

### REAL WORLD MIXING

#### INNOVATION



**ALLEN&HEATH** has forged a solid pedigree in the pro audio market and with 35 years experience under our belt it's safe to say we know our customers' and their needs.

We pride ourselves in creating products for everyone involved in musical performance whatever their experience or budget. Our small format mixers have been designed with the same commitment to professionalism and detail that has made ALLEN&HEATH a leading name associated with larger format consoles.

Whether you are a PA rental company, touring or recording artist, bar, nightclub, house of worship, school or theatre, ALLEN&HEATH's range of small live sound mixers have been designed with users in mind, providing all the features and functionality you need in one compact desk.

forefront of audio technology innovation and collectively our R&D team has decades of live mixing and field support experience. Our compact mixers are brimming with cutting edge design features, including:

Minimal Signal Path processing – where the number of components and stages are minimised so that audio performance is optimised, giving clarity and definition to the sound. All the components are carefully selected to improve the sound, while all unnecessary components are removed.

ALLEN&HEATH has always been at the

- Quick Change Connector system this system was developed for MixWizard in response to demand from rental companies, who never know which format desk will be required - will the mixer be rack mounted or sitting on a desk? With the QCC system, you can choose between rack or desk options and make the change very simply without dismantling the mixer.
- Constant Power amplifier technology this clever technology allows you to get the full-rated power from your speaker system, whether 4 or 8 ohms, simply by flicking a switch on the PA-CP series mixer. Optimise your output using Constant Power.

Innovation doesn't stop there. Features such as the new aux-fed sub mode (WZ3) demonstrate our continuing commitment to innovation for the benefit of 'real world' users.





#### **QUALITY**

We are focussed on providing the highest sound quality, and our mixers are renowned for sonic 'warmth', 'depth' and 'fullness'. From our largest **ML** touring desks down to our smallest **PA** mixer, we use the best technology and quality components throughout our product portfolio.

The **MixWizard** and **PA** Series have allmetal chassis furnished with vertical circuit boards and nutted pots - just like our flagship **ML5000** VCA console - resulting in a build quality that is second to none. You couldn't make a better investment.







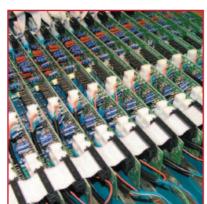












ALLEN&HEATH mixers are functional, affordable, and dependable. Welcome to 'real world' sound engineering...

### PA SERIES STEREO LIVE MIXERS

**ALLEN&HEATH**'s years of 'real world' experience with large format touring desks has resulted in many innovative touches being incorporated into the design of the **PA** Series of stereo live compact mixers. The range brings a classic, feature-packed pro audio design with the same superior build and sound quality to an even wider audience, so that now every aspirational performer or rental company supporting them can benefit from a truly professional system.

'Walk up and go' is a perfect description for the **PA** Series mixer – all the controls you expect are logically placed so that you stay in control under the pressure of any performance. The 4 band EQ on inputs and outputs and clever output routing are unique and will ensure you get the best out of the system, while features such as individual phantom power switches and SPDIF recording output add professional finishing touches.

Add sparkling clarity to your performance with the superior sound quality of a PA Series mixer.

### **KILLER FEATURES**



#### **High Performance Preamp**

The mic preamp is probably the most important stage in the console's signal path and its performance is often the measure of the quality of the console. The **PA** Series uses a high grade dual-stage design, developed from our top-end range of **ML** and **GL** consoles. This ensures optimum matching and very low noise when connecting mic or line sources.

#### **Parametric Output EO**

A 4 band equaliser with swept frequency on each band provides more precise optimisation of the speaker system and control of feedback than the typical fixed frequency graphic type EQ found on similar consoles. Download the free EQ Visualiser programme from our website to learn more about using this powerful tool.

#### **Filter**

Each mono input channel is equipped with a 100Hz high-pass filter, an invaluable tool for cleaning up the mix. The majority of live sound sources have very little content below 100Hz, and modern microphones have wide frequency response and can pick up bleed from nearby low frequency sources such as bass and kick drums. The filter can be used: on vocal channels to reduce mic handling noise and close proximity 'popping'; on drum overhead mics to reduce kick and bass pick up; on higher frequency instruments such as flute and acoustic guitar; and on stage mics to reduce foot noise.

#### **Recording Outputs**

There is a digital SPDIF 2-track output available from a RCA phono socket for recording direct to digital media, such as PC soundcards, DAT and digital audio processors. The recording send can be switched pre-fade if desired. An analogue recording output is also available.



#### 4 Band Channel EQ

Another design innovation taken from **ALLEN&HEATH**'s flagship range, the 4 band input EQ is every bit a pro tool. The low [60Hz] and high [12kHz] bands have shelving response, while the high-midrange band is sweepable from 350Hz to 6 kHz. Low-midrange EQ has a bell response at 250Hz - a frequency chosen to provide reduction of 'muddy' sounds and enhance 'warmth'.

#### Lamp socket

A 4 pin lamp connector is provided on the rear of the control surface.



#### **TECHNICAL SPECIFICATIONS**





# MITE OFF

#### **Easy-to-Mix Controls**

The control surface is laid out in an uncomplicated format and the operator can easily see all connections for patching. Pre-fade sends (FB) and post-fade sends (FX) are clearly labelled and colour coded, and there are generous 100mm fader masters with a LED mute button, identical to the channel controls. There is a selection of 16 editable digital FX to complete the professional design.

#### **Stereos**

2 dual stereo channels with RCA and TRS connectors and independent gain controls are included for FX returns and stereo sources, such as CD players and backing tracks. The RCA inputs can feed straight to LR, so providing extra returns. The stereo channels are furnished with 2 band EQ, and can be routed to all 4 auxiliary sends.

#### **Powered Option**

The **PA-CP** versions contain a built-in amplifier, delivering an impressive 1 kiloWatt, able to run a regular stereo **PA** system with very little external equipment. Our objective was to produce a powerful, great sounding amplifier in a compact package for the high-end audio market. The result is not only a well voiced amp with loads of weighty power but also clear, transparent audio quality.

**ALLEN&HEATH**'s unique 'Constant Power' system ensures that all available power is converted into useable speaker power so we can guarantee the full 500W RMS per side into 4 ohms OR 8 ohms.

#### A+B Output Channels

The main outputs - XLR (PA) or amplifier (PA-CP) - derive their source from a selectable combination of LR (stereo). L+R (mono), FB1 and FB2, and provide master level trim, meters, slave outputs, patch point for external processors, and the very precise 4 band semi-parametric equalisers. This is extremely flexible and means that the PA can be operated in many different ways. For example, the user may want to run a stereo house system with separate left and right speakers and no monitors, or a mono system with a foldback monitor. Alternatively, you may patch into a bigger house system and use the built-in amplifier to provide a pair of equalised stage monitors. The PA Series takes the concept of a 'PA in a box' a versatile step further.

#### **Operating Levels**

 Channels
 0dBu Headroom +21dB

 Mix
 0dBu Headroom +21dB

 Main Outputs
 0dBu Headroom +21dB

 Maximum output
 +21dBu

 Mic Pre-Amp Sensitivity
 -60 to +10dBu

 Stereo input sensitivity
 -20 to +30dBu

#### Frequency Response (20Hz-30kHz)

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#### Distortion at 1kHz +14dBu out

THD + Noise (mic in +40dB gain) <0.006% THD + Noise (line in 0dB gain) <0.006%

#### Crosstalk @1kHz

Adjacent Channel <-90dB
Mute Shutoff <-95dB
Fader Shutoff <-95dB

#### Noise Performance (22Hz-22kHz unweighted)

Mic EIN with 150ohm source -128dB
Residual output noise - main outputs <-89dBu

#### **Connection Impeadances**

 Mic Inputs
 2k ohms

 Line Inputs
 >10k ohms

 Outputs
 <75 ohms</td>

#### **Equalisation**

Mono Channel Low Frequency 60Hz Shelf
Mono Channel High Mid Frequency 500Hz-15kHz Q=1.8
Mono Channel High Frequency 12kHz Shelf
Filter (mono input) 100Hz switchable

#### Metering

Reading referred to Main outputs OVU = +4dBuPeak indication threshold 5dB before clipping

#### System

Lamp connectors 1 x 4pin XLR-F
Power supply Internal
Power Consumption 1600W Max (PA-CP)
75W Max (PA)

#### Amplifier Preformance - PA-CP only

 Output Power into 8 and 4 ohm loads
 2x500W RMS

 Frequency Response (20Hz-30kHz)
 +0/-0.5dB

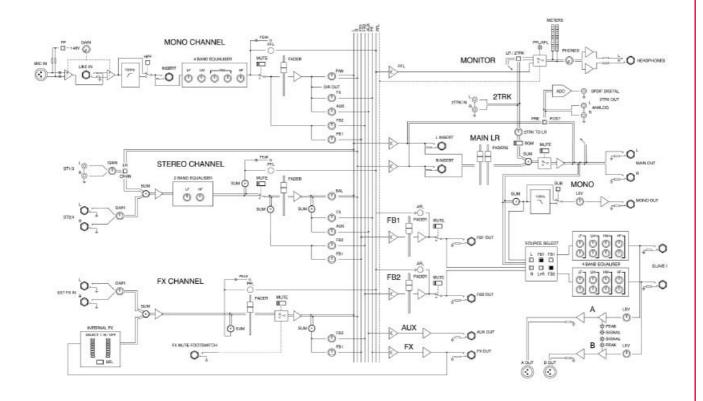
 THD + Noise
 <0.02%@1kHz</td>



# PA 12,20 & 28







- Mono Inputs 8 (PAI2), 16 (PA20) or 24 (PA28) with XLR/TRS inputs, mute and PFL switches with LEDs, and 100mm faders
- ➤ Phantom Power individually switched
- Two-stage Padless Preamp directs line sources to the second stage for improved matching and performance
- Input EQ 4-band with shelving LF and HF, a fixed LM band at 250Hz and a swept HM

- 100mm Faders with dust covers throughout
- ➤ 4 Auxiliary Sends with 2 pre-fade sends for foldback, one post-fade for internal or external FX and another post-fade for additional FX or special feeds
- 2 Dual Stereo Channels each with TRS jack and RCA phono inputs with independent gain and 2-band EQ
- Digital FX 16 FX programs.

- Outputs source selectable main AB output, mono sum with switchable sub bass filter and analogue and SPDIF digital recording outputs.
- Output EQ 4-band semi-parametric for speaker control more precise than achieved with the typical graphic type EQ
- Master section 12 segment LED meters, standby switching to disconnect the speakers, an XLR lamp socket and background music mode switch

PAI2	Without side trims for rackmount - mm(")	Desk mount with side trims - mm(")
Width	484 (19)	525 (20)
Height	145 (6)	145 (6)
Depth	437 (17)	539 (21)
Weight	13kg (28lbs)	13kg (28lbs)

<b>PA</b> 20	Desk mount with side trims mm(")
Width	733(29)
Height	145 (6)
Depth	539 (21)
Weight	17kg (11lbs)

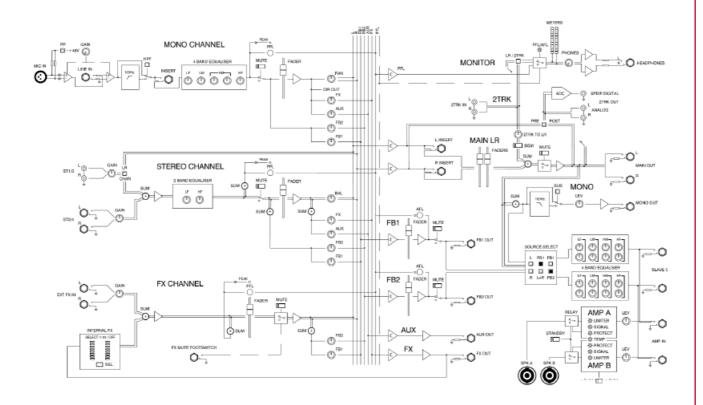
mm(")	
<b>Width</b> 958 (38)	
<b>Height</b> 145 (6)	
<b>Depth</b> 539 (21)	
Weight 21kg (46lbs)	

# PA 12/20-CP



The PA12-CP and PA20-CP are sturdy, "walk up and go" powered mixers, guaranteed to deliver loads of weighty power from their 'Constant Power' amplifiers.

These well thought-out mixers offer operational flexibility for any live sound situation and engineers of any experience.



- 'Constant Power' Amp a pair of 500W RMS amplifiers for use with 4 or 8 ohm speakers
- ➤ Mono Inputs 8 (PAIZ-CP) or 16 (PAZO-CP) with XLR/TRS inputs, mute and PFL switches with LEDs, individual phantom power switching and 100mm faders with dust covers
- ➤ Two-stage Padless Preamp directs line sources to the second stage for improved matching and performance
- Input EQ 4-band with shelving LF and HF, a fixed LM band at 250Hz and a swept HM
- Output EQ 4-band semi-parametric for speaker control more precise than achieved with the typical graphic type EQ
- ➤ 4 Auxiliary Sends with 2 pre-fade sends for foldback, one post-fade for internal or external FX and another post-fade for additional FX or special feeds
- Digital FX 16 FX programs

- 2 Dual Stereo Channels each with TRS jack and RCA phono inputs with independent gain and 2-band EQ
- Mix Output Source selectable AB amplifier outputs, mono sum with switchable sub bass filter and analogue and SPDIF digital recording outputs
- Master Section 12 segment LED meters, standby switching to disconnect the speakers, an XLR lamp socket and background music mode switch

PAI2-CP	Without side trims for rackmount mm(")	Desk mount with side trims mm(")
Width	484 (19)	525 (20)
Height	178 (7)	178 (7)
Depth	437 (17)	539 (21)
Weight	21kg (46lbs)	21kg (46lbs)

<b>PA</b> 20-CP	Desk mount with side trims mm(")
Width	733 (29)
Height	178 (7)
Depth	539 (21)
Weight	24kg (20lbs)

### MIX WIZARD MULTI-PURPOSE COMPACT CONSOLES

Now in its 3rd generation, the legendary MixWizard range builds on its market leading status by adding a new mic preamp design and advanced grounding scheme, which both further enhance sonic quality. Other improvements include individual phantom power switches, channel signal indicators, lamp socket and backup supply capability. Internal configuration options for channel aux sends and direct output are now on pluggable jumpers for user convenience, and the mixer is presented in a stylish new package.

Of course, the range retains its traditionally strong blend of professional features, including an all-metal chassis, individual circuit boards, nutted rotary controls, smooth 100mm faders, LED metering, as well as 6 aux sends, 4 band EQ, digital FX and expansion capability, which it inherits from its big brothers in the large format ranges. The sonic purity of the MixWizard has been further enhanced to retain its market leading credentials - a true professional in the world of compact mixing.

### **KILLER FEATURES**

#### **High Performance Preamp**

The mic preamp is probably the most important stage in the console's signal path and its performance is often the measure of the quality of the console. MixWizard3 mixers have a newly-designed preamp, developed from our top-end range of ML and GL consoles. The preamp provides very low noise and distortion, a wide yet smooth gain law, and extended headroom for dealing with the most demanding sources.

#### 4 band EO

Provides clean, responsive and accurate equalisation control normally only found in larger format desks. 4 extended range overlapping bands - 2 with centre frequency sweeps - let you compensate for microphone and auditorium frequency responses, add sparkle and presence to voices and instruments, control sibilance or add colour.

All 4 bands give up to 15dB boost or cut and have centre detents.

#### **Maximum Flexibility**

As with our large format large sound consoles, the WZ3I4:4:2 can work as a Front of House or Monitor mixer. In FOH mode, the 4 groups with inserts, long throw faders and XLR outputs can be routed and panned to the LR mix for flexible sub-mixing. The main LR mix has inserts, separate left and right faders, and XLR outputs, to feed the main speaker system. EQ and signal processing can easily be inserted on group and main outputs.

In Monitor mode, the aux mixes are routed to the group and LR faders, inserts and XLR output. The AFL and PFL system is switched to the Mono output to provide an engineer's 'wedge' output. In essence, it's a perfect 6-mix monitor console with additional outputs available from the group busses via the aux master controls.

To allow maximum flexibility, it is possible to operate the console in dual mode where some auxes can be used as monitor mixes and some sub-grouping can be used along with the main LR outputs. This allows the engineer to run FOH sound and some Monitor mixes from the same console.

Additionally, and unusually on a small format mixer, 2 matrix outputs are also provided - the flexibility and benefits of a matrix cannot be underestimated in today's console applications!

For WZ316:2 and WZ312:2, extra flexibility is provided by our unique third master fader, which can be switched to provide either an L+R mono feed for centre or fill speaker, a sub bass feed mixed from the channel aux 6 sends, and with master fader right where it is needed - next to the LR masters.

#### 6 auxiliary sends

Each of the 6 aux mixes has its own master level rotary control and impedance balanced TRS outputs. The console has a clever monitoring system to listen to aux outputs in mono or in stereo pairs. Auxes 1-2 are routed pre fade for monitors; auxes 3-4 are switchable pre or post fade for monitors, effects or additional recording or zone feeds; and auxes 5-6 are routed post fader for effects and aux-fed sub. The aux settings can be changed by replugging internal jumpers.



#### **Digital FX** (WZ3:16 and 12 only)

2 stereo effects engines are provided operating in either single or dual mode, providing 16 reverb, echo and other effects editable via MIDI. External effects can even be mixed in through the same return channel, thus saving precious inputs. Download FX editing software from www.allen-heath.com



#### **Expansion option**

A unique feature for such a compact mixer is the ability to expand the input capacity via the Sys-Link 2 option, which connects the mixer to another **ALLEN&HEATH** Sys-Link compatible console. The auxiliary and output busses are linked into the 'master' console, while PFL / AFL circuits are also connected, allowing the engineer to monitor both surfaces.

#### **Stereos**

On WZ3I4.4:2 and WZ3I2:2, two dual stereo channels with TRS connectors and independent gain controls are included for FX returns and stereo line sources.

One stereo input can feed straight to LR, so providing extra returns. The stereo channels are furnished with 2 band EQ and can be routed to all 6 auxiliary sends.

On the **WZ³2O5**, 8 dual stereo input channels are provided, each with TRS jack 'A' and XLR 'B' inputs. These may be mixed together into the channel or mode switched to provide up to 16 independent sources to the mix - ideal for multi-stereo keyboard and recording applications.

#### **TECHNICAL SPECIFICATIONS**

#### **Operating Levels**

 Channels
 0dBu Headroom +21dB

 Mix
 -2dBu Headroom +23dB

 Main Outputs
 +4dBu Headroom +22dB

 Maximum output
 +26dBu

 Mic Pre-Amp Sensitivity
 -60 to +10dBu

 Stereo input sensitivity
 -16 to +20dBu

#### Frequency Response (20Hz-30kHz)

Mic to Main output (+40 dB) +0/-0.5 dBLine to Main output (0 dB) +0/-0.5 dB

#### Distortion at 1kHz +14dBu out

THD + Noise (mic in +40dB gain) < 0.004%THD + Noise (line in 0dB gain) < 0.004%

#### Common Mode Rejection @1kHz

Mic Input +40dB gain >80dB
Mic Input with Pad 0dB gain >50dB

#### Crosstalk @1kHz

Adjacent Channel <-90dB
Mute Shutoff <-100dB
Fader Shutoff <-90dB

#### Noise Performance (22Hz-22kHz unweighted)

Mic EIN with 150ohm source -128dB
Residual output noise - main outputs <-95dBu
Main Mix noise <-83dBu (87dB S/N)

#### **Connection Impeadances**

 Mic Inputs
 2k ohms

 Line Inputs
 >10k ohms

 Outputs
 <75 ohms</td>

#### Equalisation

Gain (each band) +/- 15dB

Mono Channel Low Frequency 60Hz Shelf

Mono Channel Low Mid Frequency 35Hz - 1kHz Q=1.8

Mono Channel High Mid Frequency 500Hz-15kHz Q=1.8

Mono Channel High Frequency 12kHz Shelf

Filter (mono input) 100Hz switchable

#### Metering

Reading referred to Main outputs 0VU = +4dBuPeak indication threshold 5dB before clipping

#### System

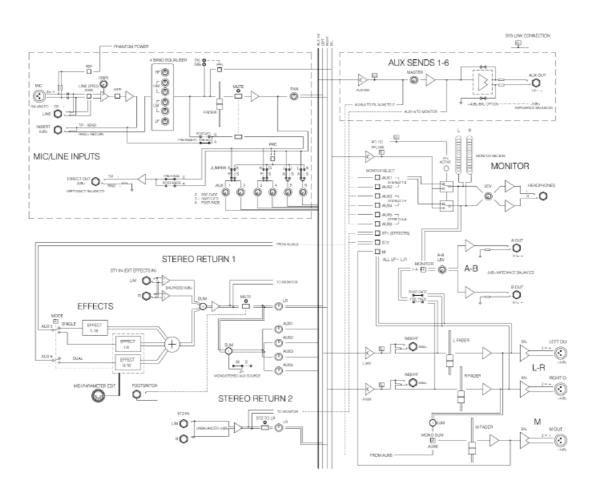
Lamp connectors 1 x 4pin XLR-F
Power supply Internal / MPS12 option
Power Consumption 35W Max



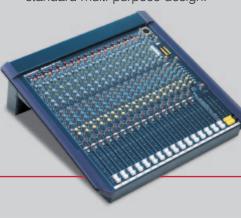
## **WZ**<sup>3</sup> 16:2







The **WZ**<sup>3</sup>:16:2 is a versatile, easy to use 16 mic/line channel mixer - the next generation of this industry standard multi-purpose design.



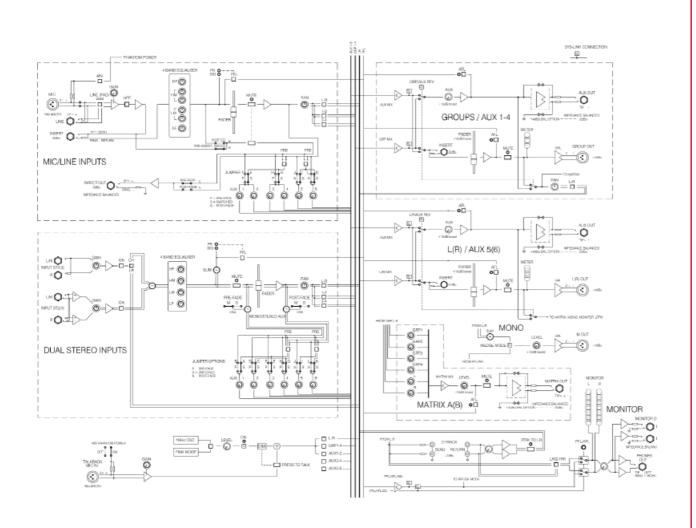
- ➤ 16 mic/line inputs with balanced XLR/TRS jack, and direct output
- > 100mm Faders throughout
- ➤ 4-band EQ comprehensive equalisation with 2 sweepable mids
- 6 auxiliary sends 2 pre, 2 switched,
   2 post fade (may be reconfigured)
- > 2 stereo returns on TRS jack
- Dedicated mono output fader with innovative mode for control of aux fed subs
- Independent A-B output to feed any number of applications including a 2-track recorder, monitor foldback or speaker fills
- Metering Twin 3-colour, 12 segment bargraph follow selected monitor source, channel signal and peak LEDs
- Onboard FX 16 FX programs with external editing software connected via MIDI
- Pluggable jumpers for user configurability
- Mounting desk or rack mountable, with rotating connector pod
- Sys-Link 2 output option for connection to other ALLEN&HEATH Sys-Link compatible consoles

	Without side trims for rackmount - mm(")	Deskmount with side trims - mm(")
Width	483 (19)	507 (20)
Height	194 (8)	195 (8)
Depth	530 (21)	135 (5)
Weight	10kg (22lbs)	10kg (22lbs)

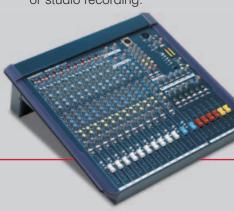
# WZ<sup>3</sup> 14:4:2







The **WZ**<sup>3</sup>:14:4:2 is a remarkably dynamic compact mixer, with multifunctionality that allows it to be used for FOH, monitors, and live or studio recording.



- 10 mic/line inputs with balanced XLR/TRS jack and direct output
- Dual functionality the aux master section can be reversed to provide up to 6 monitor sends, while the mono control and XLR can convert to an engineer's listen wedge output
- 6 auxiliary sends switchable pre/post, all can be accessed at the same time
- ➤ 4 audio groups with panned sub grouping and feed to the matrix

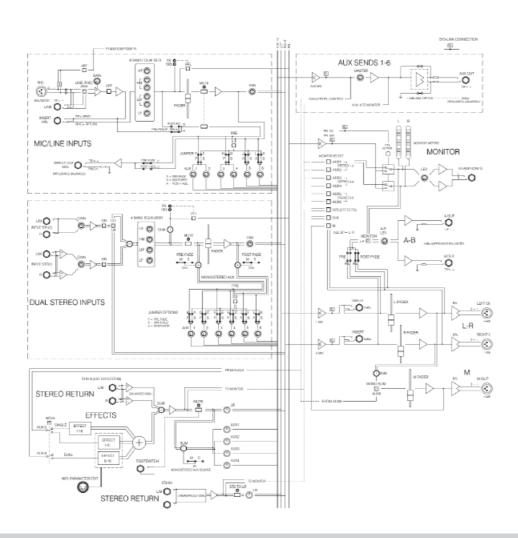
	Without side trims for rackmount - mm(")	Deskmount with side trims - mm(")
Width	483 (19)	507 (20)
Height	194 (8)	195 (8)
Depth	530 (21)	135 (5)
Weight	10kg (22lbs)	10kg (22lbs)

- ➤ 2 dual stereo inputs each with 4band EQ, separate gain and 'on' switches. Two may be routed direct to LR to provide 4 independent stereo returns
- ➤ 4-band EQ comprehensive equalisation with 2 sweepable mids
- ➤ 6x2 matrix fed from groups 1-4 and LR, featuring an illuminated mute button, level control, and AFL. The matrix can be used to create custom mixes for recording, in-ear monitors, or PA loudspeaker zones.
- Oscillator and pink noise generator for line-up and speaker testing
- Pluggable jumpers for user configurability
- Mounting desk or rack mountable, with rotating connector pod
- Sys-Link 2 input/output option for connection to other ALLEN&HEATH Sys-Link compatible consoles

# **WZ**<sup>3</sup> 12:2







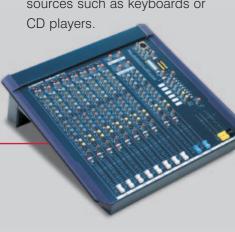
With the same functionality as its larger sister models, the WZ³:I2:2 embodies the ultimate multipurpose compact mixer, with 2 extra dual stereo inputs for stereo sources such as keyboards or

- ➤ 8 mic/line inputs with balanced XLR/TRS jack, and direct output
- > 100mm Faders throughout
- ➤ 2 dual stereo inputs featuring separate gain and 'on' switches allowing each input to be selected individually or mixed together. One pair on each channel can be routed directly to the L&R mix for even more versatility
- ➤ 4-band EQ comprehensive equalisation with 2 sweepable mids

- ➤ 6 auxiliary sends 2 pre, 2 switched, 2 post fade (may be reconfigured)
- ➤ 2 stereo returns on TRS jack
- Pluggable jumpers for user configurability
- Dedicated mono output fader with innovative mode for control of aux fed subs
- Independent A-B output to feed any number of applications including a 2-track recorder, monitor foldback or speaker fills
- Onboard FX 16 FX programs with external editing software connected via MIDI
- Mounting desk or rack mountable, with rotating connector pod
- Sys-Link 2 output option for connection to other ALLEN&HEATH Sys-Link compatible consoles



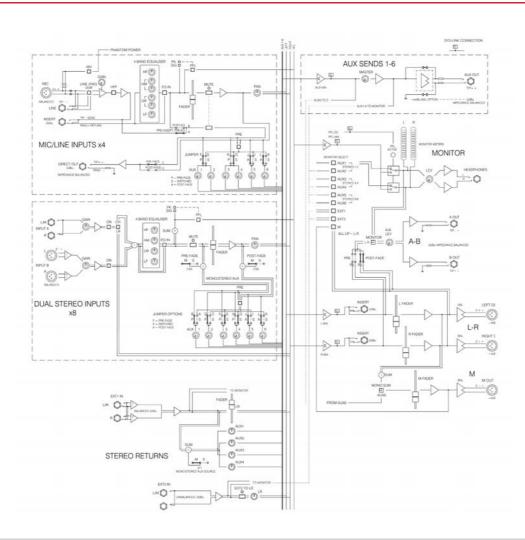
	Without side trims for rackmount - mm(")	Deskmount with side trims - mm(")
Width	483 (19)	507 (20)
Height	194 (8)	195 (8)
Depth	530 (21)	135 (5)
Weight	10kg (22lbs)	10kg (22lbs)



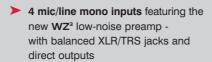
# **WZ**<sup>3</sup> 20S







Now upgraded to **WZ**<sup>3</sup> status, the **20S** remains a favourite mixer for small broadcast studios, internet radio stations, project studios and stereo sub-mixing anywhere. Featuring the new **WZ**<sup>3</sup> preamp and responsive EQ, the **WZ**<sup>3</sup>**20S** provides 12 channels with no fewer than 4 mono and 18 stereo sources.

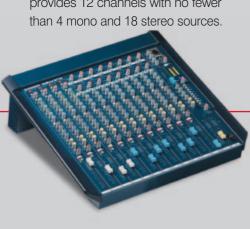


- ➤ 8 dual stereo input channels, each with TRS jack 'A' and XLR 'B' inputs. These may be mixed together into the channel or mode switched to provide up to 16 independent sources to the mix ideal for multi-stereo keyboard and recording applications
- 2 stereo returns on TRS jack, one with fader and aux sends

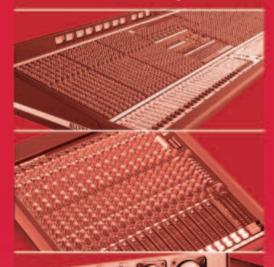
- Responsive 4-band EQ with 2 sweepable mids and in/out switching
- 6 auxiliary sends switchable pre/post fader. All can be accessed at the same time
- Internal option to configure auxes for creating stereo mixes, for example recording stereo IEM or keyboard sub mixing to FOH
- Dedicated mono output fader with innovative mode for control of aux-fed subs, dedicated C mix, or other main mix feed
- > Stereo AB output for additional mix or local monitor output
- ➤ Sys-Link 2 output option for connection to other ALLEN&HEATH Sys-Link compatible consoles
- > 100mm faders on all input channels and main outputs
- User wiring options for fader start and mic live monitor muting using the AB output



	Without side trims for rackmount - mm(")	Deskmount with side trims - mm(")
Width	483 (19)	507 (20)
Height	194 (8)	195 (8)
Depth	530 (21)	135 (5)
Weight	10kg (22lbs)	10kg (22lbs)



### **ALLEN&HEATH**





### **ALL RANGES**

### LARGEFORMAT LIVESOUND MIXERS

SMALLFORMAT LIVESOUND MIXERS

**DJ**PRODUCTS

SOUND MANAGEMENT SYSTEMS

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