



RDL®
Radio Design Labs

SPECIALISTS IN PRACTICAL PRECISION ENGINEERING™

FLAT-PAK™ SERIES Model FP-PA20A 20 W Audio Power Amplifier

- 20 Watts RMS Constant Voltage Amplifier
- 70 V and 100 V Outputs
- Plenum Rated per UL 2043 Standard
- Maximized Audio Level for Output Power
- Audio Quality Superior to Standard Amplifiers
- Input / Output Terminal Block Connections
- Line Level Balanced or Unbalanced Input
- Integral Audio Compressor to Control Clipping
- High Overall Operating Audio Level
- Peak LED to Indicate Audio Compression
- Ultra-compact All Metal Construction
- Convenience of RDL FLAT-PAKs



The FP-PA20A is part of the group of versatile FLAT-PAK products from Radio Design Labs. The unique FLAT-PAK case can be directly screwed or bolted to cabinets or shelves. Optionally available rack-mounting accessories permit single or multiple FLAT-PAK module mounting.

APPLICATION: The FP-PA20A is the ideal choice in many applications where multiple 70 V or 100 V speakers in a zone need to be powered from a single audio power amplifier.

The FP-PA20A features a balanced line level input that may be connected unbalanced. A front panel gain control is designed to be adjusted either manually or with a trimming screwdriver. The gain range will accommodate standard unbalanced levels as well as professional balanced levels. Both a 70 V and 100 V amplified output are provided to drive corresponding speakers in a distributed sound system.

A red PEAK LED is provided to indicate the threshold of the integral compressor. Audio levels that could cause the amplified output to clip are compressed according to two dynamic time constants. Normal audio level signals remain unaffected by the compressor thereby preserving audio dynamics and preventing the compressor from increasing feedback potential when the amplifier is used for paging. The compressor is designed to remain aurally transparent while maintaining clean, unclipped amplified audio for input overloads of up to 20 dB. In addition to the compressor, an active filter circuit prevents saturation of the output transformer at low frequencies. The FP-PA20A produces average audio levels and audio clarity normally expected of amplifiers delivering much higher output power.

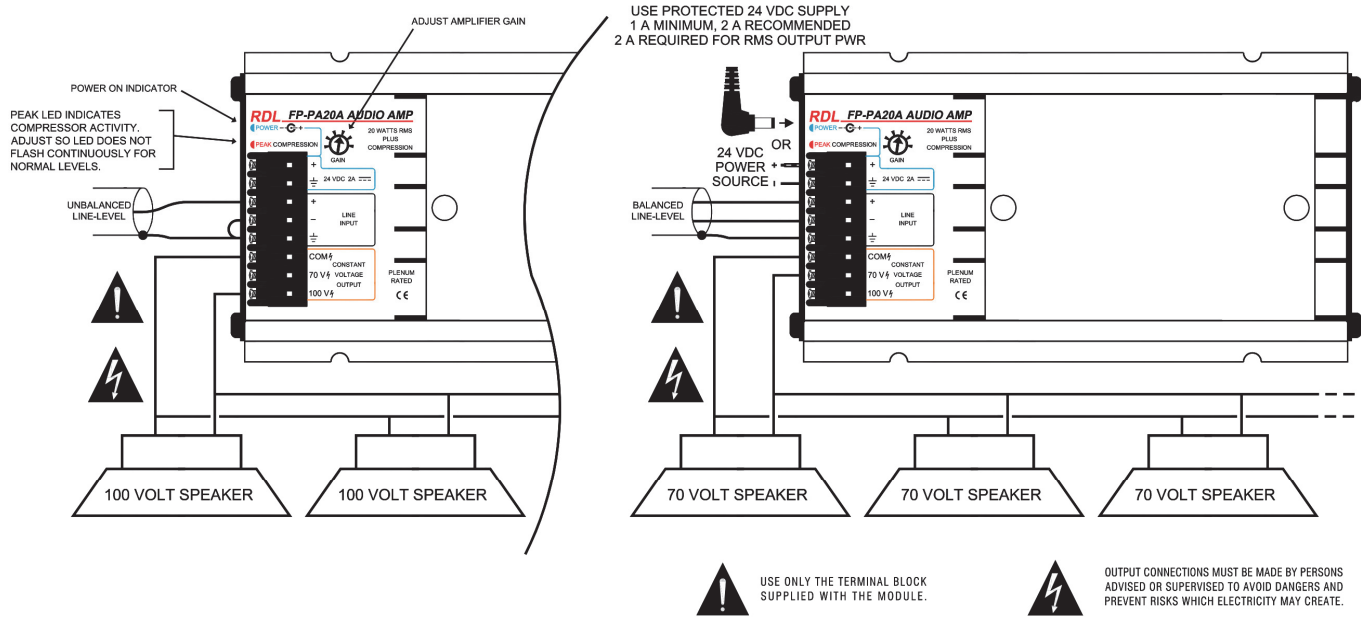
The durable construction and low profile of the FP-PA20A allow mounting in a wide range of locations not suited to a conventional style power amplifier. Power is provided to the module either through the barrier block or through the DC power jack. For full RMS output power, a 24 VDC 2A power supply is required. A 1A supply is sufficient for normal program audio levels and content. Power supplies are sold separately.

Wherever a high quality constant voltage audio power amplifier is needed to provide reliability, compactness and unsurpassed versatility, the FP-PA20A is the ideal choice. Use the FP-PA20A individually, or combine it with other RDL products as part of a complete audio/video system.

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Installation/Operation

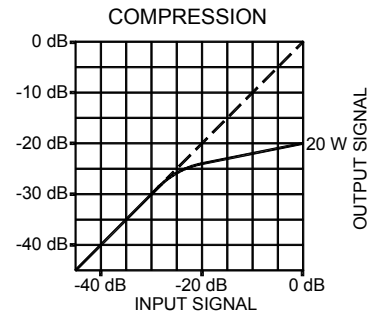
CE Declaration of Conformity available from rdlnet.com.
Sole EMC specifications provided on product package.
Specifications are subject to change without notice.



TYPICAL PERFORMANCE

Input:	Line level (+4 dBu nominal balanced) (-10 dBV nominal unbalanced)
Input Impedance:	20 kΩ balanced bridging 10 kΩ unbalanced
Input / Output Connectors:	Plug-in terminal block
Gain Adjustment:	Single turn audio taper
Minimum Input Levels:	Balanced: -26 dBu (to cross compressor threshold) Unbalanced: -28 dBV (to cross compressor threshold)
Maximum Input Levels:	Balanced: +23 dBu Unbalanced: +15 dBV
Frequency Response:	50 Hz to 20 kHz (+/- 3 dB)*
THD+N:	< 0.1% (@ 1 kHz)* < 0.5% (50 Hz to 20 kHz)*
Compressor:	Threshold 6 dB below rated output, automatic adjusting attack and release
Noise:	<-80 dB (below 20 W RMS)
CMRR:	> 55 dB (50 Hz to 120 Hz)
Output Power:	20 W RMS @ 70 V or 100 V
Ambient Operating Environment:	0° C to 30° C Maximum; 20° C Recommended
Power Requirement:	24 Vdc @ 1650 mA (for continuous RMS power output, Ground referenced) 24 to 33 Vdc @ 1000 mA (for normal program material with minimal compression, Ground referenced)
Indicators (2):	Red LED: PEAK LED indicates compressor activity Green LED: Power ON
Plenum Rating Standard:	UL 2043

*measured at compressor threshold level equaling 4 W RMS output power



Overall Dimensions:	Height:	2.30 in.	5.85 cm
	Width:	3.25 in.	8.26 cm
	Length:	6.04 in.	15.3 cm