

ArenaView System



Installation manual

DMX connection option

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1.0 SYSTEM COMPONENTS

1.1 About the System

The ArenaView™ System is a complete turnkey multimedia presentation package for large-scale event facilities with the following components:

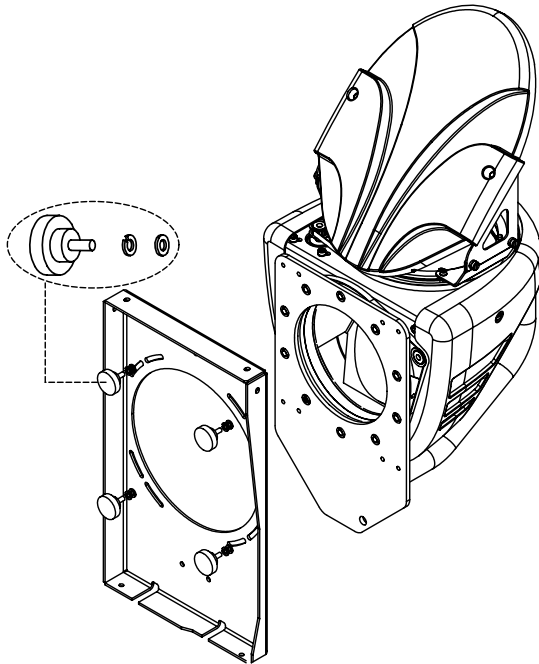
- Barco FLM Projectors fitted with ArenaView Orbital Head systems.
- The Axon Media Server for creating real time color and geometric effects.
- Road Hog® Full Boar console to provide DMX control to all the system components.

This guide will give you the basic installation process. It is brief and intended for experienced lighting professionals. You can find more detailed information on installing and operating individual components in their respective User Manuals.

1.2 Projector Hardware Setup

Mounting the Orbital Head to the Projector

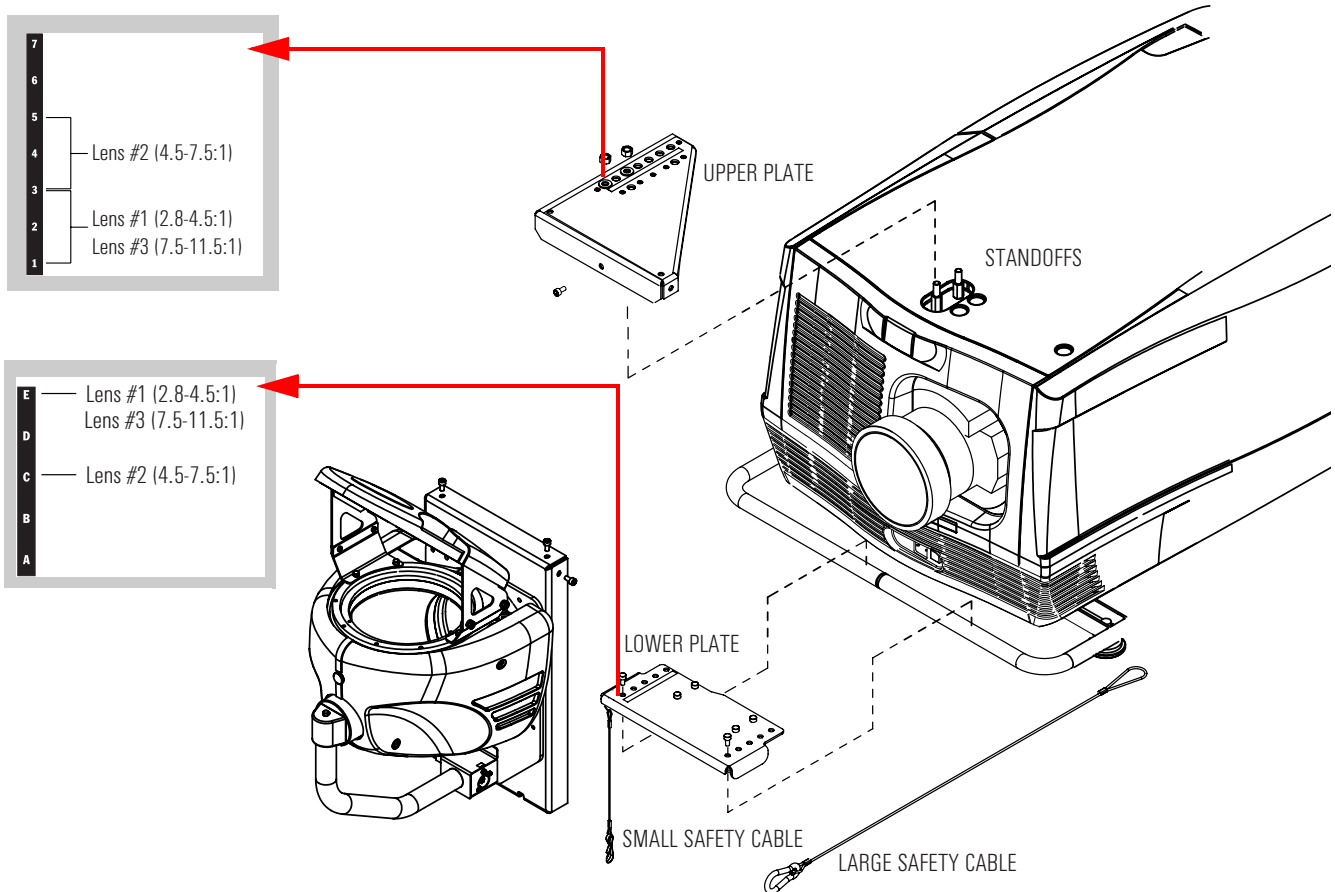
1. After selecting and installing the lens, use the following steps to mount the ArenaView Orbital head to the projector.
2. Attach the mounting plate to the Orbital Head using four knobs with M6 lock and flat washers provided.



System Components

3. Remove the large closed eye-bolt and the interlocking pin from the front of the projector top. Thread standoffs into the projector, positioning the longer one at the front.
 4. Attach the mounting plate to the lower bracket with two M6 socket cap screws. Position them according to the label in the correct holes for the lens you are using.
 5. Attach the mounting plate to the upper bracket using five M6 socket cap screws.
 6. Loosen the rail support from the lower bracket.
 7. Hook the lower bracket over the lifting bar and tilt the whole assembly until it is positioned over the standoffs.
- Note: The standoffs should be aligned with the correct holes in the upper bracket for the lens you are using.**
8. Secure the upper bracket to the standoffs with M10 flat washers and hex nuts.
 9. Secure the rail support to the lower bracket with two M6 socket cap screws.
 10. Attach the large safety cable to the lifting bar and the Orbital Head Mounting Bracket and clip the loose end of the small safety cable to the Orbital Head.

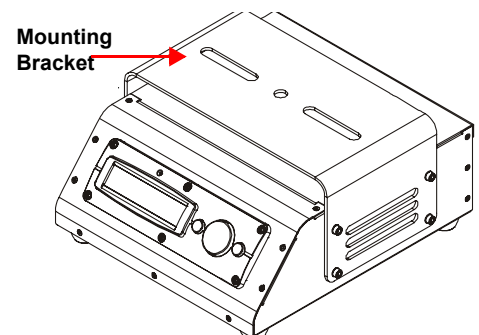
Note: A hole is available in the upper plate of the mounting bracket for re-installing the closed eye bolt if needed.



Mounting the Power Hub

1. Attach one or two cheeseborough clamps to the mounting bracket for mounting on any standard truss. Use safety cable to secure the Power Hub to an independent support.

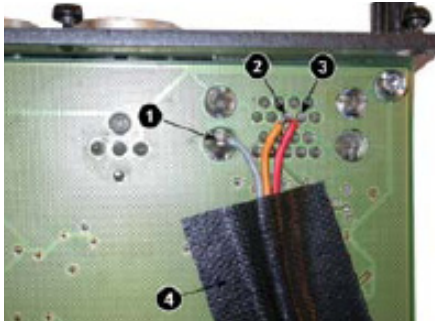
Note: The Power Hub must be located within two meters of the projector head for correct performance.



Mounting the DMX Module

Preparing the communication interface board.

1. Switch off the projector and unplug the power cord.
2. Loosen the quarter turn screws and remove first the left and then the right front bezels of the projector.
3. Loosen the two captive screws to remove the cover plate from SLOT 4 of the projector.
4. Loosen the eight captive screws holding the communication interface board module and remove it from the projector.
5. Turn the module over and solder the wires of the provided RS232 cable to the indicated points (1, 2 and 3) on the back of the board.
6. Once the wires are soldered, pull them back until they are straight and use tape (4) to fix them to the board.



- 1 gray wire
- 2 orange wire
- 3 red wire

7. Position the board for re-insertion into the projector and route the RS232 cable through the opening at the top right back corner of the communication board compartment into the open SLOT 4.
8. Taking care to prevent pinching the RS232 cable, reinsert the communications interface into the guides and push back into the projector.
9. Tighten the eight captive the secure the Communication Interface module to the projector.

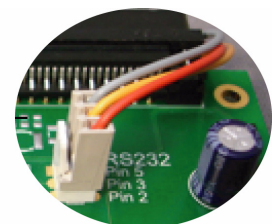


Mount the DMX unit in the FLM Projector

10. Plug to the RS232 communications cable into the RS232 header on the DMX module board.
11. Routing the cable to the right side of the back plane connector to prevent pinching the wires, carefully slide the DMX unit into the SLOT 4 card edge guides.
12. Push the DMX forward until you feel that the connector of the unit fits in the socket of the input slot.

Note: When the DMX module is completely inserted, the back side of its front plate must touch the front plate of the input and communication unit to ensure a good connection.

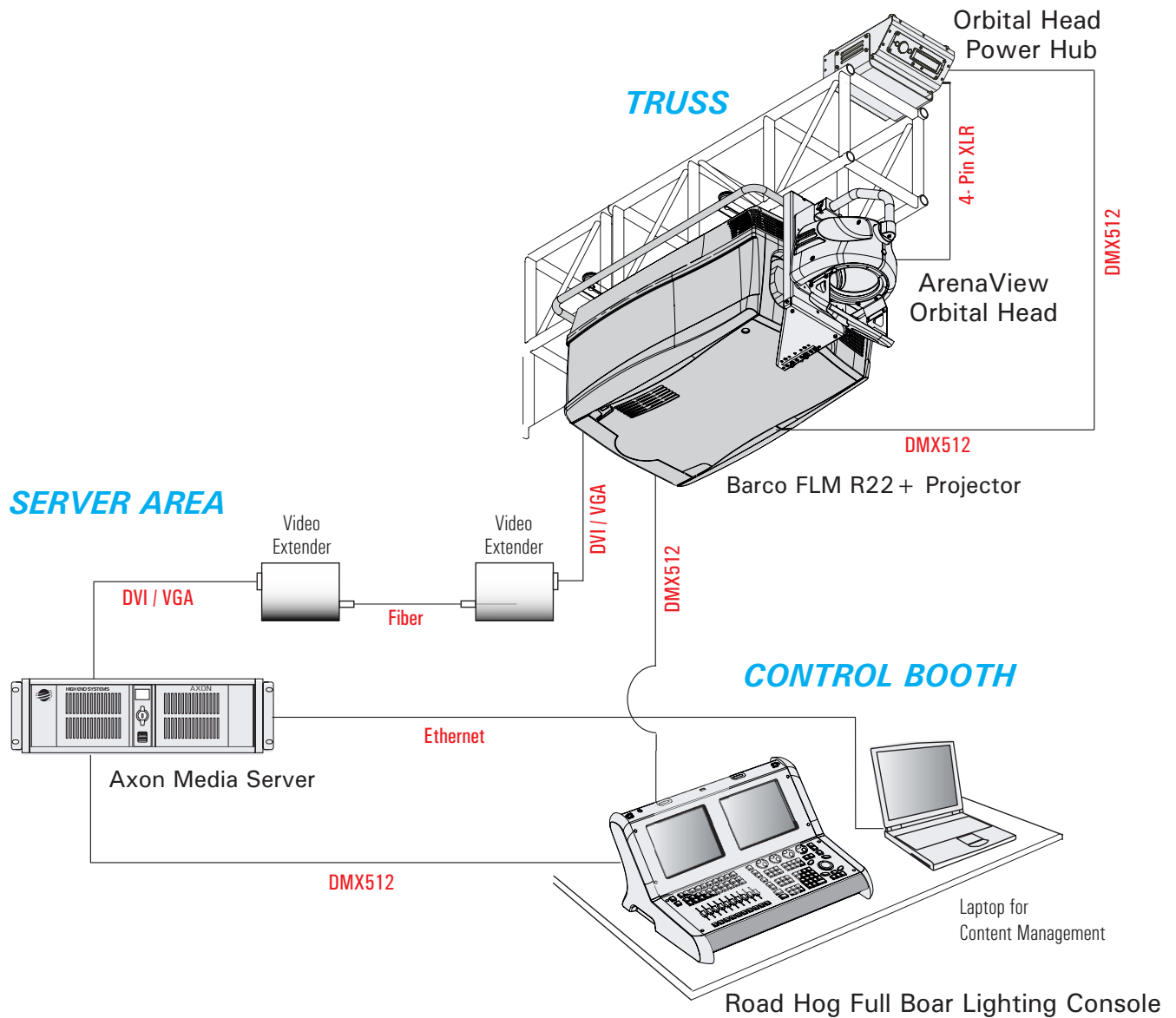
13. Secure the module by fastening both captive screws in the top corners of the unit.
14. Replace the right and then the left front bezels, tightening the quarter turn screws to secure.
15. Reattach in the power cord.



1.3 System Connections

Connect the components of the ArenaView system as shown in the diagram below. Note the following regarding component connections

- All DMX cabling needs to meet the specifications for EIA RS-485 applications to a DMX 512 link using 5-pin XLR connectors.
- The ArenaView Orbital Head connects to the Power Hub with the provided Modular link cable using 4-pin XLR connectors.
 - Pin 1 Ground
 - Pin 2 Data Complement
 - Pin 3 Data True
 - Pin 4 +40V
- Video Extenders using fiber or CAT5 cables should be used on long runs.
- In addition to the connections shown in the diagram, all components connect to power.
- See User Manuals for additional information on available connections provided for each component.



Cables

All components ship with power cords but you will need to provide and install power cord caps appropriate to your location. The Orbital Head Power hub also ships with a 4-pin XLR cable for connection to the ArenaView Orbital Head. In addition you will need to provide all the following required for your project.

- Video Cables
- DMX Cables
- Ethernet Cables
- Video Extenders
- Fiber cable
- Cat 5 Cable
- Additional Safety cables and mounting hardware

1.4 System Component Specifications

COMPONENT	ELECTRICAL		MECHANICAL	
	Power	Mains Voltage	Weight	Dimensions (includes any carrying handle and rigging points)
FLM Projector	3600 W	200-240 V	99 Kg (220 lbs)	707 mm x 1025 mm x 548 mm (27.8 in x 40.3 in x 21.5 in)
ArenaView Orbital. Head	NA	NA	12.7 kg (28 lbs)	349 mm x 369 mm x 686 mm (13.7in x 14.5in x 27in)
ArenaView Power Hub	100 W	100-230 V	2.3kg (5lbs)	276 mm x 301mm x 120mm (10.9in x 11.8in x 4.7in)
Axon Media Server	6.3 Amp	100-230 V	15 kg (33 lbs)	465 mm x 89 mm x 528 mm (18.3 in x 3.5 in x 20.8 in)
Road Hog Full Boar	6.3 Amp	90-240 V	20.8 kg (45.9 lbs)	759 mm x 572 mm x 310 mm (29.88 in x 22.5 in x 12.24 in)

Related Products, Accessories and Spare Parts

DESCRIPTION	Part Number
Projector	
Barco FLM-22 Projector	R9004500
HIGH BRIGHTNESS SLM LENS TLD(7.5-11.5:1)	R9829997
BME P TLD+ LNS 4.5-7.5 lens	R9862040
BME P TLD+ LNS 2.8-4.5 lens ^{Note 1}	R9862030
DMX Module for Barco FLM projector	R9854549
FLM lamp house (3kW lamp included)	R9854420
FLM lamp house refurbish (3kW lamp included)	R9854520
Cover plate for unused input slot	R848607
Replacement filters: FLM front, top and bottom filter (6 sets)	R9865570
Replacement filters: FLM front, top and bottom filter (24 sets)	R9854480
One rigging clamp for truss installations	R820411
Orbital Head/Power Hub	
ArenaView Orbital Head	56010004
Power Hub	56040053
Outer Mirror	80180006
Inner Mirror	80180007
Galvanized safety cable	12040001
Cheeseborough clamp	55040014
4-pin XLR Modular Link cable	90409125
Media Server	
Axon Media Server	76020002
Lighting Console	
Road Hog® Full Boar lighting console	A6020001
Road Hog® lighting console	A2020001
Optional Wholehog 3 lighting console w/	61020003
DP8000 DMX Processor (required with the Wholehog 3 console)	62040001
Miscellaneous Cabling	
Male 5-pin DMX terminator	90404039
Heavy duty 5-pin XLR cable (10')	55050017
Heavy duty 5-pin XLR cable (25')	55050018
Heavy duty 5-pin XLR cable (50')	55050019
Heavy duty 5-pin XLR cable (100')	55050020

Note 1: When using this lens, the lower end of zoom range approximately 3:1 image will be cropped.

2.0 CONFIGURING SYSTEM FOR DMX CONTROL

2.1 Projector

To configure the FLM projector for ArenaView you need to set a DMX start channel and the DMX Mode on the DMX module, and set the Lamp Mode and the Home on Startup option using the projector's menu system.

DMX Address

The projector running in extended mode for ArenaView requires 10 consecutive channels on a DMX512 link. To Set a DMX start channel: After powering up the projector, turn the three knobs located on the DMX module until the desired address is reached. The left knob is for the hundreds, the middle one for the tens and the right one for the units.



DMX Mode

ArenaView requires the projector be set to Extended DMX mode with 10 DMX channels. Select the Extended mode by setting both DIP switch 1 and DIP switch 2 to (ON).

Lamp Mode

The FLM projector has a Normal and Economic Lamp mode. ArenaView requires the Normal Lamp mode be selected to achieve maximum light output.

To select the normal lamp mode:

1. Press MENU to activate the menus.
2. Use the up or down arrow key to select Lamp and press ENTER.
3. Use the up or down arrow key to select Power and press ENTER.
4. Use the up or down arrow key to select Mode.
5. Press ENTER to toggle to [Normal]

Home Lens on Startup

When power is applied to the projector, the lens will search for its minimum and its maximum position. These minimum and maximum values will be used during this sessions to control the lens exactly. Once the lens limits are found, the lens returns to original position. This full process takes about 3 to 4 minutes. During the homing cycle, all functions in the projector are blocked.

To set lens homing option to ON:

1. Press MENU to activate the menus.
2. Use the up or down arrow key to select Projector Control and press ENTER.
3. Use the up or down arrow key to select ART DMX and press ENTER.
4. Use the up or down arrow key to select Home lens at startup and press ENTER to toggle to [On].

2.2 ArenaView Orbital Head / Power Hub

The ArenaView Orbital Head requires 6 DMX channels on a DMX link. Set a DMX start channel for the Orbital Head using the Power Hub's onboard menu system.

To set the DMX start channel:

1. After powering up the hub, press the **Menu** button to unlock the menu system or to move back up the system to the top level menus. DMX ADDRESS MENU is the first menu item at the top level.
2. Press the Enter button to select. The display will show Set DMX START CHANNEL.###. The display will show the start channel currently assigned to the fixture.
3. Use the up and down arrows on the Navigation button to select a new DMX start channel, if necessary. The display will flash a new option ready for selection.
4. Press the Enter button to accept the new DMX start channel.

Note: If the Enter button is not pressed, the old value will remain selected after exiting the menu.

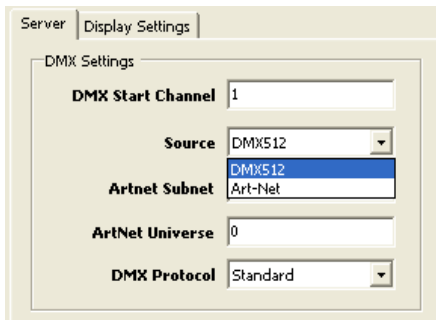
2.3 Axon Media Server

The Axon Media Server is configured for DMX control through the Content Management Application (CMA) running on a laptop connected to the Media Server via Ethernet. The Media server channel requirement depends on whether you are configuring it to render and display 1 Graphic Object (Single Protocol), 2 Graphic Objects (Dual Protocol) or 3 Graphic Objects (Standard Protocol). Standard Protocol is recommended for ArenaView applications and requires 149 channels on a DMX link.

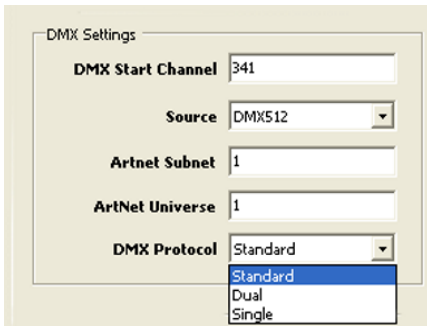
After starting up the Axon unit, press the Launch CMA button on the laptop. The application automatically finds and identifies Axon media servers connected on the same Ethernet link.

To set a DMX Start channel:

1. Select the Media Server you want to configure under the All Servers screen of the CMA.
2. Click on the down arrow of the Source field to select DMX512 for the DMX Source type.
3. Set the DMX Protocol to Standard by selecting it from the drop down list in the option field.



4. Enter a valid Start Channel for the protocol type you have chosen in the DMX Start Channel field.



Note: An active display device must be attached to both DVI ports before booting to view the CMA on a local unit. When only one port is connected, it defaults to display the graphics engine output and will not display the CMA screen.

2.4 Road Hog® Full Boar

Once the projector, media server and ArenaView Orbital head have been configured you can patch them to the lighting console using the following steps:

1. Add an "Arena View" fixture from the Barco manufacturer group to your show file.
2. Patch the Arena View fixture to match the assigned DMX start addresses for the Orbital Head and Projector. Note that the Arena View fixture is a multi-part fixture type:
 - a. The Intensity partition sets the DMX address for the Projector.
 - b. The Fixture partition sets the DMX address for the Orbital Head.
3. Add one "DL.3 Global" and three "DL.3 Graphic" fixtures from the High End Systems manufacturer group to your show file.
4. Patch the "DL.3 Global" and 3 "DL.3 Graphic" fixtures to match the DMX start address assigned on the Axon Media Server.
5. Select the Arena View fixture, assign intensity and select the input with the valid source from the Axon.
6. Select the Axon Global fixture and set the intensity to 100%. Also set the intensity of the first graphic fixture to 100%.
 - a. Adjust the graphic fixture's Media File parameter to 1.

You should now see the Axon logo being projected from the Arena View system.

3.0 DMX CHANNEL TABLES

FLM Projector (Extended Mode)

Chan #	Description
1	Intensity
2	Brightness
3	Contrast
4	Input Selection
5	Lens Control
6	Focus (MSB)
7	Focus (LSB)
8	Zoom (MSB)
9	Zoom (LSB)
10	Control

ArenaView Orbital Head

Chan #	Description
1	Pan
2	
3	Tilt
4	
5	MSpeed
6	Control

Axon Media Server

Chan #	Description	Graphic Obj 1	Graphic Obj 2	Graphic Obj 3	Description
1	Global Intensity	36	74	112	Opacity
2	Global Effect 1	37	75	113	3-D Object File
3	Global Effect 1 Modifier 1	38	76	114	Media Folder
4	Global Effect 1 Modifier 2	39	77	115	Media file
5	Global Effect 1 Modifier 3	40	78	116	In frame
6	Global Effect 2	41	79	117	
7	Global Effect 2 Modifier 1	42	80	118	Out frame
8	Global Effect 2 Modifier 2	43	81	119	
9	Global Effect 2 Modifier 3	44	82	120	Play mode
10	Mask Select (default iris)	45	83	121	Play speed
11	Mask Size	46	84	122	Sync Mode
12	Mask Edge	47	85	123	Sync To
13	Edge Fade Top	48	86	124	Visual mode
14	Edge Fade Right	49	87	125	Visual Mode Modifier 1
15	Edge Fade Bottom	50	88	126	Visual Mode Modifier 2
16	Edge Fade Left	51	89	127	Graphic Effect 1
17	Keystone Top Left X	52	90	128	Effect 1 Modifier 1
18	Keystone Top Left Y	53	91	129	Effect 1 Modifier 2
19	Keystone Top Right X	54	92	130	Effect 1 Modifier 3
20	Keystone Top Right Y	55	93	131	Graphic Effect 2
21	Keystone Bottom Right X	56	94	132	Effect 2 Modifier 1
22	Keystone Bottom Right Y	57	95	133	Effect 2 Modifier 2
23	Keystone Bottom Left X	58	96	134	Effect 2 Modifier 3
24	Keystone Bottom Left Y	59	97	135	X-axis rotation
25	X Ratio	60	98	136	
26	Y Ratio	61	99	137	Y -axis rotation
27	Viewpoint mode	62	100	138	
28	Viewpoint Position X	63	101	139	Z-sxis rotation
29		64	102	140	
30	Viewpoint Position Y	65	103	141	Scale X
31		66	104	142	Scale Y
32	Viewpoint Position Z	67	105	143	Scale Z
33		68	106	144	X Position
34		69	107	145	
35	Global Control Modifier	70	108	146	Y Position
		71	109	147	
		72	110	148	Z Position
		73	111	149	