# Series II



# Pro Level Power Conditioners

20 amp

DIMMED



# FURMAN'S PL-PRO II, PL-PRO D II, & PM-PRO II ALL FEATURE:

- SMP+ with Extreme Voltage Shutdown
- LiFT (Linear Filtering Technology) with zero ground contamination
- Two retractable, long-life, low-heat LED lights with dimmer switch for rack illumination (On PL units only)
- BNC connector on the rear panel allows you to attach any standard 12V gooseneck lamp to illuminate the rear of your rack
- Eight rear panel outlets and one front panel outlet
- 20 amp rating, with ultra-high inrush capable magnetic circuit breaker
- Three year limited warranty

#### **ADDITIONAL FEATURES:**

## PL-PRO II

 Front panel 20 segment meter displays incoming AC line voltage ranging from 90 to 128 volts (+/- 2 VAC)

#### PL-PRO D II

 Front panel digital meter displays incoming AC line voltage with laboratory accuracy (+/- 1.5 VAC)

### PM-PRO II

- Front panel digital meter displays incoming AC line voltage with laboratory accuracy (+/- 1.5 VAC)
- Additional front panel true RMS digital meter displays AC current draw with laboratory accuracy regardless of load reactance, inductance or resistance (+/- 0.1 amp)

# *INTRODUCING SERIES II*

The latest generation of Furman's legendary 20 amp power conditioners, featuring Furman's exclusive Series Multi-Stage Protection Plus (SMP+) with Linear Filtering Technology (LiFT).

## **DESCRIPTION**

The most widely recognized and trusted name in AC power conditioning is proud to introduce the PL-PRO II, PL-PRO D II and PM-PRO II power conditioners, featuring Furman's revolutionary SMP+ technology. Furman's Series Multi-Stage Protection Plus (SMP+) circuit also features our exclusive Linear Filter Technology (LiFT), Extreme Voltage Shutdown (EVS) and a high current TVZ MOV. Together, these technologies comprise what is, without question, the world's most advanced and comprehensive transient voltage surge suppressor.

# **SMP+ (Series Multi-Stage Protection Plus)**

Furman's SMP+ surge suppression virtually eliminates service calls. Traditional surge suppression circuits "sacrifice" themselves when exposed to multiple transient voltage spikes, requiring the dismantling of your system, and repair of your surge suppressor. With Furman's SMP+, however, damaging transient voltages are safely absorbed, clamped and dissipated.

Unique to Furman's SMP+ is its unparalleled clamping voltage. While other designs offer clamping voltages that are well above 300Vpk, Furman's SMP+ clamps at 188Vpk, 133 VAC RMS even when tested with multiple 6000Vpk - 3000 amp surges! This unprecedented level of protection is only available with Furman's SMP+ technology. Additionally, Furman's trusted over-voltage circuitry protects against all too frequent open neutral wiring, or accidental connections to 208 or 240 VAC. Furman's SMP+ with over voltage protection immediately shuts off the incoming power until the over voltage condition is corrected.

# SERIES II

# Pro Level Power Conditioners 20 amp



Gooseneck light sold seperately

# **LiFT** (Linear Filtering Technology)

Unfortunately, traditional AC conditioners have been designed for unrealistic laboratory conditions. Prior technologies whether multiple pole filter or conventional series mode, could actually harm audio and video performance more than they help, due to the resonant peaking of their antiquated, non-linear designs. Under certain conditions, these designs can actually add more than 10 dB of noise to the incoming AC line! Worse still, lost digital data, the need to reboot digital presets, or destroyed digital converters are frequently caused by excessive voltage spikes and AC noise contaminating the equipment ground. Furman's SMP+ with LiFT takes another approach, ensuring optimal performance through linear filtering and no leakage to ground.

# **FEATURES**

The PL -PRO II and PL-PRO D II feature LED rack lights which produce virtually no heat and provide an extremely long life span. A dimmer control for the rack lights allows the user to adjust the level of illumination or simply switch the lights off.

Additionally, all units include a rear mounted BNC jack which accepts any standard (12VAC, 0.5A) gooseneck lamp for rear rack illumination, as well as a front panel switch which controls the gooseneck's operation.

A front panel mounted master power switch is protected by a hinged cover, preventing accidental disconnection of AC power to the unit's outlets. The front-panel circuit breaker - power switch can be quickly and easily reset should the unit be overloaded. Furman's Series II Pro units also feature a 10 foot, 12 gauge heavy-duty power cable.

# THREE YEAR LIMITED WARRANTY

Furman Series II products are protected by a limited three-year warranty covering defects in materials and workmanship.

# **OPTIONS**

Multi-Stagels PL-PRO II E, PL-PRO DE II, and PM-PRO E II: "E" suffix versions are for use in countries with 220/240 volt AC lines. Each has ten rear panel outlets, using internationally- accepted IEC-320 connectors. The voltmeter on the PL-PRO E II reads from 180 to 256 VAC, in 4 volt steps.

## **SPECIFICATIONS**

Current rating:

20 amps ("E" versions 16 amps)

Operating Voltage:

90 to 140 VAC ("E" versions 180 to 280 VAC)

Over Voltage Shutdown:

140 VAC typically ("E" versions 280 VAC typically)

Voltmeter Accuracy:

PL-PRO II only: ±2 VAC, calibrated with internal trimpot adjustments

PL-PRO D II & PM-PRO II: ±1.5 VAC

Spike Protection Modes:

Line to neutral, zero ground leakage

Spike Clamping Voltage:

188 Vpk @ 3,000 amps, 133 VAC RMS (tested to UL-1449 6,000 Vpk @ 3,000 amps)

Response time:

1 nanosecond

Maximum surge current:

6,500 amps

Noise attenuation:

10 dB @ 10 kHz

40 dB @ 100 kHz

100 dB @ 10 MHz

Linear attenuation curve from 0.05 - 100 ohms line impedance

Mechanical:

Dimensions: 1.75" H x 19" W x 10.5" D.

Weight: 11 lbs (5 kg).

Construction: Steel chassis, .125" brushed and black anodized aluminum front panel; glass epoxy printed circuit boards

Power Consumption:

PL-PRO II, 11 watts PL-PRO D II, 12 watts PM-PRO II, 12 watts

Safety Agency Listings: CE, NRTL-C

Patent number: CA1332074 (4,901,183)