Software Upgrade

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FCC Notice

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- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and the receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help.

Caution!

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Canada
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Software Upgrade Instructions

These instructions are for use in upgrading the system software of the Nº53 and Nº532 power amplifiers, or in reloading the existing version of the system software.

Getting Started

The system software for the power amplifiers is upgraded from a computer. The connection may be through a network, but the amplifier being upgraded is the only Mark Levinson product that can be active during the upgrade procedure.

This document has two sections:

* **Network Setup** - describes how to connect the amplifier to a network using a router or directly to a computer. If the amplifier has already been setup for use with a network or computer, this procedure may be skipped.

* **Performing the Upgrade** - provides the instructions for actually performing the system software upgrade of the amplifier.

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If you have difficulty with the software upgrade, some troubleshooting suggestions are included at the end of the document.

Retrieve the File

Go to www.marklevinson.com and download the Nº53 or Nº532 system software upgrade file. Save it to the local hard drive of your computer, in a place you'll be able to locate it.

Network Setup

The Nº53 and Nº532 amplifiers support a network connection through the Ethernet port, connecting to either a network through use of a router or directly to a computer. The amplifier can be:

1. **Connected to a router with DHCP active** – We highly recommend using this option. Since the DHCP (Dynamic Host Configuration Protocol) automatically assigns the IP (Internet Protocol) addresses, setup is much simpler.

2. **Connected to a router with DHCP not active** – This method requires more advanced networking knowledge to set up because it uses fixed static IP addressing.

3. **Connected directly to a computer with no router** – We recommend only using this option when a router is not available. This method requires more advanced networking knowledge to set up because it uses fixed static IP addressing and a special network crossover cable.

This section provides general instructions for all three methods.

Material Requirements

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The following materials are required to connect the amplifier to the network with a router:

- Nº53 Reference Power Amplifier – Nº532 Dual Mono Power Amplifier
- Two twisted-pair network cables
- PC-compatible computer with 10/100BaseT network card
- 10/100BaseT router

Note

The amplifiers do not support wireless connection. However, a cable attached from the amplifier to a wireless adapter can be used to interface with a wireless network.

The following materials are required to connect the amplifier to a computer without the use of a router:

- Nº53 Reference Power Amplifier – Nº532 Dual Mono Power Amplifier
- Network crossover cable
- PC-compatible computer with 10/100BaseT network card

Computer Requirements

The PC-compatible computer used to connect to the amplifier must have the following software installed:
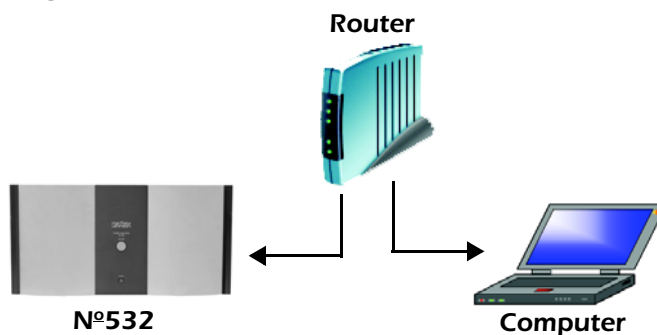
- Windows® 2000 or Windows XP®

- Web browser (Microsoft® Internet Explorer® 6.0 or higher preferred)
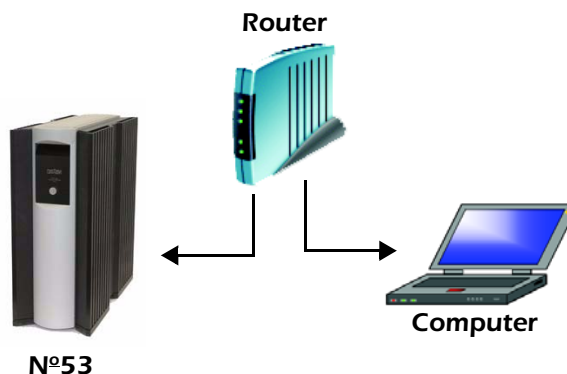
Note

If DHCP is not active, then the computer must be set up with a static IP address. Refer to the "Setting Up the Computer" procedure found later in this section for instructions.

Connecting the Cables

The amplifier can be connected to the computer in two ways – through a router or directly to the computer. *Before connecting the cables, ensure that both the computer and the amplifier are powered down.*
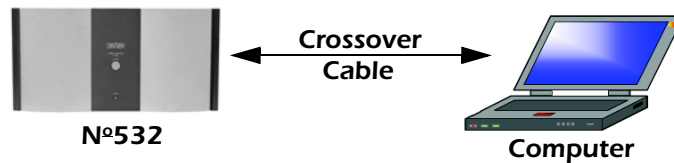
To Connect Using a Router

4. Connect a network cable from the router to the Ethernet port on the rear panel of the amplifier.

5. Connect a second network cable from the router to the Ethernet port of the computer.
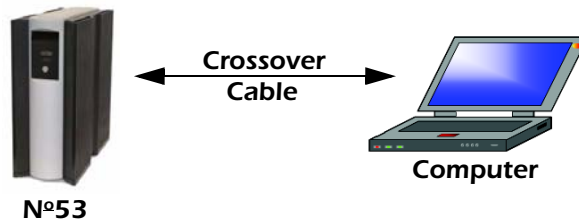

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To Connect Without a Router

Use a **network crossover cable** to connect the amplifier directly to the computer. Different from a standard network cable, the crossover cable is designed to connect network access ports directly together without a hub, router, or switch.

1. Connect the crossover cable from the Ethernet port on the rear panel of the amplifier to the Ethernet port of the computer.

4   **Internal Web Page**   When connected to a computer, the amplifier has an internal Web page that provides access to:

- **Network Setup** – allows the user to modify the network setup parameters. Accessing the internal Web page is the ONLY way to modify the network setup parameters of the amplifier.

- **Status Information** – provides basic status information for the amplifier.

- **Error Reporting** – tracks system-related error messages for the amplifier. This page is a diagnostics tool for Mark Levinson Customer Service use.

- **Display Intensity** – allows the brightness level of the front panel logo to be adjusted. Use the pull-down menu to select one of the four brightness settings available - High, Medium, Low, and Off. This adjustment is only available on the Nº53 internal Web page.

The amplifier MUST be connected to a computer via the Ethernet port before you can access the internal Web page. Continue to the next section - "Network Setup" - for further instructions.

The Web page also has a Restore Defaults button, which resets the parameters to their factory default values. Clicking the Restore Defaults button displays a pop-up asking for confirmation; click Yes to restore the factory default values.

Network Setup Parameters

Accessible only through the internal Web page of the amplifier, the network setup parameters include:

- **Static IP Address** – provides a fixed IP address. This IP address is NOT automatically selected; it must be entered. If DHCP is on, then this parameter is not used. The factory default IP address is 192.168.50.4 for the Nº53 and 192.168.50.3 for the Nº532.

- **Subnet Mask** – identifies the subnet mask for the amplifier. This IP address is automatically assigned by DHCP. If DHCP is off, then the address must be entered manually and it must agree with the subnet mask address of the router. IP address 255.255.255.0 is the factory default value.

- **Host Name** – indicates the network name given to the amplifier. This host name is unique to each amplifier and is comprised of two parts, separated by an underscore. The first part contains one to eight characters that can be modified via the internal Web page of the amplifier.

  The second part of the host name contains the last six characters of the MAC address. This MAC address is unique to each amplifier. The default is "NO53_xxxxxx" or "NO532_xxxxxx" where "x" stands for the last six characters of the unique MAC address for that amplifier.

- **DHCP** – turns the DHCP capability on or off. When activated, DHCP assigns a unique IP address to the amplifier. The factory default value is On. *We recommend leaving DHCP set to On.*

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Connecting With DHCP (Recommended)

Use this procedure if you are using a router with DHCP active to connect to the amplifier. Otherwise, skip to the next procedure.

1. Connect the amplifier to the router, as described in the earlier "Connecting the Cables" procedure. Make sure that everything is powered off before making cable connections.

2. Turn on the PC and router. Verify that the router has DHCP active.

3. Press the Power button on the amplifier.

4. On the computer, open the Internet Explorer Web browser.

5. Type "NO53_xxxxxx" or "NO532_xxxxxx" on the address line (URL). The "x" characters stand for the last six characters of the unique MAC address for that amplifier.

6. Press Enter.

   If Internet Explorer is unable to find the amplifier, then you must find the IP address that was assigned to the amplifier by the router. If required, refer to your router's owner's manual for further details. Repeat this step using the IP address for the amplifier that was assigned by the router.

7. The Home tab of the amplifier internal Web page is now displayed. The tab is in red text to indicate that it's the current page.

The network connection is now complete.

Setting Up the Computer

If DHCP is not used, then the computer must be set up too. Use this procedure to set up the computer, then continue to the next procedure to connect to the amplifier. For the computer to find the amplifier, the LAN (Local Area Network) and TCP/IP (Internet Protocol) settings of the computer must be set up. The parameter setups vary slightly depending upon the operating system of the computer. Refer to the procedure below that matches the operating system on your computer.

Note

Due to your preference settings in the Windows operating system, the names and order of the dialog boxes may vary slightly from these instructions.

Network Setup for Windows XP

1. From the Start menu, select Control Panel.

2. Double-click on the Network Connections option.

3. Double-click on the Local Area Connection option.

4. Click the Properties button to open the Local Area Connection Properties menu. If the computer is not currently connected to an active network, Step 3 has already opened the Local Area Connection Properties menu.

5. Click on the Internet Protocol (TCP/IP) line item so that it is highlighted.

6. Click the Properties button.

7. Select the "Use the following IP address" option. The IP address, Subnet mask, and Default gateway boxes are no longer grayed out and can now be modified.

8. Enter the following values:

    • IP address: 192.168.50.x – where x stands for a number other than 0, 3, 4, or 255

    • Subnet mask: 255.255.255.0

    • Do not enter a value in the Default gateway parameter

    The computer must have a unique address and be on the same subnet as the amplifier.

9. Click "OK" to save and exit the menu.

10. Open the Internet Explorer Web browser.

11. From the menu bar, select the Tools ▶ Internet Options menu.

12. Select the Connections tab.

13. Click the LAN Settings button.

14. Verify that "Use a proxy server for your LAN" is NOT checked.

15. Click "OK" to save and exit the menu.

Network Setup for Windows 2000

1. From the Start menu, select Settings ▸ Control Panel.

2. Double-click on the Network and Dial-Up Connections option.

3. Double-click on the Local Area Connection option.

4. Click the Properties button to open the Local Area Connection Properties menu. If the computer is not currently connected to an active network, Step 3 has already opened the Local Area Connection Properties menu.

5. Click on Internet Protocol (TCP/IP) line item so that it is highlighted.

6. Click the Properties button.

7. Select the "Use the following IP address" option. The IP address, Subnet mask, and Default gateway boxes are no longer grayed out and can now be modified.

8. Enter the following values:

    •   IP address: 192.168.50.x – where x stands for a number other than 0, 3, 4, or 255

    •   Subnet mask: 255.255.255.0

    •   Do not enter a value in the Default gateway parameter

    The computer must have a unique address and be on the same subnet as the amplifier.

9. Click "OK" to save and exit the menu.

10. Open the Internet Explorer Web browser.

11. From the menu bar, select the Tools ▸ Internet Options menu.

12. Select the Connections tab.

13. Click the LAN Settings button.

14. Verify that "Use a proxy server for your LAN" is NOT checked.

15. Click "OK" to save and exit the menu.

Connecting With Static IP Addressing

Use this procedure if you plan to connect with static IP addresses (DHCP is turned off). Otherwise, skip to the next procedure to connect directly to a computer. For the computer to find the amplifier, the TCP/IP and LAN settings of the computer must be set up. Refer to the previous "Setting up the Computer" procedure for instructions.

1. Connect the amplifier to the router, as described in the earlier "Connecting the Cables" procedure. Make sure that everything is powered off before making cable connections.

2. Turn on the PC and the router. Verify that the router has DHCP turned off, if required.

3. Set up the router to the IP address 192.168.50.x – where x stands for a number other than 0, 3, 4, 255, or the number used for the computer IP address. The router must be on the same subnet as the amplifier and the computer, but also must have its own unique address. Refer to

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the router's owner's manual for instructions on how to modify the IP address.

4. Press the Power button on the amplifier.

5. On the computer, open the Internet Explorer Web browser.

6. On the address (URL) line, type in the static IP address of the amplifier and press Enter. There may be a short delay before the amplifier Web page loads.

7. The Home tab of the amplifier's internal Web page is now displayed. The tab is in red text to indicate that it is the current page.

8. Observe that the Status section of the Web page identifies the host name of the amplifier. The host name can be modified, but only the first eight characters are affected; anything after the underscore may not be modified.

    To change the host name of the amplifier:

    A. Type the new name into the white box to the right of the parameter. The new name must be made from the capital letters, A to Z, and the numbers, 0 to 9. Underscores may also be used. Only eight characters are allowed.

Note   The host name MUST start with an alpha-character (A to Z). This is a standard networking rule.

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    B. Click the Submit button to save the new value.

    C. Click the Refresh button in the Status section of the Web page to observe the new host name.

9. Observe that the Status section of the Web page also identifies the IP address of the amplifier. The static IP address can be modified, if desired.

    To change the IP address of the amplifier:

    A. Type the new IP address into the white box to the right of the parameter.

    B. Click the Submit button to save the new value.

    C. Enter the new IP address of the amplifier into the browser. The amplifier Web page loads, reflecting the new information.

The network connection is now complete.

Direct Connection   Use this procedure to connect directly to a computer if you are not using a router. For the computer to find the amplifier, the TCP/IP and LAN settings of the computer must be set up. Refer to the earlier "Setting up the Computer" procedure for instructions.

1. Connect the amplifier to the computer, as described in the earlier "Connecting the Cables" procedure. Make sure that both the amplifier and the computer are powered off before connecting.

2. Press the Power button on the amplifier.

3. On the computer, open the Internet Explorer Web browser.

4. On the address (URL) line, type in the static IP address of the amplifier and press Enter. There may be a short delay before the amplifier Web page loads.

5. The Home tab of the amplifier's internal Web page is now displayed. The tab is in red text to indicate that it is the current page.

6. Observe that the Status section of the Web page identifies the host name of the amplifier. The host name can be modified, but only the first eight characters are affected; anything after the underscore may not be modified.

    To change the host name of the amplifier:

    A. Type the new name into the white box to the right of the parameter. The new name must be made from the capital letters, A to Z, and the numbers, 0 to 9. Underscores may also be used. Only eight characters are allowed.

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Note   The host name MUST start with an alpha-character (A to Z). This is a standard networking rule.

    B. Click the Submit button to save the new value.

    C. Click the Refresh button in the Status section of the Web page to observe the new host name.

7. Observe that the Status section of the Web page also identifies the static IP address of the amplifier. The static IP address can be modified, if desired.

    To change the IP address of the amplifier:

    A. Type the new IP address into the white box to the right of the parameter.

    B. Click the Submit button to save the new value.

    C. Enter the new IP address of the amplifier into the browser. The amplifier Web page loads, reflecting the new information.

The network connection is now complete.

Performing the Upgrade

Now that the computer can access the internal Web page of the amplifier, it's time to load the new software. While the process shouldn't take long, the actual time varies depending upon network conditions.

1. Verify that the amplifier being upgraded is connected to a computer.

2. Verify that all Mark Levinson equipment, including the amplifier being upgraded, is turned off.

3. On the computer, double click on the downloaded file to open the Updater Tool program.

4. Verify that the Model number listed on the Welcome page of the Updater Tool matches that of the amplifier you plan to upgrade.

5. Click Next.

6. The ML Net Slave Finder page now displays. The ML Net Slave Finder verifies there are no active Mark Levinson products on the network.

   • The clock counts down to zero and then displays a new page. Proceed to Step 9.

   • If the clock is NOT counting down, proceed to Step 7.

7. Observe that one or more items are listed in the white box. These are Mark Levinson products that have been detected on the network. Before continuing with the upgrade procedure, these products need to be turned off.

Note The amplifier being upgraded must also be turned off for this step.

8. Click the Refresh button on the ML Net Slave Finder page.

   • The clock counts down to zero and then displays a new page. Proceed to Step 9.

   • If the clock is NOT counting down, return to Step 7.

9. Turn on the amplifier to be upgraded, as instructed by the new Updater page.

   Observe that the command prompt window has a spinning cursor, indicating that the Updater is loading. The Updater goes through a series of automated steps, as described below:

   • The command prompt window closes and the Updater window displays the ML Net Slave Finder page again.

   • Once the amplifier is detected, the white box lists the Mark Levinson amplifier being upgraded and the clock counts down for fifteen seconds to confirm no other devices are detected.

- When the clock reaches zero, the Updater displays a new page and a new command prompt window opens in the background.

- The Updater page displays the IP Address and the host name of the amplifier being upgraded. These are for reference only and cannot be changed.

- The clock counts up, indicating that the Updater is working.

- The command prompt window closes and the Updater displays a new page, indicating that the update is complete.

10. Do NOT disturb the amplifier until the Updater displays the "Update complete" page.

11. Click Finish to close the Updater window.

The system software upgrade of the amplifier is now complete.

If you had problems reaching this point, the next page provides some troubleshooting suggestions.

Troubleshooting   If the software upgrade is not working successfully, you may be having difficulty with either the Ethernet connection or the network setup. The following troubleshooting information is included to assist you. If the problem persists, check www.marklevinson.com for knowledgebase information or contact an authorized Mark Levinson dealer.

1. Verify that the proxy server in the computer's network setup is disabled. An active proxy server can interfere with the software upgrade procedure.

2. If the web browser cannot find the host name of the amplifier, verify the following:

    •   Ensure that the local DNS server is properly configured. We recommend configuring the local DNS Server to "DNS Forwarding" mode. To configure the DNS Server, refer to the setup manual of the server.

    •   When using a subdomain, enter the complete address into the browser, *http://NO53_xxxxxx.yourhome.network.com* - where "NO53_xxxxxx" is the default Host Name for the amplifier and "yourhome" is a subdomain in the local network.

    •   Enter the IP Address of the amplifier into the browser, for example, "*http://192.168.50.3"*

    •   Go to the www.marklevinson.com website and download the "MLNet Sniffer" tool to a computer sharing the network with the amplifier. Double-click the .exe file and MLNet Sniffer displays the host name, IP address, and MAC address of all Mark Levinson products detected on the network.

3. Verify that the amplifier and computer are connected properly. Connecting the amplifier and computer together without a router requires a special type of network cable. Refer to the "Network Setup" section for more details.

4. Verify that the network cables are properly connected between the router, switch, or hub and the amplifier. If connecting to a computer, verify that the computer network cable is in the correct port.

5. Verify the age of the router, switch, or hub. If the router, switch, or hub is more than ten years old, there may be a communication issue with the amplifier . Power cycle the amplifier and use a newer router, switch, or hub between the network and the amplifier.