



**RDL**<sup>®</sup>  
Radio Design Labs

SPECIALISTS IN PRACTICAL PRECISION ENGINEERING™

## FLAT-PAK™ SERIES

### Model FP-PA20

### Audio Power Amplifier

#### ANYWHERE YOU NEED...

- 20 Watts RMS Audio Power Amplifier
- Output for 8 Ohm Speaker
- Maximized Audio Level at Full Power Output
- Superior Audio Quality at High Output Levels
- Input / Output Terminal Block Connections
- Line Level Balanced or Unbalanced Input
- Integral Audio Compressor to Control Clipping
- High Overall Audio Operating Level
- Peak LED to Indicate Audio Compression
- Ultra-compact All Metal Construction
- Convenience of RDL FLAT-PAKs

#### *You Need The FP-PA20!*



The FP-PA20 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-PA20 is the ideal choice in many applications where a high quality utility amplifier is needed to drive an 8 Ω speaker.

The FP-PA20 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. The output will drive an 8 Ω speaker or multiple speakers connected to present an 8 Ω load to the amplifier.

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. The FP-PA20 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-PA20 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-PA20 is the ideal choice. Use the FP-PA20 individually, or combine it with other RDL products as part of a complete audio/video system.

# FLAT-PAK™ SERIES

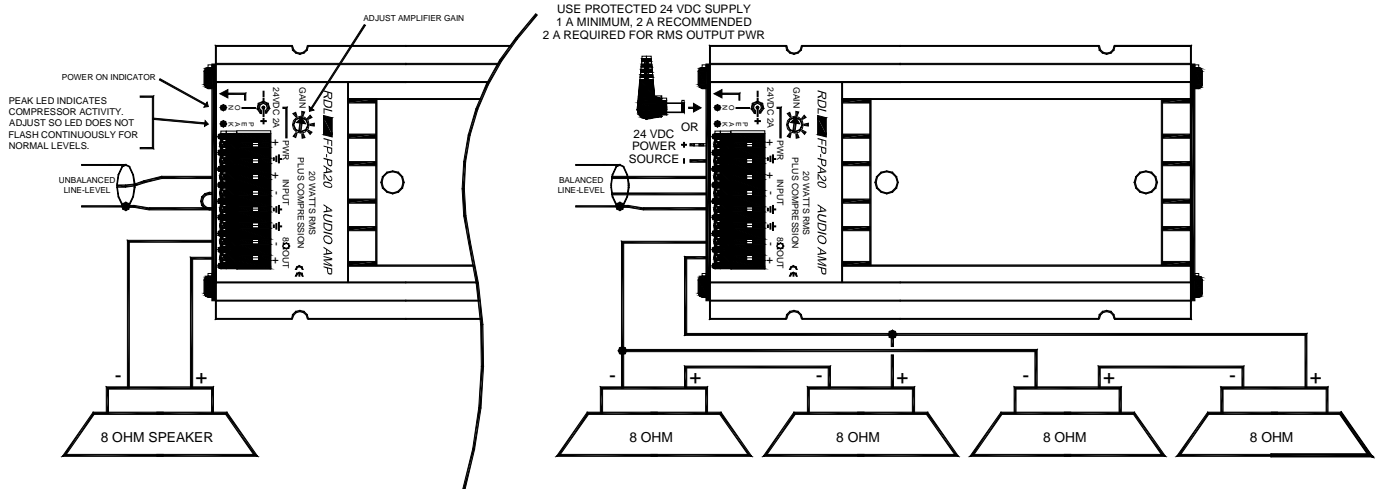
## Model FP-PA20

### Audio Power Amplifier

## Installation/Operation



EN55103-1 E1-E5; EN55103-2 E1-E4  
Typical Performance reflects product at publication time exclusive of EMC data, if any, supplied with product. Specifications are subject to change without notice.



### TYPICAL PERFORMANCE

Input:

Line level  
(+4 dBu nominal balanced)  
(-10 dBV nominal unbalanced)  
20 k $\Omega$  balanced bridging  
10 k $\Omega$  unbalanced  
Plug-in terminal block  
Single turn audio taper

Input Impedance:

Input / Output Connectors:

Gain Adjustment:

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:

THD+N:

35 Hz to 50 kHz (+/- 1.5 dB)\*  
< 0.1% (@ 1 kHz)\*

Compressor:

< 0.5% (50 Hz to 20 kHz)\*  
Threshold 6 dB below rated output,  
automatically adjusting attack and release times

Noise:

CMRR:

< -80 dB (below 20 W RMS)  
> 55 dB (50 Hz to 120 Hz)

Output Power:

20 W RMS into 8  $\Omega$

Ambient Operating Environment:

0° C to 30° C Maximum; 20° C Recommended

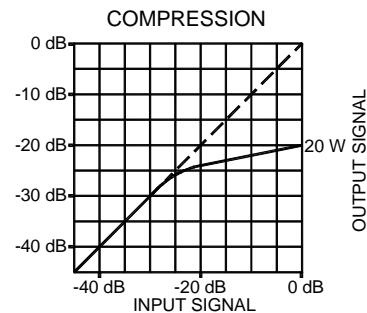
Power Requirement:

24 Vdc @ 2000 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



\*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.	15.30 cm

Radio Design Labs Technical Support Centers

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