

How to read the drawing set

Somebody handed you a stack of network paperwork. This guide is for you — the tech patching a rack at 8 AM, not the person who drew the package. Ten minutes, and you will know where everything lives, what plugs where, and what to do when the room disagrees with the paper.

BEFORE YOU START

- The package, paper or PDF. Nothing to install — you do not need the app that made it.
- Every example here is one real package: **Meridian Hall**, the small venue rig this series builds in Guide 08. Yours will differ in size, never in shape.
- The one habit this guide wants to leave you with: **check the rev, trust the colours, and mark up what the room disagrees with.**

INSIDE

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FOR THE CREW

No app needed.
One real package throughout.
About ten minutes.

Read this first

Everything in the package prints from **one database**. The cable schedule, the rack drawings, the port maps and the address book are not separate documents that someone tried to keep in agreement — they are one set of facts, printed several ways. If a device is renamed, every sheet that touches it changes together. That is why the package is worth trusting.

Two conventions carry the whole set:

- **Colour is law.** Every network (VLAN) has one colour, declared once on the legend sheet. A red port on the switch drawing, a red address on the IP schedule and a red row on a wiremap are all the same network.
- **Sheets have numbers; pages have numbers; they are different.** E-501 names a drawing wherever it appears — page numbers only say where it landed in this printing.

The cover prints on black; every other sheet prints on white. If your crew reads the package on a tablet at FOH rather than on paper, the whole set can be exported full-dark instead — same sheets, same numbers, same colours, just a night version of all of them.

The cover, and the rev

The cover tells you three things worth ten seconds: **whose package this is** (the company and the show), **who drew it** — that name is who you call when something does not add up — and **which revision you are holding**. The rev prints on the cover and in the corner of every sheet. If the crew chief says "we are on rev 3" and your cover says rev 1, stop: somebody is building yesterday's rig.

PROJECT			JOB NO.		
MERIDIAN HALL			26-0412		
DESIGNER	DATE	CHECKED	DWG. NO.	REV	SHEET
A. RIVERA			E-000	1	1 / 27

The cover. 1 The counts — devices, racks, VLANs, universes, sheets — are a thirty-second sanity check on what you were handed. **2** The titleblock: project, order number, who drew it, and the rev. Every sheet in the set repeats it — adding the sheet's own title, its date and the company — so a loose page can always be traced home.

The drawing register

Page 2 is the map. Every sheet has a **drawing number** that says what kind of sheet it is, and the series stays the same from show to show: **E-0xx** schedules (legend, addresses), **E-1xx** summaries and build lists, **E-2xx** cable schedules, **E-3xx** the network's shape (topology, universes), **E-4xx** the switch and firmware sheets, **E-5xx** the rack sheets, **E-6xx** the audits. Learn the series once and you can find the right sheet in any package this app ever printed.

DRAWING REGISTER			
SHT	TITLE	PG	REV
E-001	VLAN Legend	3	1
E-002	Master IP Schedule	4	1
E-101	Rack Overview	5	1
E-102	Pull / Prep Summary	6	1
E-103	Equipment Summary	7	1
E-104	Device / Rack Build List	15	1
E-201	FOH - Cable Schedule	17	1
E-202	SL STAGE - Cable Schedule	18	1
E-203	1 k Lines	19	1
E-301	Topology	20	1
E-302	DMX / Universe	21	1
E-401	Firmware Spec	22	1
E-402	Switch Ports / Port Map	23	1
E-403	Port Addressing	24	1
E-501	FOH RACK - Rack	8	1
E-502	FOH RACK - Wiremap	9	1
E-503	FOH RACK - Cables	10	1
E-504	STAGE RACK - Rack	11	1
E-505	STAGE RACK - Nodes	12	1

The register. 1 Drawing numbers — the stable names. 2 The page each one landed on in this printing, and its rev. Missing a page? The register is how you notice.

The VLAN legend

Sheet **E-001** is the law the whole package obeys. One row per network: its colour, its ID, its name, and — when the lane has one — the subnet its addresses come from. You do not need to know what a /12 is to use this sheet: match the colour, read the name.

VLAN LEGEND									
E-001 REV 1 by VLAN id									
1 5 VLANS IN USE		0 DHCP SCOPES		3 STATIC SUBNETS		15 DEVICES ON VLANS			
Color	ID	Name	Hex	Subnet	Gateway	DHCP	Profile	Dev	Purpose
(none)	TRUNK	TRUNK					N/A	0	Trunk port - carries every VLAN to the far end
Black	1	MGMT	#000000	10.224.0.0/12			Data	6	Switch + device management
Blue	2	MA Net 3	#0000FF	192.168.20.0/24			Lighting	3	grandMA3 console + processing traffic
Red	30	sACN	#FF0000	192.168.30.0/24			Lighting	7	sACN lighting control to nodes
Green	60	INTERNET	#00F900				Data	0	House internet - DHCP from the house router

The legend. **1** The counts up top say how much network this show carries. **2** Every colour in the package resolves here — the TRUNK row is the special one: no colour, because a trunk port carries *every* lane at once.

The IP schedule

Sheet **E-002** is the address book, grouped by what things are: consoles and processors first, then switches, then nodes, then everything else. It answers "what address does this box hold" without opening a single menu.

1

2

3

4

5

6

7

MASTER IP SCHEDULE

E-002 REV 1 by device type

MASTER IP SCHEDULE

VLAN key

TRUNK - TRUNK	1 - MGMT	2 - MA Net 3	30 - sACN	60 - INTERNET
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CONSOLES

Console	Rack	Location	Con 1	Con 2	Con 3	Notes
FOH-CONSOLE grandMA3 light		FOH	192.168.20.101 255.255.255.0 2 - MA Net 3	10.224.1.5 255.240.0.0 1 - MGMT	1	Desk at FOH position

PROCESSORS (PU / NPU)

Processor	Rack	Location	Con 1	Con 2	Notes
FOH-MINI 1 Mac mini (M4) 2024	FOH RACK	FOH	10.224.1.10 255.240.0.0 1 - MGMT		Timecode + tracking
FOH-MINI 2 Mac mini (M4) 2024	FOH RACK	FOH	10.224.1.11 255.240.0.0 1 - MGMT		Timecode + tracking
FOH-MINI 3 Mac mini (M4) 2024	FOH RACK	FOH	10.224.1.12 255.240.0.0 1 - MGMT		Timecode + tracking
PU-XL 1 MA3 PU-XL	FOH RACK	FOH	192.168.20.102 255.255.255.0 2 - MA Net 3		
PU-XL 2 MA3 PU-XL	FOH RACK	FOH	192.168.20.103 255.255.255.0 2 - MA Net 3		

SWITCHES

Device	Rack	Location	IPv4 Address	Subnet	VLAN	Notes
FOH-SW		FOH RACK	10.224.1.1	255.240.0.0	1 - MGMT	
SL-SW		STAGE RACK	10.224.1.2	255.240.0.0	1 - MGMT	

NODES

Device	Rack	Location	IPv4 Address	Subnet	VLAN	Universes	Notes
FOH-NODE 1	FOH RACK	FOH	192.168.30.131	255.255.255.0	30 - sACN	1-12	
FOH-NODE 2	FOH RACK	FOH	192.168.30.132	255.255.255.0	30 - sACN	13-24	
SL-NODE 1	STAGE RACK	SL STAGE	192.168.30.141	255.255.255.0	30 - sACN	25-32	EASY IP - OFF
SL-NODE 2	STAGE RACK	SL STAGE	192.168.30.142	255.255.255.0	30 - sACN	33-40	EASY IP - OFF
SL-NODE 3	STAGE RACK	SL STAGE	192.168.30.143	255.255.255.0	30 - sACN	41-48	EASY IP - OFF
SL-NODE 4	STAGE RACK	SL STAGE	192.168.30.144	255.255.255.0	30 - sACN	49-56	EASY IP - OFF

The address book. **1** A console is plugged in more than once, so it gets one column per jack – here MA Net on **Con 1** and management on **Con 2**, each cell wearing its lane's colour. **2** Nodes carry their universe range right next to their address – two facts you always need together.

The rack sheets

Every rack gets its own set: **Rack** (the elevation), **Wiremap**, **Cables**, and sometimes **Nodes**. That last one is an overflow page: a rack's node blocks print on the rack sheet itself when they fit — as they do on E-501 opposite — and only move to their own sheet when there are too many, which is why the four-node stage rack has one and the two-node FOH rack does not. The elevation is drawn to scale from the real RU positions, front and rear — it is the "does the rack in front of me match the drawing" sheet, and during prep it is the build order.

FOH RACK - RACK		2	3	4	5	6					
		E-501 REV 1 elevation + device list									
FOH RACK • 16 DEV • 12U • 167 LB • 0.2 KW											
1											
DEVICES											
RU	Name	Make	Model	Mount	IPV4	VLAN					
12	FOH-FURMAN	Furman	Series M-8Lx Power Conditioner with Pull-out Lights	Front							
11	FOH-22x4 IO	4Wall	22x4 Net IO	Rear							
10	FOH-SW	Netgear	M4250-40GBX-PoE+	Front	10.224.1.1	1 - MGMT					
9	FOH-NODE 1	Obsidian Controls	EN12	Front	192.168.30.131	30 - sACN					
8	PU-XL 1	MA Lighting	MA3 PU-XL	Rear	192.168.20.102	2 - MA Net 3					
7	FOH-NODE 2	Obsidian Controls	EN12	Front	192.168.30.132	30 - sACN					
6	FOH-TC 1	Brainstorm	SR112	Front							
5	PU-XL 2	MA Lighting	MA3 PU-XL	Rear	192.168.20.103	2 - MA Net 3					
4	FOH-TC 2	Brainstorm	SR112	Front							
3	FOH-MINI 1	Apple	Mac mini (M4) 2024	Front	10.224.1.10	1 - MGMT					
2	FOH-MINI 2	Apple	Mac mini (M4) 2024	Front	10.224.1.11	1 - MGMT					
1	FOH-MINI 3	Apple	Mac mini (M4) 2024	Front	10.224.1.12	1 - MGMT					
12	FOH-BLANK	Middle Atlantic	2U Solid Blank	Front							
11	FOH-VENT	Middle Atlantic	5U Vent	Rear							
10	FOH-UPS	APC	1500VA 2U SMT	Front							
9	FOH-PWR IN	Whirlwind	Powercon Input	Rear							
NODE PORT / UNIVERSE BREAKDOWN											
FOH-NODE 1 Obsidian Controls EN12 - sACN - 192.168.30.131											
P1	P2	P3	P4	P5	P6						
1	2	3	4	5	6						
P7	P8	P9	P10	P11	P12						
7	8	9	10	11	12						
FOH-NODE 2 Obsidian Controls EN12 - sACN - 192.168.30.132											
P1	P2	P3	P4	P5	P6						
13	14	15	16	17	18						
P7	P8	P9	P10	P11	P12						
19	20	21	22	23	24						

A rack sheet (E-501). **1** Front and rear elevations at true RU positions. **2** The device list: every unit, its RU, address and lane. **3** The rack's nodes with the universe each port carries — patch a fixture from this block without touching a console.

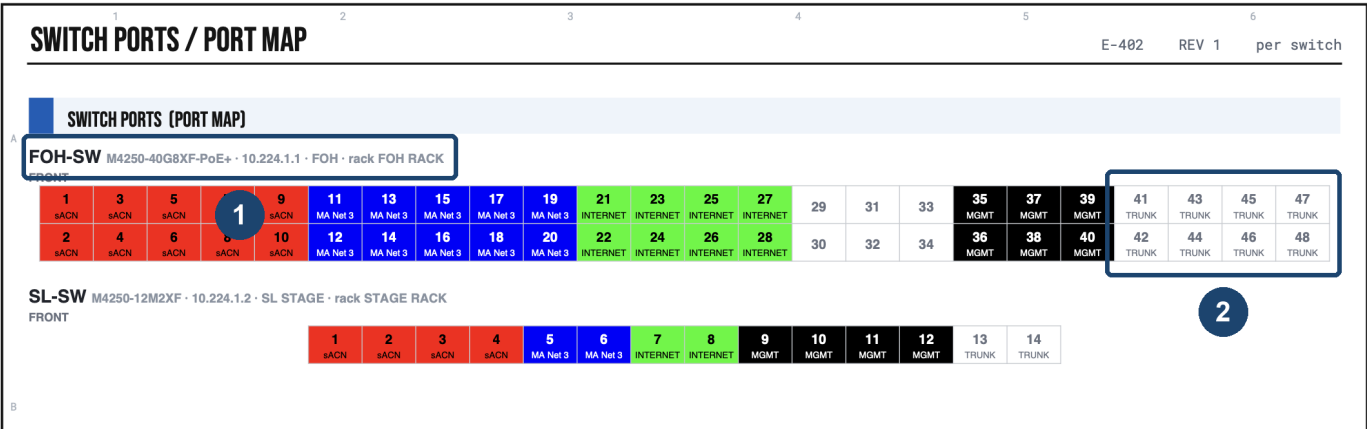
The wiremap and the port map

The wiremap — **E-502** for the FOH rack here, its own number in each rack's set — is the sheet a patching tech actually stands in front of: one row per switch port — its VLAN colour, what is plugged there, and the note that explains the odd ones. Read the VLAN cell first. A colour with nothing plugged in is a **spare on that lane** — a hole you can use. The word **TRUNK** is an uplink, never a spare. And a cell that is simply blank is a port nobody has planned yet: ask before you take it.

FOH RACK - WIREMAP					E-502	REV 1	wiremap
FOH RACK - WIREMAP (SWITCH PORTS)							
Port	Kind	VLAN	Connected Device	Note			
FOH-SW 10.224.1.1							
1	copper	30 - sACN	FOH-NODE 1				
2	copper	30 - sACN	FOH-NODE 2				
3	copper	30 - sACN	FOH-P3	video wall control			
4	copper	30 - sACN					
5	copper	30 - sACN					
6	copper	30 - sACN					
7	copper	30 - sACN					
8	copper	30 - sACN					
9	copper	30 - sACN					
10	copper	30 - sACN					
11	copper	2 - MA Net 3	PU-XL 1				
12	copper	2 - MA Net 3	PU-XL 2				
13	copper	2 - MA Net 3	FOH-CONSOLE	console MA-Net			
14	copper	2 - MA Net 3					
15	copper	2 - MA Net 3					
16	copper	2 - MA Net 3					
17	copper	2 - MA Net 3					
18	copper	2 - MA Net 3					
19	copper	2 - MA Net 3					
20	copper	2 - MA Net 3					
21	copper	60 - INTERNET					
22	copper	60 - INTERNET					
23	copper	60 - INTERNET					
24	copper	60 - INTERNET					
25	copper	60 - INTERNET					
26	copper	60 - INTERNET					
27	copper	60 - INTERNET					
28	copper	60 - INTERNET					
29	copper						
30	copper						
31	copper						
32	copper						
33	copper						
34	copper						
35	copper	1 - MGMT	FOH-CONSOLE	console mgmt NIC			
36	copper	1 - MGMT	FOH-MINI 1				
37	copper	1 - MGMT	FOH-MINI 2				
38	copper	1 - MGMT	FOH-MINI 3				
39	copper	1 - MGMT					
40	copper	1 - MGMT					
41	SFP+	TRUNK - TRUNK	SL-SW	fiber to STAGE RACK			
42	SFP+	TRUNK - TRUNK					
43	SFP+	TRUNK - TRUNK					
44	SFP+	TRUNK - TRUNK					
45	SFP+	TRUNK - TRUNK					
46	SFP+	TRUNK - TRUNK					
47	SFP+	TRUNK - TRUNK					
48	SFP+	TRUNK - TRUNK					

The wiremap. **1** One row, one port: port 13 carries MA Net to the console. **2** The SFP rows at the bottom are the uplinks — TRUNK, no colour, because they carry every lane between racks. Do not "borrow" a trunk port for a device.

Sheet **E-402** paints the same facts the way the metal looks — every switch in the show as a face drawing, jacks coloured by lane. Ten seconds with it tells you whether a switch was patched to plan.



The cable schedule

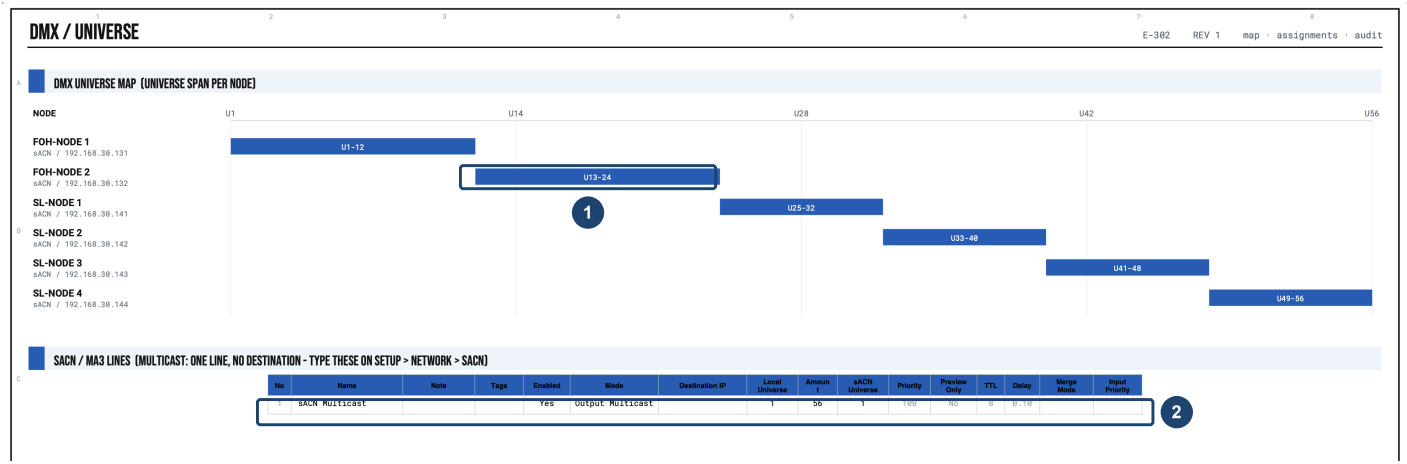
One sheet per area (**E-201, E-202...**), one row per cable, and every row reads the same way: **what it is › where it starts › where it lands**. The label column is what is physically flagged on the cable, so a mystery cable in your hand resolves in one lookup.

FOH - CABLE SCHEDULE																	E-201 REV 1 by signal
CABLE				SOURCE							DESTINATION						
Label	Cable	Signal	Len(ft)	Pit	Rack	U	Device	Port	Adpt	Conn	Pit	Rack	U	Device	Port	Adpt	Conn
P1	CAT6A	LAN	25	FOH	FOH RACK	10	FOH-SW	RL45 35	RL45	8B8/CON	FOH			FOH-CONSOLE	ETH 2	8B8/CON	8B8/CON
P2	CAT6	LAN	3	FOH	FOH RACK	10	FOH-SW	RL45 3	RL45	RL45	FOH	FOH RACK	5	FOH-MINI 1	ETH	RL45	RL45
P3	CAT6	LAN	3	FOH	FOH RACK	10	FOH-SW	RL45 5	RL45	RL45	FOH	FOH RACK	5	FOH-MINI 2	ETH	RL45	RL45
P4	CAT6	LAN	3	FOH	FOH RACK	10	FOH-SW	RL45 38	RL45	RL45	FOH	FOH RACK	5	FOH-MINI 3	ETH	RL45	RL45
M1	CAT6A	MA Net 3	25	FOH	FOH RACK	10	FOH-SW	RL45 38	RL45	etherCON	FOH			FOH-CONSOLE	ETH 1	etherCON	etherCON
M2	CAT6	MA Net 3	5	FOH	FOH RACK	10	FOH-SW	RL45 1	RL45	RL45	FOH	FOH RACK	9	PLU-XL 1	ETH 1	RL45	RL45
M3	CAT6	MA Net 3	5	FOH	FOH RACK	10	FOH-SW	RL45 12	RL45	RL45	FOH	FOH RACK	7	PLU-XL 2	ETH 1	RL45	RL45
U1	CAT6	sACN	3	FOH	FOH RACK	10	FOH-SW	RL45 1	RL45	RL45	FOH	FOH RACK	9	FOH-NODE 1	ETH	RL45	RL45
U2	CAT6	sACN	3	FOH	FOH RACK	10	FOH-SW	RL45 2	RL45	RL45	FOH	FOH RACK	8	FOH-NODE 2	ETH	RL45	RL45
U3	CAT6	sACN	10	FOH	FOH RACK	10	FOH-SW	RL45 3	RL45	RL45	FOH			FOH-P3	ETH	RL45	RL45

The cable schedule. 1 The three bands: the cable itself, its source, its destination – with pit, rack, RU, device, port and connector on both ends. 2 Rows group by signal, so all the sACN runs sit together; the label(U1, M2...) matches the flag on the physical cable.

The universe map

Sheet **E-302** answers the question the lighting crew asks the network crew all day: **which node owns this universe?** The top is a span chart – one bar per node across the whole show's range. A gap in that chart is a universe nobody carries – worth a question. Two nodes sharing a universe is normal, not a fault: that is how a rig feeds the same data to two places. Port-by-port detail lives in the node blocks – on the rack's own sheet where they fit, as on E-501, and on that rack's Nodes sheet where they did not, as on E-505.



The universe map. **1** Each bar is one node's span – find your universe on the ruler, read down to the node that carries it. **2** The console half, pre-answered: the sACN line exactly as it gets typed into the desk – one multicast line spanning all 56 universes.

The validation page

Near the back, sheet **E-601** is the package grading itself: the same live checks the app runs while the paperwork is built, printed as a report. **PASS** means zero errors on the day it was printed. And if the data had errors when someone exported anyway, every sheet in the set is stamped **DRAFT** — a package that will not pretend to be finished.

The image shows a 'VALIDATION REPORT' card with a grid layout. At the top, it says 'VALIDATION REPORT' and 'E-601 REV 1 errors + warnings'. Below this is a table with three columns: '0 ERRORS', '0 WARNINGS', and '32 DEVICES'. To the right of the table is a circular icon with the number '1'. Below the table is a green bar with the text 'STATUS: PASS' and a circular icon with the number '2'. At the bottom is a green bar with the text 'All clear - no validation errors or warnings.'

VALIDATION REPORT			E-601 REV 1 errors + warnings
VALIDATION REPORT			
0 ERRORS	0 WARNINGS	32 DEVICES	1
STATUS: PASS			2
All clear - no validation errors or warnings.			

The report card. **1** Errors, warnings, and how many devices were checked. **2** The status band. A crew that gets a PASS package and a crew that gets a DRAFT package should behave differently.

When the room disagrees

The paperwork is the truth of record, not a suggestion — but rooms drift. The rule on every crew that runs clean: **mark it up, and tell the person in the titleblock**. A silent field fix becomes next week's outage.

WHAT YOU FOUND	WHAT TO DO
A device is patched into a different port than the wiremap says	Check the port's lane colour first — if the colours match, the show works, but the paper is now wrong. Mark the real port on your copy and report it so the next rev matches the room.
The rev on your sheet is older than the one being called	Stop building from it. Get the current printing — between revs, ports move and addresses change, and the whole point of the rev is knowing which world you are in.
A box's address does not match the IP schedule	Somebody changed it in the field. Do not chase it device by device — report it; addresses ripple into switches and consoles.
The rack in front of you does not match the elevation	If gear moved RU, the wiremap and cable lengths may still be right — but confirm against the wiremap before repatching anything.
A cable has no flag, or a flag not in the schedule	Trace it to an end, find that port on the wiremap, and you have its row. Flag it with the schedule's label while you are there.
Every sheet says DRAFT	The data had validation errors when it was exported. Build with care and ask for a clean rev — DRAFT is the package telling you it already knows.