MixWizard Series
WZ16:2DX / WZ12:2DX

Stereo Audio Mixing Consoles

USER GUIDE

Publication No: AP3429

LIMITED ONE YEAR WARRANTY

This product has been manufactured in the UK by ALLEN & HEATH and 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 or its authorised agent as soon as possible for repair under warranty subject to the following conditions

CONDITIONS OF WARRANTY

1. The equipment has been installed and operated in accordance with the instructions in this User Guide
2. 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.
3. Any necessary adjustment, alteration or repair has been carried out by ALLEN & HEATH or its authorised agent.
4. The defective unit is to be returned carriage prepaid to ALLEN & HEATH or its authorised agent with proof of purchase.
5. Units returned should be packed to avoid transit damage

These terms of warranty apply to UK sales. In other territories the terms may vary according to legal requirements. Check with your ALLEN & HEATH agent for any additional warranty which may apply.

CE

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

ALLEN & HEATH

MANUFACTURED IN ENGLAND

ALLEN & HEATH
Kernick Industrial Estate
Penryn, Cornwall, TR10 9LU. UK
http://www.allen-heath.com

A DIVISION OF HARMAN INTERNATIONAL INDUSTRIES Ltd

ALLEN & HEATH AGENT:

IMPORTANT SAFETY INSTRUCTIONS
PLEASE READ THESE INSTRUCTIONS

This symbol, wherever it appears, alerts you to the presence of uninsulated dangerous voltage inside the enclosure that may be sufficient to constitute a risk of electric shock.

This symbol, wherever it appears, alerts you to important operating and maintenance instructions in the accompanying literature. Please read the operating instructions.

ATTENTION: RISQUE DE CHOC ELECTRIQUE – NE PAS OUVRIR

WARNING: To reduce the risk of fire or electric shock do not expose this apparatus to rain or moisture.

All the safety and operating instructions should be read before the appliance is operated.

- **RETAIN INSTRUCTIONS:** The safety and operating instructions should be retained for future reference.
- **HEED WARNINGS:** All warnings on the appliance and in the operating instructions should be adhered to.
- **FOLLOW INSTRUCTIONS:** All operation and user instructions should be followed.
- **WATER & MOISTURE:** The appliance should not be used near water (e.g. in a bathroom, a kitchen, wet basement or near a swimming pool etc…)
- **VENTILATION:** The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be placed on a bed, sofa, rug, or similar surface that may block the ventilation openings: or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through ventilation openings.
- **HEAT:** The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (e.g. amplifiers) that produce heat.
- **POWER SOURCES:** The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
- **GROUNDING OR POLARISATION:** Precautions should be taken so that the grounding or polarisation means of the appliance plug is not defeated. A polarised plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. When the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- **POWER CORD PROTECTION:** Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs and the point where they exit from the appliance.
- **ATTACHMENTS / ACCESSORIES:** Only use attachments and /or accessories specified and approved by the manufacturer.
- **CLEANING:** The appliance should only be cleaned as recommended by the manufacturer.
- **NON-USE PERIODS:** The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time. Unplug the apparatus during lightning storms.
- **OBJECT & LIQUID ENTRY:** Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

- **DAMAGE REQUIRING SERVICE:** The appliance should be serviced by qualified service personnel when:
  the power supply cord or the plug has been damaged: or
  objects have fallen, or liquid has been spilled into the appliance: or
  the appliance has been exposed to rain; or
  the appliance does not appear to operate normally or exhibits a marked change in performance; or
  the appliance has been dropped, or the enclosure damaged.
- **SERVICING:** The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.
- **INSTALLATION:** The appliance should only be installed and used in accordance with the manufacturers operating instructions. Use only with a cart, stand, tripod, bracket or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

Important Mains plug wiring instructions.

The appliance is supplied with a moulded mains plug fitted to the ac mains power lead. If the mains plug has to be replaced, follow the instructions below.
The wires in the mains lead are coloured in accordance with the following code:

TERMINAL		WIRE COLOUR	
		European	USA/Canada
L	LIVE	BROWN	BLACK
N	NEUTRAL	BLUE	WHITE
E	EARTH GND	GREEN & YELLOW	GREEN

As the colours of the wires in the mains lead may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

- The wire which is coloured Green and Yellow must be connected to the terminal in the plug which is marked with the letter E or with the Earth symbol.
- The wire which is coloured Blue must be connected to the terminal in the plug which is marked with the letter N.
- The wire which is coloured Brown must be connected to the terminal in the plug which is marked with the letter L.

Ensure that these colour codings are followed carefully in the event of the plug being changed.

⚠ WARNING: THIS APPLIANCE MUST BE EARTHED

CE

Allen & Heath warns that any changes or modifications to the appliance not approved or authorised by Allen & Heath could void the compliance of the appliance and therefore the users authority to operate it.

⚠ Selecting the appropriate environment

Refer to the important safety instructions overleaf and in addition the following guidelines should be adhered to:

- The appliance must be situated near a suitably grounded (earthed) electrical outlet. Where possible, use a power filter/surge protector connected to the mains lead of the appliance or any other connected appliance.
- Avoid electromagnetic, RF and magnetic fields such as those generated by TV/telecoms and radio antennae, amplifiers, speakers, TV/video monitors, air conditioning units, microwave ovens and large electric motors.
- Avoid conditions of extreme humidity.
- Avoid sources of shock and vibration.

INTRODUCTION

The ***WZ16:2DX*** and ***WZ12:2DX*** continue ALLEN & HEATH's commitment to high quality audio mixing consoles, engineered to meet the exacting requirements of today's audio business. They bring you the latest in high performance technology and offer the reassurance of over two decades of console manufacture and customer support.

This user guide presents a quick reference to the function and application of the ***WZ16:2DX*** and ***WZ12:2DX***. For further information on the basic principles of audio system engineering please refer to one of the specialist publications available from bookshops and audio equipment dealers.

Whilst we believe the information in this guide to be reliable we do not assume responsibility for inaccuracies. We also reserve the right to make changes in the interest of further product development.

SERVICE AND TECHNICAL SUPPORT

Under normal conditions the ***WZ16:2DX*** and ***WZ12:2DX*** do not require user maintenance or internal calibration. In certain cases it may be necessary to reconfigure internal option links. This and any service work required should be carried out by technically competent service or engineering personnel.

We are able to offer further product support through our worldwide network of approved dealers and service agents. You can also access our Web site on the Internet for information on our product range, assistance with your technical queries or simply to chat about audio matters. To help us provide the most efficient service please keep a record of the console serial number, and date and place of purchase to be quoted in any communication regarding this product.

SAFETY WARNING !

Mains electricity is dangerous and can kill. Mains voltage is present within the console. **Do not remove the covers with mains connected**. To ensure your safety the mains earth is connected to the chassis through the power lead. Do not remove this connection.

To avoid the risk of fire, replace the mains fuse only with the correct value and type as indicated in the connector panel.

GENERAL PRECAUTIONS

Your **MixWizard** console is ruggedly constructed to withstand the rigours of the road whether location mixing or live gigging. However, you will extend the life of the console and preserve its cosmetics by applying these simple common sense precautions.

Prevent damage to the controls and cosmetics by avoiding drinks spillage, tobacco ash, smoke, and exposure to rain and moisture. If the console becomes wet, switch off and remove mains power immediately. Allow to dry out thoroughly before using again.

Protect from excessive dirt, dust, heat and vibration when operating and storing.

Avoid the use of chemicals, abrasives or solvents. The control panel is best cleaned with a soft brush and dry lint-free cloth. The faders, switches and potentiometers are lubricated for life. The use of electrical lubricants on these parts is not recommended.

TRANSPORTING THE CONSOLE

The console may be transported as a free-standing unit or mounted in a rack or flightcase. Ensure that the connector pod is secured in place with the locking screws fitted to prevent movement. Use adequate packing if you need to ship the unit.

OVERVIEW

The ***WZ16:2DX*** and ***WZ12:2DX*** offer the professional user uncompromised features and performance for live sound engineering and recording. Built on the established tradition of innovative British design and manufacture you get a console that is both solidly reliable for a hard life on the road, and uniquely versatile to adapt to any audio mixing application. The ***WZ16:2DX*** and ***WZ12:2DX*** are equally at home mixing alongside top end live sound consoles such as the ALLEN & HEATH ***GL4000***, in theatres, houses of worship, conference and club installations, home and recording studios, or multi-tasking in equipment hire companies. Check out the key features:

WZ16:2DX	WZ12:2DX
16 mono inputs for microphone or line sources	8 mono inputs for microphone or line sources 2 dual stereo line inputs for effects or stereo sources
2 stereo return inputs for effects and replay With separate level to L-R and to Aux 1 for the monitor.	
L-R main output Balanced XLRs with inserts and individual 100mm faders.	
Extra A-B output For additional L-R stereo or L+R mono output selectable pre or post L-R faders. Unique underpanel mode switch to configure A-B as a local monitor output for additional stereo or mono monitoring.	
Engineers monitoring independent of the main outputs Stereo headphones output with auto PFL indicated by a large red LED Monitor switchbank with priority override to select each Aux, Stereo return or L-R (pre or post fader). Auxes can be listened to in stereo pairs.	
QCC Quick Change Connector system Simply hinge the connector pod into position for 19"rack or desk operation.	
MSP Minimum Signal Path for audio transparancy Carefully designed circuitry to keep the signal path from input to output short using high grade, low noise discrete and IC components.	
Rugged all metal construction Individual circuit assemblies with all rotaries securely bolted to the panel. No nonsense solid build to ensure on the road reliability.	

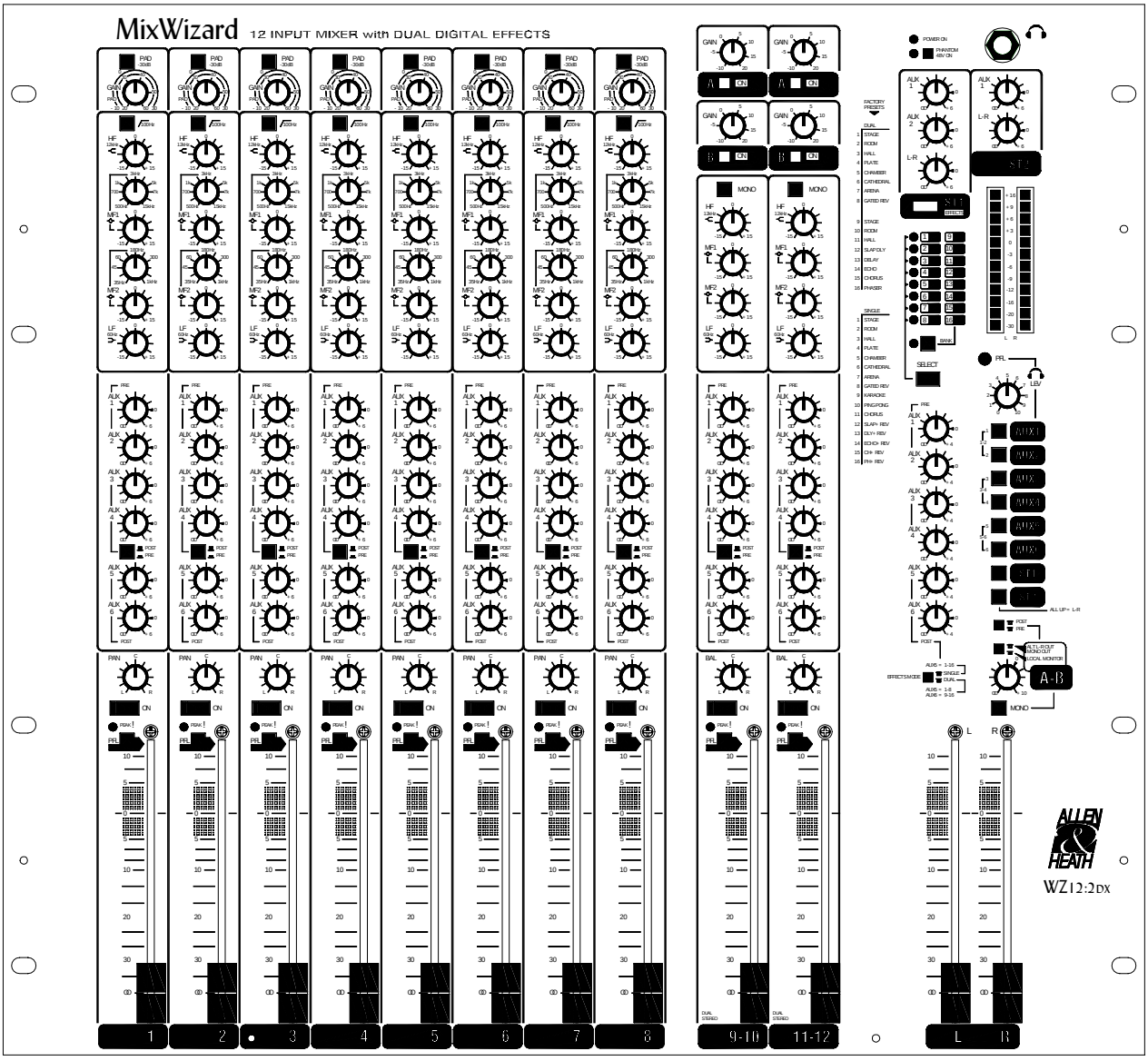
Mono Input features:

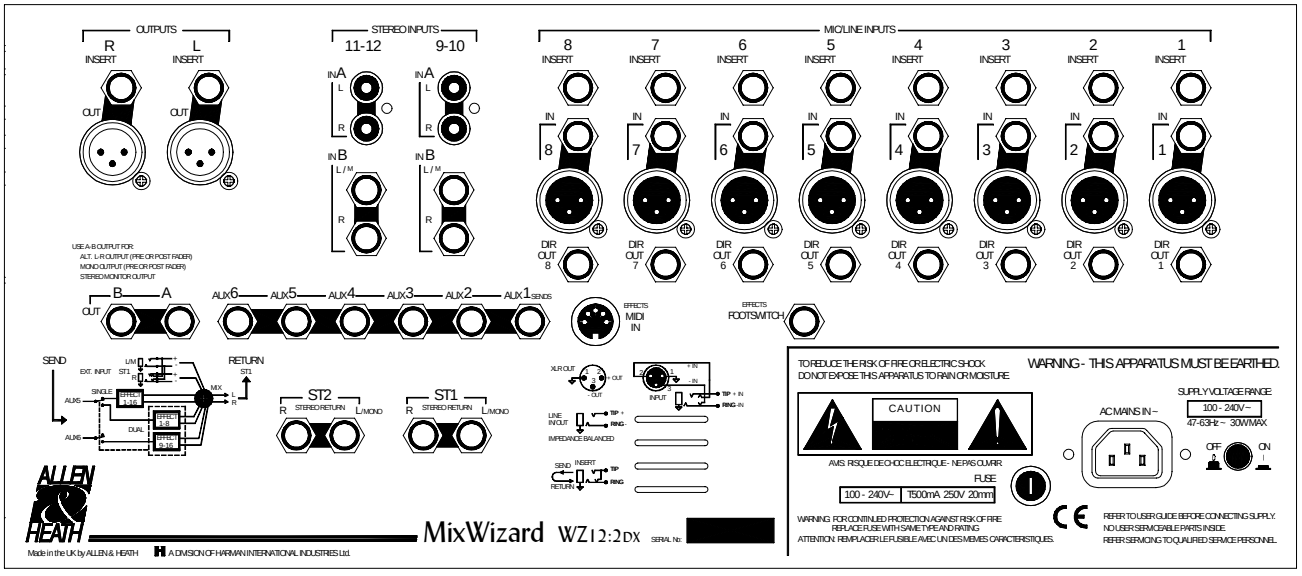
- Wide 70dB gain range for loud and soft sources.
- Balanced XLR and jack both accept mic or line signals.
- +48V phantom power switchable to the XLR inputs.
- 4-band EQ with 2 mid frequency sweeps.
- 100Hz lo-cut filter to remove mic popping and stage rumble.
- Channel inserts for plugging in signal processors.
- Channel direct outputs for multitrack recording.
- 6 Aux sends with up to 6dB boost, for 2 pre-fade monitor sends, 2 switched pre or post-fade for monitors or effects, and 2 post-fade for effects sends, recording or broadcast.
- Peak LED indicator to warn of signal overload.
- 100mm long travel faders for smooth control.

Stereo Input features (WZ12:2DX only)**:**

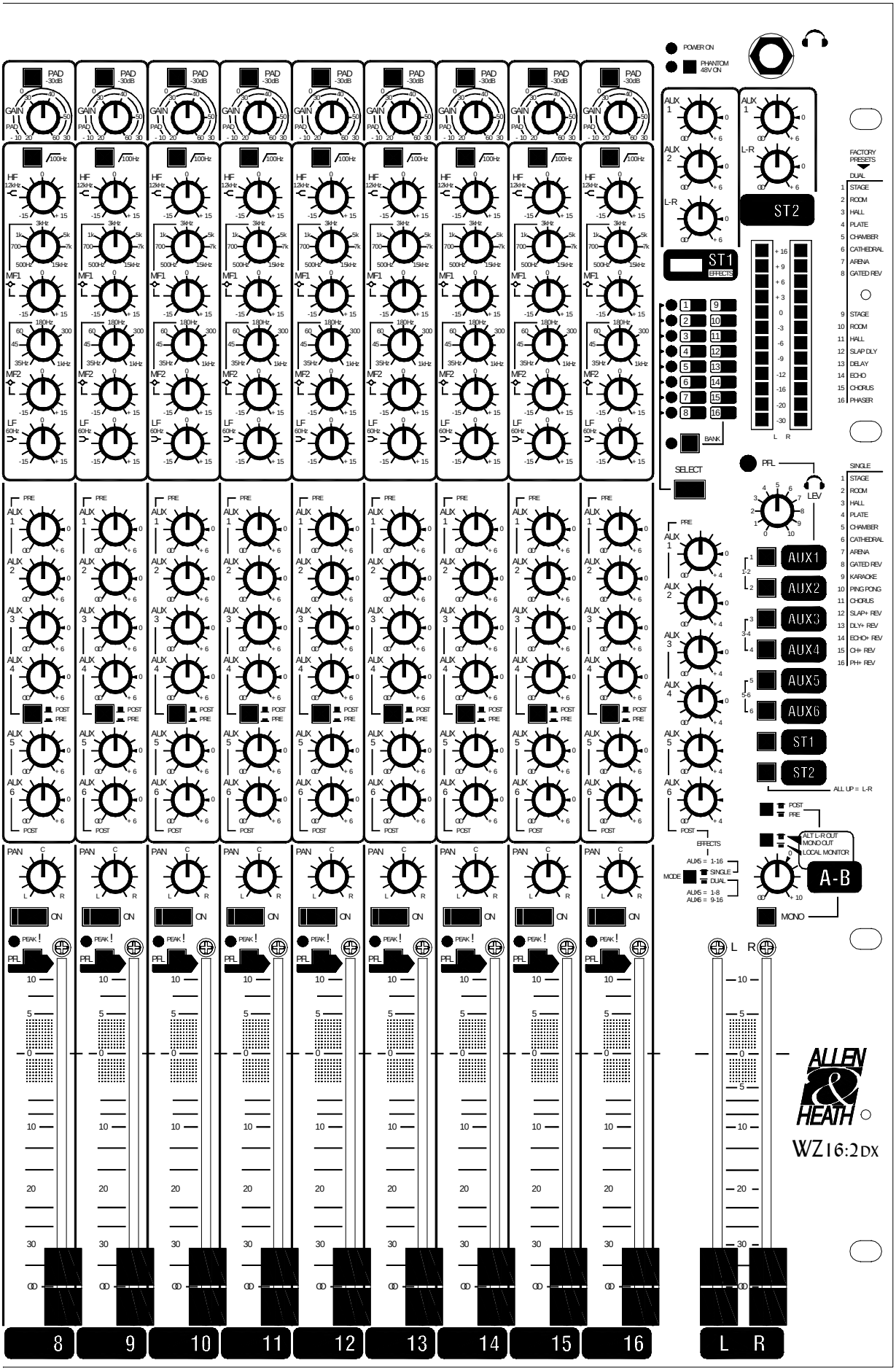
- Separate A (RCA phonos) & B (jacks) stereo line inputs, each with individual input trim and on/off switches
- 4 band EQ
- 6 aux sends
- 100mm faders

FRONT PANEL LAYOUT - WZ12:2DX

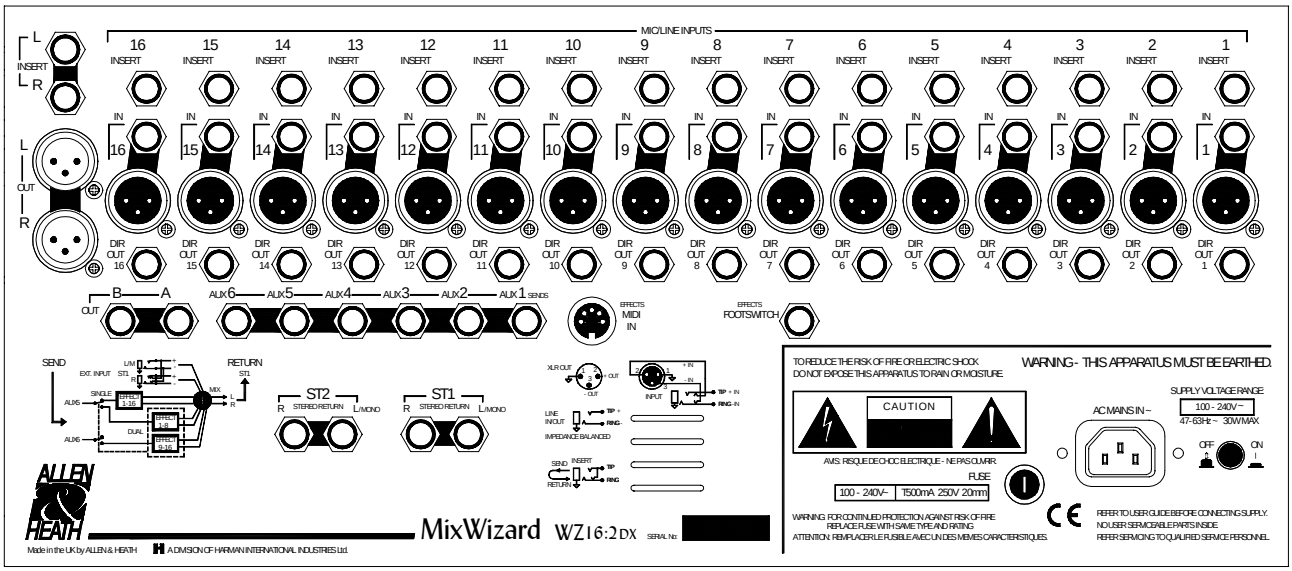




FRONT PANEL LAYOUT - WZ16:2DX



REAR PANEL LAYOUT – WZ16:2DX



SPECIFICATIONS:

0 dBu = 0.775 Volts rms 0 dBV = 1 Volt rms

Max O/P Level
L-R +27dBu into 600ohm max load
Other o/p's +21dBu into 2k ohm max load

Internal headroom
Mix to o/p +23dB
Channels +21dB

Peak LEDs 5dB before clipping

Noise - measured rms 22Hz to 22kHz
Mic EIN ref 150 ohm source -128dB
L-R residual <-90dBu (-94dB S/N)
L-R mix <-84dBu (-88dB S/N)

Frequency response
20Hz to 50kHz +0/-1dB

THD - +14dbu, 1kHz
Channel to mix o/p <0.008%

Crosstalk – 1kHz
Channel fader down <-90dB
Channel off <-90dB

Mains Power
Internal 100V to 240V AC@50/60Hz switched mode PSU with autosensing

Power consumption 30W max
Mains fuse rating
100-120V AC use T315mA 20mm
220-240V AC use T630mA 20mm

Mechanical specifications

Dimensions (mm)	Width	Height	Depth
Desk mounted	483	195	530
Rack mounted	483 (19")	444 (10U)	135
Packed	590	260	
	Unpacked	Packed	
Weight	10kg	13kg	

CONNECTIONS

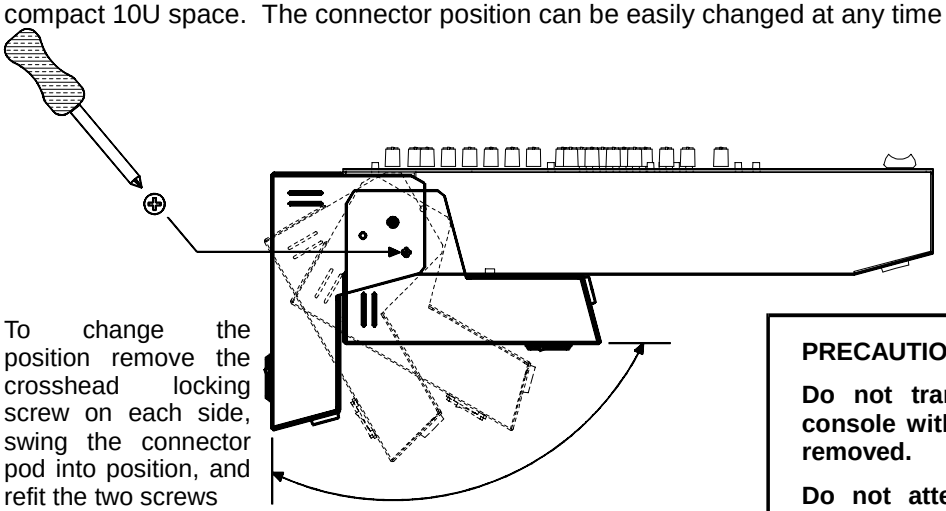
CONNECTOR	TYPE	BAL/UNBAL	IMPEDANCE	LEVEL
		INPUTS		
Mono IN	XLR	Balanced	Pad out – 2k ohm	-60 to –20dBu
	TRS Jack	Balanced	Pad in - >10k ohm	-30 to +10dBu
Stereo IN	TRS Jack	Unbalanced	>10k ohm	-20 to +10dBu
	RCA phono	Unbalanced	>10k ohm	-20 to +10dBu
Stereo Return IN	TRS jack	Balanced	>10k ohm	-10dBV (+4dBu option)
		INSERTS		
Channel Inserts	TRS jack	Unbalanced	<75 ohm, >10k ohm	0dBu
LR insert	TRS jack	Unbalanced	<75 ohm, >10k ohm	-2dBu
		OUTPUTS		
LR	XLR	Bal	<75 ohm	+4dBu
AB	TRS jack	Impedance balanced	<75 ohm	-2dBu (+4dBu bal option)
Auxes	TRS jack	Impedance balanced	<75 ohm	-2dBu (+4dBu bal option)
Direct	TRS jack	Impedance balanced	<75 ohm	0dBu
Headphones	TRS jack	Tip L, Ring R		

Note

Balanced XLR's – Pin 2 hot, Pin 3 cold
Balanced jacks – Tip hot, ring cold

INSTALLING THE CONSOLE

The Mix Wizard Series features the ALLEN & HEATH Quick Change Connector (QCC) system. The rear connector pod may be hinged and locked into either of two positions: Rear connectors for desktop operation with the control panel sloped at a convenient 15 degrees, or underside connectors for 19" rack mounting in a compact 10U space. The connector position can be easily changed at any time to fit your application.



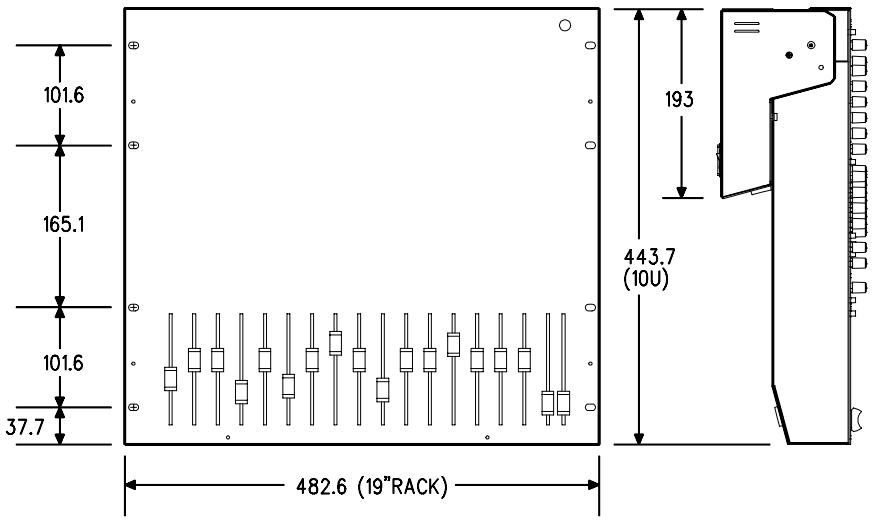
To change the position remove the crosshead locking screw on each side, swing the connector pod into position, and refit the two screws

PRECAUTION :

Do not transport or carry the console with the locking screws removed.

Do not attempt to remove the connector pod from the console.

19" RACK MOUNTING

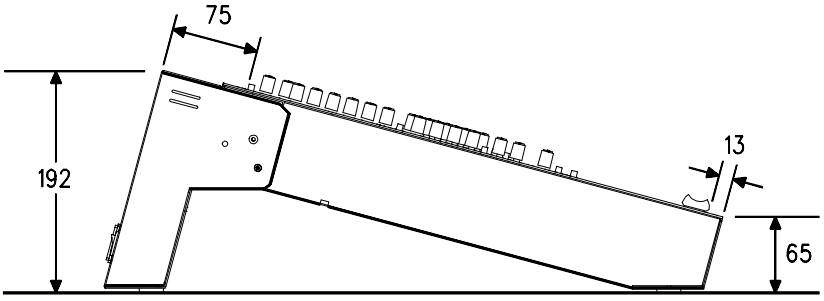


Mount the console in the rack using 4x M6 bolts each side for maximum strength. We recommend you fit the bolts with plastic cup washers to protect the panel, and they look good... These should be available from the supplier of the rack unit or a good hardware store.

FLIGHTCASING

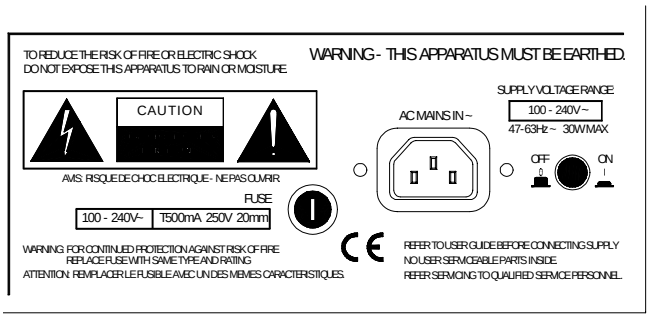
The console can be easily flightcased in either connector mode. Provide the dimensions shown here to your flightcase supplier.

DESKTOP OPERATION



The console is fitted with rubber feet to ensure it does not slip or scratch the work surface. The control panel is angled at 15 degrees for operating convenience.

Connecting Mains Power



Refer to the **SAFETY WARNING** on page 5 of this Guide. Check that the correct mains lead with moulded plug has been supplied with your console. Read and understand the warnings and instructions printed on the rear panel and reproduced here. The power supply accommodates mains voltages within the range 100-240V without changing any fuses or settings.

It is standard practice to turn connected power amplifiers down or off before switching the console on or off. Ensure that the IEC mains plug is pressed fully into the rear panel socket before switching on.

EARTHING

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

1. **SAFETY** - To protect the operator from high voltage shock associated with the AC mains supply feeding the system, and

2. **AUDIO PERFORMANCE QUALITY** - 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 the sound engineer check the continuity of the safety earth from all points in the system including microphone bodies, guitar strings, multicore cases, equipment panels ...
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 please observe the following:

- **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. It is useful to carry ground lift cable adapters such as short XLR male to female leads with pin 1 disconnected.

- **Avoid running audio cables next to mains, computer or lighting cables,** or near thyristor dimmer and power supply units. If unavoidable, cross these at right angles.

- **Use low impedance sources** such as microphones 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 where possible** 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 console output to an unbalanced destination, link the cold output to 0V earth at the console.

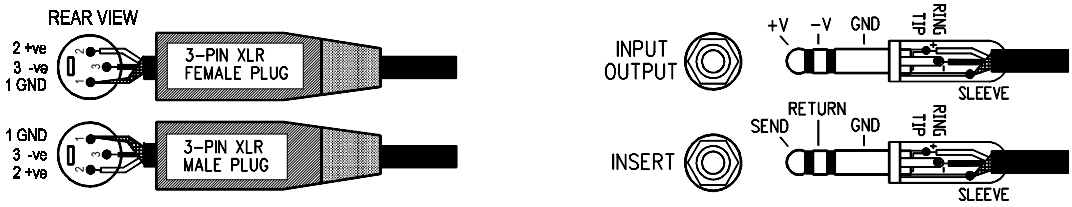
- **Use professional quality cables and connectors** and check for correct wiring and reliable solder joints.

- **If you are not sure ...** Have your system checked by a competent engineer, or contact your local Allen & Heath agent for advice.

PLUGGING UP THE SYSTEM

The **Mix Wizard** series uses professional grade 3-pin XLR, 1/4" TRS jack and RCA PHONO sockets. The applications diagrams on page 26 illustrate typical equipment interconnections. To ensure best performance, we recommend that you use high quality audio cables and connectors, and take time to check for reliable and accurate cable assembly. It is well known that most audio system failures are due to faulty interconnecting leads.

CONNECTOR PINOUTS



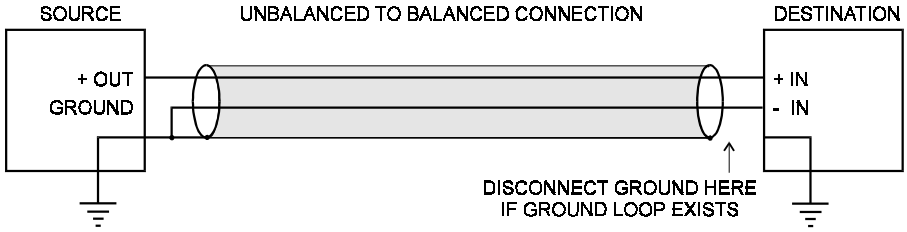
CONNECTORS, CABLES AND THEORY

All input and output **XLR** connectors are 3-wire differentially balanced. These have 3 connector pins: pin 1 = ground (cable screen), pin 2 = signal +ve, pin 3 = signal -ve

All the master output **jack** connectors are 3-wire impedance balanced. These have 3 connector pins: tip = signal +ve, ring = signal -ve, sleeve = ground (cable screen).

Avoid reversing +ve and -ve on balanced connections as this will result in out of phase signals (reverse polarity) causing signal cancellation effects. This situation is particularly common in multi-microphone mixing.

For live work where long cables runs are required, balanced interconnections should be used. Short interconnections between more affordable 2-wire (signal, ground) unbalanced effects units or signal processors and mixing console may be utilised. Refer to the following diagram for unbalanced to balanced connections.



DEALING WITH GROUND LOOPS, BUZZ AND INTERFERENCE

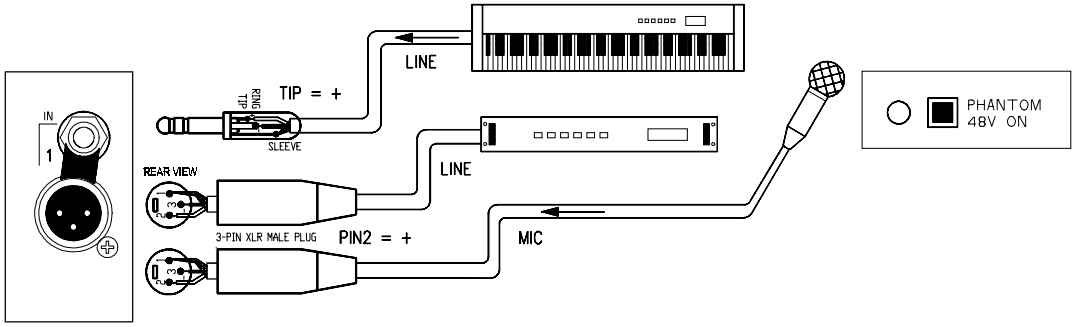
For optimum performance all audio signals should be referenced to a solid, noise-free earth point, frequently referred to as the ‘star point’ or ‘clean earth’.
A ground loop is created when the signal has more than one path to ground (earth). Should you experience hum or buzz caused by ground loops, check first that each piece of equipment has its own separate path to ground. If so, operate ground lift switches on connected equipment in accordance with the instruction manuals. Alternatively disconnect the cable screen at the destination end.
To avoid interference pickup keep audio cables away from mains power units and cables, thyristor dimmer units or computer equipment. Where this cannot be avoided, cross the cables at right angles to minimise interference.

CONNECTING CHANNEL INPUTS

Both microphone and line sources such as keyboards, replay devices and effects processors can be plugged into either the jack or XLR input for convenience. Do not connect to both at the same time. The channel accepts a wide 70dB range of source levels. The balanced 3-wire input provides the best immunity to interference pickup on long cable runs.

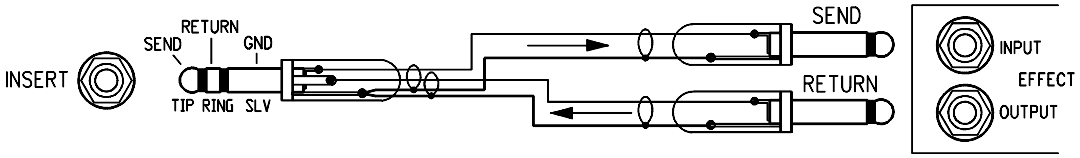
PLUGGING UP THE SYSTEM (CONT'D)

CONNECTING CHANNEL INPUTS (CONT'D)



CONNECTING TO CHANNEL INSERTS

You do not need to plug anything into the channel insert socket for normal operation. You may, however wish to insert a signal processor such as a compressor/limiter or noise gate into the channel signal path to prevent excessive peaks or to cut down source noise. The insert lets you do this by breaking the signal path after the input pre-amp and before the EQ. Use a Y-lead or suitable TRS jack lead to connect to the external processor. The insert operates at 0dBu line level. Adjust the processor input and output levels for optimum signal level.

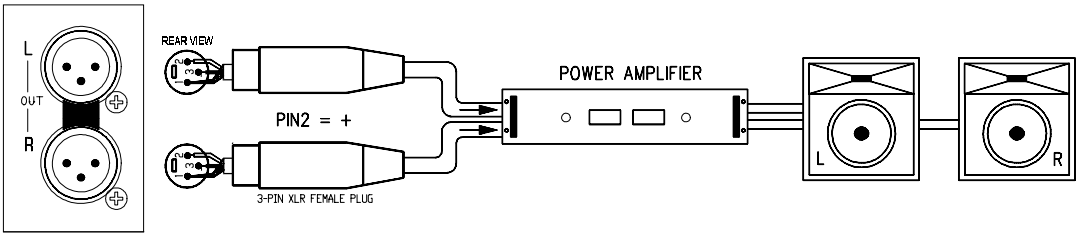


CHANNEL DIRECT OUTPUTS

The channel direct output taps the signal off post-fader (pre-fader if the internal link option is changed) for connection to external processing or recording equipment. This is ideal for multitrack recording during a live performance. Here each channel can be recorded on a separate track for mixdown later. The output is impedance balanced on TRS jack. This means that you get the benefit of interference immunity when connecting to outboard equipment with balanced inputs. You can, of course, also connect to unbalanced equipment. The signal operates at nominal 0dBu line level.

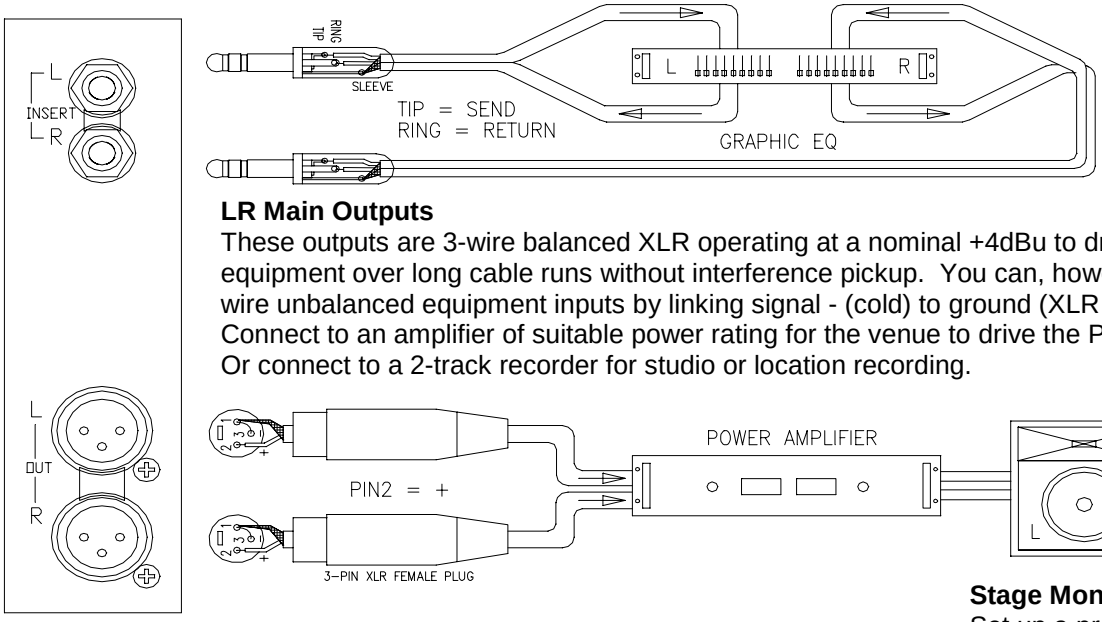
L-R MAIN OUTPUTS

These 3-wire balanced outputs on XLR connectors operate at a nominal +4dBu to drive professional equipment over long cable runs without interference pickup. Connect to an amplifier, of suitable power rating for the venue, to drive the PA loudspeakers. Or connect to a 2-track recorder for studio or location recording.

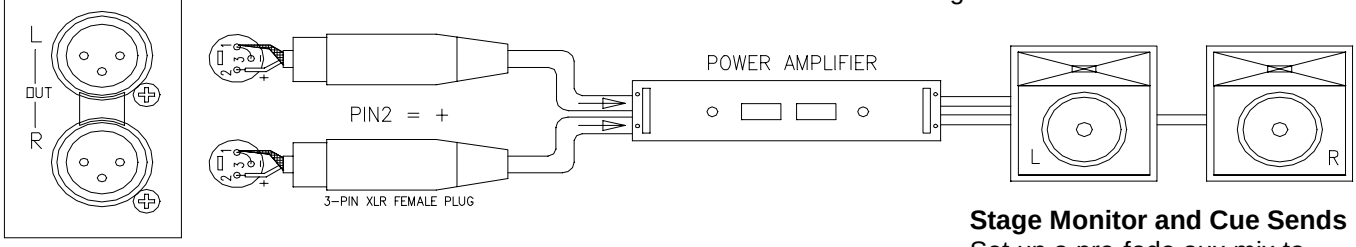


PLUGGING UP THE OUTPUTS

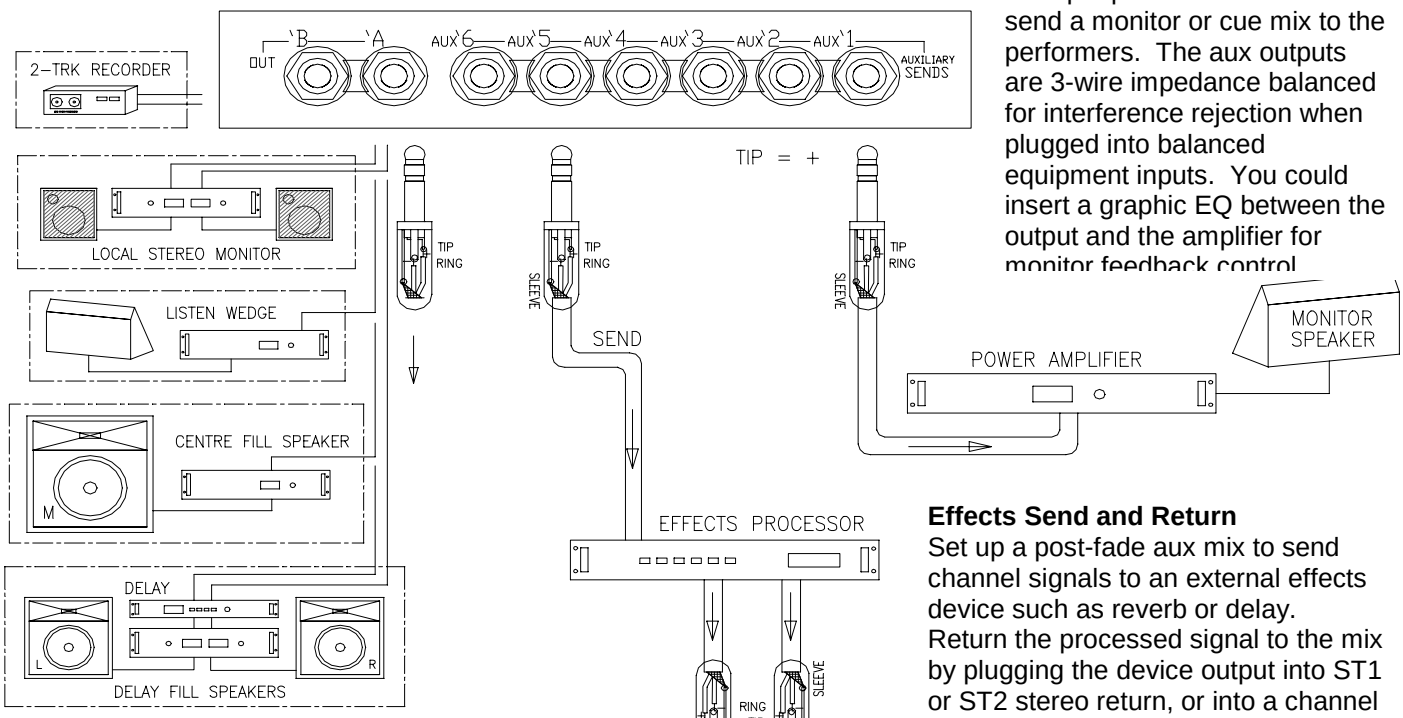
LR Mix Inserts
Use these sockets if you wish to insert external signal processing equipment into the L-R mix post-mix amp and pre-L-R fader. This lets you check the effect of the inserted equipment using the console headphones or local monitor. For live sound it is common to insert graphic equalisers to adjust for the room acoustics. In recording you could plug in a compressor to prevent unexpected peaks overloading the recording. Use a suitable stereo jack lead or Y-adaptor for tip = send, ring = return.



LR Main Outputs
These outputs are 3-wire balanced XLR operating at a nominal +4dBu to drive professional equipment over long cable runs without interference pickup. You can, however, connect to 2-wire unbalanced equipment inputs by linking signal - (cold) to ground (XLR pin3 to pin1). Connect to an amplifier of suitable power rating for the venue to drive the PA loudspeakers. Or connect to a 2-track recorder for studio or location recording.



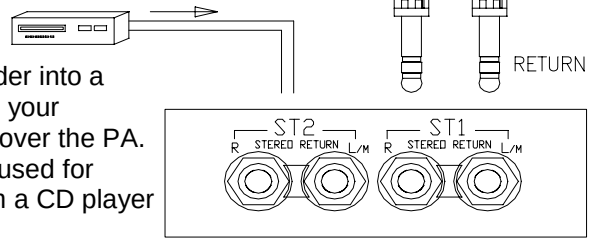
Stage Monitor and Cue Sends
Set up a pre-fade aux mix to send a monitor or cue mix to the performers. The aux outputs are 3-wire impedance balanced for interference rejection when plugged into balanced equipment inputs. You could insert a graphic EQ between the output and the amplifier for monitor feedback control.



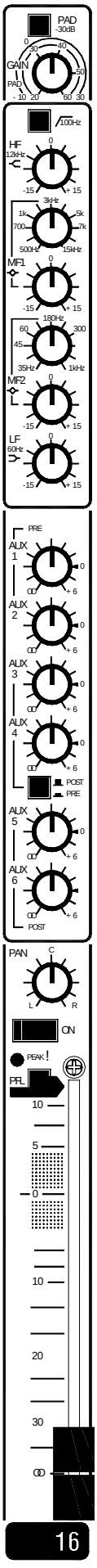
Effects Send and Return
Set up a post-fade aux mix to send channel signals to an external effects device such as reverb or delay. Return the processed signal to the mix by plugging the device output into ST1 or ST2 stereo return, or into a channel input. These inputs can operate balanced or unbalanced. For a mono return simply plug into the L input leaving R unplugged. The setting of the channel aux send control determines how much effect is added to the signal.

2-Track Replay

Plug your 2-track recorder into a stereo return to monitor your recording, or for replay over the PA. The return can also be used for intermission replay from a CD player or similar.



MONO INPUT CHANNEL



PAD - Attenuates the input signal by 30dB. Affects both the XLR and jack inputs. Press this switch when the input signal is too high even with the GAIN control backed off.

GAIN - Use this control with the PAD switch to adjust the channel input sensitivity to match the connected source (-60 to +10dBu) to the console operating level (0dBu). Use the PFL function to check that the signal reads an average '0' on the meters.

100Hz LO-CUT FILTER - Attenuates frequencies below 100Hz to reduce low frequency source noise such as microphone proximity popping, stage noise and transport rumble. Can be used to clean up sounds that do not have much bass content such as vocals.

EQUALISER - This provides separate, simultaneous control of 4 frequency bands. Each band may be boosted or cut by up to +/- 15dB. The centre flat position is detented for quick resetting.

The **HF and LF** bands have a shelving response which means that all frequencies beyond the turning point frequency are affected, HF = 12kHz, LF = 60Hz. Use HF to add sparkle or to reduce source hiss. Use LF to add punch to the bass instruments. Used with the LO-CUT filter you can tailor the low frequency response exactly as you require.

The two **mid frequency** bands have a peak/dip (bell shaped) response which means that the maximum boost or cut occurs at the selected (centre) frequency. The centre frequency can be swept over a wide range using the SWEEP controls. MF1 = 500Hz to 15kHz, MF2 = 35Hz to 1kHz. Use the mids to add warmth or presence to the sound or to notch out problem resonances that can result in feedback.

AUXILLIARY SENDS - You can set up to 6 separately balanced mixes using the aux send controls. Up to +6dB of boost is available.

Aux 1 and 2 are set pre-fader for **monitor sends** such as stage monitors, backstage, orchestra pit, and musicians recording cue. The amount of channel signal in the monitor mix is independent of the fader level. Pre-fade sends are post-EQ, post-ON as standard (can be reconfigured pre-EQ or pre-ON by setting internal links).

Aux 3 and 4 are switched pre or post fader for more monitors, effects or separately balanced feeds for **recording and broadcast**.

Aux 5 and 6 are set post-fader for sends to external **effects** devices such as reverb and delay. The amount of signal sent to the effects device follows the fader level and ON switch. The processed ("wet") signal returned to the mix through the aux return inputs is therefore in proportion to the direct ("dry") signal from the fader to the mix.

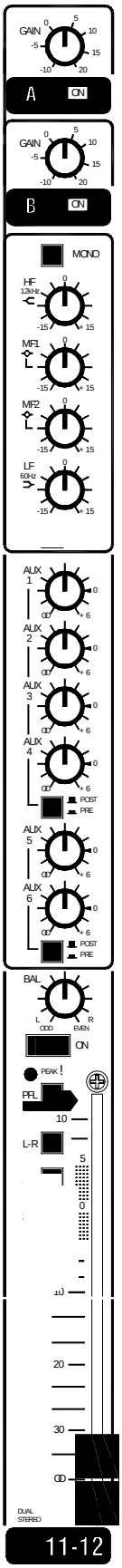
PAN - Positions the channel signal between L and R in the stereo mix. The centre position (mono image) is detented for quick resetting.

ON - This turns the channel signal on or off.

PEAK - The red LED lights when the signal is within 5dB of clipping. Should this occur turn back the GAIN control to reduce the signal level.

PFL - Press PFL to listen to the pre-fade signal on headphones or local monitor without affecting the main outputs. The signal level is shown on the L and R bar meters. The PEAK LED half lights to show which channel PFL has been selected.

STEREO INPUT CHANNEL – WZ12:2DX ONLY



DUAL INPUTS A & B - The stereo input channel features a dual input on RCA Phonos (A) and TRS jacks (B). This is ideal for fast switching between stereo sources without having to repatch the console or mixing two stereo sources together.

GAIN A - Use this control to adjust the channel input sensitivity to match the connected source (-20 to +10dBu) to the console operating level (0dBu) on the RCA Phono connectors. Press PFL to check the signal reads an average of '0' on the meters.

ON A - Selects stereo source A (RCA PHONOS)

GAIN B - Use this control to adjust the channel input sensitivity to match the connected source (-20 to +10dBu) to the console operating level (0dBu) on the TRS Jack connectors. Press PFL to check the signal reads an average of '0' on the meters.

ON B - Selects stereo source B (TRS JACKS). Press both A and B to mix both sources together.

MONO - Combines the left and right outputs to mono the source. May also be used to input a mono source to the stereo channel path.

EQUALISER - Shelving HF and LF and two fixed frequency peak/dip mid controls provide 15dB of boost or cut. The mid frequency controls provide optimum control over boomy or boxy sounds and to add bite or reduce harshness of keyboards, vocals, etc. Use the mids to add warmth or presence to the sound.

EQ IN - Press to switch the EQ into the signal path.

AUXILIARY SENDS - You can set up to 6 separately balanced mixes using the aux send controls. Up to +6dB of boost is available.

Aux 1-4 and Aux 5-6 can be used as either MONITOR SENDS to the performers or as EFFECTS SENDS to external signal processing equipment. The output can be listened to using the aux master AFL system. MONITOR SENDS are normally set pre-fader (PRE) and EFFECTS SENDS normally post-fader (POST). When set to POST, the amount of channel signal in the monitor mix is dependent on the channel fader level. Pre-fade aux sends are post-EQ, post-ON as standard (can be reconfigured pre-EQ or pre-ON by setting internal links).
The Left and Right stereo signals are summed to provide aux feeds in mono. However internal link options allow for pre or post aux sends as stereo pairs i.e. AUX 1 = left, AUX 2 = right, etc. Refer to the options section in this user guide.

BAL - Balances the channel signal within the stereo image, L (odd groups) and R (even groups). The centre position is detented for quick resetting.

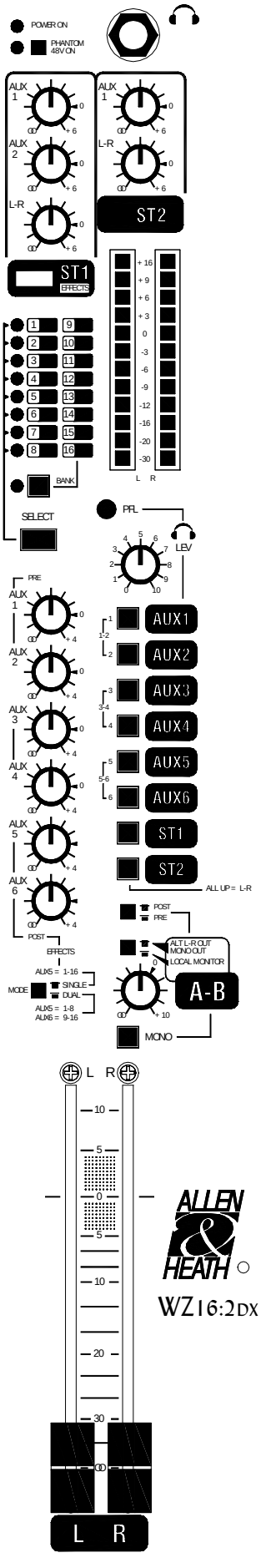
ON - This turns the channel signal on or off. A LED indicates status.

PEAK - The red LED illuminates when the signal is within 5dB of clipping. Should this occur turn back the GAIN control to reduce the signal level. This LED also half illuminates when a PFL switch is pressed.

PFL - Press PFL to listen to the pre-fade signal (mono) on headphones or local monitor without affecting the main outputs. The signal level is shown on the L and R bargraph meters.

Channel fader - 100mm smooth action fader controls the overall channel level. All post fade aux send levels are dependent on the level of the channel fader.

STEREO RETURNS



Two stereo return inputs **ST1** and **ST2** are provided giving you a total of 20 inputs to the L-R mix on the WZ16:2DX, or 16 inputs on the WZ12:2DX. These may be used for returning the processed signal from the effects devices, monitoring and replaying your 2-track recording, expander or submix inputs, or for stereo intermission replay.

AUX1/2 LEV - Sends the return signal (L and R combined into mono) to the Aux1 or Aux2 mix independent of the level to the main mix. This lets you feed effects to the performers monitor. When using the return for 2-track replay you can replay the recording to the performers cue. Up to +6dB boost is available.

L-R LEV - Adjusts the return signal level to the L-R mix.

Note that the internal effects processor is also brought back into the mix via the ST1 Aux and LR controls.

MASTERS

AUX MASTERS - Each aux mix has a master level control that adjusts the output level to match external equipment, or to trim the monitor, effect or recording level without affecting the mix balance. Up to +4dB of boost is available above the nominal '0' position.

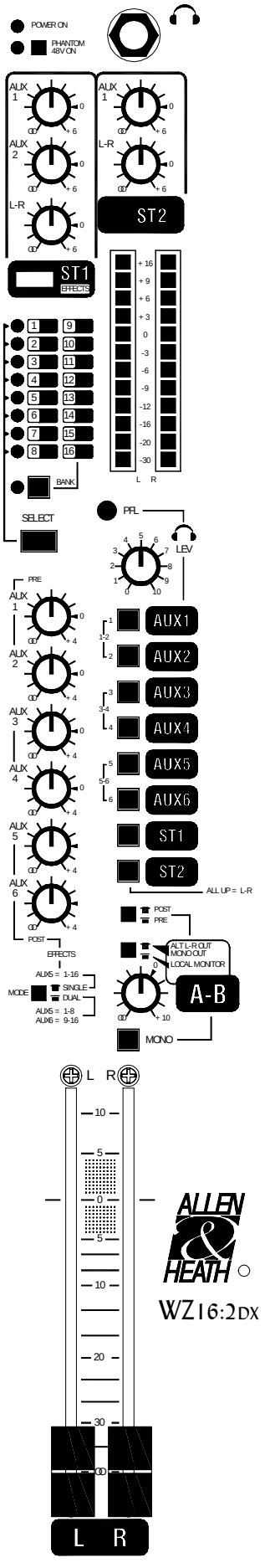
L-R FADERS - Individual 100mm faders adjust the main L-R mix level with +10dB boost available above the nominal '0' position. For best performance the faders should be operated around the '0' position for normal 'loud' level. If you find yourself operating significantly below '0' then the amplifier or recorder input is too sensitive for the console +4dBu output. Simply turn down the amplifier or recorder level trim. If none is available then insert an attenuator pad between the console and connected equipment.

MONITOR

PFL - A large red LED lights when any channel PFL switch is pressed. The PFL signal overrides any selected monitor source.

MONITOR SWITCHBANK - 8 switches select which source you listen to on the headphones and view on the L,R meters. These are Auxes1-6 and returns ST1and ST2 in stereo. Priority works from the top of the switchbank down as follows: PFL interrupts Aux, interrupts ST1, interrupts ST2.
For example, you can select all up to monitor your LR mix, then press ST1 to interrupt L-R with your 2-track replay, then press an Aux to check a monitor. Pressing any PFL always takes priority.
Auxes can be monitored in mono or as combined stereo pairs. For example, press Aux1 for mono, press Aux1 and Aux2 together to monitor Aux1-2 as a stereo pair. Pressing Aux3 overrides the Aux1-2 monitoring, and so on. This is most useful when you set up stereo cue or recording sends.

A-B OUTPUT



The A-B output is an additional stereo/mono output that can be uniquely configured as either a **separately controllable mix** output, or a **local loudspeaker monitor** feed.

MODE SWITCH - This switch is recessed under the panel to prevent accidental operation. It is operated using a pen tip or similar pointed object. In the normal up position A-B follows the main L-R mix. When pressed A-B follows the monitor switchbank + PFL to become a 'local' monitor in addition to the headphones.

POST/PRE - This recessed switch selects whether the L-R signal fed to A-B is sourced pre or post the L-R faders.

LEVEL - Adjust the output level using this control. Up to +10dB of boost is available above the nominal '0' position.

MONO - Sums L+R into mono. When A-B is configured as an additional mix output the MONO switch provides a mono output ideal for centre fill or sub-bass loudspeaker systems, or mono recording and broadcast feeds. When A-B is configured as a local monitor the MONO switch lets you check the mono compatibility of the selected mono source. Alternatively you can feed a local mono speaker monitor such as an engineers listen wedge.

Here are a few applications of the versatile A-B output:

A-B

L-R stereo live recording / broadcast

mode = up, set pre-fade
level trim to match recorder, L and R out

Mono live recording / broadcast

mode = up, set pre-fade, mono selected
level trim to match recorder, 2x M out

Additional L-R zone speakers

mode = up, set pre or post fade
level trim to balance speakers, L and R out

L-R delay fill speakers

mode = up, set post-fade
level trim to balance to main, L and R out

Mono centre fill speaker

mode = up, set post-fade, mono selected
level trim to balance to main, 2x M out

Sub-bass speaker

mode = up, set post-fade, mono selected
level trim to balance to main, 2x M out

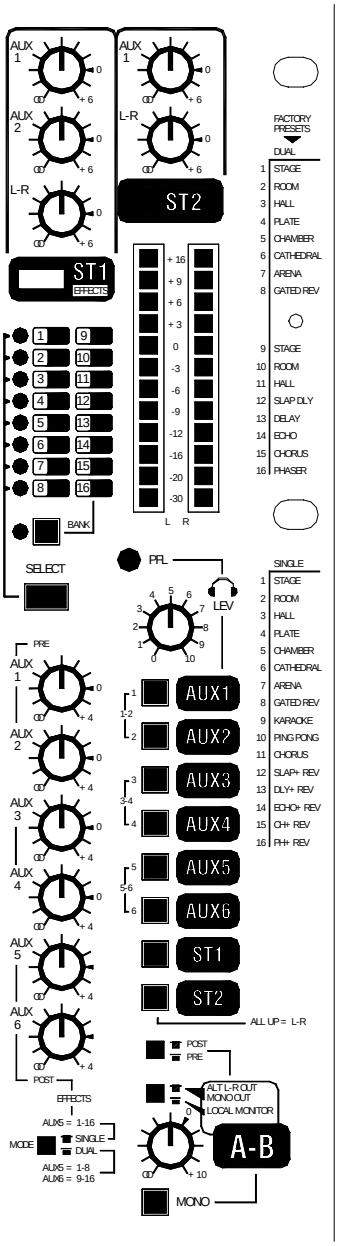
Local stereo speaker monitor

mode = down
separate monitor level, L and R out

Local floor listen wedge monitor

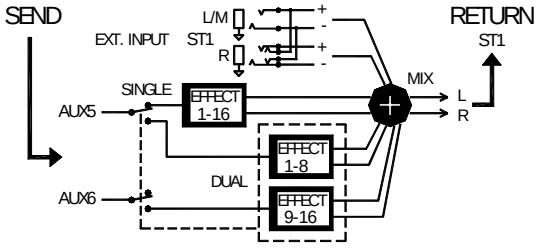
mode = down, mono selected
separate monitor level, 2x M out

DIGITAL STEREO EFFECTS



The WZ12:2DX and WZ16:2DX are provided with a built-in stereo digital effects processor. This can be configured as a single dual stereo effect (eg reverb + echo) fed from aux 5 or as two independent stereo effects fed respectively from aux 5 and aux 6.

In both single and dual modes, the processed signal is routed internally to the ST1 stereo return, as shown below. This connection is *after* the ST1 input connectors, so external signal processing can also be patched into this input if required. The processed signals can then be routed to the LR, Aux 1and/or Aux 2 mixes using the stereo return facilities. Note that Aux 5 and 6 sends are always available on their respective connectors. The OFF mode for the internal effects is provided to enable external effects loops to be created if required.



As each mode has 16 different effects programs available, this gives you the potential for 32 different programs.

Note that the parameters of these 32 sounds can be changed via the MIDI socket according to user requirements. Further information is provided on the following pages.

SINGLE/DUAL Mode Switch – Up position selects single mode and down position selects dual mode. Under-panel latching switch prevents accidental activation or de-selection during performances.

SINGLE MODE

In this mode, the effects processor acts as a single dual stereo effects processor fed from the aux 5 mix (after the aux 5 master level control). The choice of 16 effects programs is as follows:

PROGRAM 1-8			PROGRAM 9-16		
#	NAME	EFFECT	#	NAME	EFFECT
1	Stage	Short Reverbs of increasing length and differing brightness	9	Karaoke	Stereo Vocal Echo Effect
2	Room		10	Ping Pong	L-R repeat effect
3	Hall		11	Chorus	Stereo chorus effect
4	Plate	Typical studio plate reverb	12	Slap + Rev	Slap delay with hall reverb
5	Chamber	Long reverbs for special effects and simulation of large spaces	13	Dly + Rev	Delay with hall reverb
6	Cathedral		14	Echo + Rev	Echo with plate reverb
7	Arena		15	Ch + Rev	Chorus with arena reverb
8	Gated Rev	Special reverb typical for snare drums	16	Ph + Rev	Phaser effect with plate reverb

SELECT – This switch is used to select which of the 16 programs, or OFF, is active. The processor steps through programs 1-8 then 9-16 (indicated by the illumination of the BANK LED) and then OFF, which is indicated by all 8 program LEDs being turned off.

BANK – This switch and associated LED select programs 1-8 or 9-16.

DUAL MODE

The effects processor provides two independent stereo effects programs. The first from Aux 5 and the second from Aux 6.

The effects programs available to Aux 5 correspond to programs 1-8 in the following list and those available to Aux 6 are described in programs 9-16 below:

PROGRAM 1-8			PROGRAM 9-16		
#	NAME	EFFECT	#	NAME	EFFECT
1	Stage	These effects are similar to those in Single Mode	9	Stage	As effect #1
2	Room		10	Room	As effect #2
3	Hall		11	Hall	As effect #3
4	Plate		12	Slap Dly	100ms delay
5	Chamber		13	Delay	200ms stereo delay
6	Cathedral		14	Echo	Stereo echo
7	Arena		15	Chorus	Ideal for guitar chorus
8	Gated Rev		16	Phaser	Instrument/vocal phaser

SELECT – This switch is used, in conjunction with the LED column, to choose the effects programs on auxes 5 and 6 in turn. For each aux, the select switch steps through the eight programs and then OFF before cycling back to the first program of the eight.

BANK – This switch and associated LED selects the aux 5 effect or the aux 6 effect.

MIDI FUNCTIONS

The MIDI in socket provides the capability for selecting between FX programs via MIDI. MIDI program change numbers 0 to 15 correspond to effects programs 1 to 16.

MIDI Channel Change - The MIDI channel of the mixer may be selected by holding down the BANK key on power up. Whilst continuing to hold the BANK key, use the SELECT key to step through channels 1-16. The FX1-8 LEDs will light in sequence to indicate MIDI channels, then the BANK LED will light in conjunction with these to show 9-16. After cycling through MIDI channels 1 to 16, the processor will then turn all channels on and then all off. Release both BANK and SELECT keys when the required MIDI status is selected. The BANK LED will flash twice to confirm channel change. *The factory default is channel 1.*

RESET - Holding down the SELECT key during power up performs a hard RESET. The 8 FX program LEDs will flash in sequence followed by the BANK LED flashing off then on. *This restores the effects programs to the factory default settings.*

RESTORE – Hold down the BANK and SELECT keys while powering up the mixer. The 1-8 program LEDs will flash in sequence followed by the BANK led flashing twice to confirm the operation. *This restores the MIDI channel and effects programs to the factory default settings.*

WIZARD FX'S SYSTEM MIDI SPECIFICATION

PROGRAM CHANGE		CONTROL CHANGE CC NUMBER	
1-16	FX Select in single FX mode	16-19	FX1 Param 1-4
1-8	FX A Select in dual FX mode	20-23	FX2 Param 1-4
9-16	FX B Select in dual FX mode	24-27	EQ Param 1-4
100	FX bypass	28-29	NG Param 1-2
101	Exit FX bypass	31	FX Type
110	Single FX mode	48, 01	Store FX Settings (send twice to confirm store)
111	Dual FX mode		
112	Wizard front panel disable		
113	Wizard front panel enable		

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FX parameter changing:

The FX presets may be edited via the MIDI connector. The following parameters may be adjusted on each of the FX processors as shown:

		Parameters																								
		FX1 Processor													FX2 Processor											
			1			2			3			4				1			2			3			4		
MIDI Control Change No			CC#16			CC#17			CC#18			CC#19				CC#20			CC#21			CC#22			CC#23		
No	Name	FX Type	Name and units	Default Value	Range	Name and units	Default Value	Range	Name and units	Default Value	Range	Name and units	Default Value	Range	FX Type	Name and units	Default Value	Range	Name and units	Default Value	Range	Name and units	Default Value	Range	Name and units	Default Value	Range
1	Stage	St	Pre-dly ms	15	0-99	Decay	8	1-10	Damping	9	1-10	Level	90	0-99													
2	Room	Ro	Pre-dly ms	5	0-99	Decay	8	1-10	Damping	5	1-10	Level	90	0-99													
3	Hall	HA	Pre-dly ms	35	0-99	Decay	7	1-10	Damping	8	1-10	Level	80	0-99													
4	Plate	PL	Pre-dly ms	0	0-99	Decay	[illegible]	1-10	Dampin	3	1-10	[illegible]	80	0-99													
5	Chamber	Ch	Pre-dly ms	30	0-99	Decay	9	1-10	Dampin	8	1-10	Level	70	0-99													
6	Cathedral	CA	Pre-dly ms	65	0-99	Decay	8	1-10	Dampin	7	1-10	Leve	70	0-99													
7	Arena	Ar	Pre-dly ms	80	0-99	Decay	[illegible]	1-10	Dampin	1	1-10	[illegible]	70														
8	Gated Rev	GA	Pre-dly ms	0	0-99	Decay	7	1-10	Diffusion	8	1-10	Level	90	0-99													
9	Karaoke	D4	Delay	4	1-5	N/A	-	-	Repeats	10	1-10	Level	80	0-99													
10	Ping Pong	D3	Delay s	1.5	0.1-2	Delay ms	0	0-99	Feedback	20	0-99%	Level	90	0-99													
11	Chorus	CH	Speed	6	0-99	Depth	40	0-40	Delay ms	40	0-40	Level	90	0-99													
12	Slap+Rev	D1	Delay s	0.1	0.1-2	Delay ms	20	0-99	Feedback	0	0-99%	Level	90	0-99	HA	Pre-dly ms	35	0-99	Decay	9	1-10	Damping	7	1-10	Level	20	0-99
13	Dly+Rev	D3	Delay s	0.2	0.1-2	Delay ms	70	0-99	Feedback	20	0-99%	Level	90	0-99	HA	Pre-dly ms	35	0-99	Decay	8	1-10	Damping	4	1-10	Level	30	0-99
14	Echo+Rev	D3	Delay s	0.6	0.1-2	Delay ms	0	0-99	Feedback	20	0-99%	Level	50	0-99	PL	Pre-dly ms	40	0-99	Decay	10	1-10	Damping	2	1-10	Level	20	0-99
15	Ch+Rev	CH	Speed	30	0-99	Depth	15	0-40	Delay ms	10	0-40	Level	80	0-99	Ar	Pre-dly ms	65	0-99	Decay	2	1-10	Damping	7	1-10	Level	15	0-99
16	Ph+Rev	PH	Speed	30	0-99	Depth	90	0-99	Feedback	70	0-97%	Level	90	0-99	PL	Pre-dly ms	30	0-99	Decay	5	1-10	Damping	9	1-10	Level	20	0-99
1	Stage	St	Pre-dly ms	15	0-99	Decay	8	1-10	Damping	9	1-10	Level	99	0-99													
2	Room	Ro	Pre-dly ms	5	0-99	Decay	8	1-10	Damping	5	1-10	Level	99	0-99													
3	Hall	HA	Pre-dly ms	35	0-99	Decay	7	1-10	Damping	8	1-10	Level	99	0-99													
4	Plate	PL	Pre-dly ms	0	0-99	Decay	5	1-10	Damping	3	1-10	Level	99	0-99													
5	Chamber	Ch	Pre-dly ms	30	0-99	Decay	9	1-10	Damping	8	1-10	[illegible]	99	0-99													
6	Cathedral	CA	Pre-dly ms	65	0-99	Decay	8	1-10	Damping	7	1-10	[illegible]	99	0-99													
7	Arena	Ar	Pre-dly ms	80	0-99	Decay	5	1-10	Damping	10	1-10	Level	99	0-99													
8	Gated Rev	GA	Pre-dly ms	0	0-99	Decay	7	1-10	Diffusion	8	1-10	Level	99	0-99													
9	Stage														St	Pre-dly ms	15	0-99	Decay	8	1-10	Damping	9	1-10	Level	99	0-99
10	Room														Ro	Pre-dly ms	5	0-99	Decay	8	1-10	Damping	5	1-10	Level	99	0-99
11	Hall														HA	Pre-dly ms	35	0-99	Decay	7	1-10	Damping	8	1-10	Level	99	0-99
12	Slap Delay														D1	Delay s	0.1	0.1-2	Delay ms	20	0-99	Feedback	0	0-99%	Level	99	0-99
13	Delay														D3	Delay s	0.2	0.1-2	Delay ms	70	0-99	Feedback	20	0-99%	Level	99	0-99
14	Echo														D4	Delay time	4	1-5	N/A	-	-	Repeats	10	1-10	Level	99	0-99
15	Chorus														CH	Speed	30	0-99	Depth	15	0-40	Delay ms	10	0-40	Level	99	0-99
16	Phaser														PH	Speed	30	0-99	Depth	90	0-99	Feedback	70	0-97%	Level	99	0-99

Key to FX types:

CH – Chorus
FL – Flange
PH – Phaser
Tr – Tremolo
Pn – Panner
RS – Rotary speaker
PS – Pitch shift
Dn – Detuner
D1 – Mono delay
D2 – Stereo delay
D3 – Ping Pong
D4 – Karaoke
St – Stage
Ro – Room
HA – Hall
PL – Plate
Ch – Chamber
CA – Cathedral
Ar – Arena
GA – Gated
RE – Reverse
Rg – Ring Modulator
Co – Compressor
Cd – Vocoder
D1 – Mono delay
D2 – Stereo delay
D3 – Ping Pong
D4 - Karaoke

Note that the range values shown need to be converted to the 0-127 MIDI equivalent.

Example:

To change the feedback parameter on the Phaser effect. First select the phaser effect on the WZ mixer. The MIDI string should then be generated as follows;

B_n,16,xx Where Bn defines the string as a control change instruction and n=channel voice message. 16 is CC#22 in hexadecimal and xx is the new value in the range 0-127.

FX Type Selection via MIDI

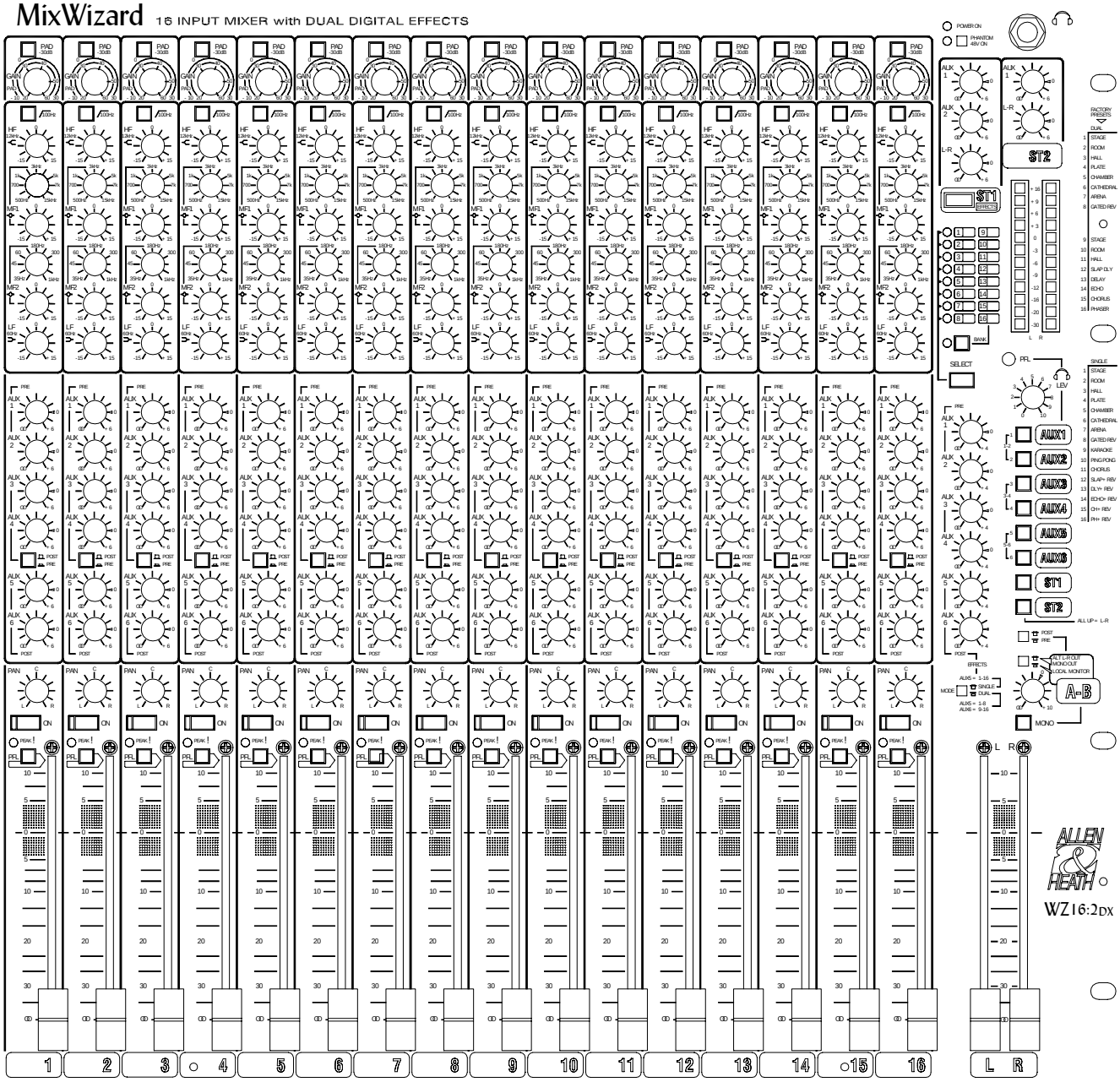
Note that the 32 FX program types may be changed using MIDI Control Change No 31 as follows:

				Parameters							
FX Type	Description	H or W type*	ID Code	1		2		3		4	
				Name	Range	Name	Range	Name	Range	Name	Range
CH	Chorus	H	12	Speed	0-99	Depth	0-40	Delay	0-40ms	Level	0-99
FL	Flanger	H	14	Speed	0-99	Depth	0-40	Feedback	0-97%	Level	0-99
PH	Phaser	H	16	Speed	0-99	Depth	0-40	Feedback	0-97%	Level	0-99
Tr	Tremelo	H	18	Speed	0-99	Depth	0-40	N/A	-	Level	0-99
Pn	Panner	H	20	Speed	0-99	Depth	0-40	N/A	-	Level	0-99
RS	Rotary Spkr	W	24	Speed	0-99	Type	6 variants	X-over freq		Level	0-99
PS	Pitch Shift	H	34	Shift	-12 to +24	Tracking	1-3	N/A	-	Level	0-99
Dn	Detuner	H	36	Detune	-12 to +12	N/A	-	N/A	-	Level	0-99
St	Stage	W	84	Predelay	0-99ms	Decay	1-10	Damping	1-10	Level	0-99
St	Stage	H	66	Predelay	0-99ms	Decay	1-10	Damping	1-10	Level	0-99
Ro	Room	W	86	Predelay	0-99ms	Decay	1-10	Damping	1-10	Level	0-99
Ro	Room	H	68	Predelay	0-99ms	Decay	1-10	Damping	1-10	Level	0-99
HA	Hall	W	88	Predelay	0-99ms	Decay	1-10	Damping	1-10	Level	0-99
HA	Hall	H	70	Predelay	0-99ms	Decay	1-10	Damping	1-10	Level	0-99
PL	Plate	W	90	Predelay	0-99ms	Decay	1-10	Damping	1-10	Level	0-99
PL	Plate	H	72	Predelay	0-99ms	Decay	1-10	Damping	1-10	Level	0-99
Ch	Chamber	W	92	Predelay	0-99ms	Decay	1-10	Damping	1-10	Level	0-99
Ch	Chamber	H	74	Predelay	0-99ms	Decay	1-10	Damping	1-10	Level	0-99
CA	Cathedral	W	94	Predelay	0-99ms	Decay	1-10	Damping	1-10	Level	0-99
CA	Cathedral	H	76	Predelay	0-99ms	Decay	1-10	Damping	1-10	Level	0-99
Ar	Arena	W	96	Predelay	0-99ms	Decay	1-10	Damping	1-10	Level	0-99
Ar	Arena	H	78	Predelay	0-99ms	Decay	1-10	Damping	1-10	Level	0-99
GA	Gated	H	62	Predelay	0-99ms	Decay	1-10	Diffusion	1-10	Level	0-99
GA	Gated	W	80	Predelay	0-99ms	Decay	1-10	Diffusion	1-10	Level	0-99
RE	Reverse	H	64	Predelay	0-99ms	Decay	1-10	Diffusion	1-10	Level	0-99
RE	Reverse	W	82	Predelay	0-99ms	Decay	1-10	Diffusion	1-10	Level	0-99
Rg	Ring Modulator	H	22	Frequency	1-99	N/A	-	N/A	-	Level	0-99
Co	Compressor	H	8	Threshold	60-0	Ratio	1-19, inf	Attack	1-10	Gain	-19 to +20
Cd	Vocoder	W	26	Sibilance	0-99	Type	1-5	N/A	-	Level	0-99
Cd	Vocoder 3	W	32	Sibilance	0-99	Type	1-5	N/A	-	Level	0-99
D1	Mono Delay (1 tap)	H	46	Delay coarse	0.1-2.0	Delay fine	0-99ms	Feedback	0-99%	Level	0-99
D2	Stereo Delay (1 tap)	H	48	Delay course	0.1-2.0	Delay fine	0-99ms	Feedback	0-99%	Level	0-99
D1	Mono Delay (2 taps)	H	50	Delay course	0.1-2.0	Delay fine	0-99ms	Feedback	0-99%	Level	0-99
D1	Mono Delay (1 tap)	W	52	Delay course	0.1-2.0	Delay fine	0-99ms	Feedback	0-99%	Level	0-99
D2	Stereo Delay (1 tap)	W	54	Delay course	0.1-2.0	Delay fine	0-99ms	Feedback	0-99%	Level	0-99
D2	Mono Delay (2 taps)	W	56	Delay course	0.1-2.0	Delay fine	0-99ms	Feedback	0-99%	Level	0-99
D1	Karaoke	H	58	Delay time	1-5	N/A	-	Repeats	1-10	Level	0-99

* W effects can only be used in single effect mode, H effects can be used in both single and dual modes.

CUE SHEET WZ16:2DX

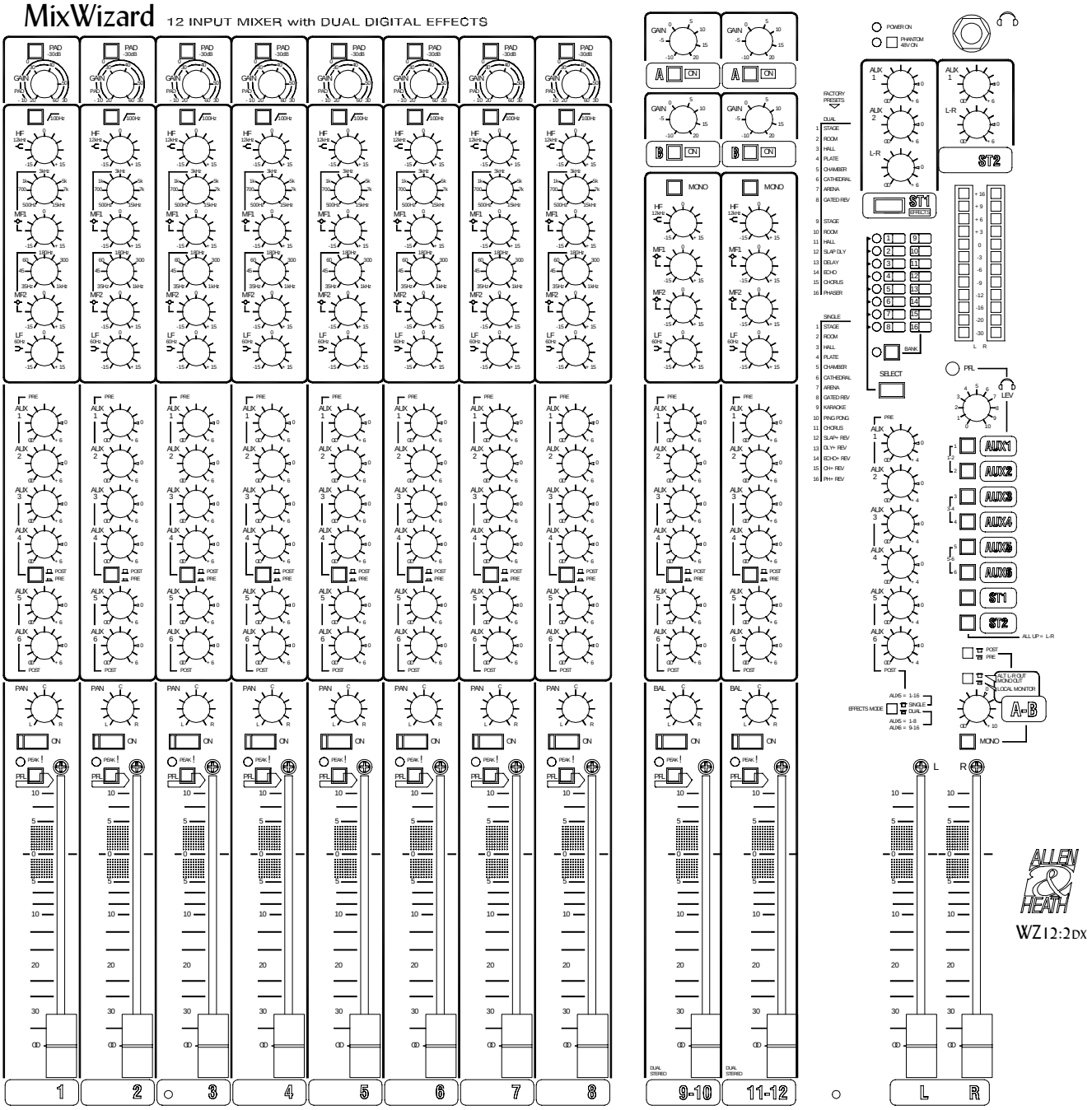
Copy and use this page to record mixer settings



Notes:

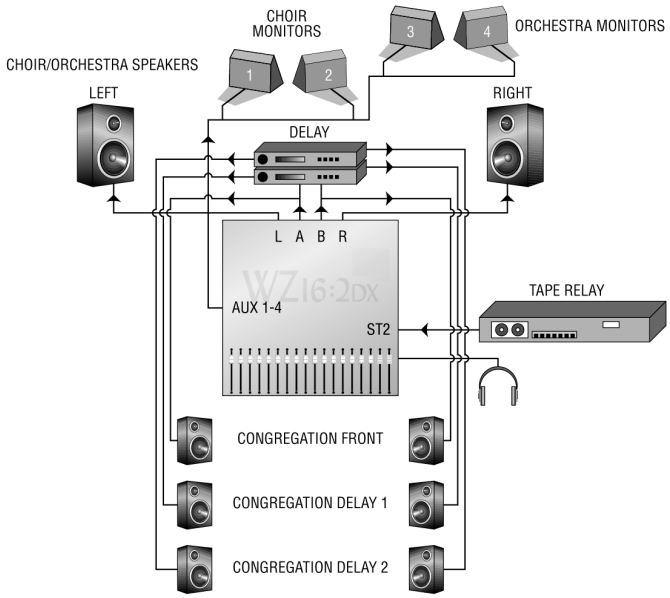
CUE SHEET WZ12:2DX

Copy and use this page to record mixer settings



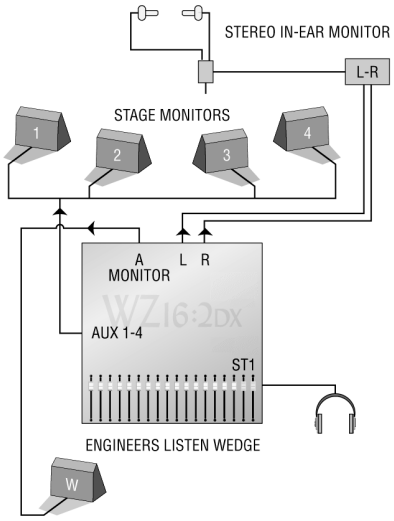
Notes:

Applications Examples



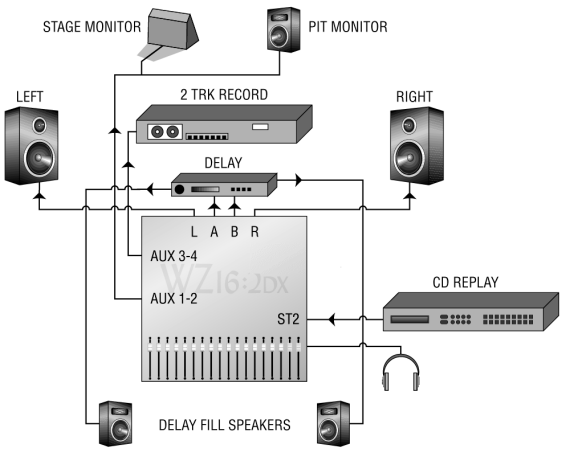
House of Worship:

- Music FOH system driven from LR mix
- Congregation PA with delays fed from AB
- Aux sends 1-4 give musicians/choir monitors
- Aux sends 5/6 used as internal FX sends
- ST2 used as a tape relay input
- Engineer checks using headphone output



Stage Monitor:

- 4 Floor wedges from auxes 1-4
- Stereo in-ear monitor mix from LR
- Engineers listen wedge from AB output
- Engineer speaker similar to musicians
- Monitor switches check on-stage sound
- Aux 5 and 6 used as internal FX sends
- FX routed to monitors via ST1
- Note up to 6 floor monitors possible



Small Theatre:

- Main FOH fed from LR mix
- Auditorium speakers fed from AB
- AB mix delayed to improve clarity
- Intermission CD replay input through ST2
- Stage and pit monitors from Aux 1-2
- 2 track recording from Aux 3-4
- Internal FX loop use Aux 5-6
- Engineer monitors using headphone mix

OPTIONS

The ***MixWizard Series WZ16:2 and WZ12:2DX*** have a versatile architecture designed to satisfy most live sound or recording applications you may encounter without modification. However, the following internal options are offered to provide alternative settings for those applications that may demand them. These options require resoldering of circuit board links and should only be carried out by competent technical personnel. Further information is available from your service agent or the **SERVICE MANUAL**.

PHANTOM POWER DISABLE

It is perfectly safe to connect non-phantom powered sources such as dynamic microphones to powered XLR sockets providing that balanced leads and sources are used. The +48V supply is current limited through 6.8k ohm resistors to each XLR to prevent damage. However, you can disable phantom power to selected channels by cutting out links on the rear connector circuit assembly. This work should be referred to your service agent.

ST1, ST2 INPUT SENSITIVITY

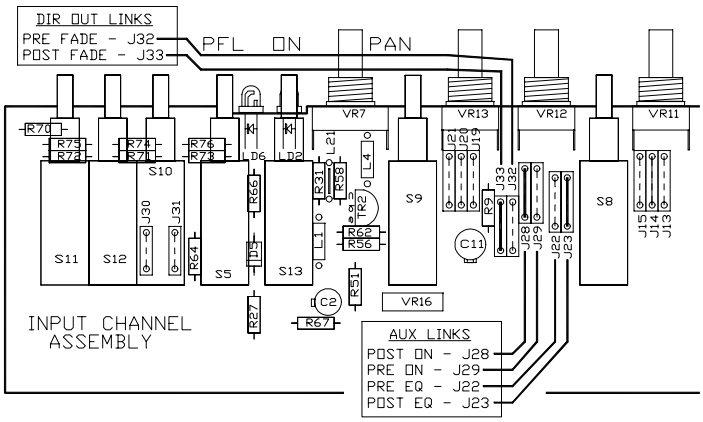
The stereo return inputs are set for nominal low level -10dBV operation as is common with much of the external equipment available today. The console level controls let you adjust for varying input levels. Most outboard equipment include output level trims. If, however, you wish to change the sensitivity to high level +4dBu the rear connector circuit can be reconfigured. This work should be referred to your service agent.

AUX OUT AND A-B OUT BALANCE OPTION

These outputs are impedance balanced on TRS jack to provide interference rejection when plugged into equipment with balanced inputs. It should not normally be necessary to fit the electronic balance option available. This option also increases the output level to a nominal +4dBu. Refer this work to your service agent.

CHANNEL PRE-FADE AUX SEND OPTIONS

The pre-fade sends are set post-EQ and post-ON as standard. However, link options on each



channel assembly allow pre-EQ and/or pre-ON if required. This is shown in the diagram below.

CHANNEL DIRECT OUTPUT SOURCE

The direct outputs are sourced post-fader as standard. A link option is available per channel to select a pre-fade source. This is shown in the diagram below.

MixWizard 12:2 DX and 16:2 DX