

Triad RackAmp 350 & 600 DSP v2.0

Instructions for IP Setup & Advanced Features



This document describes IP (Internet Protocol) features unique to our RackAmp 350 & 600 DSP v2.0. Other connections, features and functions for these amps are very similar to our previous RackAmp 300/500/1000 DSP (v1.X). For more information see our RackAmp 350/600 DSP v2 Quick Start Guide and Triad SubAmp DSP v1.X Installer Setup Manual on the HOW TO or SUPPORT pages of our website <http://www.triadspeakers.com/index.html> .

IP Features in RackAmp v2.0:

IP for Setup – Use a computer or smart phone for remote setup when your subwoofer amps are located in different rooms than your subwoofers.

IP for two Advanced Features

1. 6 Band Parametric EQ with 5 Hz resolution (-12dB to + 3dB; Q of .3 to 10).
2. Two Customizable Presets (default Volume & 1 band Parametric EQ).

Note: IP allows Setup, Reset, or review by browser only; it is NOT for use with an external control system (Crestron, Control4, etc).

IP Connections:

- **Via LAN:** Connect RackAmp Ethernet Interface to a LAN with a standard Ethernet cable. If connecting to a wireless LAN, you can also use a Wi-Fi enabled smart phone, tablet, or laptop. The only issue when using a smart phone or tablet is that sliders do not work with the touch screen (the screen moves, not the slider). Instead, click on the number box above the slider and type the numbers in directly.



- **Direct to computer:** Connect RackAmp's Ethernet Interface direct to computer with an [Ethernet crossover cable](#) or a standard Ethernet cable with a crossover adaptor.

IP Address- Where to find it:

RackAmps default IP address is dynamic. but can be changed to a static address or to a particular Host Name. See IP CONFIG tab on page 9.

You will find the amplifier's dynamic IP address in its Installer Menu. To enter the Installer Menu, on the amplifier's User Menu INSTALLER MENU ENTER CODE screen press ◀ (left), ▶(right), ◀(left) buttons on the amp face or remote control.



This takes you to the top of the Installer Menu.

Press ▼(Down) to see your RackAmp's dynamic IP address (It may be different for any amplifier).



How to connect via IP:

Type this IP address into a browser, click ENTER on your computer, and you will see your RackAmp's IP Home Page.

Note: IP changes are instant. What you see is what you hear.

HOME



[HOME](#) [SETUP](#) [ROOM EQ](#) [PRESET](#) [UPDATE](#) [IP CONFIG](#) [ABOUT](#)

TRIAD

350 DSP Version 2.0

DSP Name: TRIAD

VOLUME CONTROL

Master Volume (dB) 0 MUTE

PRESETS

REFERENCE CINEMA THX NIGHT CUSTOM1 CUSTOM2

From **HOME** page you can change **VOLUME** via the slider, **MUTE** or **UNMUTE** via the click button, or select a **PRESET** by clicking on it. These functions mirror those in the RackAmp's User Menu.

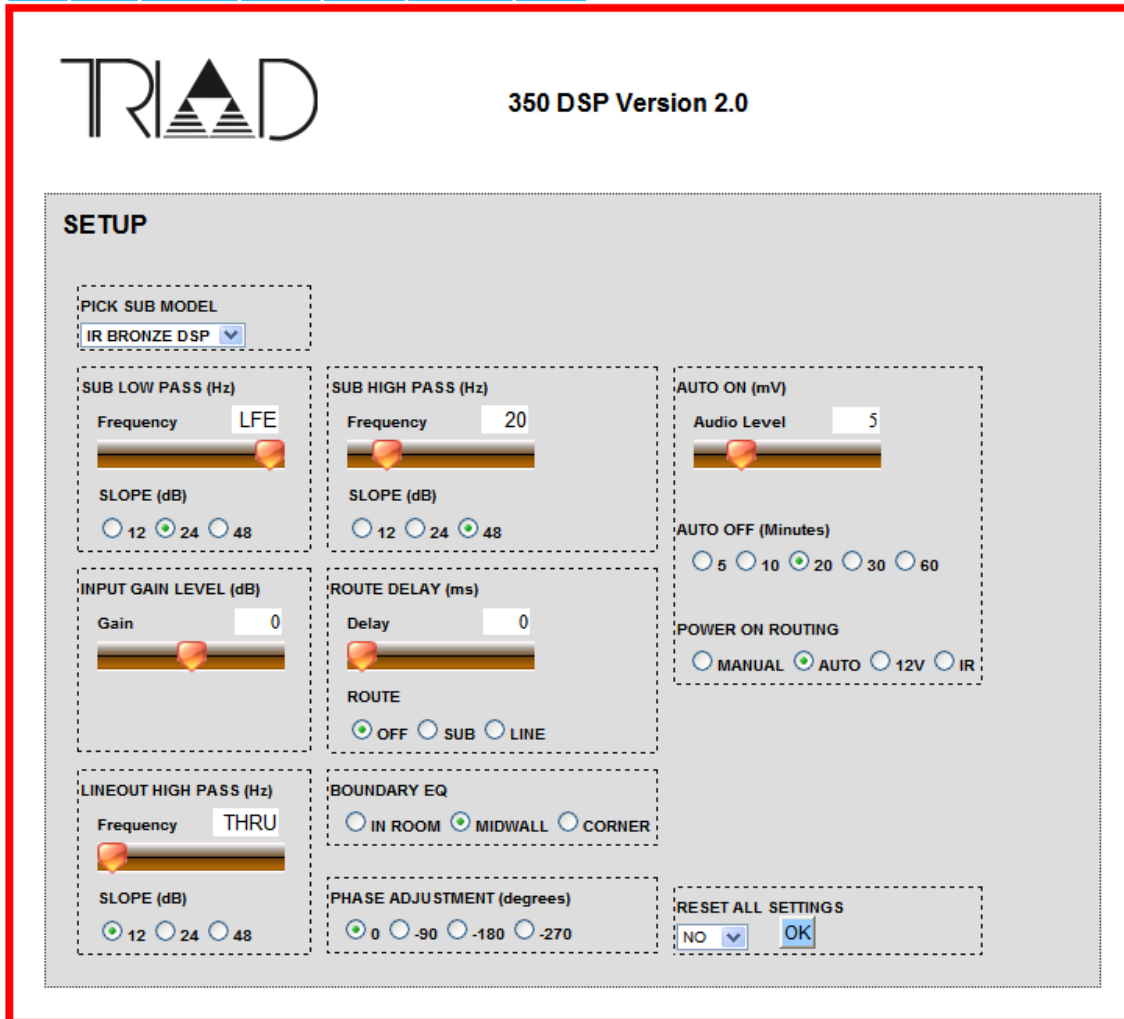
Note: **VOLUME** is a temporary, volatile setting that reverts to 00dB whenever RackAmp is turned ON from Standby. For permanent level changes, adjust INPUT GAIN on the SETUP page.

You will find further information about features, connections and setup of our v2 RackAmps in our RackAmpDSP v2 Quick Start Guide 6-25-11.pdf on the HOW TO or SUPPORT pages of our website <http://www.triadspeakers.com/index.html> .

Click on the next blue tab at the top for **SETUP**,



HOME **SETUP** ROOM EQ PRESET UPDATE IP CONFIG ABOUT

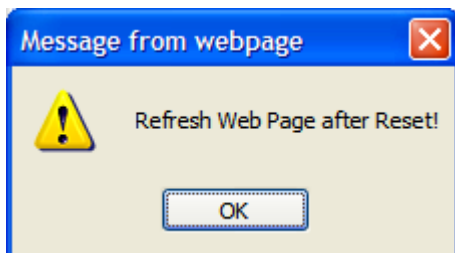


On **SETUP** page you can change any Installer Menu setting: **PICK SUB MODEL**, **SUB LOW PASS** filter, **SUB HIGH PASS** filter, **INPUT GAIN LEVEL**, **LINE OUT HIGH PASS**, **BOUNDARY EQ**, **PHASE**, **POWER ON METHOD**, **AUTO ON LEVEL**, **DELAY**, **ROUTE DELAY** (to either Subwoofer or Line Outs), and **RESET ALL SETTINGS** to factory defaults. These settings mirror those in the RackAmp's Installer Menu.

RESET ALL SETTINGS:

To Reset All Settings to their factory defaults, Select **Yes**; when you click OK you will see the pop up below. Click OK:

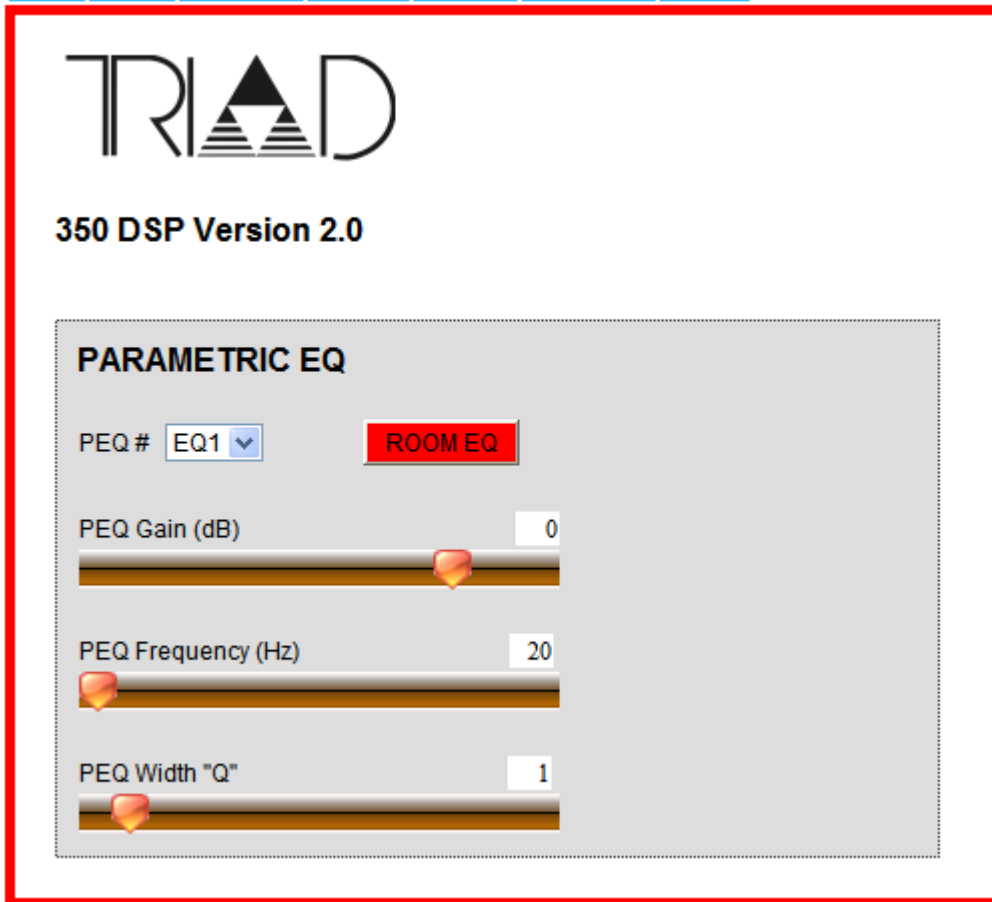
If you click OK with NO selected, you see the pop up below. Click OK to proceed.



Click on the 3rd blue tab for **ROOM EQ**, a 6 band parametric equalizer with 5 Hz resolution.



HOME SETUP **ROOM EQ** PRESET UPDATE IP CONFIG ABOUT

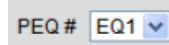


Parametric EQ (PEQ): With 6 discrete bands, you can cut measured in-room frequency peaks up to 12 dB per band or boost frequency dips up to 3 dB per band. You can overlap multiple bands for more cut or boost. Select center frequencies from 20 to 300 Hz in 5 Hz steps. Bandwidth, or “Q”, of your cut or boost ranges from .3 (wide) to 10 (narrow).

How to set Parametric EQ:

1. Use room measurements to determine the desired corrections.

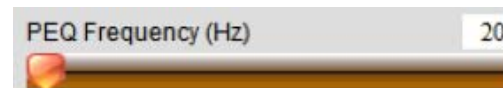
2. With PEQ # drop down, select the PEQ Band (1 to 6) to adjust:



3. Using slider enter PEQ Gain:



4. Using slider enter PEQ Frequency:



5. Using slider enter PEQ Width “Q” (see p6):



6. Repeat with other bands as needed.

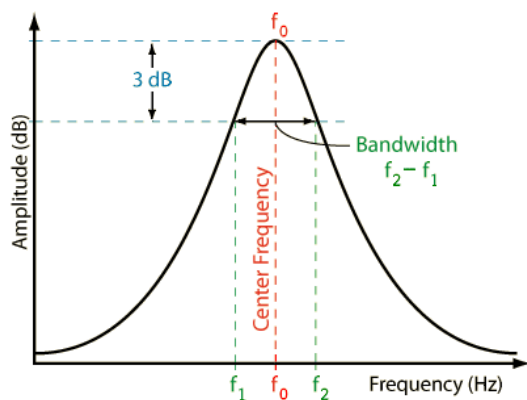
What is Q all about?

Q is simply the bandwidth of a filter that determines how broad or narrow a filter will be.

Q values range from .3 (very broad filter) to 10 (very narrow).

In Hz measure at -3dB on either side of a center peak or at +3dB from center dip.

To calculate Q, divide the center frequency (f_0 in the diagram below) by the 3dB bandwidth ($f_2 - f_1$).



Example: With a measured peak centered at 50 Hz (f_0) that is 10 Hz wide between 55 Hz (f_2) and 45 Hz (f_1):

$$Q = f_0 / (f_2 - f_1)$$

$$Q = 50 / (55 - 45)$$

$$Q = 5.0$$

7. Click on the ROOM EQ button to turn it ON (Green) or OFF (Red).

ROOM EQ

OR

ROOM EQ can also be turned ON & OFF from RackAmp's Installer Menu.



Click on blue tab 4 for **PRESET**.



HOME SETUP ROOM EQ **PRESET** UPDATE IP CONFIG ABOUT

TRIAD

350 DSP Version 2.0

CUSTOM PRESETS SETUP

PRESET # 1 CUSTOM ▾

Volume (dB) 0

PEQ Gain (dB) 0

PEQ Frequency (Hz) 20

PEQ Width "Q" 1

PRESETS

REFERENCE CINEMA THX NIGHT CUSTOM1 CUSTOM2

Custom Presets: An end user can select from six different presets to adjust bass for different purposes or taste. Four Presets are fixed: **REF** (Reference for calibration), **Cinema**, **THX**, & **NIGHT** (with compression reduced bass extension, & lower level). Two Presets can be tailored via IP by adjusting their default Volume levels and setting one band of Parametric EQ (see pages 5 & 6) for each. These Presets are labeled **1 CUSTOM**, & **2 CUSTOM**

Once set up via IP, either of these Presets can be selected at the bottom of this IP PRESET page, on the IP Home page, or in RackAmp's User Menu via front panel Menu buttons or via discrete Infrared commands.

How to set up Custom Presets

1. Use the dropdown **Preset #** to select which of the two customizable Presets (1 Custom & 2 Custom) to adjust. Note that this selection does NOT make that preset active.
2. For each Custom Preset, select a default Volume and/or set up a single band parametric EQ as shown on **ROOM EQ** pages 5 & 6.

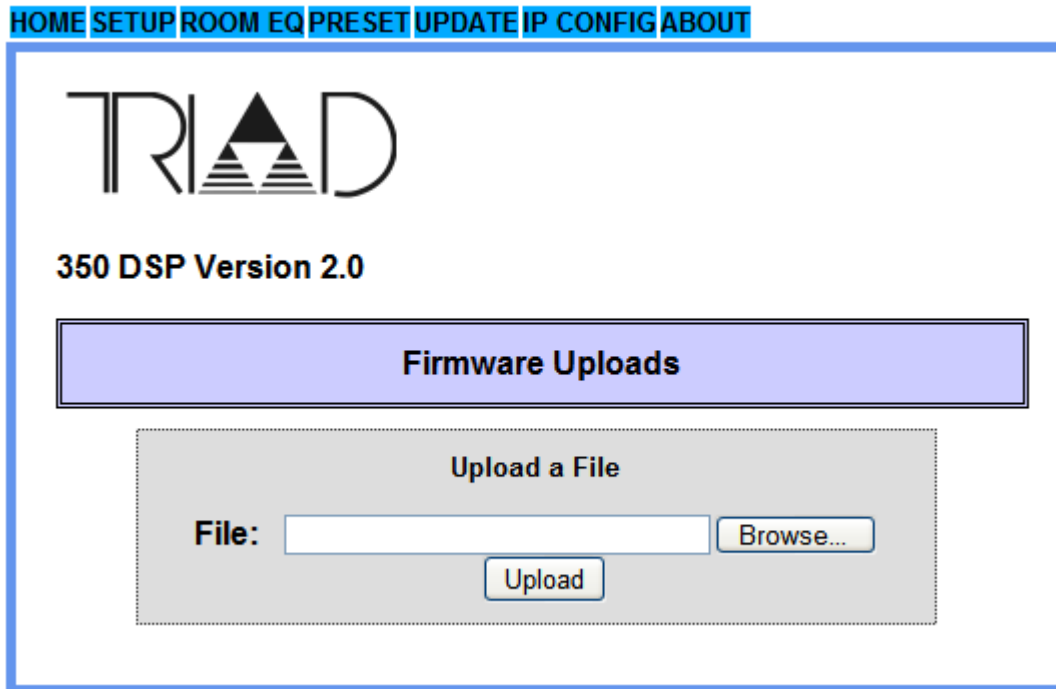
How to select Custom Presets:

In the **PRESETS** box at the bottom of the PRESET page, click on the PRESET you want active. This selection mirrors the PRESET selection in your RackAmp's User Menu and on the IP Home Page.

For Firmware Uploads, click on the **UPDATE** tab.



HOME SETUP ROOM EQ PRESET **UPDATE** IP CONFIG ABOUT



The screenshot shows the Triad 350 DSP web interface. At the top is a navigation menu with tabs: HOME, SETUP, ROOM EQ, PRESET, UPDATE, IP CONFIG, and ABOUT. The 'UPDATE' tab is highlighted in blue. Below the menu is the Triad logo and the text '350 DSP Version 2.0'. A purple box labeled 'Firmware Uploads' contains a section titled 'Upload a File'. This section includes a 'File:' label, a text input field, a 'Browse...' button, and an 'Upload' button.

NOTE: Currently there are no firmware updates.

To change IP Settings, Address, or Host Name, click on the **IP CONFIG** tab:



HOME SETUP ROOM EQ PRESET UPDATE IP CONFIG ABOUT

You are first asked for your User Name & Password.

Enter User name: admin
Password: triad

When you click OK, you see the IP CONFIG page below:

HOME SETUP ROOM EQ PRESET UPDATE IP CONFIG ABOUT

To Change to Static IP Address

The default IP address is dynamic. To change it to static, uncheck the Enable DHCP box and fill in the following blocks appropriate for your network.

To Rename Host Name

There is a simpler option that also eliminates the need to look up the dynamic IP address in the amp's Installer Menu every time you restart. Simply change the Host Name in the second block. You can name the amp however you please (HomeTheater1, STUDY, etc.) as long as there are no spaces and a 15 character limit. Each RackAmp must use a unique Host Name.

Press Save Config

In either case, when you hit Save Config after entering the required information, you will see the following screen:



600 DSP Version 2.0

Reboot In Progress...

Your settings were successfully saved, and the board is now rebooting to configure itself with the new settings.

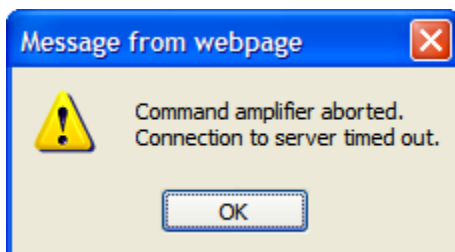
Your board is now located at: <http://SERVICE/>

Reconnection Instructions

- 1. Did you change the hostname, IP or MAC address?**
It is necessary to clear the address caches in your web browser and OS. From the command prompt in Windows, enter "nbtstat -R" to clear the hostname cache, close your current web browser, open a new web browser, and then try to access the web address above.
- 2. Did you try the IP address?**
Try accessing the board directly at the IP address shown on the LCD screen in the installer menu. (ex: enter "http://192.168.5.23/" into your browser). If this fails, then the IP address you set is not reachable. Try the step below.
- 3. Still not working?**
You can restore compile-time settings by clearing the board's EEPROM. You can achieve that by entering the InstallerMenu IP address option and pressing the front panel button left 3 times. This procedure restores the default configuration settings in TCPIPConfig.h.

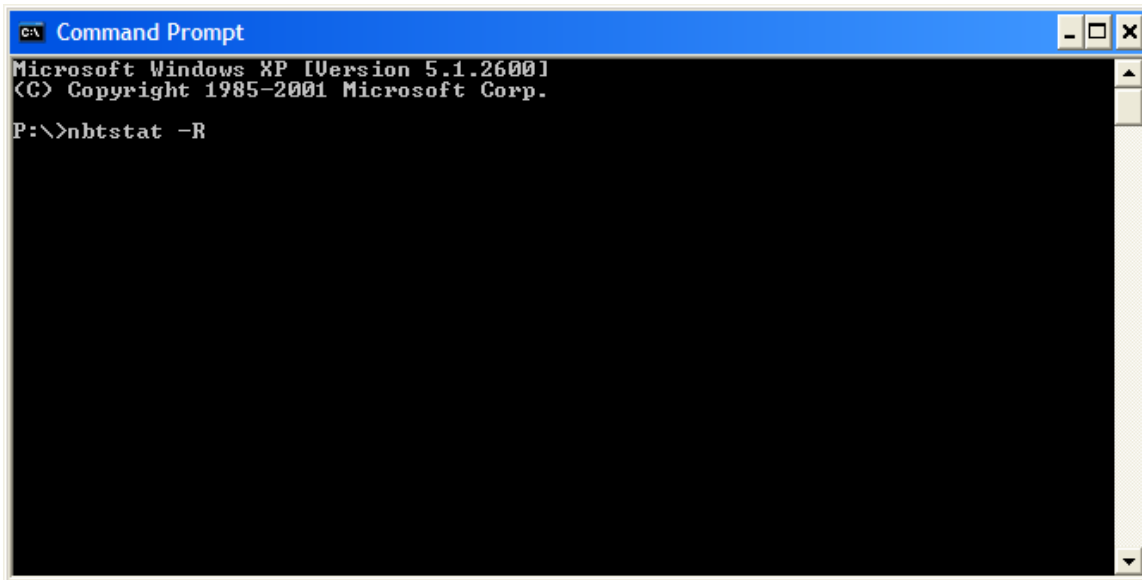
This screen shows what you would see if you changed the Host Name from its default TRIAD to SERVICE.

After a few seconds the amp reboots and you will get this message.



Press OK. At this point follow the appropriate Reconnection Instructions above.

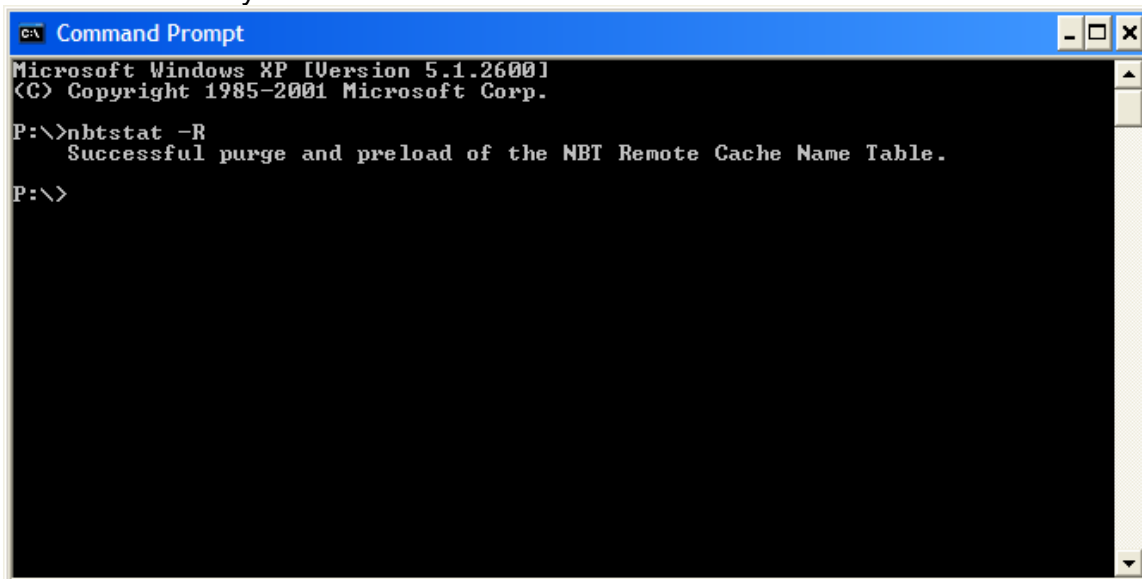
As instructed in Reconnection Instruction 1, you must close your web browser and clear the address caches in your web browser and OS. Each OS is different. In Windows XP, open Command Prompt in START / All Programs / Accessories / Command Prompt. In the Command Prompt window, type in **nbtstat -R** as shown below:



```
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

P:\>nbtstat -R
```

Press Enter and you will see this screen:



```
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

P:\>nbtstat -R
    Successful purge and preload of the NBT Remote Cache Name Table.

P:\>
```

Close this screen and open a new web browser. From this point, to access IP when RackAmp is connected to your computer directly or via a LAN, instead of entering its dynamic IP address in the browser, simply type into the address bar the new Host Name or IP address; then press Enter. In 15 – 30 seconds, the SETUP Home page will open.

For info about this software version, press **ABOUT**.



HOME SETUP ROOM EQ PRESET UPDATE IP CONFIG ABOUT



350 DSP Version 2.0

Software Stack Version:	1.6
Build Date:	Jan 14 2011 13:20:17

This TCP/IP audio control system was developed for Triad by Sonavox Audio Solutions Inc.



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