
DEXTER NETWORK CONFIGURATION

Dexter is a network device using the Ethernet protocol to connect and communicate with other devices on the network: Computers, routers, DHCP servers.... Thus you have to setup your Dexter and your network devices properly. Generally, a device can have multiple network adapters, like Ethernet, WIFI, Airport, USB Network Adapters, Firewire and others. Each adapter can have its own IP settings and it is highly recommended to set different sub-networks to avoid network problems.

1. GLOSSARY

IP Address

a unique sequence of 4 numbers which identify each device on a network. An IP address can be setup in static mode or attributed dynamically by a DHCP server. An IP address is composed by 4 numbers between 0 and 255 as follows: 192.168.2.2 or 10.0.0.35.

Network Mask

an IP-like sequence which defines a sub-network of compatible IP addresses. Most of the time we use 255.255.255.0 or 255.255.0.0, which means that only the 3 or 2 first IP numbers should be equal to be compatible. Gateway the IP address of the machine giving you access to IPs which are not included in the sub-network. In brief, a Gateway enables you to gain access to the internet from an intranet.

MAC Address

a sequence of 6 numbers identifying each network adapter on a network. The MAC Address is unique and constant for each device.

2. COMPUTER DIRECTLY CONNECTED TO DEXTER

Using a simple crossover RJ45 cable, you can directly connect your Dexter to any computer.

2.1. Computer configured as a DHCP Server – Connection Sharing

If your computer is configured as a DHCP Server, it will attribute dynamically an IP address to Dexter. Most of the time your computer forces its IP address to 169.254.X.1 and Dexter will obtain an IP like 169.254.X.X.

2.2. Computer and Dexter using DHCP

When Dexter and the computer are set up as DHCP clients, they both wait for a DHCP server until the OS gives a default IP address like 169.254.X.X.

2.3. Computer and Dexter using Static IP

The most common way to configure a network without a DHCP server is to set up each device with different but compatible IPs using the same network mask. Most people use IP addresses like 192.168.0.X or 10.0.0.X.

Eventually, when using connection sharing, the computer can share its internet connection and give Dexter access to another sub-network by using the Gateway Address.

3. COMPUTERS AND DEXTER CONNECTED TO A NETWORK

3.1. Network with a DHCP Server

Most network sharing devices allow multiple connections and manage the attribution of IP addresses through the DHCP protocol. These devices include WIFI/Ethernet Routers, Airport Base Stations and ADSL/Cable Modems with routers. You only need to configure all your devices - including Dexter - to use the DHCP mode.

3.2. Network without DHCP Server

If you have multiple devices connected through a hub or switch, you may have to configure them individually with a unique, static IP sharing the same network mask.

Use IPs like: 192.168.0.X or 10.0.0.X

Mask: 255.255.255.0

4. DEXTER NETWORK SETUP

You open the Network Settings via the Settings button, which is the left-most hardware button on top of Dexter.

4.1. Lemur Network Setup

Static IP Configuration :

- Select **Static IP**.
- Enter assigned static IP address into the **IP** field.
- Enter NetMask

The screenshot shows the 'TCP/IP Setup' window. The 'Automatic using DHCP' option is unchecked, and the 'Static IP' option is checked. The IP address field contains '169.254.0.3', the NetMask field contains '255.255.255.0', and the Gateway field contains '0.0.0.0'. At the bottom, the MAC address is '00:1F:20:21:12:34', Media is 'Connected', and Quality is 'Rx 0/0' and 'Tx 0/0'.

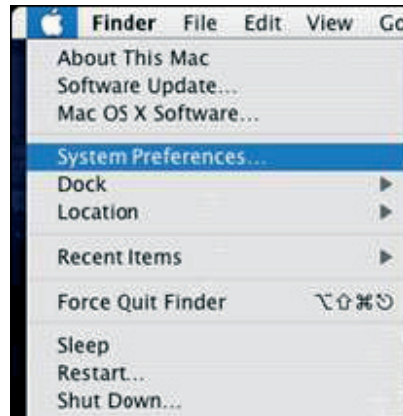
DHCP IP Configuration:

- Select **Automatic using DHCP**.
- If a DHCP server is available, Dexter will obtain a DHCP IP address automatically. If there is no DHCP server available, Dexter will choose its own address.

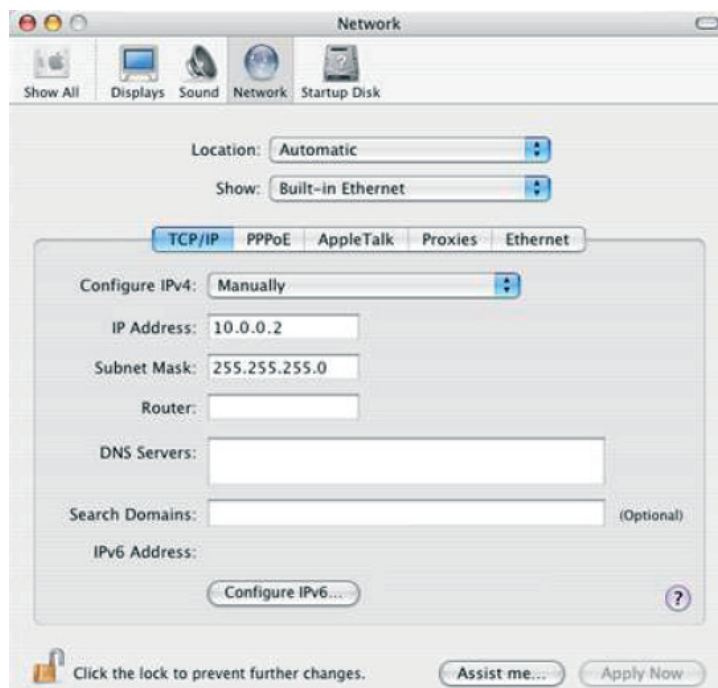
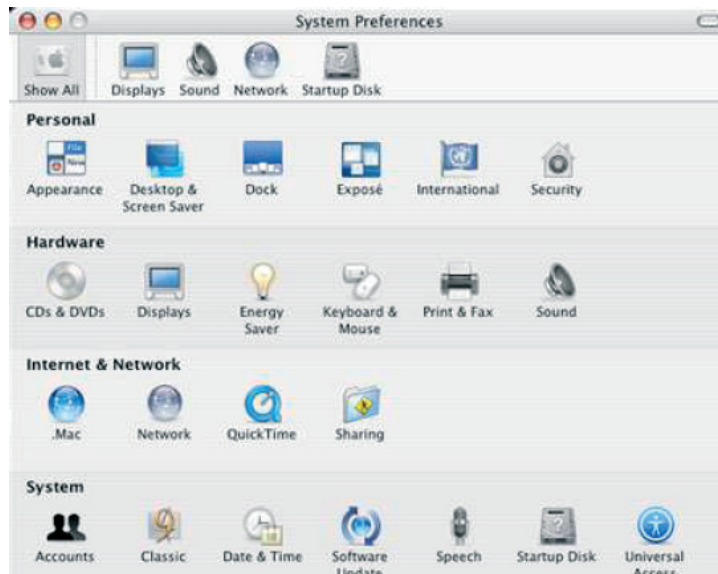
The screenshot shows the 'TCP/IP Setup' window. The 'Automatic using DHCP' option is checked, and the 'Static IP' option is unchecked. The IP address field contains '10.0.0.34', the NetMask field contains '255.255.255.0', and the Gateway field contains '10.0.0.1'. At the bottom, the MAC address is '00:1F:20:21:12:34', Media is 'Connected', and Quality is 'Rx 0/0' and 'Tx 0/0'.

4.2. MacOS Network Setup

Static IP Configuration :



- Go to the **Apple menu** and select **System Preferences**.
- Under **Internet and Network**, select **Network**.



- Change the Show pop-up option to **Built-in Ethernet**.
- Under **Location**, choose **Automatic** (or name the new connection).
- Under **Show**, Select **Built-in Ethernet**.
- Change to the **TCP/IP** tab.
- Set **Configure IPv4** to **Manually**.
- Enter assigned static **IP Address**.
- Enter **Subnet Mask** 255.255.255.0
- Click the **Apply Now** button, and **quit** the System Preferences application.

DHCP Configuration :

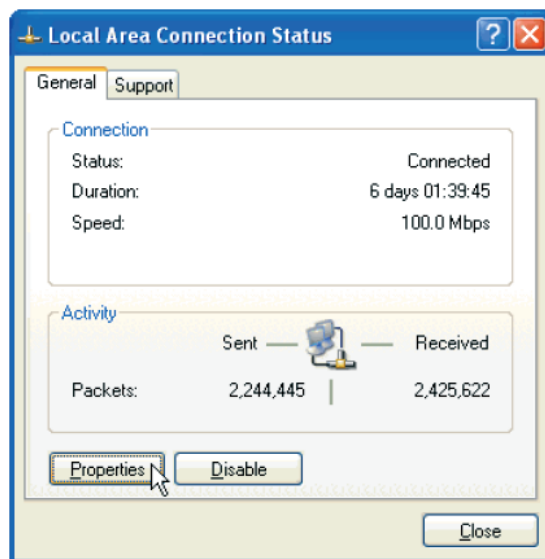
- Go to the Apple menu and select System Preferences.
- Under Internet and Network, select Network.
- Change the **Show** pop-up option to **Built-in Ethernet**.
- Under **Location**, choose **Automatic** (or give this connection a name).
- Under **Show**, Select **Built-in Ethernet**.
- Change to the **TCP/IP** tab.
- Set **Configure IPv4** to **Using DHCP**.
- Click the **Apply Now** button, and **quit** the System Preferences application.

4.3. Windows XP Network Setup

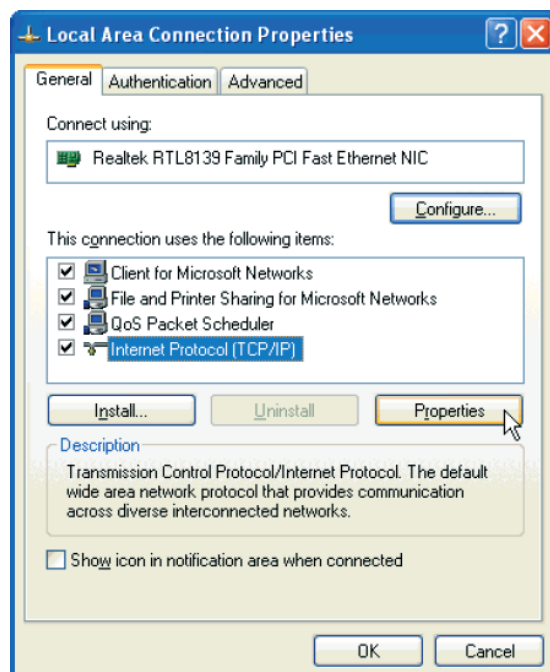
- On the Desktop, click right on the **My Network Places** icon and select **Properties**.



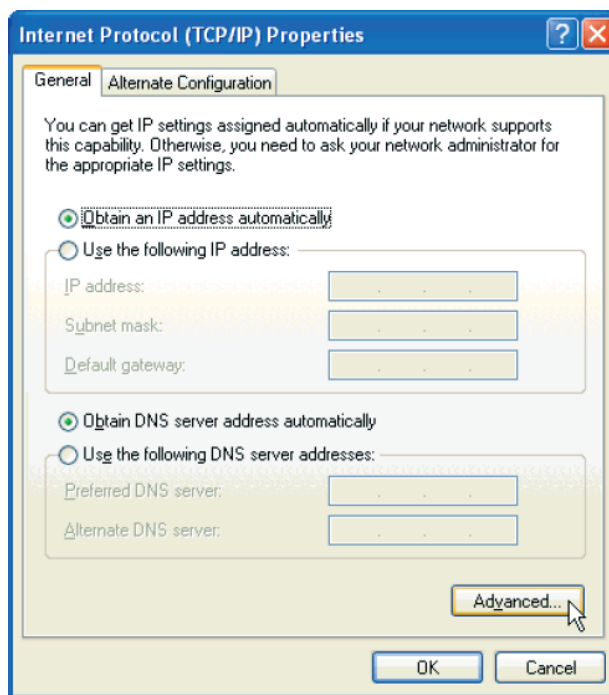
- Select your **LAN connection** and double-click on it.



- Click on the **Properties** button.



- Select **Internet Protocol (TCP/IP)** and click the **Properties** button



- Select **Obtain an IP address automatically** to use DHCP configuration or select **Use the following IP address** to use static IP configuration. Enter assigned static IP address and Subnet Mask.
- Click **OK** to confirm changes.