

MIXWIZARD4 WZ4



MixWizard WZ4 12:2



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MixWizard WZ4 16:2

SERVICE MANUAL

ISSUE 1.1

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Notices

Legal Notice

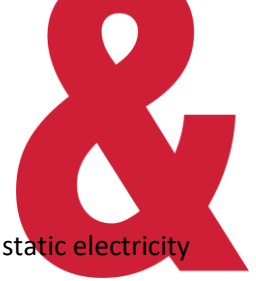
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Servicing precautions – General Notes

- Service Personnel:** Service work should be carried out by technically qualified personnel only. Mains power is dangerous and can kill. Do not attempt to work on a linear or switched mode power supply if you are not suitably qualified to do so. Do not attempt to repair surface mount circuit assemblies unless you are suitably qualified and have the necessary facilities to do so. Replacement circuit assemblies can be ordered.
- Service Facilities:** Ensure a suitably sized worksurface is available. Ensure this is clear of dirt, debris and obstructions which may damage the equipment surfaces. Ensure adequate lighting. Use the correct tools for the job and ensure that they are in good working order. Ensure all workshop safety requirements are adhered to.
- Safety Information:** Failure to follow the appropriate service and safety procedures may result in personal injury. You must read and adhere to the Safety instructions available in the box with the finished goods or available to service centers via your Asset Library login.
- Service information:** Check that you have all the information you need before starting the service job. Refer to the Allen & Heath website for user facing information such as firmware guides (including block diagrams), weights and dimensions and Technical Spec Data Sheets at www.allen-heath.com. For any other information contact Allen & Heath Product Support at <https://support.allen-heath.com>.
- Saving Data:** In order to preserve the customer data, you should save any console data onto two separate USB devices if applicable.
- Mains Power:** Connect the equipment to mains power only of the type described in the user guide and marked on the rear panel. The power source must provide a good ground connection. Ensure you always use an isolation transformer when working on any mains power supply unit.
- Mains Cord and Fuse:** Use the correct power cord as supplied with the equipment. Do not remove or tamper with the ground connection in the power cord. Heed the important mains plug wiring instructions in the Safety Instructions sheet. Always replace the equipment mains fuse with the correct type and rating as marked on the equipment panel.



- Static Discharge:** Static discharges can destroy expensive components. Discharge any static electricity your body may have accumulated before commencing servicing.
- Opening the unit:** Switch off and remove the mains power cord before opening the equipment. Ensure all power supply covers and safety shields are in place before applying power with the unit open for diagnostic fault finding.
- Fault finding:** In-warranty faults should be corrected by board swapping. If attempting an out of warranty repair at a component level, replace suspected faulty components only with those specified by Allen & Heath. The use of lower grade alternatives may degrade the performance or risk damage to the equipment.
- Closing the unit:** Before finishing, check the quality and accuracy of the service work carried out. Remove any dirt or debris as this may cause equipment failure in the future. Ensure all assemblies, harnesses and connectors are correctly aligned, plugged in and cable tied. Ensure that jumper settings and control configurations are correctly set according to the requirements of the customer.
- Testing the unit:** Before operating the equipment, read and adhere to the Safety Instructions for the unit. Test that the service work has been successfully carried out.
- Shipping the unit:** Use adequate packing such as the original packaging or purpose designed flight case if you need to ship the unit. To avoid injury to yourself or damage to the equipment take care when lifting, moving or carrying the equipment.
- Important:** Information provided is believed to be accurate, but research is ongoing, and improvements or changes can be made to the unit without notice. If you have any questions, please contact Product Support at <https://support.allen-heath.com>.
- Battery Handling:** **Batteries can explode with improper handling. Follow the following precautions if a battery is fitted to this product.**
- Battery replacement should be performed by qualified service personnel.
 - Always replace with batteries of the same type.
 - When installing on the PCB by soldering, solder using the connection terminals provided on the battery cells.
 - Never solder directly onto the cells. Perform soldering as quickly as possible.
 - Never reverse the battery polarity when installing.
 - Do not short the batteries.
 - Do not attempt to recharge batteries.
 - Do not disassemble the batteries.
 - Never heat batteries or throw them into fire.



Parts Identification WZ4 12:2

Parts List WZ4 12:2

Chassis WZ4 12:2

Part Number	Description	Qty
AA5498	BUSH W3/W4	2
AA8488	BASE W4	1
AA8491-L	SIDE MOULDING W4 LEFT	1
AA8491-R	SIDE MOULDING W4 RIGHT	1
AK0102	FEET FAST 21DIA.X4.2MM	6
AA8581	FACIA 7 SEG DISPLAY W4	1
AA8614	FRONT PNL W4 12	1
AA8489	CHASS. W4 CONN	1
AA5497	BRACKET W3/W4 CLAMP	1
AA8608	BLANK PLATE W4 USB	1
AA5461	PSU COVER	1

Screws WZ4 12:2

Part Number	Description	Qty
Main assembly		
AB0072	SCREW M3X6 PAN TORX BLACK PAN	3
AB0188	NUT M4 NYLOCK	2
AB4836	SCREW M4X8 PAN POZI BLACK	6
AB5615	WASHER 4.3X16X6.3MM THICK BLACK	2
AB5680	SCREW M4X10 PAN POZI BLACK	2
AB5710	SCREW M4X8 FLANGE POZI BLACK	2
AB5836	SCREW M3X6 CSK POZI BLACK UNDERHEAD PIP	21
Front panel		
AB0074	SCREW M3X8 COUNTERSUNK TORX BLACK	2
AB12218	SCREW M3X4 COUNTERSUNK TORX BK UNDERHEAD PIP	26
Connector panel		
AB0102	NUT M3 NYLOCK	5
AB7422	SCREW 2.7X9 AB TORX BK	16

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Screws WZ4 12:2

Part Number	Description	Qty
PSU		
AB0102	NUT M3 NYLOCK	1
AB0233	SCREW M3X4 PAN TORX BLACK	6
AB12313	SCREW M3X10 PAN TORX BLACK	2
AB8592	SCREW M3X5 TRUNC COUNTERSUNK TORX	4

Cables WZ4 12:2

Part Number	Description	Qty
Front panel		
AL5644	WFM IDC W3/W4 12 MAIN	1
Connector panel		
AL5484	WFM IDC W3/W4 LR MASTER/R	1
AL5485	WFM IDC W3/W4 AUX MASTER	1
AL5645	WFM IDC W3/W4 12 ST INPUT	1
AL8606	WFM IDC W4 INPUT TO CONNECTOR	2
AL8607	WFM IDC W4 POWER TO CONNECTOR	1

PCB WZ4 12:2

Part Number	Description	Qty
Front panel		
004-147	PCB ASSY W4 12/16 MASTER	1
004-148	PCB ASSY W4 12/16 EFFECTS	1
004-149	PCB ASSY W4 12 STEREO INP	2
004-229	LIGHT SKT ASSY W4	1
004-145	PCB ASSY W4 12/16 MONO IN	8
004-146	PCB ASSY W4 12/16 AUX MASTER	1
004-150	PCB ASSY W4 12/16 DISPLAY	1
Connector panel		
004-151	PCB ASSY W4 12 CONNECTOR	1
004-208	PSU ASSY W4	1

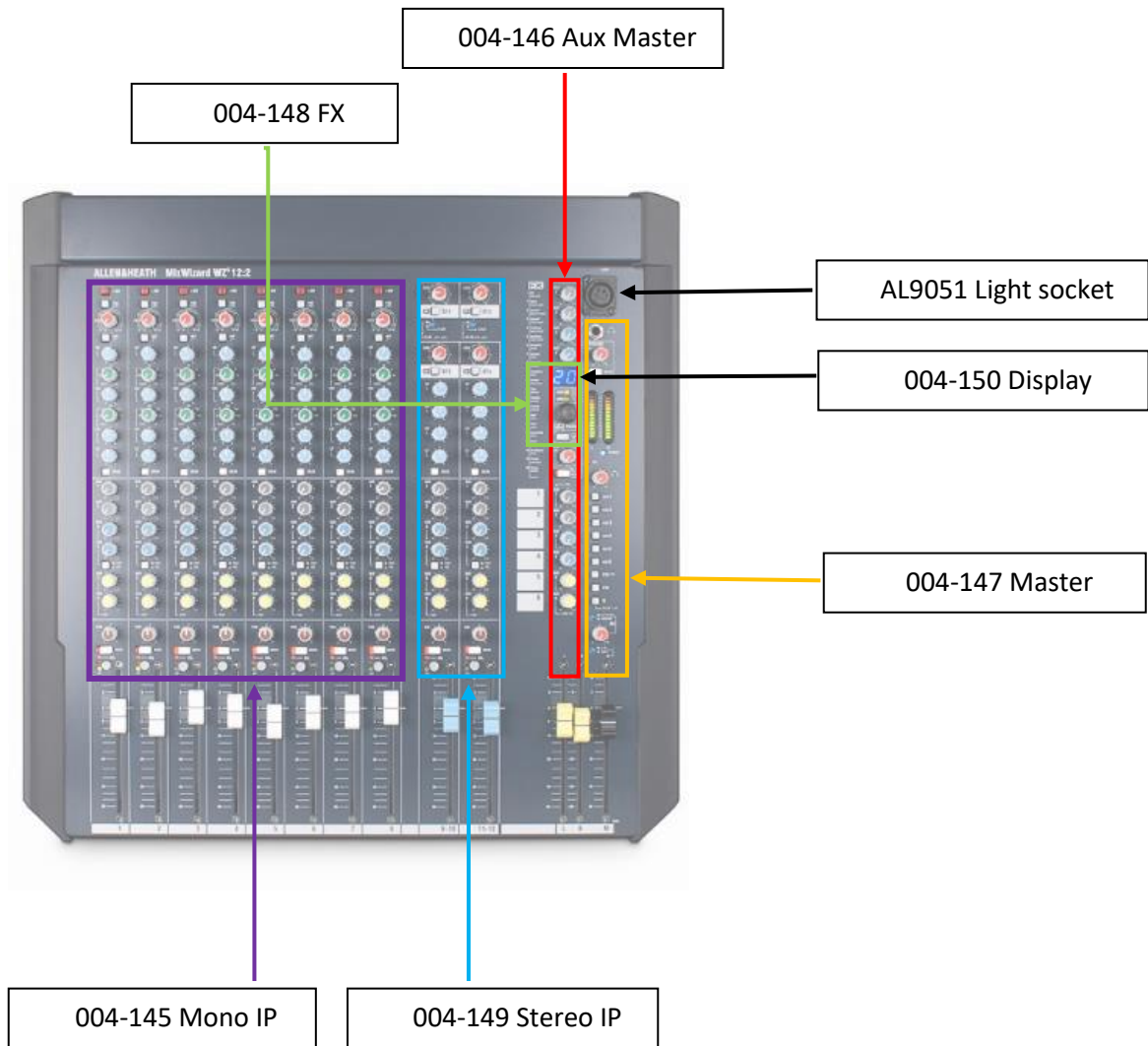


Knobs and Push Buttons WZ4 12:2

Part Number	Description	Qty
AJ6379	KNOB ENCODER SOFT BLACK	1
AJ7179	PUSH BTN RECT GRY 10X5.5	1
AJ7180	PUSH BTN RECT WHT 10X5.5	12
AJ7210	PUSH BTN SQ GRY 5.5MM	39
AJ7211	PUSH BTN SQ WHT 5.5MM	10
AJ7212	PUSH BTN SQ RED 5.5MM	8
AJ2074A	KNOB 11MM GREY-RED	16
AJ2075A	KNOB 11MM GREY-BLACK	24
AJ2076A	KNOB 11MM GREY-L/BLUE	40
AJ2077A	KNOB 11MM GREY-GREEN SIFAM	16
AJ2078A	KNOB 11MM GREY-GREY	24
AJ2079A	KNOB 11MM GREY-YELLOW	22
AJ2080A	KNOB 11MM GREY-BROWN	10
AJ3503	KNOB FADER 11MM BLACK-WHITE T	1
AJ8078	KNOB FADER 11MM WHITE-BLACK T	8
AJ8080	KNOB FADER 11MM YELLOW-BLACK T	2
AJ8081	KNOB FADER 11MM L/BLUE-BLACK T	2
PSU		
AJ2887	PUSH BTN ROUND BLACK	1



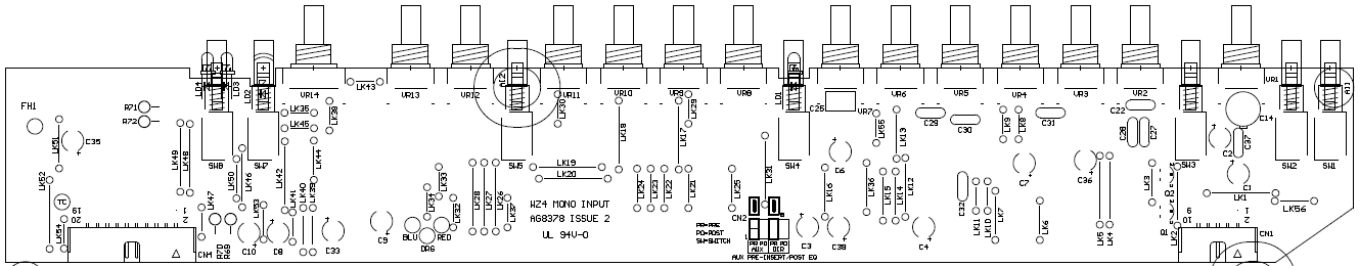
Circuit Board Layout WZ4 12:2



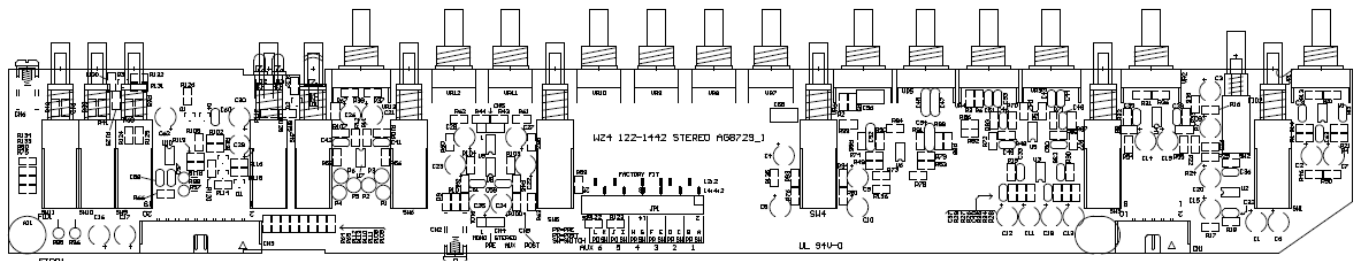


Circuit Board Identification WZ4 12:2

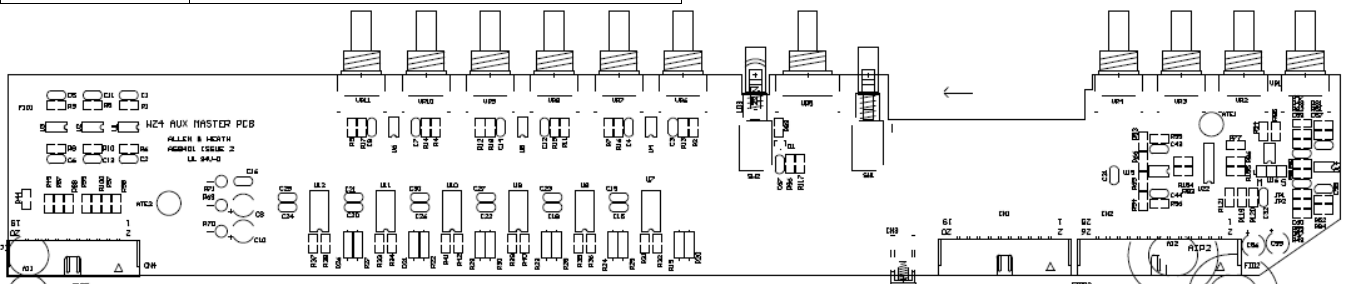
PCB	AG8378
Part Number	004-145
Description	PCB ASSY W4 12/16 MONO IN



PCB	AG8729
Part Number	004-149
Description	PCB ASSY W4 12 STEREO IN

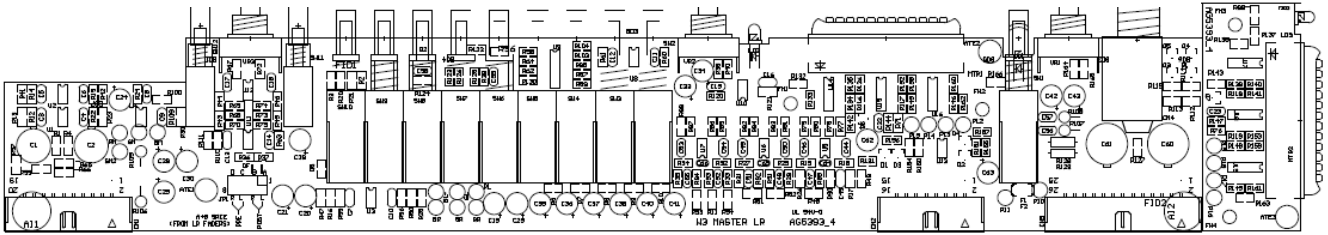


PCB	AG8401
Part Number	004-146
Description	PCB ASSY W4 12/16 AUX MASTER

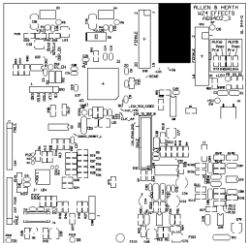




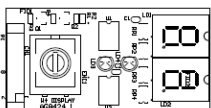
PCB	AG5393
Part Number	004-147
Description	MASTER



PCB	AG8402
Part Number	004-148
Description	FX

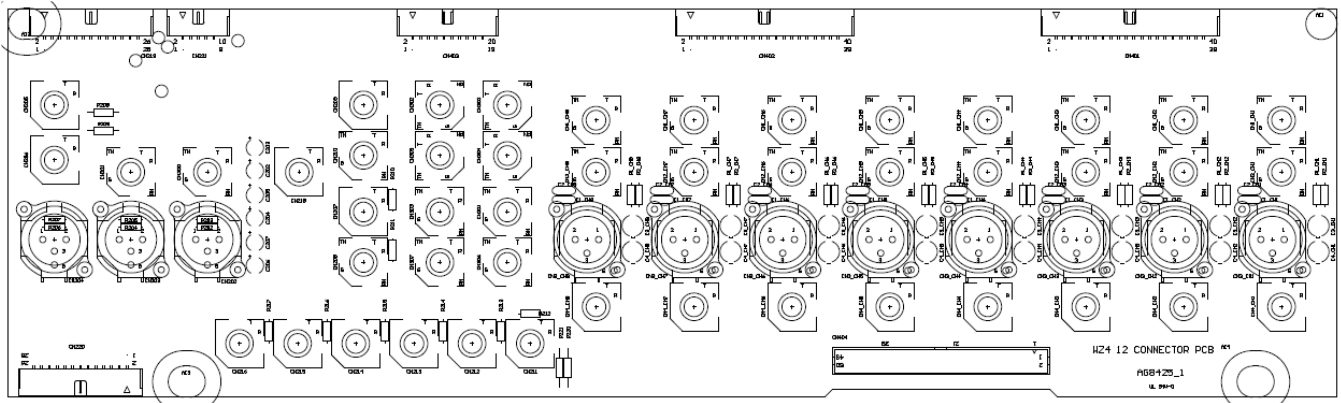


PCB	AG8424
Part Number	004-150
Description	DISPLAY

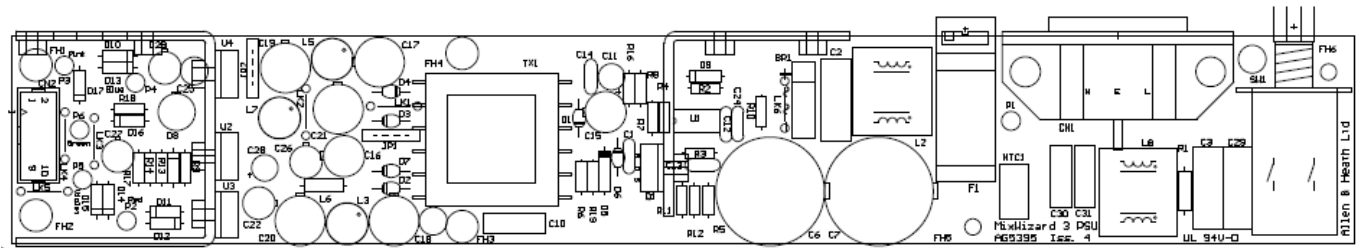




PCB	AG8425
Part Number	004-151
Description	CONNECTOR



PCB	AG5395
Part Number	004-152
Description	PSU





Parts Identification WZ4 14:4:2

Parts List WZ4 14:4:2

Chassis WZ4 14:4:2

Part Number	Description	Qty
AA5498	BUSH W3/W4	2
AA8488	BASE W4	1
AA8491-L	SIDE MOULDING W4 LEFT	1
AA8491-R	SIDE MOULDING W4 RIGHT	1
AK0102	FEET FAST 21DIA.X4.2MM	6
AA5488	EARTH STRIP	1
AA8616	FRONT PNL W4 14	1
AA8489	CHASS. W4 CONN	1
AA5497	BRACKET W3/W4 CLAMP	1
AA8617	CONN PANEL W4 14	1
AA5461	PSU COVER	1
AA8608	BLANK PLATE	1

Screws WZ4 14:4:2

Part Number	Description	Qty
AB0072	SCREW M3X6 PAN TORX BLACK PAN	3
AB0188	NUT M4 NYLOCK	2
AB4836	SCREW M4X8 PAN POZI BLACK	6
AB5615	WASHER 4.3X16X6.3MM THICK BLACK	2
AB5680	SCREW M4X10 PAN POZI BLACK	2
AB5710	SCREW M4X8 FLANGE POZI BLACK	2
AB5836	SCREW M3X6 CSK POZI BLACK UNDERHEAD PIP	21
AB0074	SCREW M3X8 COUNTERSUNK TORX BLACK	2
AB12218	SCREW M3X4 COUNTERSUNK TORX BK UNDERHEAD PIP	39
AB4782	SCREW M3X6 PAN POZI/SLOT	18
AB7422	SCREW 2.7X9 AB TORX BK UH	2
AB8172	NUT POT 9MM BLACK ZINC	194

Continued on next page



Screws WZ4 14:4:2

Part Number	Description	Qty
Connector panel		
AB0102	NUT M3 NYLOCK	5
AB7422	SCREW 2.7X9 AB TORX BK	28
PSU		
AB0102	NUT M3 NYLOCK	1
AB0233	SCREW M3X4 PAN TORX BLACK	6
AB12313	SCREW M3X10 PAN TORX BLACK	2
AB8592	SCREW M3X5 TRUNC COUNTERSUNK TORX	4

Cables WZ4 14:4:2

Part Number	Description	Qty
Front panel		
2AL5630	WFM IDC W3/W4 14 MAIN	1
AL5633	WFM IDC W3/W4 14 INTERCON	1
Connector panel		
AL5484	WFM IDC W3/W4 LR MASTER/R	1
AL8606	WFM IDC W4 INPUT TO CONNECTOR	4
AL8607	WFM IDC W4 POWER TO CONNECTOR	2

PCB WZ4 14:4:2

Part Number	Description	Qty
Front panel		
004-153	PCB ASSY W4 14 MONO INPUT	10
004-158	PCB ASSY W4 14 STEREO INPUT	2
004-161	PCB ASSY W4 14 GROUP	2
004-162	PCB ASSY W4 14 GROUP/MATRIX	1
004-163	PCB ASSY W4 14 LEFT	1
004-164	PCB ASSY W4 14 RIGHT	1
004-229	LIGHT SKT ASSY W4	1

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PCB WZ4 14:4:2

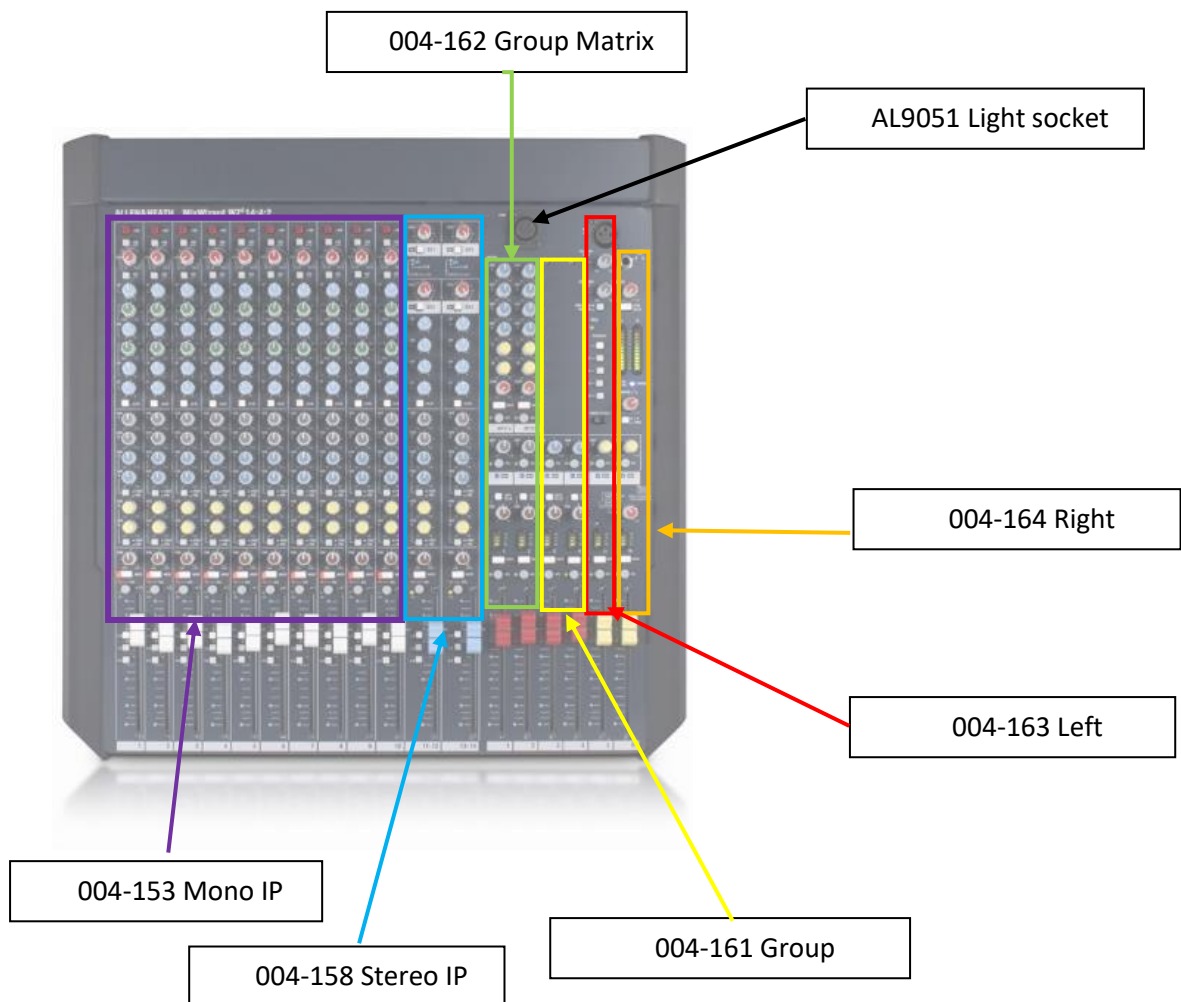
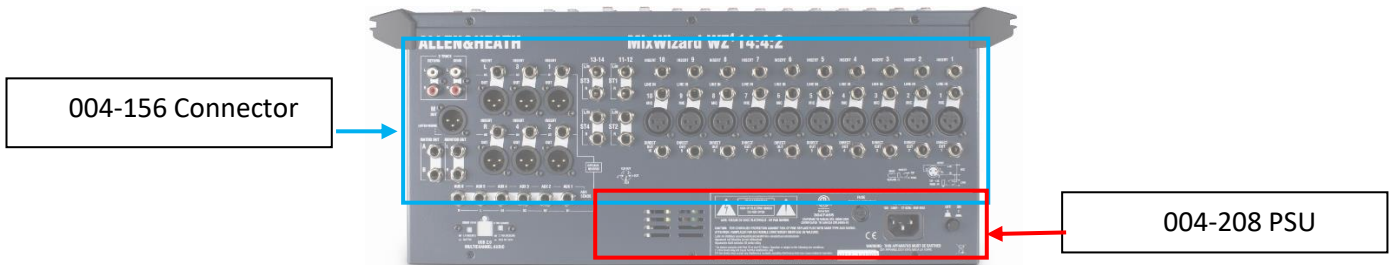
Part Number	Description	Qty
Connector panel		
004-156	PCB ASSY W4 14 CONNECTOR	1
PSU		
004-208	PSU ASSY W4	1

Knobs and Push Buttons WZ4 14:4:2

Part Number	Description	Qty
AJ2074A	KNOB 11MM GREY-RED	19
AJ2075A	KNOB 11MM GREY-BLUE	34
AJ2076A	KNOB 11MM GREY-LIGHT/BLUE	48
AJ2077A	KNOB 11MM GREY-GREEN SIFAM	20
AJ2078A	KNOB 11MM GREY-GREY	28
AJ2079A	KNOB 11MM GREY-YELLOW	30
AJ2080A	KNOB 11MM GREY-BROWN	16
AJ3955	PUSH BTN ROUND LIGHT/GREY 8MM	26
AJ7180	PUSH BTN RECT WHITE 10X5.5	21
AJ7210	PUSH BTN SQ GREY 5.5MM	77
AJ7211	PUSH BTN SQ WHITE 5.5MM	30
AJ7212	PUSH BTN SQ RED 5.5MM	10
AJ8078	KNOB FDR 11MM WHITW-BLACK T	10
AJ8079	KNOB FDR 11MM RED-BLACK T	4
AJ8080	KNOB FDR 11MM YELLOW-BLACK T	2
AJ8081	KNOB FDR 11MM LIGHT/BLUE-BLACK T	2
PSU		
AJ2887	PUSH BTN ROUND BLACK	1



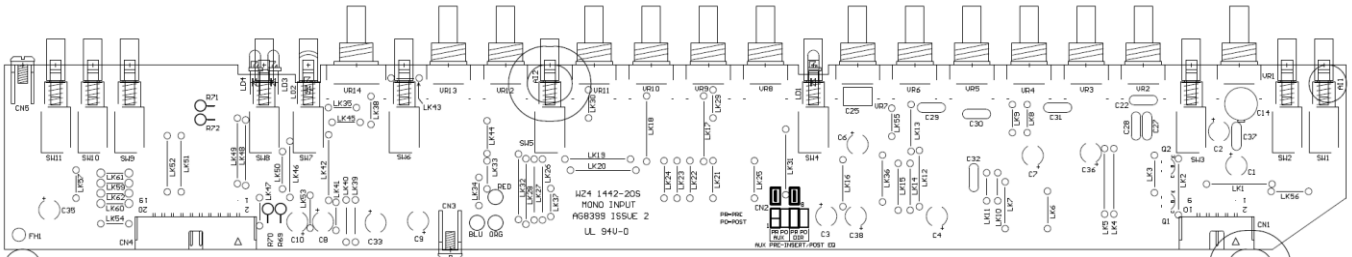
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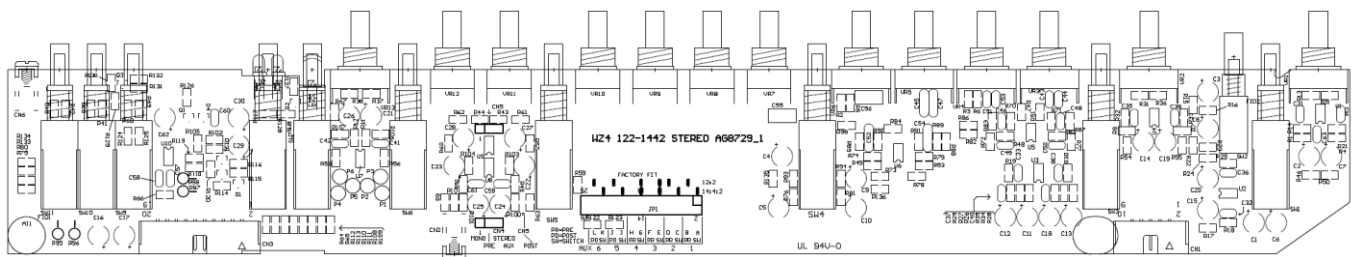


Circuit Board Identification WZ4 14:4:2

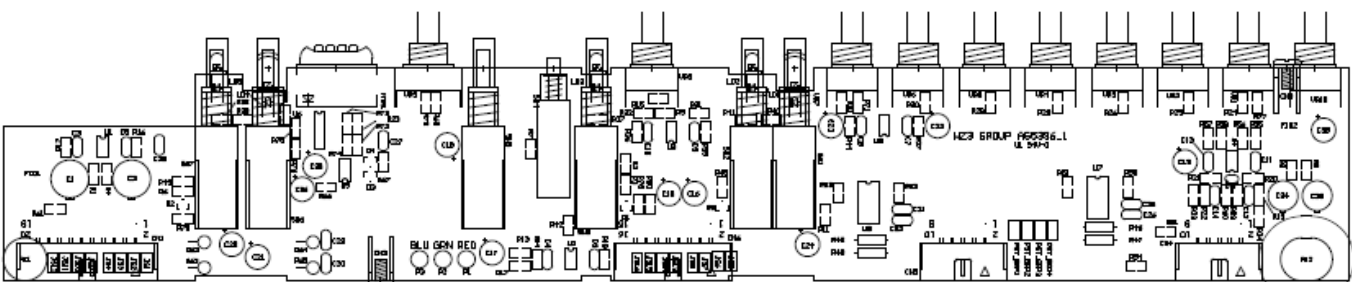
PCB	AG8389
Part Number	004-153
Description	MONO INPUT



PCB	AG8729
Part Number	004-158
Description	STEREO INPUT

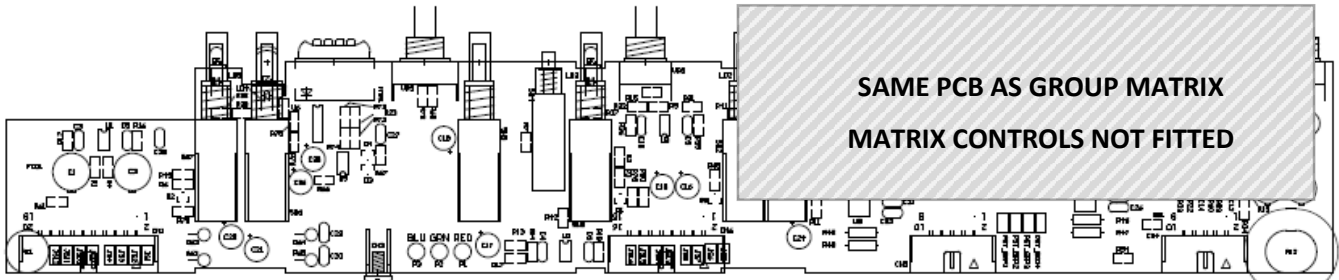


PCB	AG5396
Part Number	004-162
Description	GROUP MATRIX

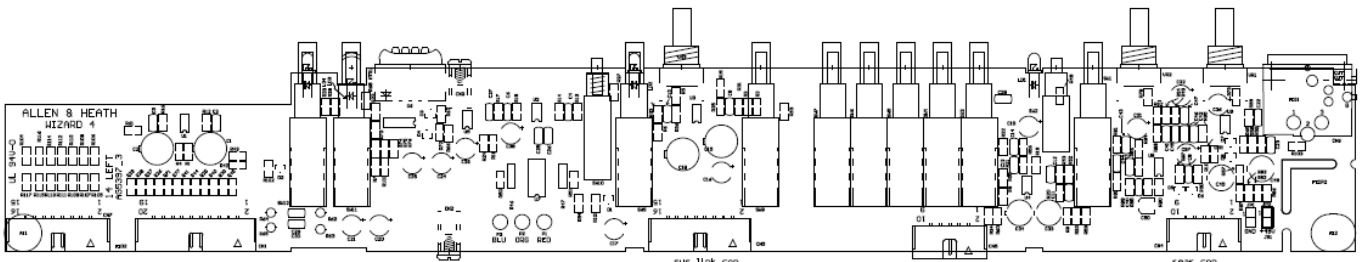




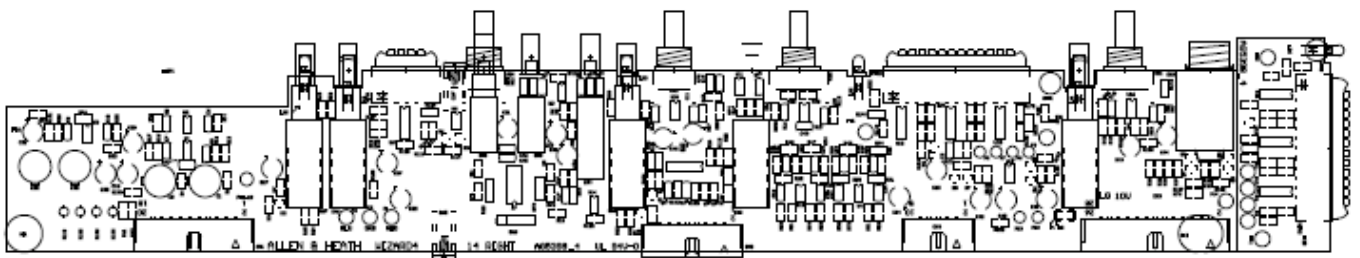
PCB	AG5396
Part Number	004-161
Description	GROUP



PCB	AG5397
Part Number	004-163
Description	LEFT

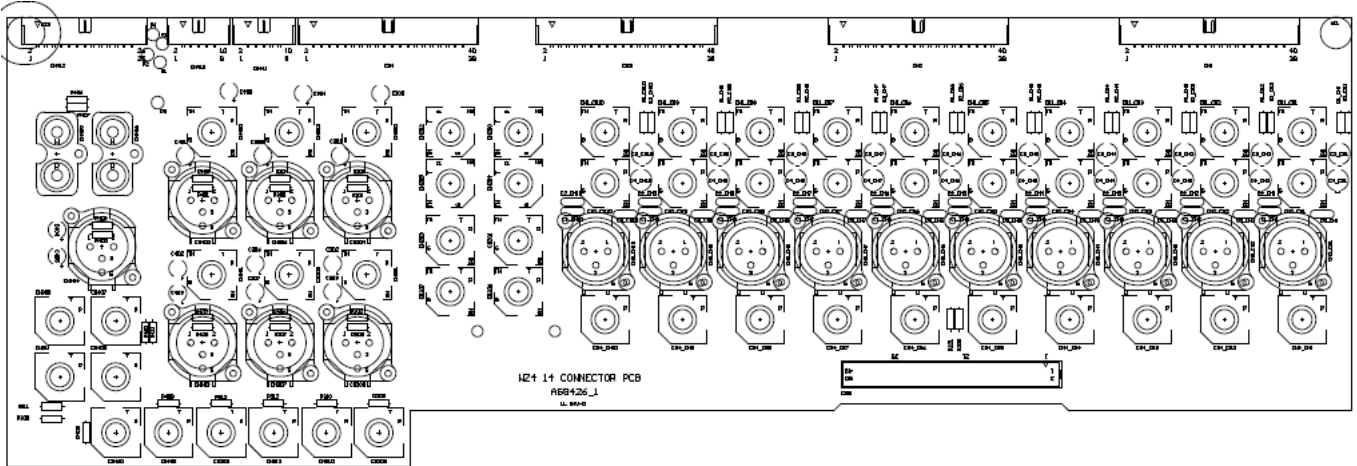


PCB	AG5398
Part Number	004-164
Description	RIGHT

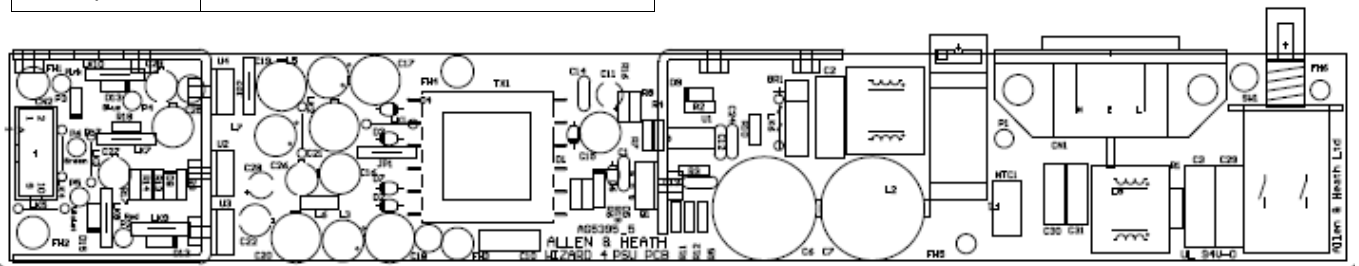




PCB	AG8426
Part Number	004-156
Description	PCB ASSY W4 14 CONNECTOR



PCB	AG5395
Part Number	004-152
Description	PSU ASSY W4





Parts Identification WZ4 16:2

Parts List WZ4 16:2

Chassis WZ4 16:2

Part Number	Description	Qty
AA5498	BUSH W3/W4	2
AA8488	BASE W4	1
AA8491-L	SIDE MOULDING W4 LEFT	1
AA8491-R	SIDE MOULDING W4 RIGHT	1
AK0102	FEET FAST 21DIA.X4.2MM	2
AA8452	FRONT PNL W4 16	1
AA8581	FACIA 7 SEG DISPLAY W4	1
AA8489	CHASS. W4 CONN	1
AA5497	BRACKET W3/W4 CLAMP	1
AA8453	CONN PANEL W4 16	1
AA8608	BLANK PLATE W4 USB	1
AK0102	FEET FAST 21DIA.X4.2MM	4
AA5461	PSU COVER	1

Screws WZ4 16:2

Part Number	Description	Qty
AB0072	SCREW M3X6 PAN TORX BLACK	3
AB0188	NUT M4 NYLOCK	2
AB4836	SCREW M4X8 PAN POZI BLACK	6
AB5680	SCREW M4X10 PAN POZI BLACK	2
AB5710	SCREW M4X8 FLANGE POZI BLACK	2
AB5836	SCREW M3X6 CSK POZI BK UNDERHEAD PIP	5
AB0074	SCREW M3X8 CSK TORX BLACK	2
AB12218	SCREW M3X4 CSK TORX BK UNDERHEAD PIP	38
AB4782	SCREW M3X6 PAN POZI OR SLOT	1
AB8172	NUT POT 9MM BLACK ZINC	238

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Screws WZ4 16:2

Part Number	Description	Qty
Connector panel		
AB0102	NUT M3 NYLOCK	5
AB5836	SCREW M3X6 CSK POZI BK UNDERHEAD PIP	6
AB7422	SCREW 2.7X9 AB TORX BK UNDERHEAD PIP	24
PSU		
AB0102	NUT M3 NYLOCK	1
AB0233	SCREW M3X4 PAN TORX BLACK	6
AB12313	SCREW M3X10 PAN TORX BLACK	2
AB8592	SCREW M3X5 TRUNC COUNTERSUNK TORX	4

Cables WZ4 16:2

Part Number	Description	Qty
Front panel		
AL5483	WFM IDC W3/W4 16 MAIN	1
Connector panel		
AL5484	WFM IDC W3/W4 LR MASTER/RIGHT	1
AL5485	WFM IDC W3/W4 AUX MASTER	1
AL8606	WFM IDC W4 INPUT TO CONNECTOR	4
AL8607	WFM IDC W4 POWER TO CONNECTOR	1

PCB WZ4 16:2

Part Number	Description	Qty
Front panel		
004-145	PCB ASSY W4 12/16 MONO INPUT	16
004-146	PCB ASSY W4 12/16 AUX MASTER	1
004-147	PCB ASSY W4 12/16 MASTER	1
004-148	PCB ASSY W4 12/16 EFFECTS	1
004-229	LIGHT SKT ASSY W4 LITTLITE	1

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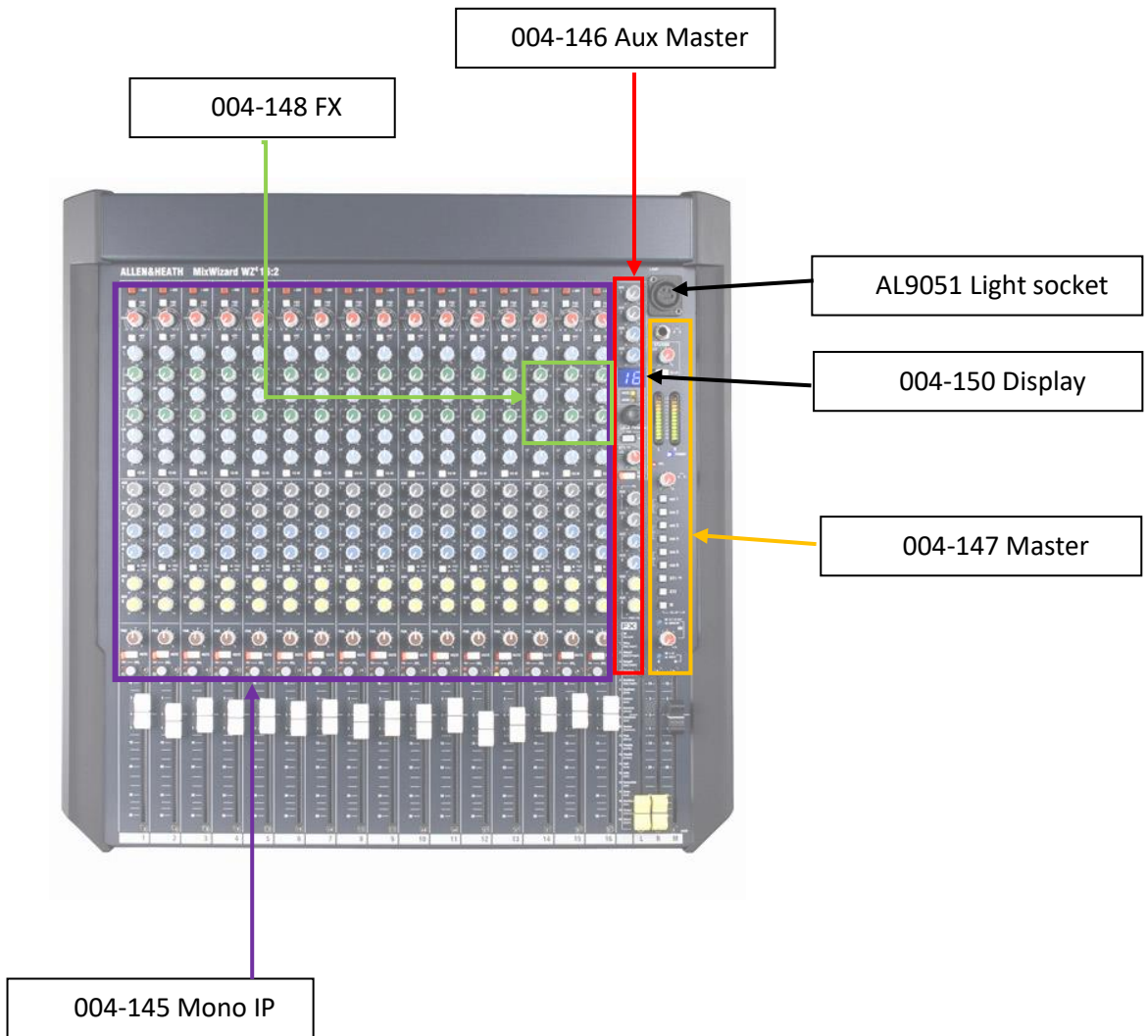
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Connector panel		
004-157	PCB ASSY W4 16 CONNECTOR	1
PSU		
004-208	PSU ASSY W4	1

Knobs and Push Buttons WZ4 16:2

Part Number	Description	Qty
Front panel		
AJ2074A	KNOB 11MM GREY-RED	20
AJ2075A	KNOB 11MM GREY-BLUE	36
AJ2076A	KNOB 11MM GREY-LIGHT BLUE	64
AJ2077A	KNOB 11MM GREY-GREEN SIFAM	32
AJ2078A	KNOB 11MM GREY-GREY	36
AJ2079A	KNOB 11MM GREY-YELLOW	34
AJ2080A	KNOB 11MM GREY-BROWN	16
AJ3503	KNOB FADER 11MM BLACK-WHITE T	1
AJ8078	KNOB FADER 11MM WHITE-BLACK T	16
AJ8080	KNOB FDR 11MM YELW-BLACK T	2
AJ6379	KNOB ENCODER SOFT BLACK	1
AJ3955	PUSH BUTTON ROUND LIGHT GRY 8MM	16
AJ7179	PUSH BUTTON RECTANGLE GREY 10X5.5	1
AJ7180	PUSH BUTTON RECTANGLE WHITE 10X5.5	18
AJ7210	PUSH BUTTON SQARE GREY 5.5MM	57
AJ7211	PUSH BUTTON SQUARE WHITE 5.5MM	16
AJ7212	PUSH BUTTON SQUARE RED 5.5MM	16
PSU		
AJ2887	PUSH BUTTON ROUND BLACK	1



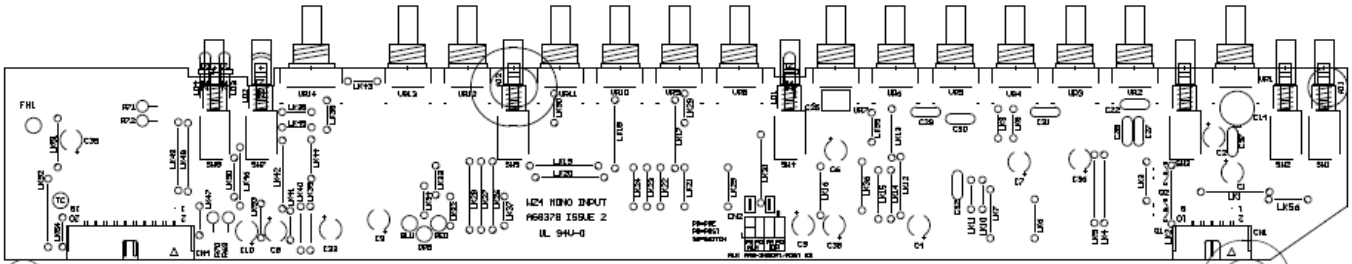
Circuit Board Layout WZ4 16:2



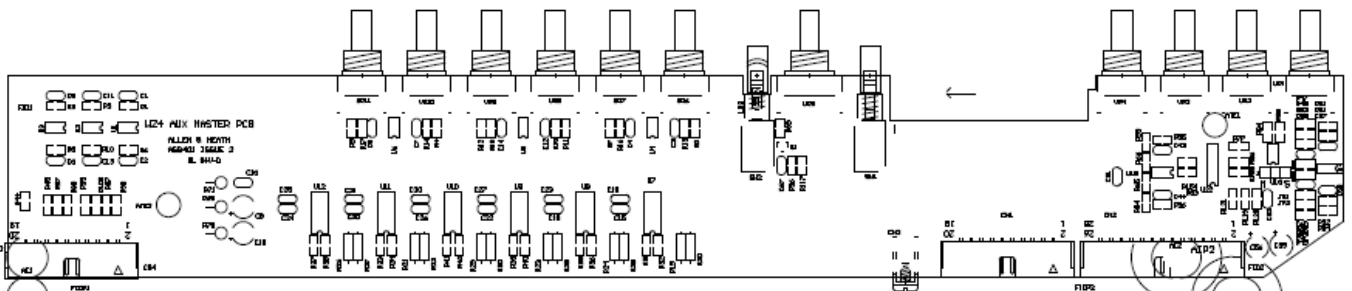


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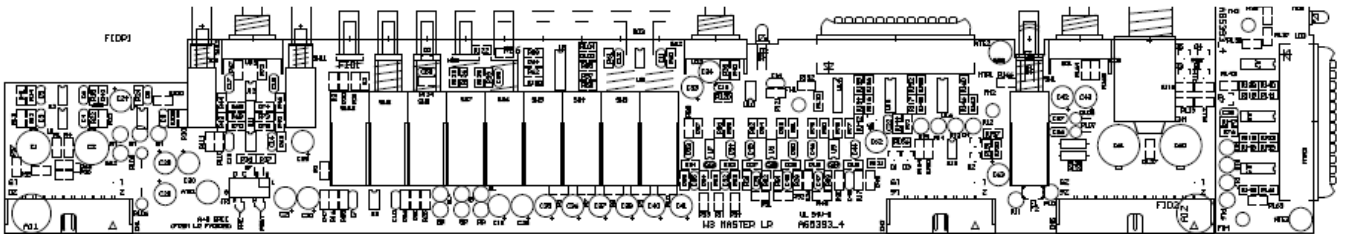
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Part Number	004-145
Description	PCB ASSY W4 12/16 MONO IN



PCB	AG8401
Part Number	004-146
Description	PCB ASSY W4 12/16 AUX MAS

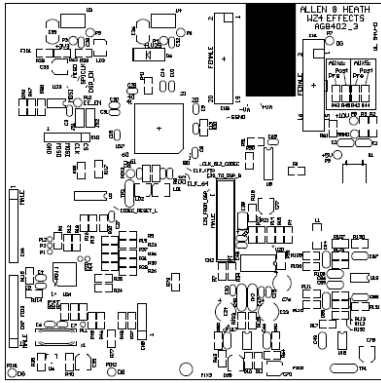


PCB	AG5393
Part Number	004-147
Description	PCB ASSY W4 12/16 MASTER

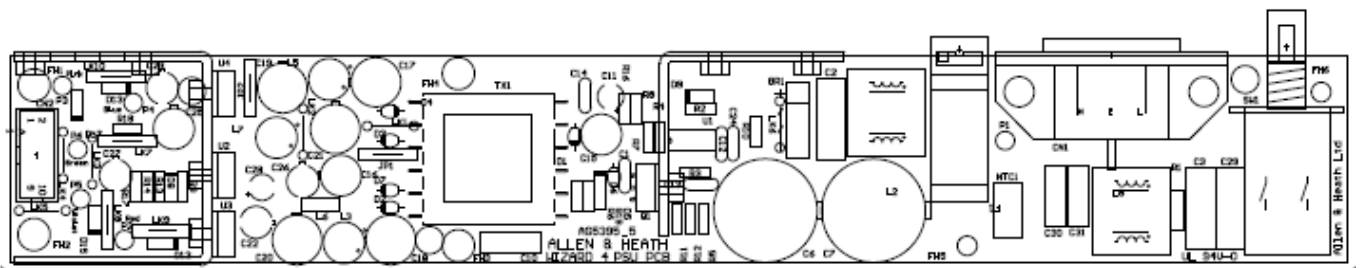




PCB	AG8402
Part Number	004-148
Description	PCB ASSY W4 12/16 EFFECTS



PCB	AG5395
Part Number	004-152
Description	PSU ASSY W4





Disassembly Procedure

Disassembly of the chassis to access the PCBs is the same on all three models. WZ4 16:2 is shown here.

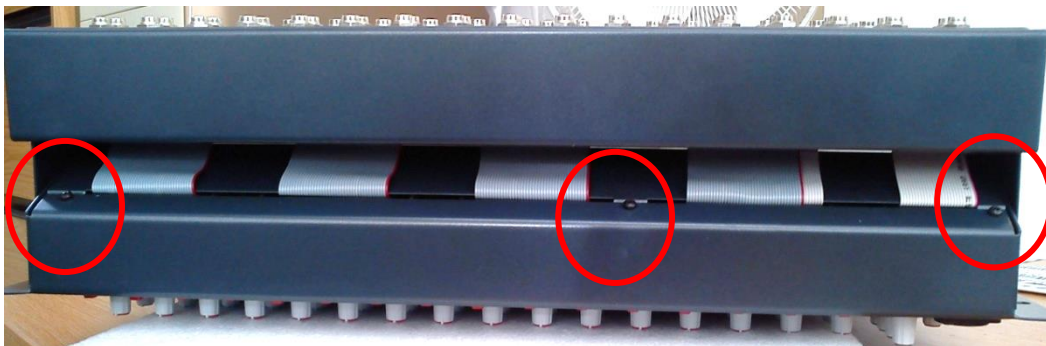


Remove side trims. X3 AB4836 M4x8

x1 AB5680 Max10



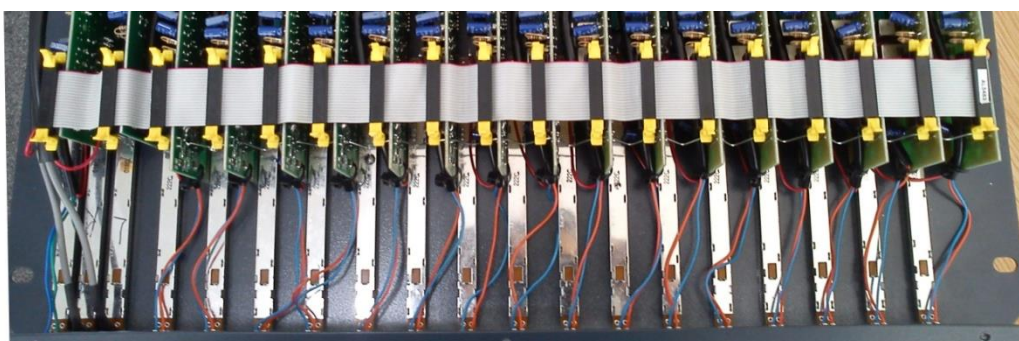
Remove pod rotation lock screws x2 AB5710 m4X8 flange



Remove rear panel screws x3 AB0072 M3x6



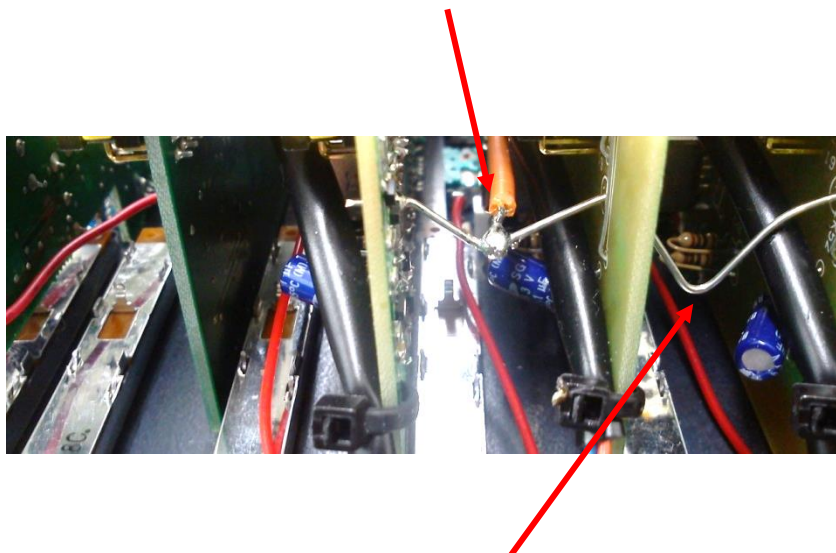
Rotate pod to remove base panel screws x5 AB5836 M3x6



Remove main harness



Disconnect the orange earth wire



Cut TC earth bus wire between PCBs if required



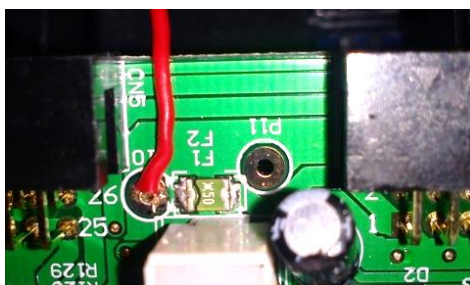
Remove FX PCB screw AB4782 and unplug header to remove PCB



Disconnect FX PCB cable AL8578 from the display



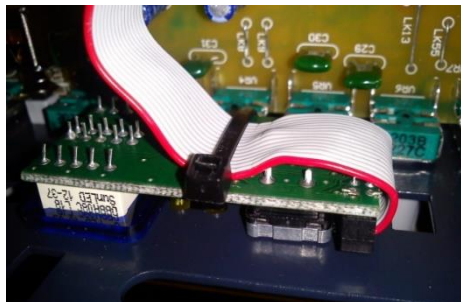
Disconnect cable AL5484 from rear pod to Master PCB



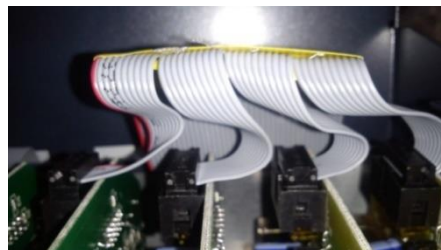
Unsolder the red wire from the master PCB



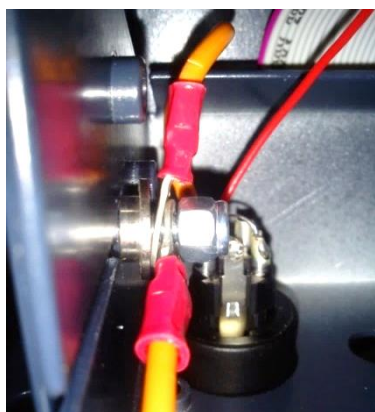
Unplug cable 5485 from the Aux master PCB



Disconnect the cable AL8578 from the Display



Note the orientation of the 4-way cables from rear connector to channel PCBs



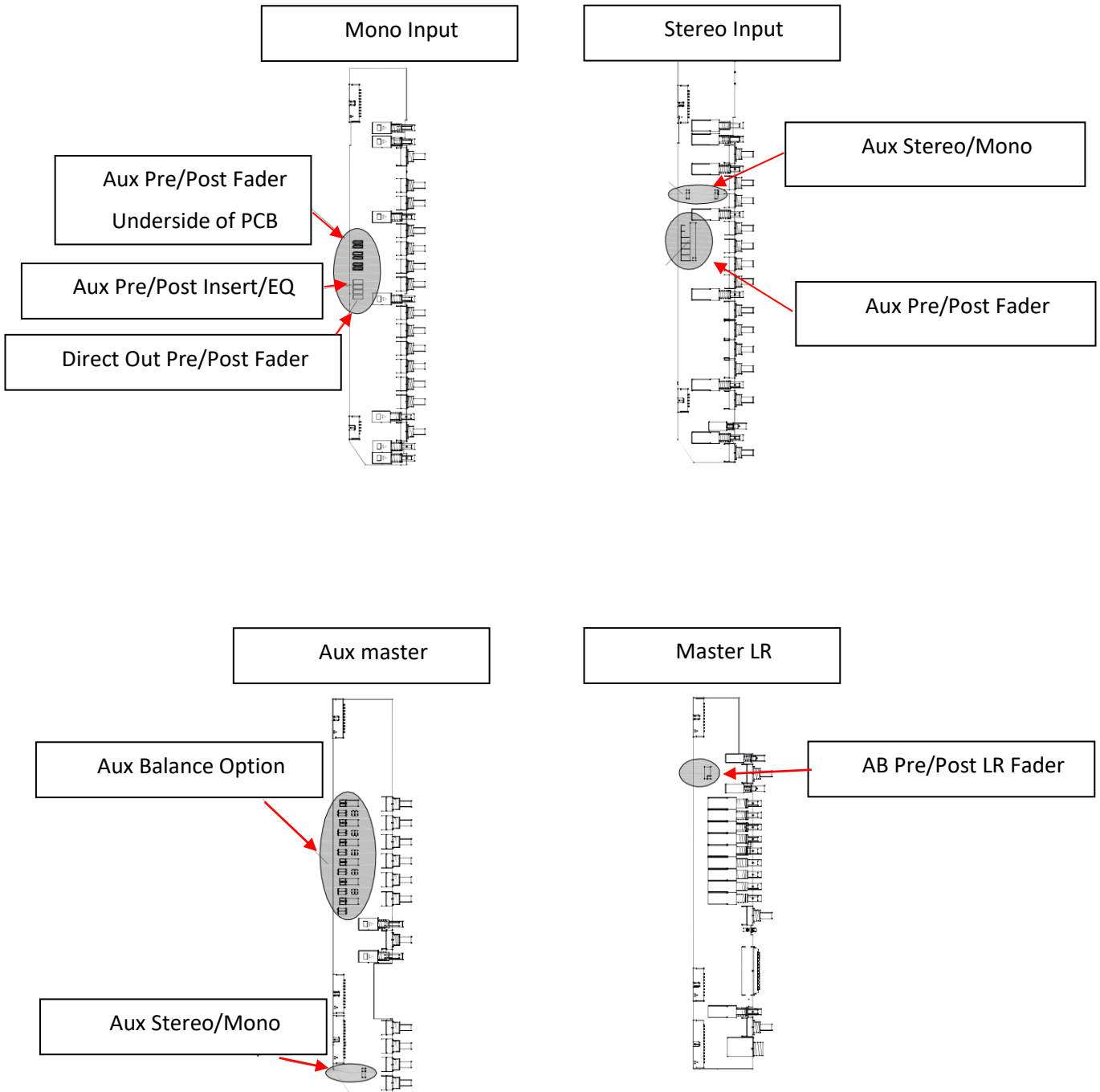
Disconnect the orange wires from the left side connector assembly (as seen with mixer upside down)



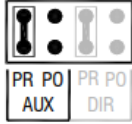
Remove the connector assembly mounting bushes AB5498, nyloc M4 AB0188 and screws from both sides



Optional Assignments



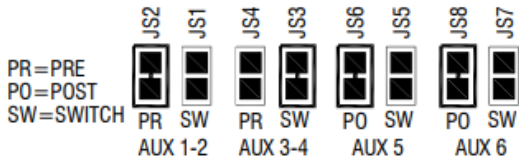
Optional Assignments



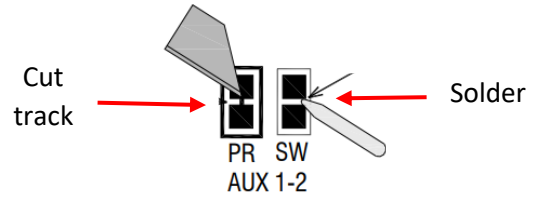
Mono ch Aux Pre/Post EQ



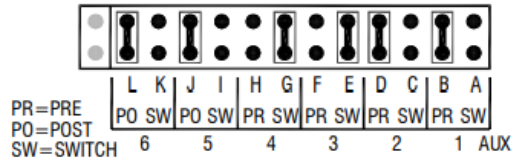
Mono ch Direct Out Pre/Post fader



Mono ch Aux Pre/Post fader



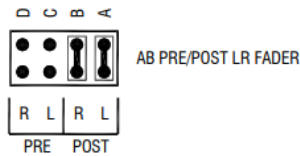
Solder assign



Stereo ch Aux Pre/Post Fader



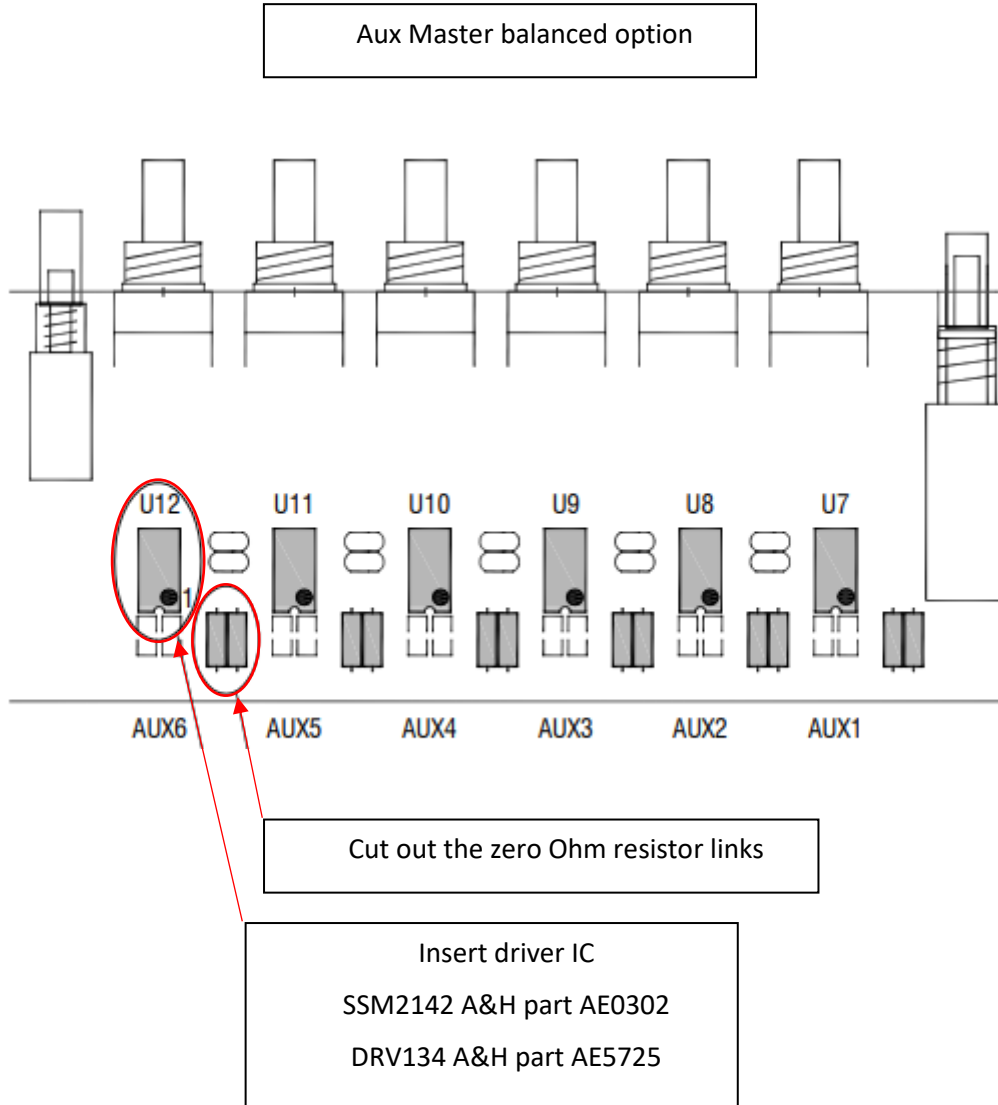
Stereo ch Mono/Stereo Aux



LR Master AB Source

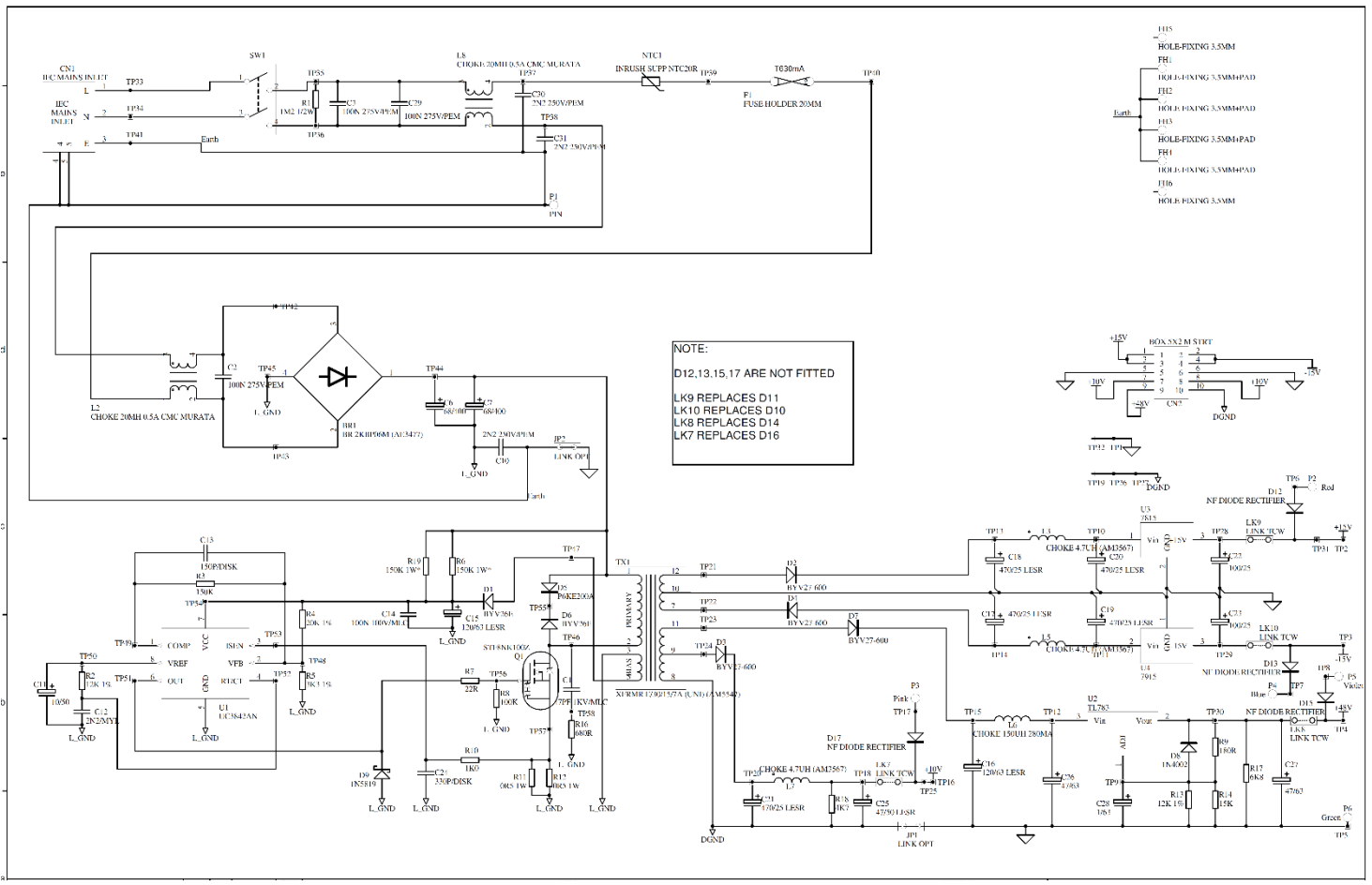
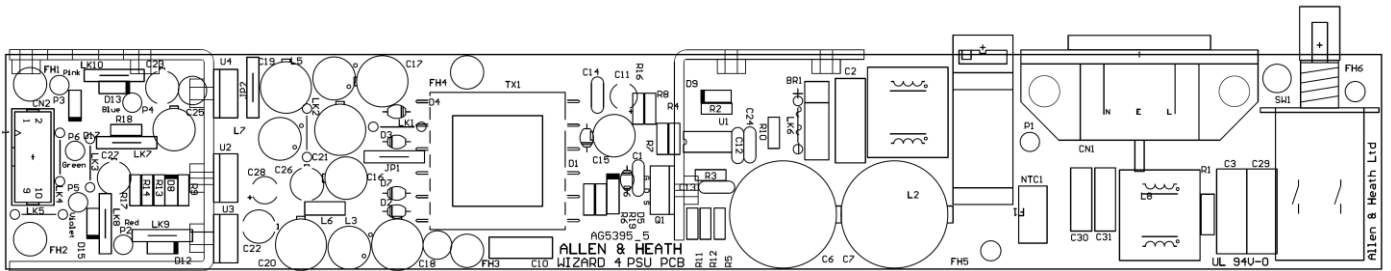


Aux Master ST1 (5) Mono/Stereo





PSU Circuit Diagram





Other Technical Information

USB Audio Option 004-232

The fitting instructions are on the Allen & Heath Resource Space.

The USB Audio option PCB is discontinued.

Drivers are supported up to Windows 10 and 10.14 Mojave.

There will be no further driver updates.

Block Diagram

Specifications

Weights & Dimensions

All of this information is available to end users and can be found at the following location.

[WZ4 14:4:2 User Guide](#)

[WZ4 16:2 User Guide](#)

[WZ4 12:2 User Guide](#)

For further information please contact Allen&Heath Product Support

<https://support.allen-heath.com>