



Broadcast Radio Encoder – User Guide

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Introduction

The Broadcast Radio Encoder application has been developed to provide a simple, effective tool for encoding audio to be streamed live over the web.

Whilst there are various applications and hardware devices that offer similar functionality, there are a few features in the Broadcast Radio Encoder (BR Encoder) that make it a unique product, ideally suited to use in a broadcast environment where other Broadcast Radio products are also in use.

These unique features include:

- Direct 'Now Playing' information feed from Myriad 5 Payout.
- Direct 'Now Playing' information feed to the Broadcast Player.
- Ability to start / stop streams directly in Myriad Payout (coming soon).
- Native connection to our streaming platform.
- Runs as a service so can be installed on PC's or servers that are normally 'logged off'.
- Monitoring application can be run from anywhere on your network.
- Native support for our redundant server streaming platform (for Platinum customers).

Other exciting features include:

- VST Plugin support for 3rd party audio processors.
- Password protect key features such as starting/stopping streams, updating 'Now Playing' information and accessing settings.

We also offer a **Pro Version** of the application that enhances the application with the following features.

- Add second output (different server, quality or both) per encoder.
- Add multiple encoder outputs (for encoding several stations with the same application).
- Set VST Plugin settings per encoder.

Installation & Setup

Because the BR Encoder runs as a 'service', the setup process is slightly different to most Broadcast Radio software installations. Here are the steps you need to follow to install the BR Encoder Service and Monitor Application.

Glossary

Before we get started on setting up your BR Encoder, there are a couple of terms we will use which are worth defining.

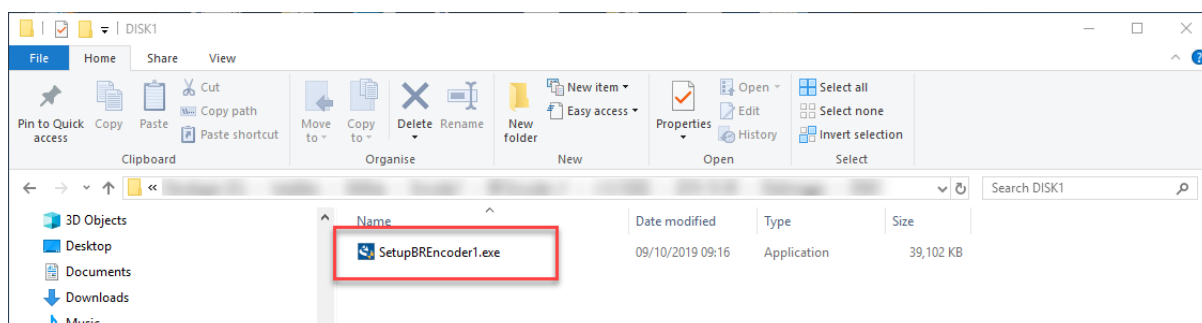
- **Encoder** – One or more streams that are being encoded from a single audio input. You would normally have one Encoder per station, even if you have more than one stream within that Encoder. So Hot FM would be one encoder but Hot Classics would be a different encoder as it is a different station and will be encoded from a different soundcard input.
- **Server** – This is a single 'stream' within an Encoder. You will always have at least one Server per Encoder but you might have more than one Server if you are connecting to redundant servers or need to run two different audio qualities within an Encoder
- **BR Encoder Standard** – This is the standard edition of BR Encoder and can only be used to connect to the Broadcast Radio Streaming Platform. BR Encoder Standard is provided free of charge to all Broadcast Radio Streaming Platform customers.

- **BR Encoder Pro** – This is an enhanced version of BR Encoder that can be purchased from Broadcast Radio. BR Encoder Pro enables multiple Encoders and Additional Servers within each Encoder. You will need the Pro version if you want to encode several stations using a single BR Encoder instance.
- **Broadcast Radio Streaming Platform** – This is the streaming platform run by Broadcast Radio. It is a series of servers used to re-distribute encoded audio (web radio) to listeners.
- **Broadcast Radio Player** – This is a visual player used to access streams on the Broadcast Radio Streaming Platform. Customers can customise the BR Player with their own logo, colour scheme, text and an 'embed' code is provided to easily embed the player on your own website. The BR Player is accessed via a web portal at <http://player.broadcastradio.com>.
- **VST Plugin** – A VST Plugin is a third party 'audio processing' tool that BR Encoder can use to enhance the audio prior to encoding for web streaming. Many third part VST plugins exist with costs ranging from free to several hundred pounds. BR Encoder is compatible with the VST Plugin framework (v2 only) so can use any VST Plugin written to work within this framework although please keep in mind that VST Plugins are 3rd party and we offer no guarantees that your chosen VST Plugin will work or be effective with BR Encoder. We strongly recommend you try a VST Plugin before you buy it. We have tested BR Encoder with Stereo Tool (<https://www.stereotool.com/>) during the development stage and would recommend you take a look. Unfortunately we cannot offer any support or guidance on the installation and setup of 3rd party VST Plugins.
- **Service** – A service is a special type of Windows application that runs in the 'background' of Windows meaning you do not have to be logged into Windows for it to function. The downside is that usually, a Service does not have a user interface so in the case of BR Encoder, the BR Encoder Monitor application is used to check status of the BR Encoder Server and to change most settings.

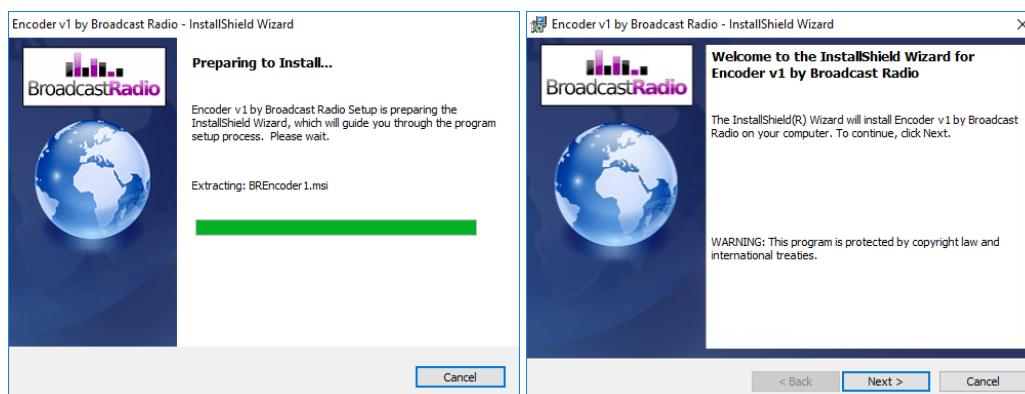
Installation

N.B. You should do this on the PC that you want to do the audio encoding.

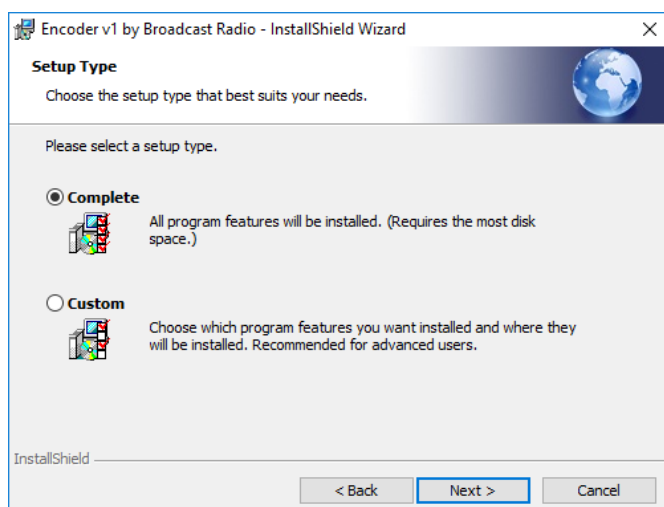
1. Download the **SetupBREncoder1.exe** from our website (you will be sent the download link along with your license details).
2. Once you have the correct file, double click on it to begin the process. You may be asked if you wish to proceed with the file, click on the **Run** button.



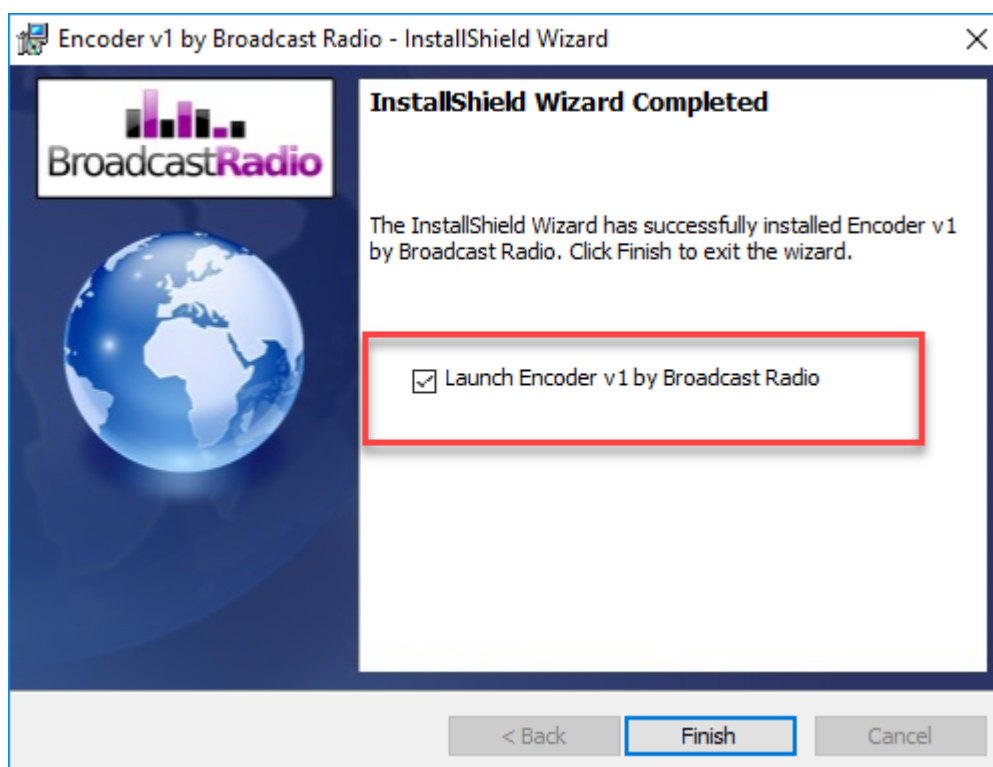
3. You will also most likely be asked to confirm you want to proceed by the Windows Security system (just like when installing most applications). Click on **Yes** to start the installation process.
4. The first phase copies the installation files and extracts the necessary data. Once that is complete you will be asked to proceed with the Installation. Click **Next**.



5. Next you will see the license agreement. Read through and when you are happy click on the **'I accept the terms of the license agreement'** option and click **Next**.

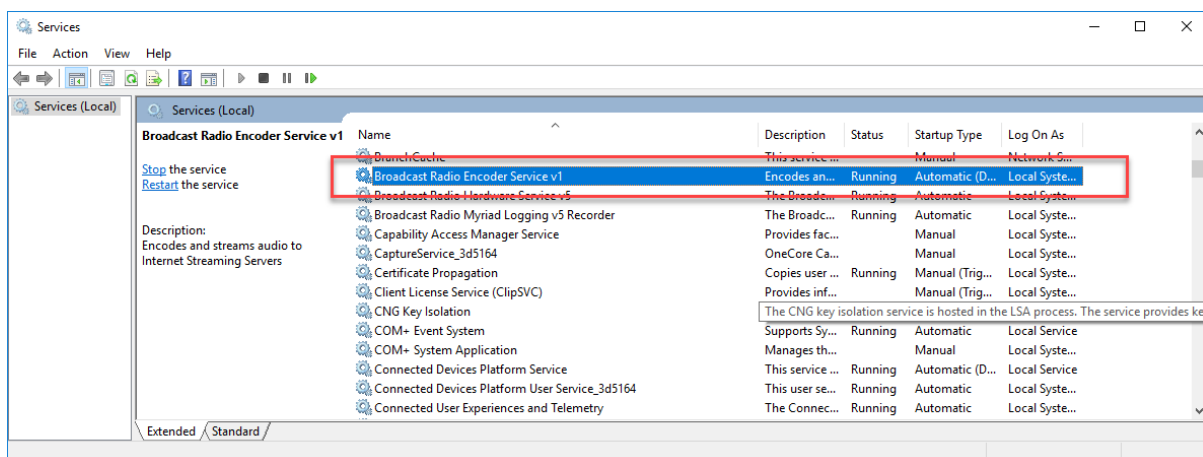


6. Next you will be asked whether you wish to proceed with a Complete or Custom installation. Select the **Complete** option and click **Next**.
7. The next page asks you to confirm the installation, click on the **Install** button.
8. The installation will now proceed and should only take a short time to complete.
9. Once the installation process has finished, tick the **Launch Encoder** option and then click **Finish**.



The BR Encoder Monitor application will now automatically start. The BR Encoder Service is also automatically started in the background.





Initial Setup

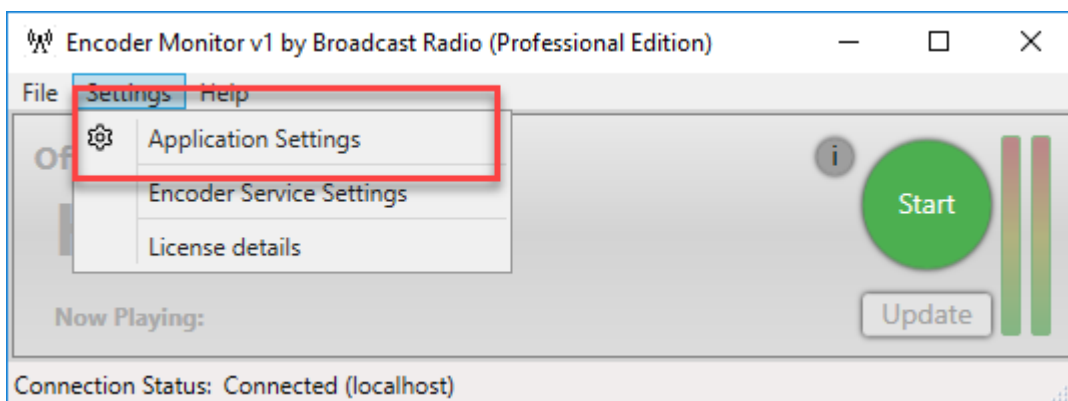
The BR Encoder runs as a service which is a special type of application that runs in the background of Windows, even when no user is logged on. Part of the requirement to run as a service is that the application cannot have a user interface (UI). Setup and status monitoring of the BR Encoder is done via the BR Encoder Monitor application (shown below).



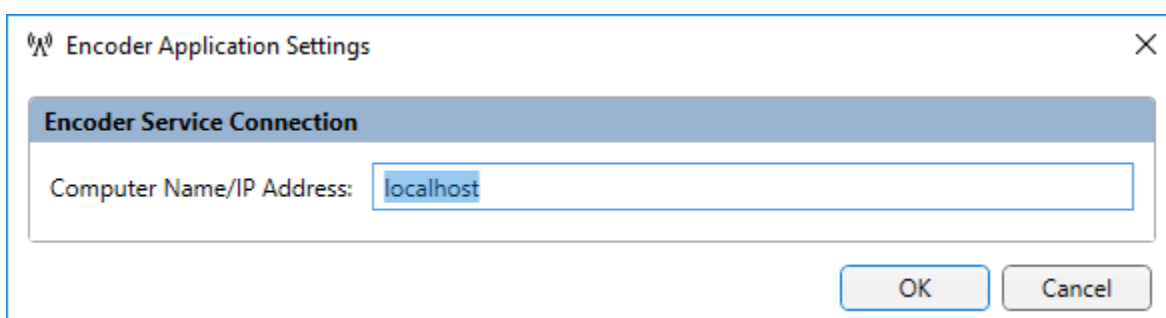
If you have just installed the BR Encoder (following the steps in the previous section) then the service is already running, and the Monitor Application should be open and ready for you to configure.

We will run through the Monitor Application in more detail in a later section but for now we will go through the steps for setting up a basic stream that will be hosted on the Broadcast Radio Streaming Platform.

1. Click on the **Settings** menu and select **Application Settings**.



2. This setting allows you to set the location IP address of the BR Encoder service. If you are running the Monitor Application on the same PC as the service then this should be set to **localhost**, otherwise type in the IP address of the PC that the service is running on.

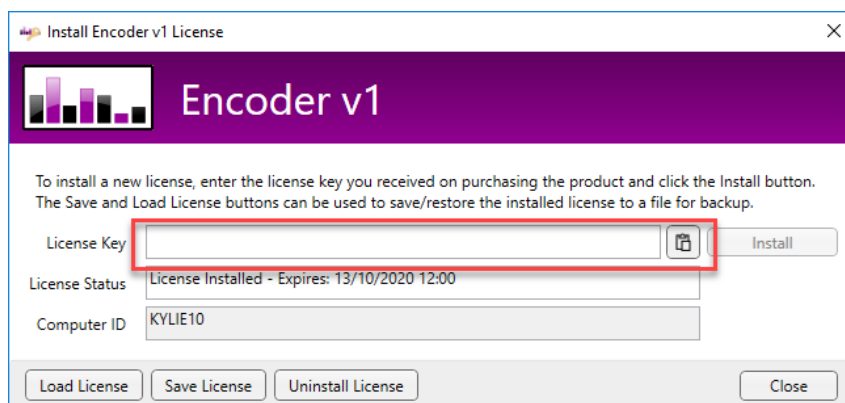


3. Before we proceed to add in the server connection details, we need to think about licensing. Whether you need to license the BR Encoder application will depend on what you intend to use it for:

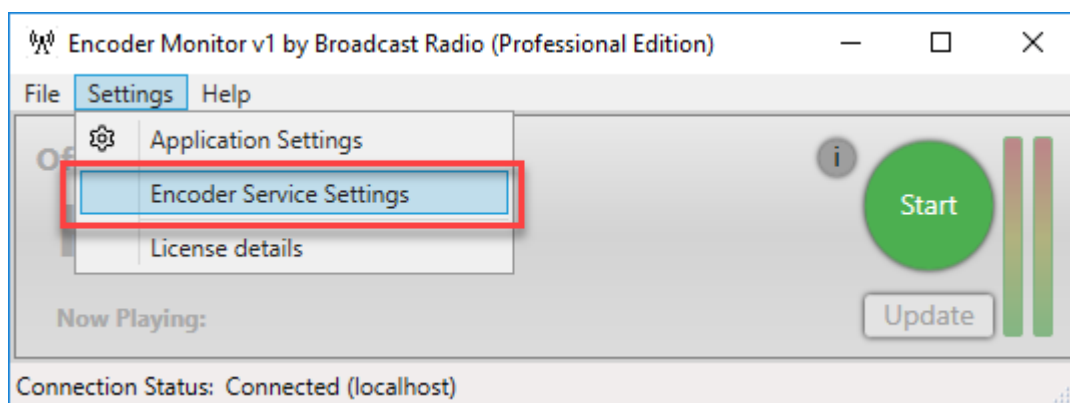
- **Gold Streaming Customers** – If you are using the BR Encoder to encode audio for Gold Streaming package with Broadcast Radio then **you do not need to license BR Encoder** and can move on to the next step.
- **Platinum Streaming Customers** – Customers wishing to use the BR Encoder to encode audio for a Broadcast Radio Platinum Streaming Package **will need to license the BR Encoder** in order to enable pushing the stream to the primary and redundant servers. The BR Encoder is free for Platinum customers so whilst you will need a license from us, it will not cost you anything whilst your streaming is hosted with us! We will send you a **License Key** which you can use to unlock the features you need.
- **BR Encoder Pro Customers** – If you opted to purchase the **Pro** version of the software to enable you to encode multiple streams and use 3rd party streaming platforms then **you will need to license the BR Encoder**. If you have purchased the Pro version of the application, then we will send you a **License key** to unlock all features.

Follow these steps to license your product:

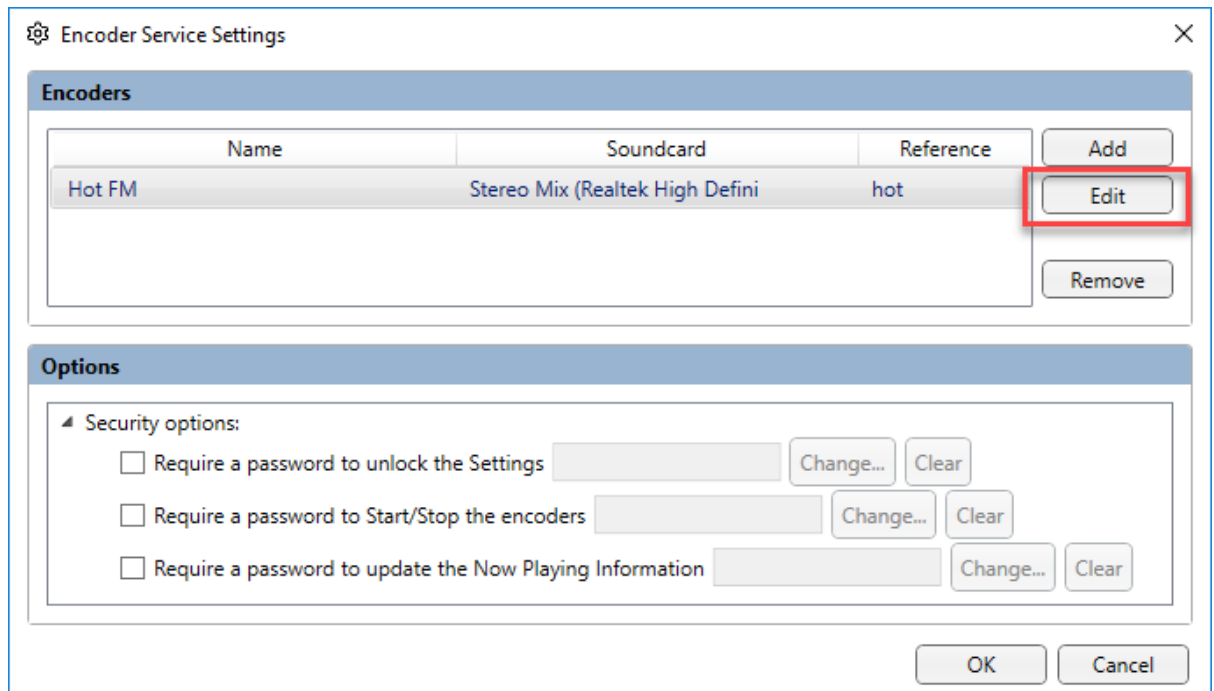
- a. Click on the **Settings Menu** and select **License Details**.
- b. Click on the **Install / Uninstall License Key** button.
- c. Paste the **License Key** you should have received into the 'License Key' field.



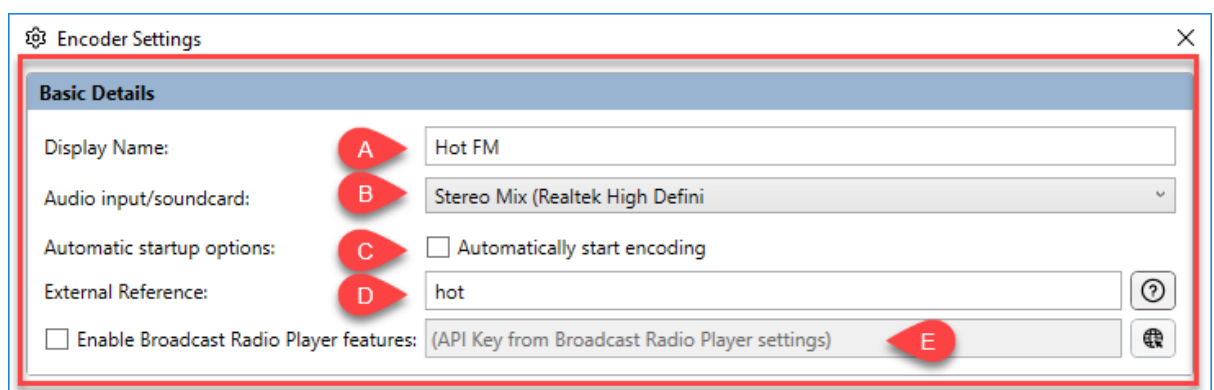
- d. Click on the **Install** button.
 - e. The software will contact our licensing servers and license your application automatically. If you receive a message telling you the license process was not successful, then you should contact our support team for more information.
4. Click on the **Settings Menu** and select the **Encoder Service Settings**.



5. This will open the **Encoder Service Settings** which is used to setup the details used to connect to the streaming platform as well as how to connect to the Broadcast Player (if you are using it). As this is the first installation, there should be an example 'Encoder' already setup. Highlight it and click on the **Edit Button**.



6. The top section of the window allows you to set the **Basic Details** for the Encoder.



- A. **Display Name:** This is the name that will be displayed in the BR Encoder Monitor Application. It would usually be set to the Station's name.
- B. **Audio Input / Soundcard:** This is the audio input the Encoder Service should use for this Encoder. Use the dropdown list to select the correct soundcard input.
- C. **Automatic Startup Options:** This tick box allows you to set whether the Service should automatically start when the PC starts. Normally this would be ticked unless you want the user to manually start and stop your stream at all times.
- D. **External Reference:** This is used by Myriad 5 Payout to identify the Encoder it should be sending 'Now Playing' information to (v5.21 or higher). Use a unique reference here and make a note of it as you will need to also add the same reference to 'Station' in Myriad that you want to push the 'Now Playing' information from.
- E. **Enable Broadcast Radio Player Features:** If you are using our Broadcast Player to allow listeners to listen to your stream, the BR Encoder can 'push' now playing information directly to your Player using this setting. When you login to your

Broadcast Radio Player portal (player.broadcastradio.com) and click on the **Edit** button, you can then navigate to the **API Key** tab and copy your unique API Key.



Station Information	Live Stream	Podcasts	API keys
---------------------	-------------	----------	----------

Manage your API key

Re-generate API key

Key successfully created

Your API key is: **oiWsRH**

Your JSON feed is: <http://player.broadcastradio.com/api/users/>

API specific URLs:

- GET: <http://player.broadcastradio.com/api/users/>
- POST: <http://player.broadcastradio.com/api/user/>

Paste your API Key into this field and your BR Encoder will be able to update the Now Playing section of your BR Player directly.

- The middle section of the window is used to setup the **Primary Streaming Service Details** which is mainly used to set the audio format of your stream along with the location and security credentials needed to 'push' content to it.

Before you proceed with this section, you will need to have the streaming server connection details provided by your streaming provider. If you are streaming using the Broadcast Radio Streaming Platform then you will receive a document like the one outlined below. The key information you will need from this document is highlighted below along with the corresponding step you will need to use the information to complete.



PSQUID Customer Reference: [REDACTED]
Issue Date: Tuesday, 15 October 2019

Congratulations!

You are now streaming your station 24hrs a day, 7 days a week. A potential audience from around the planet can now experience your music, your news, your sport, your programming.

I will be your account manager for this service, and you can call me on: 01482 350700 or you can e-mail hello@broadcastradio.com If you have any technical questions or you need the assistance of our engineers, please call the above number or e-mail support@broadcastradio.com

You should ask your IT department to open the BASE PORT number (listed below) in order to allow both streaming and listening for your Broadcast Radio station.

Here is a technical summary for your records:

Streaming Package Details	
Streaming Format	MP3 - 128kbps
Maximum Concurrent Connections	1000
Mount Point	E yourstationmountpoint
Connection Username	Source
Connection Password	F Password
Streaming Server	B streaming.broadcastradio.com
Base/Server Port	C 10000 - This should also be the port your IT department opens
Icecast Status Page	http://streaming.broadcastradio.com:10000
Payout URL	http://streaming.broadcastradio.com:10000/yourstationmountpoint
Base/Server Port (HTTPS)	10010 - This should also be the port your IT department opens
Icecast Status Page (HTTPS)	https://streaming.broadcastradio.com:10010
Payout URL (HTTPS)	https://streaming.broadcastradio.com:10010/yourstationmountpoint
Broadcast Radio Player Details	
Broadcast Radio Player Login Page	http://player.broadcastradio.com/sessions/new
Broadcast Radio Player Login Name	Yourstationlogin
Broadcast Radio Player Login Password	Password
Broadcast Radio Player Listen Link	http://player.broadcastradio.com/yourstation
Service Start Date	15/10/2019
Service Renewal Date	15/10/2060

PLEASE NOTE:

Please note the settings above are for example purposes only and will not work with your BR Encoder! Also note that there is no need to 'push' a stream to the HTTPS mount point. This is automatically generated from the standard mount point by the BR Radio Streaming Platform.

The **Primary Streaming Server Details** section is detailed below along with a step by step guide to what you need to complete this section.

Primary Streaming Server Details

Stream audio format: **A** MP3 Bitrate: 128 Kbit Sample rate: 44,100 Channels: Stereo

Server Name/IP Address: **B** streaming.broadcastradio.com **C** Port: 8340

D ☐ Also send to secondary ('Resilient') Streaming Server **E** **F** ?

Mountpoint Name: **E** broadcastradiales Password: Set Password

Stream Name: **G** Hot FM

Stream Description: **H** My Stream Description

Stream Genre: **I** various

- A. Stream Audio Format:** Use the drop down options to select the audio format and quality that you want to stream in.

Primary Streaming Server Details

Stream audio format: MP3 Bitrate: 128 Kbit Sample rate: 44,100 Channels: Stereo

Server Name/IP Address: broadcastradio.com Port: 8340

☒ Also send to secondary ('Resilient') Streaming Server ?

Mountpoint Name: broadcastradiales Password: Set Password

Stream Name: Hot FM

Stream Description: My Stream Description

Stream Genre: various

- B. Server Name / IP Address:** This is the server name or IP address of the hosting (Icast) server you want to 'push' your stream to. This field is only enabled for **BR Encoder Pro**. The Standard version automatically pushes content to our streaming platform only.
- C. Port:** The Port is a unique number that is used to connect to your specific streaming service on an Icast server. Type in the Port Number exactly as it appears in the information provided by your streaming provider. Please note that you may also have to open this Port Number on your stations Firewall if your security settings are set high.
- D. Enable Send To Secondary Streaming Server:** This is only used for **Platinum Streaming Customers** on the **Broadcast Radio Streaming Platform**. Ticking this option will automatically send a secondary stream, to a backup server. Listeners will then automatically be 'balanced' between both servers which doubles capacity (under normal circumstances) and offers redundancy in the event of a server failure. **Platinum streaming is available for just £15+vat per month for redundant streaming and peak connections of 2000 listeners @ 128kbps**. This option is only available to Platinum streaming customers.
- E. Mountpoint:** This is another unique reference that will be provided by your service provide and should the typed in exactly as it appears in your connection details document.

- F. **Password:** This password prevents unauthorised people from streaming through your mountpoint. Click on the **Set Password** button and type in the password exactly as it appears in your connection details document.
 - G. **Stream Name:** This is the name that will appear embedded in the actual stream and is also what will be displayed if listeners access your stream directly through third party media players such as Windows Media Player.
 - H. **Stream Description:** This field is also embedded in the stream and is sometimes displayed on 3rd party players.
 - I. **Stream Genre:** This information is embedded in the stream and often used by 3rd party players to display genre. Some 'aggregators' such as TuneIn sort stations by genre within their directory listings.
8. The **Enable Additional Streaming Server** option is only available for **BR Encoder Pro** users. It allows you to add a secondary streaming server mount point to connect to using the same audio input. This features is commonly used in two scenarios:
- Adding a second audio quality for the same stream (eg lower quality for mobile app).
 - Connecting to a second service provider for additional redundancy.

Ticking this option will enable the Additional Stream Server section which has the same settings outlined in step '7'.

The screenshot shows the 'Encoder Settings' window with the following sections:

- Basic Details:**
 - Display Name: Hot FM
 - Audio input/soundcard: Stereo Mix (Realtek High Defini)
 - Automatic startup options: ☒ Automatically start encoding
 - External Reference: hot
 - ☒ Connect to Broadcast Radio Player: hRuQWwKIVccedPq
- Primary Streaming Server Details:**
 - Stream audio format: MP3, Bitrate: 128 Kbit, Sample rate: 44,100, Channels: Stereo
 - Server Name/IP Address: streaming.broadcastradio.com, Port: 8000
 - ☐ Also send to secondary ('Resilient') Streaming Server
 - Mountpoint Name: broadcastradiosales, Password: Set Password
 - Stream Name: Hot FM
 - Stream Description: My Stream Description
 - Stream Genre: various
- Enable Additional Streaming Server (highlighted with a red box):**
 - ☒ Enable Additional Streaming Server
 - Stream audio format: MP3, Bitrate: 128 Kbit, Sample rate: 44,100, Channels: Stereo
 - Server Name/IP Address: streaming.broadcastradio.com, Port: 10000
 - ☐ Also send to secondary ('Resilient') Streaming Server
 - Mountpoint Name: broadcastradiosales, Password: Set Password
 - Stream Name: Hot FM
 - Stream Description: My Stream Description
 - Stream Genre: various

At the bottom right are 'OK' and 'Cancel' buttons.

When you have finished, click on **OK** to save the settings and close the Window.

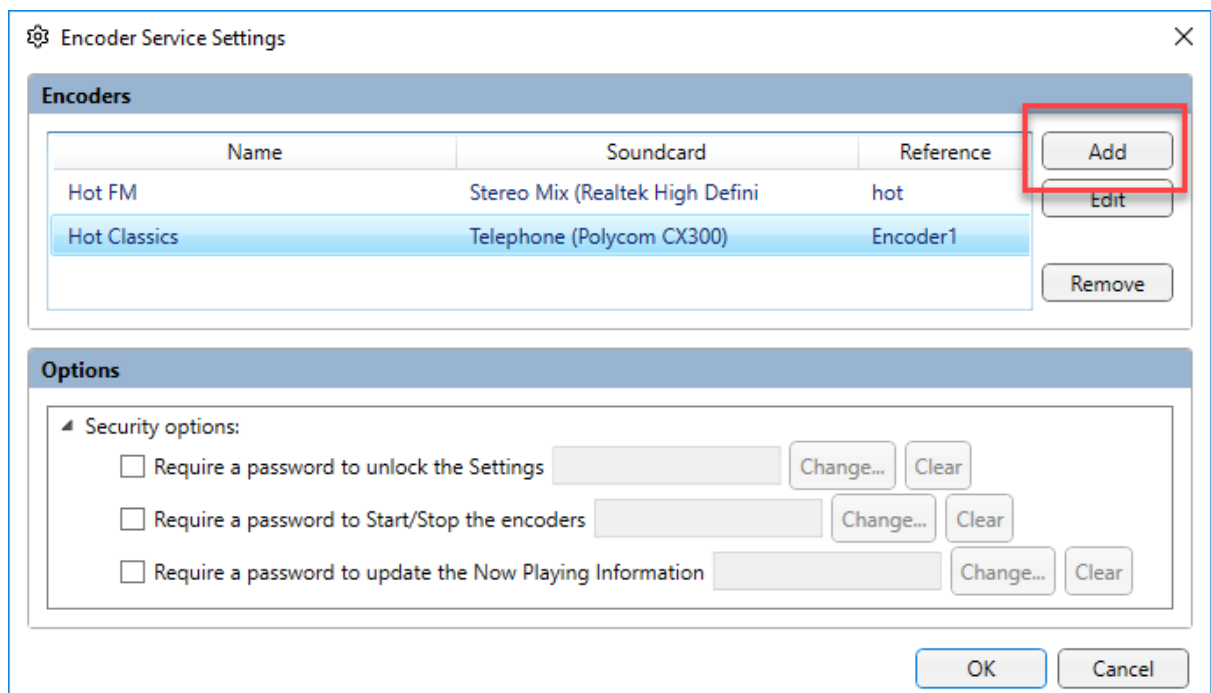
Adding An Additional Encoder (Pro edition only)

The Pro edition of the BR Encoder allows you to add more than one Encoder to the system to allow you to encode multiple radio stations within the single application/service. There is no limit to the amount of Encoders you can add but each Encoder will use some system resources (especially if you are using VST plugins) so whilst you can add as many Encoders as you like, you need to ensure the PC is capable of supporting that many Encoders.

To add an additional Encoder:

1. Click on the **Settings Menu**.
2. Select the **Encoder Service Settings** menu option.

- Click on the **Add** button to add a new Encoder.



- Follow the steps in the previous section to add your new Encoder to the system.
- When you have finished, your new Encoder will be displayed in the Encoder Monitor Application.

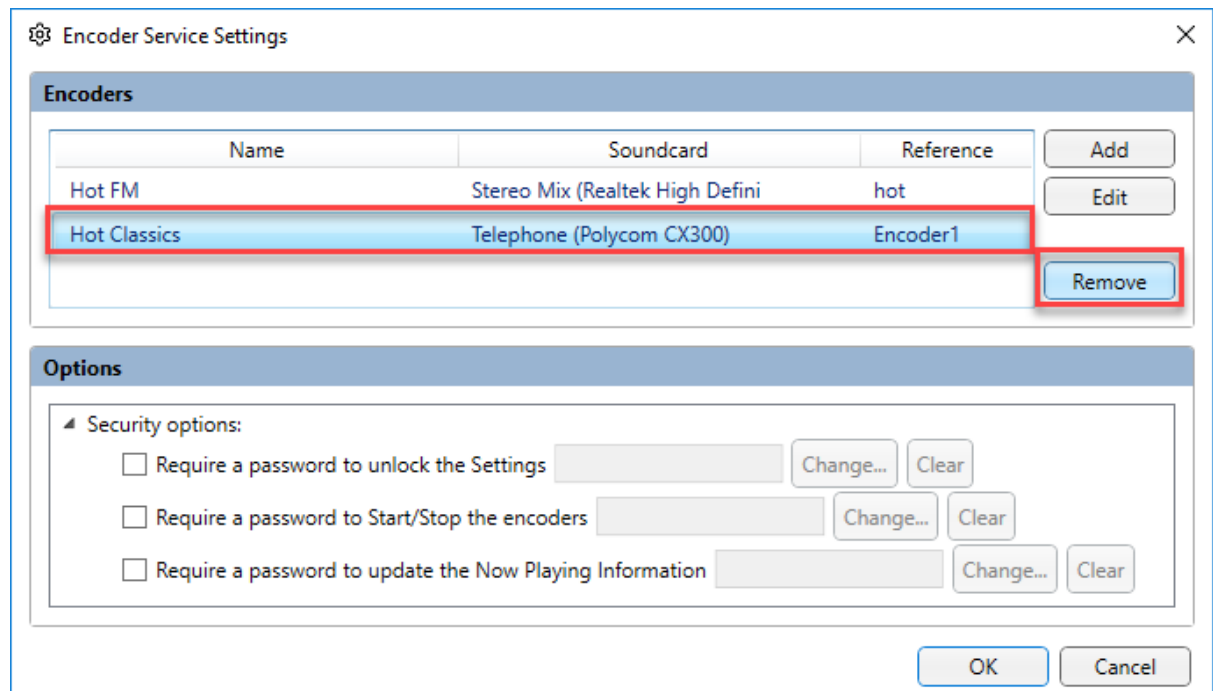


Removing An Encoder

You can also remove an existing Encoder using these steps.

To remove an additional Encoder:

1. Click on the **Settings Menu**.
2. Select the **Encoder Service Settings** menu option.
3. Highlight the Encoder you want to remove.
4. Click on the **Remove** button to add a new Encoder.



Edit An Existing Encoder

You can edit the settings for an existing Encoder using these steps.

To edit an existing Encoder:

1. Click on the **Settings Menu**.
2. Select the **Encoder Service Settings** menu option.
3. Highlight the Encoder you want to edit.
4. Click on the **Edit** button to add a new Encoder.

The image shows a screenshot of the 'Encoder Service Settings' window. It has a title bar with a gear icon and a close button. The window is divided into two main sections: 'Encoders' and 'Options'.

The 'Encoders' section contains a table with three columns: 'Name', 'Soundcard', and 'Reference'. There are two rows of data. The first row is 'Hot FM' with soundcard 'Stereo Mix (Realtek High Defini' and reference 'hot'. The second row is 'Hot Classics' with soundcard 'Telephone (Polycom CX300)' and reference 'Encoder1'. The second row is highlighted with a red border. To the right of the table are three buttons: 'Add', 'Edit', and 'Remove'. The 'Edit' button is also highlighted with a red border.

The 'Options' section is titled 'Options' and contains a sub-section 'Security options:' with three checkboxes and their corresponding password fields and buttons:

- ☐ Require a password to unlock the Settings [password field] [Change...] [Clear]
- ☐ Require a password to Start/Stop the encoders [password field] [Change...] [Clear]
- ☐ Require a password to update the Now Playing Information [password field] [Change...] [Clear]

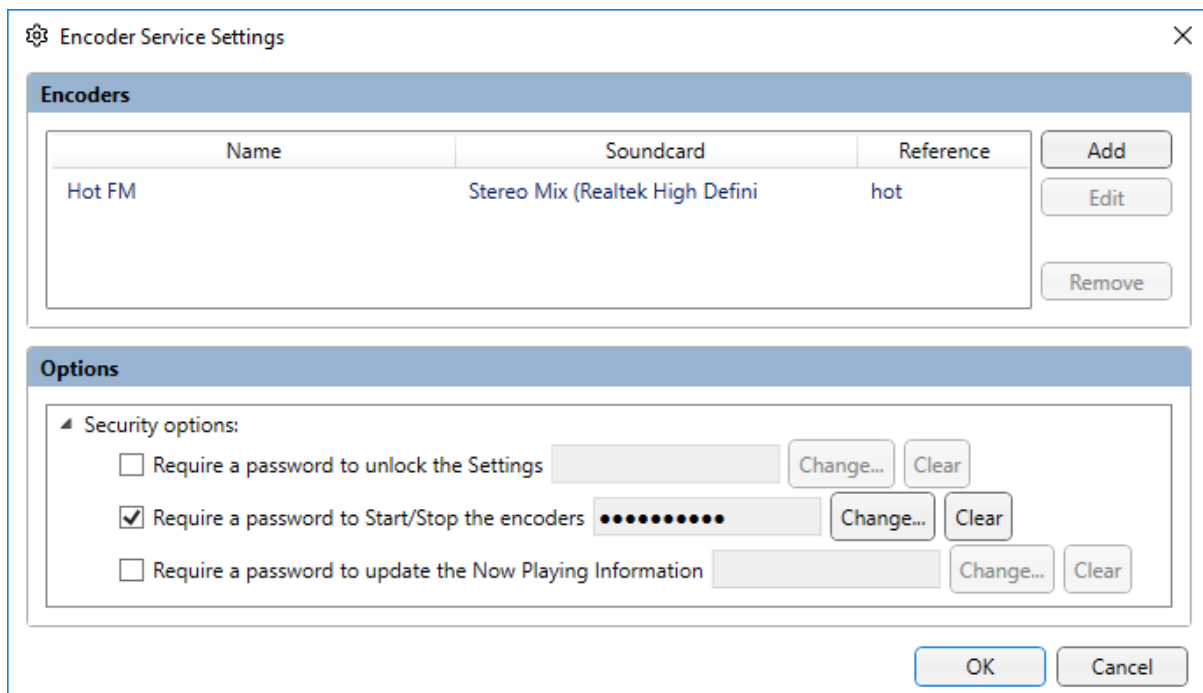
At the bottom right of the window are 'OK' and 'Cancel' buttons.

Password Protecting Actions

The BR Encoder allows you to add simple password protection to key actions to prevent accidental or un-authorised actions that may affect your broadcast. The actions you can password protect are:

- Access Settings – The user will be required to provide the set password to access any important settings in BR Encoder.
- Start / Stop Streams – The user will need to provide the set password in order to start the stream broadcasting or to stop the stream (end broadcasting).
- Manually Edit Now Playing – The user will be required to provide the set password in order to manually update the 'Now Playing' information from the BR Encoder Monitor application.

The Password protection settings can be found on the **Encoder Service Settings** window.



The 'Encoder Service Settings' window is divided into two main sections: 'Encoders' and 'Options'.

Encoders Section:

Name	Soundcard	Reference
Hot FM	Stereo Mix (Realtek High Defini	hot

Buttons: Add, Edit, Remove

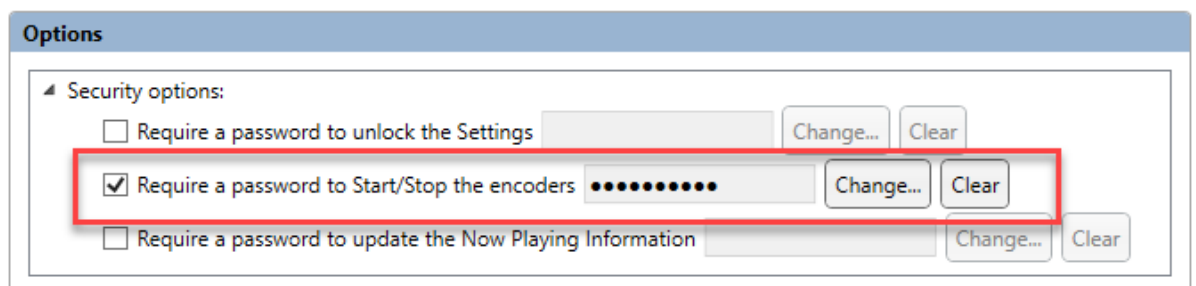
Options Section:

Security options:

- ☐ Require a password to unlock the Settings [Change... Clear]
- ☒ Require a password to Start/Stop the encoders [Change... Clear]
- ☐ Require a password to update the Now Playing Information [Change... Clear]

Buttons: OK, Cancel

1. Click on the **Settings Menu**.
2. Select **Encoder Service Settings**.
3. Go to the **Security Options** section in the lower **Options** window. You may need to expand this section if it is in 'collapsed' mode.
4. Tick one of the three actions you want to protect (Access Settings, Start/Stop Stream, Update Now Playing). In the example below we are setting a password to protect starting and stopping the stream.

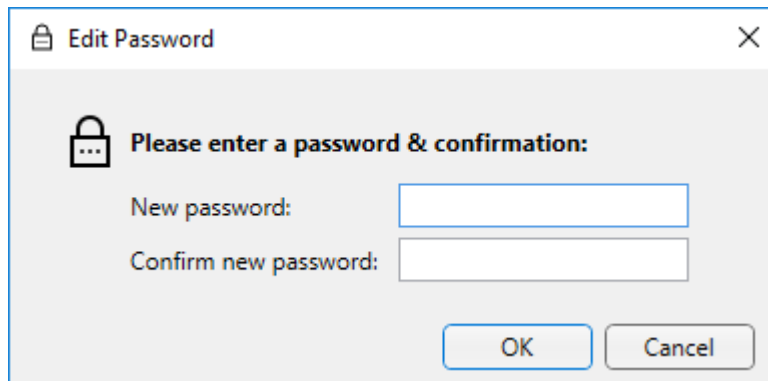


The 'Options' window shows the 'Security options' section expanded. A red rectangle highlights the option 'Require a password to Start/Stop the encoders', which is checked. The other options are unchecked.

Security options:

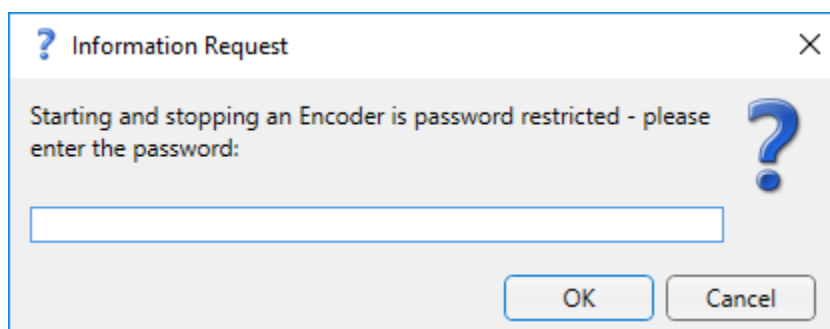
- ☐ Require a password to unlock the Settings [Change... Clear]
- ☒ Require a password to Start/Stop the encoders [Change... Clear]
- ☐ Require a password to update the Now Playing Information [Change... Clear]

5. Click on the **Change** button and type in the password (or new password) into the **Password** window.



6. If you need to remove a password, click on the **Clear** button.
7. Repeat for any other actions you wish to add a password to.
8. Click on **OK** when you have finished.

With that setting in place, whenever anyone clicks on the Start / Stop button to start or stop the stream, they will be prompted to enter the password before the action will be completed.



User BR Encoder

Now that the initial setup is complete and your Encoder(s) are setup to connect to your streaming provider, it is time to look at how to use the BR Encoder Monitor application to control, Stream and get important information such as when there is a problem.

Starting / Stopping A Stream

The BR Encoder service is always running in the background so even if you close the BR Encoder Monitor application, your stream will continue to broadcast unless you specially tell it to stop using the Start / Stop action button.

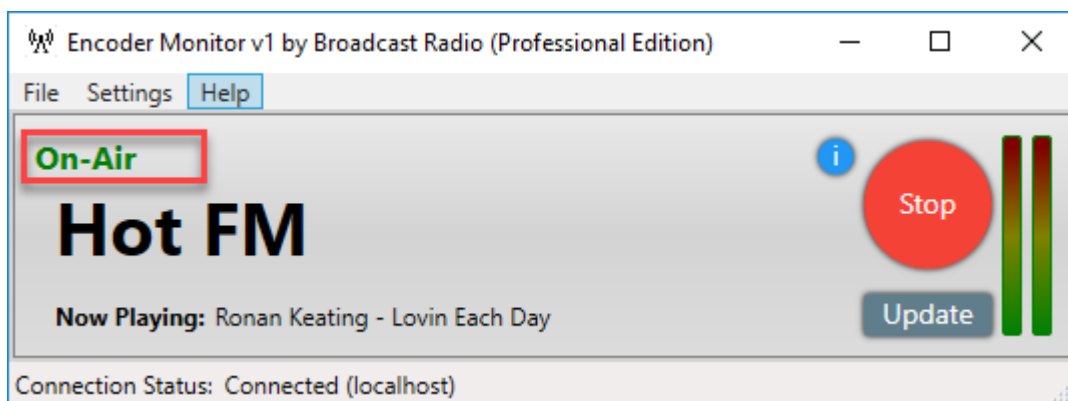


In the screen shot above, the Encoder is setup but not running. That means that your Encoder is 'Off Air' and listeners will not be able to connect to the stream (unless it is being fed by a different encoder of course).

To indicate that the Encoder is not running the text appears 'greyed out' and the status is displayed as 'Off Air'. The only enabled button is the **Start button**.

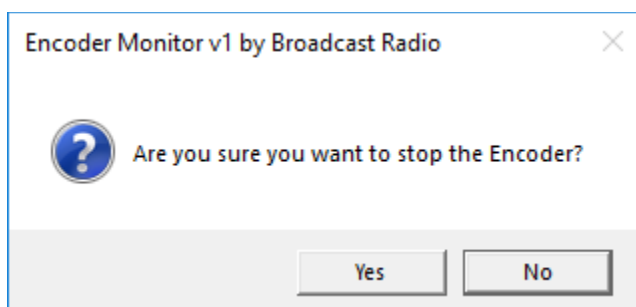
To start the Encoder, **Click on the Start button**.

N.B. If you have setup a password on this action you will prompted to enter the password before the Encoder will start!



Once the Encoder has successfully connected to the streaming server and started the broadcast, the status on the BR Encoder Monitor Application changes to 'On Air' and all the buttons and text are 'enabled'.

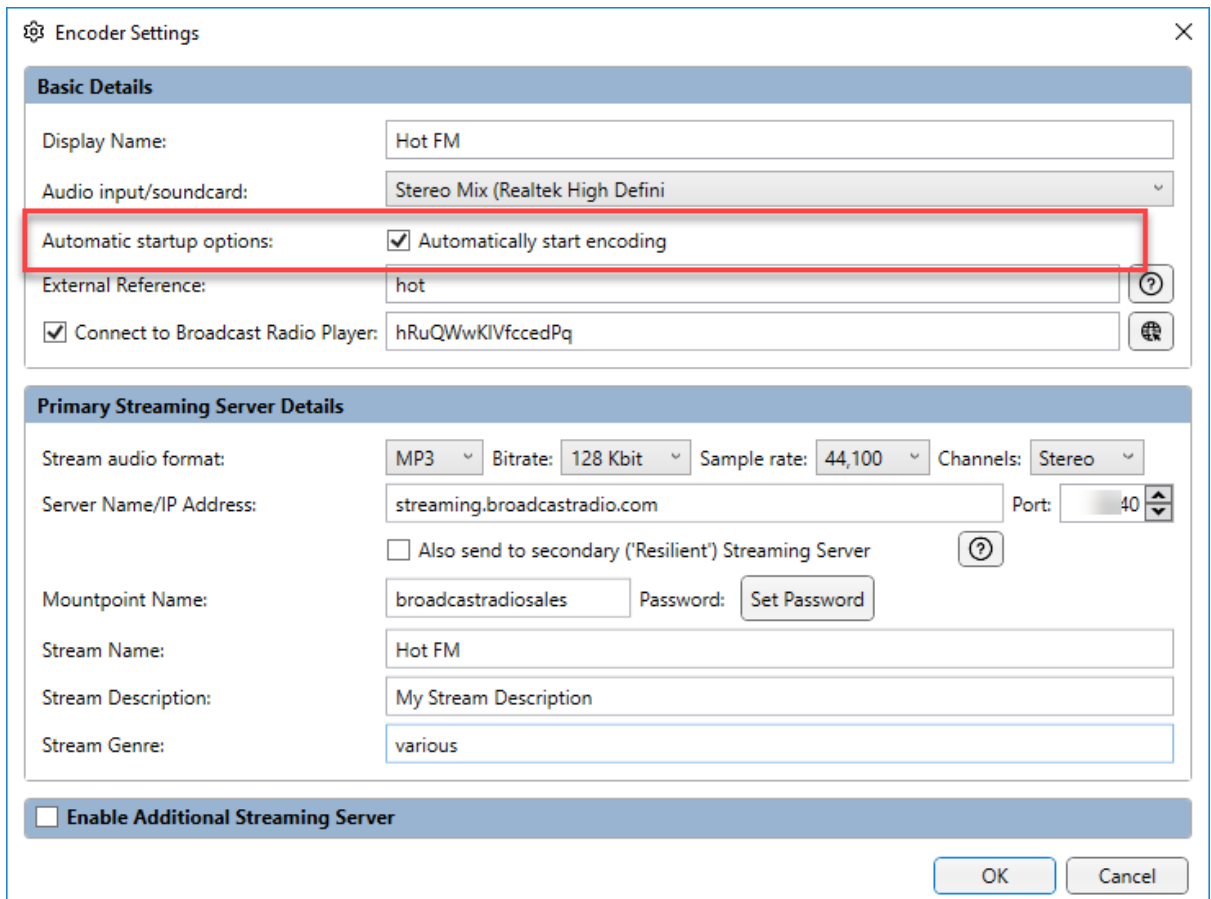
If you need to **Stop** the Encoder then click on the **Stop Button**. Again, if you have password protected this action you will need to enter the password first! You will also be asked to confirm you want to Stop the Encoder.



Automatically Starting Encoders

This was covered in the previous section but it is worth revisiting as obviously having your Encoders automatically start may be fairly important to your station.

1. Click on the **Settings Menu**.
2. Click on the **Encoder Service Settings** option.
3. Highlight the Encoder you want to automatically start and click on the **Edit** button.
4. Make sure the **Automatically Start Encoder** option is **Ticked**



The screenshot shows the 'Encoder Settings' dialog box. The 'Basic Details' section is highlighted with a red box. It contains the following fields:

- Display Name: Hot FM
- Audio input/soundcard: Stereo Mix (Realtek High Defini)
- Automatic startup options: ☒ Automatically start encoding
- External Reference: hot
- ☒ Connect to Broadcast Radio Player: hRuQWwKIVfcedPq

The 'Primary Streaming Server Details' section is visible below it, containing the following fields:

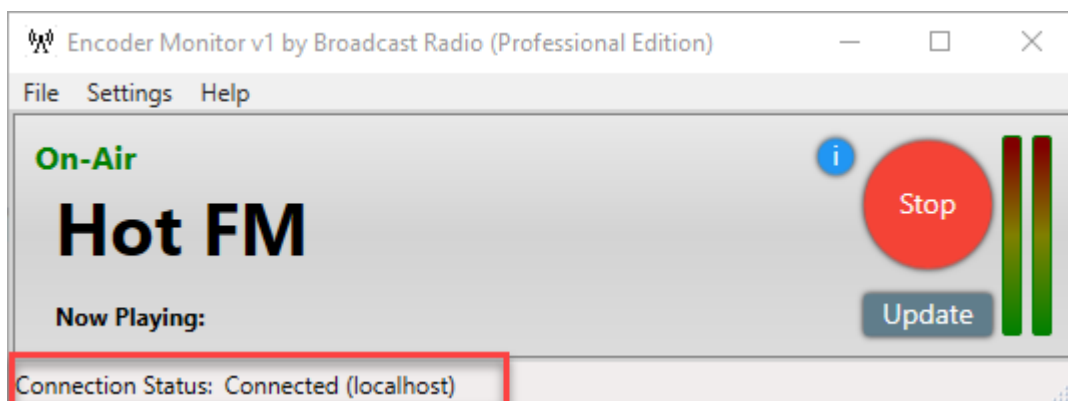
- Stream audio format: MP3, Bitrate: 128 Kbit, Sample rate: 44,100, Channels: Stereo
- Server Name/IP Address: streaming.broadcastradio.com, Port: 40
- ☐ Also send to secondary ('Resilient') Streaming Server
- Mountpoint Name: broadcastradiosales, Password: Set Password
- Stream Name: Hot FM
- Stream Description: My Stream Description
- Stream Genre: various

At the bottom, there is a checkbox for 'Enable Additional Streaming Server' and 'OK' and 'Cancel' buttons.

5. Click on **OK** to exit.

Connection Status To BR Encoder Service

As previously outlined, the BR Encoder Monitor application is used to remotely monitor and change settings for the BR Encoder Service. The status of the connection between the BR Encoder Monitor Application and the BR Encoder Service is displayed at the bottom of the BR Encoder Monitor application.



Encoder Failed To Connect Warning



If the BR Encoder Service attempts to connect to a streaming server but is unable to establish a connection after a set time period, the Encoder will enter a fault state which is indicated by a yellow warning icon displayed by the Encoder Name. This indicates that the BR Encoder was unable to connect to the streaming server and you are **not broadcasting**.

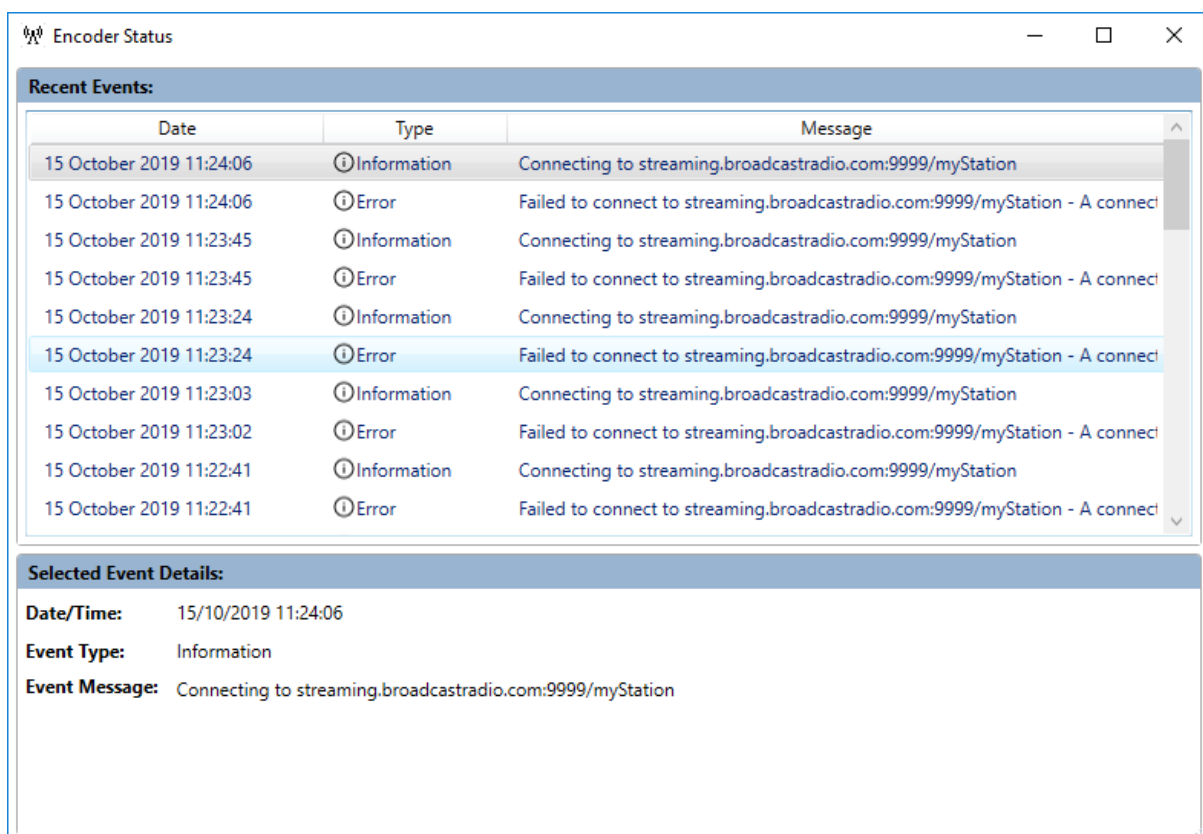
Checking The Event Log

If your Encoder is displaying a warning icon then you will need to check the **Event Log** to see what events have occurred. Hopefully this will give you an indication as to the problem (for example password incorrect etc).

To check the Event Log of an Encoder, click on the **Event Log** icon to the top left of the Start/Stop button.

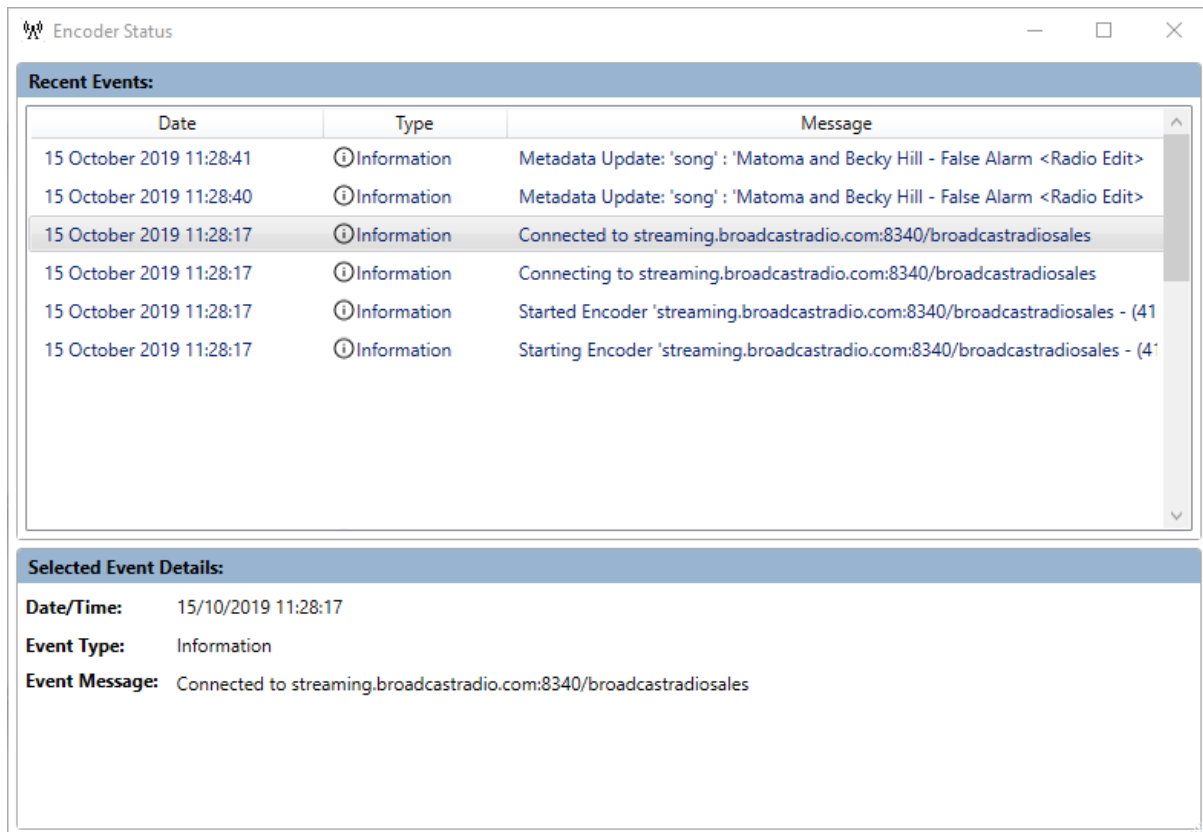


This will open the Event Log window which displays key events such as failed connections etc.



In the example above, the Encoder is trying to connect to a server mount point that does not exist so it is failing to connect each time. If the mount point existed but the password was wrong, we would see a different message.

You can also view the Event Log for Encoders that have successfully connected.



In this case the Encoder has successfully connected and started to send Now Playing information.

VU Bars

The VU's provide you with a visual confirmation that audio level is being received by the BR Encoder Service for the selected Encoder. Remember this is the level being received by the Encoder Service which may be on a different PC.

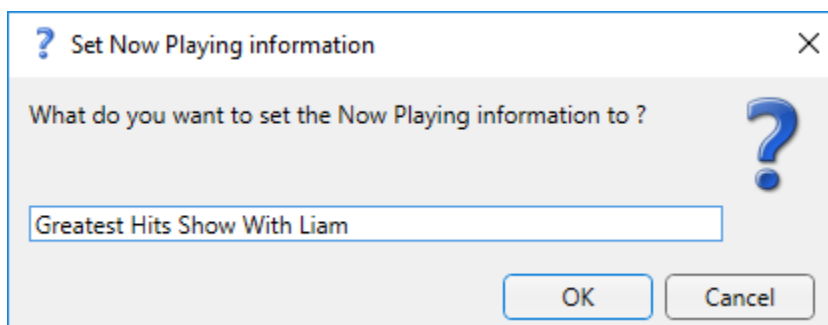


Manually Sending Now Playing Information

You can manually send 'Now Playing' information using the **Update** button located underneath the Start/Stop button.



Type in the Now Playing information you want to display.



If you are using the BR Player, the 'Now Playing' section will display this update.

11:45

Now Playing:
Greatest Hits Show With Liam

Broadcast Radio Sales

This is a demonstration station by Broadcast Radio. Playout is provided by Myriad 5 Playout, encoding by the BR Encoder and the station is hosted by our streaming platform.

Podcasts

Broadcast Radio Live

Mystery On Spooky Hill
Hannah & Farrah - 08-10-2019

download

Powered by

Automatic Now Playing Information From Myriad 5 Playout

If you are using Myriad 5 Playout (v5.21 or higher) then Myriad can automatically update the BR Encoder with the latest 'Now Playing' information from the active Log (in Live Assist or AutoFade modes).

To set this up in Myriad Playout you need to enable the **Send To BR Encoder** option located in the **Stations Settings** within **Station Database Settings**.

1. In Myriad 5 Playout, click on the **Settings Menu > Database Settings > Database Settings**.
2. Click on the **Stations Tab**.
3. Double Click on the **Station** you want to send the Now Playing information.
4. Click on the **OCP/Splits** tab.
5. Tick the **Send Now Playing Information To A Broadcast Radio Encoder** option.
 - a. Type in the Computer Name / TCP-IP address if the PC the BR Encoder Service is running on.
 - b. Type in the unique reference for the BR Encoder.

Edit Station Settings 'Hot Digital (ID: 1)'

Item Types | Scheduled Log | AutoFade | Seque Editor/AutoHook | Scheduler | Log Import | **OCP/Splits** | Location/SmartInfo | Notifications

☒ Send 'Now Playing' information to a Broadcast Radio Encoder:

Computer name/TCP-IP address: localhost Encoder 'External Reference': hot

☐ Send 'Now Playing' information to OCP:

Computer name/TCP-IP address: OCP Port: 2

☐ Connect to Myriad Network for Split Playout:

Computer name/TCP-IP address: TCP Port: 6970

Number hours ahead to check break lengths: 2

More options:

- ☒ Send Now Playing information
- ☒ Dump Split items when pressing 'Go' during split playback
- ☒ Wait for the Split to finish playing a Split Log Item before playing the next item

Now Playing Information options:

Number 'Next' items to send: 15

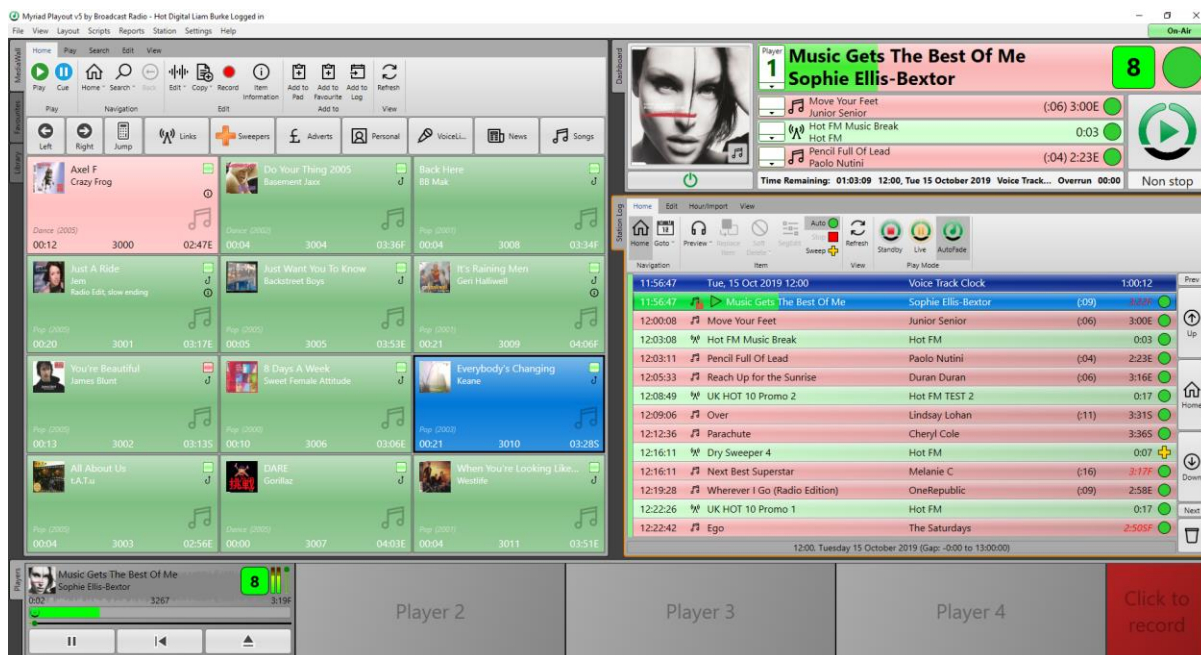
Number hours ahead to check: 2

☒ Clear the Now Playing Information if the current item has a 'Stop' ending and has completed.

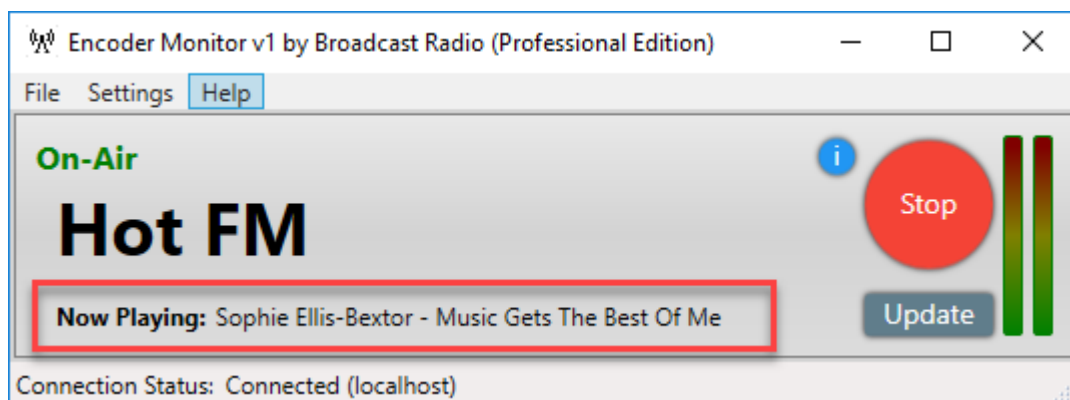
☐ Write Now Playing to a Billboard file: \\ad\BRLive\HotRadio\HotRadioV5\Stations\NowPlaying-HotFM-v50-0001.xml

OK Cancel

6. You can now click on **OK** to exit settings.
7. Make sure the Log is running in Live or Autofade mode to ensure there is Now Playing information being sent to the BR Encoder.



8. In the BR Encoder Monitor application, click on the **Settings Menu> Encoder Service Settings** option.
9. Highlight the Encoder you want to display the Now Playing information on and click on **Edit**.
10. Make sure the **External Reference** field exactly matches the External Reference you set in Myriad Playback (step 5).
11. Click on OK and make sure the Encoder is running. The Now Playing information from Myriad Playback will now automatically appear in the BR Encoder.



Encoder Settings

Basic Details

Display Name: Hot FM

Audio input/soundcard: Stereo Mix (Realtek High Defini

Automatic startup options: ☒ Automatically start encoding

External Reference: hot ?

☒ Connect to Broadcast Radio Player: hRuQWwKIVfcedPq ?

Primary Streaming Server Details

Stream audio format: MP3 Bitrate: 128 Kbit Sample rate: 44,100 Channels: Stereo

Server Name/IP Address: streaming.broadcastradio.com Port: 40

☐ Also send to secondary ('Resilient') Streaming Server ?

Mountpoint Name: broadcastradiosales Password: Set Password

Stream Name: Hot FM

Stream Description: My Stream Description

Stream Genre: various

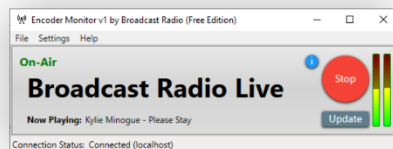
☐ Enable Additional Streaming Server

OK Cancel

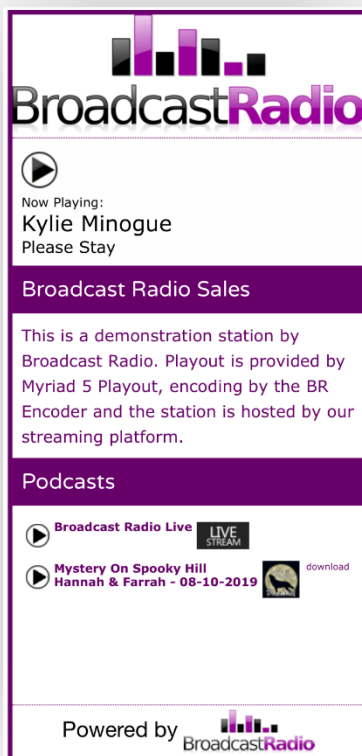
If you are using the BR Player then this information will be updated in your player each time Myriad Playout starts a new Song from the Log.



'Now Playing' information sent directly from Myriad 5 Payout to Broadcast Radio Encoder (no OCP necessary).



Broadcast Radio Encoder sends this along with the audio stream to the Broadcast Player for your listeners to access your stream.

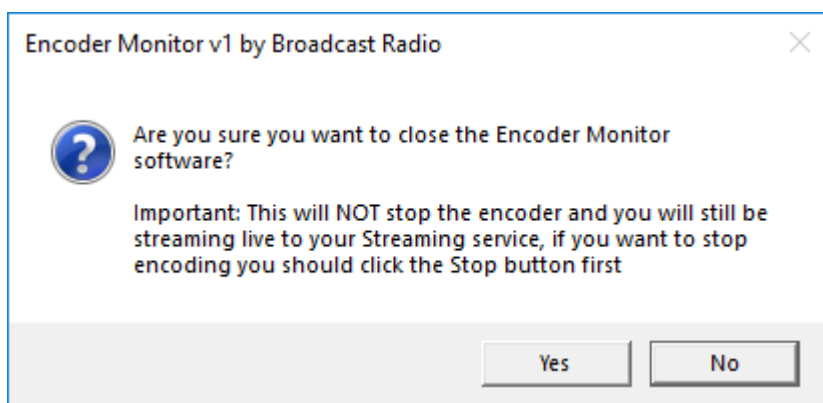


You can embed the Broadcast Player into your website or provide a 'popup' link. Listeners can access your 'live stream' and optional Podcasts on Windows, Mac, Linux, iPhone & Android using any common browser (Chrome, Safari, Firefox, Edge etc).

Closing the BR Encoder Monitor Application

As outlined previously, the BR Encoder Monitor application is used to monitor the BR Encoder Service as well as change settings for the service but the BR Encoder Service runs totally independently from the monitoring application. That means that even when you close the BR Encoder Monitoring Application, the BE Encoder Service will continue to run and you will continue to stream your station output.

When you close the BR Monitor application, you will be asked if you definitely want to close the application and reminded that this will not stop the BR Encoder Service from continuing to broadcast your stream.



REMEMBER: If you don't want to broadcast your stream, you must STOP the Encoder before you close the monitor application.

Installing A VST Plugin

The VST Plugin support in BR Encoder allows you to add a 3rd party audio processor that will be applied to your audio prior to it being encoded by the BR Encoder Service. By enabling VST Plugins, the BR Encoder provides access to a wide range of audio processing tools that range greatly in price and quality. There are a number of free options as well as established commercial solutions such as Stereo Tool (<https://www.stereotool.com/>).

The use of 3rd party VST Plugins is done so at your own risk and we cannot offer any advice or support for 3rd party VST Plugins. We also do not guarantee that all VST plugins will work successfully with BR Encoder. We strongly recommend you carefully test your selected solution prior to using it 'on air'.

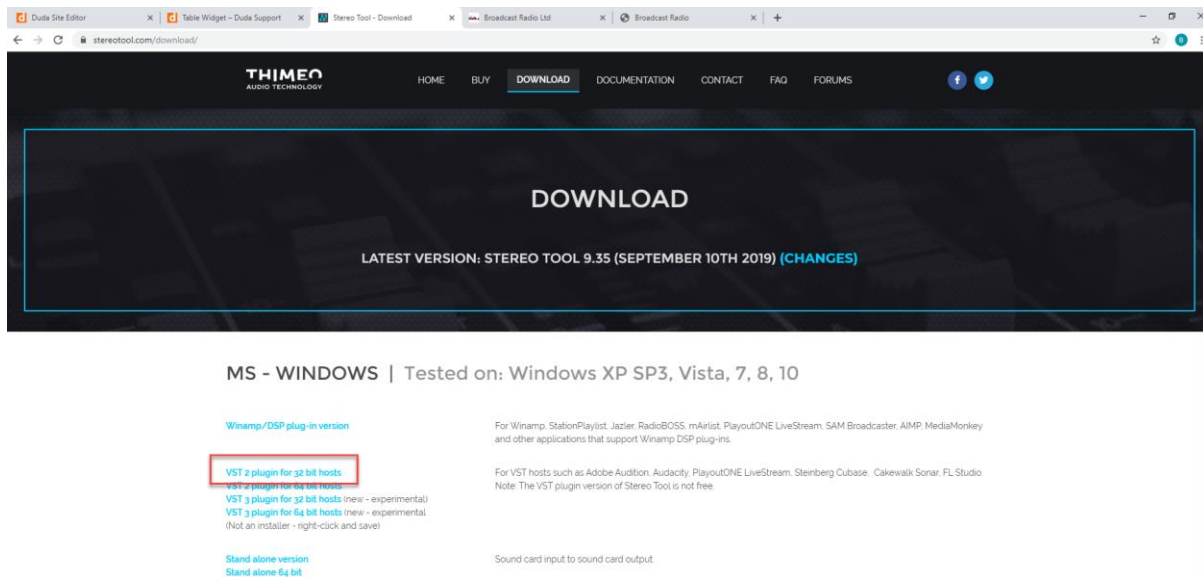
Please note that BR Encoder only support v2 VST Plugins.

Installing A VST Plugin

Unlike the general settings we have worked with so far, installing and setting up a VST Plugin is a bit more complicated and **must be done on the PC that is running the BR Encoder Service.**

The first thing to do it install the actual VST Plugin into the correct folder for the BR Encoder to use. In this example we will be installing the Stereo Tools VST Plugin but the same process should work for all VST plugins.

1. Download your VST plugin. In this example we will get the Stereo Tools VST v2 (32bit) plugin from the Stereo Tools website (<https://www.stereotool.com/download/>). Download the file (vst_stereo_tool.dll) to a location you can easily find again for the next step.



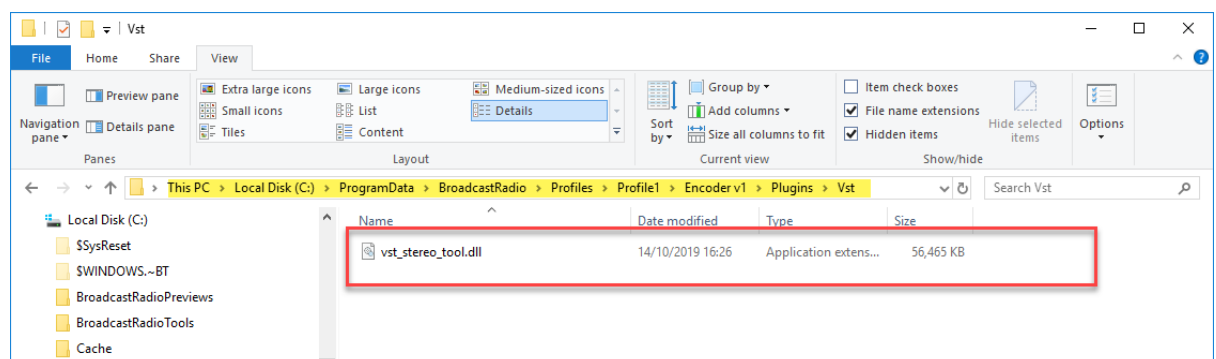
2. Now you need to use Windows File Explorer to locate the following folder location.

C:\ProgramData\BroadcastRadio\Profiles\Profile1\Encoder v1\Plugins\Vst

N.B. If you are running multiple Profiles for Myriad Payout, you may need to substitute 'Profile1' for the correct folder location.

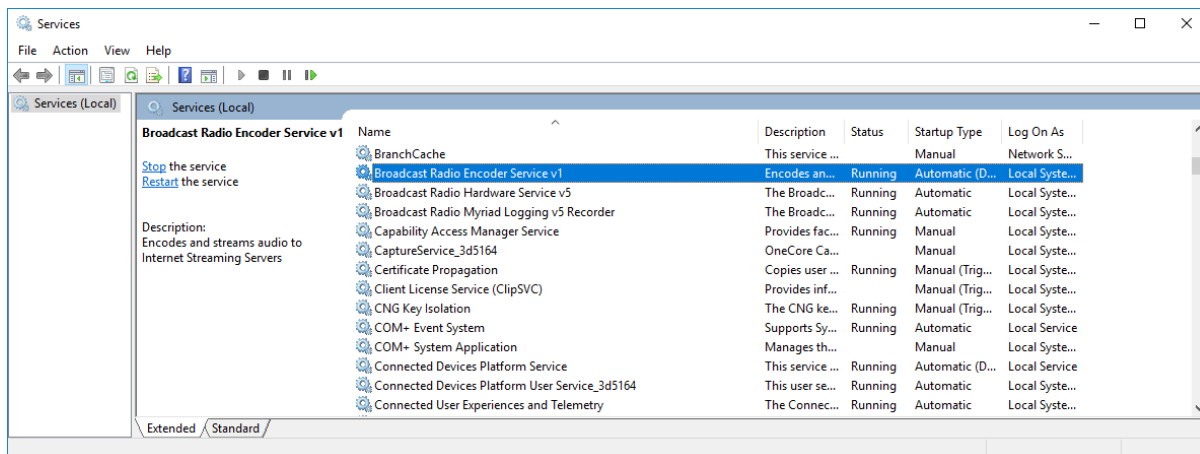
TIP: If you cannot see the 'ProgramData' folder, you may have to tick the 'Hidden Items' option on the View tab of the File Explorer ribbon.

Once you have located the correct folder, simply copy your VST Plugin .dll file into that location.

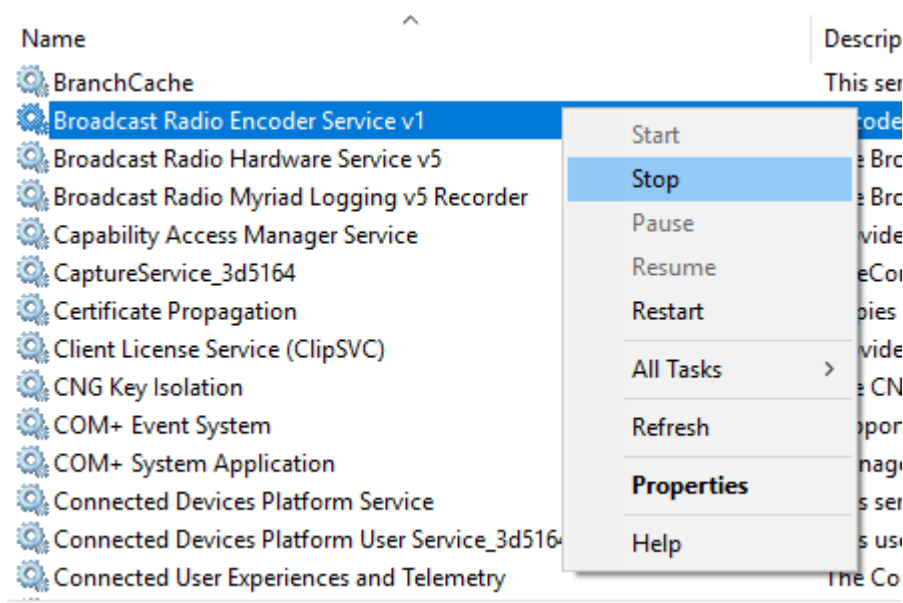


3. Now here is the tricky bit! We have mentioned several times that the BR Encoder runs as a service and as such cannot have a UI but now we want to configure a VST plugin directly in the service so we have to stop the regular version of the BR Service and then use a special 'Interactive' version of the service that does allow us to configure the VST plugins!

4. The first thing to do is stop the regular BR Encoder Service:
 - a. Press the windows key on your keyboard and type 'services'.
 - b. Run the 'Services' app which shows you a list of all the Services running on your PC.
 - c. Scroll down until you find the **Broadcast Radio Encoding Service v1**.



- d. Right click in on it and select **Stop** from the right click menu. **THIS WILL STOP YOUR STREAM.**

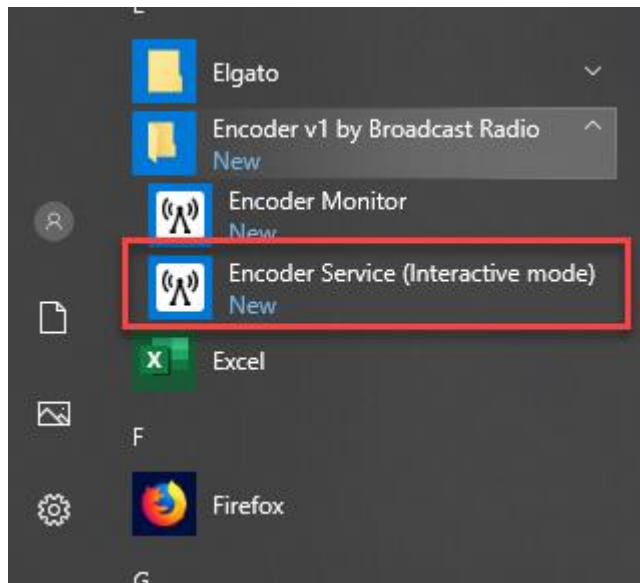


The Status column will change from 'Running' to blank once it is stopped. Leave the Services app running, we will need it again in a few minutes.

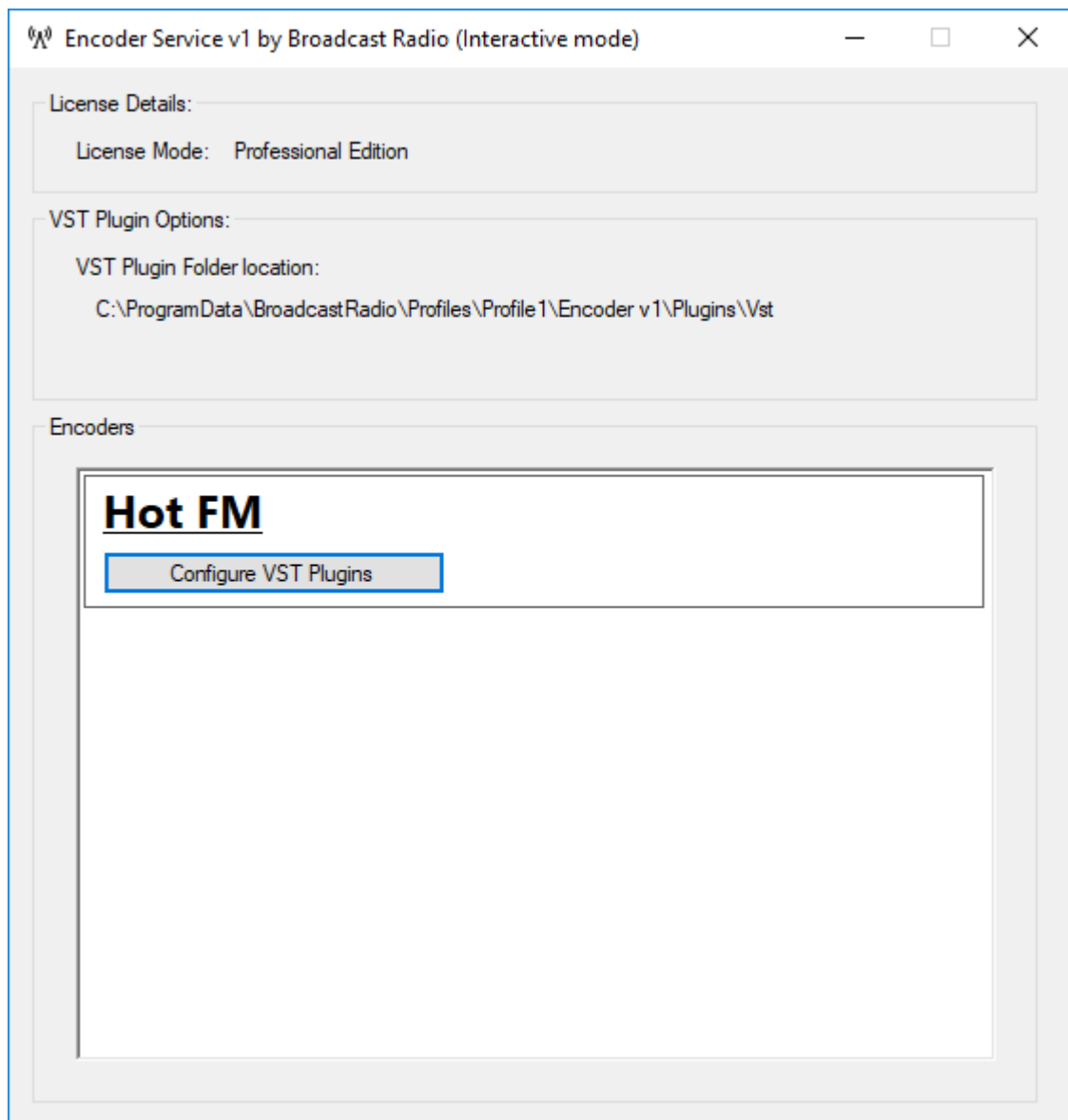
Name	Description	Status	Startup Type	Log On As
BranchCache	This service ...		Manual	Network S...
Broadcast Radio Encoder Service v1	Encodes an...		Automatic (D...	Local Syste...
Broadcast Radio Hardware Service v5	The Broadc...	Running	Automatic	Local Syste...

5. Now that the main Service has been stopped, we can run the 'Interactive Service'.
 - a. Click on the Windows Start icon to bring up the **Start Menu**.
 - b. Scroll down until you see the **Encoder Service (under 'e')** and expand that menu.

- c. Click on the **Encoder Service (Interactive Mode)** option.

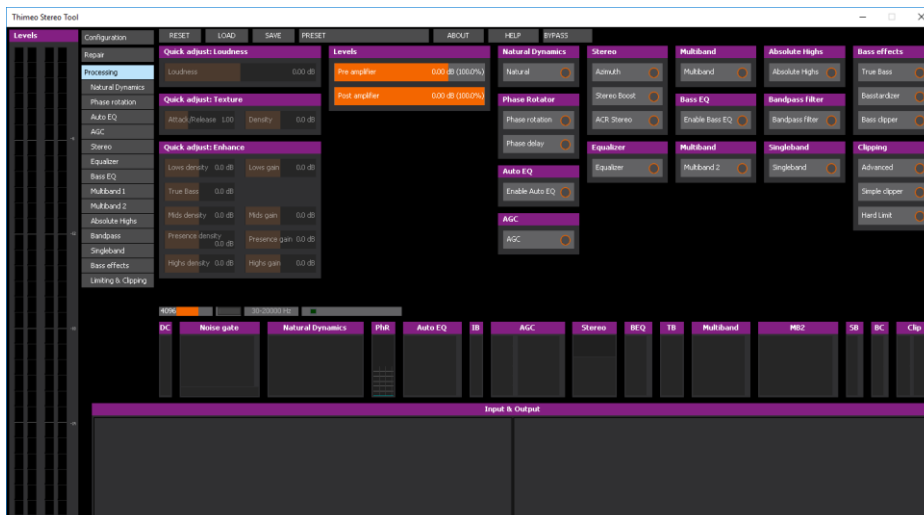


6. The Encoder Service (Interactive Mode) is basically the same as the standard Service but runs as a normal application so can also have interactive user interface elements. When it is running, it does the same job as the standard service so you can run in this mode instead of the Service mode if you prefer. In this example we will setup the VST Plugin and then close the application and restart the BR Encoder Service.



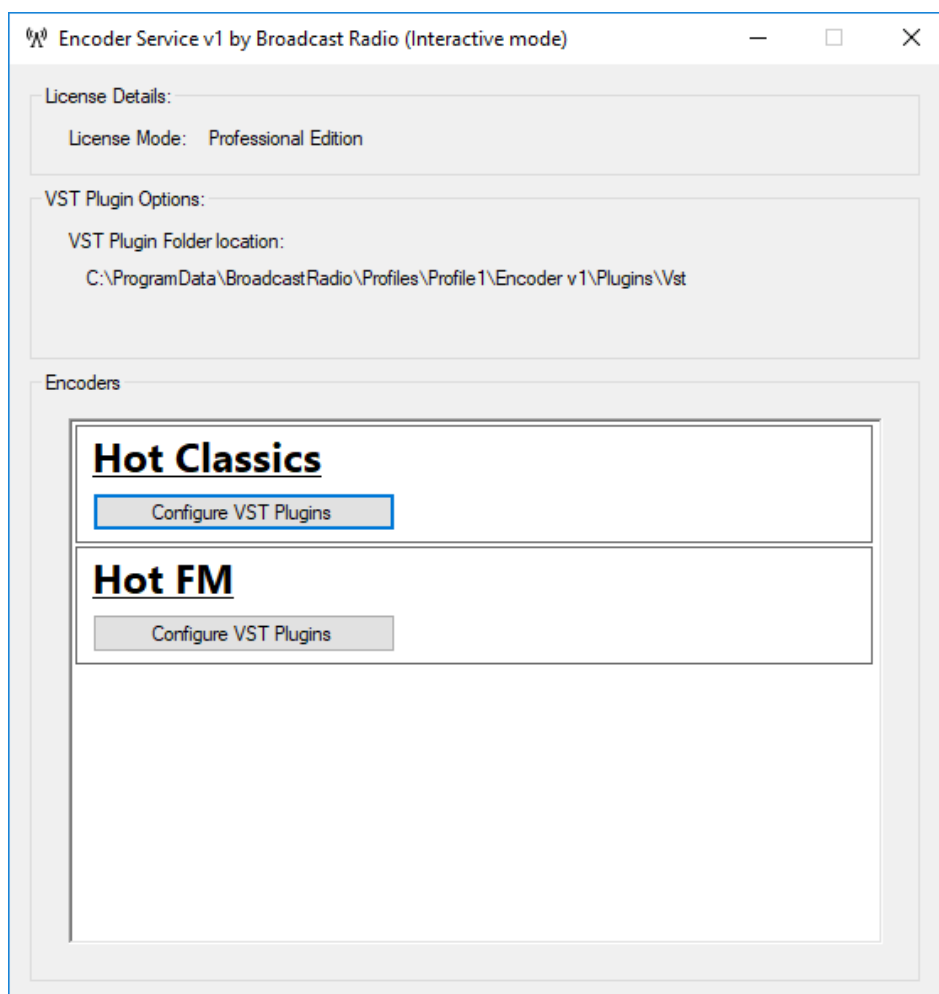
TIP: You can see that the folder location for VST plugins is displayed in the VST Plugin Options section. Double check to see if you copied your VST file into the correct folder!

7. To configure the options for your VST Plugin, click on the **Configure VST Plugin** button. This will open the configuration window built into your VST plugin. The design and layout will differ depending on what plugin you are using. Unfortunately we will not be able to offer and advice or assistance with configuring VST plugins.



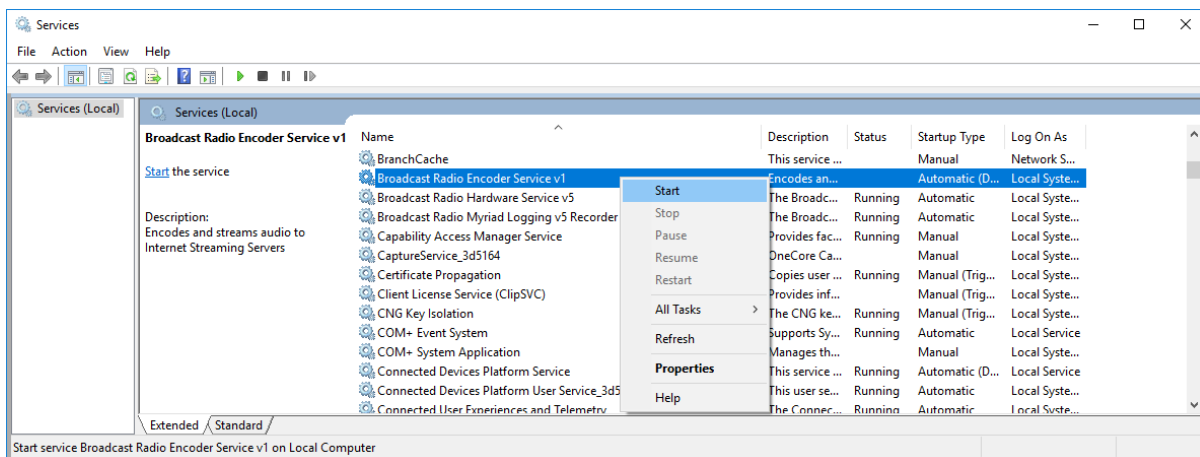
Example VST Plugin – Stereo Tool

8. When you have finished, close the VST Plugin config window to return to BR Encoder (Interactive Mode).
9. If you have more than one Encoder setup, you can configure the VST Plugin settings separately for each Encoder (but they all use the same plugin).

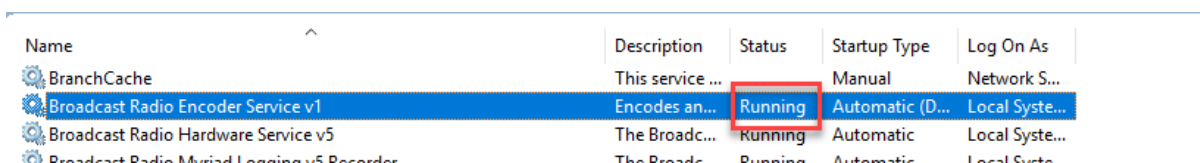


10. To return to using the standard BR Encoder Service follow these steps.

- Close the **Encoder Service (Interactive Mode)** applications. **Warning: This will stop you streaming until the main service is restarted.**
- Open the **Services App** (it is probably still open from before).
- Locate the **Broadcast Radio Encoder Service v1** and right click on it to access the right click menu.



- Select the **Start** option to restart the Service. After a few seconds, the service status should change to 'Running'.



- You can now restart your stream using the Monitor application if required.



Starting / Stopping Streams Remotely

In addition to using the BR Encoder Monitor application to start and stop streams, you can also use a HTTP GET method to start and stop streams as well as update Now Playing information. This also means you can use the Commands feature in Myriad 5 Playout to directly start and stop your Encoder streams and because Commands (in Myriad) can be a type of Media Item, that means you can start and stop your streams from the Media Wall, the Log or even from clicking on a Favourite!

Start / Stop / Update Now Playing Using HTTP Get Method

You can use the HTTP Get method to:

- Start an Encoder
- Stop an Encoder
- Update the Now Playing information for an Encoder

The HTTP Get method is available in a wide range of applications as well from standard web browsers so you can control your BR Encoder from a number of 3rd party applications or devices.

The base URL for methods is:

`http://localhost:6999/BrEncoder/v1/api/Encoder/{ExternalReference}/`

Where {ExternalReference} is the string that is set in the Encoder settings window. This reference can be shared across multiple encoders in which case calls will apply to all encoders that share the same External Reference. The 'localhost:6999' can be replaced with 'IPAddress:6999' where the BR Encoder Service is on a different PC to the one executing the HTTP Get. The port is fixed at 6999 and cannot be altered.

Available GET methods are:

- `http://localhost:6999/BrEncoder/v1/api/Encoder/{ExternalReference}/Start` - starts the Encoder
- `http://localhost:6999/BrEncoder/v1/api/Encoder/{ExternalReference}/Stop` - stops the encoder
- `http://localhost:6999/BrEncoder/v1/api/Encoder/{ExternalReference}/UpdateNowPlaying?artist={artistName}&title={itemtitle}` - updates the Now Playing information.

In the example we have been using, the External Reference for the 'Hot FM' Encoder is 'hot' so the HTTP GET call to start that Encoder streaming would be:

- `http://localhost:6999/BrEncoder/v1/api/Encoder/hot/Start`

Stop would be:

- `http://localhost:6999/BrEncoder/v1/api/Encoder/hot/Stop`

And update Now Playing info would be:

- `http://localhost:6999/BrEncoder/v1/api/Encoder/hot/UpdateNowPlaying?artist=Kylie+Mibogue&title=Spinning+Around`

You can copy these strings directly into a web browser to control your BR Encoder. Give it a try!

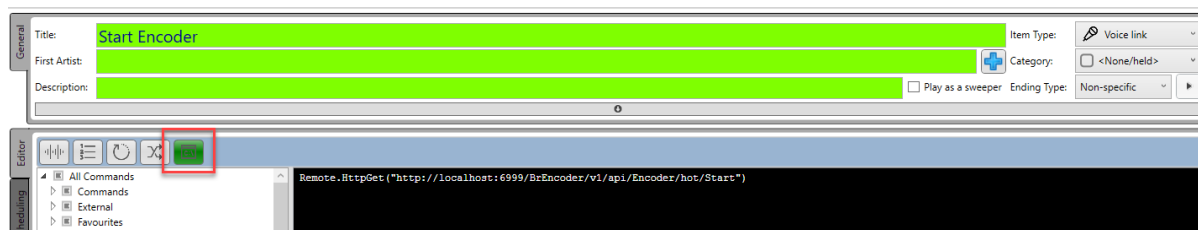
Starting & Stopping Encoders Using Commands In Myriad 5 Payout

You can also use HTTP GET calls from within Commands on the Myriad 5 Payout Media Wall. This means you can create Commands in Myriad to Start and Stop your Encoder streams or even update Now Playing Information.

To create a Command in Myriad 5 Payout to start an Encoder stream, follow these steps:

1. Highlight the Media Item you want to use for your Command.
2. Click on the **Edit** button to open the Edit Window.
3. Give it a suitable **Title**.

- In the **Editor Tab**, click on the **Command** button to set the Media Item Type to Command.



- Carefully type in the following command into the Command Script area:

Remote.HttpGet("http://localhost:6999/BrEncoder/v1/api/Encoder/hot/Start")

Where 'hot' is replaced with the External Reference you are using for your Encoder.

- Save the Media Item and it is now ready for use.

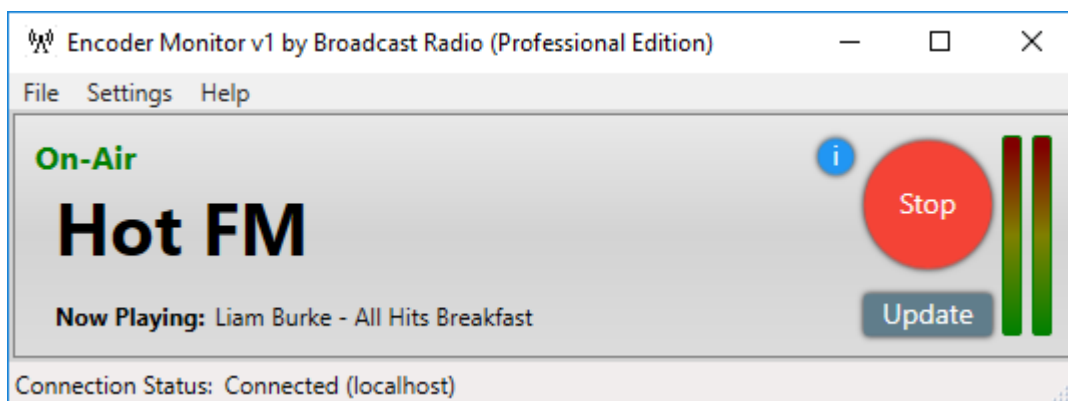


To create a Media Item that Stops the Encoder stream, follow the same steps but use the Command Script:

Remote.HttpGet("http://localhost:6999/BrEncoder/v1/api/Encoder/hot/Stop")

And finally, to create a Command Media Item that updates 'Now Playing Info us the Command Script:

Remote.HttpGet("http://localhost:6999/BrEncoder/v1/api/Encoder/hot/UpdateNowPlaying?artist=Liam+Burke&title=All+Hits+Breakfast")



Remember to replace the 'hot' with the External Reference you are using on your Encoder.

Additional Information & Resources

To get the latest information on BR Encoder and access the latest resources, visit:

<https://www.broadcastradio.com/web-radio>

<https://www.broadcastradio.com/support>

<https://www.broadcastradio.com/youtube-index>

VST Plugins

<https://www.stereotool.com/>