C-Bus Multi Room Audio

Application Note #4 – Configuring C-Bus Ripple Software

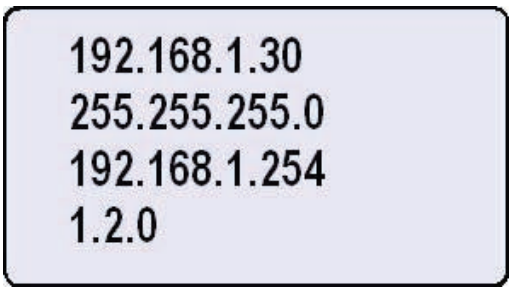
Overview

C-Bus Ripple software is a server software application designed to operate with the C-Bus Multi-Room Audio (MRA) streaming client that is located in the system's matrix switcher. The application runs on a PC running Windows XP, Vista or Windows 7 and connects to the matrix switcher over a Local area Network (LAN). C-Bus Ripple streams music and data from the PC to the MRA system. The software can also be used to stream Internet radio to the MRA system. The software supports MP3, WAV and OGG files. C-Bus Ripple can support up to four MRA matrix switchers and also play a stream through the host computer's soundcard, however the PC soundcard will not support Internet radio streaming.

Note: To play audio using the PC's sound card, Windows Media Player runs in the background. The ability to play various file types (i.e. MP3 files) depends upon Media Player's ability to decode the file type.

Configuration

In order for the software to accept a connection from a client (matrix switcher), it must know about the IP address of the device connecting. This address is displayed on power-up of the matrix switcher immediately after the initial screen on the unit's front panel LCD screen. The IP address is the 4-digit number on the first line of the display. The example below shows the IP address as 192.168.1.30. The display will look similar to the following:



This IP address needs to be configured in the C-Bus Ripple software setup. To do this, first check the File menu on the tool as shown below.



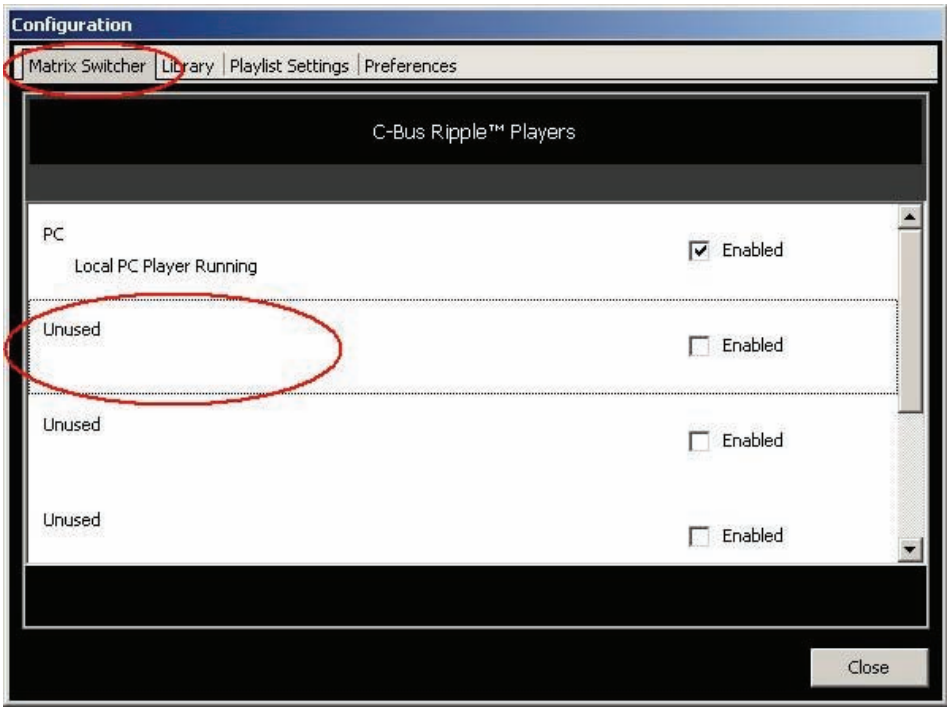
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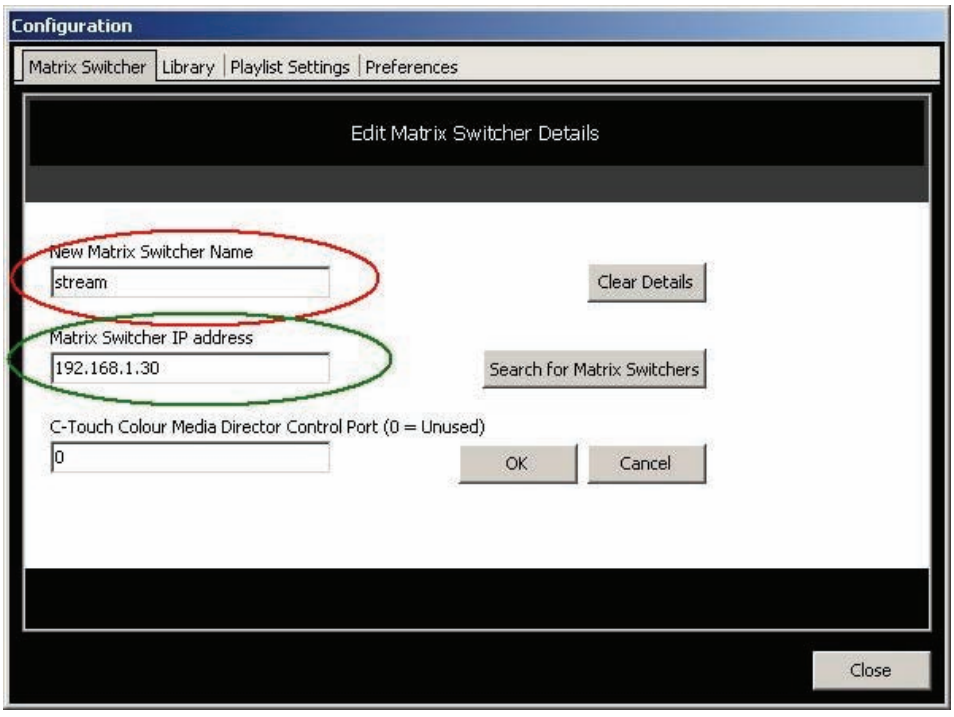
Then select Configuration from the drop-down menu.



Then select the Matrix Switcher tab followed by an unused Matrix Switcher position.

Note: When you select the Matrix switcher tab, the matrix switcher configuration screen (bottom) might appear immediately.

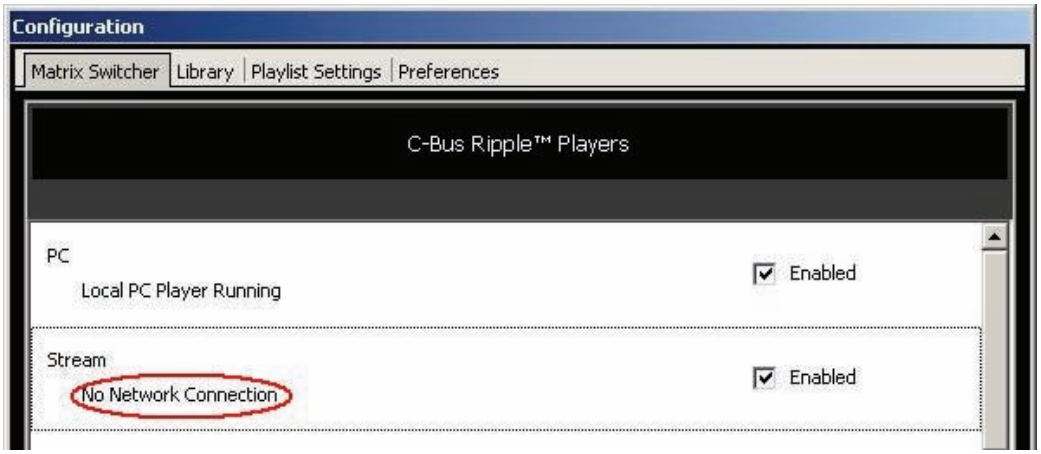




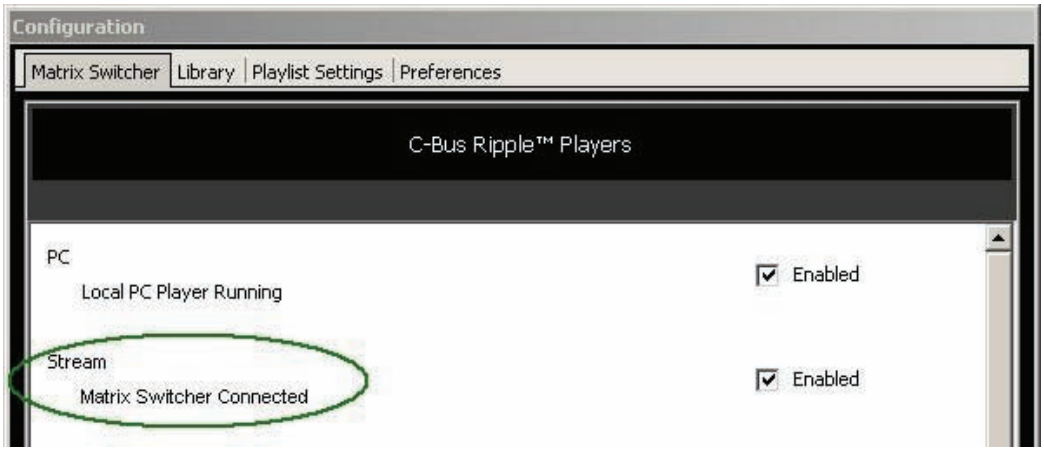
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Enter the preferred name for your matrix switcher (suggest something like stream or streaming if you only have a single matrix switcher) in the highlighted red area, followed by the IP Address of the unit in the highlighted green area. If the IP address of the matrix switcher is unknown, click the Search for Matrix Switchers button that will look for available matrix switchers on the network. Clicking OK returns you to the previous screen.

If C-Bus Ripple cannot make a connection to your matrix switcher, you will see the message below indicating there is no network connection.



If a successful connection is made, the following message is displayed indicating the matrix switcher is connected.



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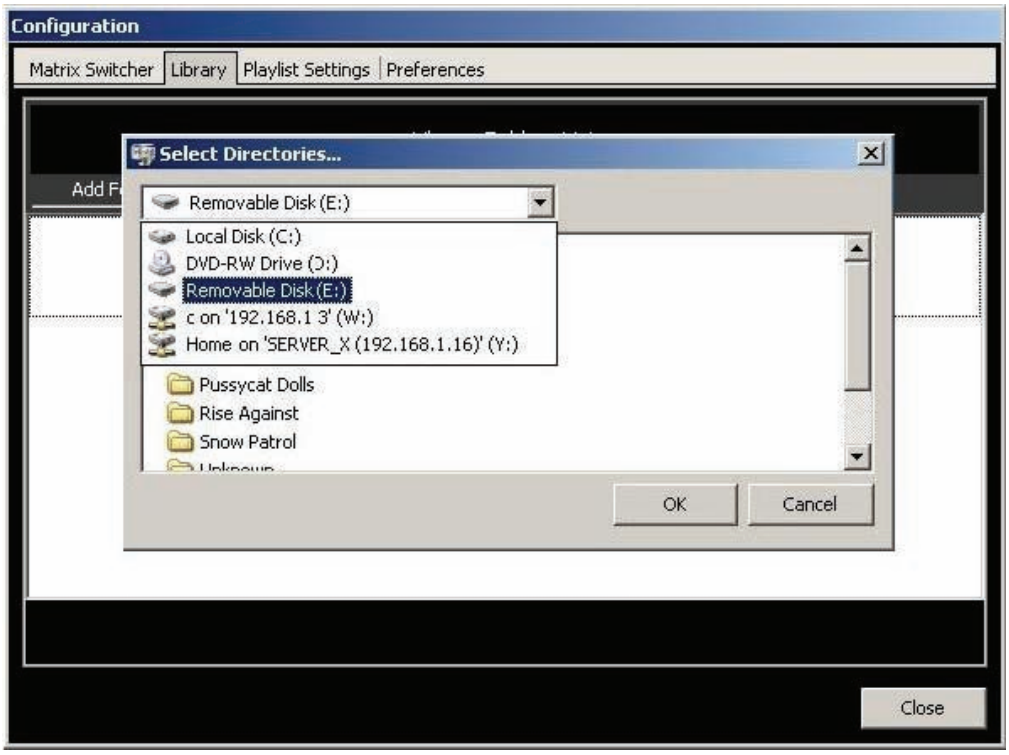
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Adding Music

The C-Bus Ripple software needs to know where to find your music collection. The tab named Library (next to the Matrix Switcher tab from the previous example) will bring up a screen that offers the ability to add a folder.



Clicking this button brings up a window that allows you to select drives on the server computer. This includes sub-directories and removable drives. It is possible to add multiple drives and directories, if so desired, one at a time.



In the above example, you can see local drives as well as drives like USB Drives, shown as Removable Disk (E:). The mapped network drives are shown as drives (W:) and (Y:).

Playlist Configuration Settings

C-Bus Ripple works with playlists with a file extension of .M3U. In the configuration stage, the location of playlists must be configured. Any playlist that exists in the location will be loaded when the system starts. Creating and saving to playlists is covered later in this Application Note.

Playlist configuration also offers the ability to have four preset playlists. These are:

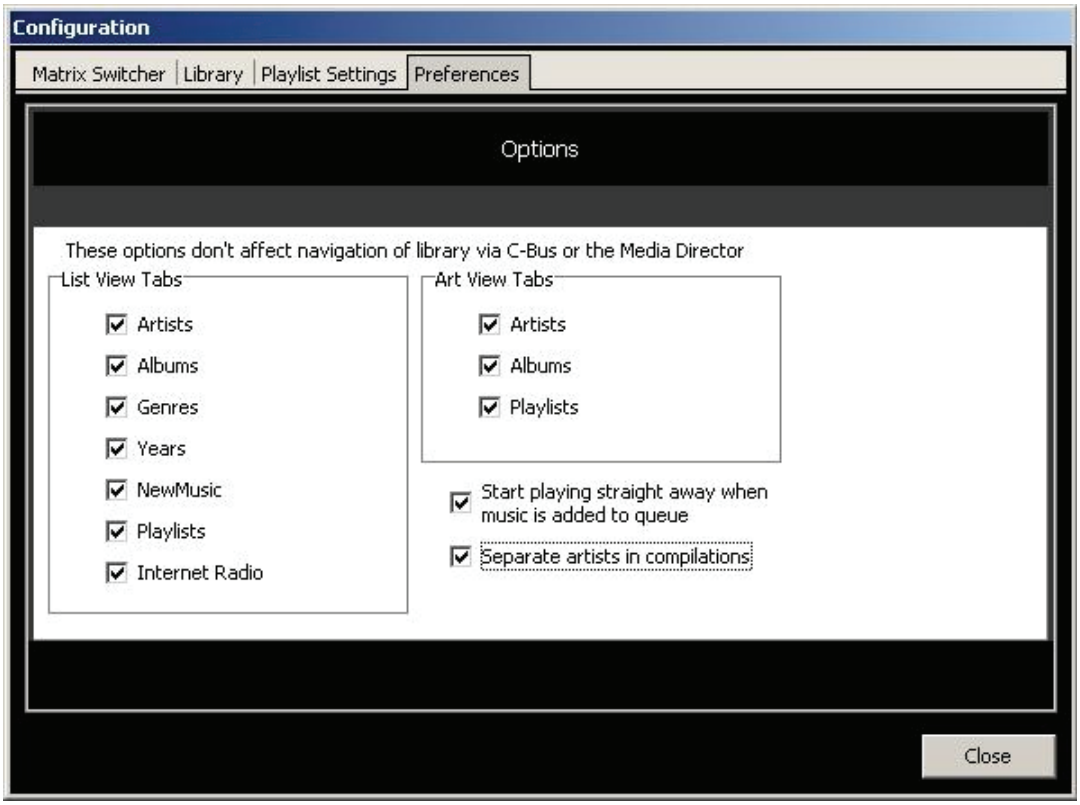
- My Top 20
- Random Albums
- Random Artists
- Random Tracks

You can choose to have any or none of these playlists configured.

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Preferences

The Preferences tab offers the ability to configure the tabs that appear in each of the two possible views for C-Bus Ripple.



The List View offers the ability to show the following:

- Artists
- Albums
- Genres
- Years
- New Music
- Playlists
- Internet Radio

The Art View offers the ability to show the following:

- Artists
- Albums
- Playlists

There are also options to allow the software to start playing straight away as soon as music is added to the queue (this also allows for the queue to start as soon as the software opens). The second option allows for artists to be separated when a compilation album is selected.

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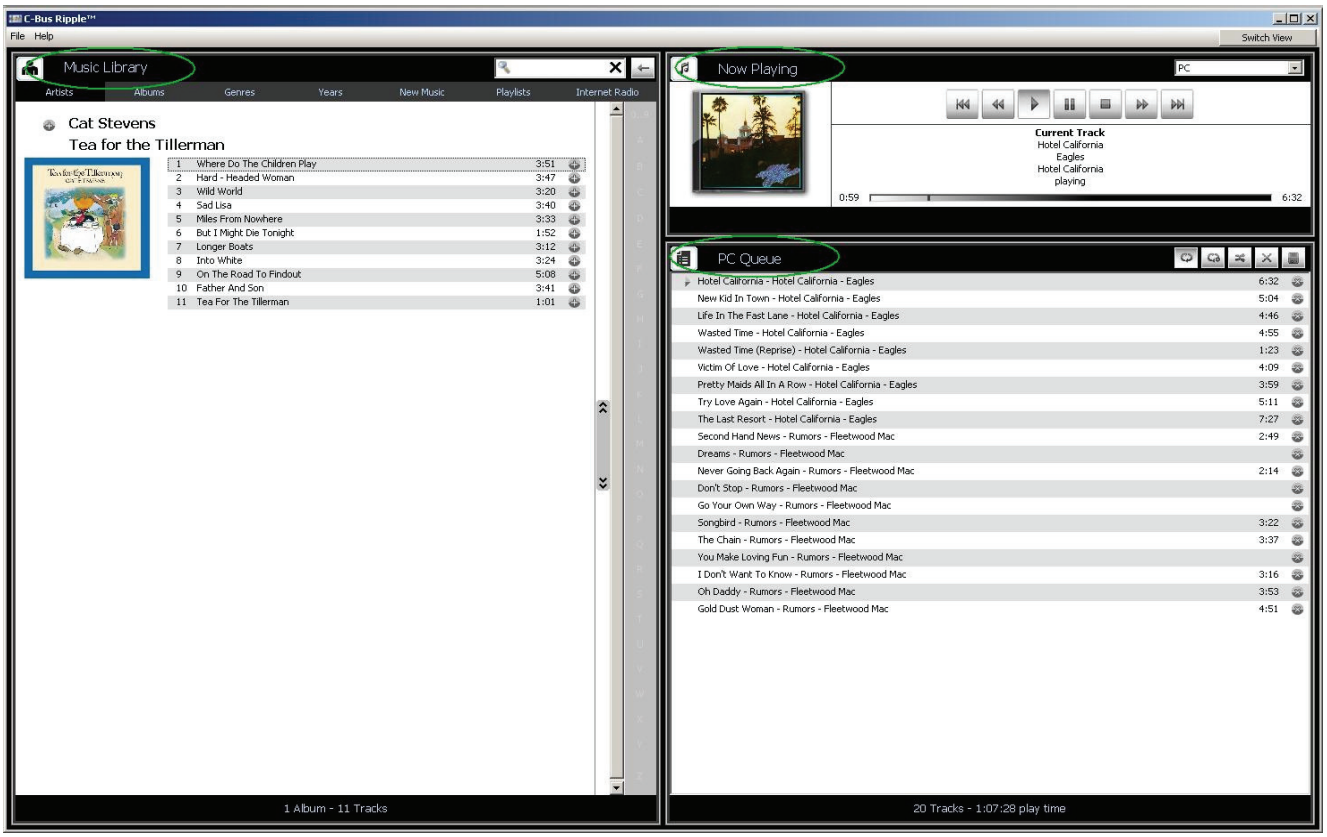
Using C-Bus Ripple

C-Bus Ripple is essentially a music server. It supports multiple music queues capable of supplying music streams to multiple matrix switchers simultaneously.

The three window panes visible on the software are:

1. The Music Library pane
2. The Music or PC Queue pane
3. The Now Playing pane

The image below shows the three panes with the Music Library pane on the left, the Now Playing on the top right and the PC Queue on the bottom right.

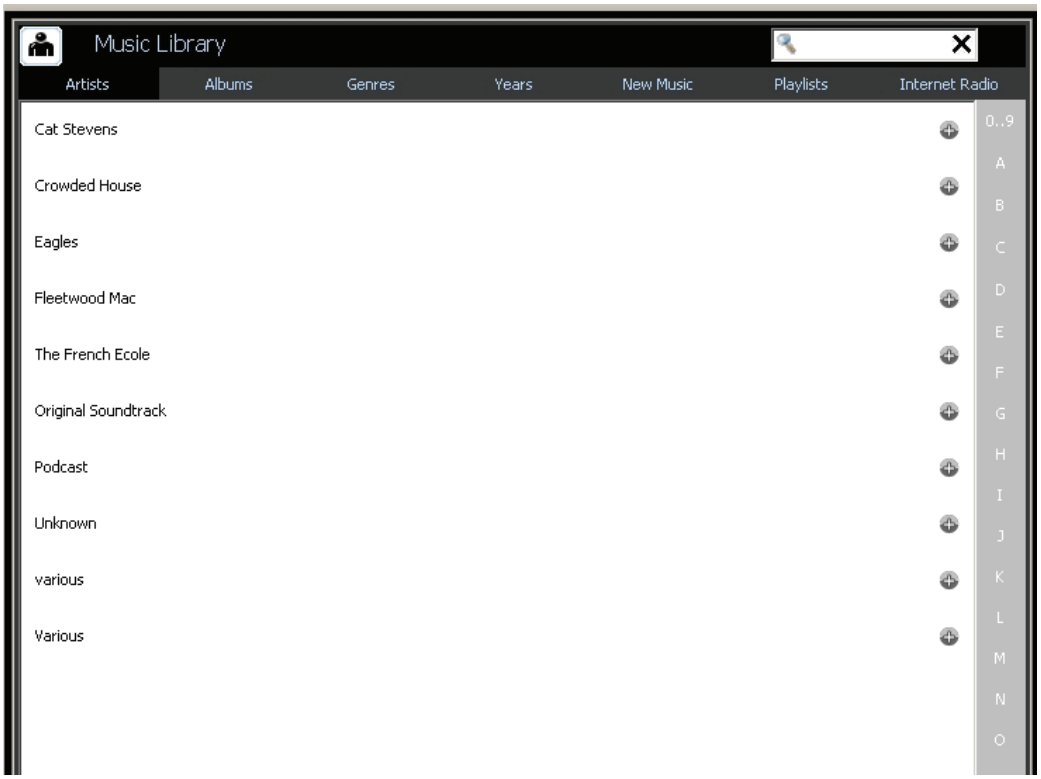


The two views (previously configured on the preferences tab) for looking at the panes both offer the same for Now Playing and the PC Queue. The Music Library however, is presented differently depending upon the view.

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The following shows the 'List View' of Artists.



The following shows the same information in Art View.



Both views offer a powerful search feature. The list view allows for searching of the topic on the tab. E.g., if the tab is showing Artists, a search will look through a match in the artists' names. If using the album art view, the search looks at the track names, album name and the artist name for the word typed into the search field. The search continuously updates as each new letter is added to the search. On the next page you can see an example of the search function in the art view.

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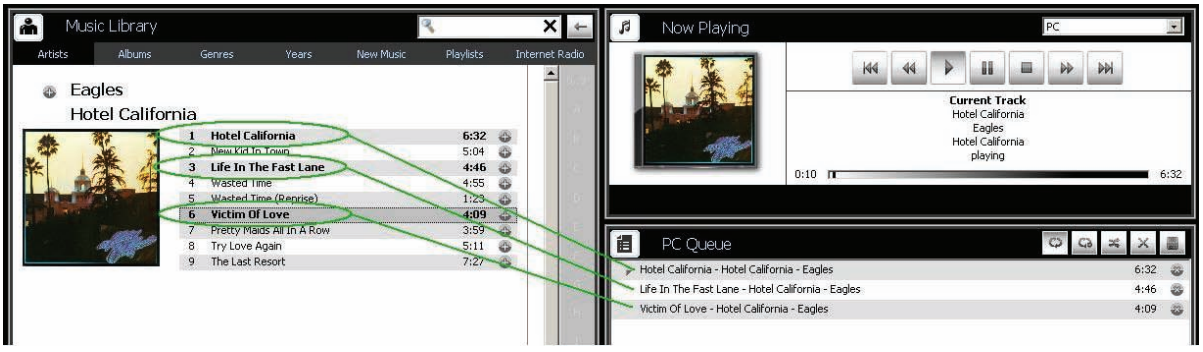
In the above example, the search phrase 'of' was typed into he search field, located in the top right hand corner of the pane. Every occurrence of the word is highlighted in yellow with red text regardless of whether it's in the song title, the album name or the artist name.

Adding Tracks to the Queue

There are several ways to add tracks to a queue (from either the list or art view). You can do any of the following:

- Double click the track
- Drag the track from the list and drop it on the queue
- Use the plus button next to the track

Note: As soon as a track exists in the queue, it will be 'bolded' in the list to indicate it is in the queue already. The green highlighted tracks below are in bold to indicate they exist in the queue.



If you should add the same track more than once to the queue, it will be highlighted in bold (in the queue).



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If you shut down the PC while the software is running, the queue(s) will be there next time you start the software. Optionally, you can save the queue as a playlist.

You can also add multiple tracks (not necessarily from the same album) by holding the Ctrl key while making your multiple selections. After you have selected all of the tracks, drag any one of them to the queue.

The white + sign in a grey circle indicates you can add to the queue. You can 'bulk-add' albums, artists, even playlists to a queue if so desired by using the plus function.

The white X sign in a grey circle next to a track in the queue allows for the removal of that track from the queue.

You can clear an entire queue by clicking on the X button on the queue control bar shown below.



Saving a Queue as a Playlist

Saving a queue as a playlist is quite easy. Simply click on the disk symbol in the queue control bar (shown below) and you will be offered the opportunity to save as a new playlist or over-write an existing one.



Queue Behaviour

The queue has several functions that determine what happens to the tracks in the queue on the completion of each track playing. The following options can be set for how this is handled.

Repeat all Tracks – This will continuously play all tracks in the queue in the order they appear. When the last track in the queue is finished being played, the player will jump back to the first track and continue through the queue again.



Repeat Track – This will continuously repeat the currently playing track.



Shuffle Tracks – This will mix up the order of the tracks in the queue on every press of the button.

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Now Playing Pane



The Now Playing pane shows the currently playing track along with the album cover art for the playing track. If there is no cover art associated with the track, a blank CD image appears in its place. A progress bar located at the bottom of the pane shows the elapsed time of the track on the left and the total duration of the track on the right. There is also a toolbar with transport control for the track. The control buttons in the transport toolbar are:

- Play
- Stop
- Pause
- Next track
- Previous Track
- Fast-Forward (x4)
- Fast-Rewind (x4)

Note: At the top left of the pane is an option for selecting the player. This player may be the PC or the stream to the Matrix Switcher(s).

Handy Hint:

The player actually has tiny web server for providing the album cover-art image for other applications (such as a colour C-Touch touchscreen). By double clicking the album art image in the Now Playing window, the complete URL is placed into a web browser address bar. You can then copy the address into your application. Typically, the URL consists of the IP address of the PC running Ripple followed by ':'then the port number. i.e. http://192.168.1.3:20035/. The port allocation is as follows:

20035- PC sound card

20036- Matrix Switcher

20037-Matrix Switcher 2 (if configured)

20038-Matrix Switcher 3(if configured)

Playlists

Playlist files can be viewed and their tracks added to queues in the same way as with albums. One difference is that you can drag a track to a playlist (from a queue) and it will be included and saved in that playlist. If you are using 'art view', you will be able to search for a track in all of your playlists. There is no real limit to the number of playlists you can add.

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Internet Radio

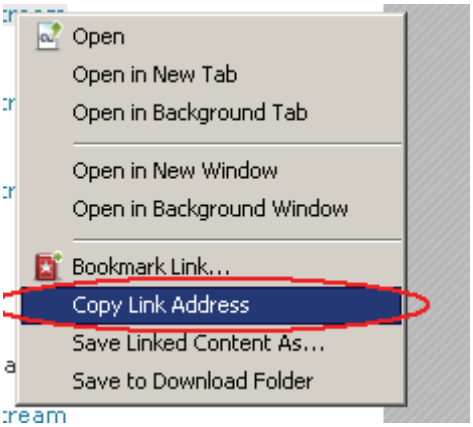
Streaming Internet radio is another feature of the software. It's possible at add Internet streams to your library. Some Internet Service Providers (ISPs) provide lists of Internet radio stations that don't count towards download data. This can be an important consideration when specifying streaming Internet radio. Many sites will display different ways of getting the stream to operate, they are:



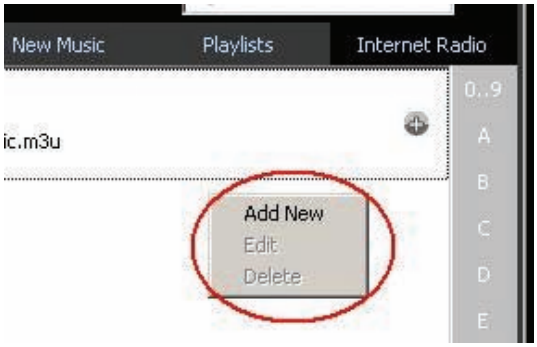
The above screen is from a typical web page that has streaming Internet radio links. To use the links with C-Bus Ripple, we need to use one of the 'mp3 stream' links (which is highlighted). There are a number of ways to capture the information for C-Bus Ripple. One way is to right click the 'mp3 stream' link and select 'copy shortcut' (this may be 'copy address link' in some browsers).



or

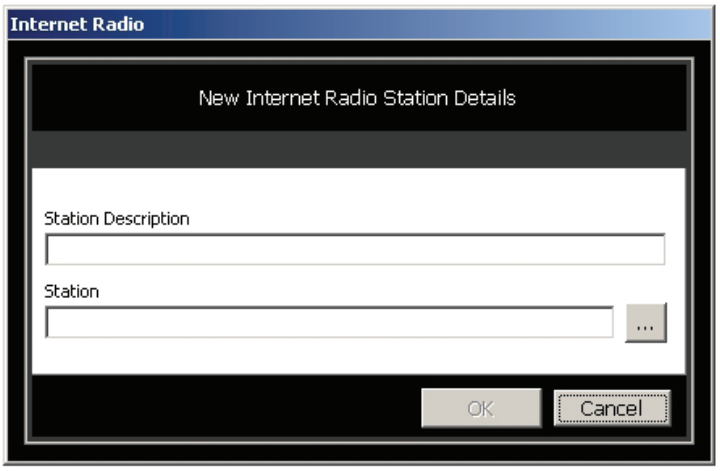


It is then a matter of pasting this address into the C-Bus Ripple software. Perform this action by selecting the 'Internet radio' tab in List View. Right click anywhere in the white section of the list view pane, to bring up the following option box.

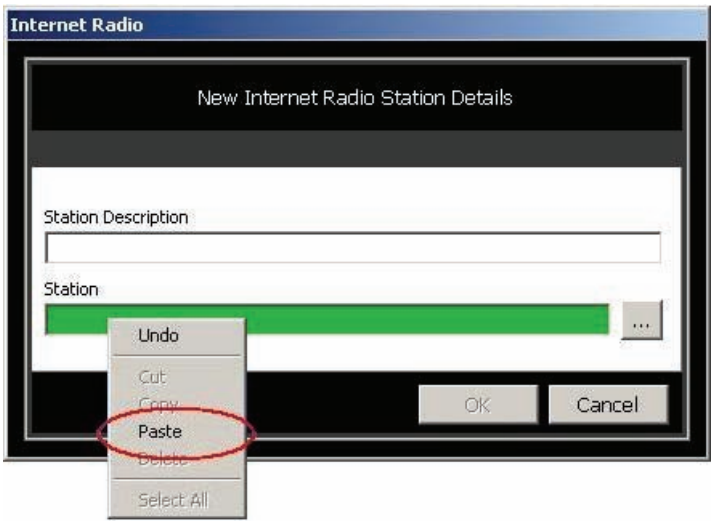


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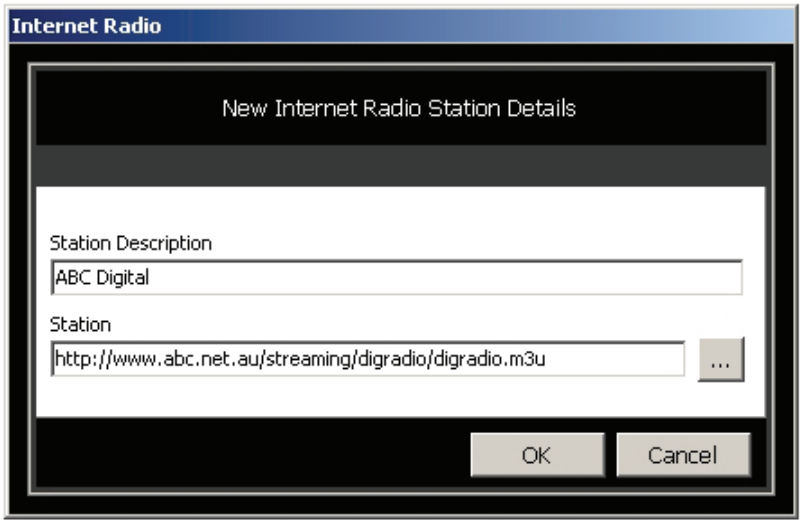
Click on the 'Add New' option to bring up the following:



This box gives you the ability to enter the description of the station as well as the pointer we copied from the browser.



Right mouse click on the green highlighted area. The highlighted option to 'paste' will be presented.



The screen on the previous page shows the link (note the URL has .m3u at the end). Enter a description in the 'Station Description' box. It's a good idea not to make this

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description too long as it will be sent over C-Bus and it might need to be displayed on buttons for fast access.

Note: If your system is streaming Internet radio and you switch all zones off (or select another source, perhaps cable TV, leaving no zones listening to MP3's or internet radio), the C-Bus Ripple software will pause playing (stop the stream). This prevents large downloads when you don't intend to use this function.

For further assistance in using this product, consult your nearest Clipsal Integrated Systems (CIS) Sales Representative or Technical Support Officer.

clipsal.com

Technical Support email: cis.support@clipsal.com.au

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