



User Guide – Metadata capture and GPIO trigger for Red Epic cameras

Metadata Capture and GPIO Trigger for Red Epic Camera

Versions

- V0.1 – 2011/07/28 created
- V1.0 – 2013/12/03 updated



Metadata Capture and GPIO Trigger for Red Epic Camera

This user guide instructs the user to capture 3Flex meta data and use the GPIO start/stop record trigger with Red Epic cameras.

Parts needed to record metadata:

- 1X of 3ality SPC7100 or SPC7000 with serial numbers 100 and higher
- 1X RED RS232 *Control Interface Cable* to SPC7XXX (4pinM Lemo to 8pinM Lemo-Black jacket)
RED part number **790-0152**
- 2X RED Epic Cameras +16 or newer. Firmware v.1.620 or higher.

Additional parts needed for start/stop record trigger:

- 1X RED *Gig-E (Ethernet) Cable* for master/slave. (9pin Lemo to 9pin Lemo) RED part number **790-0163**.
- 1X Preston Cinema Systems HU3 Hand Controller with firmware v. 1.37T or higher.
- + 1X Preston Cinema Systems PPA (Preston Protocol Adapter) firmware v. PPA-3-4 or higher.
- + 1X 3ality Digital PPA to SPC7XXX cable (8pinM Lemo to 8pinM Lemo-Black jacket)
- Or** 1x THC controller with cable (5pinM Lemo to 8pinM Lemo-Black jacket)

Make sure the 3Flex control chain is established between 3ality rig and SIP



1.1 Setup GigE connectivity

Plug in the Gig-E cable into the Gig-E ports at the back of each Epic camera.
Power "On" both RED Epic cameras.

In Epic **Menu->Settings->Setup->Communication-> Network** enable 'Camera to Camera'

The **LAN** icon on the viewfinder should illuminate green

The GigE connectivity is **not** needed to record metadata on one camera, but **is** needed for the GPIO trigger of both cameras

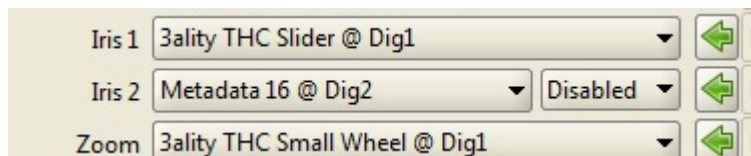
1.2 Metadata Setup

Plug in RED RS232 'CTRL' cable (4pin Lemo to 8pin Lemo-Black jacket) in one Red camera and the SPC 'Digital 2' port. **Only the one camera will record the meta data!**

In 3Flex Control Center **Rig Control -> Configuration -> Port** of the SPC7XXX assign the 'Digital 2' port to **Metadata 16**.



In the Assignment section assign the 'Iris 2' port to **Metadata16 @ Dig2**



On the Red Epic menu, navigate to **Settings->Setup->Communication->Serial** and select '3ality SPC7100' even if you are using a SPC7000!

The **RIG** indicator icon of the Viewfinder display of the Red camera should now illuminate green.
Metadata is recorded while the camera is rolling.

1.3 Start/Stop trigger Setup

Follow the instructions for Metadata setup.

The CTRL cable is required for the GPIO trigger to work

Plug in and assign your lens controls to the Preston HU3/PPA or the THC in the 'Digital 1' port of the SPC7XXX

In the Red camera menu navigate to **Settings->Setup->GPIO/Sync** and set the Brain GPIO to 'General Purpose In'

1.4 Cable diagram for 3Flex Epic Metadata cable:

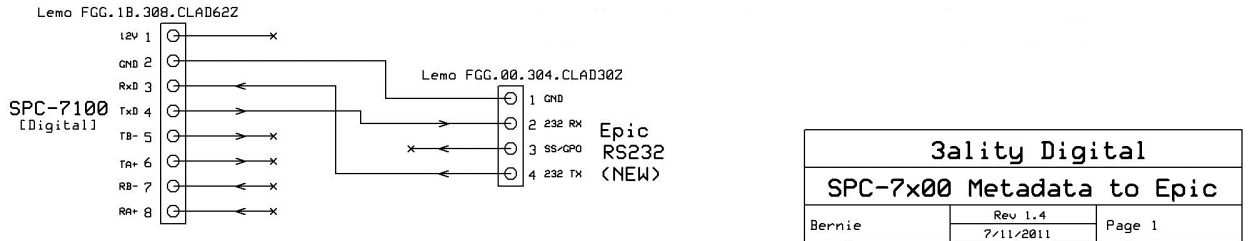


Figure 1 Cable schematic for Epic Red RS232 data cable

1.5 Export the metadata from r3d file

The metadata is not stored in the r3d files.

To extract the metadata from the r3d file, use the terminal of your RED Cine application.

To see the metadata in the terminal use following command line (the result can be seen below):

`redline -i (drag source file) -o screen --printMeta 4`

```
Nates-Pro:~ nate.heartt$ redline -i /Users/nate.heartt/Desktop/A002_R001_1214YV_001.R3D -o screen --printMeta 4
REDline Build 16.24124 Mac 64bit Public Release
"redline" "-i" "/Users/nate.heartt/Desktop/A002_R001_1214YV_001.R3D" "-o" "screen" "--printMeta" "4"
Using R3DSDK version 4.4 build 20A20 dated 20121017
Tape Distance,Focus,Iris,Zoom,Inter Axial,Convergence Distance,Battery Voltage,Toggle1,Record,Toggle2,TapeType,Toggle3,Distance Valid,Display Format
0.000000,2.250000,3.447204,65.000000,2.500000,20.400000,0.000000,,1,,0,,False,Decimal
0.000000,2.250000,3.447204,65.000000,2.500000,20.570000,0.000000,,1,,0,,False,Decimal
0.000000,2.250000,3.447204,65.000000,2.500000,20.830000,0.000000,,1,,0,,False,Decimal
0.000000,2.250000,3.447204,65.000000,2.500000,21.010000,0.000000,,1,,0,,False,Decimal
```