



# Dolby IMS3000 Cinema Server Configuration

For Optimizer Installation

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 *Unapproved*

# Table of content

Optimizer Configuration .....	3
Configure Room Settings.....	3
Device and Macro configuration.....	5
Add the HSG Labs device.....	5
Add the Cues .....	6
Configure all macros.....	10
Server Pause.....	11
Communication test.....	11
Acknowledge trigger .....	13
Trigger via playlist.....	15
Static trigger on SMS Server.....	16
Required DCP Content.....	16
Playlist Configuration .....	17
Recommendations.....	17
Frequency.....	18
Playlist creation.....	19
Playlist example: Check.....	20
Playlist example: Check with Dolby ATMOS processor.....	20
Playlist example: Focus.....	22
Playlist example: Lamp.....	23
Playlist Test .....	23

# Optimizer Configuration

Configure the Optimizer Settings by using the Configurations button from the Menu Bar.


Select Settings:

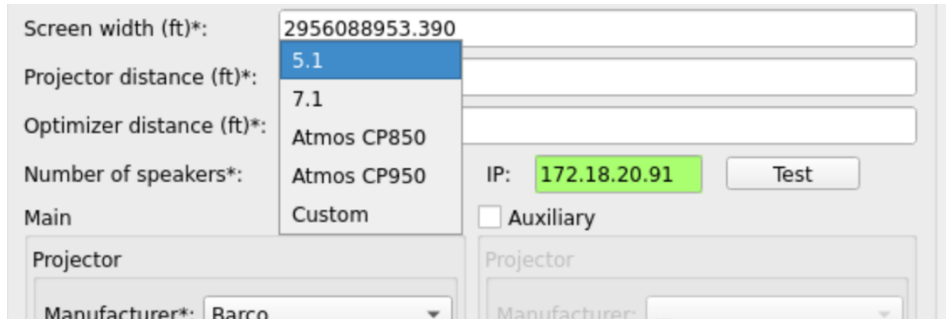
Site Specific Configurations:

- General
  - Optimizer Name
  - Units
- Room Configurations > Room Manager
- Tolerances > Site Specific Tolerances
- Calibration
  - SMTPE Seat Enabled - If Calibrated with Ultimate
  - Luminance Coefficient - If Calibrated with Spectro
  - Audio active reference active once recorded and saved
  - Microphone calibration file using mic serial number: [LINK](#)
- Network Settings
  - Static IP
    - Network Address
    - Subnet Mask
    - Gateway
    - DNS Server
  - NTP Server Optional
  - **Click Save and Reboot**
- Installation settings
  - Camera Orientation - Right Side Up/UpSide Down
  - Playlist version: Version 5 preferred
  - Projector Display Resolution: 2K or 4K
  - Screen Format: Flat or Scope
  - Manual Geometry Detection Geometry: Optional based on configuration
  - SNMP Trap: Configure server and IP

## Configure Room Settings

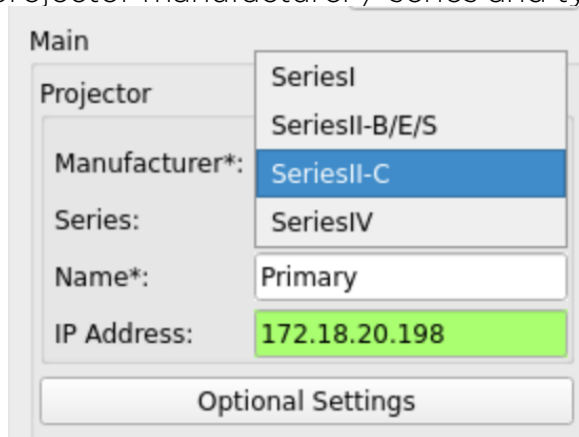
For a Dolby IMS3000, you will need to configure the room settings as follows:

1. Select the Configurations > Settings > Room manager.
2. Click the  icon to add a new room to the configuration.
3. Add required information
  - a. Type the detailed information for the theatre group, theatre name, and room name into the field.
  - b. Screen width and throw are required but not used.
4. Select the number of speakers in the auditorium.

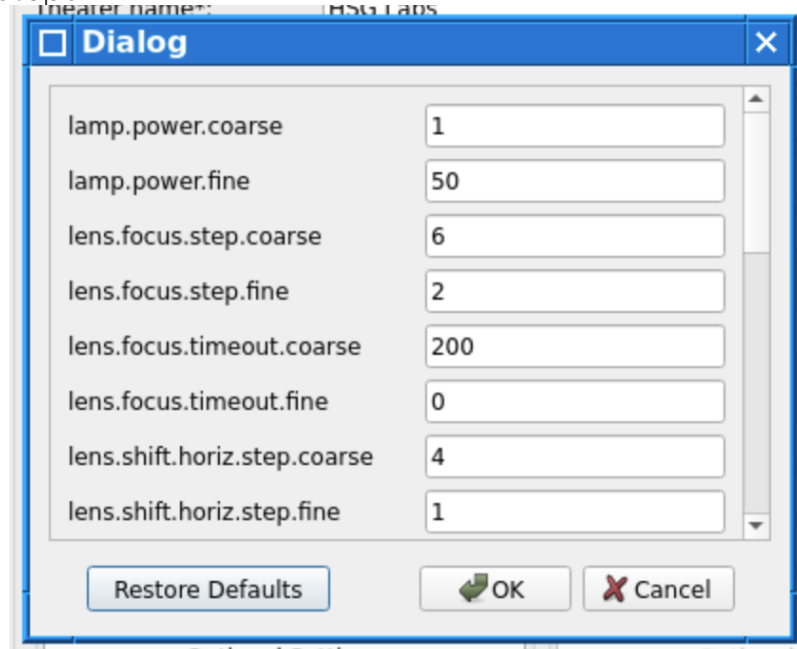


**Note:** To enable Atmos audio features, an Atmos license is required. Please speak to your salesperson. If Atmos is selected the IP address should be filled.

5. Select the correct projector manufacturer / series and type in the IP address.

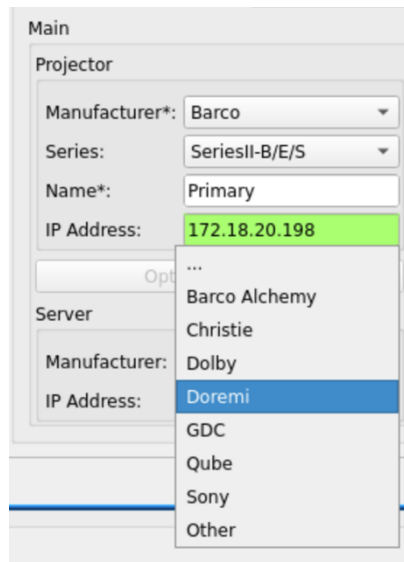


6. Optional Settings – Select to adjust the lens control speed and fine/coarse adjustment steps

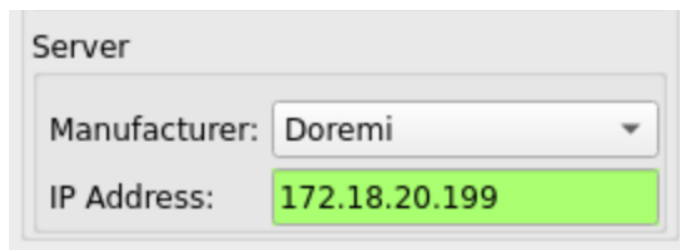


*Default Settings*

7. Select the *Doremi* server (the *Dolby* is for the Dolby DSS200)



8. Type the IP address of the server



- 9. Auxiliary Projector is not required
- 10. Select Save to save Room
- 11. Select Save to Save Configuration

## Device and Macro configuration

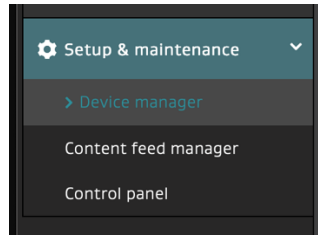
Connect via a browser to the web interface to the server.

**Note:** For support on this section, beyond the defined configuration, please contact Dolby support.

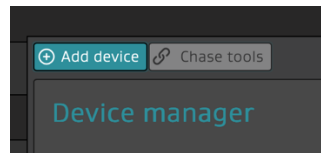
### Add the HSG Labs device

To allow the SMS Player to communicate to the HSG Labs device a new device type should be created.

- 1. From the **Setup & maintenance** menu select **Device Manager**



2. Press **Add device** button



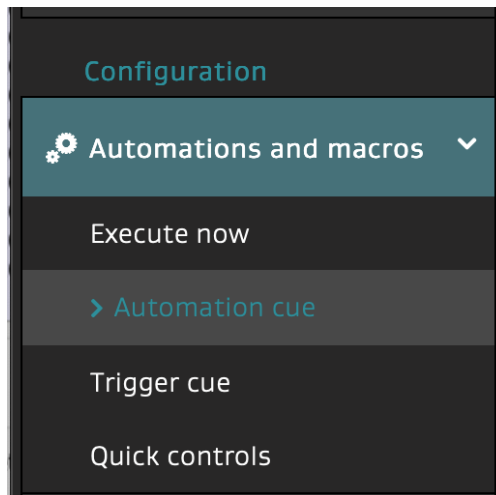
3. Configure the device as follow using the correct Device IP.

A screenshot of the 'Add device' configuration dialog box. The dialog has a dark background with teal text. It contains several fields: 'Type' (dropdown menu set to 'Raw'), 'Identifier' (text field with 'Qalif'), 'Enabled' (dropdown menu set to 'Yes'), 'Vendor' (text field with 'HSG Labs'), 'Product Name' (text field with 'Optimizer'), 'Device IP' (text field with '172.18.20.166'), 'Protocol' (dropdown menu set to 'TCP'), and 'Port' (text field with '32768'). At the bottom, there are 'Ok' and 'Cancel' buttons.

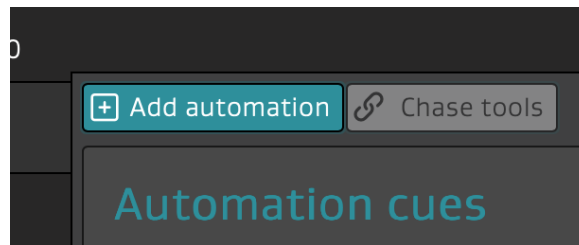
## Add the Cues

Cues are messages sent to the device from the SMS Player that allows to send action commands. In the following example is how a typical cue is configured.

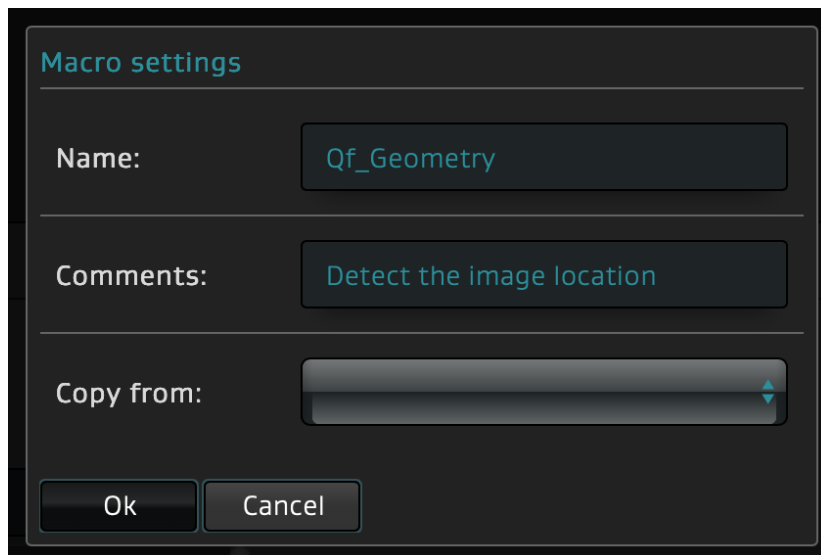
1. From the **Automations and macros** menu select **Automation cue**



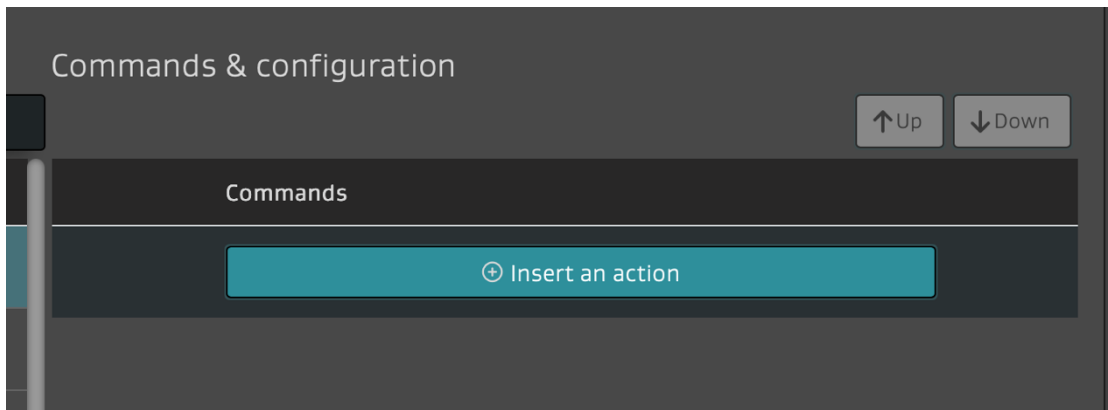
2. Press **Add automation** button



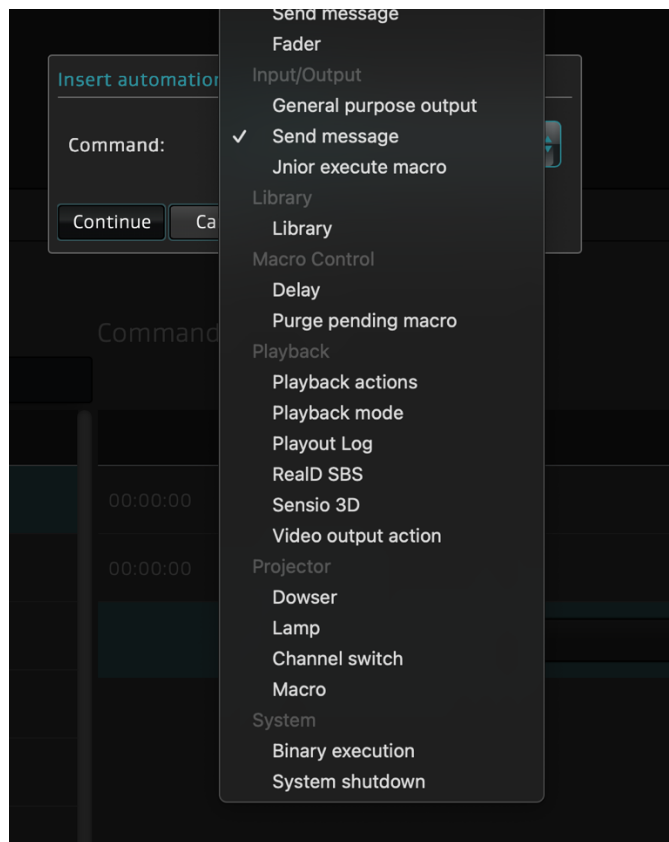
3. In this example give the name **geometry** to the macro and press ok.



4. With geometry macro selected on the left side of the window press on **Insert an action** button in the command list on the right.



5. Select **Send message** in the command type dropdown list



6. Fill the data as per the following:

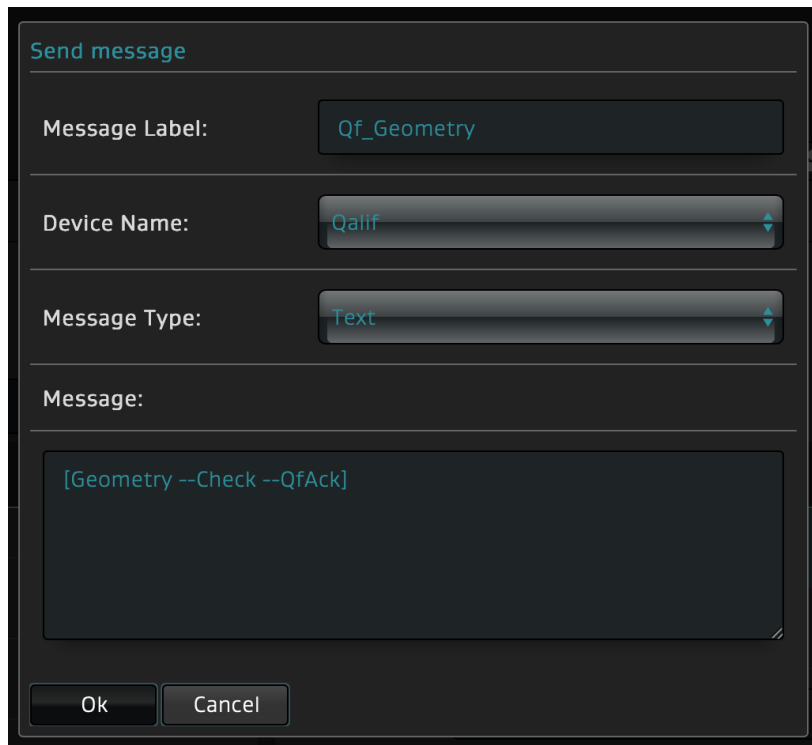
Message Label: **Qf\_Geometry**

Device Name: select the **Qalif** device previously created

Message Type: select **Text**

Message: [**Geometry --Check --QfAck**]

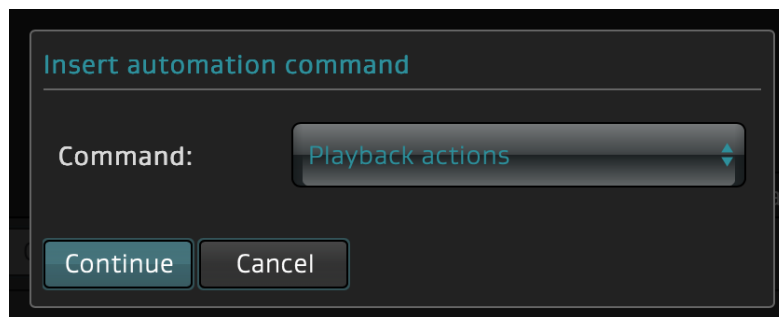
**Note:** In the command above, the '**Qf\_Geometry**' text defines the feature, the '**--Check**' defines the command for that feature, and the '**--QfAck**' defines the response required from the Optimizer to the SMS for resume playback (see add the trigger section of this document).



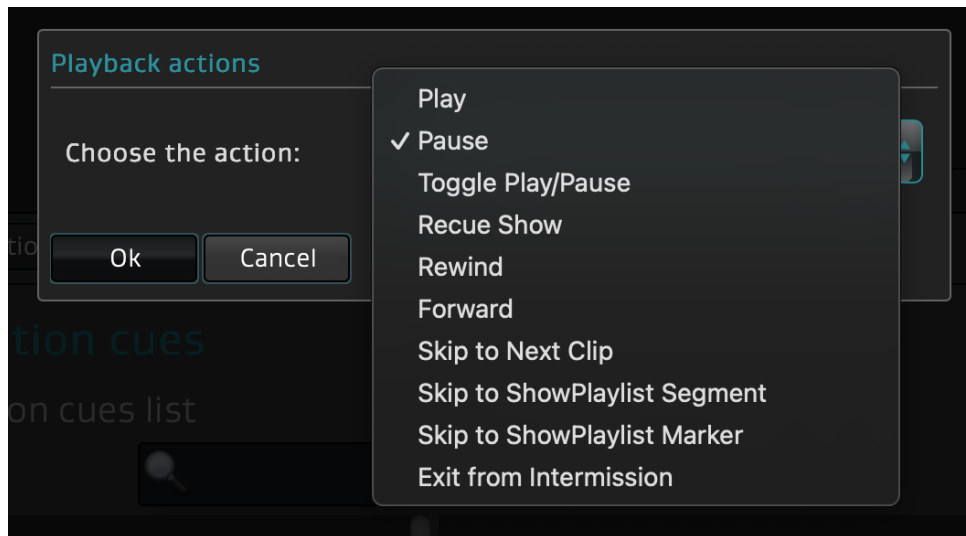
Confirm by pressing Ok button

7. Add another action below the geometry via the **Insert an action** button

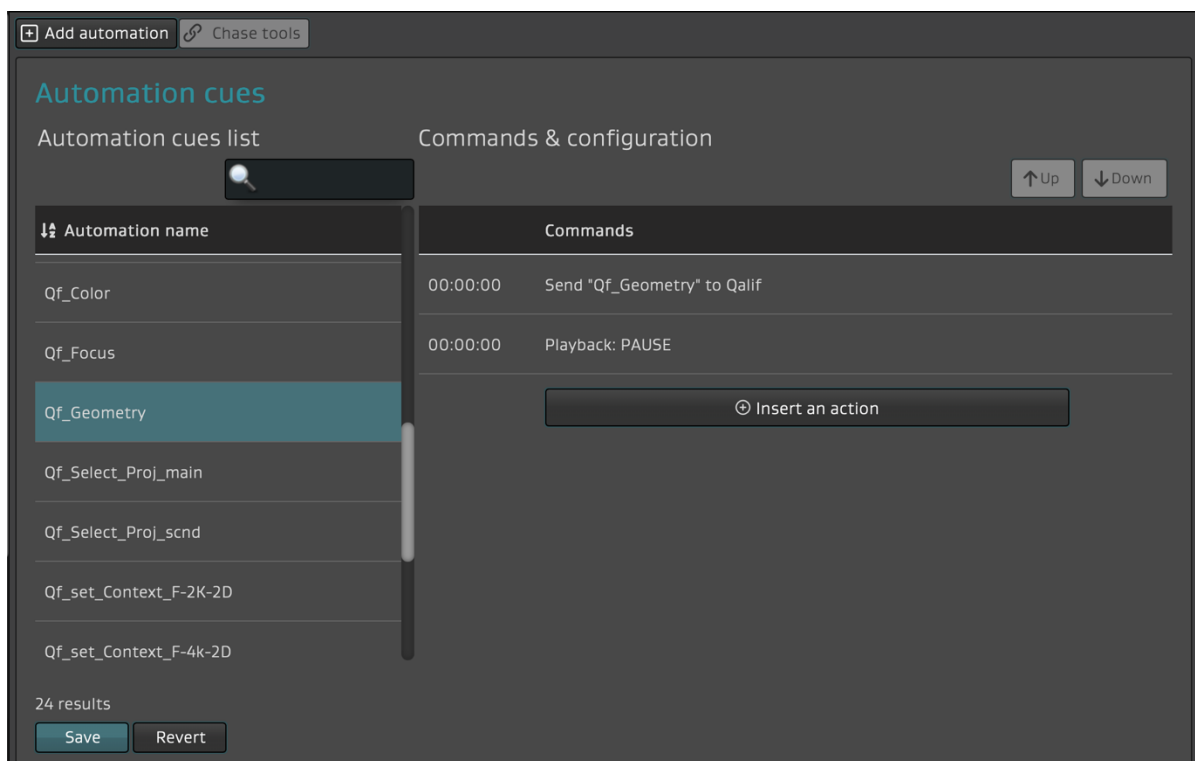
8. Select Command type **Playback actions**



9. Chose **Pause** action from the dropdown list



10. Once completed save by clicking on the Save button located at the bottom left.



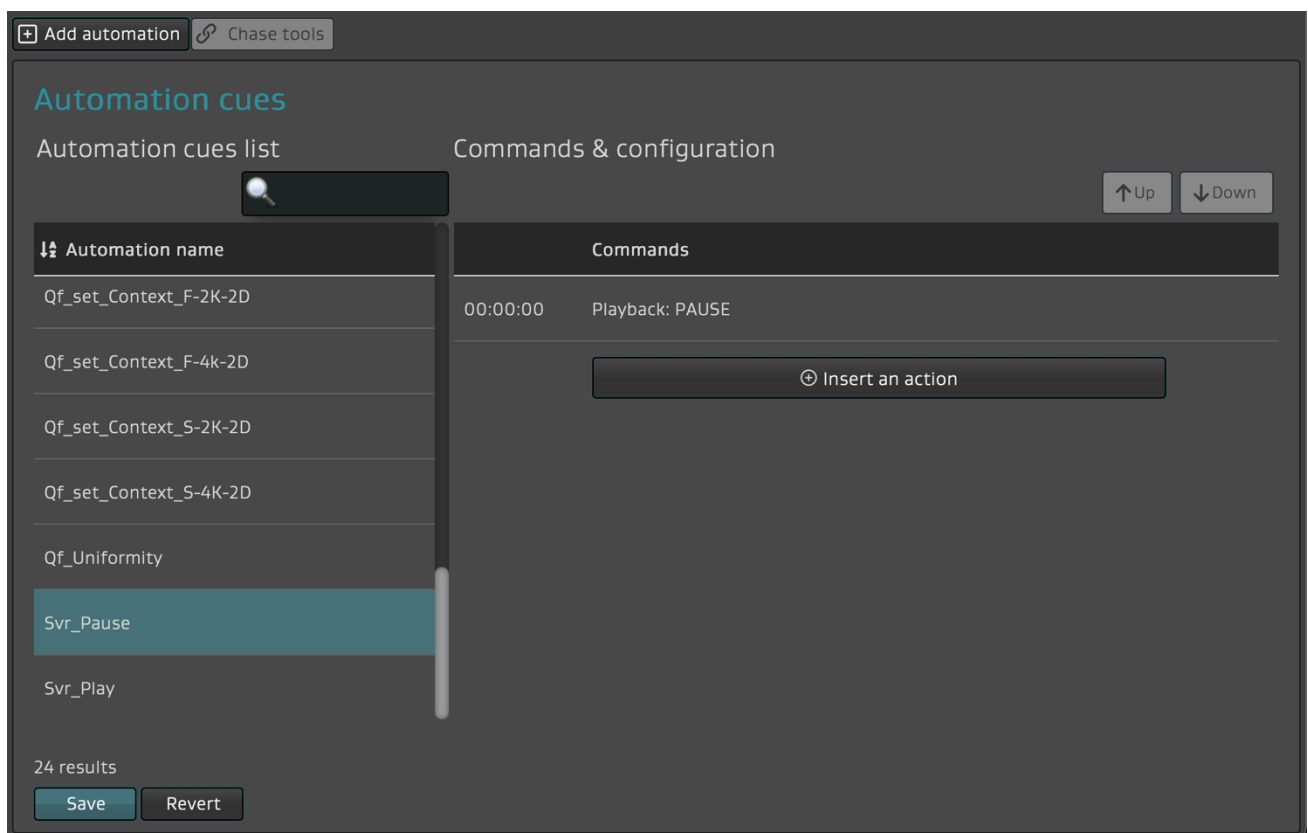
## Configure all macros

Repeat those operations for all the required macros:

Macro Name	HSG Labs API string	Notes
qf_geometry	[Geometry --Check --QfAck]	
qf_uniformity	[Uniformity --Start --QfAck]	
qf_context-Flat-4K-2D	[OperatingContext --Type Flat --Resolution 4K --Mode 2D]	No pause needed in the macro
qf_context-Scope-4K-2D	[OperatingContext --Type Scope --Resolution 4K --Mode 2D]	No pause needed in the macro
qf_focus	[Focus --Start --QfAck]	
qf_audio	[Audio --Start --QfAck]	The pause is needed on a black after the audio pattern
qf_audio (ATMOS)	[Audio --Start --QfAck]	The pause is require just after the audio macro send
qf_lamp-2D	[Lamp --Start --Mode 2D --QfAck]	
qf_lamp-3D	[Lamp --Start --Mode 3D --QfAck]	

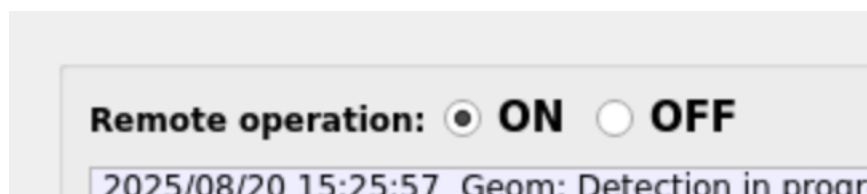
## Server Pause

The server pause cue is required as a player command to be used with the Audio Recording macro for processing the audio compare function after the audio 5.1ch or 7.1ch command is recorded. This is attached to a following 5 second black clip.

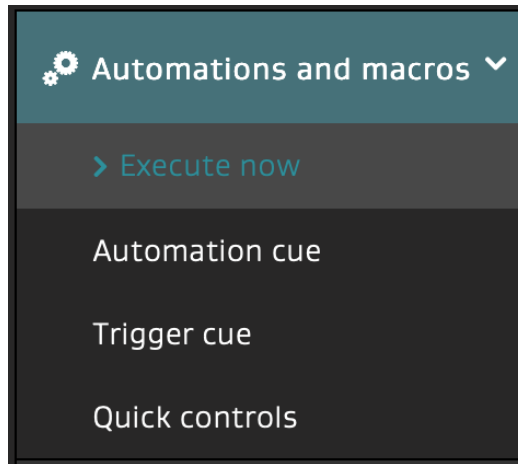


## Communication test

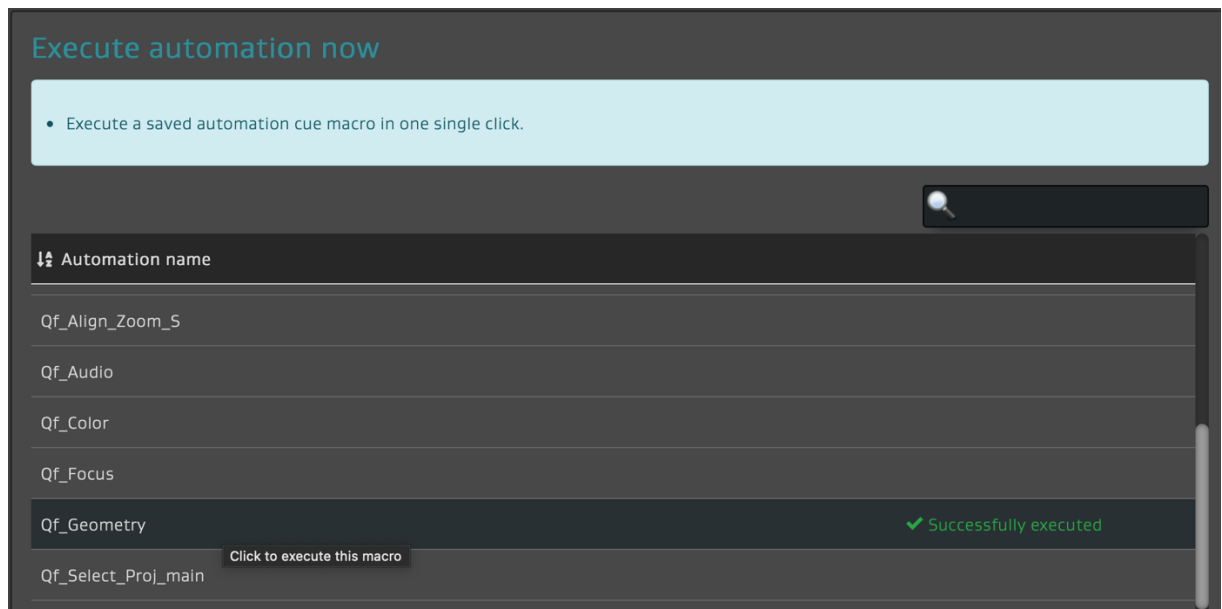
To test the communication, ensure the Optimizer has the remote mode enabled:



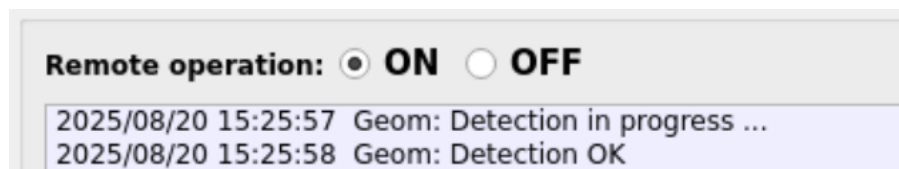
1. On the SMS Player from the Automation and macros menu select Execute now



2. Select the **geometry** macro and the SMS Player will execute the macro and send the information to the server.



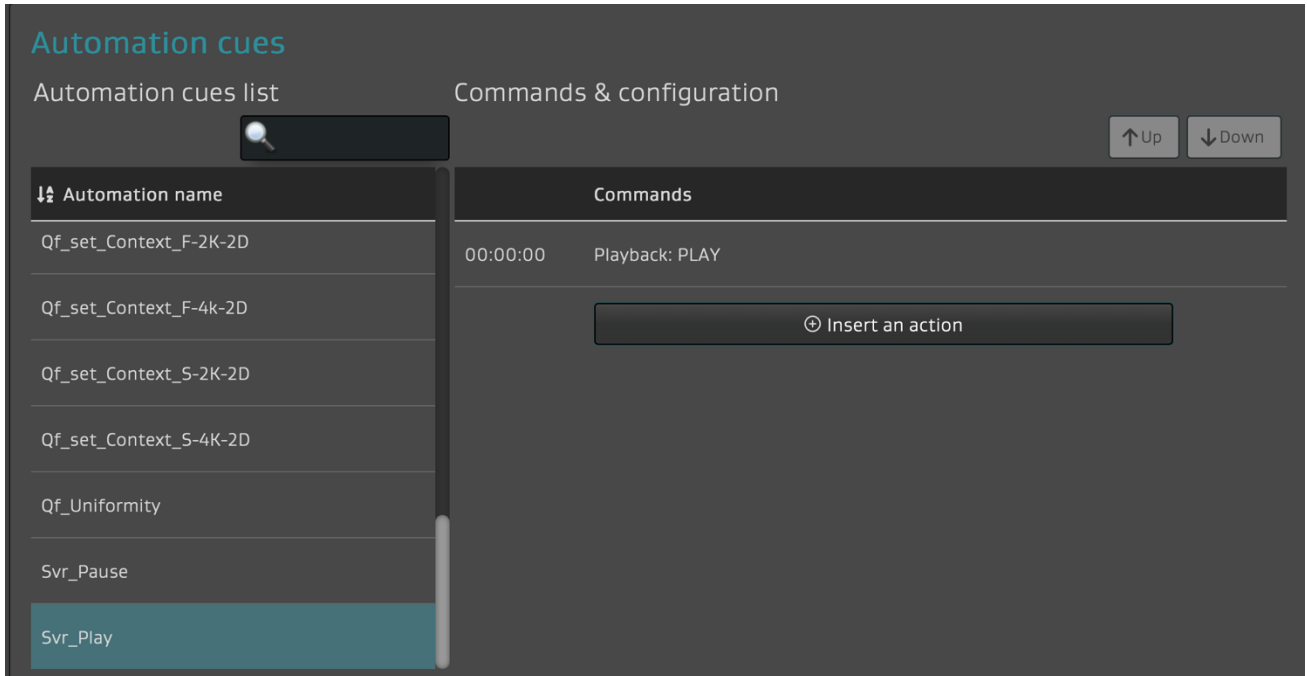
**Note:** Even if the server says Executed with errors check the optimizer interface that should show the take geometry request.



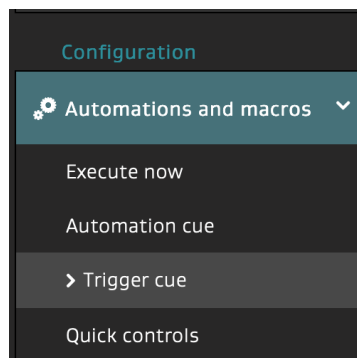
**Note:** Even if the Geometry is not detected correctly the important part here is that the message is received from the Optimizer.

## Acknowledge trigger

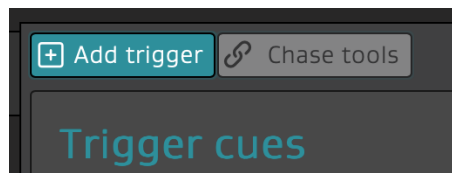
To be able to resume the playback once the HSG Labs device has performed the operation is required to wait the Acknowledge signal from the device and resume the playback. To perform this operation is required to have a resume playback cue.



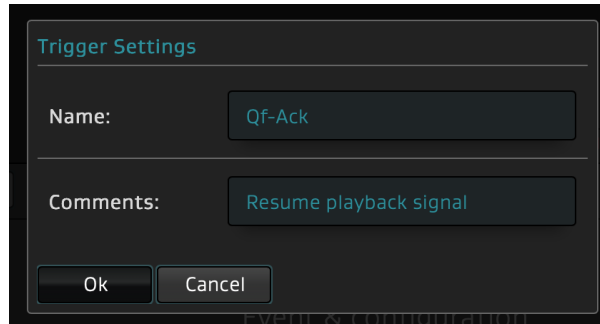
1. From the menu Automations and macros select Trigger cue



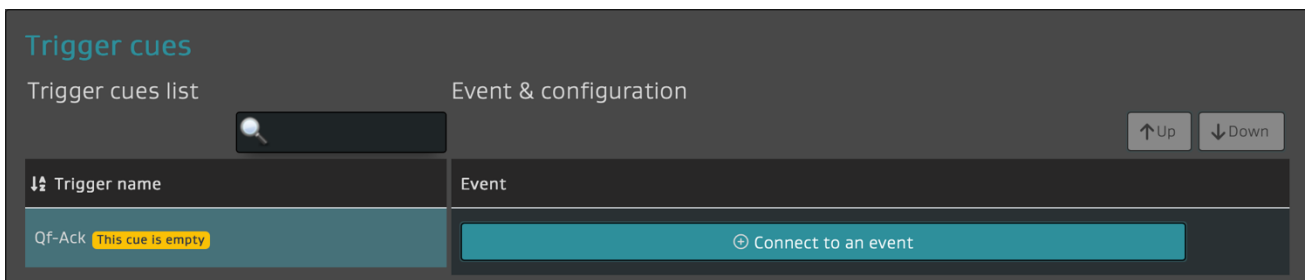
2. Press Add trigger button



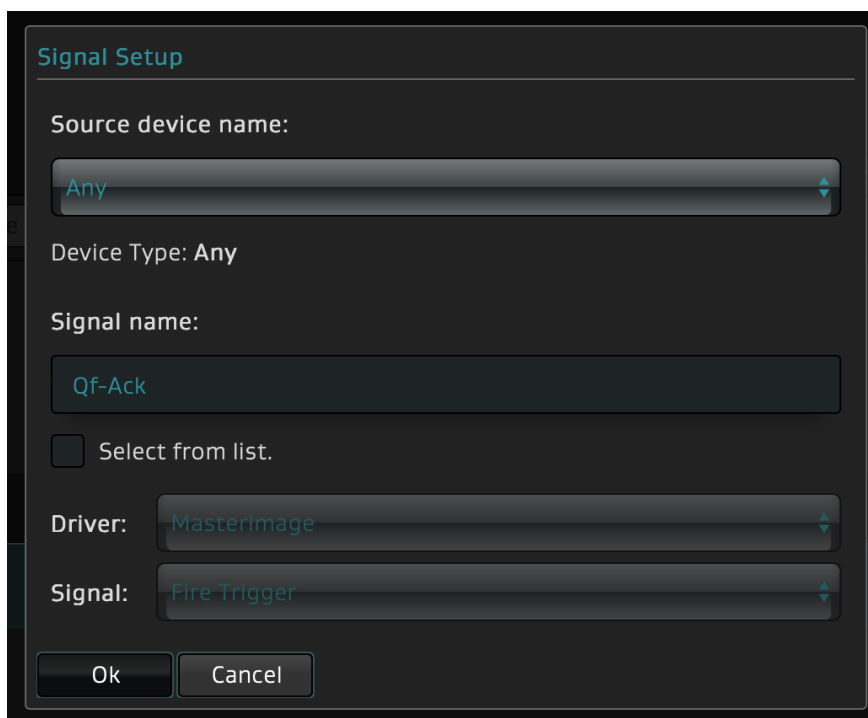
3. Fill as per below and press OK button



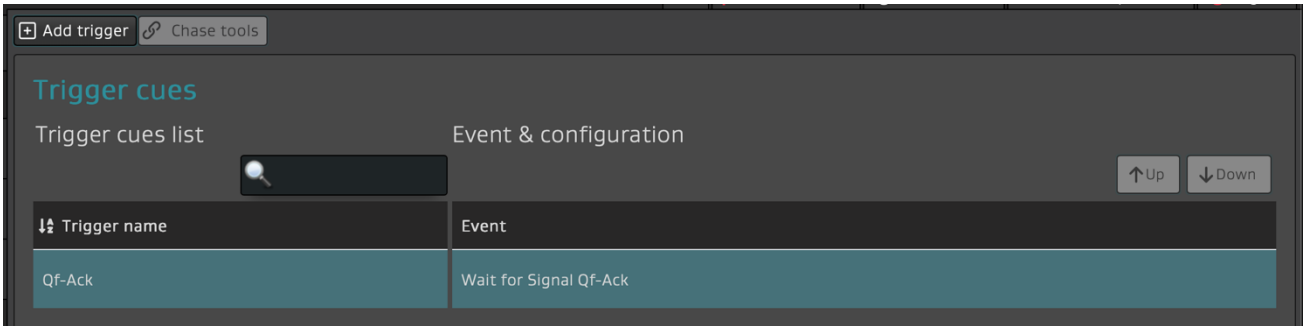
4. Press **Connect to an event** button



5. Fill as per below



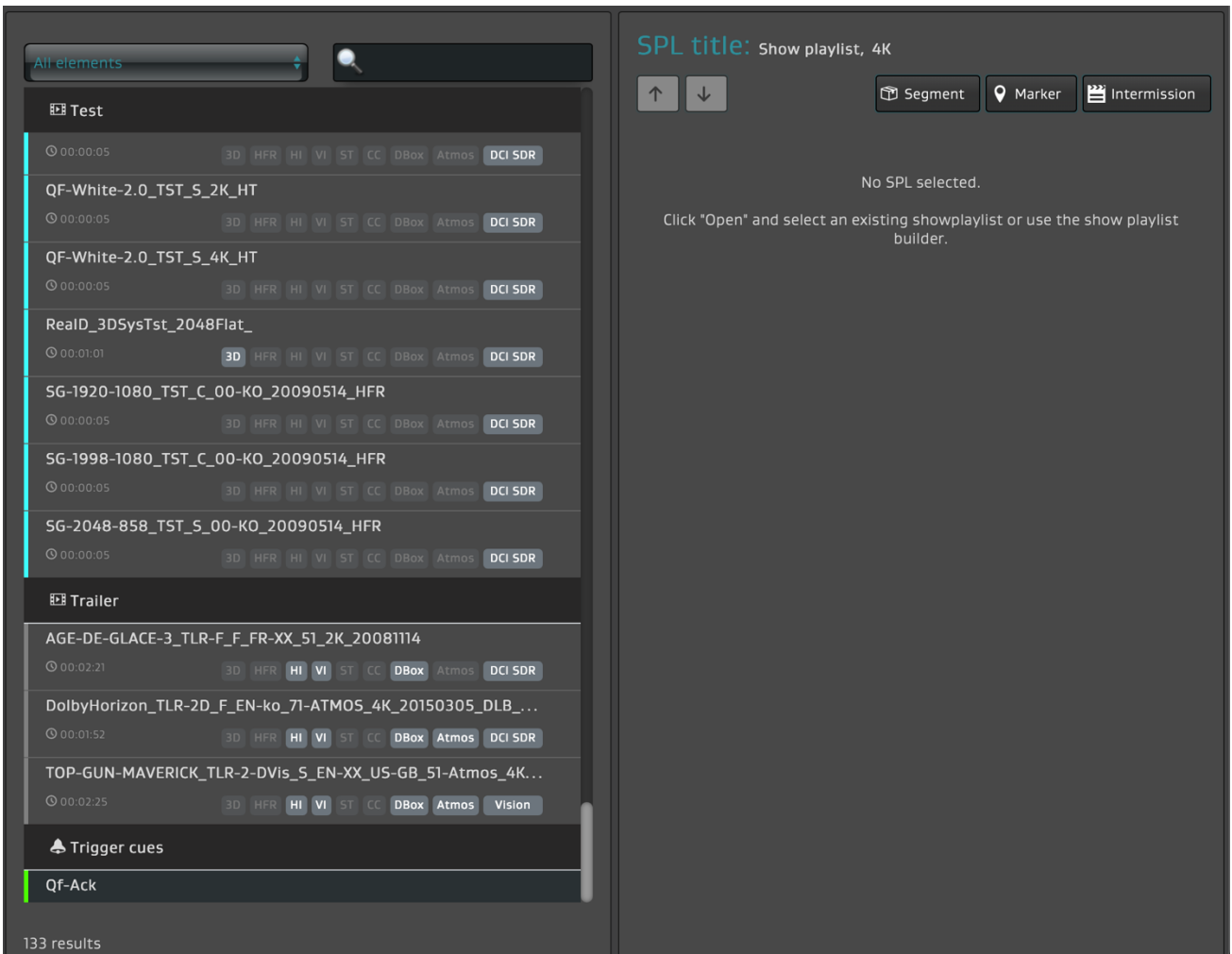
6. Save by pressing the save button on bottom right.

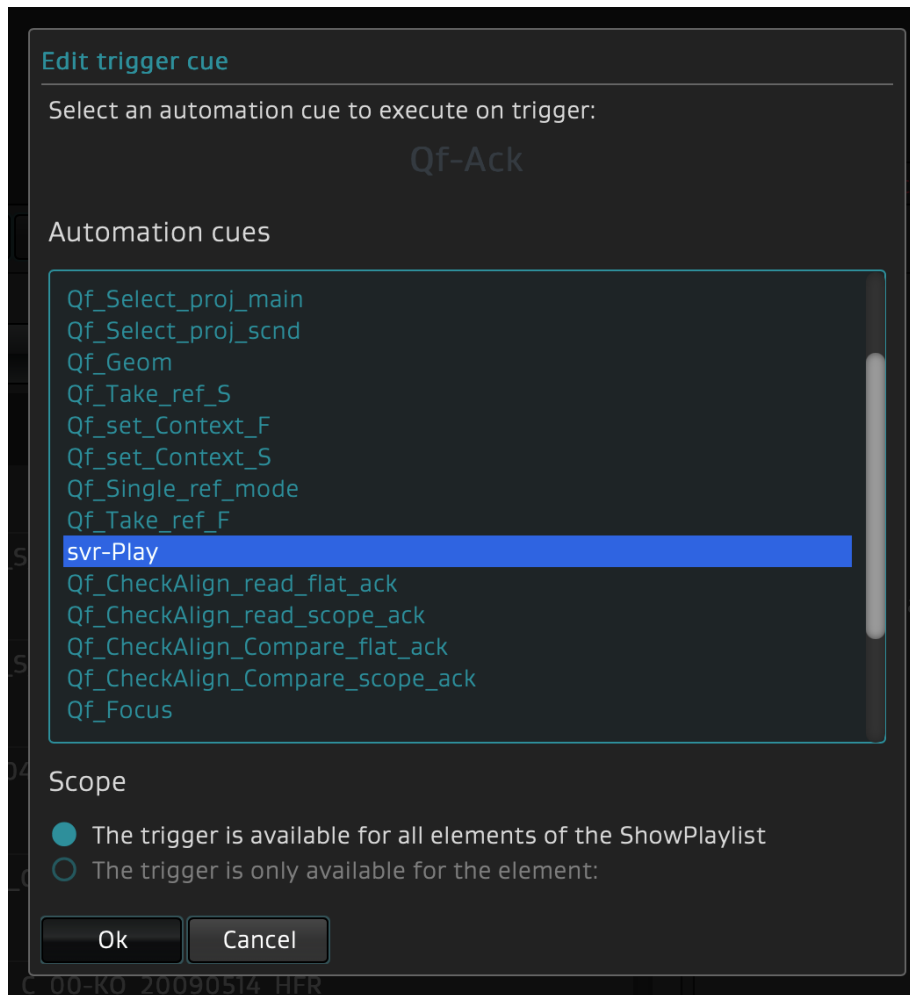


Then there are 2 ways to connect the trigger to the cue. During playlist creation select in the specific playlist or as a server configuration.

## Trigger via playlist

When building the check or calibration playlist is mandatory to add the Qf\_Ack





## Static trigger on SMS Server

The default\_cues.xml file can be used to load an automation and trigger cues playlist prior to any playback. This is to avoid having to add a Qf-Ack trigger cue to each show. If the user is provided a default\_cues.xml file, copy it into the /doremi/etc/ folder.

**Note:** For support on this section, beyond the defined configuration, please contact Dolby support.

## Required DCP Content

The required content needed for the Optimizer operation is listed below:

Macro Name	Pattern name
qf_geometry	QF-GeomQO-5.0_TST_X_XX_HT
qf_uniformity	QF-White-2.0_TST_X_XX_HT
qf_context-Flat-4K-2D	Server black pattern
qf_context-Scope-4K-2D	Server black pattern
qf_focus	QF-Checkerboard-2.0_TST_X_XX_HT

qf_audio	HSG-Audio_TST-1_C_71_2K
qf_audio (ATMOS)	Server black pattern
qf_lamp-2D	QF-White-2.0_TST_X_XX_HT
qf_lamp-3D	QF-White-2.0_TST_X_XX_HT
qf_export	Server black pattern

The content is available for download via an FTP client like Filezilla using the following credentials:

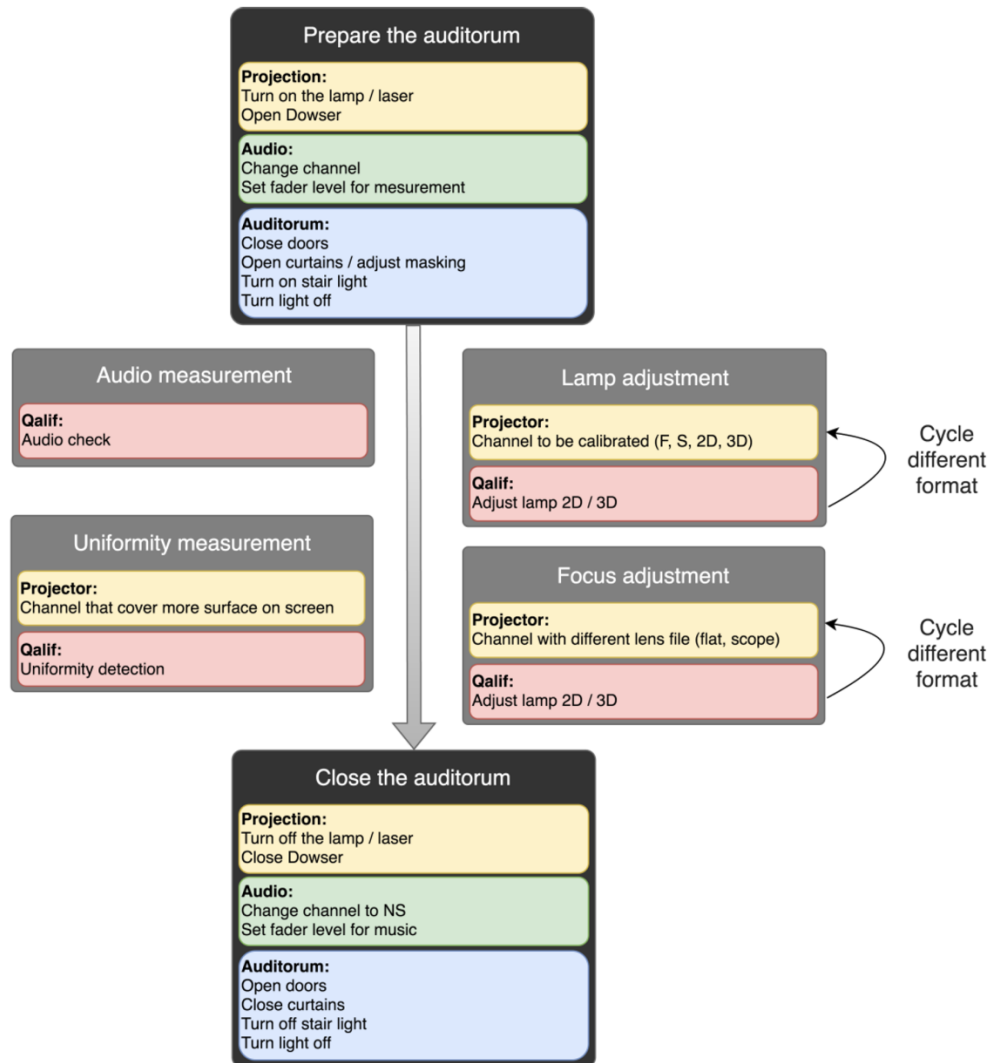
Address: ftp.active.ht  
 Port: 2121  
 User: capartner  
 Password: partner  
 Remote folder: /public/

## Playlist Configuration

The operation of the Optimizer when controlled remotely is done via a SMS player activating specific macros during specific content to trigger an event. These events tell the Optimizer which pattern is displayed and what featured to measure. The instructions below define one option for a playlist to operate the Optimizer. Many playlists can be created with different operational functions and frequency of use requirements.

## Recommendations

- Determine the frequency of each operation; daily, weekly, monthly.
- Determine the best time to schedule the play list to run, before of after last show.
- Before each calibration session the room should be setup in Movie mode:
  - Lighting / Stair light / Doors
  - Projector Lamp on & Warm-up
  - Projector Channel macro (Flat or Scope)
  - Audio Channel & Volume



- Before every calibration sequence and projector format macro change remember to set the operating context and to detect the geometry correctly.
- The Geometry must be checked at the first operation and before each format change to be able to correctly identify where the images are located with reference to the device camera.
- Is preferable to Set up Luminance prior to measuring the uniformity luminance of the screen. Luminance adjustment suggested only on Xenon projectors for colorimetry reasons.
- For audio:
  - The reference should be recorded at device installation and after each audio system calibration.
  - The volume level during the check should be set to the same level as the reference was recorded (i.e.: 7.0).

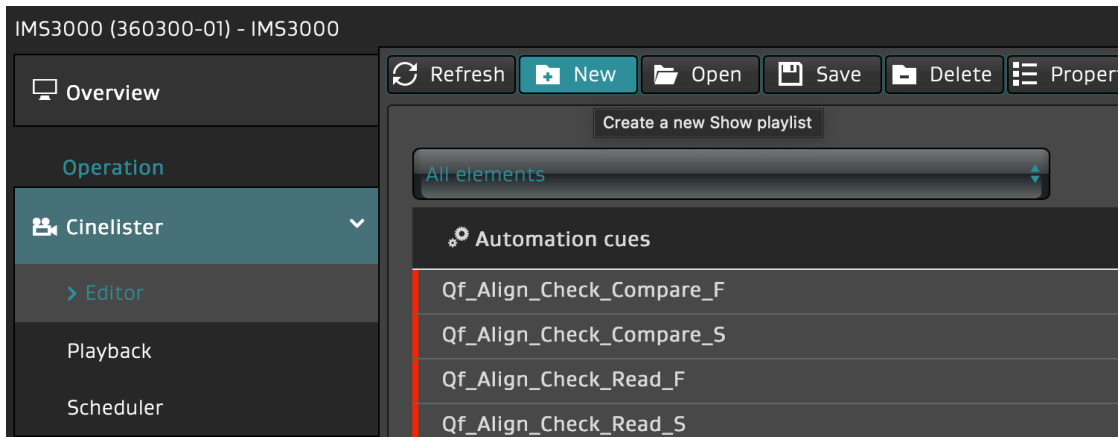
## Frequency

Operation	Suggested Frequency
Set operating Context	<b>Before every calibration sequence / format change</b>

Geometry detection	<b>Before every calibration sequence</b> / format change
Uniformity measurement	<b>Daily</b> after the last show in the format that cover more surface on the screen
Light adjustment	<b>Daily</b> after the last show for used scope and flat channel
Focus adjustment	<b>Weekly</b> after the last show for every lens file used on projector
Audio measurement	<b>Daily</b> after the last show when the speaker are warmed up

## Playlist creation

1. Login to the Dolby IMS3000 via the HTTP interface and open the playlist editor: Cinelister > Editor from the left menu



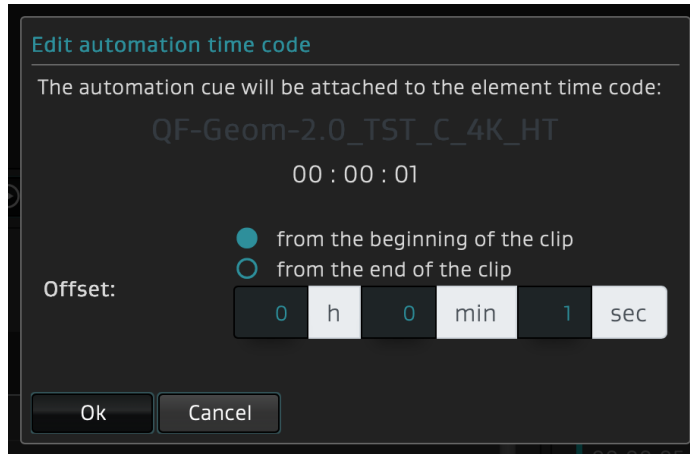
2. Drop the following listed content from the left panel to the right one.

- ✓ [Room preparation actions]
- ✓ Black (10 seconds)
- ✓ QF-GeomQO-5.0\_TST\_X\_XX\_HT
- ✓ QF-White-2.0\_TST\_X\_XX\_HT
- ✓ Black (5 seconds)
- ✓ *HSG-Audio\_TST-1\_C\_71\_2K or black (Dolby Atmos enabled)*
- ✓ Black (5 seconds)
- ✓ [Room close actions]

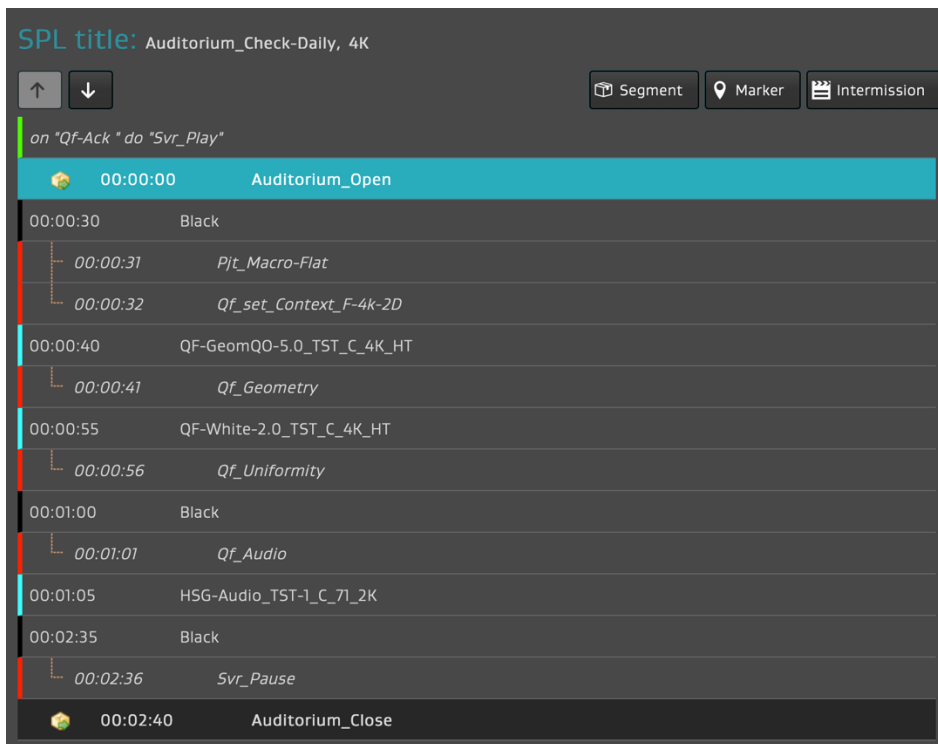
**Note:** Ensure to use the correct pattern format according to the projector format.

- C for Flat and HD formats
- S for Scope

3. Add in the cues to each content. Each time a cue is added to the content we suggest that is setup with at least 1 second from the beginning of the clip and each cue on the same pattern should be separated by at least 1 second offset.



## Playlist example: Check



## Playlist example: Check with Dolby ATMOS processor

For Dolby Atmos processor configuration the Optimizer will communicate directly with the CP850 or CP950 to activate the pink noise generator. This will allow the Optimizer to control the sequence and record the audio as expected. The audio pattern is not required for this operation but the pause command is required after the audio macro. In some integration is suggested to create a specific ATMOS cues on the SMS Server that already contain the pause command.

SPL title: Auditorium\_Check-Daily, 4K

↑ ↓ Segment Marker Intermision

on "QF-Ack " do "Svr\_Play"

00:00:00	Auditorium_Open
00:00:30	Black
00:00:31	Pjt_Macro-Flat
00:00:32	Qf_set_Context_F-4k-2D
00:00:40	QF-GeomQO-5.0_TST_C_4K_HT
00:00:41	Qf_Geometry
00:00:55	QF-White-2.0_TST_C_4K_HT
00:00:56	Qf_Uniformity
00:01:00	Black
00:01:01	Qf_Audio
00:01:03	Svr_Pause
00:01:05	Auditorium_Close

Or configure a specific Atmos cues

Automation cues

Automation cues list Commands & configuration

↑ Up ↓ Down

Automation name	Commands
Qf_Audio-Atmos	00:00:00 Send "Qf_Audio" to Qaif
Qf_Color	00:00:00 Playback: PAUSE
Qf_Focus	

⊙ Insert an action

SPL title: Auditorium\_Check-Daily, 4K

↑ ↓ Segment Marker Intermision

on "QF-Ack " do "Svr\_Play"

00:00:00	Auditorium_Open
00:00:30	Black
00:00:31	Pjt_Macro-Flat
00:00:32	Qf_set_Context_F-4k-2D
00:00:40	QF-GeomQO-5.0_TST_C_4K_HT
00:00:41	Qf_Geometry
00:00:55	QF-White-2.0_TST_C_4K_HT
00:00:56	Qf_Uniformity
00:01:00	Black
00:01:01	Qf_Audio-Atmos
00:01:05	Auditorium_Close

# Playlist example: Focus

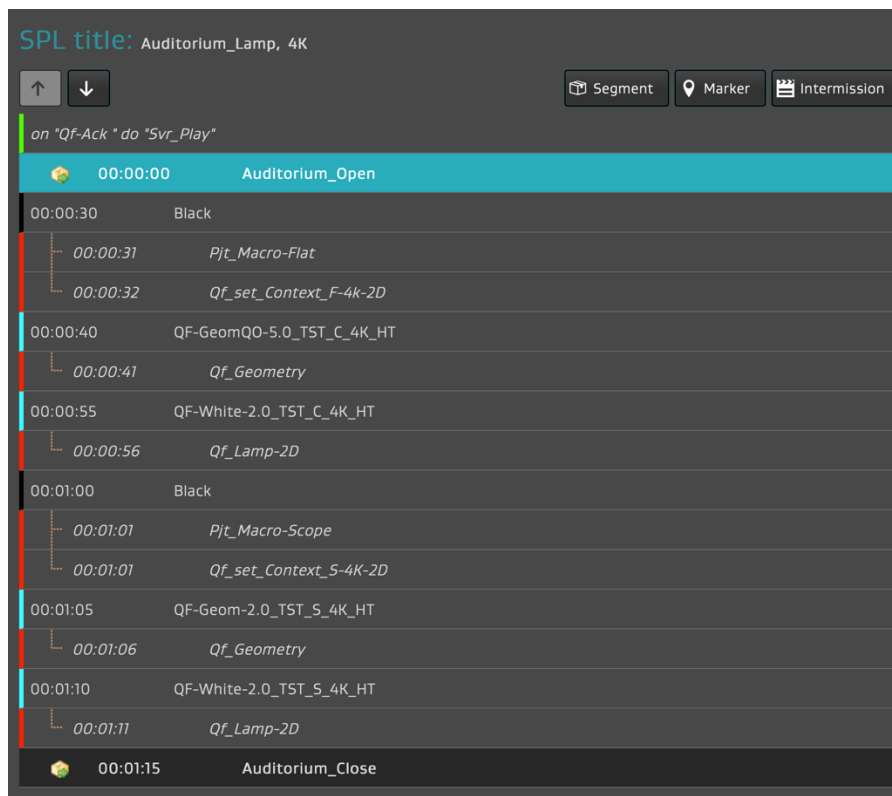
SPL title: Auditorium\_Focus, 4K

↑ ↓ Segment Marker Intermission

on "Qf-Ack " do "Svr\_Play"

00:00:00	Auditorium_Open
00:00:30	Black
00:00:31	Pjt_Macro-Flat
00:00:32	Qf_set_Context_F-4k-2D
00:00:40	QF-GeomQO-5.0_TST_C_4K_HT
00:00:41	Qf_Geometry
00:00:55	QF-Checkerboard-2.0_TST_C_4K_HT
00:00:56	Qf_Focus
00:01:00	Black
00:01:01	Pjt_Macro-Scope
00:01:01	Qf_set_Context_S-4K-2D
00:01:05	QF-Geom-2.0_TST_S_4K_HT
00:01:06	Qf_Geometry
00:01:10	QF-Checkerboard-2.0_TST_S_4K_HT
00:01:11	Qf_Focus
00:01:15	Auditorium_Close

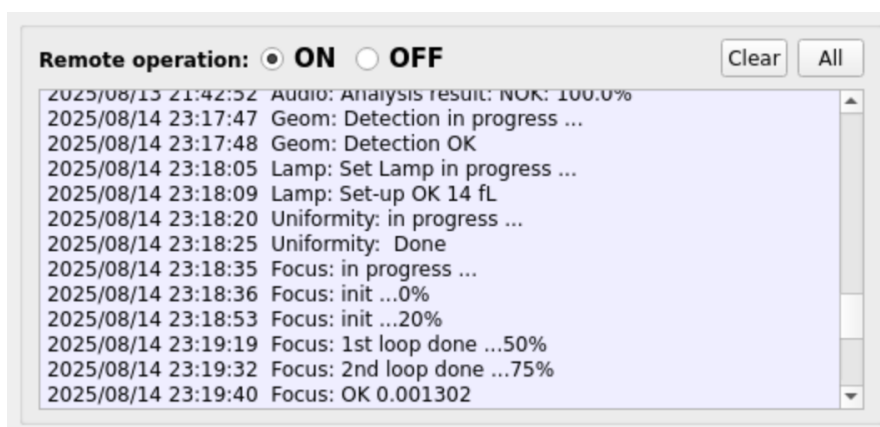
## Playlist example: Lamp



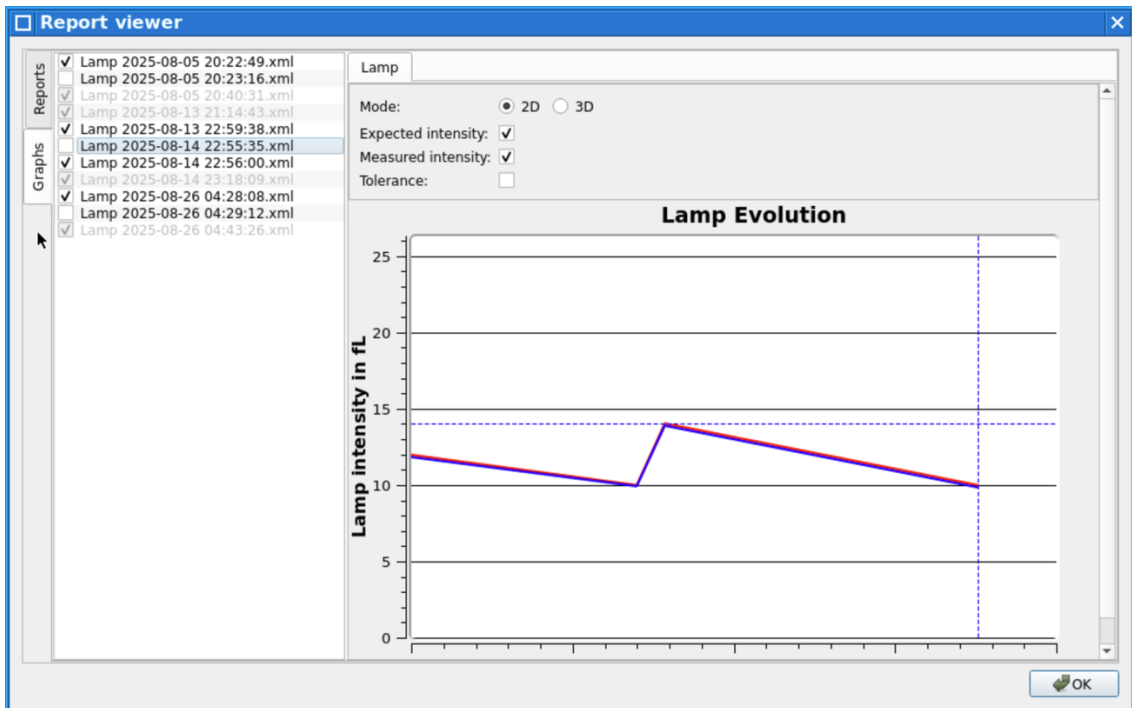
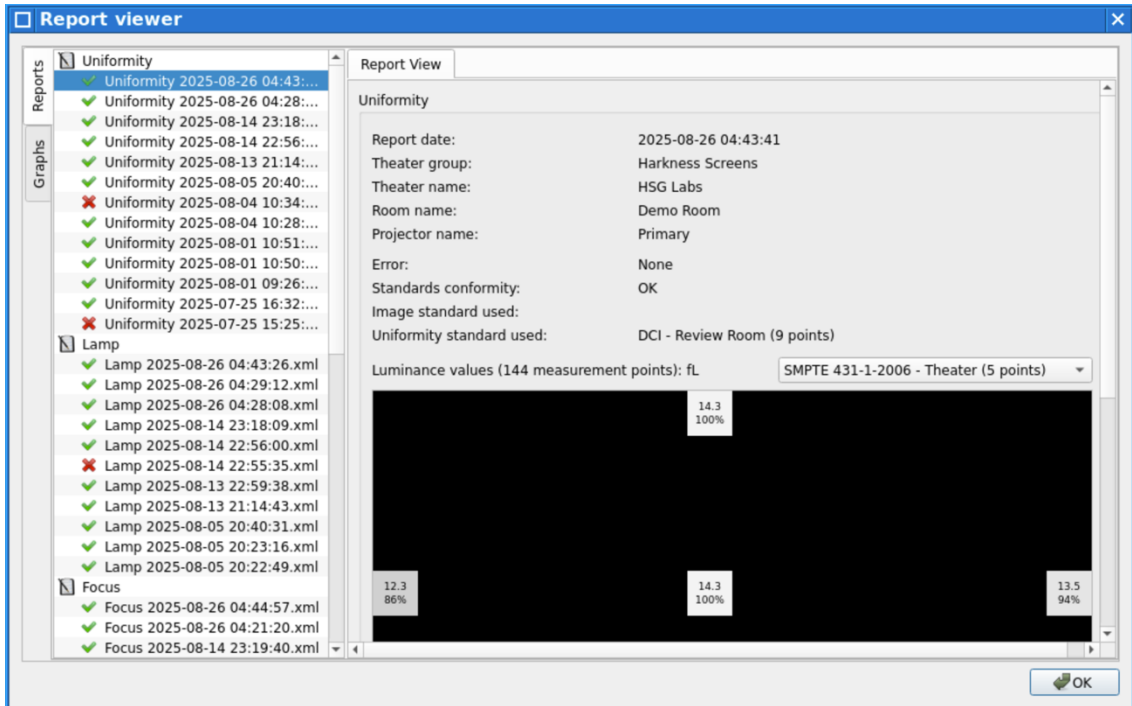
## Playlist Test

Once the playlist is saved it can be tested. Ensure Optimizer is configured in remote operation and run the playlist.

The Display log on the Optimizer show the remote operation log and details as showed in the example here below.



History data can be checked via the History menu on the optimizer or via NOC monitoring software if configured.



-- End of Document--