

Ultra 7.0.0

- Release Date: July, 2022.



Important: You **MUST** review all your custom controls! Custom control pause events in version 3.0 or earlier with the switcher operating in an interlaced video format (480i, 576i, 1080i) have changed in length. The pause duration was shown in fields but calculated in frames. This led to durations being half as long as expected. This has been corrected, but any existing CC pause events, in interlaced, will now be twice as long as previously calculated. You must edit the event to reduce the duration by half to get the same result.



Important: Please review the **End User Software License Agreement** before installing or using this software.



Important: You must power cycle the switcher after performing an upgrade, changing the **Switcher Mode** between SD, HD, and UHDTV1, or installing a software option. Refer to the relevant sections in your Manual for more information on performing the power cycle.

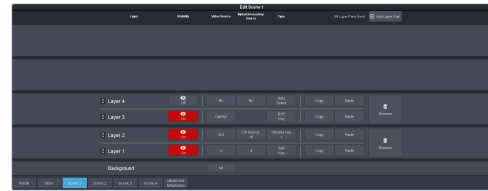
Feature Enhancements

A number of features have been added, or updated, to this version of software. This section provides a brief introduction to these features, and how to use them.

v7.0.0 Features

UltraScene

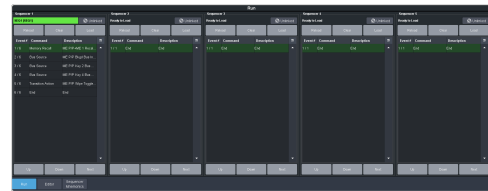
UltraScene provides a simplified interface for creating a show with multiple key layers and basic transitions. UltraScene consists of 4 scenes that share 8 layers in 4 layer pairs. Layers can only be added in pairs, so a scene can have 2, 4, 6, or 8 layers. Each layer is set up like a keyer with a video source, alpha, and key type. Each layer can also be turned on or off to cut the video source on or off-air. A background source is also available over which the layers are keyed, or the scene can be taken as a source on bus.



Sequencer

The switcher has 5 Sequencers that allow you to create a playlist or rundown of custom events, much like custom controls. Each Sequencer can be run independently or linked to other Sequencers so that they all advance together. The Sequencer uses sequences to store the rundown of events. These sequence files can be loaded into one or multiple Sequencers.

Tip: You can link multiple Sequencers together so that as you advance through one, the other Sequencers will advance.



Output Rotation

The output rotation allows you to rotate the video on outputs 12-14 in 90° increments clockwise. The video can then be zoomed and shifted in the X and Y axis.

Tip: The rotated output can be assigned to a box on the I/O MultiViewer.

Note: Output Rotation is only supported in the **ROT** switcher modes.

Audio Ducking and Talkback

The audio ducking and talkback use the noise gate to attenuate the background audio of a mix when a selected channel is active. This can be done automatically when a selected channel comes up above a threshold (Ducking), or manually (Talkback).



Ducking

Ducking is applied to the mix when audio channel that ducking is set on rises above a threshold. Ducking is often used for voice-overs or announcement, the background mix is ducked when the announcer starts talking and returns to the previous level when the ducking channel passes the threshold. The setting for ducking are the same as for noise gate except that when the ducking channel passes the threshold, the mix is ducked down by the reduction amount and the ducking channel is untouched.

When ducking is active for a channel the **Mute** button is replaced with **Ducking**. When the **Ducking** button is off, the channel is muted and ducking is not applied. When the **Ducking** button is on, the channel is unmuted and the mix will be ducked when the ducking channel passes the threshold.

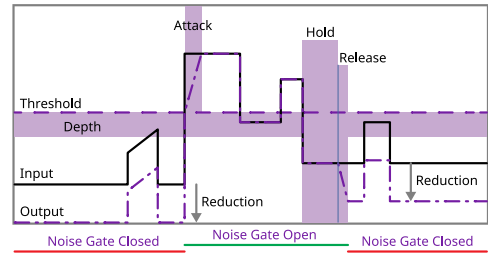
Talkback

Talkback is applied to the mix when an audio channel that is set to talkback is manually triggered. Talkback is often used in a studio for internal communications, the background mix is ducked when the talkback button is pressed so that talent can hear the director over the background. Setting for talkback are similar to ducking except there is no threshold or depth.

When talkback is active for a channel the **Mute** button is replaced with **Talkback**. When the **Talkback** button is off, the channel is muted and talkback is not applied. When the **Talkback** button is held, the channel is unmuted and the mix will be attenuated for as long as the button is held.

Noise Gate Updates

The audio noise gate feature has been expanded to include Depth and Hold values as well as re-ordering the sliders.

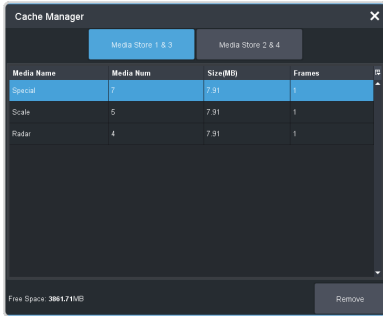


Parameter	Description
Threshold	Select the level (-dB) at which the noise gate opens.
Depth	Select the level that the audio signal must go below the threshold before the noise gate is triggered to close.
Reduction	Select the amount of attenuation/gain (dB) that you want to reduce the audio signal by when the noise gate is closed (below the threshold).
Attack	Select the amount of time (ms) you want to pass between the noise gate is triggered to open (pass the threshold) and the attenuation being fully released.
Hold	Select the amount of time (s) between when the noise gate is triggered to close (level is below the Depth) and the Release is applied.
Release	Select the amount of time (ms) you want to pass after the Hold is applied and the gate is fully closed (full Reduction is applied).

Media-Store Cache Manager

A cache manager has been added to the Media-Store page. This allows you to view what media items are loaded into each cache, how large they are, and now much free space you have remaining. Unused media items can be removed from cache to free up space.

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Bus Substitution

The substitution tables have been expanded to include ME and MiniME™ as well as specific buses on the ME and MiniME™, and Aux buses.

Additional Features and Updates

- The **Navigation Menu** bar has been re-ordered to make accessing different function more intuitive.
- A **Live Assist** button has been added next to the **Menu Navigation** button to allow you to quickly jump to Live Assist.
- The buttons on the DashBoard Custom Control Shot Box now use the custom control mnemonic colors.
- An **Apply to all** button has been added to the MultiViewer box setup dialog to allow you to apply changes to all boxes on the MultiViewer.
- The legacy web version of MediaManager can still be accessed by using a Google Chrome™ web browser to navigate to the IP address of the frame. This feature can be disabled by setting **Web Media Manager** (Click **Navigation Menu > Configuration > System > Global**) to **Disable**. The switcher must be re-started for the change to be applied.
- The 3 user select buttons from the Transition area on the TouchDrive panel have been added to the SoftPanel.
- You can now select multiple AFV Triggers for an audio source on the Audio Mixer Configuration.

- From the **Devices** Menu you can now Disable a device. This can be used to prevent the switcher from trying to connect to a device that might be down for maintenance or not used as part of the current show.
- On the **ProcAmp** and **Color Correction** menus, the source that the corrector is applied to is now selected on the bottom left corner, instead of at the top.
- Media-Store Capture naming can now be done using exactly the name and number as entered (**Capture**) or using the number incremented to the next available number (**Capture+**). Capture will overwrite an existing entry with the same name and number and Capture+ will not.
- The FTP connection to the frame can be disabled by setting **FTP** (Click **Navigation Menu > Configuration > System > Global**) to **Disable**. The switcher must be re-started for the change to be applied.
- A **Transition Action** custom control has been added that allows you to configure the entire next transition with a single event. This can set the ME, transition type, and next trans inclusions. The CC can also be set to either perform the transition, or only configure the Transition area.

New Devices Supported

No new device support or commands were added to this version of software.

Bugs Addressed

The following bugs were addressed in this version of software:

- CR-1873 — We can no longer send empty choice constraints to DashBoard.
- CR-1853 — Improvements to USB access to reduce message latency.
- CR-1822 — Sorted the Navigation Menu into logical groups.
- CR-1793, CR-1203, CR-1202, CR-125 — Improved DashBoard connectivity and performance issues.

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- CR-1762 — Crash logs are now included when downloading system logs.
- CR-1549 — Added the ability to turn off FTP on the frame (you need TD software version 1.5 or your panel will not connect).
- CR-1944 — A fader can now control the media transition from the DashBoard UI.
- CR-1808 — GPO Tallies are properly updating DashBoard after loading a set.
- CR-1805 — The Clip Player correctly updates its state across all DashBoard menus.
- CR-1804 — On TouchDrive the large mnemonic text size is now properly recalled after a reboot.
- CR 1791 — On TouchDrive TouchMap now correctly uses the TSL UMD Names.
- CR-1537 — Delete captured thumbnails when capture is deleted.
- CR-1519 — The switcher sends a NOOP command to all RossTalk devices that have ping on to keep the network connection alive.
- CR-447 — Panel response issues fixed in ½ rates.
- CR-504 — Fixed a memory leak in receiving RossTalk commands.
- CR-182 — Animations will not autoplay if they are already on air.
- CR-1462 — Capturing in E/E mode will no longer crash the switcher if there is a re-entry loop.
- CR-1941 — Input Configuration menu in DashBoard now always updates after a set load.
- CR-1861 — DVE X and Y Positions are now consistent across TouchDrive panels and CC Editor in DashBoard.
- CR-1340 — Added the ability to disable the web based DashBoard.

Known Issues and Limitations

Keep these notes in mind when upgrading your switcher to this version of software. Contact Ross Video Technical Support if you have any questions about performing a software upgrade.

External Devices

The following issues have been identified when working with external devices:

- **Sony EVI-HD1** — If you are switching between a Vision and Carbonite switcher, you must reconfigure your camera to communicate with the other switcher. The Vision switcher communicates with the camera at 38400 baud, and the Carbonite switcher communicates with the camera at 9600 baud.
- **Switcher Fails to Boot** — If you have a cable connected to the serial port of the switcher with only an RS-422/232 converter connected to it, the switcher may not boot up properly. Disconnect the cable and power-cycle to switcher to have it boot properly. You can re-connect the cable after the switcher has booted up.
- **Disable Device** — The device disable feature in DashBoard is not available for audio mixer and some robotic cameras at this time.

Operational Notes

The following issues have been identified when working with the switcher:

- **Reboot After Diagnostics** — The switcher must be rebooted after performing any diagnostic test.
- **Corrupt USB** — If you remove the USB drive while the switcher is writing to it, the USB could become corrupted and will need to be re-formatted.
- **External Re-Entry Video Errors** — A video timing error can occur when a video output of the switcher is routed back into the switcher using an input BNC. If video timing errors do occur, assigning a frame synchronizer to the input BNC will remove the timing errors.
- **GPI and Tally Diagnostics** — If you run the GPI or Tally diagnostic tests, you may have to reboot the switcher to end the test.
- **Stills with same Name** — You cannot have two or more Media-Store files with the same

name but different file extensions in the same folder. The switcher treats capital and lowercase letters as the same.

- **Transitions with Show Alpha** — If the show alpha feature is on, only cut transition are possible on the ME. The switcher will perform a cut at the end of the transition duration instead of the selected transition type.
- **Reboot after Upgrade, Switcher Mode Change, or Option Installation** — You must power cycle the switcher after performing an upgrade, changing the **Switcher Mode** between SD, HD, and UHDTV1, or installing a software option. Refer to the relevant sections in your Manual for more information on performing the power cycle.
- **Long CC Pause Delays** — If you created a Pause for a custom control in version 3.0 or earlier and the switcher is operating in an interlaced video format, the pause duration was shown in fields but calculated in frames. This lead to durations being half as long as expected. This has been corrected, but any existing CC pause events, in interlaced, will now be twice as long as previously calculated. You must edit the event to reduce the duration by half to get the same result.
- **720p in BT.2020 SDR** — The combination of 720p and the BT.2020 color gamut in SDR is not documented in the applicable standards and may not be supported by other downstream devices.
- **Sets Not Backwards Compatible** — If you save a set in one version, you may not be able to load the set in an older version of switcher software.
- **Incorrect Dynamic Range and Color Gamut PID in UHDTV1** — In UHDTV1, only the first link in the output carries the correct Dynamic Range and Color Gamut information. The other three links will continue to carry the SDR BT.709 PID.

Software Upgrade

Software upgrades are performed through DashBoard.

Depending on the version of software you are upgrading from, your menus may be arranged or appear differently.

Software Compatibility

Before installing any software, review the following version compatibility information.

Note: *Compatibility, unless otherwise indicated, shows the combination of software versions that were tested together. Other combinations may not have all the features introduced with the most recent version of software.*

Table 1: Version Compatibility

Software	Version	To Verify
Ultra	7.0.0	The current version is shown on the Status page in DashBoard for the Ultra node.
1RU Audio Breakout Module	4.5.1.326	The current version of the 1RU Audio Breakout Module is shown on the menu display of the unit.
DashBoard	9.4.1	Refer to the documentation what came with DashBoard for information on getting the current version number.
Carbonite Black Panel	1.4.512	A software mismatch message is shown on the control panel if you need to upgrade the software on the control panel.
TouchDrive Panel	1.5.251	The current version is shown on the Status page in DashBoard for the TouchDrive node.



Important: *Depending on the components that need to be upgraded, not all of the upgrade procedures need to be completed.*

To Upgrade the Switcher Software

Use DashBoard to upload the upgrade file to the switcher.

Note: *Save your switcher setup information to a set on a separate USB drive before upgrading. This switcher set can be*

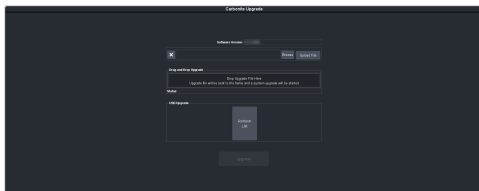
used as a backup in case there is a critical error during the upgrade.

Tip: Switcher sets are not backwards compatible. Keep an archive copy of your sets in case you want to downgrade to the previous software version.



Important: Do NOT turn the switcher power off during the upgrade. Doing so may corrupt the switcher software or damage the switcher components.

1. Click **Navigation Menu > Configuration > System > Upgrade.**



2. Locate the upgrade file for the switcher and drag and drop it into the **Drag and Drop Upgrade** area on Dashboard.

Tip: You can also upgrade from the USB. All upgrade files located on the USB are shown in the **USB Upgrade** area. Click the file you want to use and click **Upgrade**.

Tip: You can also upgrade by clicking **Browse**, locating the upgrade file, and then clicking **Upload File**.

The file is uploaded to the switcher.

3. Click **OK** to confirm the upgrade.
4. Wait for the Dashboard pages to come back up. This may take a few minutes.
5. Power cycle the frame by switching the power button **Off** and then **On** again.

The switcher will come up with the new software version.

Upgrade Issues

If there is a problem during the upgrade procedure, an error message is shown on the display of the control panel.

Table 2: Upgrade Error Messages

Error Message	Description
USB not inserted	The USB drive was removed or unmounted during the upgrade. Re-insert the same USB drive back into the frame.
USB < 1G free	The USB drive requires at least 1GB of free space for temporary files during the upgrade. Copy the upgrade file to a larger USB drive and start the upgrade again.
USB failure	There has been a critical failure with the USB drive. A forced upgrade must be performed and switcher setting will have to be restored from the saved setup. Contact Ross Technical Support for support with this error.
USB file failure	There has been a critical failure with the files on the USB drive. A forced upgrade must be performed and switcher setting will have to be restored from the saved setup. Contact Ross Technical Support for support with this error.

To Upgrade the Carbonite Black Panel

After the frame has been upgraded and reconnected to the panel, a message may be displayed indicating that a software mismatch. You only need to upgrade the panel or CarboNET if the mismatch message is displayed.

Note: It is important to upgrade all devices connected to a frame to the same version. This includes in a MultiPanel configuration.

1. In Dashboard, double-click on the **CarbonitePanel** node for the Carbonite Black panel or CarboNET that you want to upgrade.
2. Click **Upload > Browse**.
3. Locate the CarbonitePanel-v#_#_###.bin upgrade file and click **Open**.

Tip: If you have multiple devices to upgrade, click **Next** and select all the devices that you want to upgrade.

4. Click **Finish**.

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DashBoard uploads the upgrade file to the device and performs the upgrade.

5. Click **Reboot** > **OK**.

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