

Odyssey7Q Odyssey7Q+



4K RAW 2K Half RAW 120 **QHD RAW** 2K 12-BIT DPX HD 12-BIT DPX

**2K 10-BIT DPX** HD 10-BIT DPX **HD 422 DPX HD Apple ProRes 2K Apple ProRes** 





Updated February 23, 2015 | Firmware Release v5.10.100



ProRes 422 (HQ) ProRes 422 ProRes 422 (LT)



# **RECORD TIMES & FORMATS**

The following are approximate maximum record time in minutes, based on recording two 512G SSDs (1TB). Record times may vary slightly.

#### RAW RECORDING

Odyssey7Q and Odyssey7Q+ are capable of recording the RAW signal ouput from the C500 if the Canon C500 Cinema RAW Recording Option Upgrade license has been purchased through our website and the license key has been entered in the unit.

The C500 Recording Option Upgrade is required for recording 4K RAW, Half RAW and QHD.

		FRAMES PER SECOND						
		23.98	25	29.97	50	60	100	120
РΧ	4K RAW	62	60	50	30**	25**		
d D	4K Half RAW				60	50	30**	35**
V an	QHD RAW	67	64	53	32**	26**		
RAV	2K 12-BIT DPX	70*	67*	56*				
	HD 12-BIT DPX	74*	71*	59*				
	2K 10-BIT DPX	78	75	67				
	HD 10-BIT DPX	83	80	72				
	HD 422 DPX				43	36*		

Note: The Odyssey does not currently support Scan and Reverse mode on the C500, or Slow and Fast, except for the maximum rates in RAW and HRAW (100/120) \*\*4K Half Raw x 1080 is not supported at this time. \*HD 120 fps is not supported at this time.

	C500 Mode	Resolution	Bit- Depth	Frame Rates	Supported in Current Firmware	Two SSD's Required
	4K RAW	4096 x 2160	10-Bit	23.98p, 24p, 25p, 29.97p, 50p, 59.94p	Yes (RAW .RMF)	50p / 59.94p
WV NAL)	4K (QHD) RAW	3840 x 2160	10-bit	23.98p, 24p, 25p, 29.97p, 50p, 59.94p	Yes (RAW .RMF)	50p / 59.94p
4K RA (OPTIO	4K Half RAW	4096 x 2160	10-Bit	23.98p, 24p, 25p, 29.97p, 50p, 59.94p, 100p, 120p	Yes (RAW .RMF)	100p / 120p
	4K RAW x 1080	4096 x 1080	10-Bit	62p up to 119.88p (by 2 frame steps)	No	

_	2K RGB 4:4:4	2048 x 1080	10-Bit 12-Bit	23.98p, 24p, 25p, 29.97p, 50p, 59.94p	Yes (Uncompressed .DPX)	50p / 59.94p
2К/НD DPX	HD RGB 4:4:4	1920 x 1080	10-Bit 12-Bit	23.98p, 24p, 25p, 29.97p, 50p, 59.94p	Yes (Uncompressed .DPX)	50p / 59.94p
	HD YCC 4:2:2	1920 x 1080	10-Bit	62p up to 119.88p (by 2 frame steps)	No	

HD DPX files at 60p are "packed" on SSDs due to high data rate. Use free CD Data Unpacker utility software to unpack files after transfer.

#### APPLE PRORES RECORDING

Odyssey now supports recording Apple ProRes 422 (HQ), Apple ProRes 422 and Apple ProRes 422 (LT). Files are saved in .MOV format.

HD Apple ProRes 422 (HQ)	775	744	620	159	132		
HD Apple ProRes 422							
HD Apple ProRes 422 (LT)							
2K Apple ProRes 422 (HQ)	600	572	475				
2K Apple ProRes 422							
2K Apple ProRes 422 (LT)							
	HD Apple ProRes 422 (HQ) HD Apple ProRes 422 HD Apple ProRes 422 (LT) 2K Apple ProRes 422 (HQ) 2K Apple ProRes 422 2K Apple ProRes 422 (LT)	HD Apple ProRes 422 (HQ)775HD Apple ProRes 422-HD Apple ProRes 422 (LT)6002K Apple ProRes 422 (HQ)6002K Apple ProRes 422 (LT)-2K Apple ProRes 422 (LT)-	HD Apple ProRes 422 (HQ)       775       744         HD Apple ProRes 422       1       1         HD Apple ProRes 422 (LT)       600       572         2K Apple ProRes 422 (HQ)       600       572         2K Apple ProRes 422 (LT)       1       1         2K Apple ProRes 422 (LT)       1       1	HD Apple ProRes 422 (HQ)       775       744       620         HD Apple ProRes 422       1       1       1         HD Apple ProRes 422 (LT)       600       572       475         2K Apple ProRes 422 (HQ)       600       572       475         2K Apple ProRes 422 (LT)       1       1       1         2K Apple ProRes 422 (LT)       1       1       1	HD Apple ProRes 422 (HQ)       775       744       620       159         HD Apple ProRes 422       I       I       I       I       I         HD Apple ProRes 422 (LT)       I       I       I       I       I         2K Apple ProRes 422 (HQ)       600       572       475       I         2K Apple ProRes 422 (LT)       I       I       I       I         2K Apple ProRes 422 (LT)       I       I       I       I	HD Apple ProRes 422 (HQ)       775       744       620       159       132         HD Apple ProRes 422 </td <td>HD Apple ProRes 422 (HQ)       775       744       620       159       132         HD Apple ProRes 422       I</td>	HD Apple ProRes 422 (HQ)       775       744       620       159       132         HD Apple ProRes 422       I

#### APPLE PRORES FORMAT DETAILS

	C500 Mode	Resolution	Bit- Depth	Frame Rates	Supported in Current Firmware	Two SSD's Required
	HD MXF 4:2:2	1920 x 1080	10-Bit	23.98p, 24p, 25p, 29.97p, 50p, 60p	Yes (Apple ProRes .MOV)	No
2K/HD ProRes	HD YCbCr 4:2:2	1920 x 1080	10-Bit	50p, 59.94p, and 62p up to 119.88p	No	No
	2K RGB 4:4:4	2048x1080	10-Bit	23.98p, 24p, 25p, 29.97p	Yes (Only 4:2:2 Monitor Output must be used)	No

### TYPICAL DOWNLOAD TIME IN MINUTES

Media	USB3.0	Thunderbolt
256G SSD	20	10
512G SSD	40	20
1TB SSD	80	40

Actual transfer rates are dependent on computer system and capture media.

USB 3.0 or Thunderbolt connections are recommended by Convergent Design for efficient data rates

# ODYSSEY 4K RAW/PRORES (4096/3840x2160) RECORDING

# **C500 CONFIGURATION**

#### 1. SET TIME & DATE

MENU » Other Functions » Set Clock » Date/Time

<ul> <li>77 min</li> <li>▲ 82 min</li> <li>■ 82 min</li> </ul>	S	TBY 🌩	00:05:35.0	6 I
Other Functions				
•	5			
3K	Date/Ti	me		
2.K	Date Fo	ormat	MDY	
Set Clock				
00:00				
~				

Set Time & Date so both the C500 and Odyssey match. This is REQUIRED for using internal media as proxy.

#### 2. NAME THE CLIP





Name the clip so that C500 and Odyssey match.

### 3. ENABLE 3G-SDI OUTPUT & REC COMMAND

MENU » 4K/2K/MXF » 3G-SDI Output » ON (BACK) » REC Command » ON

	■77 min ▲82 min ■82 min	STB	( ▶	00:10:38.10 F		■77 min ▲82 min ■82 min	2	STBY 🕈	• 00:12:08.22 F
X	4K/2K/MXF Setup				X	4K/2K/MXF Setup			
•	Interval Rec	•				3G-SDI Output	On		
<b>3</b> K	Frame Rec	►			採	MON. 1 & 2			
b))	S&F Frame Rate	24			D.W	MON. 1			
	Clip Name	•				HD/SD-SDI			
	Metadata	•				SYNC OUT	$\blacktriangleright$		
00:00	3G-SDI Output	On			00:00	HD/SD Output			
Ŷ	MON. 1 & 2				Ŷ	Rec Command	On		
$\star$	MON. 1	•			$\star$	Set CF Card Slot			



### 4. SET 4K RAW MODE

MENU » 4K/2K/MXF Setup » 4K (4096/3840) » Mode » RAW

<ul> <li>77 min</li> <li>▲ 82 min</li> <li>■ 82 min</li> </ul>	STBY 🌩	00:52:51.15 F
K 4K/2K/MXF Setup		
· <b></b>		RAW
<b>*</b>	Mode	HRAW
<b>♪</b> »		
4K (4096/3840)		
00:00		
ç		
★		

# 5. SET SYSTEM FREQUENCY (HZ)

MENU » 4K/2K/MXF Setup » System Frequency » (Selection)

€ 77 min ▲ 82 min ■ 82 min	STBY 🕈	00:17:24.11 F
4K/2K/MXF Setup		
	59.94 Hz	
<del>Ж</del>	50.00 Hz	
System Frequency	24.00 Hz	
00:00		
Ŷ		
*		

59.94p selected you will have the options 59.94,29.97,23.98

50p selected you will have the options 50p and 25p

24p this is the only option under frame rate

#### 6. SET RESOLUTION

MENU » 4K/2K/MXF Setup » 4K (4096/3840) » Resolution » (4096x2160 or 3840x1080)



# 7. SET FRAME RATE

MENU » 4K/2K/MXF Setup » 4K (4096/3840) » Frame Rate » (Selection)

<ul> <li>77 min</li> <li>▲ 82 min</li> <li>■ 82 min</li> </ul>	STBY 🌩	00:60:12.10 F
4K/2K/MXF Setup		
		59.94P
4K		29.97P
<u>۱</u>		23.98P
4K (4096/3840)	Frame Rate	
00:00		
€ ★		

You will have the options 59.94p,29.97p,23.98p

# ODYSSEY CONFIGURATION

# 1. SET ODYSSEY TO C500 RAW MODE

☆ » SETUP » CAMERA » CANON » C500 RAW->RAW(.RMF)

# 2. SET DATE & TIME TO MATCH C500

☆ » ODYSSEY » SET » TIME

ODYSSEY S	ETUP	OUTPUTS
ACTIVATION		
SSD'S		
TIME	07:3	0:11 OK X
DATE		
RESET		
ABOUT		

### ☆ » ODYSSEY » SET » DATE

ODYSSEY SETUP OUTPUTS	
ACTIVATION	
SSD'S	
TIME	
DATE 2015 FEB 23	OK X
RESET	
ABOUT	

# ODYSSEY 4K RAW/PRORES (4096/3840x2160) RECORDING

#### 3. SET CLIP NAME AND METADATA

#### TAP ON CLIP NAME IN TOOLBAR » TAP ON FIELD » (ENTER DATA)

₩ <sup>12.2V</sup> 7.3W +41°C	59.94 4K	FS700 RAW	00:20	$\frown$	NO SSD2	⇒REC PLAY	65007090 157 .DNG A	01:00:16:72 00:00:12 719 FRAMES	
			NEX	Т ТАК	E				
			CLIP:	CLIP	000001				
			REEL:	R001					
			SCENE:	SCENE	51				
			TAKE :	001					
			DAY:	001					
			CAMERA:	A					
			PROJECT:	PROJE	ECT1				

#### 4. MAKE C500 THE RECORD TRIGGER

☆ » SETUP » RECORD TRIGGER » CAMERA

#### 5. SET TIMECODE SOURCE

☆ » SETUP » TIMECODE SOURCE » SDI/HDMI

6. FORMAT SSDs

#### ☆ » ODYSSEY » SSD'S » FORMAT BOTH

(or FORMAT SSD1 if you do not have a second SSD drive installed.)

#### 7. CONNECT TO CAMERA AND VERIFY STATUS INPUT

Connect C500 3G-SDI output to Odyssey SDIA input

#### NOTE

Use only 3G-SDI rated cables from C500 to Odyssey. Using a 1.5G SDI cable in not recommended and may cause issues.

#### The status on your Odyssey will display your camera's output.

Example:



# **C500 CONFIGURATION**

#### 1. SET TIME & DATE

MENU » Other Functions » Set Clock » Date/Time

<ul> <li>77 min</li> <li>▲ 82 min</li> <li>■ 82 min</li> </ul>	STBY ►	00:05:35.06 I
Other Functions		
•	5	
45	Date/Time	
AN AN	Date Format	MDY
• ″		
Set Clock		
00:00		

Set Time & Date so both the C500 and Odyssey match. This is REQUIRED for using internal media as proxy.

### 2. NAME THE CLIP





Name the clip so that C500 and Odyssey match.

# 3. ENABLE 3G-SDI OUTPUT & REC COMMAND

MENU » 4K/2K/MXF » 3G-SDI Output » ON (BACK) » REC Command » ON

•	☑ 77 min ▲ 82 min Β 82 min	STBY	► 00:10:38.10 F		∎77 min ▲82 min ∎82 min	S	бТВҮ 🕈	• 00:12:08.22 F
X	4K/2K/MXF Setup			X	4K/2K/MXF Setup			
1	Interval Rec	•			3G-SDI Output	On		
採	Frame Rec	•		採	MON. 1 & 2	•		
D.W	S&F Frame Rate	24		1 m	MON. 1			
	Clip Name	•			HD/SD-SDI			
	Metadata	▶			SYNC OUT	$\rightarrow$		
00:00	3G-SDI Output	On		00:00	HD/SD Output			
Ŷ	MON. 1 & 2	•		Ŷ	Rec Command	On		
$\star$	MON. 1			★	Set CF Card Slot	$\blacktriangleright$		

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#### 4. SET 4K RAW MODE

MENU » 4K/2K/MXF Setup » 4K (4096/3840) » Mode » HRAW \*4K1K RAW not supported at this time.

<ul> <li>77 min</li> <li>▲ 82 min</li> <li>■ 82 min</li> </ul>	STBY 🕈	00:01:15.09 F
K/2K/MXF Setup		
•		RAW
畿	Mode	HRAW
<u>NU</u>		4K1K RAW
4K (4096/3840)		
00:00		
¥ ★		

#### 5. SET SYSTEM FREQUENCY (HZ)

MENU » 4K/2K/MXF Setup » System Frequency » (Selection)



59.94p selected you will have the options 59.94,29.97,23.98 50p selected you will have the options 50p and 25p 24p this is the only option under frame rate

### 6. SET RESOLUTION





7. SET UP SLOW AND FAST

### MENU » 4K/2K/MXF Setup» Special Rec » Slow and Fast Motion

	77 min 82 min 82 min	S	бТВҮ ►	00:10:10.19
X	4K/2K/MXF Setup			_
-		Interva	al Rec	
<b>3</b> K	Special Rec	Frame	Rec	
b))		Slow &	Fast Motion	
		Off		
00:00				
Ŷ				
*				

8. SET SLOW & FAST FRAME RATE

MENU » 4K/2K/MXF Setup» S&F Frame Rate » [102]

<ul> <li>77 min</li> <li>▲ 82 min</li> <li>■ 82 min</li> </ul>	STBY ►	00:01:08.07 F
4K/2K/MXF Setup		
		59.94P
<u>4K</u>		29.97P
An		23.98P
• "	Frame Rate	
2K (2048/1920)		
00=00		
Ŷ		
*		

# 0 D Y S S E Y 4K HALF RAW (4096x2160 ONLY)

# **ODYSSEY CONFIGURATION**

1. SET ODYSSEY TO C500 RAW MODE

☆ » SETUP » CAMERA » CANON » C500 RAW->RAW(.RMF)

2. SET DATE & TIME TO MATCH C500

☆ » ODYSSEY » SET » TIME

ODYSSEY SETUP OUTPUTS							
SET	ACTIVATION						
SSD'S	TIME	07:30:11 OK X					
ABOUT	DATE						
	RESET						

☆ » ODYSSEY » SET » DATE

ODYSSEY SETUP OUTPUTS						
SET	ACTIVATION					
SSD'S	TIME					
ABOUT	DATE	2014	DEC	16	OK X	
	RESET					

3. SET CLIP NAME AND METADATA

TAP ON CLIP NAME IN TOOLBAR » TAP ON FIELD » (ENTER DATA)



# ODYSSEY 4K HALF RAW (4096x2160 ONLY)

#### NOTES ON CLIP NAME

When recording RAW and using Camera Trigger the clip name comes from the C500

When recording Canon HRAW 100/120 the clip name will be from the Odyssey as the C500 does not record HRAW internally.

#### 4. MAKE C500 THE RECORD TRIGGER

☆ » SETUP » RECORD TRIGGER » CAMERA

#### 5. SET TIMECODE SOURCE

#### ☆ » SETUP » TIMECODE SOURCE » SDI/HDMI

#### 6. FORMAT SSDs

### ☆ » ODYSSEY » SSD'S » FORMAT BOTH

(or FORMAT SSD1 if you do not have a second SSD drive installed.)

# 7. CONNECT TO CAMERA AND VERIFY STATUS INPUT

#### Connect C500 3G-SDI 1 output to Odyssey SDI A input

Note: When recording HRAW 100/120 connect 3G-SDI 2 output on the C500 to SDI B input on the Odyssey.

#### NOTE

Use only 3G-SDI rated cables from C500 to Odyssey. Using a 1.5G SDI cable in not recommended and may cause issues.

#### The status on your Odyssey will display your camera's output.

Example:



# ODYSSEY 2K/HD10-BIT/12-BIT (DPX)/2K Apple ProRes

# **C500 CONFIGURATION**

#### 1. SET TIME & DATE

MENU » Other Functions » Set Clock » Date/Time

STBY 🌩	00:05:35.06 F
๖	
Date/Time	
Date Format	MDY
	STBY > 5 Date/Time Date Format

Set Time & Date so both the C500 and Odyssey match. This is REQUIRED for using internal media as proxy.

### 2. NAME THE CLIP





Name the clip so that C500 and Odyssey match.

# 3. ENABLE 3G-SDI OUTPUT & REC COMMAND

MENU » 4K/2K/MXF » 3G-SDI Output » ON (BACK) » REC Command » ON

	]77 min A82 min B82 min	S	ТВҮ 🕈	00:10:38.10 F		∎77 min A82 min B82 min		STBY 🌩	• 00:12:08.22 F
X	4K/2K/MXF Setup				X	4K/2K/MXF Setup			
	Interval Rec	•				3G-SDI Output	On		
<b>3</b> K	Frame Rec	•			採	MON. 1 & 2	•		
bu)	S&F Frame Rate	24			D.W	MON. 1	•		
	Clip Name					HD/SD-SDI			
	Metadata					SYNC OUT	$\blacktriangleright$		
00:00	3G-SDI Output	On			00:00	HD/SD Output	•		
Ŷ	MON. 1 & 2				Ŷ	Rec Command	On		
$\star$	MON. 1	$\blacktriangleright$			$\star$	Set CF Card Slot	•		

### 4. SET SYSTEM PRIORITY

#### MENU » 4K/2K/MXF Setup » System Priority » 2K

<ul> <li>77 min</li> <li>▲ 78 min</li> <li>В 78 min</li> </ul>	STBY 🌩	01:39:22.17 F
K/2K/MXF Setup		
 •	4K	
K System Priority	2K	
<b>\$</b> ))	MXF	
00:00		
¥ ★		

#### 5. SET SYSTEM FREQUENCY (HZ)

MENU » 4K/2K/MXF Setup » System Frequency » (Selection)

<ul> <li>77 min</li> <li>▲ 82 min</li> <li>■ 82 min</li> </ul>	STBY 🌩	00:17:24.11
K/2K/MXF Setup		
	59.94 Hz	
4K	50.00 Hz	
♪» System Frequency	24.00 Hz	
00:00		
Ŷ		
*		

59.94p selected you will have the options 59.94,29.97,23.98 50p selected you will have the options 50p and 25p 24p this is the only option under frame rate

MENU » 4K/2K/MXF Setup » 2K (2048/1920) » Mode » YCC42210 bit

#### 6. SET MODE AND RESOLUTION



(BACK) » Resolution » 2048x1080 (2K)\*

\*In camera version 1.0.5.1.100 2048x1080 VCC is not supported.

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# 7. SET FRAME RATE

MENU » 4K/2K/MXF Setup» 2K (2048/1920) » Frame Rate » (Selection)

<ul> <li>77 min</li> <li>▲ 82 min</li> <li>■ 82 min</li> </ul>	STBY >	00:01:08.07 F
4K/2K/MXF Setup		
		59.94P
<b>3</b> 5		29.97P
۲ <u>۱)</u>		23.98P
	Frame Rate	
2K (2048/1920)		
00=00		
<b>&amp;</b>		
×		

You will have the options 59.94p,29.97p,23.98p

# 8. 2K APPLE PRORES SETUP (SKIP THIS STEP FOR DPX RECORDING)

NOTE: Only 2K 4:2:2 23.98, 24, 25 and 29.97 are supported at this time.

Connect Odyssey to Monitor Output on the C500



Confirm that Zebra's, OSD and LUTs are not applied to monitor output.

# 9. SET MONITOR OUTPUT TO 2K

MENU » 4K/2K/MXF Setup» Monitor 1&2 » Resolution » 2048x1080

<ul> <li>177 min</li> <li>▲ 78 min</li> <li>■ 78 min</li> </ul>	STBY ►	00:50:31.01 F
4K/2K/MXF Setup		
		2048×1080
∰ MON. 1 & 2		1920×1080
<b>\$</b> *))		
00:00	Resolution	
Ŷ		
*		

# ODYSSEY 2K/HD10-BIT/12-BIT (DPX)/2K Apple ProRes

# **ODYSSEY CONFIGURATION**

1. SET ODYSSEY TO UNCOMPRESSED DPX MODE

☆ » SETUP » CAMERA » CANON » (HD/2K->4:4:4 (.DPX) or HD/2K ProRes)

2. MAKE C500 THE RECORD TRIGGER

☆ » SETUP » RECORD TRIGGER » CAMERA

#### 3. SET TIMECODE SOURCE

☆ » SETUP » TIMECODE SOURCE » SDI/HDMI

#### 4. SET PRORES BITRATE

☆ » SETUP » VIDEO CODEC » (SELECT)

PRORES HQ	<ul> <li>The Apple ProRes 422 (HQ) codec offers the utmost possible quality for 4:2:2 or 4:2:0 sources (without an alpha channel) and provides the following:</li> <li>Target data rate of approximately 220 Mbps (1920 x 1080 at 60i)</li> <li>Higher quality than Apple ProRes 422</li> </ul>
PRORES 422	<ul> <li>The Apple ProRes 422 codec provides the following:</li> <li>Target data rate of approximately 145 Mbps (1920 x 1080 at 60i)</li> <li>Higher quality than Apple ProRes 422 (LT)</li> </ul>
PRORES LT	<ul> <li>The Apple ProRes 422 (LT) codec provides the following:</li> <li>Roughly 70 percent of the data rate of Apple ProRes 422 (smaller file sizes than ProRes 422)</li> <li>Higher quality than Apple ProRes 422 (Proxy)</li> </ul>

#### 5. FORMAT SSDs

#### ☆ » ODYSSEY » SSD'S » FORMAT BOTH

(or FORMAT SSD1 if you do not have a second SSD drive installed.)

#### 6. CONNECT TO CAMERA AND VERIFY STATUS INPUT

**YCC 10-Bit:** Connect C500 3G-SDI 1 output to Odyssey SDIA input **RGB 4:4:4:** Connect C500 3G-SDI 1&2 output to Odyssey SDIA & SDIB input **2K ProRes:** Connect C500 Monitor output 1 or 2 to Odyssey SDIA input

#### NOTE

Use only 3G-SDI rated cables from C500 to Odyssey. Using a 1.5G SDI cable in not recommended and may cause issues.

The status on your Odyssey will display your camera's output.

Example:



# **C500 CONFIGURATION**

#### 1. SET TIME & DATE

MENU » Other Functions » Set Clock » Date/Time

<ul> <li>77 min</li> <li>▲ 82 min</li> <li>■ 82 min</li> </ul>	STBY ►	00:05:35.06 F
Other Functions		
•	ភ	
46	Date/Time	
<b>♪</b> »	Date Format	MDY
Set Clock		
00:00		
<b>6</b>		
*		

Set Time & Date so both the C500 and Odyssey match. This is REQUIRED for using internal media as proxy.

#### 2. NAME THE CLIP





Name the clip so that C500 and Odyssey match.

# 3. ENABLE 3G-SDI OUTPUT & REC COMMAND

MENU » 4K/2K/MXF » 3G-SDI Output » ON (BACK) » REC Command » ON

	∎77 min ▲82 min ∎82 min	S	STBY 🕈	00:10:38.10 F		■77 min ▲82 min ■82 min	g	STBY 🕈	00:12:08.22 F
×	4K/2K/MXF Setup				×	4K/2K/MXF Setup			
1	Interval Rec	►				3G-SDI Output	On		
採	Frame Rec				<b></b> ∰	MON. 1 & 2			
(رط	S&F Frame Rate	24			«۹	MON. 1			
	Clip Name					HD/SD-SDI			
	Metadata					SYNC OUT			
00:00	3G-SDI Output	On			00:00	HD/SD Output			
Ŷ	MON. 1 & 2	$\mathbf{b}$			Ŷ	Rec Command	On		
$\star$	MON. 1	•			*	Set CF Card Slot	•		

\*NOTE: Depending on the frame rate you wish to record it may be best to use the HD-SDI output on the C500.

# 4. SET SYSTEM PRIORITY

MENU » 4K/2K/MXF Setup » System Priority » 2K

<ul> <li>477 min</li> <li>▲ 78 min</li> <li>■ 78 min</li> </ul>	STBY ►	01:39:22.17 F
4K/2K/MXF Setup		
• <b>•</b>	4K	
K System Priority	2K	
<b>♪</b> »)	MXF	
00:00		
Ŷ		
*		

# 5. SET SYSTEM FREQUENCY (HZ)

MENU » 4K/2K/MXF Setup » System Frequency » (Selection)



59.94p selected you will have the options 59.94,29.97,23.98 50p selected you will have the options 50p and 25p 24p this is the only option under frame rate

# 6. SET MODE AND RESOLUTION



Note: In camera version 1.0.5.1.100 2048x1080 YCC is not supported.

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# 7. SET FRAME RATE

MENU » 4K/2K/MXF Setup» 2K (2048/1920) » Frame Rate » (Selection)

<ul> <li>77 min</li> <li>▲ 82 min</li> <li>■ 82 min</li> </ul>	STBY 🌩	00:01:08.07 F
4K/2K/MXF Setup		
		59.94P
<b>3</b> <u>×</u>		29.97P
<b>♪</b> »		23.98P
	Frame Rate	
2K (2048/1920)		
00:00		
Ŷ		
*		

You will have the options 59.94p,29.97p,23.98p

NOTE: For 2K ProRes follow DPX setup and connect Monitor Output 1 or 2 to SDIA or SDIB input on Odyssey.

# ODYSSEY APPLE PRORES RECORDING

# **ODYSSEY CONFIGURATION**

1. SET ODYSSEY TO APPLE PRORES 422 MODE

☆ » SETUP » CAMERA » CANON » HD/2K 4:4:4-> HD/2K PRORES (.MOV)

2. MAKE C500 THE RECORD TRIGGER

☆ » SETUP » RECORD TRIGGER » CAMERA

#### 3. SET TIMECODE SOURCE

☆ » SETUP » TIMECODE SOURCE » SDI/HDMI

#### 4. SET PRORES BITRATE

☆ » SETUP » VIDEO CODEC » (SELECT)

PRORES HQ	<ul> <li>The Apple ProRes 422 (HQ) codec offers the utmost possible quality for 4:2:2 or 4:2:0 sources (without an alpha channel) and provides the following:</li> <li>Target data rate of approximately 220 Mbps (1920 x 1080 at 60i)</li> <li>Higher quality than Apple ProRes 422</li> </ul>
PRORES 422	<ul> <li>The Apple ProRes 422 codec provides the following:</li> <li>Target data rate of approximately 145 Mbps (1920 x 1080 at 60i)</li> <li>Higher quality than Apple ProRes 422 (LT)</li> </ul>
PRORES LT	<ul> <li>The Apple ProRes 422 (LT) codec provides the following:</li> <li>Roughly 70 percent of the data rate of Apple ProRes 422 (smaller file sizes than ProRes 422)</li> <li>Higher quality than Apple ProRes 422 (Proxy)</li> </ul>

#### 5. FORMAT SSDs

☆ » ODYSSEY » SSD'S » FORMAT BOTH

(or FORMAT SSD1 if you do not have a second SSD drive installed.)

#### 6. CONNECT TO CAMERA AND VERIFY STATUS INPUT

YCC 50/60 1080p: Connect C500 3G-SDI 1 output to Odyssey SDIA input
 2K ProRes: Connect C500 Monitor output to Odyssey SDIA input
 1920x1080 23.98-29.97: Connect C500 HD-SDI (4:2:2) output to Odyssey SDIA input

#### SDI CABLES

Use only 3G-SDI rated cables from the camera to the Odyssey. Using a 1.5G SDI cable in not recommended and may cause issues.

The status on your Odyssey will display your camera's output.

Example:

1920x1080	HD
	PRORES

# ODYSSEY OFF-LOADING DATA

# COPYING FILES TO YOUR COMPUTER

#### 1. CONNECT SSD DRIVE TO ADAPTER

Connect the Convergent Design 2.5" Premium SSD Media to any off-the-shelf 2.5" SATA adaptor (example: Seagate GoFlex Thunderbolt Adaptor or USB 3.0 Adaptor)

#### 2. CONNECT ADAPTER TO COMPUTER

The SSD will mount within 10-20 Seconds. (You will see this mount on the desktop or within finder on MAC, or within My Computer on Windows machines).

#### 3. COPY FILES FOR PLAYBACK/EDITING

All Clips or Takes are located within the "Clips" directory, navigate to this and copy all of your files to a local or external drive or RAID for playback and/or editing.

#### SOFTWARE UTILITIES (FREE DOWNLOAD FROM WEBSITE)

#### CD CLIP MERGER (RAW/DPX)

Use the Clip Merger for any Raided Record (ie if your recorded clip required more than one SSD). See the At A Glance Chart, "No. of SSD's Req" column, on page 2.

#### CD APPLE PRORESS TRANSFER TOOL V1.5 (FREE DOWNLOAD FROM WEBSITE)

Use to combine clips into a single file Use to copy all files to a single directory without folder structure. Required in order to transfer markers to your NLE.

#### CD DATA UNPACKER (DPX)

Use CD Data Unpacker to convert "packed" files to "unpacked" data.

ALL UTILITIES CAN BE DOWNLOADED FROM THE FIRMWARE/DOWNLOADS AREA OF OUR WEBSITE: <u>Convergent-Design.com/support/firmware-downloads.html</u>

### ATTENTION MAC OSX USERS

Before installing Convergent Design Software on Mac OSX You must first change the following settings.

- 1. Navigate to Applications » Utilities » System Preferences
- 2. Select Security and privacy
- 3. Under General » Allow applications downloaded from: Select Anywhere.

You will now be able to run the installer for installing any Convergent Design Applications.

# WORKING WITH RECORDED FILES

There are numerous post systems and NLEs that can read natively the various file formats recorded by the Odyssey. Some NLEs may require plug-ins in order to read certain file formats. Blackmagic Design Resolve software is available for free and can read all formats recorded by the Odyssey.

#### FILE STRUCTURE

	CLIPS{ODYSSEY	
FAVORITES All My Files AirDrop AirDrop Applications Desktop Documents Documents Downloads Movies	image:	

#### UNCOMPRESSED SUPPORT (DPX SEQUENCE)

All Uncompressed recording on the Odyssey is recorded as 10 bit RGB 4:4:4 DPX, this is for all sources regardless if the source is 8 bit, 10 bit, 4:2:2, 4:4:4. With 12 bit camera's the files are recorded as a 16 bit DPX, for more universal compatibility. Also note that with DPX files timecode, and Clip Metadata is stored in every frame, as well as in the XML file within each clip. All audio is recorded 48Hz 16 bit Uncompressed WAV audio.

Also Note 1080p59.94/60p, 1080p119/120 and 12 bit files are recorded as Packed, so our CD unpacker utility will need to be used before the files can be used in any editor.

#### NATIVE 10-BIT / 16-BIT DPX SUPPORT

Adobe CS6 / Adobe CSCC/2014 Apple Color AutoDesk Smoke Assimilate Scratch Lab Avid DS Black Magic DaVinci Resolve Cineform Studio ColorFront OnSet Dailies DJViewer Eveon Fusion Grass Valley Eduis (Does not support 16-Bit) The Foundry Nuke Xnview(Does not support 16-Bit)

#### PLUGINS FOR DPX SUPPORT

Glue Tools Apple FCP Pro Apple FCP Pro X Meta Fuse Avid Media Composer

# 2K / 1080P 12 BIT RECORDINGS IN DAVINCI RESOLVE 11\*

Generating a LUT and applying it as an input lut should help fix the issue. Here is how it can be done:

- 1. Add a single DPX sequence to a new project and create a timeline
- 2. In the color page, go to the RGB Mixer and swap the red and blue channels
- Right click on the VSR of the Clip and generate a LUT. Save the LUT in the default location or in a sub folder then open the project with the DPX files that exhibit the issue. Apply the saved LUT as an input LUT.

\* If using Resolve 10 or older, or other NLE's such as Adobe, Scratch Lab, or Autodesk Smoke, then you can simply import the DPX files after running through the data unpacker.

#### Apple ProRes

The Odyssey can record in Apple ProRes 422 (HQ), Apple ProRes 422 and Apple ProRes 422 (LT) compressed codecs. This allows for high quality recording while avoiding high data rates of working with uncompressed video.

#### NATIVE APPLE PRORES SUPPORT

Adobe CC 2014\* Apple FCP X, Aperture Cineform Studio Final Cut Pro 7 Black Magic DaVinci Resolve The Foundry Nuke Autodesk Smoke Sony Vegas

#### FCP X IMPORT SETTINGS (Apple ProRes Only)

Once you have created a new project be sure to check the following Settings:

- 1. Under Final Cut Pro select Preferences
- Select navigate to File and select Import Media
- 3. Navigate to the Clips directory, and select the Clip Folder contain your Apple ProRes (.MOV) files.

\* Note if you are recording the the internal media you can import the matching Slog2 file, and select Match Color for a close approximation of Slog2, but will most likely need additional tweaking.

# CANON C500 4K RAW SUPPORT

All Canon C500 4K recording on the Odyssey is recorded as 10 bit Cinema RAW file.

Also note that with RMF files timecode, and Clip Metadata is stored in every frame, as well as in the XML file within each clip. All audio is recorded 48Hz 32 bit Uncompressed WAV audio.

It is important to correctly set the white balance of the camera, as this is baked into the RAW file.

#### NATIVE CINEMA RAW SUPPORT

Assimilate Scratch Lab Black Magic DaVinci Resolve Canon Cinema RAW Development Adobe CC 2014

NOTE: Canon Half Raw files are not supported in Resolve 10-11 or Adobe CC2014.



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