

# **BROADCAST KIT BACKPACK**

# **BROADCAST KIT TABLET**

# **DCV IPTV RECIEVER**

## **USER MANUAL**

SPEEDSTREAM.TV offers flexibility, ease of integration and control of your mobile live streaming broadcasting connection. Whether you're in Marketing, Sales, Communications, HR, Training and Coaching, Investor or other professional role that requires you to communicate news and information, Online iptv Strategies will help you to make the right choices and build video into your existing business strategies from the ground up.

Purchase our cloud-based version and operate your own iptv Social Network.

Main Public Website:

[www.SPEEDSTREAM.TV](http://www.SPEEDSTREAM.TV)

Social Network Distribution Website:

[www.TVKnob.com](http://www.TVKnob.com)

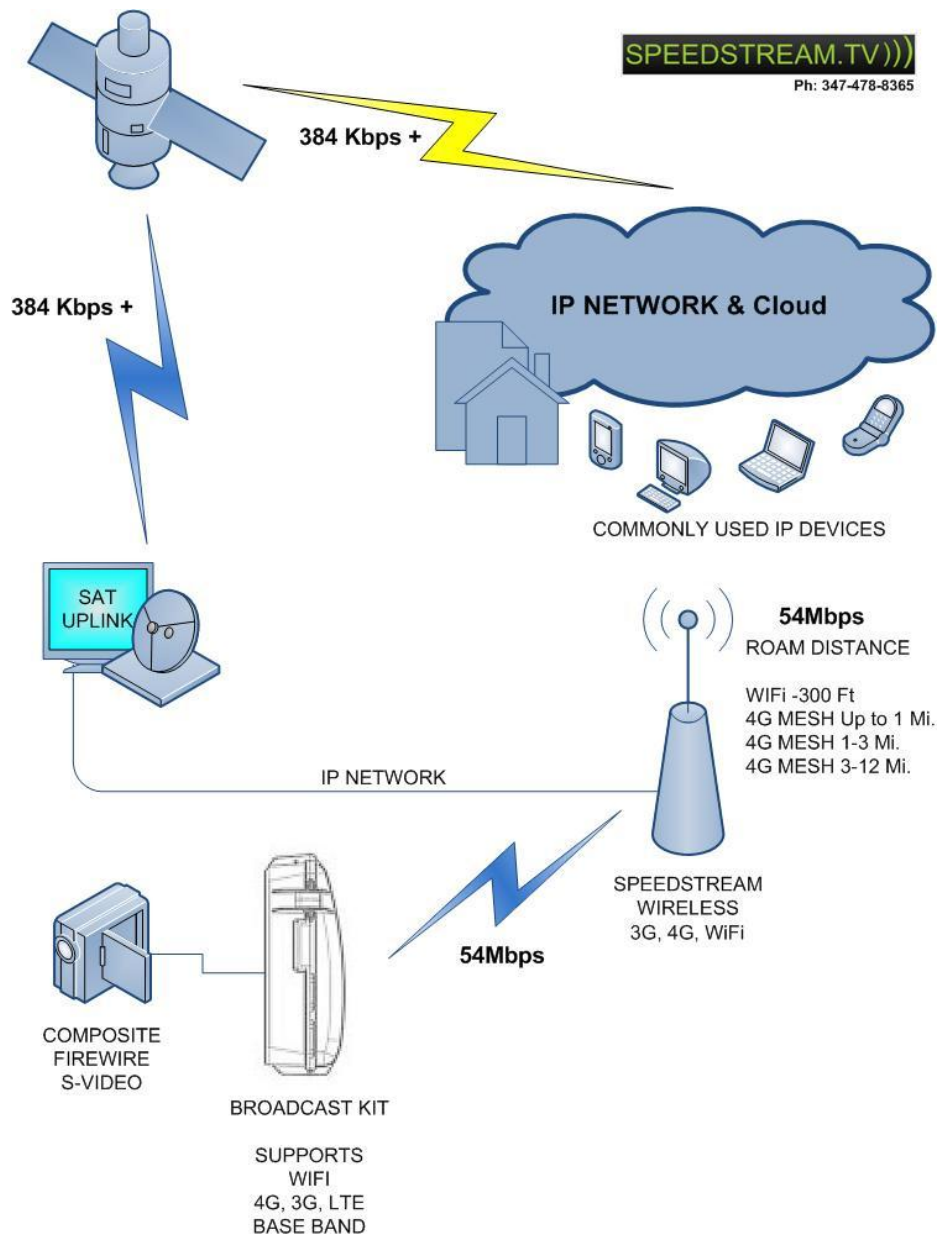
# TABLE OF CONTENTS:

**SECTION I -Support, Service and Settings**

**SECTION II - Bench Mode, Profile Building**

**SECTION III - Digital Convergence Vehicle (DCV)**

**SECTION IV - Tips Section & FAQ:**



# SECTION I

## Support, Service and Settings

**Read this manual in its entirety, it will save you time and effort**

Our OPEN Broadcasting Platform allows you every IP connection type.

\*\*If you find an interesting work around, tip or trick post them to our forum. We take the best posts and use them in our newsletter highlighting you and your business.

For special configurations, broadcasting and network consulting contact us here:

- Support Phone: 1-347-iptv-365
- Support Email: [support@speedstream.tv](mailto:support@speedstream.tv)
- Support Site: [speedstream.tv/support](http://speedstream.tv/support)
- Support Forum [speedstream.tv/forum](http://speedstream.tv/forum)

Within each work flow there are many choices to consider.

In this manual you will learn:

- Power Up and Operations
- Create Profiles
- Best Practices Tips

The following are Nodes that can be Transcoding Points. The Kit Node/Channel Connections can be reached when online at the following urls:

Your tvknob.com (public) free distribution monthly cost is based on concurrent viewers.

Embedded, sharable url is:

<http://tvknob.com/channelname> Your own dedicated 24/7 IPTV Channel with Channel Playlist for, pre-roll, promo, playlist used as roll over when live broadcast Kits are offline.

Silverlight Player: JW Player

[http://www.speedstream.tv/sl\\_play/channelname.html](http://www.speedstream.tv/sl_play/channelname.html) (IFRAME and EMBED)

[mms://](#)

[rtsp://](#)

When the Kit is Transmitting...

Windows Media:

<http://live.speedstream.tv/channelname> (Connection Uplink, Only One Connection possible here)

[rtsp://](#)

[mms://](#)

Public Distribution urls (Multi-point URL) is:

[http://live.speedstream.tv/channelname\\_live](http://live.speedstream.tv/channelname_live) (Connection, Multi-Viewer Linking)

[mms://](#)

[rtsp://](#)

On a private Network, Push Address is the address of the http://server IP or DNS Name/devicename  
Pull is the IP of the Kit.

## **Our own HCDN allows a DNS Entry for yoursite.com.**

Encode or Transcode to rtmp:// through your own server or use a Transcode Service. Example: Wowza or Brightcove, Limelight are hosts we recommend. Aliases in Windows and can be Transcoded to Flash via the following urls.

The system performs a pause when a network is temporarily disconnected; typical with cell phone interferences, does not bump off users or need Static IP Addressing or Port/Firewall Assignments.

More important is the Kit's ability to operate in a Mobile (Moving Broadcast Zone) is imperative.

Fundamentally, out of the box we have designed a system that is highly automated, versatile, rugged, and reliable and can be trans coded into most any format. More on the hardware on [www.speedstream.tv](http://www.speedstream.tv) or see <http://speedstream.tv/specs> for more.

## **Attaching Battery**

Anton Bauer battery connects to the Anton Bauer Gold Mount. The Gold Mount is located inside the Kit bottom shelf. Insert the 3 battery prongs into the Connection Mount.



The Kit has been manufactured and warranted for Anton Bauer Gold Mount Batteries only. By using any other brand of battery voids all warranties and service agreements.

SpeedStream.TV warranty covers only the below battery selections :

- Anton Bauer Hydron 140
- Anton Bauer Dionic 90
- Anton Bauer Tandem Charger

Batteries may or may not be included with your package. If not included, you can rent them from any local Video Equipment Rental and Suppliers by searching those terms on the web. Contact your sales representative for more information if you would like to purchase through SpeedStream.TV for a discounted price.

TIP:

Choosing the right Battery Charger may allow multiple battery configurations to be used!

### **Power Up Requirements:**

Unplug all USB's from the Kit during power up sequence except when operating a 1394 Firewire Connection.

## Camera's

Recommended Camera for Starter Kit and Hero Kit:

Composite using Yellow, Red and White RCA Connectors on the outside of Kit.

We have included 3 BNC Connectors so you can add your own SDI or HD Out/Input, you can use these connectors to customize your kit if you desire.

NOTE:

1394 Camera's must be powered up before the Kit is powered. If the camera goes to sleep, powers off, runs out of battery power for any reason the 1394 (firewire) must be re-detected and the broadcast sequence must be restarted.

Recommended Camera for Catalyst and Eagle Eye: SDI. Other connections are available on custom ordered Kit's.

## Networks

The Broadcast Kit can connect to ANY broadband connection. HOWEVER, it is the client's responsibility to make sure their customized networks are configured to their Kit. If you are in a country other than the USA you will need to send us your modems while your Kit is being manufactured. If you need help in this area email us at:

[support@speedstream.tv](mailto:support@speedstream.tv)

Connecting Broadband Network USB's is much like connecting internet to a Laptop. Access the Network through the CONFIG Button on the GUI (Graphical User Interface) of the Kit accessible by using the Touch Screen or a USB Mouse connected via the external USB.

The CONFIG >> Area allows you to access common network components included with your Kit. For additional components, send request to: [support@speedstream.tv](mailto:support@speedstream.tv)

3G, 4G, WiFi and LAN and Bonding of specific Multiple Networks are available upon request. Special Connections such as Satellite Networking goes through the LAN or WiFi Connections.

3G and 4G Networks are most commonly accessed by the CONFIG button on the GUI. Accessing either connection opens the Connection Manager Software Supplied with each device.

LAN and WiFi Connections are accessed by default from Control Panel Network Settings by Selecting CONFIG >> WiFi or LAN.

LAN Connection: Remove a weather resistant USB Cap and Plug Assembly from the Exterior of the Kit. Use the Open Hole in Kit to Feed LAN Cable into the Kit.

NOTE: You must remove the Access Panel on the inside of the Kit to do so. This procedure allows you to run a LAN Cable directly to the Kit with closed lid.

The Broadcast kit's comes ready for you to install your own modem software. New 4G and the older 3G Modems use Connection Manager Software to connect to the internet. We use the same process in the Broadcast Kits. This way the same process you use every day with other mobile devices carry over when operating the broadcast kit. However, you must have basic windows navigation skills, mastery of installing hardware, or calling your modem (3G/4G) provider to ask for help installing.

On every Kit there is a Config Area. There you are able access all network connections on the Backpack Kit. If your connection is not available it must be installed, re-installed or check out your providers support department to correct those issues beyond our control here at [SPEEDSTREAM.TV](http://SPEEDSTREAM.TV).

## Powering up the Kit!

NOTE: Remove ALL USB modems from The Broadcast Kit if powering up is unsuccessful. Some USB Modems are detected as storage devices and interrupt boot sequences)

If there is no Blue Light on the Inside of Computer case the system did not receive proper power or there is a power issue. One way to check to see if the computer is working properly is to attach a USB Keyboard to the external USB plug and check to see if numlock engages properly.

Check Batteries, Wall Power and Connections to make sure they are properly connected.

Power on the Kit by making sure you are either using wall power or battery power.



Flip Switch, on top of the Kit, and wait for startup beep. Startup beep lets you know that the system is stable and begins power up sequences.

NOTE:

If Blue Light on computer is absent the system did not receive proper power or there is a power issue. (You can see the blue light through the fans if it has powered up correctly.) If no Blue Light, Turn switch off and make sure everything is properly connected. Repeat Power Up sequence.

TIP:

The Blue Light should be the first thing you check on after powering up Kit.

## Touch Screen Monitor Care and Maintenance

USE COTTON CLOTH ONLY while cleaning monitor and external Kit shell.

## Personalized Configuration Options

Use the below tools to configure a desired user interface; create your own broadcast profiles and much more with our open platform.

- 1) Calibration
- 2) On Screen Keyboard
- 3) External Keyboard and Mouse
- 4) XP Touch Control

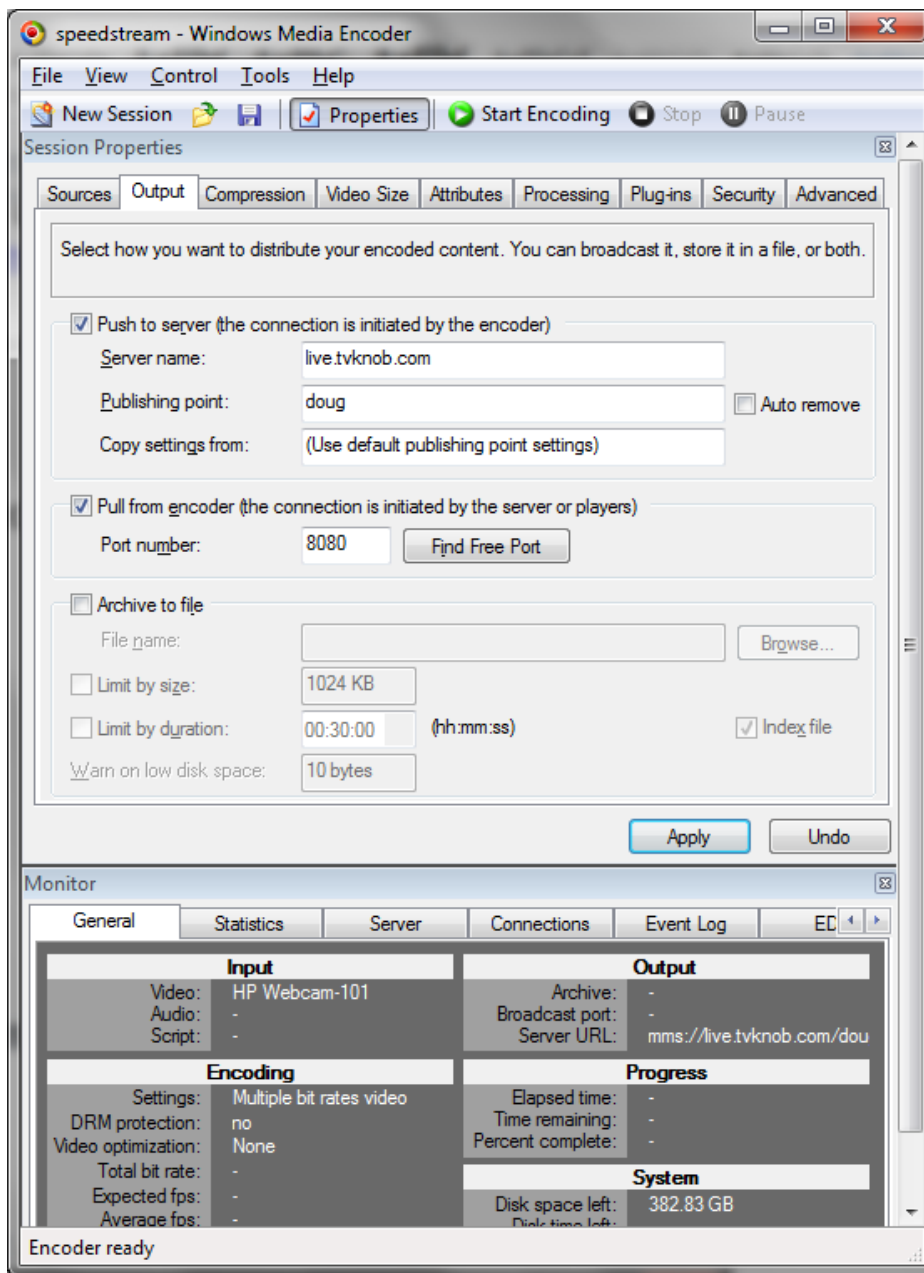
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# SECTION II

## BENCH MODE, PROFILE BUILDING

1. IF YOU DID NOT ORDER YOUR KIT WITH PREBUILT MOBILE PROFILES.
2. IF YOU CHANGED YOUR INTERNET SERVICE PROVIDER OR CAMERA.
3. IF YOU HAVE AN UNSUPPORTED INTERNET PROVIDER YOU MUST PERFORM THE FOLLOWING PROCEDURES BEFORE OPERATING THE BROADCAST KIT IN A MOBILE ENVIRONMENT OR IN THE FIELD.

### Create Windows Media Encoder Profiles: THIS IS THE MAIN SCREEN FOR CREATING PROFILES



THE PURPOSE IS TO USE WINDOWS MEDIA ENCODER WIZARD TO SAVE VARIOUS BROADCAST PROFILES, BASED ON VARIOUS SETTINGS:

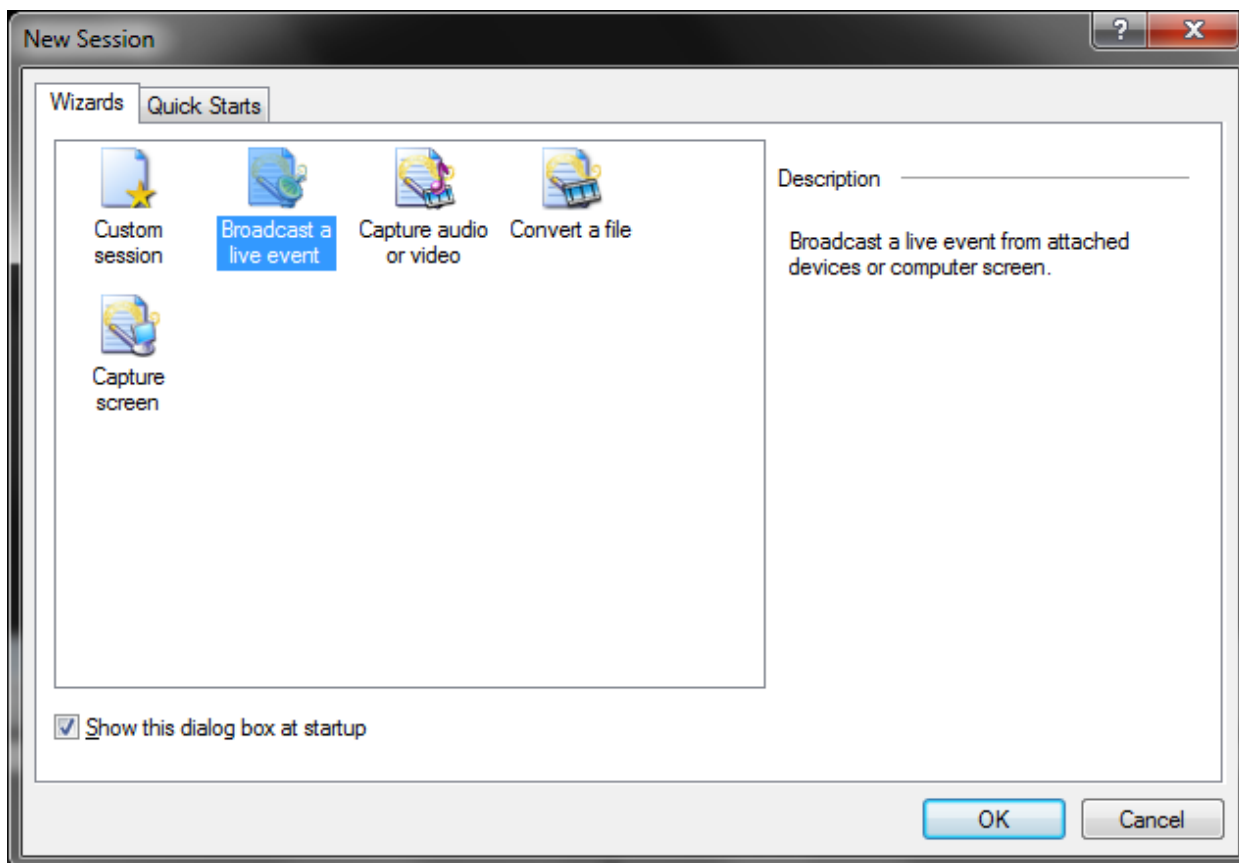
MAIN CONFIGURATION IS DONE FROM THE FOLLOWING TABS ALSO IN THE WIZARD STEPS

1. OUTPUT TAB SPECIFIES THE PUBLISHING POINT
2. OUTPUT TAB ALLOWS SECURITY USERNAME/PASSWORD
3. COMPRESSION TAB SPECIFIES BITRATE OF DESIRED STREAM OUTPUT
4. SOURCES TAB SETS THE CAMERA AND AUDIO SETTINGS

CLOSE GUI -

From the HOME/GUI Select STOP ENCODING >>Select ADVANCED >>  
At the Desktop Select START >> WINDOWS MEDIA ENCODER 9

STEP 1 OF WIZARD

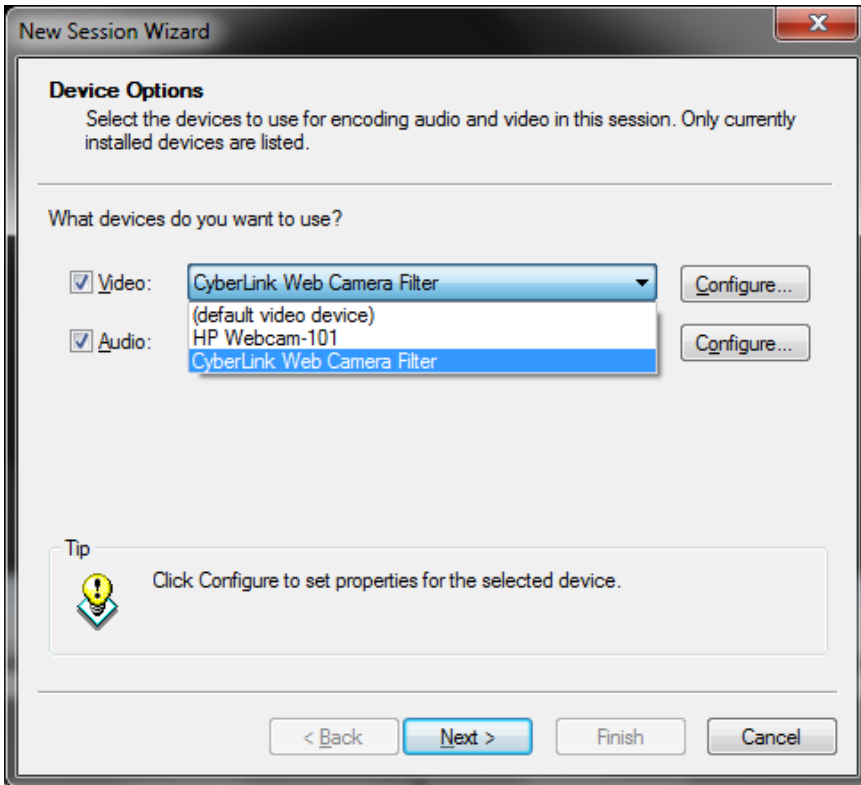


Select OK

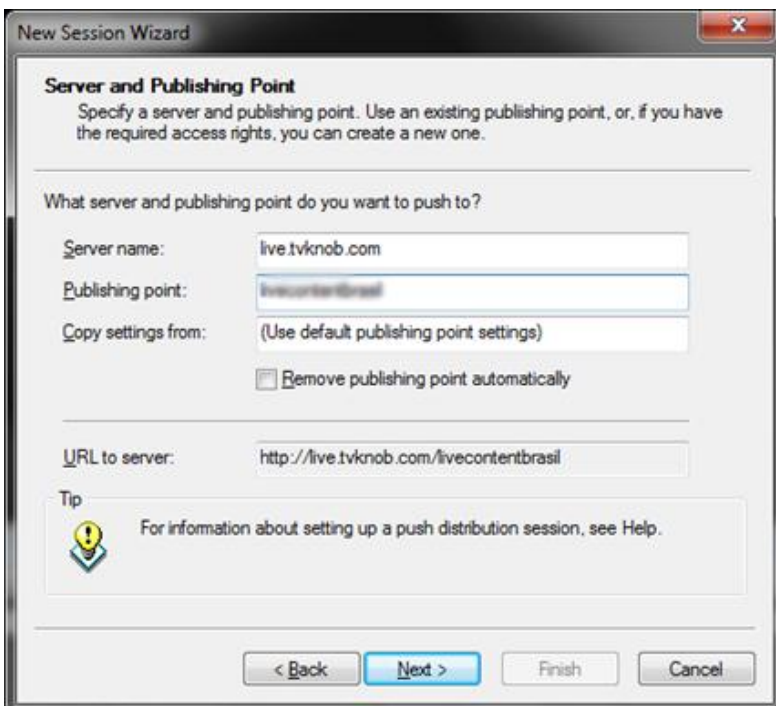
## STEP 2

### CAMERA AND AUDIO INPUTS

Select Capture Device for Video, Select Audio Source – Most Likely LINE INPUT



## STEP 3



Wait a few moments while the Server Is Located

## Enter your Publishing Point Account Information

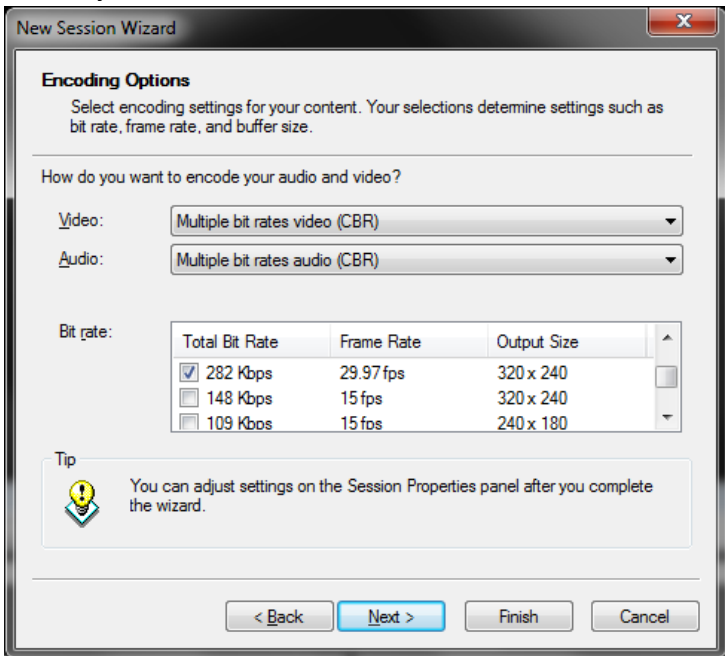
Username = channelname

Password = xxxxxxxxxx

## STEP 4

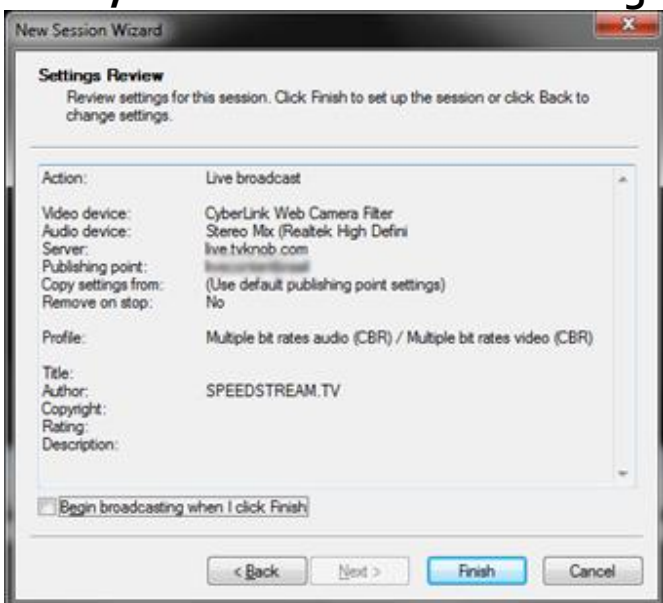
### BIT RATE SETTINGS

NEXT, Select BIT RATE



## STEP 5

NEXT, Select Local Archive Settings, NEXT, Select Title etc.,



Select FINISH

**Wait a few moments while the Server Is Located.  
Enter your Publishing Point Account Information**

**Username = channelname  
Password = xxxxxxxxx**

**Select Checkbox to Save Login Information – if you do not save it you will have to use the onscreen keyboard while in the field, which is not disables one touch operation. After selection is accepted, Select START ENCODING.**

**Run and test your publishing point.**

**Direct Link – ONLY ALLOWS 1 Connection Uplink**

**<http://live.speedstream.tv/channelname>**

**Direct Viewing Link - ONLY ALLOWS 1 Connection Reliably**

**<http://live.speedstream.tv/channelname live>**

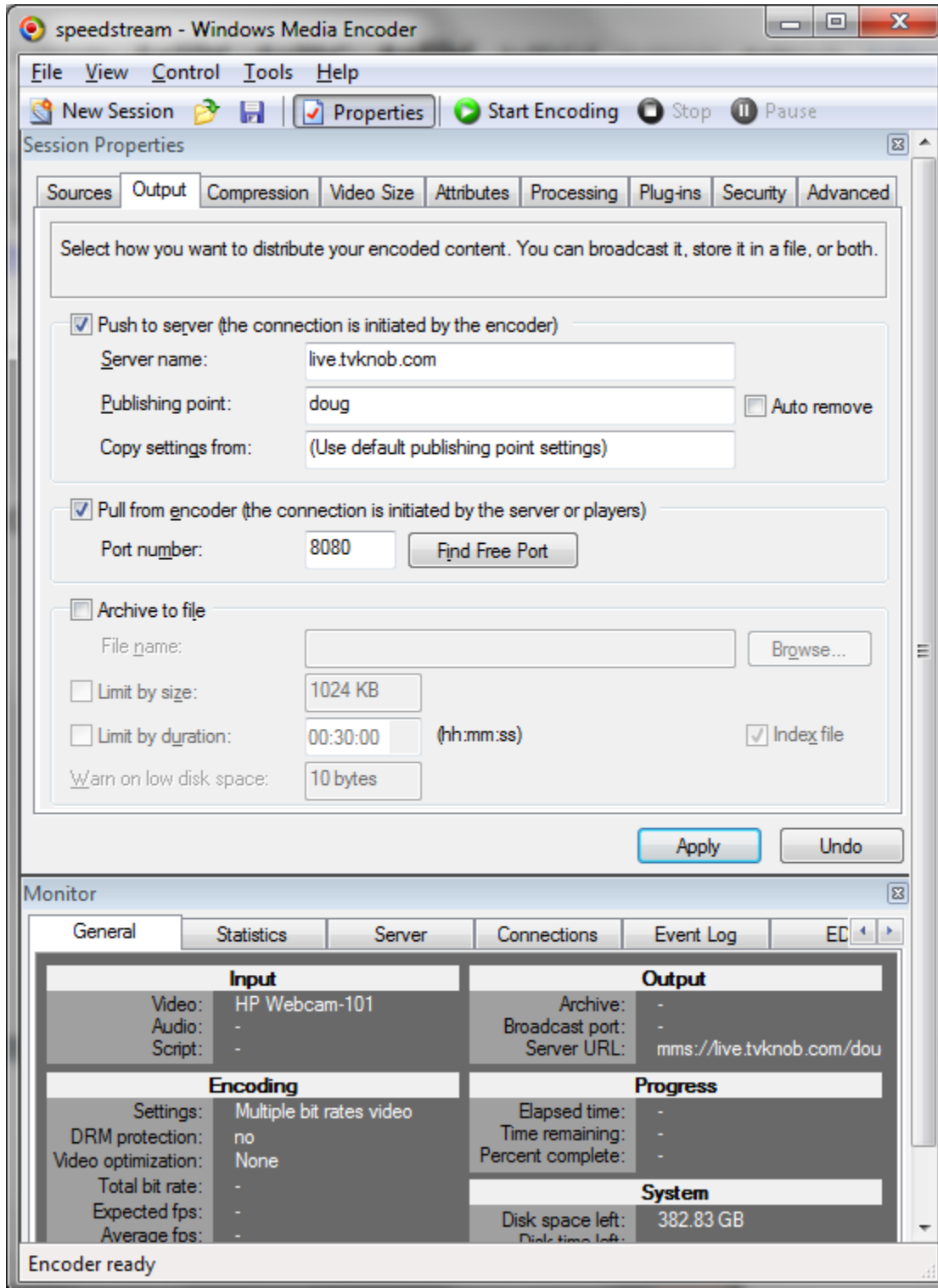
**Public Viewing URL - Allows Many Viewers**

**<http://streams.tvknob.com/u/channelname>**

**The URL Above can be place in Embed Code:**

## STEP 6

GO TO >> PROPERTIES, SELECT OUTPUT TAB

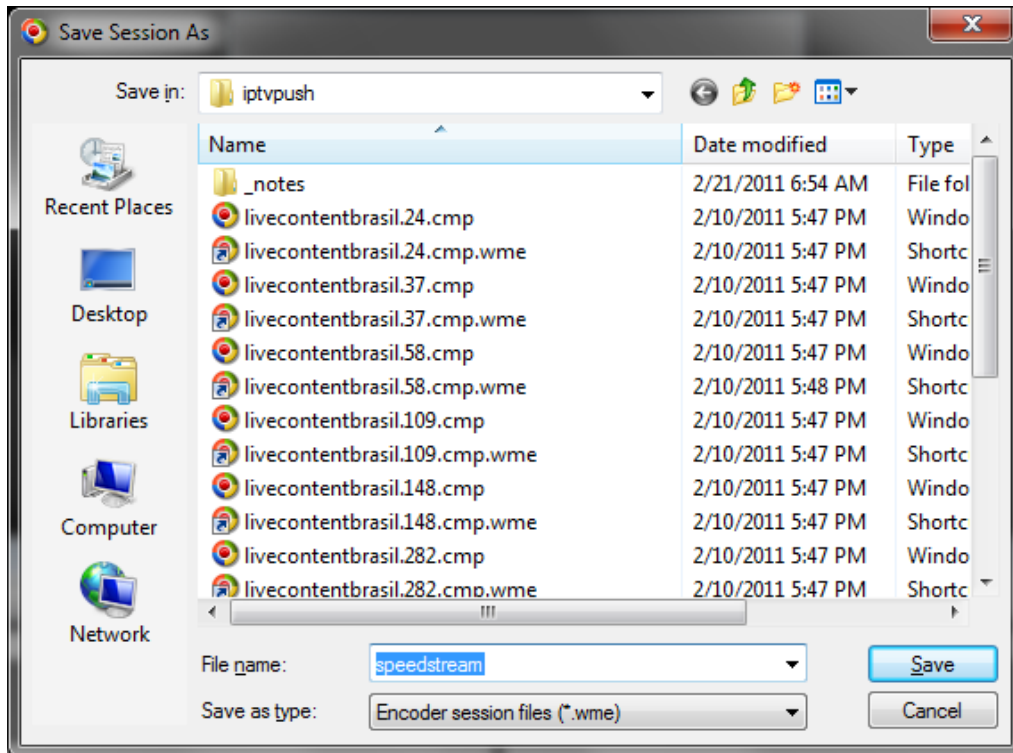


## IMPORTANT!

Make Sure PUSH and PULL are Checked and Do FILE >> SAVE AS >> AGAIN – You can also Broadcast Manually Using this Interface for Advanced Situations.

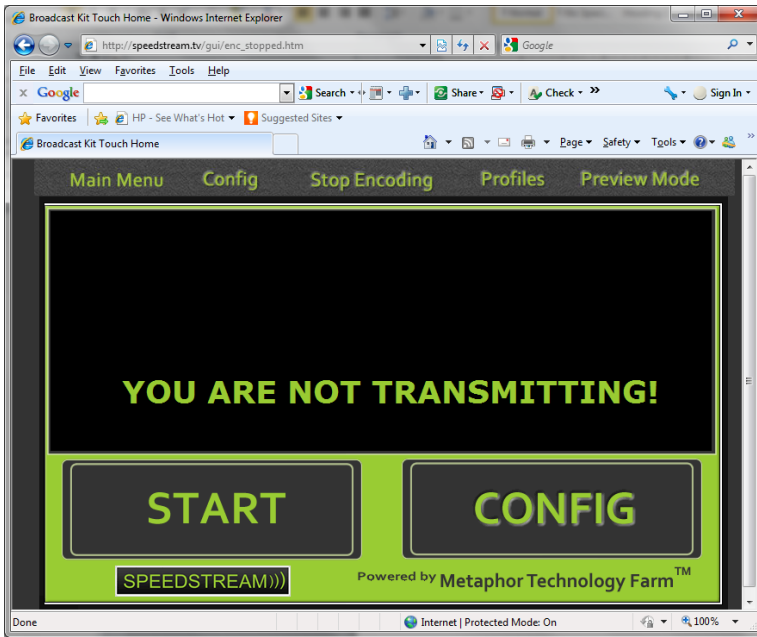
### STEP 7

Select FILE SAVE AS



C:\IPTVPUSH Saving File as Speedstream.wme (DEFAULT STREAM)

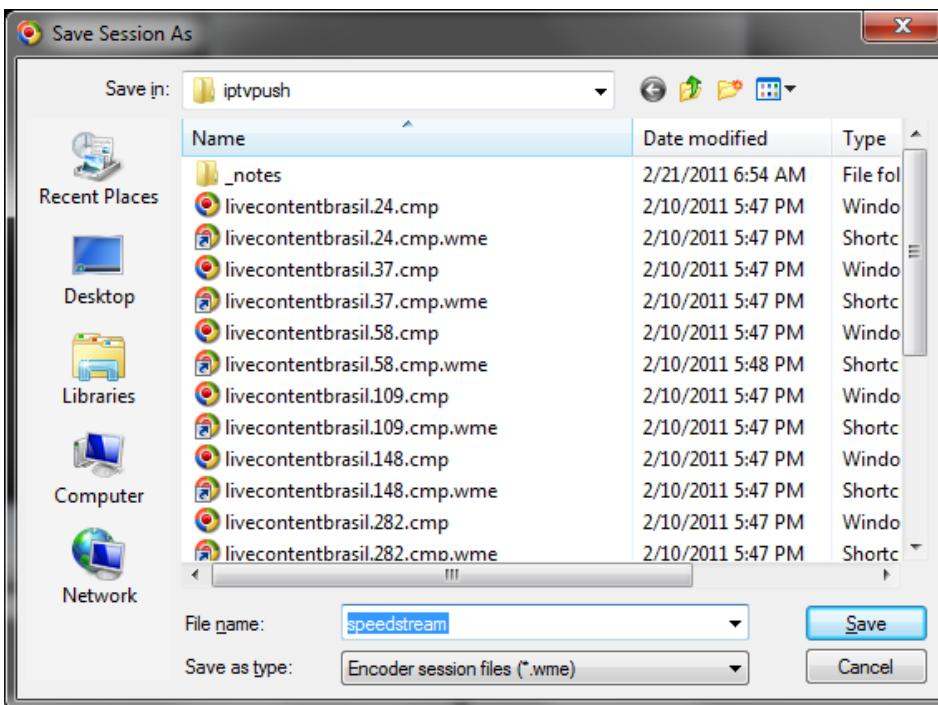
Makes the START BUTTON the Default Connection As Shown Below:



To Create Other PROFILES for PROFILES BUTTON

Start Procedure Over, when Saving As, Save as the Name

speedstream.340.cmp.wme, 340 Refers to Upload Speed, CMP refers to Composite



STORING ADDITIONAL PROFILES:



**Speedstream.282.cmp.wme, Speedstream.340.cmp.wme**

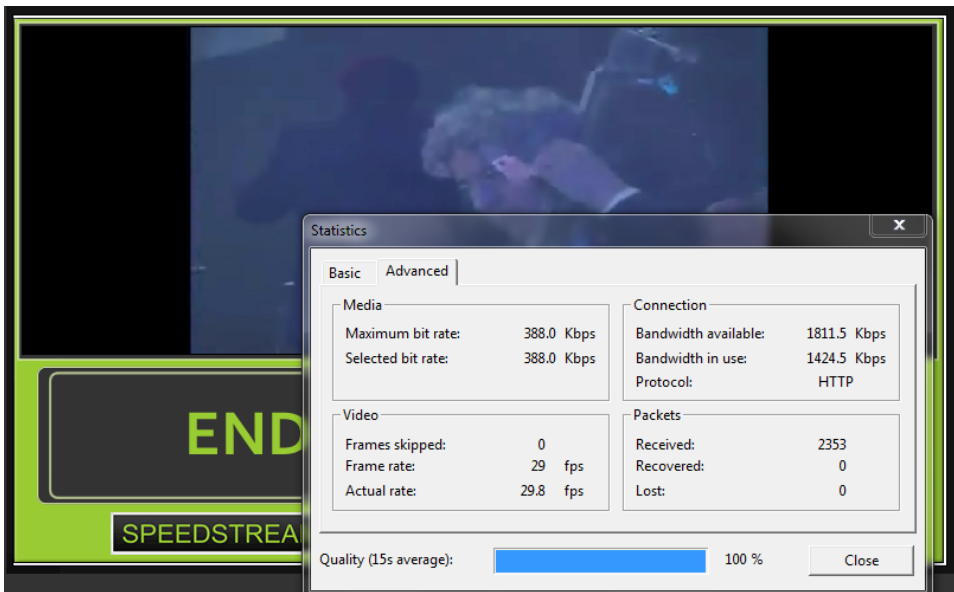
**Get familiar with these Profiles, Over Write Existing Filenames to Update GUI, Store Profiles and Then Update Screen**

**Real-Time Viewing and Modification of Transmission Rate.**

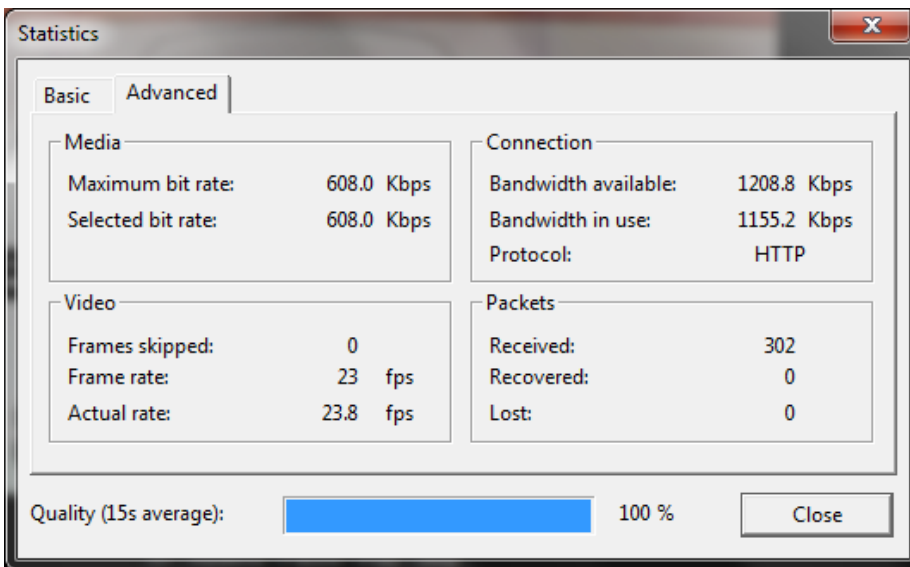
To get to this window you must

1. Connect External Mouse

From GUI Preview Mode Screen while Transmitting Video



2. Right Click SELECT >> PROPERTIES >> ADVANCED



## The Main HOME Screen



This is the Start Point to Broadcast Kit Operation. If you do not see this screen when the Kit starts, you must remove the modems then restart the Kit.

At this screen you should connect your modem. If the modem is at your default setting and you have it set to automatically connect, then all you need to do is select START >> Click Yes when prompted. Shortly your Kit will begin broadcasting.

If the Speedstream Logo Plays continuously for more than 60 seconds, then you must click CONFIG >> and check your internet connection because you are not connected.

The profiles are stored as WME. files and, once created, will broadcast to DCV only. Fee FAQ for more information.

Publishing Point Options:

The DCV can have 2 (two) operating environments, aka Publishing Point Schematics:

1. Continuous 'Go Live' 24/7 iptv video loops with automatic live interruption scripting.
2. iptv Kit to DCV connection equals NO DEAD AIR.

DCV keeps the cost down because one (1) DCV can potentially handle 50 Catalyst and/or Eagle Eye Kits.

Works with Windows Media Services and Public URL's

Windows media is a standard player system. Together with Silverlight (same technology behind Netflix.com) there is no better way to mimic terrestrial broadcast systems and have it feed to all platforms via the internet.

WME files open Windows Media Encoder 9 and allow you to manipulate audio settings, etc.

## DNS ENTRIES ARE INCLUDED IN SERVICE PLANS

Operational Scenarios and Schematics can be requested and we will post them on the FAQ Section.

Flash can be used on the Broadcast Kit to the DCV. Make note: It is NOT recommended for reliable mobile encoding, If Flash is used it is suggested that a transcoder be installed to pick up URLs of publishing points on the DCV.

### Requirements to Operate Multiple Kits:

MIMICK TERRESTRIAL TV WITH THE DCV AND BROADCAST KIT COMBINATION. 24/7 LOOPS CONNECTED TO LIVE MOBILE BROADCAST EQUIPMENT IN A TURN KEY SOLUTION. IT WORKS AUTOMATICALLY WITH NO FIREWALL OR IP ADDRESS ASSIGNMENTS FOR EVERY BROADCAST. CONNECT THE THE DCV TO A TRANSCODING SYSTEM SDI, HDMI OR IPTV DISTRIBUTION SYSTEM.

## DCV - THE DIGITAL CONVERGENCE VEHICLE

DCV (DIGITAL CONVERGENCE VEHICLE)

THE DCV IS EASY TO OPERATE



WINDOWS MEDIA SERVICES  
IP BASED TRANSCODING  
SPEEDSTREAM PUSH BASED UPLINK

MULTIPLE BROADCAST KITS TO A SINGLE DCV APPLIANCE

CONNECT TO A DCV WHILE COMPLETELY MOBILE

BLACK MAGIC HDMI TO SDI



SDI W/ AES AUDIO  
OUT  
TO NETWORK

UPLINK

MOBILE WINDOWS MEDIA ENCODER



UPLINK VIA 2G, 3G, 4G, WiFi, BGAN, WAN, LAN (ANY NETWORK)

CONVERT YOUR BACKPACK TRANSMISSION TO SDI AT ANY POINT ALONG THE UPLINK ROUTE

# SECTION III

## Digital Convergence Vehicle (DCV)

Here, you will learn all about the Digital Convergence Vehicle (DCV):

- ✓ DCV 101
- ✓ Rack Mount Appliance
- ✓ Connect to your Private Network
- ✓ Reduce Your Delay
- ✓ Manage/ Regulate Signals to Multiple Platforms
- ✓ Works with Windows Media Services, Public / Private QoS URLs
- ✓ DNS entries are included in service plans

### DCV - THE DIGITAL CONVERGENCE VEHICLE

DCV (DIGITAL CONVERGENCE VEHICLE)



WINDOWS MEDIA SERVICES  
IP BASED TRANSCODING  
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BLACK MAGIC HDMI TO SDI



SDI W/ AES AUDIO  
OUT  
TO NETWORK

UPLINK BGAN

4G  
3G  
2G

UPLINK WiFi  
LAN  
WAN  
BASE BAND

MOBILE WINDOWS MEDIA ENCODER



UPLINK VIA 2G, 3G, 4G, WiFi, BGAN, WAN, LAN (ANY NETWORK)

CONVERT YOUR BACKPACK TRANSMISSION TO SDI AT ANY POINT ALONG THE UPLINK ROUTE

### WHAT IS A DCV?

The Digital Convergence Vehicle by SPEEDSTREAM.TV allows for a more efficient, easy and universal way of live broadcasting in the field to your private network. Broadcast out in the most extreme of operational scenarios. Mimic terrestrial TV/ Radio with the DCV + Catalyst and/ or Eagle Eye Broadcast Kit combo. 24/7 loops connected to live mobile broadcast equipment in a turnkey solution. Automatic detection for firewall and IP address. Connect to transcoding system, SDI, HDMI or IPTV distribution system. DCV is not a transcoder but a consolidated distribution and convergence device. Transcoding software can be included with a SPEEDSTREAM.TV Service Package.

## **RACK MOUNT APPLIANCE**

The DCV is an AUTOMATED SERVER APPLIANCE. It has the necessary server software to LOCATE, DETECT and STREAM up to 50 Catalyst or Eagle Eye Kits. The Kit initiates the server connection and automatically begins a PUSH ENCODING SESSION enabling many more devices to be connected or aggregated with either looped content or on demand live channel URL's..

The DCV is 110/220 power and requires the use of a battery backup unit for surge protection and regulation of consistent power to the device. No static IP addresses are needed for the mobile remote broadcast kits to connect. No firewall port issues on the uplink on a IP based network.

HTTP://

MMS://

RTSP://

RTMP:// *(MUST BE TRANSCODED)*

## **CONNECT TO YOUR PRIVATE NETWORK**

The Push encoding session delay (latency time) can be reduced to 2 seconds depending on the overall topology and network design.

Reduce your Broadcast Delay's

The DCV reduces iptv latency by 45 seconds by manipulating buffer time. Depends on the network but works over base band by the HDMI to SDI Converter from Black Magic Designs.

Manage/ Regulate Signals routed to Multiple Platforms

Procedure to create encoding profiles is located on page

These procedures involve using the touch screen interface of the Broadcast Kit and possibly the mouse and keyboard supplied with the kit:

By saving various broadcast settings by saving them as profiles any number of scenarios can be created. Basic login information and a few configurations are all that is needed.

Once the below information is collected a profile you can create a button for the GUI of the Kit.

The following information is needed only one time. It is required that information be pre-installed at the factory before going out in the field. (Affects demos and end-user clients.

## ITEMS REQUIRED:

IP ADDRESS OF DCV

IP ADDRESS OF GATEWAY

SUBNET MASK

USERNAME – SPEEDSTREAM.TV provides

ROOT USER – SPEEDSTREAM.TV provides

PASSWORD SCHEME – SPEEDSTREAM.TV provides

CHOOSE PUBLISHING POINT SCHEMATIC (SEE PUBLISHING POINT OPTIONS)

KIT DNS NAME OR PUBLISHING POINT ASSIGNMENTS

CAT5 OR CAT 6 CONNECTION USING TCP/IP, NET BIOS

SPECIFY SECURITY - INSTALL VPN, FIREWALL ETC, ROUTING, BROADCAST LINK URLS ETC. TO VARIOUS PUBLISHING POINT NAMES

Once a profile and a button is created on the kit, it will no longer need to modify the buttons (unless hardware changes or software updates as you deem needed).

## SECTION IV

**Tips Section:** More FAQ's <http://speedstream.tv/faq>

### **Touch Screen Monitor:**

If the Touch Screen will not come on see Troubleshooting Tips, below.

### **If the Screen is Black:**

Unplug all USB's from the Kit during power up sequence except when operating a 1394 Firewire Connection. Re-start Kit. If that doesn't work, attach an external monitor and re-start the system.

### **Attaching and External Monitor:**

TIP: Take an external monitor and connect it to the Kit via VGA connector on the side or through the pass through inside of the shell. The Kit is compatible with HDMI and VGA; Monitor should plug into the outside of the Kit or use the Utility Hole Provided to Plug directly into Kit.

This will put you in Bench Mode. In Bench mode allows you to use the Kit just like a Desktop Computer. Plug in External Monitor, USB Keyboard and SB Mouse.

Once you re-boot the computer you should see video on the main monitor. If the LCD Screen is Blank but you see video on the monitor after the system starts up, move to the GUI Automatically.

If this did not resolve issue, Check the Power Blue Light Inside, Check Cable Connecting to LCD Touch Screen.

If external monitor and the Touch Screen consistently stays black or does not appear to be working properly read on:

## **The Touch Screen Remains Blank but the External VGA is working:**

Perform the Touch Screen Reset: By the Clock there is a Display Link Icon you must right click and select Mirror. Usually that will restore LCD and Touch Screen Control. The touch screen operates as a second monitor. Therefore, the main monitor attaches to the cable on the side of the kit with the yellow band. Think of it as a projector screen, when using the Touch Screen it is much like attaching a projector to the Kit for display plus the fact that it allows you to interact with the Touch Control Features built in. Once you get the touch screen configured the way you like, you can remove the main monitor and go mobile. You may want to adjust the double click speed, precision of the pointer, the screen area, font size, etcetera just as you would customize your own laptop. The Touch Screen is different from other monitors as it has a built in web cam for Bench Mode Testing. When creating profiles, adjusting hardware, getting the touch screen calibrated the way you like, we always use the main monitor connection located on the side of the kit to help us. The LCD Touch Screen we use is unique and allows for very little power drain allowing the battery to last longer. When the Touch Screen remains off during boot it is necessary to connect the Backpack in Bench Mode operation. Bench Mode when re-connecting the touch screen is the only way to reset the display drivers. A calibrate Icon is located on the desktop that will help you tune the Kit to your personal preference.

If you are having trouble with the Touch Screen staying off, even after the Backpack is Re-Started, please refer to the Touch Screen Reset - FAQ posted on [http://speedstream.tv/docs/Kit\\_Manual\\_2011v.4e.pdf](http://speedstream.tv/docs/Kit_Manual_2011v.4e.pdf)

Advance Tasks such as a full reset are located at <http://speedstream.tv/faq>

## **Firewire is not working:**

### **NOTE:**

**Although Firewire sends more data through to be encoded the following should be noted:**

**An abrupt loss of transmission occurs when Firewire losses power. (ie. when a camera goes to sleep, runs out of battery, power is not plugged into the wall, tape runs out and etc.) Viewers MUST refresh their browsers because the system will bump them off by default. So plan accordingly for messaging. Therefor due to the complications surrounding Firewire operation SpeedStream.TV recommends composite video. That way if the camera is on or off the stream is still connected. If for some reason it does go to black, the end user/ viewer will be able to watch immediately after re-connection is established by publisher.**

Make sure the Driver has been downloaded, Installed Successful and The Computer Detects your 1394 Device.

Next in manual mode open Windows Media Encoder and see if the 1394 Detects there. If it does you can save a profile and continue.

If none of those work the 1394 device may not be supported. Note: If camera loses power or 1394 connector is removed the stream will halt abruptly and your computing session will be disconnected.

Note: If firewire disconnects during a broadcast, you have 1 minute to re-connect or the distribution system will roll to the next clip. Viewers will either watch the clip and reconnect or they will need to refresh to join the live broadcast again.

### **Best Practice TIP:**

Using composite video the system will allow 60 seconds while the live broadcast appears to go to black, the session does not disconnect and it does not make people need to refresh browsers either.

SpeedStream.TV Equipment is manufactured and supported in Austin Texas.



**THE**

**BROADCAST KIT**

*ONE TOUCH. YOU'RE*

**CONNECTED**