

User's Manual

USB LAN DOCK

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Introduction

Thank you for ordering the USB LAN DOCK. The USB LAN DOCK is an intelligent expansion module that connects to a PC or notebook via Universal Serial Bus (USB) port, providing one Ethernet RJ-45 port, one high-speed RS-232 serial port, one printer port, one PS/2 keyboard & mouse and 3 downstream USB ports. The USB LAN DOCK features easy connectivity for traditional serial devices, keyboard, mouse and other USB devices.

By simply plugging in the USB LAN DOCK, you will:

- Add one high-speed serial port, one printer port, one PS/2 keyboard & mouse and 3 downstream USB ports to your PC or notebook in seconds.
- Improve the inconvenience of configuring old PC solutions like card extension solutions, which require to adjust IRQ or jumper settings and the incompatibility of various brands of docking solution or bus repeater.
- Avoid the hassle of removing your PC case, or rebooting the operating system during installation.

System Requirements

- A PC with a minimum of a 75MHz Pentium, or equivalent
- A minimum of 16M bytes of RAM.
- One available USB type A downstream port. (either UHCI or OHCI)
- Windows 98 or later.

Package Contents

The product you purchased should contain the equipment and accessories shown as follows:

- USB LAN DOCK
- One CD with user' s manual and driver
- One 6 foot USB AB type cable
- One switching power adapter

Connectors

- One RJ-45 connector support 10/100 Ethernet Connection
- One DB-9 RS-232 serial interface connector supports baud rates from 1,200 to 115.2K.
- One DB-25 parallel connector supports IEEE-1284 bi-directional printer port.
- One Mini-din for PS/2 keyboard, mouse.
- Three USB receptacle type A downstream ports.
- One USB type B upstream connector.



Figure 1

USB LAN DOCK Functions

The available functions of USB LAN DOCK depend on the status of power supplied:

- **Bus powered**
 1. Connecting USB cable to PC to provide bus power.
 2. When you provide bus power only, the PS/2 mouse & keyboard, RS232, printer functions and Ethernet function will be enabled. However, the USB Downstream Ports are disabled.
- **External powered**
 1. Connecting power adapter to provide external power.
 2. When you provide external power, the USB Downstream Ports are enabled, and you can use all the functions of USB LAN DOCK.

LED Indicator

- **Power Indicator**

The Power Indicator will turn **ON** when bus power is supplied.

- **USB Indicators**

There are three USB indicators to show if the USB Downstream Ports are ready for use.

1. If the USB LAN DOCK is not ready for use or only bus power is supplied, the USB Indicators will turn **OFF**, and the USB Downstream Ports can not be used.
2. If the USB LAN DOCK is ready for use, and external power is supplied, the USB Indicators will turn **ON**, and you can use all the functions of USB LAN DOCK.
3. If over-current happens for certain USB Downstream Port, the corresponding USB Indicator will turn **OFF** to indicate that this port is not working now.
4. When over-current situation is solved, the USB Indicator will turn **ON** again.

- **Ethernet Indicators**

There are three Ethernet Status indicators on the RJ45 connector.

1. Link/ Act (Green): When ON, it indicates a valid network connection on the RJ-45 port. When blinking, it indicates data is being received or transmitted through the RJ-45 port.
2. Speed (Orange): If the 100Mbps(100BASE-TX) Ethernet connected, this LED will turn ON.
3. Full/Col (Green): The LED will keep ON when in Full Duplex Mode. This LED will be blinking when colliding.



Figure 2

Installing USB LAN DOCK

1. This installation guide is written in accordance with Windows 98SE. For Windows 2000 version, the setup procedure of step A "Driver Installation" section will be skipped.
2. For Windows XP users, the setup procedure of step A and B "Driver Installation" section will be skipped, because of XP driver included.
3. Power on your computer and make sure that the USB port is enabled and working properly. Please refer to the **"application note 1 on page 22 "** if you have any trouble.
4. Connect the power adapter into USB LAN DOCK.
5. Connect the USB cable into USB LAN DOCK and the USB port of your PC.
6. Windows will detect the IEEE-1284 device. Please refer to step A of "Driver Installation" section.
7. Windows will detect the USB to Ethernet Converter. Please refer to step B of "Driver Installation" section.
8. Windows will detect the PS/2 keyboard & mouse device. Please refer to step C, the "Driver Installation" section.
9. And Windows will detect the RS232 device. Please refer to step D of "Driver Installation" section.

Driver Installation

The driver installation is divided into 4 steps. Please install USB LAN DOCK step by step by following the instruction from Step A-D.

Step A:

To install the software for USB to Printer Converter of the USB LAN DOCK:

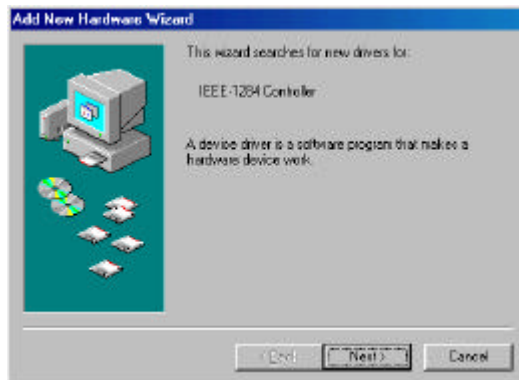


Figure A-1

A1. Insert the “USB DOCK driver CD” into CD-ROM. Click “Next” to continue
(Ref Figure A-1)

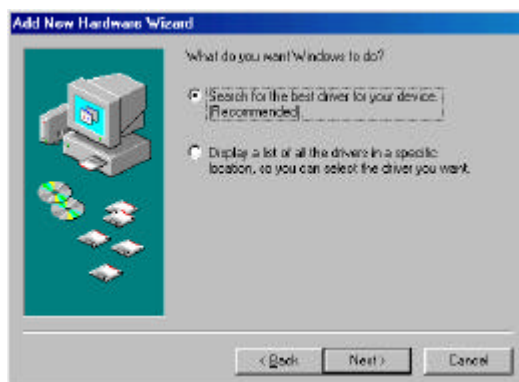


Figure A-2

A2. Click “Next” to initiate the search for the best driver for your device
(Ref Figure A-2).

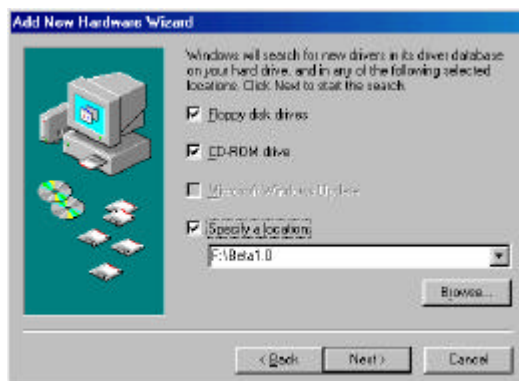


Figure A-3

A3. Select “Specify a location” and the location of the LAN DOCK driver CD.
Click “Next” to start and search.
(Ref Figure A-3).

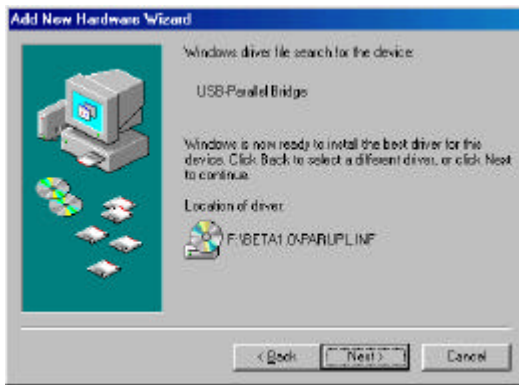


Figure A-4

A4. Click “Next” to continue
(Ref Figure A-4)

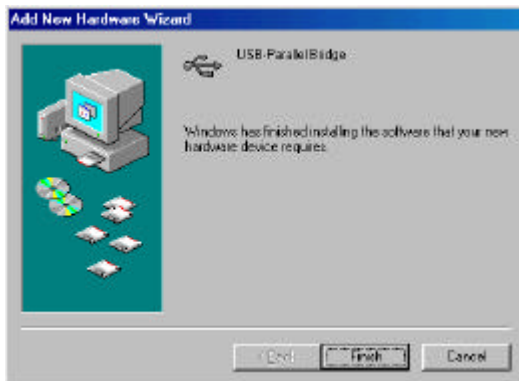


Figure A-5

A5. Click “Finish”, windows has
finished installing the printer driver
(Ref Figure A-5)

Before connecting the printer on the parallel port of USB LAN DOCK, the printer driver must be installed in advance, or it might print unknown format of character.

Please refer "Setting Up the Printer Device" section on page 17 to connect your printer to the USB LAN DOCK.

Step B.

To install the Ethernet driver of USB LAN DOCK:

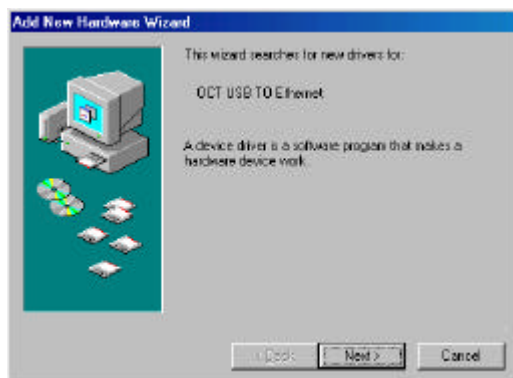


Figure B-1

B1. Click “Next” to continue
(Ref Figure B-1)

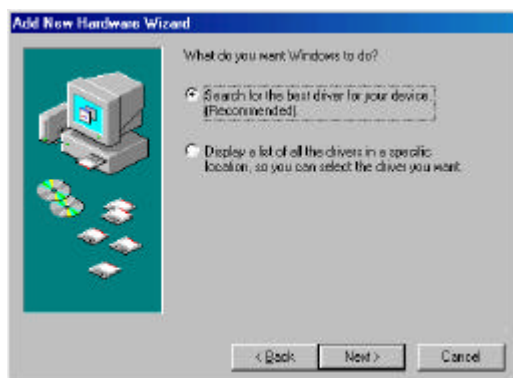


Figure B-2

B2. Click “Next” to initiate search
for the best driver for your device
(Ref Figure B-2)

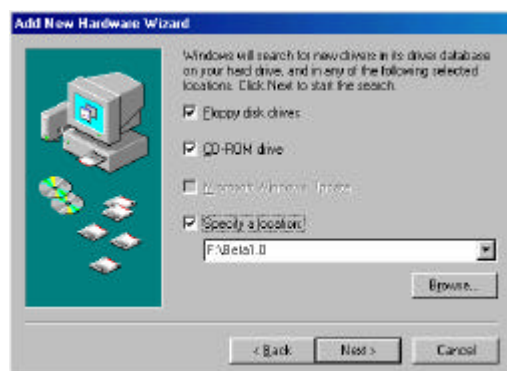


Figure B-3

B3. Select “Specify a location” and
the location of the LAN DOCK driver
CD.
Click “Next” to start and search.
(Ref Figure B-3).



Figure B-4

B4. A Message window will ask you to insert the Win98 Source disk. Please press “OK” to continue. (Ref Figure B-4)

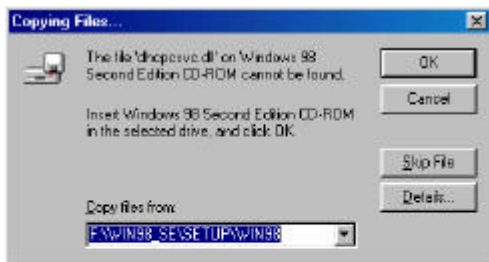


Figure B-5

B5. Please specify the location of Win98 source file, and then press “OK” to continue (Ref Figure B-5)

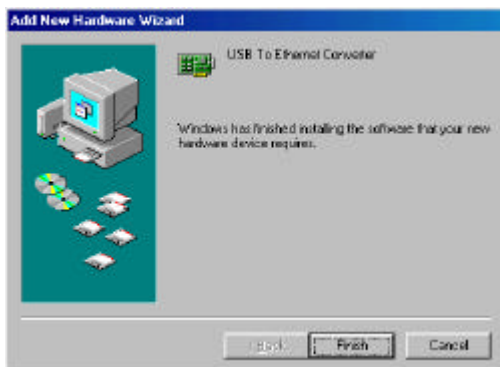


Figure B-6

B6. Click “Finish”, Windows has finished the installation of the USB to Ethernet Converter. Note: The system will require PC restart to activate the Ethernet driver. (Ref Figure B-6)



Figure B-7

B6. Click “Yes” to restart your Computer. (Ref Figure B-7)

Step C.

To install the PS/2 keyboard & mouse driver of USB LAN DOCK:

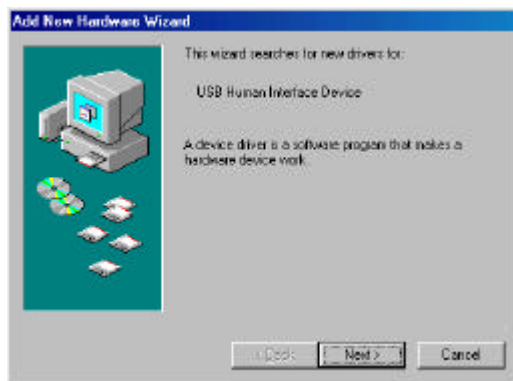


Figure C-1

C1. Click “Next” to continue
(Ref Figure C-1)



Figure C-2

C2. Click “Next” to initiate search
for the best driver for your device
(Ref Figure C-2)



Figure C-3

C3. Please insert “Windows 98” CD
into CD-ROM drive. Click “Next”
to continue
(Ref Figure C-3)



Figure C-4

C4. Click “Next” to continue
(Ref Figure C-4)



Figure C-5

C5. A Message window will ask you to insert the Win98 Source disk. Please press “OK” to continue.
(Ref Figure C-5)

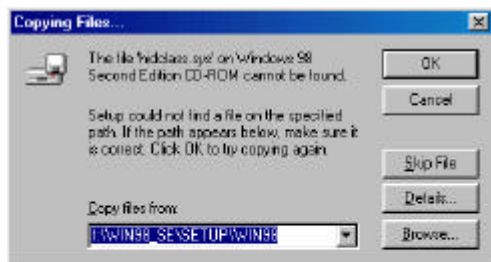


Figure C-6

C6. Please specify the location of Win98 source file, and then press “OK” to continue
(Ref Figure C-6)



Figure C-7

C7. Click “Finish”, Windows has finished installing the USB HID driver for PS/2 keyboard & mouse.
(Ref Figure C-7)

Step D:

To install the USB to serial port driver of the USB LAN DOCK, please make sure the driver diskette is inserted:

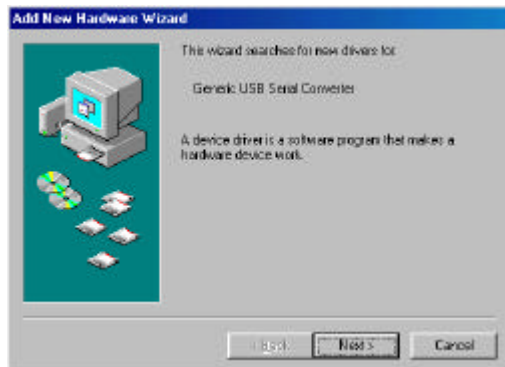


Figure D-1

D1. Click “Next” to continue
(Ref Figure D-1)



Figure D-2

D2. Click “Next” to initiate a search for the best drive for your device
(Ref Figure D-2)



Figure D-3

D3. Select “Specify a location” and the location of the LAN DOCK driver CD.
Click “Next” to start and search.
(Ref Figure D-3).

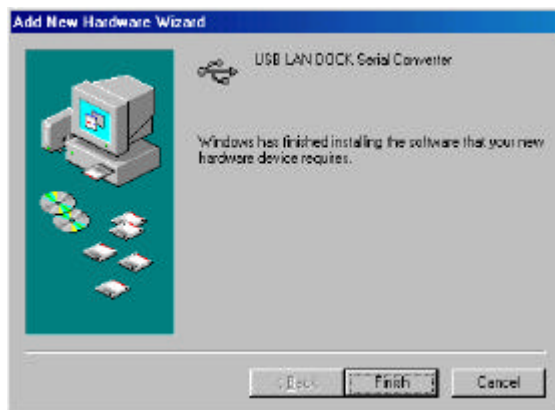


Figure D-4

D4. Click “Finish” to complete the USB LAN DOCK Serial Converter installation.
(Ref Figure D-4).

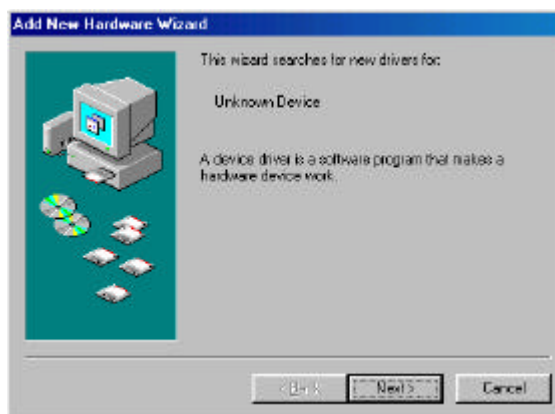


Figure D-5

D5. The USB LAN DOCK Serial Port was detected and click “next” to install the driver.
Note: An “unknown device” instead of “Serial Port” may be shown on the New Hardware Wizard window.
(Ref Figure D-5)



Figure D-6

D6. Click “Next” to continue
(Ref Figure D-6)



Figure D-7

D7. Select “Specify a location” and the location of the LAN DOCK driver CD.

Click “Next” to start and search. (Ref Figure D-7).

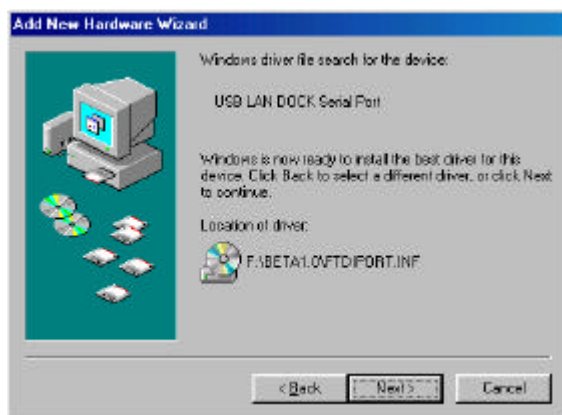


Figure D-8

D8. Click “Next” to continue (Ref Figure D-8)



Figure D-9

D9. Click “Finish”, Windows has finished installing LAN DOCK Serial port. (Ref Figure D-9)

- Before connecting the modem on the serial port of USB LAN DOCK, the modem driver must be installed in advance. Otherwise it might operate unexpectedly.
- Please refer to "Setting Up the HyperTerminal with USB to serial port" section as an example of routing your COM port setting.

Congratulations!! You have finished installing USB LAN DOCK.

Please click on **Start, Settings, Control Panel**, double click **System**, and click on **Device Manager**. Please double check the Ports and Universal Serial Bus controller of the System Manager.

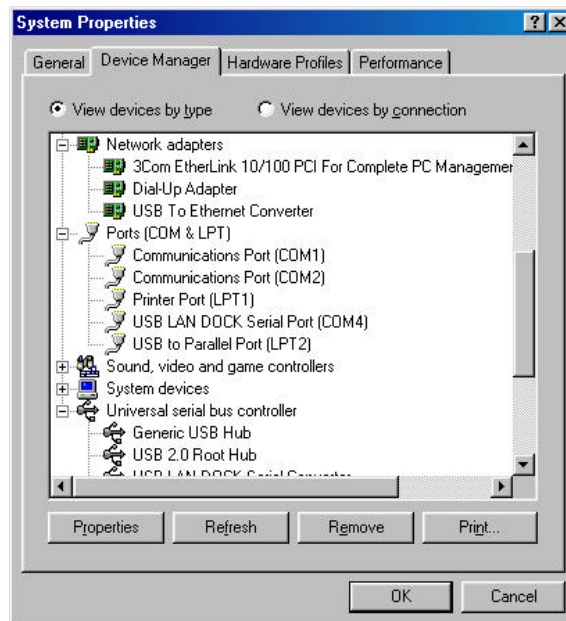


Figure 3

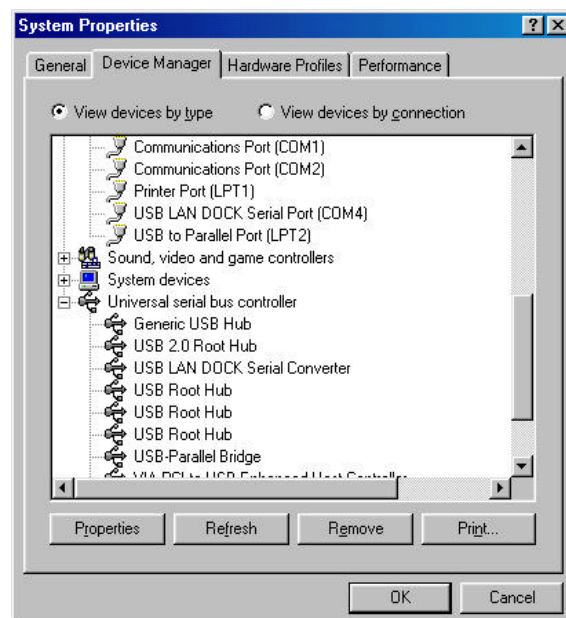


Figure 4

Set Up the Printer Device

Follow the steps below to connect your printer to the USB LAN DOCK with your PC:

For Windows 98/98SE and Me:

1. Turn off your printer. Plug the cable to connect USB LAN DOCK parallel port and printer. Turn on the printer afterwards.
2. Turn on your computer and plug in the USB cable to connect the USB LAN DOCK and the USB port of PC.
3. Please click on **Start, Settings, Control Panel**, double click **System**, and click on **Device Manager**. Check which printer port is located by USB to parallel port. The following example is located as LPT2.

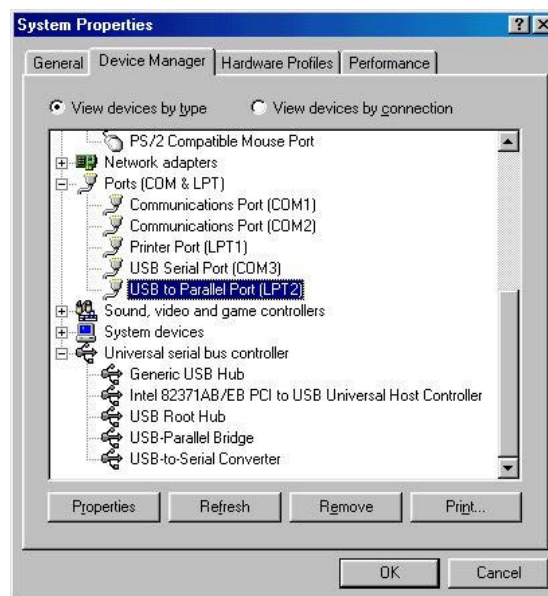


Figure 5

4. If you have installed a printer device before, click **Start, Settings, Printers**. Right-click the default installed printer and click on **Properties**. The Properties dialog box of the installed printer will appear on your screen.
5. Click the **Details** folder tab and change the printer port to **LPT2: (USB to Parallel Port)**.

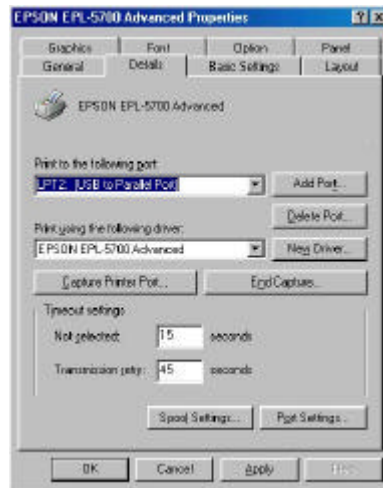


Figure 6

6. If you do not have a printer installed yet, click on **Start, Settings, Printers, Add Printer**. The **Add Printer Wizard** will start and assist you in installing a new printer device. Select the printer manufacturer and model name from the list provided by the wizard or use the printer driver diskette supplied by your printer.
7. When prompted which port the printer will use, click on **LPT2: USB to Parallel Port**.

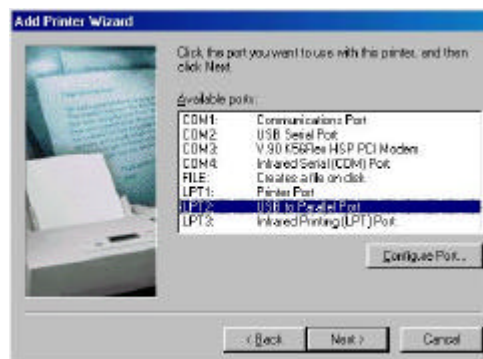


Figure 7

8. Follow the proceeding instructions to complete the installation and run **Print Test Page** to see if it can print without problems.

For WINDOWS 2000 and XP:

1. Turn off your printer. Plug the cable to connect USB LAN DOCK parallel port and printer. Turn on the printer afterwards.
2. Turn on your computer and plug in the USB cable to connect the USB LAN DOCK and the USB port of PC.
3. If you have installed a printer device before, click **Start, Settings, Printers**. Right-click the default installed printer and click on **Properties**. The Properties dialog box of the installed printer will appear on your screen.
4. Click the **Ports** tab and change the printer port to **USB001 (Virtual printer port to USB)**.

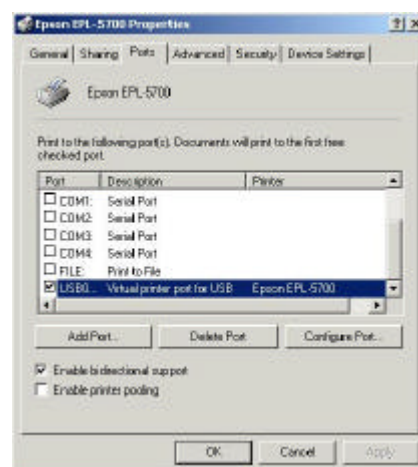


Figure 8

5. If you do not have a printer installed yet, click on **Start, Settings, Printers, Add Printer**. The **Add Printer Wizard** will start and assist you in installing a new printer device. Select the printer manufacturer and model name from the list provided by the wizard or use the printer driver diskette supplied by your printer.
6. When prompted which port the printer will use, click on **USB001 (Virtual printer port to USB)**.

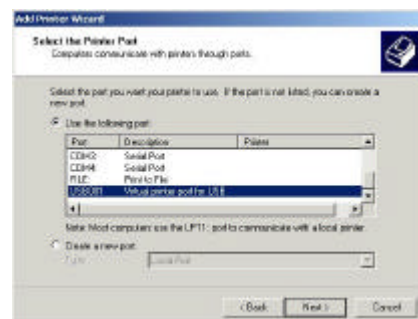


Figure 9

Set up the HyperTerminal with USB to serial port

Follow the steps below to configure your HyperTerminal with USB to serial COM port setting:

1. Make sure that HyperTerminal is installed in your system. If not, please click **Start, Settings, Control Panel**, double click **Add/Remove Programs**, choose **Windows Setup** page, **Communications**, click **Details** button, enable **HyperTerminal** to install the program to your Windows system.
2. Please click on **Start, Settings, Control Panel**, double click **System**, and click on **Device Manager**. Check which COM port is located by USB to serial port.

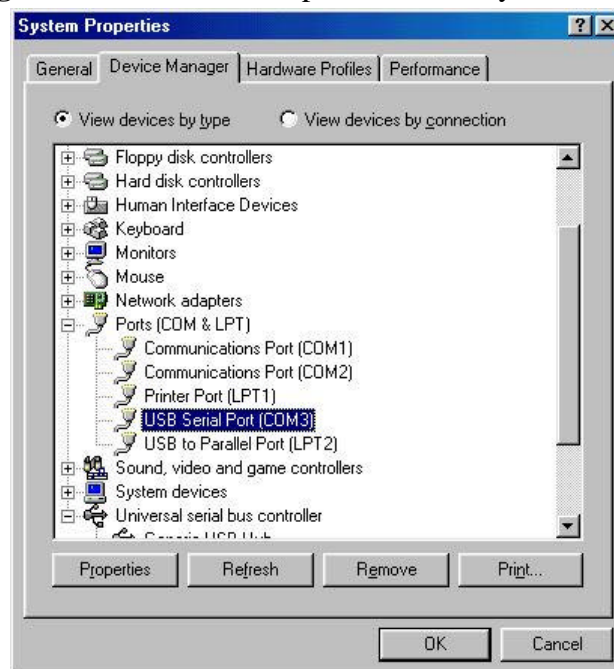


Figure 10

3. If you have setup HyperTerminal before, please run **Start, Programs, Accessories, Communications, HyperTerminal, HyperTrm.exe**. Click **File, Properties**. The Properties dialog page will appear on your screen. If you are first time to setup HyperTerminal, you will see this page during the setup procedure.

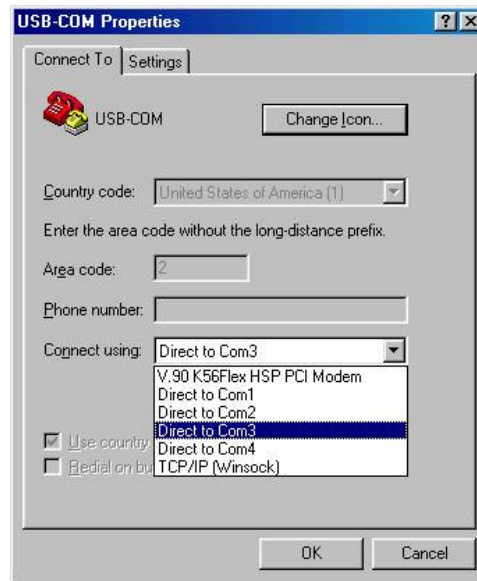


Figure 11

4. Click the "**Connect using**" item to indicate the proper COM port which appeared in step 1, and follow the succeeding instructions to complete the setup.

Uninstalling USB LAN DOCK

If you want to remove the USB LAN DOCK driver program, you can uninstall it by following the steps below:

Win98/SE/ME/2000/XP Operation System:

- a. Unplug the USB cable from your PC.
- b. Run the **UNLANDOCK.EXE** program in the LAN DOCK driver diskette and reboot the PC.

APPLICATION NOTE

1. USB LAN DOCK normally derives its own power from PC Host. When system power plugged in to the USB port of PC or notebook, the Large LED will turn green, and the serial, parallel, keyboard and mouse can operate without the switching adapter. Please note that the 4 downstream ports will not function before the power adapter is connected. However, you may use the power by connecting an external 5 voltage, 1.8A DC power which is UL, CE, T-mark or locally approved. For Polarity, see the following:



2. Unknown Device:

If all the installation process has been completed and some of the devices still don't work, please go to: My Computer/Property/Device Manager/USB, check COM port, printer, keyboard, mouse or Hub to see if there are any "Unknown device" appear on the screen. You need to "Remove" and "Refresh", start the installation processes again. After trying all the above mentioned process and your device still cannot work, please contact your technical people or local retailer.

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FCC Statement

This device generates and uses radio frequency and may cause interference to radio and television reception if not installed and used properly. This has been tested and found to comply with the limits of a Class B computing device in accordance with the specifications in Part 15 of FCC Rules. These specifications are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this device does cause harmful interference to radio or television reception, which can be determined by plugging the device in and out, the user can try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the device and receiver.
- Connect the computer into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.