

# ALLEN & HEATH

# ZED 14/18/24

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## SERVICE MANUAL

### ISSUE 1

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## ALLEN & HEATH

Allen & Heath Limited, Kernick Industrial Estate, Penryn, Cornwall, TR10 9LU, UK

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



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## Notices

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### 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 centres 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](http://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

### Parts List

#### Chassis

Part Number	Description	14	18	24
AA6738	FRONT PNL ZED 14	1	-	-
AA6739	BASE ZED 14	1	-	-
AA8523	FRONT PNL ZED 18	-	1	-
AA8525	BASE ZED 18/16FX	-	1	-
AA6998	FRONT PNL ZED 24	-	-	1
AA6999	BASE ZED 24	-	-	1
AA6740-L	SIDE TRIM ZED LEFT	1	1	1
AA6740-R	SIDE TRIM ZED RIGHT	1	1	1
AA6741-L	SIDE MOULDING ZED LEFT	1	1	1
AA6741-R	SIDE MOULDING ZED RIGHT	1	1	1

#### Screws

Part Number	Description	14	18	24
AB0078	SCREW M3X12 PAN TORX BK	3	5	5
AB0102	NUT M3 NYLOCK	4	4	4
AB12218	SCREW M3X4 CSK TORX BK UH	24	32	44
AB2810	SCREW 4X5/16 PAN TORX POL	4	4	4
AB5564	SCREW M3X12 PAN TORX BK U	2	2	2
AB6889	SCREW M4X12 PAN POZI BK	8	8	8
AB7422	SCREW 2.7X9 AB TORX BK UH	16	24	36
AB8050	NUT POT 9MM SILVER	99	139	199
AB8592	SCREW M3X5 TRUNC CSK TORX	19	33	21



## Cables

Part Number	Description	14	18	24
AL6819	IDC WFM ZED 14/12FX MAIN	1	-	-
AL8622	IDC WFM ZED 18/16FX MAIN	-	1	-
AL7033	IDC WFM ZED 24/22FX MAIN	-	-	1

## PCB

Part Number	Description		14	18	24
003-652	PCB ASSY ZED 14 MONO INPUT	(AG6744)	6	10	16
003-653	PCB ASSY ZED 14 STEREO IN	(AG6745)	3	3	3
003-655	PCB ASSY ZED 14 STEREO US	(AG6817)	1	1	1
003-656	PCB ASSY ZED 14 AUX MIX	(AG6747)	1	1	1
003-657	PCB ASSY ZED 14 MASTER	(AG6748)	1	1	1
003-658	PCB ASSY ZED 14 DISTRIBUT	(AG6749)	1	-	1
003-659	PCB ASSY ZED 14 PH/METER	(AG6751)	1	1	1
003-661	PSU ASSY ZED 14	(AG7075)	1	-	-
003-778	PSU ASSY ZED 24	(AG7075)	-	1	1
003-662	FDRA ZED MONO	(AI11158-FELT) (AI8117 - NEOPR)	8	12	18
003-663	FDRA ZED STEREO	(AI11159-FELT) (AI8118 - NEOPR)	4	4	4



## Other

Part Number	Description	14	18	24
AJ2075A	KNOB 11MM GY-BL	26	38	56
AJ2078A	KNOB 11MM GY-GY	20	28	40
AJ3955	PUSH BTN ROUND L/GRY 8MM	10	14	20
AJ6106A	KNOB 11MM GY-BK	28	40	58
AJ6237	KNOB FDR 11MM D/BL-WH T	4	4	4
AJ6278	KNOB FDR 11MM GY-BK T	6	10	26
AJ6949	KNOB 11MM GY-BURG ZED	25	33	45
AJ6950	KNOB FDR 11MM BURG-BK T Z	2	2	2
AJ7179	PUSH BTN RECT GRY 10X5.5	13	17	23
AJ7180	PUSH BTN RECT WHT 10X5.5	10	14	20
AJ7182	PUSH BTN RECT BLK 10X5.5	3	3	3
AK0102	FEET FAST 21DIA.X4.2MM	4	4	4

## Accessories

Part Number	Description	14	18	24
AH6443	CABLE USB A-B 2M PATCH	1	1	1
AN6823	BOX+FIT ZED 14	1	-	-
AN8621	BOX+FIT ZED 18	-	1	-
AN7031	BOX+FIT ZED 24	-	-	1



**EXTERIOR PARTS**

**Nut & socket**  
(supplied with complete socket)  
**AL6893**

**Knob Red**  
**AJ6949**

**Nut pot**  
**AB8050**

**Knob Blue**  
**AJ2075A**

**Knob Black**  
**AJ6106A**

**Knob Grey**  
**AJ2078A**

**Plastic side moulding left**  
**AA6741-LJIT**

**Switch cap Rectangle Black**  
**AJ3228**

**Switch cap Rectangle White**  
**AJ2962**

**Switch cap Rectangle Grey**  
**AJ2865**

**Switch cap Squire Grey**  
**AJ2864**

**Switch cap Round Grey**  
**AJ3955**

**Plastic side moulding right**  
**AA6741-RJIT**

**Small headphone socket**  
**AL5323**

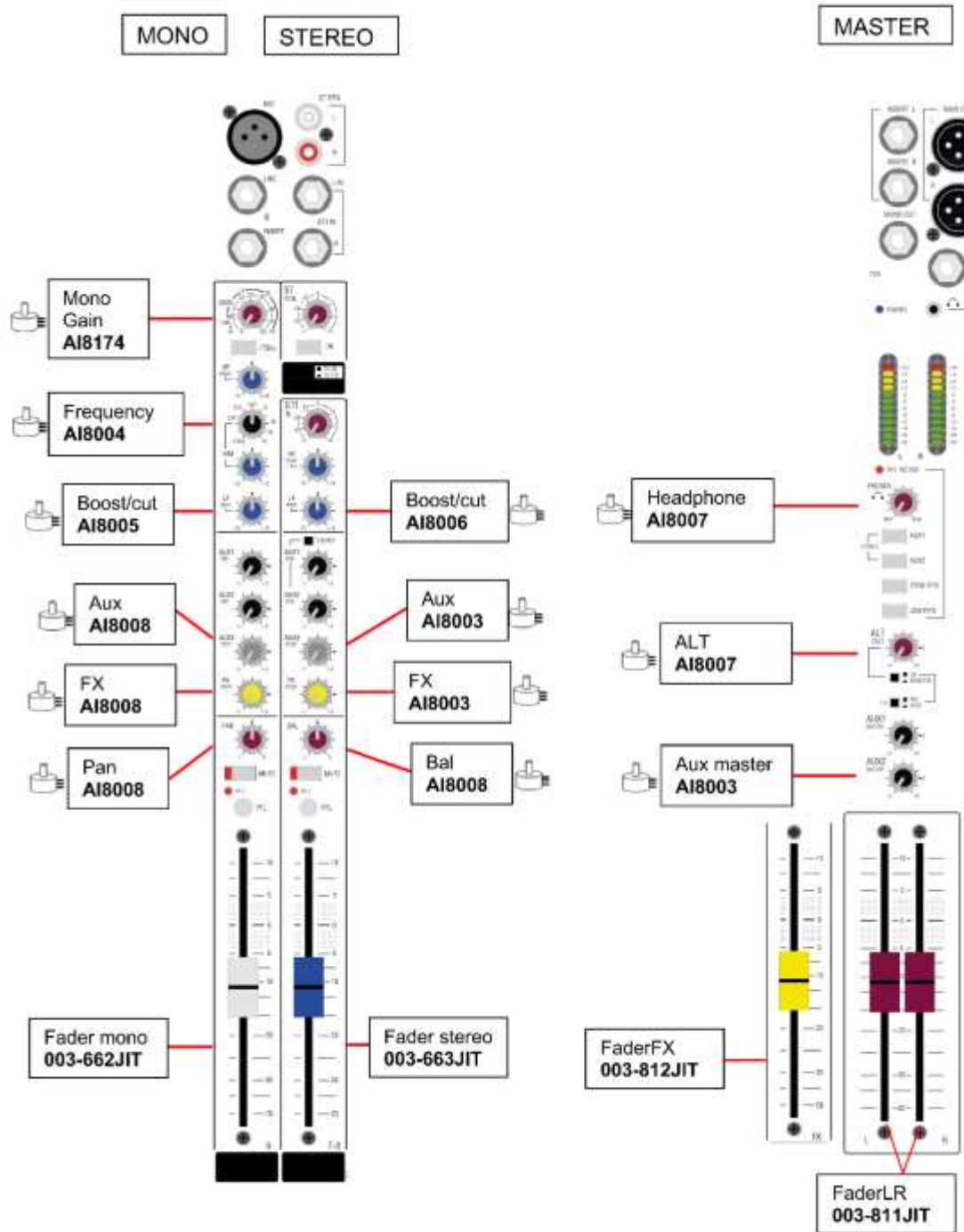
**Fader knob Grey**  
**AJ6278**

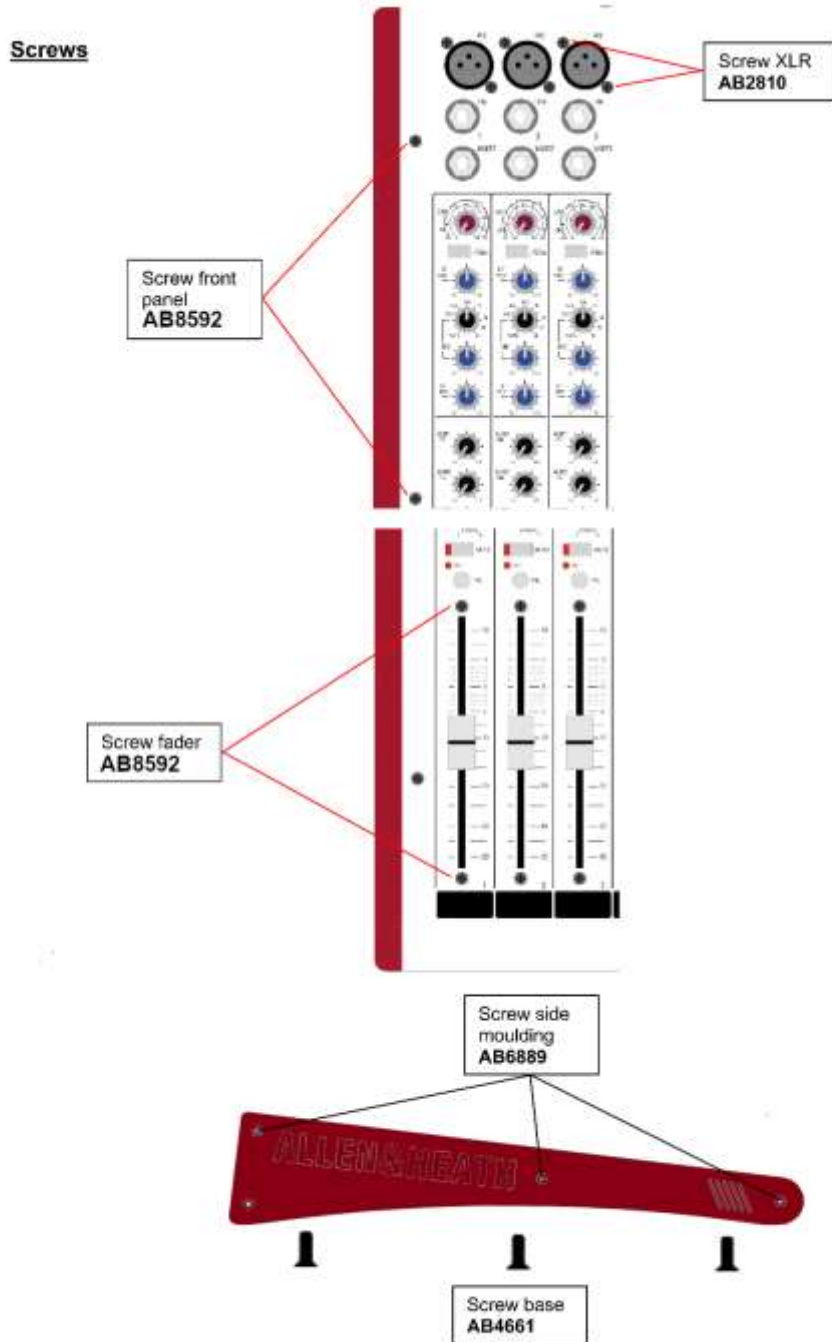
**Fader knob Blue**  
**AJ6237**

**Fader knob Black**  
**AJ8080**

**Fader knob Red**  
**AJ6950**

**Feet**  
**AK0102**

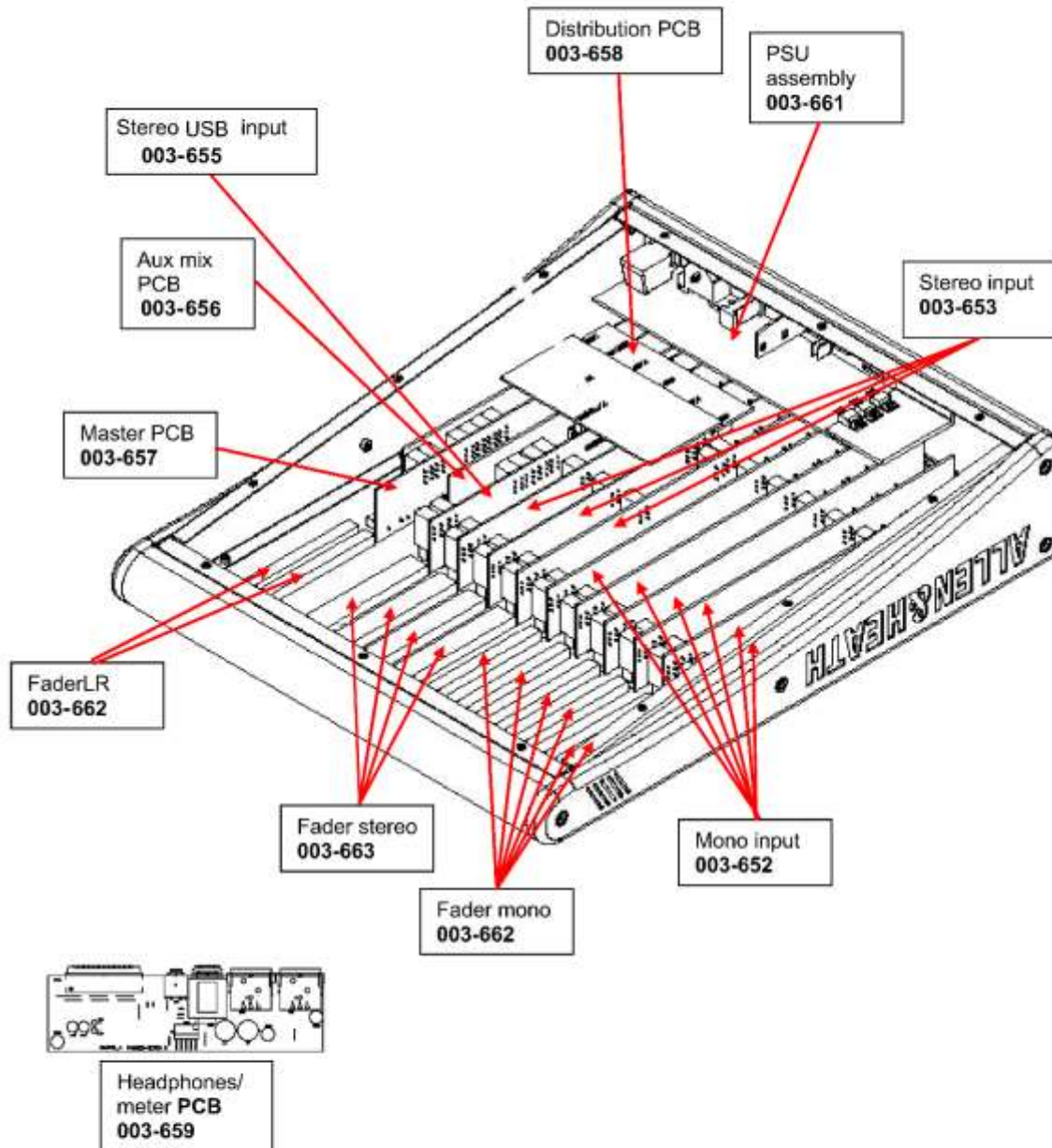






# Circuit Board Layout

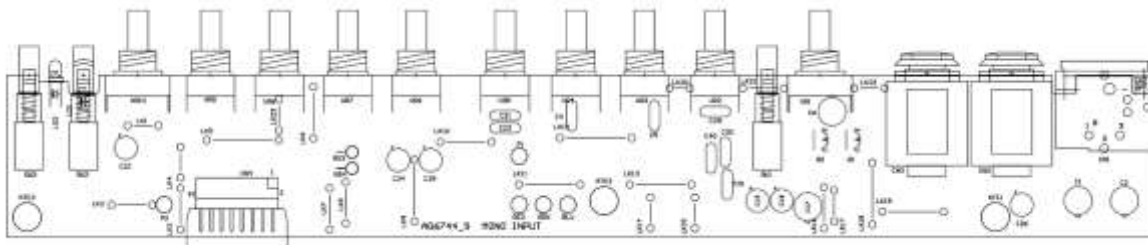
## INTERIOR PARTS



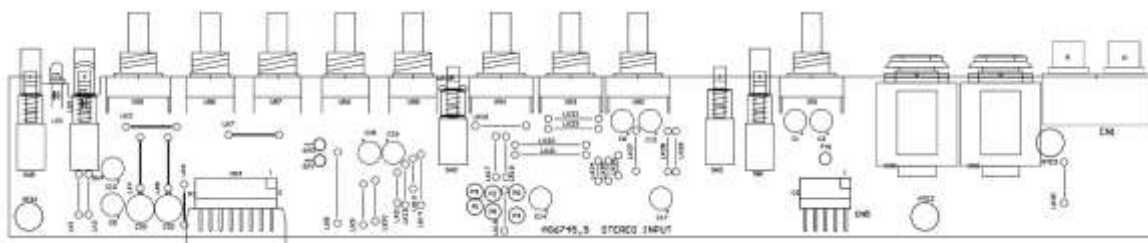


# Circuit Board Identification

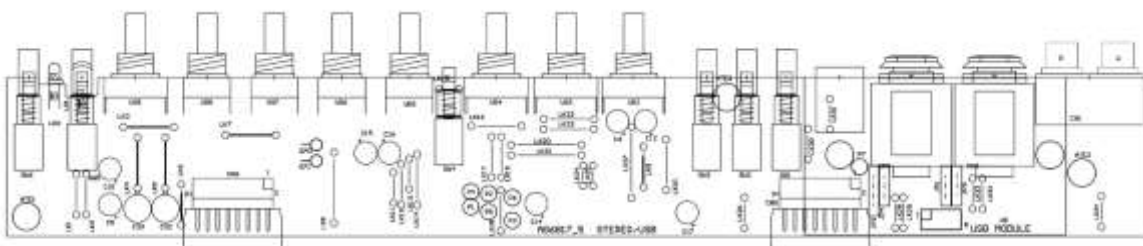
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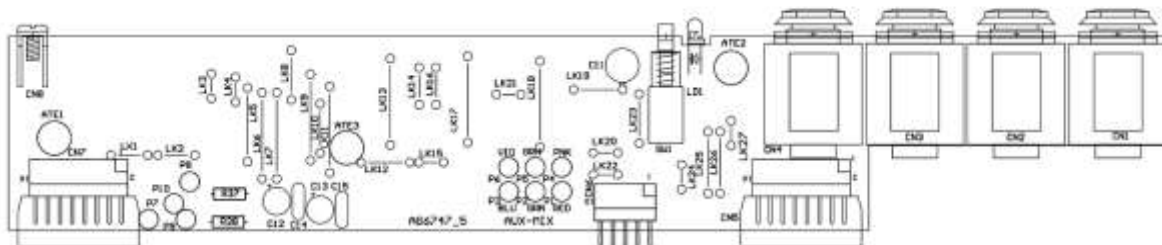
003-652 PCB ASSY ZED 14 MONO INPUT (AG6744)



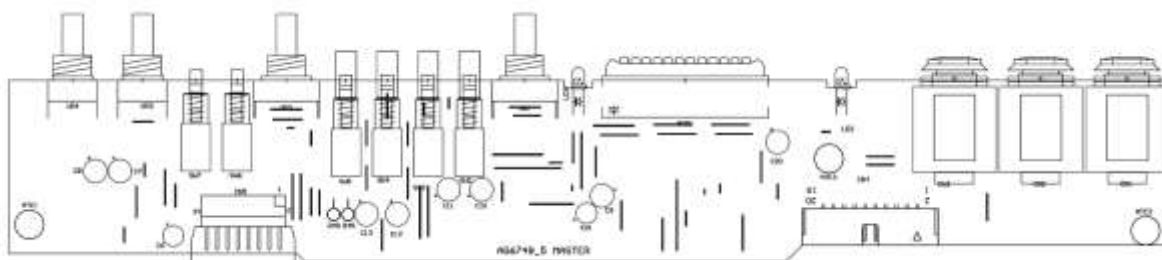
003-653 PCB ASSY ZED 14 STEREO INPUT (AG6745)



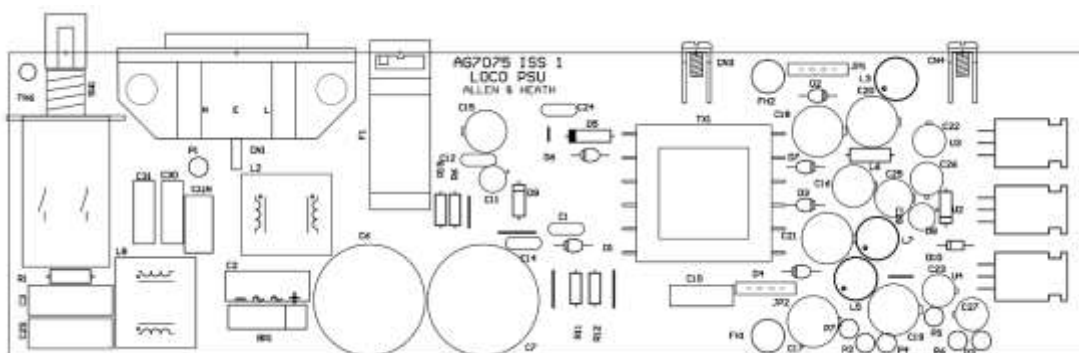
003-655 PCB ASSY ZED 14 STEREO US (AG6817)



003-656      PCB ASSY ZED 14 AUX MIX (AG6747)

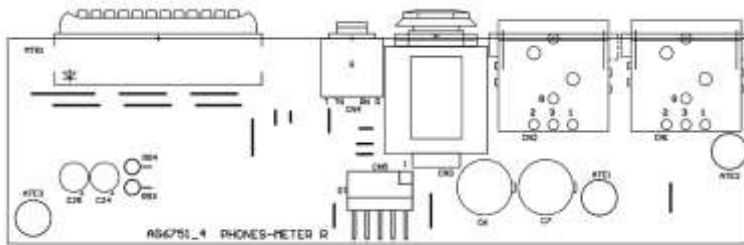


003-657      PCB ASSY ZED 14 MASTER (AG6748)

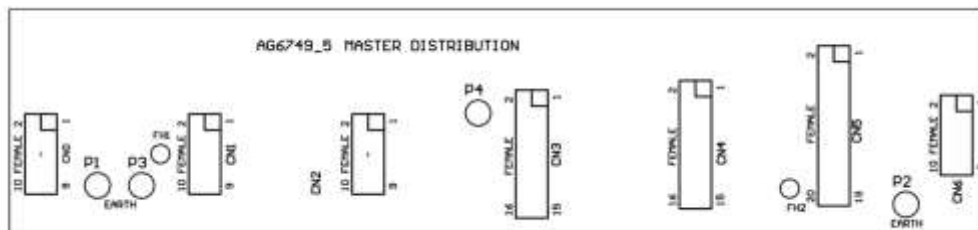


003-661      PSU ASSY ZED 14 (AG7075)

003-778      PSU ASSY ZED 24 (AG7075)



003-659 PCB ASSY ZED 14 PH/METER R (AG6751)



003-658 PCB ASSY ZED 14 DISTRIBUTION (AG6749) - (12FX &22FX)



## Servicing Information

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### Hot Melt Glue

Some connectors and wireforms/harnesses may be held in place with hot melt glue. You will need 99% Isopropyl Alcohol (propan-2-ol) to remove it. Follow these steps:

- Apply a small amount of 99% Isopropyl Alcohol to a swab and apply it to the edges of the glue
- Leave it for 20 seconds and then pick off the glue by hand or by using a tool that is of low risk to cause damage. Do not use excessive force. If the glue does not come off re-apply the Isopropyl Alcohol.
- Once the glue is removed from the connector release the wireform.
- Once the service/repair is complete re-apply the hot melt glue to secure the wireform in place.

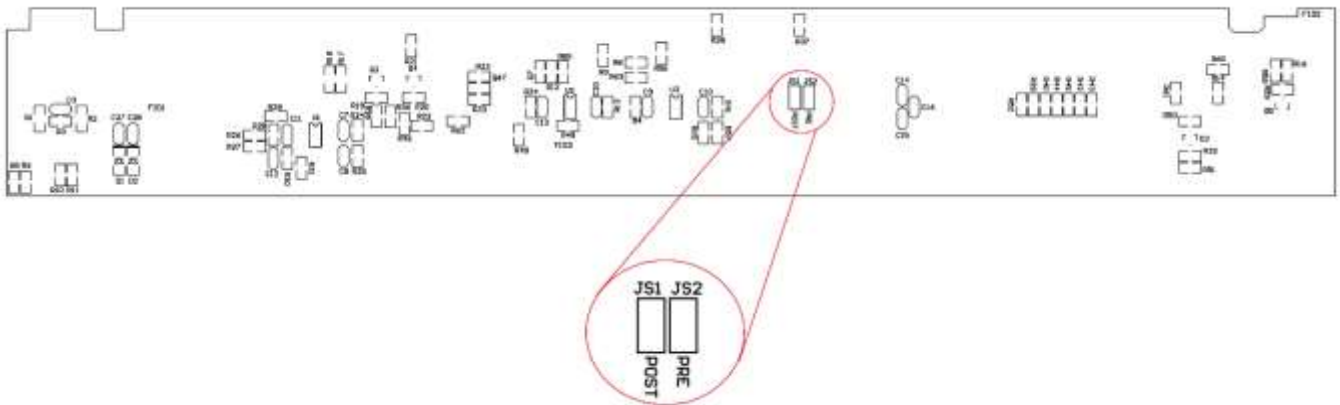
### Jumper Assignments

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Mono PCB 003-652

JS1 – AUX 3 & FX SEND – pre-fade

JS2 – AUX 3 & FX SEND – post-fade (Track default)







## Other Technical Information

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**Block Diagram**

**Specifications**

**Weights & Dimensions**

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

<https://www.allen-heath.com/ahproducts/zed-14/#tab4>

For further information please contact Allen&Heath Product Support

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

[support@allen-heath.com](mailto:support@allen-heath.com)