

# LMPRE

MIC TO LINE CONVERTER



## Features

- Two place tone controls to enhance the intelligibility of voice applications
- Phantom power (24VDC) supplied for condenser microphones
- Peak limiter protects audio systems from signal overload and distortion
- Level metering and Limit Threshold LEDs
- Balanced male XLR and dual mono RCA output connections

The Whirlwind LMPRE is a convenient single channel microphone preamplifier with tone controls and a built in peak limiter. Use it anywhere mic level to line level conversion is required. Common applications include adding a microphone to consumer audio receivers, feeding line level inputs of any professional audio processor or directly into a power amp, distribution amplifier or powered speaker system.

**whirlwind**  
whirlwindusa.com

## Specifications

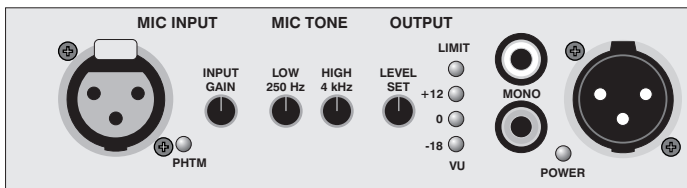
Freq. Response at 50 dB gain (Not limiting)	± 1 dBv 20-10 kHz; -2.5 dB at 20 kHz
Freq. Response at 40 dB gain (Limiting)	± 1 dBv 20-20 kHz
THD + N at 50 dB gain (Not limiting)	± .1% 20-20 kHz
THD + noise at 40 dB gain (Limiting)	± .1% 100-20 kHz; ± 1.5% 20 – 50 Hz
THD + noise in limiting	At Threshold < 0.05%; In Limiting < 0.11%
Equivalent Input Noise	-115 dBV
Total Gain	70 dB; 83 dB w/ Bass and Treble at Max.
Gain of Microphone Preamp	10 to 49 dB
Gain of Master Volume	+/- 15 dB
Range of level pot	Input Gain: 38.6 dB; Output Level 29.8 dB
Common Mode Rejection of Input	80 dB at 60 Hz
Maximum Input level	+4 dBV
Input Impedance	20 kOhm differential
Maximum output level	+23 dBV
Output Impedance	XLR 95 Ohms; RCA 1.6 kOhm
Noise at unity gain	-104 dBV
Phantom Power	Yes, 23.7 VDC
Power consumption	Typically 62 mA @ 24 VDC
Power requirements	24V 200 mA, unregulated; 2.1mm-center positive
Internal Mains fuse	Automatic reset internal fuse; 100 mA
Size	1.6 H x 5.7 W x 2.8 D inches
Unit Weight	0.7 lbs, 1.1lbs w/ Power Supply
Shipping Weight	1.25 lbs

## WARRANTY

This product is guaranteed to be free from defects in materials and workmanship to the original purchaser for a period of 2 years from the date of purchase. Should service be required, return the unit postage prepaid along with the original sales receipt to:

**whirlwind**  
Attention - Repair  
99 Ling Road  
Rochester, New York 14612

The warranty on this product shall not apply to defects or damage resulting from abuse, abnormal use or from repairs or modifications performed by anyone other than whirlwind. If it is determined a manufacturing defect has occurred, whirlwind will repair or replace the unit at our option and pay the postage back to you.



## Operation

**The LMPRE** has simple intuitive controls for boosting the gain of a microphone to drive a line level device. Both dynamic and condenser type microphones can be used, as the LMPRE supplies 24 Volt phantom power to the female XLR input jack. A rear panel switch turns the phantom power on and off and a front panel LED illuminates when the phantom is turned on.

**Microphone signal amplification** is set using a combination of the Input Gain and the Output Level Set potentiometers. There is a 10 dB fixed gain stage directly at the input and a fixed 6 dB of gain at the balanced XLR output. The Input Gain pot adds another 39 dB at full CW position. The Output Level Set has a range of  $\pm 15$  dB and can boost the maximum gain to 70 dB at full CW position. Setting both pots to the 12 o'clock position provides approximately 40 dB of gain from XLR input to XLR output. The RCA output jacks deliver the same signal, unbalanced, at levels usually required by consumer equipment such as receivers. The XLR and RCA outputs can be used simultaneously, if required.

**LED metering** provides a visual indication of the output level of the LMPRE. The output meter consists of two green and a yellow LED. When the 0 VU green LED is illuminated, the signal level at the XLR balanced output is +4 dBu. The level at the RCA outputs is approximately 14 dB lower.

## Output Level Reference

VU Meter	XLR Output Level	RCA Output Level
Yellow	+16 dBu	+2 dBV
Top green	+4 dBu	-10 dBV
Lower green	-14 dBu	-28 dBV

**Peak limiting** with the LMPRE can protect audio systems from signal overload and distortion that can occur from improper or unexpected microphone usage. The Input Gain control is used to set the amount of input level that determines when the limiter will activate. Increasing the input gain initiates limiting more quickly. The output level control has no effect on the operation of the limiter.

**For limiter setup**, determine the normal user microphone placement and adjust input gain to activate the limiter at the loudest expected level. The red "LIMIT" LED illuminates when the limiter becomes active. Then set the system drive level with the Output Level Set control. The red "LIMIT" LED is not part of the output metering and it is possible to have the "LIMIT" LED lit without any output level LEDs being illuminated.

**Low and High Tone controls** are tailored to enhance the intelligibility of voice applications of the LMPRE. The Low frequency band is centered around 250 Hz and is used to reduce "muddiness" or increase "warmth". The High band centers around 4 kHz and is used to reduce "harshness" or increase "brightness". Both are center detent controls, in which position no tonal changes occur.

**Power Supply** requirements for the LMPRE are 24 VDC at 200 mA. The Whirlwind PS242.1 wall adapter with a 2.1mm, center positive, barrel plug is included. With power is applied to the LMPRE, the red "POWER" LED illuminates.