

RadioCaster

User Manual

RadioCaster

Live audio encoder

by DJsoft.Net Team

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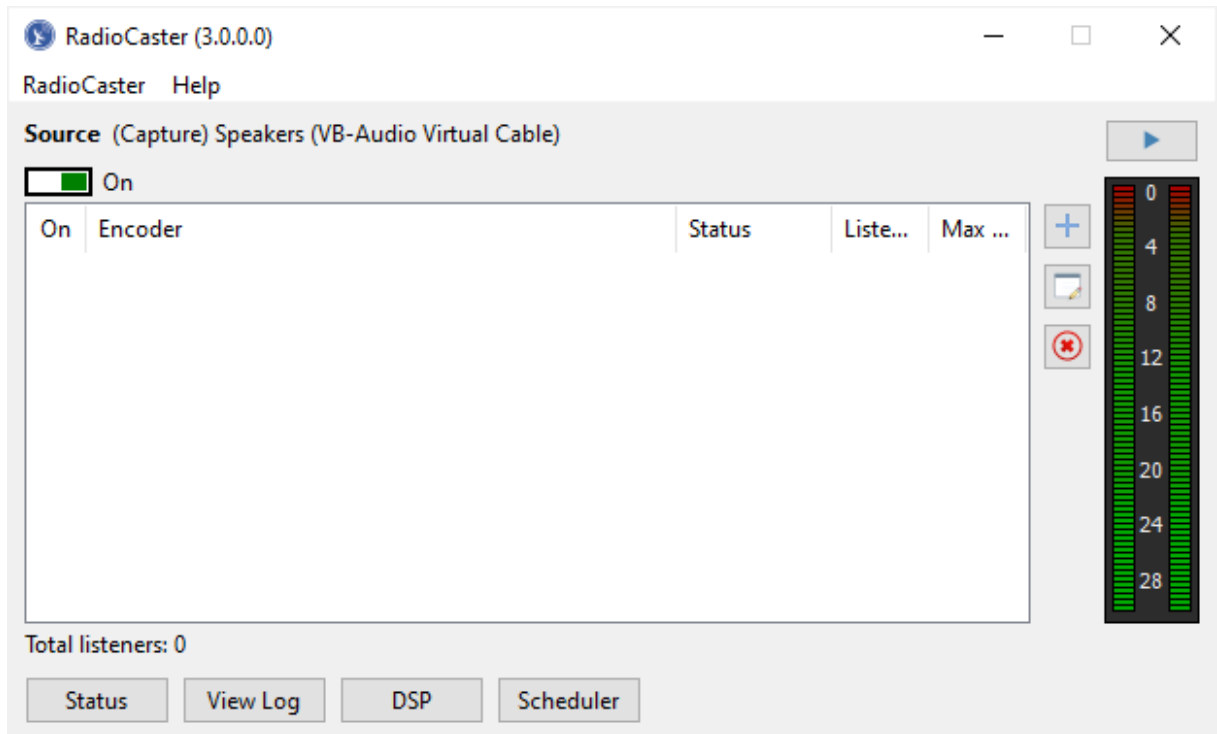
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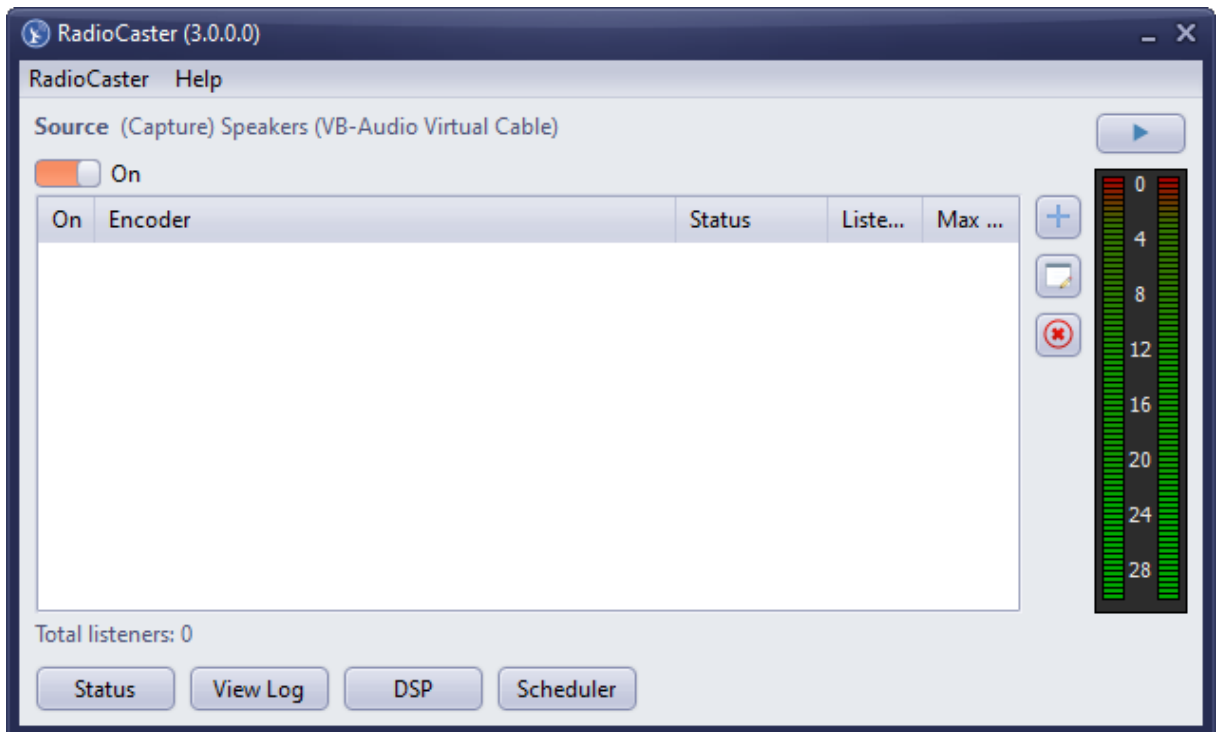
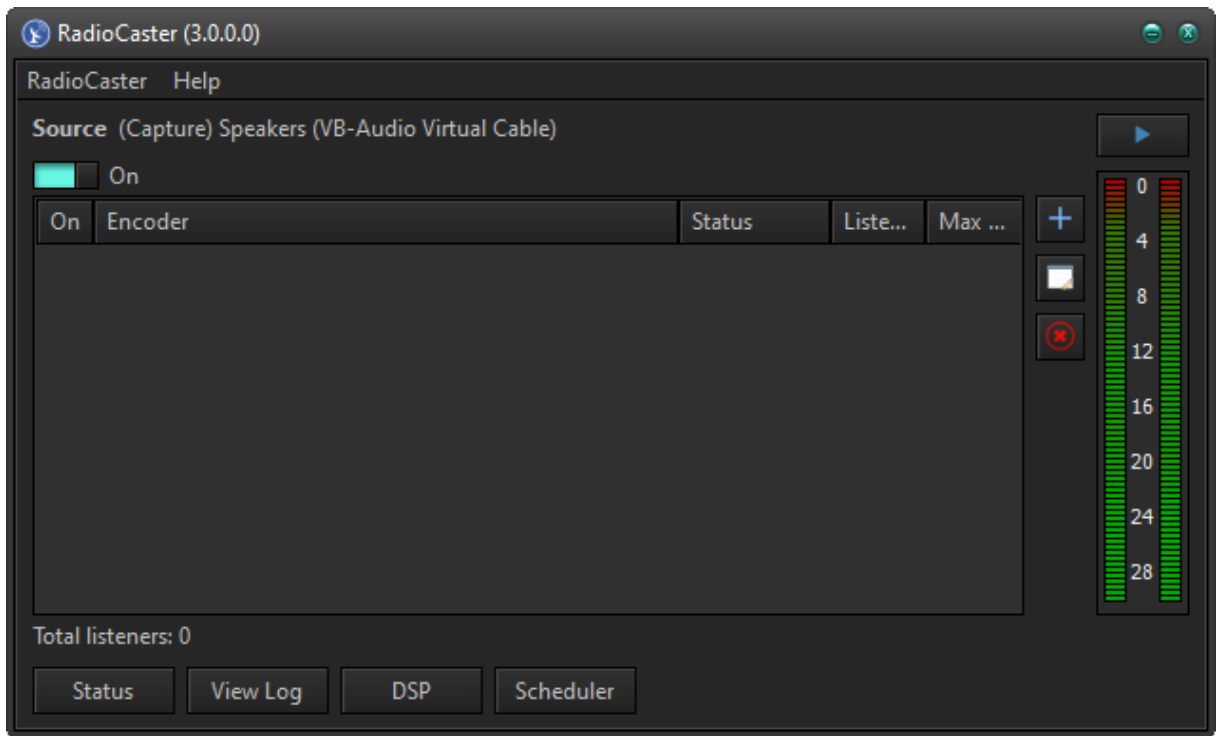


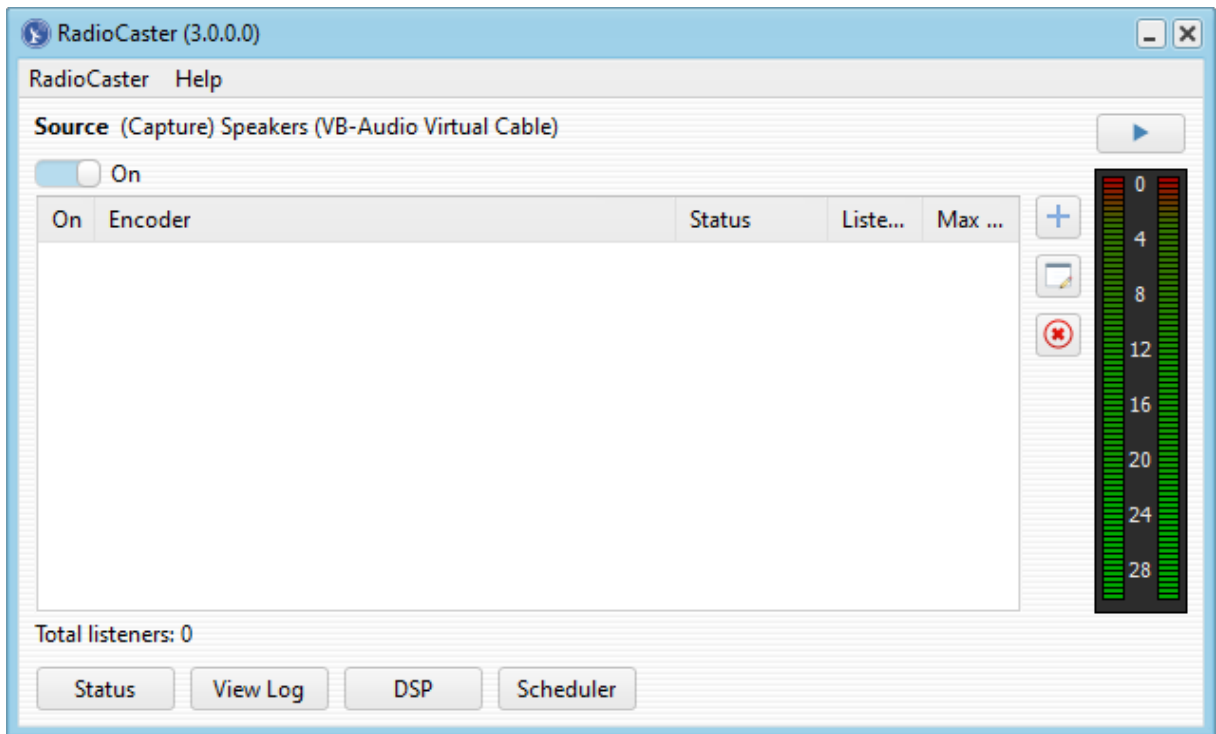
1 Introduction

RadioCaster is a program for taking any audio - including analog - connected to your computer or playback device and broadcasting it online to the whole world. That means seamless use of old audio sources, existing radio broadcasts, and other materials while maintaining your own digital presence. Configuration is painless, while detailed statistics help you keep track of your audience.



RadioCaster also supports various styles.

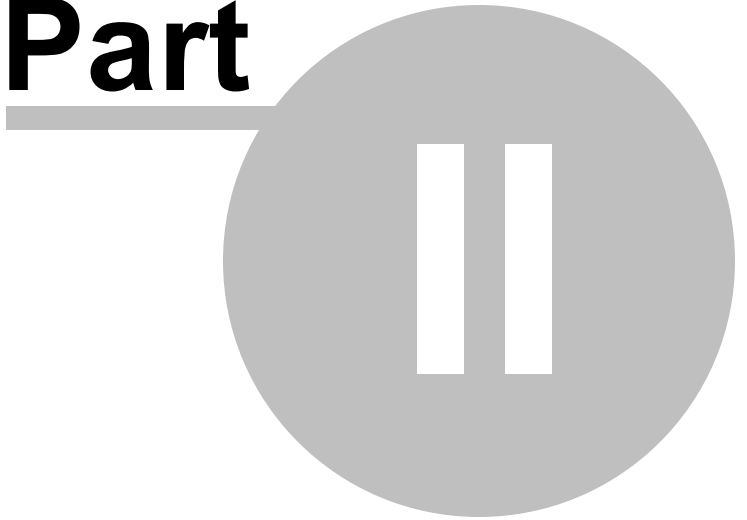




This help file is for RadioCaster 3.5

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Part



2 How to register

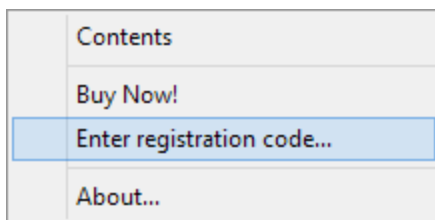
RadioCaster is distributed on a try-before-you-buy basis. You can download a trial version of the application and use it for free during the trial period. To continue using RadioCaster after the trial is over, you must buy a registration key.

To register RadioCaster, follow the steps below:

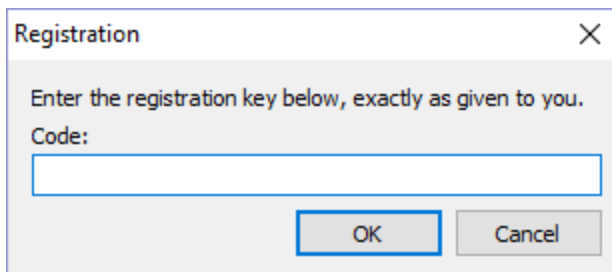
1. Go to www.djsoft.net and click the **Buy** button.

Once your order is submitted and processed, a message with the registration data will be sent to your email address specified during the registration.

2. Open RadioCaster, and select **Help** -> **Enter registration code...** in the top menu bar.



3. A dialog prompting you to enter a registration key will open:

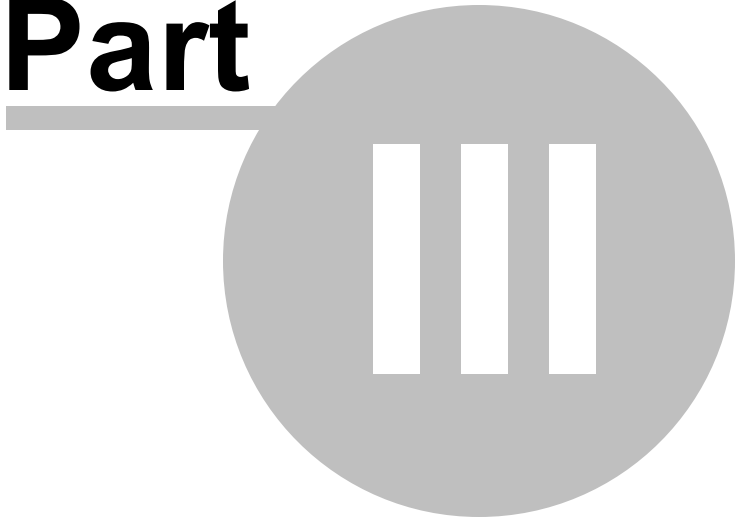


4. Enter your registration key. It is advisable to copy and paste the code from the email message.

5. Click **OK**. Now your copy of the application is registered and all limitations are removed.

If you have updated the program, select **Help** -> **Enter registration code** and enter the key you received.

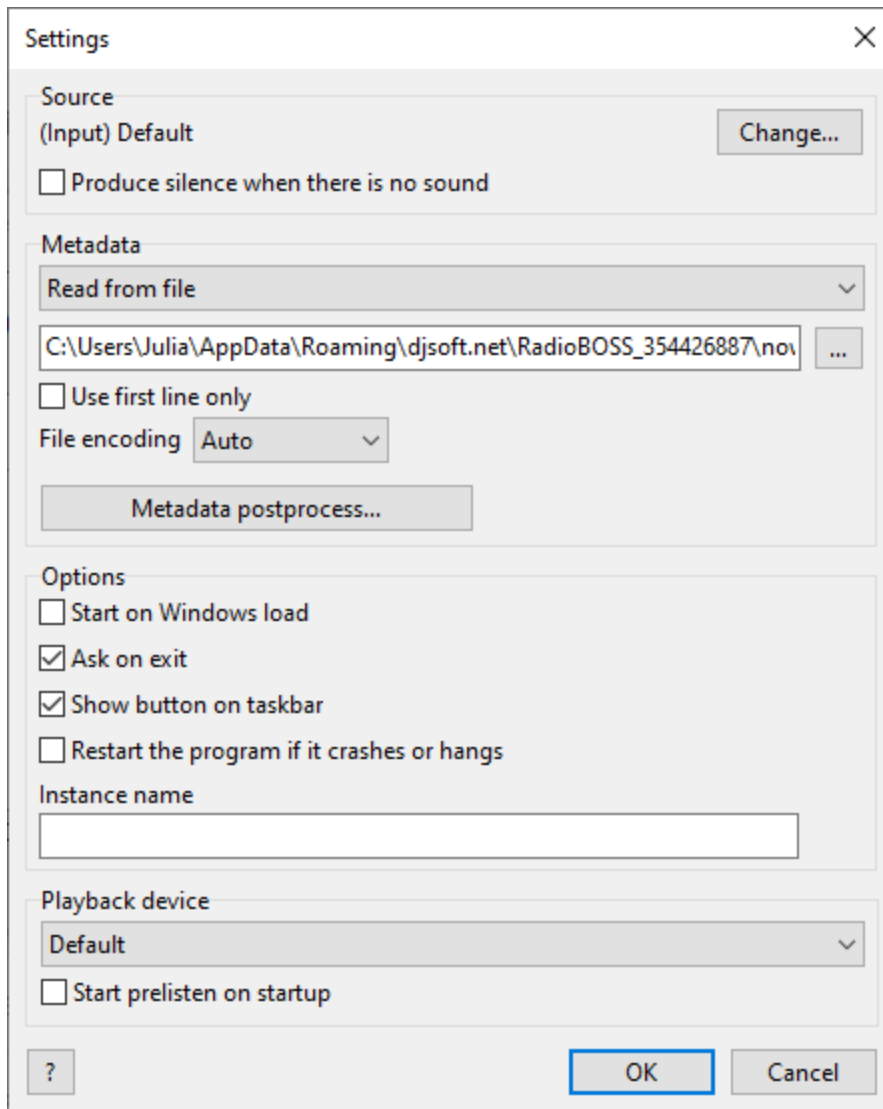
Part



3 Quick Start

This section will help you start working with the program.

1. Start **RadioCaster**.
2. In the top menu click **RadioCaster** -> **Settings...**



3. Select a [source](#)^[20] for the broadcasted audio.
4. Select a method for updating track names ([metadata](#)^[21]).
5. [Configure broadcast](#)^[13].

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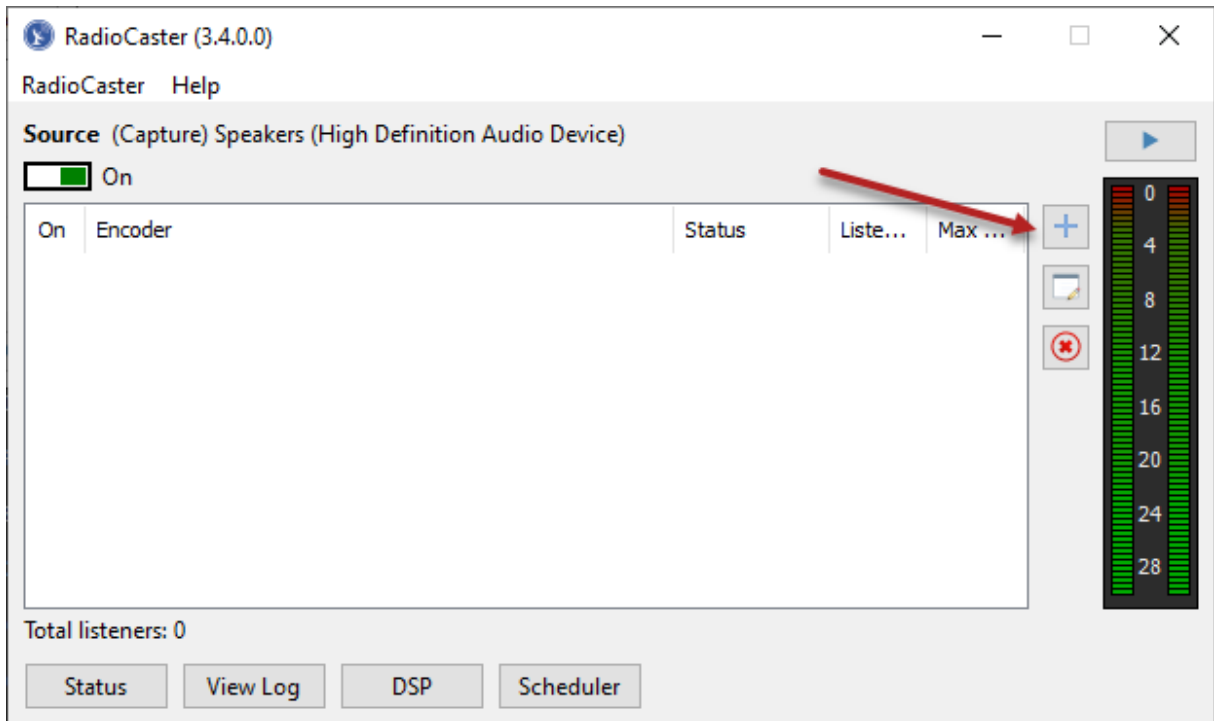


4 Operation

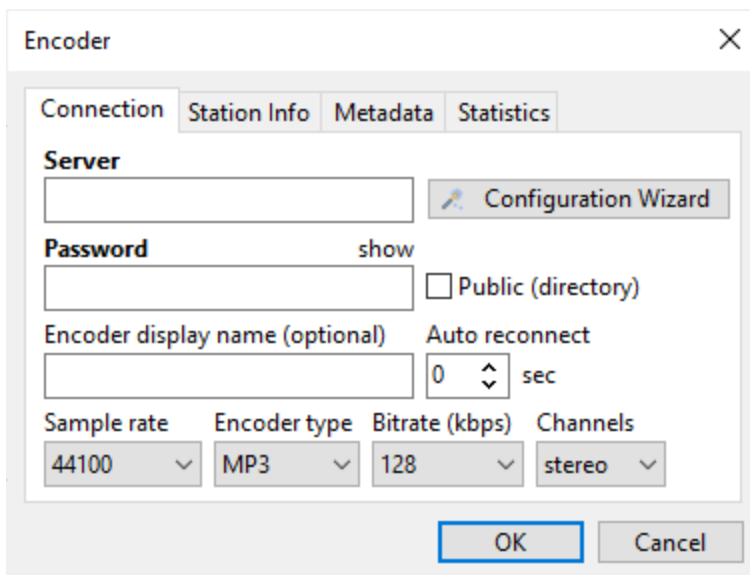
4.1 Setting up encoders

To broadcast an Internet radio, follow the steps below:

To add a new encoder, click the "+" button in the main window.



The encoder window will open:



You can use the **Configuration Wizard** or enter all connection details manually.

Server address and password are provided by your stream hosting provider (unless you are using your own server). You can usually find this information on the hosting control panel.

If you don't have a hosting radio, you can get it on the website: <http://www.radioboss.fm/>

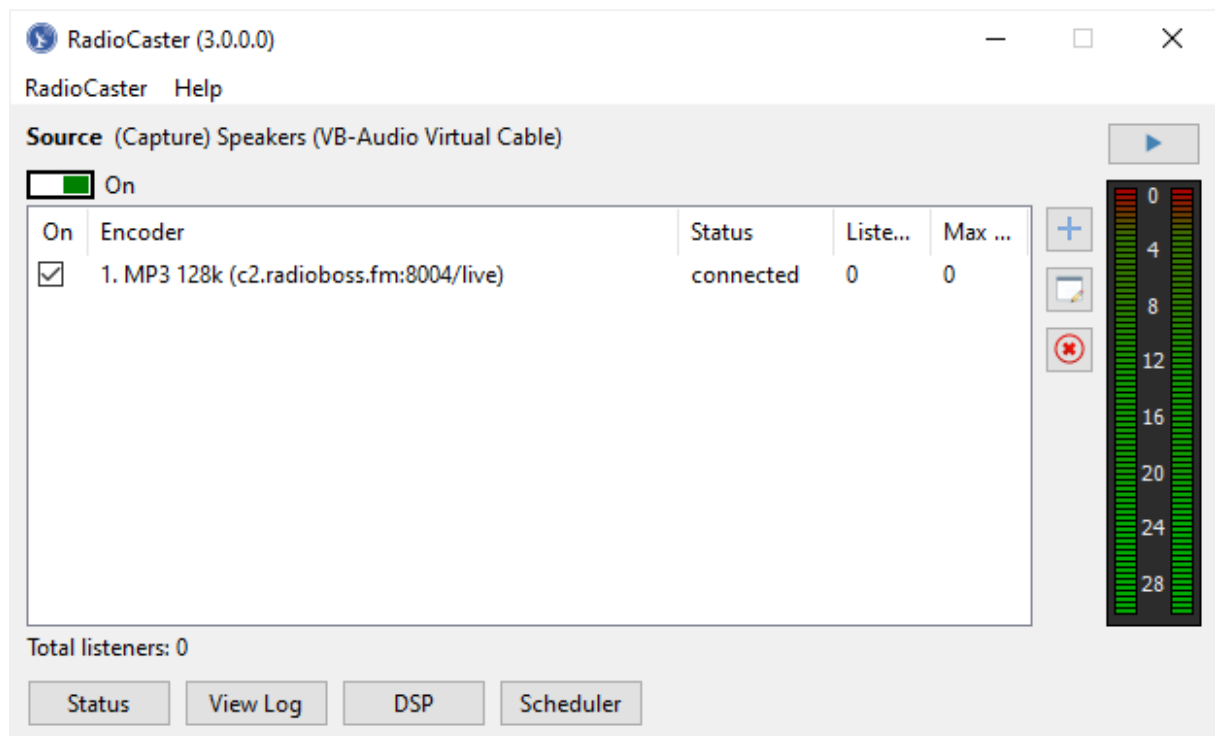
Metadata encoding: It is recommended to leave the "Auto" setting, which works fine in most cases.

Sample rate, Encoder type, Bitrate, and Channels set the broadcasting format. Please consult with your stream hosting provider about which format to use. If you are not sure, leave the default one: 44100 MP3 128kbps stereo.

The **Station Info** tab allows you to override the global station information for the encoder.

Once you have entered all the settings, click **OK**. The encoder will be added to the encoders list.

In the main Encoders menu check the boxes next to the servers you would like to use.

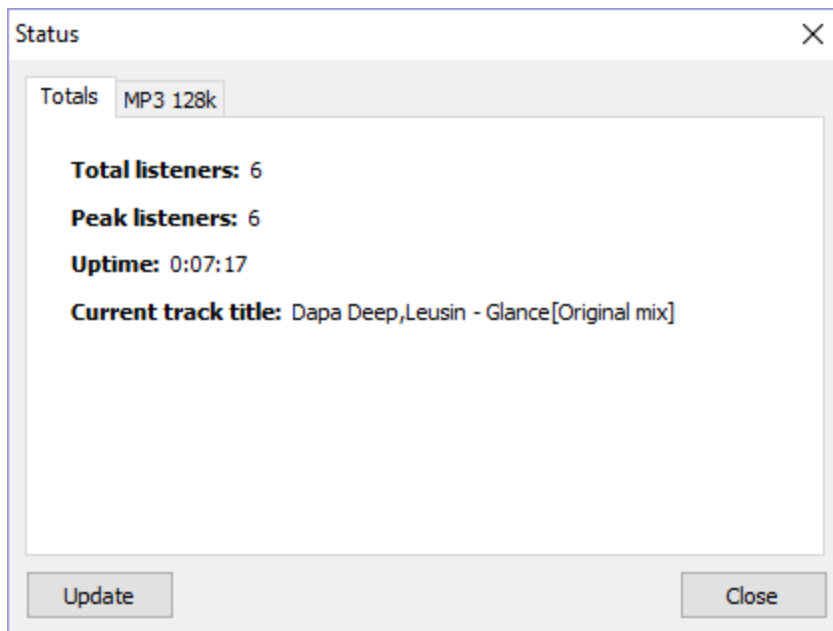


On successful connection, the report (button in the bottom) will show the following message: **Connected to server! (output N)**. It means that listeners can connect to the streaming server and listen to your radio.

If the setup is incorrect, RadioCaster will show an error message in the report. The error message will describe the problem and show the number of the encoder that failed to start (e.g. "output 1").

If this is the case, open the Settings window, select that encoder in the list, and click the Edit button to fix the configuration.

You can view audience statistics in the **Status window**. To open it, click the button Status in the main window.



Most common error messages:

Cannot start broadcasting (output N): Error 2100

The specified password is incorrect. Please check the password.

Cannot start broadcasting (output N): Error 2

The server is not available or the specified server address is incorrect. The problem is probably caused by entering an incorrect address or port. Unless you are using Windows Media Services, make sure that there is no "http://" or "ftp://" in the server address.

Other reasons: Some anti-virus software or a firewall is blocking the connection, or no network connection is present.

Cannot start broadcasting (output N): Error -1

The most common reason for this error: Someone is already connected to the server.

4.1.1 Statistic Relays

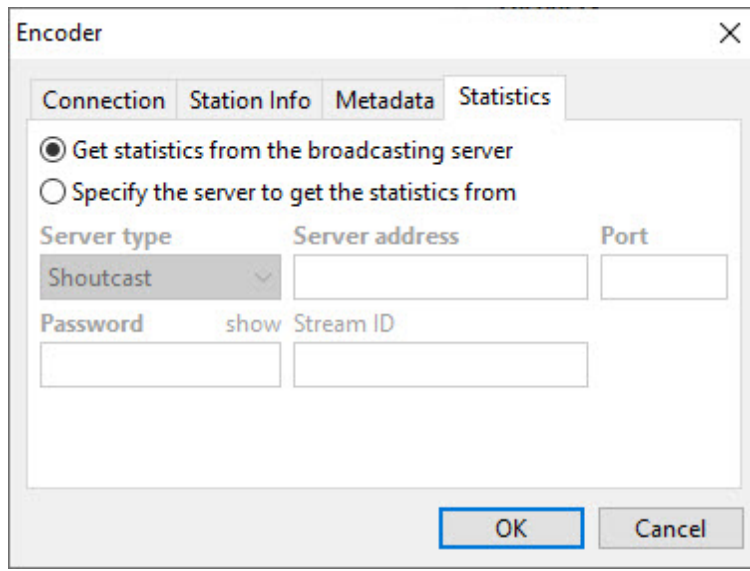
The function allows to customize the method of obtaining statistics (number of connected listeners).

By default, statistics are taken from the broadcast server. This doesn't require any additional setup.

You can also obtain statistics from another server. This can be useful, when broadcasting is maintained by one server, while listeners are connected to the other one: such situation is typical of distributed servers, or systems that support auto DJ, or multiple DJs broadcast from different locations.

To retrieve statistics without broadcasting to the server, on the **Connection** tab leave the **Server** field empty.

To obtain statistics from another server, double click the connection in the list to edit it, and choose **Statistics** tab.



Choose a **server type** – Shoutcast or Icecast; this is the type of server, from which statistics are obtained.

In the **Server** field, enter server address (without http://), e.g.: **example.com:9000**.

Password is a server password, which is either admin password or broadcasting password, depending on the server.

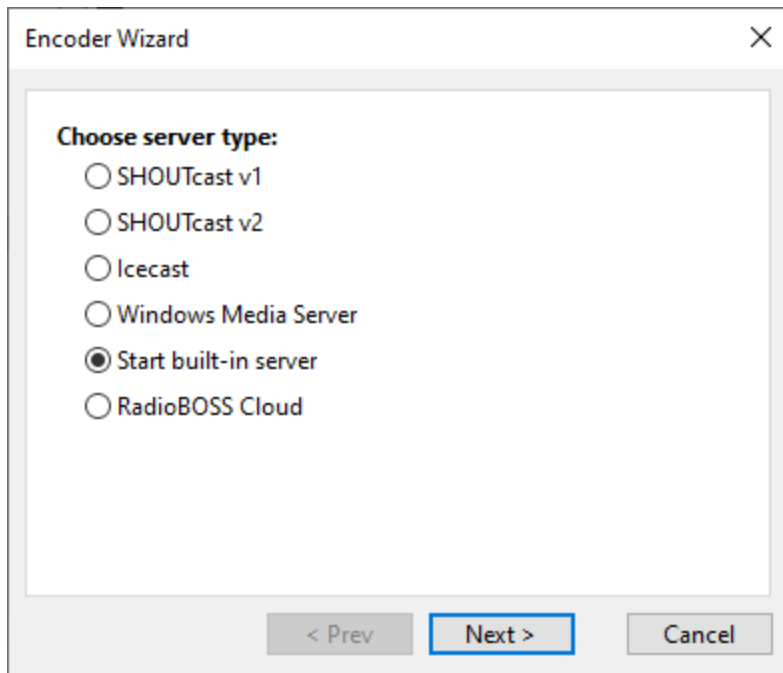
Mount Point/Stream ID is the mount name (which is necessary for Icecast) or stream ID for Shoutcast (if ID is not specified, total number of listeners at the server is returned).

If everything has been set up correctly, the main window of the program shows number of listeners.

4.1.2 Internal server

RadioCaster has a built-in broadcast server. The server allows listeners to connect directly to RadioBOSS in order to listen to the stream. A built-in server is usually used for the transmission of audio within a local area network or for signal transmission between affiliate stations. We do not recommend using it for broadcasting internet radio as the server's functionality is limited.

To activate the server, use the broadcast setup wizard and select the "Configuration Wizard" option.



Specify the port on which the server will run and the maximum number of listeners.

You can listen to the stream at <http://ip-address:port>, where "**ip-address**" is the address of a computer in the local network or a static IP on the internet, and "**port**" is the port that was selected when configuring the server.

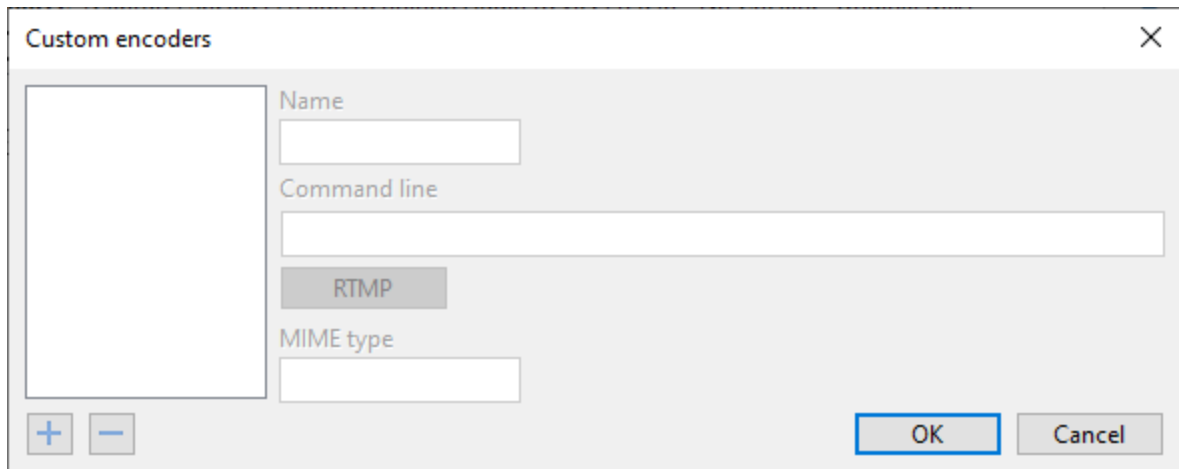
SSL streaming support

If you want to allow `https://` connections, open the settings folder (using menu Settings, Open Settings Folder) and add certificate file **server_cert.pem** - the file needs to be in PEM format. It can include intermediate and root certificates (in that order) after the server's certificate. Also add **server_key.pem** file containing a private (in PEM format) for the certificate. RadioBOSS needs to be restarted after the certificate files are added.

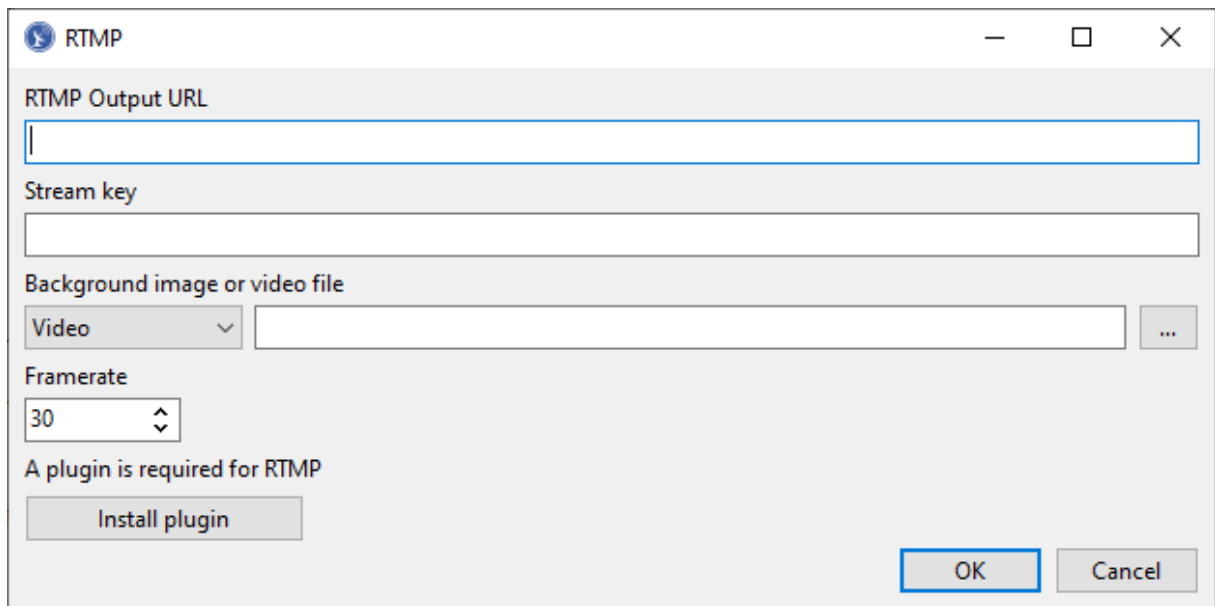
4.1.3 RTMP streaming

To stream using an RTMP protocol (services like YouTube, Facebook, and others use RTMP), please do the following.

1. In the top menu bar, select **RadioCaster -> Custom Encoders...**



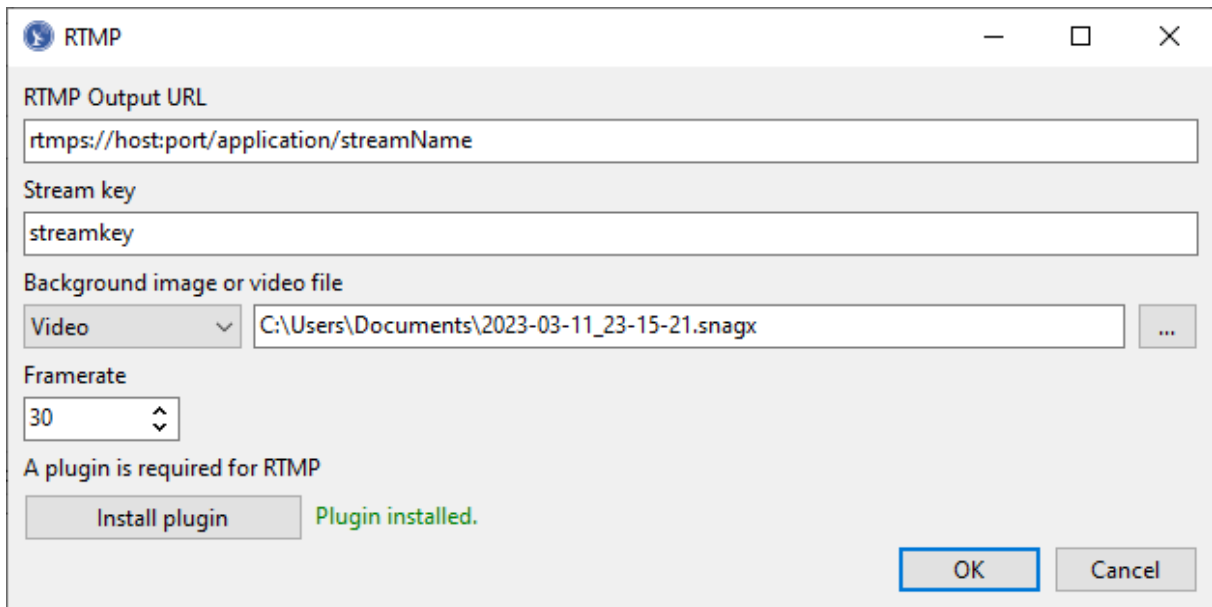
2. In the custom encoders window, click the + button to add a new encoder. Set the encoder name, e.g. "ENC1", and click the **RTMP** button.



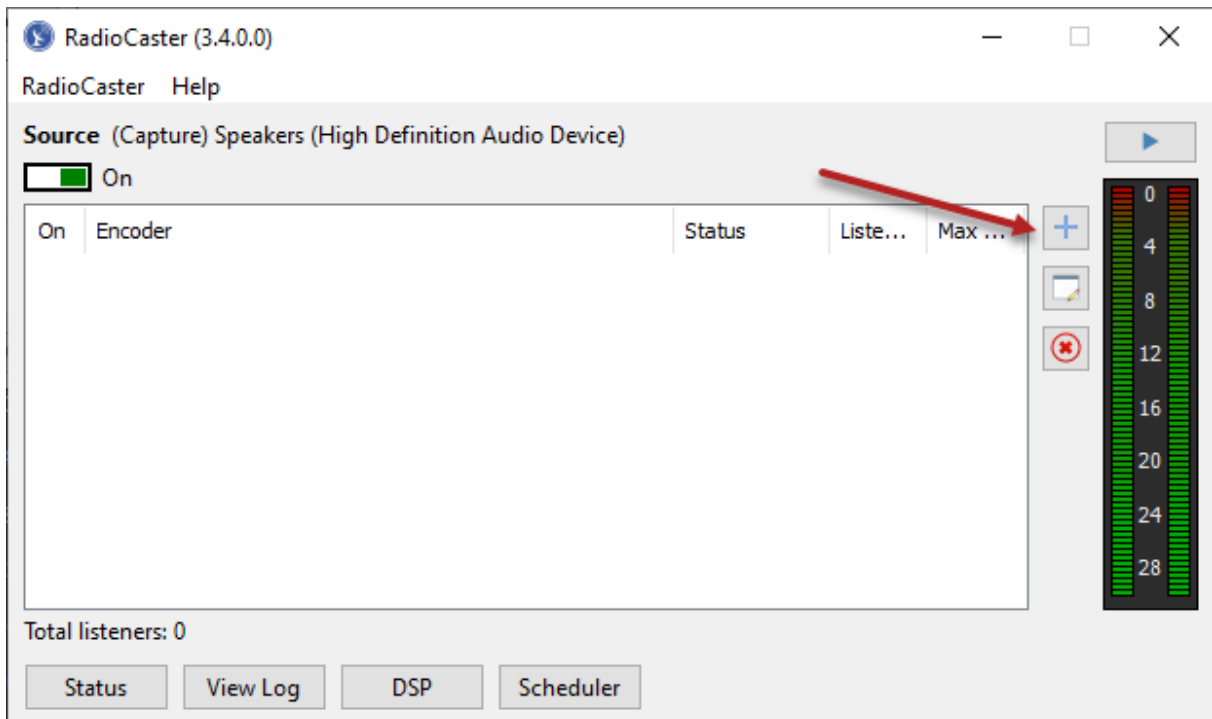
3. Input the streaming details: **RTMP Output URL** and **Stream Key** - this data is provided by the service you're streaming to.

4. Specify the image or video file to be used as a background.

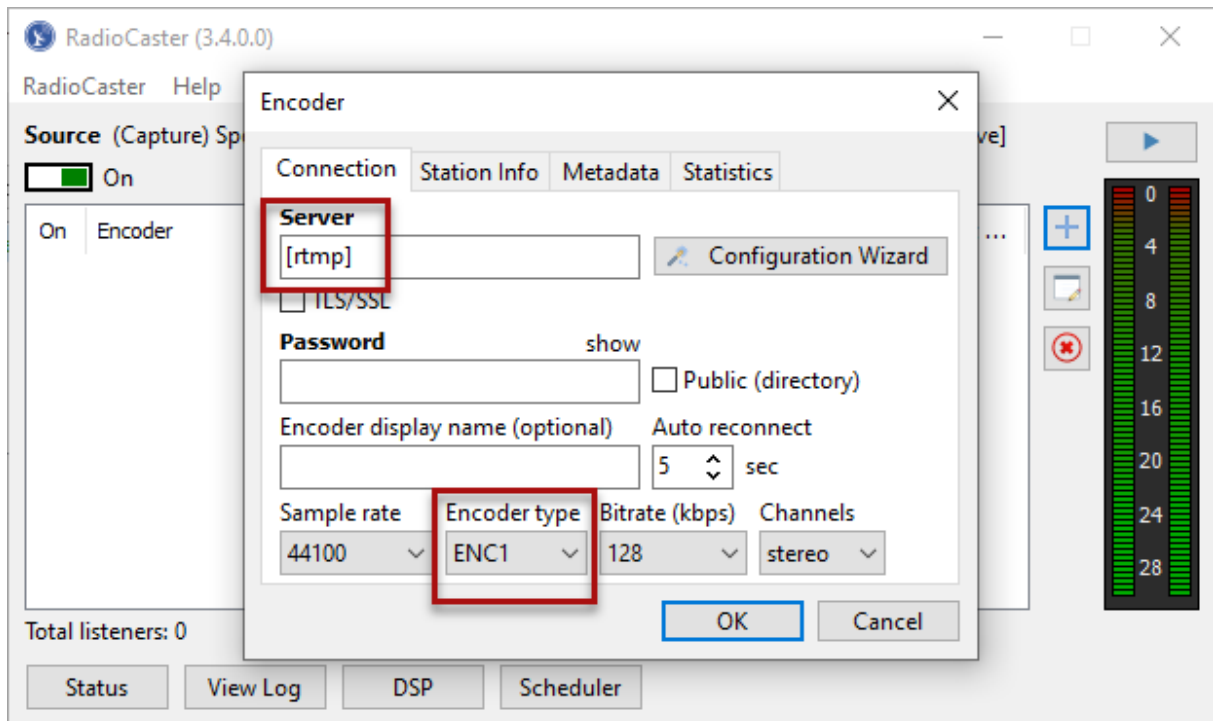
5. If you haven't yet installed the plugin, click the **Install plugin** button.



6. Click **OK** in the **RTMP** window and then **OK** in the custom encoders window.
7. In the **Broadcast** area, add a new streaming encoder (click +).



8. Enter **[rtmp]** into the **Server** field.
9. In the Encoder field, select the custom encoder that was created previously e.g., "ENC1".



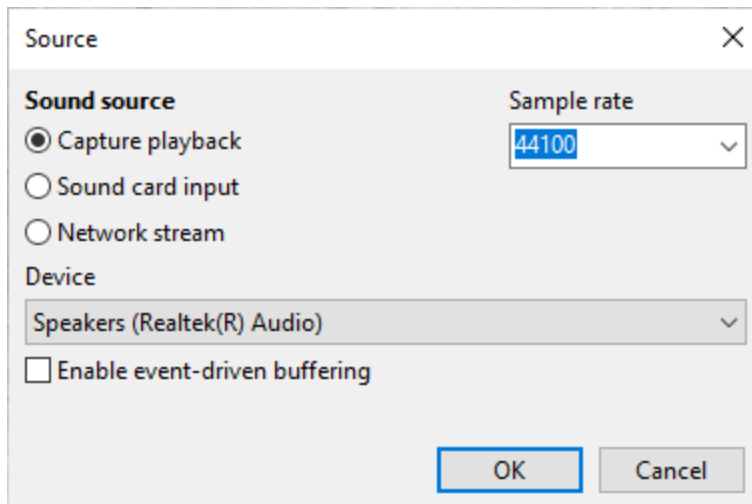
10. Click **OK**.

See also [Setting up encoders](#) ^[13]

4.2 Sources

Configuring the source:

Click **RadioCaster** -> **Settings** in the menu.
Click the **Change** button in the Source category.



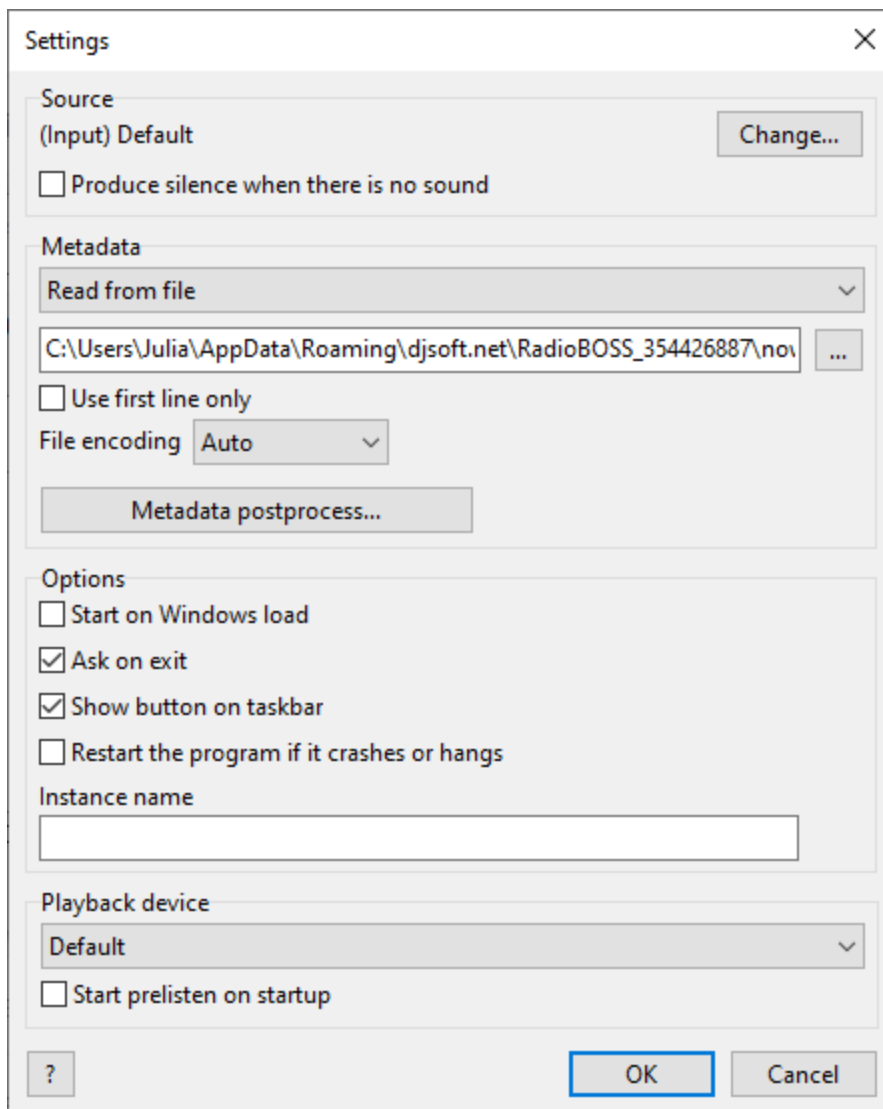
Select a suitable sound source.

- **Capture playback** - the source will be whatever is being played on the computer via the selected sound card.
- **Sound card input** - broadcast from sound card input (e.g. line-in or microphone input).
- **Network stream** - there will be a broadcast of the online stream. Enter the stream's URL in the URL field.

Sample rate - sample rate in Hz, 44100 is the default.

4.3 Metadata

To change your metadata settings, select **RadioCaster** -> **Settings** in the menu.



RadioCaster can use several sources when updating a track name:

Read from file - a name read from the file will be sent to the server. If the "Only use first line" option is enabled, only the first line will be used as a name. Otherwise the entire contents of the file will be used.

Read from URL - a query will be made to the address indicated, and the text received will be used as the name for the current track.

Use text - use the entered text.

Read metadata from stream - if a different stream is being rebroadcast, the name will be transferred from the rebroadcasted stream. The "**Include stream name**" option enables or disables the name of the rebroadcasted stream.

Read from XML file - reads metadata from the XML file. The **Title Format** field specifies the parts of the XML to read:

{Node1\Node2[Attribute]} - read attribute value of a node

{Node1\Node2} - read node contents

Do not specify root element name in the path. It can read from multiple nodes or attributes and include any custom text between the {} tags.

Example. An XML file:

```
<?xml version="1.0" encoding="utf-8"?>
<PLAYER name="RadioBOSS" version="5.8.5.2">
  <TRACK ARTIST="Prodigy" TITLE="Boom Boom Tap" ALBUM="No Tourist" YEAR="2018" GENRE="BreakBeat"
    COMMENT="" FILENAME="D:\Artist\Prodigy\No Tourists 2018\08 - Boom Boom Tap.dsf" DURATION="04:00">
  </TRACK>
</PLAYER>
```

Title Format: **{TRACK[ARTIST]} - {TRACK[TITLE]}**. It will read ARTIST and TITLE attributes of the TRACK node. The resulting title would be **Prodigy - Boom Boom Tap**.

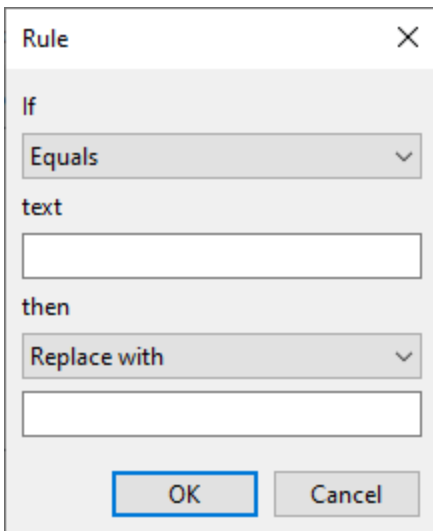
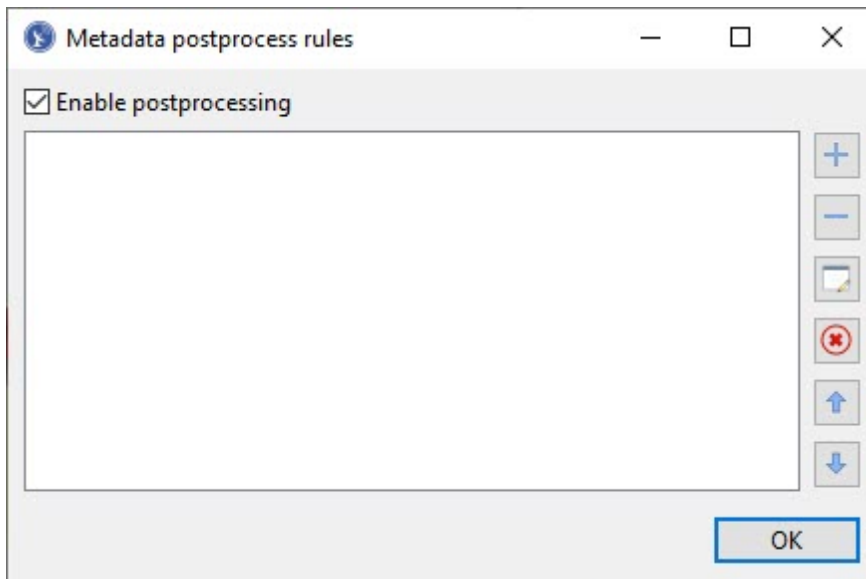
See also

[Metadata postprocess rules](#) ^[22]

4.3.1 Metadata postprocess

Metadata post-process rules allow to specify conditions to modify metadata or skip sending certain track titles.

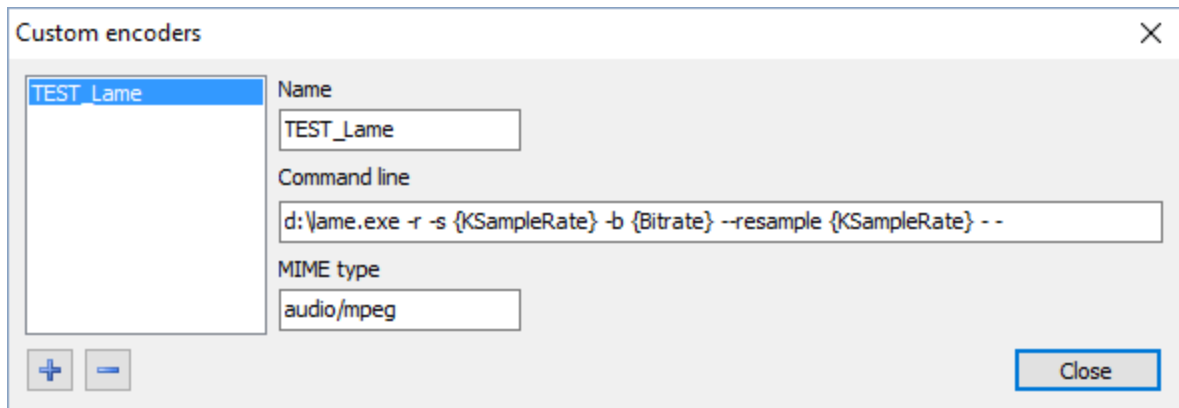
Rules are processed from top to bottom; all rules that match title will be applied.



4.4 Custom encoders

Custom encoders feature allows you to use any custom command line encoders. RadioCaster can use any command line encoder that supports input/output to console.

To configure custom encoders, in the menu click **RadioCaster -> Custom Encoders...**



Encoder command line parameters can include the following variables (the values correspond to the encoder settings in RadioCaster):

{SampleRate} - sample rate in Hz (e.g. 44100)

{KSampleRate} - sample rate in kHz (e.g. 44.1)

{Bitrate} - bitrate in kbps (e.g. 128)

{Channels} - number of channels (e.g. 2)

The encoder must be told (via the command-line) to expect input from STDIN, rather than a file, and to send output to STDOUT.

The MIME type depends on the encoder file format.

RadioCaster sends 16-bit signed int PCM data to encoder, Little-Endian.

Example: command line for **lame.exe** MP3 encoder

path_to_lame\lame.exe -r -s {KSampleRate} -b {Bitrate} --resample {KSampleRate} - -

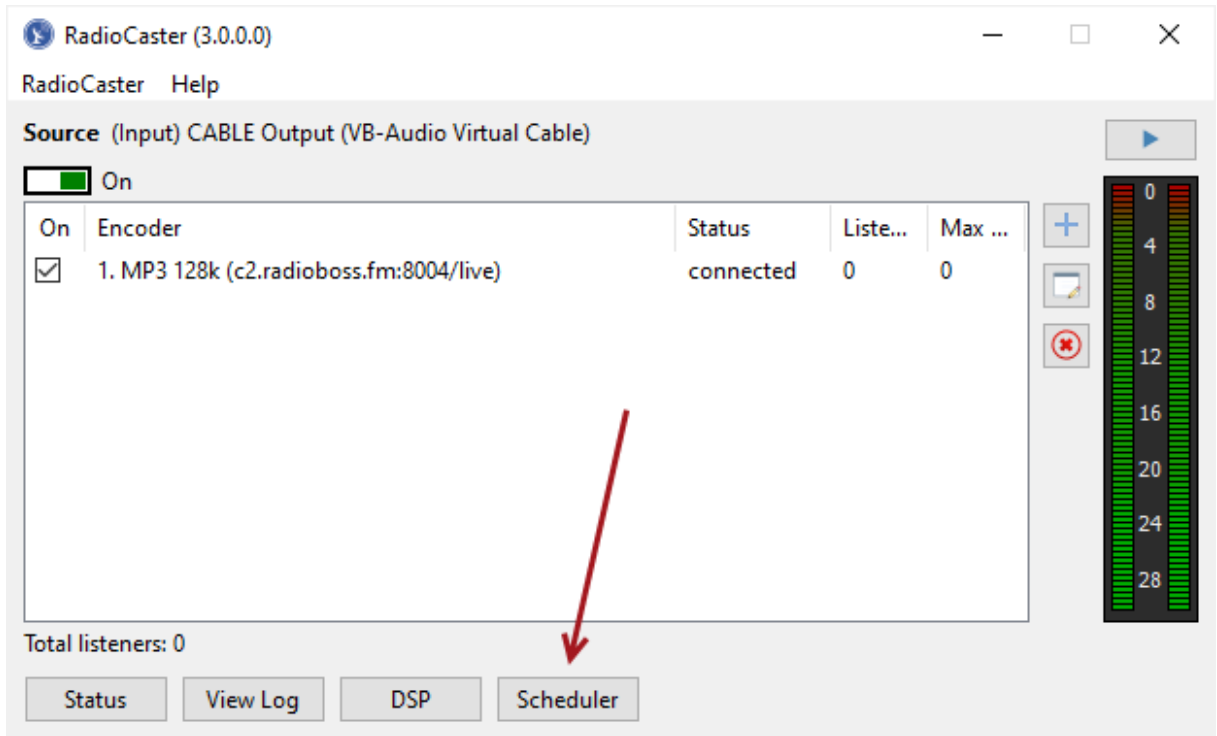
Example: command line to send uncompressed RAW PCM, **pcmraw.exe** encoder is located in the Plugins folder where you have installed RadioCaster (default C:\Program Files (x86)\RadioCaster)

C:\Program Files (x86)\RadioBOSS\Plugins\pcmraw.exe - -

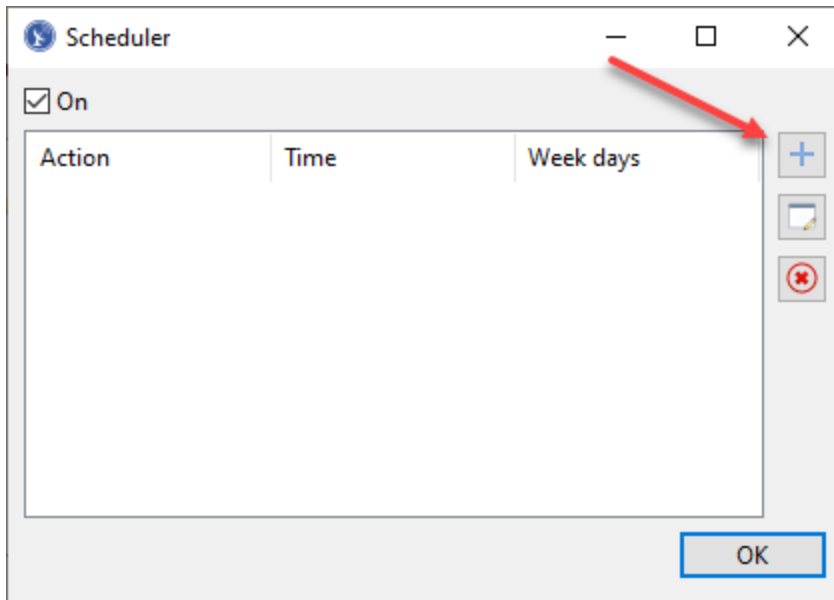
4.5 Scheduler

Scheduler allows start and stop broadcasting at predefined times.

To open the scheduler, in the main window press the **Scheduler** button.



The scheduler's window will open and you can create and edit events:



Event ✕

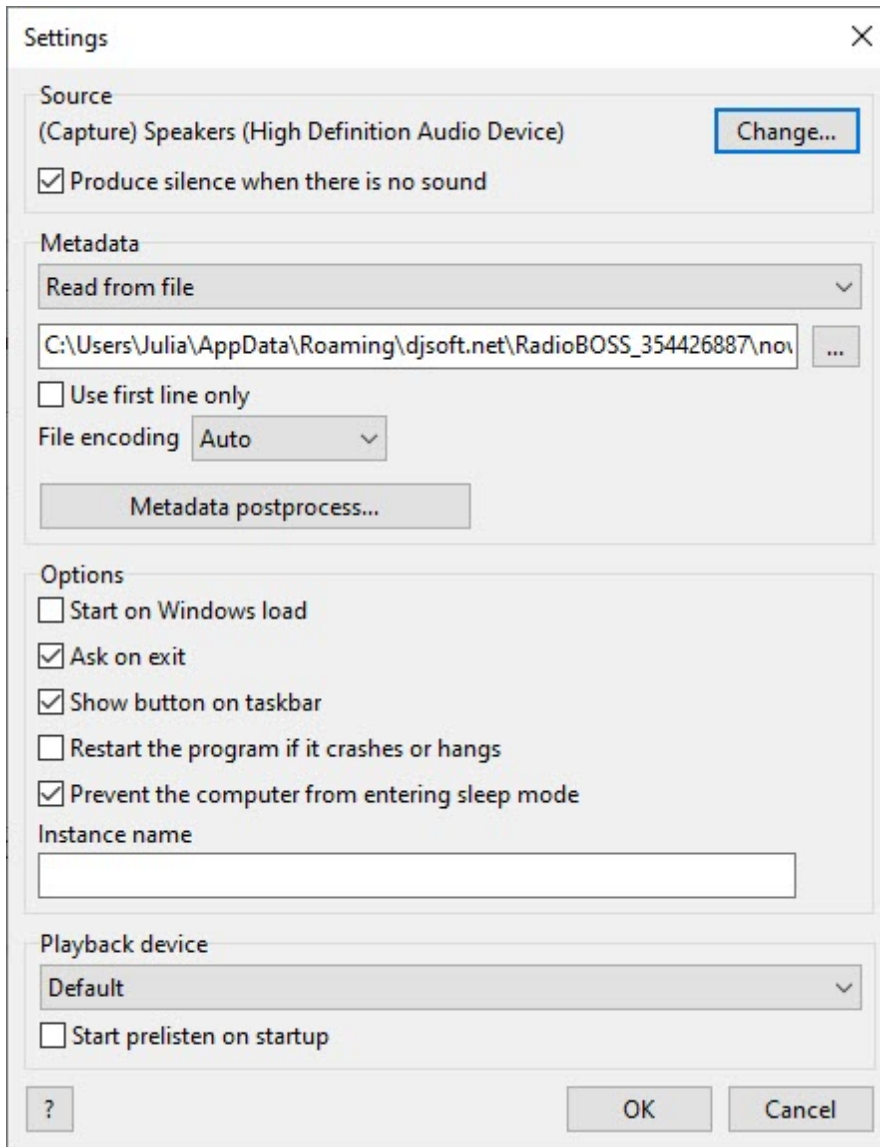
Time
12:00:00 AM

Action

Start broadcast
 Stop broadcast

Sunday
 Monday
 Tuesday
 Wednesday
 Thursday
 Friday
 Saturday

4.6 Settings window



Source - sound [source for broadcasting](#)^[20].

Metadata - [metadata](#)^[21] (track titles) source.

General

Start with Windows - start RadioLogger when the Windows user logs in

Ask on close - confirm when closing RadioLogger

Show button on taskbar - if disabled, RadioLogger will be available as a system tray icon

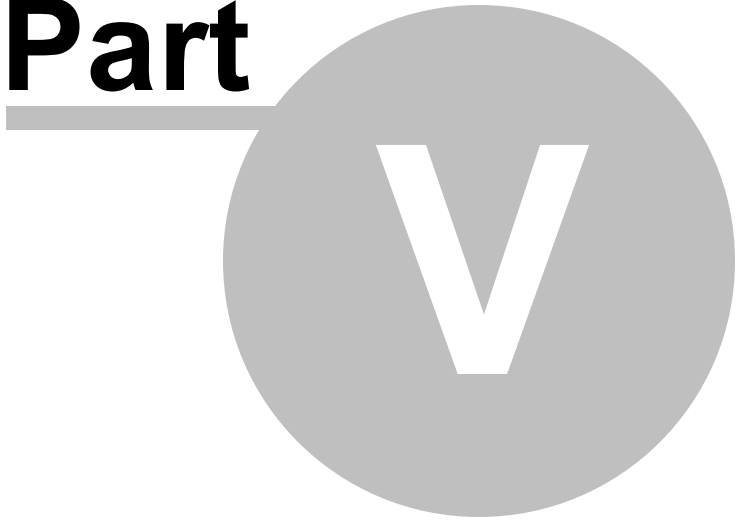
Restart the program if it crashes or hangs - automatically restart RadioLogger if it crashes

Prevent the computer from entering sleep mode - if this is enabled, the computer will not enter sleep mode when RadioLogger is running

Instance name - instance name to identify RadioLogger installation, it's displayed in the title bar

Playback device - device to use for prelistening.

Part



5 Contacts

If you have questions about RadioCaster, suggestions on how to improve the software, or you found a bug, please visit our support page: <http://www.djsoft.net/enu/support.htm> or forums: <http://www.djsoft.net/smf/>

The latest version of the program can be downloaded from <http://www.djsoft.net>