



FRAME SYNC

CREATE IMPOSSIBLE LIGHTING EFFECTS

NEW

CREAM OS 1.2.0

Chapter 7 of Vortex8 1.2 User Manual.

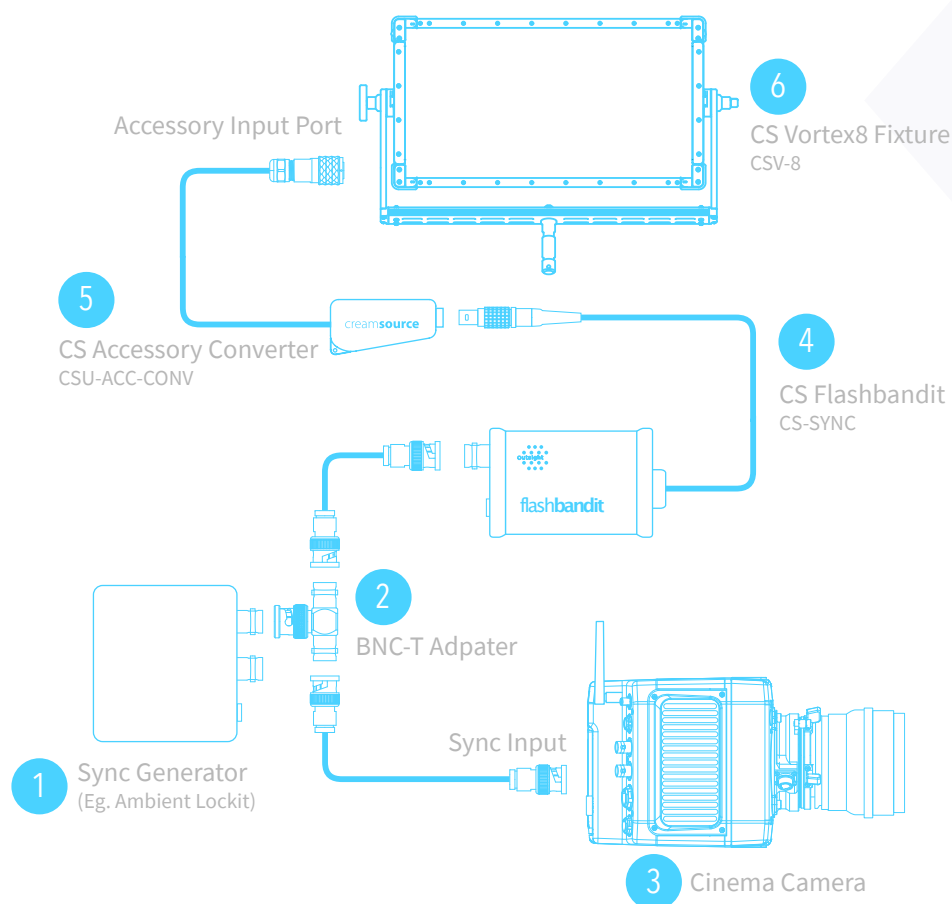


7. Camera Sync

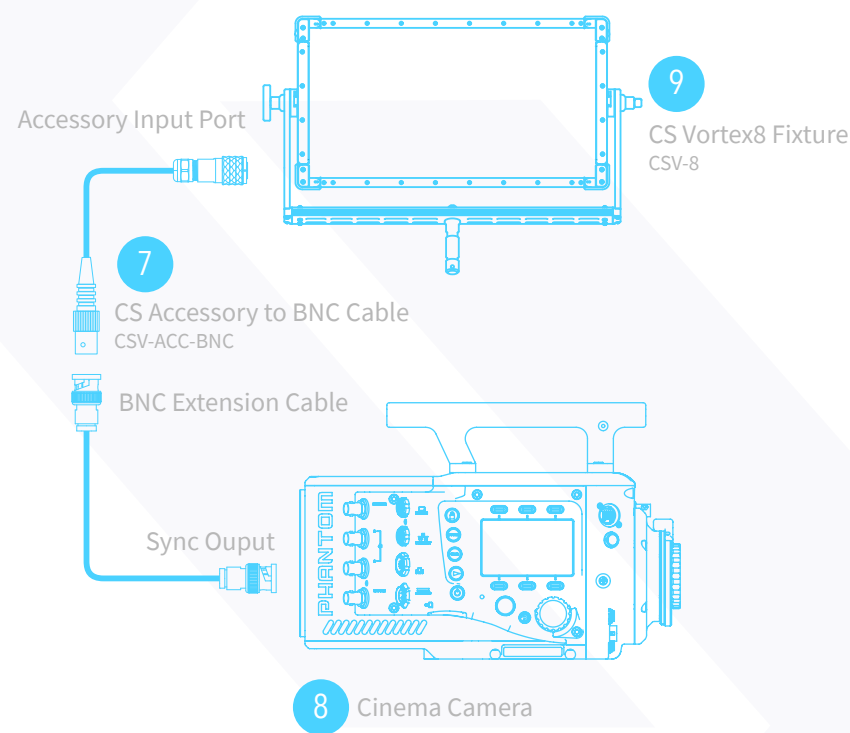
7.1 Syncing to Cameras

The Vortex8 can be triggered from an external source, such as a sync generator (e.g. Ambient Lockit ACN-CL), or the genlock output of a cinema camera to ensure that it is synchronised with the camera shutter. This can be used to solve the frame tearing / flash banding problem most digital CMOS cameras can have with any flashing or strobing light source. It can also be used for frame-accurate strobing for advanced special effects, for frame rates up to 5,000fps.

Syncing to Camera with Sync/Genlock Input



Syncing to Camera with Sync/Genlock Output



7. Camera Sync

7.2 Setting up Camera Syncing with Sync/Genlock Input using the Flashbandit

Use the Flashbandit (CS-SYNC) to setup cameras that requires a sync generator.

- 1 Set correct frame rate and format on the Lockit box 1 (see user manual for device). This should match the frame rate and format you intend to shoot at.
- 2 Plug the BNC-T adapter 2 into the SYNC/WORDCLOCK output of the Lockit box.
- 3 Connect the camera GENLOCK input 3 to the Lockit box 2 with the coaxial cable. Follow the camera instructions for setting this up.
- 4 Plug Flashbandit adapter 4 into the Creamsource Accessory adaptor. 5
- 5 Plug the Creamsource Accessory adaptor 5 into Accessories input of the Vortex8. 6
- 6 Connect the Flashbandit to the Lockit Box using coaxial cable – a blue light on Flashbandit should flash indicating valid signal.
- 7 Once sync is established, a green bar will be highlighted on the top of the status bar of the Vortex8 indicating the device is synchronised. The frame rate will also be displayed beneath the status bar.
- 8 Calibrate using the Flashbandit (see 7.5 Calibrate Sync for details).

7. Camera Sync

7.3 Setting up Camera Syncing with Sync/Genlock Output using the Accessory BNC Cable

Use the Creamsource Accessory BNC Cable (CSV-ACC-BNC) to setup cameras that are capable outputting a sync signal.

- 1 Plug the Creamsource Accessory to BNC Cable 7 directly into the BNC SYNC/AUX port of the camera. 8
- 2 Plug the other end of the Creamsource Accessory to BNC Cable 7 to the Accessory Input port of the Vortex8. 9
- 3 Setup the camera to output the sync signal (refer to the user manual for device).
- 4 Once sync is established, a green bar will be highlighted on the top of the status bar of the Vortex8 indicating the device is synchronised. The frame rate will also be displayed beneath the status bar.
- 5 Calibrate the Vortex8 (see 7.5 Calibrate Sync for details).

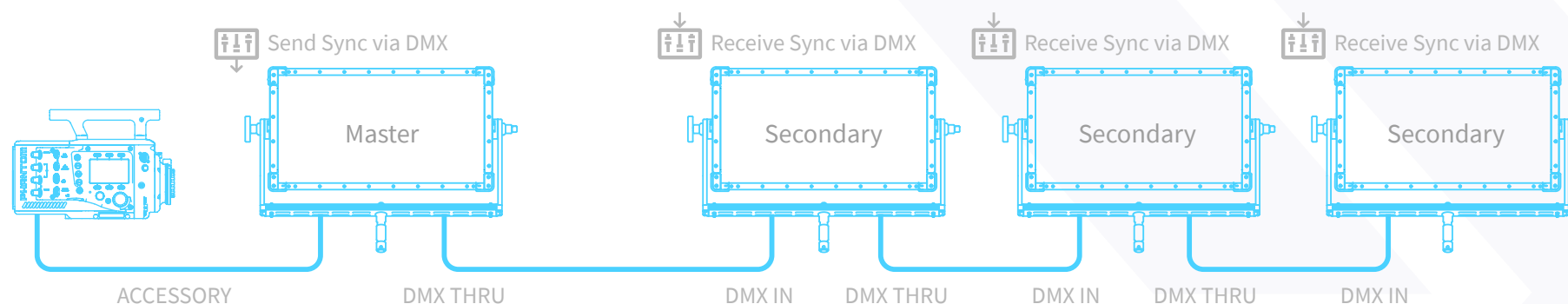
7. Camera Sync

7.4 Syncing Multiple Units

It is possible to distribute sync signal to multiple Vortex units using regular DMX cable. This allows for large arrays of Vortex to be precisely synchronised, without custom cables or extra hardware.

- 1 The sync source (camera genlock output, Flashbandit or other external trigger signal) should be connected to the Accessory port on the Master Vortex unit.
- 2 Connect DMX cable between the Master and the Secondary units using the DMX IN and DMX THRU ports.
- 3 Enable 'Send Sync via DMX' option on the Master unit (under Advanced > Sync Option menu)
- 4 Enable 'Receive Sync via DMX' option on the Secondary units (under Advanced > Sync Option menu)
- 5 You only need to calibrate sync on the Master unit, the Secondary units do not need to be calibrated. If using 'Invert Input Level' option, this only needs to be done on the Master unit.

NOTE: Regular DMX control cannot be used at the same time as sync over DMX. If you need remote control of the fixtures, you can still use CRMX Wireless, Bluetooth or sACN.

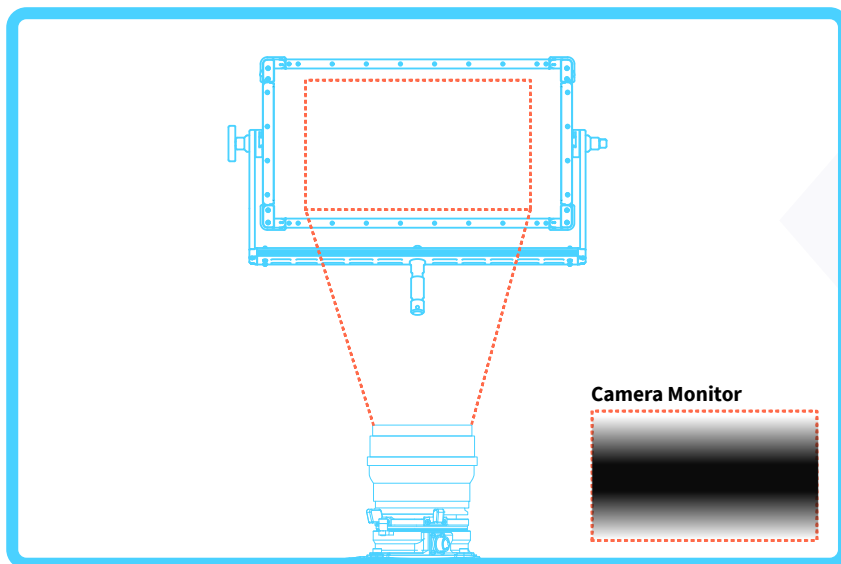


This status icon is shown if the DMX ports are being used for Camera Sync, and cannot be used for transmitting or receiving camera sync. This setting can be accessed under Advanced > Sync Options menu.

7. Camera Sync

7.5 Calibrate Sync

This is a special mode used for calibrating the light to an external sync source, such as the FlashBandit sync box. It is used to make sure the camera shutter and Creamsource are synchronised, to prevent the flash-banding effects when shooting on a CMOS sensor camera.



- 1 Point your camera directly at the Vortex8 so the entire frame is covered by the LEDs.



- 2 Select Effects > Calibrate Sync. The fixture will start to flash at the locked framerate (see **5.20 Calibrate Sync** for more details on these settings).

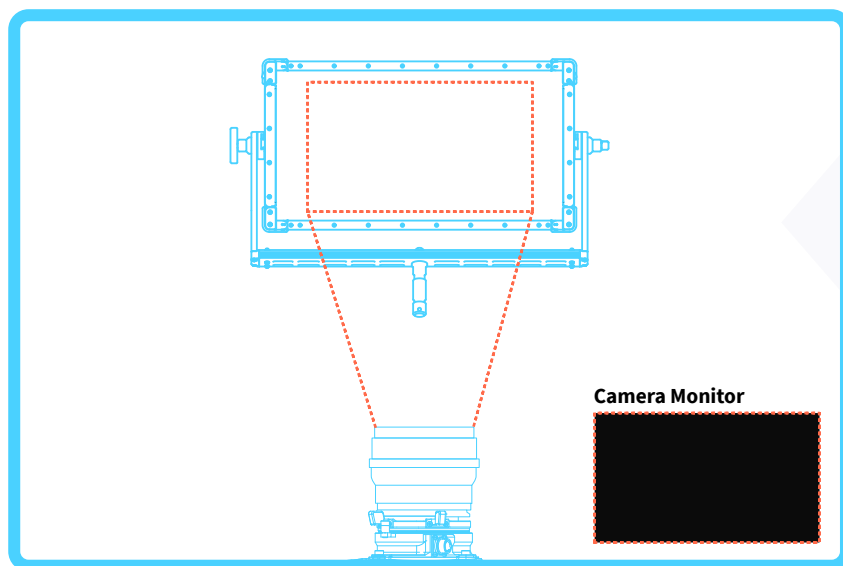


If using multiple fixtures with sync distributed by DMX cable, only the first unit needs to be calibrated. If camera frame rate and/or shutter angle is changed, it is recommended to re-calibrate.

7. Camera Sync

7.5 Calibrate Sync Cont.

This is a special mode used for calibrating the light to an external sync source, such as the FlashBandit sync box. It is used to make sure the camera shutter and Creamsource are synchronised, to prevent the flash-banding effects when shooting on a CMOS sensor camera.



- 3 Adjust phase value on Calibrate Sync screen. As you change the phase, a dark band should appear to move up and down on the camera monitor. Adjust until the dark band fills the monitor completely. Shooting with wide shutter angles and at higher speeds reduces the size of the dark band, making calibration more difficult.



- 4 The Vortex8 is now calibrated. It can now be set to desired effect mode (Normal, Strobe etc) E.g. Select Effects > Flash Frames.

7. Camera Sync

7.6 Shooting While Calibrated

Once the Creamsource has been calibrated, any of the modes may be used without the possibility of causing torn frames. The remote dimmer unit or DMX control can also be used safely. If the framerate, shutter angle or the phase of the camera shutter is adjusted, then you will need to re-calibrate.

7.7 External Effects Triggering

You can use an external pulse to trigger the Sync Flash and Dual Level effects. This input is on the Accessory Connector, see Accessory pinout for more information.

- The Rising pulse edge triggers the effect, and is the same as pressing the FLASH button in.
- The Falling pulse edge is the same as releasing the FLASH button.
- The input level can be inverted by selected 'Invert Input Level' from the Advanced > Sync Options menu.

NOTE: An input voltage from 5V – 24V can be used for trigger signal. The input impedance is 150k Ω .