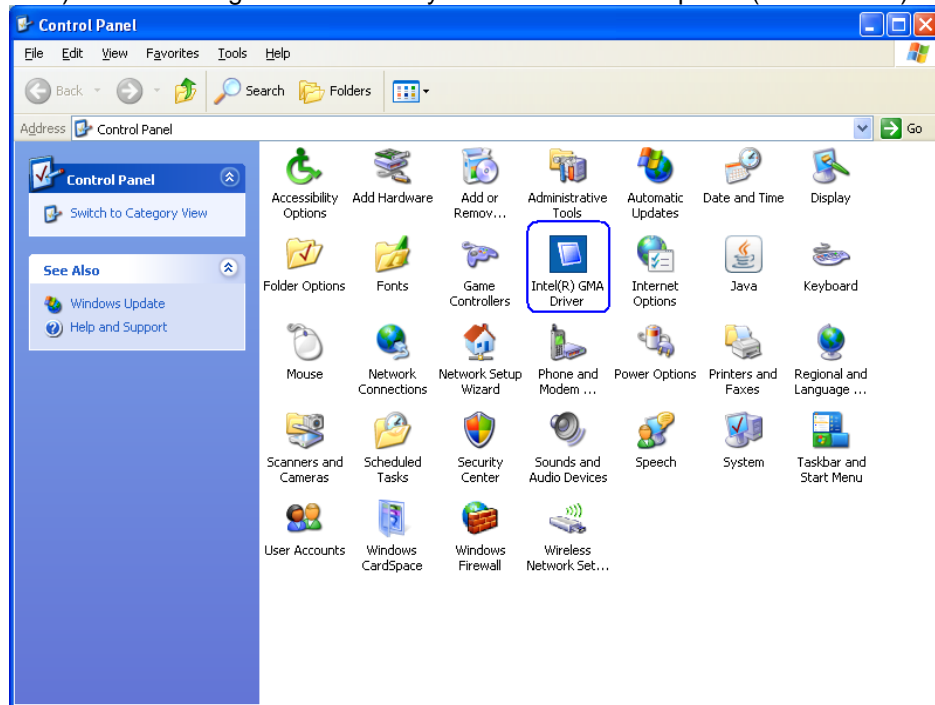
1. Launch the Intel Graphics utility from the system tray by right clicking on the Intel Graphics icon and selecting “Graphics Properties” or launch the Intel GMA driver utility from Windows control panel (classic view). The following is the Intel utility in Windows control panel (classic view):
2. In the operating mode drop down box select “Extended Desktop” option.
3. Confirm that two monitor option appears in the “Display Section”
4. Click the OK button in the Intel Graphics utility.
5. Confirm you want to keep the desktop changes. If this is not confirmed the changes will not take affect and in 15 seconds the video will revert back to the older setting.
6. After confirming this selection the second display will display the background bitmap file that has been selected.

8.5.7.2 **Detail Setup**

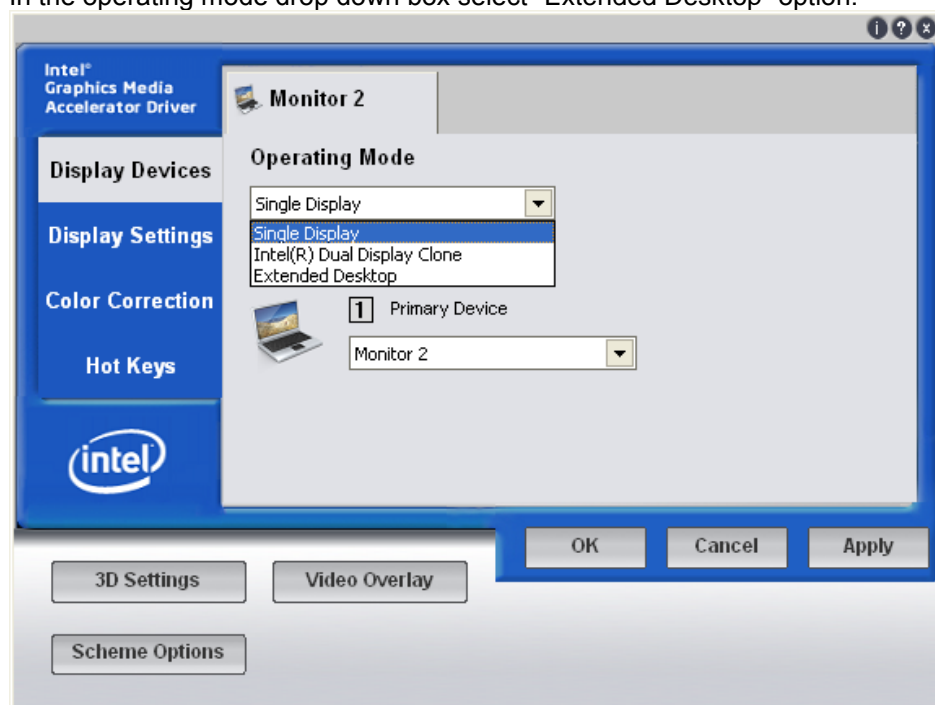
1. Launch the Intel Graphics utility from the system tray by right clicking on the Intel Graphics icon and selecting “Graphics Properties” or from control panel (classic view)



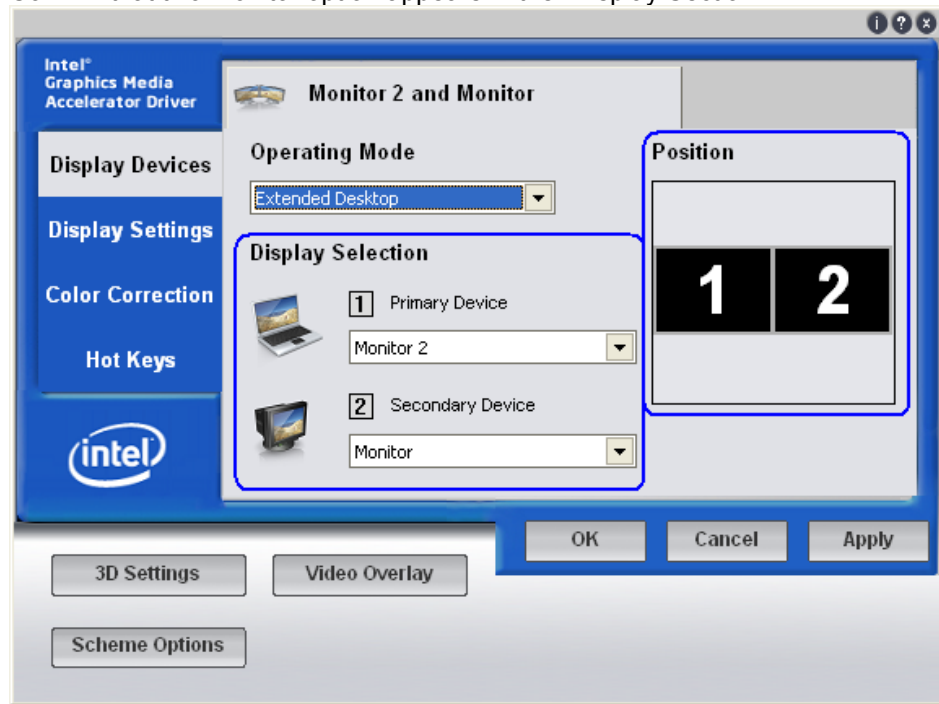
or launching the Intel GMA driver utility from Windows control panel (classic view). The following is the Intel utility in Windows control panel (classic view):



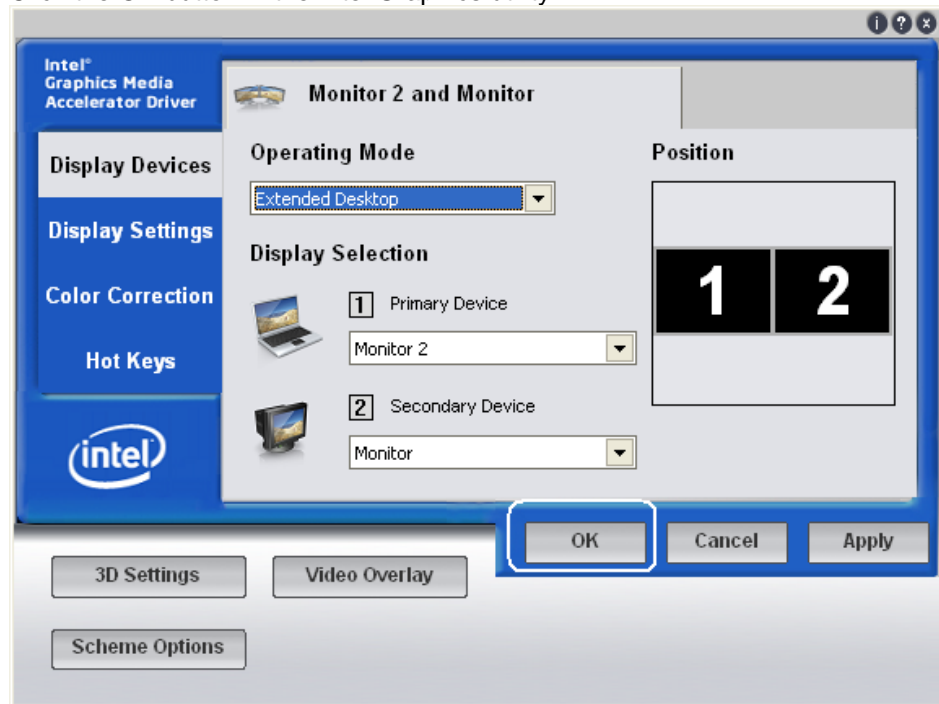
2. In the operating mode drop down box select "Extended Desktop" option.



3. Confirm that two monitor option appears in the “Display Section”



4. Click the OK button in the Intel Graphics utility.



5. Confirm you want to keep the desktop changes. If this is not confirmed the changes will not take affect and in 15 seconds the video will revert back to the older setting.



6. After confirming this selection the second display will display the background bitmap file that has been selected.

9 Q & A

9.1 General

Question: What are the OPOS names for the HP Peripherals?

Answer: Please refer to section [OPOS Names for HP Point of Sale Peripherals](#) for the OPOS names.

Question: Where can I obtain the latest driver?

Answer: The latest drivers are posted on the HP.COM web site.

Question: I have misplaced the “HP Point of Sale Documentation and Drivers” CD, where can I obtain another one?

Answer: Located on HP.COM web site in the “Software – POS” category there is a softpaq that contains an ISO file of the latest version of the “HP Point of Sale Documentation and Drivers” CD. Once the softpaq has been downloaded and created, use an utility that will allow you to make the CD from the ISO file.

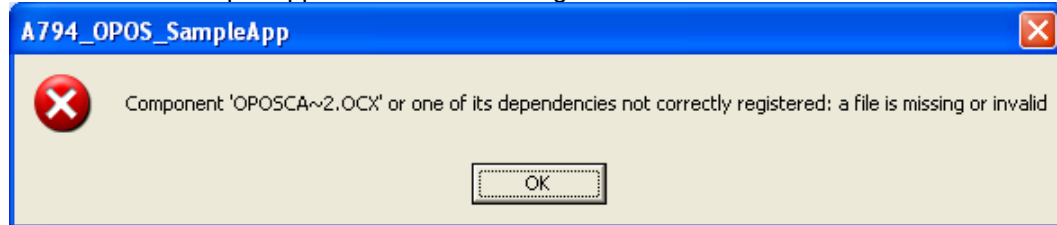
This softpaq may contain later version of drivers then what is on the physical CD that is shipped with HP peripherals.

9.2 HP Cash Drawer

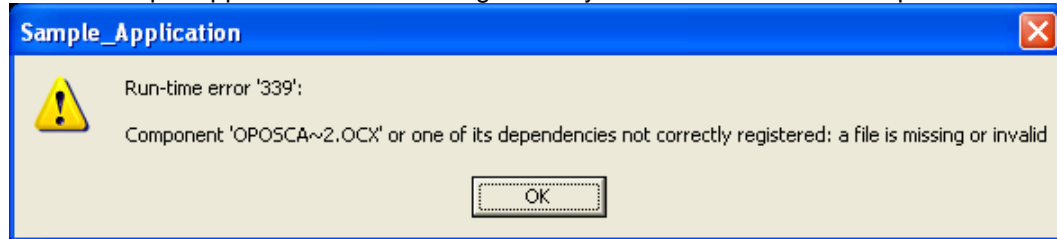
Question: When I run the sample application I receive a message stating dependencies not correctly registered. How do I correct this?

Answer: If you run the cash drawer sample application and receive the following screen, it indicates that either the CCO or the OPOS drivers are not installed and registered. Install the CCO drivers and install the printer OPOS package. After the installation is complete, please restart Windows.

Cash Drawer Sample Application Error message:



Printer Sample Application Error message when you click on cash drawer option



Question: In a dual cash drawer configuration both of my cash drawers are opening at the same time, why?

Answer: This is occurring because both the cash drawer have the same cash drawer cable. In a dual cash drawer configuration a different cash drawer cable is required for the second cash drawer.

Question: What are the ASCII codes to open the cash drawer?

Answer: The ASCII codes to open the cash drawer are:

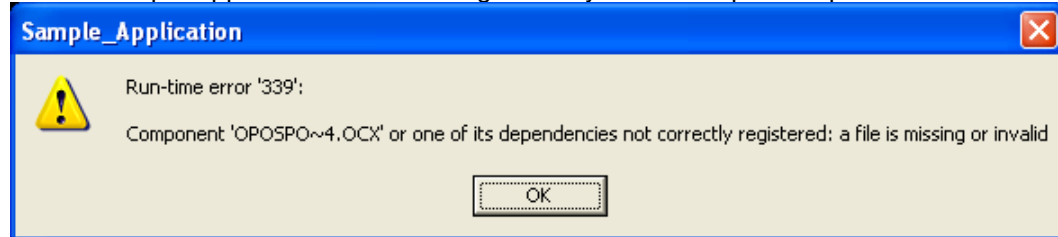
Cash drawer 1		Cash Drawer 2
27 112 0 8 8		27 112 1 8 8

9.3 HP USB Receipt Printer

Question: When I run the sample application I receive a message stating dependencies not correctly registered. How do I correct this?

Answer: If you run the cash drawer sample application and receive the following screen, it indicates that either the CCO or the OPOS drivers are not installed and registered. Install the CCO drivers and install the printer OPOS package. After the installation is complete, please restart Windows.

Printer Sample Application Error message when you click on printer option



Question: What firmware version is required to be able to switch between native and printer class mode on the A794 printer?

Answer: The A794 printer must have firmware 3.48 or later. If the printer has firmware prior to 3.48, there is softpaq available on the HP.COM web site that will allow one to update the firmware.

Question: Can one switch the printer between native and printer class mode?

Answer: Yes, one may switch the printer between native and printer class mode. On the HP.COM web site there is firmware softpaq that may be obtained that has the option to switch the printer between printer class and native mode.

Question: How do I tell if the printer is in NATIVE or PRINTER CLASS mode?

Answer: One can obtain this information in one of two ways:

- 1 ... Print out the diagnostic form on the printer by holding down the form feed button when you close the printer cover. In the COMM. INTERFACE section of the print out see if the USB DRIVER TYPE states NATIVE or PRINTER CLASS.
- 2 ... Look in Windows device manager USB section. If it states HP USB Receipt printer, the printer is in NATIVE mode. If you it has USB PRINTING SUPPORT, the printer is in PRINTER CLASS mode.

Question: Downloaded an updated JAVA from the web site, now the JPOS test utility does not launch?

Answer: The batch file sets the location where the runtime of JAVA folder is located. Need to change the location in the batch file to reflect the update JAVA folder.

Question: Why do I not see an option for “USB001 (Virtual USB Port) in the Windows mini-drivers setup?

Answer: In order for the port to appear, the printer must be attached to the unit AND the printer must be in printer class mode.

Question: What are the ASCII codes to open the cash drawer?

Answer: The ASCII codes to open the cash drawer are:

Cash drawer 1	Cash Drawer 2
27 112 0 8 8	27 112 1 8 8

Detail explanation of the cash drawer command:

Generate pulse to open cash drawer

ASCII	ESC p n p1 p2
Hexadecimal	1B 70 n p1 p2
Decimal	27 112 n p1 p2
Value of n:	00, 48 (Decimal) = Drawer 1; 01, 49 (Decimal) = Drawer 2
Value of p1:	0-255
Value of p2:	0-255

Question: What are the ASCII codes to cut the paper (knife cut)?

Answer: The ASCII codes to cut the paper (knife cut) are:

Perform full knife cut

ASCII	EM	ESC i
Hexadecimal	19	1B 69
Decimal	25	27 105

Perform partial knife cut

ASCII	SUB	ESC m
Hexadecimal	1A	1B 6D
Decimal	26	27 109

The partial knife cut leaves 5mm (0.20 inch) of paper on the left edge.

9.4 HP USB Barcode Scanner

Question: I am not sure the setting of the Barcode Scanner, how can I put the scanner back to the factory default setting?

Answer: You can put the scanner back to factory default setting by scanning the following bar code:



Set All Defaults

Question: After scanning an item, I have to press the “Enter” to accept what was scanned in my application.

Answer: You can change the behavior of the scan so that a carriage return is also transmitted after an item is scanned. In order to change the behavior of the scanner, scan the following bar codes in order that they appear below:



Scan Options



<Data><Suffix>



Enter

Question: After scanning an item my application needs a tab.

Answer: You can change the behavior of the scan so that a tab is also transmitted after an item is scanned. In order to change the behavior of the scanner, scan the following bar codes in order that they appear below:

Scan Options



<Data><Suffix>



Enter



Scan Suffix



7



0



0



9



Question: I need to use OPOS drivers with my application for the scanner, where can I obtain them from?

Answer: The OPOS drivers for the scanner maybe obtained from the HP web site under the software/driver section for the product. You will also need to change the scanner from HID device (default) to IBM hand-held USB device by scanning the appropriate bar code below:



HID Keyboard Emulation



IBM Hand-Held USB

Question: The volume of the scanner is loud for my environment, how can I lower the volume on the scanner?

Answer: There are three volume setting for the scanner low / medium (default) / high. Scan one of the bar code below to set the volume on the scanner:



Low



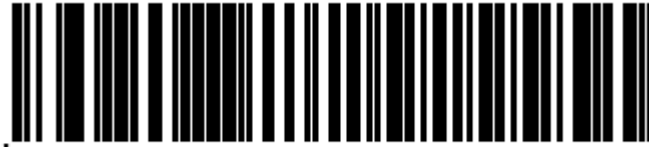
Medium (Default)



High

Question: When I scan something in notepad it appears to garbage in non-English language?

Answer: The barcode scanner USB country keyboard type needs to change. Please use one of the following barcode to change to the country.



*North American Standard USB Keyboard



German Windows



French Windows



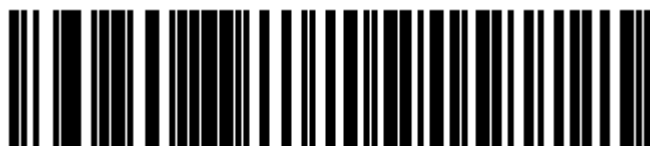
French Canadian Windows 2000/XP



Spanish Windows



Italian Windows



Swedish Windows



UK English Windows



Japanese Windows (ASCII)



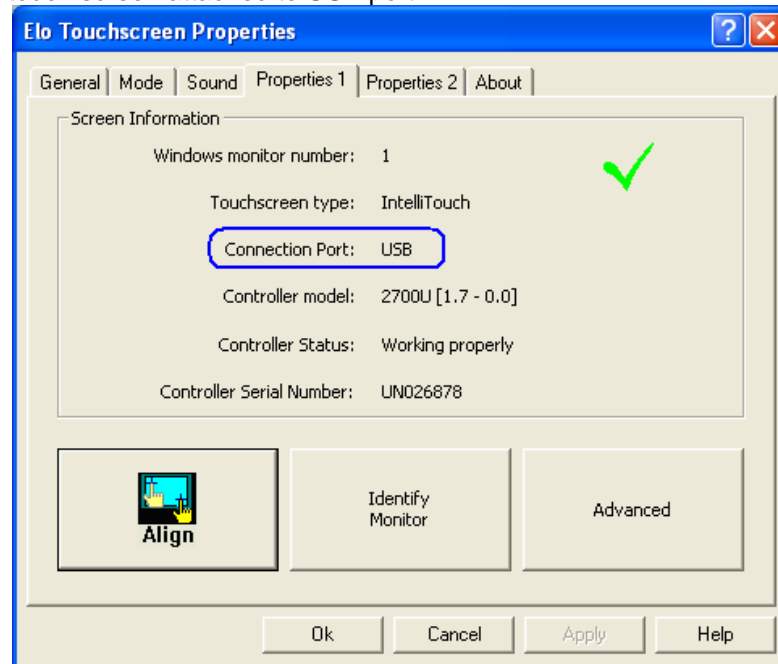
Portuguese-Brazilian Windows

9.5 HP Touch Screen

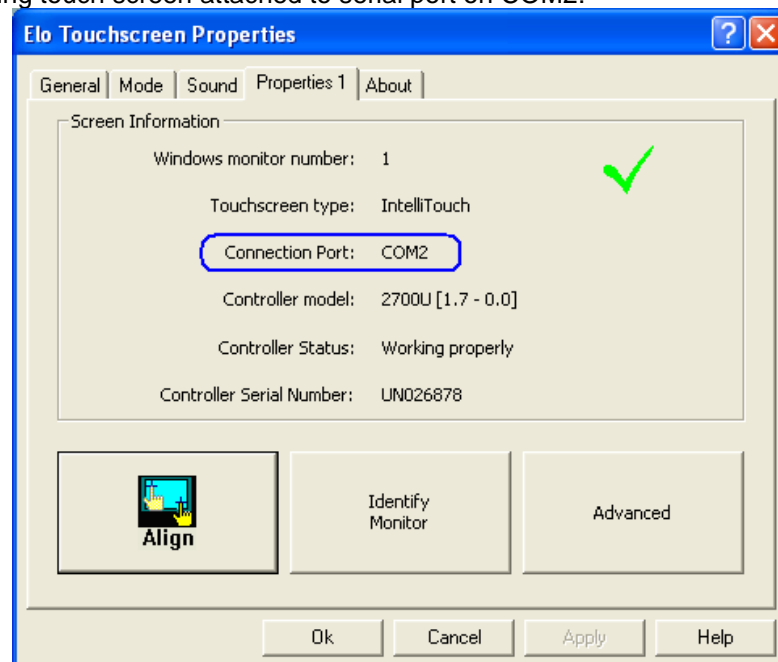
Question: Someone else installed the HP touch screen, how do I know which port the touch screen is attached to?

Answer: In the touch screen properties it will inform you what if you are on the USB or serial interface. If you are using COM port it will tell you which com port the monitor is attached to.

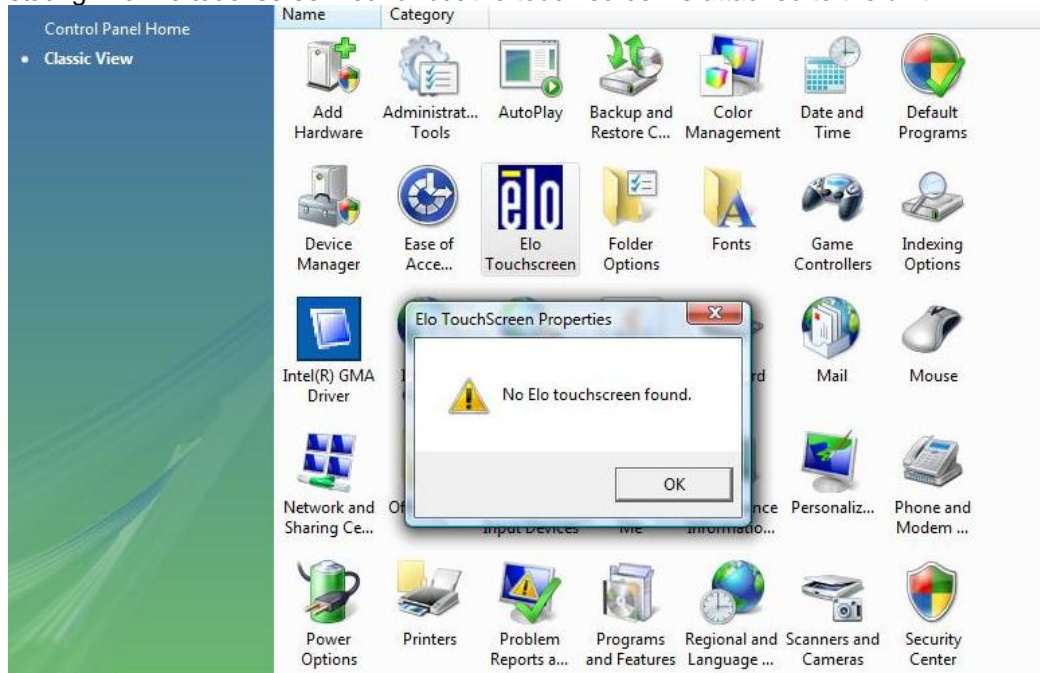
Showing touch screen attached to USB port:



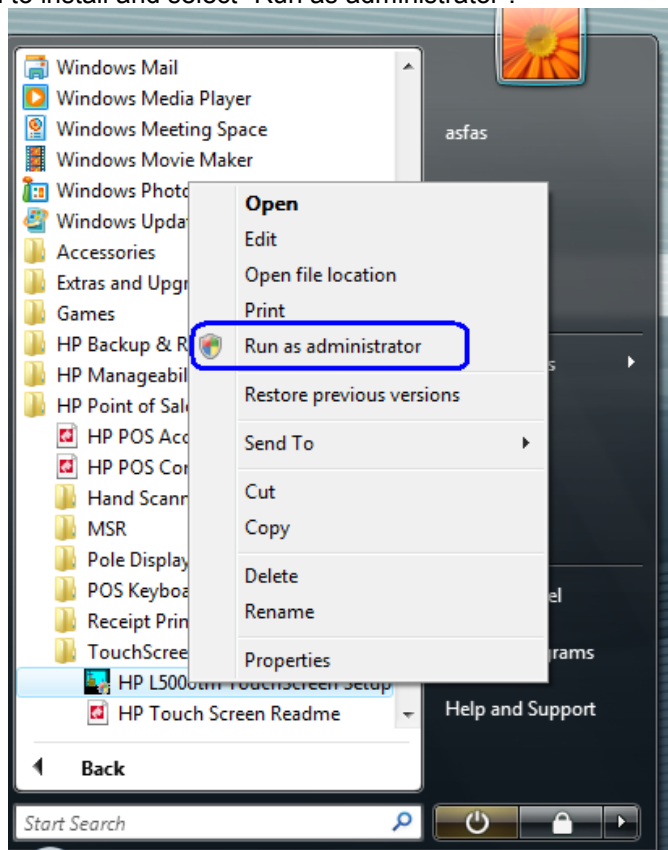
Showing touch screen attached to serial port on COM2:



Question: In Microsoft Vista when I click on Elo ICON on control panel (classical view) I receive stating “No Elo touchscreen found” but the touch screen is attached to the unit.



Answer: Re-run the install program from the start menu with administrator rights. Right click on the option to install and select “Run as administrator”.



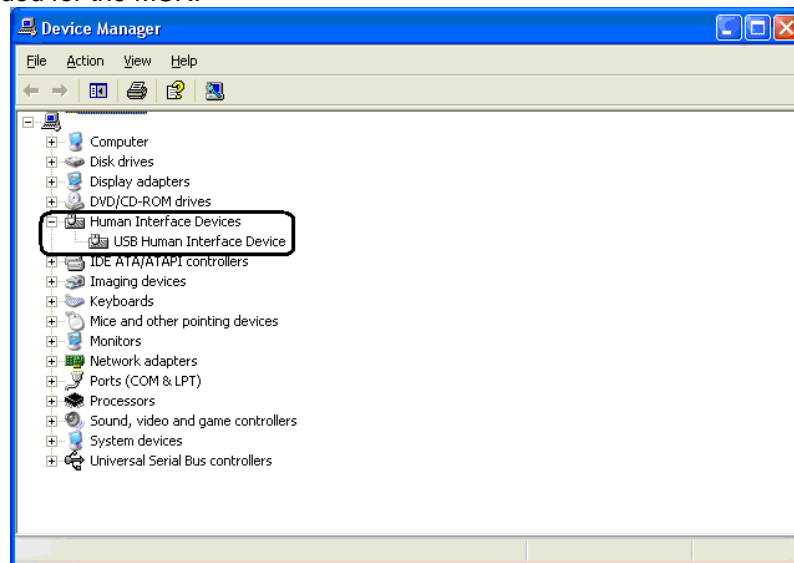
9.6 HP MSR

Question: How can I tell what mode the MSR is currently set to?

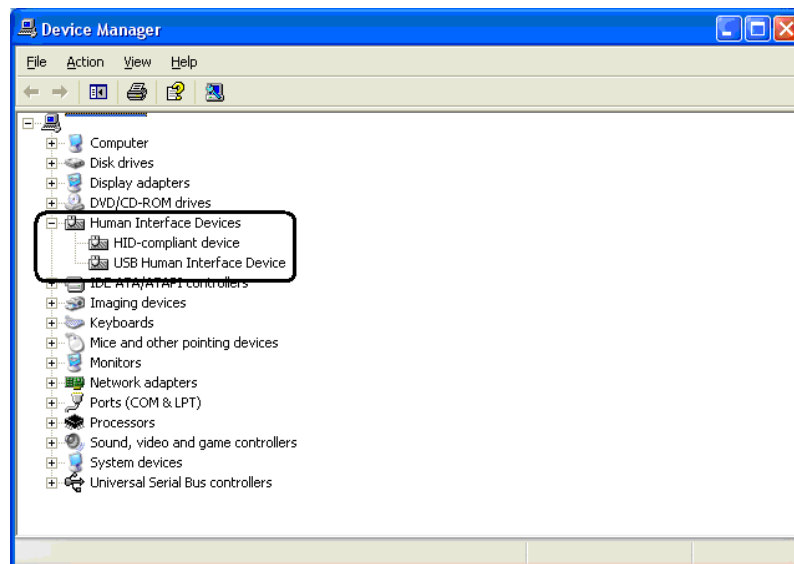
Answer: There are two ways to determine the mode the MSR is currently set to:

1. You can use the configuration utility and follow the steps that were outlined in ["Utility to switch MSR mode"](#) section of the document.
2. In Windows device manager see what drivers Microsoft Windows has loaded for the device.

When the MSR is in the USB HID-KB mode (default shipping mode) there will be one driver loaded for the MSR.*



When the MSR is in the USB HID mode there will be two drivers loaded for the MSR.*



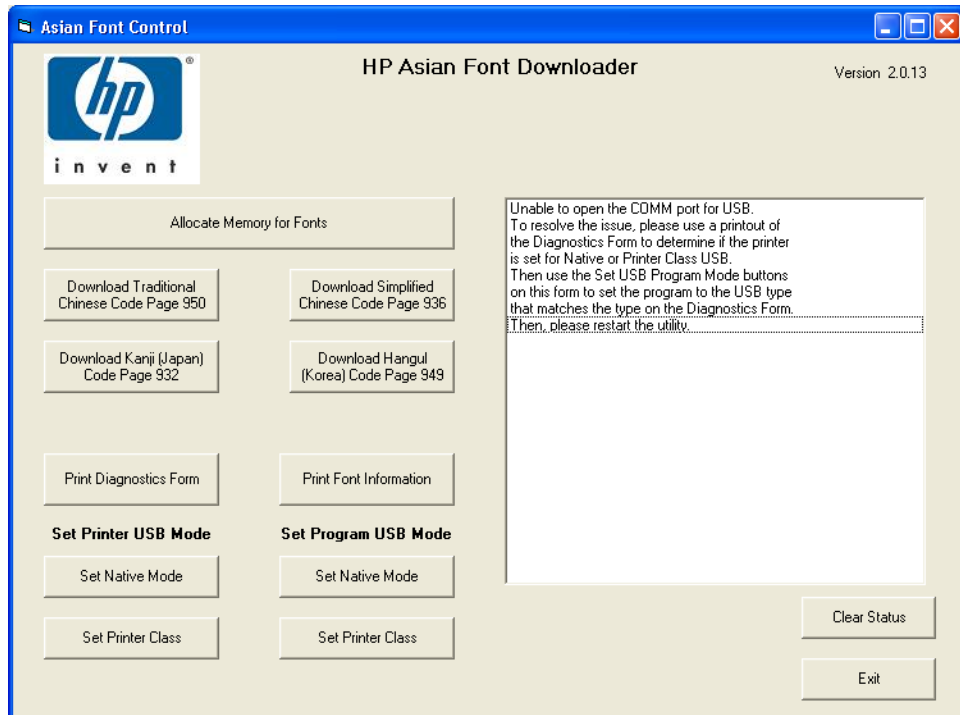
* If you have other USB device installed you may have more than two HID device loaded showing in the device manager.

Question: Can I switch the MSR between USB HID and USB HID-KB mode?

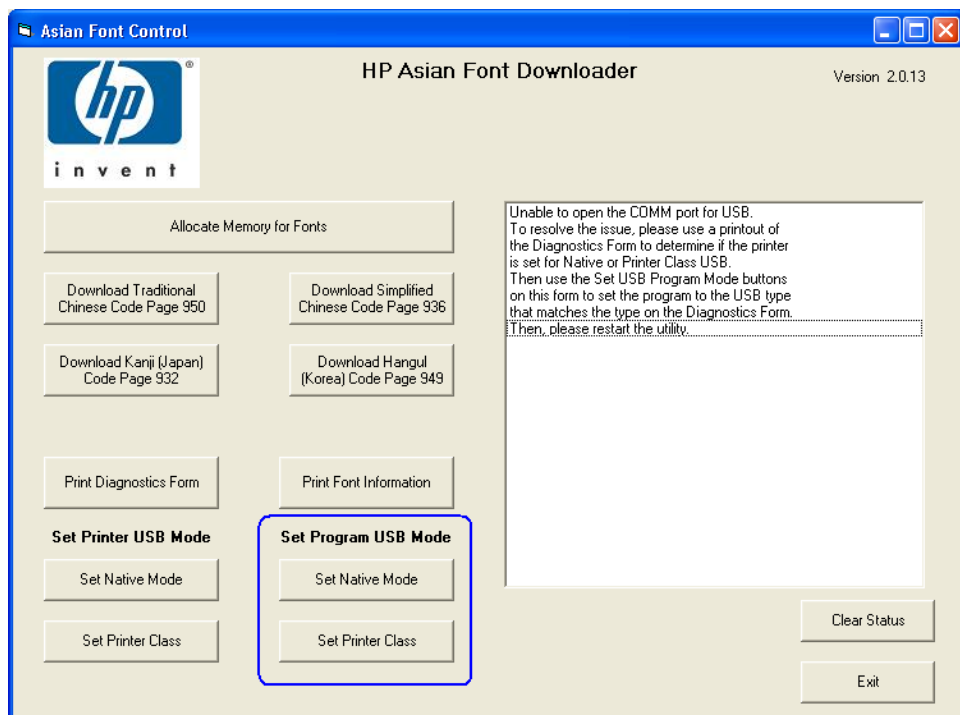
Answer: Yes, the MSR can be switched between the two modes. This can be accomplished either using the MSR configuration utility which can be obtained on HP.COM web site or use the stand alone utility to switch between the modes. The stand alone utility may be obtained from the HP.COM in folder in the MSR configuration utility softpaq or in the folder in the MSR OPOS softpaq from the HP.COM web site.

9.7 HP Font Loader

Question: When I launch the font downloader utility, I receive an error message. How do I correct this?



Answer: The printer is setup in a different mode then what utility is currently set to. In the “SET PROGRAM USB MODE” select the mode the printer is currently set and then restart the utility.



Question: After the font to the printer is complete, the LED on the printer is blinking?

Answer: Select the "PRINT Sample/Diagnostics" button on the utility or reset the printer in order to have the LED go back to solid state.

9.8 HP rp3000 Optical Door

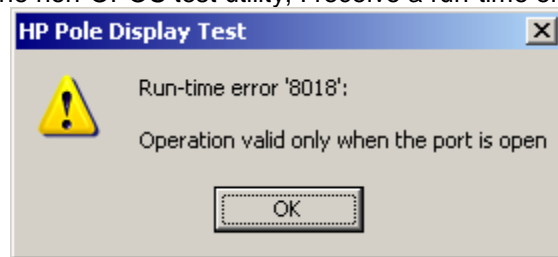
Question: How does one start and stop the optical door utility service?

Answer: One must have administrator privileges in order to stop and start the service once it has been installed in the image. The following are the syntax:

- Syntax to enable "ODDDoorCoverMonitor.exe –install"
- Syntax to disable service "sc stop HPODDDoorCoverMonitor.exe"
 - Both enable and disable of the HPODDCoverMonitor service requires a reboot for the service to perform the action.

9.9 HP Pole Display

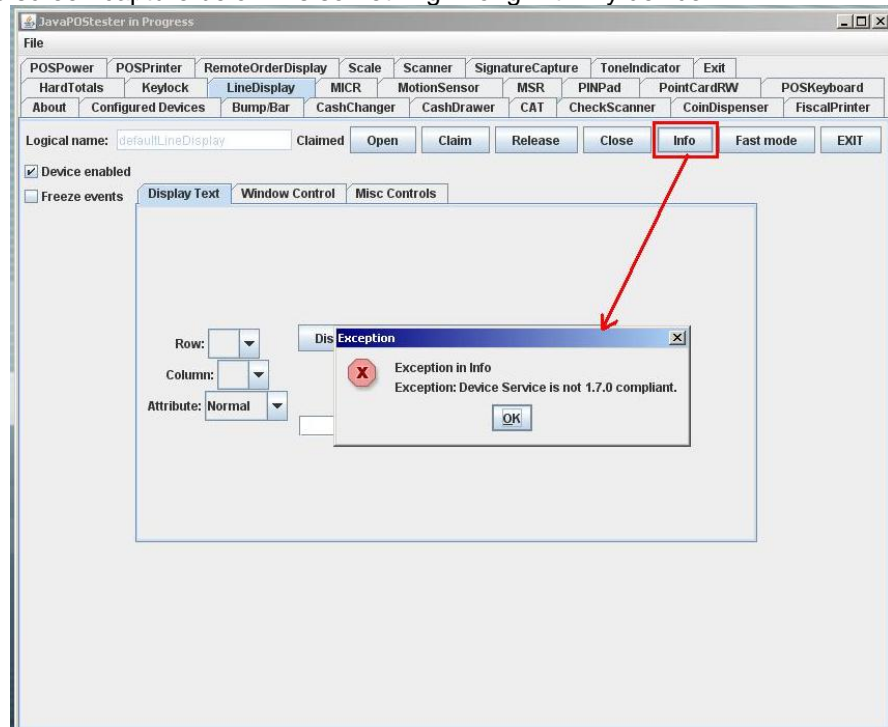
Question: When I run the non-OPOS test utility, I receive a run-time error message.



Answer: This error occurs when the utility is not able to talk to the pole display. Ensure the following on the pole display

- The pole display is attached to the unit
- The Windows device manager drivers for the pole display are installed.
- Confirm the pole display switch is turned on.

Question: On the JPOS tester utility when “INFO” button is pressed receive an exception error similar to the screen capture below. Is something wrong with my device?



Answer: All the line pole functionality under JPOS is working properly; this exception error should be ignored in the JPOS test utility

9.10 HP OPOS Logical Device Name Utility

Question: When the utility is launched it states “no OPOS drives have been detected”, what needs to be done to correct this?



Answer: Check with your POS application to see if application uses OPOS drivers. If the application does use OPOS drivers, for the HP branded peripherals the OPOS drivers can be obtained from HP.COM web site.

9.11 HP ap5000 VFD

Question: What is the default port that the VFD is attached to?

Answer: The ap5000 VFD as shipped from the HP factory is shipped on serial port 2 (COM2).

Question: Can the VFD be used on different COM port besides COM2?

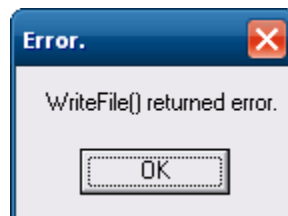
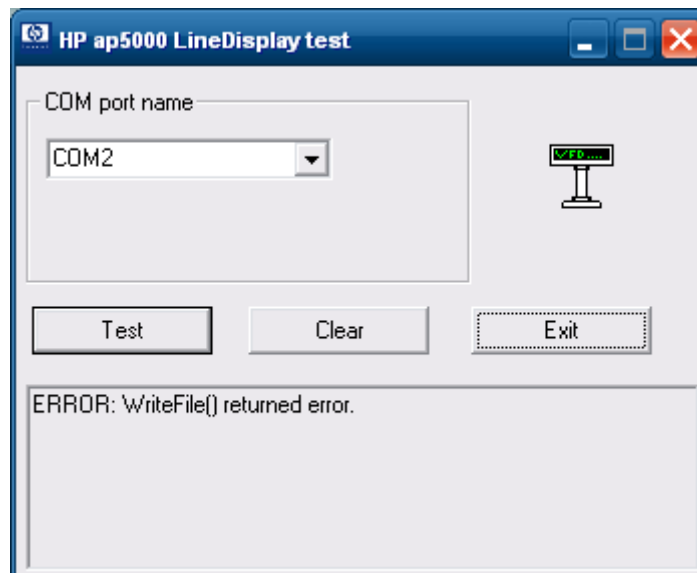
Answer: Yes, the VFD may be used either on COM1 or COM2. The VFD cannot be attached to COM3 because of the power requirements.

Question: Does the VFD support emulation modes?

Answer: No emulation modes are supported BUT many of the same ESC commands are used that are used in Epson emulation mode.

9.12 HP ap5000 VFD (non-OPOS)

Question: When the “Test” button is selected I receive an error indicating a “WriteFile” error. How to fix this error?

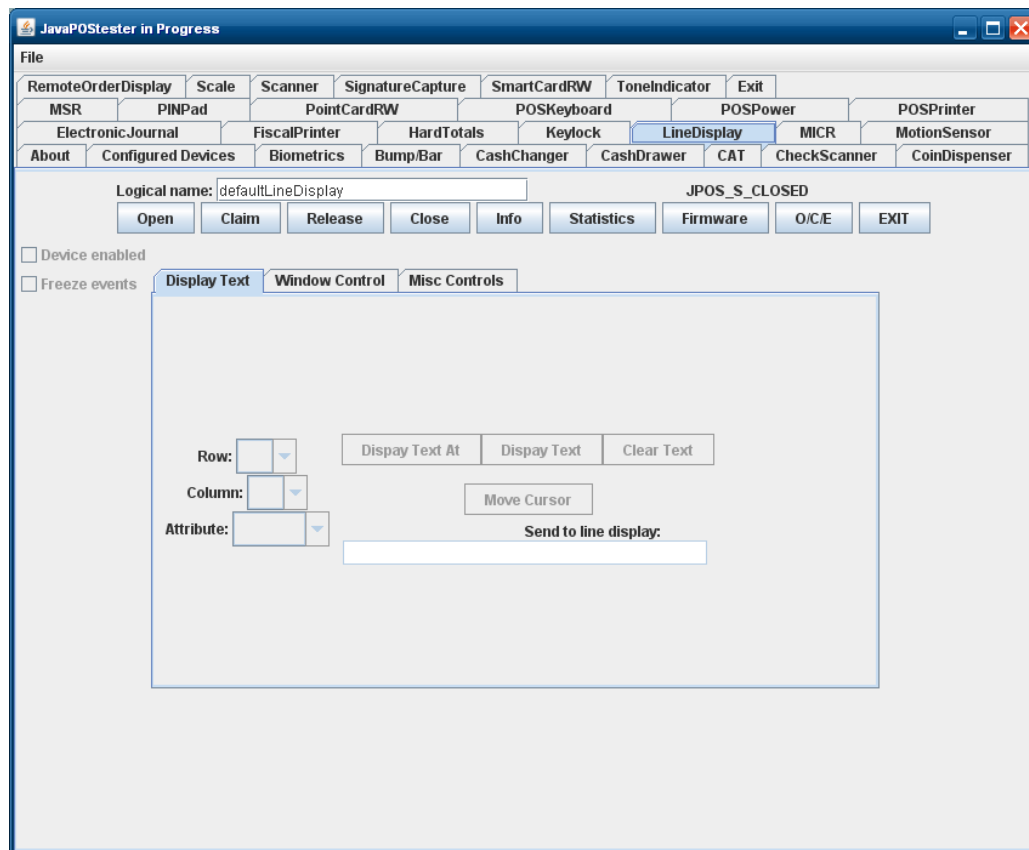


Answer: This error indicates that the utility is not able to find the ap5000 VFD attached to the unit. Checking the following items:

1. An ap5000 VFD is attached to the unit.
2. The ap5000 VFD is attached on either COM1 or COM2.
3. In BIOS the port (COM1 or COM2) that the VFD is attached is set for “5V” for power instead of “Standard Mode”. Please refer to the [HP ap5000 VFD BIOS Power setting](#) section for details on how to enable the power on the serial ports.

9.13 HP ap5000 VFD (JPOS)

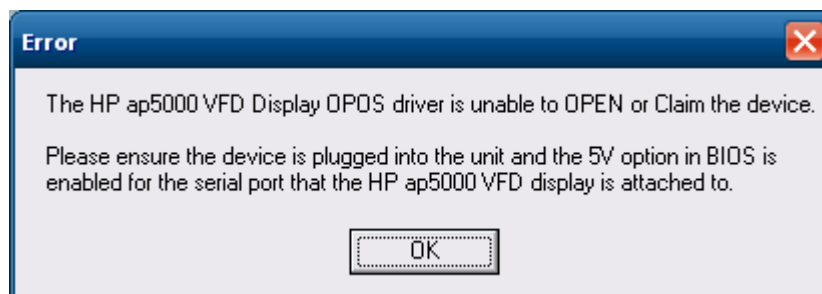
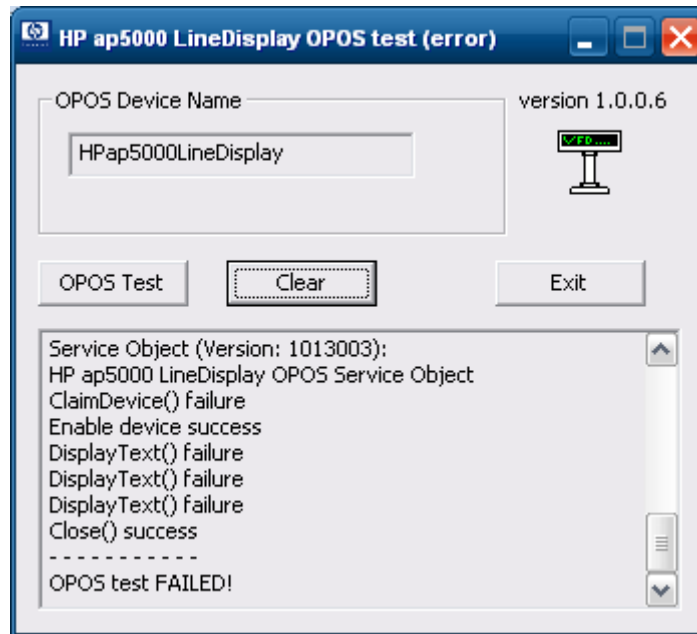
Question: In the JPOS test utility, after I click on the “OPEN” button I receive a failed message when the default name is used that appears in the JPOS test utility. How to fix this error?



Answer: The logical name of the device is “HPap5000LineDisplay”. Replace the “defaultLineDisplay” that appears in the logical name box with “HPap5000LineDisplay”. If one clicks on the “Configured Device” tab, the names for the device will appear that will be used in the test utility.

9.14 HP ap5000 VFD (OPOS)

Question: When launching the OPOS test utility, I receive an error indicating a “FAILED”. How to fix this error?



Answer: This error indicates that the utility is not able to find the ap5000 VFD attached to the unit. Checking the following items:

1. An ap5000 VFD is attached to the unit.
2. The ap5000 VFD is attached on either COM1 or COM2.
3. In BIOS the port (COM1 or COM2) that the VFD is attached is set for "5V" for power instead of "Standard Mode". Please refer to the [HP ap5000 VFD BIOS Power setting](#) section for details on how to enable the power on the serial ports.

9.15 HP ap5000 MSR

Question: What port is the MSR attached to?

Answer: The ap5000 MSR as shipped from the HP factory is shipped on COM4.

Question: When I open Notepad and swipe a card nothing appears in Notepad, why?

Answer: The ap5000 MSR is attached to a serial port; it is not a USB HID keyboard (wedge) device. In order to have data appear in Notepad one may run a third party utility that takes data from the serial port and sends via keyboard. For XP / WePOS / POSReady there is serial key option that can be enabled, for Vista / Win7 a third party utility must be used. Please check with point of sale application if they support serial MSR which would be preferred over serial key option or third party application.

Question: My application needs a carriage return after track 2, how can I add carriage return after track 2?

Answer: One can use the ap5000 MSR configuration to enable a carriage return on track 2. The ap5000 MSR configuration utility may be obtained from HP.COM or from the HP Point of Sale Driver and Documentation CD.

9.16 HP ap5000 MSR (JPOS/OPOS)

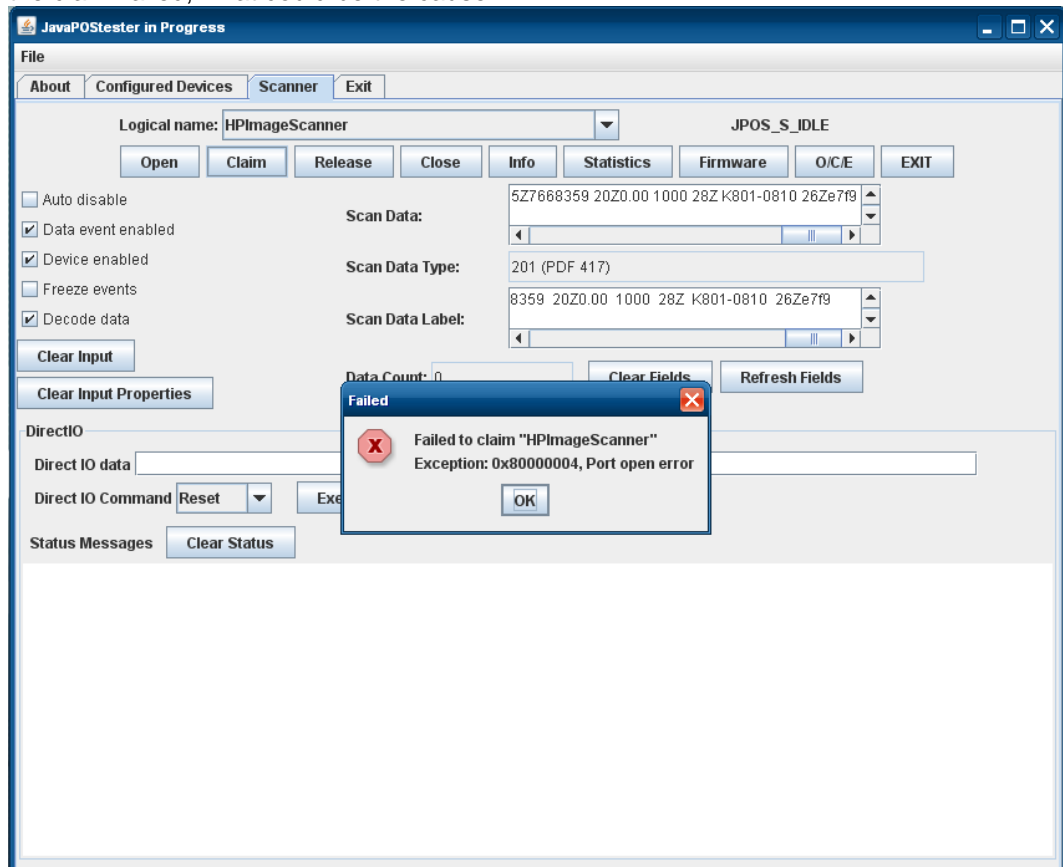
Question: Why do I not need to configure any setting besides the device name when using OPOS / JPOS for the MSR like I need to for Windows?

Answer:

- For OPOS the drivers understand the settings for the MSR and communicate with it with the proper protocols.
- For JPOS the configuration file that is provided by HP already has proper protocol setting in the file.

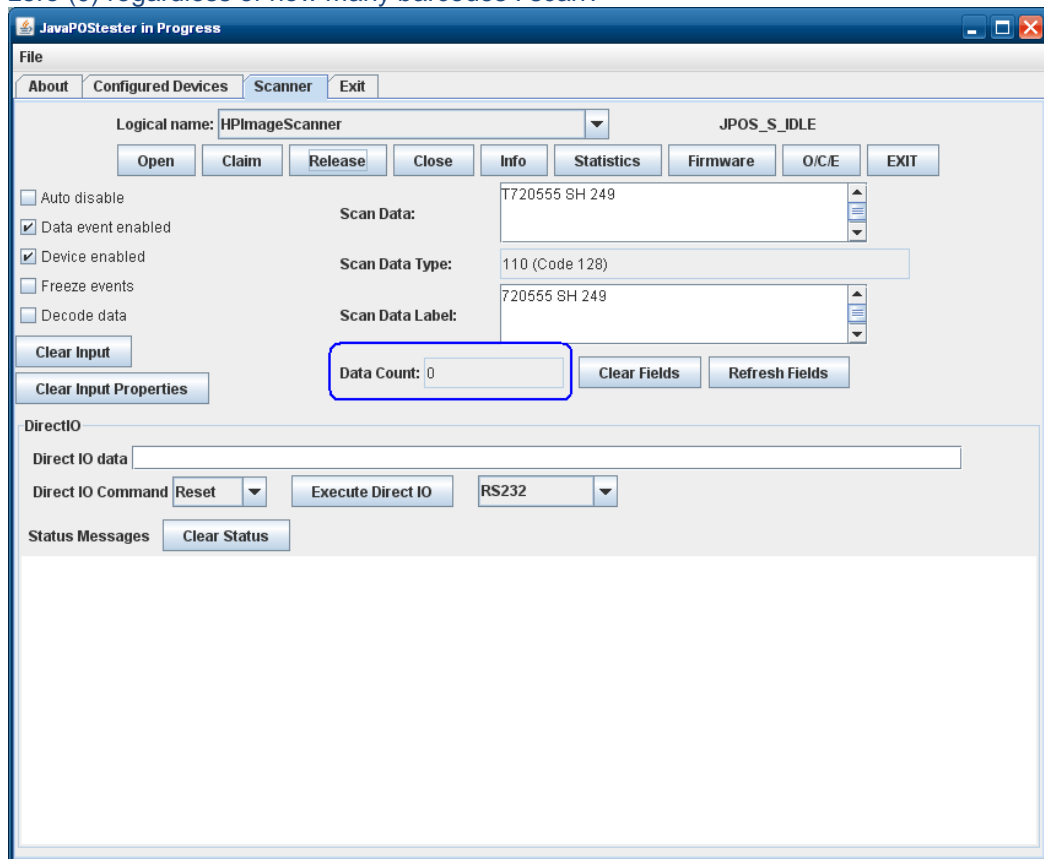
9.17 Imaging Scanner - JPOS

Question: When I do a claim of the HP Imaging scanner in the JPOS utility I receive message stating the claim failed, what could be the cause?



Answer: The above message will occur if the device has been released and then one tries to CLAIM the device again. Need to CLOSE the device and then reopen OPEN / CLAIM the device (see the [JPOS section of the Imaging Scanner](#) for details).

Question: In the JPOS test utility for the HP Imaging Barcode Scanner, the “Data Count” is always zero (0) regardless of how many barcodes I scan?



Answer: In the JPOS utility the “Data Count” field is not used to keep track of the number of barcode that have been scanned during the session of the JPOS utility like it is in the OPOS utility for the imaging scanner.