

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, nutted 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	