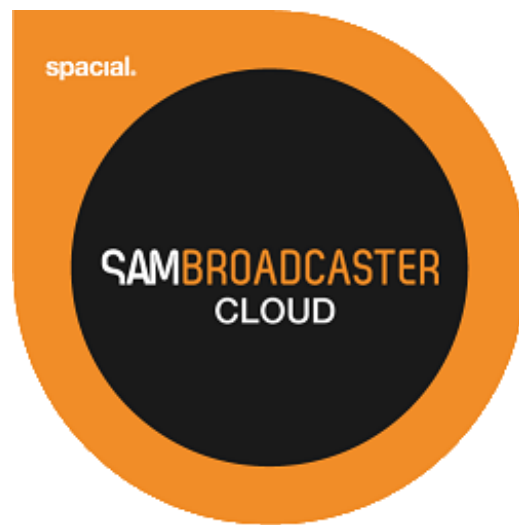


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SAM Broadcaster Cloud Scheduling User Guide

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Overview

This document is the second in a series which when combined, covers the features which make up SAM Broadcaster Cloud (SAM Cloud). This document focuses on SAM Cloud scheduling and covers Playblocks, Separation Rules, Tasks and Scheduled Events, we also cover Playlists in greater detail. With these five tools, the Station Manager can fully utilize the power of SAM Cloud automated scheduling and create a depth to the Station output which random track selection would not be able to provide. By combining these tools, you will find that SAM Cloud is as powerful and fully-featured as professional radio automation software but for a fraction of the cost.

On top of this, you don't have to worry about hardware failures, system backups or the other worries which might keep Station Managers awake at night as SAM Cloud removes these headaches.

Playblocks, Separation Rules, Tasks and Scheduled Events can all be found under the Schedule tab whilst as Playlists are located under the Library tab.

There are some points which should be noted to prevent any issues when scheduling your programming:

1. Whilst there are tracks in the Queue, no scheduled programming will play out, if there are tracks in the queue then you must clear the Queue if you wish to switch to a Playblock
2. A Playblock scheduled to play will continue to playout until the next scheduled event fires or tracks are added to the Queue. This could lead to a quickly repetitive station output if a Playblock with a small number of details is scheduled and left to run

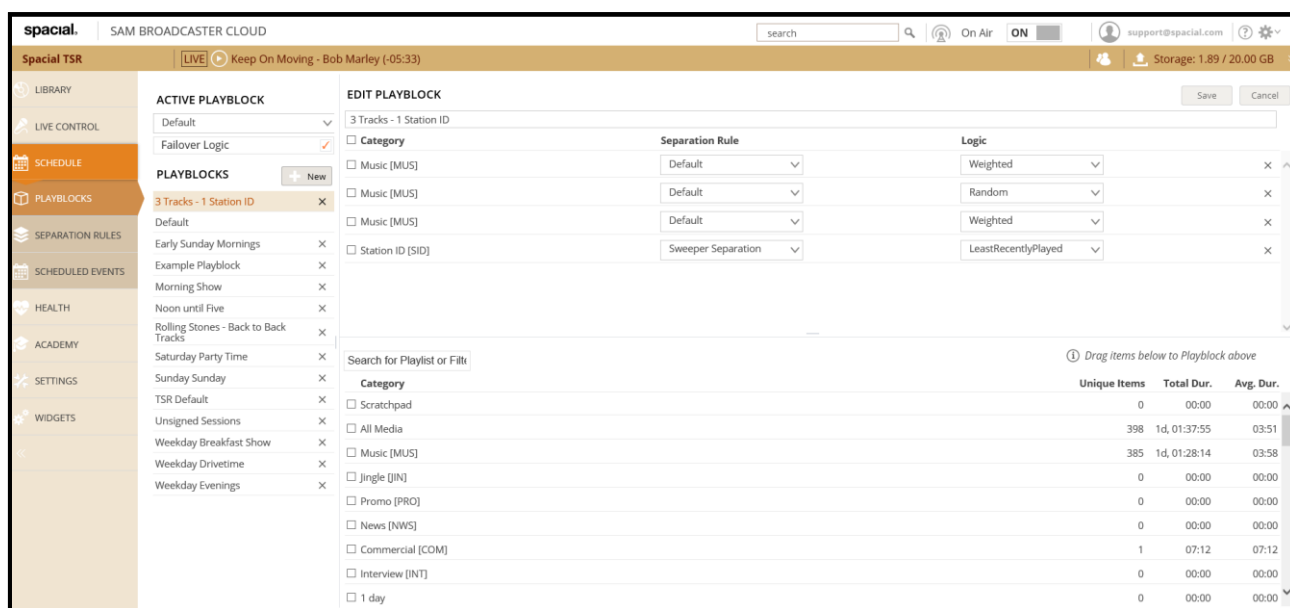


Figure 1 – Schedule Tab

Playlists

Playlists are found under the Library Tab and are containers which can be referenced and included within a Playblock, added to the top or bottom of the queue or even added to other Playlists. This allows for infinitely more variation and complete control over your station's automated output. You can of course simply create traditional Playlists by adding any tracks you wish to play.

The way in which Playlists can be used within SAM Cloud is only limited by the imagination of the Station Manager or DJ. A single track could be added to any number of Playlists and a Playlist can contain a single track or many thousands of tracks. We recommend a limit of 5000 tracks in a single

Playlist but the maximum number of tracks a single Playlist can contain is 30,000. This is also the maximum number of tracks the Queue will accept.

There are two types of Playlists available, Playlists which can be shared amongst multiple stations are located under the Shared Playlists collection and Playlists which are specific to a particular station are found under the Station Playlists collection. One of the great features of SAM Cloud is the ability to share a common music library between up to 50 stations but not every track might be suitable for every station and for this reason we can segregate tracks for specific stations with Station Playlists.

To create a Playlist, simply right-click either Shared Playlists or Station Playlists, select New Playlist and give this Playlist a meaningful name, e.g. Female Artists would be a suitable Playlist name for a Playlist which would only include tracks by Female Artists.

In this example, we have created a number of Shared Playlists with a naming convention which assists in identifying the Playlist content.

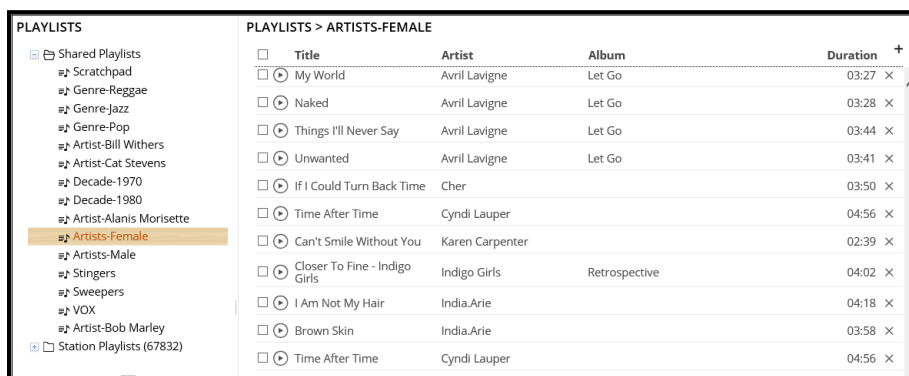


Figure 2 – Shared and Station Playlists

SAM Cloud also includes a number of built-in Media Selection Filters which can be used to list and identify tracks based on specific criteria and these can also be referenced from within Playblocks however, if you have multiple stations which might include different genres, you might also have station-specific commercial content and station IDs which you only want available to the station in question and to ensure only the correct station can utilize these Playlists, you should consider creating Station Playlists for this type of track. The available built-in Media Selection Filters are shown at Annex A and referenced throughout this document.

It is not possible to create user-defined filters however the search feature can also be used to identify tracks based on artist, track or album which can assist in identifying tracks for specific Playlists.

Whilst Playlists can contain many thousands of tracks, it is also common to find Playlists containing only a single track. This is useful when you want to play a specific track at a specific time or with a certain rotation frequency.

You can also use a Playblock to replace the track or tracks in any Playlist as required. This is handy when you have a recurring show scheduled which is pre-recorded and for which the content changes with each program. For example, a DJ might record their daily or weekly show which is scheduled at a fixed time and date. By simply replacing the track within the referenced Playlists, there is no need to adjust the programming.

Moving Playlists

It is not possible to move a Shared Playlist to a Station Playlist or vice versa but you can easily recreate a Playlist as the other type if necessary. If for example, we had created the General Music Playlist as a Station Playlist but this should have been created as a Shared Playlist simply create a new

Station Playlist with a temporary name, e.g. 'General Music Temp', select all of the tracks in the Station Playlist General Music (Ctrl+A will select all tracks) and with the tracks highlighted, right-click any track, select Add to, Playlist and select the correct Playlist. Once the new Playlist contains all of the tracks simply right-click on the original Playlist and select Delete Playlist. Finally, right-click on the newly-created Playlist and select Rename to give the Playlist the correct name.

Playlists and Grouped Media Types can both be used to build complex yet highly flexible Playblocks which can be scheduled to run when required and are the building blocks the Station Manager or DJ uses to create a varied, autonomous music program schedule.

Schedule Tab

Under the SCHEDULE tab in SAM Cloud, we find the Playblocks, Separation Rules, Tasks and Scheduled Events.

Playblocks

Each SAM Cloud station by default includes two Playblocks which can be used to run your station but these would not provide a varied musical selection; these are the Default and Example Playblocks.

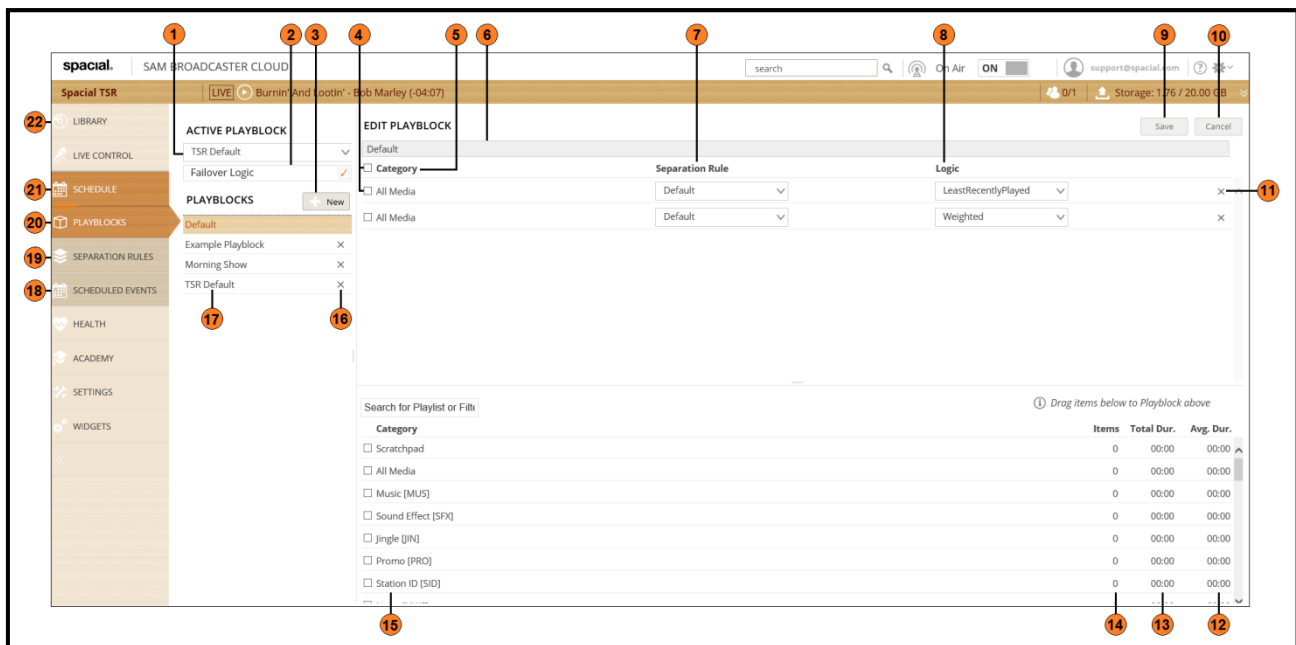


Figure 3 – Playblock Editor

Serial	Description
1	Displays the Active Playblock
2	Set Failover Logic on or off
3	Click to create a new Playblock
4	Detail Selector (either all details or individually)
5	Detail Categories
6	Edit the Playblock Name
7	Detail Separation Rules
8	Detail Logic
9	Save Playblock
10	Cancel changes
11	Delete Playblock Detail
12	Average Duration of the items in the respective Playlist or Filter
13	Total Duration of the items in the respective Playlist or Filter

14	Number of items in the respective Playlist or Filter
15	Available Playlist and Filter categories from which to create the Playblock
16	Delete Playblock
17	List of available Playblocks
18	Scheduled Events Tab
19	Separation Rules Tab
20	Playblocks Tab (selected)
21	Schedule Main Tab
22	Library Tab (Playlists are found here)

Failover Logic

With Failover Logic selected, SAM Cloud will select a track at random if for any reason SAM Cloud cannot play the scheduled track based on the Playblock Detail. With Failover Logic switched off, SAM Cloud will continue to try and play the scheduled Detail until successful but this could result in a considerable amount of dead-air which could lead to lost listeners. We recommend enabling Failover Logic.

Creating a Playblock

To create a new Playblock simply click on New Playblock, give the Playblock a meaningful name (item 6 in the previous image) then drag the required Details from the list of available Playlists and Filters to create the Playblock. By default, each new Playblock contains one Detail which can be edited or deleted. Once you have created the Playblock, click Save.

Playblock Editing

As you can see, building a varied and interesting Playblock is as simple as dragging and dropping Details from the available Playlists and Filters but by default, each new Detail will have the Default Separation Rule and Random Logic which you might consider changing to ensure your Playblock plays as expected.

Selecting a Separation Rule which requires more tracks than you have available will either lead to random tracks being selected to prevent any Dead Air or Dead Air, depending upon whether Failover Logic is enabled.

So far, we have named the Playblock and we have added a single detail with the default settings. If we Save this Playblock, we can create a Task to schedule this Playblock however, this Playblock would simply play random tracks with no theme or thought to the program content. To create a meaningful Playblock, we should consider the purpose or theme of the program or Playblock we are creating. This can be achieved by selecting different categories for each detail, varying the Separation Rules and the Logic.

As we have seen, each Playblock detail consists of three parts, the Category, the Rule and the Logic. These parts are explained in depth shortly but the Category is the collection of tracks (or Playlist) from which the played tracks are selected, the Rule is the Separation Rule which limits the frequency on which a track, artist, title or album may repeat and the Logic then decides which track to select from those tracks within the specified Category which pass the Separation Rule.

You should remember that each Playblock detail is separate and has no connection with any other details in the Playblock. This can lead to some unexpected results if you do not plan this thoroughly. Take for example, the following Playblock:

<input type="checkbox"/> Category	Separation Rule	Logic	
<input type="checkbox"/> 1960s	Sweeper Separation	Random	×
<input type="checkbox"/> 1960s	Sweeper Separation	Random	×
<input type="checkbox"/> 1960s	Sweeper Separation	Random	×

Figure 4 – Example of Poor Playblock Logic

Here, we are creating a Playblock with 3 details. We have selected the Playlist 1960s as the category and set the Rule to Sweeper Separation. This will not play the same artist within a 5 minute period, and if SAM Cloud randomly selected a track over 5 minutes in length, it could select a second track by the same artist immediately afterwards because the Playblock details are separate from each other. If the second track is also over 5 minutes long then it is also possible that the third track could also be from the same artist. This is something to bear in mind when putting together your Playblocks. This can become more likely if you start creating your own Separation Rules with short separation times.

Later in this guide, we will explain in greater detail, the interaction between the Category, Rule and Logic with some real-world examples.

We would recommend that most DJs, when starting to create Playblocks with SAM Cloud set the rule to No Rules before starting public broadcasting as this reduces the complexity of the Playblock detail and allows DJs to get a feel for creating Playblocks. When you begin broadcasting, you should ensure that you comply with any applicable laws relating to music separation e.g. DMCA legislation.

When you start broadcasting, if you find your Playblock is not playing as expected, changing the rule to No Rules will reduce the complexity and help you troubleshoot the problem, alternatively, if you have a large Separation Rule and again your output is not what is expected, you might not have a wide enough variety of tracks, artists and albums to satisfy the Playblock detail's rules. If this is the case, you could consider uploading additional tracks to meet the Separation Rules. You might also consider upgrading your storage if you do not have enough tracks to comply with the rules you require. The Health tab will record any instances where a track or detail could not be played.

<input type="checkbox"/> Category	Separation Rule	Logic	
<input type="checkbox"/> SAM Hits Station Idents	Sweeper Separation	LeastRecentlyPlayed	×
<input type="checkbox"/> SAM Hits Commercials	No Rules	Weighted	×
<input type="checkbox"/> SAM Hits Commercials	No Rules	LeastRecentlyPlayed	×
<input type="checkbox"/> Top 40	DMCA Separation1	Weighted	×
<input type="checkbox"/> Top 40	DMCA Separation1	LeastRecentlyPlayed	×

Figure 5 – 5-Detail Playblock Example

In our example Playblock, we have added five details and we will schedule this Playblock to start at 8am every Saturday. This station is called SAM Hits and we have a number of station-specific playlists for both station IDs as well as station-specific commercials. For this Playblock we will start with a Station Ident which has been set to use the Sweeper Separation and will select the Least Recently Played track in the SAM Hits Station Idents Playlist. This track will be followed by two commercials, both from the SAM Hits Commercials Playlist which have been set with no rules but the first commercial will be selected by the track weighting which will ensure the commercial selected will have a higher weighting factor than other commercials in this Playlist. This would be useful when you have an advertiser who has paid for a current, high-profile advertising campaign and all of this advertiser's

commercials have been set with a higher weighting than perhaps older commercials which might have been purchased at a lower rate for inclusion at a lower playout frequency.

After the commercial segment, we have selected two tracks to be played from the Top 40 Playlist and again, the first track is selected by weighting which would select a more popular track from the current Top 40 Playlist or we could set higher weighting to tracks with a higher place in the Top 40 which we might believe could reach higher chart positioning and we would like to be seen to advocate this by playing these tracks more frequently. The second track is selected on a Least Recently Played basis and with both tracks following the built-in DMCA Separation Rules, we can be certain that with 40 tracks in this Playlist, the same tracks will not be repeated within the time constraints of the DMCA rules.

These five details are not enough to provide a varied and interesting listener experience but it is a start which can be built on until the Playblock contains sufficient details to meet the desired output. Remembering that this Playblock is going to run from 8am until midday each Saturday, we can either include enough details to cover the 4 hours this Playblock will be scheduled to run for or we can include sufficient details to provide an hour of musical variety and the Playblock will repeat until stopped. The other option would be to create over an hour of expected airplay but to reload this Playblock every hour which will run the Station Idents and Commercials at approximately the top of the hour. We could and should of course, schedule Station Idents and Commercials at other times during the Playblock to increase advertising revenue and station brand identity awareness.

Example Playblocks

The following Playblock examples give a brief idea of how Playblocks can be used to control the station output using a variety of different scenarios.

Station ID after Every Three tracks

Three music tracks are selected with the default Separation Rule and a variety of weighted and random logic. This is followed by a Station ID with the Sweeper Separation rule selected and as the logic is Least Recently Played, this would cycle through the Station IDs by always playing the least recently played Station ID.

The screenshot shows a web interface titled "EDIT PLAYBLOCK" with "Save" and "Cancel" buttons. Below the title is a text input field containing "3 Tracks - 1 Station ID". Underneath is a table with columns for "Category", "Separation Rule", "Logic", and a delete icon (X). The table contains four rows:

Category	Separation Rule	Logic	
<input type="checkbox"/> Music [MUS]	Default	Weighted	X
<input type="checkbox"/> Music [MUS]	Default	Random	X
<input type="checkbox"/> Music [MUS]	Default	Weighted	X
<input type="checkbox"/> Station ID [SID]	Sweeper Separation	LeastRecentlyPlayed	X

Figure 6 – 3 Tracks, 1 Station ID Playblock Example

Unsigned Artists Session

If you wanted to create a session where you would be promoting local unsigned talent (the same applies for any other category you can think of) then you might like to consider a Playblock like this where we have three consecutive details selecting music from a Playlist we have created, into which, we have put all unsigned artists.

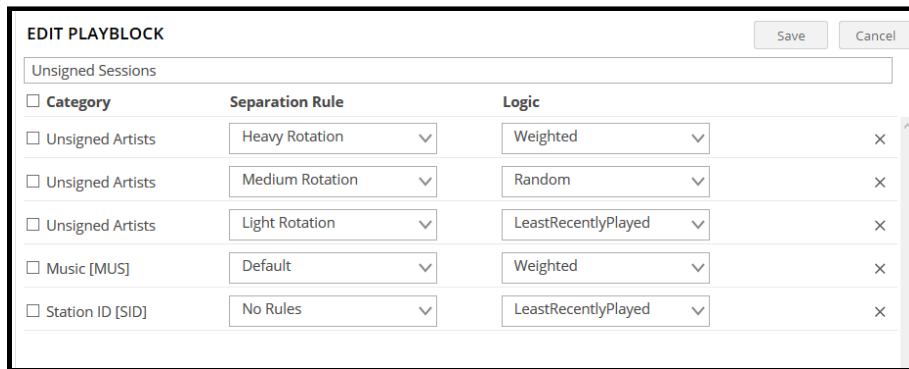


Figure 7 – Unsigned Sessions Playblock Example

Perhaps experience has indicated which artists are popular and we have already given them a heavier weighting, perhaps some of the artists have a medium weighting and some have been given a light weighting, perhaps because they are a track from an EP with a popular title track. We want to ensure our listeners do not become tired of unsigned artists so we also include a music track which has the default rotation and is also heavily weighted because it is popular.

It is good practice to build a Station Brand so we have included a Station ID after these tracks but the placement of Station IDs and other branded content is purely at the discretion of the Station Manager or DJ.

You can see from these two examples that the options available are endless and can help ensure that SAM Cloud plays what you want to play, in the order you want it played.

These examples have been achieved with simple Playblocks; we will now look at enhancing this by editing and creating Separation Rules.

Separation Rules

As you can see in **Annex B**, SAM Cloud comes with a comprehensive set of Separation Rules which enable you to start broadcasting quickly. These Separation Rules can be edited and you can also create new rules based on your own requirements.

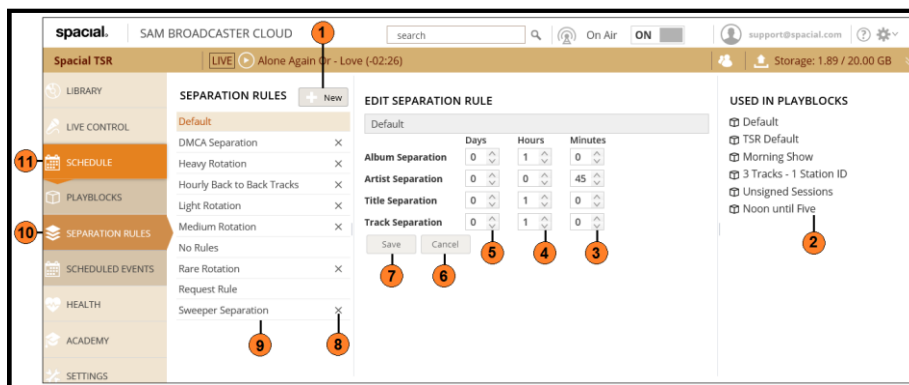


Figure 8 – Separation Rules

Serial	Description
1	Click to create a New Separation Rule
2	Lists the Playblocks in which the selected Separation Rule is used
3	Adjust the Separation Rule Minutes
4	Adjust the Separation Rule Hours
5	Adjust the Separation Rule Days
6	Cancel changes

7	Save changes
8	Click to remove a Separation Rule
9	Current Separation Rules
10	Separation Rules Tab
11	Schedule Tab

We would recommend creating your own Separation Rules and leaving the provided rules in place, especially the DMCA Separation rule which is a statutory requirement if you are broadcasting within the USA.

To create or edit a Separation Rule, simply select Separation Rules from the left hand column which then gives you the options to add a rule, edit a rule or delete a rule.

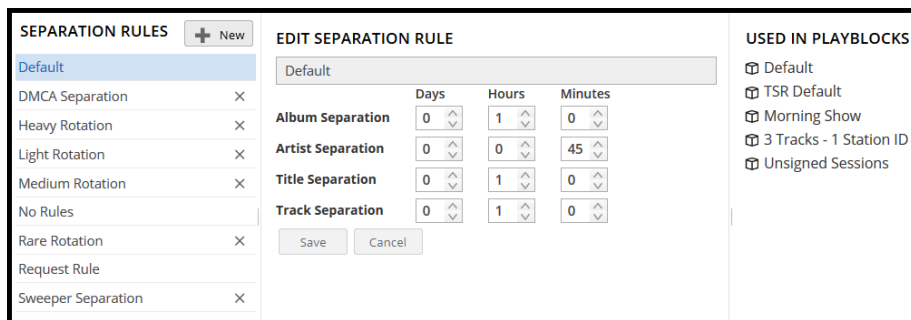


Figure 9 – Separation Rules

To remove a Separation Rule you simply click the [X] associated with the rule. You will not be asked to confirm whether you wish to delete the Separation Rule and once deleted, there is no 'undo', the Separation Rule has been removed but can be recreated if removed in error. When a Separation Rule has been selected, the list of Playblocks (if any) which currently use this Separation Rule are displayed on the right hand side.

Separation Rule Editor

To create a rule, simply click 'New' and the new Separation Rule will appear.

You can see there are four separation categories available to configure and the options available for each category are Days, Hours and Minutes. Each category can be set to any combination of Days, Hours or minutes with a minimum restriction of zero and a maximum exclusion in total before the album, artist, title or track is repeated of 20 days, 23 hours and 59 minutes.

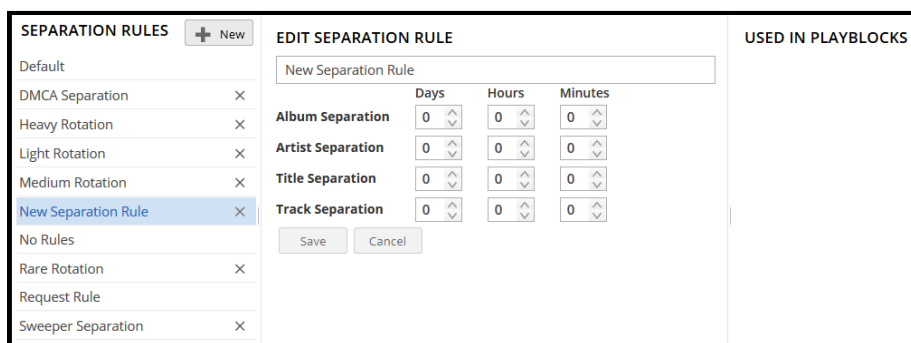


Figure 10 – Creating a New Separation Rule

When you open the Separation Rule Editor, by default, the separation options are set to zero.

Creating your own Separation Rules is as simple as clicking 'New', giving your Separation Rule a meaningful name and setting the required limits.

Back-to-Back Track Separation Rule

This Separation Rule could be used to play two tracks, back-to-back from the same artist if there were two Playblock Details playing from a single artist Playlist.

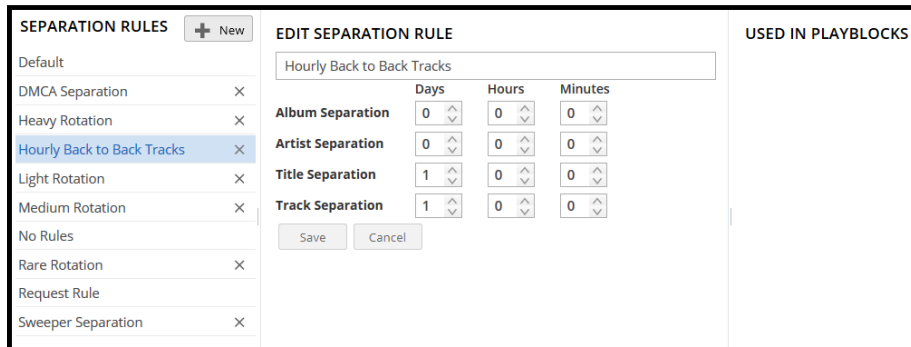


Figure 11 – Hourly Back-to-Back Tracks Separation Rule

This Separation Rule would allow two tracks from the same album or artist to be played but not the same title or track which would be prevented from playing by a 1 day separation requirement. This type of feature can be quite popular and is usually used to play a new release or a classic track from an artist with a lesser known track.

In the following image, we can see that we have selected two tracks from The Rolling Stones Playlist using the Back to Back Separation Rule. The first track is weighted to play a classic or new track, the second track is selected on the least recently played basis to provide perhaps a lesser-known track.

This type of feature would commonly be accompanied by its own Station Ident or sweeper and for this reason, we have closed the Back-to-Back segment with a Back-to-Back sweeper which uses the Sweeper Separation Rule but is selected at random.

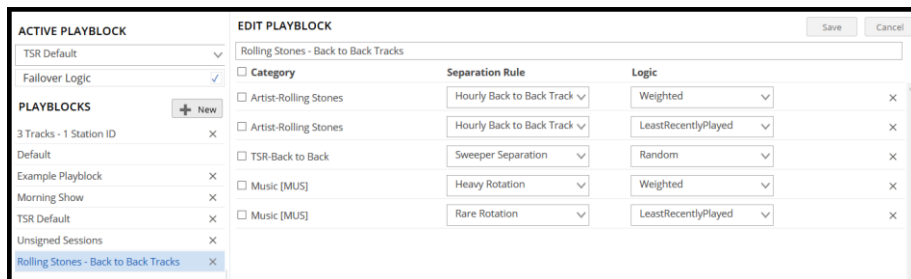


Figure 12 – Back-to-Back Tracks Example Playblock

As this is special feature we could also consider selecting this sweeper on a least recently played or weighted basis. These specific sweepers would be contained within a Back-to-Back Station Idents Playlist. This is followed by two music tracks selecting a weighted track on a Heavy Rotation which might be included to strengthen the listener's interest if the second of the Back-to-Back tracks was not as popular as imagined and then a track on a rare rotation using the least recently played logic is scheduled. This would give an average play time of around 15 minutes from only 5 details and could be scheduled to run when required.

Tasks

Just as Playlists and Filters are the building blocks used to create Playblocks, Tasks are the building blocks with which Scheduled Events are created. SAM Cloud includes a number of tasks designed to assist in automating your stations.

These built-in tasks are split into four sections:

Task Section	Tasks Available
Station	Stop Station Start Station Skip to Next Track
Queue	Clear Shuffle Loop On Loop Off
Playlists	Clear Shuffle Add to Queue Add to Filter Add to Playlist
Rotation Logic	Switch to Playblock Pick Track from Playlist Pick Track from Filter

The Playlist and Rotation Logic tasks have further options available:

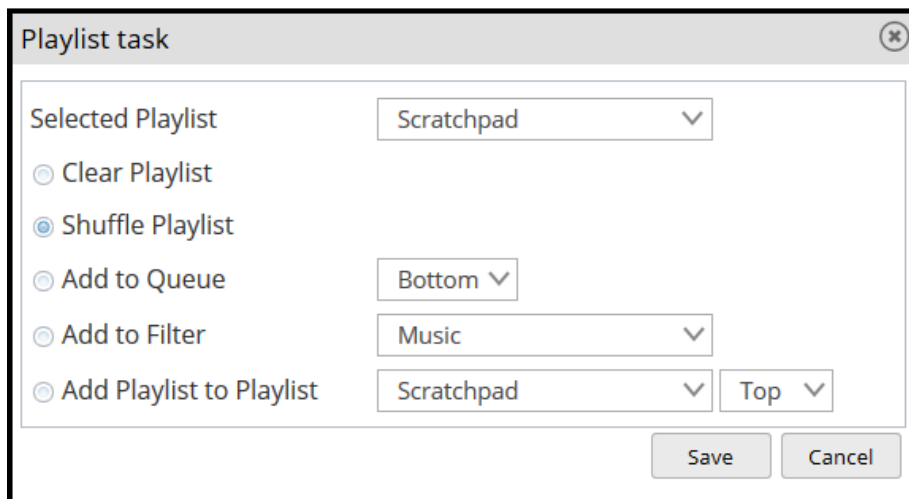


Figure 13 – Playlist Task Options

The specified Playlist should be selected from the drop-down list and the required Task selected:

Playlist Task	Tasks Description
Clear Playlist	Clears the contents of the selected Playlist
Shuffle Playlist	Shuffles the contents of the selected Playlist
Add to Queue	Adds the Playlist to either the Top or Bottom of the Queue
Add to Filter	Adds the Playlist to the specified Filter, (Music, Sound Effect, Jingle, Promo, Station ID, News, Commercial, Interview)
Add Playlist to Playlist	Adds the Playlist to either the Top or Bottom of the specified Playlist, selected from the second drop-down list

The Rotation Logic, Switch to Playblock Task enables you to switch to the Playblock selected from the drop-down list:

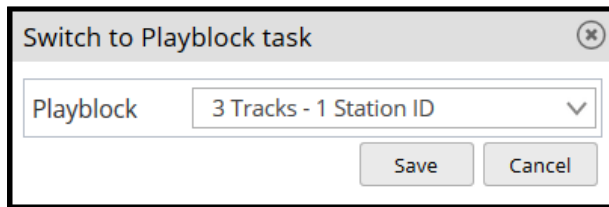


Figure 14 – Switch to Playblock Task Options

Using Tasks is covered in further detail in the following section but the important points to note about Tasks is that each Task does one job and each Task is separate from any other task, this becomes more apparent when using Scheduled Events. Each Playblock can only switch to a single Playblock and to switch to multiple Playblocks in a given order, you must create a different Scheduled Event for each Playblock and schedule them appropriately.

Scheduled Events

Scheduled Events enable you to schedule any of the available tasks, to execute on a specific date and time either as a single event or to repeat on a daily, weekly or monthly basis. Scheduled Events can be used to fully automate your station for times when you are not broadcasting live.

An example would be to start your station at 6am every day and then set another scheduled event to stop it at 10pm although you might be better served by running your station 24/7 which would enable you to develop a bigger following and listener base. With Scheduled Events, you can create a rich and varied mosaic of musical variety for your station or you can keep it simple and simply repeat the tracks in the queue, the options are endless.

Events are scheduled by selecting any time and date from the Schedule Calendar which is available under the Scheduled Events Tab. The Calendar view can be changed to show a specific day, 4-Day period, Week or Month and a date picker is available to quickly locate a specific date. In the Week and 4-Day views, the current date is shown in green whilst weekends appear as blue.

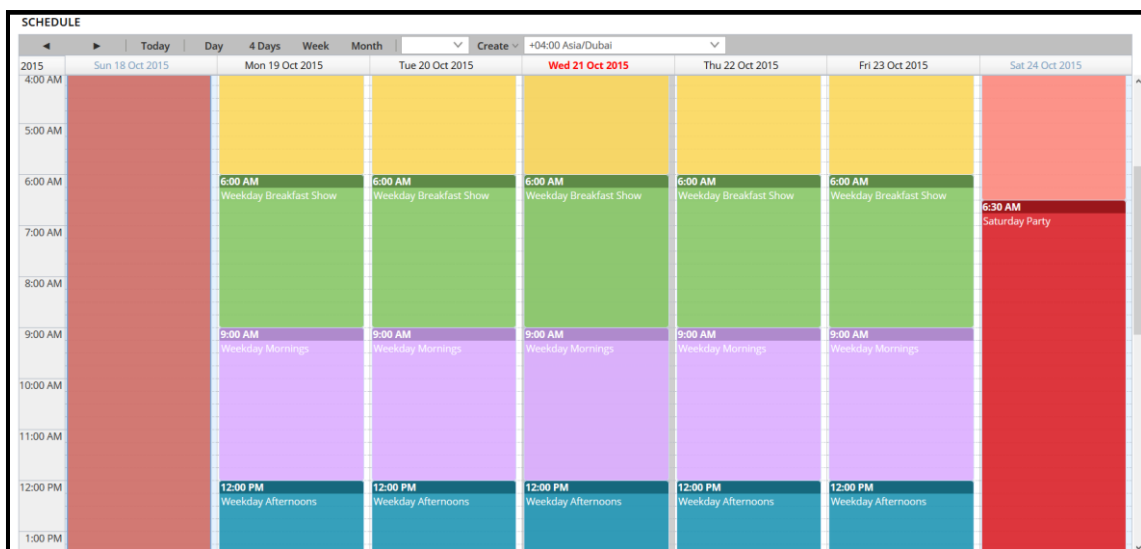


Figure 15 – Scheduled Events

Scheduled Events already created are displayed at their scheduled start time but you should remember that the Scheduled Events will play until the next Event fires so the Scheduled Event 'Weekday Breakfast Show' which starts at 6am will play until the following Scheduled Event starts at 9am and the Scheduled Event 'Weekday Afternoons' which starts at 12am, will play until the next Event is scheduled.

The Month View also highlights the current date, the weekends and any dates from either the preceding or following months as shown:

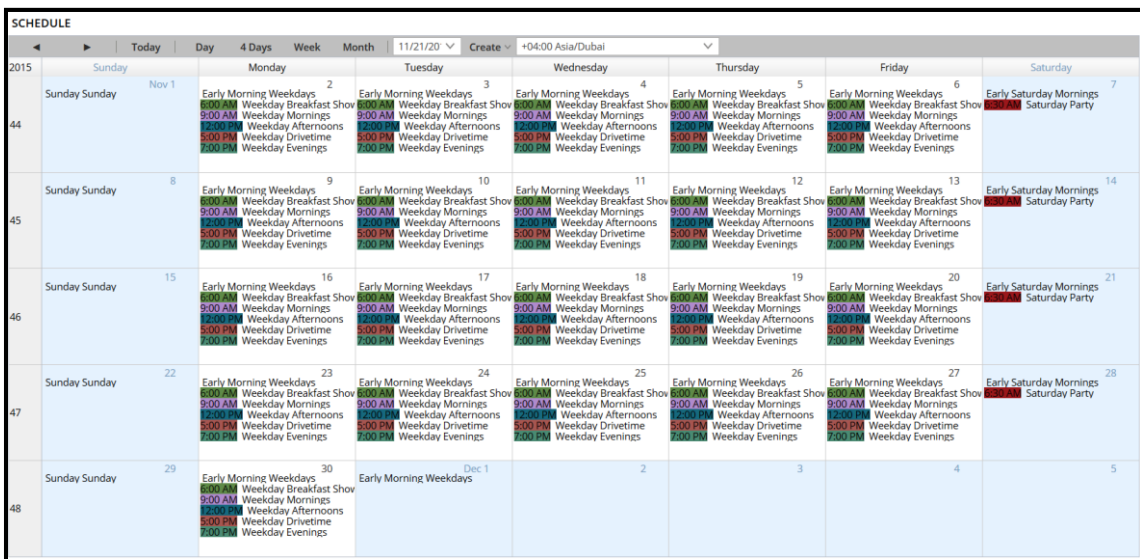


Figure 16 – Scheduled Events, Month View

Events can be scheduled by clicking on the required date in the Month View or at the required time and selected date in the remaining views. This will bring up the Create Event option:



Figure 17 – Create Event

Clicking this will bring up the Scheduled Event Editor. As mentioned previously, Scheduled Events are created from Tasks which can be used to build quite complex Events.

Figure 18 – Add Scheduled Event

Serial	Description
1	Scheduled Event Name
2	Starting Date and Time
3	Repeat option (Once, Weekdays, Last Day of the Month, Monthly, Week of Month, Minute, Advanced)

4	Starting Date Confirmation
5	Scheduled Event End Options (Never, after X Occurrences, Specific Date)
6	Scheduled Event Time and Date Summary
7	Colour Picker
8	Display Duration
9	Save Scheduled Event
10	Cancel
11	Rotation Logic Task Options
12	Playlist Task Options
13	Queue Task Options
14	Station Task Options
15	Scheduled Event Task Summary
16	Close Scheduled Event Editor

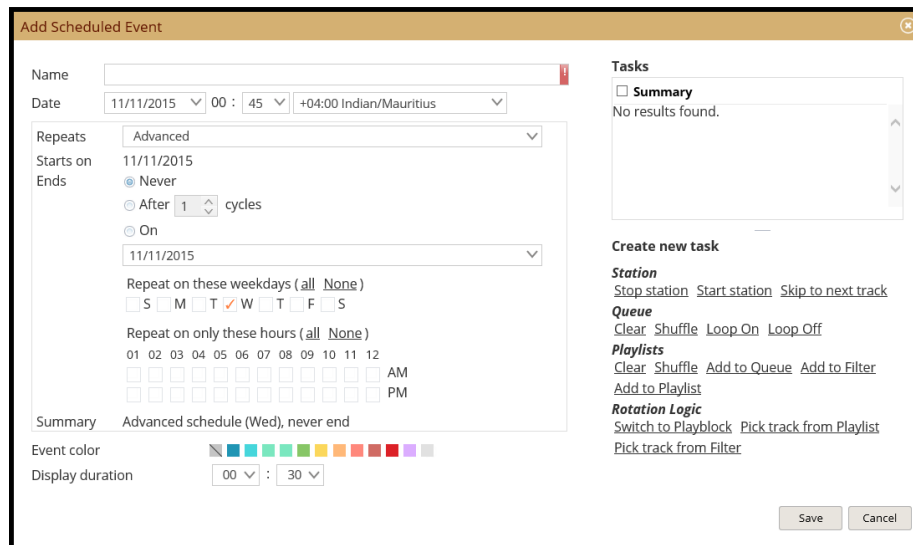


Figure 19 – Scheduled Events, Advanced Repeating Options

When selecting the Advanced repeating options we are presented with the ability to schedule events every hour of every day if required. The flexibility this provides is ideal for injecting commercials or other segments in to the scheduled music programming.

By combining multiple Scheduled Events using the Advanced scheduling options we can provide any automated programming desired.

Media Info

The six available tabs within the Media Information window are covered in more detail in the first document of this series but by right-clicking any single track or multiple tracks and selecting 'Edit Track Information' you can display the Media Info options for the selected track or tracks.

Basic Info

As you can see from the image, the basic information about the track is displayed here but there are also a number of options which can be adjusted or edited, some of which we have referred to throughout this document including Media Type and Priority (or weighting).

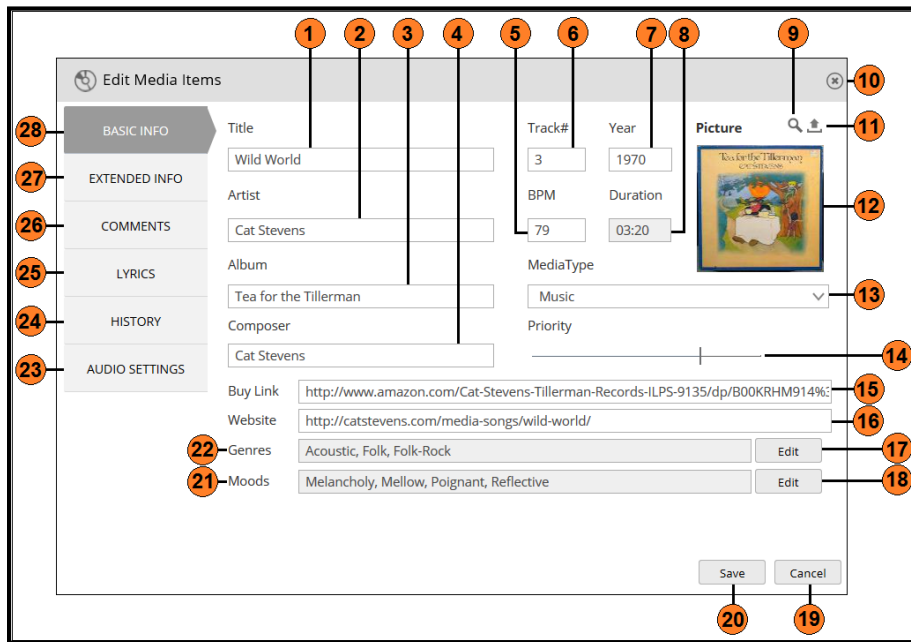


Figure 20 – Edit Media Items, Basic Info

Serial	Description
1	Track Title
2	Artist
3	Album
4	Composer
5	Beats per Minute (BPM)
6	Album Track Number
7	Year of Release
8	Track Duration
9	Affiliate Album Search Feature
10	Close Window
11	Upload Album Art
12	Album Art
13	Select the Media Type (Music is the default media type)
14	Track Priority Slider (Track Weighting)
15	Album/Track Purchase Link
16	Associated Website Address
17	Track Genre Edit Button
18	Track Mood Edit button
19	Cancel Changes
20	Save Changes
21	Track Moods
22	Track Genres
23	Audio Settings Tab
24	History Tab
25	Lyrics Tab
26	Comments Tab
27	Extended Information Tab
28	Basic Information Tab

Some of the available fields are automatically populated from the track metadata, some fields like the Duration are taken directly from the track and cannot be changed whilst some fields are populated by the selection of the album under the affiliate program.

Most fields are self-explanatory but some of the more obscure fields are described below.

Media Type

The Media Type can be used to identify the track in one of the Media Filters and although set to Music by default, it can be changed to either of the following:

- Music
- Sound Effect
- Jingle
- Promo
- Station ID
- News
- Commercial
- Interview

The Media Type can also be set for multiple tracks by selecting the tracks and dragging them onto the required Media Type filter on the Library page.

The Media Type can be used to select tracks within a Playblock as well as being an available Filter selection option when scheduling events.

Priority

The Priority relates to the Weighted logic in your Playblock with tracks having a higher Priority being played more frequently than those with a lower Priority. A track with a Priority of 80 would be played 4 times more than a track with a Priority of 20. By default, each track when uploaded is assigned a common Weighting of 60. The Priority is one of the three criteria which can be used to configure the Playblock details.

Genres

Multiple genres can be applied to each track based on a large number of included genre options which can be added to a track by selecting the Edit button, clicking Add and selecting the appropriate genres from the drop-down list. In this example we have selected three genres with a common theme:

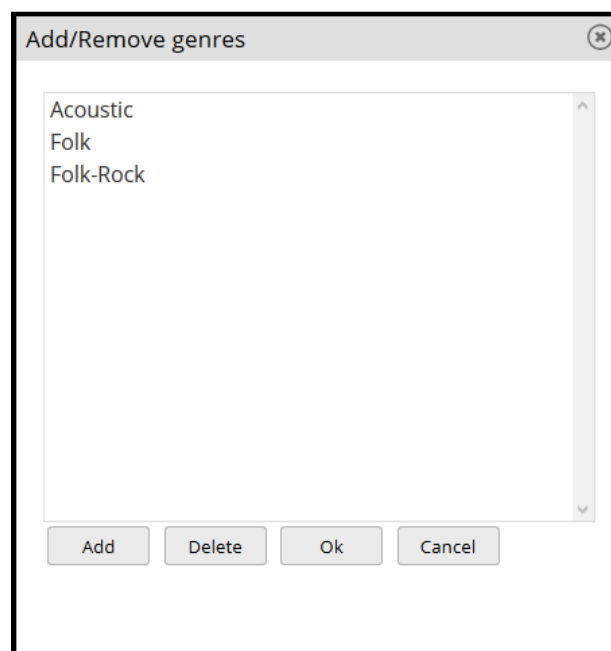


Figure 21 – Genre editor

These can be used with Grouped Filters to identify tracks of similar genres.

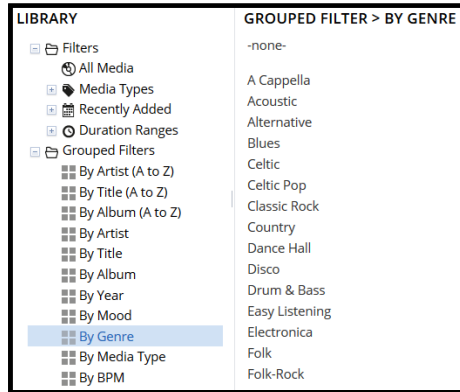


Figure 22 – Genre Grouped Filter

Moods

Tracks can also be grouped based on the mood they represent in the same way as the genres were selected and can also be used to identify tracks of a similar mood for potential inclusion in a mood-specific Playlist.

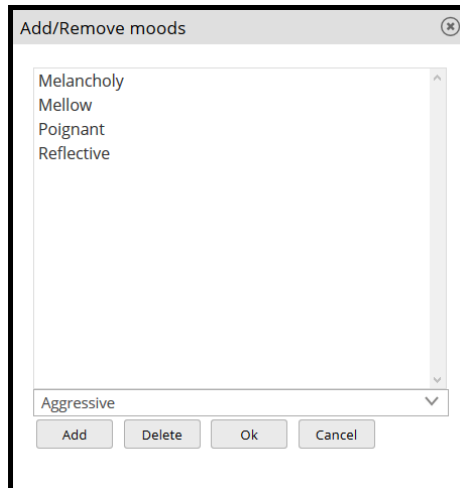


Figure 23 – Mood Editor

And just like Genres, Moods can also be used to identify tracks based on their assigned mood.

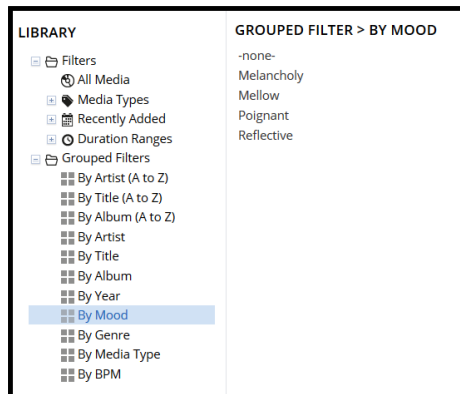


Figure 24 – Mood Grouped Filter

Whilst it is not possible to create new moods from within the WUI, both additional genre and mood types can be added to the lists available by adding these to a track prior to upload. This information could be added manually to each track or you might consider using some of the audio file tagging software available.

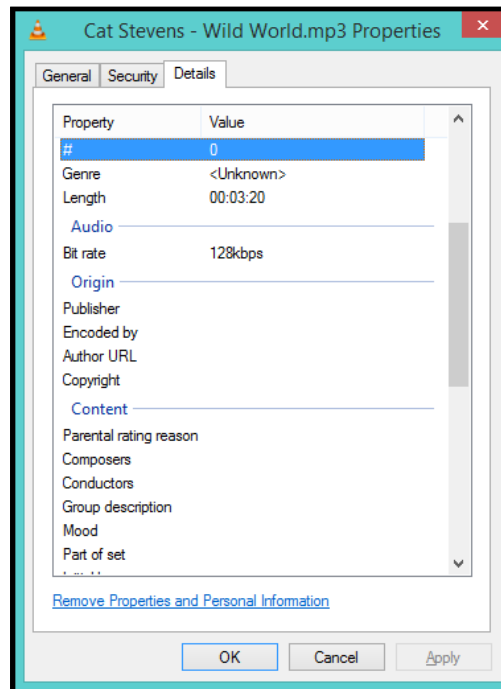


Figure 25 – Windows File Properties, Empty

Here we can see an <unknown> genre and a blank mood field. Prior to uploading this track we can complete this information which will populate the fields within the Media Info Editor. After completing a number of the available fields, this information is automatically displayed in the Media Info Editor after the track has been uploaded.

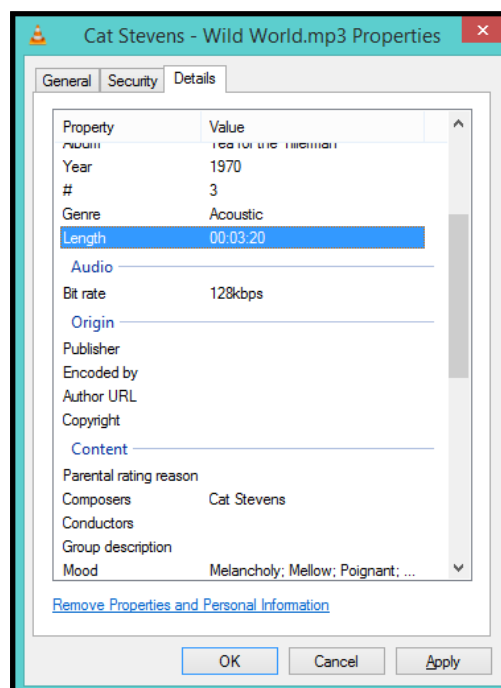


Figure 26 – Windows File Properties, Partially Completed

Scheduled Events

Scheduled Events are the tools we use to automate our station output. Without Scheduled Events we would have to manually manage the Queue and alter the Playblocks.

Example Scheduled Events

In this section we will provide examples to some of the most commonly received requests for scheduling assistance.

Injecting Tracks and Segments

By design, there is a delay between what is being played and what is being heard by the listener and this can make the automation of items challenging when we start working with Scheduled Events but if we remember that the Queue takes priority, we soon understand how we can use this to our advantage. In this example, whilst we have a 24-hour Scheduled Event already running, we will inject a Station ID at the top of every hour, followed by a news item, two commercials and a further Station ID.



Figure 27 – Track and Segment Injection

We can see that whilst there is a Scheduled Event playing all day Tuesday, we have injected this required segment to play at the top of each hour.

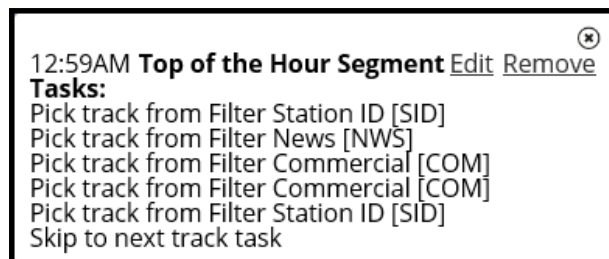


Figure 28 – Segment Details

This could be achieved with this Scheduled Event:

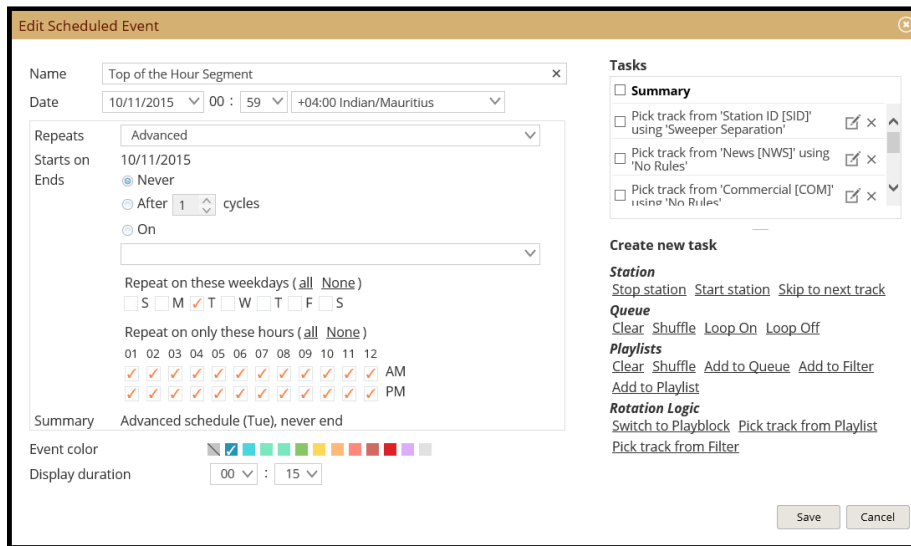


Figure 29 – Injected Event Example

This event has been scheduled to fire one minute before the top of the hour. This should allow sufficient time for the buffered, currently playing track to play out when skipping to the first new track. As we want this event to repeat hourly, we have selected the Advanced Repeating option but you should remember that the first segment for each day will actually be the last segment of the previous day.

We can expand on this to ensure tracks or segments are played as close to the required time as possible. As we have seen, there is a delay between what is playing in the cloud and what the listener hears, this is primarily down to the buffer and we recommend working on a 1 minute delay. If we want to play a specific track or switch to a specific Playblock at a specific time, we might find that the incoming track or Playblock starts playing minutes after the required time has passed.

This usually happens when we set the Scheduled Event to start at the required time and whilst the Health log will show the Scheduled Event running at the expected time, the first track of the incoming Playblock does not start for a few minutes, in fact, it will usually not start until the end of the current track or in a worst-case scenario, if the current playing track has less than one minute to play, you can find the next track has already been buffered and this track also plays out before the required Playblock or track.

Playing Specific Tracks at Specific Times

If we wish to play a specific track at a specific time then we can create a Scheduled Event to add the specific track to the top of the queue, 1-minute before the specific time and then using the Skip to Next Track task to fade out the current playing track which will immediately start buffering the new track whilst the buffer plays out what is left of the current track.

Top of the Hour News

In this example, we will create two Scheduled Events, one to play the news at the top of the hour and a second to play a different news track at the bottom of the hour.

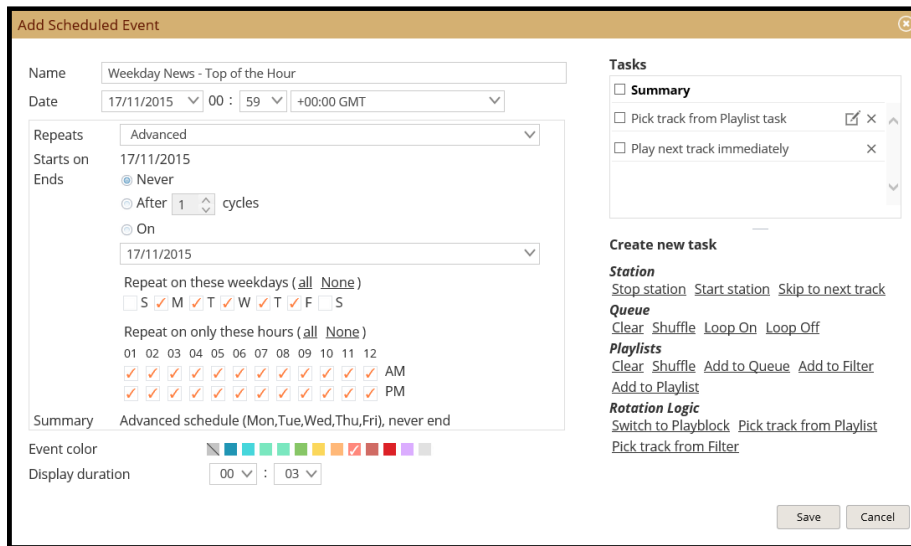


Figure 30 – Scheduled Event, Top of the Hour News

We have given the Scheduled Event a meaningful name and set this to start 1 minute before the top of the hour. Using the Advanced repeating options we have scheduled this to repeat every hour of every weekday on the premise we would have a different news schedule on weekends. We have selected the Event Colour and set the display duration to 3 minutes. The first Task is to select the required track from the corresponding Playlist which in this case is entitled 'News – Hour Top'.

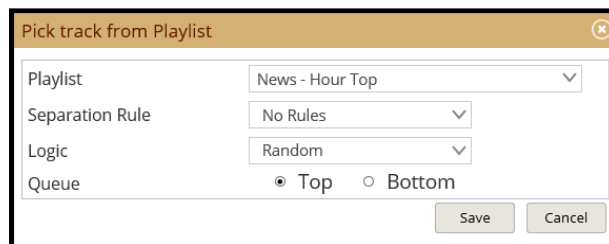


Figure 31 – Scheduled Event, Top of the Hour News Track Picker

We select the 'No Rules' Separation Rule and apply Random Logic as this Playlist should only contain one track which can either be repeated hourly until replaced, or we can also include a Task to remove the track after it has been played to prevent the same news item repeating. This would require the uploading of a replacement news item every hour which can easily be achieved with the Library Import Tool discussed in a subsequent User Guide in this series.

This requires an additional Task to clear the News – Hour Top Playlist.

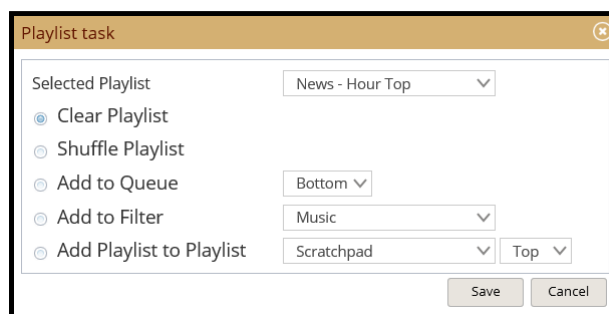


Figure 32 – Scheduled Event, Top of the Hour News, Clear Playlist

This completes the Scheduled Event.

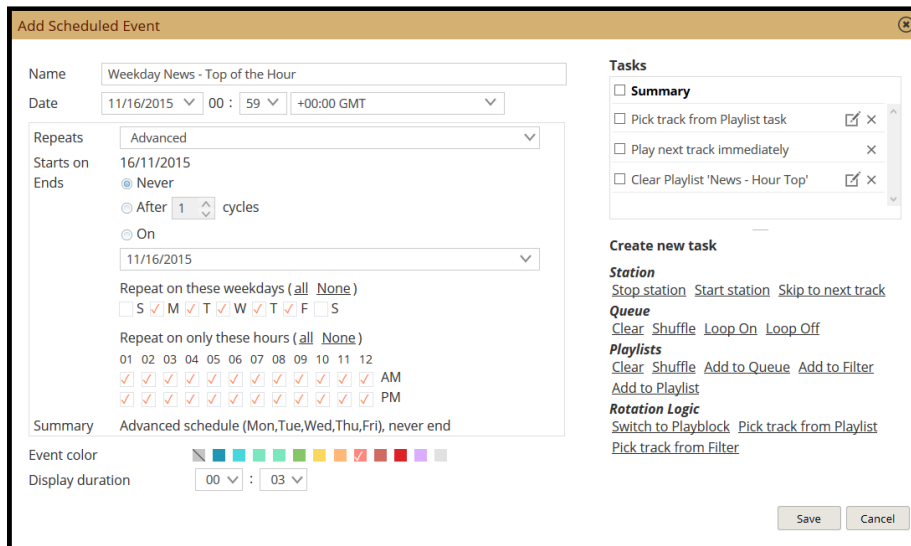


Figure 33 – Scheduled Event, Top of the Hour News, Complete

Bottom of the Hour News

A similar process if followed to create a Scheduled Event to play a different news item at the bottom of the hour.

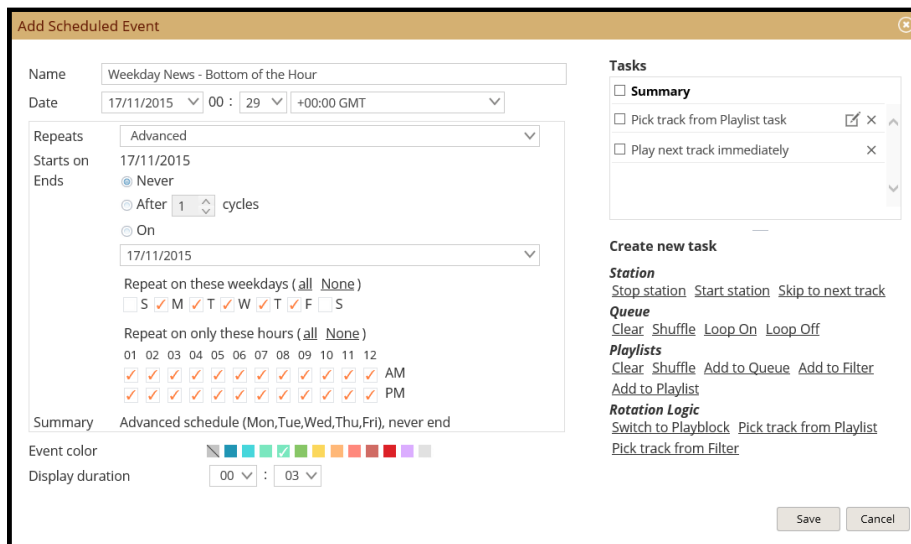


Figure 34 – Scheduled Event, Bottom of the Hour News

Apart from the different name, the other differences are the start time of 29 minutes past the hour, the colour has been changed to easily identify this Scheduled Event and of course, the track is picked from a different Playlist.



Figure 35 – Scheduled Event, Bottom of the Hour News Track Picker

We can of course, clear the Playlist if we wish, as shown in the Top of the Hour example.

This method of scheduling will usually ensure that your tracks can be scheduled with a fair degree of accuracy.

Switching to Specific Playblocks at Specific Times

The method described above will provide good results most of the time when applied to switching Playblocks however, to improve accuracy we can adjust the Scheduled Event to give more accuracy.

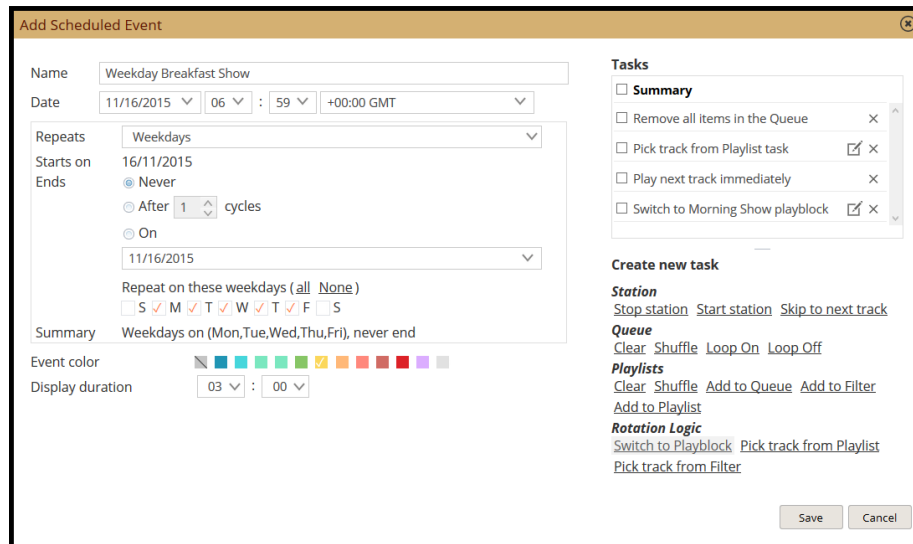


Figure 36 – Scheduled Event, Switching Playblock at the Top of the Hour

In this example, we are scheduling the Weekday Breakfast Show which will run for 3-hours, starting at 7am, Monday through Friday.

The first task might not be necessary if the Queue is not in use but to ensure this event provides the desired results, we remove any items from the Queue.

We have the choice to either pick a track which would usually be played by the incoming Playblock or, as we have done in this case, we have picked a track from the News – Hour Top Playlist using the same options previously applied. This will give the incoming Playblock a definite separation from the outgoing Playblock. As in the previous examples, once the track has been selected we skip to this track which will start buffering this track whilst the part of the current track currently buffered, is played-out.

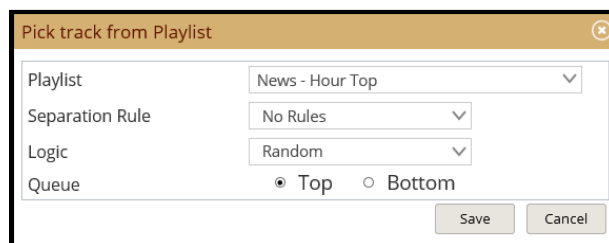


Figure 37 – Selecting the First Track

Finally we switch to the required Playblock.

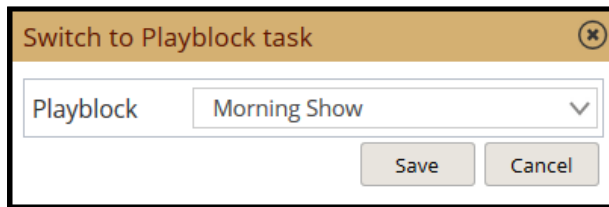


Figure 38 – Switching Playblock Task

The first track would need to be longer than one minute for this to continually work as expected and you could not pick a Station ID or other short track as a different track could begin buffering before the Playblock has been switched.

Automated Playlist Manipulation

With the Playlist and Library Import Tools, it is possible to automatically schedule the uploading of tracks from your computer. This could be useful if by default, all new tracks are added to a specific folder. You might wish to remove any tracks from the receiving Playlist prior to the automated uploading.

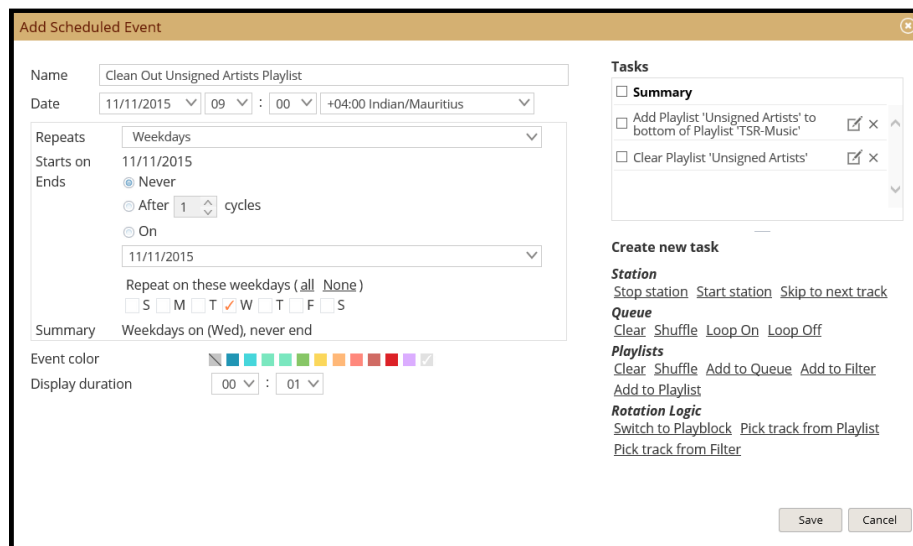


Figure 39 – Scheduling Playlist Manipulation

In this example we will wish to move the tracks currently in the Unsigned Artists Playlist to the TSR-Music for more general rotation and then empty the Unsigned Artists Playlists to prevent any previous tracks from rotating with the new music:

Injecting Commercials, Quarter past and Quarter to Each Hour

Whether we are using Playblocks for the bulk of our station output or the Queue, we can easily schedule commercials or any other type of track to play at any time we wish. In this example we have created two Scheduled Events to inject commercials into the Queue at quarter past and quarter to each hour, Monday through Friday.

Tue 10 Nov 2015	Wed 11 Nov 2015	Thu 12 Nov 2015
Commercials -	Commercials - Quarter To	Commercials - Quarter To
Commercials -	Commercials - Quarter Past	Commercials - Quarter Past
Commercials -	Commercials - Quarter To	Commercials - Quarter To
Commercials -	Commercials - Quarter Past	Commercials - Quarter Past
Commercials -	Commercials - Quarter To	Commercials - Quarter To
Commercials -	Commercials - Quarter Past	Commercials - Quarter Past
Commercials -	Commercials - Quarter To	Commercials - Quarter To
Commercials -	Commercials - Quarter Past	Commercials - Quarter Past
Commercials -	Commercials - Quarter To	Commercials - Quarter To
Commercials -	Commercials - Quarter Past	Commercials - Quarter Past
Commercials -	Commercials - Quarter To	Commercials - Quarter To

Figure 40 – Quarter Past and Quarter To Commercials

Here we can see the results of using two Scheduled Events to inject commercials into the Queue at 15-minutes past and 15-minutes to each hour. The Scheduled Events are very similar with just the display colour changed to ease identification and the start times are of course different.

Figure 41 – Commercials Quarter Past the Hour

Whilst we might wish to schedule commercials differently depending upon the time of the day or the day of the week, this does give an indication of how to create such Scheduled Events.

As this station is using Playblocks to provide the musical variation and we will be using the Queue to inject this segment, we should ensure the Queue Loop is off and the Queue is empty. We do this with the first two details shown. After ensuring the Queue is clean, we select a track from the required Playlist which for the first two commercials is the 'Commercials – Premium' Playlist.

If the station output was coming from the Queue then we would not include these first two Details.

Pick track from Playlist

Playlist: Commercials - Premium

Separation Rule: Sweeper Separation

Logic: Weighted

Queue: Top Bottom

Save Cancel

Figure 42 – First Pick Track from Playlist Detail

As this is the first track we are adding to the Queue it makes no difference whether this is added to the Top or Bottom of the Queue as the Queue is empty however, if we were injecting commercials into an active Queue then this and each track would be added to the Queue in reverse order, that is, we are playing two Premium commercials and two Standard commercials which will be added to the Queue, Premium, Premium, Standard, Standard with the last three tracks being added to the bottom of the Queue but if the Queue is in use then we would add all tracks to the top of the Queue in the order Standard, Standard, Premium, Premium and then we would use the Play Next Track Immediately Task.

Pick track from Playlist

Playlist: Commercials - Premium

Separation Rule: Sweeper Separation

Logic: Weighted

Queue: Top Bottom

Save Cancel

Figure 43 – Second Pick Track from Playlist Detail

The third and fourth commercials use the same settings.

Pick track from Playlist

Playlist: Commercials - Standard

Separation Rule: Sweeper Separation

Logic: LeastRecentlyPlayed

Queue: Top Bottom

Save Cancel

Figure 44 – Final Pick Track from Playlist Detail

You should note that we have applied the Sweeper Separation Rule to each detail which is less restrictive than other Separation Rules and whilst the Premium commercials use Weighted Logic to select tracks, the Standard commercials are selected on a Least Recently Played basis.

We simply repeat this for the Scheduled Event which will run 15-minutes before the hour.

Troubleshooting

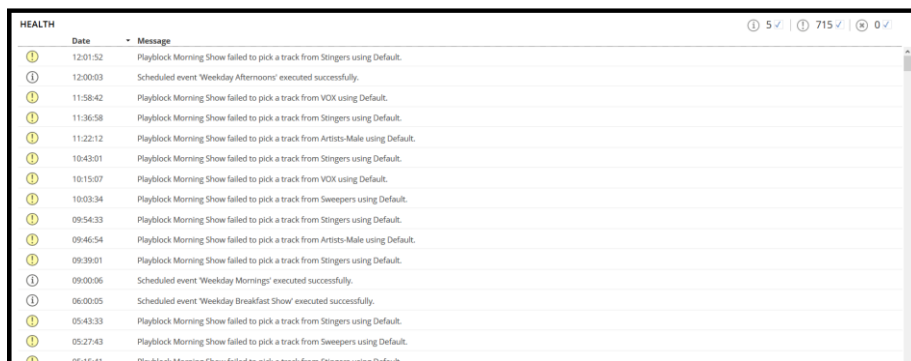
If you find the scheduled programming does not behave as expected then we can investigate the reason for this. If the tracks displayed in the History do not correspond to the Playlists selected or there are gaps in the streaming then there are a number of points to check.

By default, if SAM Cloud is unable to select a track from the Detail in the Playblock, either because the Playlist is empty or perhaps the Separation Rules are preventing the next track from playing then SAM Cloud will select a track at random from the Music category. This is to reduce the chance of dead-air and is worth remembering if you find a Christmas track has played in June.

Health

The Health tab is also covered in more detail in the first document in this series but we highly recommend regularly checking the information found in the Health Report which can indicate whether there is a problem with track rotation and to ensure Scheduled Events are firing as expected, this is listed as an information message type.

This Health log shows a number of warning messages which could indicate there are not enough tracks in the referenced category to comply with the Separation Rule selected. We can see that a number of Scheduled Events executed successfully.



Date	Message
12:01:52	Playblock Morning Show failed to pick a track from Stingers using Default.
12:00:03	Scheduled event 'Weekday Afternoons' executed successfully.
11:58:42	Playblock Morning Show failed to pick a track from VOX using Default.
11:36:58	Playblock Morning Show failed to pick a track from Stingers using Default.
11:22:12	Playblock Morning Show failed to pick a track from Artists-Male using Default.
10:43:01	Playblock Morning Show failed to pick a track from Stingers using Default.
10:15:07	Playblock Morning Show failed to pick a track from VOX using Default.
10:03:34	Playblock Morning Show failed to pick a track from Sweepers using Default.
09:54:33	Playblock Morning Show failed to pick a track from Stingers using Default.
09:46:54	Playblock Morning Show failed to pick a track from Artists-Male using Default.
09:39:01	Playblock Morning Show failed to pick a track from Stingers using Default.
09:00:06	Scheduled event 'Weekday Mornings' executed successfully.
06:00:05	Scheduled event 'Weekday Breakfast Show' executed successfully.
05:43:33	Playblock Morning Show failed to pick a track from Stingers using Default.
05:27:43	Playblock Morning Show failed to pick a track from Sweepers using Default.
05:15:21	Playblock Morning Show failed to pick a track from Stingers using Default.

Figure 45 – Health Log

Annex A – Built-In Media Selection Filters

The library includes a large number of included media selection filters which can be used to locate tracks which can then be added to specific Playlists.

Media Types

Media Type
Music [MUS]
Sound Effect [SFX]
Jingle [JIN]
Promo [PRO]
Station ID [SID]
News [NWS]
Commercial [COM]
Interview [INT]

Recently Added

Added in the Last x Days
1 day
7 days
30 days
90 days
180 days

Track Duration Ranges

Track Length
15 seconds or less
15-30 seconds
30-60 seconds
1-2 minutes
2-3 minutes
3-4 minutes
4-5 minutes
5-7 minutes
7-10 minutes
10-15 minutes
15-30 minutes
30-60 minutes
1 hour and longer

Grouped Filters

Filter
By Artist (A to Z)
By Title (A to Z)
By Album (A to Z)
By Artist
By Title
By Album
By Year
By Mood
By Genre
By Media Type
By BPM

Annex B – Separation Rules

The complete list of Separation Rules available by default and a brief explanation:

Separation Rule	Separation Details				
	Repeat Limits	Album	Artist	Title	Track
Default	1 Hour	45 Minutes	1 Hour	1 Hour	1 Hour
DMCA Separation	1 Hour	45 Minutes	1 Hour	1 Hour	1 Hour
Heavy Rotation	1 Hour	1 Hour	1 Hour	1 Hour	1 Hour
Light Rotation	12 Hours	12 Hours	12 Hours	12 Hours	12 Hours
Medium Rotation	1 Hour	2 Hours	4 Hours	4 Hours	4 Hours
No Rules	None	None	None	None	None
Rare Rotation	12 Hours	12 Hours	1 Day	4 Days	4 Days
Request Rule*	Reserved for future request feature				
Sweeper Separation	5 Minutes	5 Minutes	15 Minutes	15 Minutes	15 Minutes

With No Rules selected, there would be no limit on when a further track from a previously played album, artist, identically named song or a previously played track could be repeated.

With Rare Rotation selected, there would be at least a 12 hour gap before a track from a previously played album or artist would be played, there would be 1 day before a track with the same title would be played and there would be 4 days before the track was repeated.

**The Request Rule has been included but is not currently available to production stations*

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