

CBDomain.com Live Feed Guide

Documented (Tutorial) by: Jimmy (VMF04 Coffs)

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Introduction:

So you want to interface a Receive only radio to your computer to stream to the world via The Internet? Well here's the most basic I guide I can think of to help you with the process of setting it up and getting your stream online.

Mission: Establish a dedicated computer with permanent (and/or ADSL/Cable) internet connection for streaming purposes.

Recommended Requirements:

- Dedicated computer (that is, will not be in use while streaming): Pentium 3 processor, clocked at 500 MHz (or more) and (at least) 256MB of Ram.
- Windows XP Professional
- Soundcard with working input for radio connection.
- Dedicated receive radio interfaced to soundcard (that is, audio output and ground to sound card input).
- Dedicated and/or permanent internet connection with at least 128kBs upload (for max of 6 connections at 8/10kB bitrate).
- Static IP address (if not, Dynamic DNS software available)
- Windows Media Encoder 9

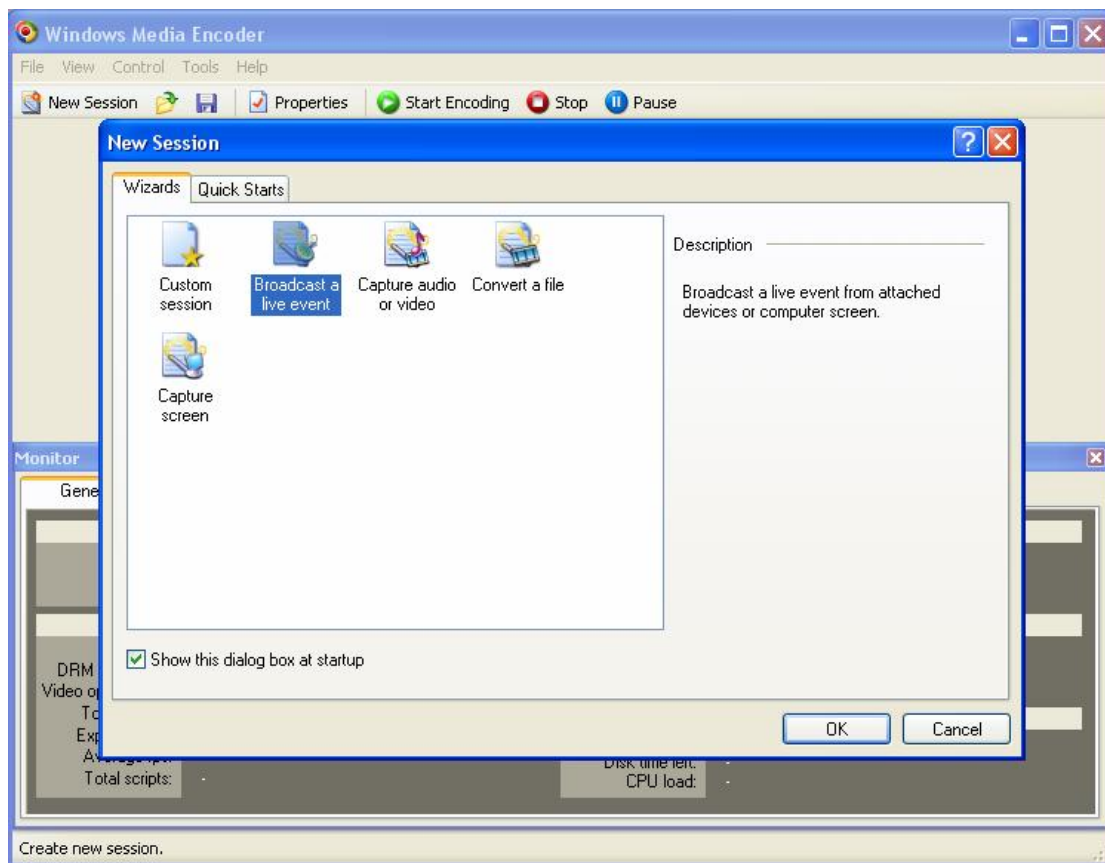
This guide is intended for users of an ADSL modem which is interfaced via an Ethernet (wired network) and the dedicated stream computer is connected to that network with the internet connection.

Setting up Windows Media Encoder 9:

Once installation has finished of Windows Media Encoder, locate program link in Start – All programs menu, run program.

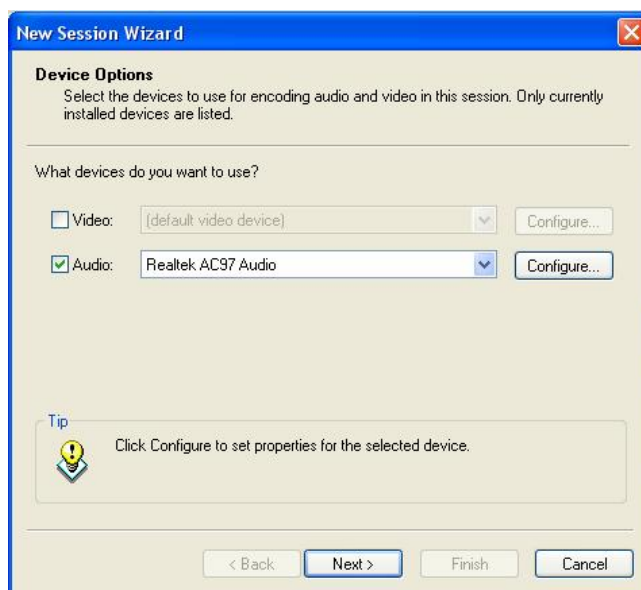
Program will launch and you will be greeted with the following welcome “splash” options area:

Welcome to Media Encoder



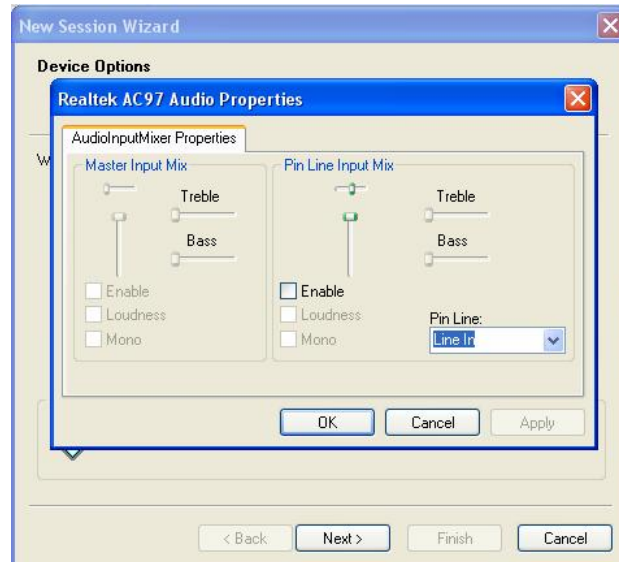
WME9: Reference 1 – Welcome screen.

Select "Broadcast a live event" and click OK and continue.



WME9: Reference 2: Input selection

Ensure Audio tick box is checked, and select Default soundcard, in my case, Realtek AC97, select Configure.



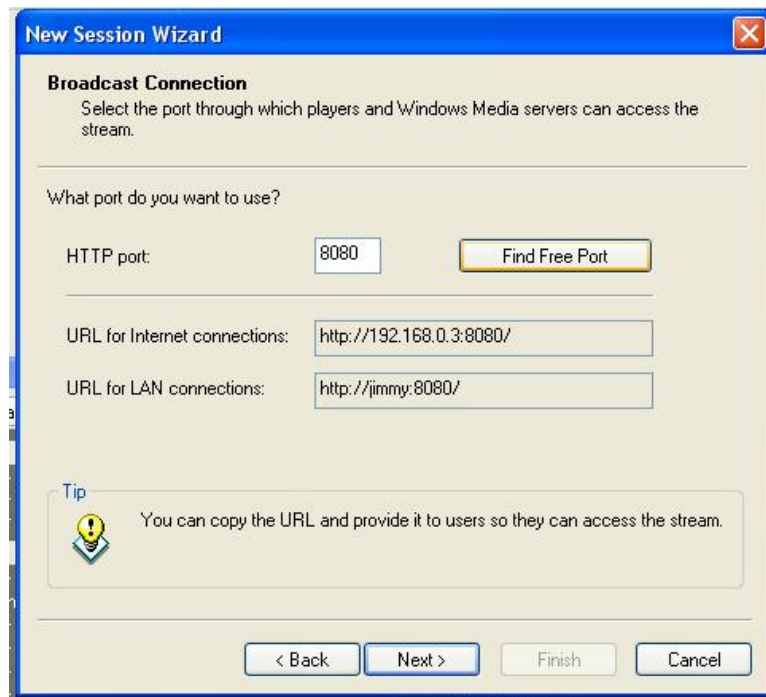
WME9: Reference 3: Input options

Select your radio input, in my case: **Line In**, and set volume high, as you can always adjust input volume via radio receiver. Select Ok and continue with wizard (next).



WME9: Reference 4: Broadcast Method

Ensure you select **Pull from encoder**, this basically means that clients will connect your computer to listen directly, and the data will not be forwarded via a Windows server, select PULL and continue (next).

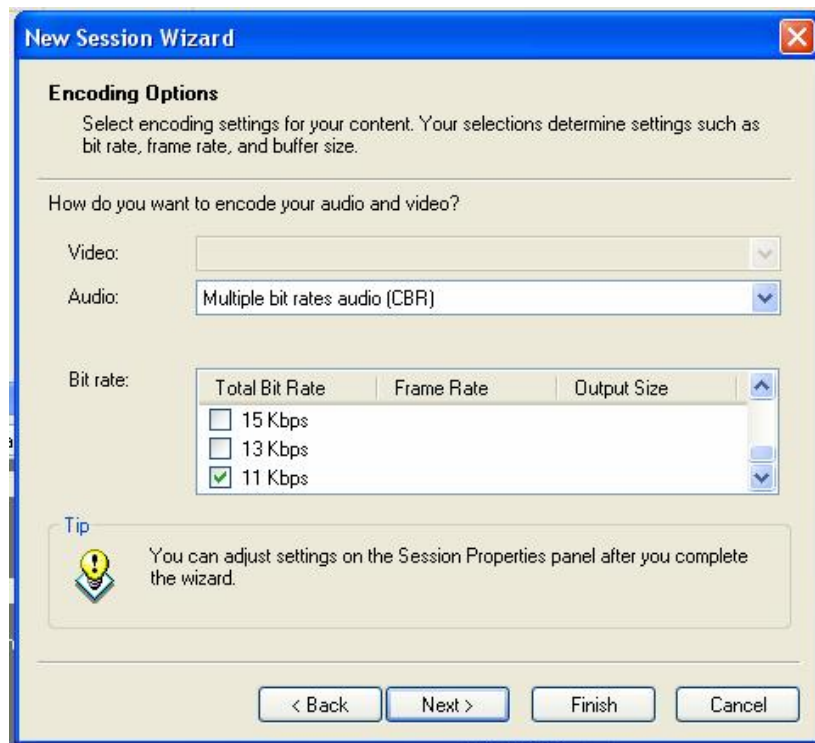


WME9: Reference 5: Connection and Port settings.

This setting is crucial to the setup of your stream.
Select the HTTP port you will be forwarding your stream on, I use and recommend port 8080 (unless blocked by your ISP).

Unfortunately, due to the security on my testing computer for this tutorial, the information on this screen is incorrect, and actually the URL for internet connections is actually my **Local** (LAN) IP address, and the URL for LAN connections is my LAN DNS.

Anyhow, record both IP addresses and port settings for later, WRITE IT DOWN, as we will need to forward this port and IP address on your ADSL modem later. Continue with wizard...



WME9: Reference 6: Bitrate

Another important setting, You will be greeted with CBR and 135k ticked, I recommend unticking this bitrate and scrolling down and selecting (ticking) 11 Kbps and continue with wizard (next, once again!)

No need to archive file, move on...



The screenshot shows a Windows-style dialog box titled "New Session Wizard" with a close button (X) in the top right corner. The main heading is "Display Information". Below it, a subtitle reads: "Specify information about your content (optional). The information is displayed during playback of the encoded content." There are five input fields: "Title:" with the text "Your Live Stream Title to Appear in Windows Media Player", "Author:" with the same text, "Copyright:" (empty), "Rating:" (empty), and "Description:" (a large empty text area with a vertical scrollbar). Below the fields is a "Tip" section with a yellow lightbulb icon and the text: "Users must enable captions in Windows Media Player to view this information." At the bottom are four buttons: "< Back", "Next >", "Finish", and "Cancel".

Above example should be pretty straight forward!!

Begin broadcasting ticked, and hit finished! You're now streaming!

LAN Configuration

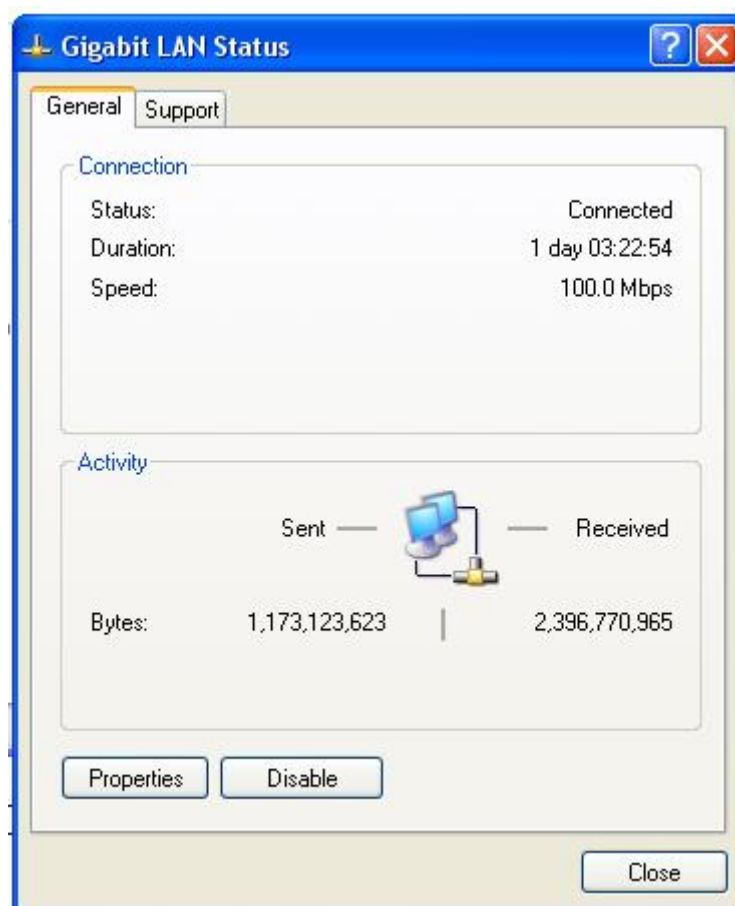
Port forwarding can be tricky depending on what ADSL modem you have, but basically (simple terms) your Internet IP address is like a telephone number, and the port is like *who you want to talk to*.

i.e. 210.211.11.12:8000 is like calling a 210.211.11.12 and asking to talk to 8000. Still don't understand? Try www.google.com

Here, we will configure your network card to static (so when the stream computer gets turned off, and back on, the ADSL Modem (DHCP) won't renew the IP address and stuff up our port forwarding settings).

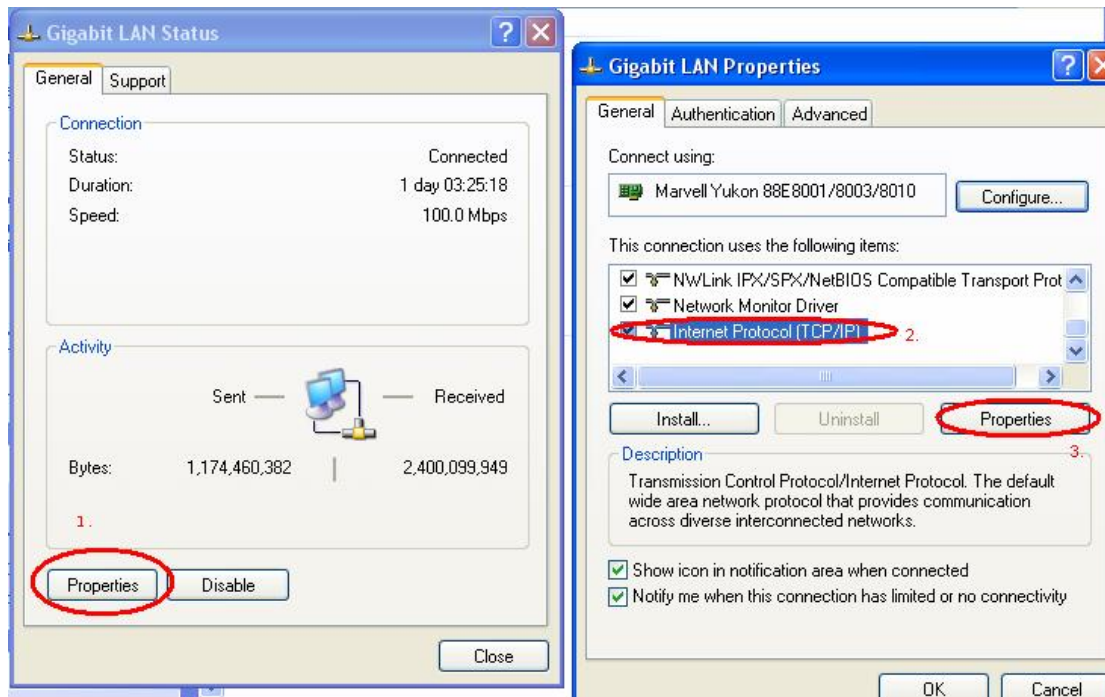
Windows XP: *Network card configuration.*

Start menu – Control Panel – Select Classic View (left hand side) - Network Connections and double click on your LAN Adapter. Hopefully, this should appear:



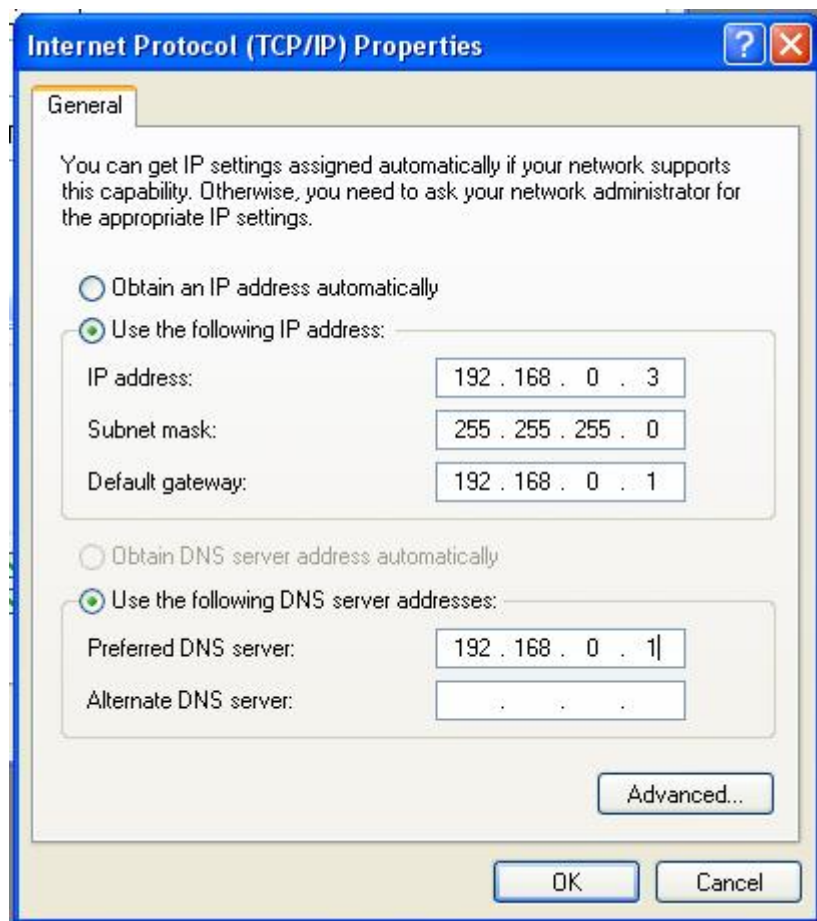
Network: Reference 1: LAN Status

Select the Support tab, and proceed with recording the IP address and gateway details (write it down). Once IP Address, Subnet and Gateway is recorded, continue..



Network: Reference 2: Configure Static LAN IP

Now for example, if the LAN IP address that you recorded was 192.168.0.3 and the gateway 192.168.0.1, you like reference 3... and hit OK:



Network: Reference 3: 192.168.0.3 example

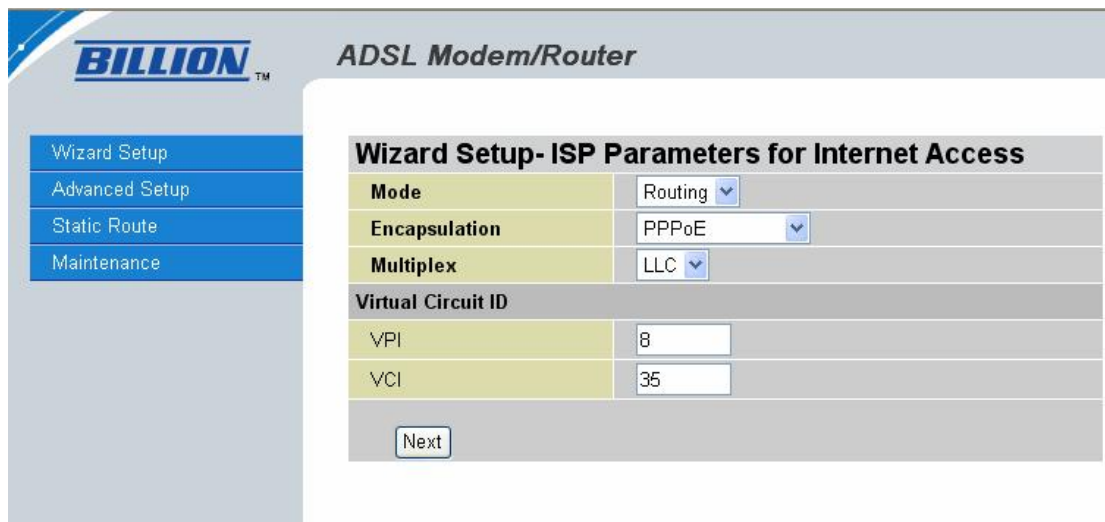
Hopefully, your network adapter is set to a Static LAN Ip address,
Please note:

Setting your LAN (Local area network) adapter to a static IP address is NOT the same as having a Static Internet IP address.

ADSL Modem Configuration

Finally, we need to forward the ports from your stream computer to the internet. We are using a Belkin ADSL modem for this tutorial, but it is recommended that you consult your product manual for further information about port forwarding.

Open your preferred web browser and enter the IP address of your ADSL modem, and when prompted enter your password details and login to the status page:



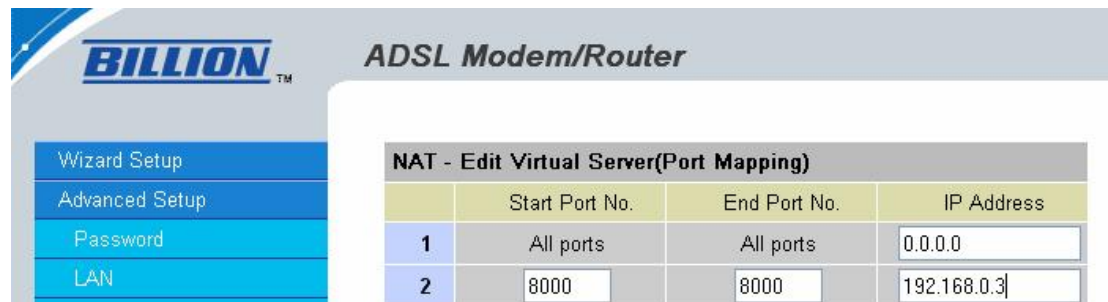
The screenshot shows the configuration interface of a BILLION ADSL Modem/Router. On the left is a sidebar with navigation links: Wizard Setup, Advanced Setup, Static Route, and Maintenance. The main area is titled 'ADSL Modem/Router' and contains a 'Wizard Setup-ISP Parameters for Internet Access' form. The form has the following fields:

Wizard Setup-ISP Parameters for Internet Access	
Mode	Routing
Encapsulation	PPPoE
Multiplex	LLC
Virtual Circuit ID	
VPI	8
VCI	35
<input type="button" value="Next"/>	

Modem: Reference 1: Status Page

Select Advanced and select NAT (Network address translator), select *Many to one* and select Edit virtual server

Enter the port number you wish to forward in the port start and end section, with the LAN IP address of your stream computer, save and reboot ADSL modem.



The screenshot shows the configuration interface of a BILLION ADSL Modem/Router. On the left is a sidebar with navigation links: Wizard Setup, Advanced Setup, Password, and LAN. The main area displays the 'NAT - Edit Virtual Server (Port Mapping)' table.

	Start Port No.	End Port No.	IP Address
1	All ports	All ports	0.0.0.0
2	8000	8000	192.168.0.3

Modem: Reference 2: Port forwards

Well done, you should by now, have Windows Media encoder running, your stream computer with a static LAN IP address and the Media encoder ports forwarding to the internet.

If you have a **Static Internet IP Address**, you're in luck, visit www.whatismyipaddress.com and find out your internet ip address and advertise your stream.

Please note: The windows media encoder link standard is mms://
For example, if your ip address is 210.211.12.12 and you are streaming on port 8000, the link to the stream you give to other users is:
<mms://210.211.12.12:8000>

If you wish to listen your stream on the LAN network locally, you must enter your stream computer **LAN** Ip address. i.e. <mms://192.168.0.3:8000>

Unfortunately, if you have a Dynamic IP address, you will have to look up <http://www.no-ip.com/> which turns a Dynamic IP address into a Domain name, in which every time your ADSL line disconnects and gives you a new internet IP address, the software updates the Domain name to the new IP address. Therefore, you don't have to keep updating your stream URL because your IP address changed ;)
So download the software – create an free account (DNS) and go from there. More information on the <http://www.no-ip.com/> website.

For Further Information...
Contact the friendly staff at CBDomain.com