

Screen Management System Controller

User's Guide
Software Version 2.51

NOTICE TO USERS

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For projector specific information, refer to projector manuals.

SRX Controller

The **SRX Controller application** exercises direct control over the projector via the projector's serial control port. Operations using the SRX Controller can be in conflict with operations using the Projectionist Terminal or the SMS Controller. The SRX Controller application should not be used at the same time the Projectionist Terminal or SMS Controller is in operation. Once changes using the SRX Controller are completed, refresh the SMS Server stored Projector data.

SMS Controller Screen Resolution

The Sony Screen Management System application is designed to run full-screen in a 1024 × 768 resolution environment. While the SMS Controller window can be minimized, it cannot be resized.

Network Data Storage

When the Network Data Storage system for the facility uses Microsoft Windows as the operating system, SAMBA may be used for connectivity between the SMS Server and the network storage computer. SAMBA is a suite of applications that provides seamless file sharing services to SMB/CIFS clients, i.e., to Microsoft Windows.

If connectivity to the Network Data Storage is lost the following steps should be taken.

- Verify the Network Data Storage system is working.
- Remove and re-create the Network Storage locations. See Settings/Folders for more information.

If you are unable to establish connectivity with the Network Data Storage system, execute a system Power OFF/ON.

Windows Settings for the SMS Controller PC

Use the default "Smaller" setting for the "Make text and other items larger or smaller" setting in the Windows control panel. If you change this setting, you will not be able to press buttons, such as the "Logout" button, as they will not fit in the screen.

Set Internet Explorer to online.

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Introduction

While digital technology has already taken over much of the home entertainment market, the vast majority of **theatrical motion pictures** are shot and/or distributed on **celluloid film**. Digital cinema presents a new and different solution to bringing motion picture entertainment to the public. A key feature of Sony's SRX based Digital Cinema is the support of Stereoscopic (3D) presentations from the same Auditorium Unit as 2D presentations with only a lens change required. The Sony Screen Management System supports 3D presentations using a lens or lenses appropriate to the Auditorium Unit.

The main advantage of digital technology is that it can store, transmit, retrieve and present a huge amount of information exactly as it was originally intended.

Digital cinema affects three major areas of movie-making:

- **Production** - how the movie is actually made
- **Distribution** - how the movie gets from the production company to the movie theater
- **Projection** - how the exhibitor presents the movie

For presentation, the most important aspect of digital cinema is the projection system. This is the final piece of technology that controls how the movie actually looks to the theatergoer. Sony has, for many years, been a leader in the areas of motion picture production using digital technology. Now Sony is leading the way in motion picture theater presentation with the CineAlta 4K Digital Cinema system, which combines an SRX Projector and Media Block (Digital Cinema Server) with the Screen Management System (SMS) and other components.

SMS Controller

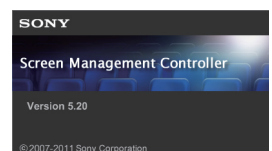
The theater complex over the past few years has evolved into a large-scale facility comprised of multiple screen/auditorium combinations, often with different requirements for projection content and differing seating arrangements and capacity. In addition, the technical and presentation capabilities in each auditorium can vary widely. This results in a presentation management challenge that requires significant attention by the exhibitor. The Sony Screen Management System (SMS) Controller application, while not acting as a theater management system, provides a consolidated control point where designated personnel can oversee the operation of individual Screen Management System (SMS) Auditorium Units in multi-screen facilities.

Start SMS Controller Application

To open the SMS Controller application, click the **SMS** icon (shown to the right) on the PC's Windows desktop.



The SMS Controller splash screen appears and then the login screen opens. From the SMS Controller, authorized personnel can access and operate Sony Digital

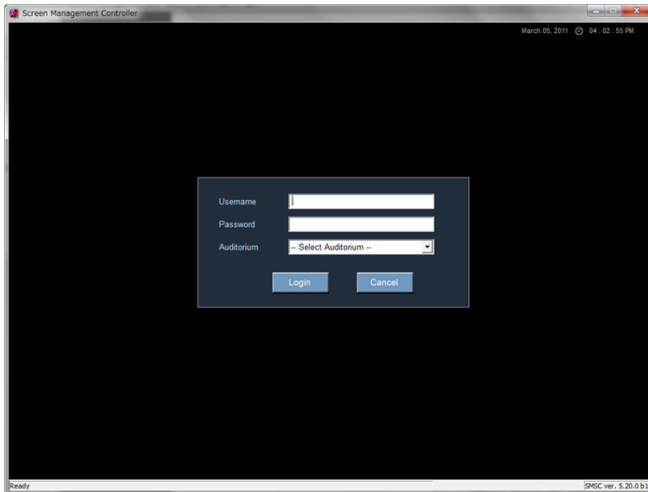


Projection Systems located in the facility and registered in the SMS Controller (SMSC) application. Features available in the SMSC application allow monitoring of the current show, the show schedule (current and future), material status, and system status for the designated auditorium. In addition, personnel can oversee ingesting and storage of material, Key Delivery Message (KDM) as required for presentation of encrypted content, and local adjustments to the show schedules.

The SMS controller application supports the following operating systems.

- Microsoft Windows XP Professional Service Pack 3
- Microsoft Windows Vista Business Service Pack 2
- Microsoft Windows Vista Ultimate Service Pack 2
- Microsoft Windows 7 Professional Service Pack 1

- Microsoft Windows 7 Ultimate Service Pack 1
- Windows 8.1 Professional

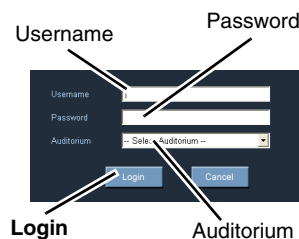


Note

You can start the SMS Controller application while the SMS Server is not active, but login is not possible. The SMS Auditorium Unit must be in the Power ON state before you will be able to login. Refer to the SMS Projectionist Terminal User Guide for additional information regarding Auditorium Unit start up and shutdown.

Login

To login to the SMS Controller application, type your **Username**, type your **Password**, select the **Auditorium** (Unit) you wish to connect to and then click **Login**.



Logout

To logout of the SMS Controller application, click **Logout** in the upper right corner of any SMS Controller screen. The SMS Controller Login screen appears.

Log-out

Close SMS Controller Application

You must be logged out of the SMS Controller before you can close the SMSC application. To close the SMS Controller application, click **Cancel** on the Login screen.

Note

Closing the SMS Controller application does NOT shutdown the SMS Auditorium Unit. Refer to the SMS Projectionist Terminal User Guide for additional information regarding Auditorium Unit start up and shutdown.

Features

Sony's SMS Controller features include DCP (Content) Ingest, and Storage Space management, KDM (decryption keys) management, Show Playlist Management, Show Schedule Management, and the ability to monitor and control selected functions of supported Sony 4K Digital Cinema Projectors.

Note

Some operational aspects of the SMS Controller differ due to variations in the Auditorium Unit, i.e., Projector. These specific differences in screens or operation appear as the specific function(s) not being available.

Manage Composition Playlist (CPL)

The Composition Playlist (CPL) in Digital Cinema is included in the Digital Cinema Package (DCP) and is essentially a description of the other Content Elements (files)¹ contained in the DCP. The CPL comprises content element data that are to be presented as a show. Multiple CPLs can be combined to make up a single show. In actual fact, a Composition Playlist is more correctly a collection of files which includes a digital image, sound, or titling content. These content files, which may be optionally encrypted, contain the material required for presentation of at least one content element. A package containing a number of these elements is generally called a DCP. Once the Digital Content Package has arrived "in-house" from distribution organization it is ingested into Media Block Storage using either the SMS Controller application or Projectionist Terminal.

During the process of ingesting the DCP, the Media Block checks for problems such as missing files or corrupted tracks, using the CPL and other information.

Once the CPL included DCP has been ingested into the Digital Cinema System it can be used to create Show Playlists.

Manage Key Delivery Message (KDM)

The contents of the Key Delivery Message are decryption keys and usage rights information. These are used to decrypt (encrypted) essence files referenced in the Composition Playlist (CPL).

As a general rule the delivery of the KDM will be via a different route than that used for delivery of the DCP. The KDM is issued for each CPL, and is used to perform decryption for a single Media Block only. Once received, the KDM is ingested by the Media Block using the SMS Controller application or Projectionist Terminal.

¹The content contained in the CPL may have more than one expression, e.g., variations in the sound presentation, different aspect ratios, multiple sub-titles.

Control of Auditorium Presentation

The SMS Controller provides remote access to start, stop, select Show Playlist, edit Show Playlist, etc. and selection of presentation related Functions¹ on an auditorium by auditorium basis.

Supervise Auditorium Unit

The SMS Controller can display collected status of the projector and associated equipment for the logged in auditorium. It also receives alerts sent by the associated components of the Digital Cinema System.

Auditorium Automation Equipment Control

The SMS Controller manages basic Automation Control for the auditorium using General Purpose Input/Output – Output (GPIO Out). Automation Controls can be used to initiate operation of legacy auxiliary equipment for the selected auditorium, e.g., curtain operation, house lights, etc.

Respond to External Triggers

The SMS Controller manages system response to General Purpose Input/Output – Input (GPIO In) Trigger. GPII initiate a defined action in the Auditorium Unit based on a trigger received via the designated input. The Inputs receive a trigger from an external legacy device and are used to initiate execution of an associated SPL.

In addition, a predefined Emergency Alert GPI In can be configured during system installation. Once the Emergency Alert has been configured (during system installation) you can configure which specific actions are initiated on the Auditorium Unit when the Alert is received.

Manage Show Playlist(s)

The SMS Controller uses one or more Composition Playlists (CPL) or previously created SPL (Sub-Playlists) to create the SPL. Using the GPIO feature, the created SPL can include projection system internal control (Projector Power, Douser, Function, Media Block Audio Muting etc.) and Auditorium Automation (show-based Automation Control events such as curtain trigger, auditorium lighting triggers, etc.).

In addition, Schedules (for the day/date) can be created which are based on Show Playlists. All content presentation using the essence files described in the content related Composition Playlist(s) is based on the Show Playlist.

¹.Functions are User selectable presentation “presets” which are consolidated under a single Function Number and can include various settings which are applied to the projector.

Operational Security

To insure that un-authorized operation of the SMS Controller does not occur, multiple levels of users security is available using “roles” and a managed login approach. Four predefined Roles are established in the SMS. They are:

- **Administrator**
- **Projectionist**
- **Show Manager**
- **Maintenance**

These four Roles cannot be deleted or modified.

Creation of Users and/or new Roles should reflect the operational needs of the facility while taking into consideration requirements to protect selected functions from unauthorized access. For a more detailed discussion of role management see “Roles” on page 77.

Communications between the SMS Controller the Auditorium Unit is via secure link.

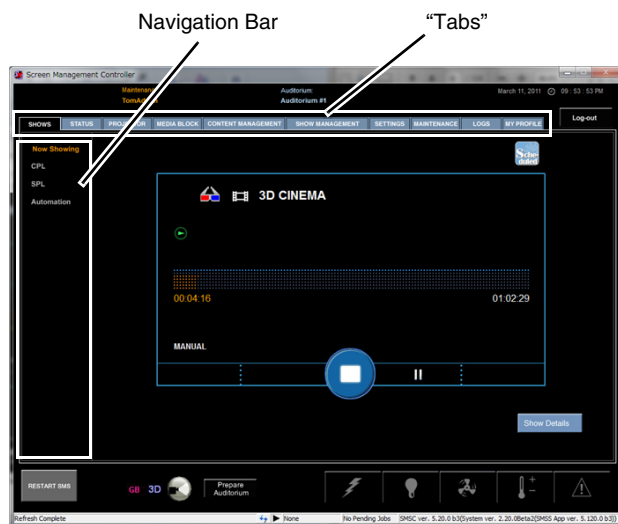
Logging

Reporting on Media Block Operations includes collection of log reports from the Security Manager and support of secondary log distribution, i.e., to TMS or to the appropriate authority in the material distribution channel. Filtering of log reports for easy control of how logged data is available so information provided to locations outside of the facility can be managed in a way appropriate to the organization.

Tabs and Navigation

Function Tabs

Major functions are accessed through “Tabs” located horizontally near the top of the SMS Controller window. The **Tabs** appear and are consistent across all SMS Controller screens. However, only those Tabs consistent with the Role assigned to your User Name will be available following login.



Note

Under some circumstances the SMS Server may not be able to communicate with the projector. However, even when the projector is not available to the SMS Server it is possible to perform other operations, e.g., DCP Ingest, SPL Management and Playout of Audio (Media Block function). When the SMS Server has not completed an initial discovery of the projector the associated Projector Tab will be unavailable.

The content of the **Navigation Bar** is specific to the operation, changes with the selected tab, and is appropriate to the Role associated with your User Name.

Tabs are:

- **Shows** - Navigation Bar selections are; Now Showing, CPL (Composition Playlist), SPL (Show Playlist), and Automation.
- **Status** - Navigation Bar selections are; Projector, Lamp, Fan, Temperature, Media Block, Storage, RAID, and GPIO.
- **Projector** - Navigation Bar selections are; Info (General Information), Control, Lamp/Lens, and Ghostbuster.

- **Media Block** - Navigation Bar selections are; Info (General Information), Control, AV Delay¹, Audio Routing¹, and Report¹.
- **Content Management** - Navigation Bar selections are; DCP (Digital Cinema Package), KDM (Key Delivery Message), Closed Caption, and Asset Report.
- **Show Management** - Navigation Bar selections are; SPL (Show Playlist), Schedule, Import/Export, and GPI Trigger.
- **Settings** - Navigation Bar selections are; Basic, Devices, Status Monitor, Folders, Disk Utility, GPIO Profiles, GPIO Channels, Automation, DCP/KDM, Logs, Users, Roles, and Import/Export.
- **Maintenance** - Navigation Bar selections are; Projector, Media Block¹, SMS Server¹, Certificates¹, Security², Emergency³, and HFR (High Frame Rate).
- **Logs** - Navigation Bar selections are; Projector, Media Block, UPS Log⁴, Alert Log, SMS Server¹, and Operation Log¹.
- **My Profile** - Navigation Bar selections: Values set for currently logged in user name

Navigation Bar

The Navigation Bar (left side of screen) allows selection of the various information and operation screens available to you under each tab. As they relate to the Tabs, the functions are discussed briefly in the following and in more detail elsewhere in this document.



Now Showing - Indicates the “Named” Show currently being presented on the associated screen. A Progress Bar for the presentation, Current Position (Time), and the Duration/Remaining Time (click to change) are displayed. Functions available are;

- **PLAY** - The alternate action command button which indicates the action that will be



1. Access to this function is Role restricted.
2. While are able to view Security status information, access to Security Reset is Role restricted.
3. Access to the Emergency Alert action options is based on system configuration settings established during installation.
4. Access to UPS log is available only when a UPS integral to the Auditorium Unit is installed and configured.

taken when clicked. Click **PLAY** (the on-screen button appears when a presentation is available) to cause the presentation to start from the current point in the Show. The control icon changes indicating clicking again will **STOP** the presentation.

- **STOP** - The alternate action command button which indicates the action that will be taken when clicked. Click **STOP** (the STOP button is shown when a Show is currently running) to cause the Show presentation to halt.
Note: Just as in a film projector, the Show remains at the same presentation point when STOP is executed. 
- **PAUSE** - The PAUSE button (available only when the presentation is in PLAY mode) halts presentation of the current Show with the last frame of the content remaining on screen. To Pause the current presentation, click **PAUSE** (when available). 
- **FRAME ADVANCE** - The FRAME ADVANCE button (available only when the presentation is in PAUSE mode) allows you to adjust (step) the current position of the presentation by a single frame. To advance the still frame of the current presentation, click **FRAME ADVANCE** (when available). 
- **RESUME** - The RESUME button (available only when the presentation is in PAUSE mode) allows to begin Playing the current presentation at the current frame. To resume presentation of the current content, click **RESUME** (when available). 
- **RESTART** - The RESTART button causes the presentation to begin Playing from the top of the Show. To restart the current presentation from the beginning of the show, click **RESTART** (when available) and then click **YES** on the popup confirmation message. 

Note

RESTART is available when STOP mode has been selected while the Show is in progress.

- **Show Details** - To open a popup containing information on the Show currently playing, click **Show Details**. Additional information about the Show including any Sub-Playlist, CPL Properties (detailed information) can be viewed by clicking the SPL object on the open popup. 

CPL - Composition Playlist refers to a “package” of individual components which typically include at least an MXF-wrapped image track file containing JPEG2000 (optionally AES-encrypted) image data, WAV audio data (optionally AES-encrypted), and an XML structured “playlist” which describes the characteristics of the included components and how the various track (essence) files are used to comprise the presentation. This playlist package is called the Composition Playlist (CPL) and includes the Universal Unique Identifier (UUID) of the CPL.

A scrollable list of CPLs available in the system is shown in Composition Playlists. A CPL¹ with the  symbol present in its leftmost column can be played from its beginning. If the CPL is encrypted the presence of the  symbol indicates that the current time falls within the date range for presentation contained in the KDM. Select a CPL to display additional details.

A manual **PLAY** control is present in the Control Panel pane. To perform PLAY control, select the CPL to play from COMPOSITION PLAYLIST. When an encrypted CPL is selected, the presence or absence of the KDM is checked. If the associated KDM is not valid then a warning message popup appears. The (optional) “**Start at**” value (HH:MM:SS) can be set when an offset start point into the selected CPL is desired.

When the presentation has been PAUSED it may be resumed from the PAUSE point at any time up to 6 hours after the KDM has expired.

Various component (essence) tracks, e.g., video, audio, sub-title, etc., comprise the CPL. To view a list of these components, click **Track Information** and a popup window opens.

SPL - A Show Playlist is a sequence of one or several CPLs and/or Sub-Playlists created from CPLs. A scrollable list of SPLs available in the system is shown in Show Playlists. An SPL² with the  symbol present in its leftmost column can be played from its beginning. The  symbol indicates that the current time falls within the date range for presentation contained in the KDMs associated with CPLs included in the SPL or Sub-Playlist. When the  symbol is missing, the SPL comprises encrypted content and the related KDM is not present, so that the presentation cannot be played. One or more of the “unique” SPL are used to create the daily Schedule.

1.A playable CPL is either not encrypted or is encrypted and a KDM is present for the encrypted CPL and the current date/time falls within the KDM valid date range.

2.A playable SPL contains CPL files that are either not encrypted or are encrypted and KDMs are present for the included CPL. In addition, the current date/time falls within the KDM valid date range.

A manual **PLAY** control is present in the Control Panel pane. To perform **PLAY** control, select the SPL to play from **SHOW PLAYLIST**. When an SPL comprising an encrypted CPL is selected, the presence or absence of the KDM is checked. If any KDM in the SPL is not valid then a warning message popup appears. Also, an optional “**Start at**” value (HH:MM:SS) can be set when an offset start point into the selected SPL is desired.

When a presentation comprising an SPL with an encrypted CPL has been paused, it may be resumed from the pause point at any time up to 6 hours after the KDM associated with the encrypted CPL has expired.

To view details of the currently playing component, click **Track Information** and a popup window appears.

Automation- The Automation Control buttons allow you to manually execute the named external action in the auditorium. An example would be to manually raise the house lights to 100% should the need arise.



Status screens for the first four selections on the Navigation Bar, i.e., Projector, Lamp, Fan, and Temperature may be accessed directly by using the quick select buttons at the bottom of each screen. These buttons are also **WARNING** indicators for conditions that may arise in these four subsystems¹ and warrant operator attention. They appear red when a warning condition exists. Click the indicator to view the associated Status screen. In addition, Status information for the Media Block and Storage are available under the Status Tab.

Generally, status indicators have four possible states. They are:

-  **(Green) - Operation Normal**
-  **(Yellow) - Warning**
-  **(Red) - Error**
-  **(Gray) - State Unknown**

Exceptions to the above status indicators are noted where applicable.

Projector - The Status indicators for the projector include monitoring of various key areas.

The Power Status indicator/button located at the bottom of every SMS Controller screen alerts the operator to any warning or error related to projector power.



1. The Digital Cinema System consists of several subsystems such as the Projector, Media Block, SMS, Enclosure, UPS etc.

• **Projector Components** - Indicators for the monitored Projector components of the Auditorium Unit include both power and additional critical areas. Monitored items are:

- **Power** - The Power Status for:
 - DVI** - Projector DVI-D Input Module
 - HIF** - Projector HD/DC-SDI Input Module
 - MB** - Projector Media Block Input Module
- **Peltier** - Device Status for²:
 - R** - Red Channel device
 - G** - Green Channel device
 - B** - Blue Channel device
- **DVI Signal** - DVI Signal Status³
- **Ballast** - Projector Ballast Status
- **RT Clock Battery** - Realtime Clock Battery Status
- **Board** - Projector Board Status
- **Lens** - Status of the Lens
- **Electrical** - Projector Electrical Status
- **Air Filter** - Air Filter presence in the Projector

Lamp - The Lamp Status indicator/button at the bottom of every SMS Controller screen alerts the operator to any issue with the lamp area of the projector.



The SRX-R320 projectors are single lamp units. The current Lamp Hours, total projector Operation Hours, the Total Lamp ON Hours, and the date on which the lamp was Last Replaced is available on this screen.

In addition, Status indicators relating to the projector Lamp are present as follows:

- **Lamp Timer Alert** - Indicates that the number of Lamp Hours has reached or exceeded the maximum rated lamp operating hours.
- **Lamp Ballast** - Indicates green when the status of the power ballast for the projection lamp is normal. The indicator will display red when an error is detected.
- **Lamp Z-axis** - Indicates green when the status of the Z-Axis adjustment motor used for lamp positioning is normal. The indicator will display yellow when a warning condition is detected.
- **Luminance Adjustment** - Indicates green when the luminance adjustment feature is operating normally. The indicator will display yellow when a warning condition is detected.

2. SRX-R320 does not include Peltier device status.

3. Indicates if external DVI-D signal matches the DVI-D Signal Mode set in Picture Control for Input A using the SRX Controller application.

- **Luminance Adjust Limit** - Currently this indicates green at all times.

Fan - The Enclosure, Projector and Media Block fans are monitored.

The Fan Status indicator/button at the bottom of every SMS Controller screen alerts the operator to a fan failure.



Loss of cooling in the Enclosure, Projector or Media Block can result in excessive temperatures and damage to components and/or system. The fans are monitored as a function of the individual subsystems.

Separate fan monitoring is provided for imaging related devices and for the Projector control board. Because of the high temperatures associated with high bulb wattages additional fan monitoring is provided for the Lamp.

The additional fans related to higher power projector operation are:

- **Peltier Fans** - The operation of specific fans providing cooling to the Red, Green and Blue Peltier devices are monitored.
- **Panel Fans**¹ - The operation of specific fans providing cooling to the Red, Green and Blue imaging panels are monitored.
- **Lamp Fan** - Operation of the fan providing cooling to the Lamp housing is monitored.
- **Board Fan** - Operation of the fan providing cooling to the circuit board area of the projector is monitored.

Temperature - Temperatures of devices may exceed operational limits even when there has been no failure of a cooling fan. An example of this would be if one of the Auditorium Units air intake or exhaust ports became blocked.

The Temperature Status indicator/button at the bottom of every SMS Controller screen alerts the operator to an over temperature warning or error condition.



In the SRX-R320 based system, monitoring of temperatures of the major subsystems² is provided and shown when parameters are exceeded. Additional monitoring of temperatures is also done for the following imaging related devices:

- **Panel R** - Operating temperature of the Red imaging panel.
- **Panel G** - Operating temperature of the Green imaging panel.
- **Panel B** - Operating temperature of the Blue imaging panel.
- **Operating temperature of UPS**

Media Block - Status monitoring for the Media Block has been enhanced to include additional alerts when one or more of the Media Block processes or hardware components exhibit errors or fails.

- **Operational Status** - Three Media Block Status indicators, i.e., **Ready**, **Play** and **Alarm**, provide a quick view of the state and status of the Media Block.
- **Video** - Indicates the status or health of the video signal processing.
- **Audio** - Indicates the status or health of the audio signal processing.
- **Process** - Indicates the status or health of the signal (image/sound essence) processing.
- **Battery** - Indicates the status or health of the internal battery that provides power to sustain Media Block settings.
- **DIMM1** - Indicates the status or health of the #1 Dual Inline Memory Module (DIMM) installed in the Media Block.
- **DIMM2** - Indicates the status or health of the #2 Dual Inline Memory Module (DIMM) installed in the Media Block.
- **Power Source 1** - Indicates the status or health of the #1 Power Supply installed in the Media Block.
- **Power Source 2** - Indicates the status or health of the optional #2 Power Supply³ installed in the Media Block.
- **Security Module** - Indicates the status or health of the Media Block security system and content key processing.
- **Video/Audio Forensic Mark** - Indicates the status or health of the image fingerprint (Forensic Marking) processing.

1.The SRX-R320 does not include a Panel fan.

2.Temperature monitoring of the Uninterruptable Power Supply (UPS) is provided only when the UPS is internal to the Auditorium Unit.

3.The presence of a 2nd Power Supply in the Media Block is optional.

Storage - Status monitoring of the utilization of allocated space on the Media Block integrated RAID allows you to track space usage and plan/execute additional file purging¹ when needed. Monitoring is provided using both graphical (% used) and numerical indicators.

- **DCP Used Space** - The total amount of space available, the space remaining for use and a percentage value for space used for DCP storage.
- **Security Log Used Space** - The total amount of space available, the space remaining for use and a percentage value for space used for Security Log storage.
- **Design Log Used Space** - The total amount of space available, the space remaining for use and a percentage value for space used for Design Log storage.
- **Work Log Used Space** - The total amount of space available, the space remaining for use and a percentage value for space used for Work Log storage.

RAID - Monitoring is provided using a status indicator (RAID) and individual icons for each installed Hard Disk Drive.

- **RAID** - The over all Status of the RAID is indicated by a warning lamp. Refer to *page 12* for additional information on lamp appearance.
- **HDD 1~7** - These icons provide status information for each individual HDD installed in the RAID. Refer to *page 38* for additional information on HDD status indicators.

GPIO - Comprehensive monitoring of the General Purpose Input and Output control lines are possible.

- **GPIO BOARD** - Identifies the GPIO installed in and configured to work with the Auditorium Unit.
- **PIN LEVELS** - Shows the current state of the GPIO “PIN”². PINs begin numbering at “0” (zero).



(Green) - Level High



(Gray) - Level Low

1.Space may be freed on DCP space, Security Log Space, Work Log space as follows: DCP Space - delete DCP to free up space, Security Log Space - generate “audit log” report to free up space, and Work Log - delete log snapshot files

2.Level based GPIO Inputs and Outputs will indicate the current level. Pulse based GPIO outputs may not be visible due to a short pulse duration.



Under some circumstances the Projector Tab will be unavailable. This occurs when the SMS Server has yet to recognized the Projector. However, even under these circumstances other operations that are unrelated to the Projector’s presence may be performed. This includes playing a Show since this is essentially a Media Block operation and does not require the presence of the Projector. (Only audio would be heard during this payout.)

Info - Two panes are shown when **Info** is selected from the Navigation Bar;

- **PROJECTOR INFORMATION** - This pane includes the Projector Model (Model), Serial Number (Serial No.), Network IP Address (IP Address), an alpha-numeric Location and “Name” (set during installation³) for ease of identification of the specific projector within the organization.
- **VERSION** - This pane contains a scrollable list of the Version Information read from the projector and its various subsystems.

Control - Key projector control functions are available when **Control** is selected on the Navigation Bar.

- **POWER** - Allows you to change the projector from **STANDBY** to **ON**, from **ON** to **LAMP OFF**, and from **ON** (or **LAMP OFF**) to **STANDBY**.

Selecting **STANDBY** causes the projector to go to stand-by.

Selecting **ON** transitions to an operational mode, activates the Peltier temperature stabilization devices, and applies power to the projection lamps. System status information will be presented on the SMS Controller screens as it becomes available. Data are, in some cases, read directly from the device and may require a short time to become available.

Note

Projection Lamps and imaging devices will typically require some number of minutes to stabilize and be ready for optimum image presentation. Refer to the information in subsequent paragraphs dealing with Projector Mode changes and LAMP ON/OFF for recommended minimum cycle times.

3.Until the “Name” is set, the Network MAC address is shown.

- **DOUSER** - Controls the OPEN and CLOSE action of the DOUSER. When set to CLOSE, the projector does not emit light.
- **LUMINANCE OFFSET** - Serves for making LUMINANCE OFFSET settings.
- **FUNCTION** - The visible Function buttons allow you to recall a “learned” configuration or setup and apply those settings to the projector. Each configuration (scrollable F1 to F20) is learned from adjustments made to the Projector using the SRX Controller application, the Projectionist Terminal, or the SMS Controller. Projector Function buttons are common to both the Projector Control and the Lamp/Lens screens. They also appear on other screens related to CPL usage and may be labeled using the SRX Controller application.

Using the Function buttons, you can recall a “learned” configuration or setup to the projector settings.

Note

To label the Functions you must use the SRX Controller application.

Lamp/Lens - Control of Projector Lamp and Lens settings are available when **Lamp/Lens** is selected from the Navigation Bar.

Note

Changes made to settings on this screen can be stored in the selected Function by using SAVE TO FUNCTION. Recall of the Function effects the projector settings as soon as the Function is selected either manually or recalled through association with a CPL.

- **LAMP POWER** - Lamp Power may be set in increments of 1% from a low of 50% to 100%.

Lamp Power may be stored in a Function as either a direct “Lamp Power” value or as an indirect “Luminance” value. The default is the direct Lamp Power value.
- **LENS ADJUST** - Provides adjustment to settings of the projector lens. Lens Adjustments are; Zoom, Focus, and Electric V Shift
 - **Zoom Adjust** - Provides motor driven adjustment of the “zoom” (image size) setting of the projection lens.
 - **Focus Adjust** - Provides motor driven adjustment of the “optical focus” (image sharpness) setting of the projection lens.
- **Electric V Shift** - Electrically adjusts the projected image in the vertical direction.

- **SAVE TO FUNCTION** - Allows you to modify the settings values contained in the currently selected projector Function.

Note

Prior to executing **SAVE TO FUNCTION** set the **LUMINANCE OFFSET** (found on the Control screen) to “0” (zero).

- **FUNCTION** - The SRX-R320 based systems have twenty **Function** buttons available which allow you to store and recall a “learned” configuration or setup of the projector settings. Each configuration comprises adjustments made to the Projector using the SRX Controller, the Projectionist Terminal, or the SMS Controller application, saved to the currently selected projector Function using the **SAVE TO FUNCTION** feature.



Info - Two panels are shown when **Info** is selected from the Navigation Bar

- **MEDIA BLOCK INFORMATION** - This pane contains a scrollable list of information related to the Media Block, its current settings, and its configuration.
- **CERTIFICATE INFORMATION** - This pane contains details related to the Security Certificates associated with the Media Block. The content of this group includes; the Names of the Issuers, the Serial Number of the Certificates, the Subject Name used in the Certificates, and the date showing the valid period of the Certificates.

Control - When you select **Control** in the Navigation Bar three major groups appear. They are: POWER, MUTING and RAID CAPACITY. These groups provide access to control functions such as Media Block RESTART, silencing of audio channels (MUTING), etc., as well as to the display of information about RAID capacity.

- **POWER** - The **RESTART** button causes a controlled shutdown and restart of the Media Block.
- **MUTING** - The **MUTING (OFF/ON)** button toggles output of the audio signals from the Media Block on and off.

Note

Audio Muting is not linked to the image Douser.

- **RAID CAPACITY** - RAID (Redundant Array of Independent Devices) is the storage medium under control of the Media Block. The RAID CAPACITY display provides an indication of the RAID usage status. When the

Digital Cinema Package (DCP), which consists of large data files, arrives from the distributor, it is copied (ingested) to the RAID storage by SMS Controller, PJT operation. Optimizing storage space utilization in the RAID is the responsibility of the exhibitor.

- **DCP Used Space** - A graphical and numerical indication of DCP storage space utilization.

AV Delay - The Image and Sound content in a Digital Cinema Package (DCP) exists as separate data streams within the files described by the Composition Playlist (CPL). During presentation of the content, decryption and processing of the image and sound elements occurs separately. Depending on the auditorium system, this can introduce different delays in the image vs. sound information and a resulting loss of “lip-sync”. Image to Sound timing (AV DELAY) is adjustable in the Sony Digital Cinema System to optimize the presentation and in-theater experience.

- **AV DELAY** - Provides stepped adjustment of up to +/- 1 second in 1 ms increments for the audio output timing in relation to the video output, allowing you to restore “lip sync” to the presentation.

Note

A/V timing differences incurred during presentation are related to processing delays in the image/sound digital data streams. Once these delays have been compensated during system installation there should be no reason to adjust this setting on a show-by-show basis.

Audio Routing - Channelization of audio in today’s theaters has become a major factor in creating an experience of total immersion in the presentation for the audience.

When you select **Audio Routing** in the Navigation Bar the AUDIO ROUTING screen appears. At the AUDIO ROUTING screen, you can manually assign the sound from any of the recovered digital audio tracks (channels) to any of channels 1 – 16 of the Media Block.

Closed Caption - When you select Closed Caption in the Navigation Bar, the CLOSED CAPTION DELAY screen appears. At the CLOSED CAPTION DELAY screen, you can adjust the delay time for display of closed caption information.

Report - When you select **Report** in the Navigation Bar the LOG REPORT screen appears. Normally, Logs are captured based on a set time of day. However, you can manually generate a Media Block Report Log¹ from the LOG REPORT screen when a “snapshot” from an event earlier than the most recently recorded one is needed.



In Digital Cinema, content is represented by the Composition Playlists (CPL) which are “packaged” in a Digital Cinema Package (DCP). The CPL is a description of the individual Content Elements (essence files) which are used to present a show.

DCP - Each Digital Cinema Package (DCP) is a set of files containing digital moving image content and associated sound and auxiliary content packaged for theater presentation. A DCP contains one or more Composition Playlists which describes the (optionally encrypted) Content Elements. The CPL is usually named to make it easy to identify. Normally, there will be multiple CPLs also for the same title, to accommodate different presentation patterns such as subtitled or dubbed shows. However, the distribution organization is not limited in the way it chooses to organize or relate any of the CPL present in the DCP. The only requirement is that a CPL describes an associated set of Content Element files.

When **DCP** is selected in the Navigation Bar, the CONTENT INFORMATION screen appears. Selecting DCP (Packing List) in the **DCP Space** brings up the DCP Properties on the right.

Note

For ease of identification, a DCP may be renamed once ingest is completed. Refer to “*Digital Cinema Package (DCP)*” on page 50 for additional information.

Expand an individual DCP (click “+” for the DCP Name) and it expands showing you the CPL components of the DCP which are present in the Media Block storage.

Select an individual **Composition Playlist (CPL)** contained in a DCP and the associated CPL Properties, including the status of related content keys, are displayed under CPL PROPERTIES to the right. Where more than one CPL is present in a DCP a separate CPL is shown and its distinct Properties will be displayed as each CPL is selected.

- **Refresh** - Causes the DCP Space list to be refreshed. When ingesting a DCP the DCP Space list is refreshed as soon as the ingest has completed.

Normally the information shown in the DCP Space list will be refreshed shortly after an action completes. However, if this does not occur a popup message will inform the user a manual

1. An unfiltered Media Block Report Log is referred to as the “security log” in the Digital Cinema Initiative documents. Once this has been filtered (see “*Logs*” on page 74) it is referred to as a Log Report by DCI.

Refresh is required. Click **Refresh** to cause the latest data to be displayed. Also, if the Media Block detects that a CPL has failed during presentation **Refresh** displays the track failure information.

Caution

Executing a **Refresh** can take some time to realize since the data must be obtained from the Media Block.

- **Validate** - Causes the selected DCP to be validated by the Media Block.

To validate a previously ingested DCP in the Media Block storage, select the specific **DCP** from the DCP Space list and then click **Validate**.

- **Delete** - Causes the selected DCP to be removed from the Media Block storage system.

To remove a DCP from the Media Block storage, select the specific **DCP** from the DCP Space list and then click **DCP Delete**.

Caution

- You will be prompted to confirm the delete but, once confirmed there is no “undo.” Once the DCP Delete has been executed you will have to ingest the DCP again if you wish to continue to use its content.
- DCP ingestion cannot be performed while a DCP is being deleted.
- **Ingest** - Select **Ingest** to open a popup browser. This shows designated folders where you select a specific DCP for ingest into the Media Block. If required, you can select Validate to be performed as a part of Ingest processing after DCP Ingest has been performed.

Selecting a CPL causes the CPL PROPERTIES pane to appear which contains the Title and Status information related to the CPL. In addition, **function** buttons are also shown. These allow you to assign functions that were memorized for the selected CPL projector setup. Associating a projector Function with a specific CPL or changing the association should be undertaken with care as making an incorrect association can produce unexpected results related to the presentation. The projector settings stored in a Function are learned using the SRX Controller application, and on selected Projector settings, the SMS Controller application.

KDM - Each Key Delivery Message (KDM) is a text file containing one or more unique keys. These Keys are required to decrypt the associated and encrypted content for presentation in a single auditorium (Media Block specific). When **KDM** is selected in the Navigation Bar DCP list appears in the Contents pane with DCP Space at

the root level. The Contents list shows previously ingested DCPs. Expand any DCP to see the included CPL. Playback of any encrypted CPL described Content Elements requires a KDM.

Below the Contents pane is the companion KDM Properties information display area. To the right of the Contents pane is the KDM Files Properties pane with its companion KDM File's Properties.

- **Contents** - This pane contains a menu of ingested DCP and, when expanded, their CPL. You can expand or collapse each DCP to show or hide the CPL. When a CPL is selected the **CPL** associated key properties are displayed below the Contents pane in KDM Properties. The key(s) contained in the Key Delivery Message (KDM) allows a single specific Media Block to unlock (optionally) encrypted CPL Content Element files for the Key designated period of time.

Note

A KDM contains one or more unique key messages used to unlock one or more associated CPL for different Media Blocks. More than one set of “keys” may be contained in a single KDM with each “key” specific to a CPL, files or Media Block.

- **KDM Properties** - Displays the properties of the “key” (included in the KDM) associated with the (encrypted) CPL selected in the Contents pane. It is possible to have multiple KDM for the same CPL (e.g., when the KDMs apply to different date ranges). To see all KDMs for a given CPL, double click the **CPL** and the KDM Details popup appears. The KDM Details is a list of KDMs with different valid/end dates will appear.
- **KDM Files** - A Key Delivery Message can arrive at the theater by various means, e.g., e-mail, flash drive, CD-ROM, etc. The KDM is essentially a text file which identifies itself and contains encrypted “keys”. These keys are applied to a specific Media Block and are used to unlock the associated CPL with encrypted content on a single, specific Media Block.

The KDM Files pane allows you select specific KDM for ingest. Since the means of delivery of KDM can vary, e.g., USB “Thumb” drive, e-mail, etc., their location is not fixed. To browse for new KDM files, click **Browse** and then navigate to the local or network Folder where the incoming KDM files are located. All KDM files that are valid for the Media Block contained in the specific Auditorium Unit will be displayed. When you select a KDM its properties are displayed in KDM File Properties located below the KDM Files pane. Once you have located, selected and verified the specific file is

correct, click **Ingest** to move the KDM into the Media Block so the encrypted contents are available to play¹.

- **KDM File Properties** - Displays the properties of the KDM File selected in the KDM File pane.

Asset Report - The ability to create a relatively complex “Show” (SPL) based on one or more CPL and including the Sub-Playlist under the top level SPL places an increased burden on the exhibitor to track and insure that Content Elements (both CPL and SPL) are not inadvertently removed from the system while still used either directly or indirectly. The Asset Report allows you to track/view these relationships.



The Show Management menu serves for creating, editing, and deleting SPLs (including Sub-Playlist objects).

Note

An industry wide effort is currently under way to standardize the Show Playlist. When this has been realized an SPL could be created by other organizations and then ingested into the system.

When **SPL** is selected in the Navigation Bar two major groups appear. They are; **SHOW PLAYLISTS** (existing SPL) and **CREATE SHOW PLAYLIST** where new SPL are created.

- **SHOW PLAYLIST** - SHOW PLAYLIST contains a list of all SPL currently in the logged in SMS Server. Each SPL item includes the Title, UUID, Duration, and a Playable Date Range. Commands available in the Show Playlist group are **EDIT** and **DELETE**.

To edit an existing SPL, select the **target SPL** and click **EDIT** or simply double-click the **target SPL**. A pop-up Edit SPL dialog appears containing the selected Show Playlist. A graphical representation in presentation order of the populated SPL provides you with information on which Content or Sub-Playlist(s) are included in the SPL being edited and their placement in the SPL. Using the Edit SPL dialog, you make changes to the selected SPL and then save it. Refer to SPL Management in Chapter 3 for information on Show Playlist editing.

To delete an existing SPL, select the **target SPL** and click **DELETE**. Following confirmation, the selected SPL is removed from the SMS Server.

Note

Deleting an SPL does not remove any CPL or its referenced elements, or affect any Sub-Playlists. Composition Playlists (CPL) can only be removed by deleting the Digital Cinema Package (DCP) which contains the CPL and referenced Content Elements. A DCP is removed through the Content Management tab.

- **CREATE SHOW PLAYLIST** - CREATE SHOW PLAYLIST contains **Title** and **Description** boxes in which you can enter a new SPL Title and a brief Description. The **NEW** button becomes available once any entry is made in **Title**. Click **NEW** and the pop-up New SPL dialog appears. The New SPL dialog contains a list of Content (CPLs) or Sub-Playlists² available for inclusion in the SPL. Click the **Content** or **Sub-Playlist** tab to select. The New SPL dialog includes a graphical representation of the empty SHOW PLAYLIST. A drag-and-drop technique is used to move any available Content or Sub-Playlist from the CONTENTS list to the SHOW PLAYLIST graphical representation (timeline) of the new SPL.

Schedule - The Schedule is expressed as a presentation-arranged sequence of Shows with each Show comprised of one (top level) SPL and either Content or one or more Sub-Playlists.

A Schedule, consists of, and describes the sequence of presentation that occurs on the screen associated with the Auditorium Unit. The Scheduler provides a calendar view where you can add and manage existing SPLs as required. The scheduling tool includes a Calendar Navigator which allows you to view one, seven, or 31 days (calendar month) and set the granularity of the Scheduler Timescale. The ability to select a new timescale makes it possible for example to use 30 minute divisions to locate the approximate time of day and then use 5 minutes per division to “zoom in” for placement of a Show Playlist (SPL). To set the Timescale, click in the **Schedule Calendar** view, right-click and then select the desired **minutes per division** from the list.

The Schedule can easily be created by the exhibitor for a presentation date or for a sequence of presentation dates corresponding to the run of content. Export/import of the schedule to and from a schedule file is also possible, for controlling a presentation on another screen.

1.A valid Key must be available to the Media Block when presentation of the associated CPL begins.

2.A Sub-Playlist is a SPL that is comprised of only Content and/or Control Events and does not have any included Sub-Playlists. SPL is restricted to one level.

- **Schedule** - Edit Schedule allows you to create a schedule by assigning an SPL to any of the days in the viewed Schedule Calendar. After locating the target day, select the **Day** (becomes highlighted), right-click and then click **Add new event** from the menu. The Create Event popup appears. Using the Create Event pop-up, select the desired SPL from the list of available SHOW PLAYLISTS, adjust **Start (time)** if necessary, select the **One-time event** (default) or **Recurring event** option and then click **OK**. The new schedule appears in the Schedule Calendar view.

Refer to “*Schedule Management*” on page 59 for addition information on deleting scheduled Shows and editing Show Schedules.

- **Import/Export Schedule** - Show Schedules may be imported or Exported to multiple auditoriums. To Export a Schedule click **Export**, select the **date range** on the Export Schedule popup and then click **OK**. Navigate to the target folder on your local computer and click **Save**. To Import a Schedule, click **Import**, navigate to the **target folder** on your local PC, select the **target Schedule** and then click **Open**.

Import/Export (Playlists) - Show Playlists are essentially text files of a specific format (XML) that contain all the information required for presentation of the show elements in a sequence. When you select **Import/Export** on the Navigation Bar The SHOW PLAYLIST and LOCAL SHOW PLAYLIST panes appear. The Import/Export screen allows exporting and importing an existing SPL to and from the designated “local” folder or another folder on the network. Deleting an SPL is also possible.

- **SHOW PLAYLIST** - This pane contains a list of all Show Playlists available on the SMS Server. They are sorted by Title to make locating the target SPL easier. Click the desired SPL to select.
- **LOCAL SHOW PLAYLIST** - This group includes a pane where SPL files in folders on the client computer and in network-designated folders on the network can be viewed in list format. To designate the folder where the SPL files are located, type the fully defined path to the location in **Folder** or click **Browse** and then navigate to the target folder.

Note

You must designate a folder before the Import/Export buttons become available.

To Export a target SPL, designate a **LOCAL SHOW PLAYLISTS** folder, select the **target SPL** from the SHOW PLAYLISTS list and then click **Export**.

To Import a target SPL, designate a **LOCAL SHOW PLAYLISTS** folder, select the **target SPL** from SPL

available in the **LOCAL SHOW PLAYLISTS** folder and then click **Import**.

To remove the SPL, select the **target SPL** and then click **Delete**.

Note

You can delete an SPL from either the SHOW PLAYLIST or the LOCAL SHOW PLAYLIST folder.

GPI Trigger - Many legacy theaters make use of simple connectors, i.e. push-buttons or relays, to cause specific actions to occur in the associated auditorium. An example would be; Button #1 causes the projection lamp to fire, Button #2 causes the presentation to start. As these theaters convert to Digital Cinema system provisions must be made to retain many of the legacy control capabilities. GPI Triggers are associated with Show Playlists (SPL) to meet these needs.

Note

By default, GPI Trigger 0 (zero) is set as the Emergency Alert input and is not enabled. The availability of the Emergency Alert feature is configured during system installation.

If playback of an SPL is to be initiated using a GPI trigger from external equipment, make a setting to link the respective GPI Input Channel and the SPL. When a GPI input is then detected in the specified GPI Input Channel, the SPL is set to “Play”. The link is valid for the duration specified by the Association Term setting.



Settings provides you with access to information and settings related to the SMS configuration and operation. The data will have been set during system installation.

For detailed description of the content of screens available under Settings refer to Chapter 2.

Note

The ability to modify some settings may be restricted based on your assigned Role.

Basic - From the Basic screen you can set the Auditorium Name and set the Time zone used for reports.

Note

The system Date and Time can be based on the Media Block internal clock or an external Time Server (NTP Server). These values can only be adjusted within defined limits by a trusted user from the Projectionist Terminal.

Devices - Three major network information groups are shown. They are; SMS SERVER, PROJECTOR, and MEDIA BLOCK. From the devices screen you can **Restart** the SMS Server application, **Reboot** the SMS Server computer, **Reboot** the Projector Network Block or **Restart** the Media Block.

Status Monitor - Allows you to configure the way in which system status is monitored and the information is reported. The monitoring interval (STATUS CHECK INTERVAL) and the reporting options (STATUS REPORTING) are configured from this screen.

Folders - The Folders screen allows you to create system specific folders, manage their characteristics, location (path) and, if required, assign a domain, an access login and password.

Disk Utility - File storage space required for a Digital Cinema operation can be quite large. The SMS Disk Utility provides the user with tools to aid in the management of disk space. See “*Disk Utility*” on page 68 for additional information.

GPIO Profiles - Systems in many theaters depend on simple connectors for control of external devices. While some external device control is quite simple, e.g., curtain and house lights control, others can be quite complex. The GPIO Profile describes a set of characteristics which can be controlled via GPIO.

Defining a GPIO Profile provides a way to associate a set of GPIO characteristics and save these under an easily recognizable Name. This Named Profile can then be assigned to GPIO Channel(s), as appropriate, using the Name of the GPIO Profile.

GPIO Channels - Most legacy systems in theater operations depend on simple contact closures for activating devices. Typical of the external devices would be curtain and house lights control. In some locations remote control of booth equipment may be used to start a Show (Projector). The SMS Server provides General Purpose Interface (GPI) controls to ease the task of operating in this environment. The GPIO Channels screen allows assigning a previously created Named Profile to a channel.

Assignments made on the GPIO Channels screen are specific to the Channel and must be appropriate to the Channel type, i.e., Input or Output.

Automation - This screen is used to assign a specific control output to a control button. For example, you can assign an easily recognized name and associate parameters (such as output channel and initial state) to a control button. The assigned button appears under the SHOWS tab in the Automation Navigator. You can verify the operation by clicking the button.

DCP/KDM - The KDM (containing the content unlock Key) is required to playback content during presentation. Keys contained in a KDM have a finite life and expire after a designated period of time.

- **Automatic Ingest of Content Keys**
Content Keys are automatically ingested from two designated “KDM Hot Folders”.
- **Automatic purge of expired Content Keys**
This occurs as a background process and is the automatic deletion of expired Keys by the Media Block.

You can also change the initial state of the checkbox that determines whether to perform automatic validation when performing ingestion.

Logs - An Audit Log is generated by the Media Block which provides a means to track security, various operations, and maintenance of the Media Block. ACTION and COLLECTION defines what action will be taken against the raw Audit Log and where the filtered Audit Log will be archived. FILTER designates what logged data are saved.

Note

Currently only time based Audit Log collection is supported.

Entries in the Audit Log (“nodes”) are identified by a “tag” as defined in the DCI specification which is in the process of being standardized. Using selections available in FILTER (refer to “*Logs*” on page 74 for filter settings), you can restrict the visibility of the reported information and make only un-selected nodes available in the exported Audit Log.

Users - From the Users screen, anyone requiring access to the SMS System is assigned a Username, a password and a “Role”. This assignment manages user access to both the SMS Controller and the Projector Terminal and defines which functions in the system the user can access.

Roles - Within the SMS System, “Roles” are used to ease management of user access to the various functions in the system. From this screen you can manage these Roles, Add and Remove Roles, and assign appropriate functions as demanded by operational requirements.

Note

Select Roles are protected from being deleted.

Import/Export - This feature provides the user with the ability to Export SMS Settings values and selectively Import them to another system. This allows Auditorium Unit SMS settings which may be common across systems in a multi-auditorium location to be easily replicated to other systems.



NOTICE

Access to some screens under the Maintenance tab is limited by the Role assigned to you by the SMS administrator.

Projector - The SRX-R320 Projector recognizes the bulb's Serial Code to determine its wattage, and to track lamp usage (history). When Projector is selected in the Navigation Bar, you can view the Lamp Reset Log, enter the new Lamp Serial Number (Resets the Lamp Timer), and initiate the Calibrate Luminance process.

- **Lamp Reset/Information** - The Lamp Timer is automatically Reset when a new Serial Code is entered and Reset. The Lamp Serial number is displayed from the Serial Code as is the Maximum Electrical Drive allowed.
- **Lamp Reset Log** - The Lamp Reset Log provides a history of lamp changes. Log information includes the Lamp Serial Number, Lamp Operating Hours, and total Projector Operating Hours.
- **Lamp Luminance Adjust - (Calibrate)** - This function is available when the Lamp Control Mode is set to "Luminance".
- **Refresh SMS Projector Data**
Occasionally, changes may be made to the Projector settings from another SMS Controller, the Projectionist Terminal, or using the SRX Controller application. These changes may not be reflected in the SMS Server data and **REFRESH** causes the SMS Server to retrieve the Projector Data and refresh the SMS Server stored data.

Media Block - When Media Block is selected in the Navigation Bar, Media Block logs are saved to a designated location on the SMS Server. When you move the created "snapshots" of the current state of the Media Block to the folder on the SMS Server, you can display the Log names.

- **FILE I/O** - Log files accumulate in the Media Block. The FILE I/O function allows you to move the Log File from the Media Block to a designated Folder on the SMS Server.
- **SERVICE LOG SNAPSHOT** - Creates a snapshot log for the current Media Block.

SMS Server - When SMS Server is selected in the Navigation Bar you have access to functions which allow you to save the SMS snapshot logs and the Media Block snapshot logs to a designated folder. Also allows creating a snapshot log of the current SMS server.

- **FILE I/O** - Snapshot Log Files the SMS Server and transferred Media Block Log Files are retained in the SMS Server. The FILE I/O function allows you to move Log Files from the SMS Server to a Folder located on the attached network. You may also delete Log Files as needed.
- **SERVICE LOG SNAPSHOT** - Allows creating a snapshot log of the current SMS server.

Certificates - Certificate files used for secure operations are electronic documents for system authentication using an identity certificate (public key certificate) as a digital signature to bind together a public key with an identity (in this case the Media Block and projector).

- **CERTIFICATE** - During the Media Block manufacturing process, security certificates are set in the Media Block. The certificate information is required to create KDMs (Content Element decryption key) for use by the DCP distribution organization. The Media Block certificate information can be saved to an **Export Folder** on the SMS Server or on an attached network device and then sent to the DCP distribution organization.

Security - The Auditorium Unit Security System displays the status of all connected components. When the security sensor detects an opening or closing action of the security door, this is indicated in an error message as a security error. Depending on the Role assigned to the user by the administrator, the user can click the Initialize Security button to cancel the security error.

Emergency (Role Restricted) - The SMS features the ability to recognize an external Emergency Alert and take one or more of the actions defined on the EMERGENCY OPERATIONS screen.

Note

The availability of the Emergency Alert feature is configured during system installation. If it is not configured then this selection in the Navigation Bar will be unavailable.

Emergency - When you select Emergency in the Navigation Bar, you can specify an action to be performed when an Emergency Alert signal is received in the GPIO trigger input channel.

Note

The Emergency Operations function will be enabled during system setup, but by default, the function is disabled at other times. When the Emergency Operations function is not enabled, the Emergency selection in the Navigation Bar will not be available.

HFR - You can input a license key that enables presentation of high-frame-rate content. You can also check whether high-frame-rate content can currently be played back.



The LOGS tab provides access to various Screen Management System log records for the following sub-systems¹:

- **Projector** - The Projector Event Log.
- **Media Block** - The Media Block Event Log.
- **UPS Log²** - The event log for the Uninterruptable Power Supply.
- **Alert Log** - The log of Emergency Alerts events.
- **SMS Server** - The SMS Server Event Log. (Access is Role restricted.)
- **Operation Log** - A log of operational events from the Media Block. (Access is Role restricted.)



The My Profile tab provides you with information about your profile and the functions you have access to within the SMS Controller and Sony Digital Cinema System.

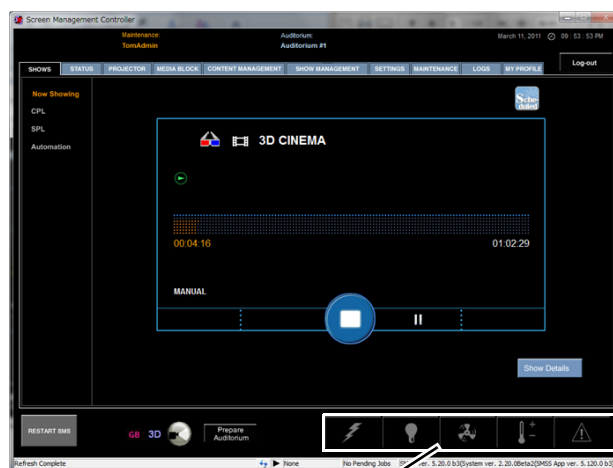
Note

You cannot make changes to ALLOWED ACTIONS.

Password - From the My Profile screen you can change your password³.

Warning Indicators

The Warning Indicator group located at the lower right is common to all screens on the SMS Controller.



Warning Indicators/
Status Display Selectors

The Status screens for the Projector, Lamp, Fan, and Temperature may be accessed directly using the quick select buttons at the bottom of each screen. These buttons are also **WARNING** indicators for error conditions that may arise in these four subsystems. They will appear red when an error condition exists.

The fifth button is a Message indicator which is illuminated (red) when a system message is available, e.g., the Cavity Security System requires initialization.

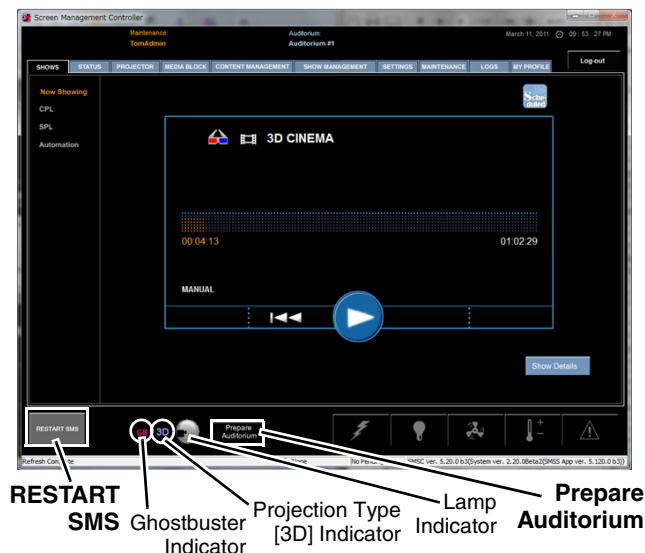
1. Access to some logs is restricted based on your user Role.

2. UPS Log cannot be obtained with the LMT-300.

3. Selected users cannot change their password. These users are restricted and use the password assigned during installation.

Common Functions

The **RESTART SMS** and **Prepare Auditorium** functions and the **Lamp Indicator** icon are common to all screens on the SMS Controller.



Lamp Indicator

The Lamp Indicator icon shows whether the Projector is in STANDBY/Lamp is OFF or the Lamp is ON.



Ghostbuster Indicator

The Ghostbuster Indicator indicates whether the user license has been obtained for the Ghostbuster function, and whether the function is enabled.

When the production type is **3D** and a Ghostbuster license has been obtained, **GB** appears. Depending on whether the Ghostbuster function is enabled or disabled (deactivated), **GB** is displayed in pink or gray respectively.

RESTART SMS

The **RESTART SMS** function is common to all SMS Controller screens and allows the user to restart the SMS Server application. This may be necessary if, for some reason, communications with other devices in the Auditorium Unit or with devices on the theater network is lost.

Note

When you Restart SMS the Projector Lamp is automatically set to OFF. Click **Prepare Auditorium** to turn the Lamp ON and insure the Douser is open and Audio is enabled.

Prepare Auditorium

The **Prepare Auditorium** function is essentially a “quick start” command which, with a single button, sets the Projector ON (or Lamp ON), opens the Projector Douser, and enables the Media Block Audio Output.

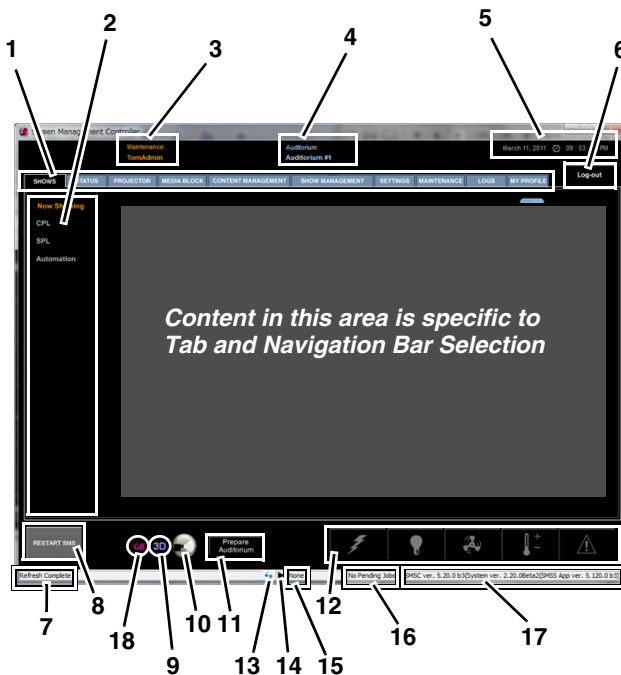
Projection Type [3D] Indicator

The Projection Type Indicator “[3D]” appears when the projector is configured¹ for stereoscopic (3D) operation.

1. Set on the Projector->Projection Type pane using the Projectionist Terminal.

Common Features - All Windows

The SMS Controller has a view with a set of functions that are common to all windows and menus. These are a group of key Status indicators/buttons, the Restart SMS (Application) command, the Prepare Auditorium command, and Logout. Information items are User ID, Date/Time, etc.



1 Tab (Selects View)

Tabs appear across the top of all windows and allow access to associated information and commands on the Navigation Bar. Tabs (in left to right order) are:

- SHOWS
- STATUS
- PROJECTOR
- MEDIA BLOCK

- CONTENT MANAGEMENT
- SHOW MANAGEMENT
- SETTINGS
- MAINTENANCE
- LOGS
- MY PROFILE

The availability of a Tab is based on the Role assigned to your Profile¹.

Note

Switching away from the screen by selecting a new Tab, or by making a new selection on the Navigation Bar, and then returning to the original screen will result in the screen being refreshed using data from the SMS Server. If you switch to a different window after changing settings but without clicking **Apply** (when the Apply button is shown), all changes to the settings will be lost.

2 Navigation Bar

Contains menu buttons related to the tab selected at the top of the window. Navigation Bar menu buttons make tab specific information and operations available to the user.

The appearance of the menu buttons in the Navigation Bar is based on the Role assigned to your Profile.

3 Role & User ID

Shows the User ID, e.g., Projectionist/[username] of the currently logged in user and the Role assigned to that User. Features available to the user are controlled by assigning a user to a "role". This assignment occurs when the new user account is created by the user administrator.

4 Auditorium Name

Each Screen/Projector combination is assigned an Auditorium Name for ease of identification to the user. During the login process you select the target Screen/Auditorium from a list of available auditoria.

1. The Projector Tab may be unavailable when the SMS Server has yet to discover Projector. However, other operations may be performed, e.g., Ingest DCP, SPL Editing, etc.

5 Date & Time

Shows the current Date and Time information. This information is the Date & Time on the client PC (the computer running the SMS Controller application). The Date and Time for the SMS Controller (local) client PC can be referenced to a local NTP Server using the client PC Control Panel or to an Internet "Network Time Service". If no NTP server is available the Date and Time can also be set from the Windows Control Panel.

The Date and Time shown in the upper right corner has no effect on the timing of Content presentation. Content presentation timing is based on the secure clock integral to the Media Block.

6 LOGOUT

Click to Logout of the session. When the confirmation message appears, click **YES**.

7 Information

Normally this area indicates the status of the SMS Controller in relation to the SMS Server, e.g., "Connected". In addition, this area will show a countdown to the start of the next show, e.g., "Lawrence of Arabia" START in 1 hour, 48 minutes.

8 RESTART SMS (Application)

A user accessible command (button) which causes the SMS Application to restart.

Note

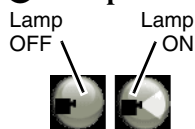
Restarting the SMS Application will cause the Presentation of the Show (Now Showing) to be interrupted and the Projector Lamp set to OFF.

Once the SMS Application completes its restart process, click **Prepare Auditorium** and then click **Resume** to start the current presentation from the point where presentation was halted.

9 Projection Type (3D) Indicator

The Projection Type Indicator (3D) is common to all SMS Controller screens. When illuminated, the projector has been set to "Single 3D" operation.¹

10 Lamp ON/OFF Indicator



The Lamp Indicator, illustrated to the right, is common to all SMS Controller screens. When the icon is illuminated the Projector Lamp is ON.

1. Setting Projection Type is realized from the PROJECTION TYPE pane using the Projectionist Terminal.

11 Prepare Auditorium

When the exhibitor chooses to manually start a presentation the process of insuring the Projector and Media Block are configured for playout requires multiple steps. The Prepare Auditorium feature is a single button which sets the Projector to ON, opens the Douser, and enable audio output from the Media Block.

12 Status/Warning

A group of 5 combined indicators/buttons. These provide a warning/error indicator for problems in specific SMS subsystems. When you click on any of these buttons the associated Status window appears and displays the selected status information. These Status displays can also be accessed through the STATUS tab and the corresponding Navigation Bar item.

Example: When you click a **Lamp** button, (indicating a warning as shown to the right) the corresponding Status window appears with the Lamp item on the Navigation Bar selected.



13 Refresh Required

When the Refresh Required indicator, located at the bottom of the SMS Control window and shown to the right is present, click to initiate a refresh of the windows data to insure that the information you are seeing is correct. The indicator becomes grey during the refresh period and disappears when the refresh cycle is complete.



14 Playback State

Indicates the Media Block's current operational status when the Media Block State is either Playing or Play & DCP Ingest. The indicators are described in the following table.

Icon	State	Description
no icon	None	The SMS Controller is retrieving the Media Block's operational state from the SMS Server, i.e. during login update
	Playing	The Media Block is PLAYING Content.
	Stopped	Presentation of Content is STOPPED.
	Paused	Presentation of Content is PAUSED
	Completed	Presentation of Content has COMPLETED.
	Error	Content PLAY is attempted during a Media Block Snapshot.
	Interrupted	Presentation of Content was interrupted ^a by a Restart of the SMS Server.

a. Presentation may be resumed from the point of interruption

15 Media Block State

Indicates the current operational state of the Media Block. The states are described in the following table.

State	Description
None	The Media Block is idle. When None is indicated, double-click in this area and the Last DCP Ingest Status pop-up appears providing information on the most recent DCP Ingest, e.g., Name, Percent of Completion, etc.
Ingesting	The Media Block is copying new content into the system. While ingesting, a percent completed is shown and you can see a graphical progress bar by clicking the area.
Snapshot	Indicates when a “snapshot” of the Media Block is being taken for logging purposes.
Validate	The Media Block is currently being used to validate content.

16 Pending Jobs

When a batch ingest has been initiated this area shows the number of Pending Jobs in the queue. The default is “No Jobs Pending”.

17 Version

Indicates the installed version of the SMS Controller application and the installed version of the SMS Server application.

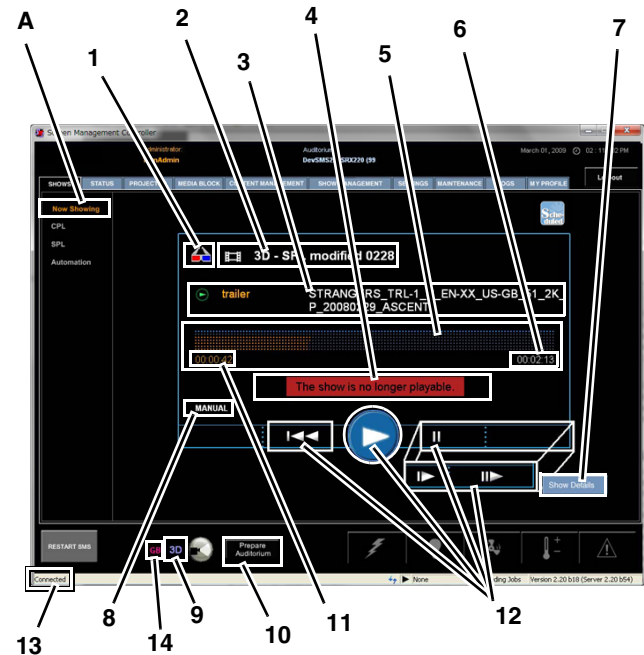
18 Ghostbuster Indicator

The Ghostbuster Indicator indicates whether the user license has been obtained for the Ghostbuster function, and whether the function is enabled.

Shows

The Shows Window presents multiple menu buttons which are selected from the Navigation Bar. This section describes controls and information available when the Shows tab is selected.

Now Showing



A Now Showing

When Now Showing is selected in the Navigation Bar the window displays information and controls relating to the Show currently running or, in the event that a Show is not running, the most recently played Show. The information and controls are described in the following.

1 3D Indicator (Stereoscopic Glasses)

The 3D indicator, shown to the right, is present whenever the current presentation contains 3D content.



2 Show Title

Displays the Title of the top level, i.e., the “show”, currently playing and a status icon.

Icon	Description
	Normal - Shown when the SPL is ready or during the time when presentation is normal.
	Error - Shown when an error is experienced during presentation, e.g., MB reports the CPL video/audio track to have a “FATAL” error, i.e., one example is if the video is badly encoded. Note: The Media Block must play the content before the error is detected.

When a Schedule is playing the Show Title area displays the Title of the currently playing SPL and CPL.

Note

Selecting either SPL or CPL from the Navigation Bar allows direct start of any content available from the Media Block storage. When a Show Playlist (SPL) is manually started the SPL Title is shown here. When a Composition Playlist (CPL) is manually started the CPL Title is shown here.

3 Playlist Element Name

Displays the SPL title.

The Type is indicated, e.g., Trailer, Feature, etc., and a green “playing” icon is visible at the left when the show is being played.

4 Not Playable Warning

When Content in Not Playable, e.g., KDM missing or out of date, a warning message appears in this area.

5 Show Progress Group

The primary indicator in the Show Progress Group is a graphical bar indicating the progress of currently running Show. Included in this groups are Elapsed Time and Running/Remaining Time

6 Running/Remaining Time - Complete Show

Displays either the total Running Time or the Remaining Time in HH:MM:SS of the current presentation. Click to change from Running to Remaining Time.

7 Show Details

To view the detailed information, click

Show Details button.

The SPL Properties pop-up appears. In addition to the Title and Duration, the SPL Properties include the MPAA Rating, KDM range if encrypted content is included, a graphic representation of the elements that make up the Show, and other items.

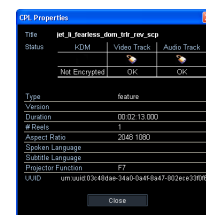


Note

Any included Black Frame Sequence does not appear in the graphical representation.

A Show element can be either a Composition Playlist or another Show Playlist.

To view additional details for the CPL, click the respective component in the graphic representation of the Show. A CPL Properties popup appears.



8 Play Initiator

This indicates whether the current presentation has been started manually (MANUAL), as a scheduled SMS event (SCHEDULE), or by an external trigger input (AUTOMATION).

Note

Regardless of how the current presentation has been started, once the presentation is stopped and restarted using the PLAY/STOP control the Play Initiator displays MANUAL.

9 3D Indicator (Projection Type)

The Projection Type Indicator provides an easily viewed indication of the configuration of the Auditorium Unit. The 3D Indicator will be present when the Auditorium Unit is configured for stereoscopic presentation.

10 Prepare Auditorium

Prepare Auditorium is a single button control which sets the Projector to ON (from STANDBY or Lamp OFF), opens the douser, and enables audio output from the Media Block.

11 Elapsed Time - Complete Show

Displays the Elapsed Time, HH:MM:SS, of the current presentation.

12 Presentation Controls¹

Presentation Controls are modal, that is, the availability of any specific control and its appearance on the screen is related to the current Presentation mode. A brief description of each control is found in the following table.

Icon	State	Description
	PLAY	Initiates presentation of the Show (Now Showing) from the Current Position. Available when STOPPED.
	STOP	Halts presentation of the current Show and the screen goes dark. Available when PLAYING or PAUSED.
	PAUSE	Halts presentation of the current Show with the last frame of the content remaining on screen. Available when PLAYING.
	FRAME ADVANCE	Advances the current position of the Presentation a single Frame. Available only when PAUSED.
	RESUME	Causes the current presentation to resume from the current frame. Available only when PAUSED.
	RESTART	Causes the current presentation to restart at the beginning. Available when STOPPED.

• PLAY/STOP

PLAY/STOP is a combined alternate action control and indicator. The indicator shows what action will occur when the control is clicked.

When the indicator appears as shown to the right (**PLAY**), and you click the indicator, the Show (Show Title) starts presentation from either the beginning of the Show or, if the Show was STOPPED, from the point in the Show where it was stopped. Once presentation has started, the indicator will change appearance to a **STOP** button. **PLAY** is only available from STOP mode.



When the indicator appears as shown to the right (**STOP**), and you click the indicator, the current presentation will Stop. The Show suspends presentation at its current location and if you click **PLAY**, the presentation resumes from the point at which it was halted. **STOP** is available when in either PLAY or PAUSED mode.



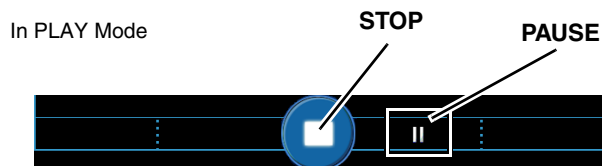
Note

Resumption of the presentation may take some seconds.

1. Presentation **MUST** be stopped or RESTART is not available.

• PAUSE

The **PAUSE** control², while suspending presentation of the current content maintains the system in PLAY mode (the STOP button remains available when in PAUSE mode).



When presentation is suspended from PLAY mode using the PAUSE control the current position of the show is retained in the Media Block.

To PAUSE the presentation, click the **PAUSE** button (shown to the right). The **PAUSE** control will be available only when the presentation is running and the STOP button is displayed.



While in PAUSE mode, the most current frame (image) of the presentation remains on the screen. The PAUSE control is only available when the presentation is in PLAY mode and the STOP button is present as illustrated above.

Selecting PAUSE enables the **FRAME ADVANCE** feature.

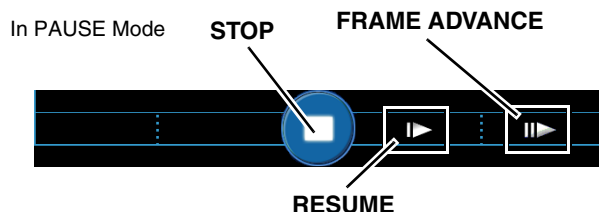
Caution

After pausing a presentation in a system for which AV DELAY is set, wait at least 1 second before resuming playback.

• FRAME ADVANCE

The **FRAME ADVANCE** control allows you to step forward a single frame at a time until the desired frame is presented on the screen.

The FRAME ADVANCE control (shown to the right) is available only when the presentation is in PAUSE mode. To advance the frame currently appearing on the auditorium screen, tap FRAME ADVANCE.



2. The STOP control halts presentation and the screen does dark.

• RESUME

The **RESUME** control (shown to the right) is only available when the presentation is in the **PAUSE** mode. **RESUME** restarts the presentation from its currently paused location (the frame displayed on the auditorium screen).



Note

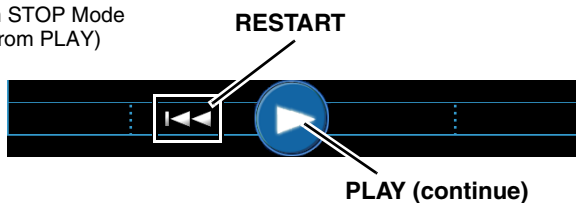
The **PLAY** control is not available when in the **PAUSE** mode.

• RESTART

The **RESTART** control (shown to the right) is available when the current presentation has been **STOPPED**.



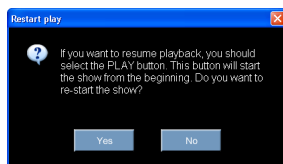
In STOP Mode
(from PLAY)



The **RESTART** control causes the presentation to “rewind” the first frame and then enter **PLAY** mode.

To begin presentation from the beginning of the Show, click **RESTART**.

A popup confirmation message appears. Click **YES** and presentation starts immediately from the Show beginning. Click **NO** to retain the current stopped location.



Note

If the SMS Server is restarted the current position of the presentation will be lost.

When a Show is stopped during its presentation using the **PLAY/STOP** control the current position of the show is retained in the SMS Server. If, once stopped, you click **PLAY**, the Show will continue presentation from the point at which it was stopped. The **RESTART** control allows you to start the current Show at its beginning. Presentation begins as soon as the **RESTART** is confirmed.

13 Information

Normally this area indicates the status of the SMS Controller in relation to the SMS Server, e.g., “Connected”. In addition, this area will show a countdown to the start of the next show, e.g., “Lawrence of Arabia” START in 1 hour, 48 minutes.

14 Ghostbuster Indicator

The Ghostbuster Indicator indicates whether the user license has been obtained for the Ghostbuster function, and whether the function is enabled.

When the production type is **3D** and a Ghostbuster license has been obtained, **GB** appears. Depending on whether the Ghostbuster function is enabled or disabled (deactivated), **GB** is displayed in pink or gray respectively.

15 Schedule/Manual icon

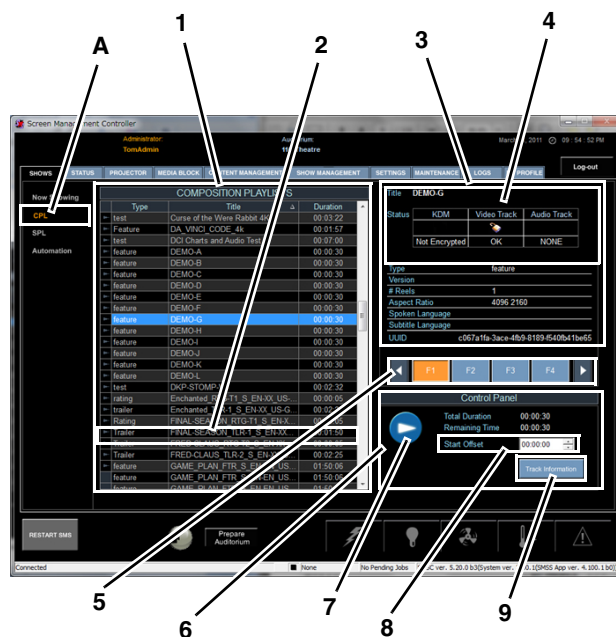
The Schedule/Manual mode icon displays whether the scheduled SPL is played automatically at the scheduled time or played manually through operator intervention. In Schedule mode, the scheduled SPL is played automatically. In Manual mode, the SPL will also be played automatically when the end of the Wait time (as set in the ini file) is reached.

Caution

Subtitles may not appear for a few seconds immediately after a presentation starts. Similarly, subtitles may not appear for a few seconds at the start of offset playback or immediately after a transition between a show and an intermission.

CPL (Composition Playlist)

When the **Shows** tab is selected and you click **CPL** (Composition Playlist) in the Navigation Bar, information related to Content resident in the system appears.



A CPL (Composition Playlist)

When **CPL** is selected in the Navigation Bar the window displays information and controls relating to Content

(CPL) resident in the system. Brief details of the selected CPL are shown to the right along with security information, any linked projector Function, and a Control Panel allowing you to PLAY/STOP the content selected in the CPL list to the left.

1 COMPOSITION PLAYLIST

A scrollable list of the Composition Playlists (CPLs) resident on the Media Block storage of the Auditorium's Digital Cinema System. The list includes the Type, Title and Duration of CPLs. When a CPL has an error, e.g., video or audio track has a FATAL error¹, it is shown highlighted in red.

To the left of the CPL Type you will find an arrow indicator  if the content is currently playable, e.g., a valid KDM is present (if required), presentation dates are valid, etc. The CPL list is loaded into the SMS Controller during user login and periodically refreshed.

Note

The CPL list may not always appear immediately after the SMS starts up. In such cases, wait a few minutes, and then try to display the CPL list screen again.

2 Selected CPL

The selected CPL is highlighted. To select a **CPL**, click the target in the CPL list.

3 CPL Details

Displays the general details of the selected CPL. This includes; the Title of the content, a Status (Security) area, additional information including Aspect Ratio in pixels, and the UUID which uniquely identifies the selected CPL.

Note

To playback content for which YES appears in the HFR Content column, a valid high-frame-rate content playback license is required.

4 Status (Security)

Shows a graphic representation of the content security status of the selected CPL. Below the Title is a table displaying the various Status.

The left most column (KDM) in the Status table indicates whether Keys, are required for decryption of the Content Element. When more than one Key² is required, the icon indicates the status of the Key(s). Below the graphical representation provides additional information.

No Key - Indicates that the KDM is either NOT present (**No Key**) or NOT required (**Not Encrypted**) for the CPL described component.



Key (alone) - Indicates that the KDM is present and valid (**Active**) for the CPL described component.



Key +  - Indicates that the KDM is present but is no longer valid (**Expired**) for the CPL described component.



Key +  - Indicates that the KDM is present but is not yet valid (**Inactive**) for the CPL described component.

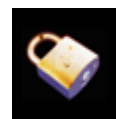


The Video Track and Audio Track columns contain icons which indicate the encryption status of the Component Elements.

Open Padlock - Indicates that the CPL described component is not encrypted and a KDM is not required.



Closed Padlock - Indicates that the CPL described component is locked and a KDM is required.



The “play status” of the Video/Audio tracks appears as text below the track specific icon. Possible values are:

- **OK**
The track is playable and the Media Block has not detected any error during the previous playback.
- **FATAL**
The Media Block has encountered “fatal” errors while playing, e.g., the content element has been badly encoded. Once set, the FATAL status of a Content Element will be retained until a correct DCP is re-ingested.
- **NONE**
The track does not exist, e.g., video content without and audio track.

1.DCP (without FATAL errors) must be re-ingested into the Media Block.

2.More than one Key may be required to fully unlock all content elements referenced by the specific CPL.

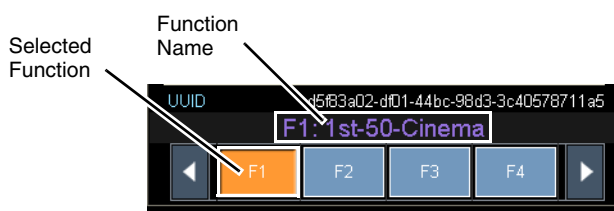
5 Function

An illuminated button indicates which, if any, Projector Function is linked to the selected CPL. Projector Function parameters are set using the separate SRX Controller¹ application.

Caution

Care should be exercised when making changes in the CPL to Function association. The new association is saved immediately and there is no “undo”. A new setting will not affect the current Show presentation. However, the new projector Function association will take effect the next time playout of the specific CPL occurs.

When you move the pointer over the Function on SRX-R320 based systems, the Function Name set using the SRX-Controller application is displayed above the Function buttons.



To set a CPL to projector Function association, select the target **CPL** in the Composition Playlist list to the left and then click the desired **Function** button. The Function button for the new association illuminates.

To clear the association, click the illuminated **Function** button.

A projector Function may also be linked to a CPL under the “Content Management” tab. See “CPL Properties” on page 52 for additional information.

6 Control Panel

Direct control of presentation of the selected CPL can be realized using this Control Panel.

7 PLAY/STOP

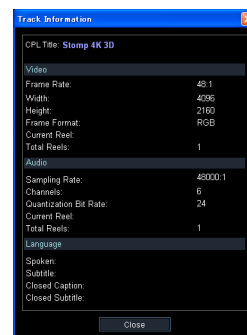
PLAY/STOP is a combined alternate action control and indicator. The control/indicator operates in the same manner as PLAY/STOP on the Now Showing screen and shows what action will occur when the control is clicked.

8 Start offset

In addition to the PLAY/STOP operation described above, an offset can be applied to the start point. Setting a specific **Start offset** value will result in the selected CPL starting at that offset location from the top of the element.

9 Track Information

A CPL describes the Content which is comprised of various component tracks (essence files), e.g., video, audio, sub-title, etc.,. When playing the CPL you can view a list of these components. Click **Track Information** and a popup window opens to display the separate components described by the selected CPL.



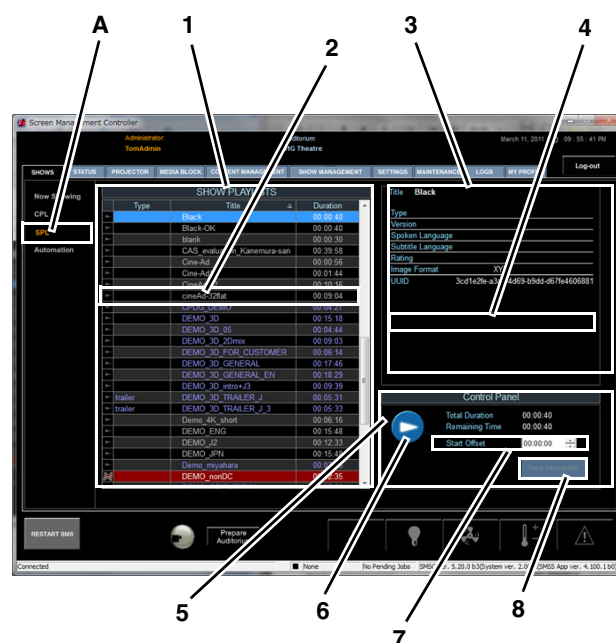
Note

The Track Information shown in the illustration is for stereoscopic (3D) content and therefore shows a Frame Rate of 48:1. Standard content(2D) will show a Frame Rate of 24:1. See “Show Management” on page 57 for additional information on SPLs.

Caution

If you want to play multiple short CPLs in an SPL in sequence, configure the sequence of CPLs so that their total duration is at least 10 seconds. If the total duration is under 10 seconds, the presentation may stop during the transitions between CPLs. See “Show Management” on page 57 for additional information on editing SPLs.

SPL (Show Playlist)



A SPL

When SPL is selected in the Navigation Bar the window displays information and controls relating to Show Playlists (SPL) resident in the system. Details of the

1. The SRX Controller exercises direct control over the Projector and therefore should not be used while the SMS Controller is in operation.

selected SPL are shown. In addition, a Control Panel allowing you to PLAY/STOP the selected SPL.

1 SHOW PLAYLISTS

A scrollable list of all Show Playlists (SPL) present. The list includes the Type, Title and Duration of SPLs. When an SPL has an error, e.g., Content (CPL) is missing or has missing or bad Content¹, it is shown highlighted in red and this broken film  indicator. To the right of the SPL Type you will find this indicator  if the entire SPL is currently playable, i.e., all included Content and associated KDM (if required) are present, presentation dates are valid, etc. This list is loaded from the SMS Server during user login and periodically refreshed.

2 Selected SPL

The selected (click to select) SPL is highlighted.

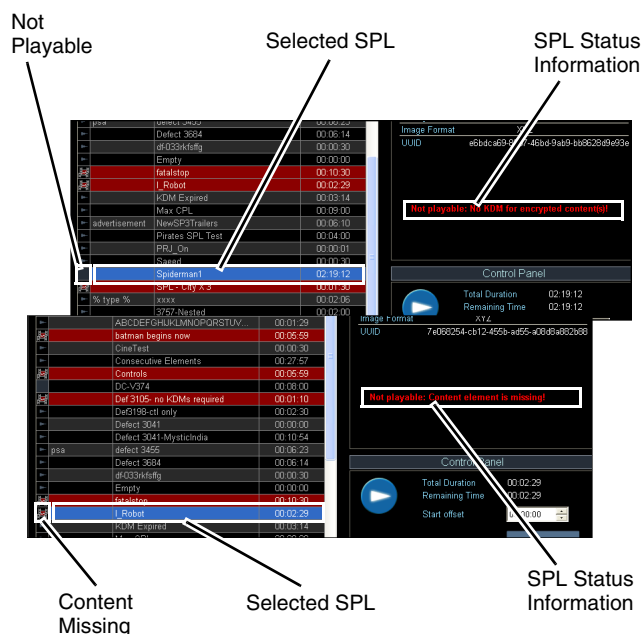
3 SPL Details

Displays the general details of the selected SPL. This includes; the Title, presentation information, and the UUID which identifies the selected SPL.

4 SPL Status Information

The status for the currently selected SPL is shown. Status information covers any included content as well as any associated KDM and KDM validity date range.

In the following illustration you can see two different SPL Status information lines. In the upper screen shown below you see an SPL where the included Content have been ingested into the Media Block but one or more KDM are missing. When the SPL is not selected its appearance in the list is normal except the “playable” indicator  is not present in the left most column.



In the lower screen you see an SPL where one or more included Content are missing. When the SPL is not selected its appearance in the list is in red and the “broken film” indicator  is present in the left most column. This indicator remains when the SPL is selected as illustrated.

5 Control Panel (Selected SPL)

Direct control over the presentation of the selected SPL can be realized using this Control Panel.

6 PLAY/STOP

PLAY/STOP is a combined alternate action control and indicator. This control/indicator operates in the same manner as PLAY/STOP on the Now Showing screen and indicates what action will occur when the control is clicked.

7 Start offset

In addition to the PLAY/STOP operation described above, an offset can be applied to the start point. Setting a specific **Start offset** value will result in the selected SPL starting at that offset location from the start of the playlist.

8 Track Information

An SPL can contain one or more CPLs or Sub-Playlists. The content currently showing will always be Content as described in a CPL. To obtain details of the CPL described Content, click **Track Information** and a popup window opens to display the separate track information, e.g., video, audio, sub-title, etc. described in the currently playing CPL.

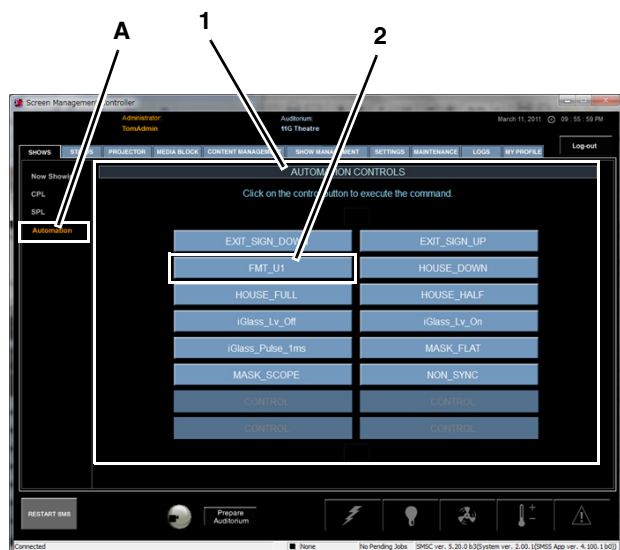


1.If CPL referenced content is missing or has an error the DCP must be re-ingested into the Media Block. Edit the SPL or copy the CPL content again. It may be necessary to refer to the Asset Report to determine the underlying issue.

Note

Track Information is only available when the SPL is playing. The Track Information shown in the illustration is for stereoscopic (3D) content and therefore shows a Frame Rate of 48:1. Standard content(2D) will show a Frame Rate of 24:1.

Automation (Controls)

**Notes**

- These actions are the same “Control Events” that can be included in a Show Playlist. (See “*Append Control Event*” on page 104.)
- In software version 2.30 and later, Automation Controls include a Z-axis auto-adjustment function and calibration function for projectors. These Automation Controls cannot be deleted from the CONTROL LIST. Also, these two functions cannot be sent from this screen.

A Automation

When Automation is selected in the Navigation Bar the window displays Automation Controls configured in the system. Each control is labeled with the same name applied during configuration. (See “*Automation (Controls)*” on page 72.)

1 Automation Controls

Using the Automation Controls, you can control Auditorium Automation and trigger any of the General Purpose Input/Output Outputs (GPIO). These outputs are configured using the Automation screen under the Settings tab and allow for interfacing with legacy equipment.

2 Control (button)

Click the target button to cause the indicated action to be executed, e.g., House Lights 50%. Each button causes only one action to be executed.

Status

You can view various status indicators for the Auditorium Unit from the SMS Controller Window.

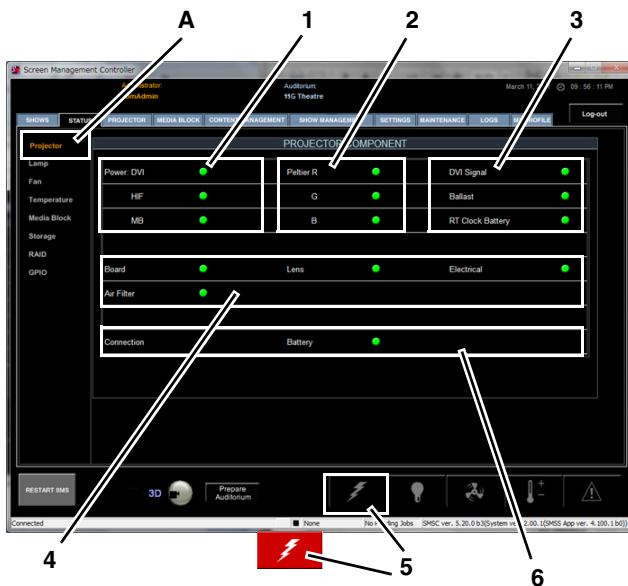
Status indicators have three possible states. They are

- (Green) - Operation Normal
- (Yellow) - Warning
- (Red) - Error
- (Gray) - State Unknown

This section describes controls and information available when the Shows tab is selected. Refer to the specific sub-system information for additional details.

Projector

You click **Projector** in the Navigation Bar the window displays the PROJECTOR COMPONENT status indicators.



A Projector

When Projector is selected in the Navigation Bar the window displays PROJECTOR COMPONENT status information.

1 Power - Signal Processors

The SRX-R320 projectors are equipped with 3 signal processors. They are:

- **DVI** - The signal processor for externally originated DVI-D signals.
- **HIF** - The signal processors for externally originated HD/DC-SDI signals.

- **MB** - The signal processor for Media Block originated signals.

2 Peltier - Thermal Devices

Monitors power to the temperature control devices associated with the Red, Green, and Blue (**R,G,B**) imagers

3 DVI, Ballast, RT Clock Battery

Displays the status of the following projector areas.

- **DVI Signal** - When an external DVI-D signal is applied the format of the DVI-D signal is verified against the configuration set using the SRX Controller¹ application.
- **Ballast** - Monitors operating the status of communication and devices associated with the Lamp Ballast.
- **RT Clock Battery** - Monitors the health of the battery for the Real-time Clock located in the projector.

4 Board, Lens, Electrical, Air Filter, Filter Duct

Displays the status of the Projector Board, Lens, Electrical system, Air Filter, and Filter Duct.

5 Projector Status Select/Warning

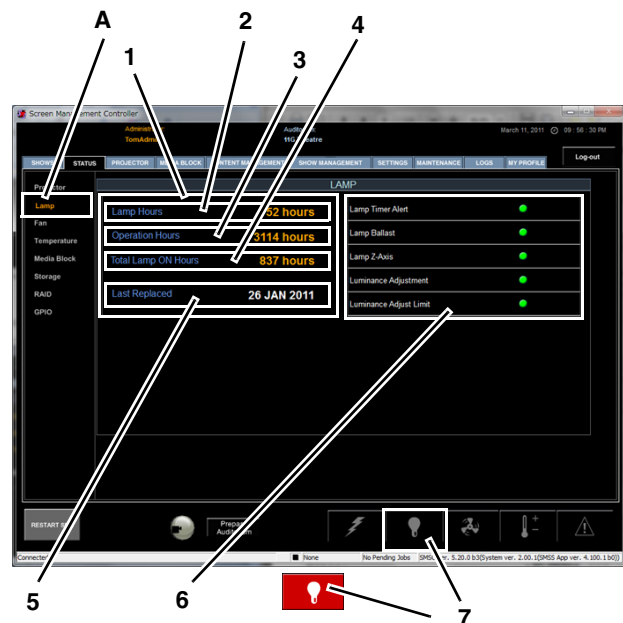
The Projector Status button appears on all SMS Controller windows and provides immediate access to the Projector Status window. This button can be used both in the normal and in the warning condition. When a Projector Warning condition exists the button will appear in RED as shown.

6 Connection and Battery

“Connection” indicates the status of physical and logical network connections between the Media Block and Projector. “Battery” indicates the status of the Projector’s Secure Silicon battery.

1. The SRX Controller exercises direct control over the projector and therefore should not be used at the same time the SMS Controller is in operation.

Lamp



A Lamp

When Lamp is selected in the Navigation Bar the window displays Lamp and Projector hours information and status indicators for specific items in the lamp area of the projector.

1 Lamp Information

This group shows the lamp usage hours, total projector hours and the date of the last lamp replacement. Status indicators appear to the right.

2 Lamp Hours

Shows the effective number of hours the lamp has operated since the hours timer has been reset¹.

3 Operation Hours

Shows the total number of hours of Projector Operation.

4 Total Lamp ON Hours

Shows the actual Total Lamp ON Hours.

5 Last Replaced (Date)

Shows the date on which the installed lamp was last replaced. This is automatically set when the Lamp Serial Code is entered during the replacement process.

1. The timer for Lamp Hours is automatically reset when a new lamp Serial Code is entered during the lamp replacement process.

6 Lamp Specific Indicators

Displays status for lamp related sub-systems. They are:

• Lamp Timer Alert

Indicates green when the Lamp Hours are less than the rated maximum operating hours. Appears yellow when the maximum rated lamp hours have been reached or exceeded.

• Lamp Ballast

Indicates green when status of the projection Lamp (power) Ballast is normal. The indicator will display red when an error is detected.

• Lamp Z-Axis

Indicates green when the status the Z-Axis adjustment motor used for lamp positioning is normal. The indicator will display yellow when a warning condition is detected.

• Luminescence Adjustment

Indicates green when the luminance adjustment feature is operating normally. The indicator will display yellow when a warning condition is detected.

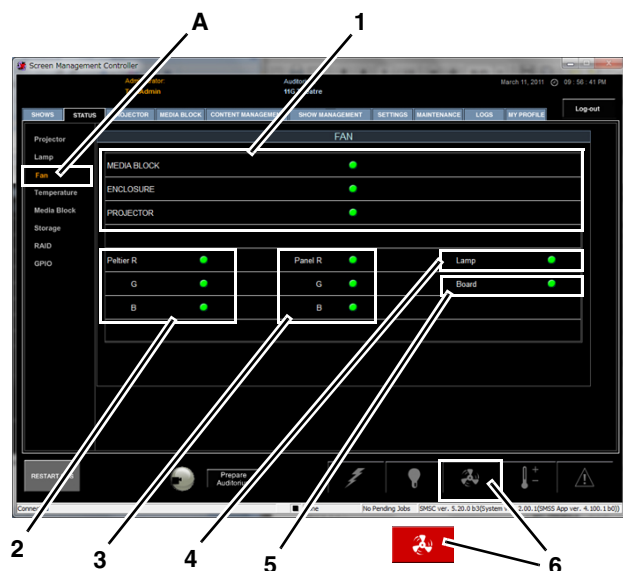
• Luminescence Adjust Limit

This indicator is reserved for future expansion of projector features. Currently this indicator is green at all times.

7 Lamp Status Select/Warning

The Lamp Status button appears on all SMS Controller windows and provides immediate access to the Lamp Status window. This button can be used both in the normal and in the warning condition. When a Warning condition appears on the LAMP window the button will appear in RED as shown.

Fan



A Fan

When Fan is selected on the Navigation Bar the window displays indicator lamps for fans in each of the major Sub-systems.

1 Monitored Subsystem Fans

Included in the FAN status area are three indicators:

- **Media Block** - indicates the status of the fans providing cooling to the Media Block.
- **Enclosure** - indicates the status of the fan providing cooling to the Auditorium Unit enclosure.
- **Projector** - indicates the status of the fans providing cooling to the SRX-R320 Projector.

2 Peltier Fans

Fans for the Peltier temperature control devices associated with the Red, Green, and Blue (**R, G, B**) imagers are monitored. A Peltier device is essentially a thermoelectric heat pump that can be operated in a manner that will either cool or heat an attached device. The Peltier devices are used to maintain the temperature of the imaging devices to optimize image presentation.

3 In the SRX-R320 projector, this item is grayed out.

4 Lamp Fan

Because of the high temperatures associated with the Lamp operation and the need for air circulation in Lamp Housing, the fan specific to that area is monitored.

5 Board Fan

The fan providing air circulation to the main projector circuit board is monitored.

6 Fan Status Select/Warning

The Fan Status button appears on all SMS Controller windows and provides immediate access to the Fan Status window. This button can be used both in the normal and in the warning condition. When a Warning condition appears on the FAN window the button will appear in RED as shown.

Temperature

The Screen Management System monitors for any abnormality of temperatures during operation. Fans are separately monitored but, even without a fan failure, internal temperatures could rise for a variety of reasons.

Temperature status for the SRX-R320 based Auditorium Unit is monitored for four major subsystems and the individual Peltier devices.



A Temperature

When Temperature is selected on the Navigation Bar the window displays indicator lamps for each components temperatures in the Auditorium Unit.

1 Monitored Subsystem Temperature

Included in the TEMPERATURE status area are indicators for the following two major areas:

- **Media Block** - Indicates the Temperature status of the Auditorium Unit's Media Block.
- **Enclosure** - In the R320 system, this indicates the SMS CPU temperature.
- **Projector** - Indicates the status of the Temperature in the Projector subsystem.

② Panel (Imaging) Temperature

High temperatures can have an undesirable effect on the quality of the presentation. Three separate temperature monitors are associated with the Red, Green, and Blue (R, G, B) imaging Panels.

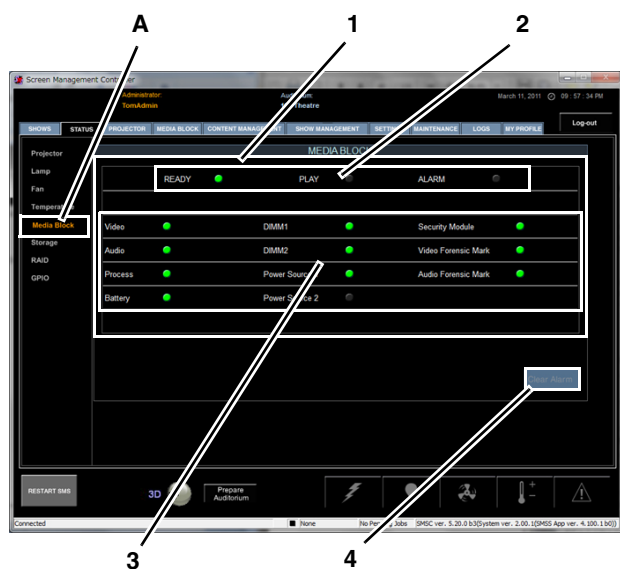
③ UPS¹

When the Auditorium Unit is equipped with an internal Uninterruptable Power Supply (UPS) the temperature statue of the UPS is monitored and indicated. This indicator is gray when the USP is external and cannot be monitored.

④ Temperature Status Select/Warning

The Temperature Status button appears on all SMS Controller windows and provides immediate access to the Temperature Status window. This button can be used both in the normal and in the warning condition. When a Warning condition appears on the TEMPERATURE window the button will appear in RED as shown.

Media Block



A Media Block

When Media Block is selected on the Navigation Bar the window displays indicator lamps for each of the Media Block Sub-system.

① MEDIA BLOCK

Displays the state and status of the major Media Block processes, components, and the included storage device. It is possible that during the start up process the RAID may encounter a problem. If this occurs system startup continues normally but playback cannot be realized. A

1. UPS temperature cannot be obtained with the LMT-300.

problem in the RAID is indicated by a Disk alarm indication.

② READY/PLAY/ALARM

Included in the MEDIA BLOCK status area are three indicators:

- **READY** - indicates the Media Block is operational.
- **PLAY** - indicates the Media Block is currently in PLAY mode.
- **ALARM** - indicates there is a problem with the Media Block operation.

③ PROCESS/COMPONENT

Additional monitoring is provided for:

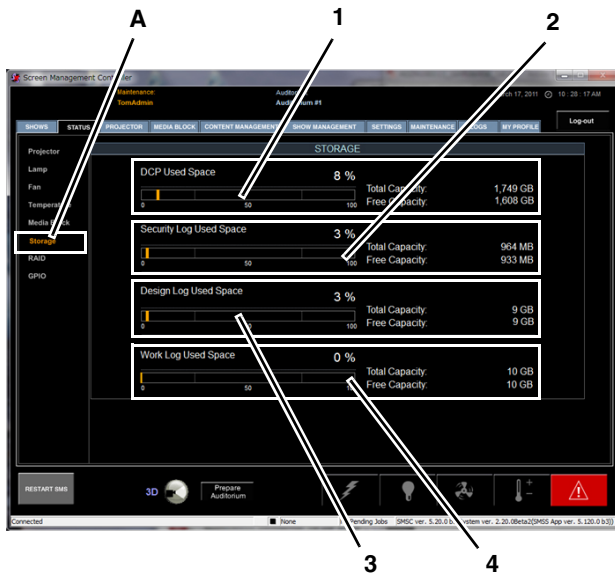
- **Video** - Indicates the status of the video signal processing.
- **Audio** - Indicates the status of the audio signal processing.
- **Process** - Indicates the status of the signal (image/sound essence) processing.
- **Battery** - Indicates the status of the internal battery that provides power to sustain Media Block settings.
- **DIMM1** - Indicates the status of the #1 Dual Inline Memory Module (DIMM) installed in the Media Block.
- **DIMM2** - Indicates the status of the #2 Dual Inline Memory Module (DIMM) installed in the Media Block.
- **Power Source 1** - Indicates the status of the #1 Power Supply installed in the Media Block.
- **Power Source 2²** - Indicates the status of the #2 Power Supply installed in the Media Block.
- **Security Module** - Indicates the status of the Media Block security system and content key processing.
- **Video/Audio Forensic Mark** - Indicates the status of the audio forensic marking processing.

④ Clear Alarm

Some alarm indicators may be delayed in returning to normal after the alarm condition has been resolved. To insure that you are seeing the current alarm status, click **Clear Alarm**.

2. The presence of a 2nd Power Supply in the Media Block is optional. When the optional supply is not present this indicator is gray.

Storage (Space)



A Storage

When Storage is selected on the Navigation Bar a combined graphical and numerical indicators display appears. This provides information on the amount of storage space used and free space available. The graphics provide an easy visual indicator for each of the Storage system areas.

1 DCP Used Space

A DCP is a set of files (possibly encrypted) containing digital content packaged for shipment to theaters. As such each “package” can be quite large. The DCP Storage group includes numerical information (to the right of the graphical indicator) detailing the amount of storage space used, the amount of free space and an easily recognized graphical indicator as a visual cue.

2 Security Log Used Space

Security Logs are stored in their own dedicated storage space. This insures that they are not inadvertently overwritten during system operation. The Security Log group includes numerical information (to the right of the graphical indicator) detailing the amount of storage space used, the amount of free space and an easily recognized graphical indicator as a visual cue.

3 Design Log Used Space

A Design Log contains information generated by the Media Block application.

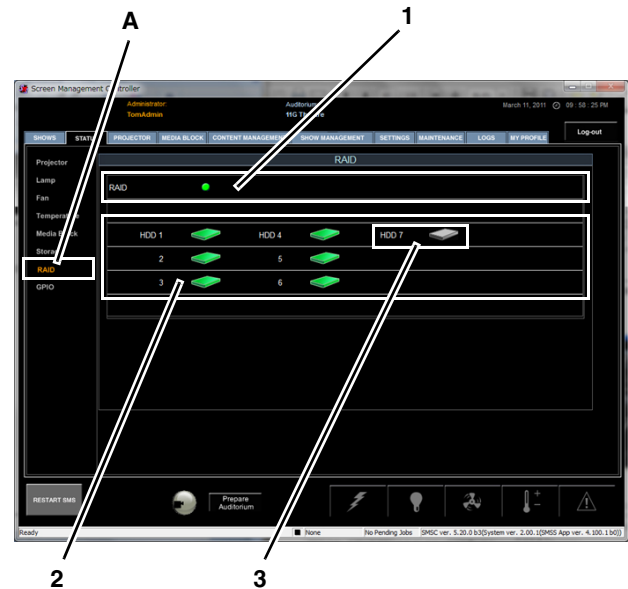
The Design Log group includes numerical information (to the right of the graphical indicator) detailing the amount of storage space used, the amount of free space and an easily recognized graphical indicator as a visual cue.

4 Work Log Used Space

This area is the temporary storage location for Media Block Service Log snapshots. The snapshot captures the current state of the Media Block and includes a date & time stamp.

The Work Log group includes numerical information (to the right of the graphical indicator) detailing the amount of storage space used, the amount of free space and an easily recognized graphical indicator as a visual cue.

RAID



A RAID

When RAID is selected on the Navigation Bar, the window displays a consolidated status indicator of the RAID. In addition, individual icons indicate the status of each individual HDD.

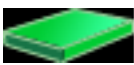
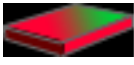
1 RAID Status

Indicates the overall status of the RAID.

2 HDD Status

The icons of the individual HDDs indicate the status of the specific Hard Disk Drive. HDDs are numbered 1 to 7 which corresponds to their location in the Media Block subsystem. Six of the HDDs operate as a RAID device with the 7th Drive acting as a spare.

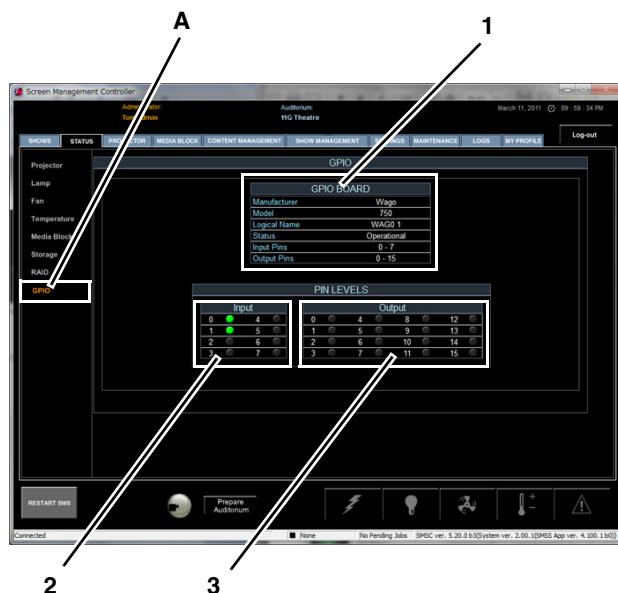
The HDD Status/State information is shown in the following table.

Appearance	HDD Status/State
	Green - HDD is Installed and operating normally.
	Yellow - HDD is installed but is in a Warning state.
	Red - HDD is installed but is in an Error condition.
	Red/Green - HDD is installed and is in the process of being rebuilt.
	White/Gray - HDD is installed and is designated as a Spare Drive.
	Yellow/Gray - HDD is installed but is in an unusable condition.
	Outline - HDD is not installed in this position. The Drive icon appears as a simple outline.

3 Spare HDD

In the RAID Status illustration, the spare HDD appears in the 7th Drive position.

GPIO



A GPIO

When **GPIO** is selected on the Navigation Bar, the window displays the GPIO Board information and two groups showing the current signal level of the GPIO Input and Output pins.

1 GPIO BOARD

Identifies the GPIO Board used in the Auditorium Unit. This includes the Manufacturer, Model, Logical Name, Status, Input Pins, Output Pins, and other information.

Note

Pin numbers appearing on the GPIO are numbered beginning at “0” (zero). The normal GPIO configuration has eight Input and 16 Output Pins or modules.

2 GPIO PIN LEVELS - Input

Input Pins are used to trigger the start of associated SPLs or an Emergency Alert¹ action. A Green lamp indicates that the associated Input is in the Active/High state at the module Pin.

3 GPIO PIN LEVELS - Output

Output Pins are used to trigger external events or actions in the auditorium, e.g., Open Curtains, Dim Lights, etc. A Green lamp indicates that the associated output is in the Active/High state at the module Pin.

Note

The actual external action, e.g., Curtain Open/Close, House Lights Up/Down, etc., is under the direct control of a dedicated controlling device. The GPIO Output trigger is used to initiate or start the designated control action.

1. The availability of the Emergency Alert feature is configured during system installation.

Projector

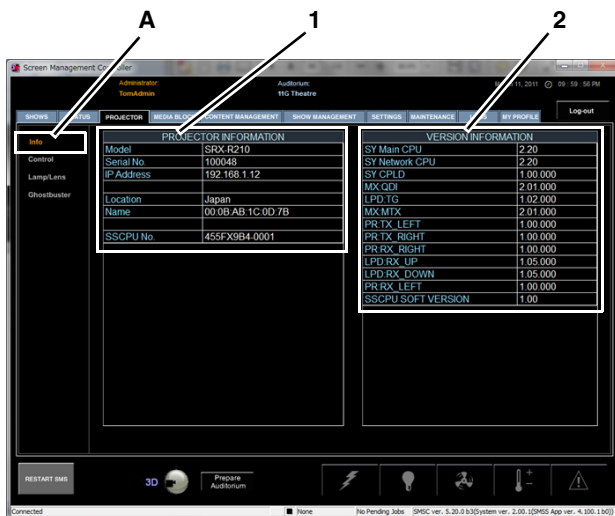
The **Projector** tab allows access to projector information, input source selection, and other adjustments and settings that affect the appearance of the projected image.

Note

When the Projector has yet to be “discovered¹”, the Projector tab is unavailable and the Alert status button is illuminated. However, other operations may be performed, e.g., DCP Ingest, SPL Editing, and Media Block operations. Projector related selections on the Navigation Bar under other tabs, e.g., STATUS and MAINTENANCE, will also be unavailable at this time.

Info

When the **Projector** tab is selected and you click **Info** in the Navigation Bar, two information areas appear.



A Info

Select **Info** in the Navigation Bar and two Projector Information groups appear.

1 PROJECTOR INFORMATION

The PROJECTOR INFORMATION list shows information specific to the projector, e.g., Model, Serial #, and IP address associated with the designated Auditorium (selected during Login).

1. Projector discovery occurs during the initial communications between the SMS Server and the Projector. Once discovered the Projector tab will be available.

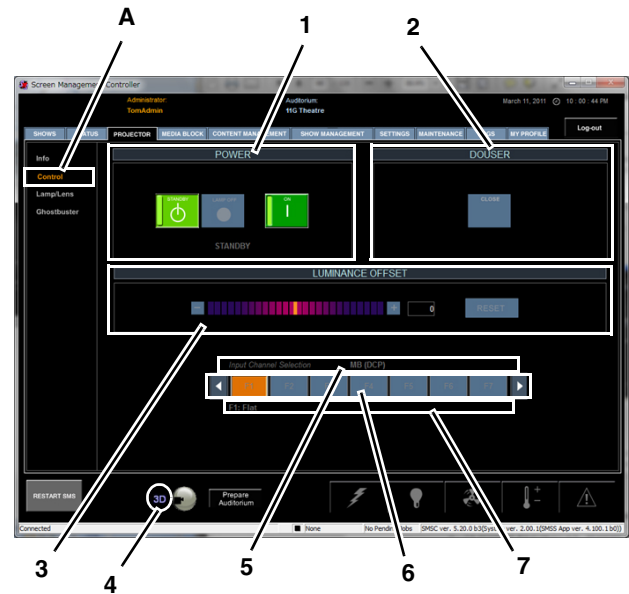
2 VERSION INFORMATION

The VERSION INFORMATION list shows the Firmware Version installed in the major projector sub-systems.

Control

The Projector Control available using the SMS Controller is specific to the model of the Auditorium Unit Projector.

When the **Projector** tab is selected and you click **Control** in the Navigation Bar, three control groups appear in addition to seven of the twenty Function selectors (scrollable). The three control groups are POWER, DOUSER and LUMINANCE OFFSET.



A Control

Select **Control** in the Navigation Bar and you have access to the projector POWER and DOUSER control buttons, the LUMINANCE OFFSET control, and the Function selectors.

1 POWER

These controls place the Projector in **STANDBY** or **ON** Mode and allow you to turn off the Lamp (select **LAMP OFF**) without resorting to **STANDBY**.

Current Mode	Transition	New Mode
STANDBY	OK	ON
	NO	LAMP OFF
ON	OK	STANDBY
	OK	LAMP OFF
LAMP OFF	OK	STANDBY
	OK	ON

When ON is selected from STANDBY the projector begins a start up sequence beginning with power being applied to the lamp.

Note

There is a delay between the time you click **ON** and the system being ready for operation. This is irrespective of whether the Projector subsystem is in STANDBY or LAMP OFF mode. During this time the douser is ON, Projector controls are unavailable and status information on other screens may be changing. At end of the start up sequence the douser will return to the same state that was current when the Projector was put in STANDBY.

• LAMP ON to OFF or STANDBY

Turning the Lamp OFF between shows can reduce lamp replacement frequency. However, a cool-down period of about 15 minutes is recommended after setting Lamp OFF or STANDBY mode.

When **STANDBY** is selected the projector begins a controlled transition beginning with power being removed from the lamp. **DO NOT REMOVE A/C MAINS POWER UNTIL THE PROJECTOR HAS COMPLETED THE COOL-DOWN CYCLE AND ALL FANS HAVE SHUT DOWN.**

Note

You may notice a slight delay between clicking **STANDBY** and the removal of power from the lamp. Also, fans will continue to operate for some period of time to provide any necessary cooling to system components. The final step in the sequence places the projector in STANDBY.

Caution

- A/C power is still present in the Projector subsystem when POWER is set to STANDBY. If you must work in the projector place the LAMP and MAIN circuit breakers located on the rear panel of the Auditorium Unit in the OFF position. This removes power from the Projector only. Other subsystems located in the Auditorium Unit, e.g., SMS Server, Media Block, etc. remain powered. When in STANDBY, the projector lamp is OFF and many of the projector functions are in a stand-by state and unavailable. Only the STANDBY/ON control and other key projector status indicators (shown when the Status tab is selected) are valid when in STANDBY. The POWER mode controls are always available to the user unless the power to the system has been removed or the system is in transition between states.
- Selecting **STANDBY** does not remove power from the Projector or the Auditorium Unit.

2 DOUSER

An alternate action control that interrupts the image from the projector. When the status indicates “**CLOSE**” the DOUSER is “**Closed**” and the screen is dark. When the status indicates “**OPEN**” the DOUSER is “**Open**” and the image appears on the screen.

Note

The lamp will remain energized even when the DOUSER is “**CLOSE**” (closed).

The DOUSER control is available to the user from this window unless the Projector is in STANDBY, LAMP OFF or the system is in transition between states. DOUSER control is also available for execution as a Control Event within an SPL.

3 LUMINANCE OFFSET

The offset level of lamp luminance can be set by the LUMINANCE OFFSET control. This control allows you to adjust the image brightness without effecting the value of the setting stored in the current projector Function. Adjustment to LUMINANCE OFFSET should be made while observing the image presentation on the auditorium screen. The Offset is retained until you click RESTET (returns the Offset to “0”).

Note

Only one offset value can be stored in one projector.

4 Projection Type Indicator

The Projection Type Indicator (3D) appears when the projector has been configured for stereoscopic presentation.

5 Input Channel Selection

The area above the Function selectors indicates which input channel, i.e., MB (DCP), DVI-D, HIF, etc. is selected to provide the input signal to the projector. Control of input channel selection is realized by use of the SRX Controller¹, and the selection can be stored under a designated Function.

6 Projector Function (F1 to F20)

Selecting a Function causes a stored² set of characteristics to be called in the projector. These characteristics are stored in the projector using the separate SRX Controller application.

1.The SRX Controller exercises direct control over the projector and therefore should not be used at the same time the SMS Controller is in operation.

2.Stored in the Projector and recalled by Function selection.

Projector Function selection is available when either Control or Lamp/Lens is selected in the Navigation Bar. Once a Function is selected, the selection is retained even when you select a different window from those available on the Navigation Bar.

Caution

Selecting a Function during presentation will cause a warning message to appear requesting confirmation. If you confirm the new selection the DOUSER will close and the auditorium screen go dark (black) for a short period of time while the new settings are applied to the projector. A “Please Wait” popup message appears on the display while the new settings are established in the projector.

Note

Projector Functions are related to the Projection Type (refer to the Screen Management System Controller User’s Guide). Functions related to stereoscopic (3D) operation are identified with the “[3D]” indicator in the Function Name. The 3D Projection Type Indicator must be present to select a 3D Function. If the Projector Function and Projection Type are incompatible, e.g., Projection Type is set to standard (no 3D Indicator) and a Projector Function designated as “[3D]” an alert message appears advising of the incompatibility. Click **YES**, the message is closed and the Projector Function is NOT set.

7 Function Name (Descriptive)

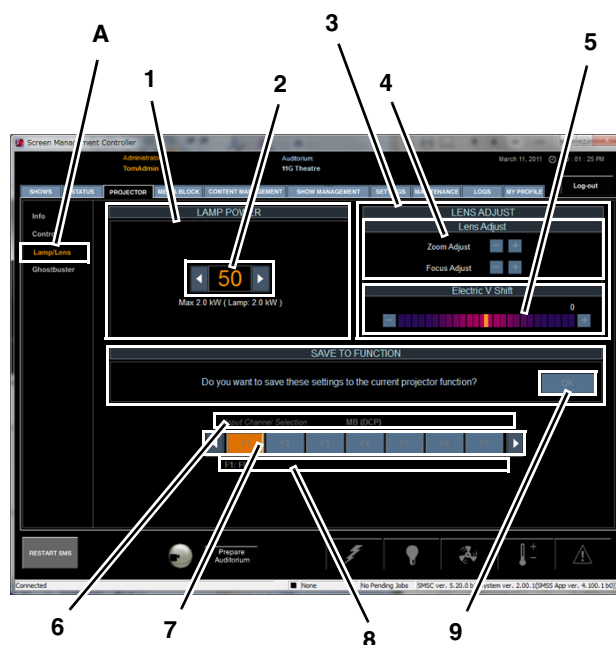
When a FUNCTION is configured using the SRX Controller you can store a descriptive label for the Function. Placing the pointer on a Function button will cause the complete Function Name to appear below the Function buttons.

Lamp/Lens

When the **Projector** tab is selected and you click **Lamp/Lens** in the Navigation Bar, three major control groups appear along with the Function (F1 to F20) selectors. The controls available are dependant on the Projection Type selected.

Projection Type - 2D (Standard)

When the Projection Type is set to 2D (Projectionist Terminal), adjustment controls in the groups sets Lamp Power, makes adjustments to the image size, optical sharpness or focus, vertical shift resulting from aspect ratio changes, and the ability to Save the changes to the currently selected Function. Refer to the Projector documentation for additional information.



Note

All settings available in the Lamp/Lens tab are active during content presentation. Saving these changes to the current projector Function will effect all future presentations that use the same Function, i.e., where the Function and CPL are associated.

Caution

Selecting a new Function during presentation will cause a warning message to appear requesting confirmation. If you confirm the new selection the auditorium screen to go dark (black) for some period of time while the selected Function is applied to the projector.

Note

Adjustments made to setting using the available controls are immediately applied to the projector. These new

settings can be optionally saved to the current projector Function and will be recalled whenever the projector Function is either manually selected or selected due to a Function to CPL association.

❶ Lamp Power

Lamp Power range is from 50 to 100. This control adjusts the lamp power output in increments of 1%. By reducing the lamp power, the brightness of the image presented on the screen will be reduced.

❷ Lens Adjust

Two adjustment are available for the projection lens. They are: Zoom and Focus.

- **Zoom**

Adjusting Zoom (+/-) allows you to resize the projected image on the screen.

Note

When the image size is changed (zoomed) the image brightness on the screen may require some adjustment. This adjustment can be realized using either the LAMP Power setting or LUMINANCE OFFSET on the Projector Control screen (see “*LUMINANCE OFFSET*” on page 41). If you make a change to the image brightness using the LAMP POWER control and then save the new setting to the current projector Function the change to the Function will effect the presentation whenever the same Function is recalled (either manually or by Function to CPL association). An adjustment to screen brightness using LUMINANCE OFFSET is independent of Function (i.e. not saved as Function). The LUMINANCE OFFSET remains in effect even for a newly selected Function. The advantage of using LUMINANCE OFFSET is that it can be used to compensate for a reduction in screen brightness as the lamp ages.

- **Focus**

Adjusting Focus (+/-) allows you to set the overall optical clarity of the projected image on the screen.

❸ Electric VShift Adjust

Electrically adjusts the projected image in the vertical direction. Refer to the Projector documentation for additional details.

❹ Input Channel Selection

The area above the Function selectors indicates which input channel, i.e., MB (DCP), DVI-D, HIF, etc. is selected to provide the input signal to the projector. Control of input channel selection is realized by use of the SRX Controller¹, and the selection can be stored under a designated Function.

❺ Projector Function (F1 to F20)

Selecting a projector Function causes a stored set of characteristics to be called in the projector. These characteristics are stored in the projector using the separate SRX Controller application.

Projector Function selection is available when either Control or Lamp/Lens is selected in the Navigation Bar. Once a Function is selected, the selection is retained even when you select a different window from those available on the Navigation Bar.

Caution

Selecting a projector Function during presentation will cause a warning message to appear requesting confirmation. If you confirm the new selection the DOUSER will close and the auditorium screen go dark (black) for a short period of time while the new settings are applied to the projector. A “Please Wait” popup message appears while the new settings are established in the projector.

Note

Projector Functions are related to the Projection Type (refer to the Screen Management System Controller User’s Guide). Functions related to stereoscopic (3D) operation are identified with the “[3D]” indicator in the Function Name. The 3D Projection Type Indicator must be present to select a 3D Function. If the Projector Function and Projection Type are incompatible, e.g., Projection Type is set to standard (no 3D Indicator) and a Projector Function designated as “[3D]” an alert message appears advising of the incompatibility. Click **YES**, the message is closed and the Projector Function is NOT set.

❻ Function Name (Descriptive)

When a projector Function is configured using the SRX Controller you can store a descriptive label for the Function. Placing the pointer on a Function button will cause the complete Function Name to appear below the Function buttons.

❼ Save Settings to Function

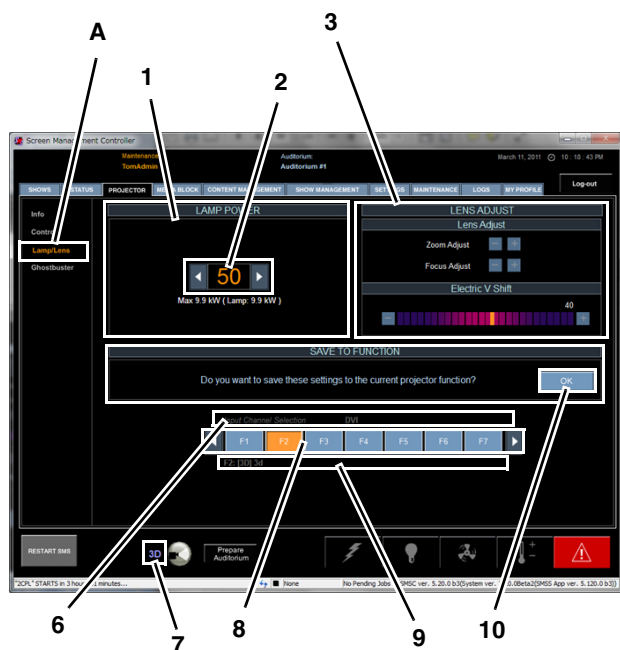
To save the changes made to setting on the Lamp/Lens screen, click **OK**. If the changes are not saved to the

1. The SRX Controller exercises direct control over the projector and therefore should not be used at the same time the SMS Controller is in operation.

current projector Function then they will be discarded when a new Function is selected.

Projection Type - 3D (Stereoscopic)

When the Projection Type is set to 3D (Projectionist Terminal), the only adjustment control available allows you to set Lamp Power. You can also Save the change to the currently selected Function. Refer to the Projector documentation for additional information.



Note

All settings available in the Lamp/Lens tab are active during content presentation. Saving these changes to the current projector Function will effect all future presentations that use the same Function, i.e., where the Function and CPL are associated.

Caution

Selecting a new Function during presentation will cause a warning message to appear requesting confirmation. If you confirm the new selection the auditorium screen to go dark (black) for some period of time while the selected Function is applied to the projector.

Note

Adjustments made to setting using the available controls are immediately applied to the projector. These new settings can be optionally saved to the current projector Function and will be recalled whenever the projector Function is either manually selected or selected due to a Function to CPL association.

1 Lamp Power

Lamp Power range is from 50 to 100. This control adjusts the lamp power output in increments of 1%. By reducing the lamp power, the brightness of the image presented on the screen will be reduced.

2 Lens Adjust

Two adjustment are available for the projection lens. They are: Zoom and Focus.

• Zoom

Adjusting Zoom (+/-) allows you to resize the projected image on the screen.

Note

When the image size is changed (zoomed) the image brightness on the screen may require some adjustment. This adjustment can be realized using either the LAMP Power setting or LUMINANCE OFFSET on the Projector Control screen (see “LUMINANCE OFFSET” on page 41). If you make a change to the image brightness using the LAMP POWER control and then save the new setting to the current projector Function the change to the Function will effect the presentation whenever the same Function is recalled (either manually or by Function to CPL association). An adjustment to screen brightness using LUMINANCE OFFSET is independent of Function (i.e. not saved as Function). The LUMINANCE OFFSET remains in effect even for a newly selected Function. The advantage of using LUMINANCE OFFSET is that it can be used to compensate for a reduction in screen brightness as the lamp ages.

• Focus

Adjusting Focus (+/-) allows you to set the overall optical clarity of the projected image on the screen.

3 Electric VShift Adjust

Electrically adjusts the projected image in the vertical direction. Refer to the Projector documentation for additional details.

4 Input Channel Selection

The area above the Function selectors indicates which input channel, i.e., MB (DCP), DVI-D, HIF, etc. is selected to provide the input signal to the projector. Control of input channel selection is realized by use of the SRX Controller¹, and the selection can be stored under a designated Function.

1. The SRX Controller exercises direct control over the projector and therefore should not be used at the same time the SMS Controller is in operation.

5 Projector Function (F1 to F20)

Selecting a projector Function causes a stored set of characteristics to be called in the projector. These characteristics are stored in the projector using the separate SRX Controller application.

Projector Function selection is available when either Control or Lamp/Lens is selected in the Navigation Bar. Once a Function is selected, the selection is retained even when you select a different window from those available on the Navigation Bar.

Caution

Selecting a projector Function during presentation will cause a warning message to appear requesting confirmation. If you confirm the new selection the DOUSER will close and the auditorium screen go dark (black) for a short period of time while the new settings are applied to the projector. A “Please Wait” popup message appears while the new settings are established in the projector.

Note

Projector Functions are related to the Projection Type (refer to the Screen Management System Controller User’s Guide). Functions related to stereoscopic (3D) operation are identified with the “[3D]” indicator in the Function Name. The 3D Projection Type Indicator must be present to select a 3D Function. If the Projector Function and Projection Type are incompatible, e.g., Projection Type is set to standard (no 3D Indicator) and a Projector Function designated as “[3D]” an alert message appears advising of the incompatibility. Click **YES**, the message is closed and the Projector Function is NOT set.

6 Function Name (Descriptive)

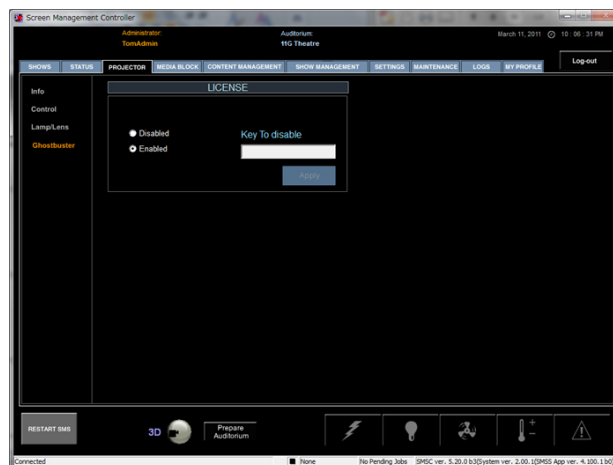
When a projector Function is configured using the SRX Controller you can store a descriptive label for the Function. Placing the pointer on a Function button will cause the complete Function Name to appear below the Function buttons.

7 Save Settings to Function

To save the changes made to setting on the Lamp/Lens screen, click **OK**. If the changes are not saved to the current projector Function then they will be discarded when a new Function is selected.

Ghostbuster

Enables or disables the Ghostbuster function and the user license. A specialized license key is needed to perform these operations.

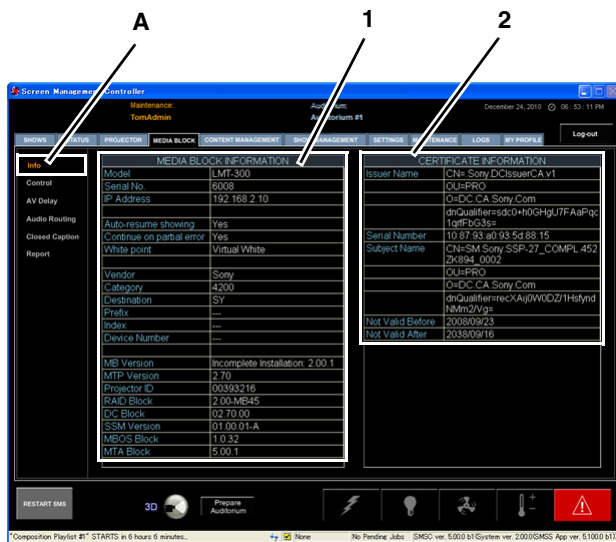


Media Block

The Media Block is a combined server and decoder that contains all the components required to store, ingest, decode and play digital content. Specific functions include: decoding, security key management, extraction of audio and visual images from MXF files, sub-titles insertion, audio and digital watermarking of image. The Redundant Array of Independent Disk (RAID) storage is an integral part of the Media Block.

Info

When the **MEDIA BLOCK** tab is selected and you click **Info** in the Navigation Bar, two information groups appear



A Info

When **Info** is selected on the Navigation Bar the Media Block Information group appears. Information blocks are: MEDIA BLOCK INFORMATION and CERTIFICATE INFORMATION.

1 MEDIA BLOCK INFORMATION

The MEDIA BLOCK INFORMATION group identifies the Media Block in the SMS system selected during your login.

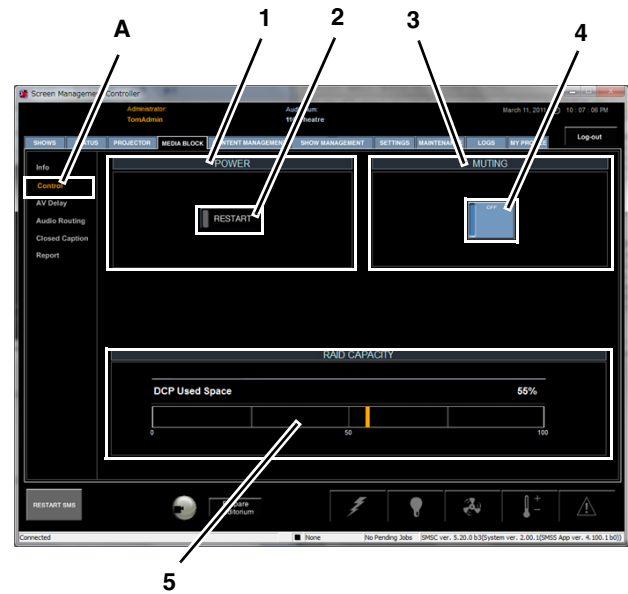
- **Model**
The model of the installed Media Block Unit.
- **Serial Number**
The serial number of the installed Media Block.
- **IP Address** - The network IP address of the installed Media Block.

Additional Media Block information, including configuration settings and versions are shown.

2 CERTIFICATE INFORMATION

Enables or disables the Ghostbuster function and the user license.

Control



A Control

Select **Control** on the Navigation Bar and you have access to the media block **POWER** and **MUTING** controls. A graphical indicator (**RAID CAPACITY**) which provides an indication of the percentage of DCP Used Space.

1 RESTART

The **RESTART** command causes the Media Block to execute a controlled restart sequence. To Restart the Media Block, click **RESTART**.

Note

The **RESTART** process requires 2 minutes or more to execute. During this time all presentation stops.

Caution

During the Ingest process, do not click **RESTART**.

2 OFF/ON (Audio Muting)

This is an alternate action control and, when **ON**, results in no output of audio from the Media Block.

Note

Audio Muting is not linked to the Projector **DOUSER** control.

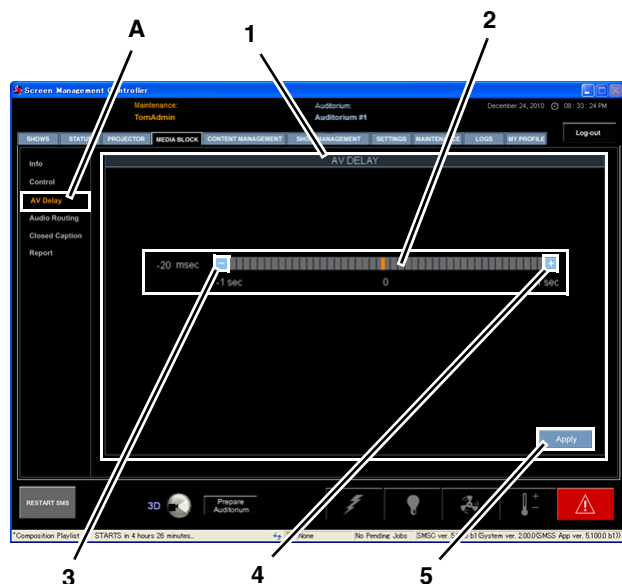
3 RAID CAPACITY

This information group presents a graphical representation (percentage) of the RAID storage space currently in-use for DCP Used Space. The STATUS/Storage screen (see “Storage (Space)” on page 38) shows a detailed view of storage space usage.

Note

When you ingest a new DCP you should review the Free Capacity in gigabytes shown on the STATUS/Storage screen.

AV Delay



A AV Delay

When **AV Delay** is selected on the Navigation Bar the Media Block A/V DELAY menu appears.

Note

Changes to adjustments on this screen will not be evident while content is playing. After making any adjustment click the “**Apply**” button. The results of the adjustment will take effect when the presentation is restarted.

1 A/V DELAY

The A/V DELAY group includes a slider control, an advanced/delay numerical display and two +/- single step buttons. The slider and step buttons are used to facilitate adjustment of the digital audio timing in relationship to the picture elements.

Note

A/V Delay settings changes will not be evident while content is playing. Changes to click **Apply**. If you leave

the A/V Delay screen before you click Apply any changes will be lost.

2 Slider Control

A/V Delay is based on the standard projection rate of 24 fps. The adjustment to A/V Delay has a granularity of 10 msec.

Using the Slider Control you can “grab” the indicator bar and drag the control to a new setting. The slider allows you to make a “gross” adjustment. Once A/V Delay is recognized as being close to ideal, use the Step Control buttons to make the final adjustments.

3 Minus Step Control

This Step Control allow you to incrementally adjust the audio delay in 10 msec. to a maximum value of -1 second.

4 Plus Step Control

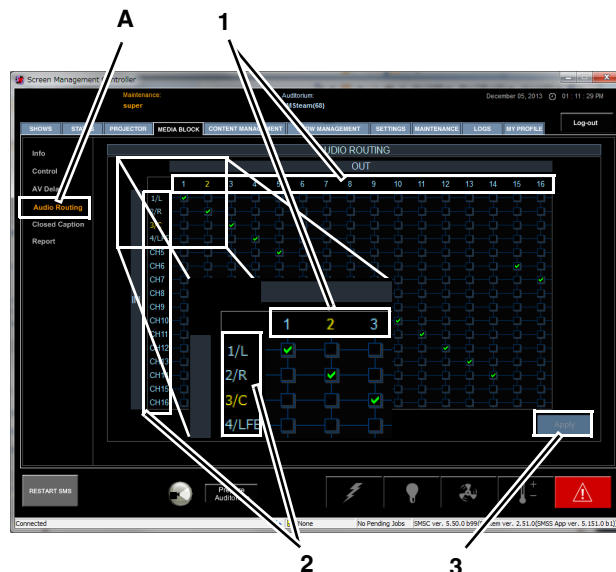
This Step Control allow you to incrementally adjust the audio advance in 10 msec. to a maximum value of +1 second.

5 Apply

The Apply command button sends the A/V DELAY setting to the Media Block for application when the presentation is restarted.

Audio Routing

A Media Block incorporates 16 × 16 audio routers designed to allow easy routing of audio output channels to the appropriate Auditorium audio channels. Any single decoded audio signal can be routed to one or multiple audio output channels of the Media Block.



Note

After making changes to channel mapping on this screen you must click “**Apply**” for the changes to take effect.

A Audio Routing

When Audio Routing is selected on the Navigation Bar the Media Block AUDIO ROUTING screen appears. A green check mark indicates that the crosspoint settings were not changed. A newly changed crosspoint appears in yellow. The green check marks indicating unchanged crosspoints and the yellow check marks indicating changed crosspoints are all shown until the Apply button is clicked.

Note

If you navigate away from the Audio Routing screen before you click Apply your changes will be lost.

1 OUT

The Audio Output Channels (physical connector) from the Media Block are numbered from 1 to 16.

2 IN

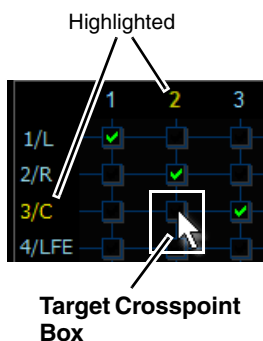
The Router Input Channels, represent the decoded audio tracks from the CPL associated digital audio Content Element, and the names of each audio channel are displayed.

3 Apply

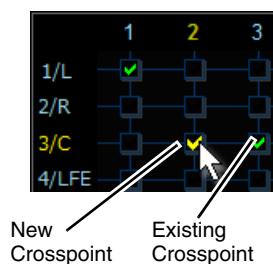
When all new crosspoint selections are complete (see “*Select New Router Crosspoint*”) click **APPLY**.

4 Select New Router Crosspoint

Referring to the illustration to the right, currently active crosspoints are indicated by a green check mark. To configure a Router Input Channel to an Audio Output Channel, point to the “crosspoint box” (the box at the intersection common to both the desired Router Input Channel and the target Audio Output Channel). As you move the pointer over an individual box the Router Input Channel number and the Audio Output Channel number becomes highlighted as shown in the illustration.



Once the specific input/output relationship is selected, click the crosspoint box. A yellow check mark indicates the selected box (illustrated to the right) while the non-changed crosspoint mapping remains green. When you move the pointer away from the selection box the highlighted CH Input and Output will return to normal and a new Input/Output relationship will be highlighted (yellow) based on the intersection/selection box.

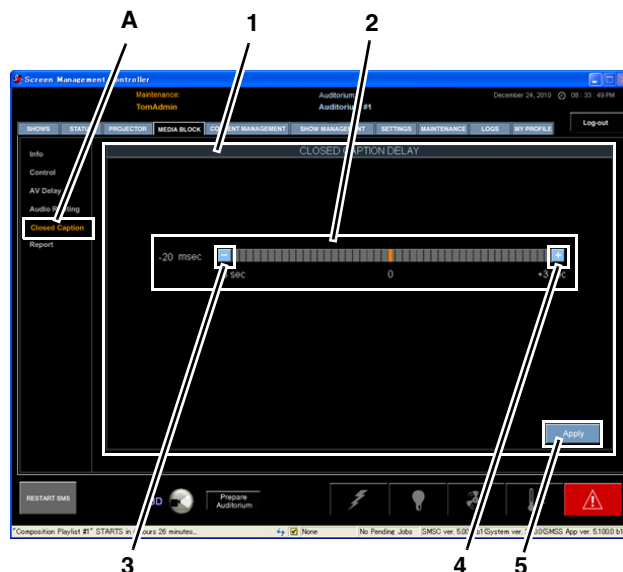


Note that in the illustration the Media Block audio output channel (physical connector) 2 is associated with the decoded audio track 3/C (Center channel). (This selection will result in the decoded audio track 3/C output appearing in both audio output channels 2 and 3.)

To route a single Router Input Channel to more than one Audio Output Channel move the pointer to any additional crosspoints along the same horizontal axis and **SELECT** as desired.

Note

Click the **Apply** button to enable the changes made to the audio routing settings. If you leave the Audio Routing screen before you click Apply any changes will be lost.

Closed Caption**A Closed Caption**

Clicking Closed Caption in the Navigation Bar brings up the CLOSED CAPTION DELAY menu for the Media Block.

Note

Changes made to adjustment values on this screen will not affect the currently playing content. If you have made changes and clicked the Apply button, the changes will be reflected at the point when the presentation is restarted.

1 CLOSED CAPTION DELAY

The CLOSED CAPTION DELAY menu comprises a slider control, a numeric display for advancing or delaying the timing, and two +/- single-step buttons. The slider and step buttons can be used to quickly change the CLOSED CAPTION output timing.

Note

Changes made to the closed caption delay time on this screen will not immediately affect the currently playing content. The changes to the closed caption delay time will become effective when you click the Apply button. If you quit the CLOSED CAPTION DELAY screen without clicking the Apply button, all changes will be lost.

2 Slider control

Adjusts the closed caption delay time in 10-millisecond steps.

Drag the indicator bar on the slider control to the new setting. This is convenient to quickly bring the value to the approximate range. You can then make fine adjustments with the +/- buttons.

3 Minus control

This control increases the closed caption delay time in 10-millisecond steps. The maximum value is -3 seconds.

4 Plus control

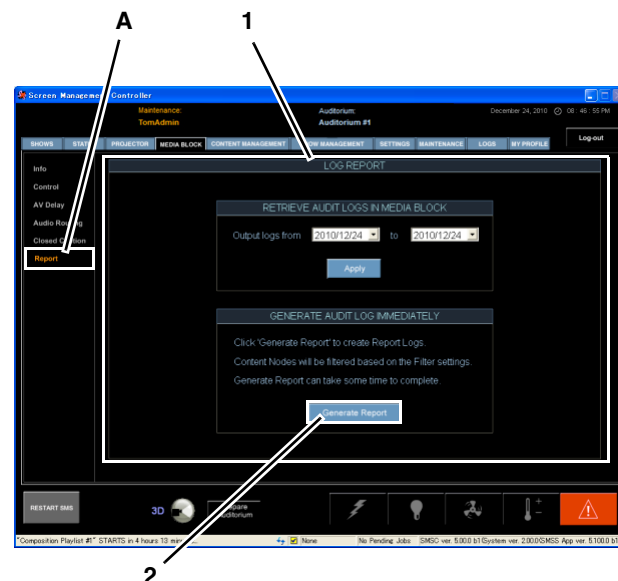
This control increases the closed caption advance time in 10-millisecond steps. The maximum value is +3 seconds.

5 Apply

Clicking the Apply button sends the new CLOSED CAPTION DELAY setting to the Media Block. The settings will then become active when the presentation is restarted.

Report

Normally, Log Reports are automatically generated based on the reporting configuration of the system. However, occasions arise when it is necessary to generate a LOG REPORT immediately. From the Reports screen you can manually trigger the generation of Media Block Report Logs.

**Note**

Generating Log Reports can take some time and consumes Media Block resources. Generating Log Reports should not be used lightly.

A Report

When **Report** is selected on the Navigation Bar the Media Block LOG REPORT screen appears.

1 LOG REPORT

From the LOG REPORT screen you can manually generate immediate Media Block Log Reports. The contents of this report is determined by the FILTER selections made under the SETTINGS tab/Audit Log selection in the Navigation Bar. It's destination folder is also set from the Audit Log screen.

2 RETRIEVE AUDIT LOGS IN MEDIA BLOCK

Outputs audit logs in the Media Block to the Windows computer where the SMS Controller is installed. The logs are output in compressed form as a ZIP file.

3 Output Log Term

Specifies the date range covered by the audit logs to be output.

4 Apply

Execute the log output function. When you click the Apply button, a dialog box for specifying the output destination folder appears. Specify the output destination and click the [OK] button. The log files will be created in the specified location.

5 GENERATE AUDIT LOG IMMEDIATELY

Based on the event information stored in the Media Block, a LOG REPORT is generated immediately by this function.

6 Generate Report

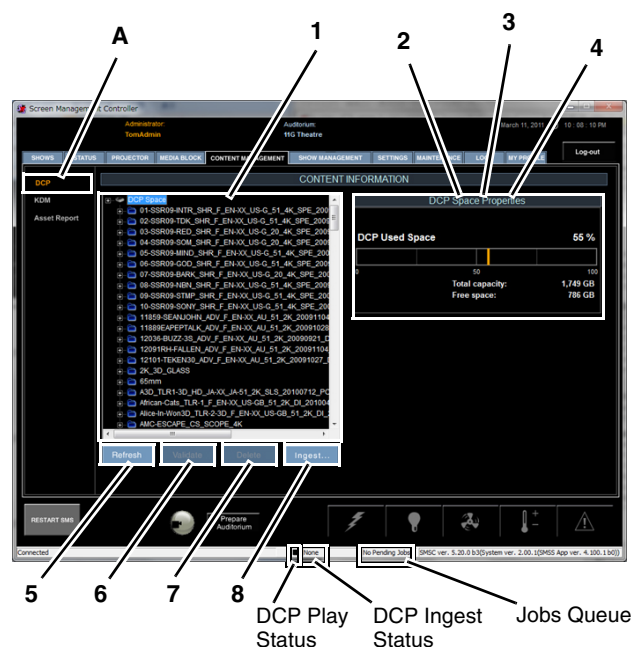
Click the **Generate Report** button to immediately create the LOG REPORT.

Content Management

The Content Management tab includes a set of tools that allow you to view and manage the Digital Cinema Package (DCP) and any Composition Playlist (CPL) residing in the SMS Server.

Digital Cinema Package (DCP)

The Digital Cinema Package is comprised of files (essence files which may or may not be encrypted) containing digital moving image content and packaged for shipment to theaters. Composition Playlists (CPL) included in the DCP are comprised of descriptive files and the associated content elements which are used for the presentation.



Each Digital Cinema Package (DCP) is a set of files containing digital moving image content and associated sound and auxiliary content packaged for theater presentation. A DCP contains one or more Composition Playlists which describes the (optionally encrypted) Content Elements. The CPL is usually named to make it easy to identify. There will be multiple CPLs also for the same title, to accommodate different presentation patterns such as subtitled or dubbed shows. However, the distribution organization is not limited in the way it chooses to organize or relate any of the CPL present in the DCP. The only requirement is that a CPL describes an associated set of Content Element files.

When DCP is selected in the Navigation Bar, the **CONTENT INFORMATION** screen appears. Selecting DCP (Packing List) in the **DCP Space** brings up the DCP Properties on the right.

In addition, control buttons used to ingest new DCP into the SMS appear on this screen.

Note

You can save up to 350 DCPs on the LMT.

A DCP

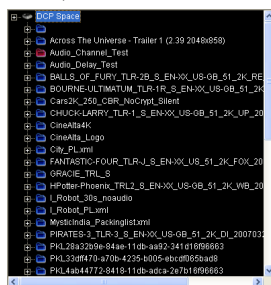
When **DCP** is selected on the Navigation Bar the **CONTENT INFORMATION** pane appears. Using the DCP List pane on the left, you can view properties of the DCP Space (select **DCP Space**) or any selected DCP/CPL¹. In the list of DCPs, locate the specific Digital Cinema Package (DCP) or associated Composition Playlist(s) and select the target. From this window, you can also associate a specific projector Function with a specific CPL.

Caution

Care should be exercised when making changes in the association between a CPL and a projector Function. The new association is saved immediately in the SMS database. However, the new setting will not affect the screen presentation until the next time playout of the specific CPL occurs.

1 DCP List (DCP Space/DCP/CPL)

In the illustration to the right is the List view of the Digital Content Packages stored in the SMS “DCP Space” and under control of the Media Block. Each DCP contains one or more Composition Playlist (indicated by a +).

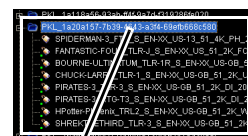


When DCP Space (top level) is selected as shown above, DCP Space Properties appear in the Properties pane to the right.

• Rename DCP

Currently, when a DCP is ingested successfully it is identified by the pre-assigned DCP unique identifier. The identification may be changed to a more easily identified name. To change the DCP name, double-click the **DCP Identification** and type the new name. However, when a DCP is re-ingested the identification will revert to the original DCP identification.

When a specific DCP is selected in the explorer, the selected DCP is expanded (as shown to the right and its Properties appear in the DCP Properties pane.

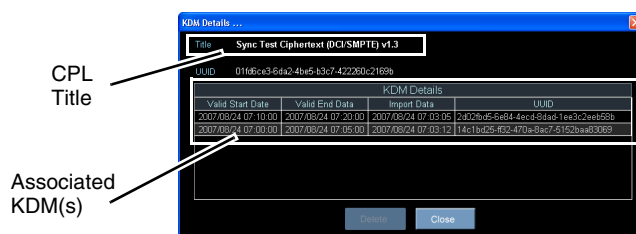


DCP expanded

Note

The DCP identification assigned during the ingest process is easily identified by the prefix “PKL”. To change the DCP identification, select the DCP, click the DCP again and then type the new DCP name.

When the DCP is expanded and any of the included CPL are selected the associated CPL Properties appear in the Properties pane to the right. To view KDM Details of any of the included CPL, double-click the target CPL. The KDM Details pop-up appears listing all KDM associated with the target CPL.

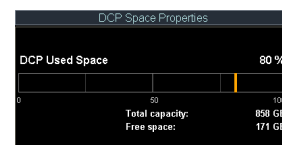


CPL Title

Associated KDM(s)

2 DCP Space Properties

As illustrated, DCP Space Properties are shown and provide a graphical indicator of space used for storage of Digital Cinema Packages.



Note

The content of the Properties pane is based on the specific selection in the DCP List pane.

3 DCP Properties

When a specific DCP is selected DCP Space Properties is replaced by DCP Properties.

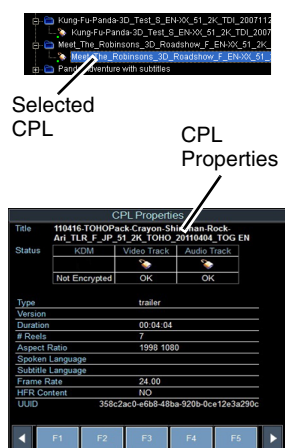
DCP Properties	
DCP Title	PKL_1a20a157-7b39-4643-a34d-69a6660c500
UUID	1a20a157-7b39-4643-a34d-69a6660c500
Size	284.838 GB
Imported	2007/06/22 15:47:20
Verify Status	Fail
Validate Status	Pass

Information includes the DCP Title, the UUID, the size of the DCP and the date the package was ingested.

1. Partially ingested DCPs (failed during ingest) are listed as “Incomplete” in the Title and identified with their uuid.

4 CPL Properties

By expanding the DCP (click the specific DCP) all associated CPL will appear in the DCP List view. Select any of the visible CPL and the right pane changes to display CPL Properties as shown. In this example, the selected CPL is stereoscopic (3D) as indicated by the color of the Title which matches the 3D Projection Type Indicator. CPL Properties includes; Title, Status (Security¹), Type, Version, Duration, Number of “Reels”, Aspect Ratio (H/V in pixels), Spoken Language, Subtitle Language, and the uid for the CPL.



Note

To playback content for which YES appears in the HFR Content column, a valid high-frame-rate content playback license is required.

In the CPL Properties pane, Functions are shown. These selectors are used to associate a projector Function (a Function defined using the SRX Controller²).

To associate a Function to a CPL, select the **target CPL** and then click the **Function** selector. The target CPL will appear highlighted indicating that a change has been made. If a Function is already associated with a CPL the association is indicated by the Function button being highlighted.

To remove or change the association, select the **CPL** and then click the selected **Function** or click the new (target) **Function**. The CPL will appear highlighted in the DCP List view indicating that a change has been made.

Caution

Care should be exercised when making changes in the association between CPL and projector Function. A new Function association is saved immediately in the SMS database. However, the new setting will not affect the screen presentation until the next time payout of the specific CPL occurs.

1. The open padlocks indicate this CPL is not encrypted. When encrypted the padlocks will be closed and the KDM and Key status shown.

2. The SRX Controller exercises direct control over the projector and therefore should not be used at the same time the SMS Controller is in operation.

5 Refresh

While the DCP tree is automatically refreshed after a DCP or KDM ingest/delete action this does not occur when Security is initialized and/or KDMs are removed. When this occurs the tree is not updated automatically and you must click **Refresh** to update the information contained in the (DCP) explorer pane.

6 Validate

Validates the selected DCP Content Elements (files) against the DCP Packing List. This is done by comparing the checksum for the individual files against the checksum contained in the Packing List for the corresponding Content Element.

7 DCP Delete

Following selection of a DCP in the explorer pane, this control becomes available and you can delete the specific Digital Cinema Package from SMS storage. If a CPL from the target DCP has been included in a Show Playlist (SPL) any attempt to remove the DCP will fail and a popup message will appear. Use the SMS Controller Asset Report to locate where the CPL(s) are used and delete these Playlist Elements from the individual SPL. Once these have been removed from the SPL then the DCP can be deleted.

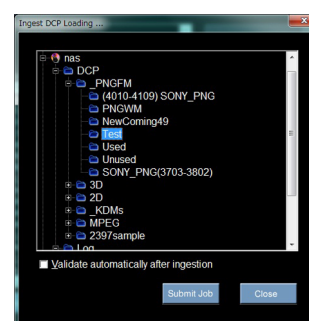
Note

This control is available only when a DCP is selected in the DCP List pane.

8 DCP Ingest

DCP Ingest is realized under control of the Media Block. Each DCP Ingest is submitted as a single “job” with the ability to submit subsequent jobs so that they are executed in sequence.

A Digital Cinema Package must be ingested into the Media Block RAID storage system under control of the SMS. Click **Ingest...** and the Ingest DCP explorer appears. From the Ingest DCP explorer you access a predefined location (set under the Settings tab then Folders in the Navigation Bar) and navigate to the target DCP. If you want validation to be performed automatically after ingestion of a DCP that requires validation is complete, select the “**Validate automatically after ingestion**” checkbox. When you select the target **DCP** and then click **Submit Job**, DCP ingestion starts and a progress window appears. If the “Validate” option was selected and the ingested DCP requires validation, a Validate progress window will appear after ingestion is complete.



Note

When a USB HDD is connected to the LMT and DCP Ingest is performed, the LMT may not recognize the USB HDD in rare cases. In such cases, the DCPs on the USB HDD will not be displayed. If the problem is not resolved by removing the USB HDD and reconnecting it, restart the LMT by clicking the **MEDIA BLOCK tab >Control >Restart**.

Caution

Folders with the following names (regardless of case) will not be displayed in the Ingest DCP explorer.

System Volume Information, RECYCLER, lost+found
In addition, folder names that begin with the following character strings will not be displayed.

bin, boot, dev, etc, home, initrd, lib, misc, opt, proc, root, sbin, selinux, srv, tmp, sys, usr, var

- **Multiple DCP Ingest**

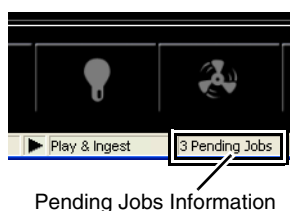
Multiple DCPs are included on the transport media. If a single Asset Map accompanies the multiple DCPs they can all be ingested in a single pass. For example, a multiple DCP “package” is specified and ingested from the USB device from the rear of the Auditorium Unit or from network attached storage. To ingest all DCPs from the transport media, select the top level directory of the attached media, e.g., Ingest_USB, and then click **Submit Job**. The ingest process starts and a progress window appears. If the “Validate” option was selected, validation of the DCP will be performed after ingestion is complete if necessary.

To ingest multiple DCPs with separate Asset Maps in a single operation, the DCPs must be registered for the ingest process. Navigate to the **target DCP** and select it, then click **Submit Job**. Repeat this process for each DCP you wish to ingest.

Each submitted Ingest Job is queued in the sequence it was submitted.

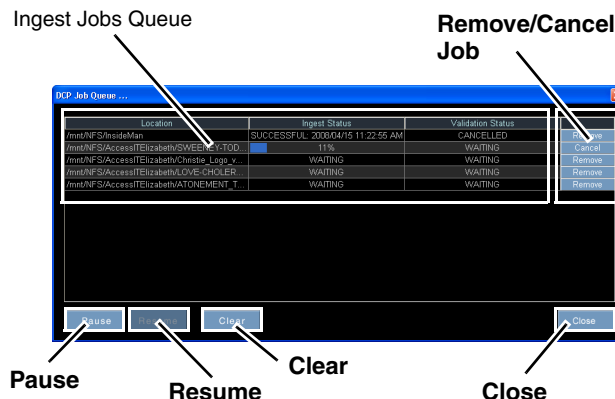
Caution

When ingestion is performed during a presentation, the subtitles for the presented content may take a few seconds or a few minutes to appear.



- **DCP Job Queue**

To view the Job Queue for ingesting DCP, double-click in the Pending Jobs information area shown in the illustration to the right. The DCP Jobs Queue appears.



From the DCP Jobs Queue you can manage the queued Jobs and Pause/Resume the execution of the Ingest process.

- **Cancel Job**

The Cancel Job button applies to the associated Job. A Job may be cancelled even when it is running. To Cancel a Job, locate the **running Job** in the Ingest Jobs Queue (the Ingest Status will show a blue bar and some percentage of completion), and then click **Cancel**¹. Canceled Jobs remain in the Ingest Queue but cannot be resumed. Once a Job is cancelled it must be re-submitted.

- **Remove Job**

The Remove Job buttons apply to the adjacent Job. A Job may be removed from the queue as long as it is not running (Ingest Status is Waiting). To Remove a Job, locate the **target Job** in the Ingest Jobs Queue (the Ingest Status is Waiting), and then click **Remove**. Once a Job is Removed it must be re-submitted.

- **Pause Queue**

Normally the process of Pausing and Resuming processing of the DCP Jobs Queue is managed by the Media Block to meet presentation needs. However, it is possible to Pause the Ingest DCP Jobs Queue manually. To pause execution of the DCP Jobs Queue, click **Pause**. This is a manual pause and the queue will remain paused until you click **Resume**.

1.Cancel will only appear for the currently running Job.

– Resume Queue

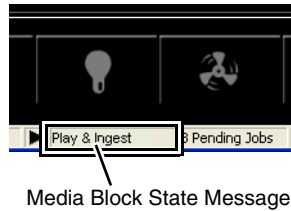
The normal process of Pausing and Resuming the processing of the Ingest DCP Jobs Queue is managed by the Media Block to meet presentation needs. However, if the Ingest DCP Jobs Queue has been manually paused, you must manually resume the execution of the process. Click **Resume**.

Note

Manually resuming the Ingest DCP Queue may not result in the ingest process starting immediately.

• DCP Ingest Status

During the Ingest process, in addition to the message windows (which may be closed), a Media Block State message appears in the lower right area of the screen. For example, **“Play & Ingest”** may be shown, indicating that content is currently being played and Ingest processing is being performed during Play. The speed of Ingest processing during playback of a Show will be slower than while playback is stopped. When the Ingest Status shows **“Ingesting...”** a percentage of completion is also shown. e.g., **51%**. Once the Ingest process has ended the Media Block State changes to **“None”**. To obtain additional information, double-click the Media Block State message. See *“Media Block State” on page 26* for additional information.

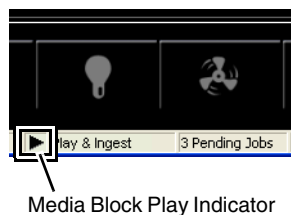


Note

Ingest may fail to complete for various reasons. The Media Block State should be checked and, when **“None”** is indicated, double-click the Media Block State indicator. The Last DCP Ingest State message appears containing the Ingest Process completion results.

• DCP Play Status

Located to the left of the Media Block State message is a indicator showing the current Media Block status relating to content presentation. See *“Playback State” on page 25* for additional information.

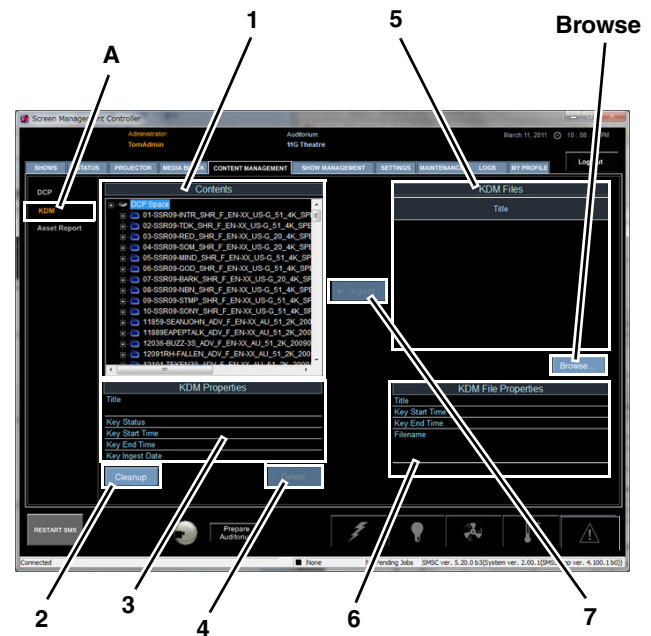


KDM (Key Delivery Message)

The KDM may arrive at the facility in any of a number of ways, e.g., e-mail, file transfer, flash-drive, etc.

When the **Content Management** tab is selected and you click **KDM** in the Navigation Bar, the KDM screen appears. KDM is a multi-functional screen containing an

explorer pane similar to the DCP List view and three information panes which are associated with KDM properties.



Security keys, when delivered to the theater, are specific to a DCP and serve to decode encoded content for playback on a single Media Block. As a result, to play a particular Composition Playlist (CPL) using the Media Block in the Digital Cinema System associated with a specific auditorium, the specific security key for that Media Block and CPL are required. Keys are delivered in a text-based XML message called a Key Delivery Message (KDM). The KDM contains the key or keys required to unlock associated encrypted DCP content. Since a DCP may contain multiple variations of content as different CPL, the KDM will contain only those Keys associated with specific CPLs and the Media Block authorized for presentation.

The actual key contained in the KDM is encrypted so it's security keys are not exposed by simply viewing the contents of the XML file. The KDM is a small file, and is easily e-mailed or delivered by means of USB thumb drive.

A KDM

When **KDM** is selected on the Navigation Bar four panes appear. Using the DCP List pane you can locate a specific Digital Cinema Package (DCP) and see the included Composition Playlist(s). The KDM screen is also where you can view properties of the KDM and ingest new KDM into the Media Block.

1 Contents (DCP List)

A view of the DCP Space List and its contents. Each stored package contains one or more CPL. When the CPL is selected the Key properties appear in KDM Properties.

2 Cleanup (KDM)

Allows the user to remove all un-referenced (or orphan) KDMs. A popup confirmation message appears.

3 KDM Properties

The KDM Properties shows information relating to the decryption key, if required, for the selected CPL. The following key information for the item selected in the Contents pane is shown:

- **Title** of the selected item
- **Key Status**
 - **Not Encrypted** - The selected CPL is not encrypted and no key is required for presentation.
 - **Inactive** - The selected CPL is encrypted, the Key required for presentation is present but is valid at some future Date/Time.
 - **Active** - The selected CPL is encrypted, the Key is present and is valid for presentation.
 - **Expired** - The selected CPL is encrypted and, while a key required and is present it has expired.
 - **No Key** - The selected CPL is encrypted but no associated key is present.
- **Key Start Time**¹
- **Key End Time**
- **Key Ingest Date** - Shows the date and time on which the KDM was ingested into the Media Block.

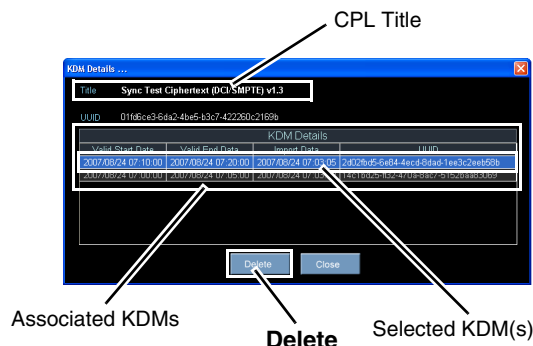
Note

In situations where multiple KDM have been ingested for the same DCP, the KDM Properties displays the properties of the Keys that will expire the soonest.

4 Delete

Deletes the Key displayed in KDM Properties. Delete is only available when a CPL with a valid Key has been selected in the Contents pane. Where multiple KDM for the selected CPL have been ingested, the Key that will expire soonest will be deleted.

To delete KDM where multiple KDM are associated with a CPL, double-click the **target CPL**. The KDM Details pop-up appears.



From the KDM Details pop-up you can select one or more associated KDM and then click **Delete** to delete KDM. To select more than one KDM in a contiguous group, select the **first KDM** in the group and then press SHIFT + click the **last KDM** in the group.

5 KDM Files

The KDM Files list shows all the KDM files available for ingesting into the Media Block from the target folder. To select the target KDM Import folder, click **Browse**.

Note

The KDM Files may be located on your local computer, on a directly attached device or on any network attached device that can be reached by your computer.

6 KDM File Properties

Once the KDM has been located and selected in the KDM Files list, the Title of the selected Key and the Start Date/Time for the Key are displayed. The Title of the KDM should be the same as the Title of the related CPL under KDM Properties. Select the target **KDM File** and the **Ingest** button becomes available.

Note

Multiple KDM may be selected and ingested in a single step. However, they must be adjacent to each other in the folder.

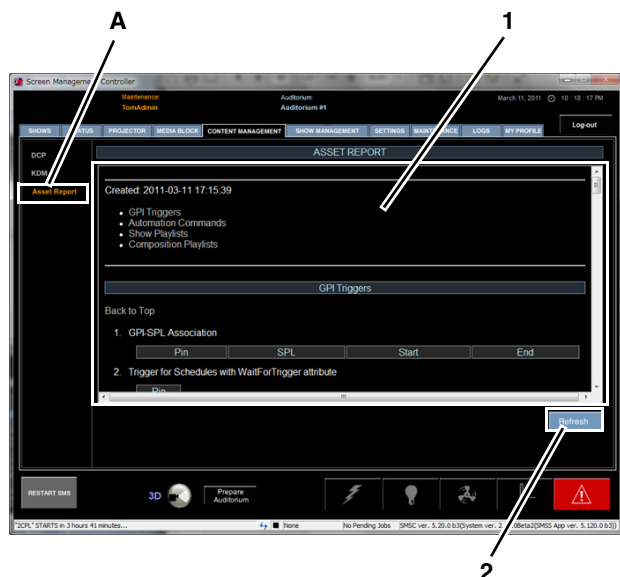
7 Ingest

Ingests the KDM selected in the KDM Files list into the SMS/Media Block.

The Ingest control is only available when one or more KDM have been selected in the KDM Files list. To ingest a KDM select the KDM from those shown in the KDM Files list and click **Ingest**. You can ingest more than one KDM at a time by selecting multiple KDM from the KDM Files list. However, they must be adjacent to each other in the list.

1. Key Start/End date/times are based on UTC. However, they are displayed in local time for ease of use.

Asset Report



The SMS Asset Report feature allows you to view Shows, CPL (Content Element) usage and status, and includes GPI (Control Events).

A Asset Report

In the SMS System the use of Content Elements (CPL) and Control Events (GPI) can be complex when it comes to tracking their use across multiple Show Playlists and Schedules. The Asset Report provides a view into the use of these assets.

1 Asset Report (Viewer)

The Asset report is generated periodically by the SMS Server and includes information on the following:

- **GPI Triggers** - GPI Triggers are external inputs to the Auditorium Unit that causes some action to occur. For example, a GPI trigger input could be used to start playback of an SPL assigned to that trigger.
- **Automation Events** - Automation Events are commands sent to external equipment that causes something to happen in the auditorium. An example would be an event included in the SPL that would cause the curtain to open and house lights to dim to 50% and another that would dim the house lights to 0%.
- **Show Playlists** - Show Playlists are the top level of a Show. Show Playlists are comprised of Composition Playlist or other Show Playlists included in a nested manner.
- **Composition Playlists** - The CPL is essentially a “list” that points to the individual essence files or elements required for presentation of the Content.

However, for purposes of presentation the CPL is the lowest level that can be included in the SPL. During presentation, Show Playlist(s) point to the included CPL which are the playable Content.

2 Refresh

Forces a refresh of the ASSET REPORT display. The SMS Server automatically refreshes the content when there is a change to content. This includes; when KDM is ingested/deleted, when DCP is ingested/deleted, and when SPL is created/deleted or edited. However, the automatic update process begins after a 10 minute quiet period. This allows you to ingest/delete a number of content items without causing the SMS Server to execute multiple updates.

Show Management

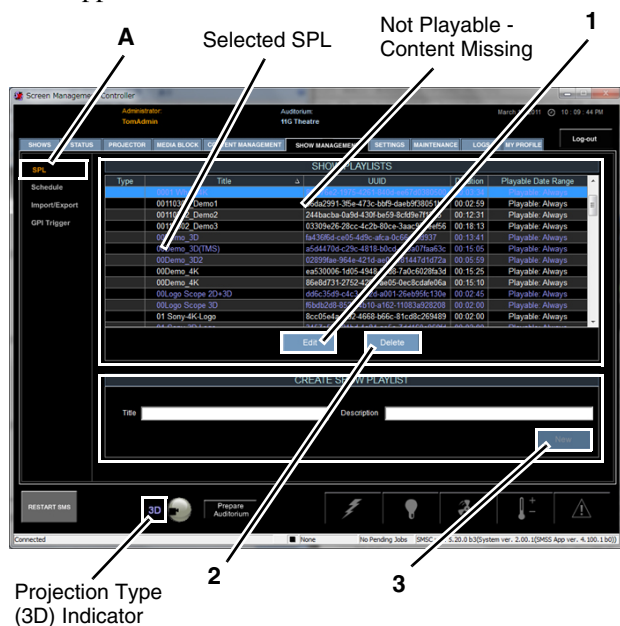
Show Management in the SMS Controller consists of a set of tools for managing Show Playlists.

These tools can be used to create a new SPL, edit or delete SPLs, and to perform other tasks. You can also Import/Export SPLs to/from the SMS Server.

Creation of the SPL, its editing and control event are more fully discussed in SPL Management, Chapter 3.

SPL (Show Playlist)

When the **Show Management** tab is control event and you click **SPL** in the Navigation Bar, the basic Show Playlist screen appears.



An SPL containing either 3D Content or a 3D related Command is shown in the same color as the 3D Projection Type Indicator. An SPL with Content missing is shown in red.

A SPL

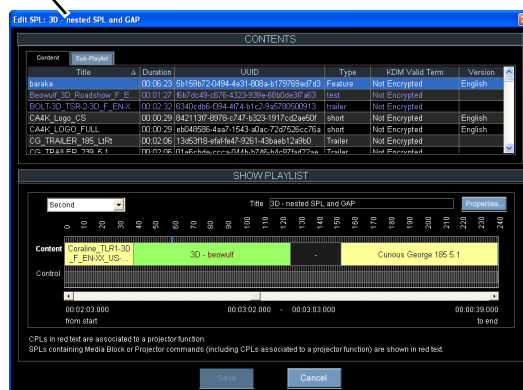
In the SMS System, a Show Playlist is comprised of content (one or more CPLs) and one or more Sub-Playlists (nested one-level deep).

1 Edit SPL

Editing a Show Playlist is initiated from the SPL screen. Select the **target SPL** from the SHOW PLAYLISTS list and click **Edit**. The Edit SPL popup window appears where you use simple drag and drop techniques to add new

CPL or SPL elements to an existing SPL. You can also Delete elements from an existing SPL.

Edit SPL



Refer to “*SPL Management*” on page 92 for additional information on SPL Editing.

2 Delete Show Playlist

To delete an entire SPL, select the **target SPL** from the SHOW PLAYLISTS list and then click **Delete**.

Note

Deleting an SPL does not delete other SPL or CPL contained in the deleted SPL.

3 CREATE SHOW PLAYLIST

From the SPL screen you initiate the creation of a New SPL. This process includes setting a Title¹ and (optionally) adding a brief Description² for the new SPL in the CREATE SHOW PLAYLIST group. Once the Title has been entered, **New** becomes available. Click **New** and the New SPL popup window appears, using drag and drop techniques, you place Content Elements and Control Events in the new SPL.

See “*SPL Management*” on page 92 for additional information on SPL elements and creating a New SPL.

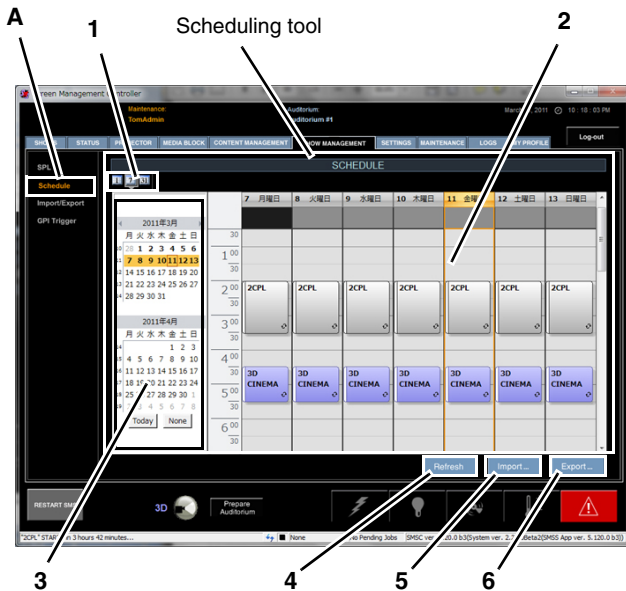
1. Maximum 128 characters.

2. Maximum 512 characters. This Description can be revised using the Properties pop-up available on the Edit SPL screen.

Schedule

The scheduling tool allows you to view one, seven, or 31 days (calendar month) and set the granularity of the Scheduler Timescale (illustrated to the right). The ability to select a new timescale allows you to locate an approximate time of day using 30 minutes per division and then “zoom in” to 5 minutes per division for placement of a Show Playlist (SPL). Inserting an SPL into the Daily Schedule is realized from the graphical scheduling tool as is deleting an SPL. Relocating an SPL is an easy drag-and-drop or cut-and-paste operation. You can also copy an SPL and paste it to another day/time.

When the **Show Management** tab is selected and you click **Schedule** in the Navigation Bar, the **SCHEDULE** screen appears.



A Schedule

The scheduling view or grid is located on the right side of the **SCHEDULE** screen. You can view one, seven, or 31 days (calendar month) and set the granularity, e.g., 60, 30, 10, 5 minute per division for the day's view. Inserting or managing an SPL in the Daily Schedule is realized from the graphical scheduling tool.

A Year/Month calendar appears to the left of the Schedule and, using the calendar, you can move to a specific Week/Month/Year. The current 'View' (Day/5 Day/7 Day/Month) is highlighted in the calendar.

Using the calendar you can move to a view determined by the 1/7/31 selector. Alternatively, you can jump directly to a specific day using the calendar tool. Once the target day (Schedule) is located, the Schedules for that day appear in the list.

Schedules are edited and created using a common popup tool.

1 Days View

Allows you to select the number of days you view in the Scheduling Grid. Views available are: 1 day, 7 days, and 31 days.

2 Scheduling Grid

The Scheduling Grid is where all Daily Schedules are created, edited and deleted. The “view” can be changed by selecting a different Day View and by changing the granularity of the scheduling timescale divisions. Day divisions available are; hours, half-hour, or quarter-hour, and 10, 6, or 5 minute. When changing the granularity of the scheduling timescale the grid repositions so the selected division appears at the top of the grid's viewable area.

3 Calendar Navigator

The Calendar Tool displays multiple calendar months and allows you to easily move from month to month. In addition, you can directly select one or multiple (up to 6) weeks to view in the Scheduling Grid.

4 Refresh (View)

It is possible that more than one person can be editing the schedule at the same time. Since exclusivity is not enforced, the most recent Add/Edit/Delete action takes precedence. Click **Refresh** to see changes made by others.

5 Import... (Schedule Events)

Schedules can be exported and then imported into other systems when the requirement dictates. To Import a Schedule, click **Import**. A Folder Explorer opens which allows you to locate select the target file.

6 Export... (Schedule Events)

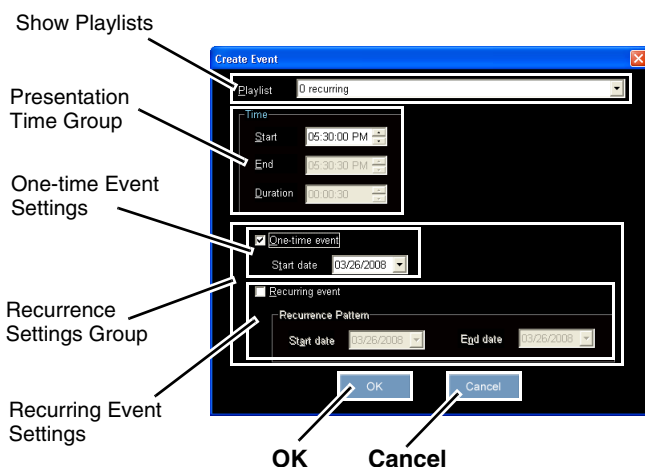
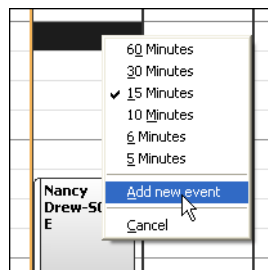
Schedules can be exported and then imported into other systems when the requirement dictates. To Export a Schedule, click **Export**. The Export Schedule dialog opens. When you specify a start and end day for exporting a schedule and click the [OK] button, the Folder Explorer opens, allowing you to locate a target folder, name and then export the file.

Schedule Management

All schedule management is realized via the Scheduling Grid.

Add New (Schedule) Event

To place an SPL (Add new event) in the Schedule, locate a point in the Scheduling Grid where the SPL will be located¹, click to select the **location** (becomes highlighted), right-click and then click **Add new event** from the menu. The Create Event popup appears.



Shows can only be scheduled during the day's timeline where no conflict occurs. If a conflict occurs, a message will appear. Click **OK** to dismiss the conflict message.

• Playlist

Show Playlists are available on a drop-down list containing all SPLs currently in the system. In the Playlist list, click and scroll to locate the desired SPL, then click the target SPL (Title).

• Time

The Time group allows you to adjust the Start (Time)² of the selected SPL. The initial setting is where the pointer is located when you click **Add new event**.

• Recurrence Settings

When a new Schedule Event is created, you can select either the **One-time event** or the **Recurring event** option in the Recurrence Settings Group. The initial selection is the **One-time event** option and the **Start date** initial value is the date where your pointer is located when you click **Add new event**. To set the event to be a recurring series for a defined period of

1. It is not necessary to locate the exact point in the target day since you will have the opportunity to set the exact Start Time of the SPL in the Create Event popup.

2. Start time is based on the local time-of-day.

time, select **Recurring event**, set the Start date and End Date. The recurrence series uses the Start Time set in the Time group and repeats the insertion of the same SPL from Start Date to the End Date set under **Recurring event**. Click in **Start date** or **End date** to open a calendar.

Note

When a new event is created as recurring, the series can be managed, i.e., moved or edited, as a series with any changes applied to all events in the series. When you delete an event that is part of a recurring series, you have the option of deleting only the selected event or all events in the recurring series. Once you delete only the selected event, the remaining events that were originally part of the series must be managed as separate events.

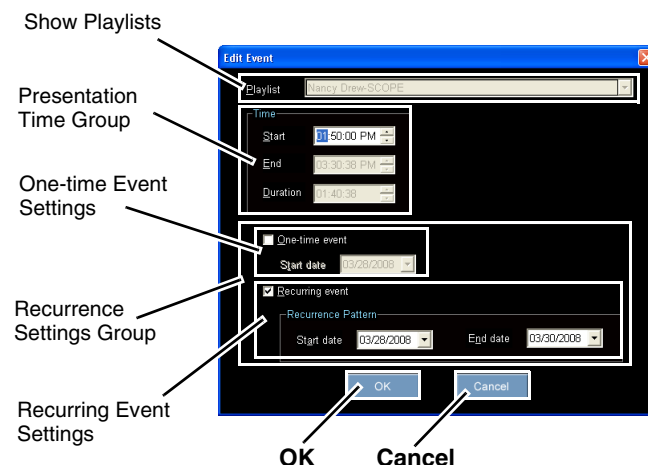
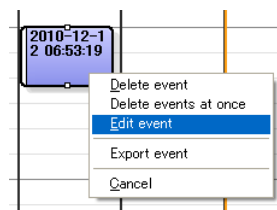
Caution

As preparations for presenting each CPL can take several seconds, the duration of presentations may be longer than normally expected if several CPLs exist in the Show Playlist. As a result, some presentations may not be finished by the time the next presentation is scheduled to begin. In such cases, the next presentation will not begin.

Edit Schedule Event

When you edit the Schedule, select the target Show Playlist (SPL) using the Scheduling Grid and modify either the selected Event or the timeline of the schedule day(s). Locate the target day of the Schedule using the Calendar Navigator and the Scheduling Grid.

To edit the schedule for the specific SPL, select the target **Show Playlist**, right-click and then click **Edit event**. Alternatively, you can double-click the target **Show Playlist**. The Edit Event popup appears.



- **Playlist**

Playlist displays the Title of the SPL being edited. It is shaded and cannot be changed.

- **Time**

The Time group allows you to revise the Start (Time) of the SPL being edited. The initial time reflects the value set when you created the event.

- **Recurrence Settings**

When a Schedule Event is edited, you can change the event to either a **One-time event** or a **Recurring event** in the Recurrence Settings Group. The initial settings reflect the option selected and the date value(s) set when you originally created the event.

To revise the event, select either the **One-time event** or **Recurring event** option and set the associated Start date (One-time event) or Start/End dates (Recurring event). The event uses the Start Time set in the Time group and, if recurring, repeats the insertion of the same SPL from Start Date to the End Date set under Recurring event. Click in **Start date** or **End date** to open a calendar.

Move Schedule Event(s)

Schedule Events can be moved using drag-and-drop (a single Event) using the Scheduling Grid.

To move a single Event, point to the target **Event**, then drag the Event to its new location.

Replicate Schedule Event(s)

A Schedule Event or Events may be replicated to a new location using the Scheduling Grid.

To replicate one or more Events, select a single **Event**, and then hold down the CTRL key while you click other **Events** that you want to select. When multiple Events are replicated, the replication occurs in a grid of the same shape as the Events being replicated and “homed” on the position of the first Event selected. Once all Events have been selected press **CTRL+C**. Move the pointer to the new location for the “home” Event, select the **new location** on the grid, and then press **CTRL+V**. The copied Events are replicated in the new location.

Delete Schedule Event

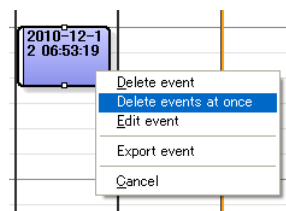
When you delete a Show Playlist from the Schedule the action is initiated on the graphical scheduling tool.

To delete an SPL, select the target Show Playlist (SPL) using the Scheduling Grid, right-click and then click **Delete Event**. A confirmation popup appears. If the Event is part of a series, select the appropriate option and then click **Yes**. When an Event is removed from a Schedule, the Start Time of the following

Event is retained. This results in a gap where the deleted Event was previously scheduled.

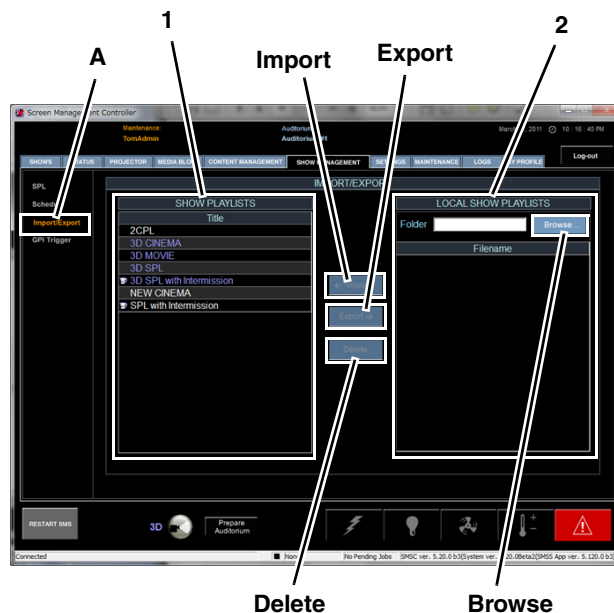
Delete events at once

To delete multiple events at once, you can use the “Delete Schedule Events at once” function. If you select multiple events and then click “Delete event”, a separate confirmation message will appear for each selected event. If you click “Delete Schedule Events at once”, only one confirmation message will be shown. Clicking “Yes” will then delete all selected events.



Import/Export

When the **Show Management** tab is selected and you click **Import/Export** in the Navigation Bar the Show Import/Export screen appears.



A Import/Export

From the Import/Export screen you locate and select the target SPL from the SHOW PLAYLISTS or LOCAL SHOW PLAYLISTS lists. Once a target SPL is selected the appropriate IMPORT or EXPORT control becomes available.

1 SHOW PLAYLISTS

A list of Show Playlists (SPL) available on the SMS Server.

② LOCAL SHOW PLAYLISTS

A list containing Show Playlists in the designated Folder. This folder and its included SPL can be present on local storage or on storage accessible to the SMS Controller computer, i.e., network connected.

Note

If the folder is prefixed with “\”, keyboard entry may be slow depending on the network speed.

Import Show Playlist

The Import SPL process copies the selected Show Playlist from the indicated folder to the SMS Server. During the import process the SPL is checked and if included the required content elements are not present on the SMS Server a warning message is displayed.

When importing an SPL, navigate to the local Folder in LOCAL SHOW PLAYLISTS using **Browse**. The list of available SPL in the indicated folder will appear in the Filename list in the LOCAL SHOW PLAYLISTS pane. You can also type the full path to the folder location. Once the target SPL is selected, IMPORT and DELETE become available. Click **IMPORT** to copy the SPL into the SMS Server. To Delete the SPL from the local folder, click **DELETE**.

Note

SPLs that include SubSPLs cannot be imported.

Export Show Playlist

The Export SPL process copies the selected Show Playlist from the SMS Server to indicated folder.

To copy an SPL to the “local folder”, select the target SPL in the SHOW PLAYLISTS Title list and click **EXPORT**. If the LOCAL SHOW PLAYLISTS already contains an SPL with the same name, the SPL will be exported with an incremental number (in ascending order) appended to the file name.

To Delete the SPL from the SMS Server, select the target SPL and click **DELETE**. A popup confirmation message appears then click **YES**.

Note

In both the Import and Export process the selected SPL remains in the source list with a copy appearing in the destination list.

For additional information on Import and Export of Show Playlists, see “SPL Management” on page 92.

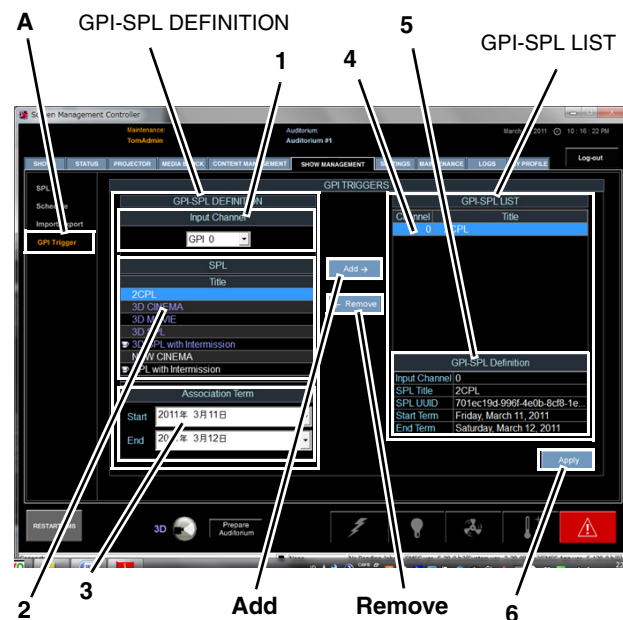
GPI Trigger

The GPI Trigger feature allows you to connect an external signal to a GPI Input which can cause a related action to occur in the Auditorium Unit. The most common of these external signals is the Emergency Alert¹ Signal. Others are often used to cause the presentation to start.

The GPI Trigger feature allows for a number of external inputs to the Digital Cinema system which can be linked to any designated SPL and cause that specific SPL to execute playing. This ability to accept an external “trigger” which starts an SPL which in turn can cause designated actions to occur, e.g., Power ON mode (Lamp ON) or controlling auditorium systems (maintenance lights OFF) provides an easy method to integrate the Digital Cinema systems into legacy facilities.

GPI Trigger characteristics are configured in a named Profile which can be applied to specific Input Channels. GPI Trigger characteristics are named and established in the PROFILES DEFINITION pane located under the “Settings” tab and “GPIO Profiles” in the Navigation Bar (see “GPIO Profiles” on page 69). The Named Profile is then attached to a specific GPIO Input Channel (see “GPIO Channels” on page 71).

When the **Show Management** tab is selected and you click **GPI Trigger** in the Navigation Bar the GPI TRIGGER screen appears.



A GPI Trigger

From the GPI Trigger screen you associate a General Purpose Interface INPUT (GPI Input Pin) with a specific

1. The Emergency Alert feature is configured during system installation.

Show Playlist (SPL) for a defined period of time. When the specific input conditions become “true” or “active”¹, and the current date falls within the Association Term then the associated SPL is executed². The trigger may result in the actual presentation of content, in specific Automation Events being executed, or in a combination of both.

The **GPI-SPL DEFINITION** pane is used to create the association between a specific GPI Input Pin, an SPL and the period during which the association is valid (Association Term). The order in which the various parameters are set is not significant. Once all three settings are valid the **Add** button becomes available.

The **GPI-SPL LISTS** pane shows the established associations and the content of the selected GPI-SPL association.

1 GPI Input Pin

The desired setting is made from the GPI Input Pin list³. The pin number corresponds to the external (trigger) input of the Digital Cinema system.

Scroll and locate the specific GPI (GPI ‘n’) and then select.



2 SPL

All SPL currently available to the SMS Server are listed.

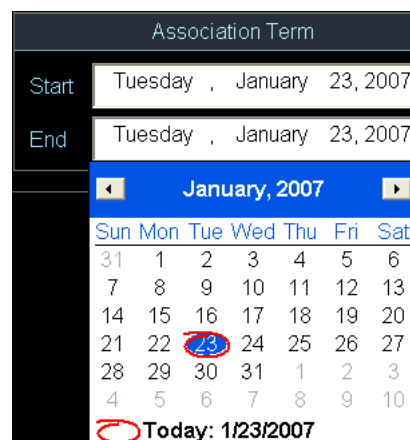
Scroll and locate the target **SPL**, then select.

SPL	
Title	UUID
16 Steps	urn:uuid:f08...
cars	urn:uuid:610...
Demo SPL	urn:uuid:dda...
ii robot	urn:uuid:8fc...
Media Block Commands	urn:uuid:3c5...
nested	urn:uuid:d64...

3 Association Term

The default Term of Association is for one day (the current day). If you desire to establish a different set of dates for the Association Term, select the month and type the new month in numerical format.

Repeat the same process for the day of the month and the year. Alternatively, click  and use the calendar tool to select the date. When the calendar tool opens it displays the current date. You must select an **End** date that is one or more days following the **Start** date.



4 GPI-SPL LIST

A list of GPI Inputs which are associated as Triggers for the execution of an SPL. When the Trigger is detected the associated SPL playing begins execution and the type of action that occurs is based on the content of the specific SPL. An SPL may be comprised of only Content, Sub-Playlist (SPL), Automation Controls or a combination of these.

5 GPI-SPL Definition

The GPI Trigger Definition associated with the SPL selected from the GPI-SPL LIST.

6 Apply

When all GPI Trigger associations are complete, click **APPLY**.

Caution

Up to six GPI Triggers can be stored internally. If a seventh trigger or beyond is input before the completion of a previously triggered SPL playback operation, the later triggers will be discarded. When using the Wait for Trigger function, do not input the next trigger until the image of the previously triggered playback operation appears.

1. The “true” or “active” state is configured on the GPIO PROFILES screen under the Settings tab.

2. Care should be taken to insure that any KDM required for Content included in the linked SPL are valid for the Association Term.

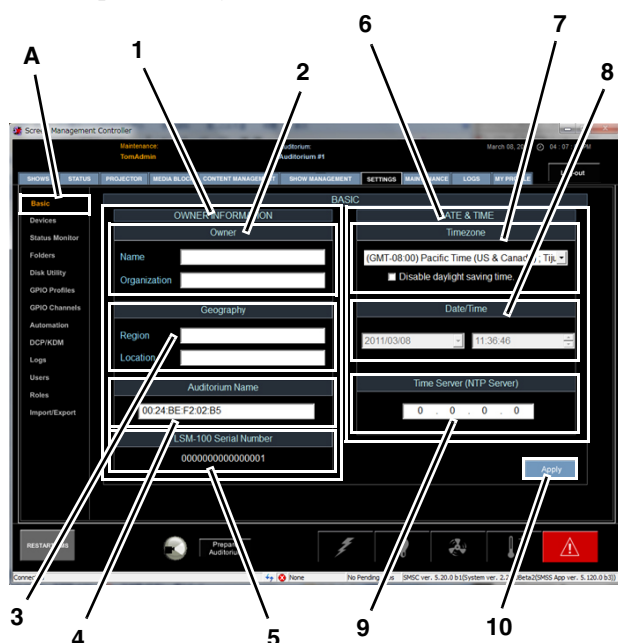
3. When the Emergency Operations feature is enabled during system installation, the GPI Input Pin assigned to the Emergency Alert function will be missing from those available in the GPI Input Pin list.

Settings

The Settings tab provides you with access to information and settings related to the overall SMS. In some cases the data will have been set during system installation and/or configuration and resides in the projector or the SMS Server database. User Management for the SMS Server is done under Settings as are settings for status check interval and log file filtering. Access to the Settings tab is Role restricted.

Basic

When the **Settings** tab is selected and you click **Basic** in the Navigation Bar the basic Settings Information screen appears which contains two major information groups. They are; Owner Information and Date & Time. Included in the Owner Information group is the Auditorium Name which may be set to identify the specific auditorium/screen in a multiplex facility.



A Basic

When Basic is selected on the Navigation Bar the Basic settings screen appears.

1 OWNER INFORMATION

An information group that identified the owner and location of the system.

2 Owner

These settings are text information set during installation and configuration of the Auditorium Unit.

- **Name** - The “owner’s” name.
- **Organization** - The name of the organization.

3 Geography

These settings are text information set during installation and configuration of the Auditorium Unit.

- **Region** - Identifies the “region” where the system is located.
- **Location** - Identifies the specific “location”, e.g., street address, theater complex name, etc., of the system.

4 Auditorium Name

The Auditorium Name, by default, is initially filled with information from the SMS Server’s theater network interface (MAC address). However, the Auditorium Name is user editable. This allows you to identify the specific auditorium and/or screen to meet the exhibitor’s identification needs and is normally set during initial deployment. Once you have typed or made any change to the Auditorium Name you must click **Apply** to transfer the new settings to the SMS Server.

Note

The Auditorium Name must contain information or **Apply** will remain unavailable.

5 LSM-100 Serial Number

Shows the Serial Number assigned to the LSM-100 (Sony Screen Management System application) during the manufacturing process. Not user changeable. For the LMT-300, however, this area is only used for compatibility with previous versions, and a non-unique fixed value is displayed.

6 DATE & TIME

This group includes date and time related information.

ACCESS TO SETTING DATE, TIME AND THE NTP SERVER ADDRESS IS RESTRICTED.

The Time Zone and DST option is normally set during system installation and configuration. Time information can be based on either the Media Block internal clock or use an NTP Server to maintain synchronization. When an NTP Server is used it does not affect the internal clock in the Media Block and the timing of KDM validity.

7 Time Zone

Note

When making changes to the Time Zone setting it is necessary to Restart the SMS Server to insure synchronization of time. To Restart the SMS Server, click **RESTART SMS** located in the lower right-hand corner of the screen.

This setting affects the date and time associated with the various logs generated by the SMS Server and the Date & Time displayed in the upper right-hand corner of the SMS Controller window. This setting does not affect the internal clock in the Media Block and the timing of KDM validity. The Time Zone box indicates the time offset from UTC and the specific time zone information, e.g., Pacific Time, US & Canada; Osaka, Sapporo, and Tokyo. While the UTC offset provides a general time setting for the system, the specific time zone information is needed to coordinate with DST settings. Select or clear Disable Daylight Saving Time appropriate to your location.

8 Date/Time

- **Date**
The Date box (unlabeled) displays the current date.
- **Time**
The Time box (unlabeled) displays the current time.

These values can only be changed by a “trusted” user.

Note

The Date/Time settings can also be set by a “trusted” user from the Projectionist Terminal.

9 Time Server (NTP Server)

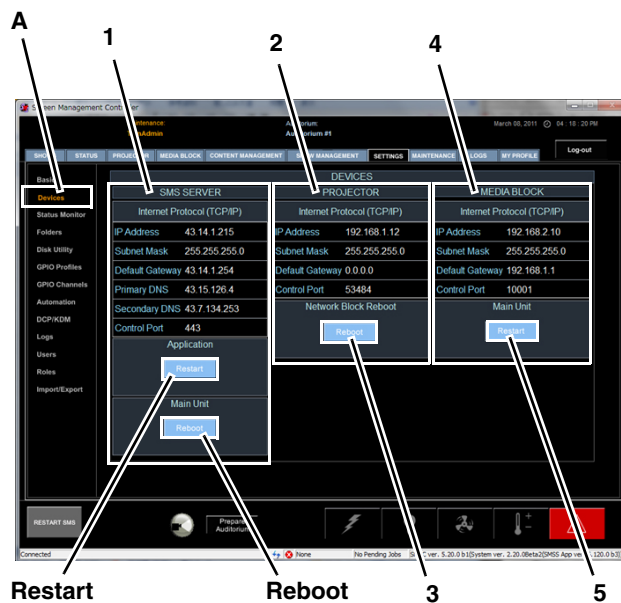
The IP address 0.0.0.0 is the default setting and is always shown unless the NTP Server address has been previously changed. This value can only be changed by a “trusted” user.

Note

The NTP Server IP address setting can also be set by a “trusted” user from the Projectionist Terminal.

10 Apply (button)

When the user has changed a setting, the Apply button becomes available, provided that the Auditorium Name contains some information. Unless already completed, enter the Auditorium Name information and then click the **Apply** button to transfer the user settings to the SMS Server and to enable the settings.

Devices**A Devices**

When the **Settings** tab is selected and you click **Devices** in the Navigation Bar the DEVICES information screen appears. Information displayed (but not editable) is the Internet Protocol (TCP/IP) settings for system network devices. Reboot and Restart buttons are also present for the Projector Network Block and the Media Block Main Unit respectively.

1 SMS SERVER

Displays the current **Internet Protocol (TCP/IP)** address information of the SMS Server network settings. Refer to the SMS Server installation and configuration document for additional information. In addition, the ability to **Restart** the SMS Server application and **Reboot** the SMS Server computer means are in this group.

Note

A Restart of the SMS Server application or Reboot of the SMS Server computer **halts** presentation.

A Confirmation message appears, click **YES** to execute the command. A short delay may occur following confirmation so the SMS Server can save the current location of the presentation. This allows you to resume the presentation from the point where it was halted. You will automatically be logged out of the SMS Server application during the Restart process.

2 PROJECTOR

Displays the current **Internet Protocol (TCP/IP)** address information for the Projector network settings. Refer to the Projector specific documentation for additional information.

3 Network Block Reboot (Projector)

If a communications failure occurs between the SMS Server and the Projector you can Reboot the Network Block in the Projector to re-establish communications. Click **Reboot** to initiate the Projector Network Block reboot.

Note

A Reboot of the Network Block in the Projector **affects** presentation. A Warning/Confirmation message appears when Reboot is executed, click **YES** to execute the Reboot.

4 MEDIA BLOCK

Displays the current **Internet Protocol (TCP/IP)** network address information for the Media Block subsystem. Refer to the associated Media Block documentation for additional information.

5 Main Unit (Restart)

If a problem occurs during presentation, and no other cause can be found, it may be necessary to Restart the Media Block. Executing a Restart of the Media Block results in a controlled shutdown and restart of the Media Block subsystem and its integrated RAID storage. Click **Restart** to initiate the Media Block restart process.

A **Restart** of the Media Block will result in some delay before a new Show can start.

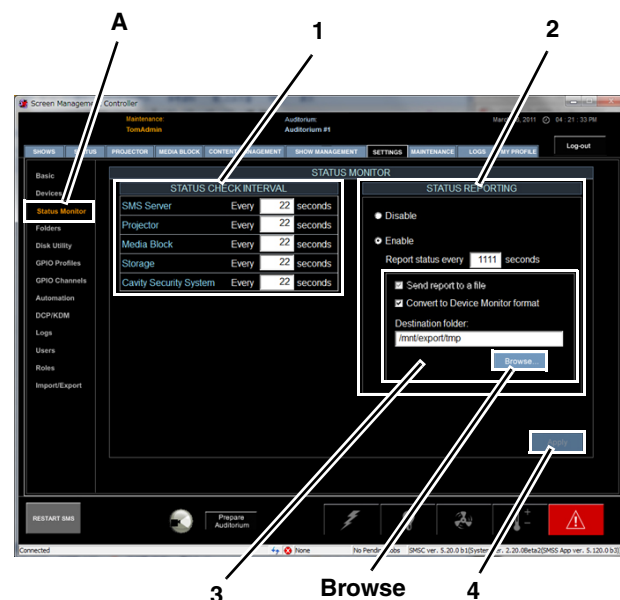
Caution

- Do not restart the Media Block while content is being shown.
- While the execution of Reboot is blocked if a Show is running, the command is executed immediately following confirmation (click **YES**) when no Show is being presented. A Warning/Confirmation message appears when Restart is executed, click **YES** to execute the Restart.

Status Monitor

Note

The files generated as a result of Status Monitoring are generally not intended for analysis or review by the user. These files, and their content, are intended to be forwarded to system support for analysis of issues that occurred during normal operation.



Settings on the STATUS MONITOR screen effect the period of how often the status of system devices are checked. Under STATUS CHECK INTERVAL separate settings are available for the major system components.

Under STATUS REPORTING an additional setting is available which determines how often the data are reported to the log file. In addition, you can specify the path that will be used when the log file for the system is written.

Note

To avoid consuming space on the SMS Server, log files are written to an attached network storage device. The log file path for each system controlled by a single SMS Controller must comprise a unique name part identifying the SMS, such as \\storage\logs\SMS1, \\storage\logs\SMS2 etc. If the same path specification is used for different SMS Controllers in a theater where multiple SMS systems are operating, the files will be output to the same folder under the same name, so that log files will overwrite existing files or will be overwritten in turn.

A Status Monitor

When the **Settings** tab is selected and you click **Status Monitor** in the Navigation Bar two system status related groups appear. The STATUS CHECK INTERVAL group contains five settings that determine how often the specific

sub-system is queried for status data. The STATUS REPORTING group provides control over the reporting of status data and includes a location (folder) where the files will be saved.

1 STATUS CHECK INTERVAL

In this group you can set the interval (in seconds) for checking the status of the specific sub-systems. They are:

- **SMS Server**
- **Projector**
- **Media Block**
- **Storage**
- **Cavity Security System**
(physical security of the Digital Cinema system)

Note

Overly aggressive status checking of any specific sub-system may have a detrimental effect on the operation of that sub-system and the SMS Server.

2 STATUS REPORTING

Settings in this group affect whether status information are reported and saved to a file. Settings also include how often the data are saved and the folder/directory where the status file is located.

- **Disable/Enable**
Select as appropriate to stop or start reporting and saving of status data.
- **Report every.... seconds**
Enter a value in seconds to determine how often you wish the status data reported and saved in the file.

3 Status File - Destination (unlabeled)

The various Status Files contain information that, while not normally informative to the user, are used for diagnosing issues that may arise during operation. Once Status Reporting is enabled you can select the manner in which it is reported. The options available determine how the information is reported, i.e., whether it is saved to a file¹ and optionally converted to Device Monitor² format. Setting the Destination folder allows you to specify the folder/directory where the file will be saved.

Click **Browse** to open a folder explorer, navigate to the target folder and select. Alternatively, you can type the path and folder name directly in Destination folder.

1. **Send report to a file** is selected by default and cannot be unselected.

2. **Device Monitor** - Refers to the Sony Professional Services Device Monitor, a multi-protocol monitoring system that provides continuous health and utilization awareness of devices.

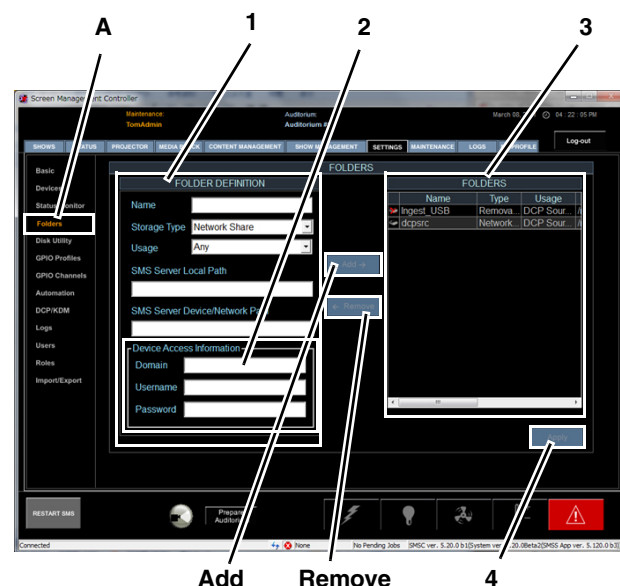
Note

When using Browse, the complete path must exist. There is no verification that the path or folder actually exists when you type the path/folder.

4 Apply (button)

The button becomes available when any change is made to any setting on the Status Monitor screen. Click **Apply** to transfer the user settings to the SMS Server and apply the settings as indicated.

Folders



For security purposes it is necessary to restrict unlimited access from the SMS Server to any accessible folder/directory. The Settings->Folders screen is where system folder access is managed.

The FOLDER DEFINITION information, when a new folder is created, is moved into FOLDERS using the **Add** button.

• Change Folder Settings

To make changes to a previously created/registered folder, select the **target folder** from the FOLDERS list and then click **Remove**. This moves the information into FOLDER DEFINITION. Make the necessary changes to its characteristics in FOLDER DEFINITION, click **Add** and then click **Apply**. This will send the FOLDERS list containing the revisions to the SMS Server.

• Delete Folder

To delete a previously created/registered folder from the SMS Server, select the **target folder** from the FOLDERS list and then click **Remove**. This will move the selected folder to FOLDER DEFINITION. Click

Apply and the changed FOLDERS list is sent to the SMS Server.

Notes

- No changes to the content of items in the FOLDERS list are finalized until you click **Apply** at which time the changes are applied to the SMS Server.
- During ingest, the registered folders should be left in their current state. Do not add, change, or delete a folder.

A Folders

When **Folders** is selected on the Navigation Bar two folder related groups appear. The **FOLDER DEFINITION** group contains settings that register and define a specific folder location available to the SMS Server. The **FOLDERS** list displays information about the currently registered folders, their characteristics, locations, and the user id (password is not displayed) associated with the named folder.

Note

To avoid consuming storage space on the SMS Server, Folders are usually defined as being located on an attached network storage device. The exception is Removable Folders. Also, the FTP path cannot be set.

1 FOLDER DEFINITION

This group contains eight settings that allow you to characterize a Folder for storage. They name, define and register a folder with the SMS Server for a specific purpose.

• Name

Type a recognizable name for ease of identification by the user. This is the network folder Name that will appear in a Folder Explorer when you click **Browse** during file related operations¹. By default, the name you type in Name also appears in SMS Server Local Path with the /mnt/ prefix. This can be changed as needed to redefine the local path.

• Storage Type

Identifies the type of storage. Select either Network Share or Removable Drive from the list.

Network Share Folders are located on devices associated with other systems. These Folders are provided to avoid consuming storage space on SMS Server as a result of the various logging processes.

A **Removable Drive** appears in the Folders list but cannot be removed. This Removable Drive appears as a USB connection on the Signal Panel where you can

1. If a file related operation is targeted at the local PC (running SMS Controller) then a File Explorer showing only local Folders appears.

attach a Device used to transport DCPs to the system. Other **Removable Drives** may be added as a Network Share Folder.

• Usage

This setting allows you to limit the way in which the specific path will be used. Options currently available are:

– Output

Folders designated as “Output” can only be used as a destination for system generated files, e.g., log files.

– Any

Any file type can be stored or found in folders with the “Any” designation. The “Any” designation is provided for backward compatibility. The system now limits the view of available folders based on the type of action., e.g., Ingest not only sees “DCP” designated folders but also sees “Any” designated folders. Ingest does not see “Output” designated folders.

– DCP

Only DCP file types are stored or found in folders with the “DCP” designation.

• SMS Server Local Path

This setting determines the folder (directory) name and the path to the folder as it appears on the SMS Server and how it appears when you **Browse** using a Folder Explorer. The Folder Name previously entered by default appears in the SMS Server Local Path with the “/mnt/” prefix. You can redefine the path as needed. Highlight the path and make the path changes necessary to point to the location of the target folder. The “/mnt/” portion of the path is automatically prepended to the defined path.

If the SMS Server Local Path does not exist it will be created when you click **Apply**.

• SMS Server Device/Network Path

Defines where on the network the SMS Server will “find” the registered folder. Storage locations are usually defined during deployment and use the fully qualified path in **SMS Server Device/Network Path**. These typically begin with the IP address of the storage location, e.g., “nnn.nnn.nnn.nnn”. The balance of the path is defined by the remote storage system. For example, when Samba is used for network files access the path appears as “//172.12.11.1/DCP” while when the Network File System (NFS) is used the path appears as “172.12.11.1/DCP”.

You specify the network storage location directly by entering the fully qualified path in **SMS Server Device/Network Path**.

If you are unsure as to how to specify the fully qualified network path contact your local/network administrator.

Note

While the physical location of storage may be local to the SMS Server this is not recommended because of the space required as a result of the various logging operations. It is recommended that storage be located on attached network accessible devices.

2 Device Access Information

The following are Device Access Information security related settings.

• Domain

The “Name” applied to a group of computers that can be accessed, i.e., “seen”, from other computers within the same domain or sharing a common directory or storage location. (Optional)

• Username

The User ID that will be used by SMS Server to access the registered folder. Type the name in **User ID**.

• Password

The Password that SMS Server will use to access the registered folder. Type the value in **Password**.

Enter the folder information and then click **Add** to move the new folder into the FOLDERS list.

Note

You MUST click **Apply** to send this newly added folder to the SMS Server prior to leaving this screen. If you leave the FOLDERS screen without clicking **Apply** your changes will be lost.

3 FOLDERS

A scrollable list of FOLDERS registered in the SMS Server.

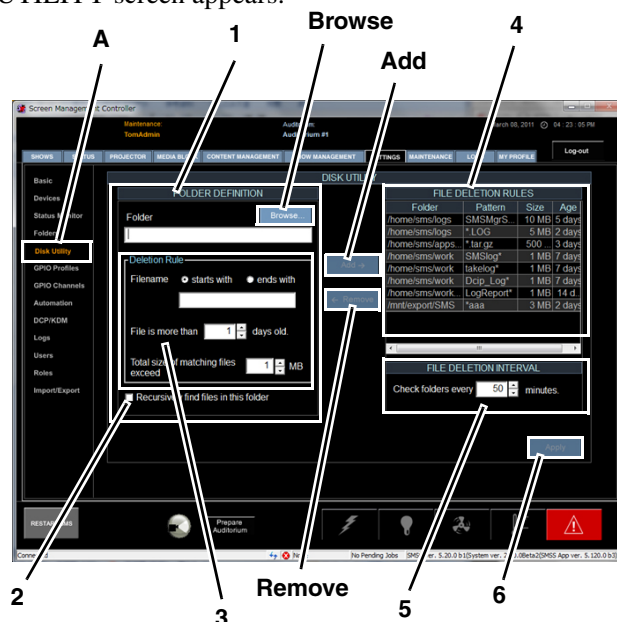
4 Apply (button)

The **Apply** button is available when any change is made to the content of the FOLDERS list. Click **Apply** to transfer the FOLDERS list to the SMS Server and apply the changes as indicated. When you click Apply the path to the SMS Server Local Folder is checked and if it does not exist the named Folder will be created. Also, the SMS Server will attempt to connect to the network storage location specified in SMS Server Device/Network Path.

When connection to the network storage is successful the “connected” drive icon  will appear in the left-most column. If the specified network storage location cannot be accessed then the “not connected” drive icon  appears. If the not connected icon appears, contact your system/network support person. Once the problem is resolved you must “refresh” the Folder.

Disk Utility

The SMS Controller includes a Disk Utility which is a tool used manage disk space on a periodic basis using a limited set of user defined rules. When the **Settings** tab is selected and you click **Disk Utility** in the Navigation Bar the DISK UTILITY screen appears.



A Disk Utility

When Disk Utility is selected on the Navigation Bar three related panes appear. They are;

• FOLDER DEFINITION

The settings in this group allow you to define a specific location (Folder) and the deletion “rules” that will be applied to all files located in the folder.

• FILE DELETION RULES

This group contains a list of previously defined file deletion rules.

• FILE DELETION INTERVAL

The setting in this group specifies in minutes how often the rule-set is executed.

1 FOLDER DEFINITION

This group allows you to define a rule set and specify a folder/directory location against which the rule will be executed. By setting a combination of Folder and the Deletion Rule you can control which files will be periodically deleted from the SMS Server and other folders and directories under its control. Click **Browse** to open a folder explorer, navigate to the target Folder and select. The Folder Definition qualifies the Deletion Rule to determine which folder and its included files will be acted on.

Alternatively, you can type the path and folder name. However, there is no verification that the path or folder actually exists when you type the path/folder.

Caution

If a folder that does not exist is specified, the SMS Controller may not be able to connect to the SMS Server. Do not specify folders that do not exist.

2 Recursively find files in the folder

Select this option to allow the SMS Server to apply the same rule to any included folder in the target folder, i.e., start at the defined folder and then open any sub-folders and apply the deletion rule.

3 Deletion Rule

The settings in Deletion Rule are “ANDed” together and will determine which files in the target Folder will be deleted. Settings include:

- **File name starts with/ends with**

This rule determines how the content of the text box will be applied to the file names found in the target folder. Click either **starts with** or **ends with** and then type the selection criteria in the text box. Selecting **starts with** results in a “wildcard” being appended to the end of the text box entry, e.g., “ab22*”. Selecting **ends with** results in a “wildcard” being prepended to the beginning of the text box entry, e.g., “*ab22”

- **File is more than....**

This setting establishes the maximum age of a file in days retained in the system. Type or select the number of days to use as a selection criteria.

- **Total size of matching files exceed...**

This setting establishes the maximum size in megabytes of a file that will be retained in the system. Type or select the minimum file size to use as a selection criteria.

Note

The above settings are “anded” together in a single rule to determine what files will be deleted.

- **Add File Deletion Rule**

After setting the FOLDER DEFINITION data, click **Add** to move the newly created rule into the FILE DEFINITION list. When the new definitions have been created or changes made to existing rules and added to the list, click **Apply** to save the FILE DELETION RULES list in the SMS Server,

- **Edit File Deletion Rule**

To edit the characteristics of a File Deletion Rule, select the target rule (**Folder**) in the FILE DELETION RULES list and click **Remove**. Make the necessary changes to the FOLDER DEFINITION and then click **Add**. This will return the rule with new definition to the FILE DELETION RULES list. Click **Apply** to save the revised list in the SMS Server.

- **Delete File Deletion Rule**

To remove a File Deletion Rule, select the target rule (**Folder**) in the FILE DELETION RULES list and click **Remove** and then click **Add**.

4 FILE DELETION RULES (List)

A list of previously established rules that will be applied to files in the target (defined) folder(s). These rules are resident in the SMS Server and the list is displayed when you access the DISK UTILITY screen. To remove or change any existing rule, select the rule and then click **Remove**. This will remove the rule from the list and it will appear in FOLDER DEFINITION. If you wish to delete the rule, simply click **Apply**. This sends the revised list to the SMS Server.

5 FILE DELETION INTERVAL

Sets how often (in minutes) the target folder(s) specified in the FILE DELETION RULES will be checked and the deletion rules applied. Type or select the number of minutes desired (maximum 1440 min.).

6 Apply (button)

The Apply button becomes available when any change is made to any setting on this screen. Click **Apply** to save the new FILE DELETION RULES list in the SMS Server.

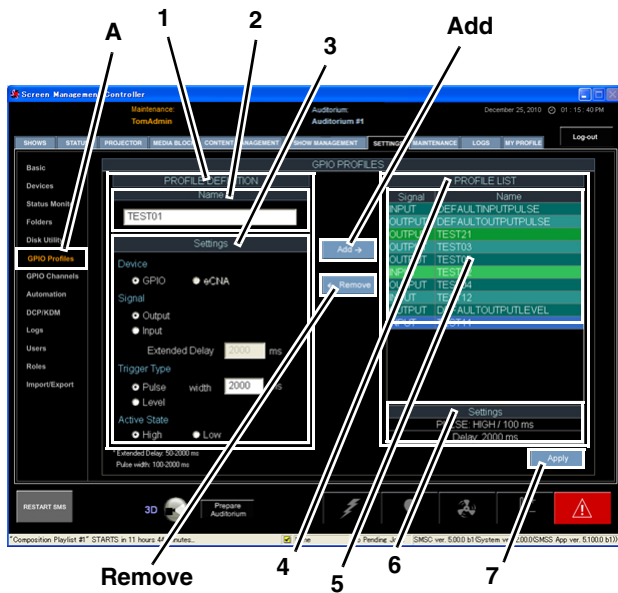
GPIO Profiles

Caution

Changes should not be made to GPIO Profiles while Presentation is in progress. When you click **Apply**, all Profiles contained in the PROFILE LIST are sent to the SMS Server and all GPIO Channels are set to their initial or wake-up state. This can result in unintended triggering or operation of attached auditorium equipment.

The SMS Server provides General Purpose Interface (GPI) control **Inputs** (detection) and **Outputs** (triggers) to ease the task of interfacing to and operating with legacy equipment present in many theaters. To make handling of these variations easier GPIO Profiles allow you to create a “Named” profile with specific characteristics. Once the profile has been created, it can be assigned, by Name, to the GPIO Input or Output as appropriate.

To configure the GPIO Profiles, select **Settings** and then click **GPIO Profiles** in the Navigation Bar. The GPIO Profiles screen appears.



A GPIO Profiles

When GPIO Profiles is selected on the Navigation Bar two GPI Configuration groups appear. They are;

• PROFILE DEFINITION

This group contains settings which you use to Name and Define the characteristics of a GPI Profile. These are globally applied to all GPI inputs and take effect from the time you click **Apply**. GPI Inputs are employed as Triggers to initiate execution of a Show Playlist.

• PROFILE LIST

A list of previously defined GPIO Profiles that can be applied to appropriate GPIO Channels. These profiles are resident in the SMS Server. To remove or change any existing profile, select the Profile and then click **Remove**. This will remove the Profile from the list and it will appear in PROFILE DEFINITION where it can be modified. If you wish to delete the Profile, simply click **Apply** after moving it to PROFILE DEFINITION. Apply sends the revised PROFILE LIST to the SMS Server.

1 PROFILE DEFINITION

This group allows you to characterize a set of GPIO Settings and apply a Name to the grouped Settings. Using this Name, the Settings can be easily applied to one or more GPIO Channels as appropriate to the external device.

2 Name

Type a recognizable name for ease of identification by the user. This is the Profile Name that will appear in pull-down menus on the GPIO Channels screen.

3 Settings

Defines the characteristics of the GPIO Profile.

• Device

This option determines whether the Profile is applicable to a GPIO or to the eCNA-10 from EPRAD. Select GPIO or eCNA as appropriate for the environment.

• Signal

This option determines whether the Profile will be applicable to an Input Channel or an Output Channel. Click the **Output** or **Input** option as appropriate.

When Input is selected you can adjust the timing delay between the receipt of an Input Trigger and the resulting action (SPL PLAY)¹. Type an appropriate value (in milliseconds) in **Extended Delay**².

• Trigger Type

This option determines whether the Signal is a Pulse (momentary) or a Level (maintained until changed). Click the **Pulse** or **Level** option as appropriate.

When Pulse is selected you can adjust the duration of the Pulse³. By changing the Pulse duration you can reduce the possibility of a false action based on the presence of short duration signals (noise) appearing on the signal line.

• Active State

This option determines whether the Signal is either High Level or Low Level when a “ON” state exists⁴. Click the **High** or **Low** option as appropriate.

• Add GPIO Profile

After setting the PROFILE DEFINITION data, click **Add** to move the newly created rule into the PROFILE LIST. When the new definitions have been created or changes made to existing rules and added to the list, click **Apply** to save the GPIO PROFILES LIST in the SMS Server,

1.This delay is approximate and should not be relied on for accurate synchronization of Presentation to an external event.

2.Extended Delay can be any value between 0.05 and 2000 milliseconds (50 to 2.0 seconds).

3.The duration of the Pulse can be any value between 0.1 and 2000 milliseconds (100 to 2.0 seconds).

4.The ON or OFF state is defined in Controls. The Channel Output wakes-up in an OFF state (the opposite of the level defined in Active State) and remains in that state until a Control ON is executed. Once Control ON is executed, the Channel Output remains ON until a Control OFF is executed.

• Edit GPIO Profile

To edit the characteristics of a GPIO Profile, select the target Profile (**Signal**) in the PROFILES LIST and click **Remove**. This will move the Profile to the PROFILE DEFINITION. Make the necessary changes and then click **Add**. This will return the revised Profile to the PROFILES LIST. Click **Apply** to save the revised list in the SMS Server.

• Delete GPIO Profile

To remove a GPIO Profile, select the target Profile (**Signal**) in the PROFILES LIST, click **Remove** and then click **Add**.

4 PROFILE LIST

The Profile List contains previously defined GPIO Profiles. These profiles are resident in the SMS Server and can be assigned to GPIO Channels as required.

5 Profiles

A list of Profiles stored in the SMS Server. To sort the list, click the **Signal** or **Name** column header in the list. When you sort on Name you also have an option to reverse the sort order. Click the arrow to the right in the Name heading.

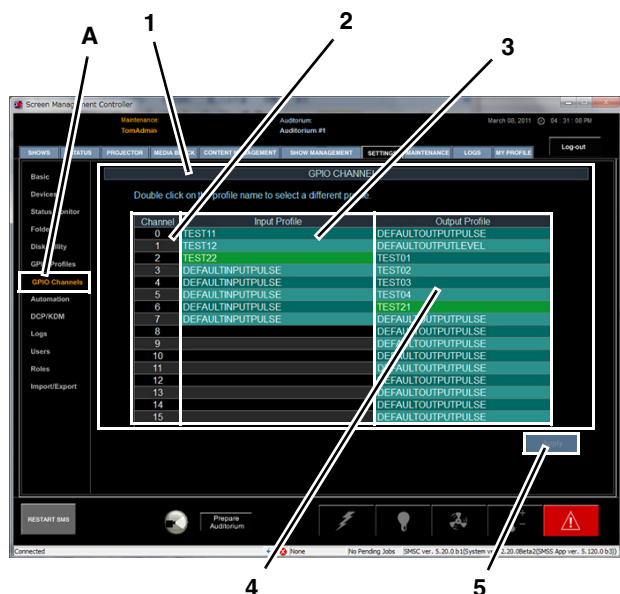
6 Settings

Displays the current Settings for the selected Profile in the PROFILE LIST. Click the target **Profile** to select.

7 Apply (Button)

The Apply button becomes available when any change is made to any setting on this screen. Click **Apply** to save the PROFILES LIST in the SMS Server.

GPIO Channels



A GPIO Channels

When GPIO Channels is selected on the Navigation Bar the GPIO Channels list appears.

From this screen you can assign a previously save **GPIO Profile** (see “GPIO Profiles” on page 69) to an appropriate channel or channels. Eight Input Channels are available and Sixteen Output Channels.

Note

GPIO Channel numbering begins with zero (0).

1 GPIO CHANNELS

A list of the GPIO Channels available in the SMS System.

2 Channel (Number)

Channel numbering begins with zero (0) and is incremental to the maximum number of GPIO modules installed in the SMS Auditorium Unit.

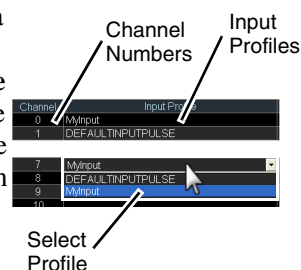
3 Input Profile

Displays the Input Profile assigned to the Channel Number.

Note

Channels 0~7 are both Input and Output Channels and therefore can have both an Input Profile and Output Profile assignment.

To assign an Input Profile to a target GPIO Channel, double-click the **Input Profile** immediately to the right of the Channel Number and select the appropriate **Input Profile** from the list that appears.



Only GPIO Profiles appropriate to Input Channels will appear. Once you have made the selection, click **Apply** to send the information to the SMS Server.

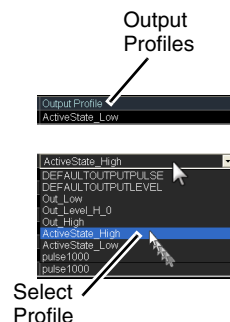
Note

If you leave this screen before you click **Apply** any changes will be lost.

4 Output Profiles

Displays the Output Profile assigned to the Channel Number.

To assign an Output Profile to a target GPIO Channel, double-click the **Output Profile** to the far right of the Channel Number and select the appropriate **Output Profile** from the list that appears.



Only GPIO Profiles appropriate to Output Channels will appear. Once you have made the selection, click **Apply** to send the information to the SMS Server.

Note

If you leave this screen before you click **Apply** any changes will be lost.

5 Apply (button)

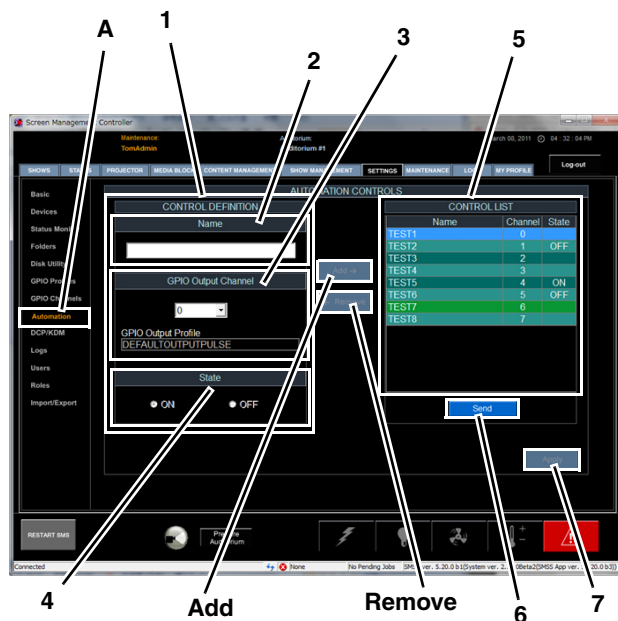
The Apply button becomes available when any change is made to any setting on this screen. Click **Apply** to transfer the new GPIO configuration to the SMS Server.

Automation (Controls)

The Automation Controls screen allows the user to assign easily recognizable Control Names to the General Purpose Input/Output (GPIO) Output Channel. These labeled controls appear on the Automation Controls screen when you select the **Shows** tab and then click **Automation** in the Navigation Bar.

Automation Controls ease the task of operating legacy equipment present in many theaters and uses the Outputs available in the General Purpose Input/Output Channels. Automation Control functions are often associated with curtain control, lighting management, etc. (outputs).

Currently, control of external devices is via parallel I/O only.



Testing Controls - Each Controls can be tested once it is assigned and the CONTROL LIST sent to the SMS Server. To test a Control, select the **target Control** from the CONTROLS LIST and then click **Send**. The defined external action associated with the target Control should occur.

A Automation

When Automation is selected on the Navigation Bar the AUTOMATION CONTROLS screen appears containing the CONTROL DEFINITION group and CONTROL LIST.

1 CONTROL DEFINITION

The settings in the CONTROL DEFINITION group includes the ability to set an easily identifiable Name, associate the Name with a GPIO Output pin¹, and establish the initial state of the Output pin.

2 Name

Type an easily recognized name for the specific GPIO Channel. Example: When the GPIO Channel output results in opening the curtains the Automation Control might be named "Curtains Open," while GPIO Channel that closes the curtains might be named "Curtains Close". The name you give the Automation Control is what you will see when you add an event to the SPL Control timeline (refer to Show Management and Editing SPL) and what appears when you select Shows and then click Automation.

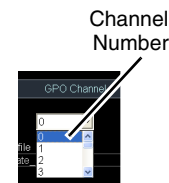
Note

The order in which the Automation Controls appear in the CONTROLS LIST can be changed by clicking the column Name.

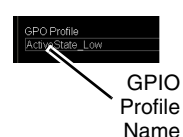
3 GPIO Output Channel

Associates the specific GPIO Output Channel (Pin) with the Automation Control Name.

In the GPIO Output Channel list, select the specified Output Channel for the named Automation Control.



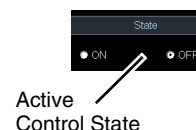
Once the GPIO Output Channel has been selected, the descriptive Name, e.g., ActiveLow, of the associated GPIO Output Profile is displayed.



4 (Initial) State

When the GPIO Output Profile characteristics are defined as "Level" based, this option is available. An Automation Control can be set to either the ON or OFF State when activated. The ON State equates to the Active State established in the GPIO Output Channel's associated GPIO Profile.

To define the State of the Control when it is activated, select either **ON** or **OFF**. This will result in the GPIO Output Channel transitioning to the



1. The characteristics of the signal available on the associated Output Channel (Pin) is established by assigning a GPIO Profile to the GPIO Channel.

Active or Inactive State respectively as defined in the associated GPIO Profile.

The State option is NOT available when the GPIO Profile is defined as “Pulse”.

5 CONTROL LIST

The Control List shows the named Automation Controls available for use in creating and executing SPLs in the SMS Server.

• Editing Controls

The process of editing an existing Automation Control occurs using data which is contained in the GUI and then moved to the SMS Server. Editing an Automation Control first requires you to move (**Remove**) the Automation Control from the CONTROL LIST to the CONTROL DEFINITION group where changes can be made. Once changed, the Automation Control is Added (**Add**) back to the CONTROL LIST.

- 1 Locate and select the target Automation Control in the CONTROL LIST.
- 2 Click **Remove** to move the selected Automation Control from the CONTROL LIST to the CONTROL DEFINITION group.
- 3 Edit the parameters of the Automation Control.
- 4 Click **Add** to return the changed Automation Control to the CONTROL LIST.
- 5 Click **Apply** to send the revised CONTROL LIST to the SMS Server.

Note

In software version 2.30 and later, Automation Controls include a Z-axis auto-adjustment function and calibration function for projectors. These Automation Controls cannot be deleted from the CONTROL LIST. Also, these two functions cannot be sent from this screen.

6 Send (Button)

Once a new Automation Control has been sent to the SMS Server you can test it for correct operation. To test an Automation Control, select the **Automation Control** from the CONTROL LIST and click **Send**. The associate operation of the external device should occur.

7 Apply (Button)

The Apply button becomes available when any change is made to any setting on this screen. Click **Apply** to transfer the contents of the GPI Control List to the SMS Server and apply the changes as indicated.

Note

If you leave the AUTOMATION CONTROLS screen prior to clicking Apply all changes are lost as the content of the CONTROL LIST is refreshed using SMS Server data whenever you enter the AUTOMATION CONTROLS screen.

DCP/KDM (Digital Cinema Package / Key Delivery Message)

The Key Delivery Message (KDM) contains decryption information which is used to unlock a CPL containing encrypted content elements during presentation. Key expiration information is also included in the KDM. When the expiration date/time has passed, decryption of the associated encrypted CPL will no longer be possible.

• Automatic purge of expired Content Keys

Automatic purge of Content Keys occurs as a background process and is the automatic deletion of expired Keys by the Media Block.

• Automatic Ingest of KDMs

KDMs are automatically ingested from two designated “KDM Hot Folders”. The Automatic Ingest of KDMs eliminate the need to manually sort through KDMs and determine if they are needed in anticipation of presentation of encrypted content.

Automatic Ingest is based on the following criteria:

– Hardware Target

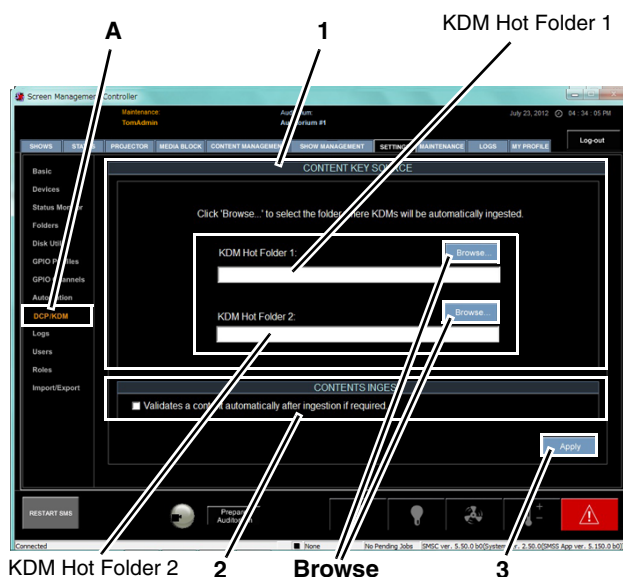
Is the Key targeted at the Auditorium Unit’s Media Block.

– Content Target

Is the associated Content (CPL) located on storage under control of the target Media Block.

– Valid Key Dates

Is the Content Key’s Start Date within 48 hours of the current Date/Time (as determined by the Secure Clock).



When an expired KDM has been removed a new, valid KDM must be placed in one of the “KDM Hot Folders” to support any subsequent decryption and presentation of the CPL.

A KDM (Key Delivery Message)

When KDM is selected on the Navigation Bar the CONTENT KEY SOURCE screen appears.

1 CONTENT KEY SOURCE

In the CONTENT KEY SOURCE group you can specify two “KDM Hot Folders” where KDMs are stored and available for Automatic Ingest.

• KDM Hot Folder 1/2

Designates where the KDMs are stored. These locations may be local or may be on a network attached device. The folders are designated in “*Folders*” on page 66. Click **Browse** and the SMS Server Explorer will open then select the target Folder.

2 CONTENT INGEST (initial state of the automatic validation checkbox for ingestion)

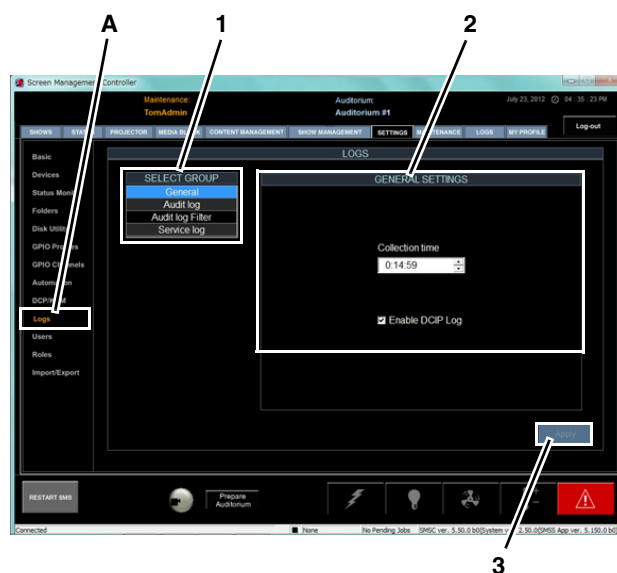
Specify the initial state of the checkbox (Validate automatically after Ingestion) that determines whether validation is performed automatically after ingestion of a DCP that requires validation is complete. If you select the “**Validates a content automatically after ingestion if required**” checkbox, the “**Validate automatically after ingestion**” checkbox will always be selected whenever you open the ingest screen.

3 Apply (button)

The Apply button becomes available when any change is made to any setting on this screen. Click **Apply** to save the contents of the CONTENT KEY SOURCE settings in the SMS Server and apply the changes as indicated.

Logs

When the Settings tab is selected, clicking “Logs” in the Navigation Bar brings up the LOGS screen. The LOGS screen lets you make settings for generating regular daily reports.



A Logs

When the Settings tab is selected, clicking “Logs” in the Navigation Bar brings up the LOGS screen. This screen serves for specifying the parameters that are applied when creating reports.

1 SELECT GROUP

The following group settings are available.

- General
- Audit Log
- Audit Log Filter
- Service Log

2 Settings pane

Shows available setting items, depending on the selection made in SELECT GROUP.

3 Apply (button)

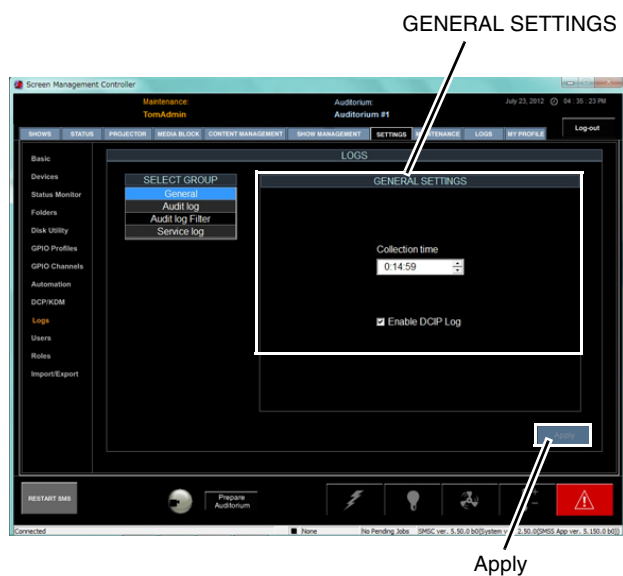
When any of the settings on this screen has been changed, this button becomes available. Clicking the button sends the settings made on the Logs screen to the SMS Server and enables them.

General

When you select “General” under SELECT GROUP, the GENERAL SETTINGS pane appears.

The GENERAL SETTINGS pane lets you specify the time parameters for generating regular reports. You can also

select whether to generate a DCIP Log report or not. When the settings are complete, click the Apply button. The parameters set under GENERAL SETTINGS are saved on the SMS Server and the displayed settings become valid.

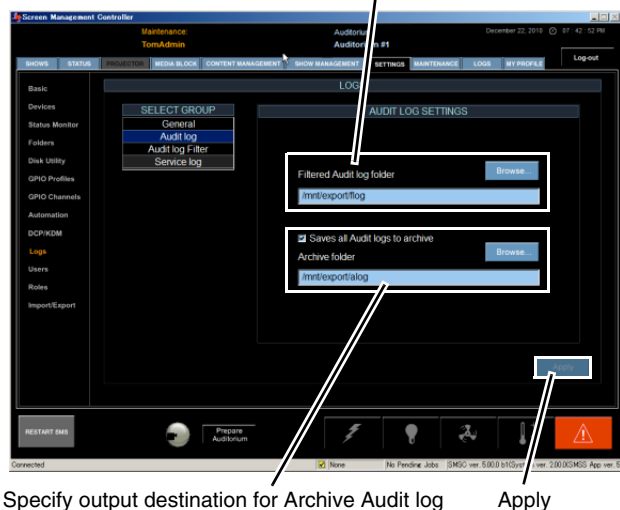


Audit Log

The Audit Log is a log created by filtering out security log information for the Media Block.

When you select “Audit Log” under SELECT GROUP, the AUDIT LOG SETTINGS pane appears. The AUDIT LOG SETTINGS pane lets you specify the output destination for the filtered Audit Log, as well as the output destination for the Archive Audit Log. When the settings are complete, click the Apply button. The parameters set under AUDIT LOG SETTINGS are saved on the SMS Server and the displayed settings become valid.

Specify output destination for filtered Audit log

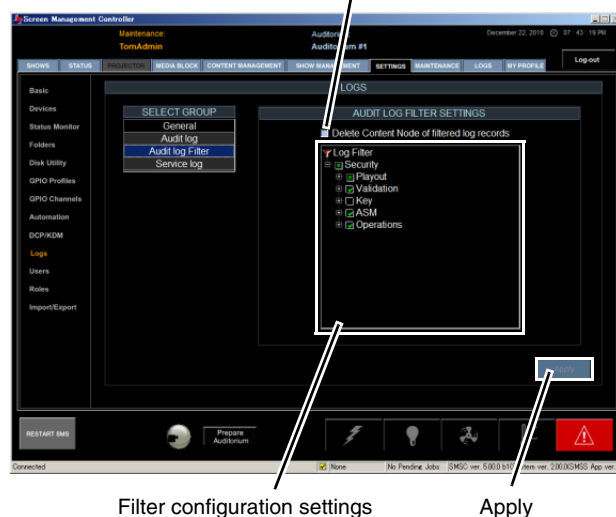


Audit Log Filter

When you select “Audit Log Filter” under SELECT GROUP, the AUDIT LOG FILTER SETTINGS pane appears.

The AUDIT LOG FILTER SETTINGS pane lets you specify parameters for the filter configuration to be applied to the Audit Logs obtained from the Media Block. When the settings are complete, click the Apply button. The parameters set under AUDIT LOG FILTER SETTINGS are saved on the SMS Server and the displayed settings become valid.

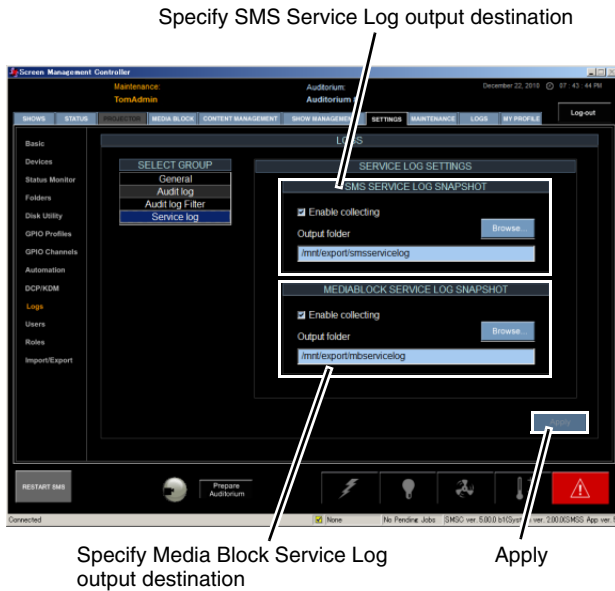
Delete Content Node of filtered log records



A green check mark in the filter configuration tree indicates that all filters under this level will be applied. To check or configure filters individually under this level, click [+]. When “Delete Content Node of filtered log records” is selected, any Content Node matching a selected filter will be deleted. When the option is not selected, all items will be reported, regardless of the log filter settings.

Service Log

When you select “Service Log” under SELECT GROUP, the SERVICE LOG SETTINGS pane appears. The SERVICE LOG SETTINGS pane lets you specify the output destination for the service logs. When the settings are complete, click the Apply button. The parameters set under SERVICE LOG SETTINGS are saved on the SMS Server and the displayed settings become valid.



Since the service logs are separate for the SMS and the Media Block, two different output destinations can be specified. When “Enable collecting” is selected, the service logs are created automatically after the Audit Log/DCIP Log output.

Note

The output destination setting does not affect the Logs tab (see “Logs” on page 90).

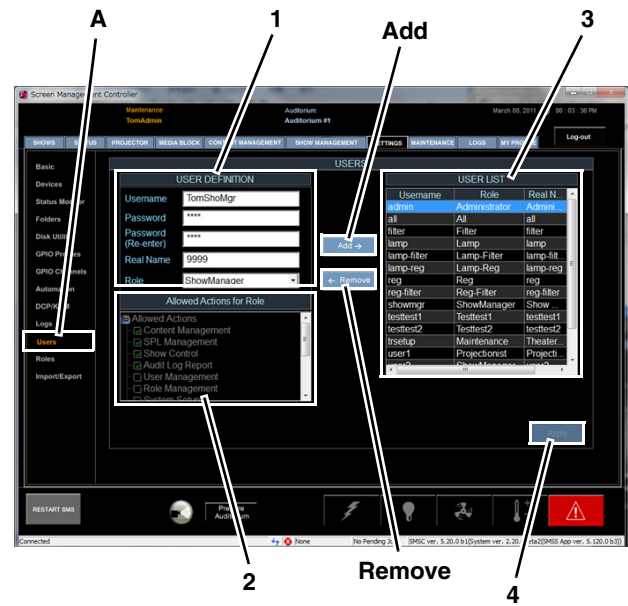
Users

User interaction with the system has the potential of impacting the presentation of a scheduled or running show. The continued introduction of increasingly complex technology dictates a simple yet versatile approach to user management and their access to system functions. In the Digital Cinema System this is realized through the assignment of a Username and a “Role” for each user.

Users are assigned a Username and a password which is common to both the SMS Controller and the Projector Terminal. The SMS System makes use of “Roles” in allowing users access to appropriate functions in the system.

When the **Settings** tab is selected and you click **Users** in the Navigation Bar the USERS screen appears containing the USER DEFINITION and USER LIST groups. These

settings establish a user identification/password, the person’s actual name, and an association with a specific Role or level of access to system functions.



A Users

When Users is selected on the Navigation Bar the USERS screen appears. In addition to the two major groups, the “Add” and “Remove” buttons are available to move the user into or out of the USERS list. The “Apply” button sends the current USER LIST to the SMS Server.

1 USER DEFINITION

These settings identify the person and allow logging of operations associated with the specific user. User information stored in the SMS Server is comprised of the following:

- **Username**

Type the name the person will use to Login to the SMS Server. The Username must be unique within the system.

Note

- The Username is case sensitive.
- The Username applies to accessing both the SMS Controller and the Projectionist Terminal.

- **Password**

Type the user specific password. The content of this box is masked (or hidden). The Password must be entered twice and be identical in both cases.

Note

The Password applies to accessing both the SMS Controller and the Projectionist Terminal.

- **Real Name**
Type the actual name of the user in Real Name.
- **Role**
Select the role to associate with the specific user from those available in the list. Once the Role is selected the user's operational access is displayed in the Allowed actions for Role list.

Note

The various Roles and the Actions allowed for each Role is defined under the Roles screen when selected on the Navigation Bar. The actual functions available to any specific role is determined when a Role is created.

2 Allowed actions for Role

The user's access to SMS Controller functions are indicated by a check mark in the box adjacent to the specific action. The list is scrollable and for information purposes only.

3 USER LIST

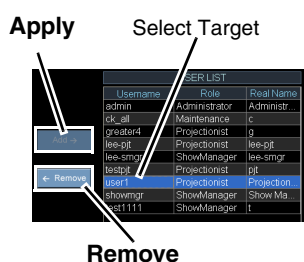
The USER LIST shows all users registered in the SMS Server.

To add a user to the USERS list:

- 1 Create a new User in USER DEFINITION.
- 2 In USER DEFINITION, select User's **Role**.
- 3 Click **Add**.
- 4 Click **Apply**.

To edit a **USER DEFINITION**, e.g., Real Name or Password;

- 1 Select the target user from USER LIST.
- 2 Click **Remove**.
- 3 Make any desired changes to USER DEFINITION (**Add** will becomes available).
- 4 Click **Add**.
- 5 Click **Apply**.



To delete a user from the USERS list:

- 1 Select target from USER LIST
- 2 Click **Remove**.
- 3 Click **Apply**.

All changes to the USER LIST are local until you click **Apply** at which time the contents of USER LIST is transferred to the SMS Server and takes effect immediately.

4 Apply (button)

The Apply button becomes available when any change is made to the content of the USER LIST. Click **Apply** to cause the current content of the **USER LIST** to be applied to the SMS Server.

Roles

Many operations in a theater can impact the presentation of a scheduled show. Within the SMS System, "Roles" are used to control user access to the system and to functions in the system. When a User is created in the SMS a Role is assigned to the User. This Role allows and limits the actions the User can take.

Four predefined Roles are established in the SMS. These Roles cannot be deleted or their Allowed Actions changed.

The predefined User Roles are:

- **Administrator**
- **Projectionist**
- **Show Manager**
- **Maintenance**

These predefined Roles relate to specific operational areas of responsibility as show in the table below.

As can be seen in the above, "Show Control" appears in all roles. While the functions/operations available in the predefined Roles cannot be changed, any combination of operations/functions can be assigned to a newly created Role. Once a Role is created, modifying the Role's Allowed Actions at any time in the future will add or remove those functions for all Users assigned that Role.

The Maintenance Role includes access to all functions while the Administrator Role has limited and does not include functions that are security and logging related.

Each Theater will have its own needs for user access to SMS functions. Specific Roles should be created that meet the needs of the Theater and these Roles assigned to the appropriate User(s).

Role	Allowed Actions											
	Content Management	SPL Management	Show Control	Audit Log Report	User Management	Role Management	System Setup	Retrieve Svc/App Logs	Proj Lamp Timer Reset	Proj Settings	CSS Operations ^a	Proj Tuning
Projectionist	D	D	E	D	D	D	D	D	E	E	D	E
Show Manager	E	E	E	E	D	D	D	D	D	D	D	D
Administrator	E	E	E	E	E	E	E	D	E	E	D	E
Maintenance	E	E	E	E	E	E	E	E	E	E	D	E
E = Enabled for that Role — D = Disabled for that Role												

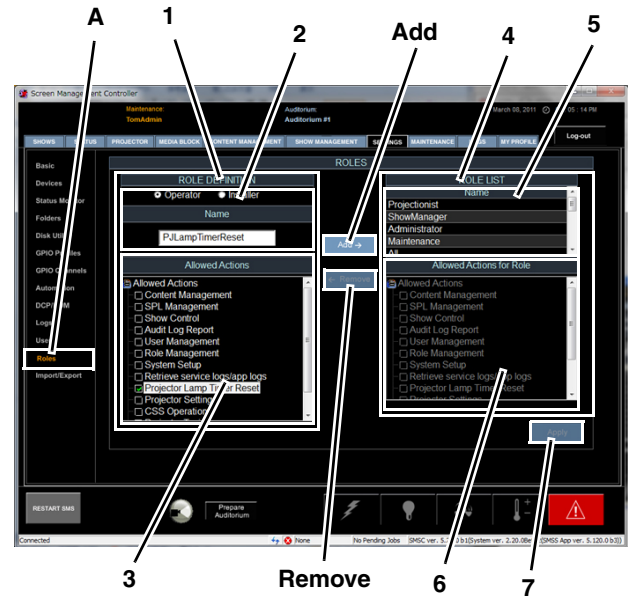
a.Accessible only by a trusted user.

Note

Specific operations related to the security of the SMS enclosure and its content are accessible only by a “trusted user”. Should, for any reason, a Security violation be triggered, the ability to Initialize Security must be accessible to an available User in order to resume presentation. While initializing the System Security may seem to be a rather routine function it must be kept in mind that any person that has access to Initialize Security can open the SMS enclosure, compromise the un-encrypted Media Block to Projector connection, secure the enclosure and Initialize Security thus allowing encrypted Content to be diverted in its un-encrypted form.

Also see “Maintenance” on page 81 and “Security” on page 85.

When the **Settings** tab is selected and you click **Roles** in the Navigation Bar the ROLES screen appears containing the ROLE DEFINITION and ROLE LIST groups.



The process of adding a new Role to the system begins by creating a new Role **Name** (unique) under **ROLE DEFINITION**. After the new Role Name has been entered and the Role’s associated **Allowed Actions** set, click **Add** to move the new Role into the **ROLE LIST**. Once the new Role is added to the **ROLE LIST** the **Apply** button becomes available.

Note

All changes to the **ROLE LIST** are local until you click **Apply**.

A Roles

When Roles is selected on the Navigation Bar the ROLES screen appears. This screen is divided into two major groups. The pane on the left, ROLE DEFINITION, is used to define a new Role and the pane on the right, ROLE LIST, contains the existing and any added Roles, and displays the Allowed Actions specific to a selected Role.

1 ROLE DEFINITION

Depending on the current operation type (Operation/Installer), you can define new Roles or edit existing Roles.

- **Operator**
Users logging in as “Operator” on the SMS Controller/PJT Operation Login screen can select the “Operator type” action options.
- **Installer**
Users logging in as “Installer” on the SMS Controller/PJT Operation Login screen can select the “Installer type” action options.

Note

In previous versions, the “trsetup” login was used to gain access to setting items, but in the new version, setup action options can be managed separately by User and Role.

2 Name (new Role name)

Type a uniquely identifying name for the new Role in the text box.

Selected Roles are predefined and are associated to permanent User Names. New Roles can be created and named appropriate to the local operation.

3 Allowed Actions

Allowed Actions contains a list of all actions or functions available to a SMS User. Select or clear the actions/functions as required to meet the operational needs of the new Role.

All actions/functions selected will be available to any user assigned the defined role.

4 ROLE LIST

The ROLE LIST is a scrollable list showing all current roles available to be assigned to a user. Any change to the ROLE LIST is local and you must click **Apply** to save the list in the SMS Server. A new or changed setting for a specific ROLE DEFINITION does not apply to the user until you click **Apply** and the list is saved in the SMS Server.

Changes to the ROLE LIST are abandoned if you leave the ROLES screen and return prior to clicking **Apply**.

5 Name (existing/added Roles)

A list of defined Roles available for saving in the SMS Server. Changes to this list or any of the listed Roles causes the **Apply** button to become available.

6 Allowed Actions

Allowed Actions contains a list of all actions or functions available to the (Role) Name selected in the ROLE LIST. Only those actions/functions selected (checked) are available to Users assigned the selected Role.

7 Apply (button)

The Apply button becomes available when any change is made to the content of the ROLE LIST. Click **Apply** to cause the current content of the **ROLE LIST** to be saved in the SMS Server.

To edit a Role’s **ALLOWED ACTONS**:

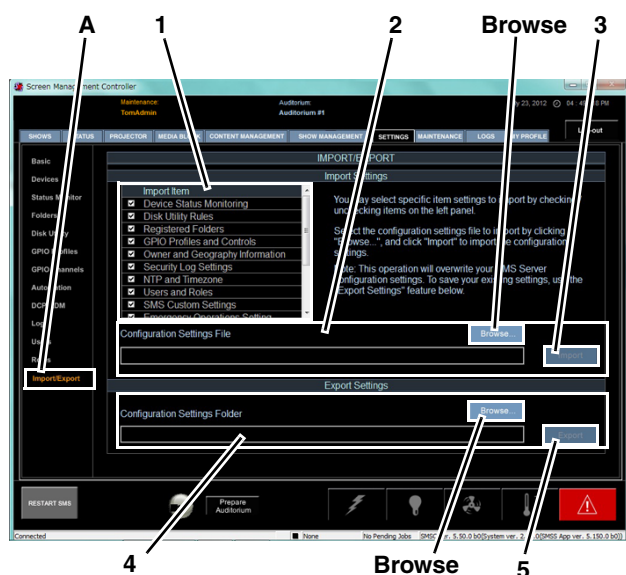
- 1 Select the target from ROLES LIST.
- 2 Click **Remove**.
- 3 Make desired changes to Allowed Actions (select or clear the specific action/function).
- 4 Click **Add**.
- 5 Click **Apply**.

All changes to the ROLE LIST are local until you click **Apply**.

Import/Export

The ability to Export settings and selectively Import them to another system is a feature allowing Auditorium Unit settings, which can be common across systems in a multi-auditorium location, to be easily replicated to other systems.

When you Import settings all of the selected Import Items will be overwritten by the content of the imported file. If you wish to save the current settings prior to importing, export the current settings to a file and preserve the file.



Note

The Export process writes settings data to the transfer file¹. During the Import process you can selectively designate while settings are imported to the target system.

A Import/Export

When Import/Export is selected on the Navigation Bar the IMPORT/EXPORT screen appears. This screen is divided into two major groups. The option list on the left, Import Item, is used to select which data groups are imported from the selected file. The two other areas set the location of the Export and Import file.

1 Import Item

The Export process packages all settings into a file. This includes the Roles and Users (Passwords are encrypted). Prior to importing the settings data you can select which of the settings groups to be imported and applied to the target system. Select the desired options from those available in the **Import Item** list. See “Import Settings” on page 112.

1. Selected settings data are not written to the transfer file. Settings data not exported are those unique to the source system and/or auditorium, e.g., Auditorium Name.

2 Import Target

The Import Target points to the location where exported Settings Files can be found. Click **Browse**. This opens the SMS Explorer. Navigate to the target folder, select the specific Settings File and then click **OPEN**. The path and filename appears in Configuration Settings File.

Note

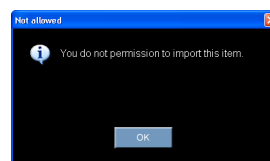
Folders are defined in Settings->Folders and can be created and named appropriate to the local operation.

3 Import

After locating the target Folder and selecting the desired Import Options, click **Import**. The new settings will be loaded into the current system.

Note

The ability to select the Owner/Geography and NTP/Time Zone options are Role Restricted. If your assigned Role does not allow import of the specific setting group you have selected then a Not Allowed message appears. Click **OK** to continue.



Generally, the new settings will take effect immediately. However, if Role and User ID has been one of the selected options and these have changed it is possible that you will not have future access to the system once you logout.

4 Export Target

The Export Target points to the location where the exported settings file will be placed. Click **Browse**. This opens the SMS Explorer. Navigate to the target folder, select and then click **OK**.

Note

Folders are defined in Settings->Folders and can be created and named appropriate to the local operation.

5 Export

After locating the target Folder, click **Export**. The settings of the current system will be saved to a transportable file.

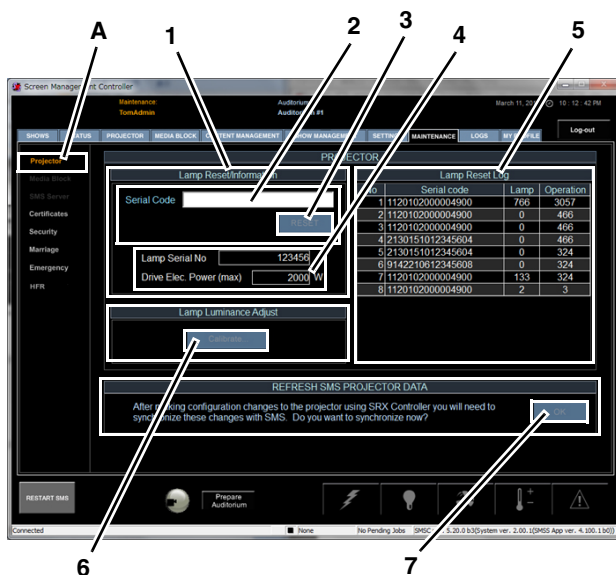
Maintenance

The Maintenance tab allows you access to specific maintenance functions for the SMS System. Refer to the documentation specific to the sub-system for additional information. General Maintenance operations include; Projector specific operations, downloading the Media Block Security Certificate, and, when system installation, execution of the Marriage process and configuration of the Emergency Alert actions settings.

Selected Maintenance operations have special access requirements. These are; Media Block File operations, SMS Server File operations, and the ability to Initialize System Security.

Projector

When the **Maintenance** tab is selected and you click **Projector** in the Navigation Bar the PROJECTOR screen appears. From this screen you can enter the Serial Code of a replacement lamp¹, view the Lamp Reset Log, execute the Luminance Calibration process, and refresh the SMS Server's Projector information.



1. Entering a new Serial Code causes the Lamp Timer to be reset. In addition, the Serial Code contains information that defines the maximum Lamp Power. Normally, lamp replacement is done using the SRX Controller application which should not be used at the same time the SMS Controller application is in use.

Usable lamp life in hours is discussed in documentation accompanying the projection lamp. Exceeding the usable lamp hours is not recommended as it can result in lamp explosion and damage to the lamp housing and reflector. The lamp replacement process is also outlined in the Projector documentation. Refer to the lamp specifications where additional information related to lamp life vs. lamp output is discussed.

A Projector

When **Projector** is selected on the Navigation Bar the PROJECTOR maintenance screen appears.

1 Lamp Reset/Information

For optimum presentation quality it is recommended you monitor the number of hours the lamps has been in use. Refer to the Projector User Guide and the technical information and description of the lamp. When the individual lamp is replaced and the new Serial Code entered, **RESET** becomes available. On Reset, the Lamp Replacement information (see “Lamp” on page 35 under the “Status” tab) is reset, e.g., Lamp Hours are set to zero (0) and the Last Replaced date is set to the current date. The replacement information is also entered in the Lamp Reset Log.

2 Serial Code

Lamps for the SRX-R320 projector are identified by a unique Serial Code. The Serial Code includes a Manufacturer ID, the Maximum Power and Minimum Power in Watts (operational range), and a Serial Number. This Serial Code establishes the maximum projector lamp Drive. Elect. Power (max).

3 RESET

Sets the new Serial Code and causes the Lamp Hours Timer to RESET.

Note

Normally the lamp replacement process uses the SRX Controller application where the Serial Code is entered and the process of optimizing the position of the lamp in the reflector is realized.

4 Lamp Information

This information displays the Lamp Serial Number and the maximum Drive Elect. Power that can be used by the installed lamp. This information is encoded in the Serial Code that is entered when the lamp is replaced.

5 Lamp Reset Log

A log of Lamp replacements is shown in this list. This list does not allow for horizontal scroll but you can resize the columns to display the Hours information if necessary.

6 Lamp Luminance Adjust - Calibrate...

Note

Access to the Lamp Luminance Adjust - Calibrate... function is Role restricted.

This function is only available when the Lamp Control Mode is set to “Luminance”.

Because the normal operation mode is “Lamp Power”, the function will usually not be available

If it is needed, use the SRX Controller to make the setting.

Note

Calibrate Luminance takes about 5 minutes to complete.

7 REFRESH SMS PROJECTOR DATA

Note

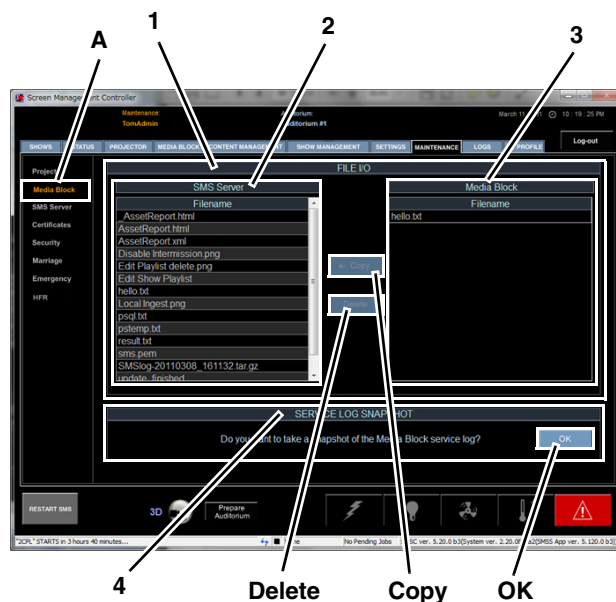
Access to the Refresh SMS Projector Data function is Role restricted.

Causes the SMS Server to retrieve the Projector Data and refresh the SMS Server stored data. Occasionally, changes may be made to the Projector settings from another SMS Controller, the Projectionist Terminal, or using the SRX Controller application. These changes may not be reflected in the SMS Server data and REFRESH forces the SMS Server to retrieve the current Projector data. To refresh the Projector data to the SMS Server, click **OK**.

Note

Use of the SRX Controller while the SMS Controller is in use is not recommended because data synchronization between the Projector and SMS Server can be lost.

Media Block - (Role restricted)



Note

Service Log snapshots are normally taken only if some anomaly occurs during presentation. Taking a snapshot of the Service Log can require some time to complete and should not be done in a casual manner.

A Media Block

When **Media Block** is selected on the Navigation Bar, the screen for acquiring a service log snapshot appears. This screen deals with “taking” a snapshot of the current status of the Media Block and saving the Media Block file in the SMS Server.

1 FILE I/O

The FILE I/O group contains two lists of Service Log files. The SMS Server list containing files copied from the Media Block. The Media Block list contains the Service Log snapshot files present on the RAID.

To delete a file from either the Media Block list or the SMS Server list, select the **target file** and then click **Delete**.

2 SMS Server - Filename

A list of Service Log snapshot files present in the SMS Server. This location is common to both SMS Service Log snapshot files and Media Block snapshot files that were previously transferred from the Media Block. Files in this list can be copied from the SMS Server to a Folder on your local computer. See “*SMS Server - (Role restricted)*” on page 83 under the “Maintenance” tab.

③ Media Block - Filename

These files are “snapshots” of the current Media Block Service Log and are used when additional analysis of an unusual Media Block event is required. Once a snapshot is completed it is automatically copied to the SMS Server but also remains on the Media Block controlled storage for some time. Should the file(s) on the SMS Server be deleted it/they can be re- copied, one at a time, from the Media Block to the SMS Server. Snapshot files present on the SMS Server can be copied to a Folder on your local computer. When a snapshot of the Service Log is taken it appears in the Media Block list of filenames.

To copy a snapshot file from the Media Block list to the SMS Server list, select the **target file** and then click **Copy**.

④ SERVICE LOG SNAPSHOT

Allows you to take a “snapshot” of the current state of the Media Block. Click **OK**.

Caution

- Taking a snapshot of the Media Block Service Log can affect DCP Ingest and Validation.
- If Content presentation is occurring you will not be able to take a Service Log snapshot. A popup message appears. Click OK to clear the message and take the snapshot at a time when the presentation has ended.
- Presentation operations and ingestion cannot be performed while snapshot capture is in progress. Conversely, snapshot capture cannot be performed while ingestion is in progress.
- Do not perform snapshot capture while another snapshot capture operation is in progress.

Taking a snapshot of the Service Log may take some time to complete¹. If the snapshot completes within a 15 minute window, the file will be automatically copied to the SMS Server (appears in the Filename list). If the process does not complete within the designated 15 minute window the snapshot file will appear in the Media Block - Filename list. The filename format is as follows:

takelog_VVV_SSSSS-YYMMDD_hhmmss

takelog	file name heading
VVV	a numeric value indicating the version of the Media Block software
SSSSS	a numeric value showing the Serial Number of the Media Block
YYMMDD	the date the log was taken
hhmmss	the time of day the log was taken (24hr format)

1. The amount of time required to complete the Service Log snapshot is dependant on how long it has been since the most recent snapshot and the amount of storage space allocated for logs.

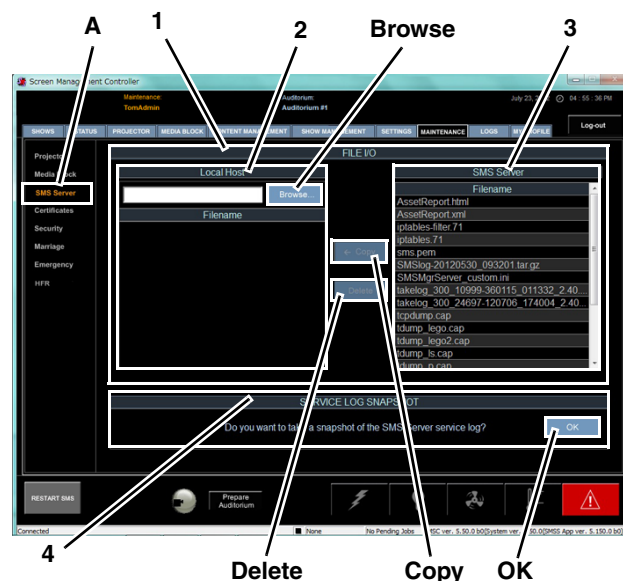
The filename extension is “.tar.gz” indicating it is in “tar” format and compressed (.gz). Select the takelog and click **Copy** to replicate it in the SMS Server Filename list. Once the file appears in the SMS Server Filename list, it can be downloaded to your local computer.

Caution

Do not download the file before the service log snapshot processing has finished. Downloading the file too early will create an incomplete service log. Download will be performed about 30 seconds after the snapshot completed popup window appears. After download is complete, click **MEDIA BLOCK** tab >Control >Restart to restart the LMT.

SMS Server - (Role restricted)

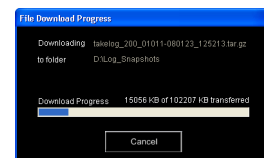
When the **Maintenance** tab is selected and you click **SMS Server** in the Navigation Bar the SMS Server FILE I/O screen appears.



The Local Host Filename list and the SMS Server Filename list are shown and are used to manage the Service Logs.

To delete a file from either the SMS Server list or the Local Host list, select the **target file** and then click **Delete**.

To copy a log file from the SMS Server list to a folder on the Local Host, select the **target file** in the SMS Server list and then click **Copy**. The File Download Progress appears (shown to the right) and provides information on the copying progress.



Files in the SMS Server list may be snapshots of the Service Log from the SMS Server or they may be files which have been copied from the snapshots of the Media Block Service Logs. It is from this screen that you will export copies of the Services Log from both the SMS Server and the Media Block.

Taking a Service Log snapshot causes the SMS Server resident Service Log to be written to SMS Server folder.

A SMS Server

When SMS Server is selected on the Navigation Bar the FILE I/O screen appears.

1 FILE I/O

The FILE I/O screen displays lists of files located in the specified Folder on the Local Host computer and on the SMS Server. Service Log Files are copied to the Local Host Folder and also remain on the SMS Server until manually deleted.

Note

The SMS Server list contains the combined snapshot files of the SMS Server and the snapshot files of the Media Block that have been copied from the Media Block to the SMS Server.

2 Local Host - Filename

A list of Service Log snapshot files present on the local host computer. This location must be designated and can be on storage physically attached to the system or on any system connected via a network. These files are available for transfer to another location for further analysis.

Type the Path to the target folder. Alternatively, click **Browse**, navigate to the target folder and then click **OK** on the Folder Browser.

3 SMS Server - Filename

A list of Service Log snapshot files present in the SMS Server.

4 SERVICE LOG SNAPSHOT

Allows you to take a “snapshot” of the current state of the SMS Server. Click **OK**. The snapshot file will appear in the SMS Server - Filename list with the name “SMSlog” followed by an identifier.

Note

Taking a snapshot of the Service Log may take some time to complete.

Certificates

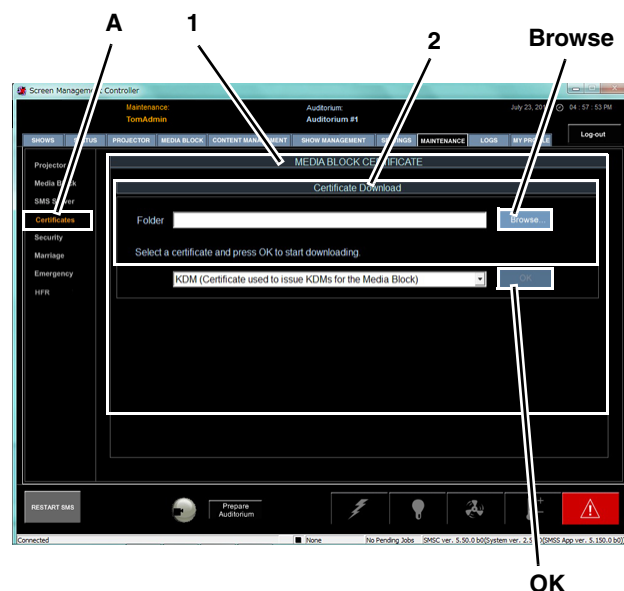
Content security is a critical component of a digital cinema system. Digital motion picture content (sound, imagery,

and subtitles) is protected during transport from the distributor to the theater using encryption technology. The encryption allows the content to be safely distributed via any convenient transmission channel including courier, satellite, or computer network. To decrypt an encrypted DCP, a key specific to the theater is required. This key is transferred to the theater as part of the KDM. On site, the encoded DCP is then decrypted by means of a private key assigned to a specific projection system and stored in the Media Block. To generate the theater specific keys the distributor must have knowledge of the decryption Certificates resident in the Media Block.

Media Block Certificate

Three Certificates are fixed in the Sony Media Block during the factory manufacturing process. They are; the Root Certificate, the Issuer Certificate, and a Certificate unique to the specific Sony Media Block (Device Certificate). The Certificate Download process described here allows the exhibitor to “export” the Media Block Certificate information for purposes of sending the it to the distributor of the DCP. This is required so Content corresponding keys, specific to the Media Block, can be generated and provided in the Key Delivery Message (KDM). You can also obtain the certificate¹ for the Projector via the Media Block. However, the Projector certificate can only be obtained when Marriage processes have already been performed.

When the **Maintenance** tab is selected and you click **Certificates** in the Navigation Bar the MEDIA BLOCK CERTIFICATE screen appears.



1. For versions offering DCI Compliance support, DCP distribution may be handled using SMPTE type DCP. In this case, a Projector Certificate may be required for SMPTE KDM generation.

A Certificates

To minimize the possibility of unauthorized access to the DCP content the Media Block contains Certificates that are used to identify the “system” (specifically the Media Block) to the organization that will issue a KDM appropriate to the content elements contained in the DCP. The “Keys” contained in the KDM, when present in the Media Block, unlocks the encrypted components of the DCI Package as an ongoing process at the time of presentation by the specific Media Block/System.

When **Certificates** is selected on the Navigation Bar the CERTIFICATES screen appears.

1 MEDIA BLOCK CERTIFICATES

The Media Block Certificates are used in the process of KDM generation by the content distributor and is set in the Media Block during the manufacturing. This Certificate information must be made available (exported) to any organization creating DCP associated KDMs (targeted for the specific Media Block). The three Certificates in the exported file are used by the KDM generation system to meet the needs of the KDM generation process.

2 Certificate Download (Path)

This Path is located on the PC where the SMS Controller application is running or on any attached network device. The path defines where the Media Block Certificates and Projector Certificates will be located following a download (export). Enter the full path to the folder, or click **Browse** to open a folder browser and then select the target for downloading the certificate. When a local folder has been specified, the **OK** button becomes available. Select the certificate type from the drop-down list (Media Block certificate, Projector certificate). Click **OK** to download the certificate.

The downloaded Certificate file is essentially a text file. The file is sent to the organization creating Digital Content Packages (DCP) that are encrypted and will be used to generate a Key Delivery Message (KDM). The resulting KDM is returned to the exhibitor, ingested to the Media Block with its included “Keys” enabling presentation of the associated DCP.

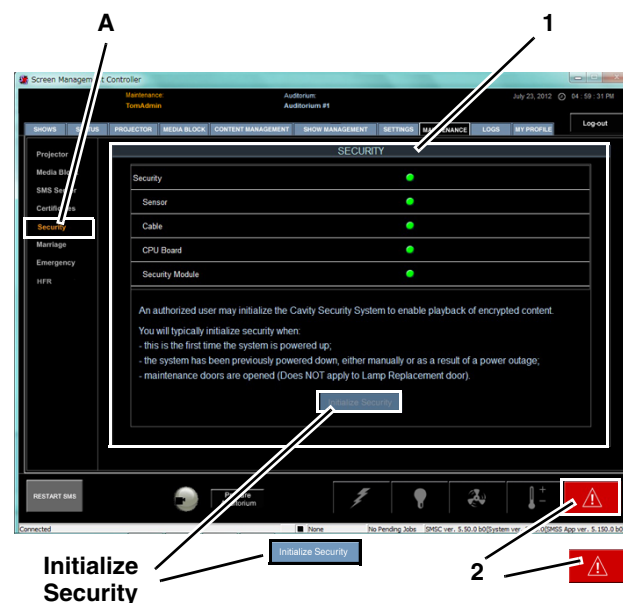
Security

System security is designed to protect the DCP Packages from unauthorized access to content and the potential for duplication in an un-encrypted form. You must Initialize the System Security when the power is initially applied to the system and following certain other occurrences that may indicate a compromised system enclosure.

Note

It may take some minutes for the Security Services to come to a ready state following initial application or restoration of system power.

When the **Maintenance** tab is selected and you click **Security** in the Navigation Bar the SECURITY screen appears. This is a Maintenance function that validates the enclosure security status including the presence of all appropriate certificates, security of interconnections, content related module security, and physical security of the enclosure.



A Security

When **Security** is selected on the Navigation Bar the SECURITY screen appears. Access to the Initialize Security function on this screen is restricted.

1 SECURITY

Validates that the Media Block security related devices are operational and the monitored areas of the Auditorium Unit are secure¹.

2 Warning

The Warning indicator appears illuminated (red) when the Security System requires attention. Click the **Warning Indicator** and a popup message appears.

¹In the SRX-R320 based system the areas of the system associated with Lamp replacement are not monitored by Security.

Initialize Security (Role Restricted)

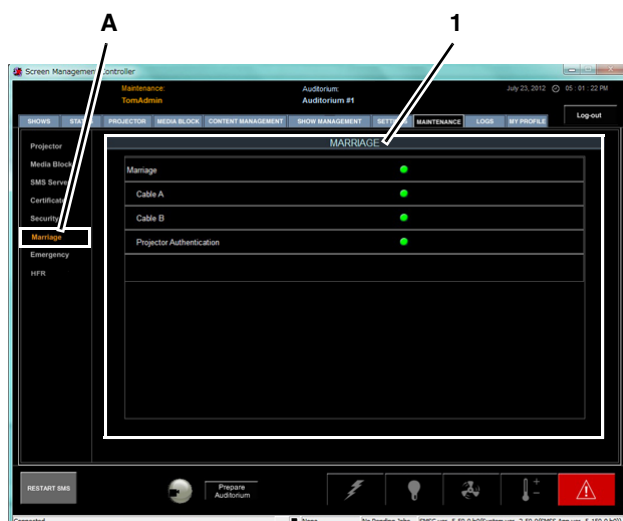
Validates that the Media Block security related devices are operational and the monitored areas of the Auditorium Unit are secured¹. Click **Initialize Security**² to activate the Security System. A pop-up message appears confirming the Security initialization has been received by the Media Block (click **OK**) and, if Security is validated, the Warning button which was illuminated is restored to its normal state.

Note

It will no longer be necessary to re-ingest KDM files.

Marriage

Performs Marriage processes during system installation. The Status of the Marriage can be obtained with the SMS Controller. (Marriage processes are executed with the Projectionist Terminal.)



A MARRIAGE

Selecting “Marriage” from the Navigation Bar brings up the MARRIAGE group display. At this screen you can check the Marriage status for each device.

1. In the SRX-R320 based system the areas of the system associated with Lamp replacement are not monitored by Security.

2. Access to **Initialize Security** is Role restricted.

1 MARRIAGE

The MARRIAGE pane uses the following status indicators.

- (Green) - Safety is assured.
- (Yellow) - Not connected.
- (Red) - Safety is not assured.
- (Gray) - Status cannot be ascertained.

Note

For software version 2.20 and later, Marriage will be disconnected also when the enclosure is opened.

Emergency - (Role restricted)³

Note

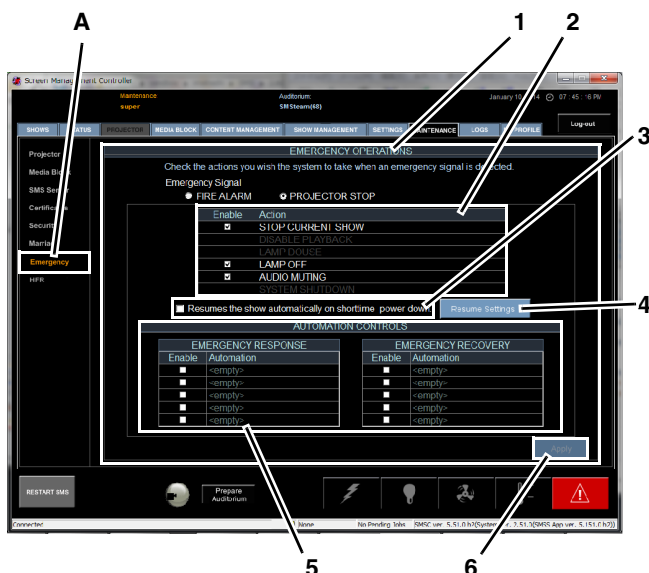
The availability of the Emergency Alert feature is configured during system installation. If it is not configured then this selection in the Navigation Bar will be unavailable.

The SMS features the ability to recognize an external Emergency Alert and take one or more of the actions defined on the EMERGENCY OPERATIONS screen.

This Maintenance function is Role restricted and available only when the Emergency Operations (Emergency Alert) feature has been enabled during system installation and configuration.

A momentary power interruption to the projector is one such emergency. This includes cases where only the projector lamp goes out. In version 2.30 and later, there is a function that automatically turns the projector lamp back on and restarts the showing in such cases. However, a momentary power interruption is not the only cause of the lamp going out, so it does not mean that this function is invoked after every power interruption.

3. When the signal on the Emergency GPIO Input is set to LOW, EMERGENCY OPERATIONS are triggered.



A Emergency.

When Emergency is selected in the Navigation Bar, the EMERGENCY OPERATIONS screen appears. From this screen you can select what system actions will be taken when an emergency alert signal is detected at the designated Channel (Input).

1 EMERGENCY OPERATIONS

A list of Actions are available for optional selection when a Life Safety alert signal is detected.

2 Enable/Actions

The following optional Actions are available (click to select):

• STOP CURRENT SHOW

Immediately halts presentation of the current show. The timeline of the Current Show is preserved and the Show may be resumed from the halted position. The Lamp remains on and the Projector remains operational.

• DISABLE PLAYBACK

Prevents starting presentation of any Show subsequent to the receipt of a Life Safety alert. The Lamp remains on and the Projector remains operational.

• LAMP DOUSE

Causes the Douser on the Projector to close. The Lamp remains on, Audio is not muted, and the Projector remains operational.

• LAMP OFF

Puts the Lamp in the off state. The Projector remains operational and the Peltier temperature control devices and Imaging Panels remain energized. See “Control” on page 40 for additional information.

• AUDIO MUTING

Mutes the Media Block playback of the Content Element Audio Tracks.¹ Muting the Audio does not Douse the Projector image output.

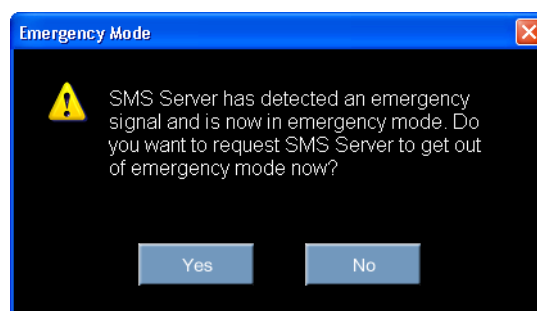
• SYSTEM SHUTDOWN

Selecting this option results in the Auditorium Unit to begin the Shutdown process on receipt of an Emergency Alert signal. When the Shutdown process is complete, the Projector and all devices in the Auditorium Units will be shutdown.

Note

When setting the System Shutdown option it must be recognized that once the Emergency Alert has been received by the SMS Server the process cannot be interrupted. The Emergency Alert condition must be removed and the Auditorium Unit must go through the complete Emergency Alert process.

If the Shutdown option is not selected the receipt of an Emergency Alert causes an Emergency Mode alert message to be generated and the Warning indicator to be illuminated. To view the Emergency Alert message, click the **Warning indicator**.



If the Emergency Alert has not been resolved and you wish to close the message without taking any action, click **NO**. While the Emergency Mode message closes, the Warning indicator remains illuminated. To access the Emergency Mode message again, click the **Warning indicator**.

1. Simply Dousing the Projector while not stopping the presentation does not interrupt Audio Playback.

If the Emergency Alert has been cleared, click **YES**. The Clear Emergency message appears¹.



Click **OK** to allow resumption of operation.

Note

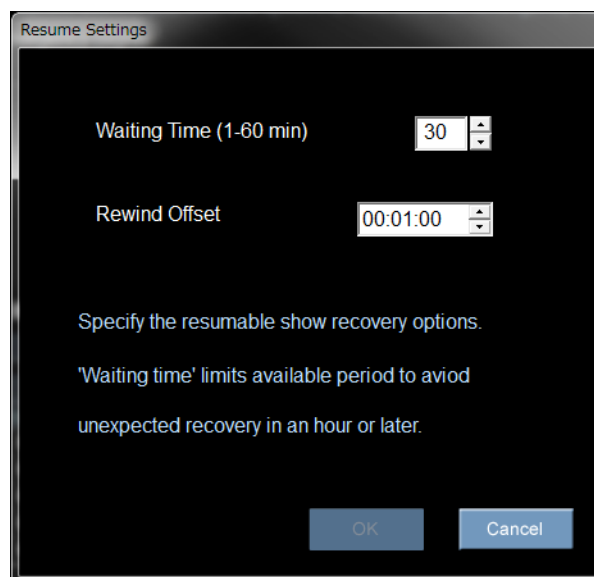
When you click OK presentation does NOT automatically resume. The steps necessary to resume presentation are manually executed and are a function of the options selected in the Emergency Action Enable list. For example, if Lamp Douse is selected and Lamp OFF is not selected then presentation can resume without the need to wait for the Lamp Start/Warm up process.

③ “Resume the show automatically on shorttime power down” checkbox

Selecting “Resume the show automatically on shorttime power down” enables the automatic presentation resume function. This function automatically turns on the lamp and resumes a presentation after waiting for the projector to restart after a Projector Stop interrupts a presentation. Enabling the function allows the projector to resume a presentation automatically once it restarts after a power outage or other event that interrupts the power supply and causes a Projector Stop to occur.

④ Resume Settings (button)

Click the Resume Settings button to display the Resume Settings dialog box.



• Waiting Time

Allows you to configure the wait time between the moment the projector’s power supply is lost and the moment the presentation resumes when the automatic presentation resume function is enabled. If the duration between the moment the Projector Stop occurs and the moment the projector’s power supply is restored is longer than the duration specified for Waiting Time, the automatic presentation resume function will not operate.

• Rewind Offset

When you want to resume within the same content after a Projector Stop occurs, this rewinds the playback position to a position that corresponds to the specified amount of time before resuming the presentation.

However, Rewind Offset will be disabled in the following cases.

- When a presentation was not in progress when the Projector Stop occurred
- When you want to present content other than the content at the time of the Projector Stop occurrence
- When manually specifying the offset during presentation resume

⑤ AUTOMATION CONTROLS

Register Automation Controls here.

In Emergency Response, you can register up to five Automation Controls that will be performed when an Emergency occurs.

In Emergency Recovery, you can register up to five Automation Controls that will be performed when an Emergency is removed.

To register an Automation Control, select Enable, click the Automation field, and select the Automation Control you want performed from the Control List that appears. To disable the Automation Control, unselect Enable.

¹.If the Emergency Alert has not been cleared the Emergency Mode message reappears.

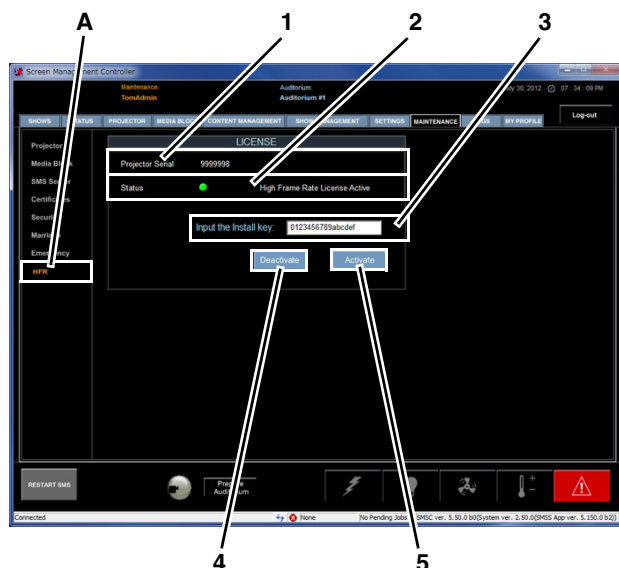
For details on registering new Automation Controls, see “Automation (Controls)” on page 72.

⑥ Apply (button)

The Apply button becomes available when any change is made to the Enabled Actions. Click **Apply** to cause the Enable Actions to be saved in the SMS Server.

HFR (High-Frame-Rate Playback License Management)

Allows you to input license keys that enable playback of high-frame-rate content or check whether of high-frame-rate content can be played back.



A HFR

Selecting “HFR” from the Navigation Bar brings up the HFR group display.

① Projector Serial (projector serial number)

Displays the serial number of the projector that is required to generate the high-frame-rate license key.

② Status (license status)

Indicates whether high-frame-rate content can be played back.

- (green) - A high-frame-rate playback license key has been input, and playback is possible.
- (yellow) - A high-frame-rate playback license key has been input. However, playback is not possible because the key does not match the projector serial number, or because the projector serial number could not be obtained due to communication with the projector being disabled.
- (red) - Playback is not possible because a high-frame-rate playback license key has not been input.

③ Input the Install key (license key input area)

Displays the currently input license key. This is empty if a license key is not input. The license key must be 16 characters in length.

④ Deactivate (key removal)

Press this to remove the license key that is input into the system.

⑤ Activate (key registration)

Press this to register the license key that is input in the Input the Install key area to the system.

Note

A paid license (option) is required to play back high-frame-rate content that is not supported by DCI specifications.
For details, consult your local Sony representative.

Logs

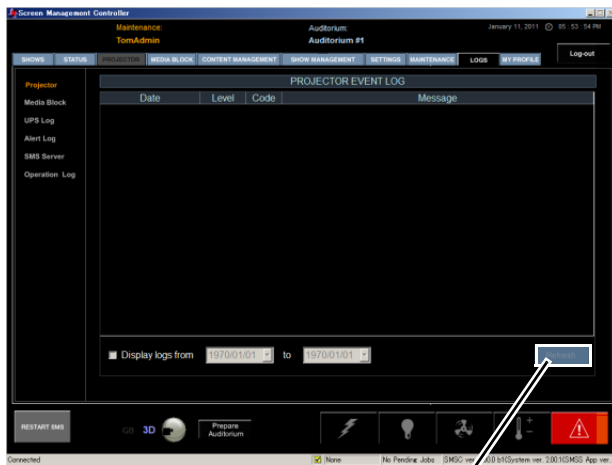
The Screen Management System maintains logs for selected devices and operations. These logs are used to track subsystem errors or, in the case of the Operations Log, to track system operations and specific operator actions. When reporting issues for product support include the date/time, complete error message, the code and the color of the indicator (if present).

While system logged data is automatically captured, these changes are not reflected in the Log screens once the screen is open. In addition, under some circumstances, e.g., the SMS Server has been restarted, the log cache is cleared. If you are unsure of the status of the log information and you wish to insure that the log information is current, click **Refresh**. Alternatively, you can leave the specific Log screen and then return to it. This will cause the screen to be reloaded from the SMS Server.

The following Logs are maintained in the SMS:

- **Projector**
- **Media Block**
- **UPS Log**
- **Alert Log**
- **SMS Server¹**
- **Operations Log²**

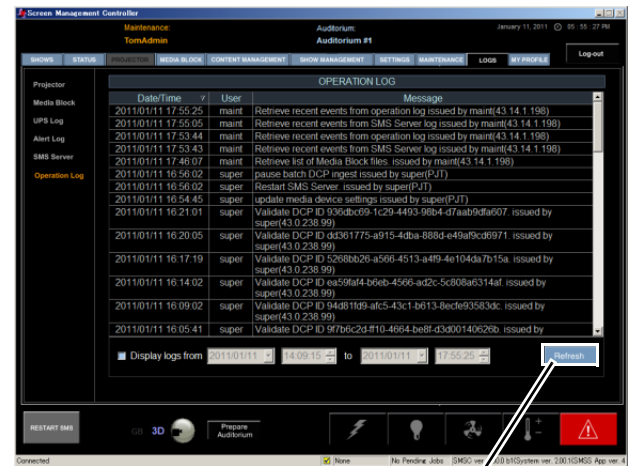
Two examples of logs are shown in the following illustrations:



Refresh

The above log is an example of a Projector Error Log showing a Lamp temperature errors.

The following log is an example of the Operations log showing actions taken by the specific User.



Refresh

You can show logs for a specific date range by selecting “Display logs from [] to []” and entering the desired dates.

1.Access to the SMS Server Log is Role restricted.

2.Access to the Operations Log is Role restricted.

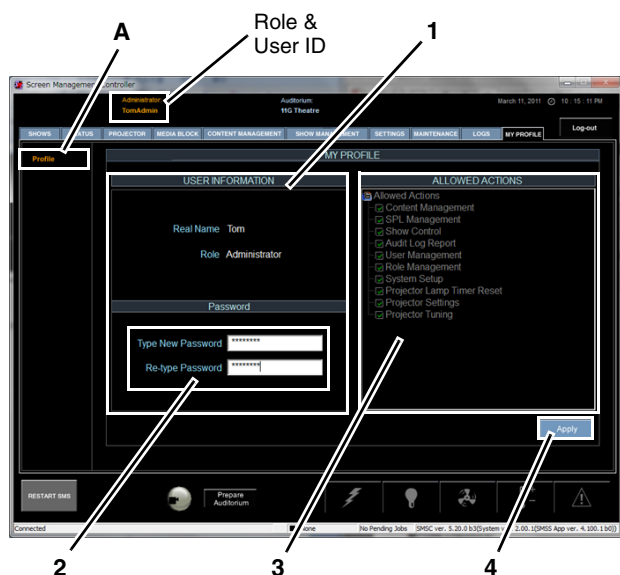
My Profile

The My Profile tab provides you with information about your profile and the functions you have access to within the SMS Controller and Sony Digital Cinema System. In addition, from the My Profile screen you can change your password. However, you cannot make changes to ALLOWED ACTIONS.

Note

All changes are local to the My Profile screen until you click **Apply**.

When the **My Profile** tab is selected, the MY PROFILE screen appears.



A Profile

The Profile of the currently logged-in user is shown.

1 USER INFORMATION

The USER INFORMATION pane shows the Real Name of the current User, the User's Role and includes an area where you can set a New Password. Your Role and User ID are also shown in the upper-right of the screen as illustrated above.

2 Password

To set a new Password, type the password in **Type New Password**. Re-type the password in **Re-type Password** and then click **Apply**.

Note

For some users, the Profile and Password areas are NOT available.

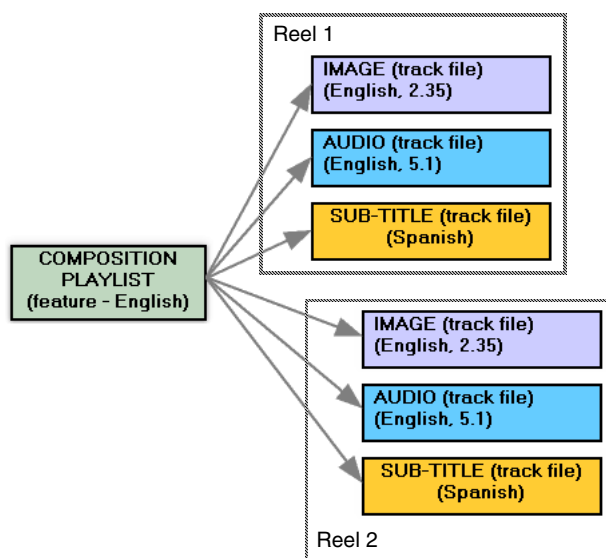
3 ALLOWED ACTIONS

The ALLOWED ACTIONS pane is informational only and displays the level of actions allowed to the current user. To have your allowed actions changed, contact your system administrator.

4 Apply (button)

The Apply button becomes available when your Password is changed by you. Click **Apply** to cause the changed Password to be saved in the SMS Server.

In Digital Cinema, the Composition Playlist (CPL) is the base on which every show and schedule is built. The Composition Playlist in Digital Cinema is included in the Digital Cinema Package (DCP) and is essentially a description of the individual Content Elements contained in the DCP. The CPL is analogous to the “cut-sheet” in the film environment which describes the content of a reel of film (trailer or featurette) or a set of reels (feature film) and the sequence for presentation.



However, where the cut-sheet describes a fully composed (including sound & sub-titles) reel, the CPL contains information to the essence files in the DCP that make up the reel(s) as a “composition” for presentation. A CPL is a textually based list that identifies the content elements and defines how the elements of the specific Digital Cinema Composition are played back in a presentation. The CPL contains:

- **General Information**
Includes Title, Content Type, Language, Aspect Ratio, etc.
- **Image Track Information**
Includes the Unique Universal ID of the essence file and it’s entry point (offset in the file).

- **Audio Track Information.**
- **Subtitle Track Information.**
- **Auxiliary Track Information**
(if tracks are present).
- **Digital Signature**
Insures the CPL has not been subject to tampering.

Refer to the Digital Cinema System Specification for a complete description of the CPL.

Note

The Content Elements described by the CPL may or may not require an associated KDM for presentation. If a KDM is required the keys it contains are associated with a specific Composition Playlist for presentation using a specific Media Block.

During presentation of the content, the CPL is “read” by the Media Block and the information it contains is used to manage the playout of the content elements stored on the RAID. The key item in this process is that fact that the CPL is always used to control the sequential presentation of the content elements by the Media Block during playout.

Synchronization of the content elements described in the CPL and contained in their separate data files is realized in the Media Block and occurs at the (logical) Reel level. This is the same as what would be found in a film environment. Synchronization, e.g., image, sound, text, is based solely on the Reel to Content Element file relationship as described in the CPL. Synchronization of Content Elements at the Reel to Reel juncture is also managed in the Media Block. However, there is no specification on the transition at a CPL to CPL juncture and delays of 3 to 5 seconds between the end of a CPL and the start of a following CPL could be experienced.

Control Events are executed in the SMS Server and, while not immediate, are not subject to the same processing delays possible at the start of a CPL. Any attempt at close synchronization of Control Events and a given point in a CPL should take into account the delays and variances possible.

Show Schedules

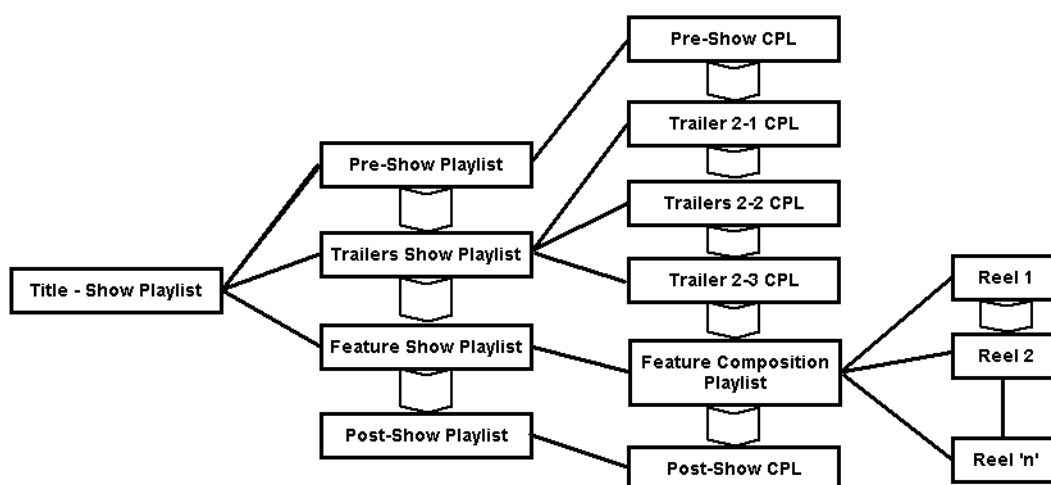
Daily Show Schedules are prepared by the exhibitor for each Auditorium/Screen in the theater. The design concepts behind the Show Playlist allow for a great deal of flexibility in the preparation of the Daily Show Schedule. The only restriction is that only Show Playlists can be present in the Daily Schedule.

Show Playlist

The hierarchy of a Show Playlist is intended to allow inclusion of either Composition Playlist(s) or other Show Playlist(s). The Composition Playlist, which contains all

the information and references required to play content, always appears at the lowest level of a Show Playlist hierarchy. The structure of a typical Show Playlist is shown in the below illustration.

As shown in the below illustration, the Composition Playlist is always at the lowest level of the Show Playlist hierarchy. The graph illustrates the SPL structure normally used for a presentation. The SPL used for the presentation comprises a number of content elements such as Pre-Show, Trailer, Feature, Post-Show, etc. The illustration also shows that rather than simply lining up CPLs, content can be grouped into Sub-Playlists or otherwise arranged as necessary. Using this approach the exhibitor can easily make changes which allows different content to surround the feature presentation based on the positioning of the Show in the daily Schedule.



Show Schedule - Daily

The illustration to the right provides an example of a day's schedule. The times are shown for reference only and would probably not be part of the Show's Title. However, as you can see, a Title containing a common identifier is used, e.g., ABC, which is followed by something that would describe the "special" nature of that specific Show.

10:00 am ABC Mid-day
12:30 pm ABC Mid-day
3:00 pm ABC Afternoon
5:30 pm ABC Afternoon
7:00 pm ABC Evening
9:30 pm ABC Late

The way in which any named show can be "special" is left up to the exhibitor and his local needs. It could be something as simple as running a different pre-show local advertising package or as complex as tailoring the trailers to the time-of-day audience typical for the theater.

Multiple MPAA ratings, when available for the same feature, could also be accommodated by creating and scheduling a Show that meets those needs. Because the theater management has control over the Show composition there is almost no chance that the wrong "reel" is set by mistake.

Show Playlist Editor

The Show Playlist Editor provides a graphic timeline display of the target playlist.

The following illustration is a composite Show Playlist containing several Content Elements and a separate Control Event. In the overall view of the Playlist the Insertion Point for the Content Timeline appears near the left of the timescale. Content Elements, a Start Offset, and Control Events appear “unselected”.

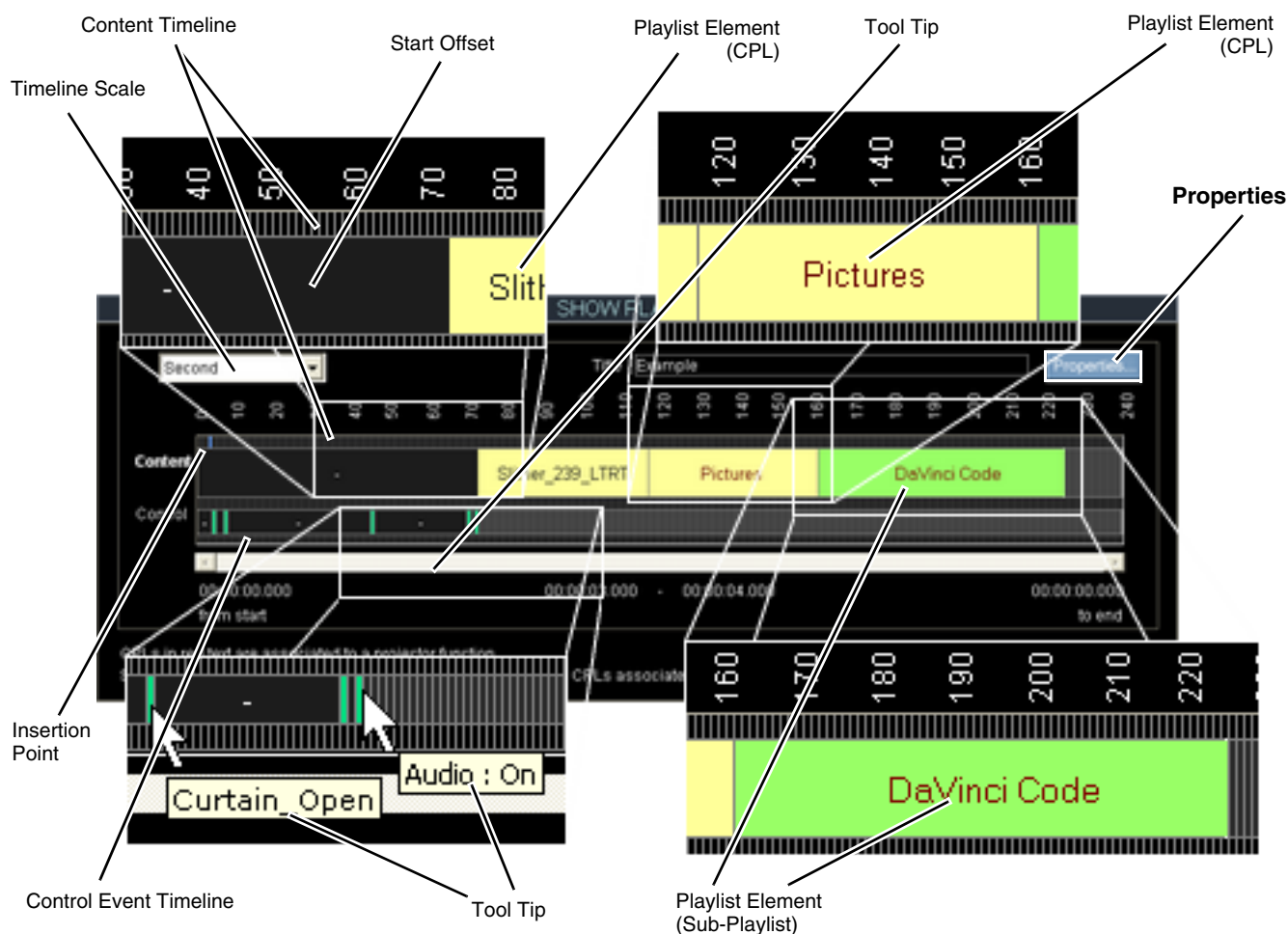
The Playlist Timeline is comprised of two separate but related timelines, Content and Control. Both separately and collectively appear as a contiguous sequence of either Content Elements, Control Events, or associated Start Offsets¹. While the Control Timeline illustrated appears to

end prematurely (after the Open Curtain Control Event), placement of a subsequent Control Event the space will automatically be filled with black, i.e., a Start Offset. If a Control Event is placed later than the end of the last Content Element (later in the timeline) the Content timeline will appear to end prematurely however, presentation will continue until the completion of the last Control Event.

Note

Any Content Element or Control Event that cannot be played, e.g., missing Key, GPI not configured, etc., is displayed in red.

1. A Start Offset is simply a delay in the Start Time of the following Content Element or Control Event. During this period of time the Media Block output is muted. A SPL cannot be comprised of only a Start Offset.

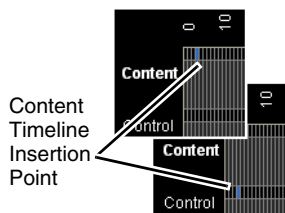


Timeline Insertion Point

The Timeline Insertion Point in Version 2.20 or later is related to either the Content Timeline or Control Timeline. In previous versions the Timeline Insertion Point was common to both Content and Control Timelines.

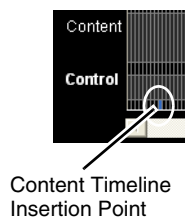
Content Timeline Insertion Point

In Version 2.20 or later, placing the Timeline Insertion Point also selects which Timeline is the focus of the following actions. To set the Content Timeline Insertion Point, use the mouse to locate the pointer at the desired location in either the upper graticule or the graticule between the Content and Control Timelines and then **click**. The Insertion Point (blue line) will appear and the Content Timeline will be selected. Any following keyboard actions will be focused on the Content Timeline.



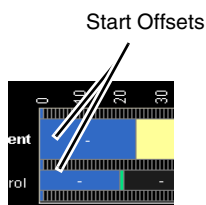
Control Timeline Insertion Point

To set the Control Timeline Insertion Point, use the mouse to locate the pointer at the desired location in the graticule below the Control Timelines and then **click**. The Insertion Point (blue line) will appear and the Control Timeline will be selected. Any following keyboard actions will be focused on the Control Timeline.



Start Offset

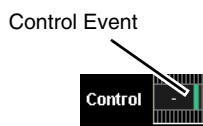
A Start Offset is shown in the above illustration and appears selected in the illustration to the right. These Start Offsets, which are identified by a dash “-” shown in a black block instead of a Title, are an offset to the start of the following Content Element or Control Event.



A Start Offset can be inserted manually or automatically when either the Content Element (upper timeline) or Control Event (lower timeline) is placed at a position that is not contiguous with the previous item in the respective timeline. See “*Insert Start Offset*” on page 102.

Control Event

A Control Event, illustrated to the right, appears as a single line in the Control Event Timeline and can be comprised of either external device triggers (see “*GPI Trigger*” on page 61) or system control events such as, Media Block Audio Control functions (see “*Media Block*”/“*Control*” on page 46), or Projector Control functions (see “*Projector*”/“*Control*” on page 40). The specific Control Event (Title) appears in the Tooltip as shown in the opening illustration by moving the pointer over the Control Event.



Content Element

The illustration on the preceding page shows the content elements that make up the CPL. The color of the Content’s background makes it easily identifiable and the color of the Title indicates whether a Projector Function is associated with the CPL. As shown in the illustration, when no Projector Function is associated with the Content the Title is black and when a Projector Function is associated with the Content the Title appears dark red. The full Title can be seen in the Tooltip by moving the pointer over the specific Playlist Element.

Sub-Playlist

A Playlist Element in the SPL which is a Sub-Playlist appears as illustrated (see page 94). The background color of a Sub-Playlist differs from that of Content making it easily identified. The color of the title of the Sub-Playlist indicates whether Control Events are included in the Sub-Playlist or if a Projector Function is associated with underlying Content. As shown, either a Control Event or a Projector Function is included in the Sub-Playlist and the Title appears dark red. The full Title of the Sub-Playlist can be seen in the Tooltip by moving the pointer over the specific Playlist Element.

Note

The Sub-Playlist’s Content, Control Events and Timeline will execute in the including SPL as they existed at the time the Sub-Playlist was included in the top level SPL. Changes made to the Sub-Playlist will NOT be reflected in the top level SPL during subsequent edits or presentation.

It is recommended to create a Sub-Playlist comprised only of Control Elements targeted at executing various presentation related operations, e.g., House Light Dim, Curtain Open, etc.

By including this Sub-Playlist in a top-level SPL, a number of pre-show and/or post-show operations that are the same for every presentation can be easily executed. Once this Sub-Playlist has been created it can be exported and then imported to other SMS auditoriums within the same theater when control systems are the same.

Editing a Show Playlist

A Show Playlist (SPL) is a sequence of Content or Sub-Playlist elements beginning at the start of the SPL (top) and ending with the last element in the SPL. Playlist Elements may be Content (CPL), a Sub-Playlist (a SPL as a Playlist Element), or a Start Offset¹.

Note

Show Sub-Playlist is limited to one level deep.

In addition to CPL and Sub-Playlist, Control Events may be included in the SPL. These control events can be used to make changes to selected operations in the Auditorium Unit, e.g., Media Block Audio, DOUSER, etc., or as Automation Controls to effect changes to external devices, e.g., open curtains, dim houselights, etc., using GPI Outputs.

Note

Inclusion of 3D Content, an SPL (same as a sub-playlist) that includes 3D Content, or a 3D associated Projector FUNCTION sets the created Show Playlist to a 3D type and requires that the Projection Type be set to Single 3D for presentation². While 2D Content may be included in a 3D Show Playlist you cannot include a Projector FUNCTION that is other than a 3D FUNCTION.

As previously discussed, the lowest level in the hierarchy of a Show is Content which are the picture, sounds, etc. essence files. A sequence of “virtual” black frames is a Start Offset device acting as a virtual filler element which causes playout of the following Content to be delayed and resulting in the screen being dark. While a gap sequence reflecting the Start Offset appears in the SPL to maintain the continuity of the SPL sequence of elements it does not appear in the SPL Details popup.

When splicing actual film Black Leader is primarily used to provide “pacing” of the presentation. This is especially true when dealing with a sequence of unrelated subjects such as advertisements or trailers. A secondary use is to allow the eye to rest momentarily so the slight variations in dynamic range and differentiation between colors of one film vs. another is not as noticeable. The Start Offset which is available in the SMS Controller serves a similar purpose (creating a sequence of “virtual” black frames).

1. A Start Offset is a delay in the start time of the following Content Element or Control Event. The result is a virtual sequence of black frames.

2. Refer to Projectionist Terminal User Guide, PROJECTION TYPE for additional information.

Caution

Do not edit an SPL that is currently showing. Furthermore, in theaters using the Sony Theater Management System (TMS), the SPL and schedule should be edited in the TMS, not the SMS controller or PJT.

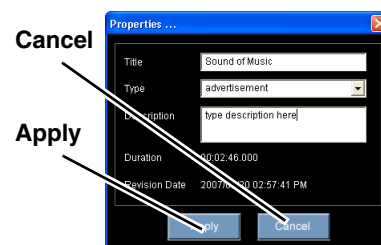
Create New Show Playlist

To create a new Show Playlist, select the **Show Management** tab and then click **SPL**. The list of existing Show Playlists and the Create Show Playlist group is displayed. Type the name of the New Playlist in **Title**³ and (optionally) adding a brief **Description**⁴ for the new SPL. Once the Title has been entered **New** becomes available. Click **New** to open a popup window where you create the SPL using SPL Editing Commands.

In addition to renaming the new SPL, you can identify it as to Type and include a brief Description. To make these changes or entries, click

Properties (see page

94). The Properties popup appears. Revise the **Title** (if desired), add a **Description** and (optionally) select from the available choices in the **Type** list. To set the new properties, click **APPLY** or click **CANCEL** to abandon the changes.



Note

Changes to SPL Properties can be made at anytime you are editing the SPL.

Configuring the projector for 3D presentation requires installation of the stereoscopic lens and setting the Projection Type⁵ to Single 3D. Both are manual operations and separate from setting the correct a projector FUNCTION, i.e., a FUNCTION that is identified as a 3D FUNCTION, which adjusts the projector to the content. To insure that 3D content presentation is successful the first CPL in a 3D SPL should be a FUNCTION appropriate to a 3D Projection Type combined with parameters appropriate to the content.

3. Maximum 128 characters.

4. Maximum 512 characters. The Description can be revised using the Properties pop-up available on the Edit SPL screen.

5. Refer to Projectionist Terminal User Guide.

Show Playlist Editing Commands

Playlist Editing commands are divided into three groups. They are: Append Title, Insert Title, Move Title. Playlist Editing Commands apply to both Content and Sub-Playlist Elements.

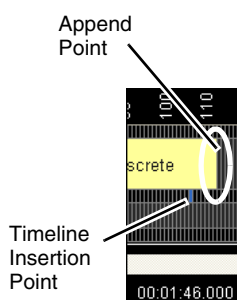
Separate commands are available for insertion of a Start Offset (resulting in a dark screen) associated with a Title.

Keyboard based Playlist editing commands, with the exception of Append, are executed based on the current position of the Timeline Insertion Point (shown to the right) in the Content Timeline graphic. Drag-and-Drop actions are related to the position of the mouse pointer and not the timeline pointer.

Commands for Control (GPI) Insertion are documented in “SPL Control Event Editing”.

Append Title

An Append causes the target Title to be placed immediately following the last CPL or Sub-Playlist in the Content Timeline. This occurs regardless of the current position of the Timeline Insertion Point or whether a Title in the Content timeline has been selected. This is illustrated to the right.



In the normal process of creating an SPL it is quite likely the most common action will be to append another Playlist Element (either CPL or Sub-Playlist) to the end of the Content timeline. This assumption is based on the probability that an exhibitor will have pre-made SPLs (Sub-Playlists) comprising the advertisements, trailer, etc., followed by the feature presentation. The exhibitor may use the advertisements SPL as the initial Playlist Element (a Sub-Playlist) in the Content timeline for the Show and then simply append additional Content or Sub-Playlist Titles and the feature Title (CPL) as they become available. A simple append process using Point and Double-click makes building the Show Playlist quiet easy. However, if you are more comfortable with Drag-and-Drop then that process is also available for placing a new Title at the end of the Content timeline.

Point and Click to Append Title

To Append a new Title to the end of the Content timeline using keyboard commands:

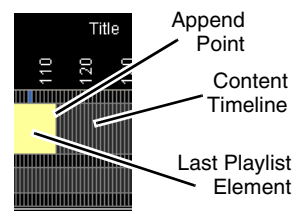
- 1 Determine if the new Element to be appended is Content or a Sub-Playlist and select either the **Content** or **Sub-Playlist** tab in the New SPL dialog Contents list.
- 2 Scroll the **Contents** list to locate the new Title.
To recorder the list, click the column heading, e.g., **Title**.
- 3 Double-click the new **Title**.

The new Title is appended to the end of the last CPL or Sub-Playlist in the Show Playlist.

Drag-and-Drop to Append Title

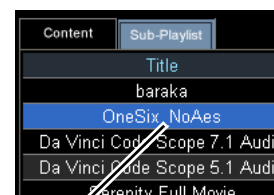
When you use the Drag-and-Drop method to append a new Title the process of capturing and moving the new Title requires two steps. First you select the new Title and then, in a 2nd step, you press and drag the selected Title to the end of the Content timeline. The complete sequence is outlined in the following steps.

- 1 Verify that the timeline scale is set to a scale, e.g., seconds or minutes, that allows you to view the end of the last Playlist Element in the Content timeline.



- 2 Select either the **Content** or **Sub-Playlist** tab, scroll the Contents list to locate the new Title and then select the **Title**.

Make sure you release the mouse button after selecting the new Title.



New (append) Title

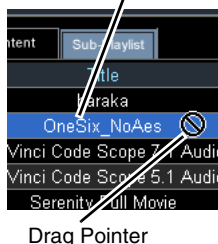
Note

In the illustration, the new Title (to be appended) is already selected and shown highlighted.

- 3** To continue the append process, point to the new Title (previously selected) and press then drag the new **Title** from the Contents list to the Content timeline.

The pointer will change to a “drag” pointer as shown to the right.

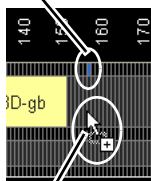
New (append) Title



- 4** To complete the append process, continue to move the pointer until it is located to the right of the last Playlist Element in the Content timeline.

Once the pointer moves into the Content timeline it changes to a “drop” pointer as illustrated to the left.

Content Timeline Insertion Point

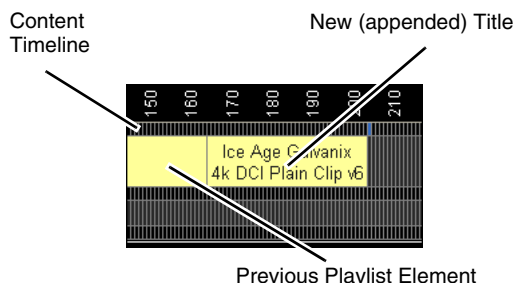


Drop Pointer

Note

Once the Drop Point is located within the Timeline the Content Timeline Insertion Point locks to the Drop Pointer.

Continue moving the pointer until it is located anywhere to the right of the last Playlist Element in the Content timeline as shown in the illustration and then release the mouse button. The new Title is appended immediately following the last Playlist Element in the Content timeline as shown below.



Insert Title

An Insert causes the new Title to be placed at the Content Timeline Insertion Point. If no preceding Playlist Element (CPL or Sub-Playlist) exists, then the new Title will be placed as the “top” Playlist Element in the Content timeline. Because of the various scales of the timeline, the insertion process requires careful placement of the Insertion Point for proper location of the new (inserted) Title.

If the Insertion Point is located at the beginning of an existing Playlist Element then the new (inserted) Title will be placed between the previous Playlist Element and the target Playlist Element. If the Insertion Point is located

within an existing Playlist Element then the new (inserted) Title will be placed at the position of the pointer in the Content timeline with a Start Offset (virtual black leader) shown in the time between the end of the previous Playlist Element and the beginning of the new (inserted) Title.

Insert Ahead of Playlist Element Start

Inserting a new Title at the start point of an existing Playlist Element essentially places a new Playlist Element in the sequence of presentation. Placing a new Title ahead of an existing Playlist Element (the target Title) uses an easy Drag-and-Drop operation. Simply select the new Title from the Contents list and then press and drag the selected Title anywhere into the target Playlist Element. The new Title is placed in front of the target Playlist Element in the Content timeline.

Drag-and-Drop Insert

To use Drag-and-Drop method to insert a new Title the process of capturing and moving the new Title requires two-steps. First locate and select the Content or Sub-Playlist Element (new Title) from the Contents list. Then, in the 2nd step, drag the new Title from the list towards the target Playlist Element. The complete drag-and-drop sequence is outlined in the following steps.

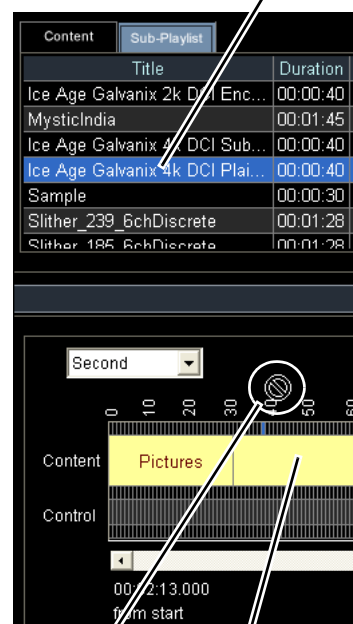
- 1 Verify that the timeline scale is set to a scale, e.g., seconds or minutes, that allows you to locate the target Playlist Element which will be proceeded by the new (inserted) Title.

This may require scrolling of the Timeline.

- 2 Select the new Title from the **Content** or **Sub-Playlist** Contents list.

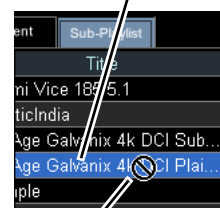
The selected new Title will be highlighted. Make sure you release the mouse button after selecting the new Title.

New (insert) Title



Drag Pointer Playlist Element (Target)

New (insert) Title



Drag Pointer

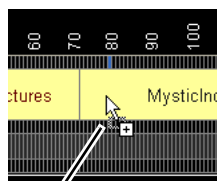
Note

In the illustration, the new Title (to be inserted) is already selected and shown highlighted.

- To continue the insert process, point to the previously selected Title then Press and Drag the selected new Title towards the target Playlist Element.

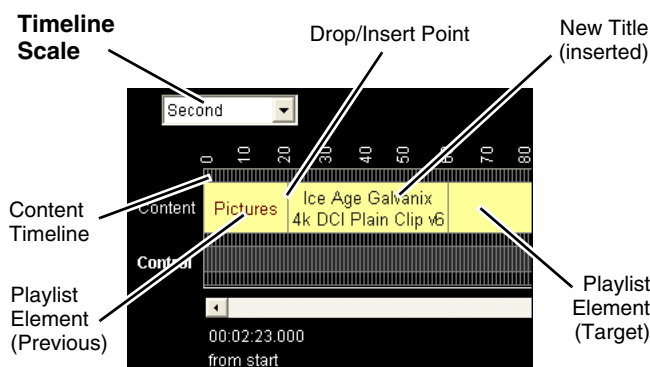
The pointer will change to a “drag” pointer as shown above.

- Once the pointer moves into the Content timeline it changes to a “drop” pointer as illustrated to the right and the Timeline Insertion Point (blue line) locks to the “drop” pointer.



- Continue moving the pointer until it is located anywhere within the target Playlist Element and then release the **mouse** button.

The new Title is inserted between the target Playlist Element (pointed to) and the previous Playlist Element as shown below.



Drag and Drop Insert with Gap

During the process of inserting a new Title in the Content timeline it is often desirable to include a “gap” or sequence of “Black Frames” ahead of the new Title. This is done for reasons of content “pacing” or to cause the new Title to start at a specific time in relationship to the start of the Show Playlist.

When you use Drag-and-Drop to insert a new Title and wish to add a gap the process of capturing and moving the new Title requires two-steps.

First you select the new Title from either the **Content** or **Sub-Playlist** Contents list and then, in a 2nd step, press **SHIFT** and drag the new Title from the Contents list towards the target Playlist Element. When you drop the new Title it is inserted at the location in the Content timeline indicated by the Timeline Pointer. A “gap” is opened between the previous Playlist Element and the insertion point of the new Title. This “gap” or Start Point offset is automatically filled with black based on the Media Block’s muted output. The complete drag-and-drop sequence is outlined in the following steps.

- Verify that the timeline scale is set to a scale, e.g., seconds or minutes, that allows you to view the Playlist Element (“target” Title) of interest in the Content timeline.

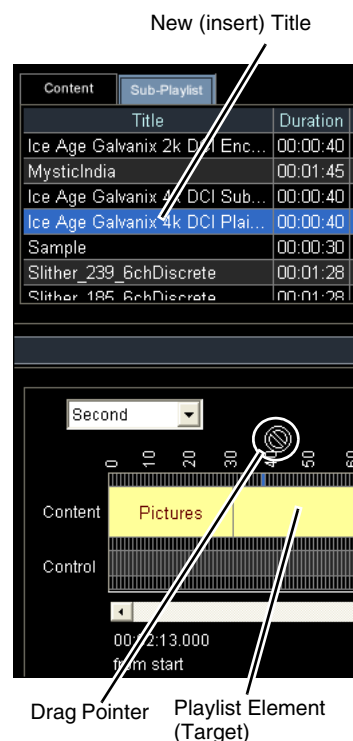
On the Content timeline, locate the “target” **Playlist Element** which will be preceded by the new (inserted) Title. This may require scrolling of the Content timeline.

- Select the new **Content** or **Sub-Playlist** (new Title) from the Contents list.

Point to the new Title in the Contents list and select it. The selected Title is highlighted as shown. Make sure you release the mouse button after selecting the new Title.

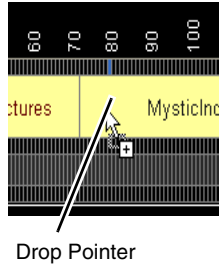
- To continue the insert process, point to the previously selected Title, press **SHIFT** and then **Drag** the selected new Title towards the target Playlist Element.

The pointer will change to a Drag Pointer as shown to the right.



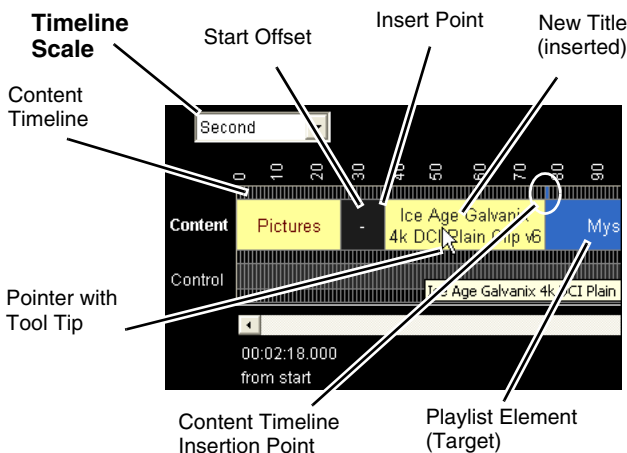
- 4 Continue to move the pointer until it is located within the Content timeline.

Once the pointer moves into the Content timeline it changes to a “drop” pointer as illustrated to the left.



Continue moving the pointer until it is located within the target Playlist Element while making sure the target Playlist Element is not highlighted (selected¹). Place the drop pointer at the desired offset from the start of the target Playlist Element. This Start Point offset will become the length of the gap (black) inserted when you complete the drop.

Continue to hold the **SHIFT** key while releasing the **mouse** button. The new Title will be inserted at the location indicated by the Timeline Pointer and black will fill the space between the (new) Playlist Element preceding the target Playlist Element in the SPL as shown below.



Note that the target Playlist Element may become selected and is shown highlighted.

Insert Within a Scheduled Title

A Show Playlist construct is a continuous sequence of Playlist Elements (Titles) and optionally Start Offsets². With the exception of the first Playlist Element, every Playlist Element follows the previous one with no open gap in the SPL.

When inserting a new Title in the SPL which is at a position in the timeline covered (or occupied) by an existing Playlist Element, the SMS Controller places the

1. This occurs when the pointer is positioned at the beginning of the target Title.
2. When considering the content of a Show Playlist, a Start Offset is virtual playlist content but not a Title.

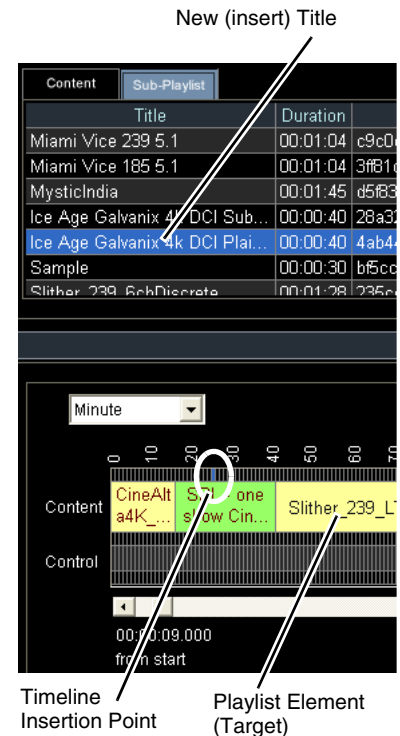
new Title at the Timeline Insertion Point and repositions the existing Playlist Element (covering the Insertion Point) to the end of the new (inserted) Title. Since the new Title is placed at a fixed insertion point, a Start Offset is created between the new Title and the end of the preceding Playlist Element. This Start Offset is a sequence of “virtual” black frames resulting from the Media Block’s muted output.

Note

A Start Offset can also be manually inserted in the SPL. See “*Insert Start Offset*” on page 102.

Drag-and-Drop Title Insert

When you use the Drag-and-Drop method to insert a new Title the process of capturing and moving the new Title is two-step. First you select the new Title from either **Content** or **Sub-Playlist** in the Contents list. In the 2nd step, you press and hold **SHIFT** and then press and drag the selected Title from the Contents list towards the target Playlist Element.



Note

As shown in the illustration, the position of the Timeline Insertion Point is not significant when starting the Drag-and-Drop sequence to place a new Title in the Content timeline. Also, once the new Content is selected, Timeline focus, i.e., Content or Control, is deselected as shown.

- 1 Verify that the timeline scale is set to a value, e.g., seconds or minutes, that allows you to view the Playlist Element of interest in the Content timeline.

Locate (it is not necessary to select) the “target” Playlist Element i.e., the Title where the new (inserted) Title will be “Dropped”. This may require scrolling of the Timeline.
- 2 Select either the **Content** or **Sub-Playlist** tab, point to the new Title in the Contents list and then select.

The selected Title will be highlighted. Make sure you release the mouse button after selecting the new Title.

Note

In the illustration, the new Title (to be inserted) is already selected and shown highlighted.

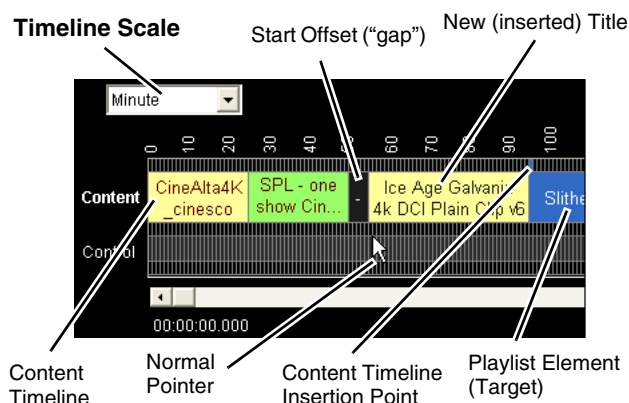
- To continue the insert process, point to the previously selected Title in the Contents list, Press and Hold **SHIFT** and then Drag the selected new Title towards the target Playlist Element.

The mouse pointer will change to a “drag” pointer” as shown to the right.

- To complete the insert process, continue to move the pointer until it is located within the Content timeline.

Once the pointer moves into the Content timeline it changes to the “Drop Pointer” as illustrated to the right. In addition, the Timeline Insertion Point “locks” and tracks the location of the mouse (drop) pointer. Note in the illustration the positioning of the Timeline Insertion Point.

- While continuing to hold **SHIFT**, position the locked mouse/timeline insertion point at the desired position within the target Title and then release the mouse button.



The new Title is inserted at the point in the Content timeline where the Content Timeline Insertion Point was located. The original target Playlist Element is selected and “pushed” to the right (later) in the Content timeline. Note that the Insertion Point is now associated with the target Playlist Element and not the new Title. The Drop Pointer has changed to a normal pointer and is located at the point of insertion on the Content timeline. Between the newly inserted Title

and the previous Playlist Element is a Start Offset shown as black in the Timeline but without a Title. Also, the target Playlist Element has been automatically selected and is highlighted, as shown.

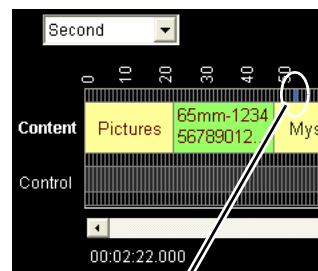
Keyboard/Point and Click Title Insert

The Keyboard/Point and Click based Title Insert often allows you to make a more accurate placement of an inserted Title because the target location in the Content Timeline is initially defined by placement of the Timeline Insertion Point.

- Verify that the timeline scale is set to a scale, e.g., seconds or minutes, that allows you to view the target Playlist Element and the Timeline Insertion Point location is in the viewable Content timeline.

On the Content timeline, locate the “target” Playlist Element. This may require scrolling of the Timeline.

- Place the pointer in the graticule area either above or below the Content timeline. Now, while keeping the pointer adjacent to the Content timeline, move it to the point in the timeline where you want the new Title inserted and click.



Content Timeline Insertion Point

The Timeline Insertion Point is located at the selected position.

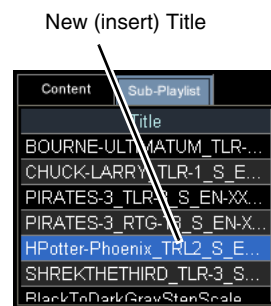
Note

The Timeline scale shown in the illustration is in seconds. When Titles are longer than a few minutes select the appropriate timeline scale to allow you to locate the point on the timeline covered by the current Playlist Element where the new Title will be inserted. You may need to scroll to locate the desired position. Refer to the Timeline information located below the scroll bar. The center value indicates the current position of the Timeline Insertion Point.

- Inserting the new Title is a two step process. First you select the Title you wish to insert.

Once selected, you execute the insert action.

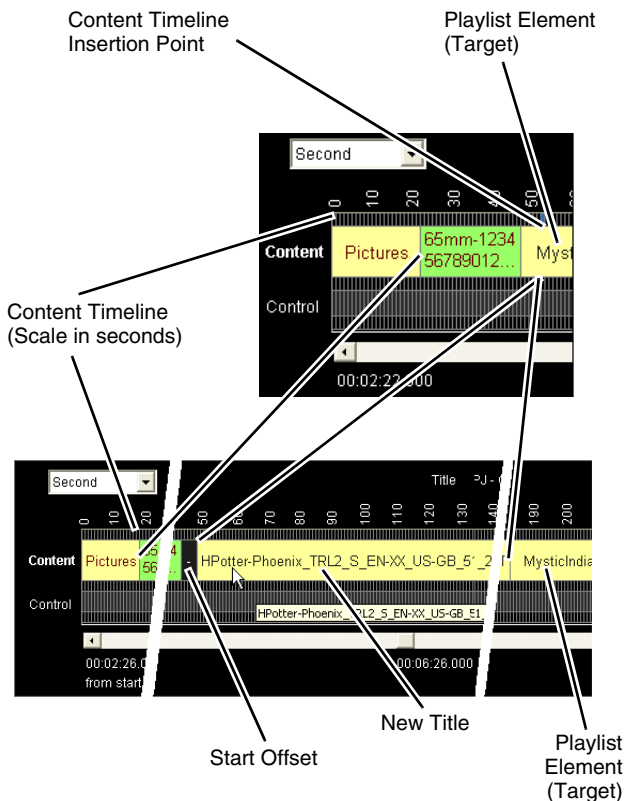
Scroll the Contents list and select either the **Content** or **Sub-Playlist** tab based on the type of content to be inserted.



Scroll the Contents list to locate the Title you wish to insert in the SPL. In the Contents list, select the new **Title**. The selected Title is highlighted as shown in the illustration.

- 4 Referring to the Title selected in Step 3, move the pointer to the selected Title, hold down the **SHIFT** key and double-click the **Title**.

The Title is directly inserted with its start at the Timeline Insertion Point location previously established in Step 2. The start point of the target Playlist Element is shifted later in the Content timeline following the new (inserted) Title.



A Start Offset is inserted and shown as black to fill the gap between the previous Playlist Element and the start of the new Title as illustrated above.

Delete a Title

To remove a Playlist Element (Title) from the SPL, select the target **Playlist Element** and then press Delete. When the confirmation message appears click **YES** to complete the deletion.

When the Playlist element (CPL or Sub-Playlist) immediately before a Start Offset is deleted, the Start Offset is also deleted along with it.

Insert Start Offset

The basic Show Playlist is essentially comprised of a sequence of Content, Sub-Playlist and (optionally) Start Offsets of Playlist Elements. The presentation of a Content or Sub-Playlist Element is realized in the Media Block. The timing of presentation is controlled by the SMS Server sending “requests” for playout of the individual Composition Playlist(s) which comprise the Content or Content “packaged” in a Sub-Playlist to the Media Block at a time appropriate to presentation. The appearance of a black interval on the screen and silence in the auditoriums often used as a transition point or “gap” between Content Elements and results when the Media Block playout between the end of the previous Content or Sub-Playlist packaged Content and the start of the next Content or Sub-Playlist packaged Content is delayed (Media Block output is muted). Essentially, this is an interval in the Playlist execution when no other Content or Sub-Playlist has been requested by the SMS Server for playout by the Media Block. From this description we can see how a virtual sequence of black frames is, in reality, an offset to the Start Time of the following Content or Sub-Playlist packaged Content resulting in a “null” (muted) presentation by the Media Block. The offset or null presentation artifact is created in the SMS Server but produced by the Media Block because its output is “muted” whenever Content (a CPL essence file) is not being played. These Start Offsets (sequence of virtual black frames) appear in the sequence of execution of Playlist Elements¹ in just the same manner as a Title appears in the SPL sequence².

Control Events are also executed by the SMS Server and are shown in the SPL in their sequence of execution but separated by a sequence of “virtual” black frames.

Note

A Start Offset can occur in the SPL when Content or Sub-Playlist Elements, or Control Events are present. The resulting sequence of black frames is “virtual” in nature as there is no “black” content that is presented by the Media Block. If your intention is to create a Playlist that contains only a sequence of black frames, i.e., no Content or Sub-Playlist Elements or Control Events, then you must use a Content Element, i.e., a Composition Playlist, whose essence file is comprised of black video frames.

1.The sequence of virtual black frames or “gaps” do not appear in the SPL Details popup because they are not Playlist Elements but rather Start Offsets to the following Content Element.

2.Black frame transitions may also be actual Content supplied as part of the DCP. In this case they are “real” Content played by the Media Block in the same manner as other Content, e.g., trailers, feature, etc.

The Start Offset of the SPL is shown within the SPL to maintain SPL sequence continuity. The location of the Start Offset when scheduling is always immediately before the target (selected) Playlist Element.

When a Start Offset is inserted using the SMS Controller SPL Editor, its size or duration is based on the current Timeline Scale setting. When you set a timeline scale of **Second** the Start Offset is inserted in increments of 1 second. When the timeline scale is set to **Minute** the Start Offset is inserted in increments of 1 minute.

Since a Start Offset is not actual content but rather a sequence of “virtual” black frames, it is always inserted as a keyboard based operation (drag-and-drop is not available).

- 1 Verify that the timeline scale is set to a value, e.g., seconds or minutes, that allows you to view the Playlist Element of interest in the Content timeline.

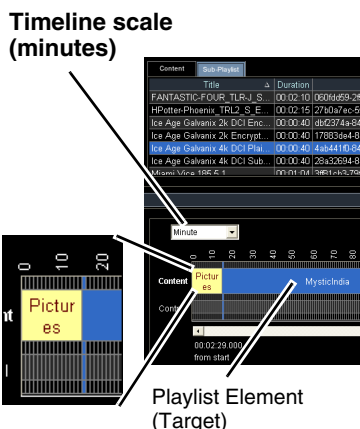
On the Content timeline, locate the “target” **Playlist Element**, i.e., the Title which will be preceded by the Start Offset. This may require scrolling of the Timeline.

- 2 To select the target Playlist Element in the SPL Content timeline, click anywhere in the **Playlist Element (Title)** as it appears in the Content timeline.

The target Playlist Element is highlighted and the Insertion Point appears at the junction of the preceding Playlist Element and the target Playlist Element.

Note

The Timeline scale shown in the illustration is in minutes. When Playlist Elements are longer than a few minutes this scale allows for easy location of the start point of a longer Playlist Element. Select the appropriate timeline to allow you to easily locate the target Playlist Element.

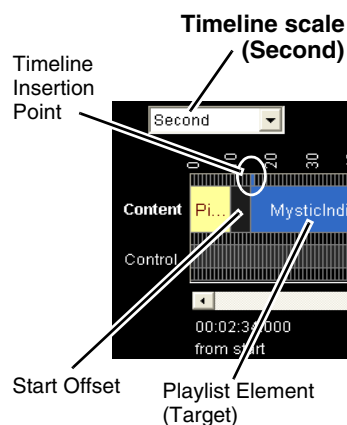


- 3 To insert a sequence of “virtual” black frames (Start Offset) of the duration, e.g., 1 Sec. = 24 frames, of the timeline scale, press “**SHIFT + PLUS SIGN**”.

If you have set the timeline scale to Minute to locate the target Playlist Element you may have to change the setting and scroll the timeline to relocate the start of the specific Playlist Element. Continue to press “**SHIFT + PLUS SIGN**” to further delay the start time of the following Content Element until the desired offset is realized.

- 4 To reduce the Start Offset, i.e., the number of “virtual black frames before the target Title, press “**SHIFT + MINUS SIGN**”.

Each press reduces the Start Offset by the duration of the timeline scale (Second in the illustration).

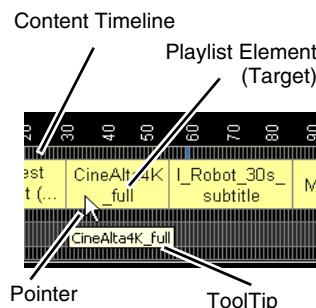


Move Title

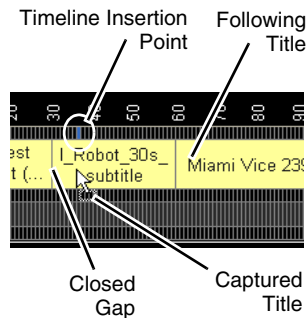
In the film environment changing the sequence of clips (Coming Attractions, advertisements, etc.) associated with a feature presentation is a time consuming task. In addition, frames may be lost due to trimming and, because of the need to handle the film, there is always the chance of damage. The Show Management feature in Sony’s Screen Management System includes the ability to quickly and simply reposition Playlist Elements in the sequence of presentation.

- 1 Verify that the timeline scale is set to a scale, e.g., seconds or minutes, that allows you to view the both the area of the timeline where the move will occur.

This includes the ability to view both the “target” Playlist Element, i.e., the Title to be moved, and the “destination” Playlist Element, i.e. the Title when the move will terminate. On the Content timeline, locate the target **Playlist Element** by placing the pointer within the bounds of the element on the Content timeline. A ToolTip appears showing the target’s Title.



- 2** Moving the target Playlist Element first requires that you “capture” the target, drag the Pointer (this also moves the Timeline Insertion Point) to the new location and then release the captured Title.

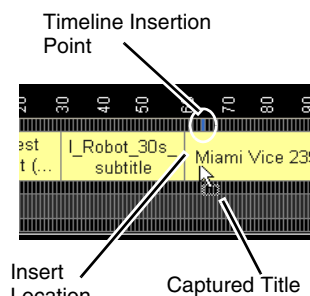


The moved Title will be placed before the Playlist Element that contains the Insertion Point when released. To “capture” the target Playlist Element, point to the target and then press **CTRL + the left mouse button**. The target Playlist Element disappears from the Content timeline, the following Playlist Element in the timeline is moved forward (to the left) to remove or “close” the gap, the Insertion Point appears at the pointer location, and a dashed box appears below the pointer representing the captured Title.

Note

Once the target Title has been captured you can release the CTRL key.

- 3** Continue to hold the left mouse button pressed and drag the pointer (and the captured Title) along with the locked Timeline Insertion Point until the Insertion Point is located any place within the Playlist Element that is to follow the captured Title.

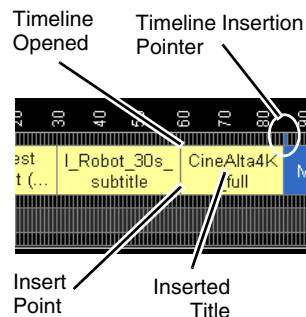


Note

The captured Title, once the move is completed, is placed immediately before the Playlist Element in which the Timeline Insertion Point is located when the mouse button is released. It is not necessary for the Playlist Element to be selected (highlighted).

- 4** To place the captured Title at the desired location, **release the mouse button**.

A gap is created in the Content timeline between the Playlist Element containing the Insertion Point and the previous Playlist Element in the Content



Timeline. The captured Title is inserted into the open gap, the Timeline Insertion Point appears at the beginning of the destination Playlist Element and the destination Playlist Element is selected (highlighted).

SPL Control Event Editing

Control Event editing commands are generally based on mouse actions with the keyboard and used only to delete an existing control element.

Control events exist in an SPL as a function of a point in time relative to the beginning (00:00:00.000) of the SPL in which the control events are contained.

Note

Control Events which are included in a Sub-Playlist execute in relationship to the start of the Sub-Playlist.

The characteristics of control functions and the Event names are configured using the GPIO and Automation selections in the Navigation Bar under the Settings tab. (Access may be Role restricted.) A Control Event can be inserted as either appended to the previous Control Event or at the location of the Timeline Pointer. When inserted at the Timeline Pointer location the space between the previous Control Event and the newly inserted Control Event appears with a Start Offset and is automatically filled with a sequence of “virtual” black frames from the end of the previous Control Event.

Note

Generally, inserting a new CPL in an SPL or substituting a CPL with a different duration between the start of the SPL and the control event will not adjust the execution point of the control event. The exception to this is if the control event is contained in a Sub-Playlist. In this case, its relationship to the start of the Sub-Playlist remains unchanged and it will execute at the appropriate point in the Sub-Playlist. Control events in Sub-Playlists do not appear in the control timeline display for the top level SPL.

Append Control Event

A Control Event always executes in relation to the beginning of a Show Playlist (SPL). A Control Event can be placed in the SPL prior to inserting the initial CPL. However, when this is done, the subsequent insertion of Content places the starting point of the Content coincident with the beginning of the Control Event. Once the initial Content is placed in the SPL, additional Control Events can be placed at any point on the timeline, irrespective of Content being present at that point in the timeline.

Append causes the Control Event to be placed immediately following (appended to) a previous Control Event in the Control Timeline. When no previous Control Event exists

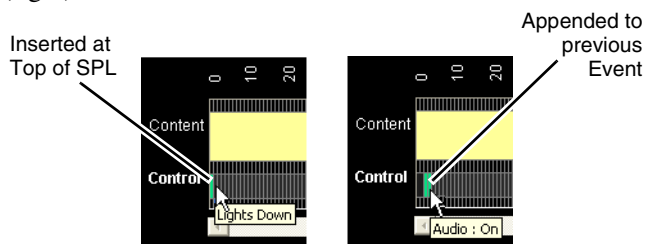
the placement will be at the start of the SPL. When more than one Control Event exists, the placement will be immediately following the Control Event proceeding the the Control Timeline Insertion Point location. This placement of the new Control Event occurs regardless of whether a Playlist Element appears in the Content timeline.

To Append a Control Event, locate the pointer in the Control Timeline following the target Control Event and **click**, then **right-click**. On the popup menu that appears, locate the desired **Automation Control**, e.g., Lights-Up, Lights-Down, etc., and then click the **Automation Control**. If the Control Event is device specific, e.g., Projector or Media Block, point to the **Device**, point to the **Event Type**, e.g., Douser, and then click the **Event Action**, e.g., ON.

Note

Confirm that the Control timeline is selected (Content label is dimmed).

The new Control Event is inserted as shown in the following illustration. Where there have been no previous Control Events, the new event will appear at the beginning of the Timeline (left). When a previous Control Events exists the new event will appear appended to the Timeline (right).

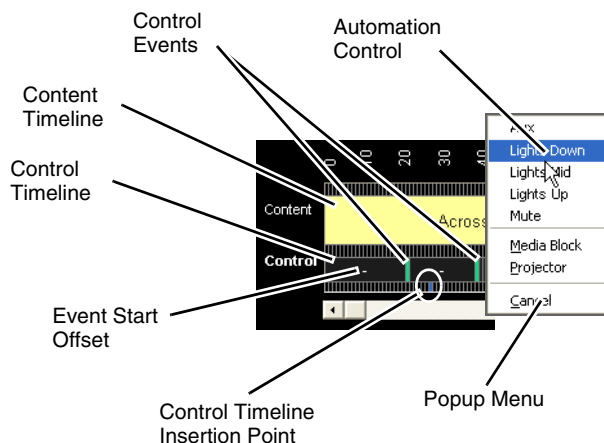


Note that in the previous illustration the Control Timeline Insertion Point does not appear as it is hidden by the pointer.

Insert Control Event

Control Events are executed in relation to the beginning of a Show Playlist (SPL). To allow for placing of a Control Event at a specific location in the Control Timeline you can insert the new event with an offset from the beginning of the Show Playlist. In the Control Timeline, the offset appears as a sequence of black frames filling the unoccupied time from the start of the SPL or between the previous Control Event and the inserted Control Event.

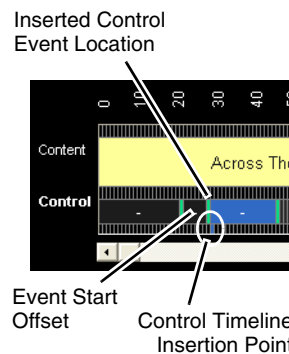
To Insert a Control Event at a specific point on the Control Timeline, locate the pointer in the Control Timeline following the target Control Event and **click**, then **right-click**. A popup menu appears as shown below.



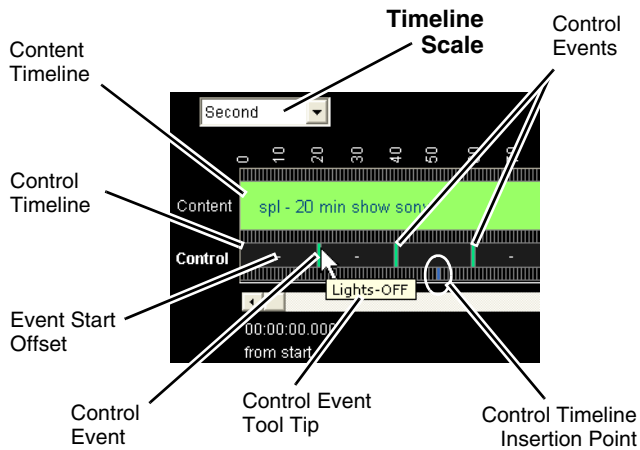
Press **SHIFT**, point to the desired **Automation Control**, e.g., Lights-Up, Lights-Down, etc., and then **click**. If the Control Event is device specific, e.g., Projector or Media Block, press **SHIFT**, point to the **Device**, point to the **Event Type**, e.g., Douser, and then click the **Event Action**, e.g., ON.

The Control timeline with the inserted Control Event is shown to the right with the event located at the Control Timeline Insertion Point. Additional Control Events are also shown in the illustration.

To Insert a Control Event offset from the previous Control Event, locate the pointer in the Control Timeline following the target Control Event and **click**, then **right-click**. A popup menu appears. Point to the desired **Automation Control**, e.g., Lights-Up, Lights-Down, etc., and then **click**. If the Control Event is device specific, e.g., Projector or Media Block, press **SHIFT**, point to the **Device**, point to the **Event Type**, e.g., Douser, and then click the **Event Action**, e.g., ON.



Control Event locations (in the SPL) are indicated by the green location bars in the Control timeline. Place the pointer over the Control Event and a ToolTip will appear showing the type of event at that location.



When inserting a Control Event, the accuracy of event placement in the Control timeline is sensitive to the timeline scale. If you wish to have a control event placement accuracy of 1 second then you must use the Second timeline scale when you locate the Insertion Point (shown in the above illustration).

Notes

- The execution of Control Events occur asynchronously from the timing of Playlist Elements. The actual timing differential between Playlist Element timing and the timing of a Control Event could be as much as 5 seconds.
- In software version 2.30 and later, external audio equipment connected by a serial cable can be specified as a Control Event. The CP-650 and DCP-300 external audio equipment are supported. Configuration on the LMT-300 is required to control external audio equipment. Operation has been tested and confirmed with the following versions of the CP-650 and DCP-300.
 CP-650: Versions 1.2.3.0, 2.2.5.3, 2.3.5.3, 2.3.6.3, 2.3.6.6
 DCP-300: Versions 2.0.10, 2.1.30
- In software version 2.30 and later, support has been added for Z-axis auto-adjustment and calibration for projectors in SPLs. It is recommended that SPLs with these functions be executed once a week, one day after screening has finished. The SPL execution takes about five minutes. Also to execute these SPLs, the projector power supply must be turned, and the content is not playing. For details about SPL samples, consult your local Sony representative.

Caution

- When executing a projector control command from an SPL, wait at least 50 seconds after the projector lamp turns on before executing the command. The command may be ignored if you execute the command before 50 seconds.
- When executing multiple GPOs, be sure to leave at least 200 milliseconds between the completion time of a previous GPO and the start time of the next GPO.

Delete Control Event

To delete a Control Event, click the desired **Control Event** and then press **DELETE**. A confirmation message appears. Click **YES**. You may have to change the scale of the timeline if Control Events are located near each other.

Note

When deleting a Control Event the duration of its associated Offset is deducted from the Offset of all following Control Events.

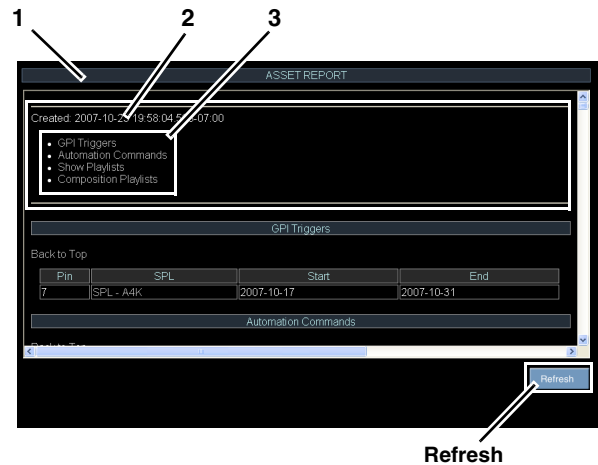
Asset Report

The SMS Controller's Asset Report is essentially a scrollable page that allows you to see dependencies between Composition Playlists, Show Playlists, GPI Triggers, and Automation Commands.

The relationship between an SPL, a GPI Trigger (used to start the SPL), included Automation Commands (used to cause an external device to operate, and the SPL included Composition Playlists (Content Elements) can be quite complex. This is especially true when the same asset is used in multiple Show Playlists. The Asset Report is useful to determine how the various assets are related to a specific SPL and, if the asset is limited in its use due to encryption or rights, whether all the included content are present and playable. Information included in the SPL listing shows whether included content is encrypted and whether the SPL is currently playable.

Links between assets and/or sections in the Asset Report are available and allow you to navigate across sections in both a forward (click the link) and backward (right-click then click Back) directions.

To view the Asset Report, select the CONTENT MANAGEMENT tab and then click Asset Report in the Navigation Bar.



1 Asset Report

The Asset Report is a scrollable listing of GPI Triggers, Automation Commands, Show PLayerlists, and Composition Playlists.

2 Report Date

The Asset Report is regenerated periodically during the day. The Created information indicates the date and time when the Asset Report was last generated.

3 Report Sections

Links to sections of the Asset Report. To display the specific section of the Asset Report, click the appropriate Link.

4 Refresh

Because the Asset Report is periodically regenerated you may see a message that the report is not available when you initially access the page. Click Refresh to load the new report to your terminal.

When you access a specific section of the Asset Report clickable links to the specific asset may be available. As you mouse over an active link the cursor changes from the normal pointer (arrow) to a hand as shown to the right.

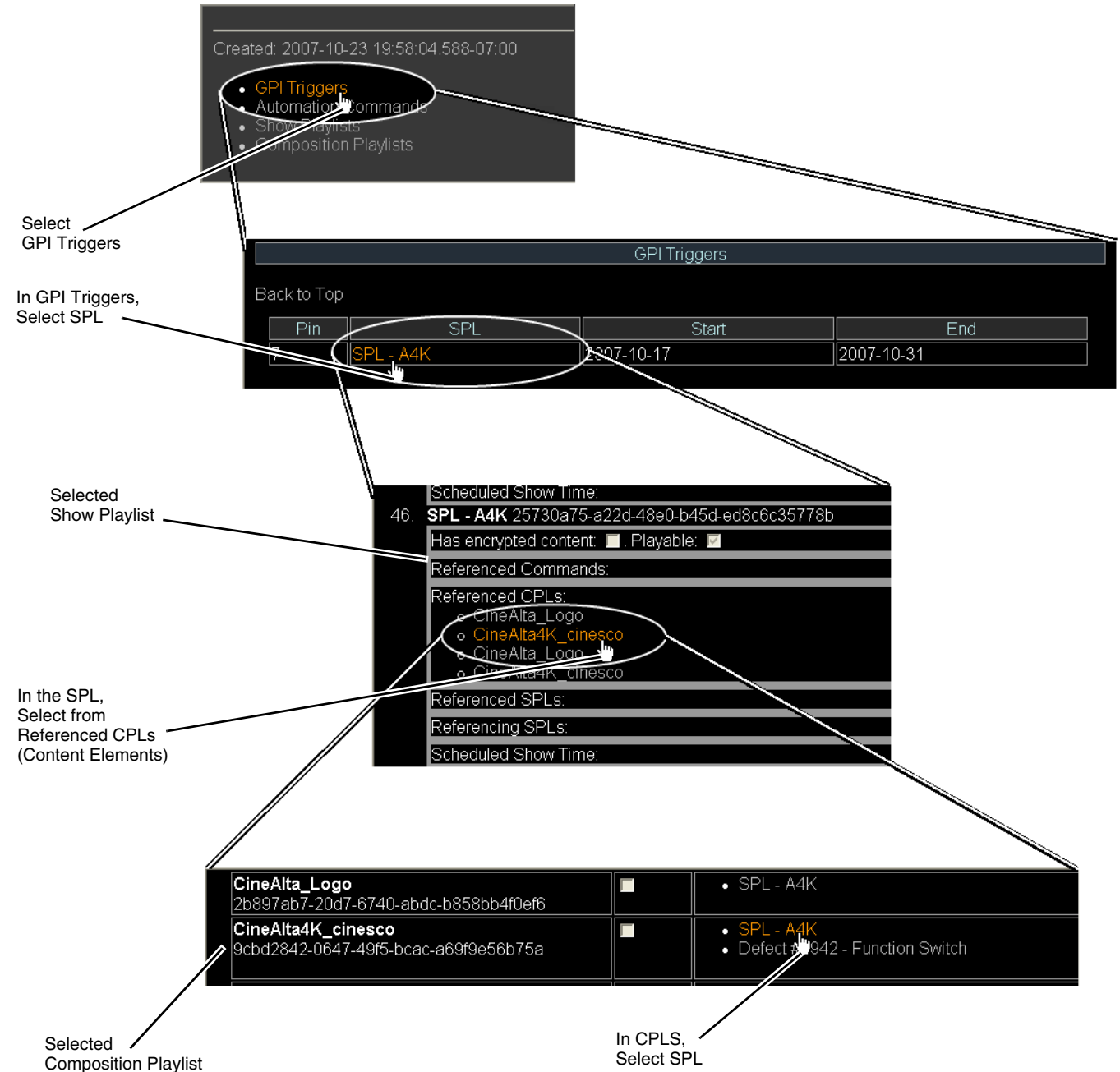


To return to the top of the Asset Report, click Back to Top whenever it appears on the page.

GPI Triggers

The GPI Trigger feature allows you to use an external signal to cause a Show Playlist to start playing from the projection system. For additional information on using GPI Triggers, refer to “GPI Trigger” on page 61.

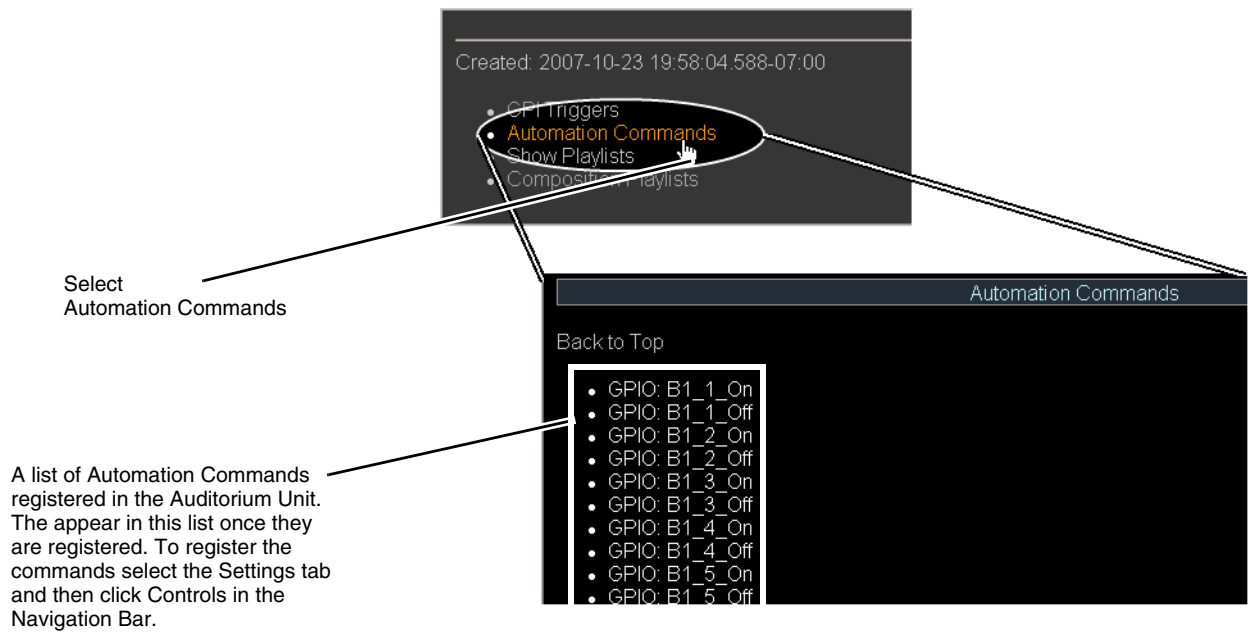
The GPI Trigger section displays those triggers that have been assigned to start an SPL. While an SPL is normally thought of as a container of Content Elements (CPL) it may contain only Automation Commands (Controls) to cause external devices associated with the specific auditorium to start/execute, e.g., Open Curtian.



The above illustrates the relationship between a specific GPI Trigger, the Show Playlist linked to the GPI Trigger, and Content Elements (CPL) included in the SPL. In the illustration there are no included Automation Commands. However, if they were present in the SPL they would appear as Referenced Commands. If the SPL included another SPL the SPL would appear under Referenced SPLs. Likewise, if the selected SPL was included in another SPL then the including SPL would appear in Referencing SPLs. Information regarding Scheduled Show times also appears in the SPL listing. Click the specific link to display the specific information included in the Asset Report list.

Automation Commands

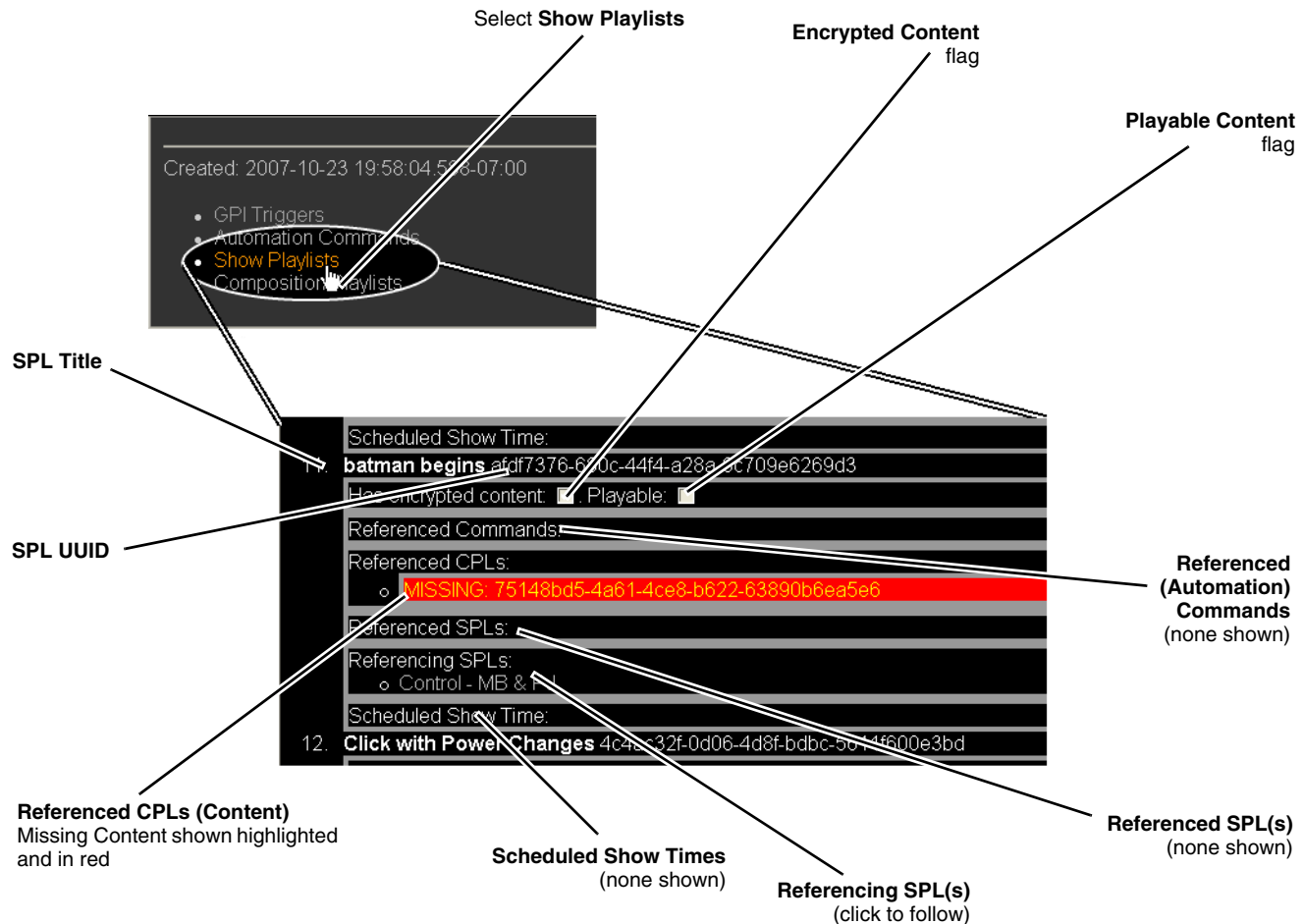
The Automation Commands section of the Asset Report displays a list of the registered Automation Commands. Its intent is to allow the operator to easily verify that the same Automation Commands are registered across multiple Auditorium Units in a multi-screen theater complex.



The Automation Commands appear in the individual SPLs under the Referenced Commands heading. Note that these are not links but shown for reference only.

Show Playlists

The Show Playlists section displays all the SPLs associated with the specific Auditorium Unit. Show Playlists can be a complex association of multiple assets available to the Auditorium Unit. These assets include CPLs in an SPL, Sub-Playlists, CPLs in Sub-Playlists, and Automation Commands. Information included in the SPL shows whether encrypted content is included and if all included elements are currently available for presentation (Playable). The playability of content elements is based on whether an appropriate KDM have been ingested for the CPL and/or if the KDM allows the CPL to be played based on use rights. In addition, information is shown indicating the Scheduled Show Time for the SPL when it is included in a daily schedule.



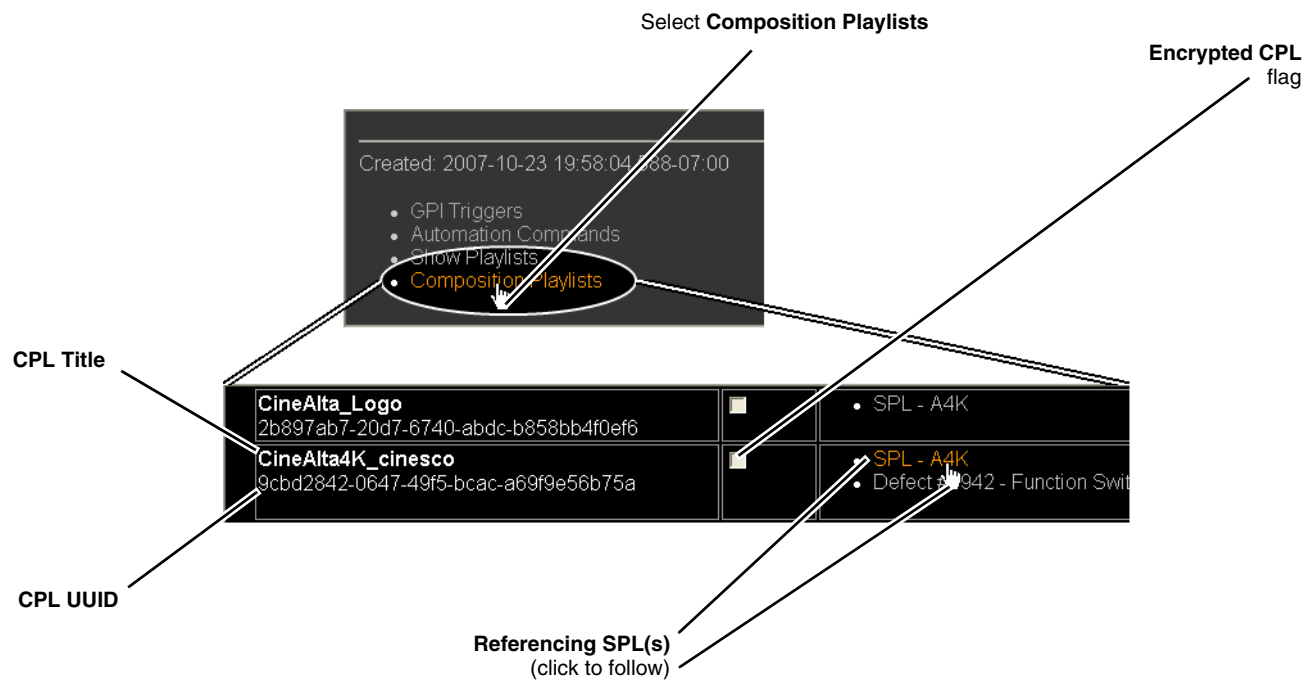
- **Encrypted Content flag** — This flag is set when any of the included Content Elements (CPLs or Sub-Playlists) are encrypted and require a valid KDM for presentation.
- **Playable Content flag** — This flag is set when the included Content Elements (CPLs or Sub-Playlists) are playable at the time the Asset Report was generated. A Show Playlist is considered playable when all included Content Elements are present and any required keys for encrypted elements are present and valid.
- **Referenced CPLs** — A list of Composition Playlists included in the Show Playlist. Click the specific CPL to jump to the CPL in the Asset Report

list. When a CPL is not available that element is shown in RED.

- **Referenced & Referencing SPLs** — The Referenced SPLs section is a list of Sub-Playlists or included in the displayed asset. The Referencing SPLs section is a list of SPL(s) where the displayed SPL is included as a Content Element.
- **Scheduled Show Times** — A simple list (not clickable) of the date(s) and time(s) when the displayed SPL is included as a element in a Show Schedule.

Composition Playlists

The Composition Playlists section displays all the CPLs registered and stored under Media Block control. Composition Playlists can referenced by one or more Show Playlists available to the Auditorium Unit for presentation. Information included in the CPL shows whether the asset is encrypted and any SPL(s) referencing the specific CPL.



- **Encrypted Content flag** — This flag is set when the Content Element (CPL) is encrypted and requires a valid KDM for presentation.
- **Referencing SPL(s)** — The Referencing SPLs section is a list of SPL(s) where the corresponding Composition Playlist is included as a Content Element.

Import Settings

The Import Settings feature, introduced in Version 2.1, provides the ability to Export settings to a file and then Import the settings to another system. This feature allows you to easily replicate Auditorium Unit settings resident in a single system to other systems in a multi-auditorium location. All settings are exported to a file. You can select which settings are to be imported, to match the current requirements.

Note

The ability to select specific import a Settings Group is Role Restricted at the Group level. Once the Settings have been imported you should Restart the SMS Server to insure the new settings are applied. Restarting the SMS Server sets the Lamp OFF.

The following table provides a brief description of the Import Settings Groups.

Import Selection Setting	Screen	Description
Device Status Monitoring Note: Importing Device Status Monitoring is not recommended when Status Monitoring is enables. Each system needs to have a folder designated or the files will overwrite each other.	Status Monitor	The STATUS CHECK INTERVAL values are set based on the values in the imported file. STATUS REPORTING settings are also based on the content of the imported file. However, if the Destination Folder is a network location then keep in mind that this is not protected and could be overwritten by other systems when the name is the same. If the folder does not exist it will not be created until the SMS Server is Restarted.
Disk Utility Rules	Disk Utility	All settings in DISK UTILITY are imported when selected. Note: There is no confirmation that the path or files defined in the FILE DELETION RULES are valid or present.
Registered Folders	Folders	The paths/folders defined in the FOLDERS list are created by the SMS Server. If the SMS Server is restarted the folder is created during the restart process. If the SMS Server is not restarted the newly defined folders will be created within 1 hour of importing the Settings. Note: There is no indication that the folder failed to be created or that the path is not valid. The user should review the content of the FOLDERS list.
GPIO Profiles and Controls Note: If all Auditorium GPIO are not configured in the same way, e.g., Device/ Pin #, Emergency Alert, etc., then importing the GPIO Profile and Controls Settings should not be used.	GPIO Profiles GPIO Channels Automation	The GPIO PROFILES defined in the PROFILES LIST and the value in Settings are imported. The GPIO CHANNELS Input and Output Profiles are imported and assigned to the corresponding Channel Number. The Control Name, Channel, and (default) STATE are assigned based on the imported file.
Owner and Geography Information	Basic	The following OWNER INFORMATION is imported from the file: - Owner: Name & Organization - Geography: Region & Location Note: The Auditorium Name is not imported.
Security Log Settings	Audit Log	All settings are imported from the file. Note: There is no confirmation that the path or files defined in the folders are valid or present. If the paths do not exist then the log files will not be created.

Import Selection Setting	Screen	Description
NTP and Timezone Note: The ability to Import NTP and Timezone settings is Role Restricted.	Basic	The following DATE & TIME are imported from the file: • Timezone: Time Zone and Daylight Savings selection • Time Server (NTP Server): IP (Network) address
Users and Roles Note: The Imported Users and Roles take effect immediately. However, your current session continues until you logout.	Users Roles	All Users are imported from the file. Where a conflict exists in Usernames the new data contained in the file overwrites the existing data. All Roles are imported from the file. Where a conflict exists in the Role name the Role Definition contained in the file overwrites the existing Definition.
SMS Custom Settings		The definition of the “Custom Import Settings” are made during installation and site configuration. These can vary based on the exhibitor’s needs. Refer to the site configuration documents for more information.

