

Streambox® Media Player™ for Windows®

(HD • 2K • UHD • 4K • 8, 10, & 12-bit • 5.1 & 7.1 Audio)

Setup Guide - Review

History: Document for v.1.10

The following list remains to be released:

- Advanced Settings (Many of the Advanced settings features have not yet been turned on)
- Color Space Settings (Currently only Rec.709 is support. More profiles to be added in the next release).
- Channel Sync (Currently, all channels must be added manually. Channel Sync will be added in the near future. If you have a copy of the channels.xml file from other Streambox Media Players, you can copy that to '%appdata%\Streambox\SMPlayer\' to save yourself some typing.)

We would appreciate timely feedback of any bugs and suggestions for improvement.

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Introduction

Streambox® Media Player for Windows OS is an HD/UHD player for IP video streams arriving from Streambox encoders or from the Streambox Cloud services. The Media Player is well suited for streams being pushed (routed to) or pulled from the Streambox Cloud Services.



Getting Started

Installing the Media Player:

- Install the *Streambox Media Player* from www.Streambox.com
- Make sure your device has good internet connection (LAN, Mobile, or WiFi)
- Open Streambox Media Player

Home/Main Screen

The video is presented in the top panel of the status mode (image above). Clicking the full screen icon (red arrow) puts the viewer in full screen mode (image below); press Esc to return to default mode.

Full Screen Mode:

When in full screen mode, you can display the control buttons (see red square) by clicking anywhere in the video display area.



Status Mode



In Status Mode, the metadata and video properties are displayed under the video:

- **Status line** appears just above the video image and displays the player status, the incoming video format and color profile (see top image, previous page, green arrow).
- **Video display** provides an aspect ratio correct display of the incoming video. When there is no incoming stream, a standard splash screen is displayed (see top image, previous page,).
- **Audio meter** is displayed as a green bar just under the Video Display (see green bar just below Video display in image above).
- **Channel:** Name of current Channel or Session
- **Session ID:** Field used to enter Session ID (see Sessions section below). The Session ID will be provided to you from the person setting up the session. Once the Session ID is entered (click Go) the Media Player waits for the session to start.
- **Metadata** (text encoded in video stream); i.e., *Title*, *Location*, *DRM* (aka, Group, Network1), *Source* (aka, Reporter), Source *IP* of stream source, and *Bitrate* from stream source.
- **Stream data** (ascertained from incoming stream); i.e., *Local/Public IP* of the unit, *Port* receiving stream, *Current Bitrate* of incoming stream, *Encryption* status of incoming stream, and *Video In*, the format, color profile, and audio channels (e.g., Mono, Stereo, 5.1, and 7.1, or downmix) of the incoming stream
    - **Local IP** is needed if you want to send a video stream directly to the Media Player over the local network. If the video source and the Media Player are on separate networks

separated by a firewall, you may have to set up port forwarding on the network where the Media Player is connected. Port forwarding is a firewall/gateway setting. Make sure both the device IP and desired port match (see Channel Settings for Port ID below).

- **Encryption** indicates if the incoming stream is encrypted. If it is, a matching Decryption Key will need to be set for the channel used (see Setup Channels section below) and the method of encryption will be displayed (e.g., AES128). If the encryption keys do not match, an error, 'wrong key', will be displayed.
- **Downmix** when Downmix is enabled on the Advanced Page (see Advanced Settings section below) multichannel audio (e.g., 5.1 and 7.1) will be downmixed to 2-channel stereo to be compatible with most audio systems (e.g., laptops, etc.).

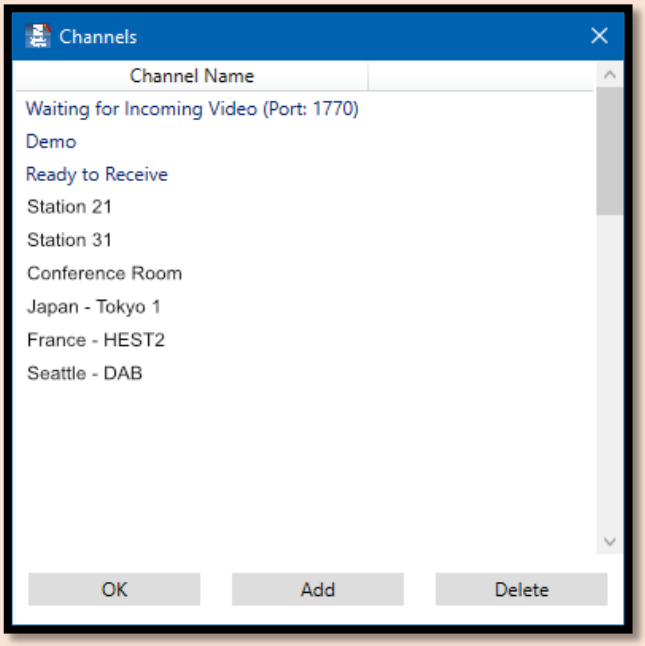
- **Version number** is displayed at the bottom-middle of the screen. This is only needed for Support assistance.

Control Buttons

Control buttons appear at the bottom of the main page (click anywhere on the video display in full screen mode to show the control buttons).

- **Channels** button opens a menu from which to select programmable channels (only active channels are displayed).
- **Settings** button opens a menu from which to select *Setup Channels and Advanced Settings*; both covered in sections below. *About…* opens the About page. See second image on right.
- **Stop** button initiates a stop stream process to shut down the current incoming stream. This can take up to 30 seconds. Once completed, the Channel display will be changed to "Please select a channel". This is a prompt to remind you to select a new channel or enter a new Session ID.

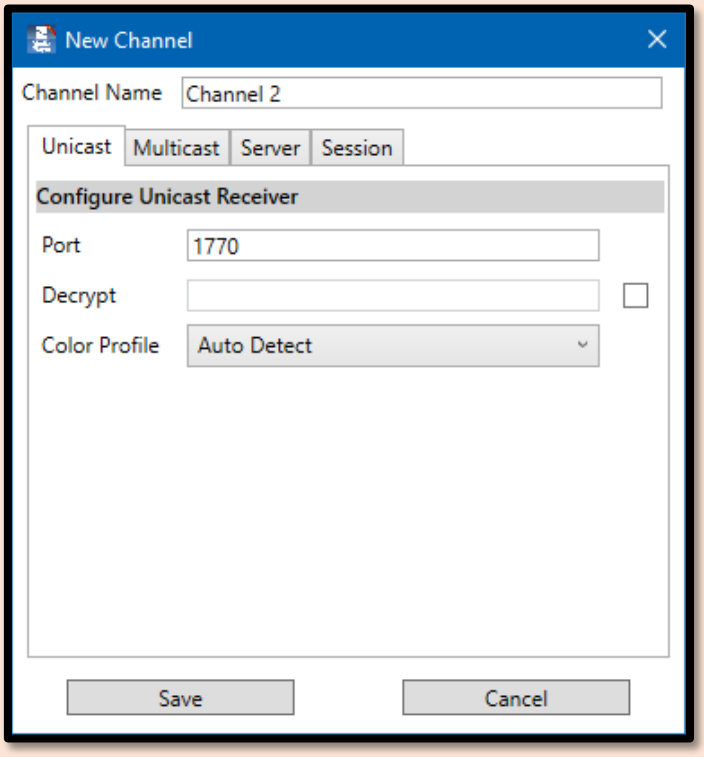
Setup Channels



The Media Player supports 30 programmable channels. Save channels to receive direct streaming over more than one port, or to pull from Streambox Cloud services, or to display multicast streams, or channels for recurring Sessions, and of course any combination of the above. Each channel can be assigned a unique name. Once set up, it is easy to select an active channel from the Channels menu.

To create/edit channels, select 'Setup Channels' from the Settings menu on the Home page; the *Channels* page will open (see image). From here, you can modify a currently defined channel by double-clicking on its row, or you can choose 'Add' to add a new channel or 'Delete' to delete a selected channel.

Add a Channel



To add a channel, click the 'Add' button. This will open a blank channel page. You can choose from Unicast, Multicast, Server, and Session modes (see respective sections below).

Unicast

Selecting 'Unicast' mode allows a video stream to be delivered directly to the Media Player. This is ideal for point-to-point streaming from a media source via Streambox Cloud services directly to the Media Player.[1]

- Provide a Channel Name that helps you remember the behavior of the channel.
- Set *Port* number (1770, 1771, 1772, and 1773

[1] See www.Streambox.com for a list of Streambox encoders and Cloud services

are typical for UDP video streaming). 1770 is the default.

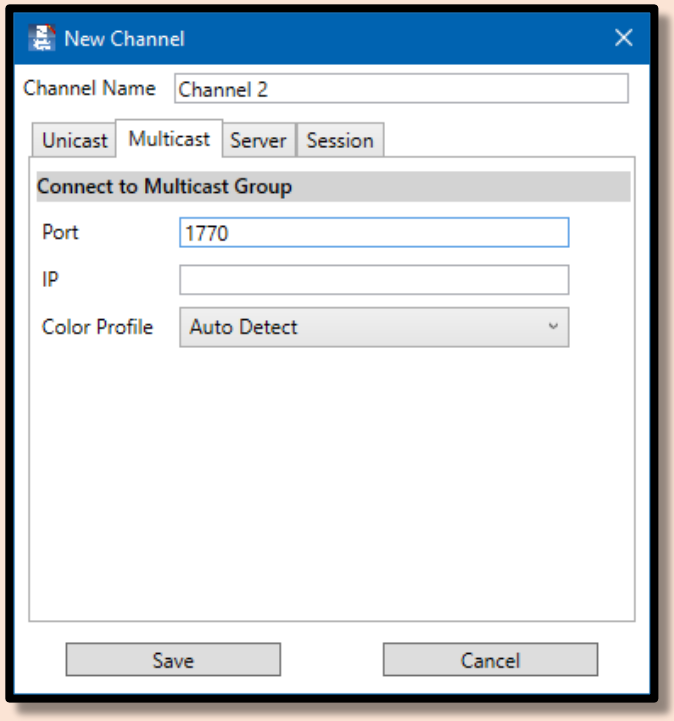
- Enter *Decrypt* key that matches the encryption key used by the encoder. Leave blank if no encryption was used.
- Select *Color Profile*. NOTE: *Auto Detect* is only supported in this version. More profiles to come in next release.
- Click 'Save'.

Now you can stream directly to the Media Player by selecting a Unicast channel. Set the Decoder IP (destination) on your Streambox source (encoder or cloud routing) to the IPv4 address of the network where the Media Player is located. IPv4 addresses have the common IP appearance (e.g., 72.21.215.90) of a numeric address. Set the Port number to match the one set for the Media Player channel (e.g., 1770). Start the stream – it should appear on the Media Player within just a few seconds (but sometimes it can take a minute).

Remember: If the video source and the Media Player are on separate networks, separated by a firewall, you must set up port forwarding on the network where the Media Player is connected. Port forwarding is a router setting. Make sure both the Device IP and Port number match (you can usually define a port range to support multiple channels, e.g., 1770 to 1779).

Multicast

The use of multicast can be useful where a stream needs to be shared within a closed network, e.g., multiroom lectures or sermons. The one or several Media Players can be used to capture and display the multicast stream. Note: multicast is a router feature that is supported by most routers.



The Multicast mode must be used within a single network. A Streambox Encoder must be setup for multicasting with matching settings, IP and Port.

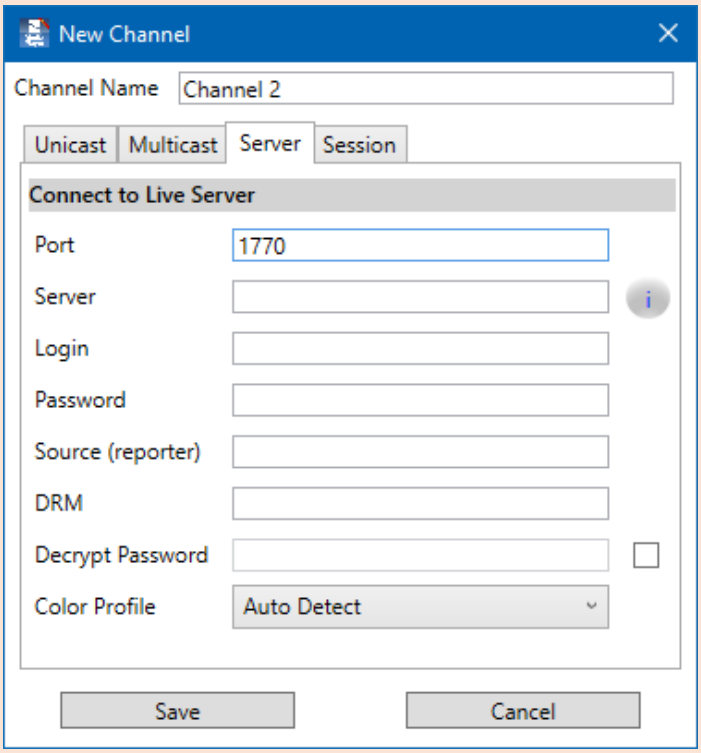
The IP address must be in the range reserved for multicast use: 224.0.0.1 to 239.255.255.255.

Server

Selecting 'Server' mode allows a video stream to be pulled from the Streambox Cloud or from a Streambox Enterprise Server. This is ideal when you have many sources streaming videos and you want

to select one of them.

- Provide a Channel Name that helps you remember the behavior of the channel
- Enter Port number (1770 (default), 1771, 1772… are common)
- Select a Streambox Cloud Server (click 'i' icon to open list of servers)
- Enter server login credentials; 'Login' and 'Password'
- Enter Source name (this must match *Reporter* of the source's metadata). Source is a generic designation and can be anything from a name to an event name, or a course name, etc.
- Enter DRM (aka, Group name or Network1)
- Enter *Decrypt* key that matches the encryption key used by the encoder. Leave blank if no encryption was used.
- Select *Color Profile*. NOTE: *Auto Detect* is only supported in this version. More profiles to come in next release.
- Click 'Save'.

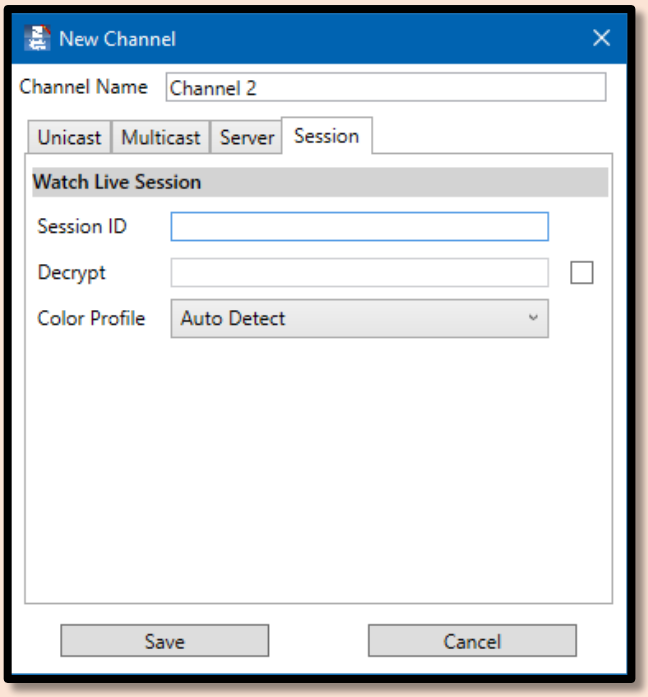


Once a channel with Mode set to Server is selected from the *Channel* menu, Media Player will attempt to log-on to the specified server with the provided credentials. If login succeeds, Media Player will then request a video stream with the specified Source (Reporter) name; if found, the stream will start. This process can take up to a couple of minutes.

Note: The Source (Reporter) name should not be the same as the user (login) name. For example, if the username is David, the Source (Reporter) name could be David1 or any other name except David itself.

Sessions

Streambox® Sessions™ makes video production collaboration easy. This is ideal for offsite producers, colorist, advisors, and others. All you do is create a session and stream to it, share the Session ID with collaborators, they plug the Session ID into the Streambox Media Play, and all are live, reviewing the same high quality, color rich, video. The Session ID can be entered directly on the Home page (see Page 3) or can be saved as a Channel for convenient recall (see image below). The latter is required if the stream is encrypted.



Note: The host of the session will provide the Session ID.

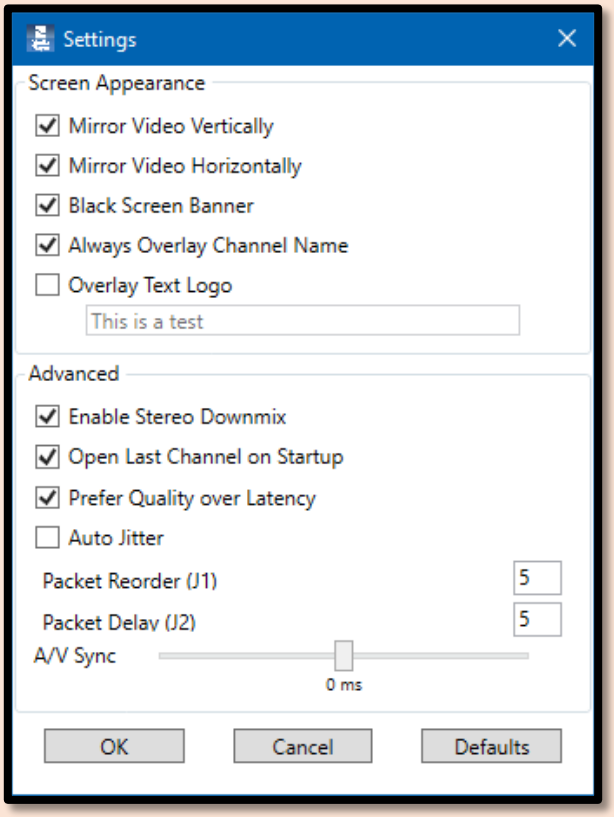
- Provide a Channel Name that helps you remember the behavior of the channel
- Enter the Session ID
- Enter a Decryption/Encryption password if used (switch on to apply)
- Select a Color Profile. We recommend Auto Detect; as mentioned above, Color Profile.
- Click ‘Save’.

Advanced Settings

Selecting *Advanced Settings* from the *Settings* menu will open the Settings page.

Screen Appearance

The Screen settings are straight forward and adjust the screen presentation:



- **Mirror Video Vertically** inverts the display along the vertical axis; that is, upside-down mirror image or prompter view (see comparison image below, page 11). NOTE: Not supported in current version
- **Mirror Video Horizontally** inverts the display along the horizontal axis; that is, mirror image (see comparison image below, page 11). NOTE: Not supported in current version
- **Black Screen Banner** is a black/blank opening screen
- **Always Overlay Channel Name** displays channel name in lower left-hand corner of the screen
- **Overlay Text Logo** displays custom text in the upper left-hand corner of the screen

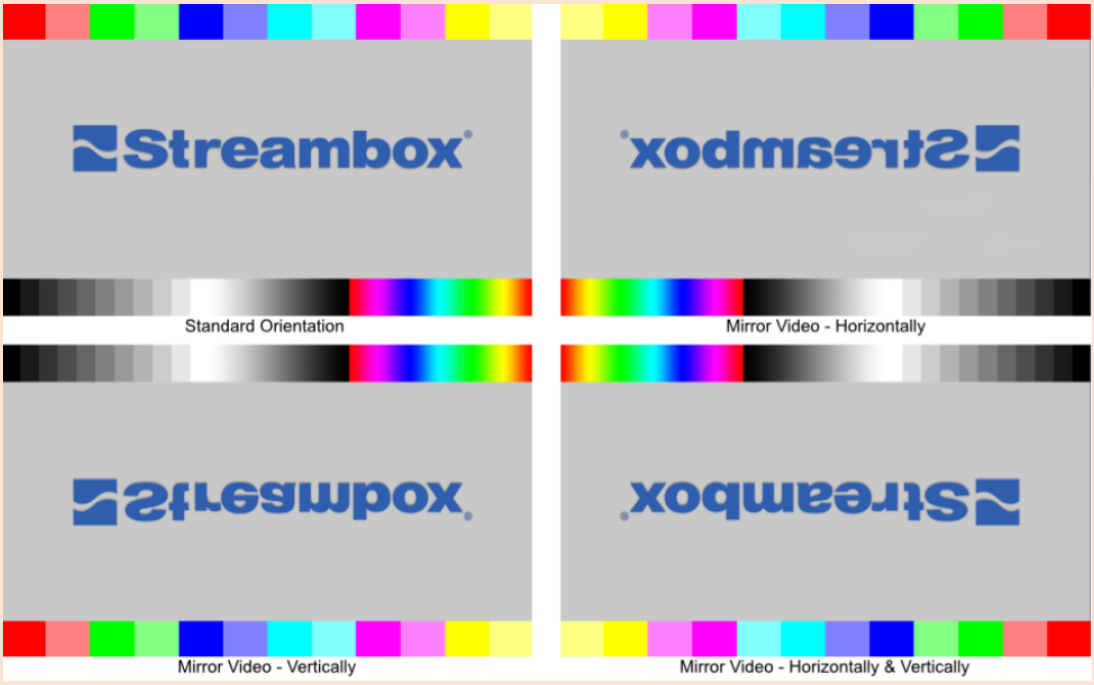
Advanced

Advanced settings are usually reserved for product support fine tuning.

- **Enable Stereo Downmix** multichannel audio (e.g., 5.1 and 7.1) will be downmixed to 2-channel stereo to be compatible with most audio systems (e.g., laptops, etc.). Uncheck if your system supports 5.1 or 7.1 audio. NOTE: You must restart the Media Player if you change this setting.
- **Open Last Channel on Startup** reloads last used channel on startup
- **Prefer Quality over Latency** compensates for network delays and should remain on unless Support recommends otherwise.
- **Auto Jitter** is a legacy filter that is rarely deployed.
- **Packet Reorder (J1)** refers to the size of a buffer of data packets. This allows sufficient data to be buffered to compensate for small dips in network activity or occasional data corruption.
- **Packet Delay (J2)** refers to the initial offset buffer between when packets arrive and when packets

are rendered into a video stream. This is another method to compensate for variations in network activity; that is, even if the network gets a little backed up, there should be enough data in the buffer to provide a smooth and continuous video. NOTE: When LDMP is active on the Encoder, these values may be overridden by the Encoder LDMP settings.

- **A/V Sync** is used to fine tune the synchronization between audio and video which are rendered separately. Sometimes you can see someone talking and the action of their mouth is a little out of sync with the audio of their speech. Usually, the difference is temporary or so minor that most viewers are unaware. Should this become a significant issue, the A/V Offset can be used to add or subtract delay in the audio track.



Media Player Specifications

Feature	Windows
Rec'v Point-to-Point Streams	YES
Pull from Cloud	YES
Pull from ES	NO (Optional)
Play Files	NO
Session Compatible	YES
Quick Session	YES
Programmable Channels	30
Channel Modes	Unicast, Server, Multicast, Sessions
Sync Channels, Remote	NO
A/V Offset	YES
Horizontal Flip	YES
Vertical Flip (Teleprompter)	YES
Full Screen playout	YES
Output (Blackmagic adapter)	NO
Decryption AES 128-bit	YES
Decryption AES 192/256-bit	YES (Optional)
ACT-L3 Codec (auto switch)	YES
ACT-L5 Codec (auto switch)	YES
Dynamic Resolution	YES
Stream Resolution	SD/HD/2K/UHD/DCI/4K
Decoding	8, 10, and 12-bit
Chroma Subsampling	4:2:0, 4:2:2, 4:4:4
Video Output RGB	24-bit, 4:4:4
HDR Video (PQ encoding)	YES
Color gamut	Rec.709 (other standards coming soon)
Full Color Fidelity	YES
Audio Codecs	AAC, GSM, CELP, PCM
Audio Channels	Mono, Stereo, 5.1 & 7.1, and downmix 5.1 & 7.1

Support

Email **support@streambox.com** for a response within 24 business hours.

The below information will help to expedite your support request:

- Your name
- Company name
- Contact information and best time(s) to reach you
- Media Player version number (include platform, Windows & version)
- Steps to reproduce and/or a detailed description of your support questions/needs, and the outcome expected

Privacy Notice

http://www.streambox.com/streambox-inc-privacy-policy/

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