



HP Point of Sale (POS) Peripherals Configuration Guide – ap5000 VFD Windows (non-OPOS)

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1 HP Point of Sale Peripherals

1.1 HP ap5000 VFD (Vacuum Fluorescent Display)



1.1.1 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

1.1.2 Windows Drivers for the HP ap5000 VFD

Windows operating system supports serial port COM1/COM2, so no extra drivers are needed to be installed.

1.1.3 Testing HP ap5000 VFD

1.1.3.1 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.

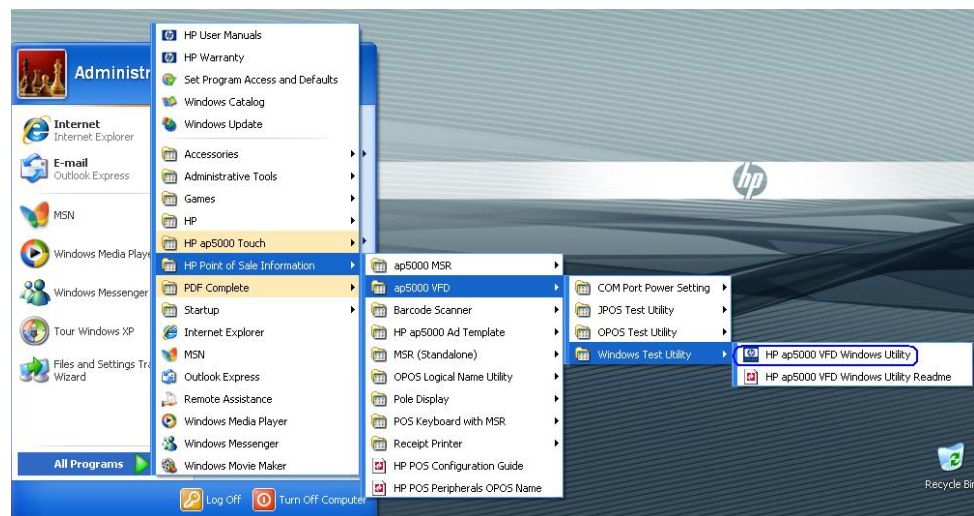
3. Click on the “Test” button once “READY” appears in the status box.
4. To exit the application:
 - a. Click on “Exit” to close test applet.

Detail Steps

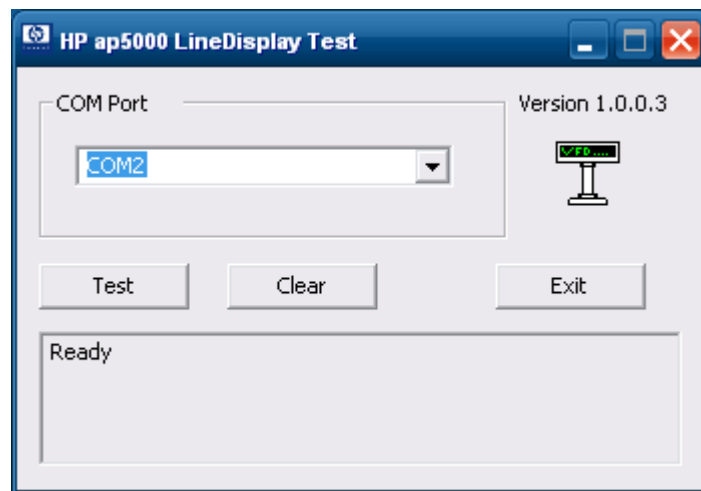
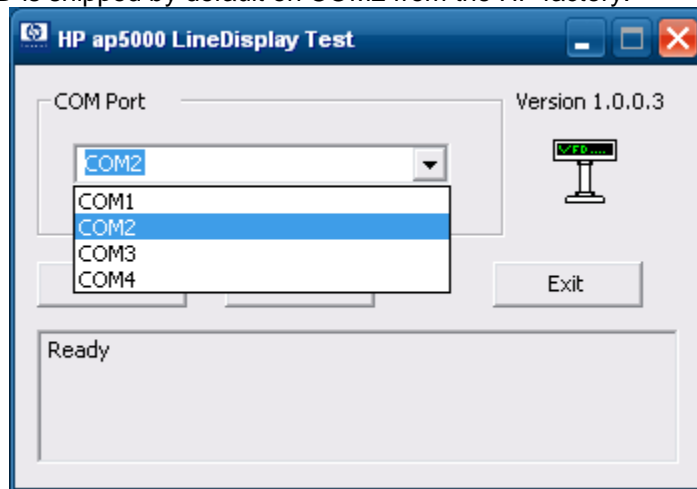
1. Start the Windows test utility from Windows start menu.



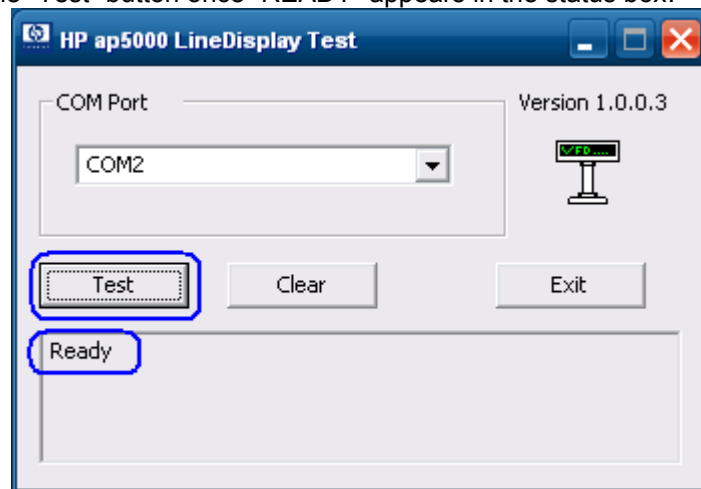
or



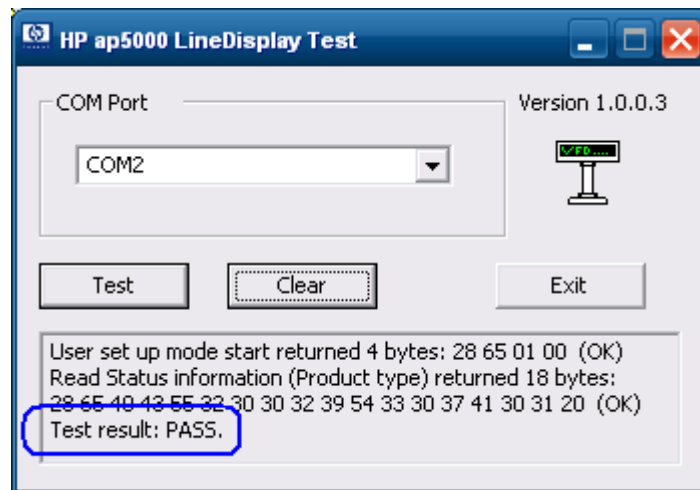
2. Select the COM port from the drop down box or keep the default option. The ap5000 VFD is shipped by default on COM2 from the HP factory.



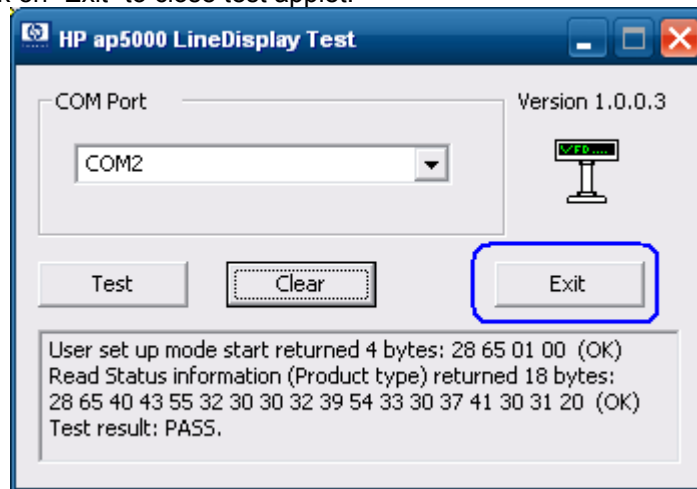
3. Click on the "Test" button once "READY" appears in the status box.



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.



1.2 **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.

1.2.1 **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.

1.2.2 **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.

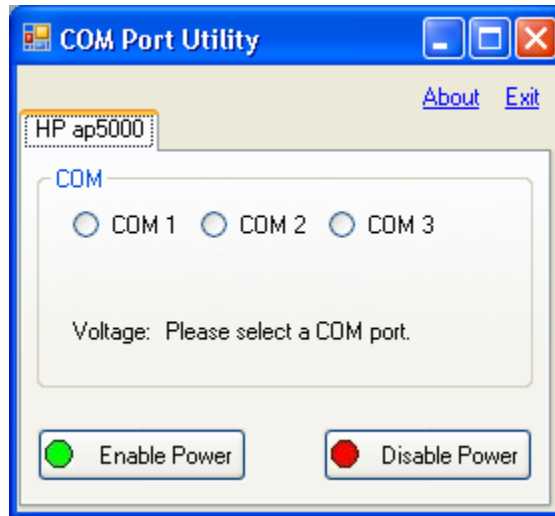
Note: The ap5000 VFD **cannot** be installed on COM3, it only be used on COM1 or COM2

The following is an overview of the Windows graphical utility for the COM port setting:

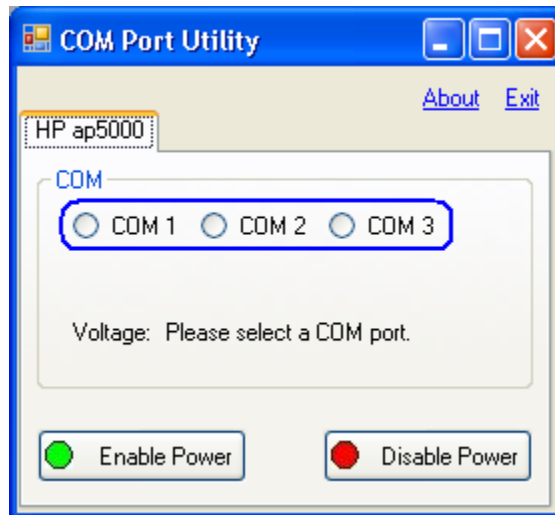
1. Close any open application or document.
2. Launch the “HP Com Port Utility.EXE” which is located on the “HP POS Software and Documentation CD” that is included in the peripherals after market option kit.
3. Select the COM port that you which to change.
4. Select the option that you wish for the COM 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

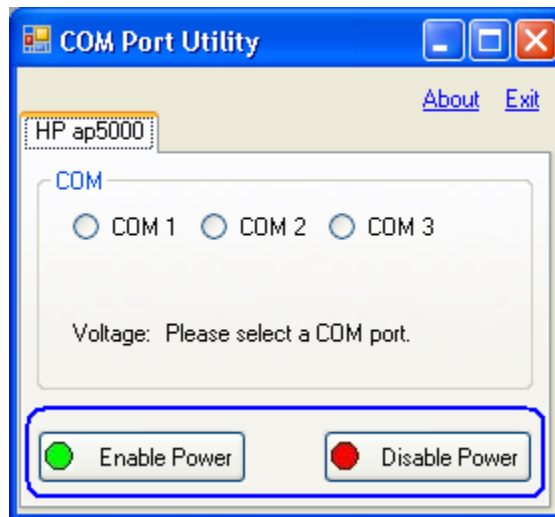
1. Close any open application or document.
2. Launch the "HP Com Port Utility.EXE" which is located on the "HP POS Software and Documentation CD" that is included in the peripherals after market option kit. The following is the GUI that will appear when the utility is launched:



3. Select the COM port that you would like to change..



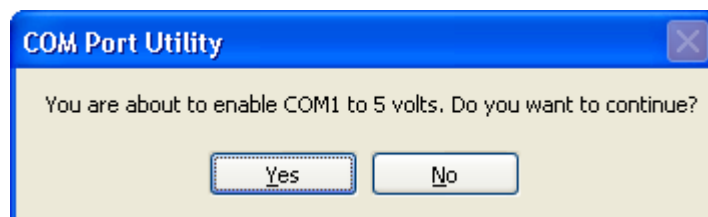
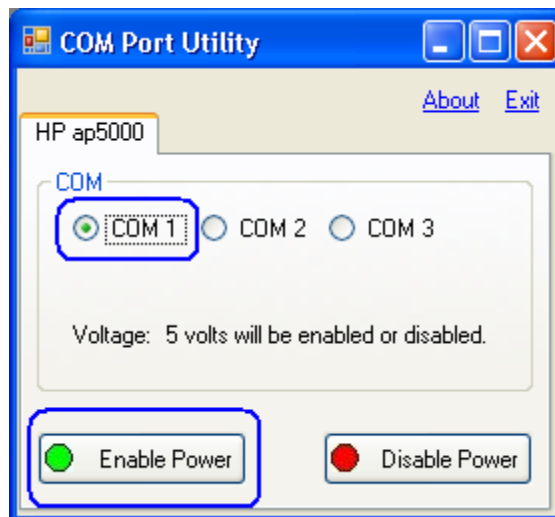
4. Select from the two options for the COM port (Enable Power or Disable Power).



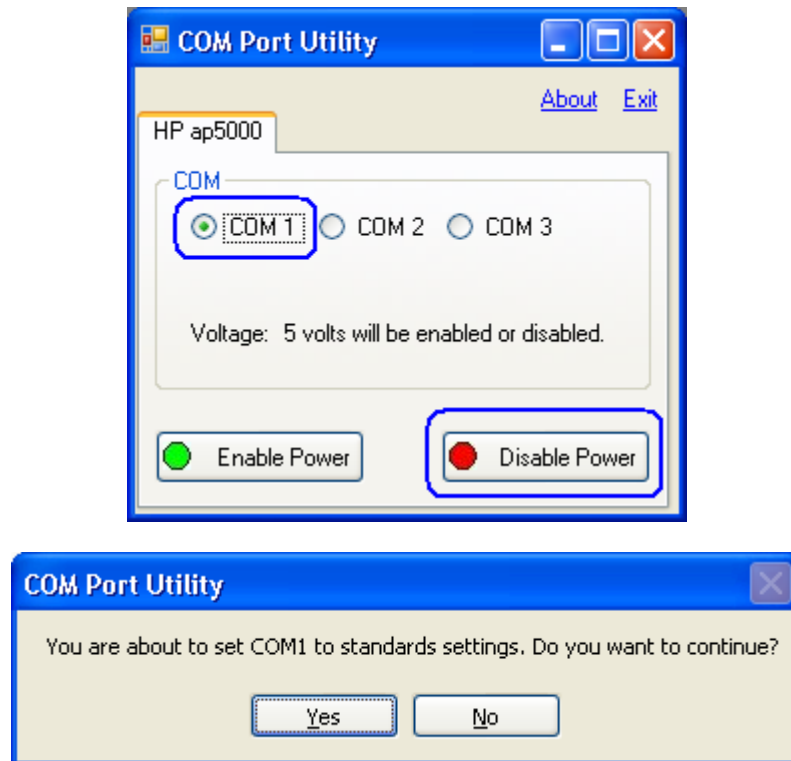
When power is enabled for COM1 or COM2, 5V will be enabled. When power is enabled for COM3, 12V will be enabled.

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.

2 Q & A

2.1 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?

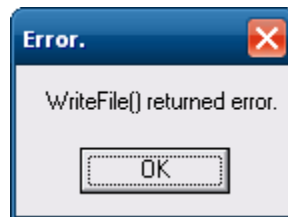
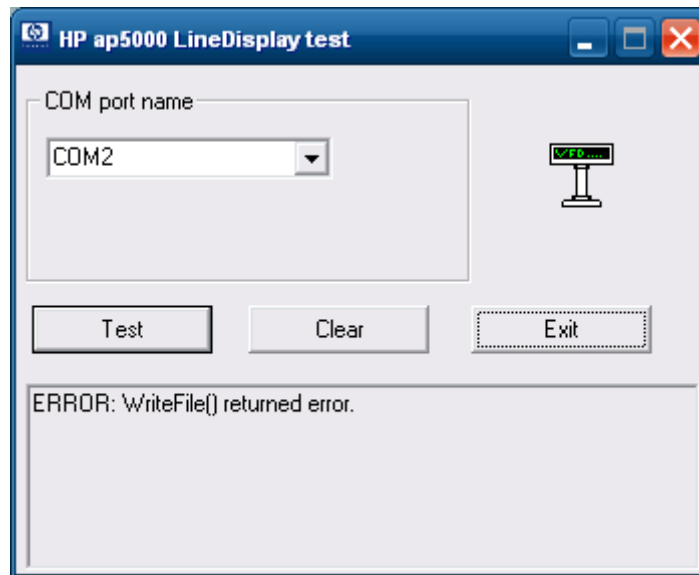
Answer: Yes, the VFD may be used either on COM1 or COM2. The VFD cannot be attached to COM3 because of the power requirements.

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.

2.2 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.