

ALLEN & HEATH



XONE:3D

SERVICE MANUAL

Issue 2

Publication AP6389

Limited One Year Warranty

This product is warranted to be free from defects in materials or workmanship for period of one year from the date of purchase by the original owner.

To ensure a high level of performance and reliability for which this equipment has been designed and manufactured, read this User Guide before operating. In the event of a failure, notify and return the defective unit to ALLEN & HEATH Limited or its authorised agent as soon as possible for repair under warranty subject to the following conditions

Conditions Of Warranty

The equipment has been installed and operated in accordance with the instructions in this User Guide.

The equipment has not been subject to misuse either intended or accidental, neglect, or alteration other than as described in the User Guide or Service Manual, or approved by ALLEN & HEATH.


Any necessary adjustment, alteration or repair has been carried out by ALLEN & HEATH or its authorised agent.

This warranty does not cover fader wear and tear.

The defective unit is to be returned carriage prepaid to ALLEN & HEATH or its authorised agent with proof of purchase.

Units returned should be packed to avoid transit damage.

In certain territories the terms may vary. Check with your ALLEN & HEATH agent for any additional warranty which may apply.

 This product complies with the European Electro magnetic Compatibility directives 89/336/EEC & 92/31/EEC and the European Low Voltage Directives 73/23/EEC & 93/68/EEC.

This product has been tested to EN55103 Parts 1 & 2 1996 for use in Environments E1, E2, E3, and E4 to demonstrate compliance with the protection requirements in the European EMC directive 89/336/EEC. During some tests the specified performance figures of the product were affected. This is considered permissible and the product has been passed as acceptable for its intended use. Allen & Heath has a strict policy of ensuring all products are tested to the latest safety and EMC standards. Customers requiring more information about EMC and safety issues can contact Allen & Heath.

XONE:3D Service Manual AP6389 Issue 1

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Allen & Heath Limited

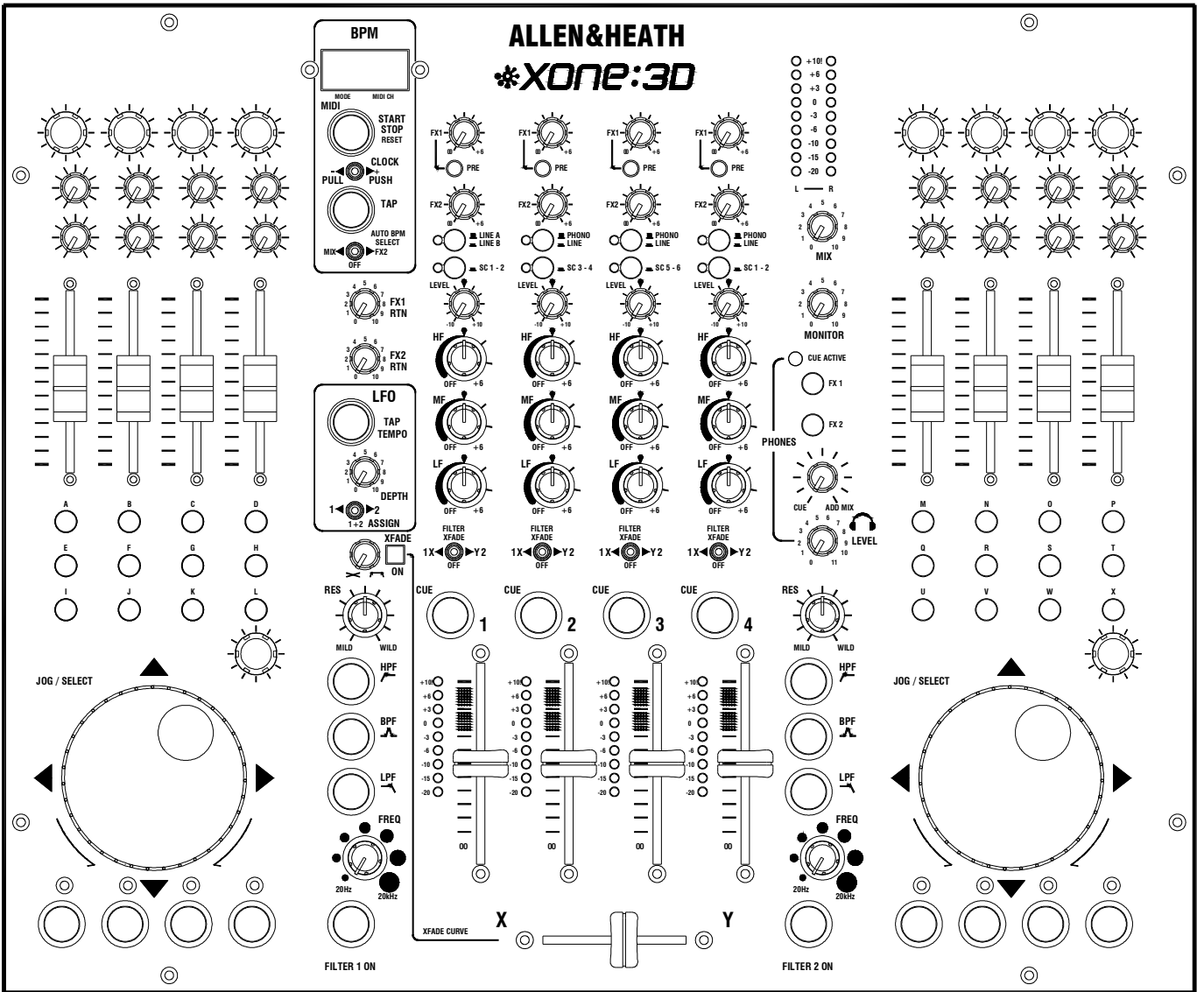
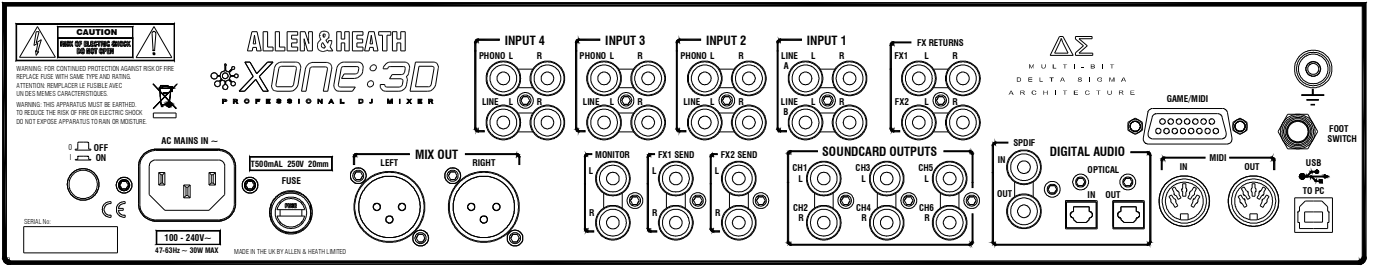
Kernick Industrial Estate, Penryn, Cornwall, TR10 9LU, UK

<http://www.allen-heath.com> <http://www.xone.co.uk>



Servicing Precautions – General Notes

- Service personnel:** Service work should be carried out by technically qualified service 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 work surface 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 they are in good working order. Ensure all workshop safety requirements are adhered to.
- Service information:** Check that you have all the information you need before starting the service job. Refer to the Allen & Heath web site or contact Allen & Heath technical support for details on the latest information. Full technical information can be downloaded from the web site Distributor Zone (password required).
- 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 printed in the user guide if it is necessary to rewire the mains cord. Always replace the equipment mains fuse with the correct type and rating as described in the user guide and marked on the equipment panel.
- 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.
- 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 and plugged in. 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 Important Safety Instructions printed in the user guide. 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.



EARTHING

The connection to earth (ground) in an audio system is important for two reasons:



SAFETY - To protect the operator from high voltage electric shock, and

AUDIO PERFORMANCE - To minimise the effect of earth (ground) loops which result in audible hum and buzz, and to shield the audio signals from interference.

For safety it is important that all equipment earths are connected to mains earth so that exposed metal parts are prevented from carrying high voltage which can injure or even kill the operator. It is recommended that a qualified system engineer check the continuity of the safety earth from all points in the system including microphone bodies, turntable chassis, equipment cases, and so on.

The same earth is also used to shield audio cables from external interference such as the hum fields associated with power transformers, lighting dimmer buzz, and computer radiation. Problems arise when the signal sees more than one path to mains earth. An 'earth loop' (ground loop) results causing current to flow between the different earth paths. This condition is usually detected as a mains frequency audible hum or buzz.

To ensure safe and trouble-free operation we recommend the following:

Have your mains system checked by a qualified electrician. If the supply earthing is solid to start with you are less likely to experience problems.

Do not remove the earth connection from the console mains plug. The console chassis is connected to mains earth through the power cable to ensure your safety. Audio 0V is connected to the console chassis internally. If problems are encountered with earth loops operate the audio 'ground lift' switches on connected equipment accordingly, or disconnect the cable screens at one end, usually at the destination.

Make sure that turntables are correctly earthed. A chassis earth terminal is provided on the console rear panel to connect to turntable earth straps.

Use low impedance sources such as microphones and line level equipment rated at 200 ohms or less to reduce susceptibility to interference. The console outputs are designed to operate at very low impedance to minimise interference problems.

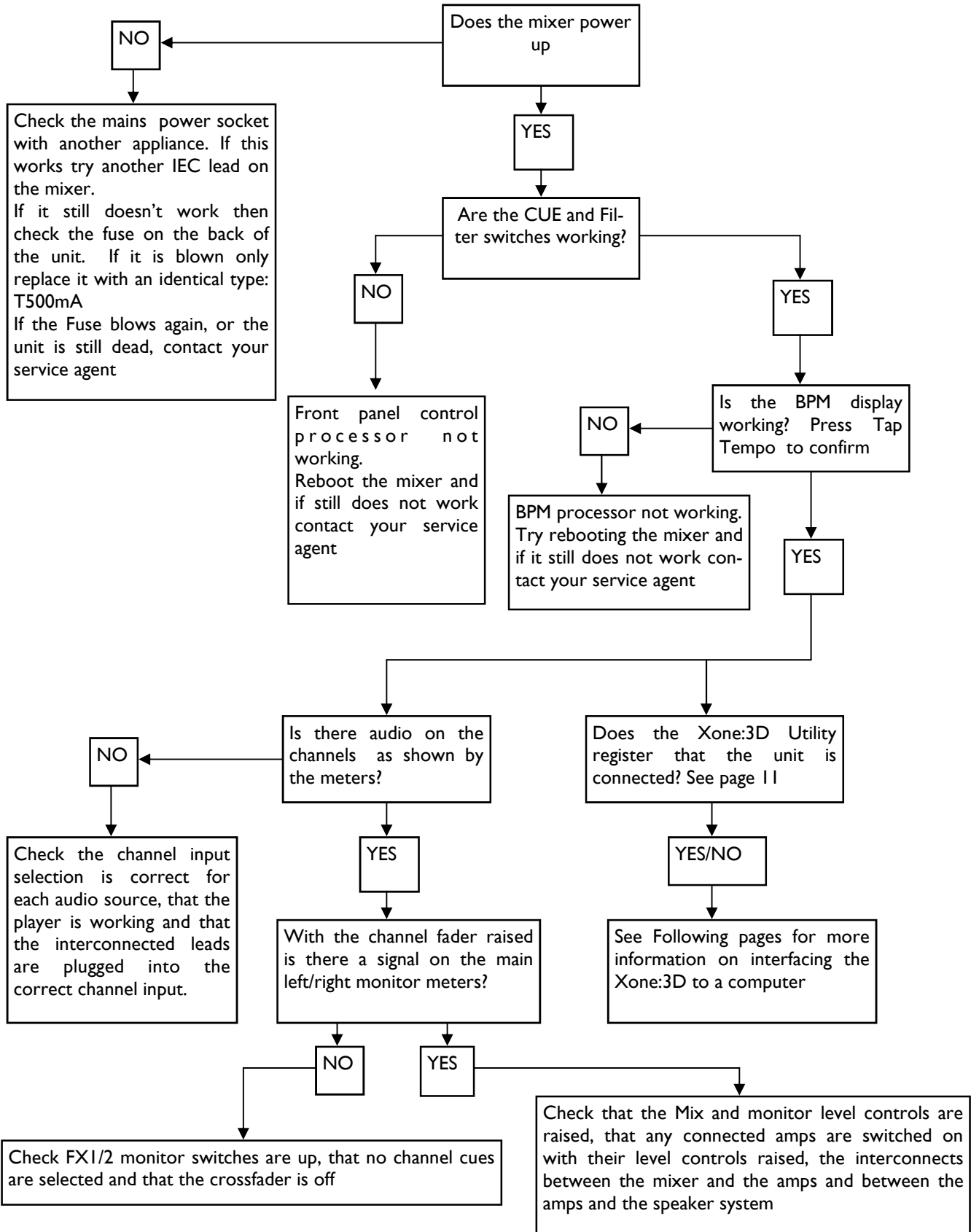
Use balanced connections for microphones and mix output as these provide further immunity by cancelling out interference that may be picked up on long cable runs. To connect an unbalanced source to a balanced console input, link the cold input (XLR pin 3 or jack ring) to 0V earth (XLR pin 1 or jack sleeve) at the console. To connect a balanced XLR output to unbalanced equipment, link the cold output to 0V earth at the console.

Use good quality cables and connectors and check for correct wiring and reliable solder joints. Allow sufficient cable loop to prevent damage through stretching.

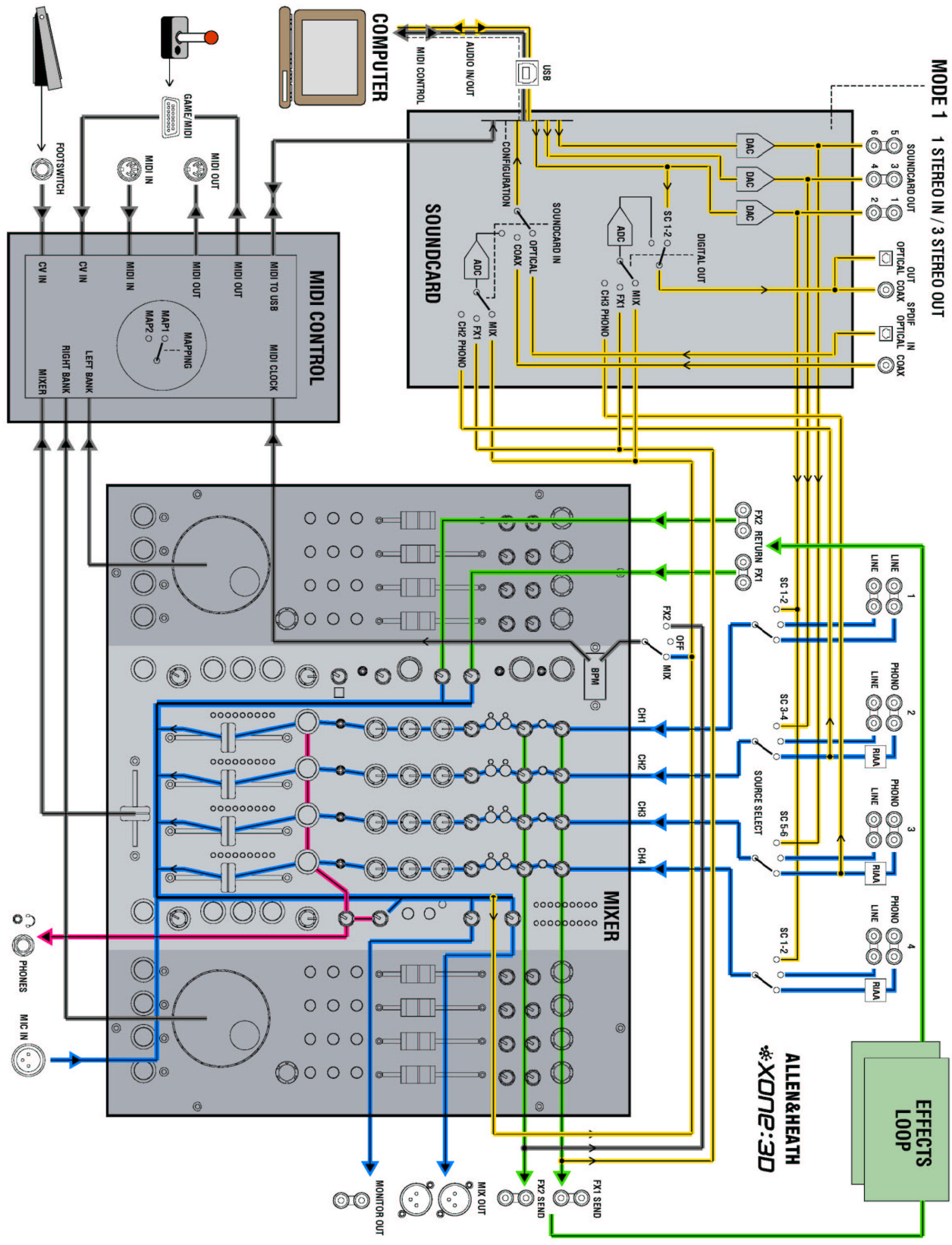
If you are not sure ... Contact your service agent or local Allen & Heath dealer for advice.

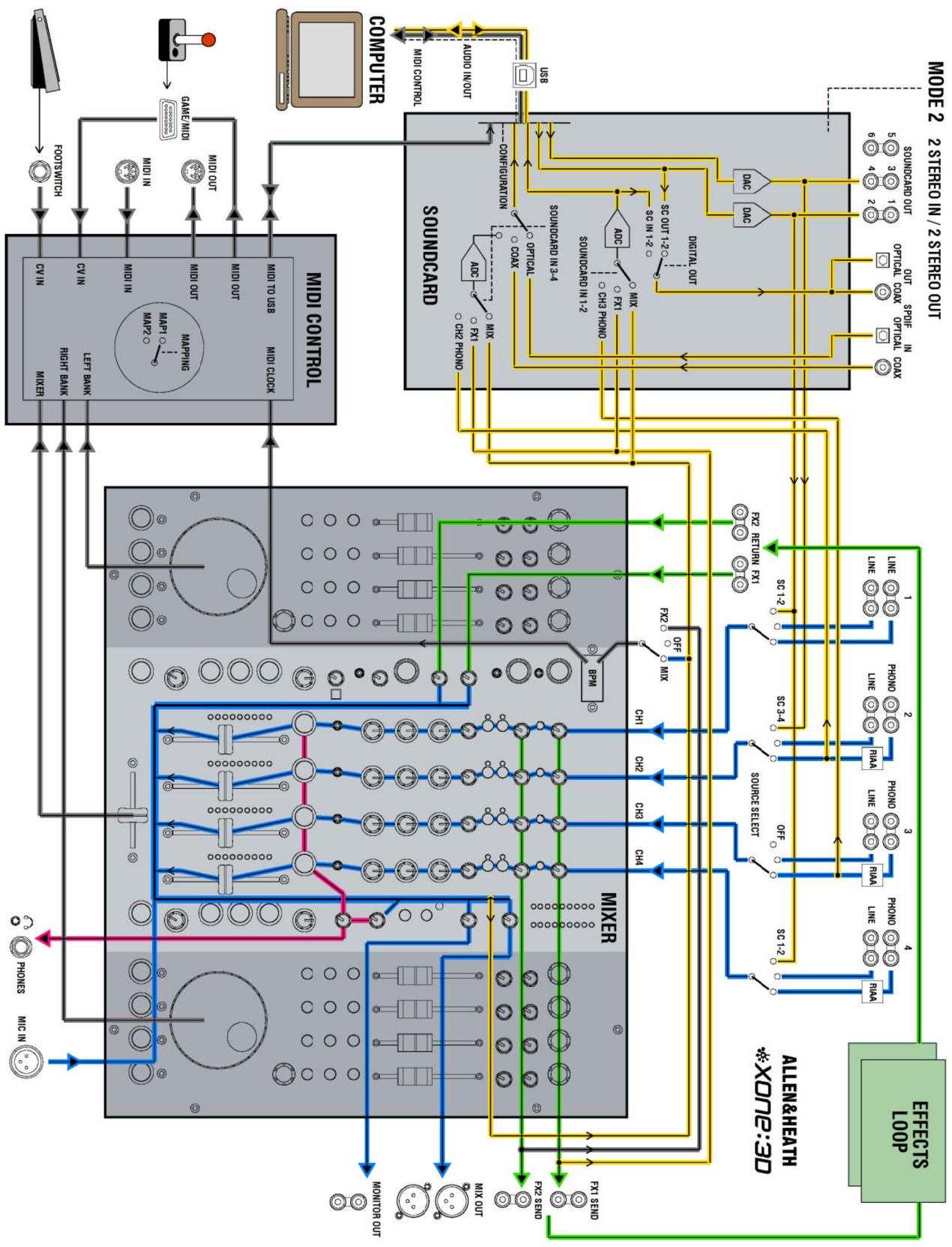
MIXER TROUBLESHOOTING

If things don't seem to be working properly the first thing is not to panic. It is very easy to overlook a simple error or obvious problem in the heat of the moment. Instead, work methodically through a few checks before deciding there is an actual problem.



MODE 1 1 STEREO IN / 3 STEREO OUT

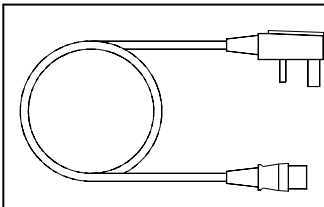




PACKED ITEMS



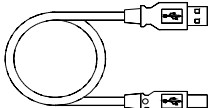
AP6388 USER GUIDE XONE:3D



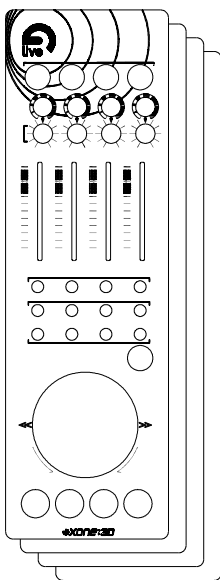
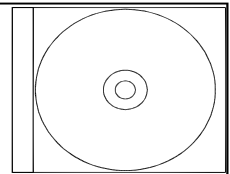
Mains Lead

- AH0205 *MAINS LEAD IEC-2PIN EURO
- AH0323 *MAINS LEAD IEC-3PIN C33 USA
- AH0206 *MAINS LEAD IEC-3PIN UK 10AMP

AH6443 Type A-B USB Lead



AP6442 Xone:3D Utility CD including:
ASIO drivers, Configuration Utility software,
Ableton Live Lite 6 application.

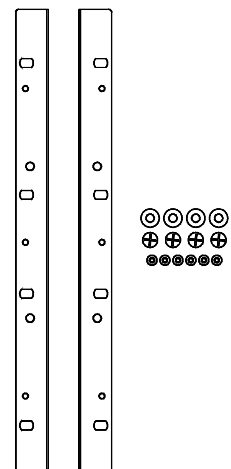


Software Overlay Sheets
For Serial numbers starting X3D:
003-536 Replacement Kit-
AN6441 Ableton Live
AN6442 Native Instruments Tractor

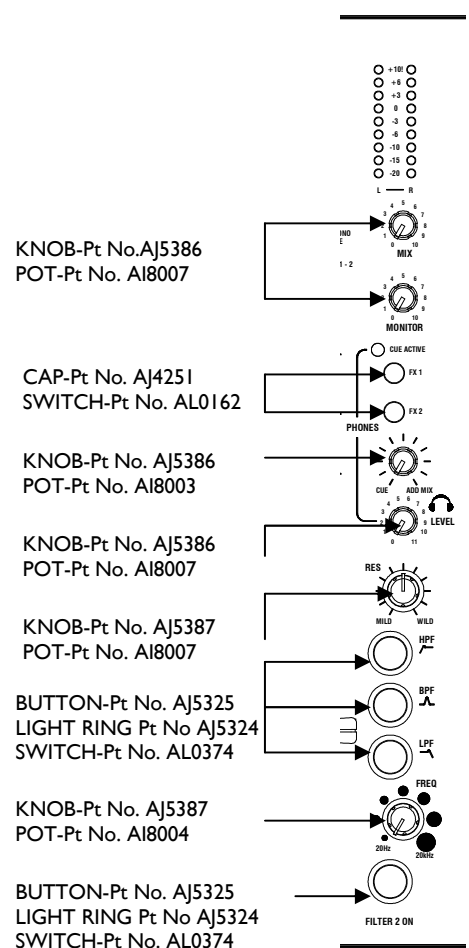
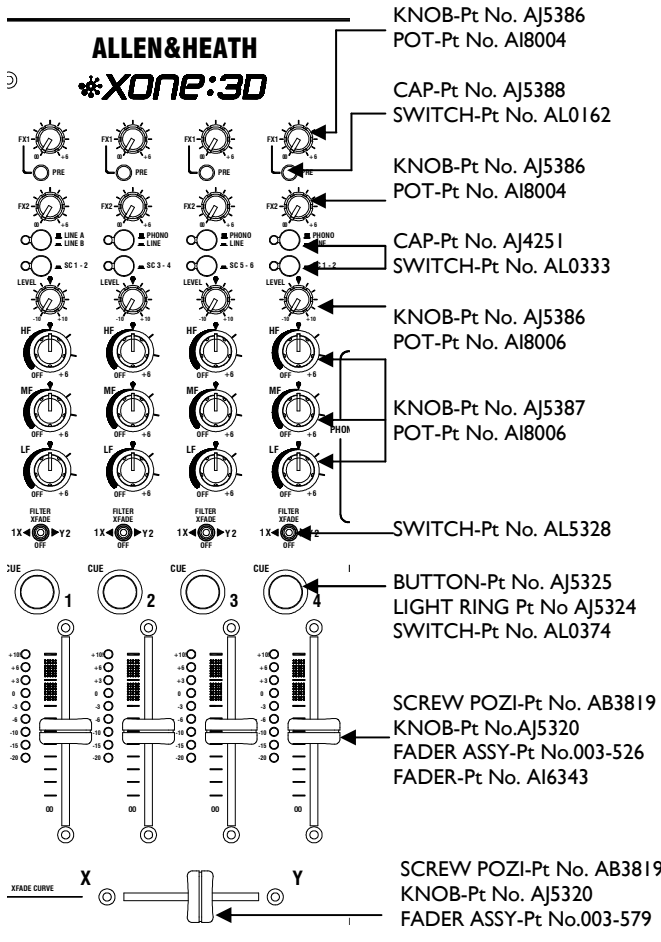
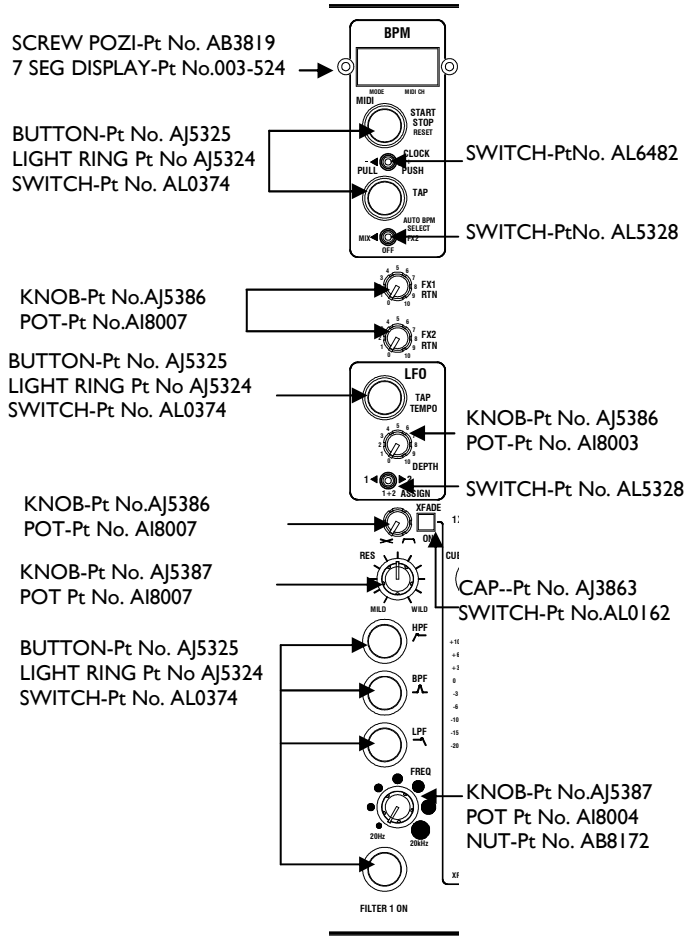
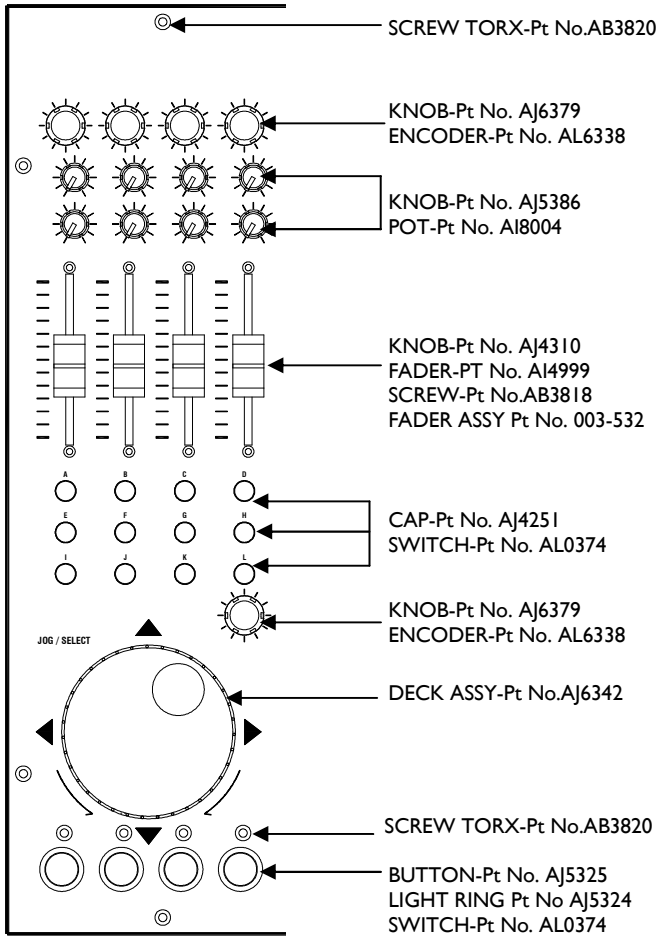
For Serial numbers starting X23D:
003-704 Replacement Kit-
AN6880 Ableton Live
AN6881 Native Instruments Tractor

AA6553-L & AA6553-R
Rack Ears.

AB5680 M4x10mm screws



AL6531 Optical in/out blank plugs





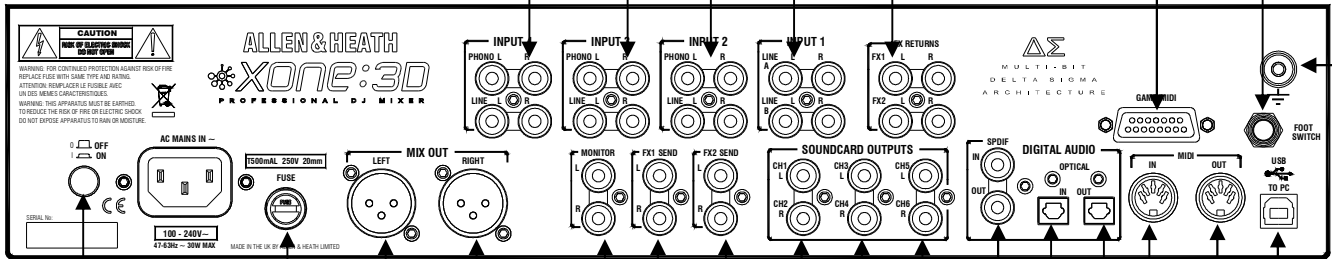
RCA PHONO PLUG SHORTING-
Pt No. AL4396

TERMINAL POST-PT No
AL8106

D TYPE CONNECTOR-
Pt No. AL6351

QUAD RCA SOCKET-Pt No. AL497
SCREW-Pt No. AB2771

JACK SOCKET-
Pt No. AL0328



SWITCH CAP-Pt
No AJ2887

XLR MALE SKT-Pt No. AL241 I
SCREW-Pt No. AB2810

FUSE 20mm 500 mA-
Pt No. AL3534

RCA DUAL VERTICAL SOCKET-
Pt No. AL3753
SCREW -Pt No. AB2771

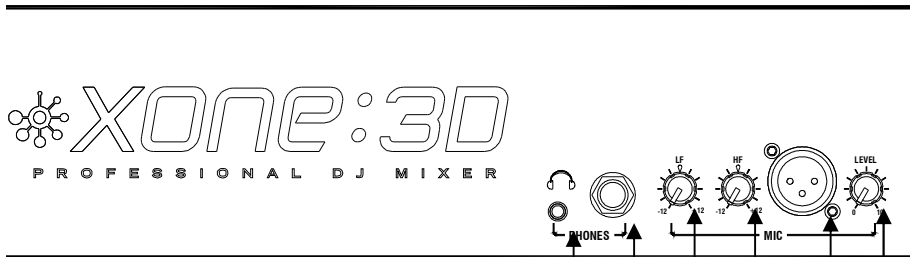
PHONO DUAL
SOCKET-Pt No.
AL0566

OPTICAL IN SOCKET-
Pt No. AE6096
OPTICAL OUT SOCKET-
Pt No. AE5899

USB SOCKET-
Pt No. AL6096

5 WAY DIN-
Pt No. AL0095

OPTICAL IN/OUT BLANKING PLUG-
Pt No. AL6531



JACK SOCKET-
Pt No. AL5323

KNOB-Pt No.
AJ4346
POT-Pt No.
AI8004

KNOB-Pt No.
AJ4346
POT-Pt No.
AI8003

JACK SOCKET-
Pt No. AL0328

XLR SOCKET-
Pt No. AL2414
SCREW-Pt No.

CONNECTING WIREFORMS USED IN CONSOLE

From	to
AL5904-	HEADPHONE ASSY
AL5904-	7 SEGMENT DISPLAY
AL5904-	ANALOGUE SLAVE ASSY
AL5904-	JOGWHEEL (L) ASSY
AL5904-	JOGWHEEL (R) ASSY
AL4606-	CONNECTOR ASSY
AL6407-	MIDI SLAVE (L) ASSY
AL6592-	MIDI CONTROL (R) ASSY
AL5485-	ANALOGUE SLAVE ASSY
AL6098-	GAMEPORT ASSY
AL3817-	LINEAR FADER ASSY'S
AL3817-	X FADER ASSY
AH2228	MIDI FADER ASSY'S
	MASTER ASSY
	USB CONTROL ASSY
	POWER SUPPLY ASSY
	MIDI SLAVE (L) ASSY
	MIDI SLAVE (R) ASSY
	MASTER ASSY
	USB CONTROL ASSY
	USB CONTROL ASSY
	USB CONTROL ASSY
	INPUT ASSY'S
	FILTER ASSY
	MIDI SLAVE ASSY'S

Control IP (MIDI controller strips)
IP 1, 2, 3, & 5, 6, 7
X:3D 003-535
X2:3D 003636

IP 4 & 8 both models
003-635

Control IP (MIDI controller strips)
IP 1, 2, 3, & 5, 6, 7
X:3D 003-535
X2:3D 003636

IP 4 & 8 both models
003-635

MASTER ASSY- Pt No. 003-522 INPUT ASSY- Pt No. 003521 FILTER ASSY- Pt No. 003-525 7 SEGMENT DISPLAY ASSY- Pt No. 003-695

MIDI SLAVE R ASSY- Pt No. 003-546

MIDI SLAVE L ASSY- Pt No. 003-523

MIDI FADER ASSY- Pt No. 003-532 (under midi slave assy)

MIDI FADER ASSY- Pt No. 003-532 (under midi slave assy)

JOGWHEEL ASSY- Pt No. 003-533

JOGWHEEL ASSY- Pt No. 003-533

ANALOGUE SLAVE ASSY- Pt No. 003-519



LINEAR FADER ASSY- Pt No. 003-526

X FADER ASSY- Pt No. 003-579



GAMEPORT ASSY- Pt No. 003-531

CONNECTOR ASSY- Pt No. 003-527

POWER SUPPLY ASSY- Pt No. 003-233

USB CONTROL ASSY- Pt No. 003-528

HEADPHONE SOCKET ASSY- Pt No. 003-530