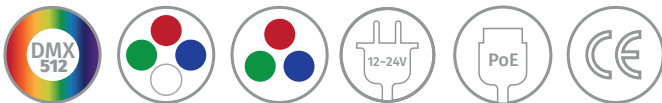


| | |
|------------|--|
| Date: | |
| Type: | |
| Firm Name: | |
| Project: | |



C-ART-EU32S DMX Controller

Everylite Datasheet Ver 2.3
Revision Date 02/2021



Features

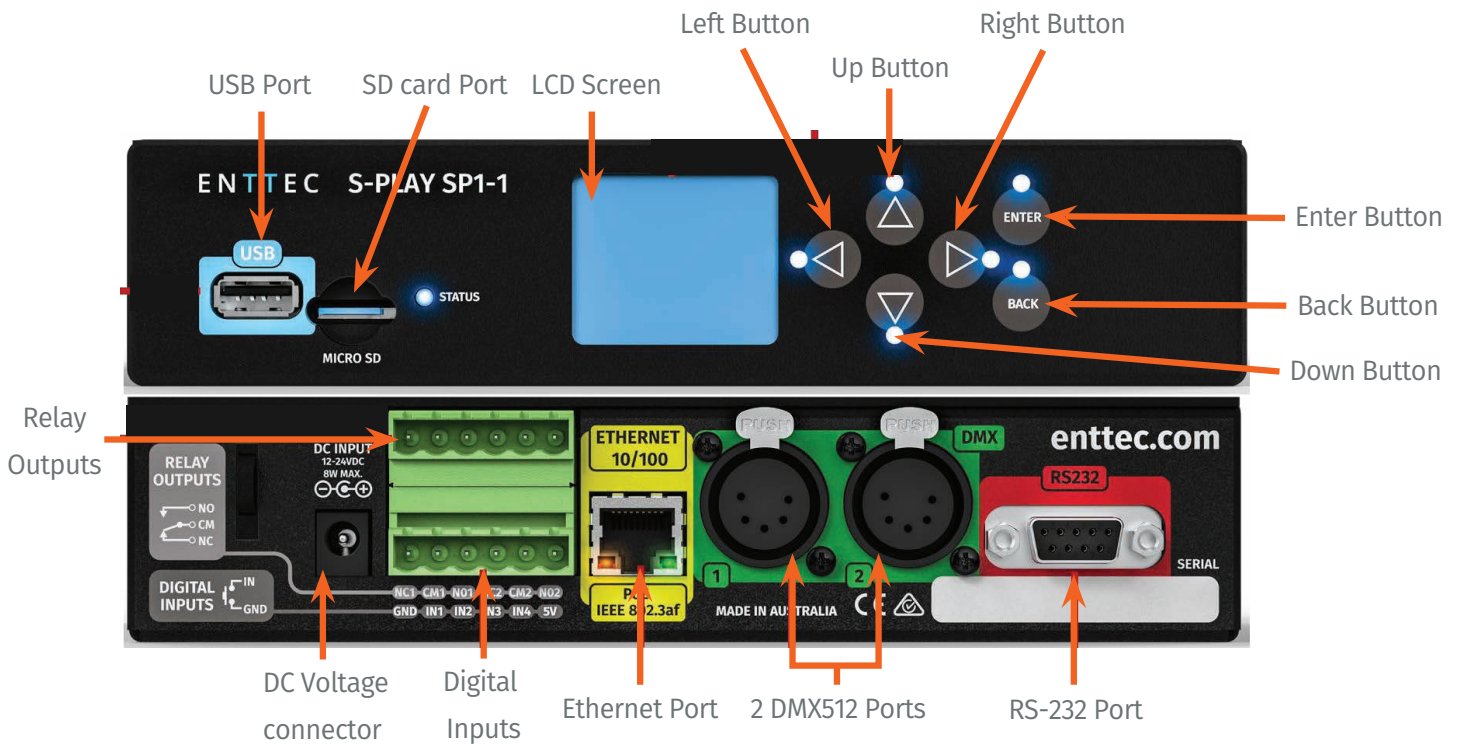
- 2 DMX512 and up to 32 eDMX Universes Stand Alone
- eDMX to DMX512 converter
- Multi-Protocol Support ArtNet/sACN/ESP
- Ethernet connectivity for programming/control/supervision
- LCD display (Menu and Navigation to access playlists and cues)
- Schedule playlists from dynamic and static cues
- iPhone/iPad/Android remote and programming apps
- Windows/Mac software to set dynamic colors/effects
- 8GB internal memory, up to 64GB capacity with an external micro HCSD card (Class 10, minimum 10MB/S or higher).



Technical Parameters

| Input Power | Output Protocol | Programmability | Connections |
|--|--|------------------------------|--|
| 12 ~ 24 VDC / PoE | 2 Universes DMX512 up to 32 Universes eDMX | PC, Mac, Tablet, Smart-phone | USB port, 12-24 DCV input, 4 Digital inputs, 2 Relay outputs, Ethernet port, 2 DMX512 in/out, 1 RS232 port |
| Buttons | Working Temperature | Standards | Dimensions (L x W x H) |
| 5 buttons (Up, Down, Right, Left, Enter and Back) | (32 ~122) °F | EC | (5.05 x 7.64 x 1.68) in |

Hardware



Connection Pin out

RJ-45

PIN 1: DATA +
PIN 2: DATA -
PIN 7: GND

RS232 (M)

PIN 2: RX
PIN 3: TX
PIN 5: GND

XLR5

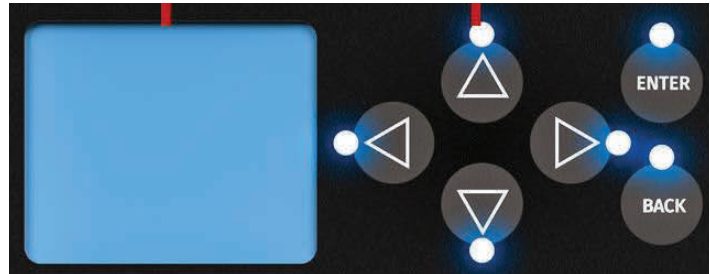
PIN 1: GND
PIN 2: DATA -
PIN 7: DATA +

Interfaces

The LCD Menu

Controls

- **Direction arrows:** can be used to move between menu tabs and increase or decrease the value in the field with numbers such as IP address.
- **Back:** used to return to the main Menu from a Sub-menu
- **Enter:** used to move down to a menu, access sub-menu options, set a numerical value or select options.



Layout (Navigation tabs)

- **Home Screen:** The Home screen displays the following:

- *Current day and time
- *Device IP Address
- *Device Name
- *Playlist Status
- *Lock Screen
- *Playlist control
- *Brightness control

- **Cues Screen:** The Cue screen displays the following:

- *Navigate cues
- *Preview cues
- *Stop current previewing cues

- **Playlist Screen:** The Playlist screen displays the following:

- *Navigate playlists
- *Play, pause and stop playlists
- *Monitor playlist status

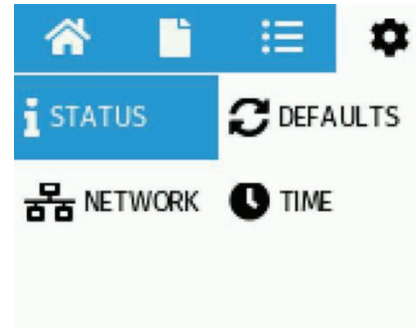


Interfaces

The LCD Menu

- **Settings Screen:** The Settings screen displays the following:

- *Display system status
- *Change network specifications
- *Display time and date
- *Restore to factory defaults



Web Interface

The controller is configured, controlled and programmed through a web browser interface running on a computer system located on the same Local Area Network (LAN). Either click on the underlined URL displayed on NMU or type the IP address (as detected by the NMU) into the web browser to access the web interface.

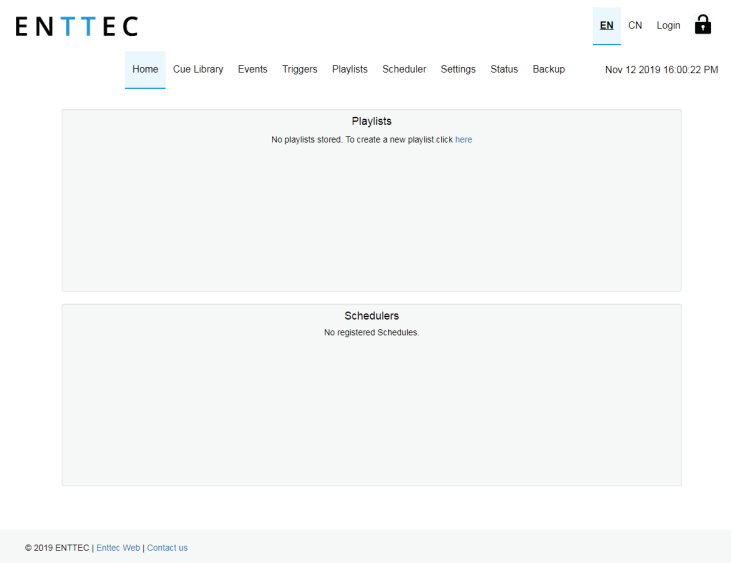
The pages are:

- *Home
- *Cue Library
- *Events
- *Triggers
- *Playlists
- *Scheduler
- *Settings
- *Status
- *Backup

Home

The home page displays the following:

- **Created playlists:** Play, Pause, Stop and Control playlists intensity
- **Created schedules:** Activate and Pause schedules



Interfaces

Web Interface

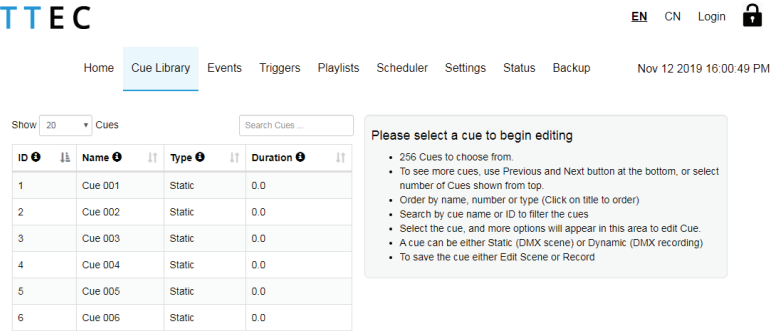
Cue Library

Cue library consists of a list of 256 cues, which can either be static or dynamic. A static cue is a snapshot of up to 16 Universes of data captured at a given time instance. A dynamic cue is multiple snapshots of up to 16 Universes of data captured at a given time duration.

The cue library page allows the user the following:

- Access all recorded cues
- Preview and Stop cues

ENTTEC



Home Cue Library Events Triggers Playlists Scheduler Settings Status Backup Nov 12 2019 16:00:49 PM

Show 20 Cues Search Cues ...

| ID | Name | Type | Duration |
|----|---------|--------|----------|
| 1 | Cue 001 | Static | 0.0 |
| 2 | Cue 002 | Static | 0.0 |
| 3 | Cue 003 | Static | 0.0 |
| 4 | Cue 004 | Static | 0.0 |
| 5 | Cue 005 | Static | 0.0 |
| 6 | Cue 006 | Static | 0.0 |

Please select a cue to begin editing

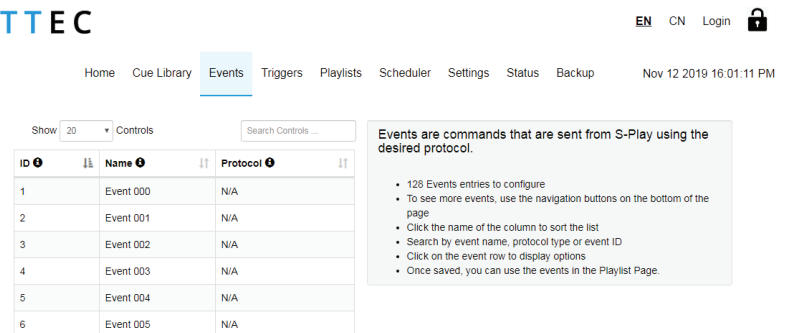
- 256 Cues to choose from.
- To see more cues, use Previous and Next button at the bottom, or select number of Cues shown from top.
- Order by name, number or type (Click on title to order)
- Search by cue name or ID to filter the cues
- Select the cue, and more options will appear in this area to edit Cue.
- A cue can be either Static (DMX scene) or Dynamic (DMX recording)
- To save the cue either Edit Scene or Record

Events

The Events page allows the user the following:

- Access all events options
- Create, Edit and Delete events

ENTTEC



Home Cue Library Events Triggers Playlists Scheduler Settings Status Backup Nov 12 2019 16:01:11 PM

Show 20 Controls Search Controls ...

| ID | Name | Protocol |
|----|-----------|----------|
| 1 | Event 000 | N/A |
| 2 | Event 001 | N/A |
| 3 | Event 002 | N/A |
| 4 | Event 003 | N/A |
| 5 | Event 004 | N/A |
| 6 | Event 005 | N/A |

Events are commands that are sent from S-Play using the desired protocol.

- 128 Events entries to configure
- To see more events, use the navigation buttons on the bottom of the page
- Click the name of the column to sort the list
- Search by event name, protocol type or event ID
- Click on the event row to display options
- Once saved, you can use the events in the Playlist Page.

Triggers

The Triggers page allows the user the following:

- Access all triggers options
- Create, Edit and Delete triggers



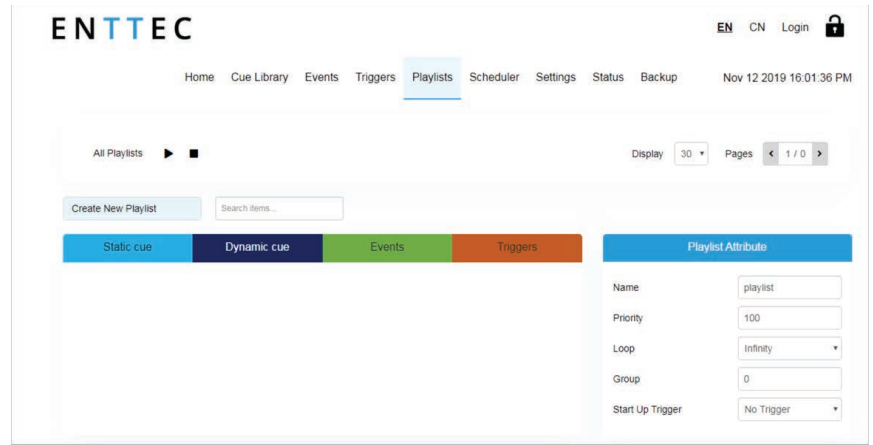
Interfaces

Web Interface

Playlist

The Playlist page allows the user the following:

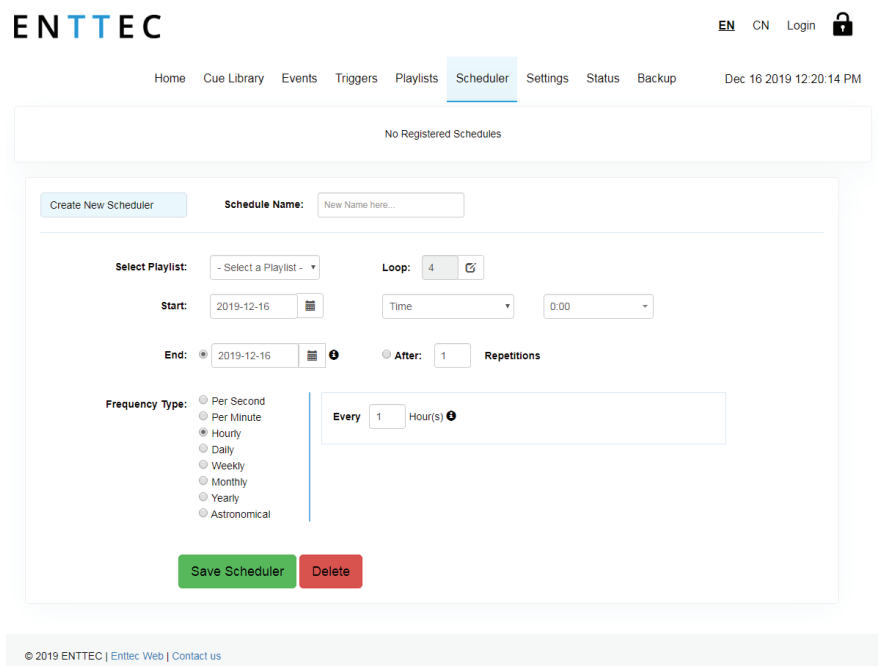
- Access all playlists
- Play and Stop playlists
- Delete playlists
- Create and Edit playlists



Scheduler

The Scheduler page allows the user the following:

- Access all schedules
- Play and Pause schedules
- Monitor Status of the schedule
- Create and Edit schedules



Interfaces

Web Interface

Settings

The Settings page allows the user the following:

- Set the controller's outputs
- Configure Art-Net and sACN output Universes and destination IP
- Configure refresh rate
- Configure DMX output port
- Set date, time and location
- Change Network configuration
- Reset to factory defaults
- Update Firmware

Status

The Status page allows the user the following:


- The network information of the device
- The current output protocols
- System information including:
 - *System status
 - *Playlist activity
 - *CPU status
 - *Storage status
 - *Device name
 - *System uptime
 - *Hardware ID
- Software version information
 - *Firmware version



ENTTEC


EN CN Login 

Home Cue Library Events Triggers Playlists Scheduler Settings **Status** Backup Nov 12 2019 16:06:14 PM

| Network Information  | |
|---|-------------------|
| IP Address: | 10.10.3.156 |
| Subnet Mask: | 255.255.255.0 |
| Broadcast Address: | 10.10.3.255 |
| Serial No. / Mac Address: | 00:50:C2:08:07:A7 |

| Output Information  | | |
|--|------------|------------|
| | Universe 1 | Universe 2 |
| Protocol | DMX | DMX |
| Universe | 1 | 2 |
| IP Address | NA | NA |

| System Information  | |
|--|---|
| System Status: | ✔ STARTED STOP ENGINE REBOOT |
| Activity: | No Playlist is Playing |
| CPU Status: | Load: 8.4 % Temp: 49.1 °C |
| Disk Space: | <div style="display: flex; align-items: center;"> <div style="width: 50px; height: 10px; background-color: #007bff; border-radius: 5px;"></div> 5.10 % Used 7.40 GB free out of 7.80 GB </div> |
| System Name: |  S-PLAY |
| System Uptime: | 8 minutes |
| Hardware ID: | 165166100581147c |

| Software Information  | |
|--|------------------------------------|
| Software version: | 06112019-910 (updated: 06/11/2019) |
| DMX driver version: | version: 1.4 |

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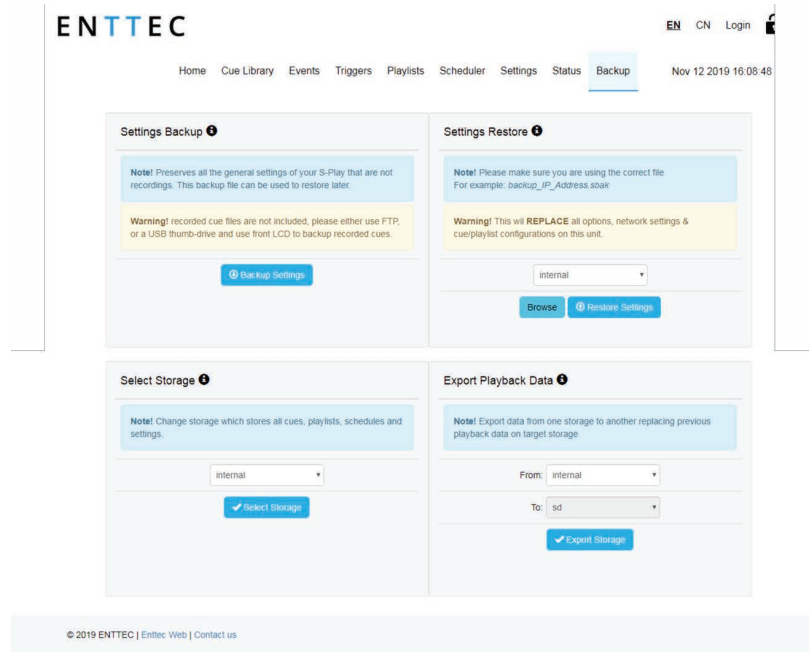
Interfaces

Web Interface

Backup

The Backup page allows the user the following:

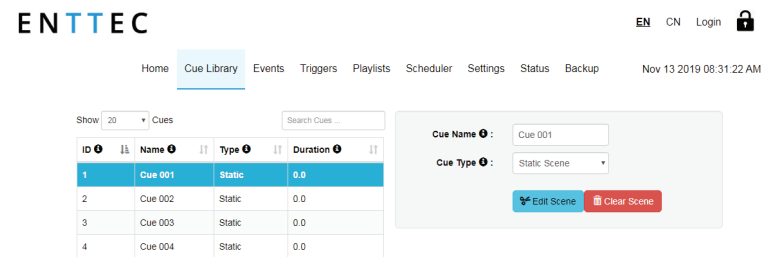
- Settings backup
- Settings restore
- Storage location select
- Playback export



Record

To record Cues, select any cue in the library as shown in the image.

The controller previews a recording on the output ports set in settings. To avoid issues with the frames being recorded, make sure the output and the input ports and universes are not the same. There are two types of cue: Static and Dynamic.



Interfaces

Record

Static Cue

The cue interface has steps to select the static cue option, the steps are the following:

- 1- Select **STATIC SCENE** as the cue type
- 2- Press **EDIT SCENE** button
- 3- Provide Cue name to aid identification
- 4- Select one of the following options for Data capture:

*Snap DMX (up to 2 Universes/1024 Channels)

*Snap Art-Net (up to 32 Universes/8192 Channels)

*Snap sACN (up to 32 Universes/8192 Channels)

- 5- Specify the Universes for capturing data
- 6- Once the option for capturing is selected, press on the **CAPTURE** button to take a snapshot of data at a specific time.

TOGGLE ALL INPUTS - Selects all input Universes

SAVE SCENE - Used to save the cue created

CLOSE - Close edit window without saving

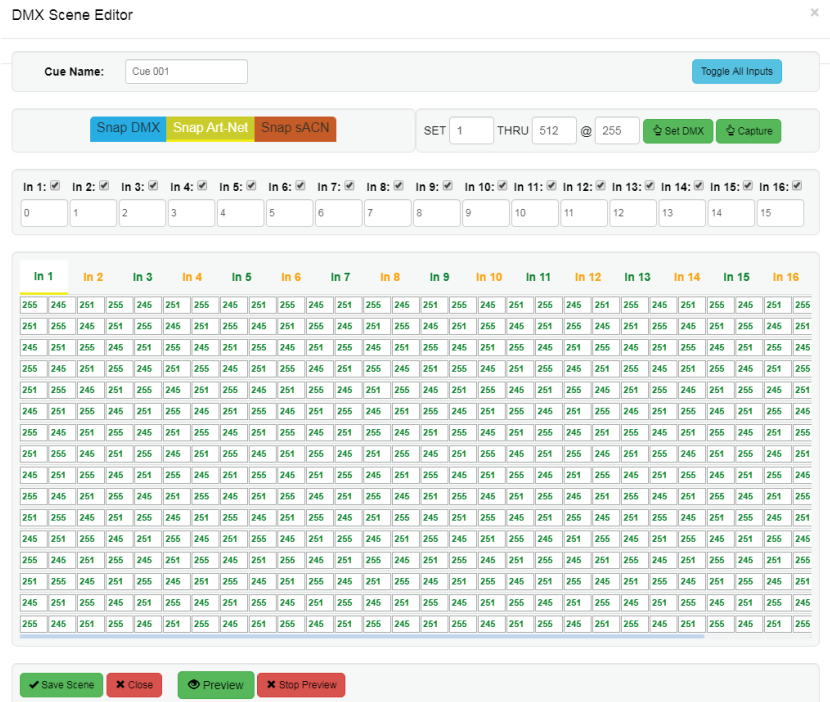
PREVIEW - Observe the capture using DMX ports.

This will stop any current playbacks

STOP PREVIEW - Stop output of captured data through DMX ports

N.B. - Sometimes not all Universes are captured at a time because of the inconsistency of network packets order and the controller's capturing logic which waits just for the selected number of frames (equal to number active universes).

The DMX values captured will be shown for the corresponding universe, as shown in the image.



DMX Scene Editor

Cue Name: Cue 001 Toggle All Inputs

Snap DMX Snap Art-Net Snap sACN SET 1 THRU 512 @ 255 Set DMX Capture

In 1: In 2: In 3: In 4: In 5: In 6: In 7: In 8: In 9: In 10: In 11: In 12: In 13: In 14: In 15: In 16:

| In 1 | In 2 | In 3 | In 4 | In 5 | In 6 | In 7 | In 8 | In 9 | In 10 | In 11 | In 12 | In 13 | In 14 | In 15 | In 16 |
|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|
| 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 |
| 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 |
| 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 |
| 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 |
| 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 |
| 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 |
| 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 |
| 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 |
| 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 |
| 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 |
| 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 |
| 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 |
| 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 |
| 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 |
| 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 |
| 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 |
| 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 |
| 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 |
| 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 |
| 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 |
| 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 |
| 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 | 245 | 251 | 255 |

Save Scene Close Preview Stop Preview



Interfaces

Record

Art-Net Triggering

- 1- Select DYNAMIC SCENE as the cue type
- 2- Select ARTNET TRIGGER from the Rec Control option
- 3- Set the desired universe, channel and value to activate the trigger
- 4- Press the EDIT RECORD button
- 5- Provide Cue name to aid the identification
- 6- Select one of the following options for data capture:
 - *Snap DMX (up to 2 Universes/1024 Channels)
 - *Snap Art-Net (up to 32 Universes/8192 Channels)
 - *Snap sACN (up to 32 Universes/8192 Channels)
- 7- Specify the Universes for capturing data
- 8- Once the option for capturing is selected, press on the START REC button to start the recording.
- 9- The controller will wait then for the trigger to be active before it starts recording.
- 10- The timer in the right bottom part of the window should start running as soon as data is captured.

The DMX values captured will be shown for the corresponding Universe.

TOGGLE ALL INPUTS - Selects all input Universes

SAVE SCENE - Used to save the cue created

CLOSE - Close edit window without saving

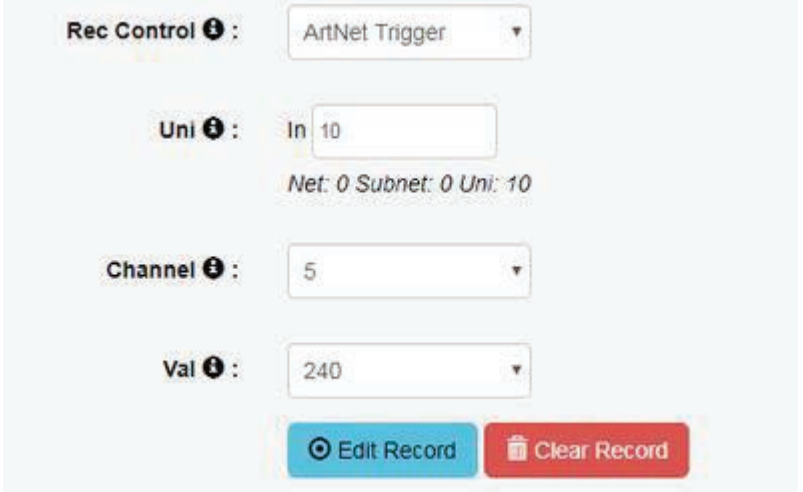
PREVIEW - Observe the capture using DMX ports.

This will stop any current playbacks

STOP PREVIEW - Stop output of captured data through DMX ports.

N.B. - During Art-Net recording check if not active Art-Net output is broadcasting to eliminate frames loopback, which leads to the incorrect recording.

N.B. - The Art-Net trigger will be active, once the value of channel is equal to or greater than the value set in the trigger.



The screenshot shows a configuration window for Art-Net Triggering. It includes the following fields and controls:

- Rec Control:** A dropdown menu set to "ArtNet Trigger".
- Uni:** A text input field containing "10". Below it, the network information "Net: 0 Subnet: 0 Uni: 10" is displayed.
- Channel:** A dropdown menu set to "5".
- Val:** A dropdown menu set to "240".
- Buttons:** Two buttons at the bottom: "Edit Record" (blue) and "Clear Record" (red).

Interfaces

Playback

Preview Cue

- Access a Cue
- Click Preview Cue
- Cue is previewed on the selected output ports

When Previewing a static cue, stop the preview when done.

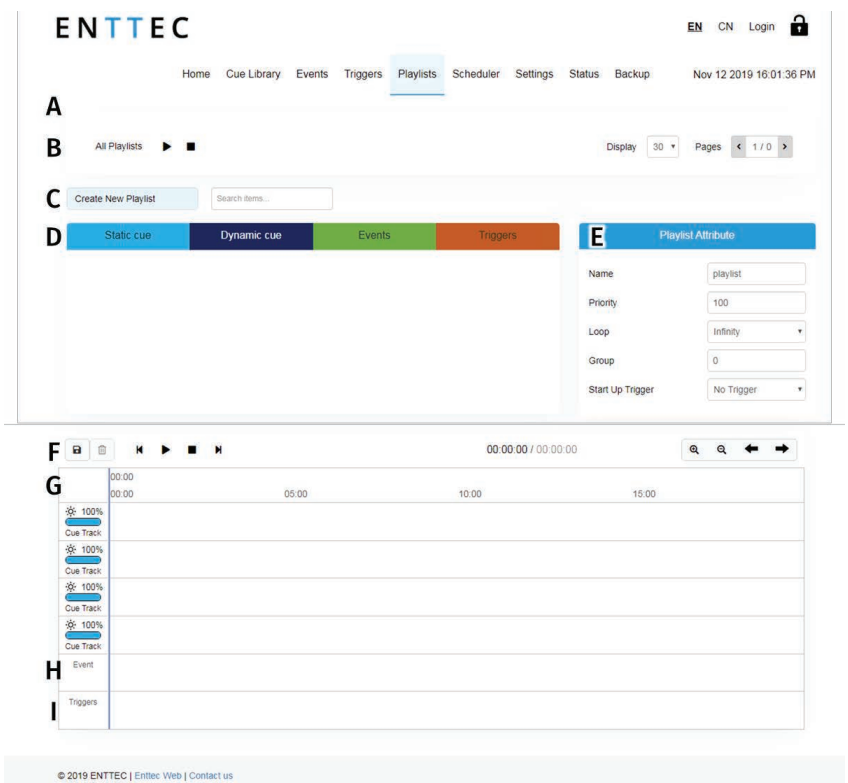
Playlists

The Playlist page allows the user to add multiple cues (static or dynamic), events and triggers in a sequence to be stored and played back at any given point.

Playlist Page Layout

The page has 9 different sections

- A- Created playlists
- B- Global playlist control
- Playlist Editor
- C- List of playlists
- D- Available cues and controls
- E- Playlist attributes
- F- Playlist settings
- G- Playlist timeline and media tracks
- H- Event track
- I- Trigger track



The screenshot shows the ENTTEC web interface for the Playlist page. At the top, there is a navigation menu with options: Home, Cue Library, Events, Triggers, **Playlists**, Scheduler, Settings, Status, Backup. The current date and time are Nov 12 2019 16:01:36 PM. The interface is divided into several sections:

- A:** Header area with the ENTTEC logo and user information (EN, CN, Login, lock icon).
- B:** Global playlist control, showing "All Playlists" and a "Display" dropdown set to 30, and "Pages" 1 / 0.
- C:** Playlist Editor, featuring a "Create New Playlist" button and a "Search Items..." input field.
- D:** Available cues and controls, with tabs for "Static cue", "Dynamic cue", "Events", and "Triggers".
- E:** Playlist attributes, including fields for Name (playlist), Priority (100), Loop (Infinity), Group (0), and Start Up Trigger (No Trigger).
- F:** Playlist settings, showing playback controls and a time display of 00:00:00 / 00:00:00.
- G:** Playlist timeline and media tracks, showing a timeline from 00:00 to 15:00 with multiple "Cue Track" entries at 100%.
- H:** Event track, showing an "Event" entry.
- I:** Trigger track, showing a "Triggers" entry.

At the bottom of the page, there is a footer: © 2019 ENTTEC | Enttec Web | Contact us



Interfaces

Playlists

Created Playlists

This section lists all the playlist created. The section displays basic information like the playlist name and duration and gives the user basic control over a playlist.

- **Load:** loads the playlist in the time line and media track for editing.

- **Name:** Display the name of the playlist set in the playlist attribute section

- **Controls - Play, Pause, Stop:**

***Play:** Play the selected playlist, also the Playlist is loaded into the timeline and media track section.

***Pause:** Pause the selected playlist. By pausing a playlist, the controller holds the last DMX value.

***Stop:** Stops the selected playlist. By stopping a playlist, the controller stops outputting any data (set DMX value to 0).

- **Intensity:** Real-time control of the master intensity of the playlist. By default, it is set to 100% and it can be changed when the playlist is playing.

- **Status:** States the status of the playlist. It can be:

*Playing

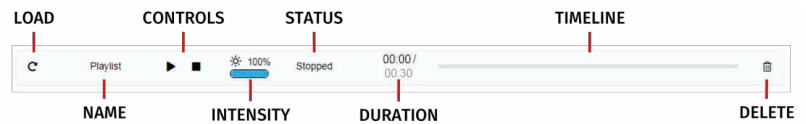
*Paused

*Stopped

*Waiting for Trigger

- **Duration and Timeline:** Real-time count down of the playlist. Actual time/Duration of the playlist. Once the playlist is done playing, the controller stops outputting any data.

- **Delete:** Deletes the playlist and schedules where the playlist is used.



Interfaces

Playlists

Global Playlist Control

Gives control over all the created playlists. When pressing play on the global control, all the playlists start playing. If there are conflicts in channels, the values are merged on HTP. The playlists with higher priority override the other values played.

List of Playlists

This dropdown menu lists all created playlists. For editing select a playlist from the list. To create a new playlist, select CREATE NEW PLAYLIST from the list. This entry will always be the first entry of the menu.

Available Cues and Controls

Lists all the media that can be used in the playlist. It is categorized by Static Cues, Dynamic Cues, Events and Triggers.

To use any media, drag and drop the desired cue into any of the media tracks. Please note that triggers and events have dedicated tracks.



Interfaces

Playlists

Playlist Attributes

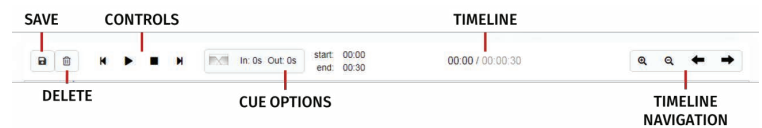
- **Name:** Set the name of the Playlist.
- **Internal Priority:** When playing multiple playlists, for any conflict between channels, the playlist with higher priority will drive the output. If the playlist has the same priority the channels will merge following HTP (Highest Takes Precedence) method.
- **Loop:** Determine the number of times that the playlist will play until it stops.
- **Group:** Group playlists to override the output. Groups with higher hierarchy drive the controller's output.
- **Start Trigger:** List of triggers set in Triggers page, except ON POWER UP which triggers playlist right after the controller powers up. These triggers are used to start the playlist. To use this feature, just select a Trigger from the dropdown menu; the Playlist will play by either pressing PLAY or activating the Trigger.

Playlist Attribute

| | |
|-------------------|--|
| Name | <input style="width: 90%;" type="text" value="Playlist"/> |
| Internal Priority | <input style="width: 90%;" type="text" value="100"/> |
| Loop | <input style="border-bottom: 1px solid #ccc;" type="text" value="1"/> |
| Group | <input style="width: 90%;" type="text" value="0"/> |
| Start Trigger | <input style="border-bottom: 1px solid #ccc;" type="text" value="No Trigger"/> |

Playlist Settings

- **Save:** Saves any change on the playlist. The controller will ask to save any change before playing a playlist.
- **Delete:** Deletes the playlist loaded in the Playlist Editor.
- **Control:** Gives control to the playlist loaded in the Playlist Editor.
- **Cue Options:** Options for any cue added into the cue track. The cue options are also active when a cue in the Cue Track is selected.
- **Fade:** Set the fade in and fade out time for a cue. It'll go from 0 to Max intensity in the set period.



Interfaces

Playlists

Playlist Settings

- **Start/Duration:** Manually add the start time for the selected cue.

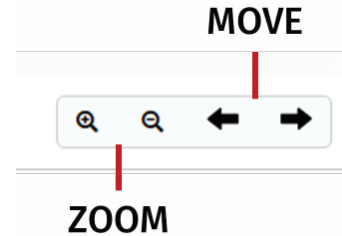
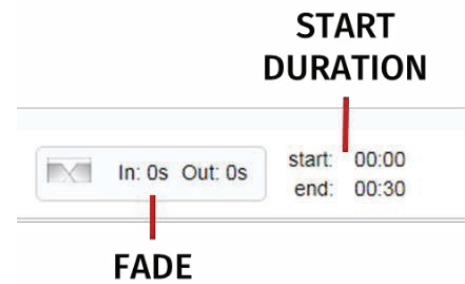
***Static Cue:** It is possible to change the duration by also editing the end time.

***Dynamic Cue:** The duration is set according to the recording.

- **Timeline:** Shows the current time of the playlist out of the total duration of it.

- **Timeline Navigation:** Zoom in and out using the magnifying glass with the plus and minus symbol. Note that when you zoom in/out, the values in the timeline change and the size of the cue boxes change.

Use the arrows to move on time in the playlist timeline.



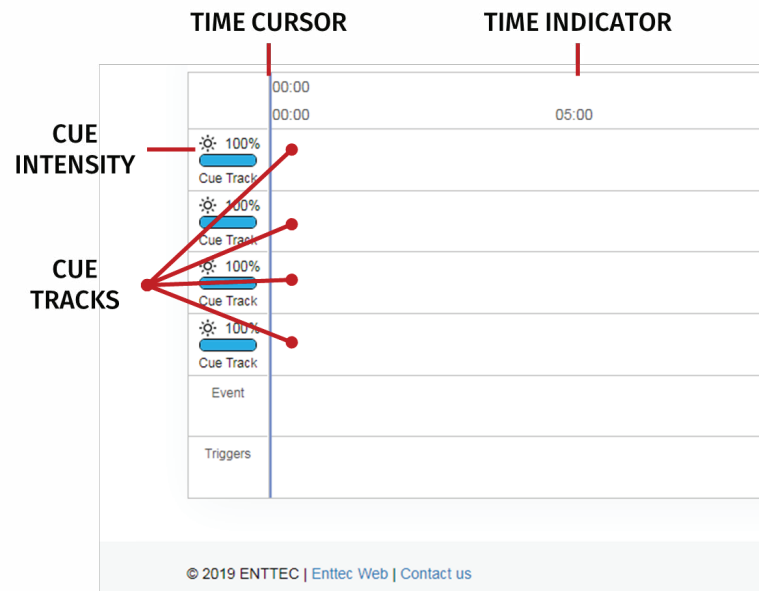
Playlist Timeline and Media Tracks

The controller has 4 different Cue Tracks where any cue from the playlist media section can be dragged on.

- **Intensity:** Each track has its own intensity and it affects all the media on the same level.

- **Cue Tracks:** Drag and drop media to this section. to remove a cue from the tracks, select the cue and click on the red X next to the right edge of the box.

When playing multiple media at the same time the controller will use HTP (Highest value Takes Priority) merging.



Interfaces

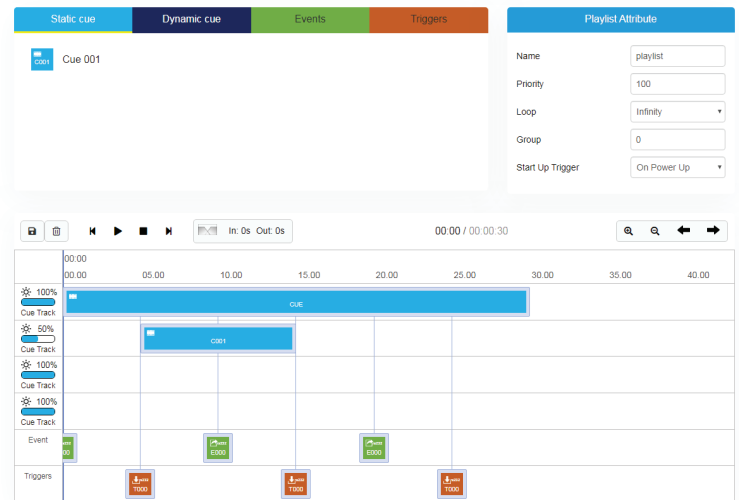
Playlists

Event and Trigger Tracks

These tracks are reserved for events and triggers respectively. The vertical line shows the exact moment playlist will pause to wait for the trigger to be active, or the playlist executes the event. When using triggers, the playlist pauses and holds the last value on the output. To continue, activate the selected trigger or press play again.

Example Playlist

This example is showing a playlist named PLAYLIST that will start on power up and will loop until manually stopped (Loop: Infinity). The static cue CUE will play while sending an RS232 Event. By second 5 the playlist will pause and wait for the GPIO trigger to be sent an C001 will start playing with 50% intensity. The playlist will then continue sending Events and waiting for triggers. At second 30 it will loop back sending the first RS232 Event out.



Control

Events

Use events to allow integration between the controller and other devices. The controller can send commands over multiple protocols and interact with Relays.



Interfaces

Control

RS232

Make sure the receiver has the correct communication setup:

*Baud Rate: 9600

*Data: 8bit

*Parity: None

*Stop: 1bit

*Flow Control: None

M. B. - Command text is limited to 32 Characters only.

Control Options

Control Name :

Type or Protocol :

Command :

• Trigger will send entered **RS232 Command**, when activated.
 • **RS232 Communication information** Baud rate : 9600, Data : 8 bit, Parity : none, Stop: 1 bit, Flow Control: none
 • Command text is limited to 32 characters only.

Art-Net

Unicast or broadcast a value over a specified channel and universe over Art-Net.

Set the following:

*IP Address (if unicasting)

*Output Universe

*Channel

*Value

Control Options

Control Name :

Type or Protocol :

• When activated, S-Play will send selected DMX value
 • DMX value is sent over Art-Net as specified below

Off **Broadcast**

IP : . . .

Universe : Net: 0 Subnet: 15 Uni: 10

Event Channel :

Event Value :

DMX

Send a value over a specified channel on the DMX port of your choosing.

Set the following:

*DMX Port

*Channel

*Value

Control Options

Control Name :

Type or Protocol :

When activated, S-Play will send selected DMX value over the specified port and channel

DMX Port :

Event Channel :

Event Value :

Interfaces

Control


sACN


Unicast or multicast a value over a specified channel and universe over sACN.


Set the following:

- *IP Address (if unicasting)
- *Output Universe
- *Channel
- *Value

Control Options


Control Name  :


Type or Protocol  :




- When activated, S-Play will send selected DMX value
- DMX value is sent over sACN as specified below

On
 Multicast
 : . . .

sACN Uni  :

Event Channel  :

Event Value  :


Relay


Control the relay action


- ***NO**: Normally Open
- ***NC**: Normally Closed

M. B. - On system power-up, the Relays position is set to be normally open.


Control Options

Control Name  :


Type or Protocol  :




When activated in a playlist the Relay will perform the selected action



NO: Normally Open
NC: Normally Closed

Relay Selection  :

Relay Action  :

Triggers

Use triggers to take control of the timeline of the playlist. When using a trigger, the timeline will pause until the selected trigger is active.

Triggers can be used to start a playlist or at any point within the timeline.

When a playlist is waiting for a trigger, it will play by either activating the trigger or by pressing play. This way there is full control of the playback even when the triggers are not available.



Interfaces

Triggers

OSC

Change OSC Port in settings page OSC PORT. The controller can interact with OSC in multiple ways. Triggers can be created to start and resume playlists, but there is also a close integration with the OSC API that enables control of:

- *Master Intensity
- *Play, Pause and Stop all playlists
- *Play, Pause and Stop individual playlists
- *Playlist Intensity

Export Playlists in the OSC section in the settings page will download a .csv that contains the Playlist ID and Playlist Name.

Control Options

Control Name ⓘ :

Type or Protocol ⓘ :

ⓘ

- Trigger will be ready, when, entered **Command** is matched.
- Command must be received on UDP Port configured in OSC Settings.
- OSC Command must start with leading / sign.

Command ⓘ :

RS232

Make sure the receiver has the correct communication setup:

- *Baud Rate: 9600
- *Data: 8bit
- *Parity: None
- *Stop: 1bit
- *Flow Control: None

M. B. - Command text is limited to 32 Characters only.

Control Options

Control Name ⓘ :

Output Type ⓘ :

ⓘ

- A Trigger will be activated when an incoming command matches the user defined RS232 command.
- RS232 communication information** Baud rate : 9600, Data : 8 bit, Parity : none, Stop: 1 bit, Flow Control: none
- Command text is limited to 32 characters only.

String ⓘ :



Interfaces

Triggers

DMX

DMX trigger will be active when the trigger value is equal and greater than the selected trigger value. Set the following:

- *DMX Port
- *Channel
- *Value

N. B. - If DMX is selected as output protocol in the setting page, the DMX triggers will be disabled in the playlist.

Control Options

Control Name :

Type or Protocol :

Info

- When used in a playlist, S-Play will wait to receive the selected DMX value over the specified Port and Channel

DMX Port :

Trigger Channel :

Trigger Value :

Digital Input

The controller has 4 Digital input ports to activate triggers. The triggers will be activated when the digital input is in low position (normally closed). If the input remains on low position while the timeline goes over the trigger, the playlist won't pause.

Use GPIO triggers with sensors, pressure pads, wall switches, etc.

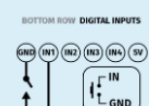
Control Options

Control Name :

Type or Protocol :

Info

- Idle position for digital input is **high**
- Trigger is executed when digital input position is low



BOTTOM ROW DIGITAL INPUTS

Ports :

Art-Net

Art-Net trigger will be active when the trigger value is equal and greater than the selected trigger value.

Art-Net trigger can be unicasted or broadcasted to the controller. Set the following:

- *Input Universe
- *Channel
- *Value

Control Options

Control Name :

Type or Protocol :

Info

- When used in a playlist, S-Play will wait to receive the selected DMX value over the specified Art-Net Universe and Channel

Universe : Net: 0 Subnet: 0 Uni: 0

Trigger Channel :

Trigger Value :

Interfaces

Triggers

sACN

sACN trigger will be active when the trigger value is equal and great than the selected trigger value.

Unicast or multicast a value over a specified channel and universe over sACN. Set the following:

- *Input Universe
- *Channel
- *Value

Control Options

Control Name ⓘ :

Type or Protocol ⓘ :

• When used in a playlist, S-Play will wait to receive the selected DMX value over the specified sACN Universe and Channel

sACN Uni ⓘ :

Trigger Channel ⓘ :

Trigger Value ⓘ :

Schedule

To set up a scheduler you need to create a playlist first. The scheduler will play the playlist at a set time until the end condition is met. The playlists played by the scheduler will play next if there is a playlist playing when the initial condition is met. Give attention to the setup of Date and Time and Location Settings for the correct work of Schedulers.

The page has 7 different sections:

- A- Created Schedules
- Scheduler Editor
- B- List of Schedules
- C- Schedule Name
- D- Selected Playlist
- E- Start Condition
- F- End condition
- G- Frequency type

ENTTEC

[Home](#)
[Cue Library](#)
[Events](#)
[Triggers](#)
[Playlists](#)
[Scheduler](#)
[Settings](#)
[Status](#)
[Backup](#)

No registered Schedules.

B - [Create New Scheduler](#)

C - **Schedule Name:**

D - **Select Playlist:**

E - **Start:**

F - **End:** **Repetitions**

G - **Frequency Type:**

- Secondly
- Minutely
- Hourly
- Daily
- Weekly
- Monthly
- Yearly
- Astronomical

Every **Hour(s)**

Interfaces

Schedule

Created Schedules

The created schedulers list gives information at a glance of the parameters set on each scheduler.

- **Pause/Play:** Gives control of the scheduler. If a scheduler is paused, the status light will become yellow.

- **Load:** Load Scheduler into the Scheduler Editor to update or change any parameter.

- **Status:** Displays the status of the scheduler

***Green:** Active Scheduler. An active scheduler still has instances to play.

***Red:** Expired Scheduler. An expired scheduler does not have any instances left to play.

***Yellow:** Paused Scheduler. The scheduler will not play until it's active and the end condition is not met.

- **Scheduler Name:** Name set in the scheduler editor.

- **Playlist Name:** Playlist selected in the scheduler editor.

- **Playlist loop:** loop set in the scheduler editor, by default this is the same value configured in the playlist attributes.

- **Scheduler Frequency:** Frequency set in the scheduler editor.

- **Start Time:** Time set in the scheduler editor.

- **Start Date:** Start date set in the scheduler editor.

- **End Condition:** End condition set in the scheduler editor.

- **Delete:** Delete selected Scheduler.

| PLAY PAUSE | STATUS | SCHEDULER NAME | PLAYLIST NAME | PLAYLIST LOOP | SCHEDULER FREQUENCY | START TIME | START DATE | END DATE | DELETE |
|------------|-------------|----------------|---------------|---------------|---------------------|-------------|-------------------|-----------------|--------|
| C | ● Activated | ONCE A YEAR | Playlist | Infinity | Frequency: Hourly | Time: 20:30 | Start: 2019-11-18 | End: 2019-11-18 | 🗑️ |

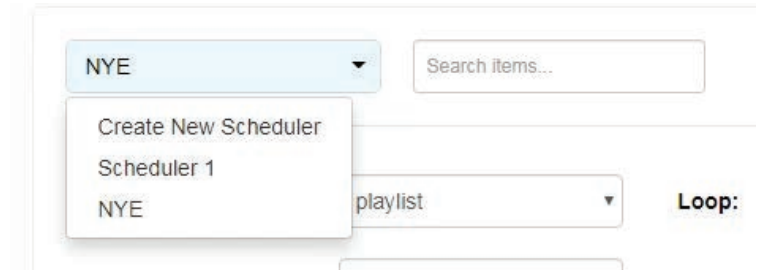


Interfaces

Schedule

List of Schedules

Lists all the schedules saved and shown in the created scheduler section. When an option is selected, its parameters are loaded into the scheduler editor. To create a new scheduler, select CREATE NEW SCHEDULER option.



Schedule Name

Name to aid Schedule identification.

Selected Playlist

List of available Playlist to be scheduled.

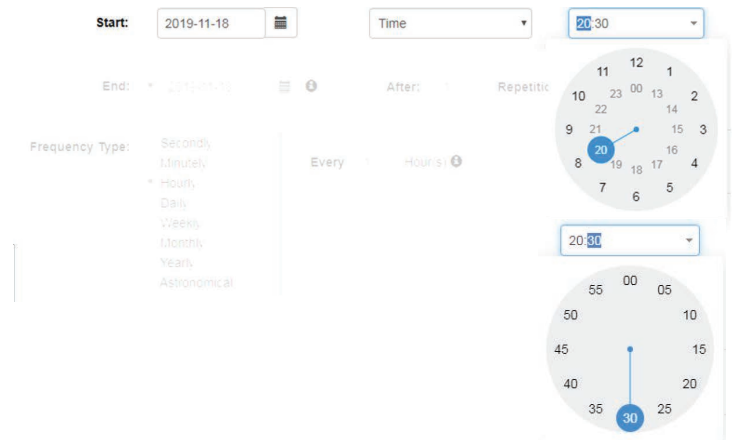
Start Condition

Set a schedule to start at a specific time, at sunrise or sunset. The sun phase is calculated based on the location set in the setting page. It takes into consideration:

- *GMT Offset
- *Latitude
- *Longitude

To set the start of the scheduler to a specific time do the following:

- Select TIME from the dropdown menu
- Click the first 2 digits on the second dropdown menu and set the hour using the dial. Note that the inner circle show hours past noon (>12) and the outer circle show hours before noon (<12).
- To set the minutes, click on the last two digits and use the dial to select the desired time.



Interfaces

Schedule

End Condition

The scheduler will be expired once the end condition is met. It can be on a specific date or after a desired amount of repetitions.

Frequency Type

Set the frequency when the playlist set will play. There are 8 frequency types available:

- **Per Second:** Start the selected playlist after the specified seconds.

- **Per Minute:** Start the selected playlist after the specified minutes.

- **Hourly:** Start the selected playlist after the specified hours.

- **Daily:** Start the selected playlist either every day or every number of days specified.

- **Weekly:** The selected playlist will play on the selected days every week or as specified in the text box.

- **Monthly:** The selected playlist will play on a specific day of every month as specified.

- **Yearly:** The selected playlist will play a specific day of the year.

- **Astronomical:** The selected playlist will play depending on the phase of the moon.

Frequency Type: Per Second
 Per Minute
 Hourly
 Daily
 Weekly
 Monthly
 Yearly
 Astronomical

Every Day
 Every days

Frequency Type: Per Second
 Per Minute
 Hourly
 Daily
 Weekly
 Monthly
 Yearly
 Astronomical

Monday Tuesday
 Wednesday Thursday
 Friday Saturday
 Sunday

Frequency Type: Per Second
 Per Minute
 Hourly
 Daily
 Weekly
 Monthly
 Yearly
 Astronomical

Day of every month
 The of every month

Frequency Type: Per Second
 Per Minute
 Hourly
 Daily
 Weekly
 Monthly
 Yearly
 Astronomical

The
 On the of

Frequency Type: Per Second
 Per Minute
 Hourly
 Daily
 Weekly
 Monthly
 Yearly
 Astronomical

New Moon
 First Quarter
 Full Moon
 Third Quarter



Interfaces

Setup

Changing the Network Settings

- Changing the Network Settings using LCD Interface:

1- Use the UP or DOWN navigation buttons located next to the screen to move to the Settings tab.

2- Use the DOWN button to navigate to the Network Settings page

The Network page can be used for the following:

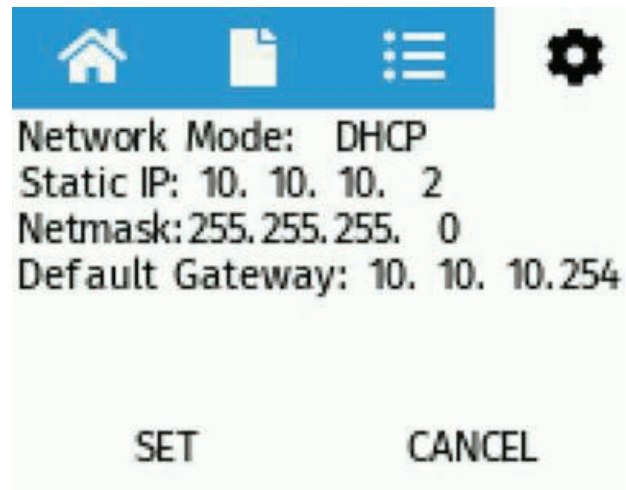
*Enable or disable DHCP

*Set static IP value

*Set Netmask

*Set Gateway

Use the arrows and enter keys to get the desired network settings.



- Setting IP Example:

1- Toggle between DHC and Static by pressing enter to change options and the up-down arrow to change between options

2- Press ENTER button to move to IP address

3- Use the arrows to assign a number for each byte in IP; press on the RIGHT-LEFT arrow to jump in tens, use the UP-DOWN arrow to move by one number.

4- Once desired IP is set, press ENTER button to move to Netmask Settings.

5- Repeat step 3 to set the desired Netmask

6- Once desired Netmask is set, press ENTER button to assign Gateway Settings.

7- Repeat step 3 to set the desired Gateway - (this can be set to any IP on the same SubNet as your controller, if a gateway is not required)

8- Press ENTER to move out of network settings

9- Use the arrows to navigate to OK button and press ENTER

10- All Network setting assigned will get saved once OK button is selected.

Interfaces

Setup

Changing the Network Settings

- Changing IP Using Web Interface:

Change the Network setting between DHCP and Static IP, Netmask and Gateway.



Network Interface ⓘ

DHCP: Off

IP Address: 10 . 10 . 3 . 100

Net Mask: 255 . 255 . 255 . 0

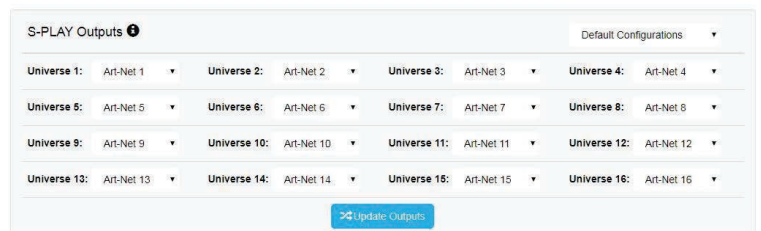
Gateway: 10 . 10 . 3 . 254

[Update Network Settings](#)

Controller's Output

Change outputs independently between ArtNet, sACN and DMX.

Use the Default configurations option in the top part of the section to quick select Art-Net, sACN, DMX and none.



S-PLAY Outputs ⓘ Default Configurations ▾

| | | | | | | | |
|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Universe 1: | Art-Net 1 ▾ | Universe 2: | Art-Net 2 ▾ | Universe 3: | Art-Net 3 ▾ | Universe 4: | Art-Net 4 ▾ |
| Universe 5: | Art-Net 5 ▾ | Universe 6: | Art-Net 6 ▾ | Universe 7: | Art-Net 7 ▾ | Universe 8: | Art-Net 8 ▾ |
| Universe 9: | Art-Net 9 ▾ | Universe 10: | Art-Net 10 ▾ | Universe 11: | Art-Net 11 ▾ | Universe 12: | Art-Net 12 ▾ |
| Universe 13: | Art-Net 13 ▾ | Universe 14: | Art-Net 14 ▾ | Universe 15: | Art-Net 15 ▾ | Universe 16: | Art-Net 16 ▾ |

[Update Outputs](#)

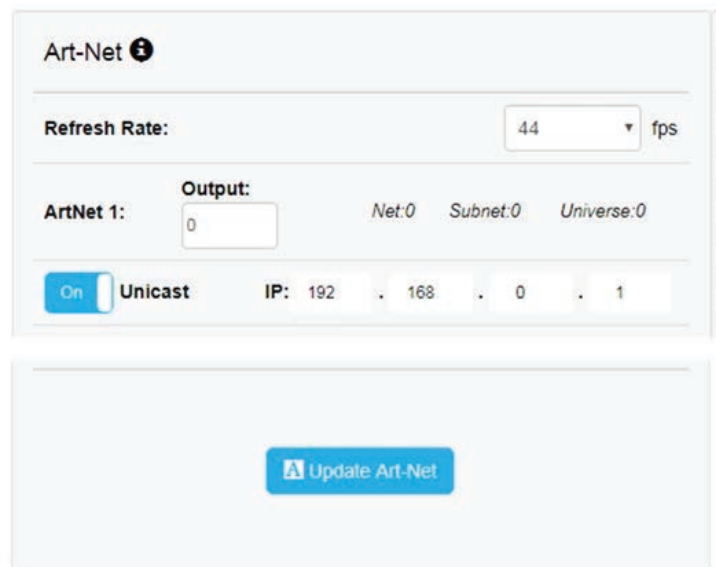
- Art-Net Output Configuration:

*Configure output refresh rate for all Art-Net output stream.

*Set output Art-Net each of the 16 Universes (Universe, Unicast IP address and Broadcast)

*Save after any change by pressing UPDATE ART-NET.

N. B. - Max refresh rate = 60FPS



Art-Net ⓘ

Refresh Rate: 44 ▾ fps

ArtNet 1: Output: Net:0 Subnet:0 Universe:0

Unicast IP: 192 . 168 . 0 . 1

[Update Art-Net](#)



Interfaces

Setup

- sACN Output Configuration:

*Configure output refresh rate for all sACN output stream

*Set output sACN each of the 16 Universes (Universe, Unicast IP address and Multicast)

*Save after any change by pressing UPDATE SACN

*Generate sACN ID

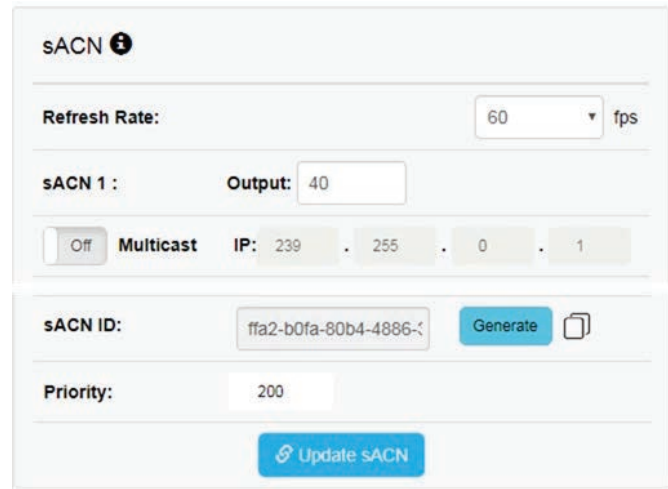
*Get the controller sACN priority

N. B. - Max refresh rate = 60FPS

- DMX Output Configuration:

*Configure output refresh rate for all DMX output stream

*Configure a specific universe to a DMX port



sACN ⓘ

Refresh Rate: 60 fps

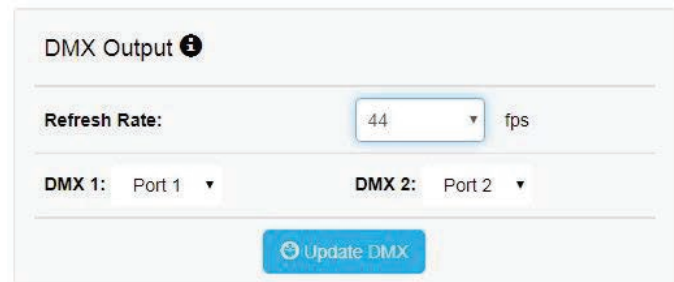
sACN 1 : Output: 40

Off Multicast IP: 239 . 255 . 0 . 1

sACN ID: ffa2-b0fa-80b4-4886- Generate

Priority: 200

Update sACN



DMX Output ⓘ

Refresh Rate: 44 fps

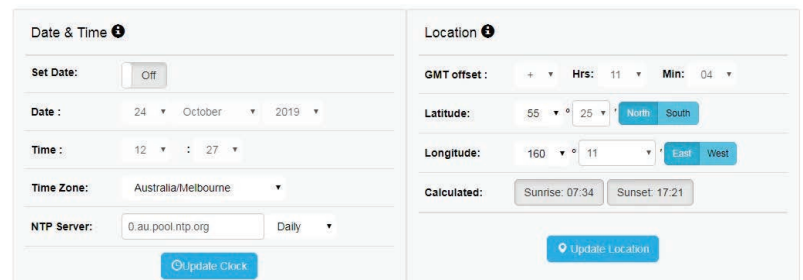
DMX 1: Port 1 DMX 2: Port 2

Update DMX

Change Date/Time and Location

Set time, date and location. This information is critical when setting schedules.

When the set date is off. The NTP server will update the system time information. An internet connection is required to configure the NTP.



Date & Time ⓘ

Set Date: Off

Date: 24 October 2019

Time: 12 : 27

Time Zone: Australia/Melbourne

NTP Server: 0.au.pool.ntp.org Daily

Update Clock

Location ⓘ

GMT offset: + Hrs: 11 Min: 04

Latitude: 55 25 North South

Longitude: 160 11 East West

Calculated: Sunrise: 07:34 Sunset: 17:21

Update Location



Interfaces

Factory Reset

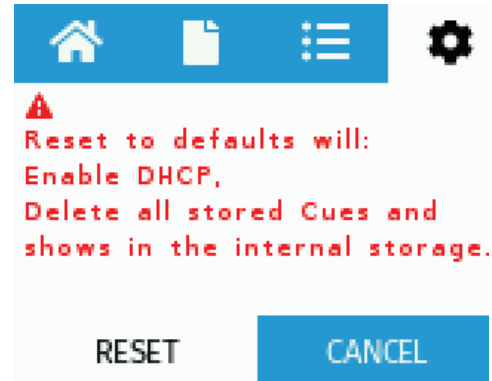
When performing a factory reset the controller:

- *IP address will go back to DHCP
- *Delete all cues, playlists and schedulers
- *Output will be set to DMX1 and DMX2
- *Art-Net Output will be set to broadcast
- *sACN output will be set to multicast

Factory reset is possible from the web interface and the menu display in the LCD screen.

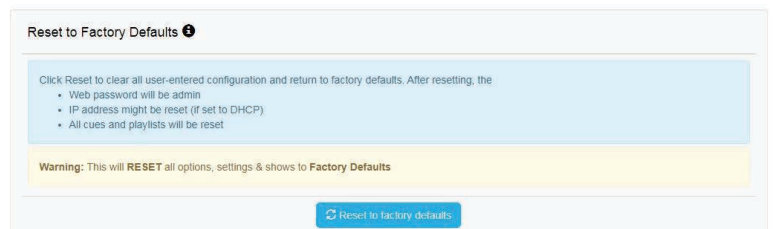
LCD Screen

- 1- Navigate to SETTINGS
- 2- Locate the RESET TO DEFAULTS
- 3- Select RESET



Web Interface

Go to SETTINGS page, scroll down to the end of the page and select RESET TO FACTORY DEFAULTS



Interfaces

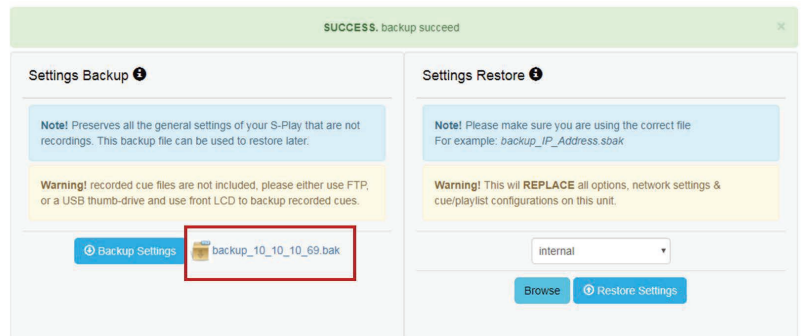
Backup

The controller produces a package that includes:

- *Cues
- *Playlist
- *Schedules
- *Settings

The backup can be done via LCD screen or web interface.

Go to BACKUP page, click BACKUP. the process produces a .bak package that can be downloaded and saved to any location in your PC.



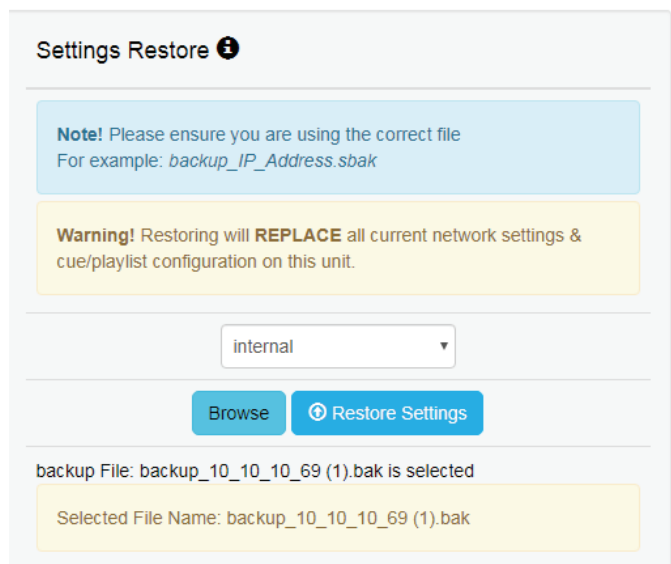
Restore

Use the created .bak file to restore cues, playlists, schedules and output settings.

Go to the BACKUP menu in the web interface

- *Select the desired memory (internal or external)
- *Click BROWSE and look for the .bak file
- *Insert and click on RESTORE

Once the restore is complete, a confirmation message will appear on the top of the page.



Storage

Static Cue

Snapshots are comprised of a single DMX frame. The maximum file size of a frame of one universe with associated metadata is 4.5Kb. To calculate the file size of a Static Cue, multiply 4.5 Kb by the quantity of universes you intend to capture as part of the static cue. This calculation will give a file size in Kb.

$$((4.5\text{Kb}) * (\text{Quantity of Universes to be captured})) = \text{Cue Size (Kb)}$$



Interfaces

Storage

Dynamic Cue

A Dynamic cue can be thought of as a stream of Static cues. To calculate the file size of a Dynamic Cue, multiply 4.5 Kb (the size of a single 1 Universe DMX frame) by the quantity of universes you intend to capture, the quantity of frames being recorded per second and duration of recording (in seconds). This calculation will give a file size in Kb.

$$((4.5\text{Kb}) * (\text{Quantity of Universes to be captured}) * (\text{Quantity of Frames per Second [produced by the DMX source]}) * (\text{Intended Recording Length [seconds]})) = \text{Recording Size (Kb)}$$

Triggers and Events

Triggers and Events each have a maximum file of 4.5 Kb. To calculate the theoretical storage size all Triggers and Events your configuration will occupy, multiply the total quantity of Triggers and Events you will use by 4.5 Kb.

$$((4.5\text{Kb}) * (\text{Quantity of Triggers and Events})) = \text{Total Trigger and Event Size (Kb)}$$

Select Storage

The controller contains internal memory. However, if the storage is getting full, the user can switch memory to an external Class 10 SD Memory Card designed for high load video recording.

The controller can only operate from a single memory source so make sure to move all the files from the internal memory to the external SD card. To do so, please refer to the next section in the user manual "Export Playback Data".

When a SD card is inserted into the controller it will be wiped and re-formatted to support the Linux EXT4 file format before shows are saved onto it. Ensure all files are removed from your SD card before inserting it into the controller.

Select Storage ⓘ

Note! Change storage which stores all cues, playlists, schedules and settings.



Interfaces

Export Playback Data

Export playback data moves:

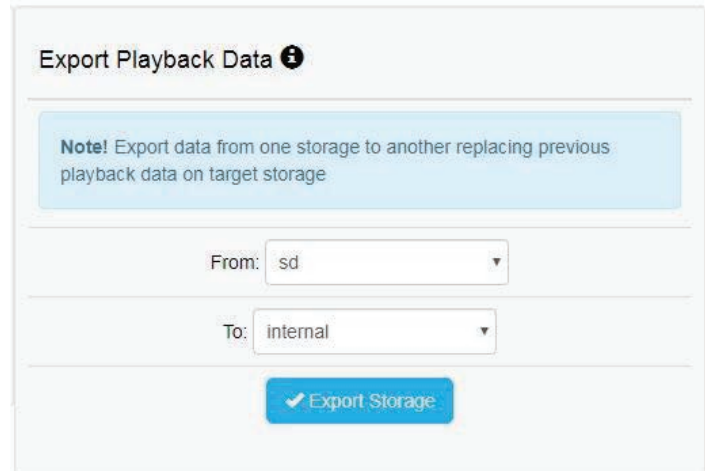
- Cues
- Playlists
- Schedules

From the internal memory to the external SD card inserted in the front slot of the controller or vice versa.

When moving files across make sure the desired storage is selected in “Select Storage” section on the web interface.

The files are copied from one location to another. Which means that they are not deleted from the original location.

The status of both memory devices can be tracked down in the STATUS page.



Locking the Unit User Management

The controller includes a locking system to prevent changing settings, deleting playlists, cues and schedulers from unauthorized users.

Lock Feature

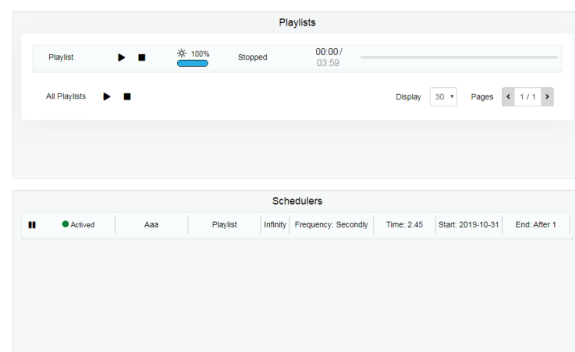
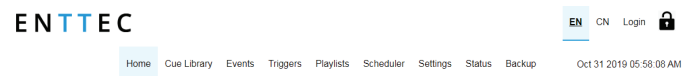
The controller is unlock by default, which means when connected to a network any computer within the network can change settings, create cues, create playlists, trigger playlists, etc. If the lock on the top right corner of the screen is open, the unit is unlocked and accessible within the network.

To lock the unit, simply click on the lock and the unit will automatically disable all the tabs but home.

When the controller is locked, the user can:

- Play and Stop any playlist
- Play and Stop all playlists
- Pause and Resume Schedulers
- Navigate the LCD to preview cues, activate playlists and display settings.

To enable functionality the user needs to log in



Interfaces

Locking the Unit User Management

When an user is logged in, the unit can remain locked for the rest of the users accessing from other locations/browsers within the network. However, the unit will force only one browser open at the same time when accessing HOME, CUE LIBRARY and/or PLAYLIST PAGE. This is to avoid having conflicting commands that can jeopardize the light installation.

To unlock the unit, just click on the LOCK icon on the top right corner.

| USERS | DEFAULT PASSWORD |
|-------|---|
| User | 123456 |
| Admin | enttec+6 last digits of MAC i.e. MAC: 00:50:C2:07:E6:78 Password: enttec07E678 |

Status

Network Information

- IP Address
- Subnet Mask
- Broadcast Address
- MAC Address
- Engine Address

Output Information

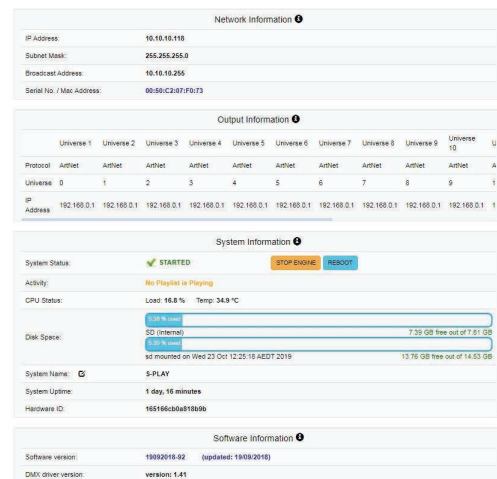
- Protocol
- Universe
- Output IP Address, if applicable

System Information

- Status
- Activity
- CPU Status
- Disk Space (internal/external)
- System Uptime
- Hardware ID

Software Information

- Software information
- DMX Driver Version



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Interfaces

Network Discovery

Built-In IP Address Discovery

- Ensure your controller is hooked up physically by an Ethernet cable and connected to a physical network or router.
- Power up the device
- Monitor the LCD menu. The LCD will show IP address when booting up and will display the IP address in the HOME page.
- Using a browser on a device within the same network range, type in that IP address in the URL window, and that will load the controller's web page. All configuration can be done using the web page.

Find Device IP Address from NMU

NMU (Node Management Utility), a free app (available for Windows and Mac), that find the controller and display its IP address.

Note: The controller is only supported by NMU v1.93 and above.

Please follow these steps:

- Download NMU from <https://www.enttec.com/product/controls/dmx-ethernet-lighting-control/nmu/>
- The controller should be connected physically by an ethernet cable to the same physical network (or router) as the computer on which you will run NMU
- Open NMU. If prompted with multiple network interfaces, select the correct one to which the controller is connected to
- 4. Press the Discovery button and wait until NMU finds all supported devices
- 5. Once found, select the controller and use the IP address to access the web interface

Note: When the controller is in static IP, the default gateway must be the same between the unit and the router for NMU to discover the controller.



Safety Information

1. The product shall be installed and serviced by a qualified person.
2. This product is a non-waterproof, indoor rated device. Please avoid the sun and rain.
3. Good heat dissipation will prolong the working life of the controller, please ensure good ventilation.
4. Please check if the output voltage of any power supplies used comply with the working voltage of the products.
5. Ensure all wire connections and polarities are correct and secure before applying power to avoid any damages to the LED lights.
6. If a fault occurs please return the product to your supplier. Do not attempt to fix this product by yourself.

Dimensions

