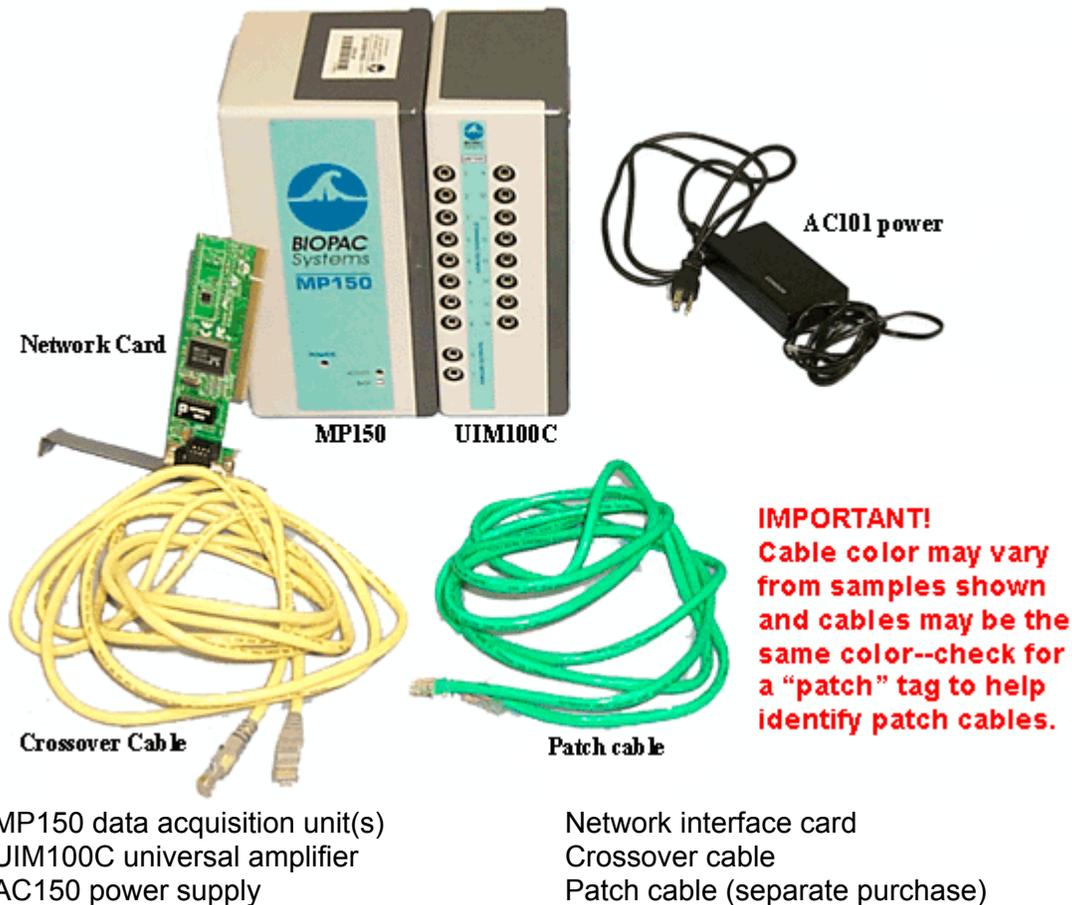


Application Note 208: *AcqKnowledge* for Windows: Upgrade for 1+MP150s and Domain Network Access or Direct Communication Setup (Domain/Non-domain)

BIOPAC Software

- *AcqKnowledge* 3.7.3 or better for Windows OS (version compatibility varies each release)

BIOPAC Hardware



Objective:

This Application Note will explain how to update the MP unit firmware, install the *AcqKnowledge* software and make all necessary connections to acquire data when using one or more MP150s and maintaining domain network access or when using the High Performance Setup option.

- **About Direct Communication Setup...**
 - Users with an aggregate sampling rate greater than 10K are most likely to notice a performance enhancement with this setup.
 - This setup eliminates network traffic in the computer to MP150 communication link, which can impede acquisition.
 - Install the BIOPAC supplied network card and use it for direct communication between your computer and the MP unit.

- If adding additional MP units...add to network or connect straight to the computer; the crossover cable is not required.

You can stay connected to the normal network, but acquisition will occur via the newly installed network card over the computer to MP150 "network."

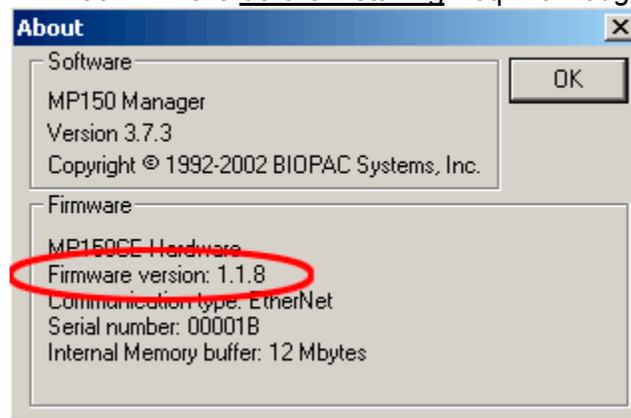
- **Installation Options**

For alternate setups, see the appropriate Application Note in the Support section at www.biopac.com:

- [#AH-207](#) 1+ MP150s and no network access
- [#AH-209](#) 1+ MP150 and non-domain network access
or 1+ MP150 and non-domain, DHCP server
or Multiple Computers and no network setup

Firmware Update:

You must upgrade your MP150 firmware before installing AcqKnowledge v3.7.3 or better.



Firmware version must be 1.1.8 or better for UDP setup

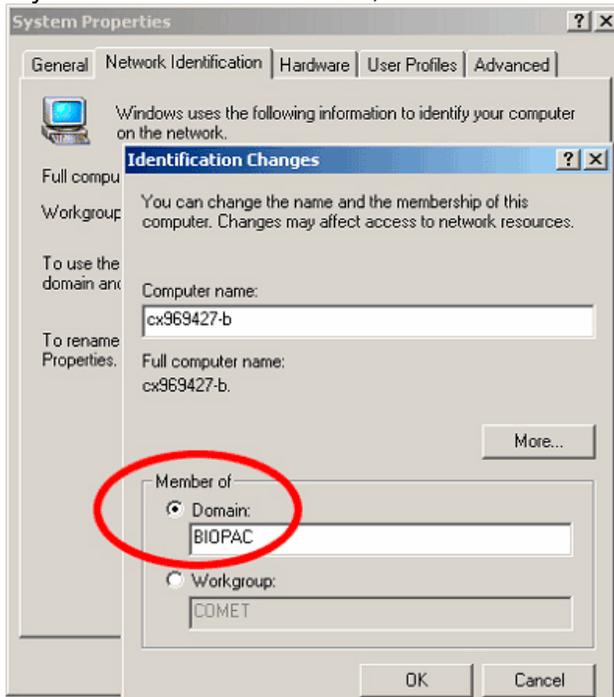
IMPORTANT!

DO NOT erase the installed version of AcqKnowledge (v3.7.2 or below) before installing AcqKnowledge v3.7.3 or better and KEEP the CD for the older AcqKnowledge.

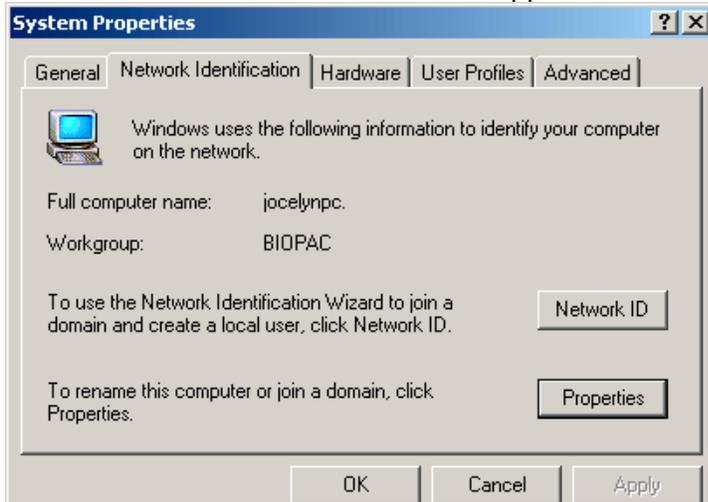
1. Launch AcqKnowledge (v3.7.2 or below) and select the MP150 communication option, and then select the appropriate MP150 by serial number.
2. Insert the new AcqKnowledge v3.7.3 or better CD into computer and cancel out of the installer if it autostarts.
3. Locate and copy the "MPTools.exe" Firmware Update Utility from the AcqKnowledge v3.7.3 or better CD.
4. Go to the existing AcqKnowledge folder (v3.7.2 or below) and paste the Firmware Update Utility...OVERWRITING the older firmware update utility.
5. Launch "MPTools.exe" by double-clicking on the icon.
6. Select "Show info" from the MPTools menu to verify connection to the correct MP150 unit (by serial number).
7. Complete the firmware update by selecting the "lightning bolt" toolbar button in the MPTool menu bar.
8. Launch the existing AcqKnowledge (v3.7.2 or below) to verify that the application could "find" and communicate with the MP150 unit.
9. Click on MP150 menu>About MP150 and confirm that the firmware version is **1.1.8** or better.
10. Repeat as necessary for additional MP150 units.

Confirm Domain Network Status:

1. Click on the  button and choose **Settings > Control Panel**.
 2. Select **System**.
XP Users: Select **Computer Name**.
 3. In the **System Properties** dialog, click the Network Identification tab.
XP Users: Select "Computer Name."
 4. Click "Properties" see if your computer is a member of any domain.
XP Users: Select "Computer Name" and then "Changes."
- If you are a domain member, the domain name should be listed.



- If you are not a member of a domain network, there will be some information about joining a domain. Non-domain users must use Application Note [#AH-209](#).



Confirm Network Card Settings:

1. Click on [Settings](#) and select Settings and then select the networking option:

98, 98 SE, 2000, Me:

Network and Dial-up Connections > Local Area Connection

XP:

Network Connections > Local Area Connection

If there is more than one Local Area Connection, pick the one you plan to use for MP Communication.

2. Confirm or establish the following properties:

98, 98 SE, Me (Millennium)

[Click here for 2000 and XP](#)

- a. On the Configuration tab, select the TCP/IP line for the network card you will use for MP150 communication and then click on Properties.
- b. IP address tab: Obtain an IP address automatically.
 - § If “Specify an IP address” is selected, see the [IP Note](#).
- c. WINS Configuration tab: Use DHCP for WINS Resolution.
- d. Gateway tab:
 - New Gateway: . . . (blank)
 - Installed Gateway: Select and Remove any installed gateways.
- e. DNS Configuration tab: Disable DNS.

2000 and XP

[Click here for 98, 98 SE, Me](#)

- a. On the General tab, click on Properties.
- b. Select Internet Protocol (TCP/IP) and click on Properties.
- c. Select “Obtain an IP address automatically” and “Obtain DNS server address automatically.”
 - § If “Use the following IP address” is selected, see the [IP Note](#).
- d. Click on Advanced...and check that the IP Address reads “DHCP Enabled.”

IP Note

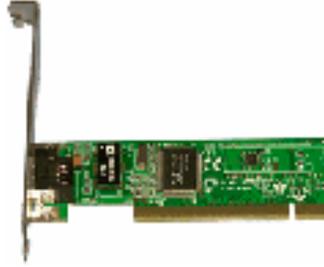
If the IP address for your network card(s) is specified, the computer will not recognize the MP150 connection to the network and will be unable to establish communication. To establish MP150 communication, try ONE of the following:

- A. **Recommended for DHCP Servers or one computer setups:**
Select “Obtain an IP address automatically” for each networked computer.
- B. Specify a unique IP address for each networked computer:
IP Address: 169.254.xxx.xxx (always start with 169.254, enter xxx as any number from 1-254)
Subnet Mask: 255.255.0.0 (always enter this exact series)
- C. Install another network card for MP150 communication.
See Application Note #AH-208 for details

[BACK](#)

Install New Network Card:

DOMAIN USERS: *Install the Network Card from BIOPAC*



Network Card

1. Follow the installation instructions provided with the network card.
 - If prompted to locate the new network card hardware driver when you restart the computer, the required driver should be on a disk or CD that was shipped with the network card.

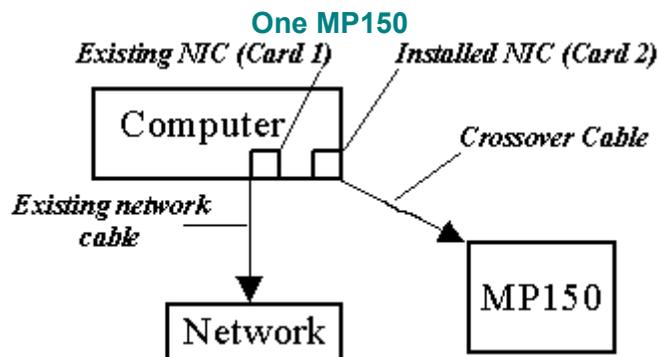
Software Installation:

1. Insert the BIOPAC CD.
2. Accept the License Agreement.
3. Complete the Install Wizard as prompted, selecting MP150 and UDP when prompted.

Hardware Connections:

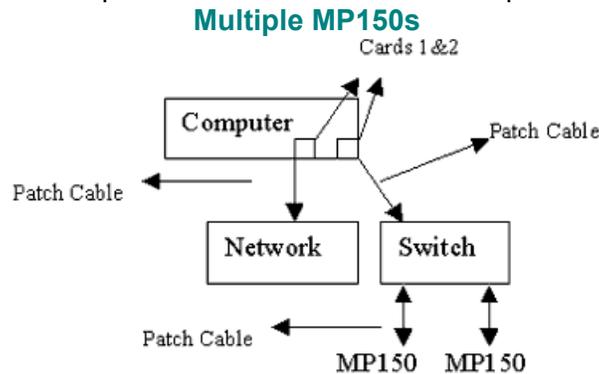
1. Snap the MP150 to the side of the UIM100C.
2. Connect each AC150 power supply from an outlet (Mains power) to the MP150.
3. Use the appropriate cable to connect each MP150 to the computer or switch box:

One MP150: Connect the **crossover cable** from the MP150 (Ethernet port) to an available network interface card on your computer. Leave the existing network connection as is.



Multiple MP150s: Connect one **patch cable** from the available network interface card on your computer to a switch box and use additional patch cables to connect the MP150 units to the switch box. Leave the existing network connection as is.

IMPORTANT! Never use a patch cable to connect the computer directly to the MP unit.



For additional network setup options, [click here](#).

Confirm Setup

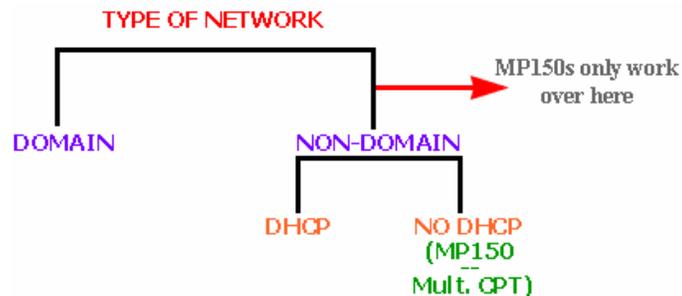
- Restart your computer to activate the new driver(s) and the installed software.
 - Click on Start>Shutdown.



- Launch AcqKnowledge.
 - Click on Start>Programs and drag to select AcqKnowledge 3.7.3 or better.



APPENDIX: Network Setup Options for UDP

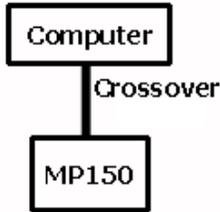


Note: If an MP150 must be used on a computer attached to a DOMAIN network, the BIOPAC ETHCARD1 must be installed to communicate directly with the MP150.

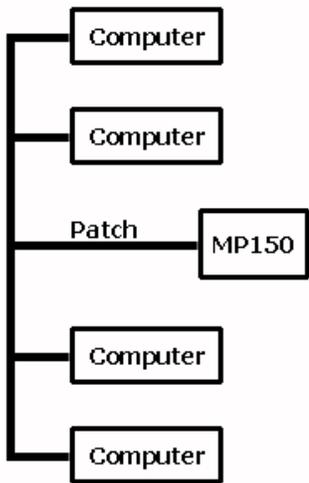
Network Setup Options

1. [No DHCP network, one computer, one MP150 \(non-domain\)](#)
2. [No DHCP network, multiple computers, one or more MP150s \(non-domain\)](#)
3. [DHCP network, multiple computers, one MP150 \(non-domain\)](#)
4. [DHCP network, multiple computers, multiple MP150s \(non-domain\)](#)
5. [Domain network, multiple computers, one MP150 \(domain from Card 1, non-domain from Card2\)](#)
6. [Direct Communication \(High Performance\) or DHCP network \(domain or non-domain\) and one MP150](#)

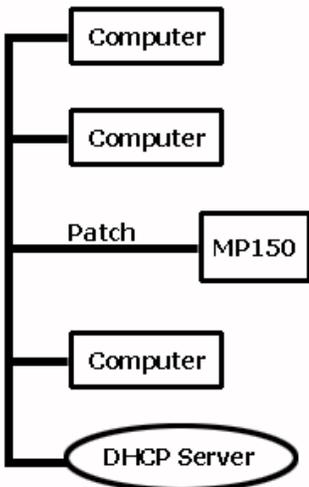
1. No DHCP network, one computer, one MP150 (non-domain)



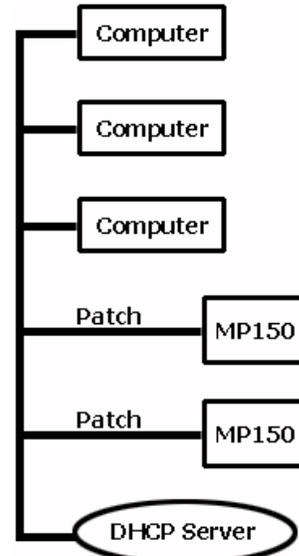
2. No DHCP network, multiple computers, one or more MP150s (non-domain)



3. DHCP network, multiple computers, one MP150 (non-domain)

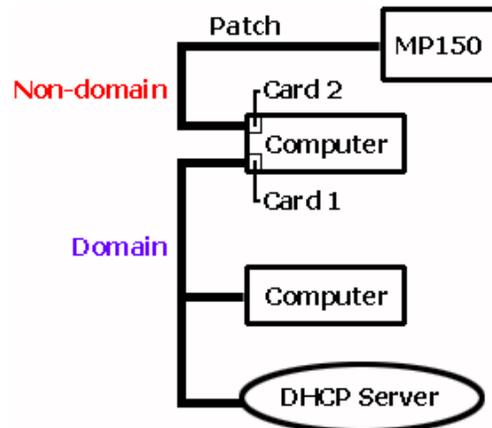


4. DHCP network, multiple computers, multiple MP150s (non-domain)



5. Domain network, multiple computers, one MP150 (domain from Card 1, non-domain from Card2)

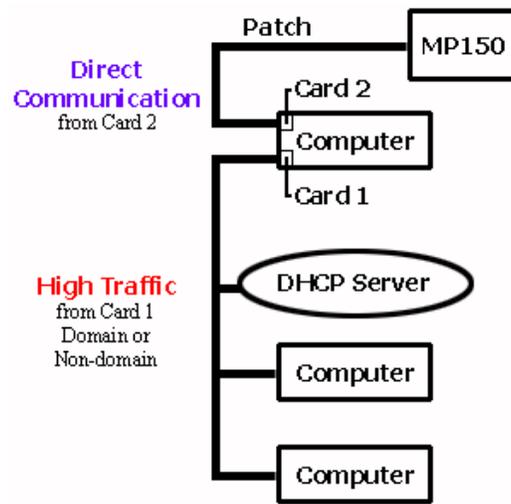
Note: BIOPAC **ETHCARD1** is installed ("Card 2") for MP150 communication.



Continues...

6. Direct Communication (High Performance) or DHCP network (domain or non-domain) and one MP150

Note: BIOPAC **ETHCARD1** is installed (“Card 2”) for MP150 communication.



[Back to Setup Options](#)