



MODEL 2221

PREAMPLIFIER POWER SUPPLY

- 6 x AA batteries or DC adapter powered
- 0 & 200 volt polarization
- Selectable weighting (A, C, or Z)
- Drive long cables up to 500 ft (150 m)
- Settings retained when powered off
- Selectable gain (0 - 40 dB in 10 dB steps)
- Overload indicator

TYPICAL APPLICATIONS

- In-House calibration of vibration instrumentation
- Power a variety of precision microphones and preamplifiers
- Signal conditioning for use with recorders, data loggers and analyzers

FOR LOW NOISE AND 200 V MICROPHONES

The Model 2221 is an excellent choice for when you need a traditional preamplifier power supply. The Model 2221 includes all the features needed for demanding applications such as low noise amplification and the ability to drive long cables up to 500 feet.

Combine the Model 2221 power supply with a traditional preamplifier like the model PRM902 and an externally polarized microphone to make a complete analog front-end. The Model 2221 will operate on AA batteries for 40 hours and includes A, C, and Z weighting filters which makes it an excellent choice for portable applications. Signal is output on a BNC connector, making it easy to interface with a variety of data acquisition devices.

When you purchase PCB and Larson Davis products you can rely upon our excellent customer support and Total Customer Satisfaction policy to ensure our commitment to your success.

SPECIFICATIONS				
Performance				
Frequency Response				
A-weighted	63 Hz to 20 kHz (± 0.3 dB)			
C-weighted	25 Hz to 20 kHz (± 0.3 dB)			
Z-weighted	10 Hz to 100 kHz (± 0.2 dB) 1 Hz to 150 kHz (-3 dB)			
With respect to response at 1000 Hz				
Electrical Specifications				
Microphone Bias	0 and 200 V (± 0.25 V)			
Preamplifier Voltage	± 18 V			
Output Current (Max)	25 mA			
Input Level (Max)	18 Vpeak			
Overload Indicators	Blinking LED = Instantaneous Solid LED = latched			
Overload Level	± 16.5 Vpeak			
Gain	0 to 40 dB in 10 dB steps			
Fine Gain Adjustment	-10 to 0 dB			
Electrical Output Noise (with input shorted)				
20 Hz to 20 kHz	Gain	A	C	Z
	0	5.9 μ V	4.4 μ V	1.9 μ V
	20	20 μ V	6.6 μ V	7.8 μ V
Cable Length (capacitance = 30 pF/ft)				
Length	14 Vpeak	4.2 Vpeak	1.4 Vpeak	
250 ft (76 m)	38 kHz	120 kHz	300 kHz	
500 ft (152 m)	19 kHz	62 kHz	180 kHz	
Power Supply				
Internal Batteries	6 x AA cells			
Battery Runtime	40 hours with PRM902			
DC Input Voltage	10.5 to 30 V			
DC Input Current	65 mA @ 12 V with PRM902			
Input Connector				
PIN	SIGNAL			
1	No connection			
2	Signal ground			
3	Microphone polarization voltage			
4	Signal Input			
5	No connection			
6	Power Supply (+18 V)			
7	Power Supply (-18 V)			
Shell	Connected to case ground			

SPECIFICATIONS (continued)		
Physical		
Dimensions (H x W x D)	8.02 x 4.10 x 1.29 in (204 x 104 x 32.8 mm)	
Weight (incl. batteries)	15 oz (425 g)	
Input Connector	7-pin LEMO® 1B Female	
Output Connector	BNC Female	
Power Connector	2.5 x 5.5 circular, center positive	
Operating Temperature	-40 °F to 140 °F	-40 °C to 60 °C
Operating Humidity	0 to 90% relative humidity, non-condensing	
Compliance		
IEC 61672-1 (2002) and ANSI S1.40 1984 for Class 1 A, C and Z-weighted filters		
IEC 61010-1 (2001) Safety		
CE		
Ordering Information		
2221	Single channel power and amplification for precision mic, 7-pin LEMO® input, internal batteries, 0 and 200 V polarization, flat (Z), A or C-WT, 0 to 50 dB gain range.	
Supplied Accessories		
PSA027	90 – 264 VAC to 12 VDC power adapter	
Optional Accessories		
EXAxxx	Microphone extensions cables with 7-pin LEMO® connectors	
Related Products		
PRM902	½" microphone preamplifier	
CAL200	Class 1 acoustic calibrator	



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Larson Davis offers a full line of noise and vibration measurement instrumentation such as Class 1 and 2 sound level meters, outdoor noise monitoring systems, personal noise dosimeters, human vibration meters, audiometric calibration systems, microphones and preamplifiers, and data analysis software. Instrumentation is used in community and environmental noise monitoring, measurement of building acoustics, managing worker exposure to noise and vibration, and various automotive, aerospace, and industrial applications. Larson Davis is a division of PCB Piezotronics, Inc., a wholly owned subsidiary of MTS Systems Corporations.

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