

Windows 95 and 98

Setting Up the Network Card for the Easy II System and Peer to Peer Network Configuration Guide

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Configuring the Network Card on the Acquisition PC for the Easy II Amplifier

The Easy II Amplifier communicates with the PC over an Ethernet link. A dedicated Ethernet Network Card must be installed in the PC and the card must be configured for a specific IP address. The following describes how to configure the Network Properties and set the IP address.

1. Install the Network Card as indicated in the manufacturer's installation guide. After installation check the Windows Device Manager and verify the network card is installed correctly and that there are no resource conflicts (yellow exclamation point on the card signifies a resource conflict).
2. Click on the Windows Start button.
3. Select Settings and then Control Panel.
4. From the Control Panel window double click on the Network icon.
5. Click the configuration tab if it is not already selected. A list of installed network components is displayed. There may already be several items listed for the system such as a network adapter, client software and protocols. If the TCP/IP protocol is listed you can skip directly to step #10.
6. If there is no TCP/IP protocol listed, click on the "Add" button.
7. Double click on "Protocol".
8. Select Microsoft under manufacturers and select TCP/IP under network protocols.
9. The new TCP/IP entry should be shown under the installed network components list with the name of the network card next to it.
10. Double click on the TCP/IP protocol.
11. Select the IP Address tab if it is not already selected.
12. Select "Specify an IP Address".
13. In the boxes below enter the following IP Address --- 192.168.113.066 The subnet mask can be left blank.
14. Select the <OK> button and then the next <OK> button.
15. Follow the instructions to reboot the computer.
16. Connect the Easy II Amplifier to the power module, then connect a network cable from the network card to the power module. **If you have a custom keyboard connect the amplifier to the custom keyboard and the network cable to the back of the custom keyboard.
17. Make sure the Easy II Amplifier has power (green light on the front of the amplifier).
18. Start the EasyEEG program. On the bottom of the Easy II amplifier are two green LED's. LED #1 will be solid green indicating a good network cable connection. LED #2 should show almost constant flashing activity while running the Easy EEG program. If the EasyEEG program does not find the amplifier the number 2 LED will not show activity and a red X will be displayed over the amplifier icon in the lower right corner of the screen.

Setting up a Peer to Peer Microsoft Network between the Easy II Acquisition system and a PC Reader Station

A second network card must be installed in the Easy II acquisition system in order to setup a peer to peer network with a PC Reader Station. It is highly recommended that the second network card be a completely different brand than the network card already installed for communication with the Easy II amplifier. If the network cards are exactly alike it will be nearly impossible to tell which one is for the Easy II amplifier and which one is for the local area network.

Install the Second Network Card on the Easy II Acquisition system:

Install the second Network Card as indicated in the manufacturer's installation guide. After installation check the Windows Device Manager and verify the network card is installed correctly and that there are no resource conflicts (yellow exclamation point on the card signifies a resource conflict).

Configure Network Properties for Easy II Acquisition system:

1. Select "Network" from the Control Panel. You will see a list of installed network components for the system. There should two network adapters listed as well as other client and protocol components.
2. If the second network card adapter is not shown in the list of components use the Add button to add the appropriate *network adapter*.
3. Use the Add button to add "Client for Microsoft Networking" if it is not already in the list.
4. Remove the IPX/SPX protocol (for each network card) these are automatically added by Windows and are not needed. Remove the NetBEUI protocol for the Easy II "amplifier network card" but do not remove the NetBEUI protocol for the second "peer to peer network card". If a NetBEUI protocol is not listed for the "peer to peer network card" use the add button to add this protocol. You can also remove the "Client for NetWare Networks" and the TCP/IP protocol for the "peer to peer network card".
5. Add the service for "File and Printer sharing for Microsoft Networks". The following example shows how the component list should look at this point.

Installed Network Components

Client for Microsoft Networks
3Com ISA 10B T ethernet network adapter (*for Easy II amplifier*)
3Com PCI 10/100 ethernet network adapter (*for peer to peer network*)
TCP/IP (for 3Com ISA 10B T adapter) (*for Easy II amplifier*)
NetBEUI (for 3Com PCI 10/100 adapter) (*for peer to peer network*)
File and Printer Sharing for Microsoft Networks

Note: You could substitute TCP/IP instead of NetBEUI for the peer to peer network protocol. In order to do this you would need to supply a unique IP Address for each system in the network. For example, the Acquisition station could be 192.168.000.001 and the Reader station could be 192.168.000.002.

6. Highlight “File and Printer sharing for Microsoft Networks” then select the properties button.
Set Browse Master to Disabled.
Set LM Announce to Yes.
Select OK.
7. Set the Primary Network Login to “Client for Microsoft Networks”.
8. Select the File and Printer Sharing button and verify both boxes are checked.
9. Select the Identification Tab.
Set the computer name to an appropriate description, usually EasyII or EasyIab.
For the workgroup enter CADWELL.
Set the computer description to the same name as the computer name shown above.
10. Select OK and restart the system.
11. When the login dialog appears for Microsoft Networking, enter CADWELL for the user name and leave the password blank, select OK.

Enable File Sharing on Easy II Acquisition system:

1. Double click on My Computer, Double click on the C: drive, Right click on the CADWELL folder and select "sharing" from the pop-up menu.
2. Select the “Shared As” radio button. Enter “Cadwell” in the Share name field.
3. Set the Access type to FULL and press OK.

Configure Network Properties on PC Reader:

Install a Network Card as indicated in the manufacturer's installation guide. After installation check the Windows Device Manager and verify the network card is installed correctly and that there are no resource conflicts (yellow exclamation point on the card signifies a resource conflict).

1. Select “Network” from the Control Panel. You will see a list of installed network components for the system. There should one network adapter listed and there may be other client and protocol components listed also.
2. If the network card adapter is not shown in the list of components use the Add button to add the appropriate *network adapter*.
3. Use the Add button to add “Client for Microsoft Networking” if this is not already in the list.
4. Remove the IPX/SPX and TCP/IP protocols, these are automatically added by Windows and are not needed. Do not remove the NetBEUI protocol, add it if not already listed. You can also remove the "Client for NetWare Networks".
5. Add the service “File and Printer sharing for Microsoft Networks”. The following example shows how the list of components should look at this point.

Installed Network Components

Client for Microsoft Networks
Network card adapter
NetBEUI protocol

File and Printer Sharing for Microsoft Networks

Note: You could substitute TCP/IP instead of NetBEUI for the peer to peer network protocol. In order to do this you would need to supply a unique IP Address for each system in the network. For example, the Acquisition station could be 192.168.000.001 and the Reader station could be 192.168.000.002.

6. Highlight “File and Printer sharing for Microsoft Networks” and select the properties button.
 - Set Browse Master to Enabled.
 - Set LM Announce to Yes.
 - Select OK.
7. Set the Primary Network Login to “Client for Microsoft Networks”.
8. Select the File and Printer Sharing button and verify both boxes are checked.
9. Select the Identification Tab.
 - Set the computer name to an appropriate description, usually Reader or Reader1.
 - For the workgroup enter CADWELL.
 - Set the computer description to the same name as the computer name shown above.
10. Press OK and restart the system.
11. When the login dialog appears for Microsoft Networking, enter CADWELL for the user name and leave the password blank, select OK.

File Sharing and Data Directory on the PC Reader:

(A) For EasyEEG Reader System:

This type of PC Reader has the complete EasyEEG program installed. The Data directory has already been created during Easy EEG program installation. Networking allows the Easy II acquisition system to transfer EEG records directly to the PC Reader's hard disk drive. The PC Reader usually has a CD-R drive for archiving the EEG records after review.

To enable file sharing,

1. Double click on My Computer, Double click on the C: drive, Right click on the CADWELL folder and select "sharing" from the pop-up menu.
2. Select the “Shared As” radio button. Enter “Cadwell” in the Share name field.
3. Set the Access type to FULL and press OK.

To designate as the Server in your network,

1. Start the EasyEEG program. Select View-Options, select the Directories Tab, check the box next to “This System is an EasyEEG Server”.
2. Select OK.

(B) For EEG AnyWhere Reader System:

This type of PC Reader has the "free" EEG AnyWhere program installed. You can read EEG records directly from CD-ROM disks or from the hard disk drive. Networking allows the Easy II acquisition system to copy/move EEG records directly to this system's hard disk. ****The EEG AnyWhere program does not support archiving of records to CD-R, this would have to be done outside the program using Windows Explorer.****

Create a Data folder for networking,

1. Double click My Computer.
2. Double click the Cadwell folder to open it.
3. Create a new folder at this level and name it EASYEEG.
4. Double click on the newly created EasyEEG folder to open it.
5. Create a new folder at this level and name it DATA.
6. You should now have a data path of C:\Cadwell\EasyEEG\Data.

Enable File Sharing,

1. Double click on My Computer, Double click on the C: drive, Right click on the CADWELL folder and select "sharing" from the pop-up menu.
2. Select the "Shared As" radio button. Enter "Cadwell" in the Share name field.
3. Set the Access type to FULL and press OK.

Connect Network Cables and Verify Network Communication:

Connect a "10 Base T" cable between the Easy II acquisition system and the PC Reader. The transmit and receive lines need to be reversed at one end of the cable. This can be accomplished with a "swapper" cable obtained from Cadwell or by using a network "hub box" between the two systems.

Reboot the PC Reader and then reboot the Easy II system. A green light on network card at each station indicates a good connection. Wait a minute or two and then double click the Network Neighborhood icon on both machines. You should see the computer name of both machines in the network neighborhood window. If not, check your network cable connections and reboot both systems.

Setup Network Data Directory on the Easy II system:

After verifying network communication is working correctly you can designate the network data path on the Easy II acquisition system.

1. Start the EasyEEG program. Select View-Options, select the Directories Tab. Do Not place a check next to "This system is an EasyEEG Server".
2. Click the Browse button for the Network Path. You should see the server name (i.e., Reader1) listed under Network Neighborhood. Click on the (+) sign in front of the server name. Click on the (+) sign in front of the Cadwell folder to open it. Click on

the (+) sign in front of the EasyEEG folder to open it. Highlight the Data folder and then click OK. The Network Path should now look something like this
\\Reader1\Cadwell\EasyEEG\Data.

3. Select the Networking Tab. Select one of the available options for file transfer after EEG recording is complete. The options are "always move to server" or "ask before moving to server".
4. Select OK.