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Harbour 2.0

USB 2.0 LAN Docking Station

User's Manual

Version 2.0   04/04/2005

Index

1. Instruction

Thank you for ordering Harbour 2.0. Harbour 2.0 is an intelligent expansion module, which connects to a PC or notebook via Universal Serial Bus (USB) port, providing one high-speed RS-232 serial port, one printer port, one PS/2 keyboard & mouse, 3 downstream USB2.0 ports and one Ethernet access. Harbour 2.0 features easy connectivity for traditional serial devices, keyboards, mice and other USB devices and provides up to 480Mbps USB2.0 High Speed capability. Also can add one extra Ethernet port to your PC or notebook in seconds.

1.1 Features and Specifications

- Add one high-speed serial port, one printer port, one PS/2 keyboard & mouse, 3 USB2.0 High Speed downstream ports and one Ethernet port to your PC or notebook in seconds.
- Improve the inconvenience of configuring old PC solutions like card extension solutions, which require adjusting IRQ or jumper settings and the incompatibility of various brands of docking solutions or bus repeaters.
- Avoid the hassle of removing your PC case, or rebooting the operating system during installation.
- Built-in 10/100Mbps Fast-Ethernet and IEEE802.3x flow control function for 100BASE-TX and 10BASE-T.
- Complies with USB specifications 2.0 (and under), with IEEE802.3u 100BASE-TX and with IEEE802.3 10BASE-T standards.

Product Information:

Basic Power Consumption:	450mA
Bus-Power limit current protection:	500mA
Output Voltage:	5V
Output Current:	1.8A (switching power adapter)
Physical PCB size (WxL):	129x70mm
Operating Temperature:	0 ~70C
Stock temperature:	0 ~85C
Humidity:	0%~80%RH
Unit Weight:	145g
Dimensions (LxWxH):	91x135x34mm
Cable Length:	6 feet

1.2 System Requirements

1. A PC with Pentium series, or equivalent.
2. A minimum of 16M bytes of RAM.
3. One available USB type A downstream port (UHCI, OHCI, or EHCI).
4. Windows 98 or later.

1.3 Package Contents

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

1. A Harbour 2.0.
2. One 6" USB AB type cable.
3. One 2A switching power adapter.
4. One Harbour 2.0 driver and User's manual CD.

1.4 Connectors (Ref. Fig.1)

1. One DB-9 RS-232 serial interface connector supports baud rates from 2,400 to 115.2K.
2. One DB-25 parallel printer connector supports IEEE-1284 printer port.
3. One Mini-din for PS/2 keyboard, mouse.
4. Three USB receptacles type A downstream ports.
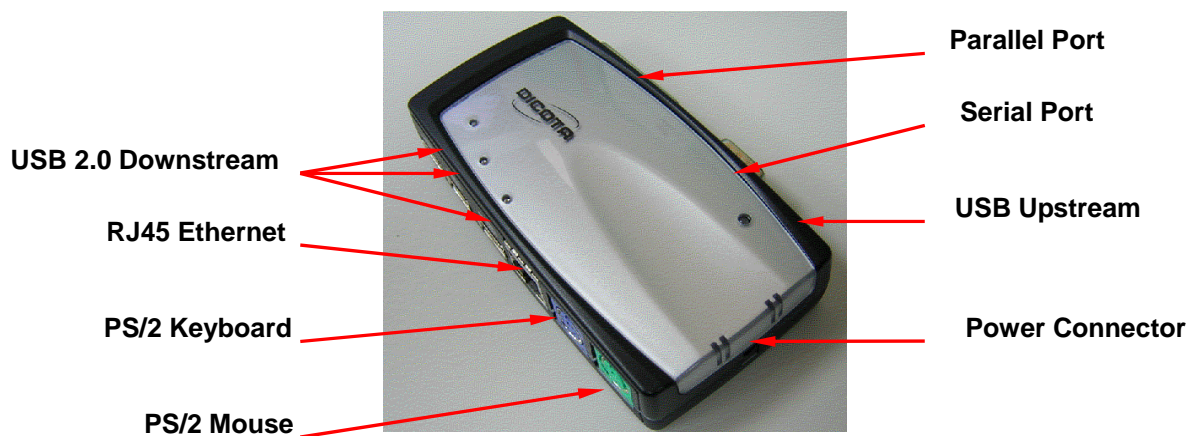5. One USB type B upstream connector.
6. One RJ45 Ethernet connector.

Fig.1

1.5 Available functions.

The available functions of Harbour 2.0 depend on the status of power supplied:

- Bus powered
  1. Connect the USB2.0 cable to your PC to provide bus power.
  2. When you provide bus power only, the PS/2 mouse & keyboard, RS232, printer and Ethernet ports will be enabled. However, the USB2.0 Downstream Ports can also work under low power mode. So used of externally power adaptor is recommended. (For the use of all functions)
- Externally powered
  1. Connect the power adapter to provide external power.
  2. When you provide external power, the USB Downstream Ports can support all USB devices, and you can use all the functions of Harbour 2.0.

1.6 LED Indicator (Ref. Fig.2)

- Power Indicator

    The Power Indicator will turn RED when only bus power is supplied, will turn GREEN when external power is supplied.

- USB Indicators

    1. There are three USB indicators. If the USB Downstream Ports are ready for use, the indicators will turn **ON**.

    2. If over-current happens for certain USB Downstream Ports, the corresponding USB Indicator will turn **OFF** to indicate that this port is not working at the moment.

    3. When over-current situation is resolved, the USB Indicator will turn **ON** again.

- LAN Indicators

    1. Link/Act (Orange): This LED turns on if the 10/100Mbps (100BASE-TX) Ethernet is connected.

    2. Transmission (Green): Blinking to indicate that the data is being received or transmitted through the RJ-45 port.
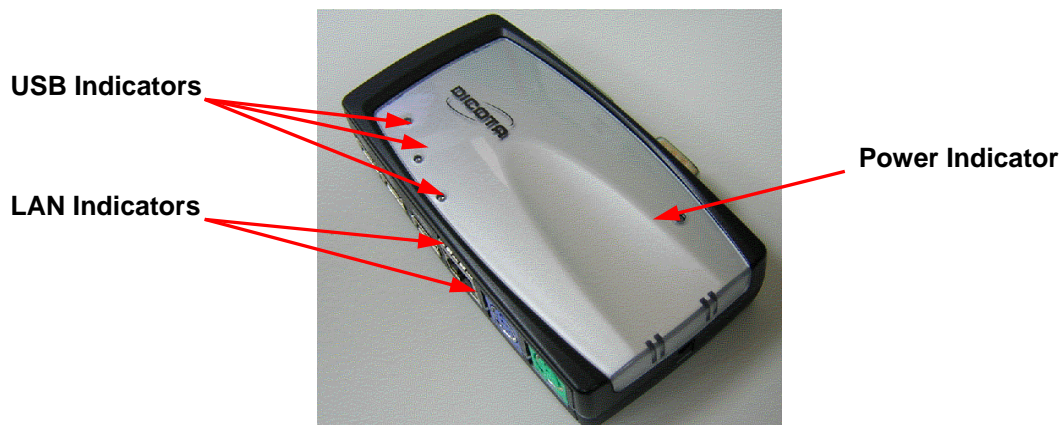

Fig.2

2. Installing Harbour 2.0

1. This installation guide is written in accordance with different operation systems. Including Windows 98/98SE/ME, Windows 2000, and Windows XP.
2. Power on your computer and make sure that the USB port is enabled and working properly.
3. Connect the power adapter into Harbour 2.0. (For full functions)
4. Connect Harbour 2.0 to the USB port on your computer with the USB2.0 transfer cable provided.
5. Windows will start detecting USB devices. Please follow the related section to install your Harbour 2.0.

2.1 Driver Installation

2.1.1 Win98/98SE Driver Installation

The driver installation is divided into A to F six-steps. Please install Harbour 2.0 under Win98/SE step by step by the following instructions:

A. USB Hub Installation

A1. Please insert the "Windows 98" CD into your CD-ROM drive and press "Next" to continue.
(Ref. Fig. Win98-A1)

Fig. Win98-A1

A2. Tick "Search for the best driver for your device" and press "Next" to continue.
(Ref. Fig. Win98-A2)

Fig. Win98-A2

Harbour 2.0 User's Manual

Fig. Win98-A3

A3. Tick "CD-ROM drive" and press "Next" to start the searching process.
(Ref. Fig. Win98-A3)

Fig. Win98-A4

A4. Press "Next" to start the installation process.
(Ref Fig. Win98-A4)

Fig. Win98-A5

A5. Press "Finish" to complete the installation of USB HUB.
(Ref Fig. Win98-A5)
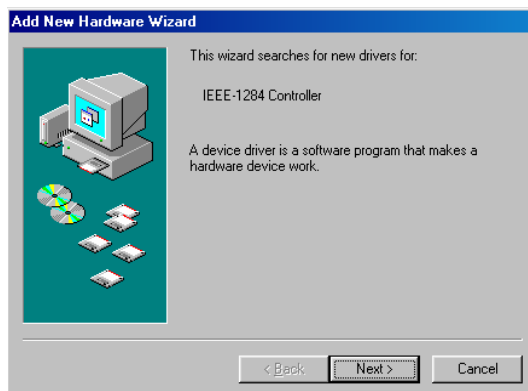
B. IEEE-1284 Controller Installation

Fig. Win98-B1

B1. Please insert the "Harbour 2.0" CD into your CD-ROM drive and press "Next" to continue.
(Ref. Fig. Win98-B1)

Harbour 2.0 User's Manual

Fig. Win98-B2

B2. Tick "Search for the best driver for your device" and press "Next" to continue. (Ref. Fig. Win98-B2).

Fig. Win98-B3

B3. Tick "Specify a location" and click "Browse" to select the location of the driver folder in the "Harbour 2.0" CD. Press "Next" to start the searching process. (Ref. Fig. Win98-B3).

Fig. Win98-B4

B4. Press "Next" to start the installation process. (Ref. Fig. Win98-B4)

Harbour 2.0 User's Manual

Fig. Win98-B5

B5. Press "Finish" to complete the installation of USB-to-Parallel Port. (Ref. Fig. Win98-B5)

C. USB-to-Serial Port Installation

Fig. Win98-C1

C1. Please insert the "Harbour 2.0" CD into your CD-ROM drive and press "Next" to continue. (Ref. Fig. Win98-C1)

Fig. Win98-C2

C2. Tick "Search for the best driver for your device" and press "Next" to continue. (Ref. Fig. Win98-C2)

Harbour 2.0 User's Manual

Fig. Win98-C3

C3. Tick "Specify a location" and click "Browse" to select the location of the driver folder in the "Harbour 2.0" CD.
Click "Next" to start the searching process.
(Ref. Fig. Win98-C3)

Fig. Win98-C4

C4. Press "Next" to start the installation process.
(Ref. Fig. Win98-C4)

Fig. Win98-C5

C5. Press "Finish" to complete the installation of USB-to-Serial Port.
(Ref. Fig. Win98-C5)

Harbour 2.0 User's Manual

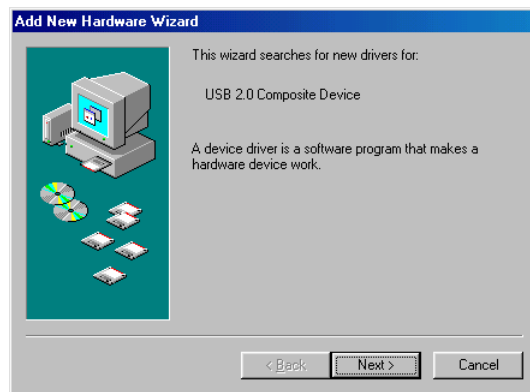## D. USB Composite Device Installation

Fig. Win98-D1

D1. Please insert the "Windows 98" CD into your CD-ROM drive and press "Next" to continue (Ref. Fig. Win98-D1)

Fig. Win98-D2

D2. Tick "Search for the best driver for your device" and press "Next" to continue. (Ref. Fig. Win98-D2)

Fig. Win98-D3

D3. Tick "CD-ROM drive" and press "Next" to start the searching process. (Ref. Fig. Win98-D3)

Harbour 2.0 User's Manual

Fig. Win98-D4

D4. Press "Next" to start the installation process.
(Ref. Fig. Win98-D4)

Fig. Win98-D5

D5. Press "Finish" to complete the installation of Composite Device.
(Ref. Fig. Win98-D5)
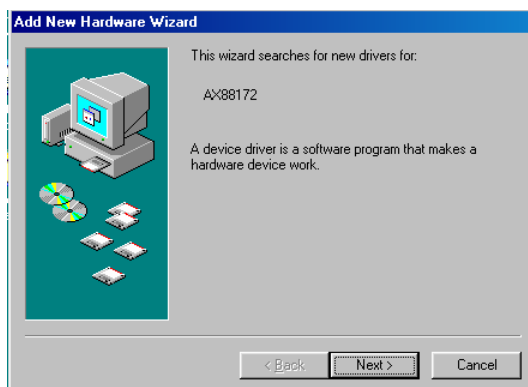
E. Ethernet Port Installation

Fig. Win98-E1

E1. Please insert the "Harbour 2.0" CD into your CD-ROM drive and press "Next" to continue.
(Ref. Fig. Win98-E1)

Harbour 2.0 User's Manual

Fig. Win98-E2

E2. Tick "Search for the best driver for your device" and press "Next" to continue.
(Ref. Fig. Win98-E2)

Fig. Win98-E3

E3. Tick "Specify a location" and click "Browse" to select the location of the driver folder in the "Harbour 2.0" CD. Press "Next" to start the searching process.
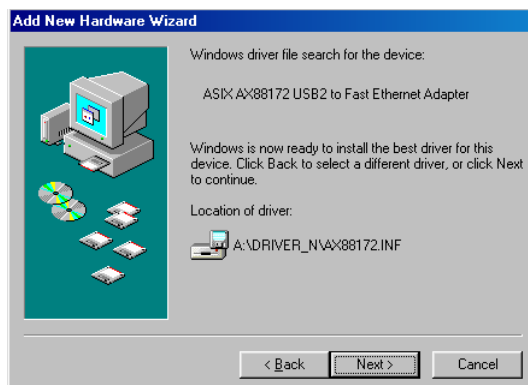(Ref. Fig. Win98-E3)

Fig. Win98-E4

E4. Press "Next" to start the installation process. (Windows might ask you to insert the "Windows 98" CD during the installation process).
(Ref. Fig. Win98-E4)

Harbour 2.0 User's Manual

E5. Press "Finish" to complete the installation of Ethernet Port. (Restart Windows might necessary).
(Ref Fig. Win98-E5)

Fig. Win98-E5

F. USB HID Device for PS/2 keyboard & mouse Installation

(This step might repeat once due to two different devices, mouse and keyboard)

F1. Please insert the "Windows 98" CD into your CD-ROM drive and press "Next" to continue.
(Ref. Fig. Win98-F1)

Fig. Win98-F1

F2. Tick "Search for the best driver for your device" and press "Next" to continue.
(Ref. Fig. Win98-F2)

Fig. Win98-F2

Harbour 2.0 User's Manual

Fig. Win98-F3

F3. Tick "CD-ROM drive" and press "Next" to start the searching process.
(Ref. Fig. Win98-F3)

Fig. Win98-F4

F4. Press "Next" to start the installation process.
(Ref. Fig. Win98-F4)

Fig. Win98-F5

F5. Press "Finish" to complete the installation of HID.
(Ref. Fig. Win98-F5)

Harbour 2.0 User's Manual

2.1.2 WinME Driver Installation

The driver installation for WinME is divided into A to C three-steps.
Please install Harbour 2.0 under WinME step by step by the following instructions:

A. USB-to-Parallel Port Installation

Fig. WinME-A1

A1 Please insert the "Harbour 2.0" CD into your CD-ROM drive. Tick "Automatic search for a better driver" and press "Next" to continue.
(Ref. Fig. WinME-A1)

Fig. WinME-A2

A2. Press "Finish" to complete the installation USB-to-Parallel Port.
(Ref. Fig. WinME-A2)

B. USB-to-Serial Port Installation

Fig. WinME-B1

B1. Tick "Automatic search for a better driver" and press "Next" to continue.
(Ref. Fig. WinME-B1)

Harbour 2.0 User's Manual

Fig. WinME-B2

B2. Press "Finish" to complete the installation of USB-to-Serial Port. (Ref. Fig. WinME-B2)
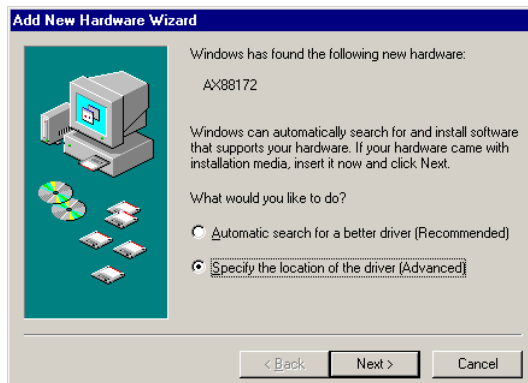
C. Ethernet Port Installation

Fig. WinME-C1

C1. Tick "Specify the location for a better driver" and press "Next" to continue. (Ref. Fig. WinME-C1)

Fig. WinME-C2

C2. Tick "Search for the best driver for your device" and then choose "Specify a location". Click "Browse" to select the location of the driver folder in the "Harbour 2.0" CD. Press "Next" to continue. (Ref. Fig. WinME-C2)

Harbour 2.0 User's Manual

Fig. WinME-C3

C3. Press "Next" to start the installation process.
(Ref. Fig. WinME-C3)

Fig. WinME-C4

C4. Press "Finish" to complete the installation of Ethernet Port.
(Ref. Fig. WinME-C4)

2.1.3 Win2000 Driver Installation

The driver installation for Win2000 is divided into A, B two-steps.
Please install Harbour 2.0 under Win2000 step by step by the following instructions:

A. USB-to-Serial Port Installation

Fig. Win2k-A1

A1. Please insert the "Harbour 2.0" CD into your CD-ROM drive and press "Next" to continue.
(Ref Fig. Win2k-A1)

Harbour 2.0 User's Manual

Fig. Win2k-A2

A2. Tick "Search for a suitable driver for my device" and press "Next" to continue.
(Ref Fig. Win2k-A2)
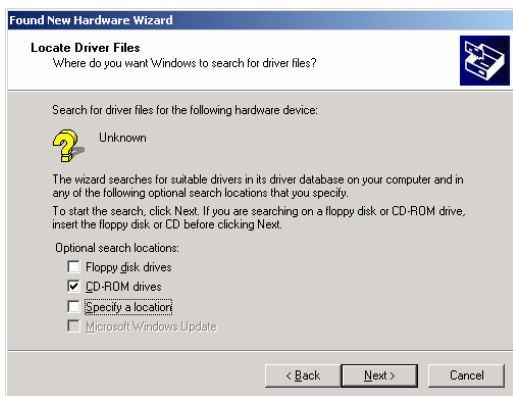
Fig. Win2k-A3

A3. Please insert "Harbour 2.0" CD into your CD-ROM drive and press "Next" to start the searching process.
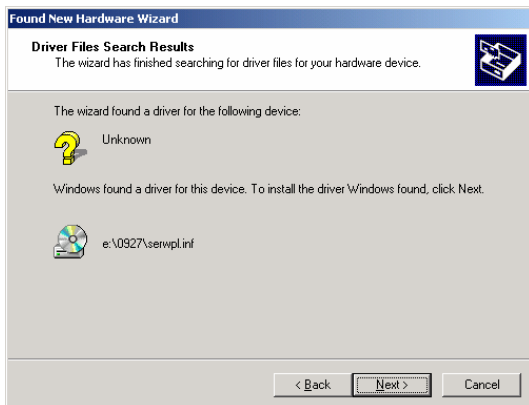(Ref Fig. Win2k-A3)

Fig. Win2k-A4

A4. Press "Next" to start the installation process.
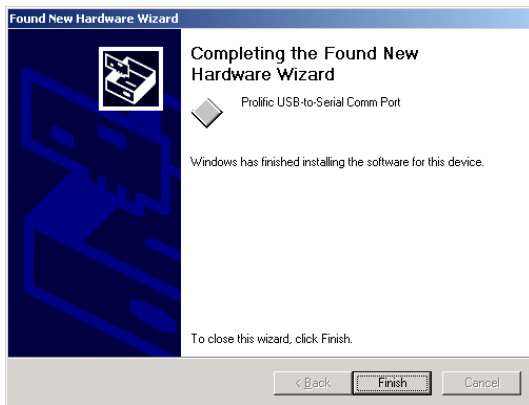(Ref Fig. Win2k-A4)

Harbour 2.0 User's Manual

A5. Press "Finish" to complete the installation of USB-to-Serial Port. (Ref Fig. Win2k-A5)

Fig. Win2k-A5

B. Ethernet Port Installation
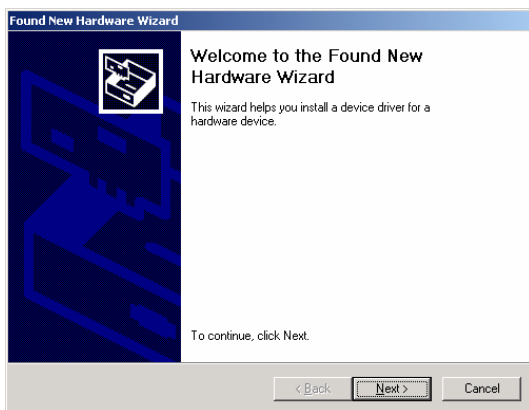
B1. Press " Next" to continue. (Ref Fig. Win2k-B1)

Fig. Win2k-B1

B2. Tick "Search for a suitable driver for my device" and press "Next" to continue. (Ref Fig. Win2k-B2)
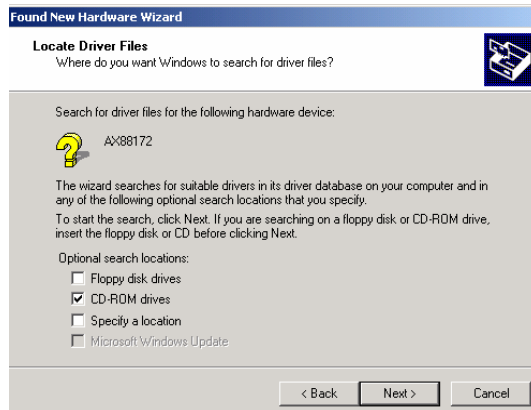
Fig. Win2k-B2

Fig. Win2k-B3

B3. Tick "CD-ROM drives" and press "Next" to start the searching process.
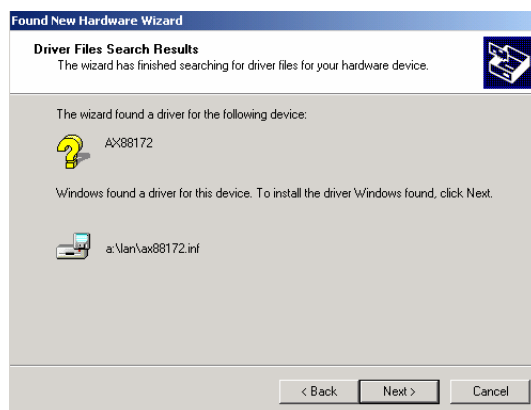(Ref Fig. Win2k-B3)

Fig. Win2k-B4

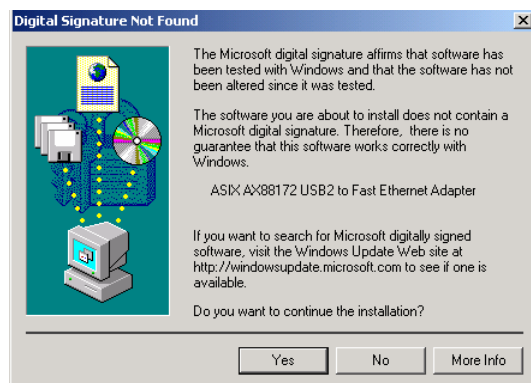B4. Press "Next" to start the installation process.
(Ref Fig. Win2k-B4)

Fig. Win2k-B5

B5. You will receive a message stating that the software you are installing has not passed Windows Logo testing. But this driver is fully compatible with Windows 2000, so just press "Yes" to continue.
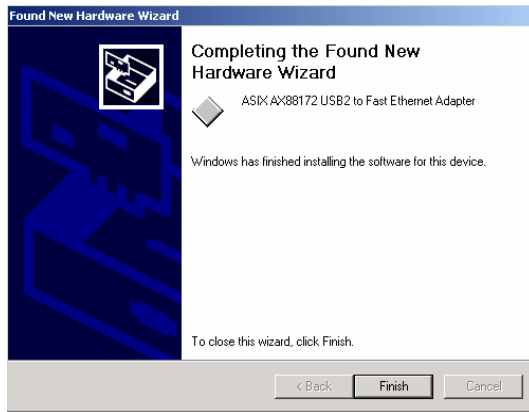(Ref. Fig. Win2k-B5)

Harbour 2.0 User's Manual

B6. Press "Finish" to complete the installation of Ethernet port.
(Ref. Win2k-B6)

Fig. Win2k-B6

2.1.4 WinXP Driver Installation

Please install Harbour 2.0 under Win2000 step by step by the following instructions:

A. Serial Port Installation

A1. Please insert the "Harbour 2.0" CD into your CD-ROM drive. Tick "Install the software automatically" and press "Next" to continue
(Ref Fig. WinXP-A1)

Fig. WinXP-A1

A2. You will receive a message stating that the software you are installing has not passed Windows Logo testing. But this driver is fully compatible with Windows XP, so just press "Continue Anyway" to continue.
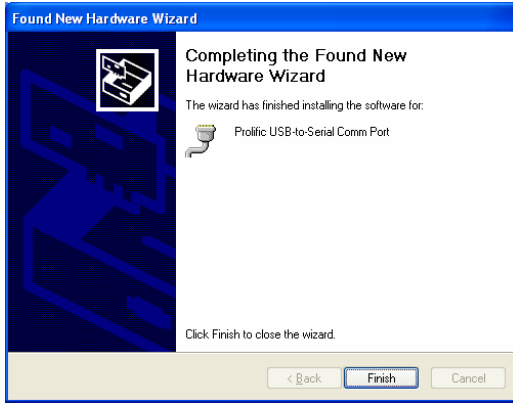(Ref. Fig. WinXP-A2)

Fig. WinXP-A2

Harbour 2.0 User's Manual

Fig. WinXP-A3

A3. Press "Finish" to complete the installation of USB-to-Serial Port. (Ref Fig. WinXP-A3)

B. Ethernet Port Installation

Fig. WinXP-B1

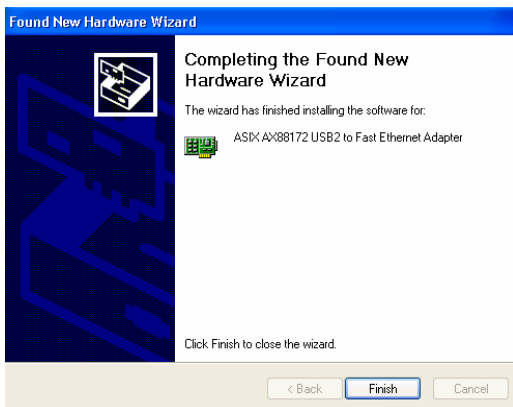B1. Tick "Install the software automatically" and press "Next" to continue (Ref Fig. WinXP-B1)

Fig. WinXP-B2

B2. Press "Finish" to complete the installation of Ethernet Port. (Ref Fig. WinXP-B2)

2.2 Things you need to know

● Before connecting the printer to the parallel port of Harbour 2.0, the printer driver must be installed on your computer in advance, otherwise it might print unknown format of characters.

● Please refer to "Setting Up the Printer Device" section to connect your printer to the Harbour 2.0.

● For modem users, we advise you to install the modem driver manually before connecting the modem to the converter, 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 Harbour 2.0.

Please click on **Start**, **Settings, Control Panel,** double-click **System**, and **Device Manager**. Please double check "Human Interface Devices", "Keyboard", "Mouse", "Network adapters", "Ports", and "Universal serial bus controller" on the dialog box and see if they are working properly. (Ref. Fig.3, 4)
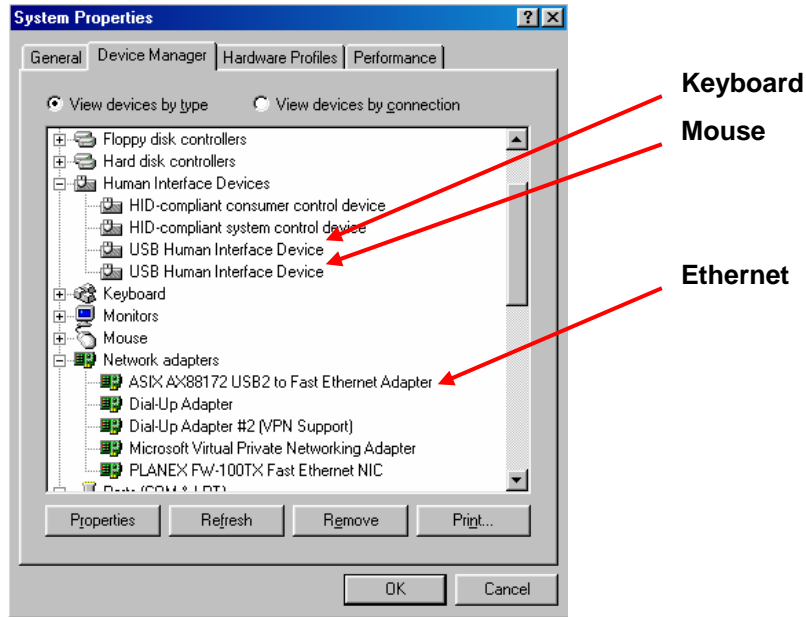

Fig.3
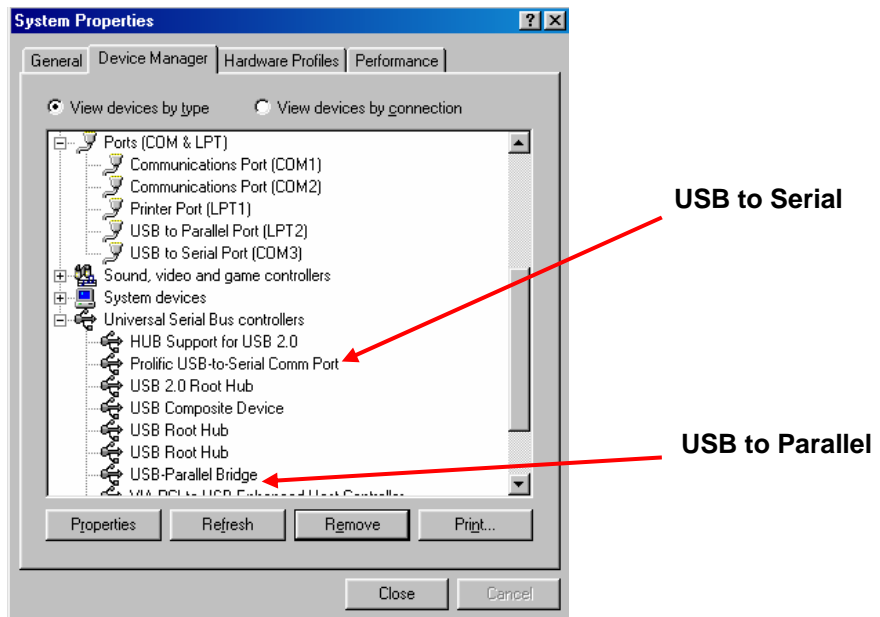

Fig.4

Harbour 2.0 User's Manual

2.3 Set Up the Printer Device

Follow the steps below to connect your printer to the Harbour 2.0 with
your PC:

2.3.1 For Windows 98/98SE/ME:

1. Connect the Harbour 2.0 to your printer with the parallel cable and
   then turn on the printer.
2. Connect the Harbour 2.0 to the USB port on your computer with the
   USB2.0 transfer cable provided.
3. Please go to **Start, Settings**, **Control Panel**, double click **System**,
   and **Device Manager**. Check **Ports** on the dialog box and see which
   printer ports the "USB-to-Parallel Port" is located. The following
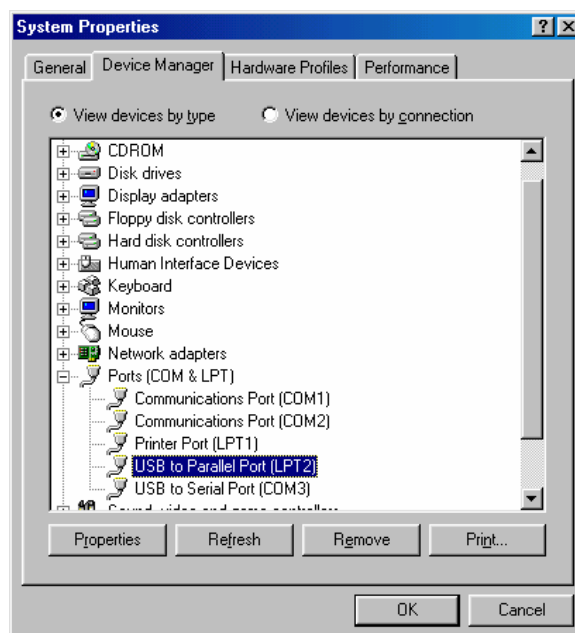   example is located as LPT2. (Ref. Fig.5)

Fig.5

4. If you have installed a printer device before, go to **Start**, **Settings**,
   and Printers. Right-click the default-installed printer and choose
   Properties. The Properties dialog box of the installed printer will
   appear on your screen.

Harbour 2.0 User's Manual

5. Click **Details** folder tab and change the printer port to **LPT2: USB-to- Parallel Port**. (Ref. Fig.6)
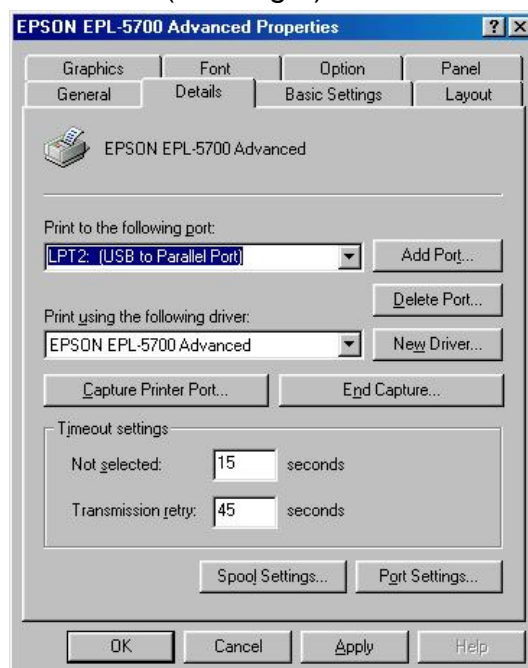

Fig.6

6. If you do not have a printer installed yet, go to **Start**, **Settings**, **Printers**, and choose **Add Printer**. The **Add Printer Wizard** will start and assist you to install a new printer device. Select the printer manufacturer and model name from the list provided by the wizard or use the printer driver diskette came with your printer.
7. Windows will ask you which port the printer will be used, choose **LPT2: USB to Parallel Port**. (Ref. Fig.7)
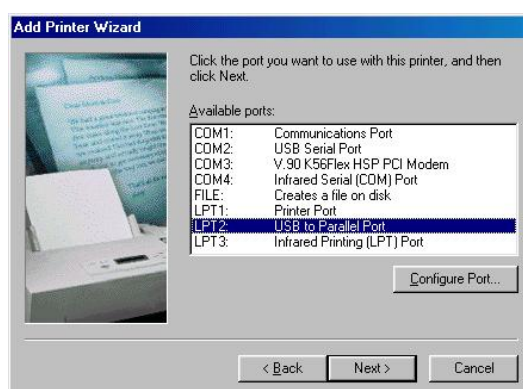

Fig.7

Follow the instructions to complete the installation. Run **Print Test Page** to see if the printer is working without any problem.

2.3.2 For Windows 2000/XP:

1. Connect the Harbour 2.0 to your printer with the parallel cable and then turn on the printer.
2. Connect the Harbour 2.0 to the USB port on your computer with the USB2.0 transfer cable provided.
3. If you have installed a printer device before, go to **Start**, **Settings**, and **Printers**. Right-click the default-installed printer and choose **Properties**. The Properties dialog box of the installed printer will appear on your screen.
4. Click **Ports** folder tab and change the printer port to **USB001: (Virtual printer port for USB)**. (Ref. Fig.8)
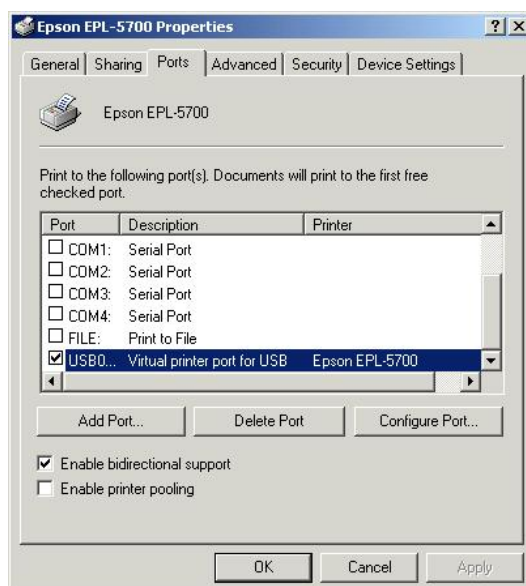

Fig.8

5. If you do not have a printer installed yet, click on **Start**, **Settings**, **Printers** and choose **Add Printer**. The **Add Printer Wizard** will start and assist you to install a new printer device. Select the printer manufacturer and model name from the list provided by the wizard or use the printer driver diskette came with your printer.

6. Windows will ask you which port the printer will be used, choose **USB001:**
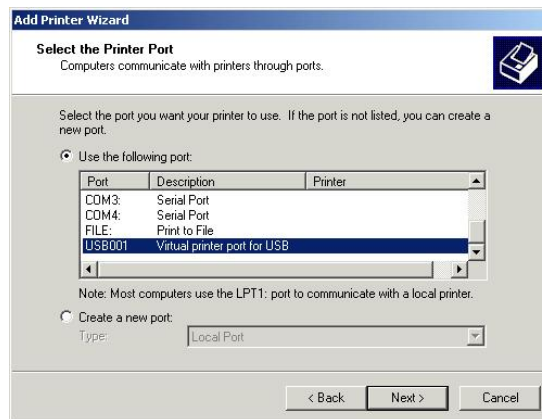   **(Virtual printer port to USB)**. (Ref. Fig.9)

Fig.9

2.4 Set up the HyperTerminal with USB to serial port

1. Make sure that HyperTerminal is installed in your system. If not, please go to **Start, Settings, and Control Panel**. Double click **Add/Remove Programs**, choose **Windows Setup** page, **Communications,** click **Details** button and enable **HyperTerminal** to install the program to your Windows system.
2. Go to **Start, Settings, Control Panel**, double click **System**, and click on **Device Manager**. Check which COM port is located by USB to serial port. (Ref. Fig.10)
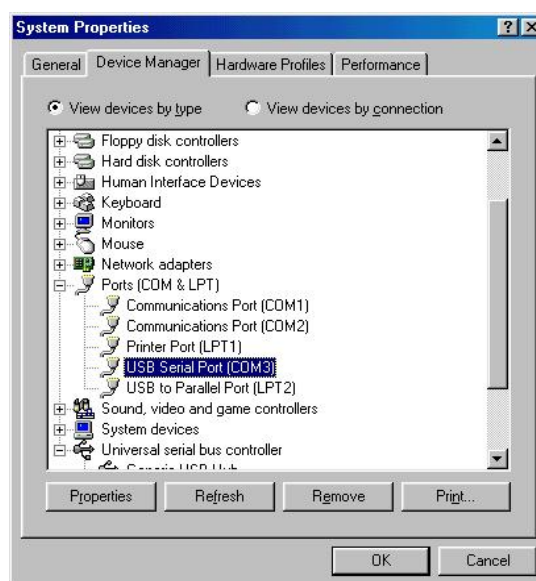

Fig.10

Harbour 2.0 User's Manual

3. If you have setup HyperTerminal before, please go to **Start, Programs, Accessories, Communications, HyperTerminal**. Click **File** and choose **Properties**. The Properties dialog page will appear on your screen. If it is your first time to setup HyperTerminal, you will see the following page during the setup procedure. (Ref. Fig.11)
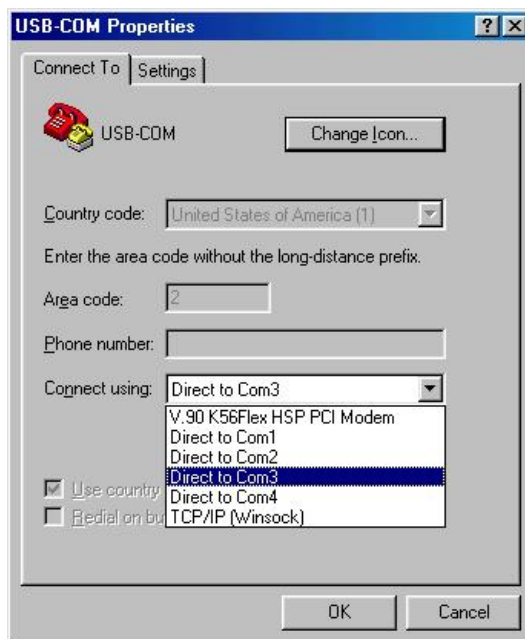

Fig.11

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

3. Uninstalling Harbour 2.0

If you want to remove Harbour 2.0 and its driver, you can uninstall it by the following steps:

3.1 Remove the device

1. Please Unplug the USB cable.

3.2 Uninstall the driver

1. For the Windows 2000/XP users: since the system has built in the USB Printer Class driver already, so you do not need to remove the printer driver.
2. For the Windows 98/SE/ME users: you have to follow the instruction to remove the Serial, Printer driver.

3.2.1 For Windows 98/SE/ME (Remove Printer, Serial Drivers):

1. Run **Uninst.exe** from the driver folder in Harbour 2.0 CD.
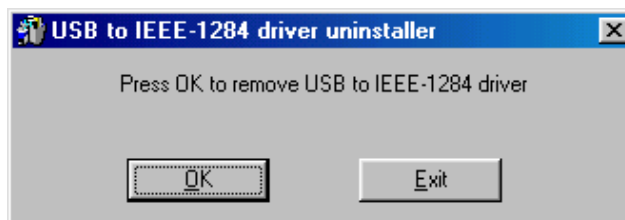2. Please Press **OK** to remove Printer Converter. (Ref. Fig.13)

Fig.13

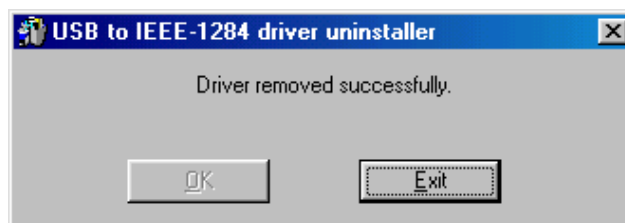3. Printer Converter had been removed. Please press **Exit** to continue. (Ref. Fig.14)

Fig.14

4. Run **DRemover98_2k.exe** from the driver folder in Harbour 2.0 CD.

5. Please Press **OK** to remove Serial Converter. (Ref. Fig.15)

Fig.15
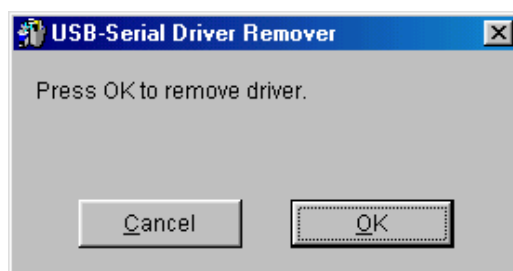
7. Press "Yes" to reboot your Windows system to complete.
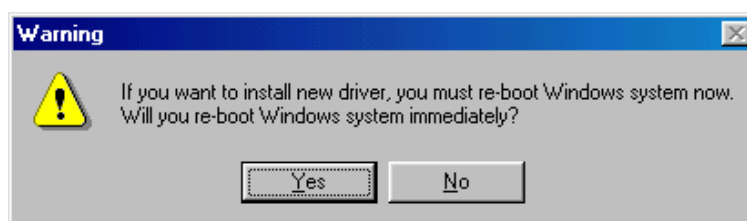   (Ref. Fig.16)

Fig.16

3.2.2 For Windows 2000/XP (Remove Serial Driver):

1. Run **DRemover98_2k.exe** from the driver folder in Harbour 2.0 CD.

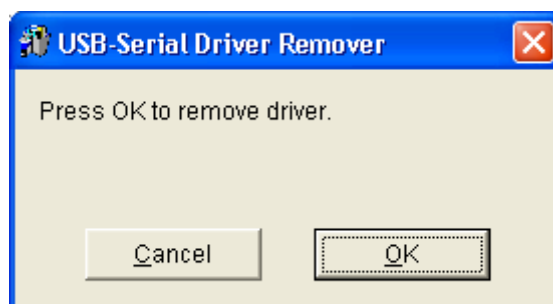2. Please Press "**OK"** to remove Serial Converter. (Ref. Fig.17)

Fig.17

3. Press "Yes" to reboot your Windows system to complete.
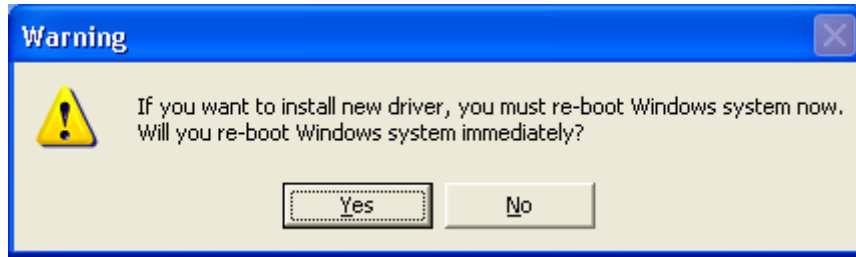   (Ref. Fig.18)

Harbour 2.0 User's Manual

Fig.18

4. APPLICATION NOTE

1. Harbour 2.0 normally derives its own power from PC Host. When only the Host power is supplied, the Power LED will turn RED, and the serial, parallel, keyboard, mouse, Ethernet and 3 downstream ports can operate without the external power adapter.

2. Please note that if the external power adaptor is not be used and heavy power consumption USB device is connected, the 3 downstream ports may not function normally. Therefore the used of external power adaptor is highly recommend. You may use the external power by connecting an external 5 voltage, 2A DC power that is UL, CE, T-mark or locally approved. For Polarity, see the following:

3. *Unknown Device:*
    If the installation process is completed and some of the devices still don't work, please click on **Start**, **Settings, Control Panel,** double-click **System**, and **Device Manager**. Check "Human Interface Devices", "Keyboard", "Mouse", "Network adapters", "Ports", and "Universal serial bus controller" on the dialog box and see if "Unknown device" appears on the screen. You need to right-click the "***Unknown device***" and choose **Remove** to remove it. Then choose **Refresh** to re-detect the device. (You might need to install the device driver once again so please follow the same installation procedures as section 2.1). After trying the above procedures and your device still cannot work, please contact the technical support at your local distributor.

Harbour 2.0 User's Manual

4. Service and Answers

Installed the driver for USB Port Replicator under **Windows XP** operation system, there is **no Printer Port available in the device manager** , but the other Ports (Serial ,Mouse, Keyboard and USB) are OK .

The driver for USB to Printer converter on Windows 2000 and XP is not required.
Microsoft supports USB Printer class in both OS. The related driver will be loaded Automatically by Microsoft when you plug in the USB to Printer device.
It will be created a message **"printer support device"** in the device manager and also a " virtual printer port for USB " in the port selection of printer setting.

You may just check this item and it will work on both system.

This is different for Windows 98 and ME. There won't be any LPT port generated by system as like in 98/ME . Please also refer to the user's manual "Set up the Printer Device " >> for Windows 2000 and XP .

2 year warranty.

If you encounter any problem with your Harbour 2.0, please contact our local dealer. You can find a list of all dealers on this CD.

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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 the 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.

Harbour 2.0 User's Manual