1. Setting up the EPLIP Virtual NIC on Windows2000

1.1.ECP Port Configuration:

You should first make sure that the Parallel Port Driver is using an interrupt line. Use **Device Manager** to find out the ECP Port you are going to use with EPLIP. On the "**Port Properties"** dialog select the **Port Settings** page and make sure that the option "**Use any interrupt assigned to the port"** is selected (As shown in the screenshot below – figure 1.1).
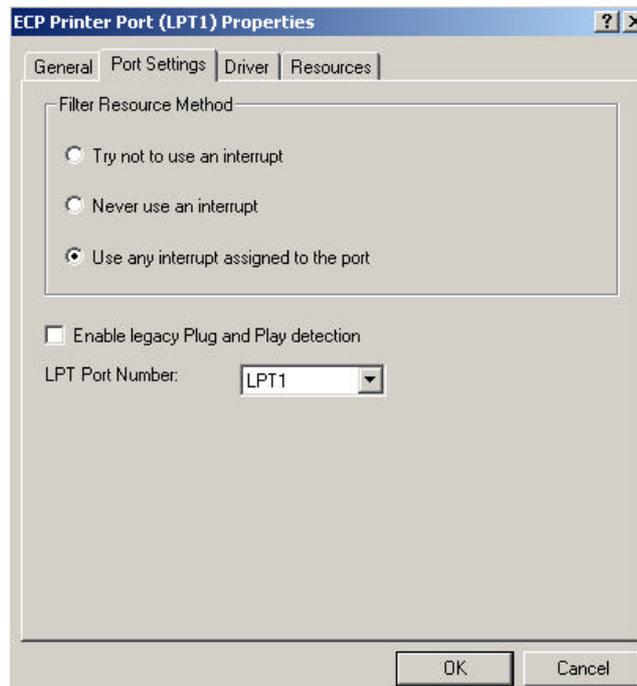

fig.1.1

Next, you should enable an internal device io control call that allows higher level drivers to register their interrupt handler with the parallel port driver for the target ECP port. Using the Windows bundled registry editor **regedit.exe**(or your favorite registry editor), add to the **"Device Parameters"** section of the PnP node for the target port a **DWORD** key named "**EnableConnectInterruptIoctl"** with a nonzero value (If this key already exists, just make sure it has nonzero value).

The PnP device node for the target ECP port, in the case of ACPI compatible system should be located under (As shown on the screenshot bellow – figure-1.2) :

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Enum\ACPI\PNP0401

The Node **PNP0401** is used for all **"Parallel Port"** class devices that have been autodetected by the Windows 2000 PnP manager. For legacy parallel ports, the node **PNP0400** is used (Some third party drivers for non-legacy ports also may use this node) .
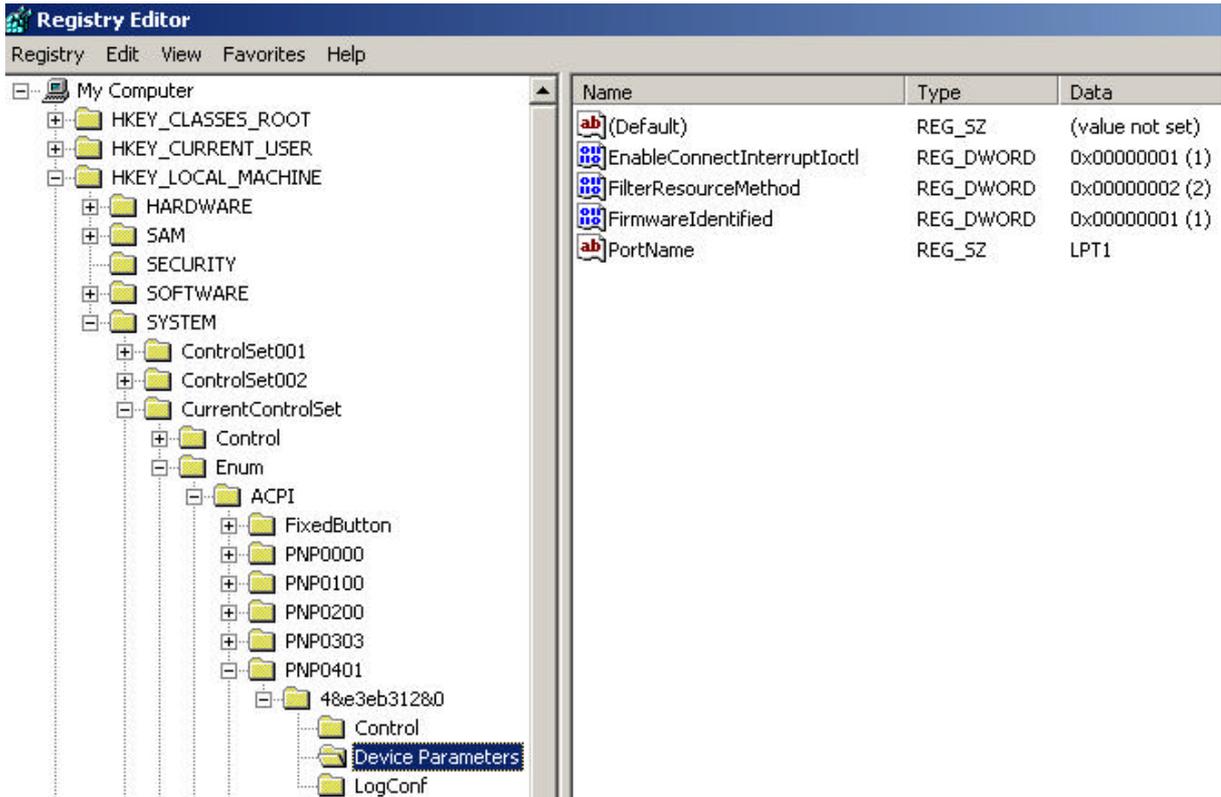
fig.1.2

1.2. WEPLIP driver installation:

Using the .INF file supplied with the WEPLIP distribution (**neteplip.inf**), follow the bellow procedure to install the Virtual NIC EPLIP:

From **Device Manager** select **Hardware Wizard**. In the dialog box **Add/Remove Hardware(Choose a Hardware Task)** select the option **? dd/Troubleshoot a device** (As shown in the screenshot bellow – figure-2.1)
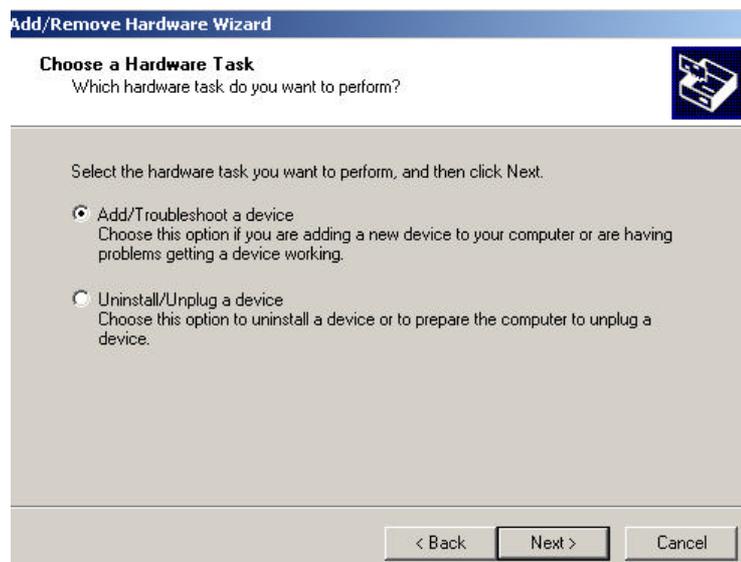

fig.2.1

In the dialog box **Add/Remove Hardware(Choose a Hardware Device)** , from the device list, select **Add a new Device** (As shown in the screenshot bellow – figure-2.2)
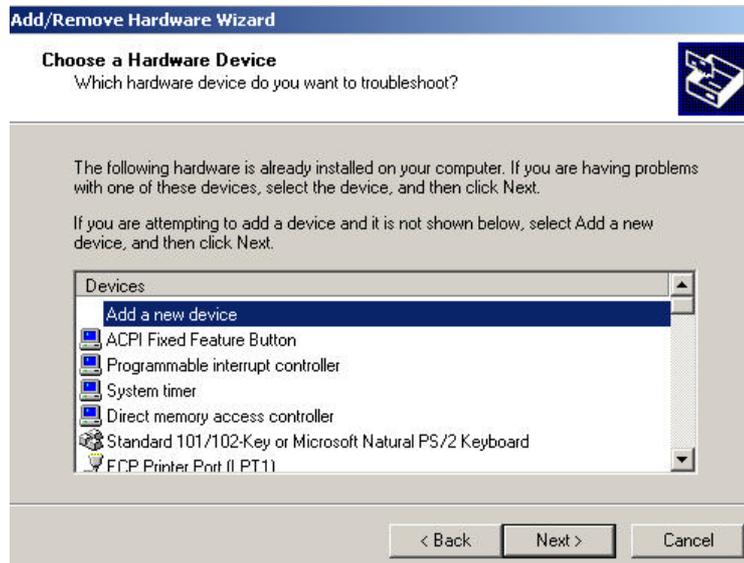

fig.2.2.

Then, select the option **"No, I will select it from the list"** and from the device class list, select **Network adapters** (As shown in the screenshot bellow – figure-2.3)

fig.2.3.

Finally select **Have Disk** and enter the path to **neteplip.inf** in the file open dialog.
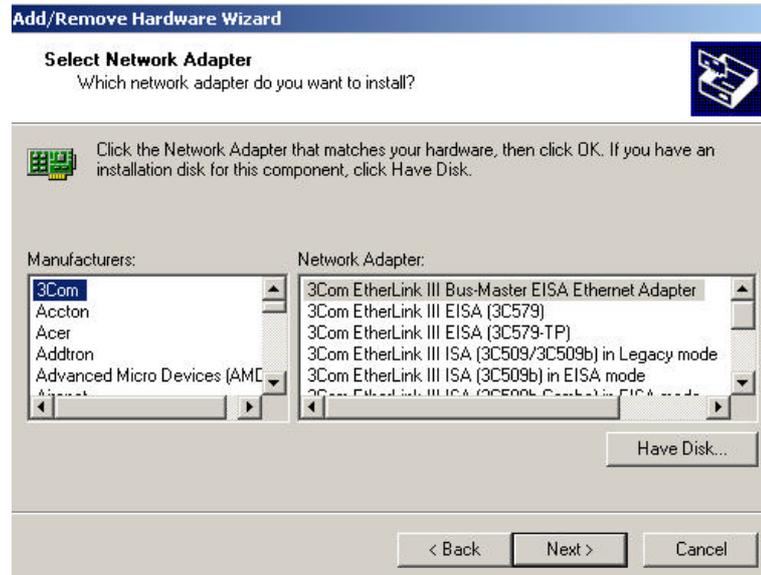
fig.2.4.

If your Windows2000 box **System File Protection** feature is enabled (it's enabled by default), you'll have to reboot your system at this point.

1.3. W? PLIP driver configuration:

You should configure at least two parameters at the **"Advanced Properties"** page for the EPLIP Virtual NIC in the **Device Manager**: The Parallel Port that EPLIP binds to (figure-3.1) and the MAC Address of the NIC (figure-3.2).
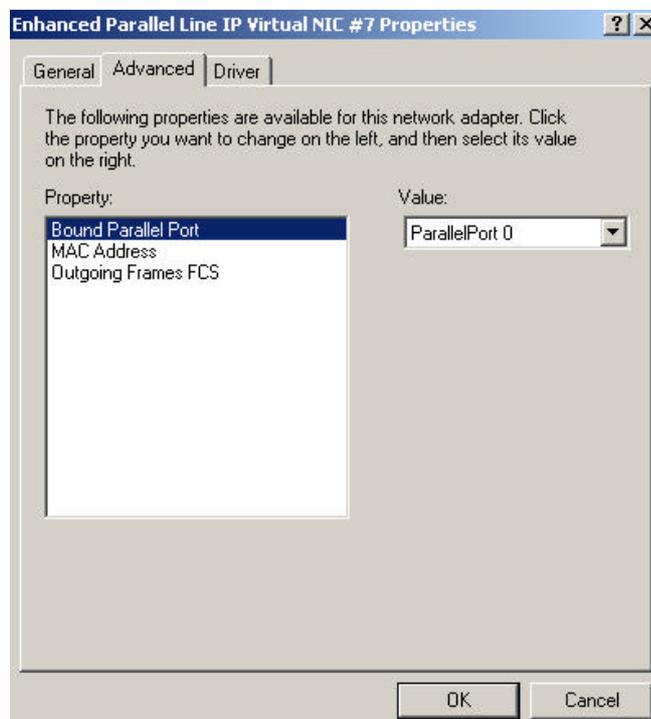

fig.3.1.

Actually the **"MAC Address**" setting on the **Advanced Properties** page isn't a real Ethernet MAC address. This four byte value presents the rightmost four bytes for the Ethernet MAC.(First 2 bytes are hardcoded in WEPLIP to **FC:FC**)

The default setting (as shown on the screenshot) is 3232235520 which is 0xC0A80000 in hexadecimal notation. Thus, the default MAC address is **FC:FC:C0:A8:00:00**. Note that this value should be entered (and shows up) in decimal base. You should enter a value that will guarantee a unique MAC Address (Otherwise no packets will be routed to this interface from NDIS).
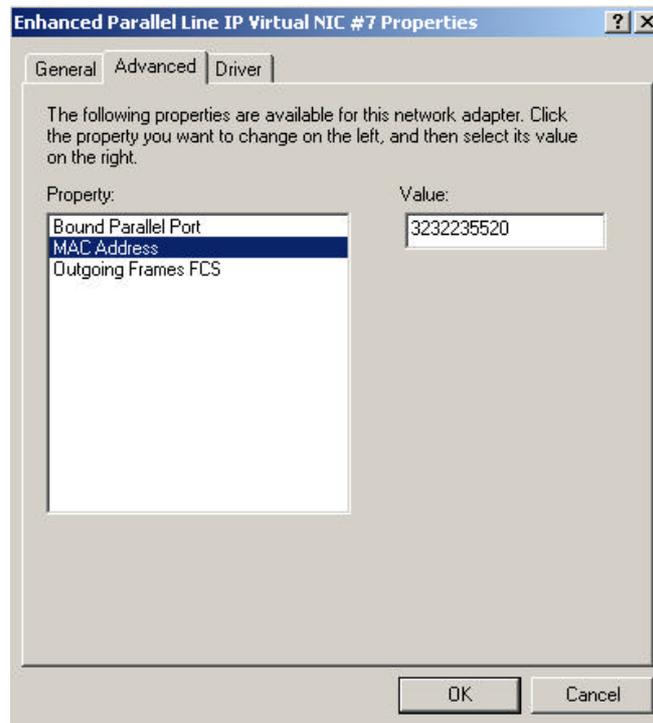
fig.3.2.

The Third setting - **Outgoing Frames FCS**, affects the type of the Frame Control Sequence (**FCS**) used to checksum packets send through this interface. If you are using longer cables and are somewhat paranoid about transmission errors, you may prefer using AUTODIN II CRC instead of plain checksum, but be warned that the throughput will drop significantly since this algorithm is much more CPU intensive (And probably later EPLIP versions – both Linux & Windows, wouldn't support AUTODIN II CRC at all).