IOXperts 802.11b Driver
User's Manual

IOXperts, Inc.
`http://www.ioxperts.com/`

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1 Introduction

The IOXperts 802.11b Driver allows Apple Macintosh owners to use a wide variety of consumer wireless network adapters. This driver supports cards which use the IEEE 802.11b standard for wireless communication,[1] also often called Wi-Fi.[2] Using a wireless adapter allows older computers to access modern wireless networks, and can provide better signal strength and range for computers that come with built-in wireless capabilities.

1.1 Obtaining the Driver

There are separate versions of the driver for MacOS 9 and MacOS X. The current release of each version can be downloaded from the IOXperts web site at the following URLs:

MacOS 9:	`http://www.ioxperts.com/80211b.html`
MacOS X:	`http://www.ioxperts.com/80211b_X.html`

1.2 Supported Hardware

We try to keep an up to date list of all of the wireless adapters that the driver supports:

`http://www.ioxperts.com/devices_80211b.html`

IMPORTANT NOTE: Some manufacturers change the electronics inside their device without changing the product name or number. If our compatibility list shows a version number for a device, that means that other versions of that device *will not work* with the driver. Also, if the name on the box is not exactly the same as it appears in our list, it may not work; simply choosing a box with the right brand name is not enough to guarantee compatibility. Where we know of such problems, we try to list the versions or models that don't work as well, but that list may not be up to date. There are enough different devices on the market that we often only find out about internal changes when we start getting problem reports from users.

2 Installation

After downloading the installer, double-click it to run it. The installer will install the driver files and prompt you to restart the machine. After restarting, insert your wireless adapter into a PCMCIA slot on your computer. Without a license key, you may use the driver for 30 minutes, after which it will disable itself until the next reboot. During those 30 minutes, all features of the driver are available. This allows you test it before you buy

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[1] For more information, see `http://standards.ieee.org/getieee802/`

[2] For more information, see `http://www.wi-fi.org/`

it, and make sure it works well with your wireless adapter. Also, this lets you set up your wireless connection and then use it to go online to purchase a license key, without requiring you to find an alternate connection method just to do the purchase.
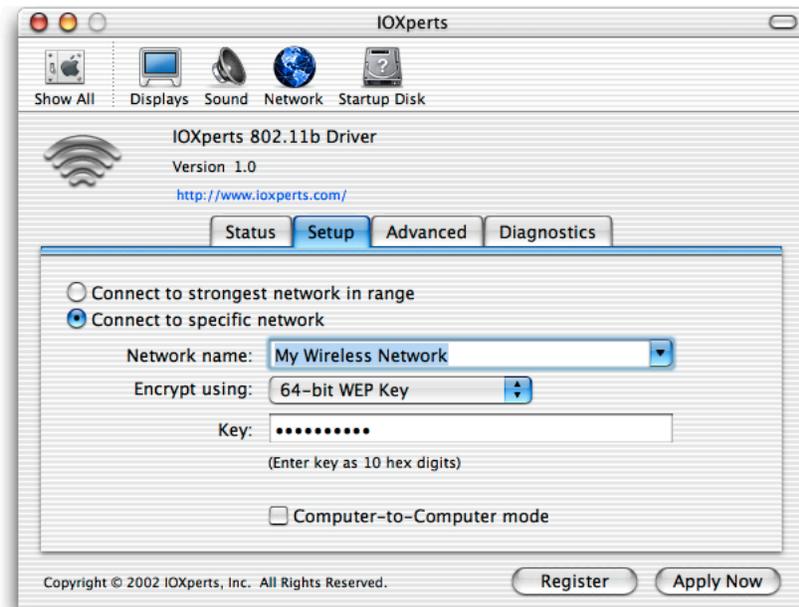
3   Configuration

3.1   MacOS 9

To configure the driver under MacOS 9, open the "IOXperts 802.11b Settings" control panel.

3.2   MacOS X

3.2.1   Wireless Settings

To configure the driver under MacOS X, select "System Preferences..." under the Apple menu and click on the "IOXperts 802.11b" icon. The IOXperts 802.11b preferences pane will appear:

If you want to connect to the strongest network in range, and that network doesn't use encryption, you can simply select the option "Connect to strongest network in range." This is mostly useful for people who are travelling or otherwise using public 802.11b hotspots. Public hotspots generally do not use encryption, and their names vary widely. If you select this option, please skip ahead to the next section ("Network Settings").

In order to establish a wireless connection, you will need to supply the name of a wireless network to connect to. If that network uses WEP encryption, you will also need to supply a password or encryption key. Type the name (also sometimes called the SSID) of your wireless network into the "Network Name" field. If you click on the arrow at the right end of the field, you will get a pop-down list of all networks in range that have not been set up as "closed" networks. Selecting one of them will fill in the field for you.

If your network uses encryption, select the type of encryption from the "Encrypt using" popup menu. For Apple base stations, select one of the Airport Password options and enter the Airport password in the "Password" field.

For non-Apple base stations, the "WEP Key" options let you specify the encryption key in hexadecimal, while the "ASCII Password" options let you specify the key in alphanumeric characters. Select the same method that your base station was configured for, and enter the hexadecimal or ASCII key in the "Key:" field.

While you are typing, you will be able to read the password or key. Once you close the preference pane, if you open it again the password or key will be obscured so that someone couldn't look over your shoulder and read it. Especially if you are using one of the "WEP Key" options, *proofread the key very carefully.* Because of the way 802.11b works, you can connect to a base station and view the signal strength under the Status tab even if your keys don't match, but you won't be able to send or receive any data. If you email our support address (`support@ioxperts.com`) and describe the symptom as "I can see my base station and my signal's strong, but I can't get an IP address or surf the web," the very first thing we will ask you to do is to double-check your encryption setup. It is very easy to mistype long strings of letters and numbers–we do it ourselves.

Once you've entered the password or key, click "Apply Now."

If you are using one of the very few wireless networks that uses multiple encryption keys, click on the "Advanced" tab and enter your encryption keys in the fields provided:
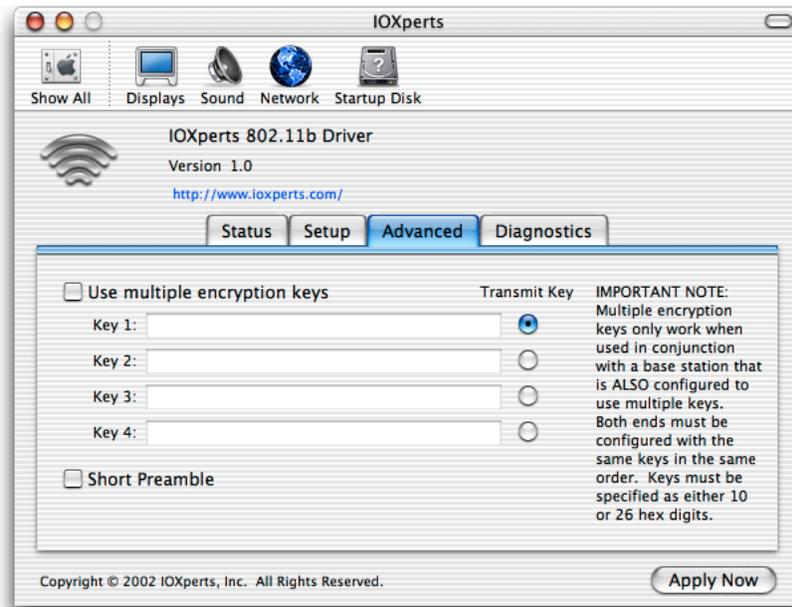
The keys must be in hexadecimal format, and must be entered in the same order as they are on the base station. This option is generally only used in corporate networks, and it's rare even there.

Once the wireless settings have been applied, you can check the network status and signal strength by clicking on the Status tab:
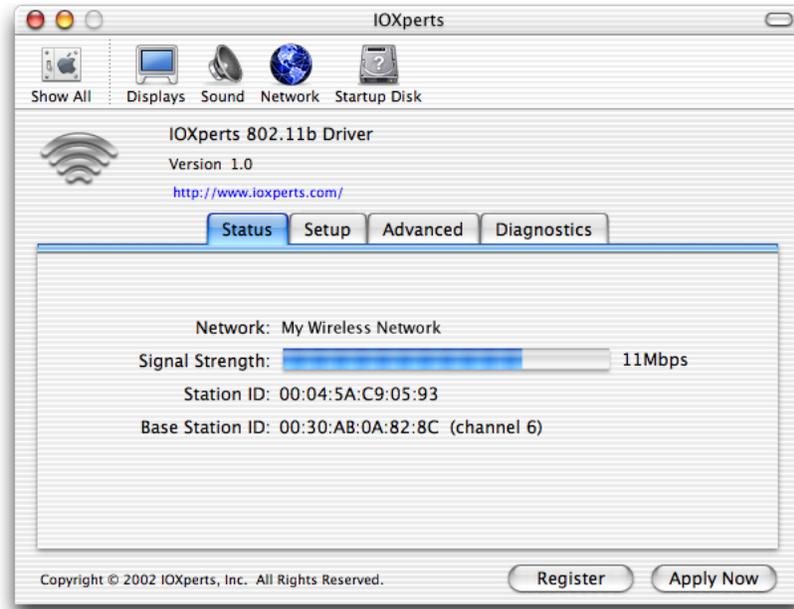
Remember that, as noted above, showing a good connection on this tab does not confirm that your encryption settings are correct, just that your wireless adapter is getting a good signal from the base station.

3.2.2   Network Settings

After getting the wireless network connection set up, click on the Network icon to switch to the Network preference pane. This will let you set up the TCP/IP settings for the wireless adapter. When you switch to the Network pane, it should detect that you have a new network interface and put up a message saying so ("en7" is an example–the number will vary from machine to machine):

If it does not put up a message similar to this, quit out of System Preferences and select it again from the Apple menu. Occasionally, it won't notice the new port right away, but relaunching it should fix the problem. Click OK to acknowledge the message and select "Network Port Configurations" from the Show popup menu. You should see a list of network port names:
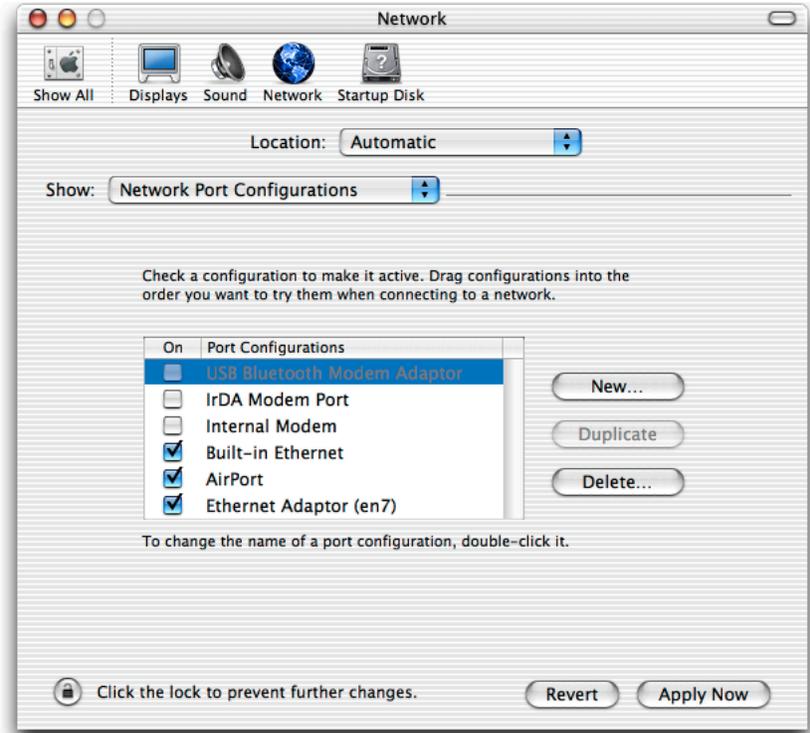
Make sure the newly-created port is checked, and if you'd like, double-click the name and change it to something more informative than "Ethernet Adapter (enX)." Now select the port in the Show menu to bring up the TCP/IP settings for that port:
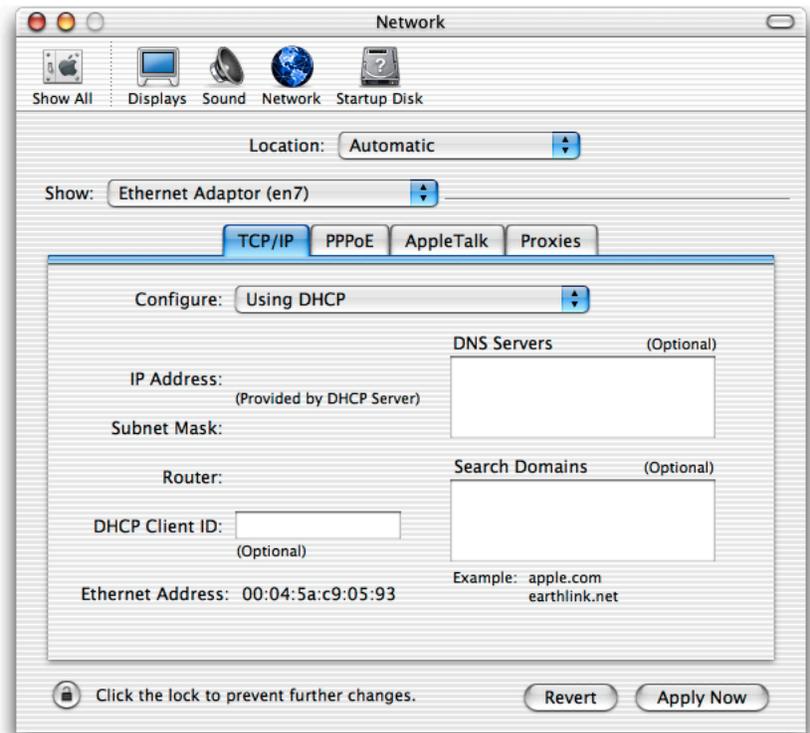
If your base station is set up to assign IP addresses via DHCP, as most are by default, you can click the "Apply Now" button. If you are using static IP addresses, enter the information in this pane and then hit "Apply Now." That's it for configuration, so quit out from System Preferences. To verify that everything is set up, try launching a web browser and bringing up a web page. If it doesn't work, go back to the Network preference panel and check the TCP/IP information for the wireless network adapter's port. If it shows an IP address beginning with 169 and has the notation "self-assigned," it probably means that your encryption settings have a typo. Try re-entering your encryption keys in the IOXperts preference pane. You won't need to re-enter the TCP/IP information, though.

3.3   Purchasing a License

Once the driver is configured and has successfully exchanged a few packets with the base station, it checks for a valid license key. If it does not find one, it starts a 30-minute timer and puts up a message:
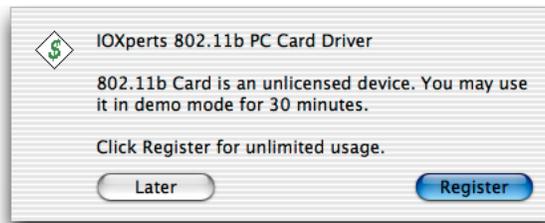
If you want to test drive the driver, just click on the Later button. You can always start the purchase process from the IOXperts 802.11b preference pane by clicking on the Register button. If you want to purchase a license, or you already have a license and you need to re-enter it (for example, if your disk drive died and you re-installed from scratch instead of a backup), click Register. Once you do this, you will be prompted to enter your license key or buy one online:
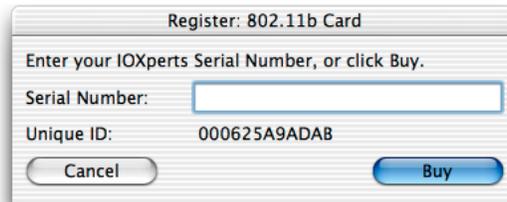
If you have a key, enter it here and hit Return. The 30 minute timer will be turned off, and your driver will be fully usable. If you do not, click Buy to start the online purchase process. If you hit cancel, the purchase process will stop and the 30 minute timer will continue to count down.

If you click Buy, the eSellerate purchase process will begin. eSellerate is a secure online e-commerce service that we use to process credit card purchases. Once you enter your credit card info, eSellerate will generate a license key, enter it for you into the driver, and send you an email message confirming the sale. eSellerate encrypts all credit card information, and does not keep your credit card number once the charge is approved. The eSellerate purchase window has links to more information about their service and policies.

If you do not have a credit or debit card, there are other ways to pay for a license, though they take a little longer because a human is involved on the other end. Our preferred alternate method is PayPal.[3] If you send $19.95 via PayPal to sales@ioxperts.com and include the MAC address of your wireless card (as shown at the Register prompt, or printed on the bottom of your device), we will send you a license key via email. If you can't use either eSellerate or PayPal, send email to support@ioxperts.com to discuss other payment options.

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[3]For more information, see http://www.paypal.com/