

## UP 4000 Series

■ The UP4161 is designed for continuous duty in speech, music, paging and sound reinforcement applications in churches, schools, offices, arenas, hotel meeting rooms, convention centers, recreation facilities and other venues demanding high performance, flexible features and rugged dependability.

■ The UP4161 offers two discrete inputs with priority. The main program input is actively balanced and terminated to a barrier strip connection on the rear panel. The second input is unbalanced, and terminated to a single RCA connector. A contact closure will give priority to the balanced input. Activation of the balanced input priority turns on 18Vdc (300mA) power at a barrier connector on the rear panel, which may be used to drive LEDs or relays. The unbalanced input features a paralleled output and 0/-20dB sensitivity switch. 12dB/octave Bass and Treble shelving equalization with up to 12dB of boost or cut at 100Hz and 10kHz can be applied to the output signal.

■ Output modes include 4Ω and 25V, 50V, 70V and 100V constant voltage. The output stage is fully protected against permanent damage caused by overloading, shorts and extreme temperatures.

■ The UP4161 will operate on either 115 or 230VAC, 50/60Hz, supplied by a detachable IEC power cord. Insulated terminals to connect a backup 24Vdc battery are provided on the rear panel. Switchover to DC is automatic. A programmable stand-by mode allows the amplifier to be turned on remotely with a contact closure.

■ The front panel provides a master volume control and controls for the bass and treble shelving filters. The control knobs can be easily removed for security and the recessed shafts covered with inserts supplied with the unit. LEDs indicate power, stand-by mode, signal present at the output, peak and output overload.

■ Accessories include rack mounting ears.

■ All products from Mackie Industrial are covered by our exclusive, one-time, NO FAULT repair policy in addition to a five year limited warranty.

## Power Amplifier



## Features

- 160 Watt RMS Convection Cooled
- 4Ω - 25V - 50V - 70V - 100V Outputs
- 2 Inputs w/ Priority
- High-Pass/Low Pass Filters
- 2 RU Rack Mounting Kit Included
- Automatic 24Vdc Backup Power Input

- Foreground/Background Music Systems
- Sound Reinforcement Systems
- Paging Systems
- Continuous-duty Applications

# UP4161 Power Amplifier

## Specifications

### Performance

Amplifier Power:	160W, nominal, 220W peak (10mS)
Frequency Response:	50Hz–15kHz $\pm$ 3dB
Distortion:	Less than 1% THD at 1kHz nominal power
Noise:	Better than 80dB

### Equalization

Output:	Treble shelving: $\pm$ 12dB at 10kHz, Bass shelving: $\pm$ 12dB at 100Hz
Inputs:	H-P filter: 12dB/oct. at 300Hz, L-P filter: 12dB/oct. at 7kHz

### Audio Inputs

Line Level, Balanced:	775mV, 100k $\Omega$ , barrier connector
Line Level, Unbalanced:	775mV, 50k $\Omega$ or 80mV, 50k $\Omega$ RCA connector

### Audio Outputs

Number of Channels:	One
Constant Impedance:	One 4 $\Omega$
Constant Voltage:	One each, 25V, 50V, 70V, 100V, barrier connectors
Line Level:	Parallel to Unbalanced In, RCA connector

### Control Inputs & Outputs

Outputs: Overload Indicator:	18Vdc (300mA)
Inputs: Priority Switch Input:	Dry contact closure
Stand-by Switch Input:	Dry contact closure, barrier connectors

### Controls

Front Panel:	Power switch, master Volume, Treble shelving, Bass shelving
Rear Panel:	Unbalanced input sensitivity switch, H-P Filter in/out switch, L-P Filter in/out switch, Source Voltage Selector switch

### Power Supply

115/230VAC ( $\pm$ 5%), 50/60Hz, 550VA,  
DC (24V battery) 14A/Hr

### Environment

Maximum Ambient:	131°F (55°C), Non-precipitating humidity
------------------	---

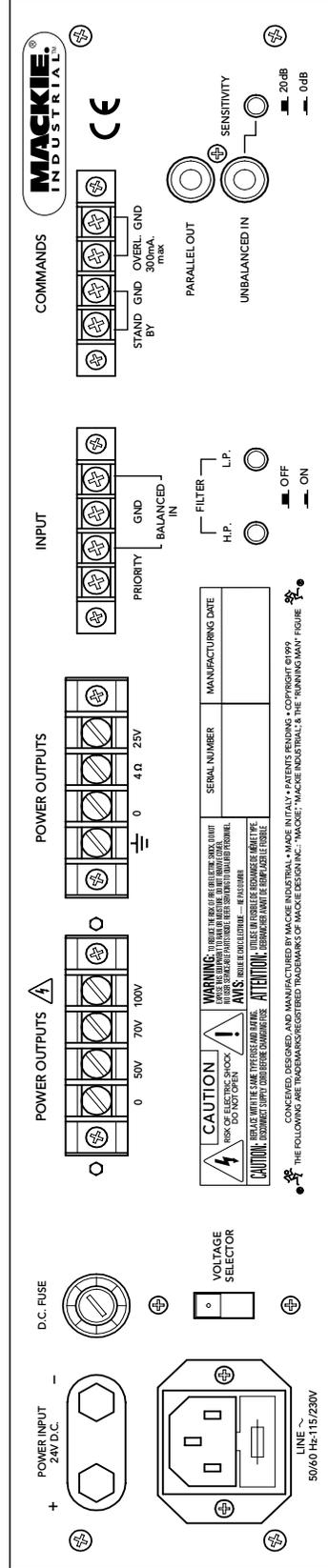
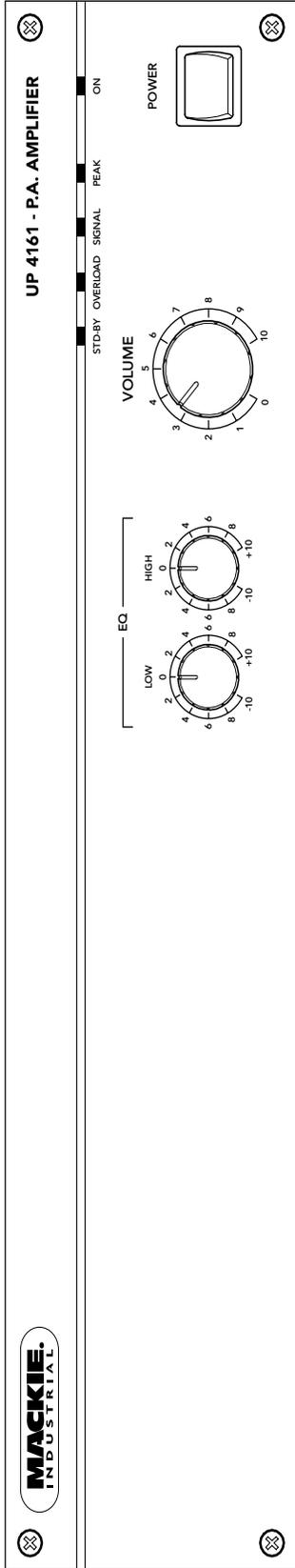
### Physical

Dimensions (HxWxD):	3.46" x 17" x 12.4" (88mm x 433mm x 315mm)
Weight:	34.5 lbs (12.9kg)
Finish:	Black painted or treated steel, white nomenclature

### Warranty

3 years, parts & labor,  
one-time, no-fault repair policy

# UP4161 Power Amplifier



# UP4161 Power Amplifier

## Architects' and Engineers' Specifications

The power amplifier shall have a nominal output power of 160W RMS. It shall operate on 115VAC or 230VAC at either 50Hz or 60Hz and have its source power supplied by a detachable IEC power cord. In addition, the unit shall be capable of being directly powered by a 24Vdc source such as storage batteries. It shall have a power switch on the front panel. The unit shall have a constant-impedance output to drive a 4Ω load at its rated output. It shall also have 25V, 50V, 70V and 100V constant-voltage outputs with like performance. The unit shall be capable of being remotely turned on from a stand-by mode, with a contact closure.

The amplifier shall have an active balanced input and an unbalanced input. The balanced input connection shall be made through barrier connectors. The unbalanced input shall have a sensitivity switch on the rear panel to select between a nominal input signal of 0dB or -20dB. This input shall be wired, in parallel, to an unbalanced output connector. Unbalanced connections shall be made through RCA connectors. The unit shall be capable of being connected to two different input program sources. The balanced input shall be programmable to completely exclude the unbalanced input when its priority link is activated by a contact closure. The inputs shall be equipped with a high-pass filter and a low-pass filter having a response of 12dB/octave and fixed 300Hz and 7kHz, respectively. Each of these filters shall be enabled by a switch on the rear panel. An overload condition shall cause an auxiliary voltage of 18Vdc at 300mA to be present at a pair of terminals on the rear panel.

The unit shall have on its front panel continuously variable controls for the master volume as well as bass and treble shelving filters. The shelving filters shall have a range of ±12dB with the frequency for the bass fixed at 100Hz and the treble fixed at 10kHz. LED status indicators shall be provided on the front panel to indicate power, stand-by mode, signal present at the output terminals, peak signals near clipping and an overload condition. The amplifier shall be a model UP4161 manufactured by Mackie Industrial.



[www.mackieindustrial.com](http://www.mackieindustrial.com)

16220 Wood-Red Rd. NE, Woodinville, WA 98072 USA  
888.337.7404, fax 425.487.4337, [industrial@mackie.com](mailto:industrial@mackie.com)

**UK** +44.1268.571.212, fax +44.1268.570.809, [info@rcf-uk.com](mailto:info@rcf-uk.com)  
**ITALY** +39.0522.354.111, fax +39.0522.926.208, [industrial@rcf.it](mailto:industrial@rcf.it)  
**FRANCE** +33.3.8546.9160, fax +33.3.8546.9161, [rcf.commercial@wanadoo.fr](mailto:rcf.commercial@wanadoo.fr)  
**GERMANY** +49.2572.96042.0, fax +49.2572.96042.10, [industrial@mackie.de](mailto:industrial@mackie.de)

Electronic files for this product available at:  
[www.mackieindustrial.com](http://www.mackieindustrial.com)

This Specification Sheet  
Quick-Start Manual

UP4161.PDF  
UP4161QS.PDF

Mackie Designs continually engages in research related to product improvement. New material, production methods, and design refinements are introduced into existing products without notice as a routine expression of that philosophy. For this reason, any current Mackie Industrial product may differ in some respect from its published description, but will always equal or exceed the original design specifications unless otherwise stated. ©1999-2001 Mackie Designs Inc. All rights Reserved. **MACKIE** and  are registered trademarks of Mackie Designs Inc. Mackie Industrial is a trademark of Mackie Designs Inc.

part no. 910-144-10 Rev.B