

Application Note

**Connecting two Wi232 Wireless adapters
in a Point-to-Point configuration.**

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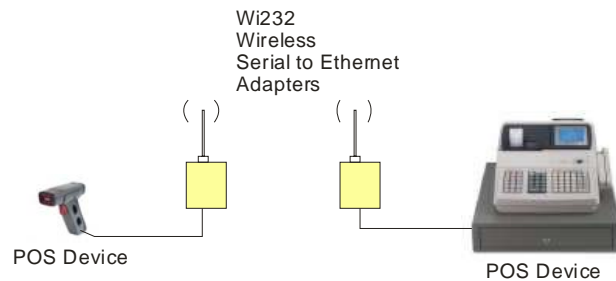
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05/24/05	A	GR	Preliminary Release

1. Serial Tunnel

This manual contains detailed information for setup and configuration of a pair of Wi232 Wireless Ethernet Adapters to operate in a point-to-point mode.

In the following example, two Wi232s have established an Ad-Hoc peer-to-peer relationship. They communicate directly to each other's serial devices without a PC or an Access Point.



This application is sometimes called *serial tunneling* and in this case it is *wireless serial tunneling*.

Each device has a unique IP address and it knows the IP address of the other unit.

The units are connected so that they start communicating as soon as they establish a link.

This application can be used to replace cables in a situation where cables may not be practical or possible. Any remote serial device can be connected in this manner.

2. Configuration

Both units are configured the same except for the **IP address**.

1. Connect a null modem cable to the Wi232's serial port. (Null Modem Adapter supplied)
2. Connect the other end of the serial cable to a PC's serial COM port.
3. On the PC, open a terminal emulation application (e.g. HyperTerminal). The default serial settings are: 9600 baud, 8 bits, not parity, 1 stop bit and no flow control(9600, 8, N, 1).

Note: The default settings are always the same for the first 5 seconds of startup.

4. Enter Setup Mode by simultaneously connecting the power supply and holding down the lower case x key.
5. Upon connection , the following information displays:

```
MAC address 00204A8245A8
Software version 01.6 (040505) WPT
Press Enter for Setup Mode
```

Press **Enter** within 5 seconds to display a list of all the settings. The **Change Setup** menu will be displayed at the end of the list. If you use HyperTerminal, you can use the scroll bars to move back and forth in the display to read the entire list.

All of the settings are default except as shown in the following setup menus.

2.1.1 Channel 1 Settings

Select Channel 1 from the menu and make the following changes:

Baud Rate: Set to the speed of your device.
I/F Mode (4C): No change
Flow (00): No change
Port Number: 10001
Connect Mode: C5 (Autostart)
Auto increment source port (N): No change
Remote IP Address: Enter the IP address of the other unit.
Remote Port: Enter the number of the remote port. Can also be 10001.
DisConnMode (00): No change
FlushMode (00): No change
DisConnTime (00:00): No change
SendChar1 (00): No change
SendChar2 (00): No change

Select option 9 to Save and Exit.

Follow the same procedure to set up the second unit and make sure to set the remote IP address.

Cycle power on both units and they should be connected. The following drawing details the setup configuration.



Wi232 #1
IP: 172.20.206.135
Port: 10001
Baud Rate: 9600
Connect Mode: C5
Remote IP: 172.20.206.120
Remote Port 10001

Wi232 #2
IP: 172.20.206.120
Port: 10001
Baud Rate: 9600
Connect Mode: C5
Remote IP: 172.20.206.135
Remote Port 10001

3. Test the Connection

To test the connection, connect one Wi232 to your PC COM port. Start a terminal program like Hyperterminal and set the COM port to match the Wi232 Channel 1 baud rate setting.

The second unit will have a loop-back plug installed on the RS-232 cable so that any characters received will be immediately sent back. This will help determine the best location and range of the units. A loop-back plug is simply a female DB-9 connector with pins 2 and 3 jumpered. Place the unit where you want to make a connection to the other RS-232 device.

Cycle power on both units. Begin typing characters on the PC keyboard and they should be echoed back. You can send a long text file to test for dropped characters or link failure. Once you are sure the link is working, remove the loop-back plug and attach your RS-232 device. You should now have a wireless RS-232 link.