



# MPS-420 Microphone Preamp

The LARES MPS-420 microphone preamp provides the very highest performance for even the most demanding LARES installation. The MPS-420 has a dynamic range in excess of 120 dB, a one dB noise figure, 200kHz bandwidth, and virtually immeasurable distortion.

It will faithfully deliver every nuance captured by the world's best microphones, including dynamic output ranging from a whisper to sounds that exceed 120dB. RF rejection and immunity are outstanding - an important consideration when the microphone preamp is located near digital audio equipment.

Housed in a single rack unit, the MPS-420 provides four independent microphone preamps with independent balanced outputs. For low AC line interference, the PS-10B power supply is housed in its own totally separate chassis. Front panel controls include gain trim, a 20 dB pad, and a switch for 48V phantom power. Two additional summed outputs are also provided, making the MPS-420 ideal for both single and multiple LARES mainframe installations.

## Specifications

### Electrical Gain Range

- +18 to +73 dB.  
With 20 dB pad, -2 to +73 dB.

### Frequency Response

H F (gains to 65 dB) >200 kHz,  
@ max gain > 150 kHz  
L F is gain dependent- worst  
@ A = 73 dB -26 Hz  
@ A = 40 dB, 0.85 Hz.

### THD

@ 40 dB & +20 dBu, 2 kHz  
THD = 0.0007%  
@ 20 kHz THD = 0.00088%  
All electrolytics paralleled with  
large film capacitors

### IMD

@ 40 dB of gain, 50 kHz CCIF = 0.0015%  
@ 0 dBu 0.0035% @ + 10 dBu out

### TIM

DIM30 or DIM100- < 0.003% @ + 20 dBu out

### Noise

Up to A = 36 dB, -93 dBu,  
@ A = 50 dB, --79.5 dBu (1 dB N.F.)  
Ref-150 source, 20-20 kHz.  
E.I.N. = -130 dBu

### Max Out

Balanced = +29 dBu  
Unbalanced = +23 dBu into 2 k or greater  
600 load not recommended.

### Max Input

Gain dependent, Min Gain (With Pad) = +29 dBu

### Input Impedance -

No pad = 8.06 k || 780 pF  
With Pad = 1.47 k || 25 pF

### RF Protection

2 Pole Common Mode Filter -26 kHz  
CM Bandwidth Down 60 dB @ 1 MHz,  
Diff bandwidth > 200 kHz.

### Power Supply

plus or minus 18 volts at 200 mA, +50 volts at 50 mA.

### Mechanical

#### Chassis

High Quality Extruded Aluminum  
1 Rack Unit (1.75" H) x 12.5" D, (Allow 2" for Connectors)

#### Power Supply

5.75" W by 9.45" D by 1.50" H

#### PS Cable Length

6' with 4 Pin Locking XLR Type Connector.

