Application Note 207: AcqKnowledge for Windows: Upgrade for 1+MP150s and No Network Access

**BIOPAC Software**

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

**BIOPAC Hardware**

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 no network access.

**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 no network access.

**Installation Options**

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

- #AH-208 1+ MP150s and domain network access
  
- #AH-208 Direct Communication Setup (domain & non-domain)

- #AH-209 1+ MP150 and non-domain network access
  
- or 1+ MP150 and non-domain, DHCP server
  
- or Multiple Computers and no DHCP Server
**Firmware Update:**
You must upgrade your MP150 firmware before installing AcqKnowledge.

**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 Network Card Settings:**

1. Click on **Settings and then select the networking option:**
   - **98, 98 SE, 2000, Me:**
     - Network and Dial-up Connections > Local Area Connection
     - 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.
DNS Configuration tab: Disable DNS.

2000 and XP

Click here for 98, 98 SE, Me

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

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.
   
   ![Diagram of one MP150 connection]
   
   **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.
   
   ![Diagram of multiple MP150s connection]
   
   **IMPORTANT!** Never use a patch cable to connect the computer directly to the MP unit.

   **Multiple MP150s**

   ![Diagram of multiple MP150s connection]

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

   **Multiple MP150s**

   ![Diagram of multiple MP150s connection]

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

   **Confirm Setup**

   1. Restart your computer to activate the new driver(s) and the installed software.
      - Click on Start>Shutdown.
      - Select “Restart” and click “OK.”

   2. 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
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, oe MP150 (domain from Card 1, non-domain from Card2)

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