

Wavenode WN-1
Windows 7 / 8 installation
With add in PCI LPT Card

Preface:

After an 8 year hiatus from ham radio, I got back into the hobby, guns blazing, about three months ago. I fired up my PC and found that the motherboard suffered damage from a lightning strike. I pieced a replacement together from spare parts that I had only to find that the new board did not have an LPT port. I loaded Windows 8 to facilitate operation with other updated software programs that I was using. To facilitate a connection with the WN-1, I installed an old Startech PCI2PECP PCI LPT card that I had lying around. This card is still produced and can be purchased from <http://www.startech.com/Cards-Adapters/Parallel/2-Port-EPPECP-Parallel-PCI-Card~PCI2PECP> Other vendors are reselling this card cheaper however; this is the manufacturer site and they provide drivers for the older cards as well. When the card is installed in windows, it is given a range of resources that are above the legacy LPT1 and LPT2 ports; entering these hex addresses into the WN-1 software would not allow communication with the device. The problem lies within in input32.dll driver; Windows 7 / 8 does not communicate directly with legacy devices as Windows 95 – Windows XP did. Another side note, Windows 7/8 will **NOT** allow resource reassignment to an LPT PCI card; the cards that allow this feature is only allowed in Windows 95-98.

Steps to make the WN-1 work with Windows 7 / 8:

1. A rewritten input32.dll package is available at <http://www.highrez.co.uk/Downloads/InpOut32/> The site is a little cryptic for my taste but scroll down to the text that reads;

The following links are for my x64 port of the source code and examples of how it can be used:

[Binaries only - x86 & x64 DLLs and libs.](#) (Mirror)

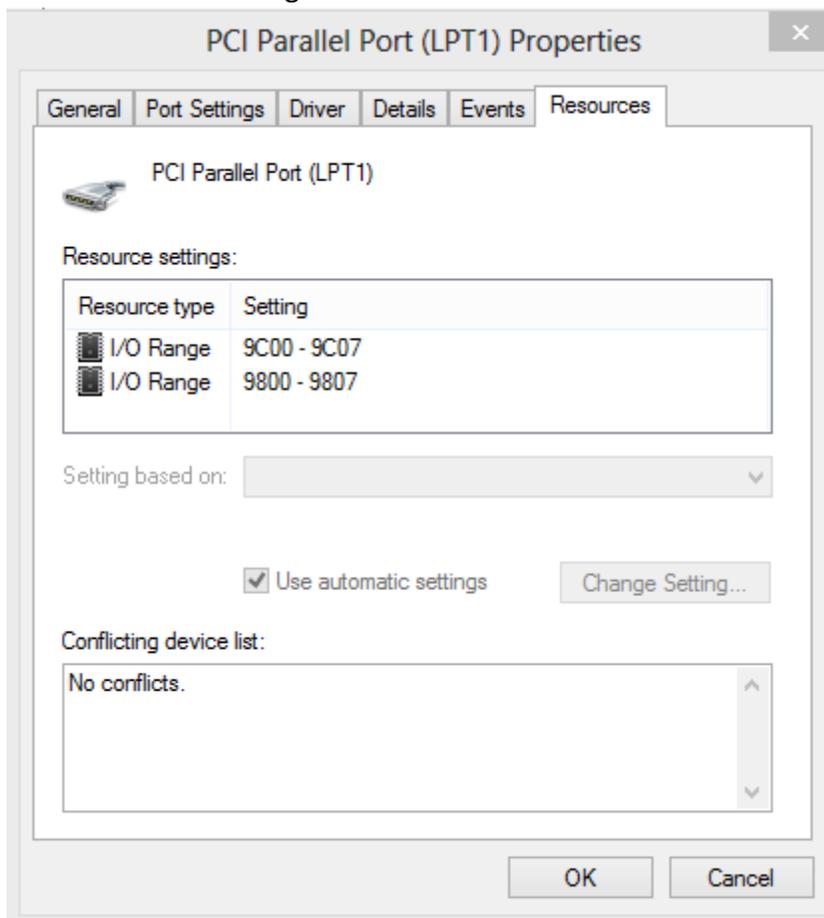
For end users of applications designed for use with InpOut32 (for example LCDSmartie) this is all you need.

It also contains everything required to develop your own application. See the readme

2. Click the Binaries only – x86 & x64 DLLs and libs; this will download the driver package that you need. This will provide you with a zip file; when you unzip the file you will have a directory that resembles the following;

| | | | |
|--------------|-------------------|-------------|------|
| Win32 | 8/23/2013 3:49 PM | File folder | |
| x64 | 8/23/2013 3:49 PM | File folder | |
| DLPortIO.txt | 8/23/2013 3:49 PM | TXT File | 1 KB |
| ReadMe.txt | 8/23/2013 3:49 PM | TXT File | 2 KB |

3. Open the Win32 folder; this contains the installdriver.exe that will install 32 bit and 64 bit drivers for the system that you are using. You will be asked to give administrative privileges for the install.
4. When the driver installation is complete, from the Win32 folder that was unzipped, copy inport32.dll into your Wavenode install directory. You will be replacing the existing copy. My install directory is located at C:\Program Files (x86)\WN-1 Version 2_5
5. Go to Control Panel / Device manager, expand Ports (COM & LPT), double click LPT1 (assuming this is the LPT port number that you are using) and select the resources tab. You will have two ranges of addresses listed.



- From the Parallel Port Properties Resources page, select the first I/O Range and write down the first hexadecimal address; in my case it is 9C00. Open the Wavenode software; in the top left pane, click file and then Configuration File Editor. On the bottom right of this page in LPT Port Select, put a tick in the User Select in the bottom right and enter 9C00 as the address or whatever hex address your card is assigned. Click Save and then Close. If you have a Rev. C unit, ensure you have a tick mark here as well.

Configuration File Editor

Main Form

Select Sensor Type

Meter #1 Title: IC-7000 LP-1 HF1/UHF1 8KW User Meter #1 Range: 150

Meter #2 Title: Drake L-4 LP-1 HF1/UHF1 8KW User Meter #2 Range: 1700

Meter #3 Title: Meter #3 LP-1 HF1/UHF1 8KW User Meter #3 Range: 700

Meter #4 Title: Meter #4 LP-1 HF1/UHF1 8KW User Meter #4 Range: 800

Your Call Sign: NSXTE

Sample Rate (Samples/Sec.): 5 10 20

User Control One Title: CH #1

User Control Two Title: CH #2

User Control Three Title: CH #3

Aux #1 Form

Meter #1 Title: Aux #1 Vertical Scale: 4 Vertical Label: volts Scale Factor: 1

Meter #2 Title: Aux #2 Vertical Scale: 4 Vertical Label: volts Scale Factor: 1

Meter #3 Title: Aux #3 Vertical Scale: 4 Vertical Label: volts Scale Factor: 1

Meter #4 Title: Aux #4 Vertical Scale: 4 Vertical Label: volts Scale Factor: 1

Save Close **WaveNode** Rev. C LPT Port Select

LPT #1 LPT #2 User Sel. 9C00

- Once these steps are complete, ensure that the Interface light on the WN-1 box is flashing indicating that the computer and device are communicating.

Conclusion:

There are additional troubleshooting tips on the <http://www.highrez.co.uk/Downloads/InpOut32/> site as well as links to user groups. There is information that the Inpout32 driver will not work with add in cards however; there is information that this will work with a PCI card using the Moschip chipset. I am successfully using it with the PCI version of the Startech PCI2PECP LPT card. I have not tested any other cards as I do not own any. The only configuration that I can tell you for sure that works flawlessly is the PCI2PECP PCI add-in card under Windows 8 Pro 64 bit installation. I have had no conflicts running WN-1 simultaneously with Ham Radio Deluxe (controlling my IC-7000) and HSDR software (controlling my Softrock Ensemble II). They all seem to play nicely together.

I have no affiliation with any of the afore mentioned software programs, drivers or hardware. I solely wanted to make use of my WN-1 and had to find a workaround for legacy parallel devices under the Windows 8 operating system. I did not write, modify or in any way alter any drivers or software however; I was able to piece it together to make my system work. If I can help another ham figure out the installation, I can be reached at dcoffman@pdswireless.com.

Regards,

Doug Coffman – N9XTF