


How To Build a RED Workflow

Everyone wants a solid workflow – one that saves time and money, and keeps production moving along at a steady pace – but designing one can be a challenge. This document details proper drive selection, as well as best practices around data management, so that you can build an efficient workflow for any RED DSMC2 camera project.



Supported Workflow Tools

Readers and Storage



Editing and Color Management

Adobe Premiere

Davinci Resolve

Avid Media Composer

Final Cut Pro X

Media Management

Shotput Pro

Hedge

Pomfort Offload Manager

Rendering and Transcodes

nVidia Graphic Hardware

REDCINE-X Pro

Here are basic considerations when shooting with a RED DSMC2 Camera:

Capture up to 8K R3D’s (that’s RAW) at variable compression ratios to manage your data volume. Depending on your frame rates and compression ratio, you can also generate ProRes or DNx Proxy files simultaneously in-camera. After offload, take advantage of hardware GPU acceleration from Nvidia, which can allow for real-time 8K R3D playback, and improved render times on your system. One more key is to set up your camera with the new IPP2 Color Pipeline for its improved color management in a more intuitive process.

To get more in-depth information about RED R3D workflows, you can contact RED at +1-949-206-7900

SAMPLE OCF OFFLOAD TIMES W/ CHECKSUMS BASED ON DRIVE SELECTION

Runtime: 30 min
Format: 8K R3D at 23.98fps, REDCODE 8:1
Size: 289GB
Media: RED 480GB MINI-MAG

Typical Bus-powered
2.5” HDD

G-RAID™
(RAID 0)



G-DRIVE™
Mobile SSD



ArmorLock
Encrypted
NVMe SSD



G-SPEED™
Shuttle XL



When using single disk HDD and low-performance RAID HDD devices, it is NOT recommended to do multiple simultaneous transfers. Rather it is better to do consecutive transfers in a serialized batch, not concurrently (especially when using checksums). Doing concurrent transfers with this kind of hardware may significantly degrade transfer and/or subsequent drive read performance.

<div>Capacity * SKU</div> <div>*** Additional capacities available</div>	--	<div>12TB OG05753-1</div> <div>20TB OG05763-1</div> <div>36TB OG10810-1</div> <div>***</div>	<div>500GB OG06052-1</div> <div>1TB OG06053-1</div> <div>2TB OG06054-1</div>	<div>2TB OG10484-1</div>	<div>48TB OG05854</div> <div>80TB OG05864</div> <div>144TB OG10819-1</div> <div>***</div>			
# of OCF Media Cards that can Reasonably Offload Simultaneously	< 1 Card	1 Card	2-3 Cards	2-3 Cards	4 Cards			
Averaged Write Speeds with Checksums Factored (MB/s)**	1 Card = ~ 61 2 Cards = ~ 32	1 Card = ~ 191 2 Cards = ~ 123	1 Card = ~177 2 Cards = ~ 245	3 Cards = ~ 254	1 Card = ~193 2 Cards = ~ 355	3 Cards = ~ 400	1 Card = ~245 2 Cards = ~ 423	3 Cards = ~ 558 4 Cards = ~ 640
Estimated Transfer Times w/ Checksums based on # of Simultaneous Cards; each w/ 289GB (30 Min) of OCF	1 Card= ~ 1 hr 19 Min 2 Cards= ~ 5 hr 1 Min	1 Card= ~ 25 Min 2 Cards= ~ 1 hr 18 Min	1 Card= ~ 27 Min 2 Cards= ~ 39 Min 3 Cards= ~ 57 Min	1 Card= ~ 25 Min 2 Cards= ~ 27 Min 3 Cards= ~ 36 Min	1 Card= ~ 20 Min 2 Cards= ~ 23 Min 3 Cards= ~ 26 Min 4 Cards= ~ 30 Min			

The transfer times stated in this table are approximated times and actual results may vary. Factors that will affect performance are system hardware, software/checksums used and settings, general configurations, and possibly others. These were achieved using a 2017 Model MacBook Pro with Hedge Software utilizing MD5 and sha1 Checksums.

**As used for transfer rate, 1 MB/s = 1 million bytes per second. Based on internal testing; performance may vary depending upon host device, usage conditions, drive capacity, RAID configurations, and other factors.



Efficient Workflow with G-SPEED™ Shuttle Series

One of the most overlooked areas of inefficiency in production is storage. Buying cheap, lower performing drives may save money initially, but it could cost a lot more over time. The biggest factor is balancing transfers to help prevent delays, overtime labor, and lost opportunities. Be mindful of device performance and interface throughput, because an upfront investment in the right setup can mean less money wasted and a scalable, more efficient workflow.



INGEST

The key is to Ingest onto drives that write as fast as the MINI-MAG(s) can read & getting your Original Camera Footage (OCF) safely off the mag and into duplicates ASAP and securely. Utilize data transfer software with confidence-based checksums to move your OCF so your creative intent & metadata aren't lost or corrupted from capture through Post.



CONSOLIDATION

Moving your crew cross-country? You wouldn't use a fleet of small cars, you'd use one big plane. A large RAID can give you added speed, simplicity, and redundancy. The key is to offset the risks of putting everything in one place, by balancing with your Distribution. No matter which RAID you're in, you still need to backup your OCF with multiple copies.



BACKUP

Even if it's in a RAID, you can't rely on only one (1) copy of your OCF. If something happens to that RAID, you lose your footage, it doesn't care if you had it in RAID 5. The key is following the 3-2-1 Rule: At least 3 copies, on 2 types of media, w/ 1 backup in a different location. If you're not prepared, that's not just a delay, that's literally going back to shoot it again.



DISTRIBUTION

You shouldn't put all your eggs in just one basket (ie have backups), and you have to move your data. The key is to use the Checksum verification programs on the OCF, every time. If you're creating proxies, ensure your system can keep up and always do a QC (Quality Control). Know what everyone needs and be sure you can deliver it as fast as possible.

