

TECH DOC Essentials: The PaperBoats - *Seven Little Wonders*

Goodwood Theatre and Studios

7LWS Touring Party

Dave Brown – Conceiver, Director, Lighting, Sound, Motion Graphics Designer.

Gavin Clarke - Theatre-Maker, Performer, Composer, Music Producer.

Sarah Brokensha - Theatre-Maker, Performer.

Bob Weatherly - Technical Director, Lighting Co-Designer, Provocateur.

Robyn Brown - Business Development Manager.

7LWS OverView

Seven Little Wonders is an intimate, non-verbal, visual theatre performance for 3 to 8 year old children and their carers. For more information about the show see: <https://thepaperboats.org/7lws>

We tour with and operate all the equipment we need for the show, including onstage seating, lighting, sound, video projection, cameras, operating systems and cabling. We provide as a separate document in printable text-only form - all essential tech specs with additional info that may be useful on the day. (7LWS Tech Doc)

Show Length: 45 minutes (no interval)

Touring Party: 2 performers, 2 technical manager/operators

Dressing Rooms: one for each performer (2)

Office: with desk and wifi access

Laundry: washing machine, tumble drier, iron, ironing board

Green Room: tea/coffee making, washing up

Technical Operating Desks: 2 x 1.8 mx .8m approx.

Audience Safety: As shown on the stage plot diagram, the audience is seated on mats and benches on-stage. We need a safety barrier of some sort behind the back row of benches to ensure the safety of patrons. In Port Lincoln this will take the form of a row of flip-up seats taped to the floor.

Local Crew: Bump-in/Bump-out: 1 or 2 multi-skilled venue technicians

Show Crew: None required

Lighting Overview: All fixtures, equipment and cabling is supplied and operated by The PaperBoats. Overhead, we have 8 moving washes, 8 kinetic bowl lights on winches, 2 moving profiles, 2 UV's, and 1 titan tube on a winch. On the floor, we have 6 booms each with a .5m LED strip and a pat 23 profile, 6 titan tubes on stands, and 7 droplight pucks. We need power on the PS end of each lighting bar on which we have our lights and projector and power at floor level (either US or DS) both PS and OP.

Audio Visual Overview: We tour our own audio system - 2 regular speakers + 2 woofers, wirelessly connected to mixer and a variety of inputs. We tour with our own projector but will use the inhouse projector if that is the best option and it doesn't incur additional expense. We use a DMX operated projector shutter/douser for complete projection blackout on a number of occasions. We also use 3 x PTZ networked cameras. We need to set-up an off-stage green screen studio in close proximity to the stage.

7LWS Tour Equipment List

2 x PowerMac Pro Computers plus dual monitors and hubs
1 x GS30 8EP NetGear Switch + Cat 8 Cabling
1 x Vista MV Lighting Control Surface + 2 x 512 channel dongles
DMX Transmitter System + Splitter
3 x PTZ FoMalo 30X Cameras
1 x PTZ Controller
1 x Optomo 6000LM Laser Project + HDMI Ethernet Compact
1 x DMX Controlled Projector Shutter/Douser
1 x Green Screen Set-up + Lights
1 x Panasonic Video Cam HC-V800HD
9 x Astera AX3 Lightdrop Pucks + charger box
8 x Atstera Titan Tubes + charger box
1 x Astera Box ART7
1 x iPad Pro with Astera App
2 x Phillips Showline SL300 Intel Spotlights
8 x 19x15 Watt LED Moving Wash Lights
8 x DMX controlled winches + LED Light Balls
2 x Chauvet EVE P150 UV Lights
8 x Sidelight Stands
8 x Patt 23
8 x DMX Dimmer Units
8 x .5m LED Strips
Power, PowerCon, DMX and Ethernet Cabling as required
(all tested and tagged)
1 x MG10XU Mixing Desk
1 x Alto Stealth Wireless Speaker System
2 x Wireless Headset Microphones
2 x Wireless Instrument Pick-Ups
2 x Yamaha DBR12 Speakers
2 x DSX12 Mk11 Sub Woofer Speakers
Show props, instruments and costumes
Audience Seating: 5 benches @ 1.8x.42m, 4 benches @ 2.4x.33m, 4 benches @ 2.4 x .22m,
32 mats x .6 x .6m

Bump In: Venue Tech (VT) + 7LWs Tour Party of 4 (BW, DB, SB, GC)

Hour 1 - Load in, Mark-up Stage and Layout Fixtures & Cables

Hour 2 - Hang and Focus Lights, Winches and Projector (BW+VT)

Set-Up Operating Desk and PTZ Cameras (DB)

Set-Up Side Lights and GreenScreen Studio (SB+GC)

Hour 3 - Continue and complete above (BW)

Set up Sound System - (DB)

Set up audience seating (SB+GC)

Hour 4 - Set up Astera Titans and AX3's - (DB)

Set up discs, cushions, instruments and props - (GC+SB)

Hour 5: Complete and Test all systems. Trouble Shoot problems.

Hour 6: Plot Lighting Presets (BW)

Plot Camera Presets (DB)

Hour 7&8: Tech Rehearsal + Dress Rehearsal

Bump Out: Venue Tech (VT) + 7LWs Tour Party of 4 (BW, DB, SB, GC)

Hour 1+2 - Derig + Pack Hanged Lights, Winches, Projector & Cabling (BW+VT)

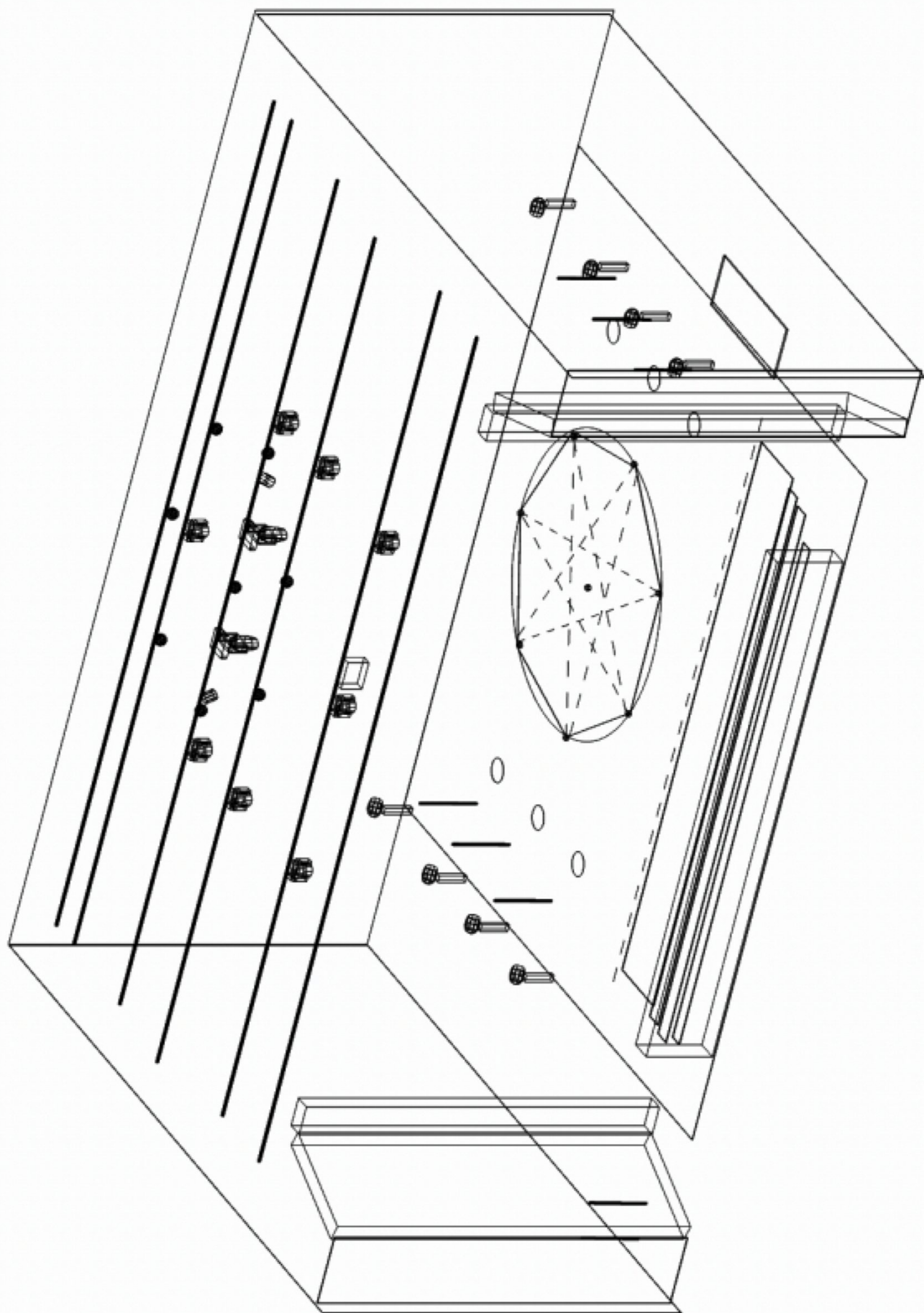
Pack+Recharge Astera Titans and AX3's; Pack PTZ Camera's (DB)

Derig and Pack Side Lights and Green Screen Studio (SB+GC)

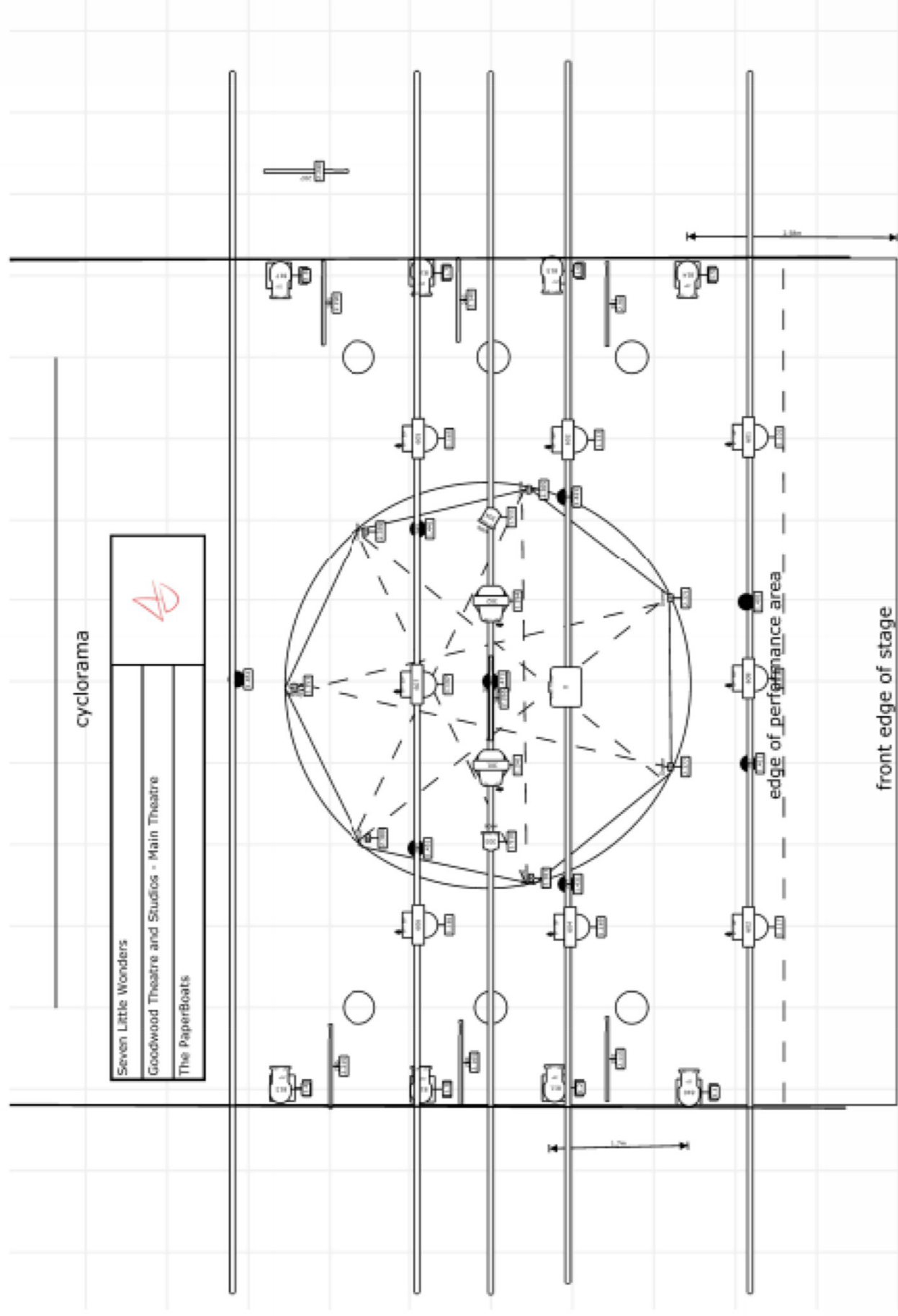
Dismantle and Pack Sound System (DB)

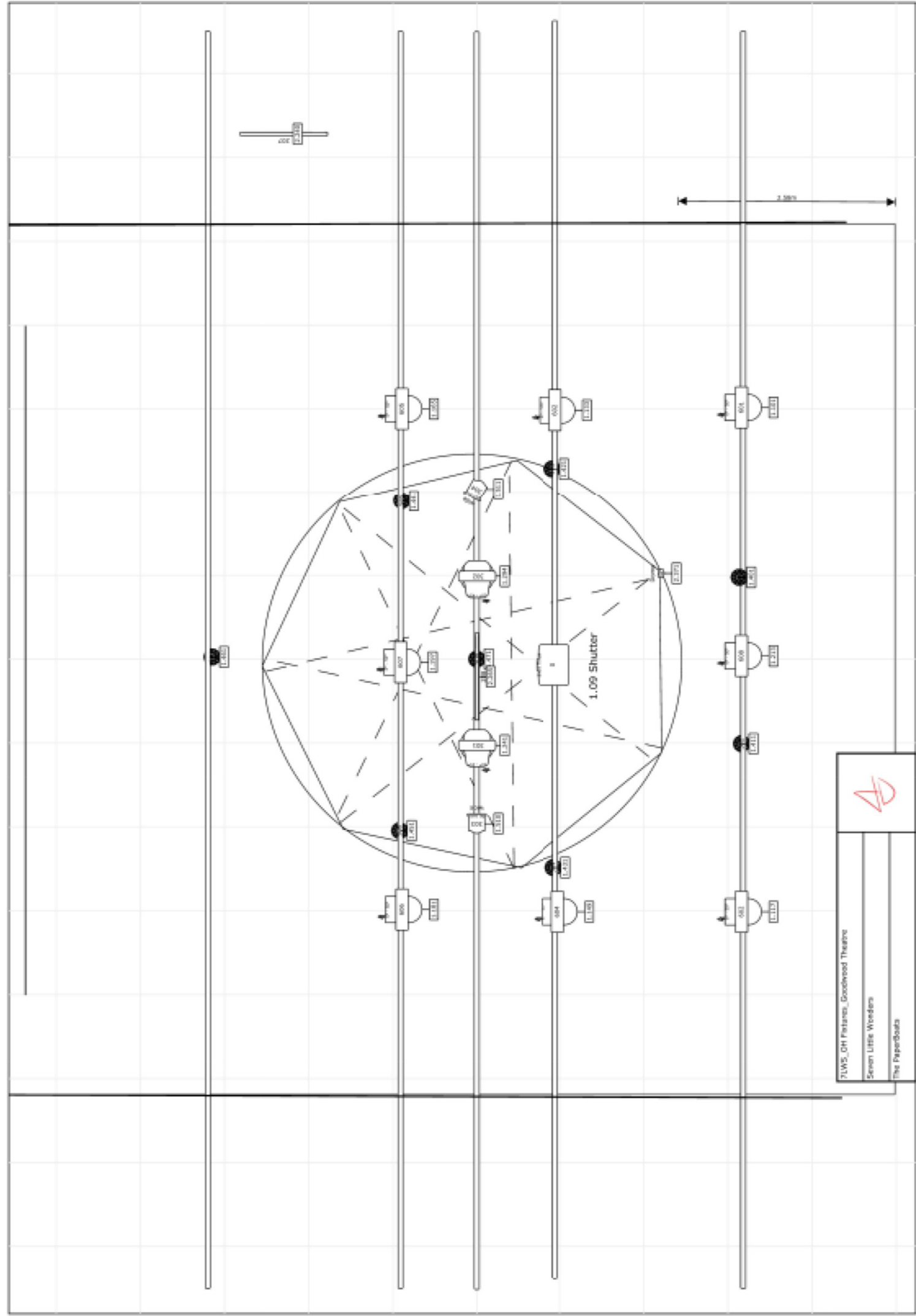
Dismantle Audience Seating (SB+GC)

Hour 3 - Pack Desk. (DB) Load Out and Pack Vehicle (ALL)



Seven Little Wonders - Goodwood Theatre Plot





TLWS_OH Finland, Goodwood Theatre
Seven Little Woodens
The Paperboats

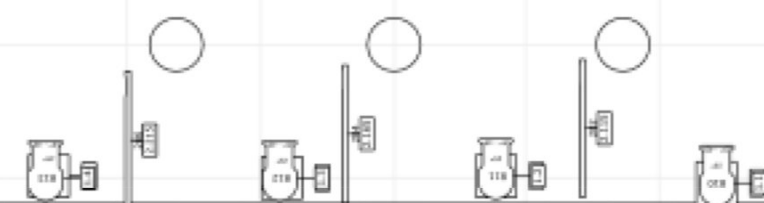
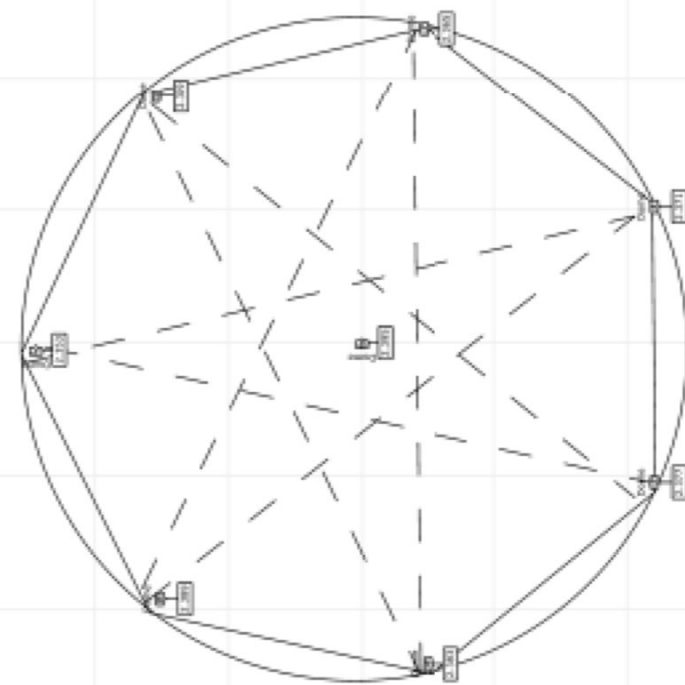
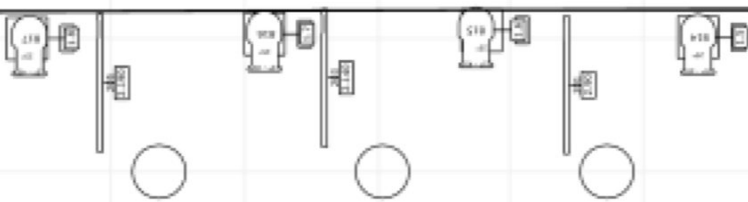




PLANS...Four Palaces...Goodwood Theatre
Seven Little Wonders
The PaperBoats



2.50m



1.75m

←.....← piggy back power cable

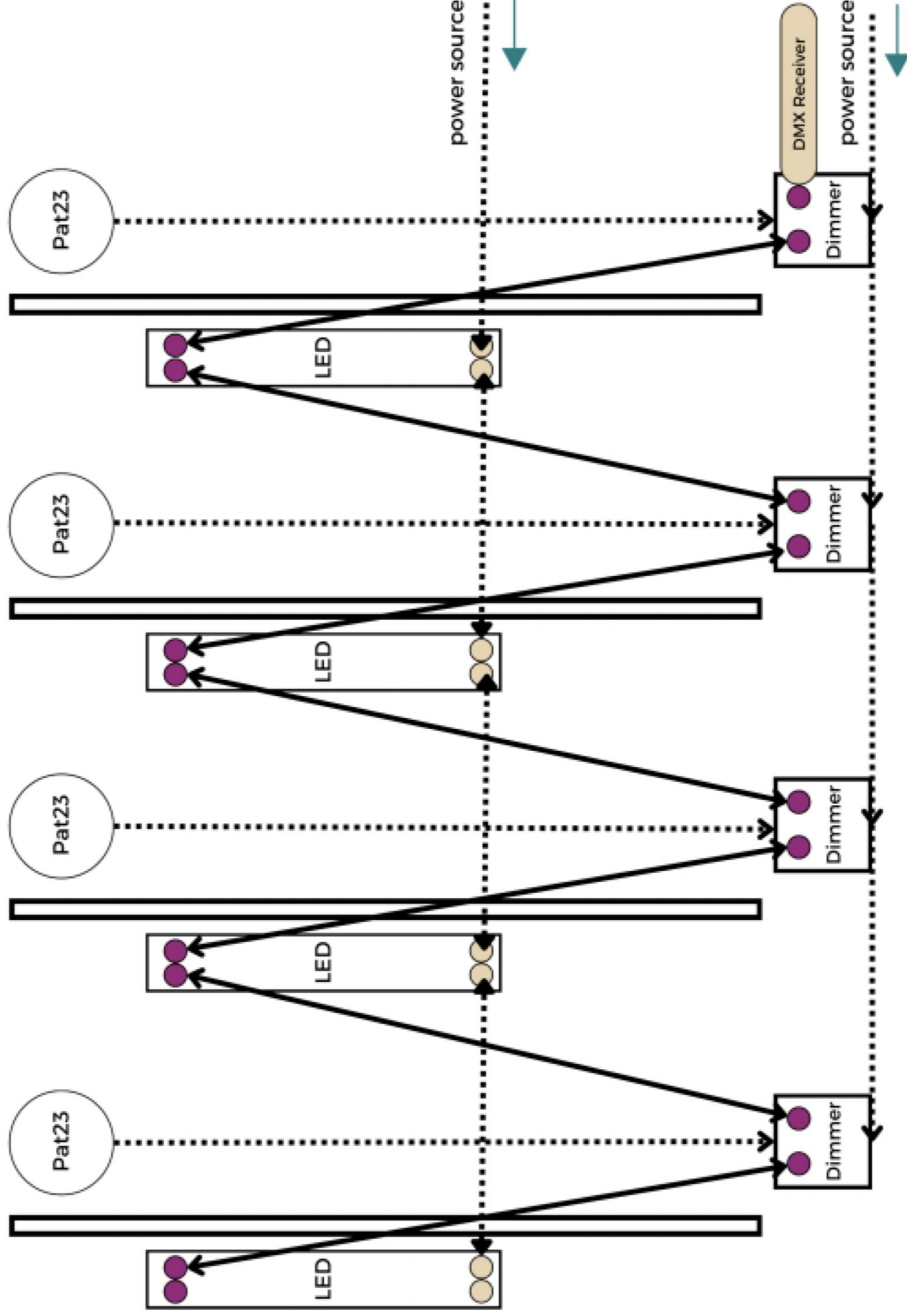
↔.....↔ powercon cables

DMX cables

Side Booms - LED Half Strips + Pat23's

4 booms each on OP and P-side

distance between units = 1.7m



Seven Little Wonders Fixture report

February 2024 Nautilus Arts Centre - Port Lincoln Theatre

Fixtures

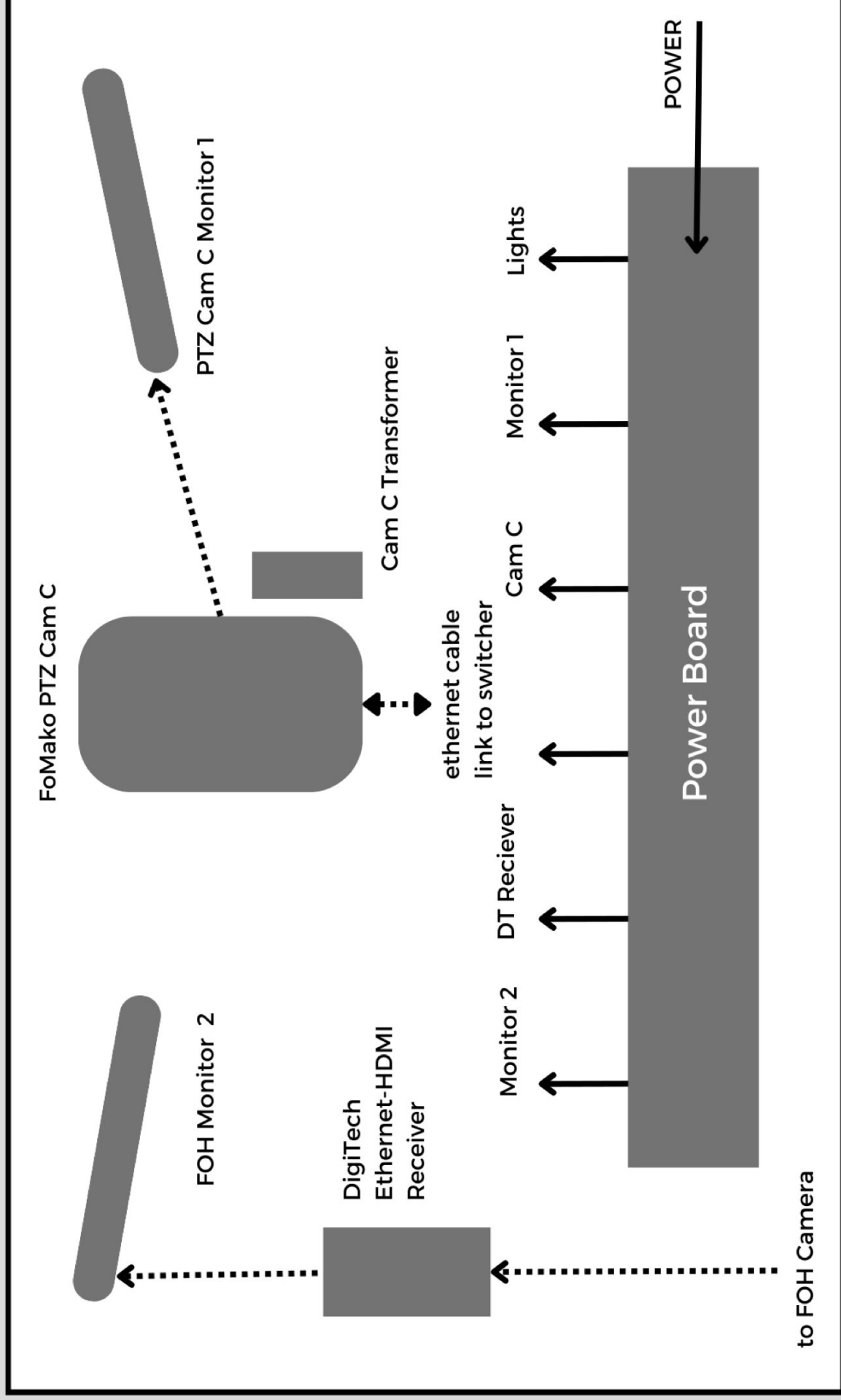
Unit	Name	Patch	Mode	Location
1	Astera AX3 Lightdrop	2.371	6: DIM RGBAW [Pixel=1]	P1
2	Astera AX3 Lightdrop	2.377	6: DIM RGBAW [Pixel=1]	OP1
3	Astera AX3 Lightdrop	2.365	6: DIM RGBAW [Pixel=1]	P2
4	Astera AX3 Lightdrop	2.383	6: DIM RGBAW [Pixel=1]	OP2
5	Astera AX3 Lightdrop	2.359	6: DIM RGBAW [Pixel=1]	P3
6	Astera AX3 Lightdrop	2.389	6: DIM RGBAW [Pixel=1]	OP3
7	Astera AX3 Lightdrop	2.353	6: DIM RGBAW [Pixel=1]	UC
8	Astera AX3 Lightdrop	2.395	6: DIM RGBAW [Pixel=1]	C
101	Unknown 9x18W Led Pixel Wall Washer	1.10	11 Channel	OP1
102	Unknown 9x18W Led Pixel Wall Washer	1.21	11 Channel	OP2
103	Unknown 9x18W Led Pixel Wall Washer	1.32	11 Channel	OP3
104	Unknown 9x18W Led Pixel Wall Washer	1.43	11 Channel	OP4
105	Unknown 9x18W Led Pixel Wall Washer	1.54	11 Channel	P1
106	Unknown 9x18W Led Pixel Wall Washer	1.65	11 Channel	P2
107	Unknown 9x18W Led Pixel Wall Washer	1.76	11 Channel	P3
108	Unknown 9x18W Led Pixel Wall Washer	1.87	11 Channel	P4
201	Astera Titan Tube FP1	2.90	31 DIM RGBAW DIM RGBAW .. S [PXL=4] [STRB=Single]	Star1
202	Astera Titan Tube FP1	2.115	31 DIM RGBAW DIM RGBAW .. S [PXL=4] [STRB=Single]	Star2
203	Astera Titan Tube FP1	2.140	31 DIM RGBAW DIM RGBAW .. S [PXL=4] [STRB=Single]	Star3
204	Astera Titan Tube FP1	2.165	31 DIM RGBAW DIM RGBAW .. S [PXL=4] [STRB=Single]	Star4
205	Astera Titan Tube FP1	2.190	31 DIM RGBAW DIM RGBAW .. S [PXL=4] [STRB=Single]	Star5
206	Astera Titan Tube FP1	2.215	31 DIM RGBAW DIM RGBAW .. S [PXL=4] [STRB=Single]	Star6
207	Astera Titan Tube FP1	2.240	31 DIM RGBAW DIM RGBAW .. S [PXL=4] [STRB=Single]	Star7
208	Astera Titan Tube FP1	2.265	42 RGB RGB [PXL=16] [STRB=Off]	Star8_C
301	Showline SL LEDSpot 300	1.241	Standard	LX3_OP
302	Showline SL LEDSpot 300	1.294	Standard	LX4
303	Chauvet DJ EVE P-150 UV	1.510	1 Channel Mode	OP
304	Chauvet DJ EVE P-150 UV	1.511	1 Channel Mode	P
501	Flykostage LED Kinetic Lighting System	1.401	10 Channel	W1
502	Flykostage LED Kinetic Lighting System	1.411	10 Channel	W2

503	Flykostage LED Kinetic Lighting System	1.421	10 Channel	W3
504	Flykostage LED Kinetic Lighting System	1.431	10 Channel	W4
505	Flykostage LED Kinetic Lighting System	1.441	10 Channel	W5
506	Flykostage LED Kinetic Lighting System	1.451	10 Channel	W6
507	Flykostage LED Kinetic Lighting System	1.461	10 Channel	W7
508	Flykostage LED Kinetic Lighting System	1.471	10 Channel	W8
601	MZMLing LED 19x15W Wash/Zoom Light	1.101	16 Channel	LX2_P
602	MZMLing LED 19x15W Wash/Zoom Light	1.117	16 Channel	LX2_OP
602	MZMLing LED 19x15W Wash/Zoom Light	1.133	16 Channel	LX3_P
604	MZMLing LED 19x15W Wash/Zoom Light	1.149	16 Channel	LX3_OP
605	MZMLing LED 19x15W Wash/Zoom Light	1.165	16 Channel	LX4_P
606	MZMLing LED 19x15W Wash/Zoom Light	1.181	16 Channel	LX4_OP
607	MZMLing LED 19x15W Wash/Zoom Light	1.197	16 Channel	LX4_C
608	MZMLing LED 19x15W Wash/Zoom Light	1.213	16 Channel	LX3_C
810	Strand Lighting Pattern 23 Profile	1.1	Control	OP1
811	Strand Lighting Pattern 23 Profile	1.2	Control	OP2
812	Strand Lighting Pattern 23 Profile	1.3	Control	OP3
813	Strand Lighting Pattern 23 Profile	1.4	Control	OP4
814	Strand Lighting Pattern 23 Profile	1.5	Control	PS1
815	Strand Lighting Pattern 23 Profile	1.6	Control	PS2
816	Strand Lighting Pattern 23 Profile	1.7	Control	PS3
817	Strand Lighting Pattern 23 Profile	1.8	Control	PS4
1000	Optoma ZU720TST		Control	LX1_C



DO NOT sit on benches

Green Screen Studio - Table Set-Up



The PaperBoats - Seven Little Wonders

ADDITIONAL INFO ~ 7LWS_Computer Peripherals Set-Up

Dave's Computer

LHS

Apple Power in

USB-C – Hub USB Mouse, USB Spare, HDMI Spare

USB-C – Spare

Phono – to MXU Mixer

RHS

HDMI Out

USB-C ALogic Powered HUB 1 – 3 x USB-C to Dual Monitors + Ethernet, 1 x USB BackUp HD

Computer 1

LHS

Apple Power in

USB-C ALogic Powered HUB 1 – 3 x USB-C to Dual Monitors + BackUp HD, 1 x USB to MV1

RHS

Next Tech USB Hub with 4 x USB Outlets

C1 – USB Hub – 2 x USB Vista Dongles, 1 x USB Mouse, 1 x Ethernet Connection

Astera Profiles

Configure Astera Titan Tubes for DMX = <https://youtu.be/dFSmfueOi4Q>

Astera Titan Tubes # 1-6

Pairing and Setting = <https://www.youtube.com/watch?v=9Qo5ADREf70>

31: DIM RGBAW DIM RGBAW .. S (PIXEL = 4; STROBE = SINGLE)

CHANNEL	VALUE	PERCENTAGE	FUNCTION
1	0 - 255	0 - 100	Dimmer of Pixel 1 (closed --> open)
2	0 - 255	0 - 100	Intensity Red of Pixel 1 (0% --> 100%)
3	0 - 255	0 - 100	Intensity Green of Pixel 1 (0% --> 100%)
4	0 - 255	0 - 100	Intensity Blue of Pixel 1 (0% --> 100%)
5	0 - 255	0 - 100	Intensity Amber of Pixel 1 (0% --> 100%)
6	0 - 255	0 - 100	Intensity Emulated White of Pixel 1 (0% --> 100%)
7	0 - 255	0 - 100	Dimmer of Pixel 2 (closed --> open)
8	0 - 255	0 - 100	Intensity Red of Pixel 2 (0% --> 100%)
9	0 - 255	0 - 100	Intensity Green of Pixel 2 (0% --> 100%)
10	0 - 255	0 - 100	Intensity Blue of Pixel 2 (0% --> 100%)
11	0 - 255	0 - 100	Intensity Amber of Pixel 2 (0% --> 100%)
12	0 - 255	0 - 100	Intensity Emulated White of Pixel 2 (0% --> 100%)
13	0 - 255	0 - 100	Dimmer of Pixel 3 (closed --> open)
14	0 - 255	0 - 100	Intensity Red of Pixel 3 (0% --> 100%)
15	0 - 255	0 - 100	Intensity Green of Pixel 3 (0% --> 100%)
16	0 - 255	0 - 100	Intensity Blue of Pixel 3 (0% --> 100%)
17	0 - 255	0 - 100	Intensity Amber of Pixel 3 (0% --> 100%)
18	0 - 255	0 - 100	Intensity Emulated White of Pixel 3 (0% --> 100%)
19	0 - 255	0 - 100	Dimmer of Pixel 4 (closed --> open)
20	0 - 255	0 - 100	Intensity Red of Pixel 4 (0% --> 100%)
21	0 - 255	0 - 100	Intensity Green of Pixel 4 (0% --> 100%)
22	0 - 255	0 - 100	Intensity Blue of Pixel 4 (0% --> 100%)
23	0 - 255	0 - 100	Intensity Amber of Pixel 4 (0% --> 100%)
24	0 - 255	0 - 100	Intensity Emulated White of Pixel 4 (0% --> 100%)
25	0 - 3 4 5 6 7 - 255	0 - 1.2 1,6 2.0 2,4 2.7 - 100	Strobe for all Pixels Off Random Fast Random Medium Random Slow Variable Strobe (0.4Hz --> 25Hz)

Astera Titan Tube # 7

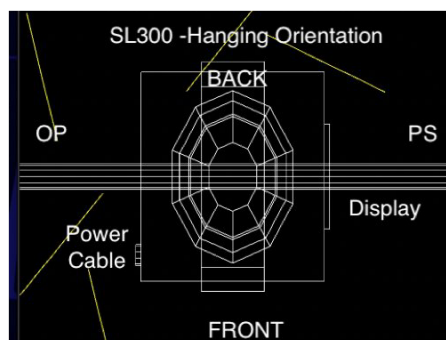
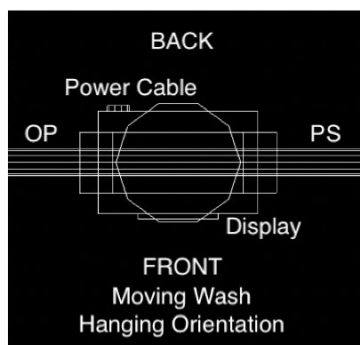
42: RGB RGB (PIXEL = 16; STROBE = OFF)

CHANNEL	VALUE	PERCENTAGE	FUNCTION
1	0 - 255	0 - 100	Intensity Red of Pixel 1 (0% --> 100%)
2	0 - 255	0 - 100	Intensity Green of Pixel 1 (0% --> 100%)
3	0 - 255	0 - 100	Intensity Blue of Pixel 1 (0% --> 100%)
4	0 - 255	0 - 100	Intensity Red of Pixel 2 (0% --> 100%)
5	0 - 255	0 - 100	Intensity Green of Pixel 2 (0% --> 100%)
6	0 - 255	0 - 100	Intensity Blue of Pixel 2 (0% --> 100%)
7	0 - 255	0 - 100	Intensity Red of Pixel 3 (0% --> 100%)
8	0 - 255	0 - 100	Intensity Green of Pixel 3 (0% --> 100%)
9	0 - 255	0 - 100	Intensity Blue of Pixel 3 (0% --> 100%)
10	0 - 255	0 - 100	Intensity Red of Pixel 4 (0% --> 100%)
11	0 - 255	0 - 100	Intensity Green of Pixel 4 (0% --> 100%)
12	0 - 255	0 - 100	Intensity Blue of Pixel 4 (0% --> 100%)
13	0 - 255	0 - 100	Intensity Red of Pixel 5 (0% --> 100%)
14	0 - 255	0 - 100	Intensity Green of Pixel 5 (0% --> 100%)
15	0 - 255	0 - 100	Intensity Blue of Pixel 5 (0% --> 100%)
16	0 - 255	0 - 100	Intensity Red of Pixel 6 (0% --> 100%)
17	0 - 255	0 - 100	Intensity Green of Pixel 6 (0% --> 100%)
18	0 - 255	0 - 100	Intensity Blue of Pixel 6 (0% --> 100%)
19	0 - 255	0 - 100	Intensity Red of Pixel 7 (0% --> 100%)
20	0 - 255	0 - 100	Intensity Green of Pixel 7 (0% --> 100%)
21	0 - 255	0 - 100	Intensity Blue of Pixel 7 (0% --> 100%)
22	0 - 255	0 - 100	Intensity Red of Pixel 8 (0% --> 100%)
23	0 - 255	0 - 100	Intensity Green of Pixel 8 (0% --> 100%)
24	0 - 255	0 - 100	Intensity Blue of Pixel 8 (0% --> 100%)
25	0 - 255	0 - 100	Intensity Red of Pixel 9 (0% --> 100%)
26	0 - 255	0 - 100	Intensity Green of Pixel 9 (0% --> 100%)
27	0 - 255	0 - 100	Intensity Blue of Pixel 9 (0% --> 100%)
28	0 - 255	0 - 100	Intensity Red of Pixel 10 (0% --> 100%)
29	0 - 255	0 - 100	Intensity Green of Pixel 10 (0% --> 100%)
30	0 - 255	0 - 100	Intensity Blue of Pixel 10 (0% --> 100%)
31	0 - 255	0 - 100	Intensity Red of Pixel 11 (0% --> 100%)
32	0 - 255	0 - 100	Intensity Green of Pixel 11 (0% --> 100%)
33	0 - 255	0 - 100	Intensity Blue of Pixel 11 (0% --> 100%)
34	0 - 255	0 - 100	Intensity Red of Pixel 12 (0% --> 100%)
35	0 - 255	0 - 100	Intensity Green of Pixel 12 (0% --> 100%)
36	0 - 255	0 - 100	Intensity Blue of Pixel 12 (0% --> 100%)
37	0 - 255	0 - 100	Intensity Red of Pixel 13 (0% --> 100%)
38	0 - 255	0 - 100	Intensity Green of Pixel 13 (0% --> 100%)
39	0 - 255	0 - 100	Intensity Blue of Pixel 13 (0% --> 100%)
40	0 - 255	0 - 100	Intensity Red of Pixel 14 (0% --> 100%)
41	0 - 255	0 - 100	Intensity Green of Pixel 14 (0% --> 100%)
42	0 - 255	0 - 100	Intensity Blue of Pixel 14 (0% --> 100%)
43	0 - 255	0 - 100	Intensity Red of Pixel 15 (0% --> 100%)
44	0 - 255	0 - 100	Intensity Green of Pixel 15 (0% --> 100%)
45	0 - 255	0 - 100	Intensity Blue of Pixel 15 (0% --> 100%)
46	0 - 255	0 - 100	Intensity Red of Pixel 16 (0% --> 100%)
47	0 - 255	0 - 100	Intensity Green of Pixel 16 (0% --> 100%)
48	0 - 255	0 - 100	Intensity Blue of Pixel 16 (0% --> 100%)

Astera AX3 Droplight Puck

6: DIM RGBAW (PIXEL = 1; STROBE = OFF)

CHANNEL	VALUE	PERCENTAGE	FUNCTION
1	0 - 255	0 - 100	Dimmer (closed --> open)
2	0 - 255	0 - 100	Intensity Red (0% --> 100%)
3	0 - 255	0 - 100	Intensity Green (0% --> 100%)
4	0 - 255	0 - 100	Intensity Blue (0% --> 100%)
5			No Effect
6	0 - 255	0 - 100	Intensity White (0% --> 100%)



PROJECTOR_Throw Ratio

width of image = W

distance from screen = D

throw ration = TR

$$D = W \times TR$$

Throw Ratio = .76 up to .96

So for a 10 m image need to be at least 7.6m away

$$10\text{m} \times .96 = 9.6\text{m}$$

$$10\text{m} \times .76 = 7.6\text{m}$$

$$\text{width} = D/TR$$

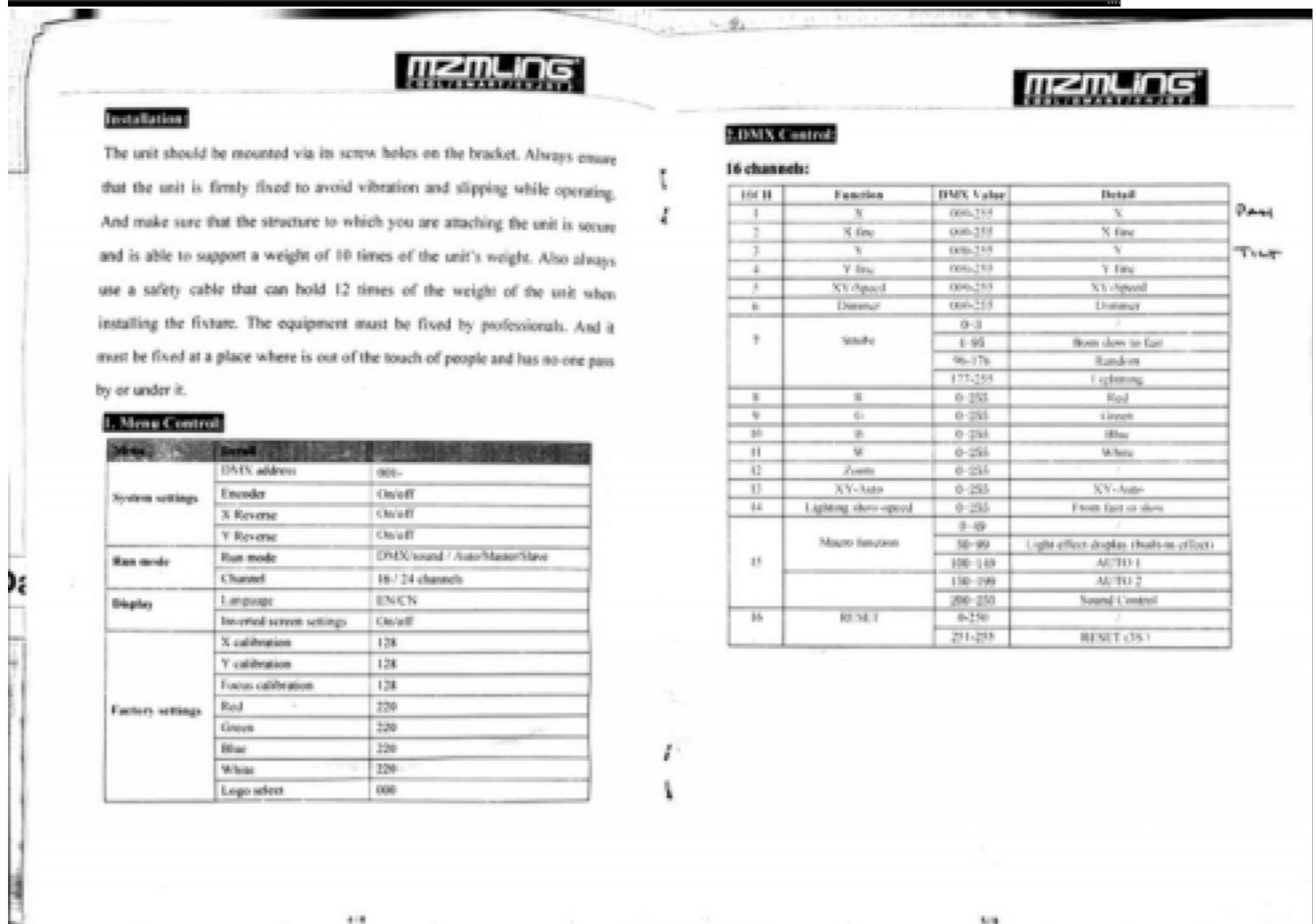
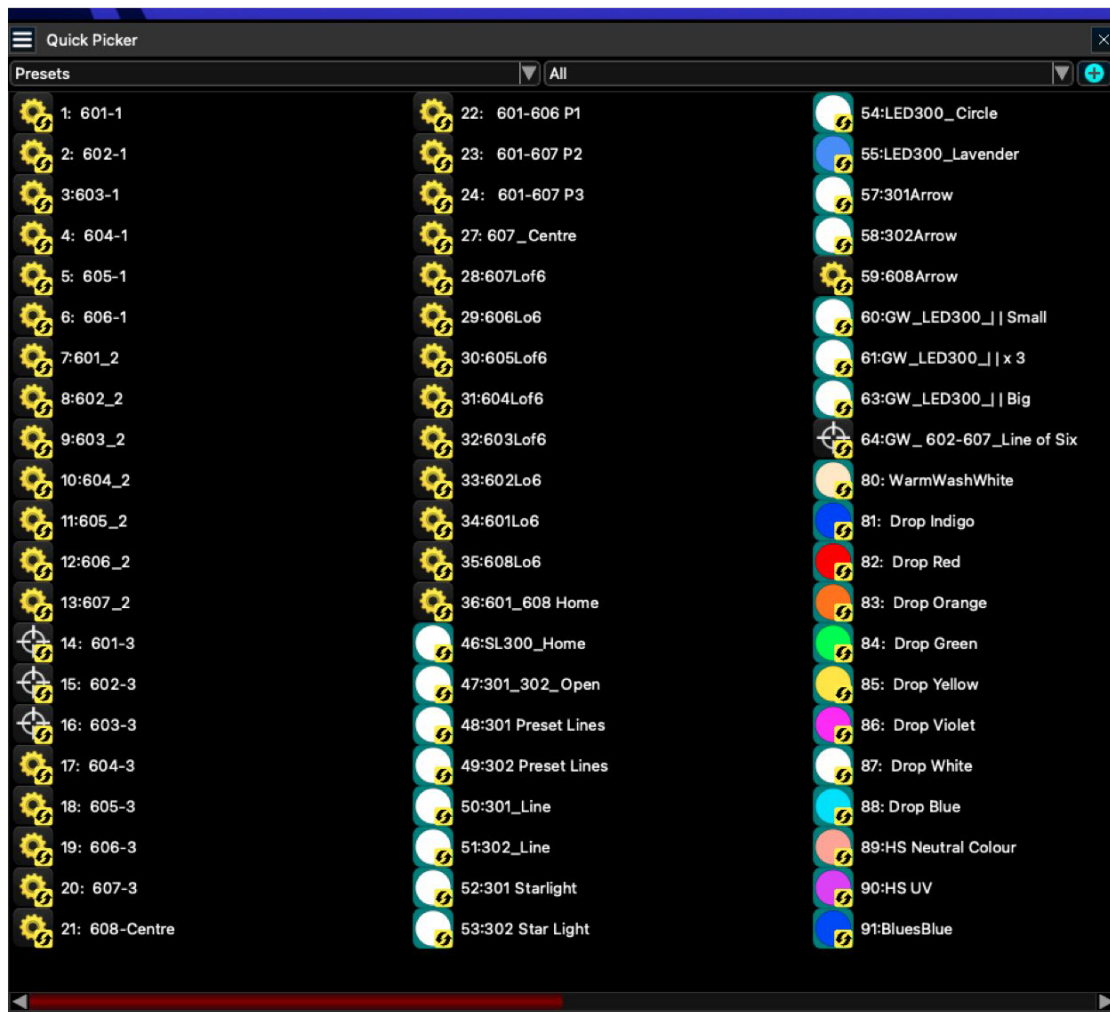
If you're 7.6m = D

The size of the screen is between 8 and 10 metres wide

**7LWS_ PTZ Camera Presets**

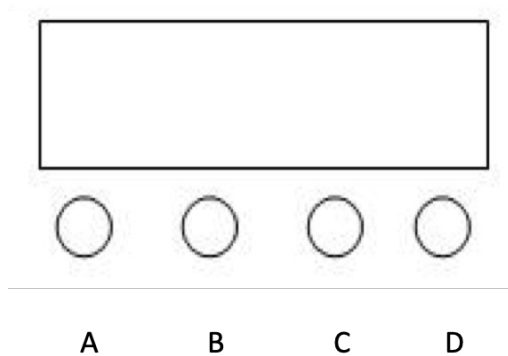
Preset Number	Camera 1 (PS)	Camera 2 (OP)
1		AX3 (CS CloseUp)
2	Position 2	Position 2
3	Position 6	Position 6
4	Position 3	Position 3
5	OP	P
6	Audience 1	Audience 2
7	Sam	Sam

7LWS Vista Presets



SunArt Focus Moving Head Light Instructions

- A. Function keys
- B. Add key
- C. Minus key
- D. Enter
- E. LCD display window



Operation instructions:

Press function key A to cycle through different functions, and press key B or C to modify its parameter value. Press the D key to confirm.

1. LCD Chinese and English display window comparison table,
2. [DMX Address Set] menu can set the address of the lamp.
3. The [Work Mode Set] menu is the work mode selection menu. After entering this menu, you can choose three working modes: [DMX512] console control mode, [Auto] self-propelled mode and [Sound] voice control mode. When [Auto] or [Sound] is selected, this light will automatically act as a host and send DMX signals to the outside.
4. Invert PAN Set] is the horizontal forward and reverse setting menu.
5. Invert TILT Set] is the vertical forward and reverse setting menu.
6. Channel Set] Select [15 Channel] for the channel.
7. [Restore Factory Settings] menu can restore the factory settings of the lamp.
8. [Reset] menu can reset the lamp when it is running. English display: AUTO RUN; Chinese display: Self-running program

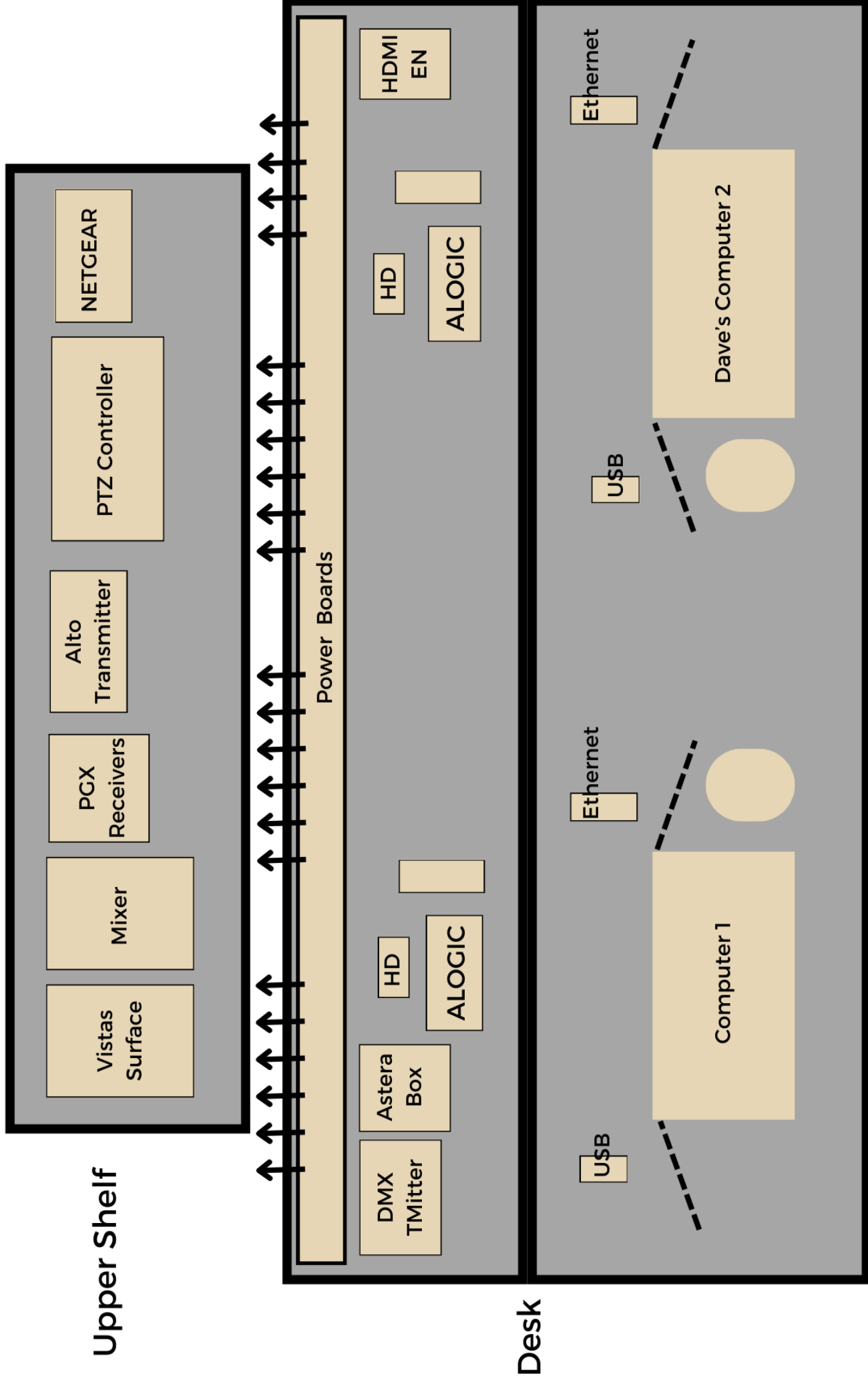
In the language selection state, press the up and down keys to select Chinese or English. When the English menu is displayed: ENGLISH or CHINESE is displayed; when the Chinese menu is displayed: English or Chinese.

15 channel mode:

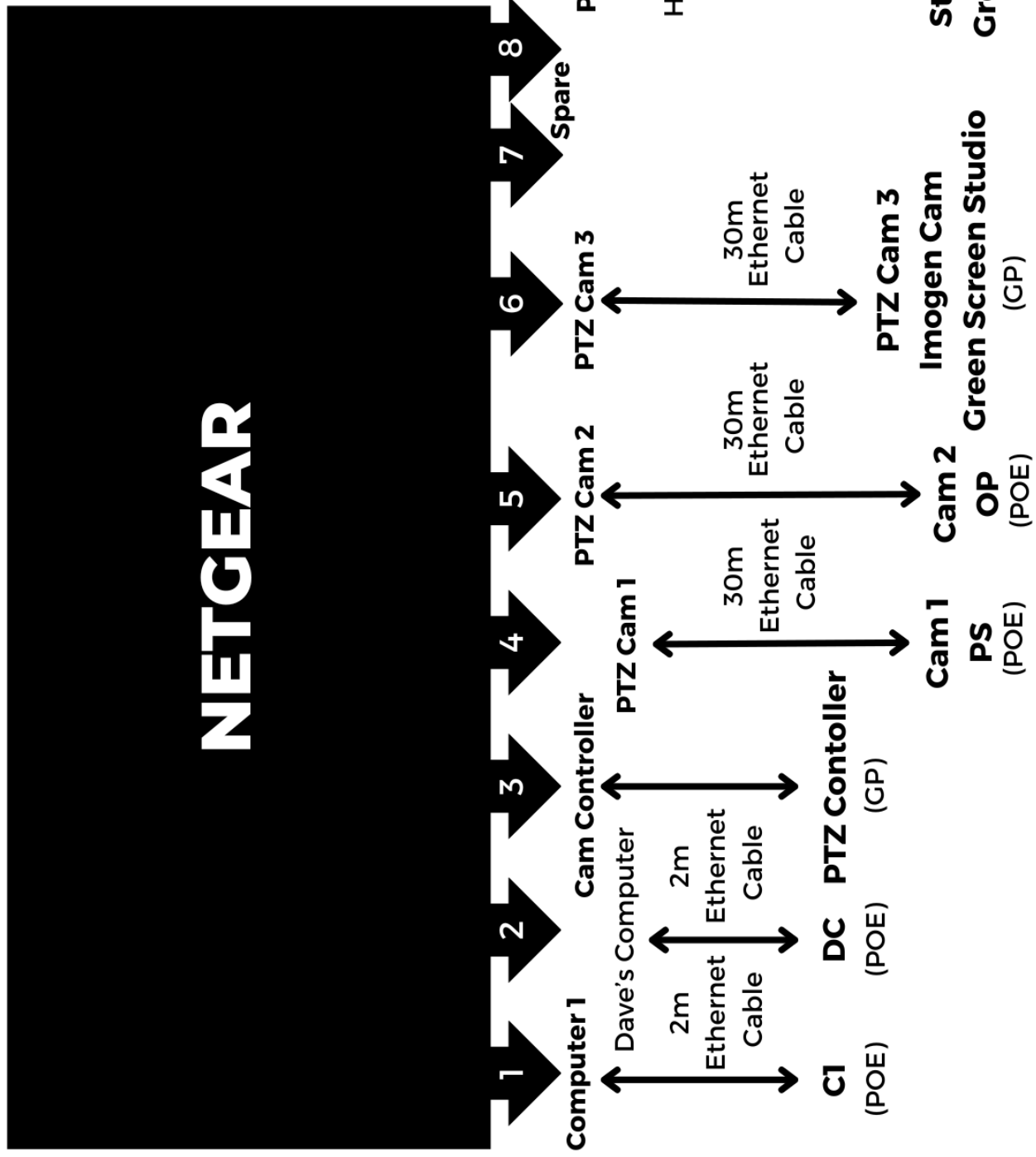
- Channel 1: Pan adjustment Level adjustment 0----255
- Channel 2: Pan fine adjustment Horizontal fine adjustment 0----255
- Channel 3: Tilt adjustment Vertical adjustment 0----255
- Channel 4: Tilt fine adjustment Vertical fine adjustment 0----255
- Channel 5: Pan/Tilt speed from fast to slow 0----255
- Channel 6: Focus Speed from fast to slow 0----255
- Channel 7: Total dimming from dark to bright 0----255
- Channel 8: Strobe has no effect 0----15 Strobe (from slow to fast) 16----255
- Channel 9: Self-propelled lamp beads have no effect 0----15 Self-propelled lamp beads 16----255
- Channel 10: Lamp bead self-propelled speed from fast to slow 0----255
- Channel 11: R from dark to light 0----255

Channel 12: G from dark to bright 0----255
Channel 13: B from dark to bright 0----255
Channel 14: W from dark to bright 0----255
Channel 15: Reset has no effect 0----127
Reset 128----255

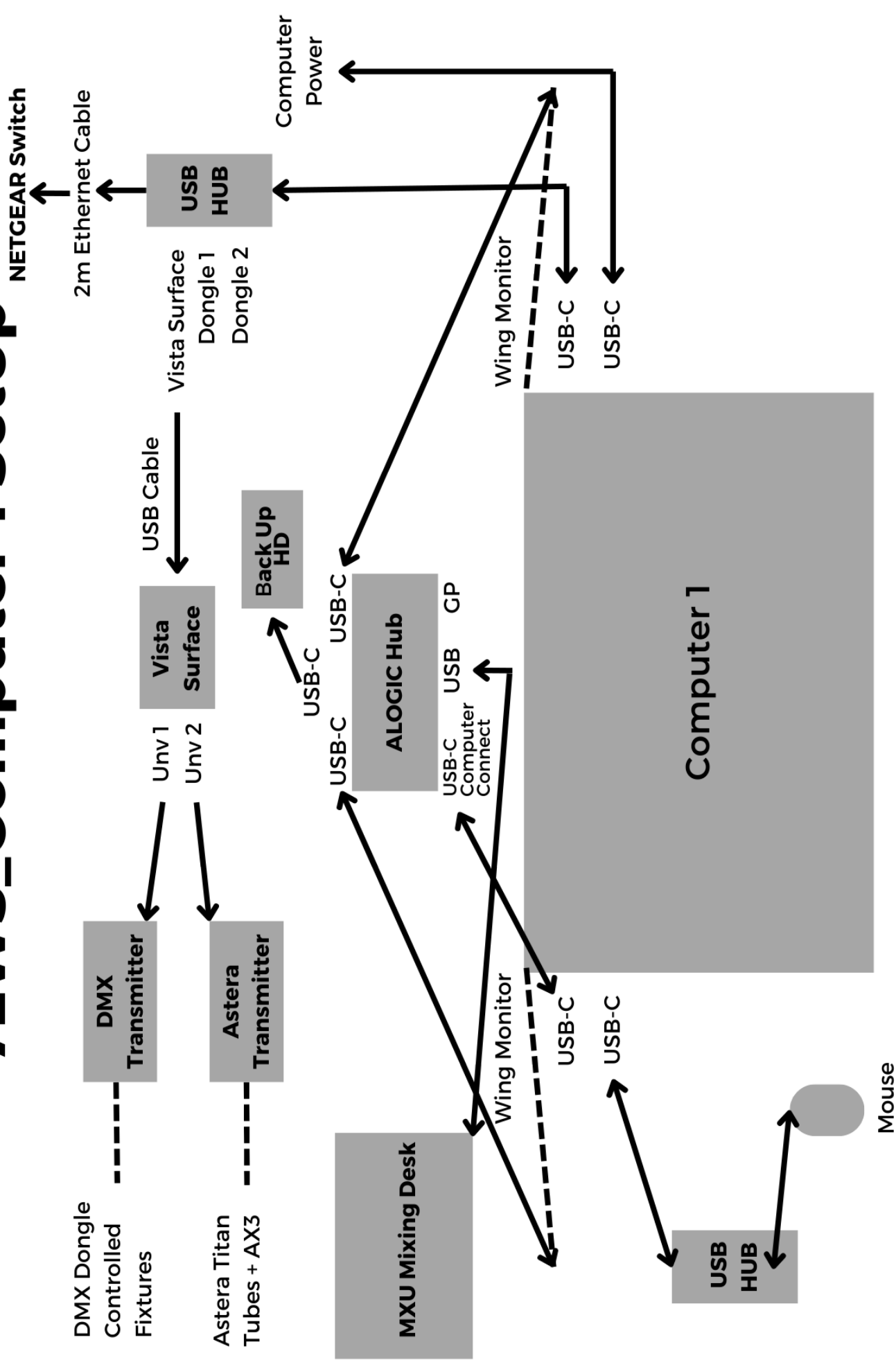
7LWS_Control Desk Set-Up



NetGear Switcher Cables, Computers, Cameras



7LWS_Computer 1 Setup



7LWS_Computer 2 SetUp

Dave's Computers (DC)

