



▶ **Smart Wireless**

Access Point 802.11b (95-10)
Firmware Upgrade

Technical Note



Introduction

This technical note provides instructions on how to upgrade the firmware of a Madge Smart Wireless Access Point (95-10). There are two methods of achieving this:

Method 1: Using the TFTP Server Utility

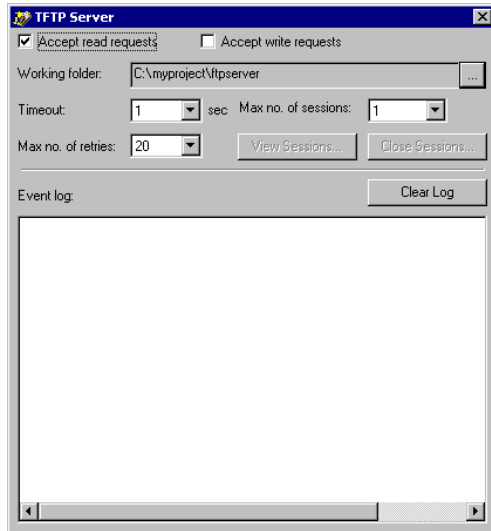


Figure 1: TFTP Server Utility

Method 2: Using the Upgrade Wizard of the Wireless Network Manager Utility

This is the recommended method of upgrading AP firmware.

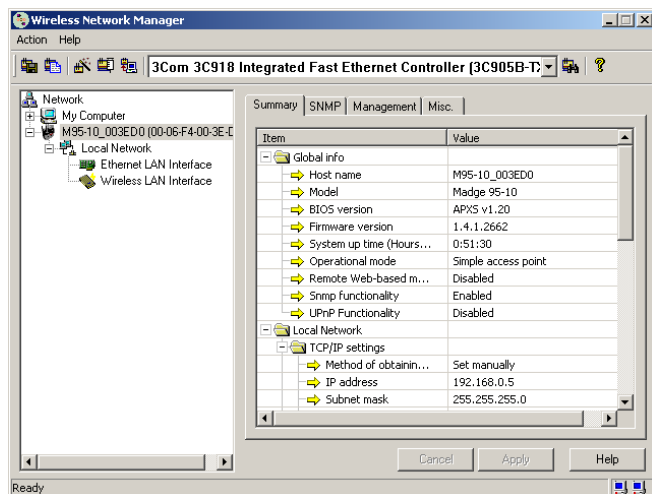


Figure 2: Wireless Network Manager Utility

Before You Start

Both methods require an upgrade computer from which the new firmware is downloaded to the Access Point.

- The most convenient method is to use the Upgrade Wizard of the Wireless Network Manager Utility.
- You can use the TFTP Server Utility if you are unsure whether the Access Point is compatible with the Wireless Network Manager Utility (e.g. incompatible versions of the Wireless Management Protocol [WMP] are being used).

Download the Firmware Files

Download the latest firmware from the Madge website (www.madge.com/software). Unzip the firmware files into a suitable folder on the Upgrade Computer (d:\AP Firmware 1.4.1.2662 in this case).

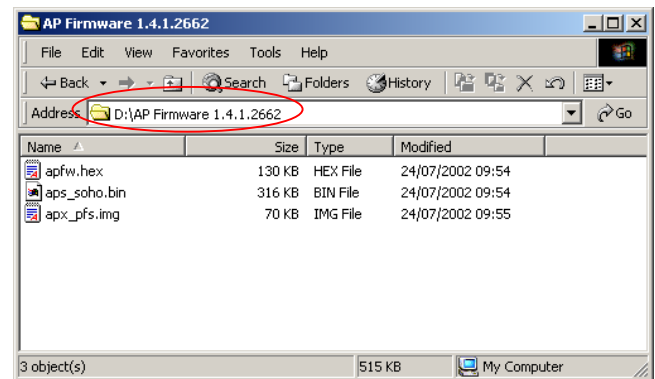


Figure 3: Download AP Firmware

The files provided are:

- **apfw.hex**: this file contains firmware to be loaded into the IEEE 802.11b wireless LAN adapter (i.e. RF Module) that is embedded in the Access Point.
- **aps_soho.bin**: this file contains the core firmware of the Access Point.
- **apx_pfs.img**: this file contains Web pages that are served by the Access Point when using the Web-Based Network Management feature.

Connect the Upgrade Computer to the Access Point to be upgraded

The simplest solution is to directly connect the Upgrade Computer and the Access Point using the Ethernet cross-over cable supplied with the Access Point. The Access Point can also be upgraded over a LAN if it is already installed and remote from the Upgrade Computer. Make a note of the IP addresses of the Upgrade Computer and the Access Point.

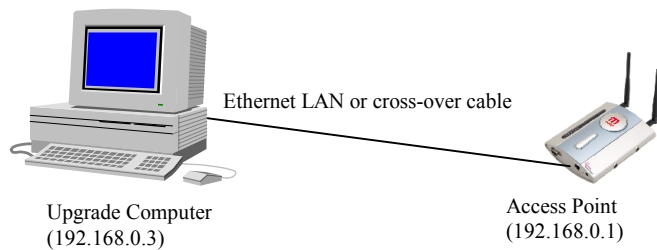


Figure 4: Connecting the Upgrade Computer and AP

NOTE: When upgrading over a LAN, the Upgrade Computer and the Access Point must both be on the same subnet.

Get the IP Address of the Upgrade Computer

Run the Command Prompt utility “ipconfig” and note the IP Address of the Upgrade Computer (192.168.0.3 in this case).

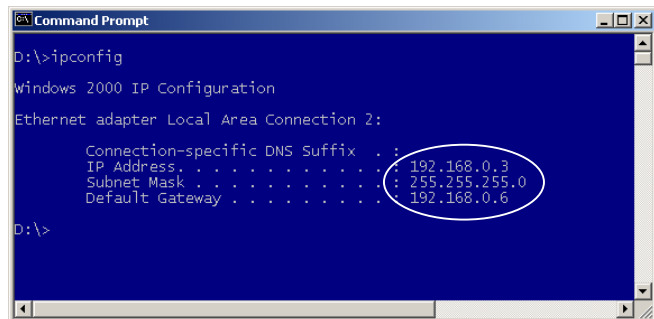
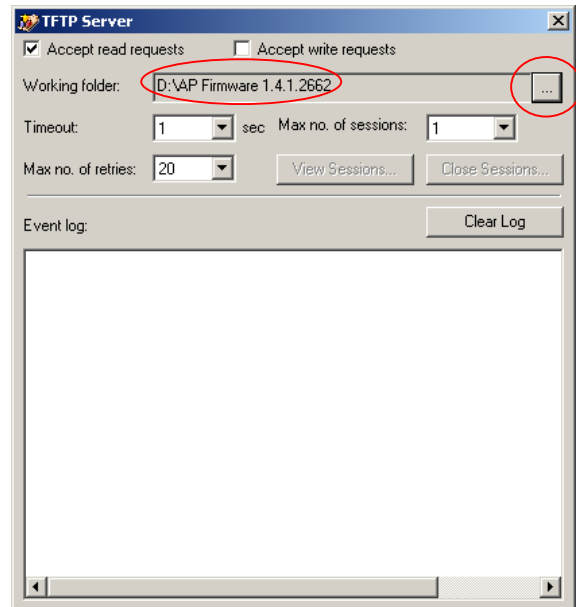


Figure 5: Obtain Upgrade Computer IP Address

Method 1: Using the TFTP Server Utility

1. Start the TFTP Server on the Upgrade Computer and set the working folder to where firmware has been saved (d:\AP Firmware 1.4.1.2662 in this case).



Click to select working folder

Figure 6: TFTP Server

2. Open a Web Browser and go to the Access Point that requires upgrading (192.168.0.1 in this case). Enter the username “root ” and password (default: “root”). Select **General → Firmware Upgrade**. Enter the IP address of the TFTP Server (the Upgrade Computer IP address: 192.168.0.3 in this case). Click the **Upgrade** button.

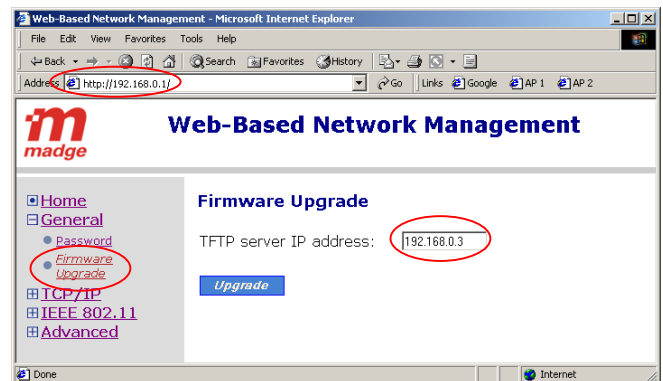


Figure 7: Set TFTP Server IP Address

3. Check that all three files have been transferred by viewing the TFTP Server Event Log on the Upgrade Computer.

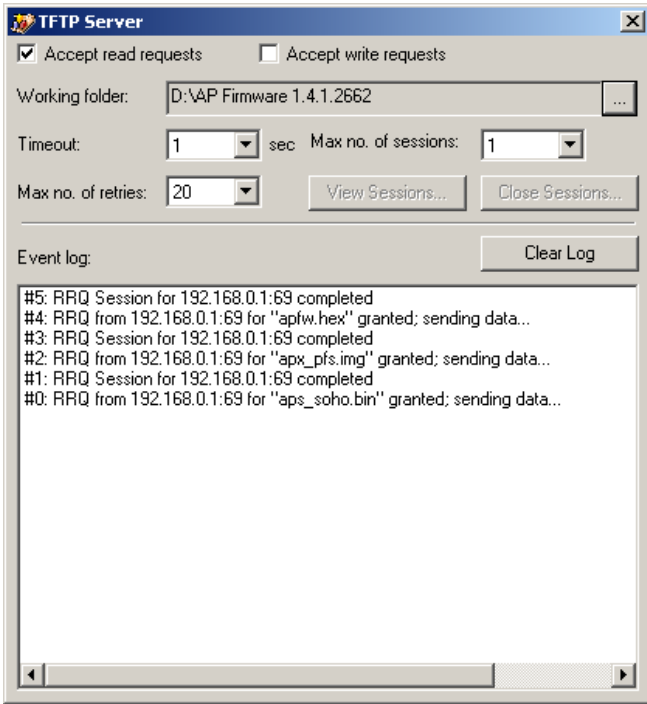


Figure 8: Check TFTP Server Log

- Switch back to the Web Browser and wait for the **Firmware upgrade succeeded** message (see Figure 9). Note that the Access Point will be restarted and its configuration will be restored to factory defaults. See page 6 for a table of the default configuration.

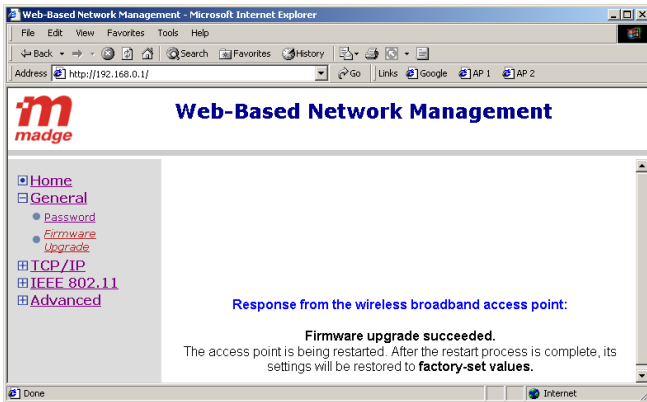


Figure 9: Firmware Upgrade Succeeded

NOTE: By default the Access Point obtains its IP address automatically. If there is no DHCP server (for example if the Access Point is directly connected to the Upgrade Computer using a cross-over cable) then after about 75 seconds the Access Point will default to 192.168.0.1/24.

- Using a Web Browser check the Access Point is operating correctly. It may be necessary to delete temporary internet files in the Web Browser and reload

the home page to get it displayed fully. Check the Firmware Version number.

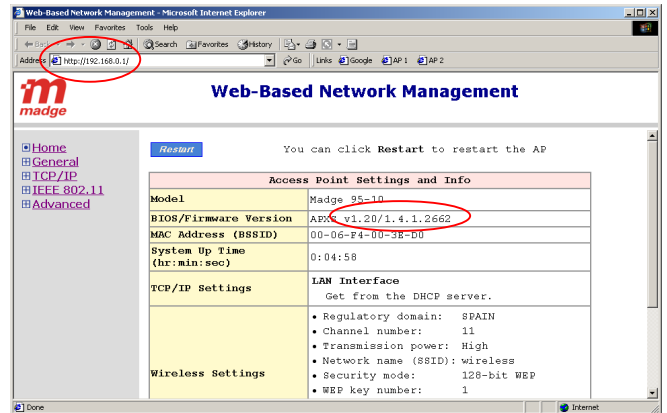


Figure 10: Check Firmware Version Number

Method 2: Using the WNM Firmware Upgrade Wizard

- Run the Wireless Network Manager Utility on the Upgrade Computer. Select the Access Point to be upgraded and check that it has an IP address on the same subnet as the Upgrade Computer. If not (as in this case) then set the Access Point's IP address (see step 2).

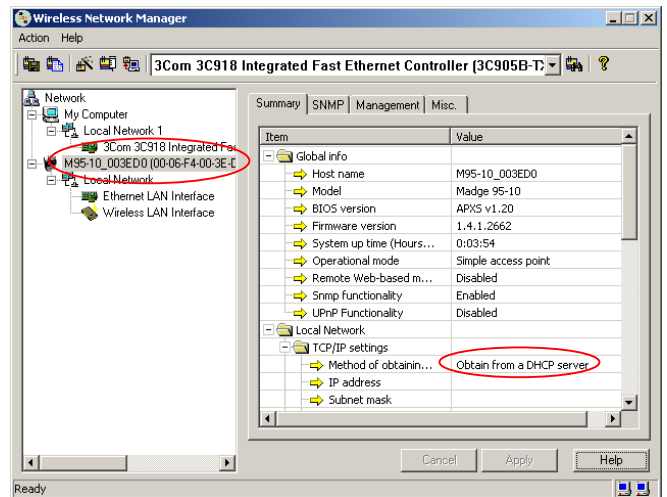


Figure 11: Select AP to Upgrade

- To set the Access Point's IP address: Select **Local Network** and click **Use the following IP address**. Enter an IP address and Subnet mask (192.168.0.1 and 255.255.255.0 in this case). Click **Apply** to review the configuration settings. Click **Continue** to set the IP address. Wait for the progress bar to complete.

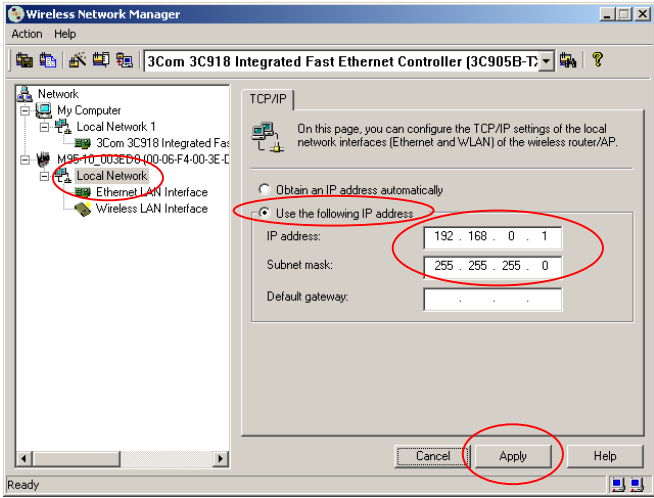


Figure 12: Set IP Address

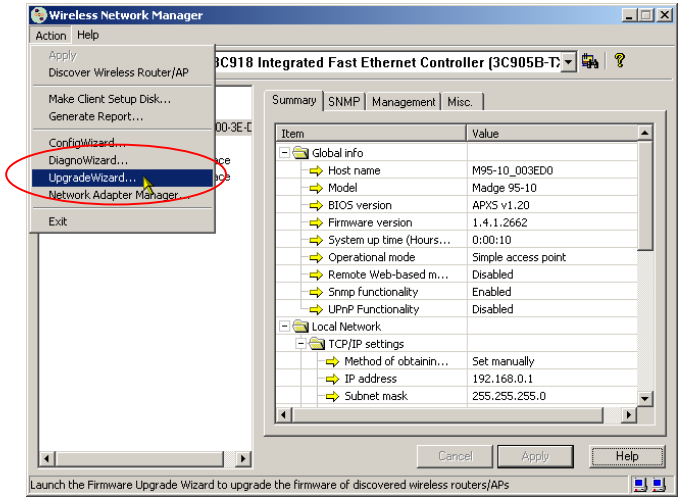


Figure 15: Start Firmware Upgrade Wizard

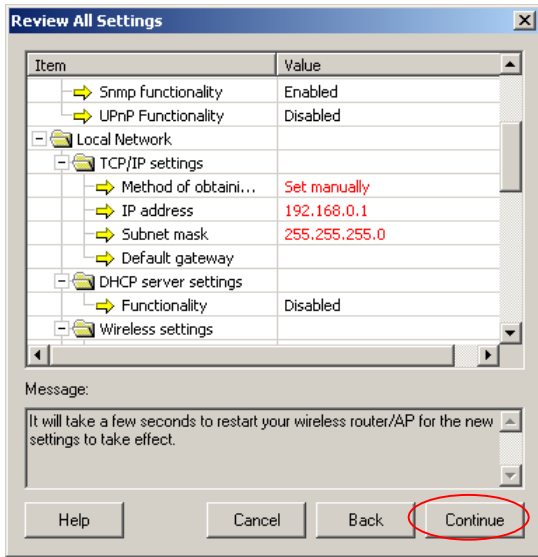


Figure 13: Review Settings

4. Select the Access Point to be upgraded. Set the working folder to where the firmware has been saved on the Upgrade Computer (d:\AP Firmware 1.4.1.2662 in this case). Click **Upgrade**.

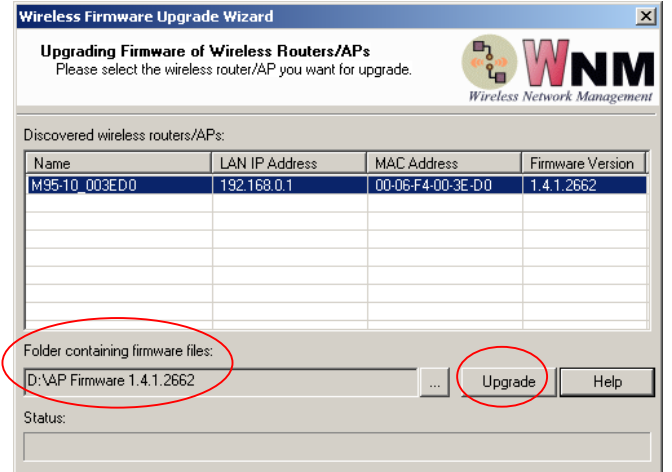


Figure 16: Select Firmware File Folder

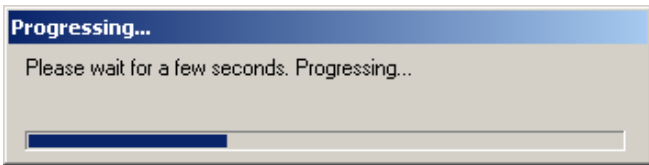


Figure 14: Settings Update in Progress

3. Once the Access Point has a compatible IP Address, select **UpgradeWizard...** from the Wireless Network Manager's **Action** menu.

5. Enter the password for the selected Access Point (default: "root").

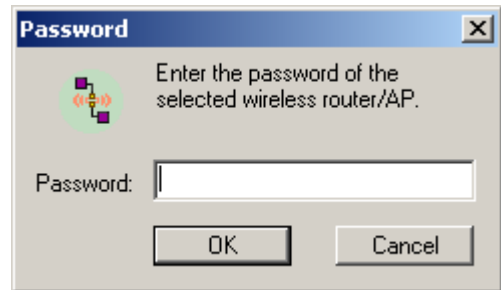


Figure 17: Enter AP Password

- Watch the progress bar as all three files are downloaded. Wait for the alert to say that the upgrade has been completed successfully.

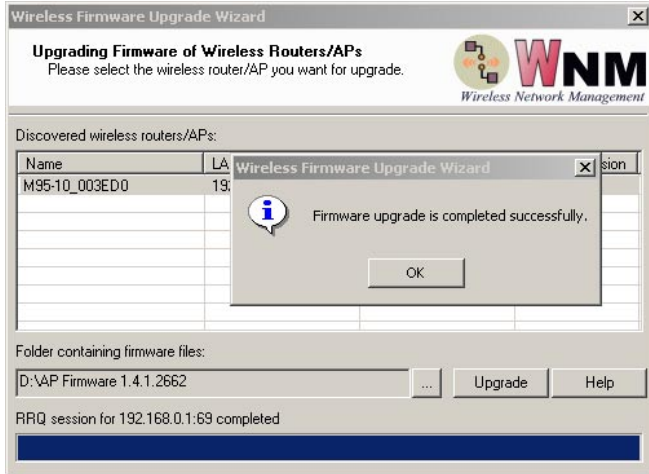


Figure 18: Await Successful Upgrade

- The Access Point configuration will have returned to factory defaults (see page 6). Note the new firmware version.

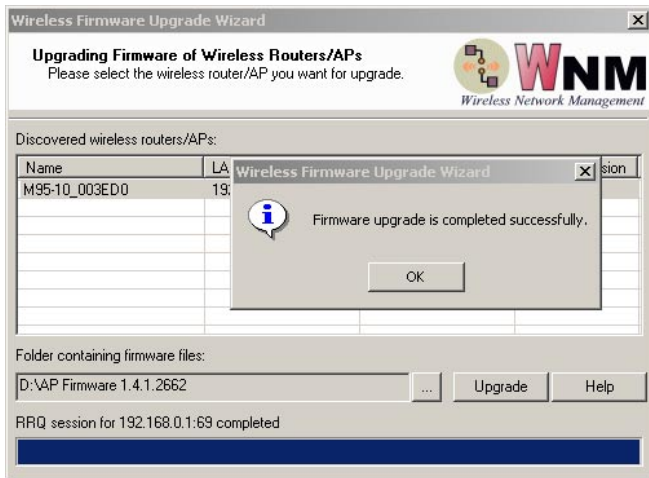


Figure 19: Await Successful Upgrade

NOTE: By default the Access Point obtains its IP address automatically. If there is no DHCP server (for example if the Access Point is directly connected to the Upgrade Computer using a cross-over cable) then after about 75 seconds the Access Point will default to 192.168.0.1/24. The Wireless Network Manager will still report the method as “Obtain from a DHCP server”.

Factory Default Settings

Setting Name	Default Value
Global	
User Name	root
Password	root
Host Name	"M95-10xxxxxx" where xxxxxx = last 6 hex digits of the AP's MAC address
IEEE 802.11b	
Regulatory Domain	Spain
Channel Number	11
SSID	wireless
SSID Broadcasts	Enabled
MAC Address	See the label on the housing of the advanced AP.
Security Mode	128-bit WEP
Selected WEP Key	Key #1
WEP Key #1	Generated by using Host Name as the passphrase
WEP Key #2	00-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00
WEP Key #3	00-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00
WEP Key #4	00-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00
MAC-Address-Based Access Control	Disabled
Access Control Table Type	Inclusive
LAN Interface	
Method of obtaining an IP Address	Obtain automatically by DHCP. If the AP fails to obtain an IP address from a DHCP server after 75 seconds, it assigns 192.168.0.1 as its IP address.
IP Address	192.168.0.1
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Management	
SNMP	Enabled
SNMP read community	public
SNMP write community	public
UPnP	Disabled