

A large, professional-grade live sound mixer is shown from a low angle, filling the lower half of the frame. The mixer is dark-colored with numerous silver knobs and faders. The background is a blurred image of a large crowd of people, suggesting a live performance or event. The entire image is overlaid with a semi-transparent red gradient.

SMALL FORMAT LIVE SOUND MIXERS

ALLEN & HEATH

REAL WORLD MIXING

INNOVATION

35
YEARS OF AUDIO INNOVATION
ALLEN & HEATH



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.

ALLEN & HEATH has always been at the 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.
- **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.

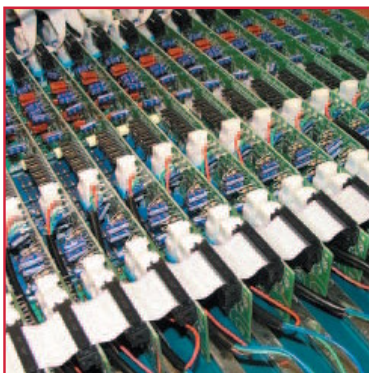
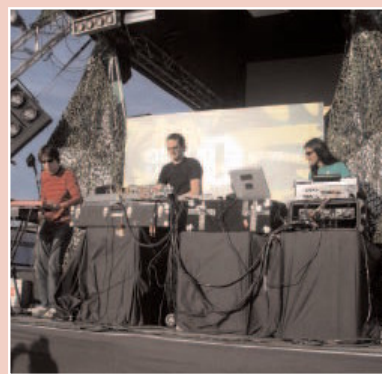
Innovation doesn't stop there. Features such as the new aux-fed sub mode (**WZ3**) demonstrate our continuing commitment to innovation for the benefit of 'real world' users.



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 all-metal 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 EQ

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.





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.

TECHNICAL SPECIFICATIONS

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)

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

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 Impedances

Mic Inputs	2k ohms
Line Inputs	>10k ohms
Outputs	<75 ohms

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	0VU = +4dBu
Peak 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 Performance - 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

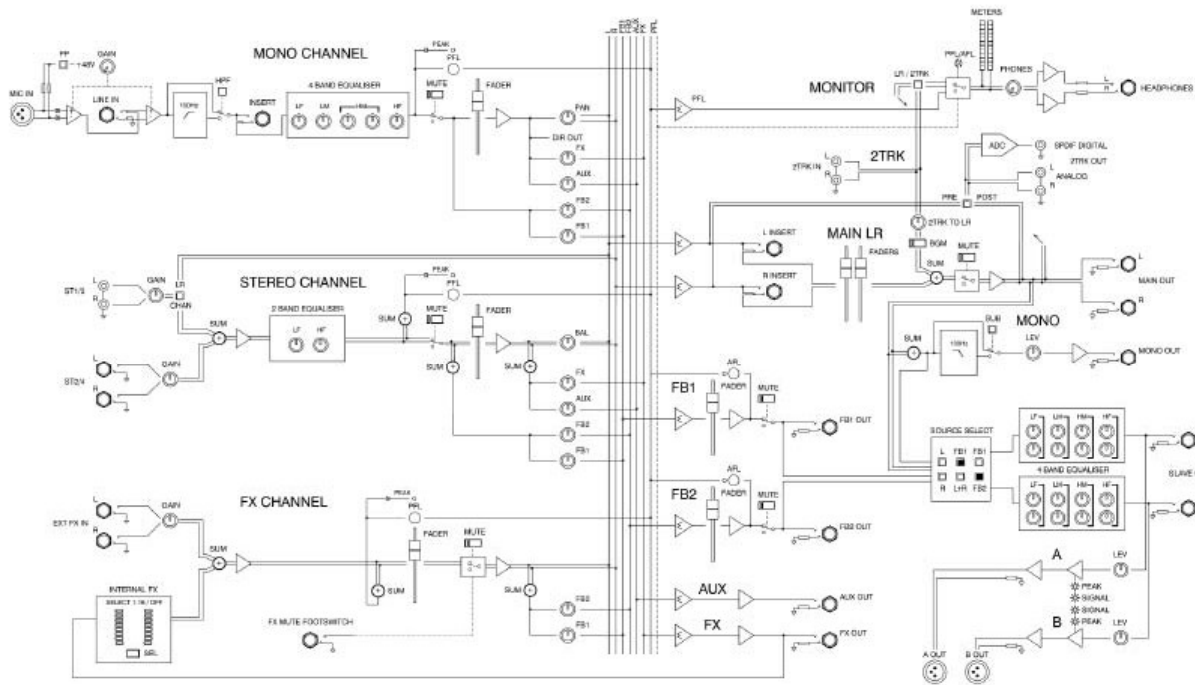


PA 12, 20 & 28



The **PA** range (**PA12**, **PA20** and **PA28**) are robust compact mixers with a straight forward layout and buckets of functionality. With a design and build quality that mirrors our professional touring desks, these mixers are an essential addition to any band, school, theatre, or hire inventory.





FEATURES

- **Mono Inputs** - 8 (PA12), 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

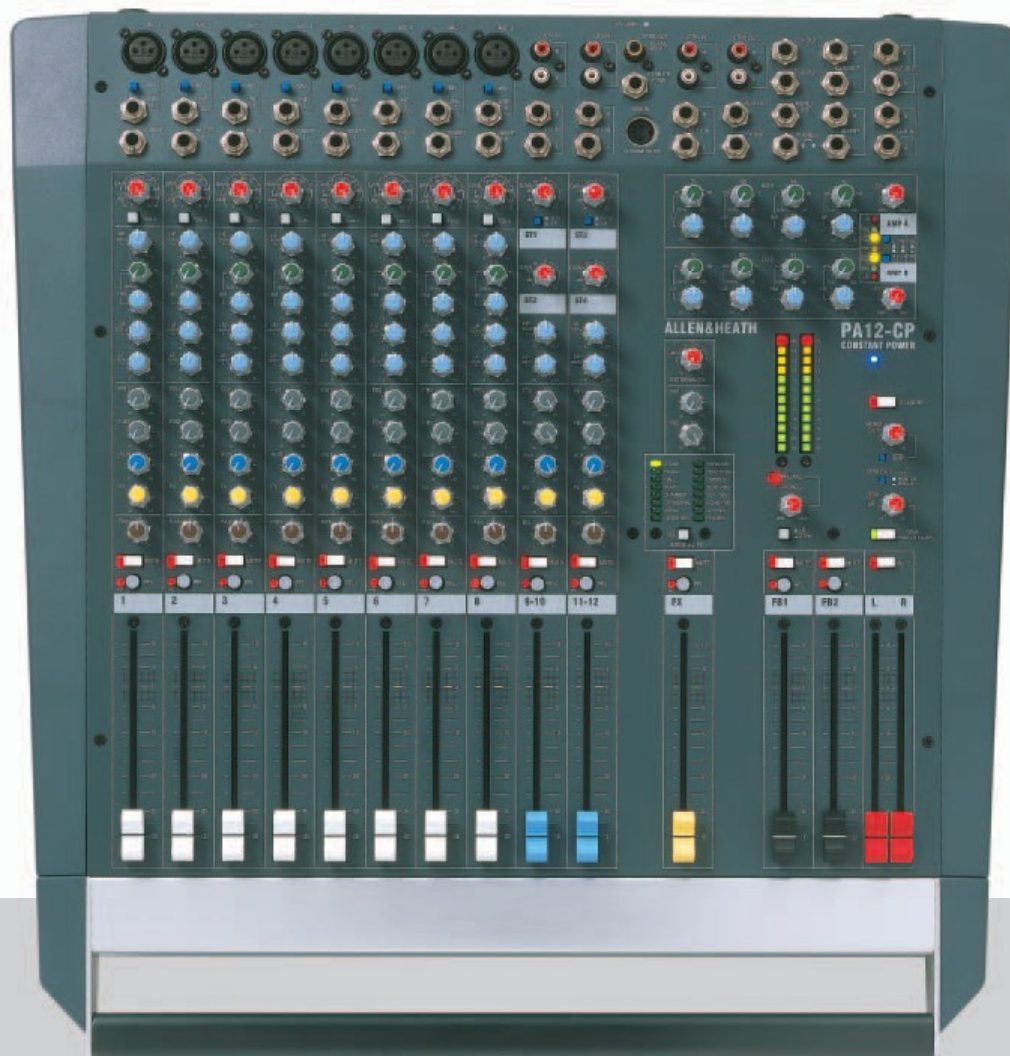
MECHANICAL SPECIFICATIONS

PA12	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)

PA20	Desk mount with side trims mm(")
Width	733(29)
Height	145 (6)
Depth	539 (21)
Weight	17kg (11lbs)

PA28	Desk mount with side trims mm(")
Width	958 (38)
Height	145 (6)
Depth	539 (21)
Weight	21kg (46lbs)

PA12/20-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.

