

1kW powered consoles



PA series mixers are designed to provide all the tools you need to run a regular stereo PA system in a straightforward 'walk up and go' format. You'll quickly feel at home with these desks, but you'll also find that we've included a number of those innovative touches that you only get from designers who have many years of 'real world' experience. If you care about quality you'll also appreciate the build standards that the PA series conforms to, including the same individual vertical circuit boards, nipped pots and solid copper buss interconnection as our acclaimed ML series consoles. As for audio performance, PA series mixers have the wonderfully full, open, natural quality that you'd expect from a professional ALLEN&HEATH desk.

FEATURES:

- Mono Inputs** → 8 [PA12-CP] or 16 [PA20-CP] mono channels with Mic [XLR] & Line [TRS] inputs. Line input overrides the XLR input. Individual +48V phantom power switches are provided. New **padless** two-stage preamp with smooth gain law. **Line input** goes to **second stage** for better matching and performance. Switched 100Hz **high pass filter**. **Insert** point. **4 band EQ**. **4 aux** mixes. **Mute** with **LED**. **PFL** button with **LED** [functions as **peak** indicator]. **100mm** fader.
- 4 Band EQ** → Shelving **LF [60Hz]**, and **HF [12kHz]**. Fixed **LM [250Hz]**, and swept **HM [300Hz - 6kHz]**. The fixed 250Hz control has been carefully selected to provide reduction of 'muddy' sounds and enhance 'warmth'
- Dual Stereo Channels** → Two stereo channels with **two** unbalanced **stereo inputs** on each. One is **RCA** one is **TRS** jack. **Independent gain** controls provide source mixing in the channel strip. The top inputs [RCA] can be switched **direct to L&R** instead of the channel strip providing extra returns. Two band shelving **EQ**. **4 aux** mixes. Stereo balance, **mute** with **LED**, **PFL** with **LED**, and **100mm** fader as mono channels.
- 4 Auxiliary Sends** → From all channels: **2 pre-fade** for **foldback** mixes - these have **100mm fader** masters, **mute** switch with **LED**, **AFL** with **LED**, and **TRS** outputs [can be routed internally to output section]. **1 post-fade** aux mix for **FX** - this feeds the internal **FX** and has a **TRS** jack output for external **FX**. **1 post-fade** aux mix to **TRS** jack output is provided for external **FX** or special feeds.
- Mix Outputs** → Main stereo mix output has **100mm** fader control & mute with **LED**. **TRS** jack outputs. **Mono** sum output with level control with switch for **subwoofer mode** to **TRS** jack. Record output [RCA] analogue + **SPDIF** switchable pre/post fader. Twin **12 segment LED** bar meter shows program [or PFL / AFL]. **Insert** points on **TRS** jack for external processing. Output **EQ** and routing to internal amplifiers / external systems is provided.
- Output EQ** → **4 band semi-parametric EQ** is provided in the output section, this affects the **TRS slave outputs**, and the internal **constant power** amplifiers. This offers more control than graphic equalisers for precise management of speakers, especially foldback / monitors. Source selector allows output EQ section to be used on **Left / right**, **L&R sum / foldback1**, or **foldback1 / foldback2**.
- Constant Power Amplifiers** → **1kW** i.e. **2 x 500W** RMS peak power professional **class AB** power amplifiers built in. Unique **ALLEN&HEATH** design gives full output into **4 OR 8** ohms [rear switch selector]. Output is to locking **Speakon™** connectors. **Thermal management** twin fan system. **Full protection** - **input limiter** to prevent clipping, **short circuit** protection, **current limit** and **DC fault sensing**. **LED** indication of: signal presence, **peak** warning, **speaker** protect and **temperature**. **AB** amp input **TRS break-jacks** [normalised to output section / slave out jacks] allow independent use of the power amplifiers if desired. **Standby** mode switch puts amplifier into protect with speakers isolated.
- Digital FX** → **16 program** digital FX processor provides **reverbs**, **delays**, **chorus** and others, inc **combined**. This FX module takes its feed from the post-fade FX aux on the mono & stereo channels. The output of the FX module is controlled by a **100mm fader** with **mute** & **PFL** and is routed to the stereo mix and **FB1&2** with post fade level controls. At this point, **2 TRS** inputs with level control provide a way of combining external FX with the internal unit. Internal FX unit can be switched off to use external only if preferred. A **footswitch TRS jack** is provided to mute the FX channel. Editing of FX can be done via **MIDI** using **ALLEN&HEATH** software editor available free from resource CD or our website.
- Master Section** → Background music **BGM** mode - plays **2 track** input into the main mix post fader, allows user to pull down fader (whilst patching, taking a break, or during walk-in) and leave music playing through the amplifiers / speakers. **2 track** input [RCA] with level control to L&R - feeds headphone monitor selector [checking recording]. Twin, **3 colour 12 segment LED** meter displays active monitor source. Large **LED** indicates **PFL / AFL** active - signal overrides L&R / 2TRK monitor source selection. **Standby** switch uses relays to disconnect the speakers. **2 track output [RCA] analogue + SPDIF** allows direct to digital recording. Switchable pre / post master L&R fader. Mono sum out with level [TRS] - mode switch to provide **sub** feed with **100Hz** low pass filter. Phones out [TRS] with level.
- PSU** → Solid & reliable internal PSU. **1600W** design.
- Lamp** → 4-pin XLR socket

PA 12-CP & 20-CP



Digital FX can be edited using **ALLEN&HEATH PA-FX Editor** free software - see www.allen-heath.com/pa12cp.asp



Technical Specifications

OdBu = 0.775 Volts rms OdBV = 1 Volt rms

Maximum output level

TRS +21dBu into 2k ohm load

Nominal output level

L-R +0dBu into 600ohm max load
Other o/p's +0dBu into 2k ohm max load

Internal headroom

Mix to o/p +21dB
Channels +21dB

Peak LEDs

5dB before clipping

Noise - measured rms 22Hz to 22kHz

Mic EIN ref 150 ohm source -128dB
L-R residual <-89dBu (nothing routed)
L-R mix <-85dBu (channels routed)

Frequency response

20Hz to 30kHz +/- 0.5dB

THD +10dbu, 1kHz

Channel to mix o/p <0.006%

Crosstalk - 1kHz

Ch to ch <-90dB
Ch1 mute shutoff <-95dB
Ch fader shutoff <-95dB

Power Amp

Output power Constant Power switchable
= 2 x 500w RMS into 4 ohm
= 2 x 500w RMS into 8 ohm
Frequency response THD+N <0.02%@1kHz

Mains Power - Internal unit, linear regulated Internally wired to required country voltage

AC mains input 100V to 240V AC@50/60Hz
Power consumption 1600W max
Mains fuse rating
100-120V AC use T10A 20mm
220-240V AC use T8A 20mm

Mechanical specifications

Dimensions in mm	Width	Height	Depth
PA-12CP			
Desk mounted (inc side trims)	525(20.6")	177(7")	538(21.2")
Rack mounted (NB requires 11U rackspace)	483 (19")	444(17.5")	135(5.3")
PA-20CP			
Desk mounted	732(28.8")	177(7")	538(21.2")
Weight	Unpacked	Packed	
PA-12CP	21kg (46lbs)	22kg (48lbs)	
PA-20CP	24kg (53lbs)	25kg (55lbs)	

Connections

INPUTS

Mono IN	XLR	Balanced	2k ohm	-62 to +5dBu
	TRS Jack	Balanced, tip+	>30k ohm	-26 to +10dBu
Stereo A1	RCA phono	Unbalanced		-10dBu to off
Stereo B2	TRS Jack	Unbalanced tip hot		-10dBu to off
2-track return	RCA phono	Unbalanced tip hot	>10k ohm	0dBu, +20dBu max

INSERTS

Channel Inserts	TRS jack	tip send, ring return	0dBu
LR insert	TRS jack	tip send, ring return	0dBu

OUTPUTS

LR, Mono, AB	TRS jack	ground compensated, tip+	0dBu
Aux, FX, FB1, FB2	TRS jack	ground compensated, tip+	0dBu
2 Track out	RCA phono	unbalanced tip	
Headphones	TRS jack	Tip L, Ring R	>30 ohm
SPDIF out	RCA phono	Transformer isolated digital	