streamstar

STREAMSTAR
LIVE PRODUCTION and STREAMING SOFTWARE v 4.0
USER'S MANUAL

August 2017

streamstar

LIVE PRODUCTION SMARTER FASTER EASIER

Table of Contents

WELCOME

Congratulations on your purchase of the Streamstar Live Production Studio.

About the company

Streamstar is offering advanced technology solutions and innovative products for live the production and streaming industry. Streamstar's goal is to deliver the best possible professional tools for the new generation of streaming video producers.

Streamstar products range consists of:
- Streamstar SW - live production studio software
- Streamstar KITs - software + capture cards packages
- Streamstar X - rack-mount series of live production and streaming systems
- Streamstar CASE - portable series of live production and streaming systems
- Streamstar SCOREPLUS - Live sports graphics generator SW
- Streamstar SCOREPLUS SERVER - a complete Live sports graphics solution in a rack-mount system

Streamstar SW - Live Production Studio Software

The most advanced, live production software in existence. Conceptually ground breaking, technologically the most advanced, incredibly flexible, extremely efficient yet intuitive and easy to use.
Streamlined for live streaming production it features a highly effective touch screen user interface, tried and tested in real world productions. It is the ideal live production system for the new generation of digital native media professionals.

GUI - Graphical User Interface Overview

**The Production Software is operated via an innovative, touch screen user interface,
perfectly tuned for live streaming production.**
It was designed to fulfill all the requirements of a live streaming production in the **easiest, most efficient
and user-friendly** way. It allows a high level of sophistication, creative freedom, operational flexibility
while maintaining a perfect control of every aspect of the production at all times.

The GUI is designed to allow the control of processes, functionalities and workflows in the most logical and
practical way. Its layout is divided into 3 main, horizontal sections, containing logically related, operational
elements and functions.

1. PRODUCTION LAYOUT section - on top
2. PGM & CAMERA SWITCHING section - in the middle
3. CONTENT MANAGEMENT & SETTINGS section - at bottom
At the very bottom is an additional information bar displaying some helpful info on system status.

Streamstar SW 4.0 GUI comes in 3 variants depending on the number of cameras supported (6-4-2)
but the functionality of all variants is identical.

Streamstar SW 4.0 - 6 camera version

PRODUCTION LAYOUT
section

PGM & CAMERA SWITCHING
section

CONTENT MANAGEMENT
& SETTINGS section

Info bar

Streamstar SW 4.0 - 4 camera version

Streamstar SW 4.0 - 2 camera version

SOFTWARE START

Start the Streamstar SW application in a Windows OS usual way. The 1st GUI screen appears.
Tap/click one of the 2 large buttons
- NEW PROJECT - a new project is created and you can start working immediately
- LOAD PROJECT - a dialog screen appears with a list of your previously saved projects.

Streamstar SW 4.0 - 6 camera version

The dialog screen allows you to:

1. **Select** an existing project by tap/click on its name in the list
2. **Edit** the name of projects by tap/click on the PENCIL icon besides the names of projects
3. **Delete** projects by tap/click on the TRASH Icon
4. **Create** a new project by typing its name into the text input field and tap/click the NEW button
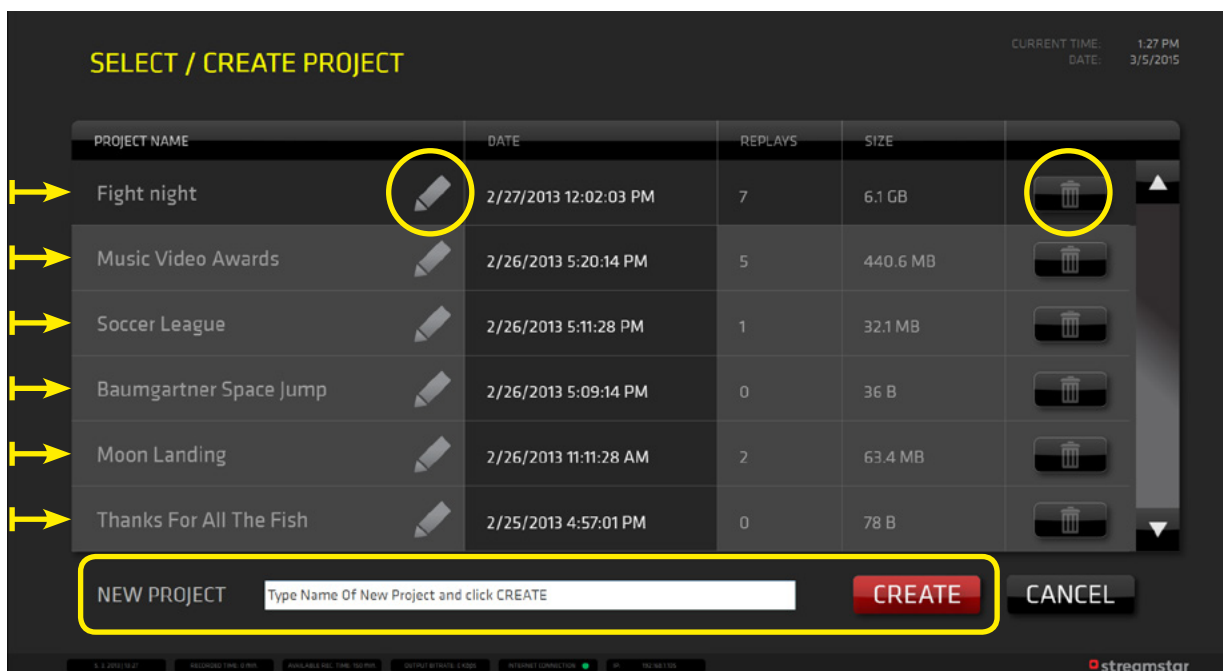
I. PRODUCTION LAYOUT Section

It contains all the important functionality controls for the creation of the look, layout and the overall appearance of your production (PGM output) and the behavior of certain related software functions.

It contains the following elements (left-to-right):
1. LAYERS - Logo / Overlay / CG / Ingest
2. ACTIVITY INDICATORS
3. MIXING MODE SWITCHES
4. SCREEN LAYOUT SWITCHES - PIP / Split screen
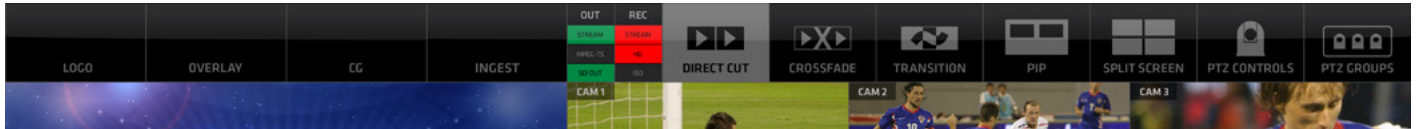5. PTZ CAMERA CONTROLS - Individual PTZ Camera controls / PTZ Groups controls

I. 1. LAYERS:
contains four switches for the video layers superimposed on top of the camera layer

LOGO   on/off switch for the LOGO layer
              (for description go to the SETTINGS / LAYERS / LOGO section on page 30.)
OVERLAYS   on/off switch for the OVERLAYS layer
              (for detailed description go to the CMA / OVERLAYS TAB section on page 18.)
CG   on/off switch for the Character Generator layer
              (for detailed description go to the CMA / CG TAB section on page 19.)
INGEST   on/off switch for the INGEST layer
              (for description go to the SETTINGS / LAYERS / INGEST section on page 28.)

PLEASE NOTE: in order to maximise the PGM monitor and the live camera monitor sizes and to optimise the available desktop space, in the 4 camera SW version these 4 layer switches are located to the left of the PGM monitor. Example is shown in the PGM / CAMERA SWITCHING section on page 12.

I. 2. ACTIVITY INDICATORS:
contains 6 indicators that inform you about the status of the various processes of the system.
The column marked OUT contains status indicators for the different types of the output.
The column marked REC contains status indicators for the recording functions.

I. 3. MIXING MODES:
Tap/Click any of the three switches to select a switching mode with their respective functionality controls.
DIRECT CUT -   enables a direct cut between sources
CROSSFADE -   enables automated crossfade transition between sources
TRANSITION - enables automated wipe transition between sources

Adjusting the Mixing Modes parameters:
Direct Cut - there are no parameters to adjust
Crossfade - Tap/Click and HOLD the CROSSFADE button for over a second to reveal the
             CROSSFADE DURATION ADJUSTMENT window with its controls.
Transition - Tap/Click and HOLD the TRANSITION button for over a second to reveal the
             TRANSITION ADJUSTMENT window with its controls.
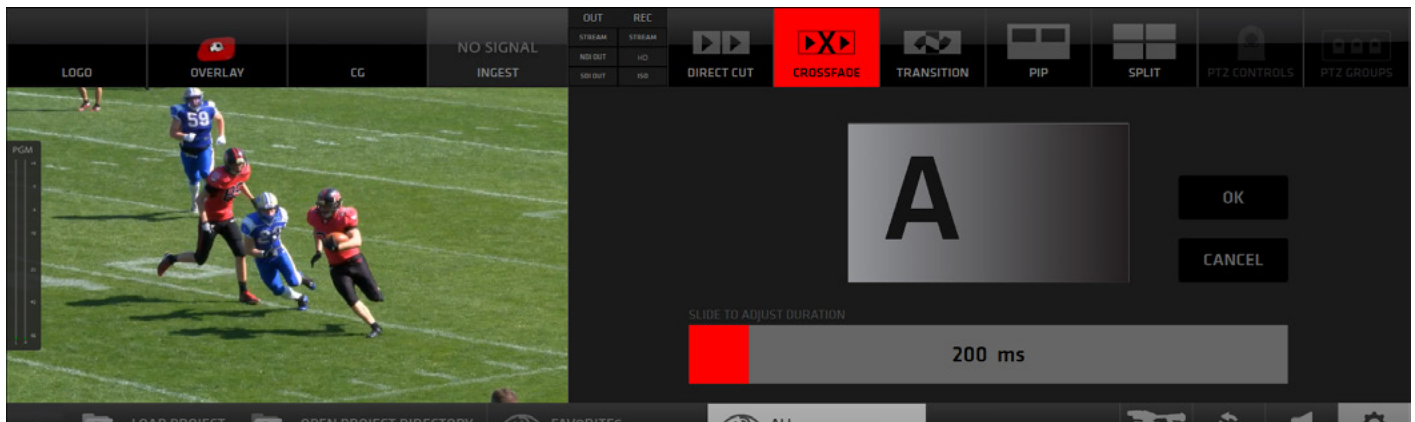
Crossfade Duration Adjustment:

The following image bellow shows the CROSSFADE DURATION ADJUSTMENT controls window revealed.
Use the DURATION BAR to adjust the duration of the crosfade. Slide the red bar to the right to increase the crossfade duration, ...to the left to decrease it.
Or tap/click anywhere on the duration adjustment bar to set a new duration.
After a new value is set the Preview window above (with letter A) will play a crossfade animation demonstrating the newly set duration.
When you are done with the new duration setup tap/click OK to confirm the new duration.
The CROSSFADE DURATION ADJUSTMENT window closes and from now on all CROSSFADES are executed with the new duration time setting.

Transition Adjustment:

The next image bellow shows the TRANSITION ADJUSTMENT controls window revealed.
On top left it contains 9 buttons allowing you to select a transition template.
Tap/click any of them to select a desired transition.

Use the TRANSITION DURATION BAR to adjust the duration of the transition. Slide the red bar to the right to increase the transition duration, ...to the left to decrease it.
Or tap/click anywhere on the duration adjustment bar to set a new duration.

After a new value is set the Preview window above (with letter A) will play a transition animation demonstrating the newly set duration and transition template.
When you are done with the transition setup tap/click OK to confirm the new transition. The TRANSITION ADJUSTMENT window closes and from now on all TRANSITIONS are executed with the new transition and duration time setting.
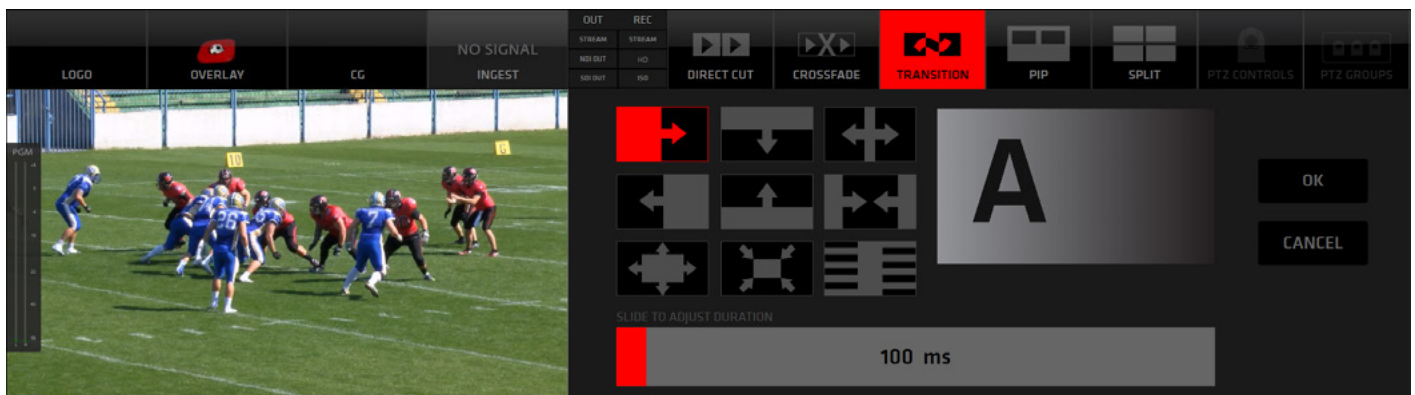
I. 4. SCREEN LAYOUT SWITCHES

PICTURE IN PICTURE - enables the PIP screen layout functionality
Operating procedure:

1. Tap/click the PIP layout switch to select/activate it
   If there is no PIP layout setup yet, you need to set it up to be able to use it.
   Tap/click and HOLD the PIP switch for over a second to reveal the PIP SETUP window which opens above the PGM monitor (*see image 1 bellow*)
2. Tap/click one of the 9 preset templates available - the selected template zooms in (*see image 2 bellow*)
3. Select the sources (content) for the individual PIP areas by simply tap/click on them
   PLEASE NOTE: a source for a PIP can be a live camera, media file, playlist or a replay
   The software prompts you to assign a source by highlighting the area in RED that need to be set ...
   A... B... C... depending on the number of PIP areas in the selected template
4. when all PIP screen areas are populated a red GO LIVE button at bottom becomes active
5. Tap/click GO LIVE **GO LIVE** to switch the SPLIT SCREEN layout to PGM
6. Tap/click SAVE to save the PIP layout - the saved PIP layout is highlighted in grey
   now you can setup another one if you wish or exit the PIP SETUP (point 8b)
7. When assigning sources to PIP areas tap/click BACKSPACE ⬅ to go back a step, press twice to go back two steps and so on ... this way you can modify/clear the existing PIPs
8. Tap/click CANCEL ✖ to:
   a: cancel the zoomed-in PIP setup to go back to the PIP Templates selector to choose another template
   b: exit the PIP layout setup and close the PIP SETUP window
9. The last selected PIP used in PGM is assigned to the main PIP SWITCH button in the top section for fast instant access. If you wish to select another PIP layout simply tap/click and HOLD the PIP switch to access the PIP Setup window and select another saved PIP or create a new one.
10. To re-assign new content to areas in an already setup PIP template, tap the PIP template, select the area you wish to re-assign and select a new source by a tap/click on it.

SPLIT SCREEN - enables the split screen layout functionality
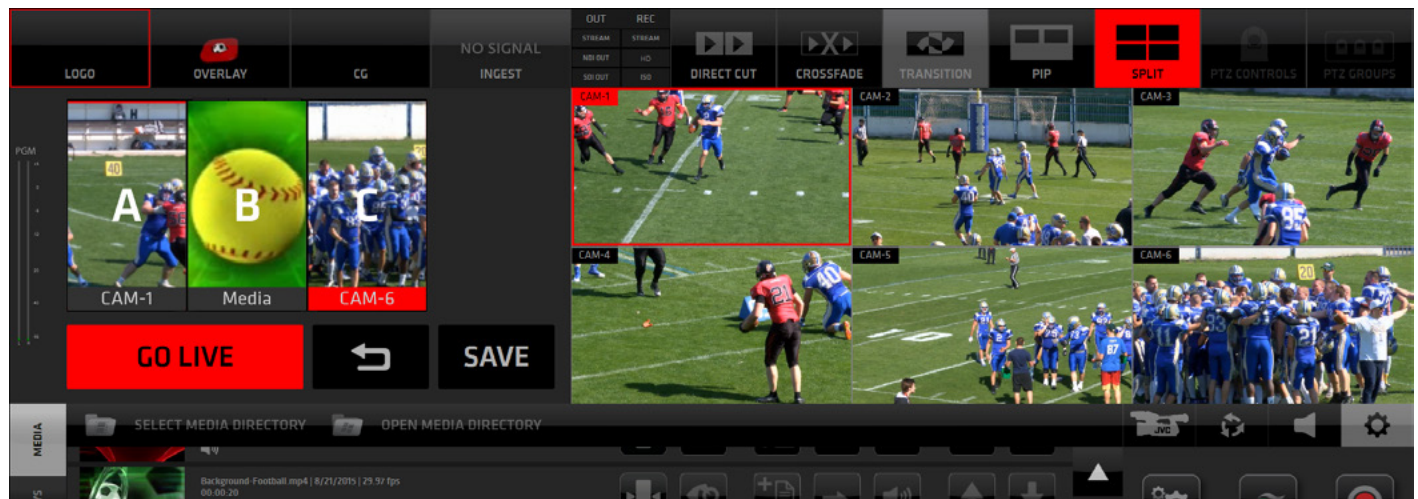**Operating procedure:**
The operating procedure of the SPLIT SCREEN is identical to the of PIP.
Please refer to the previous page for instructions. The only difference is that now you are working with SPLIT SCREEN TEMPLATES.

Selecting a template

Populating the Split Screen areas

I. 5. PTZ CAMERA CONTROL

The last 2 switches in the top section are
I. 5.a. PTZ CONTROLS - enables the control of individual PTZ cameras over IP
I. 5.a. PTZ GROUPS control - enables the PTZ CAMERA GROUPS control over IP

These 2 functions become available automatically if PTZ CAMERAS are connected to the system.

NOTE: For a good understanding of these functions, knowledge of the CAMERA SWITCHING and JVC CAMERA CONTROL sections is required. Therefore we will discuss them in detail later in the JVC CAMERA CONTROL section on page 36.

II. PGM / CAMERA SWITCHING SECTION

This section features the PGM output monitor and the live camera monitors. The layout of this section will look slightly different depending on the version of the Streamstar SW 4.0 you purchased.

The difference is in the number of live camera monitors (6-4-2), their sizes and the layout of the GUI. It was designed to maximise the PGM monitor and live camera monitor sizes and to optimise the available desktop space. The functionality however is identical.

The screen shots bellow show the differences in the 6, 4 and 2 camera versions of the Streamstar SW 4.0

Streamstar SW 4.0 - 6 camera version

Streamstar SW 4.0 - 4 camera version

Streamstar SW 4.0 - 2 camera version

As you have already seen in the Mixing Modes and Screen layouts, the PGM and Live Camera monitors desktop area is occasionally used to display certain control elements, logically related to the functionalities that triggered them. As you learn to know the GUI you will quickly understand how it all makes perfect sense and allows for the incredible speed with which you can work with Streamstar SW 4.0

PGM monitor

The large PGM monitor is displaying the composite system output.

Audio levels indicator

On the left side there is an audio level indicator superimposed over the video signal - the audio level indicator is not part of the composite signal created and broadcast by the SW and is given for information purposes only.
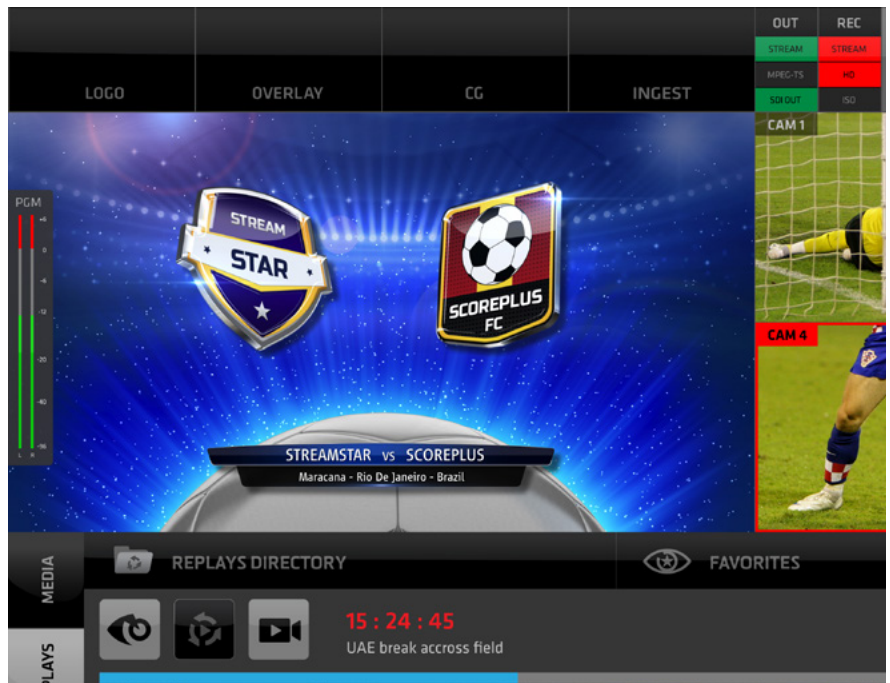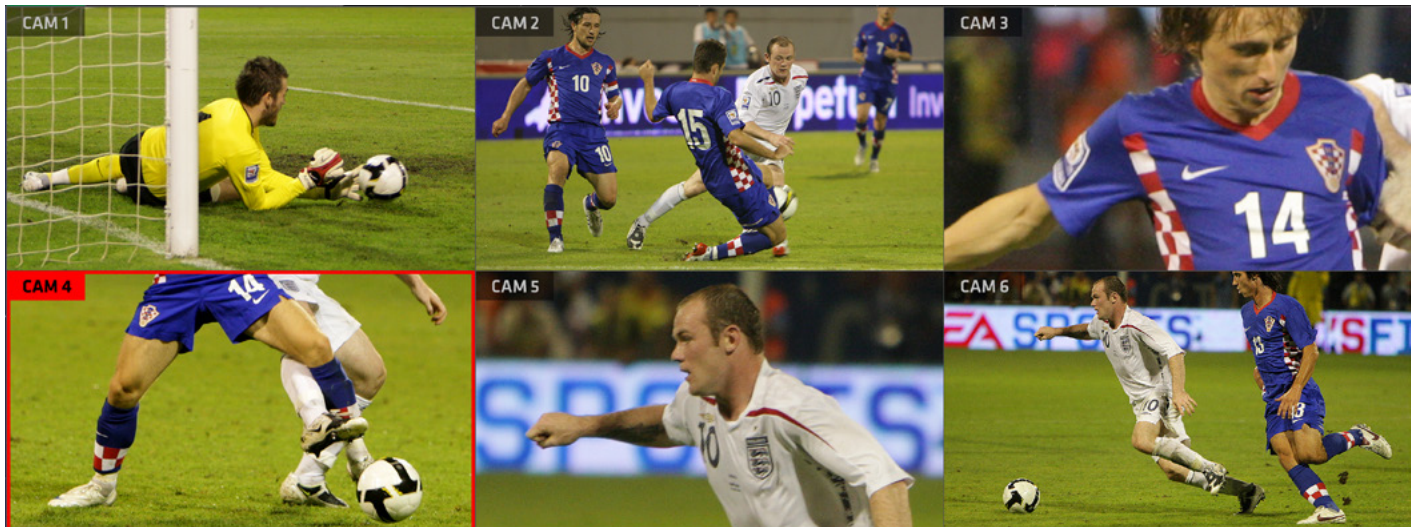

Live Camera monitors

Depending on the SW version this area contains 6-4-2 live camera monitors.
These monitors also function as switches for camera switching.
Tap/click on any of the live camera monitors to switch that camera to PGM.

III. CONTENT MANAGEMENT and SETTINGS Section

This section contains all the control elements of the many functionalities available in Streamstar SW 4.0
It's content changes according to what is selected and allows for great operational flexibility and speed.

The sections GUI is subdivided into two major SUB-sections:
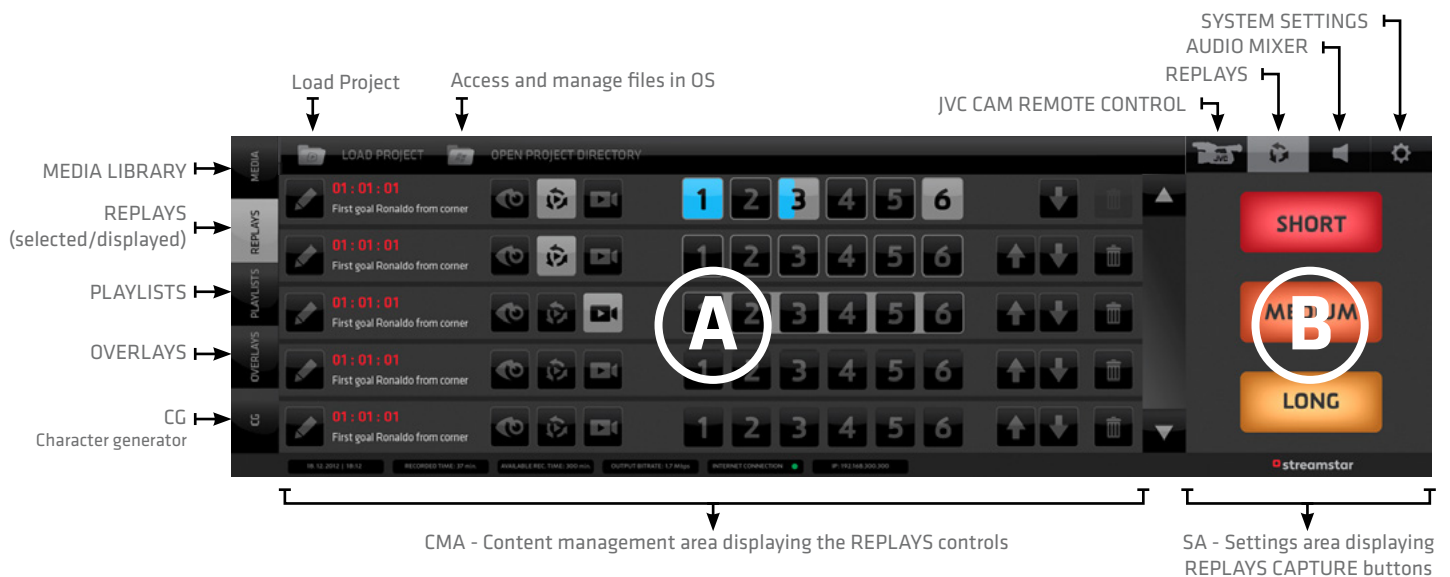**A** - the **CONTENT MANAGEMENT AREA (CMA)** *(marked with letter A)*
B - the **SETTINGS AREA (SA)** *(marked with letter B)*

The **CMA** (Content Management Area) has **5 TABS on the left** that reveal the operational controls for
the **MEDIA LIBRARY**, **REPLAYS & SLOW MOTION PLAYBACK**, **PLAYLIST, OVERLAYS** and **CG** controls.

The **SA** (Settings Area) has **4 TABS on the top** that trigger the display of:
REPLAYS CAPTURE buttons, the **AUDIO MIXER**, **SETTINGS BUTTONS** and the **JVC CAMERA CONTROL**.

The image below shows REPLAYS controls in CMA and REPLAY CAPTURE BUTTONS in the SA.

SYSTEM SETTINGS
AUDIO MIXER
REPLAYS
JVC CAM REMOTE CONTROL

Load Project
Access and manage files in OS

MEDIA LIBRARY
REPLAYS (selected/displayed)
PLAYLISTS
OVERLAYS
CG
Character generator

CMA - Content management area displaying the REPLAYS controls

SA - Settings area displaying REPLAYS CAPTURE buttons

The next image shows the AUDIO MIXER controls in CMA and REPLAY CAPTURE BUTTONS in the SA.

CMA - Content management area displaying the AUDIO MIXER

SA - Settings area displaying SETTINGS BUTTONS
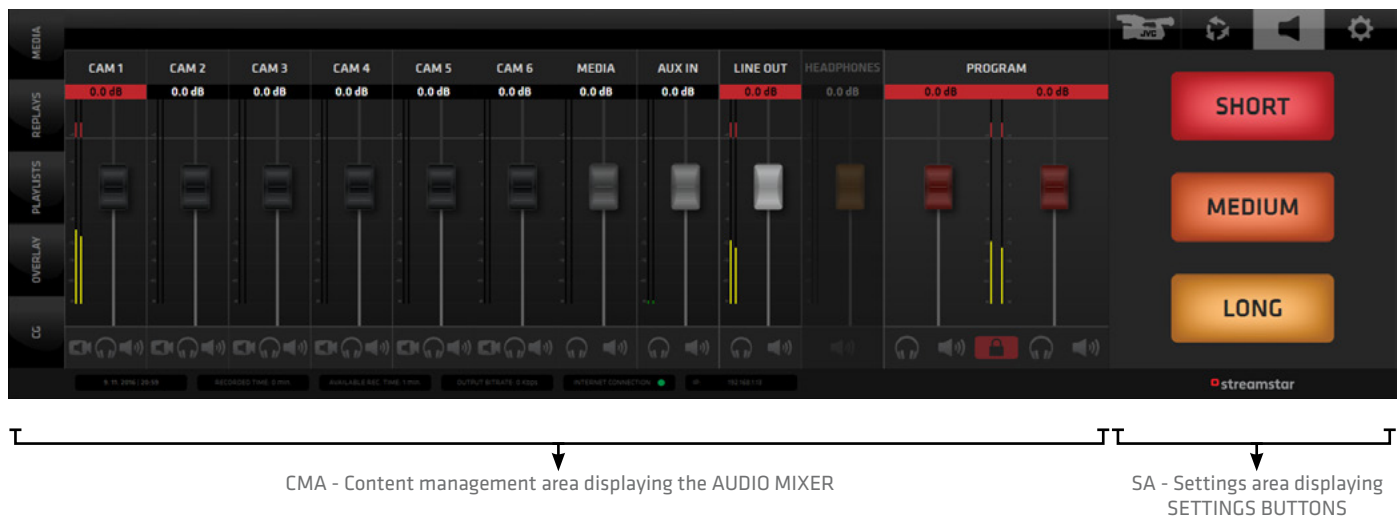
III./1. CMA (Content Management Area) - MEDIA Tab
Contains a list of available media and all interface elements to use for the MEDIA playback functionality.

1. **Media Monitor / Switch** - a thumbnail media preview player that also functions as a switch
     Tap/click it to switch the media file to live PGM or to assign the media to a PIP or SPLIT screen area.

2. **Media file info** - contains information about the media file status
     - name of madia file, date created, framerate
     - entire media duration time and selected duration when IN/OUT points are set for the media
     - audio indicator icon
     - large countdown timer displaying the remaining time when the media is playing live

> **NOTE:** When the media is playing the AUTOCUT function is active on the camera switches allowing you to choose to which camera the system wil switch after the media is finished.
> Tap any camera switch to cut out of the media playback at any time.

3. **Media In/Out Points editor button** - tap/click to enter the media In/Out points editor.
     The functionality si described in detail on next page.

4. **Live preview on/off button** - tap/click it to preview the media in the thumbnail media player
     A media can be cut to live PGM anytime during the preview by a tap/click on the thumbnail media player

5. **Assign to Playlist** - used to assign the media files to a Playlists
     Tap/click the button -> a dialog box appears that enables you to select a playlist (or to create a new one)
     and assign the file to it. (The procedure is described in detail in the PLAYLISTS section on page 13.)

6. **Loop** - sets a media file to loop - tap/click it several times to set various loop options - play the selected number of times

7. **Audio switch** - enable/mute switch for Media audio

8. **Sorting buttons** - use them to move Media files up and down in the list

9. **Scroll bar** - use to scroll the list

MEDIA IN/OUT POINTS EDITOR

Enables you to trim your media file by setting up IN/OUT points for media playback.
The functionality is non-destructive and your physical media files are untouched.
You can reset the IN/OUT points at any time.
Enter the IN/OUT points editor by tap/click on any MEDIA IN/OUT POINTS EDITOR BUTTON in the meida file list display.
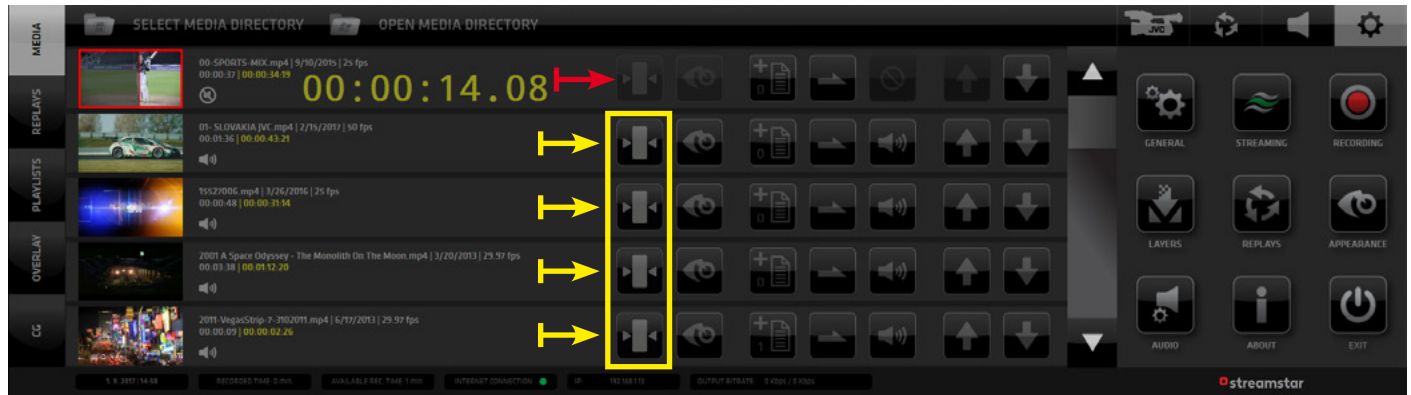
NOTE: When a media is playing in Live PGM the MEDIA IN/OUT points editor button is disabled for that media file and no In/Out points editting is possible.

IN/OUT points control elements functionality
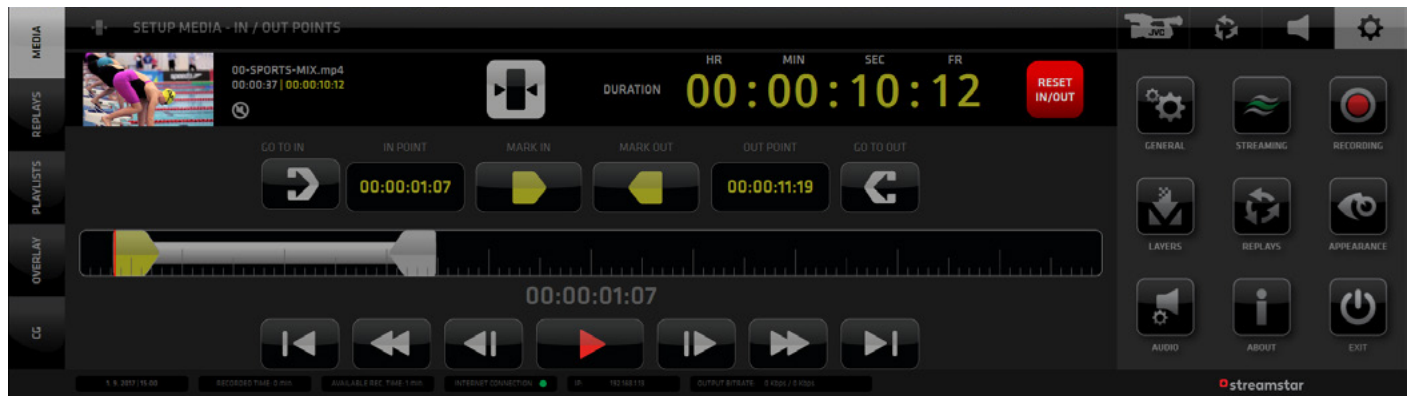
IN/OUT POINTS control elements functionality description

The MEDIA IN/OUT POINTS EDITOR pane contains several elements that enable you to easily setup the media playback In/Out points precisely and to prepare your media for playback in a live production.

1st row - PREVIEW/EXIT/ DURATION/ RESET (left to right)

a, preview video player
b, media info display
c, media In/Out Points Editor EXIT BUTTON
d, playback duration time of media - between the IN and OUT points.
   if no In/Out points are set it shows the entire media duration.
e, RESET In/Out Points BUTTON - clears the In/Out Points and resets media playback to the entire duration of the media file

2nd row - IN/OUT POINTS SET/NAVIGATE (left to right)

a, GO TO IN Point - moves the playhead to the IN point location
b, IN POINT Time - displays the the IN point time
c, MARK IN Point button - tap/click to set the IN point
d, MARK OUT Point button - tap/click to set the OUT point
e, OUT POINT Time - displays the the OUT point time
f, GO TO OUT Point - moves the playhead to the OUT point location

NOTE: For a manual / keyboard entry of In/Out points DOUBLE CLICK on any of the digit pairs in the IN and OUT POINT DISPLAYs and enter a desired numeric value.

3rd row - TIMELINE BAR

Tap/click anywhere on the Timeline Bar to move the playhead to that location. It is indicated by a red line.
A numeric display bellow the Timeline Bar indicates the current time/location of the playhead.
To set the IN or OUT point to that location tap/click either the MARK IN or MARK OUT button above.
The IN/OUT point is set and the indicator moves to that location, visually identifying the In/Out position.
Repeat this procedure to setup your in out points as you wish.

4th row - VIDEO NAVIGATION CONTROLS (left to right)

a, GO TO FRONT - moves the playhead to the beginning of the media
b, REWIND 1 SEC. - moves the playhead 1 second towards the beginning of the media
c, STEP BACK 1 FRAME - moves the playhead 1 frame towards the beginning of the media
d, PLAY - plays the media in the PREVIEW Video player on top left from the current playhead location
e, STEP FORWARD 1 FRAME - moves the playhead 1 frame towards the end of the media
f, FORWARD 1 SEC. - moves the playhead 1 second towards the end of the media

MEDIA IN/OUT POINTS SETUP PROCEDURE

1. Open the Media In/Out Editor
2. Position the playhead at the desired In Point location
3. Use Video Navigation control elements to fine tune the In Point location
4. Tap/Click the Mark In button
5. Repeat 2. and 3. to locate the Out Point
6. Tap/Click the Mark Out button
7. Tap /Click the GO TO IN Point button
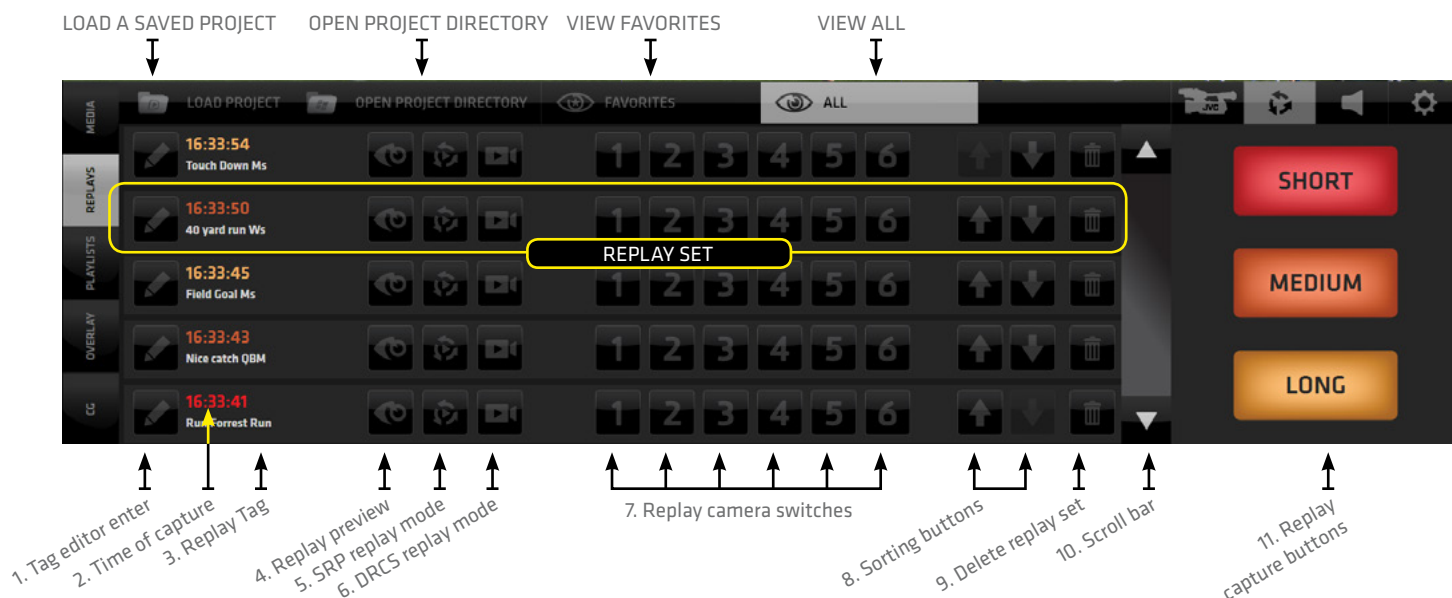8. Tap /Click the PLAY button to preview the media playback

If you are OK with In/Out Points the setup

9. Tap /Click the EXIT In/Out Points Editor button to go back the the Media List View.

III./2. CMA (Content Management Area) - REPLAYS Tab

Contains a list of all captured REPLAY SETS
Each REPLAY SET contains all interface elements to operate the REPLAY functionality.

The REPLAY TAB top bar contains 4 buttons:

LOAD PROJECT - opens a saved project
OPEN PROJECT DIRECTORY - opens the project directory in OS
FAVORITES - view only the replay sets that contain a favorite marked replay
ALL - view all replay sets captured

**The REPLAY SET contains the following controls/buttons:**

1. **Tag editor** - name a replay set / add a text note "TAG" for easy identification
2. **Time of capture** - color coded time signature of the captured Replay set
3. **Replay TAG** - display of replay set Tag
4. **Preview button** - triggers the display of video monitors to preview the captured replay set
   Tap/click a preview to cut the replay of a camera to live PG OUT
   While playing a preview a blue progress bar in the preview button indicates the playhead position
5. **SRP replay mode** - activation switch (Sequential Replay Playback)
6. **DRCS replay mode** - activation switch (Dynamic Replay Camera Switching)
7. **Camera switches** - tap/click any of the camera replay buttons to switch that camera replay to PG.
   Replays are cut IN and OUT to PGM with a lead-in and a lead-out animation - called "WIPE"
   The Wipes setup and activation is described in the Settings section under REPLAYS/Settings (page 19)
8. **Sorting buttons** - move a set of Replays up and down in the list
9. **Delete button** - deletes a set of Replays from the list and the system
10. **Scroll Bar** - scroll up and down the list
11. **Replay Capture buttons** - used to capture replays of 3 different lengths, which can be set in the
    Settings/Replays section. Go to page 20 for detailed description.

NOTE: The REPLAYS functionality is described in detail in the REPLAY SETTINGS section starting on page 19.
We highly recommend to learn about the Replay Settings first, to use the REPLAY functionality to its full potential.

III./3. CMA (Content Management Area) - PLAYLISTS Tab

Contains a list of PLAYLISTS with control elements to operate the PLAYLISTS functionality.
Playlists are virtual collections of MEDIA / REPLAYS assembled in a list for continuous playback.
Each Playlist can be expanded with the EXPAND button to reveal list of files contained in it.
Each contained file contains a set of control elements to operate its behavior in the Playlist.
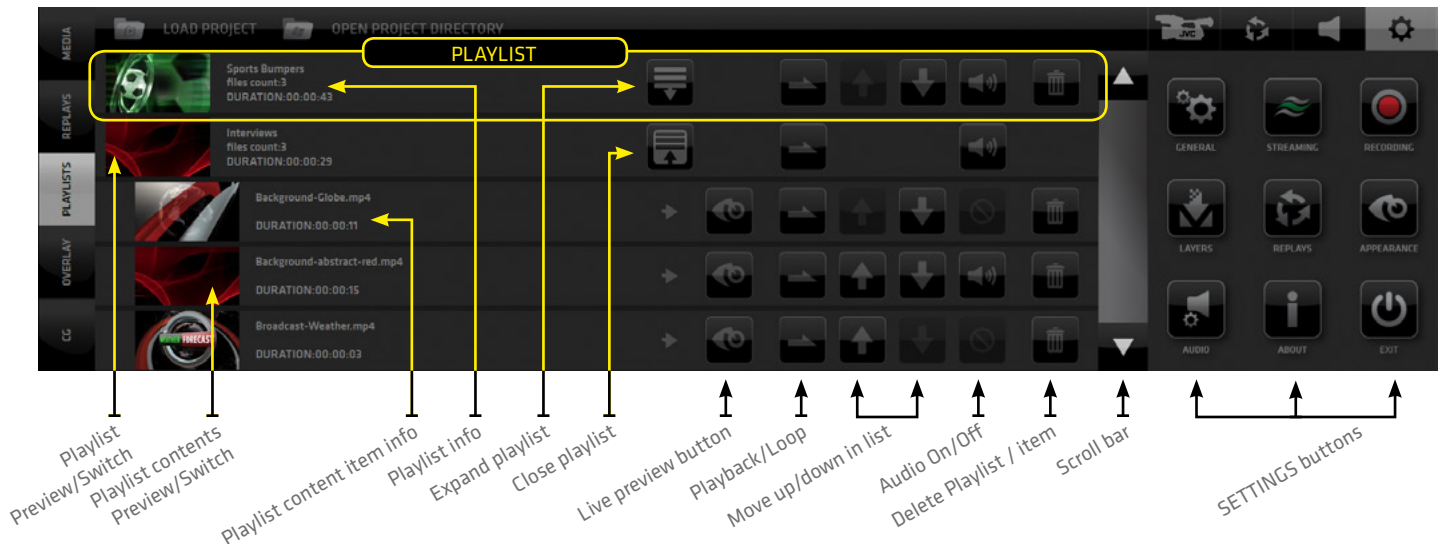
1. **Playlist Preview/Switch** - thumbnail video player/monitor of the entire playlist
   tap/click it to cut the Playlist to PGM, when live in PGM tap/click it again to cut out of PGM
2. **Playlist Content Preview/Switch** - thumbnail video player of an item in the playlist,
   touch/click it to cut to PG OUT, when playing in PG OUT touch/click it again to cut out of PG OUT
3. **Playlist content info** - playlist content item info
4. **Playlist info** - playlist info
5. **Playlist Open - expansion button** - tap/click to expand a playlist a manage it's content
6. **Expansion Close button** - close expanded playlist
7. **Preview button** - triggers a preview of the item in the thumbnail video player
8. **Playback/Loop button** - set the playback of the item to a number of repeats or a loop
9. **Sorting buttons** - move a Playlist item up and down in the list
10. **Audio On/Off button** - it turns the item's audio on/off if audio is available
11. **Delete** - deletes either an item inside the playlist or the entire playlist if in the closed PL(top line)

Playlist Creation / Management

To assign an item to a Playlist:
1. Go to MEDIA or REPLYAS Tabs
2. Locate the file/replay to assign to a Playlist
3. Tap/click the Playlist Assignment button
   A dialog box appears that
   enables you to:
   - select a playlist
   - create a new playlist
   - edit the name of a playlist
     (marked with white circle)
4. Tap/click a Playlist in the dialog box to assign
   the Media / Replay to it

III./4. CMA (Content Management Area) - OVERLAYS Tab

OVERLAYS enable you to insert/superimpose pre-rendered graphics into your live PGM.
Typical usage is info graphics, bumpers, stingers, advertisements, pop up promos and similar.
PNG files with transparency/alpha channel and FLV animations with transparency are supported.
The OVERLAYS controls are accessed via the OVERLAYS TAB within the left side menu in the CMA.

Procedure to operate:
1. Tap/click the OVERLAYS TAB in the left side menu bar of the CMA to display the OVERLAYS content.
2. Specify the directory where your Overlays files are located using the path selector on top of the CMA.
3. Load all slots at once using the LOAD ALL button. The first 10 files in the specified Overlays directory are instantly loaded into the 10 slots. Each slot can also be loaded individually using the selector button on top of the slot.
4. Tap/click the preview of the Overlay file you wish to insert into PGM to select it.
5. Tap/click the OVERLAYS switch in the LAYERS section of the Production Section on top left to activate the layer / switch the pre-selected file to PGM.

NOTE: Alternatively if the OVERLAYS LAYER SWITCH in the Production Section on top left is active, you can switch the Overlay graphics directly by tapping the thumbnail previews in the Overlays pane in the CMA.

OVERLAYS LAYER SWITCH ON/OFF

SPECIFY OVERLAYS DIRECTORY

LOAD 1st 10 FILES INTO SLOTS

LOAD FILES INDIVIDUALLY IN EACH SLOT
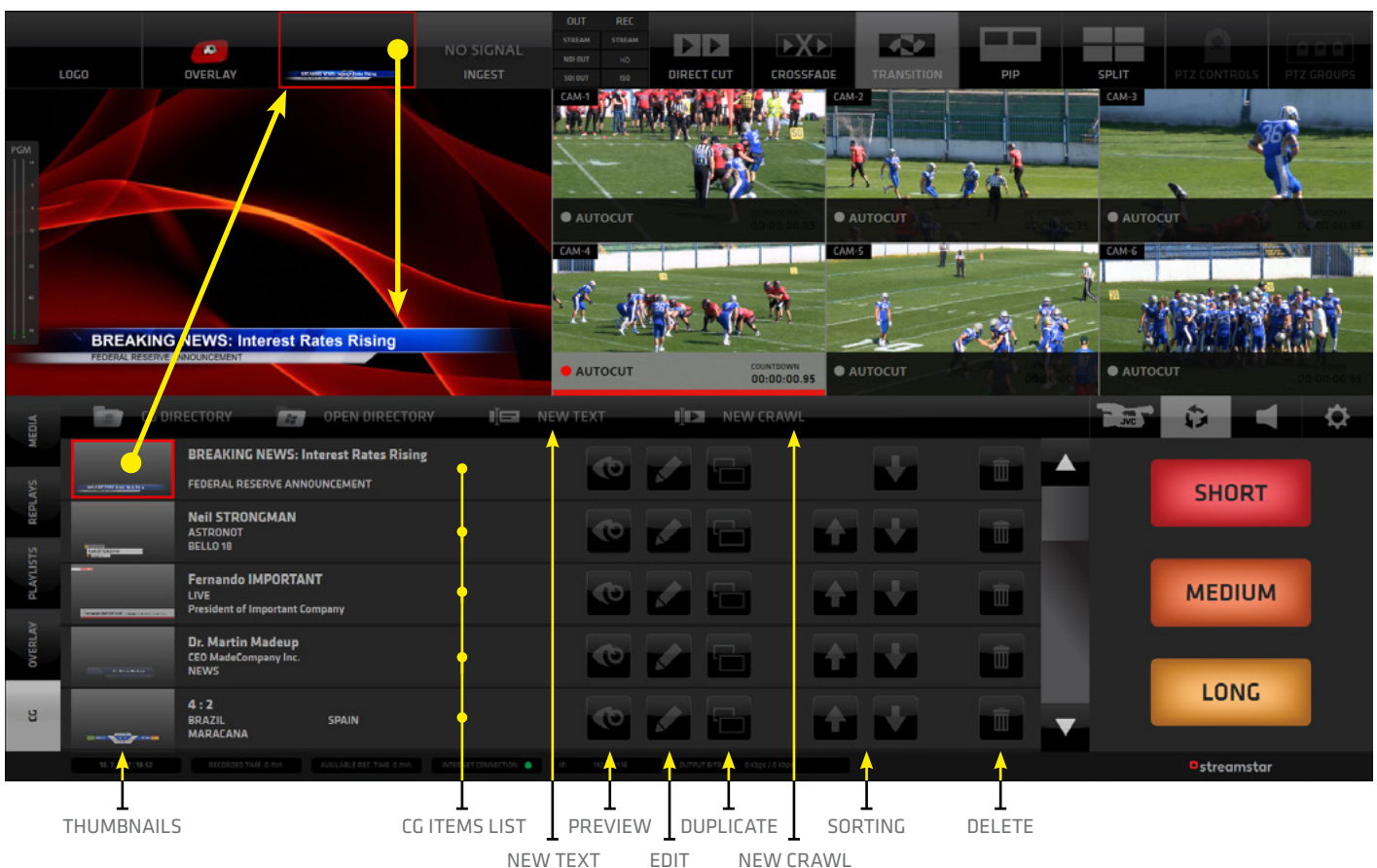
10 OVERLAY GRAPHICS SLOTS AVAILABLE

III./5. CMA (Content Management Area) - CG Tab

contains a list of CG ITEMS with control elements to operate the CG functionality.
The CHARACTER GENERATOR - CG enables you to insert real time graphics into your live PGM.
Typical usage is Lower thirds, Titles, Texts, Crawls or similar.
The CG list and controls are accessed via the CG TAB in the left side menu of the CMA.

Procedure to operate:

1. Tap/click the CG TAB in the left side menu bar of the CMA to display the CG list pane.
2. Specify where your CG files are located using the Directory selectors in the top bar of the CMA.
   - Use the CG DIRECTORY tab to SELECT a directory from which your CG items will load into the list
   - Use the OPEN DIRECTORY tab to OPEN and manipulate its content in Windows OS
3. Tap/click the CG thumbnail in the list to select it - red outline
4. Switch ON the CG Layer in the LAYERS section to insert the CG into your Live PGM

THUMBNAILS   CG ITEMS LIST   PREVIEW   DUPLICATE   SORTING   DELETE
                           NEW TEXT   EDIT   NEW CRAWL

- CG DIRECTORY - (in the CMA top bar) select a directory in the OS that contains the CG items to load/use
- OPEN DIRECTORY - (in the CMA top bar) open the selected CG directory in OS
- THUMBNAIL - a small preview of the CG that functions as a SWITCH to select the CG item
- NEW TEXT and NEW CRAWL Tabs in the CMA top bar create new CG Items.
  These buttons open a new pane where the new CG item are setup. The exact procedure follows bellow.
- PREVIEW - play the CG animation inside the THUMBNAIL
- EDIT - opens the CG item editor to edit its properties
- DUPLICATE - creates a duplicate of an existing CG Item in the list
  It is the best way to create multiple variants of a Lower 3rd with different name s for example...
- SORTING - move items in list up/down
- DELETE - delete item in list

EDITING CG PROPERTIES

Tap the EDIT icon in the CG item to open the CG PROPERTIES pane.
It contains all controls to setup the CG item for use in your productions.

About CG Item Construction

CG items are constructed from 4 separately controlled layers. 1x BACKGROUND and 3x TEXT layers.
Objects in these 4 layers are combined to create complex CG items that can be used in your productions.

The CG Editor GUI is therefore divided into 4 TABS containing all the controls to set the properties
of objects in each of the 4 layers.

- **BACKGROUND** Layer
  Contains the controls to setup the background graphics for the 3 independent TEXT layers placed above.
  Supported file formats are: - .FLV for animated backgrounds
  - .PNG for static graphics with transparency

- **TEXT** Layers
  Allows you to edit the text content and control it's parameters.

Procedure to edit Background Layer parameters

- Select the graphic file using the file selector drop-down menu
- Set the position using the X-POS, Y-POS coordinates
- Push the LOOP button to loop the selected graphic/animation file indefinitely
- Set the SCALE, DURATION and CROSSFADE parameters using the provided controls.
- Push the APPLY button to apply the changes to the CG item.
- Tap/click the PREVIEW monitor to preview the modified CG
  When you are done editing the Background Layer you can continue to edit the Text Layers or
- Push the SAVE button to save all changes and exit the editor -> go back to the list of CG items.
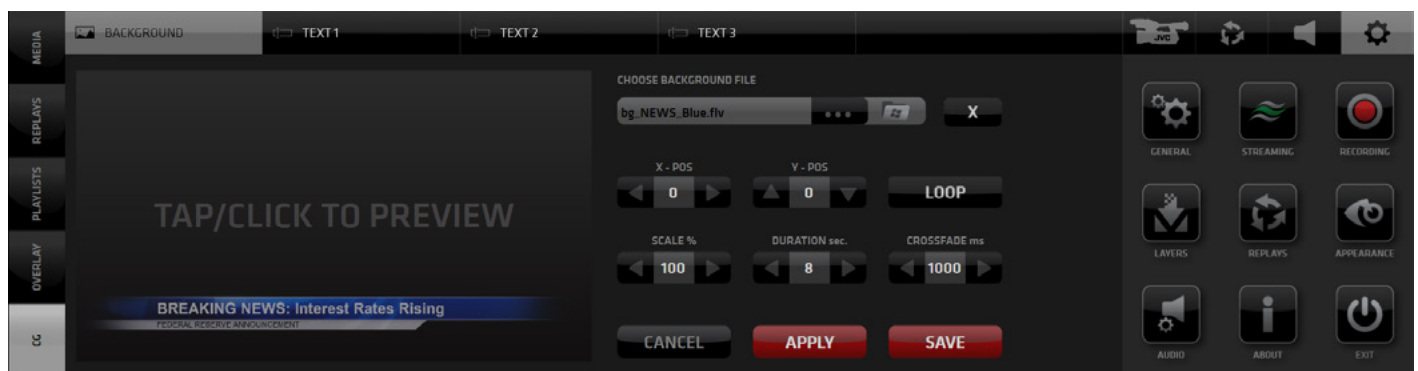
NOTE: Streamstar provides several examples of different ready-made CG items to help you to learn
working with the CG quickly. We recommend to duplicate the CG item before you start editing
it's parameters so the original configuration is preserved.

Procedure to edit Text Layer parameters
- Edit the text content in the text field
- Format the text using the provided controls - font, size, line spacing, style, opacity, alignment in a usual text editor way.
- Setup the text position using the X-POS, Y-POS, Text Block Width, Text Block Height properties
- Setup the text animation using the In-Time, Out-Time, Crossfade properties
- Push the APPLY button to apply the changes to the CG item
- Tap/click the PREVIEW monitor to preview the modified CG

When you are done editing the Text Layer you can continue to edit the next Text Layers or
- Push the SAVE button to save all changes and exit the editor -> go back to the list of CG items.
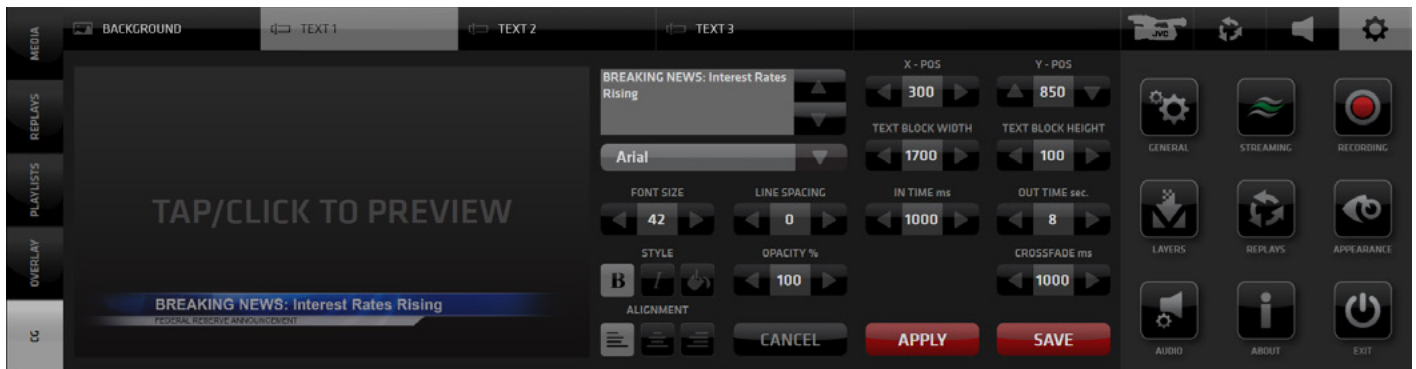
NOTE: X/Y-POS parameters define the coordinates of the TOP LEFT corner of the text block within the video frame. The TEXT BLOCK WIDTH and HEIGHT define the distance from the X/Y = Left/Top edges of the text block. That determines the width and height of the whole text block calculated from the X/Y coordinate. (E.g.: If X=0 and TEXT BLOCK WIDTH = 1920px it means the text block is set to the full width of the frame)

Procedure to edit CRAWL Text Layer parameters
The procedure is identical to editing a regular text except for a few small differences we need to point out:
- Text content is edited in a separate pane since the crawl text is usually longer - more space is needed. Tap/click the EDIT TEXT icon to enter the EDIT CRAWL TEXT pane.
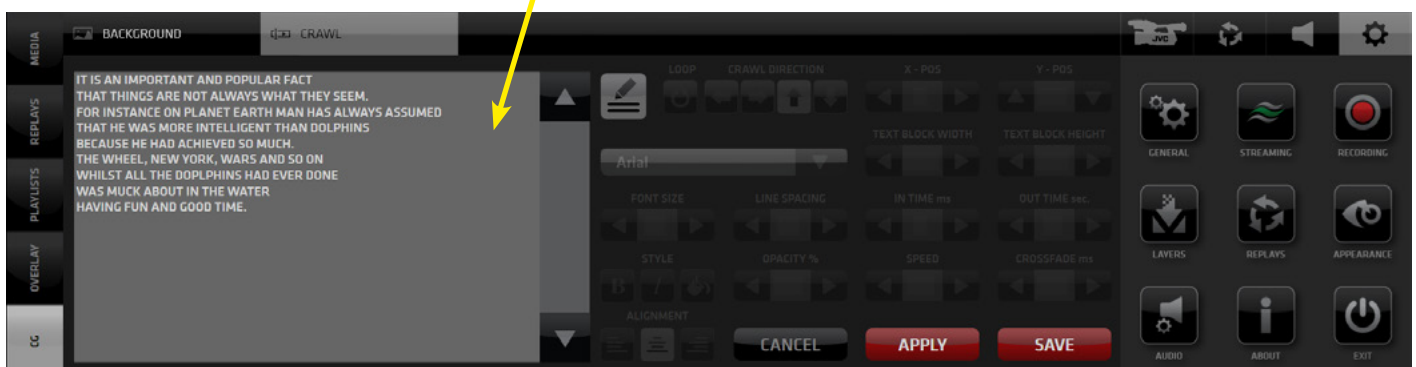
Procedure to edit CRAWL DIRECTION and LOOP parameters

- Use the CRAWL DIRECTION buttons to specify the crawl direction.
- Use the LOOP button to loop the crawl text.

NOTE: The loop is only active for as long as set by the OUT TIME parameter which has the priority.
The OUT TIME setting will terminate the crawl regardless of the loop setting.
To loop the crawl text indefinitely you need to set the OUT TIME to 999.

Procedure to edit Text Layer COLOR parameters

- Push the BUCKET Icon in the STYLE group of icons. The COLOR EDITOR pane opens
- Tap/click inside the color selector or enter the new color RGB values numerically
- Push the APPLY button to view the new text color in the PREVIEW monitor
- Once you decide on the new color push the SAVE button to save the setting
  The color editor closes and the CG editor is displayed with text in new color.
- Once you are done with all edits push SAVE to re-render the CG and exit to the CG list view
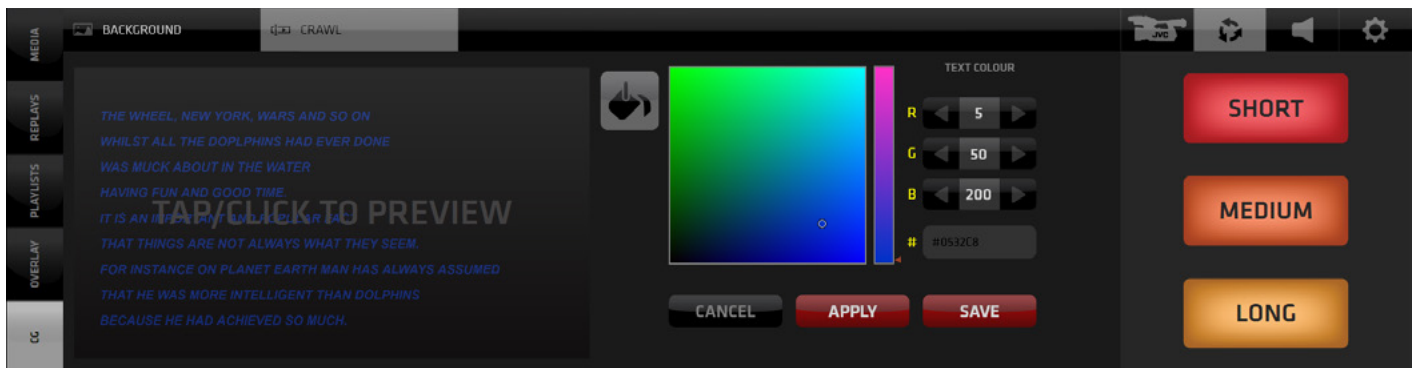
III. SA (settings area)

Contains user interface elements that provide access to:
1. JVC CAMERAS REMOTE CONTROLS
2. REPLAY CAPTURE BUTTONS
3. AUDIO MIXER
4. SYSTEM SETTINGS BUTTONS - adjusting various system settings

NOTE: The SA TABS change the appearance of both the SA and CMA to provide operating space for many interface elements as needed.
In a Live situation access to the REPLAY CAPTURE BUTTONS is a priority therefore the 3 replay capture buttons are visible as often as possible without having to switch tabs to reveal them.

III./a. SA (settings area) - 1. REPLAYS TAB

Activates REPLAY CAPTURE buttons in SA and the REPLAYS TAB in the CMA for Replays operation

1. **SHORT button**
   triggers the capture of 3, 4 or 5 sec. replays in all cameras
   (the length can be set in REPLAY SETTINGS - default is 3 sec.)
2. **MEDIUM button**
   triggers the capture of 6, 8 or 10 sec. replays in all cameras
   (the length can be set in REPLAY SETTINGS - default is 6 sec.)
3. **LONG button**
   triggers the capture of 10, 15 or 20 sec. replays in all cameras
   (the length can be set in REPLAY SETTINGS - default is 10 sec.)
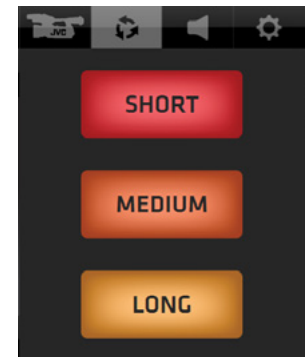
SA - Replay Capture buttons

Replay Capture and Playback procedure

1. Activate the REPLAY TAB on of the SA, which reveals the Replay Capture buttons and opens the REPLAYS pane in the CMA. In a new project there are no replays captured/listed yet.
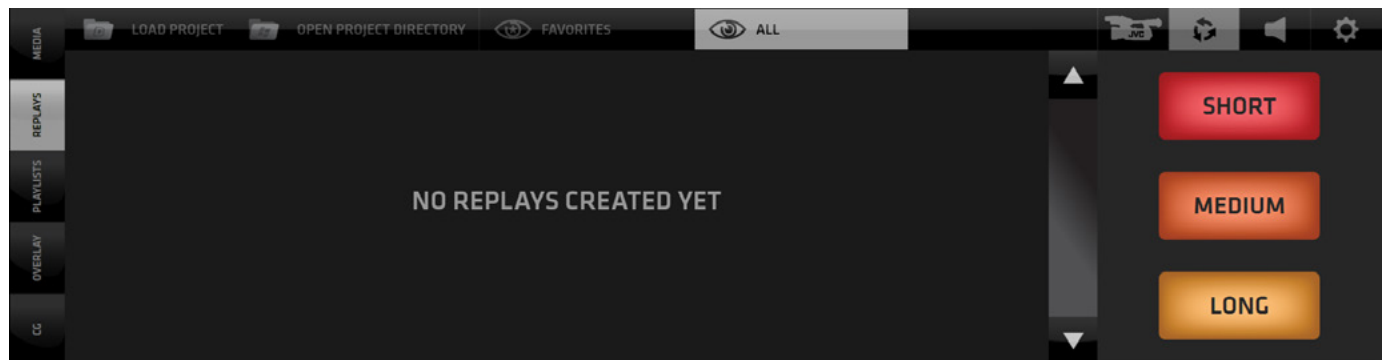
2. Tap/click one of the REPLAY CAPTURE BUTTONS in the SM to capture of a replay set. A new replay set is instantly generated and listed on top of the list in CMA.
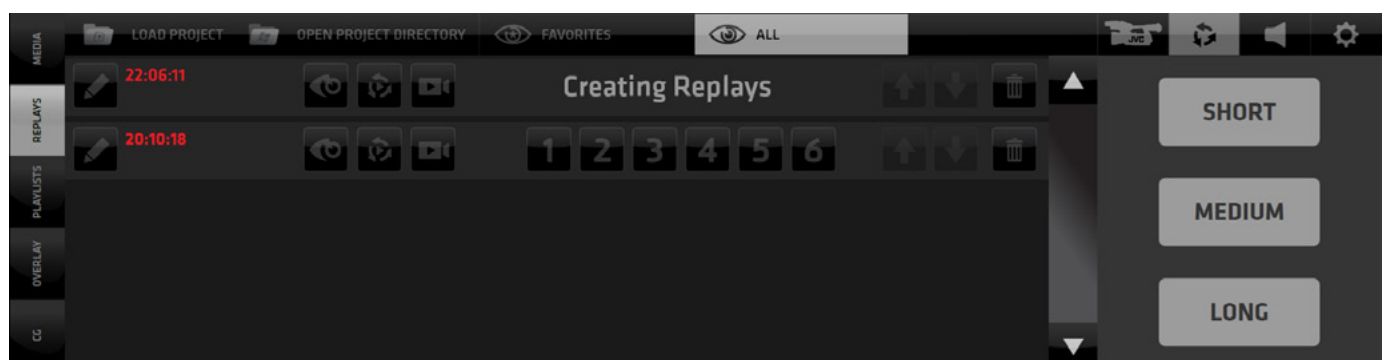
REPLAY MODES

Streamstar designed a very unique and extremely efficient replay system unmatched by any other product (patent pending). It is absolutely easy-to-use and does not require special training or a separate operator.

It offers 3 different MODES to work with replays, that provide many creative possibilities.
1. **NORMAL MODE**
2. **SEQUENTIAL MODE** - (SRP) Sequential Replay Playback
3. **DYNAMIC MODE** - (DRCS) Dynamic Replay Camera Switching

NORMAL MODE - a replay is instantly played/switched to PGM by a tap/click on any of the numbered replay buttons (*indicated with arrows*)

SRP - SEQUENTIAL MODE - allows you to instantly create and play a sequence of replays.
1. Tap/Click the SRP MODE ICON to activate the SRP MODE (outlined in yellow)
The numbered replay camera buttons become outlined to indicate the SRP MODE.
2. Tap the numbered replay camera buttons in the order you wish the replays to play. All selected replays will play in a sequence in the same order as you selected them. The playback progress is indicated by a blue fill inside the numbered replay camera buttons.
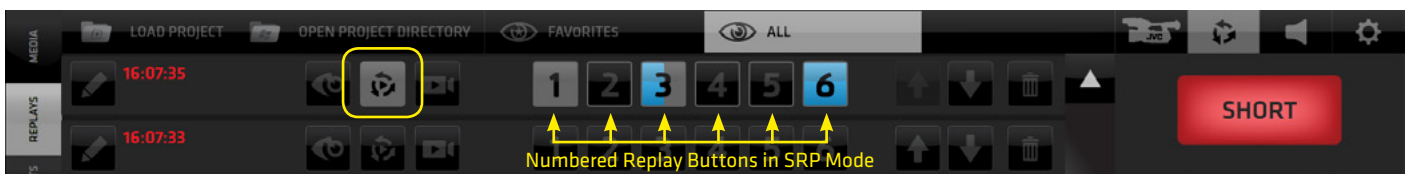
SRP - SEQUENTIAL MODE with PREVIEW
- allows you to create replay sequences while previewing/monitoring their content.
Tap/click the PREVIEW ICON in the Replay Set to open the replay PREVIEWS pane with replay preview monitors. The previews loop indefinitely to give a good overview of their content. Tap the preview monitors to create a replay sequence the same way as before with the numbered buttons. The sequence starts to play in PGM and the individual blue bars above the monitors indicate its progress. While the sequence is in progress continue adding more replays - even those already finished can be added again.
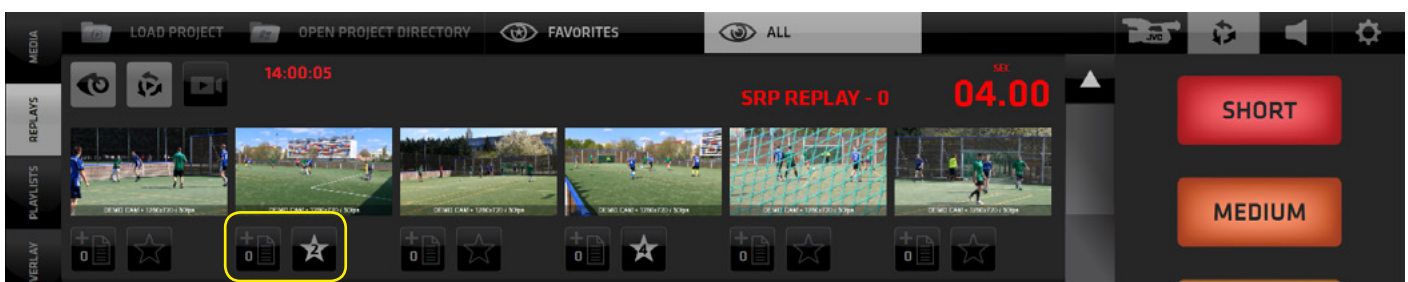
Bellow the replay preview monitors there are 2 more icons: (outlined in yellow)
- **Add replay to Playlist** -adds this replay to a playlist
- **Favorite** - marks this replay as Favorite

DRCS - DYNAMIC MODE

- allows you to switch camera angles during the replay playback.

1. Tap/Click the DRCS MODE ICON to activate the DRCS MODE. (outlined in yellow)
   The numbered replay camera buttons will group in a block to indicate the DRCS MODE.
2. Tap any of the numbered camera buttons to start the DRCS replay playback in PGM.

Numbered Replay Buttons in DRCS Mode
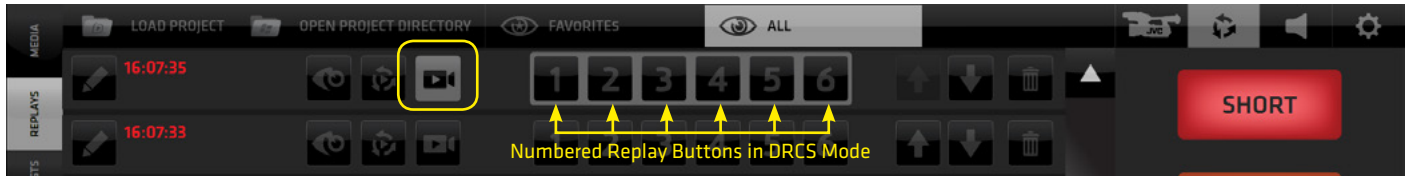
The REPLAY PREVIEW pane opens immediately in the CMA to reveal the Replay Monitors. The DRCS replay playback is indicated by the BLUE PROGRESS BAR and the red text: "DRCS REPLAY" above. The replay set is now playing in sync and you can switch the camera angles in real time just like live cameras.
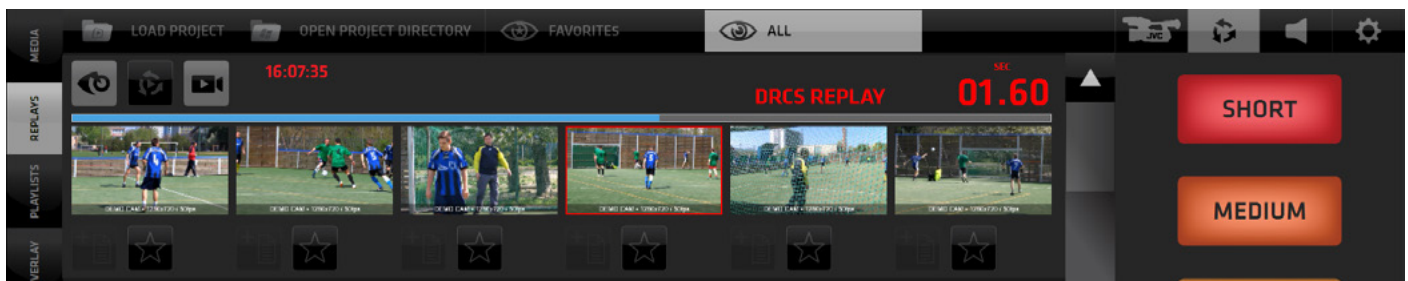
3. Tap the monitors of the replay cam-angles to switch them to Live PGM just like switching cameras. The monitor of a replay cam in Live PGM is outlined RED for visual control.

For greater control also a **COUNTDOWN TIMER** is provided to give info about the remaining time after which the replay will cut to a live camera via **AUTO-CUT** (described on next page).

SLOW MOTION REPLAY PLAYBACK

During the replay playback SLOW MOTION functionality is applied. Default playback motion ratio is 50% of original speed. The playback can be slowed down further to 20%, or sped up to 100% of the original speed by pushing and holding the "S" or "F" keyboard shortcuts respectively. All parameters of replay playback are fully adjustable and accessed via the Replay Settings described on page XX.

REPLAYS RECORDING

The Replays are recorded and stored internally. The recorded replay files are located in the Project Directory as sets of separate files for each camera with a separate the audio file.

NOTE: Deleting a Replay set is a destructive operation which physically erases the files from storage.

AUTOCUT

Another unique feature of the Streamstar production SW that allows you to select a Camera, that will be switched to Live PGM after a Replay, Media File or Playlist (further: "R/M/PL") reached the end.

When a R/M/PL is witched to Live PGM a darkened area = the **AUTOCUT SWITCH** appears on top of the lower portion of all Camera Monitors. Tap/click on it, to activate the AUTOCAUT switch of any camera.

After the R/M/PL reached its end this camera will be automatically switched to Live PGM.

Tapping outside of the AUTOCUT SWITCH but inside the CAMERA MONITOR will switch the camera to Live PGM - it is the normal functionality of the CAMERA MONITOR SWITCHES.

A COUNTDOWN TIMER inside the AUTOCUT button indicates the remaining time of the R/M/PL.

If a M/PL is set to loop, the countdown timer is showing the remaining time of the M/PL currently playing.
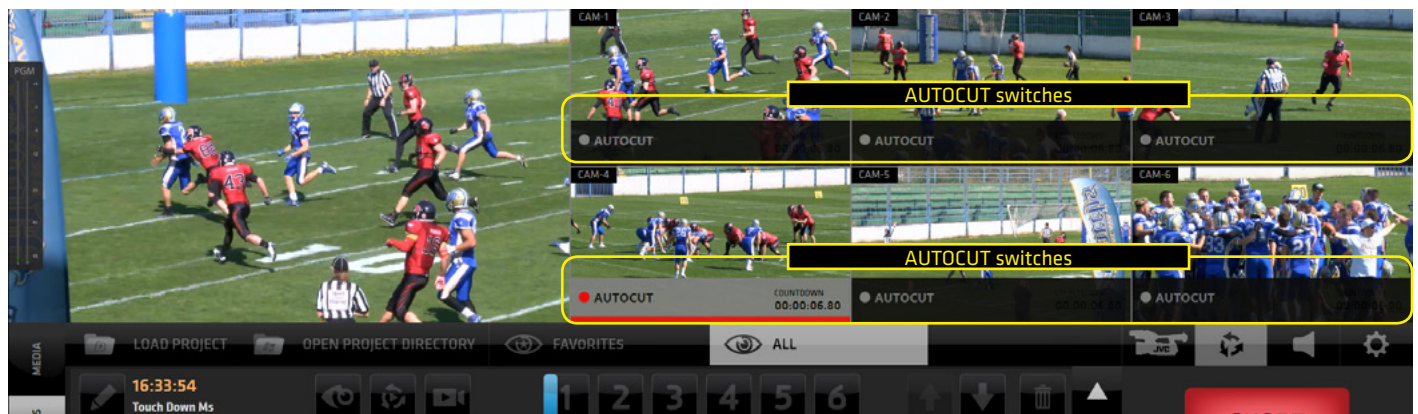
NOTE: By default, when a R, M, PL is switched to Live PGM, the AUTOCUT SWITCH of the camera is activated, which was live in PGM before the R,M,PL was switched.

WIPES

Short Lead-In / Lead Out animations used in the Replay system as transition to enter and exit the Replay. The users can create these animations themselves to enhance the visual appeal of their productions. It is a well accepted, unobtrusive way to introduce commercial content, sponsor logos etc. into the production and can become an extra source of revenue for the production. Exact Wipes usage statistics are provided for monetizing purposes.
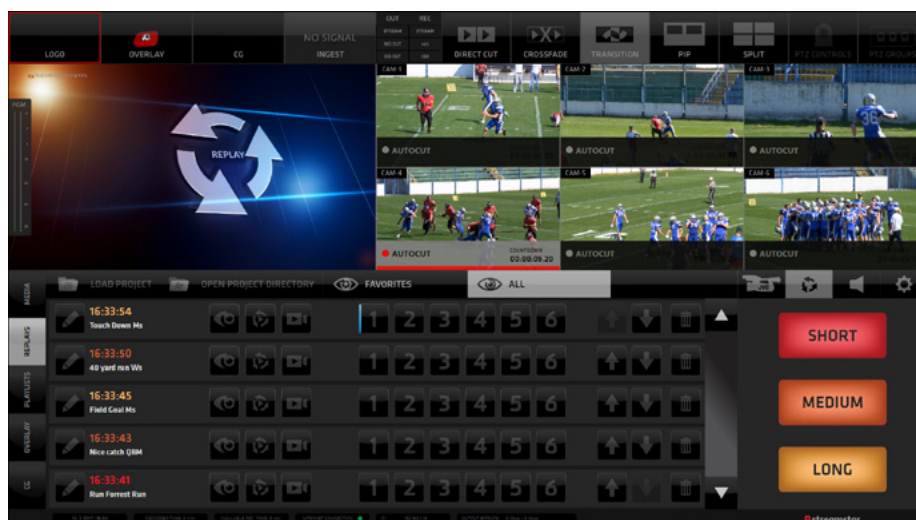
NOTE:

A choice of a single wipe, a sequence or a random shuffle mode can be set for the use of Replay Wipes.
Wipes format: FLV animations with transparency.
The switch to and from a replay is at 1 sec. into the wipe exactly. To cover the switch it is best to create the animation with a full frame graphic at 1 sec.
A tutorial on Wipes construction is available at the Streamstar support site www.streamstar.com/support

NOTE: By default, Wipes are used when entering and exiting the replay system only.
When switching from a replay to another replay no wipe but a 10 frames crossfade is used.
The user can override this setting or turn of the functionality completely.

III./b. SA (settings area) - 2. AUDIO TAB

Activates the AUDIO MIXER in the CMA
and the REPLAY CAPTURE buttons in the SA (REPLAYS access priority).

The AUDIO MIXER board provides all the standard Audio for Video mixer interface elements.
- Cameras SDI embeded audio faders with levels indicators
- Audio Follow Video, Solo and Mute buttons
- MEDIA audio fader
- AUX input fader (external audio signal source)
- Headphones output fader
- PG OUT levels faders with a stereo lock/unlock button
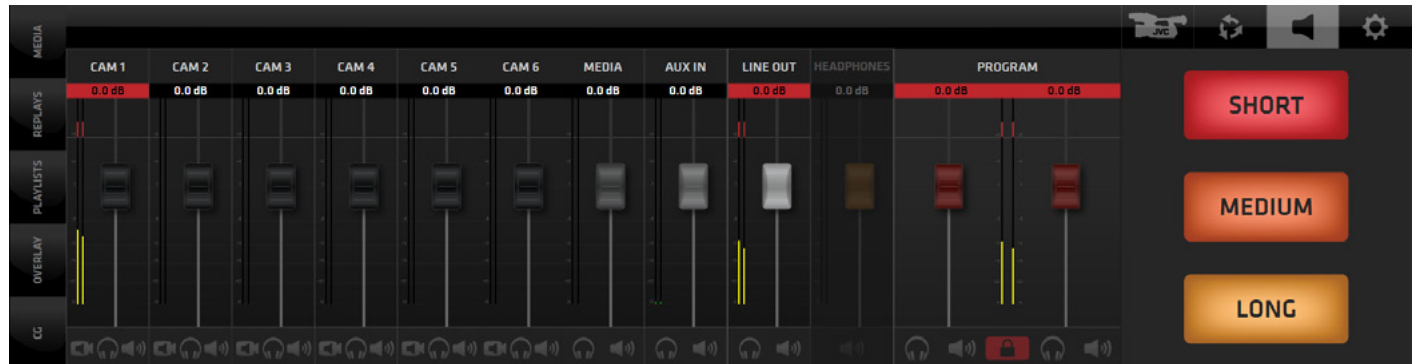
NOTE: 1. All faders have integrated Level and Peaking indicators
2. It is not the purpose of this manual to explain Audio Mixer board operational procedures.
Basic knowledge of audio mixer operation is required.

III./c. SA (settings area) - 3. SETTINGS TAB

Provides 9 buttons to access control panes for all system settings and functions.
Tap/click on each settings button in SA opens a relevant settings pane in CMA.
Some panes have additional PREFERENCES TABS in the top bar of the CMA
allowing access to more settings and adjustable parameters.

The screen shot bellow is an example of a typical UI elements organization in the Settings section.
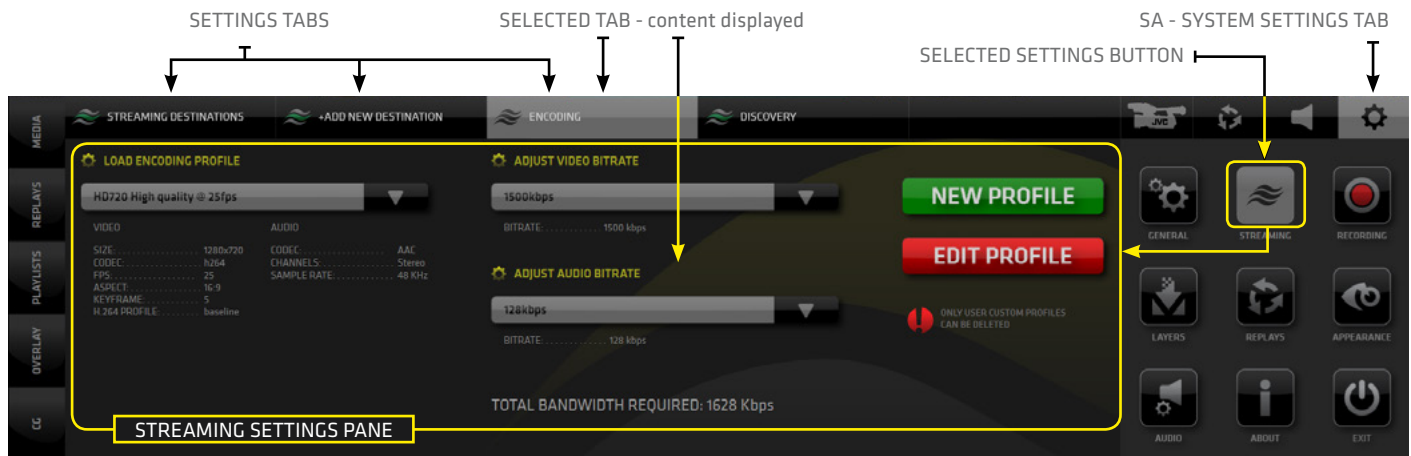
3.1a - GENERAL / General System Setting Tab
setup of directories, languages, layout grid on a
second monitor and the video standard settings

3.1b - GENERAL / Camera Input Settings Tab
use the drop-down selection box in each camera
column to setup all camera inputs

3.1c - GENERAL / Ingest Settings
Ingest Layer Input Setup
a presentation on a notebook, an action camera,
or even a smartphone can be used as sources and
inserted into your live production
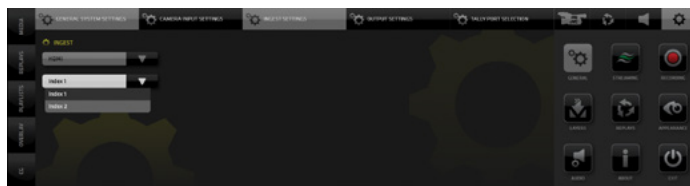
3.1d - GENERAL / Tally Port Selection Tab
setup of the communication port for the optional
Streamstar Tally & Intercom
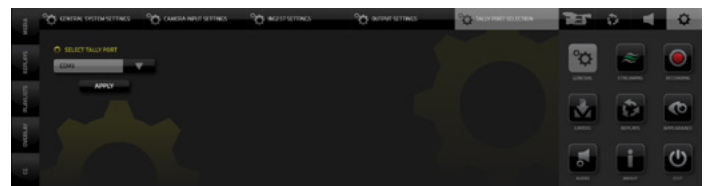
3.2a - STREAMING / Add Streaming Destination
Provides a choice of streaming platforms - tap/click to choose
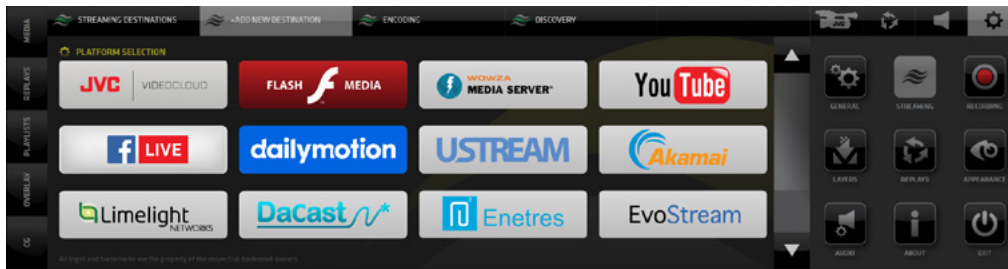
3.2b - STREAMING / Streaming Destination - Login
Login for the selected platform
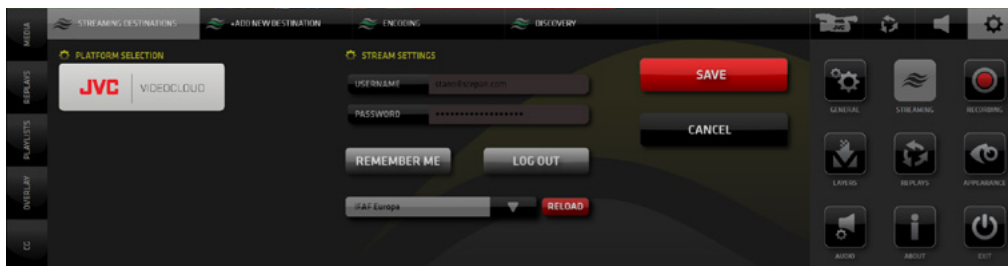
3.2c - STREAMING / Streaming Destinations - Multicasting
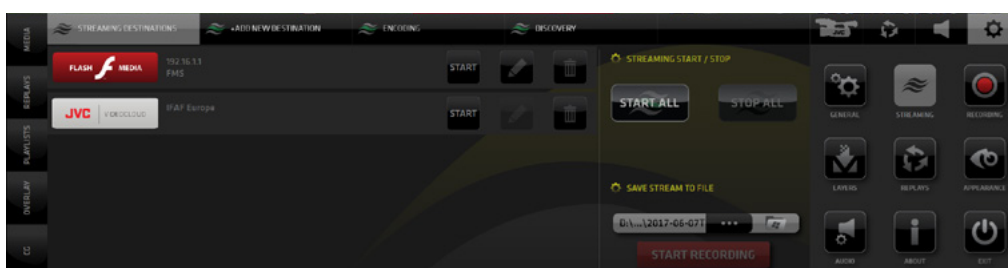Destinations list - streaming controls for START/STOP/EDIT/DELETE/START ALL/STOP ALL
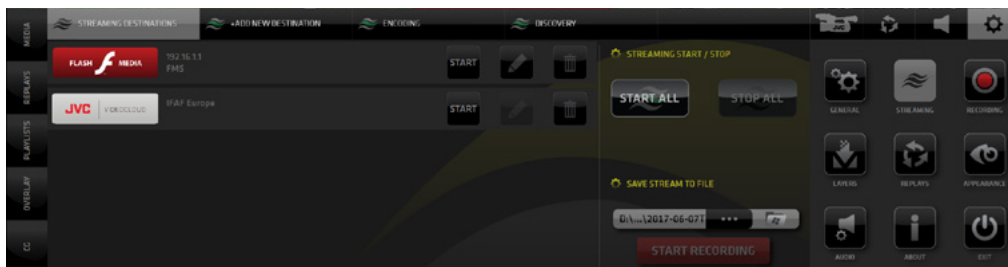
3.2d - STREAMING / Encoding Tab
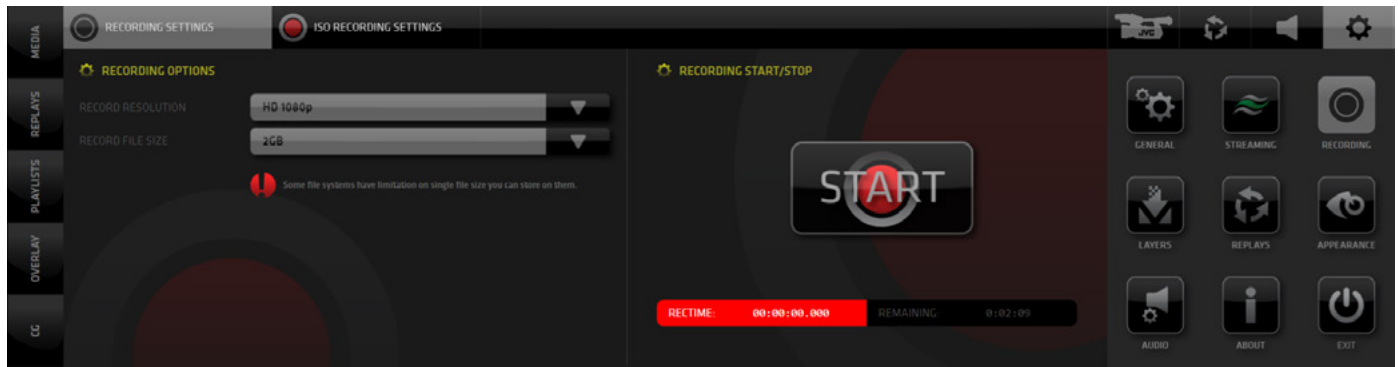setup of the encoder profile - audio/video bitrates
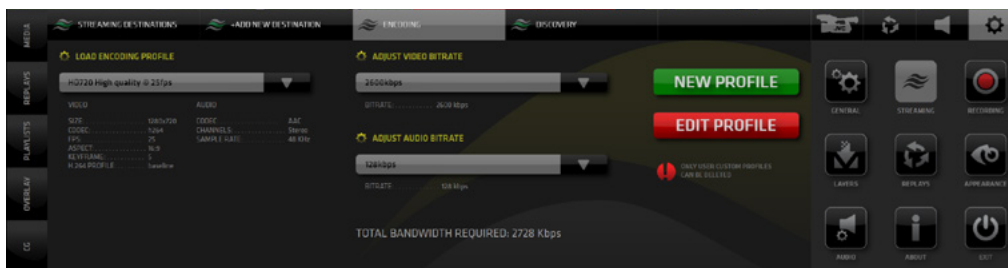
3.2e - STREAMING / Discovery Tab
setup of the API (development purposes)

3.3a RECORDING / Recording Settings Tab
PGM high quality recording setup, start/stop, recording and remaining time info

3.3b RECORDING / ISO Recording Settings Tab
All camera ISO recording setup, define drives, paths, start/stop recording, storage space info
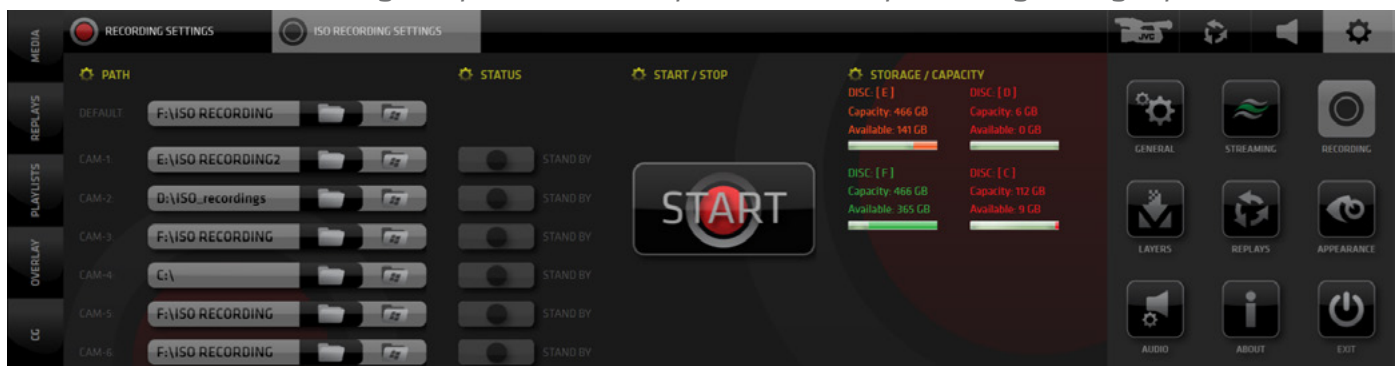
4.1a LAYERS SETTINGS / Ingest Tab
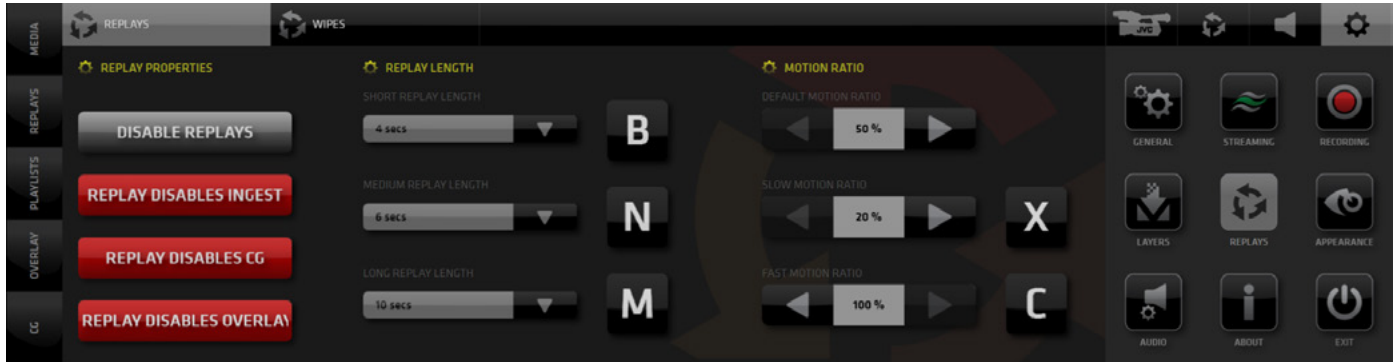setup of the INGEST Layer transparency color key
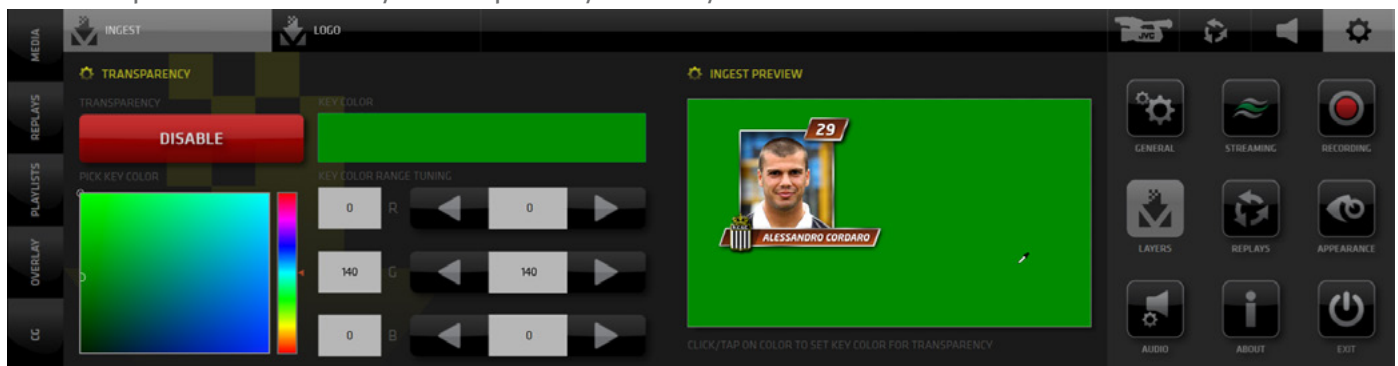
4.1b LAYERS / Logo Tab
setup of the LOGO Layer / select directory & file to use
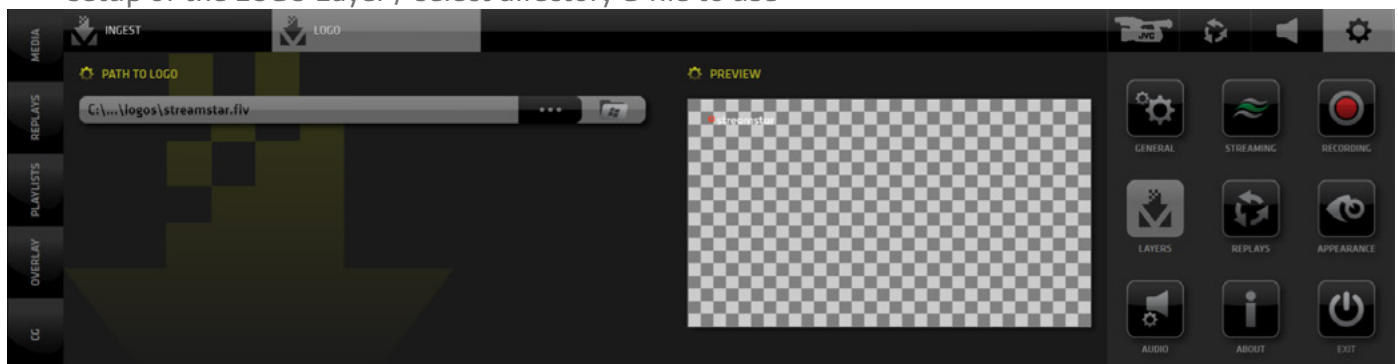
3.5a REPLAYS / Replays Tab
setup replay properties, capture duration, motion ratio, shortcuts

REPLAY PROPERTIES
Enable/Disable buttons for the specified functionality
• DISABLE REPLAYS - turn the replay functionality ON/OFF
• REPLAY DISABLES INGEST - replay activation automatically disables the Ingest layer
• REPLAY DISABLES CG - replay activation automatically disables the CG layer
• REPLAY DISABLES OVERLAY - replay activation automatically disables the Overlay layer

NOTE: Throughout the SW GUI red color indicates the "ON" state of buttons. By default the DISABLE REPLAYS function is turned OFF = meaning the replays are ON. Therefore the grey default color. It seems reversed but it actually is logical. To turn Replays OFF push the button (it turns red). You will be asked to RESTART the system to apply the change

REPLAY LENGTH
Set the replay capture duration for each of the 3 Replay Capture Buttons
- SHORT   - available range: 3 - 5 sec. / default is 3 sec.
- MEDIUM   - available range: 6 - 10 sec. / default is 6 sec.
- LONG   - available range: 10 to 20 sec. / default is 10 sec.

REPLAY CAPTURE SHORTCUT KEYS
- SHORT   "B"
- MEDIUM   "N"
- LONG   "M"

MOTION RATIO
Set the playback speed of Replays
- DEFAULT - replay playback speed = 50% of original speed
- SLOW - replay playback speed when the SLOW KEY is held / default is 20% of original speed
- FAST - replay playback speed when FAST KEY is held / default is 100% of original

## VARIABLE REPLAY PLAYBACK SPEED SHORTCUT KEYS
- SLOW   "X" - press and hold key to apply
- FAST   "C" - press and hold key to apply
- FREEZE   "Z" - press key to freeze frame - press again to continue replay playback

NOTE: To slow down or speed up replay playback **PRESS & HOLD** the "**X**" or "**C**" shortcut key.
To **FREEZE** a frame of a replay playback **PRESS** the "**Z**" keyboard key. Press again to continue.

3.5b REPLAYS preferences / WIPES TAB - Wipe MODE

Wipes are short animations that serve as a transition to Lead In/Out the Replay.
This pane allows you to choose the MODE of operation of Wipes.
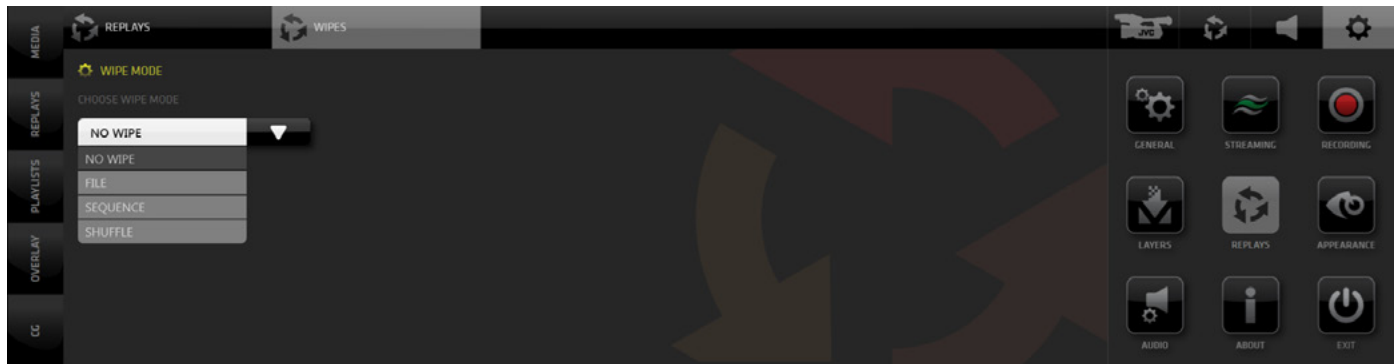
Depending on your choice of a WIPE MODE the following controls will be displayed in the CMA.
Here you can select the WIPES folder and check the WIPES to be used, view WIPE usage statistics
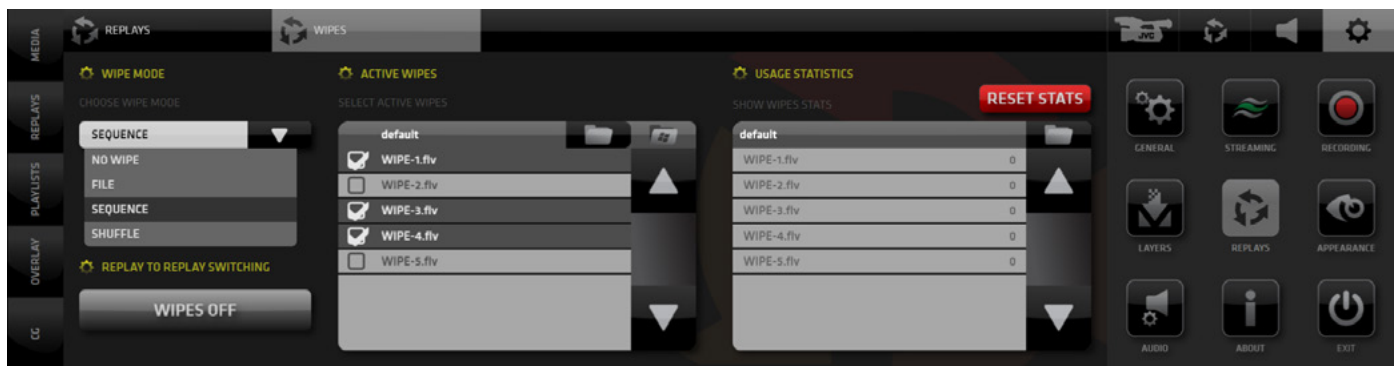
WIPES MODE choices:

NO WIPES - No wipes used to lead in / out the replays
FILE - Select a single file / wipe to be used only for all replays
SEQUENCE - Check the box for files / wipes to be used in sequence
SHUFFLE - Checked files / wipes will be used randomly

USAGE STATISTICS

A listing of wipes usage statistical information. This is a very important monetising tool especially
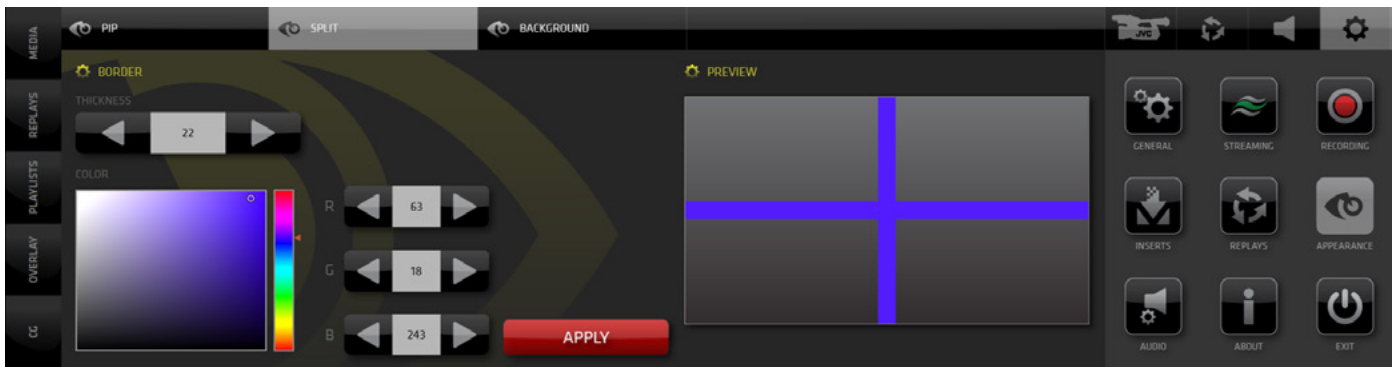in live sports productions where sponsor logos built into replay wipes are the source of extra revenue.

3.6.a APPEARANCE preferences / PIP tab

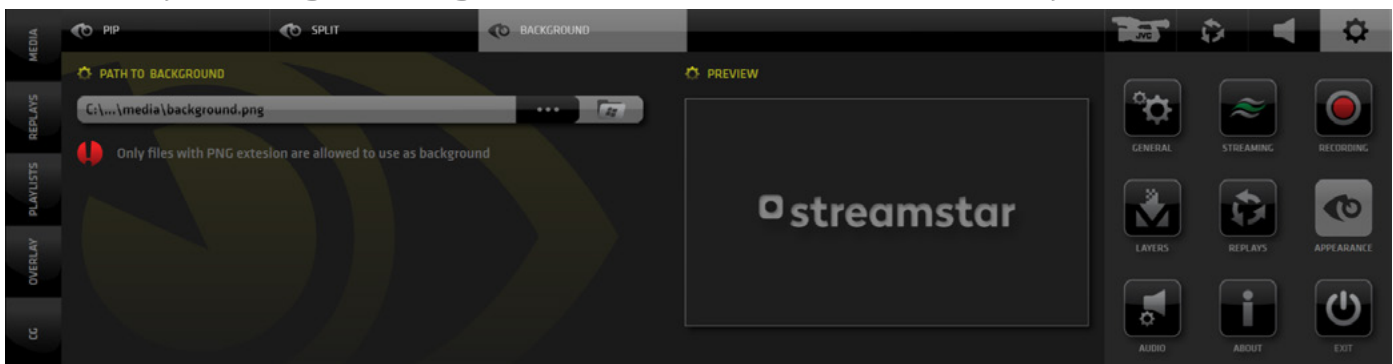setup of PIP border - color, thickness and shadow on/off
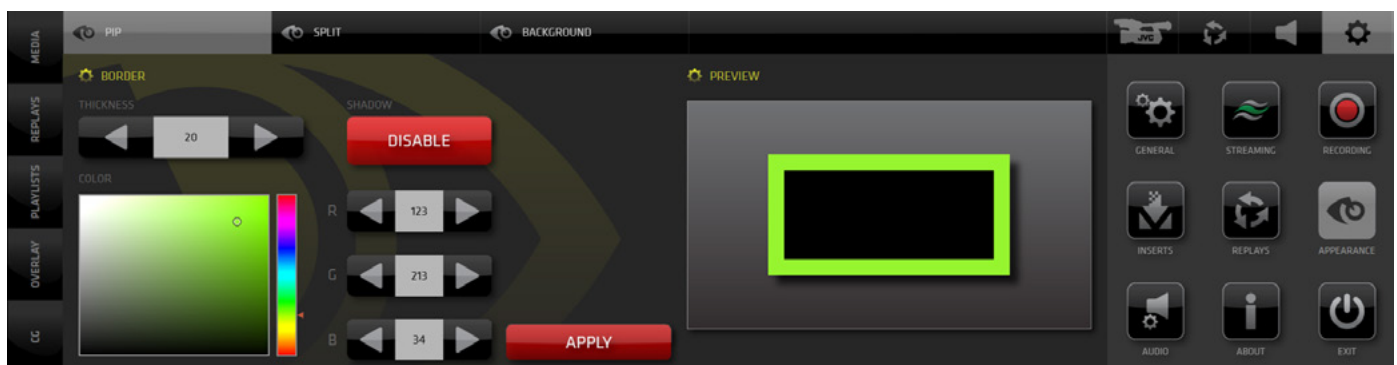
3.6b   APPEARANCE preferences / SPLIT tab
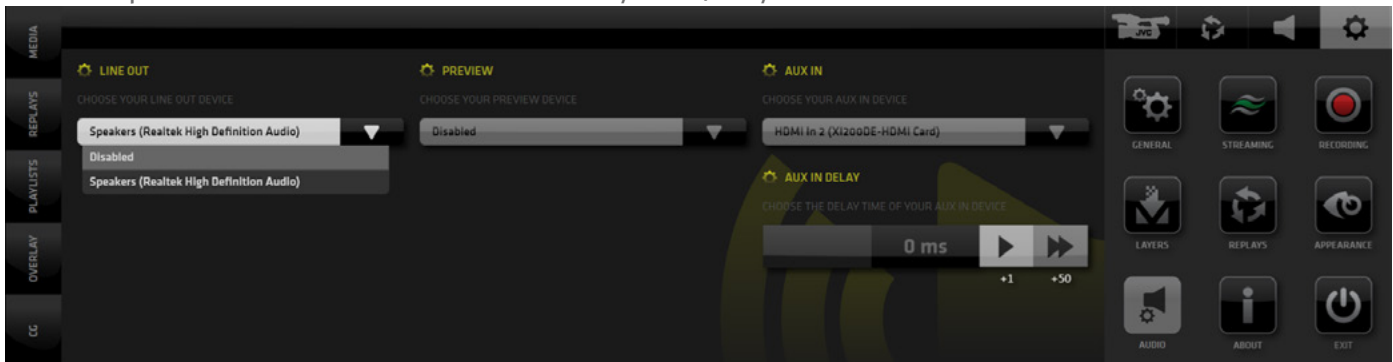setup of SPLIT SCREEN border - color and thickness

3.6c.   APPEARANCE preferences / BACKGROUND tab
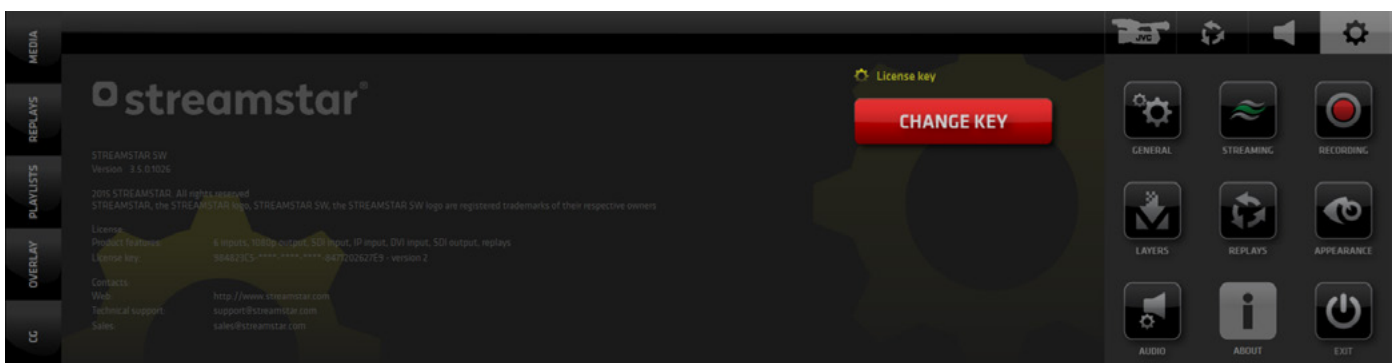setup of a background image to avoid black screen in case of camera dropout

3.7   AUDIO preferences
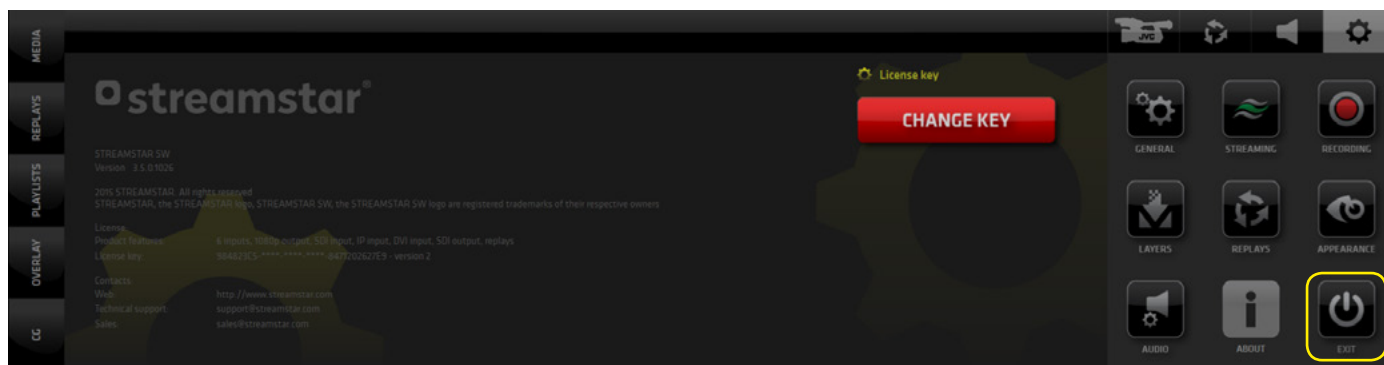setup of audio devices and aux audio delay for A/V synchronization

3.8   ABOUT screen
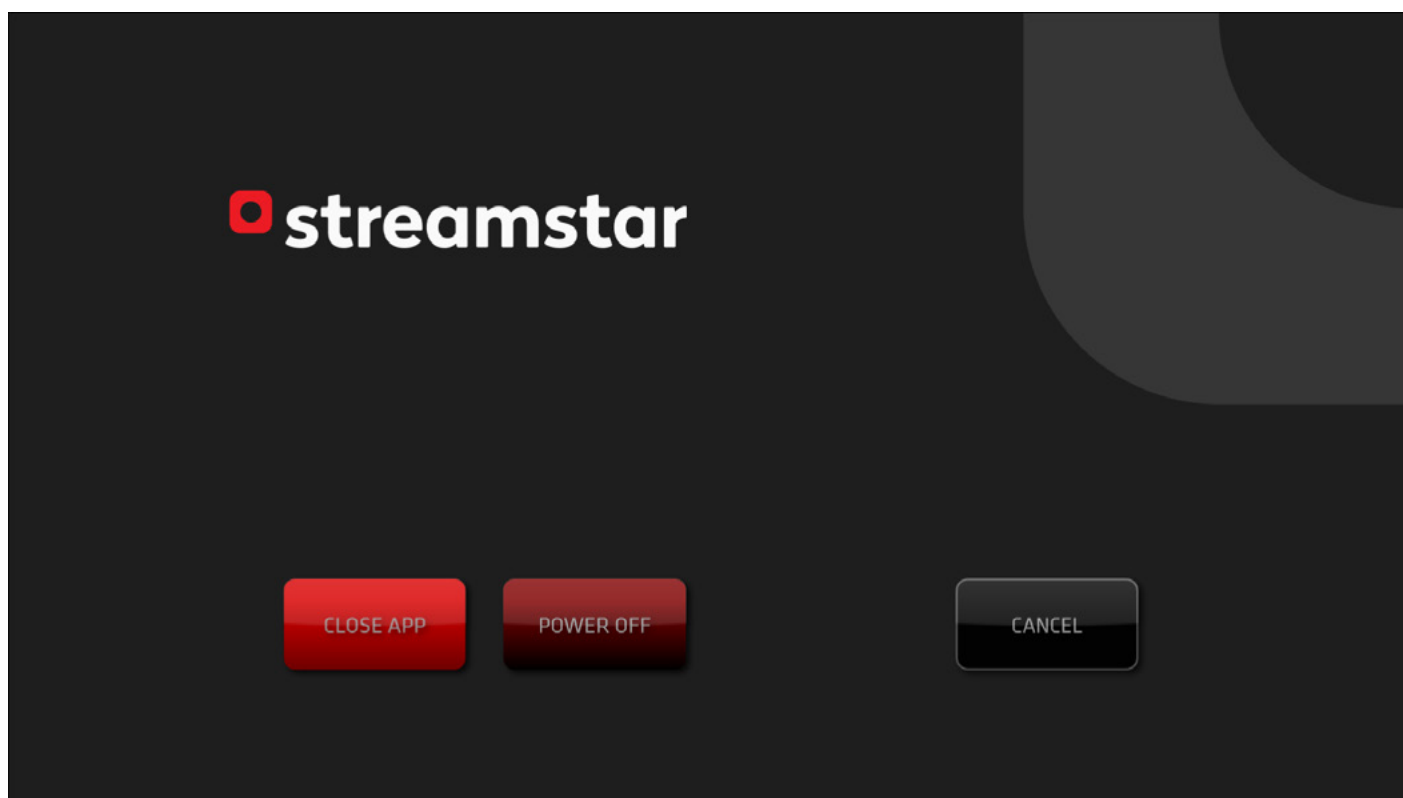system information and license key entry

9. SYSTEM TURN OFF

Tap/click the EXIT button to close the application

Application shut down / system shut down dialog

## IV. SA (settings area) - JVC CAMERA CONTROL TAB

It provides all the interface elements to remotely control JVC camcorders or PTZ cameras - over IP.
It is divided into 4 TABS with various logically related controls.

1. IP CONNECT - contains all parameters to establish a connection to a camera
2. CONTROLS - contains all camera settings available to be controlled over IP
3   ZOOM & FOCUS - contains zoom focus, presets, recording start/stop controls
4. PTZ - contains all controls to operate individual JVC PTZ cameras and to create camera presets
5. PTZ GROUPS - contains tool for creation of PTZ camera groups and group presets

1. IP CONNECT
    - Setup of the camera connection
    - Setup of the camera IP signal
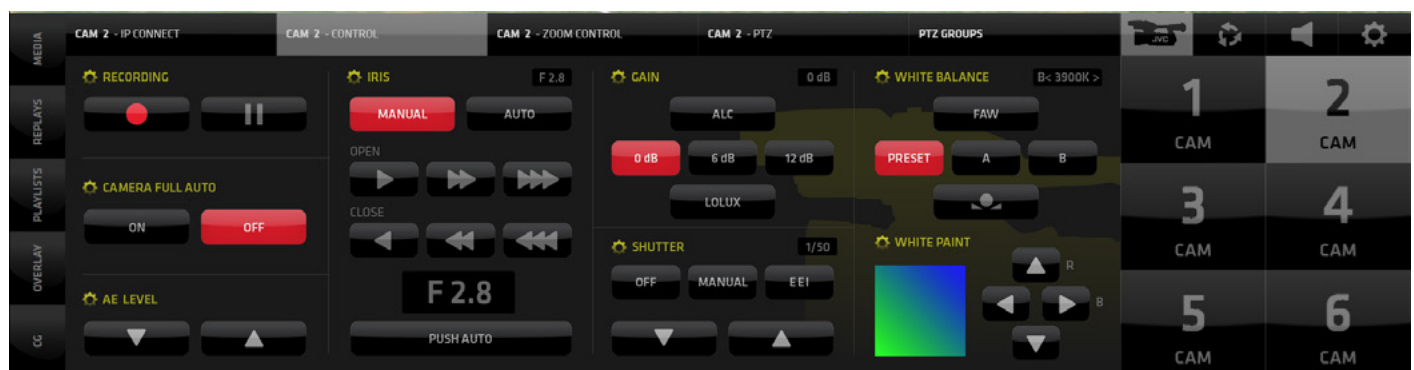   - Tally light control port

NOTE: when a camera is connected, the Streamstar SW takes over the function of the on camera recording light and uses it as TALLY LIGHT
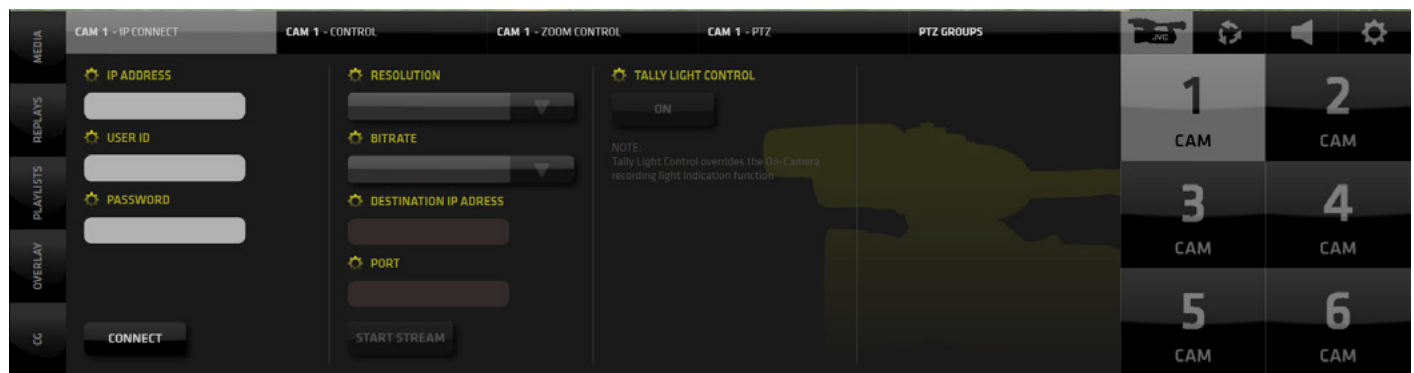
2. CONTROL
    Provides access to all camera settings of the JVC camcorder that can be controlled over IP:

    - Recording
    - Camera Full Auto
    - AE Level
    - Iris

    - Gain
    - Shutter
    - White balance
    - White paint

NOTE: For details on the functionality and settings of JVC cameras please refer to your camera users manual.

3. ZOOM CONTROL

Provides access to the following JVC camera controls:

- Recording
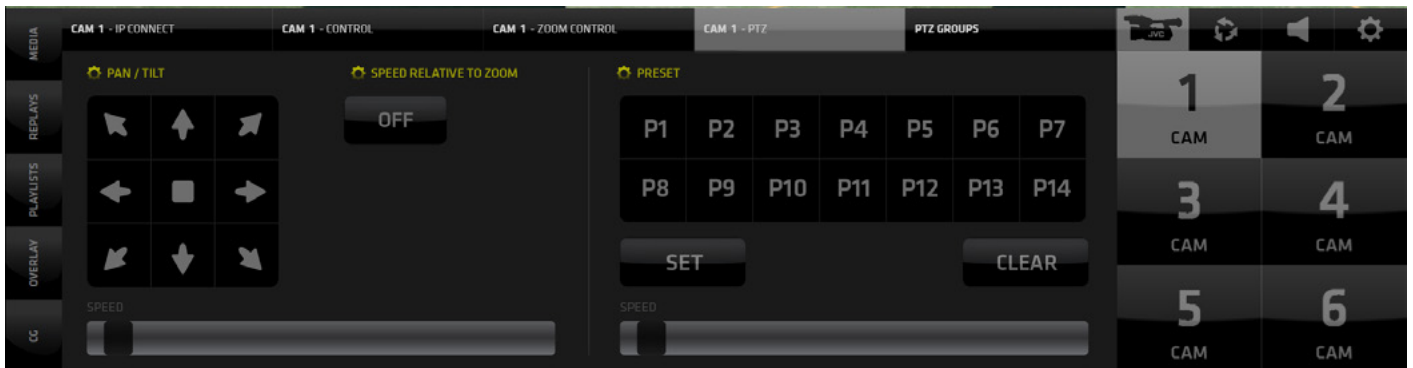- Camera Full Auto
- Zoom
- Zoom presets ABC
- Focus

NOTE: For details on the functionality and settings of JVC cameras please refer to your camera users manual.

4. PTZ PRESETS

Provides access to the following JVC - PTZ camera controls:

- Pan/Tilt with movement speed adjustment slider
- Speed Relative to Zoom On/Off
- Presets - 14 memory slots to store the PTZ camera position

PTZ controls operating procedures:
- Pan/Tilt - press and hold the directional arrow buttons to move the camera to a desired position
- Speed Relative to Zoom - The wider the zoom the faster the speed of movement and vice-versa
- Presets - to create and store a camera preset tap/click the SET button followed by the PRESET (P1 - P14) button - the current settings for this camera is stored as a preset
   - to activate a stored camera preset just push a Preset button (P1 - P14)
   - to clear a preset push CLEAR button followed by the Preset button (P1 - P14)

5. PTZ GROUPS PRESETS

Provide access to the JVC - PTZ camera groups controls:

- Combine individual camera presets into 14 groups of presets
- Execute a group presets - instantly move multiple cameras to positions assigned in the group preset
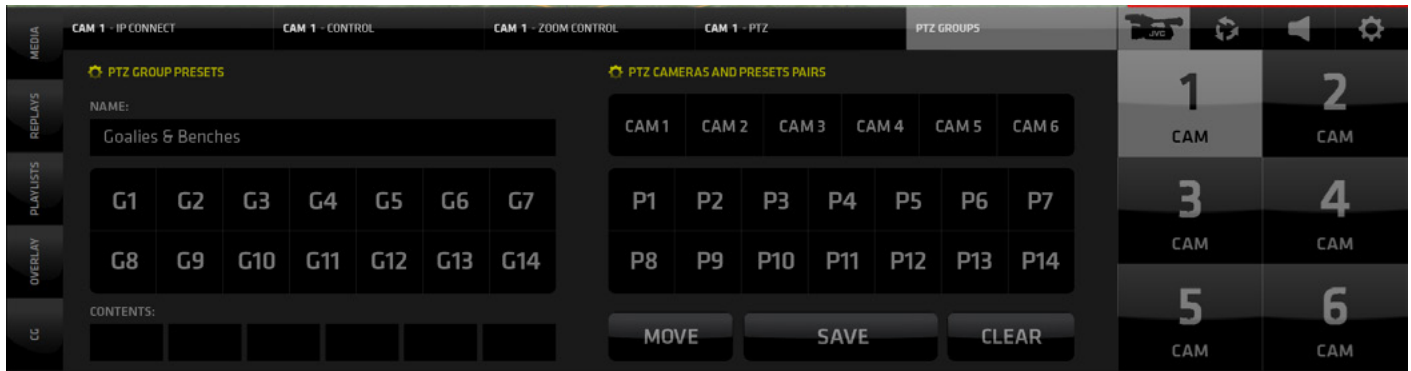
Creating a PTZ Group:

1. Select a slot (button) for a new group preset in the grid of buttons on the left G1 - G14
2. Select a camera in the upper row of buttons of the PTZ CAMERAS AND PRESTS on the right
3. Choose a preset for the selected camera 1-14 that will be used when the Group preset is activated
   Note: Steps 2 & 3 created a so called "Camera+Preset" pair
4. Repeat steps 2 & 3 and create more Camera+Preset pairs
   - add as many as you wish up to 6 pairs are possible
5. Name the preset - type a name in the field above the G1-G14 buttons
6. Tap/click SAVE to save the group preset
7. To CLEAR the contents of a Group Preset tap/click CLEAR and tap whatever you wish to clear
   it can be a Camera+Preset pair in the group or the entire group.
   When done deactivate the clear function by tap/click on the CLEAR button so it is turned off
8. Tap/click MOVE to execute the Group Preset.
   Executing a Group Preset will move all cameras in the group to their chosen presets at once.

In the example bellow a GROUPS PRESET - G7 was created.
It contains 3 Camera+Preset pairs: CAM1-P3, CAM2-P1 and CAM3-P3
The content of the selected group preset is indicated in the the CONTENT fields bellow the Group Preset buttons. The Camera+Preset pairs are clearly listed.
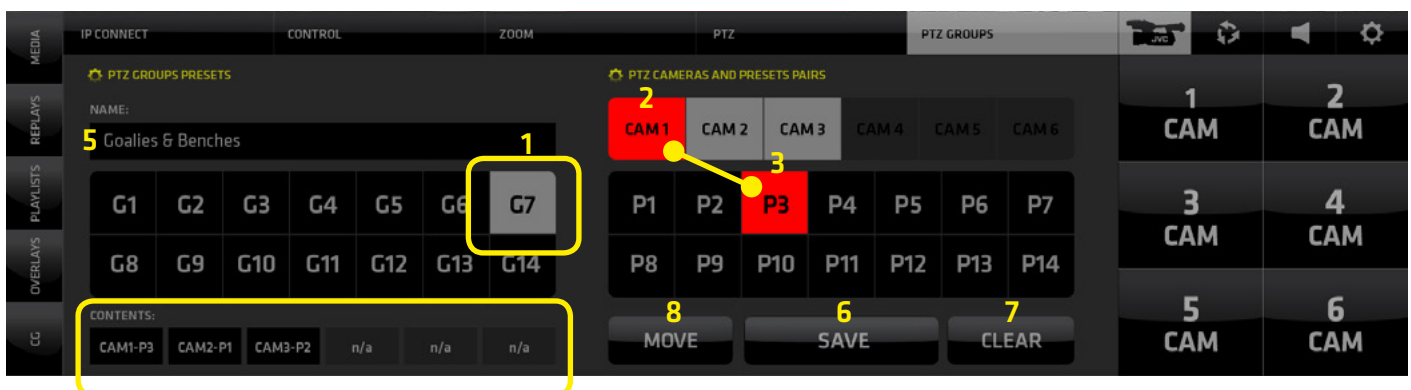
## Camera Presets and Group Presets - GUI explained

Now that we understand how the Camera presets and Camera groups work we can return to the two PTZ functionality buttons in the TOP MENU.

As mentioned earlier these 2 buttons will become active automatically if PTZ CAMERAS are connected to the system.
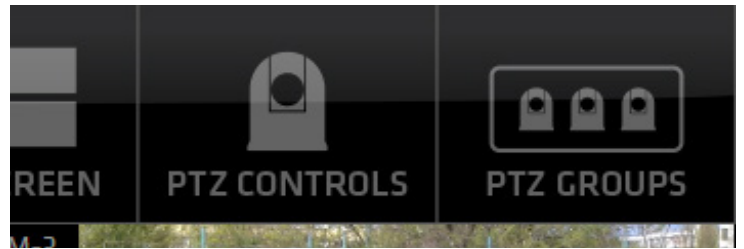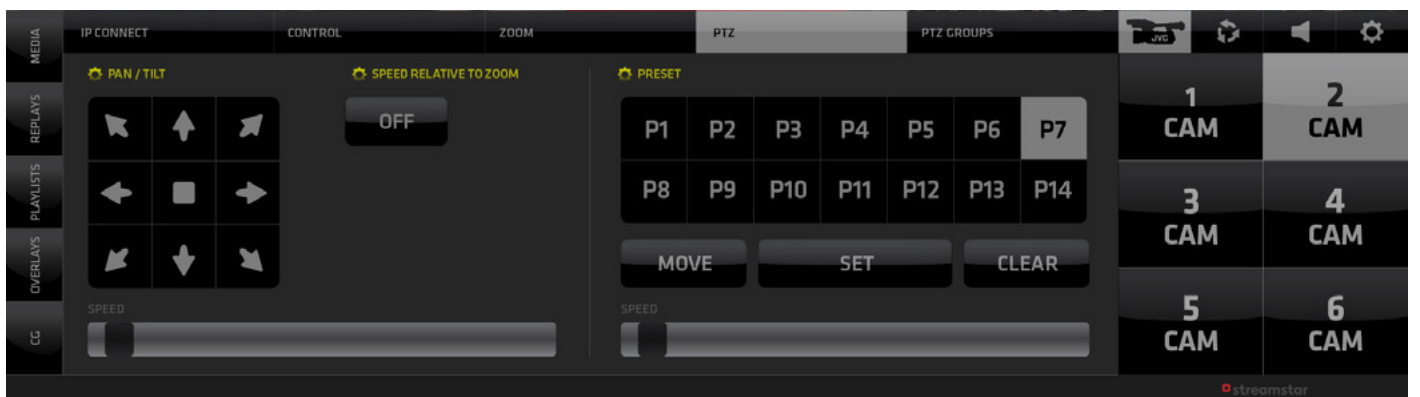

PTZ CONTROLS
1. Tap/click on the PTZ CONTROLS button reveals the PTZ CAMERA CONTROLS for individual PTZ cameras
2. 2 buttons become visible in the live monitors of the PTZ cameras,
    2A - Camera PRESETS
    2B - Camera settings HOT KEY
3. Tap/click on the Preset button (2A) reveals a PRESTS GRID of all available presets for this PTZ camera
    a - These are the presets we created in the PTZ CAMERA PRESETS pane in the JVC PTZ Tab on pg. 36.
    b - tap/click any of the PRESET (P1-P14) buttons and the camera moves to that position immediately
    c - tap/click the [X] button in lower right to close/hide the PRESETS GRID.
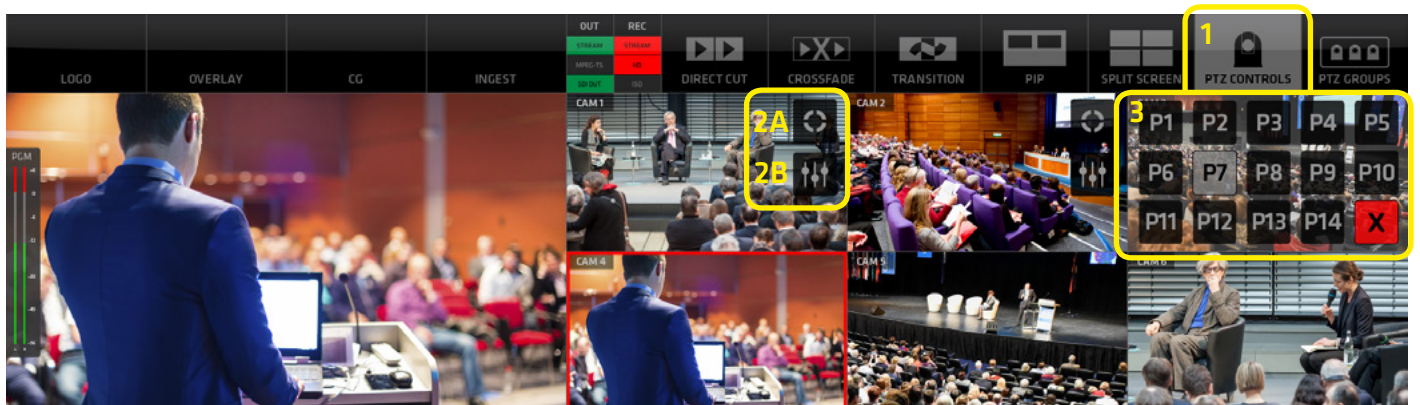
3. Tap/click on the CAMERA SETTINGS HOT KEY button opens the PTZ camera settings in the CMA
   so quick changes to PTZ Camera presets can be made when needed.

PTZ GROUPS

This button reveals PTZ GROUP controls for all available PTZ cameras

1. Tap/click on the PTZ GROUP button reveals the PTZ GROUP CONTROLS
2. In the PGM monitor area, 2 buttons become visible

C - PTZ Camera GROUP PRESETS

D - PTZ Camera GROUP PRESETS HOT KEY

3. Tap/click on the Preset button (2C) reveals a GROUP PRESTS GRID of all available presets

    a - These are the presets we created in the PTZ CAMERA GROUP PRESETS pane
           on the JVC PTZ CAMERA GROUPS PRESETS Tab on page 37.

    b - tap/click any of the PRESET (G1 - G14) buttons and all cameras within that group move to their
           preset positions immediately

    c - tap/click the [X] button in lower right to close/hide the PTZ GROUP PRESETS GRID

3. Tap/click on the CAMERA SETTINGS HOT KEY button (2D) opens the PTZ CAMERA GROUPS settings in the CMA so quick changes to PTZ Camera Group Presets can be made when needed.
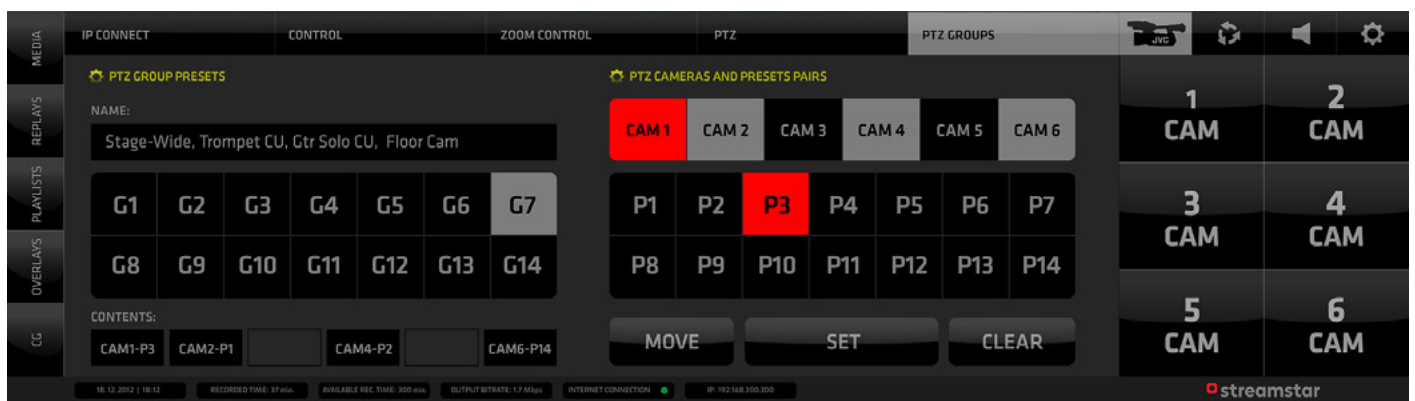
For information on upgrading from version 3.5 please visit:
https://www.streamstar.com/sw-40-upgrade/

For tutorials and instructions videos visit our videoblog at:
https://streamstar.videogate.net

For support visit:
http://support.streamstar.com

Thank You using Streamstar.
Enjoy!