



MP3 RTP Streamer

The MP3 RTP Streamer is a portable Java application, which takes its input either from an iTunes library format (the .xml file), or from a very simple playlist directory (.m3u), and generates multiple MP3 RTP streams ("channels"). The stream content can be MP3 files from playlists, or internet radio streams.

The application has a simple user interface to configure which playlist/internet radio station to stream to which destination (IP address / port number). Streaming can be unicast, multicast, or broadcast. Optional start and stop times can be set for a channel, as well as shuffle and repeat functions. Once a channel is configured, playback starts.

1 Installation

- 1.1. Save the file MP3_RTP_Streamer.jar into the target directory of your choice, the file can be downloaded from www.barix.com; go to the 'software' section under 'downloads'.
- 1.2. The application is Java based, so the streaming computer must have a java runtime environment v5 or later installed prior to use of the streaming application.
- 1.3. Ensure that the JAR file's location is in the Java class path.
- 1.4. The application can be run by either double clicking on the file mp3_rtp_streamer.jar, or by entering the following command on a command line:

```
java [-version:1.5.0_11] -jar MP3_RTP_Streamer.jar [my.cfg] [> console.log]
```

where the optional arguments are shown in [...]:

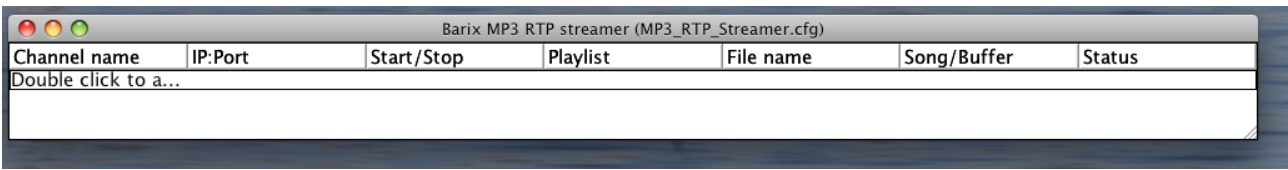
- “-version:1.5.0_11” – this is the version used to create the streamer application. If the server has several JRE/JDK versions (including 1.5.0_11) installed, then it is best to use this version.
- “my.cfg” – The MP3 RTP Streamer can accept settings by specifying a configuration file when it is started. This facility is useful when standard channels are being defined for a number of PCs within a facility, it saves having to create channels at each installation. If the specified file exists, the Streamer will use it and adopt the defined channel settings; If the “my.cfg” file does not exist, the application will use this supplied name to create a new configuration file, which will be saved automatically as soon as the first channel has been created.
Multiple installations of the Streamer can be run (with different configuration files) simultaneously, if required. For each instance, the configuration file name is shown in the title bar.
If no configuration file name is specified, the Streamer will look for the default configuration file “MP3_RTP_Streamer.cfg” to define the channels, or will create this file when the first channel is defined, if it did not previously exist.
- “> console.log” – To be used when trying to identify problems with streaming. Records console output and LOG file entries. You can use it to log info about streaming and as an error report, if needed. In normal operation, this option is not necessary.

2. Set up

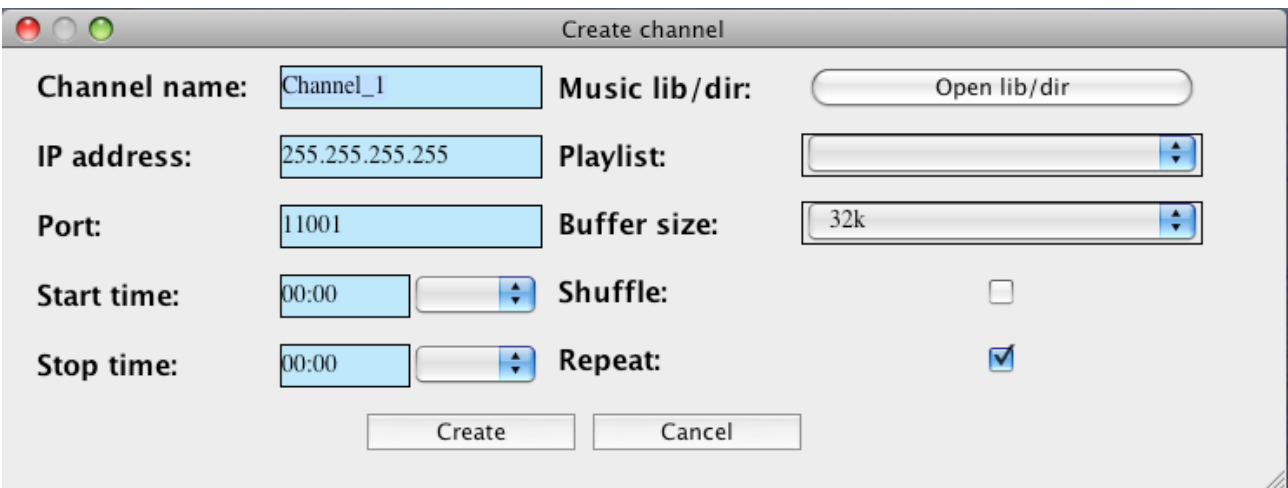
2.1 Create channel

The first step is to define the channels for the audio. In order to create a new channel, double click on the

last row of the current table (where you can see the prompt “Double click to add channel”)

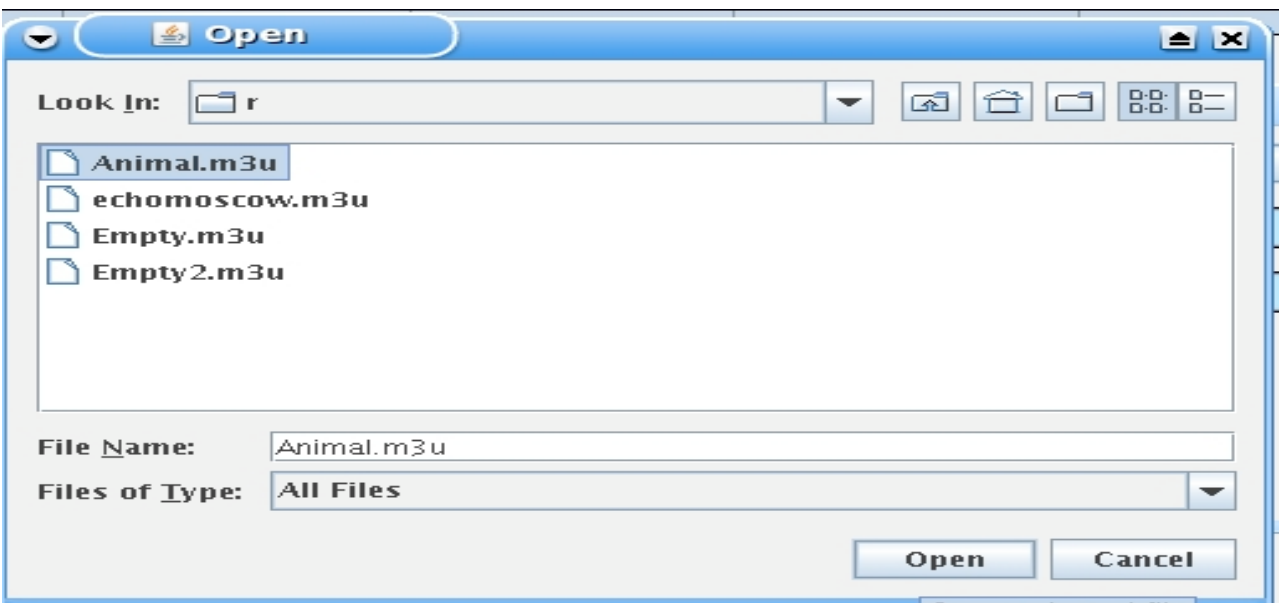


This results in the “Create channel” window being displayed, as shown below. If the table is empty (e.g. the first time the application is run, or if you start a new instance with an empty configuration file), you will first need to select the source of the music for all of the channels:

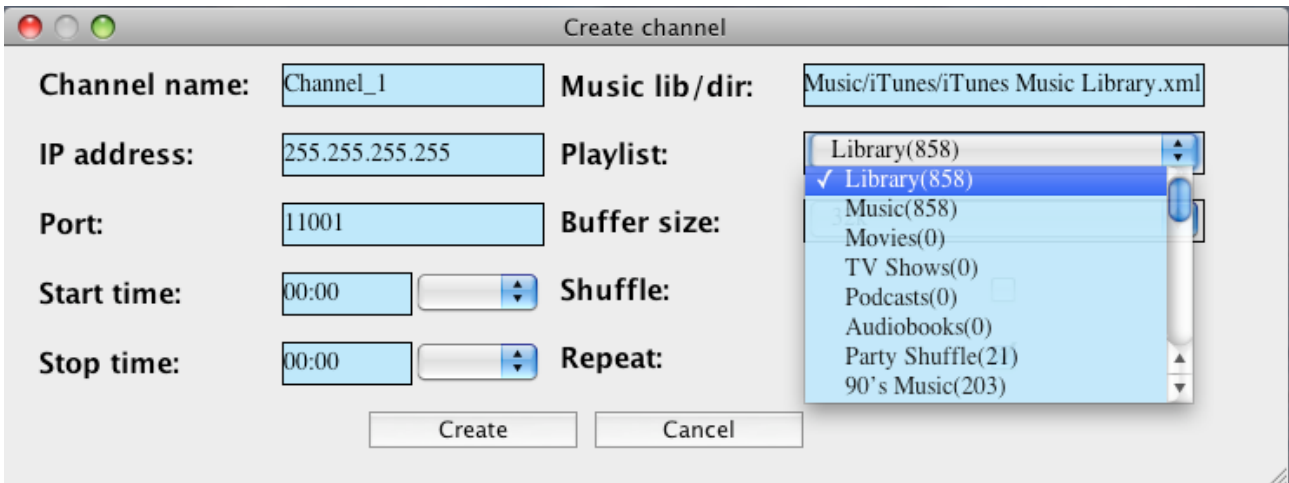


First click on the “Open lib/dir” field, this will result in the standard Open window for your operating system, locate and select the appropriate library / directory, e.g. “iTunes music library.xml”. Once a Music library / playlist directory has been selected for the first channel, all subsequent channels in this instance of the software will use the same selection.

If a playlist directory is chosen, the Streamer application will identify all valid playlists in this directory and populate the 'Playlist' field in the 'create channel' panel for further selection:

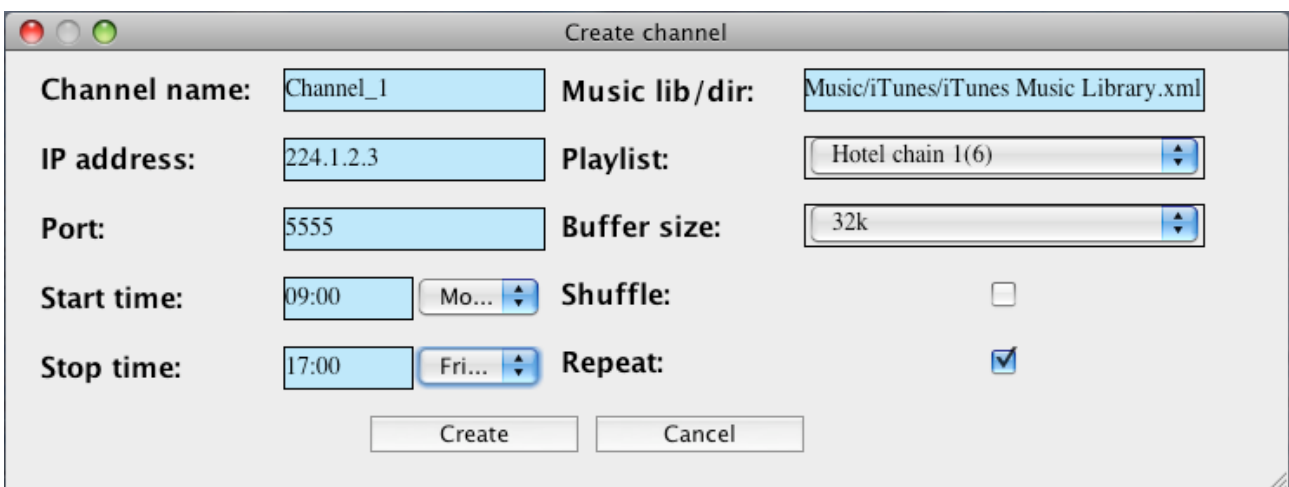


Alternatively, to open a music library you should find and open the proper XML file (e.g. iTunes Music Library.xml). Again, the Streamer application will identify all valid playlists and populate the 'Playlist' field for selection.

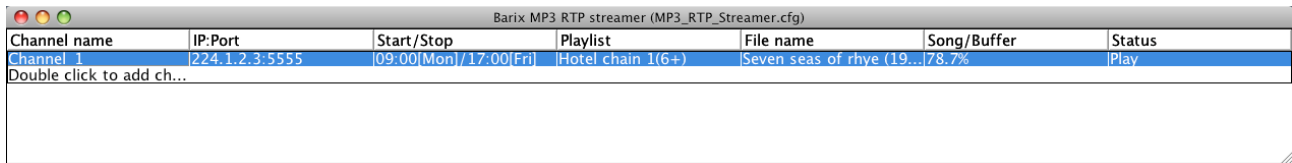


Once you have 'Opened' either the playlist directory, or music library, the display reverts to the "Create channel" window, where all other options for this channel should be defined:

- channel name
- uni/multi/broadcast IP address, or DNS name
- port number
- **N.B.** it is possible to define multiple channels with the same IP and port number combination, to allow different 'mood playlists' to be defined for an area, depending upon the time. If duplication of IP & port number is implemented, ensure that the time frame defined by the start and stop times are different.
- start and stop time, start day and stop day (from drop down lists to the right of start time/stop time). Leaving the start/stop times at 00:00 and the start/stop days blank means that the channel will be always playing; In the screenshot below, the system is being configured to play channel_1 from 9am to 5pm, Monday to Friday.
- select a playlist for this channel from the drop down list
- **N.B.** to stream an internet radio station from iTunes, it is necessary to create a playlist for the station and then drag and drop the station details into this playlist: stations cannot be chosen from the iTunes library 'Radio' entry.
- For internet radio playlists, a suitable buffer size should be selected from the drop down list – this is to allow for variations in the quality of the internet link, to enable the channel to be played back properly
- shuffle mode (default NO i.e. files will be played in order)
- repeat mode (default YES, i.e. the playlist will be repeated, as long as the current time is within the 'start / stop' time parameters)



Click on "Create"; the channel will be created, the configuration file updated with the channel details and the channel will automatically start playing, provided that the current time is within the 'start / stop' time parameters.

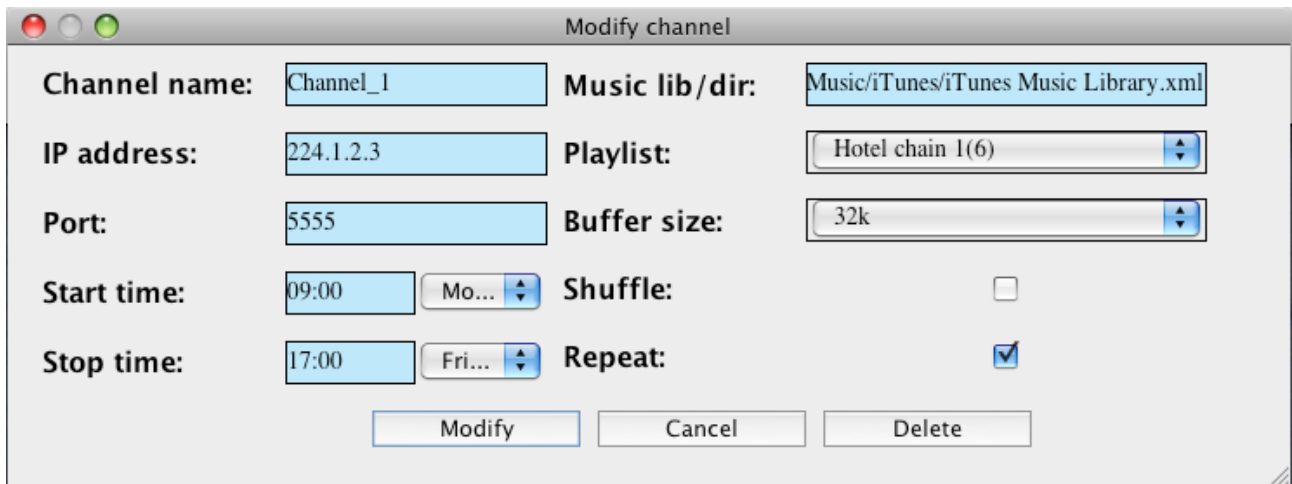


Channel name	IP:Port	Start/Stop	Playlist	File name	Song/Buffer	Status
Channel_1	224.1.2.3:5555	09:00(Mon)/17:00(Fri)	Hotel chain 1(6+)	Seven seas of rhye (19...	78.7%	Play

Double click to add ch...

2.2 Modify / Delete Channel

In order to modify, or delete, an already existing channel, select the channel by double clicking anywhere on it apart from the "status" field. This will cause the "Modify Channel" pop-up to be displayed as shown below; this is effectively the "Create Channel" window. Either change the necessary parameters, or select to delete the channel. Opting to delete will cause the application to display a pop up asking you to confirm the delete. Once "modify" has been selected, or "delete" confirmed, the channel parameters will be changed and the configuration file automatically updated.



Modify channel

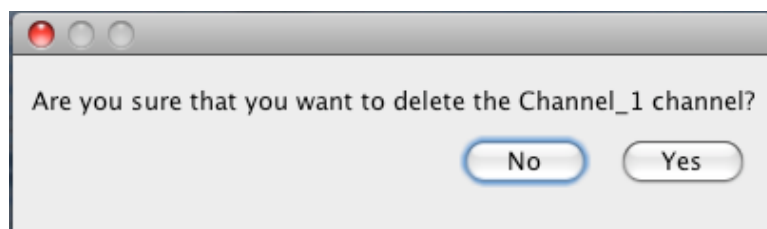
Channel name: Music lib/dir:

IP address: Playlist:

Port: Buffer size:

Start time: Mo... Shuffle:

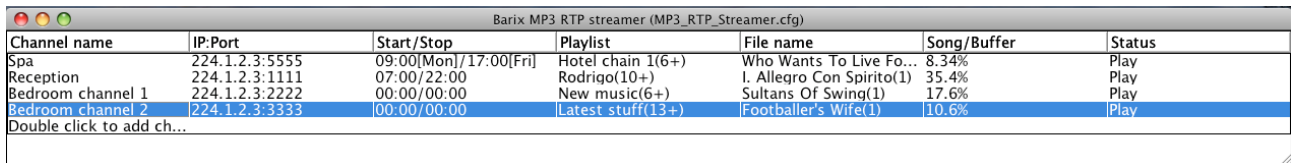
Stop time: Fri... Repeat:



Are you sure that you want to delete the Channel_1 channel?

3. Operation

When the application starts, all channels defined in the configuration file are automatically started and a screen is displayed, such as the one below:



Channel name	IP:Port	Start/Stop	Playlist	File name	Song/Buffer	Status
Spa	224.1.2.3:5555	09:00[Mon]/17:00[Fri]	Hotel chain 1(6+)	Who Wants To Live Fo...	8.34%	Play
Reception	224.1.2.3:1111	07:00/22:00	Rodrigo(10+)	I. Allegro Con Spirito(1)	35.4%	Play
Bedroom channel 1	224.1.2.3:2222	00:00/00:00	New music(6+)	Sultans Of Swing(1)	17.6%	Play
Bedroom channel 2	224.1.2.3:3333	00:00/00:00	Latest stuff(13+)	Footballer's Wife(1)	10.6%	Play
Double click to add ch...						

The following information is shown for each defined channel:

- channel name;
- streaming socket; IP / port number combination.
- time frame; the configured start and stop times for the channel
- playlist; the number of songs in the playlist is indicated, additionally an “@” symbol indicates that Shuffle play is selected, a “+” means Repeat mode
- current song filename and its position in the playlist;
- % of playback for current song, or % of buffer in use when internet radio streaming
- current status of this channel.

There are three “action” areas on the screen:

- “Status”: During operation, a channel can be stopped, or paused by double clicking on the Status field and selecting the required action in the pop-up window. If a channel is “stopped”, or “paused”, it can be started again in the same way.



- Double clicking anywhere else on a channel row will cause the “Modify/Delete” pop-up window to be displayed, as detailed in section 1.2.2
- Double clicking on the last entry on the screen “Double click to...” will cause the “Create Channel” pop up to be displayed, as outlined in section 1.2.1

To close the application, click on the MP3_RTP_Streamer menu bar and select “Quit/Exit”.