Start with POWER

ADVANCED POWER MANAGEMENT SOLUTIONS FOR AUDIO, VIDEO, AND BROADCAST PROFESSIONALS
I recently purchased a Furman P-2400 IT for my recording studio with the primary goal of lowering the noise floor. What I got in addition to this 3-RU, heavy duty (nearly 100lb) box was a measure of sonic fidelity I had no idea my gear could achieve…

I can hear more depth, transients have more punch, there’s a crispness in the upper frequencies and a tightness in the low mids…the biggest thing I was struck by was how much of a blatant improvement it was…The Furman P-2400 IT has taken my potential to a whole new level because I can simply hear things more accurately. Grimy power no longer creeps into the chain and fogs the information I’m hearing…I have no doubts that the Furman P-2400 IT is the most important piece of gear that I own.”

– Lucas Jones

Electrical protection and filtering are very important to me…I want the gear I invested in to sound its absolute best. Furman is the brand that I completely trust for protection and filtering!

– Jeff Hansen

Furman goes to my short list of 5 star companies that: 1) make quality products; and 2) have quality service.

– Al Johnson

I wanted to let you know that a PL-8C saved my equipment this weekend. I truly believe had I not had your equipment protecting my equipment that I would probably be replacing my DSP and 2 amps.

Thank you Furman!

– Richard Covington

I’ve been skeptical in the past about the benefits of power conditioning and filtering equipment, but no more. You can bet I’ll be back for more Furman power conditioning equipment.

– Eric Wadley

The PF-Pro R is awesome. My amp never sounded this good.

– Bob Boisselle

FurmanPower.com - more TESTIMONIALS


**FOUNDED IN 1974,** Furman is the leading provider of power management solutions for audio, video and broadcast professionals. From pioneering the concept of power conditioning in 1983 to introducing advanced technologies such as Series Multi-Stage Protection and Linear Filtering Technology, Furman is committed to providing the highest level of performance and protection to equipment used in mission-critical applications around the world.

**WHAT ARE YOU PLUGGING INTO?**

Plug Into What The Pros Use! Furman is the go-to name in AC power management for professional musicians, sound engineers, broadcasters, and systems integrators around the world.

**AWARDS:**

- Mix Certified Hit
- New Product Awards Winner 2008
- PG Premier Gear
- Readers’ Choice Award Winner
- Most Innovative Products
- Technical Excellence & Creativity Awards
- Commercial Integrator 2016 Best
- CEPro 2016 Best

FURMAN FEATURES AND TECHNOLOGIES

SERIES MULTI-STAGE PROTECTION (SMP)

Audio/video professionals can never accept down time, corrupted data, or unreliability. It is for this reason that a robust, professional level transient voltage surge suppression system, such as SMP, is the best choice for critical applications.

With SMP, there is virtually no downtime. In fact, the circuit is tested to handle multiple 6000 volt or 3000 amp pulses without sustaining any damage. This is far beyond the demands placed on typical surge suppressors. But because of the extreme conditions and critical applications faced by Furman’s clients, the SMP circuit has been designed to pass this severe test and ensure that equipment damage or maintenance is extremely unlikely.

Furman’s SMP relies on a network of components to slow down the impact of a potentially catastrophic surge by capturing it, dissipating it in the form of heat, and absorbing the remaining excess energy. When tested with multiple 6,000V/3,000A surges, the SMP circuit’s maximum let-through voltage is 188V Pk (133V RMS - only 11% higher than a nominal 120V line). Due to the design of the circuit, it will not degrade over time (unlike most standard surge suppressors) and will show minimal increase in line impedance (unlike many advanced surge suppressors).

Furman has earned its reputation of trust around the world as a result of the billions of dollars worth of equipment saved from power problems, and because of its innovative technologies which maximize an A/V system’s performance. For our clients, operating a system without the safe, clean power delivered by a Furman unit is simply out of the question.

THE FURMAN DIFFERENCE

For over 40 years, Furman has been the industry’s most trusted name in AC conditioning, regulation, balanced isolation transformers, sequencing and distribution for audio, video, and broadcast professionals. Our clients include respected professional musicians, renowned recording studios, commercial contractors, and touring groups that handle major concert tours across North America and across the world. They choose Furman because of our reputation for reliability, our engineering expertise, and our years of experience focusing on the specific needs of industry professionals who cannot afford equipment failure or downtime.

These common voltage surges, although small, can have a serious adverse effect over the long-term. Even when protected by a standard surge protector, digital circuits can see long-term damage due to exposure to voltage on the ground line, causing intermittent behavior, equipment lock-ups, and data loss. By absorbing these everyday surges without deterioration of the circuit or contamination of the ground line, Furman’s SMP maximizes the longevity of connected equipment and minimizes the risk of downtime or failure in mission-critical applications.

The SMP circuit is not simply designed to protect from a catastrophic surge, such as a lightning strike - it is engineered to provide maximum life to connected equipment. This means it not only protects from devastating spikes and surges, but also offers protection from the dozens to hundreds of small spikes and surges your equipment is exposed to on a daily basis.

Engineered to provide maximum life to connected equipment.
Transient spikes and ground contamination are not the only problems faced by today’s sensitive electronics. There are also sustained over-voltage conditions, sometimes called extreme voltages. Many surge suppression devices will not be able to protect equipment from sustained over-voltages. These conditions can occur for multiple reasons: a power pole may be damaged during a storm or accident; or, in many countries, such as USA and Canada, lost or intermittent neutral wiring of a multiple-zone system can result in a sudden connection well in excess of 208 volts AC. Many surge suppression devices are not equipped to handle these kinds of conditions. Without proper protection, the end result is destroyed equipment, or at best, a destroyed surge suppression system.

**EXTREME VOLTAGE SHUTDOWN (EVS)**

Furman’s EVS constantly monitors incoming voltage, and once any over-voltage condition over 137 volts AC is detected, a relay opens which immediately shuts down the unit and all connected equipment. An indicator light informs the user there is a problem, and once the condition has been corrected, the unit may be reset or auto-reset (depending on model) and will operate normally.

Without proper protection, the end result is destroyed equipment, or at best, a destroyed surge suppression system.

208 volts AC. Many surge suppression devices are not equipped to handle these kinds of conditions. Without proper protection, the end result is destroyed equipment, or at best, a destroyed surge suppression system.
LINEAR FILTERING TECHNOLOGY (LiFT)

While delivering your power, your AC tap also delivers a significant amount of line noise. This is due to many reasons: the widening popularity of switching power supplies and the harmonics they backfeed into our AC power mains, the deterioration of our power grid from age and use, and the noise pollution generated from the massive amounts of electronic devices on our grid at any given time, among others. When this AC noise couples into critical circuits, it will distort and mask low-level signal information. This information is vital to today’s high-performance, high-definition video and audio.

Furman’s LiFT employs a finely tuned low-pass filter to reduce the differential AC noise coming through your line. What is significant about Furman’s filtering is that it reduces the AC noise in a linear fashion across a very wide bandwidth.

Prior filtering schemes (such as those found in most AC conditioners and in Furman’s own conditioners prior to developing LiFT) reduce noise unevenly, creating a noise attenuation curve that resembles a roller coaster. This is akin to a poor job of equalizing a recording.

With Furman’s LiFT, differential AC noise is reduced linearly, across a very wide bandwidth, even extending into the video frequencies. This results in a lower noise floor for your audio system, improved picture on your video display, and protection from possible data corruption and losses caused by low-level differential AC noise fed into digital systems.

Output of real-time noise analysis software, showing the noise attenuation curve of a standard AC noise filter. Note the uneven shape of the output curve (the green line).

Output of the same analysis using Furman’s Linear Filtering Technology. As you can see, the output noise attenuation curve is smooth and linear, without the resonant peaking seen in the standard filter.
Another power quality issue facing today’s electronics is irregular voltage. While we may expect a constant 120V to be supplied by our power utility, such an expectation is not realistic.

The only national standard regarding voltage is known as ANSI C84.1. It establishes recommended voltage ranges as 114V to 126V as the service voltage, (typically the connection point between utility and customer) and 104V to 127V as the utilization voltage, (typically the termination point to the equipment). While these standards were well within the operating parameters of most equipment in use when the standard was written in 1954, today’s sensitive equipment is much more susceptible to such large irregularities in the incoming voltage.

Today’s power supplies are designed to operate at the optimum 120V input. When the voltage is higher than 120V, your equipment is subject to extra electricity that can overheat or damage your equipment. When the voltage is lower than 120V, your equipment’s power supply must work harder to create more electrical current in order to make up for the difference, creating a “tug-of-war” in your power supply. This can cause your equipment to malfunction or sustain permanent damage.

Furman’s True RMS Voltage Regulation is designed around an ultra-low noise toroidal autoformer. A microprocessor within the regulator monitors the incoming RMS voltage with each cycle, measuring the phase angle in time with the advancing cycle. Most commercial voltage regulators using multiple-tapped transformers switch taps at uncontrolled times. This creates voltage spikes and clicks that can leak into audio. When a voltage fluctuation requires correction, Furman’s True RMS Voltage Regulation advances a new tap with less stress than other technologies and, in turn, avoids distortion to the AC waveform. Hysteresis in the circuitry avoids the unnecessary switching back and forth between the adjacent taps (or “chatter”) found in many commercial voltage regulators. If necessary, Furman’s True RMS Voltage Regulation technology can switch taps as often as once each cycle and do so with a shorter recovery time than a commercial voltage regulator. In addition, and unlike voltage regulators that employ ferroresonant transformers, Furman regulators are not sensitive to small errors in line frequency, making them ideal for use with generators. The autoformer’s toroidal design assures minimal leakage of stray magnetic fields.

True RMS Voltage Regulation is achieved through the use of an ultra-quiet, microprocessor controlled autoformer with solid-state switching.
Furman’s Power Factor Technology was designed to address problems with instrument amplifiers in various locations. A common complaint of musicians is that their equipment will sound great at one club or venue, yet sound squashed and lack definition at other locations. This lack of consistency is typically due to resistance in the AC line.

For example, at the location where the amplifier rig sounded good, the amp was connected to only 35 feet of AC line from the power panel, causing a low resistance. At the locations where the amp sounded squashed and lacked definition, the AC outlets were 300 feet from the power panel, resulting in a higher resistance, not supplying the amplifier with the current it needed to reproduce the signals accurately.

Furman’s Power Factor Technology has a current reserve of 45 amps peak, so when the power company cannot deliver the current needed or if your AC line has a high resistance, your amplifier will be able to tap the current in the Power Factor’s reserve. This means your amplifier will always get the current needed to reproduce signals accurately and consistently, no matter what venue or club or how close or far away from the power panel your amplifier is. In simple terms, Furman’s Power Factor Technology keeps your instrument amplifier’s tone consistent and sounding its best at all times.

Available in Furman’s Power Factor models, Clear Tone Technology works in unison with Power Factor Technology and Linear Filtering Technology to add an additional layer of AC noise filtration specifically engineered for instrument amplifiers. Clear Tone Technology provides tuned filtering circuits that unveil instrument tone, harmonics, and clarity, resulting in a fuller sound and improved dynamic response.

Power Sequencing is useful whenever various kinds of equipment must be powered up or down in groups, rather than all simultaneously. In audio systems, sequenced powering is often necessary to allow turn-on transients from low level amplifiers and processors to settle down before any power amps are turned on, because simultaneous powering would result in a loud, annoying, and potentially destructive “pop” reaching the speakers. And in any large system whose components present an inductive load to the AC line (including electric motors, power supplies, and power amplifiers of all kinds), sequenced powering can avoid excessive inrush currents that can cause circuit breakers to trip even though the steady-state currents are not excessive. Power sequencing is particularly suited to applications where large installations must be switched by inexperienced personnel.
To understand the incredible need for clean, noise-free AC power, it's important to note that today's sophisticated studio equipment features tremendous dynamic range. Most of the signal content that defines high resolution such as harmonics, instrument timbre, high frequency extension, spatial cues, and fast transient attacks in audio are inherently low in signal level. When AC noise is induced into recording and reproduction equipment, these all-important low level signals are distorted or masked. Once signals are masked there is no way to retrieve the lost content.

For the most critical, low-noise applications, Furman's Symmetrically Balanced Power provides an invisible noise floor, while completely breaking ground loops without dismantling equipment or rewiring. True symmetrically balanced power is achieved by running the incoming AC line into a one-to-one ratio isolation transformer with a precisely placed center tap on the transformer's output. The incoming voltage (120V on the line terminal, 0V on the neutral and ground) are split in perfect halves on the secondary of the transformer. The output line terminal now has 60V and the neutral terminal has 60V when referenced to its new center tap ground (which remains at 0V). What's significant about this is that the two 60V AC terminals are now in opposite polarity, so the symmetrical AC noise, or common mode fields, cancel. This noise reduction is extraordinarily efficient and linear across a huge frequency range. The transformer has completely re-worked your incoming AC and the result is perfectly clean power devoid of the masking effects of AC noise.

Battery Backup provides temporary power when power is interrupted, allowing the opportunity to save any data and shut down equipment properly. Good candidates for such battery backup in Pro A/V applications are computers and external hard drives in studios, DLP projectors, digital video recorders, and digital mixing consoles. Essentially, any component that holds critical data, has volatile memory, or needs to run a shutdown procedure to power off safely will benefit from battery backup.

Furman’s Symmetrically Balanced Power utilizes a 1:1 transformer for noise-free output and 100% isolation from ground

BlueBOLT™
Provides remote access to reboot components, power equipment on or off, and monitor power quality over the Internet from anywhere in the world.
CLASSIC SERIES POWER CONDITIONERS

An update to Furman’s popular Series II line, all Classic Series models provide advanced features such as SMP Surge Protection, EVS Protection, Linear Filtering Technology, pull-out LED lights, and isolated rear panel outlet banks.

**PL-8C** 15A Advanced Power Conditioner

- **SMP Advanced Surge Protection**
- **LiFT Linear Filtering Technology**
- **EVS Voltage Protection**
- 9 Outlets
- 15A Rating
- Diagnostic Lights
- Wall Wart Spacing
- Isolated Outlet Banks
- Front Panel Retractable Lights
- Rear Panel BNC Connector for Gooseneck Lamp

**PL-PLUS C** 15A Advanced Power Conditioner

- **SMP Advanced Surge Protection**
- **LiFT Linear Filtering Technology**
- **EVS Voltage Protection**
- 9 Outlets
- 15A Rating
- Diagnostic Lights
- Wall Wart Spacing
- Isolated Outlet Banks
- Front Panel Retractable Lights
- Rear Panel BNC Connector for Gooseneck Lamp
- **LED Voltmeter**

**PL-PLUS DMC** 15A Advanced Power Conditioner

- **SMP Advanced Surge Protection**
- **LiFT Linear Filtering Technology**
- **EVS Voltage Protection**
- 9 Outlets
- 15A Rating
- Diagnostic Lights
- Wall Wart Spacing
- Isolated Outlet Banks
- Front Panel Retractable Lights
- Rear Panel BNC Connector for Gooseneck Lamp
- **LED Voltmeter**

**REAR PANEL** (All Models)

Classic Series (15A) Specifications:
- **Maximum Output Current**: 15 Amps.
- **Line Cord**: 10 ft. captive, 14 AWG, with NEMA 15 plug.
- **Lamps**: Two multi-LED dimmable lamps.
- **Spacing**: Dual Voltage/Current Meter
- **Diagnostic Lights**: 120VAC 500MA max (lamp not included).
- **Dimensions**: 1.75” H x 19” W x 7.5” D.
- **Weight**: 12 lbs.
- **Safety Agency**: cTUVus.
- **Warranty**: Five Year.


Noise Attenuation (Transverse Mode): 10 dB @ 10 kHz, 40 dB @ 100 kHz, 50 dB @ 500 kHz. BNC Connector: 12VAC 500MA max (lamp not included).
CLASSIC SERIES POWER CONDITIONERS (PRO MODELS)

Furman’s Classic Series Pro Models provide additional features such as a higher current capacity (20A), USB front panel chargers, and Secure Straps to lock large AC transformers (“wall warts”) in place.

PL-PRO C 20A Advanced Power Conditioner

PL-PRO DMC 20A Advanced Power Conditioner

REAR PANEL (Both Models)

P-8 PRO C 20A Classic Series Power Conditioner

MERIT SERIES POWER CONDITIONER

Furman’s most affordable rackmount power conditioners provide nine total outlets, standard level surge suppression, standard level EMI/RFI filtration, and a robust steel chassis.

**M-8x² 15A Power Conditioner**

- **Standard Level Surge Protection**
- **Standard Level RFI/EMI Filtration**
- **9 Outlets**
- **15 A**
- **Protection OK Indicator**
- **Wall Wart Spacing**

**M-8Lx 15A Power Conditioner**

- **Standard Level Surge Protection**
- **Standard Level RFI/EMI Filtration**
- **9 Outlets**
- **15 A**
- **Protection OK Indicator**
- **Wall Wart Spacing**
- **Front Panel Retractable Lights**

**M-8Dx 15A Power Conditioner**

- **Standard Level Surge Protection**
- **Standard Level RFI/EMI Filtration**
- **9 Outlets**
- **15 A**
- **Protection OK Indicator**
- **Wall Wart Spacing**
- **Front Panel Retractable Lights**
- **Digital Voltmeter**

**REAR PANEL (All Models)**

*Merit X Series Specifications:*
- **Maximum Output Current:** 15 Amps.
- **Line Cord:** 6 ft. captive, 14 AWG, with NEMA 15 plug.
- **Lamps (M-8Lx/M-8Dx):** Two 120V incandescent bulbs, 4 watts each.
- **Spike Protection Mode:** Fused MOV, Line to neutral.
- **Maximum Operating Voltage:** 130V RMS.
- **Noise Attenuation (Transverse Mode):** 23dB (M-8x²) / 26 dB (M-8Lx/M-8Dx), 200Khz to 10 Mhz.
- **Dimensions:** 1.75” H x 19” W x 3.75” D (M-8x²) / 1.75” H x 19” W x 7.5” D (M-8Lx/M-8Dx).
- **Weight:** 4 lbs (M-8x²) / 6 lbs (M-8Lx/M-8Dx).
- **Safety Agency:** cTUVus.
- **Warranty:** Three Year.
Furman’s Power Stations provide advanced protection and filtration in a convenient “surge strip” form factor, ideal for floor mounting or attaching to the side of an equipment rack. Coax and telco connections provide signal and data line protection.

**PST-2+6** 15A Plastic Chassis Power Conditioning Strip

- Standard Level Surge Protection
- Standard Level RFI/EMI Filtration
- 8 Outlets
- 15A Rating
- Diagnostic Lights
- Wall Wart Spacing
- Broadband Data/Signal Line Protection

**PST-2+6 Specifications:**
- **Maximum Output Current:** 15 Amps.
- **Line Cord:** 6 ft. captive, 14 AWG, with NEMA 15 plug.
- **Spike Protection Mode:** Fused MOV, Line to neutral.
- **Noise Attenuation (Transverse Mode):** >40 dB, 150kHz-100 MHz.
- **TVSS Modules:** 1 pair.
- **Dimensions:** 2.75”H x 3.75”W x 13.5”D. **Weight:** 3 lbs. **Safety Agency:** C-UL. **Warranty:** One Year.

**PST-6** 15A Aluminum Chassis Power Conditioning Strip

- Standard Level Surge Protection
- Standard Level RFI/EMI Filtration
- 6 Outlets
- 15A Rating
- Diagnostic Lights
- Wall Wart Spacing
- Broadband Data/Signal Line Protection

**PST-6 Specifications:**
- **Maximum Output Current:** 15 Amps.
- **Line Cord:** 6 ft. captive, 14 AWG, with NEMA 15 plug.
- **Spike Protection Mode:** Fused MOV, Line to neutral.
- **Noise Attenuation (Transverse Mode):** >40 dB, 150kHz-100 MHz.
- **TVSS Modules:** 1 pair.
- **Dimensions:** 2.75”H x 3.75”W x 13.5”D. **Weight:** 3 lbs. **Safety Agency:** C-UL. **Warranty:** One Year.

**PST-8** 15A Aluminum Chassis Advanced Power Conditioning Strip

- SMP Advanced Surge Protection
- LIFT Extreme Filtering Technology
- EVS Voltage Protection
- 8 Outlets
- 15A Rating
- Diagnostic Lights
- Wall Wart Spacing
- Broadband Data/Signal Line Protection

**PST-8 Specifications:**
- **Maximum Output Current:** 15 Amps.
- **Line Cord:** 6 ft. captive, 14 AWG, with NEMA 15 plug.
- **Spike Protection Mode:** SMP, Line to neutral, zero ground leakage.
- **Maximum Continuous Operating Voltage:** 139V RMS.
- **Let Through Voltage (@ 125 Amps, 8/20uS waveform):** 188Vpk (133V RMS).
- **Noise Attenuation (Transverse Mode):** >40 dB, 10 kHz to 100 MHz.
- **TVSS Modules:** 1 pair.
- **Dimensions:** 2.75”H x 3.75”W x 17.75”D. **Weight:** 3 lbs. **Safety Agency:** C-UL. **Warranty:** Three Year.

**PST-8D** 15A Aluminum Chassis Advanced Power Conditioning Strip

- SMP Protection
- LIFT Extreme Filtering Technology
- EVS Voltage Protection
- 8 Outlets
- 15A Rating
- Diagnostic Lights
- Wall Wart Spacing
- Isolated Outlet Banks
- Broadband Data/Signal Line Protection

**PST-8D Specifications:**
- **Maximum Output Current:** 15 Amps.
- **Line Cord:** 6 ft. captive, 14 AWG, with NEMA 15 plug.
- **Spike Protection Mode:** SMP, Line to neutral, zero ground leakage.
- **Maximum Continuous Operating Voltage:** 139V RMS.
- **Let Through Voltage (@ 125 Amps, 8/20uS waveform):** 188Vpk (133V RMS).
- **Noise Attenuation (Transverse Mode):** >40 dB, 10 kHz to 100 MHz.
- **TVSS Modules:** 2 pairs.
- **Dimensions:** 2.75”H x 3.75”W x 18.3”D. **Weight:** 5 lbs. **Safety Agency:** C-UL. **Warranty:** Three Year.
**CONTRACTOR SERIES – POWER SEQUENCERS**

**WHY CHOOSE POWER SEQUENCING?**

Many pro audio/video installations need audio power amplifiers to activate last. Our solution is the AC power sequencer. The power sequencer provides AC power to outlet groups one at a time, thus allowing equipment to be powered up and down in an orderly fashion by first providing power to signal processing equipment and then providing power to the amplifiers. When shutting down the A/V system, a sequencer will turn off the system in the reverse order, hence the amps will be turned off first, and then the signal processing equipment will be turned off last.

This is necessary because, as most sound reinforcement professionals know, the majority of equipment damage occurs when devices are either powered up or powered down. Power sequencing allows equipment to power up in sequence and prevent the dreaded “pop”. The “pop” is a speaker pop associated with on off switching of signal processing equipment while the audio power amplifiers are energized. If the signal processing “pop” is amplified sufficiently, the result can damage speaker components. Because it prevents this unwanted, and often costly, circumstance, AC power sequencing is extremely valuable.

Furman Contractor Series equipment also allow sound reinforcement equipment to be remotely powered up or powered down over a large distance, not just in the immediate vicinity of the operator. Additionally, Maintained or Momentary mode contact switching allows the user great flexibility when controlling the unit from a remote location. A remotely mounted switch or control pad can be used to sequence equipment on or off. In addition, Furman Contractor Series remote functions can be initiated across a room, on-site, or off-site with RS-232 protocol or our cloud-based BlueBOLT technology.

**CN-1800S Contractor Series Smart Sequencer**

Furman’s SmartSequencers combines AC power distribution, protection, filtration, and sequential system power on/off in a 1RU, 120VAC, rack-mount unit.

CONTRACTOR SERIES – POWER SEQUENCERS

CN-2400S Contractor Series SmartSequencer

CN-2400S Specifications:
- AC Voltage Input Range: 90-139VAC, 50/60Hz.
- Maximum AC Current Rating: 20 amps (Thermal breaker).
- AC Cord:
  - CN-15MP: 3/14AWG, 10 feet, black, fixed, NEMA 5-15P plug.
  - CN-20MP: 3/12 AWG, 10 feet, black, fixed, NEMA 5-20P plug.
- AC Receptacles:
  - CN-15MP: 2 NEMA 5-15R’s (1 duplex).
  - CN-20MP: 2 NEMA 5-20R’s (1 duplex).
- AC Surge Protection: SMP.
- AC Undervoltage Protection: EVS, 77VAC+/-3VAC.
- AC Filtering: LiFT.
- Noise Attenuation: Linear, 10dB@10kHz, 40dB@100kHz, 50dB@500kHz.
- Response Time: 1 nanosecond.
- Maximum Surge Current: 6,500 Amps.
- AC Filtering: LiFT.
- Noise Attenuation: Linear, 10dB@10kHz, 40dB@100kHz, 50dB@500kHz.
- Operating Temperature Range: 5⁰C (40F) to 40⁰C (105F) degrees.
- Humidity Range: <90% rH (Relative Humidity).
- Power Consumption (No Load): 10 Watts.
- Safety Agency: NRTL-C.
- RoHS Compliant: Yes.
- Warranty: 15 Years.

CN-15MP
Contractor Series MiniPort

CN-20MP
Contractor Series MiniPort

CN-15MP Specifications:
- AC Voltage Input Range: 90-139VAC, 50/60Hz.
- Maximum AC Current Rating: 15 Amps (Thermal breaker).
- AC Cord: 3/12 AWG, 10 feet, black, fixed, NEMA 5-20P plug.
- AC Receptacles: Convenience Outlet (Front Panel) 1 Unswitched NEMA 5-15R. Rear Panel Outlets: 2 Unswitched NEMA 5 20R’s (1 duplex), 6 Sequenced NEMA 5-20R’s (3 duplexes each controlled by separate relay).
- AC Surge Protection: SMP.
- AC Undervoltage Protection: EVS, 77VAC+/-3VAC.
- Operating Temperature Range: 5⁰C (40F) to 40⁰C (105F) degrees.
- Humidity Range: <90% rH (Relative Humidity).
- Power Consumption (No Load): 10 Watts.
- Safety Agency: CSA.
- RoHS Compliant: Yes.

BB-RS232
Contractor Series BlueBOLT Adapter

The BB-RS232 Adaptor provides Ethernet connectivity to BlueBOLT-supported products that are otherwise only capable of RS-232 communication. Once the Adaptor is connected between the BlueBOLT-supported product (via RS-232) and the site’s Local Area Network (via Ethernet), the product can communicate with our BlueBOLT servers or a local control system.

MAC Address and Challenge Key Numbers (Labels on back of BB-RS232) and in box.

RS-232 (DTE pinout, DE-9)
MERIT SERIES POWER SEQUENCER & REGULATOR

The Merit M-8s Power Sequencer is the perfect low-cost AC power solution for any rack mount system. Install an M-8s in to the top slot of your rack, and the six delayed outlets in the rear panel will power up sequentially and protect all your equipment up to a 15-amp load.

**M-8S 15A Power Sequencer**

The Merit M-8x AR voltage regulator ensures a stable 120V (±5V) from any voltage input between 97V and 141V.

**M-8x AR 15A Merit Series Voltage Regulator**

The Merit M-8x AR voltage regulator ensures a stable 120V (±5V) from any voltage input between 97V and 141V.

**M-8 Specifcations:**
- **Maximum Output Current:** 15 Amps.
- **Line Cord:** 10 ft. captive, 14 AWG, with NEMA 5-15 plug.
- **Spike Protection Mode:** Fused MOV, Line to neutral.
- **Maximum Operating Voltage:** 130V RMS.
- **Noise Attenuation:** >23dB, 100Khz to 1 Mhz.
- **Outlet banks:** (2 outlets each): 1 unswitched (always on), 3 delay banks with adjustable delay.
- **Dimensions:** 1.75” H x 19” W x 6.5” D.
- **Weight:** 5.3 lbs.
- **Safety Agency:** cCSAus.
- **Warranty:** Three Year.

**M-8x AR Specifications:**
- **Maximum Output Current:** 15 Amps.
- **Line Cord:** 10 ft. captive, 14 AWG, with NEMA 5-15 plug.
- **Spike Protection Mode:** Fused MOV, Line to neutral.
- **Maximum Operating Voltage:** 130V RMS.
- **Regulation Capture Range:** 97VAC to 141VAC.
- **Output Voltage:** 120VAC ± 5V.
- **Noise Attenuation:** -16dB @ 10KHz, -33dB @ 100 kHz, -48dB @ 400KHz.
- **Dimensions:** 1.75” H x 19” W x 11” D.
- **Weight:** 5.75 lbs.
- **Safety Agency:** cCSAus.
- **Warranty:** Three Year.
POWER FACTOR POWER CONDITIONERS

Furman’s Power Factor Power Conditioners are the only power management solutions specifically engineered to extract optimal performance from instrument amplifiers. Furman’s unique Power Factor Technology gives amps the current they need when they need it.

**P-1800 PF R** 15A Advanced Power Conditioner with Power Factor Technology

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**P-1800 PF R Specifications:**
- **Maximum Output Current:** 15 Amps.
- **Line Cord:** 10 ft. captive, 14 AWG, with 3-conductor Edison plug.
- **USB Circuit:** 500 mA@5VDC, USB-A Connector.
- **Spike Protection Mode:** SMP, Line to neutral, zero ground leakage.
- **Maximum Operating Voltage:** 139V RMS.
- **Let Through Voltage:** 188Vpk (133V RMS).
- **Noise Attenuation (Transverse Mode):** 30 dB @ 2 kHz, 40 dB @ 10 kHz, 50 dB @ 20 kHz, 70 dB @ 100 kHz.
- **Reactive Power:** 460 VA.
- **BNC Connector:** 12VAC 500MA max (lamp not included).
- **Dimensions:** 1.75” H x 19” W x 10.5” D.
- **Weight:** 13 lbs.
- **Safety Agency:** cETLus.
- **Warranty:** Five Year.

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The Furman P-1800 PF R gives my gear the juice it needs to sound its best. With Furman, I know I’m protected from power problems and I can get the tone I expect at every show.

– Steve Vai
ADVANCED VOLTAGE REGULATORS / POWER CONDITIONERS

Furman’s Advanced Voltage Regulators/Power Conditioners provide consistent 120V (±5V) output to correct unstable voltage while also offering all of the advanced protection and noise filtering benefits of Furman’s power conditioning technologies.

**P-1800 AR 15A Advanced Voltage Regulator/Power Conditioner**

P-1800 AR Specifications:
- **Maximum Output Current:** 15 Amps.
- **In Regulation Range:** 97 to 137 VAC.
- **Output Voltage:** 120V, 5V.
- **Line Cord:** 10 ft. captive, 12 AWG, with 3-conductor Edison plug.
- **USB Circuit:** 500 mA@5VDC, USB-A Connector.
- **Spike Protection Mode:** SMP, Line to neutral, zero ground leakage.
- **Maximum Continuous Operating Voltage:** 139V RMS.
- **Let Through Voltage (@ 125 Amps, 8/20uS waveform):** 188Vpk (133V RMS).
- **Noise Attenuation (Transverse Mode):** 10 dB @ 10 kHz, 40 dB @ 100 kHz, 50 dB @ 500 kHz.
- **Dimensions:** 19” W x 12.0” D x 1.745” H.
- **Weight:** 15 lbs.
- **Safety Agency:** cETLus.
- **Warranty:** Five Year.

**P-2400 AR 20A Advanced Voltage Regulator/Power Conditioner**

P-2400 AR Specifications:
- **Maximum Output Current:** 20 Amps.
- **In Regulation Range:** 97 to 137 VAC.
- **Output Voltage:** 120V, 5V.
- **Line Cord:** 10 ft. captive, 12 AWG, with NEMA 20 plug.
- **Spike Protection Mode:** SMP, Line to neutral, zero ground leakage.
- **Maximum Continuous Operating Voltage:** 139V RMS.
- **Let Through Voltage (@ 125 Amps, 8/20uS waveform):** 188Vpk (133V RMS).
- **Noise Attenuation (Transverse Mode):** 10 dB @ 10 kHz, 40 dB @ 100 kHz, 50 dB @ 500 kHz.
- **Dimensions:** 3.50” H x 19” W x 12” D.
- **Weight:** 39 lbs.
- **Safety Agency:** cETLus.
- **Warranty:** Five Year.
WORLD TOUR VOLTAGE REGULATOR / POWER CONDITIONER

Ideal for installation in equipment racks that travel to different regions around the globe, the one-of-a-kind Furman P-3600 AR G provides stable 120V (±5%) output from any voltage source between 88V-134V and 170V-265V.

**P-3600 AR G 30A Global Voltage Regulator**

**Specifications:**
- **Maximum Output Current:** 30A.
- **In Regulation Range (Low):** 88-134 VAC @ 50/60Hz.
- **In Regulation Range (High):** 170-265 VAC @ 50/60Hz.
- **Output Voltage:** 120V
- **Line Cord:** L-14 Male Twistlock.
- **Spike Protection Mode:** SMP, line to neutral, zero ground leakage.
- **Maximum Continuous Operating Voltage:** 145 V Nominal (120V Input), 275 VAC Nominal (240V Input).
- **Let Through Voltage (@ 125 Amps, 8/20uS waveform):** 188Vpk (133V RMS).
- **Noise Attenuation:** 10 dB @ 10kHz, 40 dB @ 100 kHz, 50 dB @ 500kHz.
- **Dimensions:** 19” W x 12” D x 5.25” H.
- **Weight:** 50 lbs.
- **Safety Agency:** cTUVus.
- **Warranty:** Five Year.

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The Furman P-3600 AR G is a valuable and essential asset in my touring rig. Built like a tank it keeps the voltage supply to my rig stable and consistent.

– Edward Van Halen
BALANCED POWER CONDITIONER

Designed for the most critical low-noise applications, Furman’s flagship P-2400 IT provides pristine balanced power to connected equipment with 100% isolation from the power grid.

**P-2400 IT 20A Balanced Power Conditioner**

Furman’s 90 lb. isolation transformer works much like balanced audio... at a higher voltage. The incoming AC is split from 120V on the line to 60V on the line and neutral when referenced to the new 0V ground. Since these voltage paths are in opposite polarity, all noise on the incoming AC line is cancelled, resulting in a substantially lower noise floor and allowing harmonics and overtones in audio content to shine through without the masking effects of AC noise. Further, Furman’s P-2400 IT is the only balanced power conditioner that provides 100% isolation from line, neutral and ground, providing your equipment with total isolation from the power grid.

P-2400 IT Specifications:
- **Maximum Output Current**: 20 Amps.
- **Line Cord**: 10 ft. captive, 12 AWG, with NEMA 5-20 plug.
- **Spike Protection Mode**: SMP, Line to neutral, zero ground leakage.
- **Maximum Continuous Operating Voltage**: 139V RMS.
- **Let Through Voltage (@ 125 Amps, 8/20μS waveform)**: 188Vpk (133V RMS).
- **Noise Attenuation (Transverse Mode)**: >80 dB @ 20 kHz, >40 dB @ 20 kHz-1 MHz.
- **Noise Attenuation (Common Mode)**: >80 dB @ 20 kHz, >40 dB @ 20 kHz-1 MHz.
- **Dimensions**: 5.25” H x 19” W x 14” D.
- **Weight**: 90 lbs.
- **Safety Agency**: cETLus
- **Warranty**: Five Year.
COMPACT POWER CONDITIONER

Ideal for flat panel televisions, video projectors, or anywhere advanced power conditioning is needed for components away from the main equipment rack, the AC-215A provides advanced protection and filtration in a compact, 1.75” H x 5” W x 8.5” D chassis.

AC-215A 10A Compact Advanced Power Conditioner

**AC-215A Specifications:**
- **Maximum Output Current:** 10 Amps.
- **Line Cord:** 6 ft. removable, 14 AWG, with NEMA 15 plug.
- **Spike Protection Mode:** SMP, line to neutral, zero ground leakage.
- **Let Through Voltage (@ 125 Amps, 8/20μS waveform):** 188Vpk (133V RMS).
- **Dimensions:** 1.75” H x 5” W x 8.5” D.
- **Weight:** 3 lbs.
- **Safety Agency:** CSAus.
- **Warranty:** Three Year.

IN-WALL SOLUTIONS

Innovative in-wall solutions provide discreet, in-wall surge protection and signal line management in a standard 2-gang form factor – ideal for flat panel screens and projectors.

**MIW-POWER-PRO-PFP In-Wall Surge/Over-Voltage Protection System**

MIW-POWER-PRO-PFP delivers surge and voltage protected AC power to flat panel displays, ceiling mounted video projectors and powered sub-woofers. Discreetly hides behind electronic equipment for a neat, clean, code compliant and professional installation.

- Provides surge protection and Extreme Voltage Shutdown
- Ultra-thin profile can allow equipment to hang less than one inch from the wall
- Standard Level EMI/RFI noise filtration
- CSA Certified for code compliant installations
- 3 Year Product Warranty

**MIW-POWER-PRO-PFP Specifications:**
- **AC Outlets, Total:** 2.
- **Line Voltage:** 120V, 50/60Hz.
- **Total Current Capacity:** 15A.
- **UL 1449 2nd Ed. Suppressed Voltage (@500A):** 330V.
- **UL 1449 3rd Ed. Voltage Protection: (@3000A):** 400V.
- **Protection Modes:** L-N, L-G, N-G.
- **Energy Dissipation:** 1350 Joules.
- **Dimensions (Installed):** 4.75” H x 4.75” W x 2.25” D.
- **Weight:** 2 lbs.
- **Safety Agency:** CSAus.
- **Warranty:** Three Year.

**MIW-SURGE-1G In-Wall Surge Protection System**

Two AC receptacles provide surge protection. Fits most standard single gang plastic or metal boxes.

- **DECORA® Faceplate Interface.** This piece surrounds the receptacles and fits within a standard cover plates DECORA cutout. • Uses standard wiring device screw-hole. • Both outlets with Protect or Disconnect™ Circuitry.
- **Bi-color Indicator LED.** Green = Power On Red = Line Fault • 3 Year Product Warranty

**MIW-SURGE-1G Specifications:**
- **AC Outlets, Total:** 2.
- **Line Voltage:** 120V, 50/60Hz.
- **Total Current Capacity:** 15A.
- **UL 1449 2nd Ed. Suppressed Voltage (@500A):** 330V.
- **UL 1449 3rd Ed. Voltage Protection: (@3000A):** 400V.
- **Protection Modes:** L-N, L-G, N-G.
- **Energy Dissipation:** 1350 Joules.
- **Dimensions:** 4.25” H x 4.75” W x 2.25” D.
- **Weight:** 2 lbs.
- **Safety Agency:** CSAus.
- **Warranty:** Three Year.

DECORA is a registered trademark of Leviton Manufacturing Company
POWER DISTRIBUTION

Furman’s Power Distribution models provide convenient rackmount solutions for delivering AC power to multiple circuits when a hard-wired, built-in system is not available.

**ASD-120 2.0 120 Amp Sequenced Power Distro**

ASD-120 2.0 Specifications:

- **Input Current:** 120 amps maximum.
- **Input Voltage:** Selectable between 120V single phase/240V single phase/208V 3-phase.
- **Output:** Six identical 20 amp, 120V circuits.
- **Delay Interval:** 0.5 seconds to 7 minutes per step, adjustable with front panel DIP switches and potentiometer.
- **Dimensions:** 3.5” H x 19” W x 10” D.
- **Weight:** 16 lbs.
- **Safety Agency:** cETLus
- **Warranty:** Three year.

**POWER RELAY**

Furman’s PS-REL works in tandem with Furman’s Power Sequencers, Controllers and Distros to provide modular solutions for any power sequencing scenario.

**PS-REL  Power Relay Accessory**

The PS-REL AC Relay provides an alternate way of closing switch contacts. It is a relay that detects the presence of AC power and, in response, closes relay contacts that are wired to a terminal strip. A PS-REL is useful in determining when a certain outlet has come on after a sequenced delay, and to extend that outlet’s capacity.

**POWER RELAY CONTROL PANELS**

Furman’s Power Relay Control Panels allow remote operation of Furman’s Power Sequencers, Controllers, Distros and Relays.

**RS-2  Remote System Control Panel**

The RS-2 Remote System Control Panel provides a simple way to control AC equipment from one or more locations, using only inexpensive low-voltage wiring. The RS-2 can be operated via a maintained contact “Start ON/OFF Sequence” keyswitch or a momentary push button. The rear of the panel has a circuit board with a full size barrier strip for field wiring connections.
BATTERY BACKUP (UPS)

Furman’s UPS solutions provide power backup in the event of a blackout and a full feature set designed specifically for A/V professionals.

**F-1000 UPS 1000VA Simulated Sine Wave Battery Backup**

F1000-UPS Specifications:
- **Maximum Output Current:** 12 Amps
- **Battery Output:** 120V ±5V, Simulated Sine Wave
- **Battery Capacity:** 1000VA, 600W @ 0.6pf
- **In Regulation Range:** 85 to 137 VAC
- **Line Cord:** 10 ft. captive, 14 AWG, with 3-conductor Edison plug
- **Spike Protection Mode:** SMP, Line to neutral, zero ground leakage
- **Maximum Continuous Operating Voltage:** 139V RMS
- **Let Through Voltage (@ 125 Amps, 8/20μs waveform):** 188Vpk (133V RMS)
- **Noise Attenuation (Transverse Mode):** 10 dB @ 10 kHz, 40 dB @ 100 kHz, 50 dB @ 500 kHz
- **Dimensions (with rack ears):** 3.5” H x 19” W x 13” D
- **Weight:** 36 lbs
- **Safety Agency:** cULus
- **Warranty:** Three Year (product), Two Year (Battery)

**F1500-UPS 1500VA True Sine Wave Battery Backup**

F1500-UPS Specifications:
- **Maximum Output Current:** 12 Amps
- **Battery Output:** 120V ±5%, True Sine Wave
- **Battery Capacity:** 1500VA, 900W @ 0.6pf
- **In Regulation Range:** 85 to 137 VAC
- **Line Cord:** 10 ft. captive, 14 AWG, with 3-conductor Edison plug
- **Spike Protection Mode:** SMP, Line to neutral, zero ground leakage
- **Maximum Continuous Operating Voltage:** 139V RMS
- **Let Through Voltage (@ 125 Amps, 8/20μs waveform):** 188Vpk (133V RMS)
- **Noise Attenuation (Transverse Mode):** 10 dB @ 10 kHz, 40 dB @ 100 kHz, 50 dB @ 500 kHz
- **Dimensions (with rack ears):** 3.5” H x 17” W x 19.2” D
- **Weight:** 72 lbs
- **Safety Agency:** cULus
- **Warranty:** Three Year (product), Two Year (Battery)
**BATTERY BACKUP (EXTRAS)**

**CASE STUDY:**

**F1500-UPS**  
O.co Coliseum

AV systems designer and integrator Diversified Systems installed a new Grass Valley slow-mo video playback system, consisting of a Grass Valley® Dyno slow-motion controller and Summit video server, replacing an older Grass Valley Profile slow-motion system at the **MLB’s Oakland Athletics’ 35,000-plus-seat O.co Coliseum**, which it shares with the NFL’s Oakland Raiders. As part of this system upgrade, a Furman F1500-UPS uninterruptible power supply and battery backup/power conditioner was included, to protect the rack containing the Summit server.

One day in mid July, a power surge due to an electrical storm hit the control room racks overnight, taking several of them offline – except for the rack holding the Summit slow-motion server, which never even blinked during the power surge.

“The (video) switcher and the router were knocked off line briefly, but the Furman F1500-UPS protected the server, exactly as it was designed and intended to do,” says Mark Sackett, project manager and system engineer.

“Surge protection and power conditioning seem like very small parts of a complex system like a stadium’s slow-motion video, but if there comes a time when you really need it, it’s suddenly the most important component in the rack. We were very happy we had a Furman unit in there. It really made the difference.”

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**BlueBOLT-CV2**  
Online Remote Power Management  
Now with Embedded Web Control  
(For use with the F1500-UPS)

Provides secure, local and hosted IP system control and monitoring for the F1500-UPS as well as additional BlueBOLT® compatible products from Furman and Panamax

**Features:**
- Control for individual outlet banks featuring power, trigger and delay settings  
- Auto rebooting for connected network devices  
- Remote diagnostics: check unit status and incoming line voltages  
- Easy, plug-in installation  
- Email alerts for over and under voltages help you anticipate or prevent service calls

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**BATT1500-EXT**  
(For use with the F1500-UPS)

Extend Runtime with External Battery Pack Component for F1500-UPS  
up to 100 minutes when used in combination with F1500-UPS.

One BATT1500-EXT may be used at a time.

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**Run Times**

Extended Run Time with F1500*  
Half Load ........................................... 100 Min.  
Full Load ........................................... 45 Min.
BlueBOLT™ REMOTE POWER MANAGEMENT
Commercial Integration Application Guide

What Is BlueBOLT?

BlueBOLT is a free, cloud-based platform for control and monitoring of Panamax and Furman power management products. BlueBOLT can be used in integrated electronics systems to drastically reduce service calls by remotely rebooting problem components, send alerts regarding onsite system issues, manage energy use, monitor network connectivity, and much more.

Applications:

Retail
Restaurants/Bars
House of Worship
Medical Offices
Fitness Centers
Education
Dance Clubs
Property Management
Research/Labs
Corporate Meeting Rooms
Auditoriums
Hotels/Hospitality
What can you do with BlueBOLT?

**Power-cycle A/V equipment remotely**
A valuable technology for System Support Providers, reducing onsite service calls by as much as 80%.

**Automatic alerts instantly warn you of power issues, like power outages**
Know the moment it happens so you can act.

**Scheduled power conservation**
Power off unused equipment when not needed to save money and equipment lifespan.

**Verify network connections**
Ping networked devices and build in corrective actions to restore networks.

It’s as easy as:

1. Choose from the variety of BlueBOLT enabled hardware devices (page 24-28).
3. Connect hardware to the internet.
4. Add hardware to a location you create for the system you want to monitor and control.
5. Plug in your equipment and you’re good to go!

BlueBOLT Cloud Control GUI
BlueBOLT’s cloud-based communications provides an incredibly easy setup procedure - simply plug your BlueBOLT-enabled power management component into the wall, connect it to a standard Ethernet cable with an active Internet connection, and plug in your electronic components. BlueBOLT will automatically detect your device as active and you can immediately register it and begin monitoring and control from your computer, tablet or smartphone: no static IP addresses or port forwarding needed.

*BlueBOLT will allow you to control power to your equipment from your computer, tablet or smartphone.*
PANAMAX PRO

Designed for the needs of professionally installed integrated electronic systems, Panamax Pro products from Furman's sister company, Panamax, deliver power protection and filtering along with BlueBOLT cloud-based systems management for remote power, energy, and network monitoring and control.

**M4000-PRO** 15 Amp BlueBOLT Enabled

- **Maximum Output Current:** 15 Amps.
- **Line Cord:** 8 ft. removable, 14 AWG, with 3-conductor Edison plug.
- **Spike Protection Mode:** Protect-Or-Disconnect.
- **Maximum Operating Voltage:** 134V RMS.
- **Let Through Voltage:** 200Vpk.
- **Noise Attenuation (Transverse Mode):** 18.7 dB @ 10 kHz, 50.5 dB @ 100 kHz, 43.9 dB @ 1 MHz.
- **Dimensions:** 1.75” H x 17” W (19” W w/ rack ears, included) x 13” D.
- **Weight:** 10.6 lbs.
- **Safety Agency:** cETLus.
- **Warranty:** Three Year.

**POWER CONDITIONER**

**M4315-PRO** 15 Amp BlueBOLT Enabled

**ALSO AVAILABLE:**

**M4320-PRO** 20 Amp BlueBOLT Enabled

**M4315-PRO** Specifications:
- **Maximum Output Current:** 15 Amps.
- **Line Cord:** 10 ft. removable, 14 AWG, with 3-conductor Edison plug.
- **Spike Protection Mode:** Protect-Or-Disconnect.
- **Maximum Operating Voltage:** 134V RMS.
- **Let Through Voltage:** 200Vpk.
- **Noise Attenuation (Transverse Mode):** Banks 1,2,3: 76dB 5kHz-250kHz, Bank 4 (High Current Outlets): 46dB, 250kHz-1MHz.
- **Dimensions:** 1.75” H x 17” W (19” W w/ rack ears, included) x 12.25” D.
- **Weight:** 12 lbs.
- **Safety Agency:** cETLus.
- **Warranty:** Three Year.
PANAMAX PRO

VT4315-PRO  BlueBOLT Enabled Vertical Rack Power Conditioner with 12 AC Outlets

- BlueBOLT® enabled for remote control and monitoring
- 12 protected and filtered outlets in 8 controllable outlet banks
- Outlets widely spaced to accommodate bulky “wall warts”
- 4K ready, high-bandwidth coaxial protection
- Gigabit (10/100/1000) Ethernet protection
- 12V trigger
- Indicator lights for Voltage, Power, Protection OK, and BlueBOLT Connectivity
- Mounting brackets (included) provide flexible mounting options

SM3-PRO  15 Amp BlueBOLT Enabled Compact Power Conditioner

SM3-PRO Specifications: 
- Maximum Output Current: 15 Amps.
- Line Cord: 3 ft. removable, 14 AWG, with 3-conductor Edison plug.
- Noise Attenuation (Transverse Mode): Banks 1, 2, 3: -13.8dB @ 10 kHz, -41.0dB @ 100 kHz, -43.9dB @ 1 MHz hz. Dimensions: 7 in. W x 10 in. D x 1.6 in. H. Weight: 4.8 lbs. Safety Agency: cETLus. Warranty: Three Year.

VT4315-PRO Specifications: 
- Maximum Output Current: 15 Amps.
- Line Cord: 8 ft. captive, 14 AWG, with 3-conductor Edison plug. Spike Protection Modes: Protect-Or-Disconnect. Maximum Operating Voltage: 134V RMS. Let Through Voltage: 200Vpk. Noise Attenuation (Transverse Mode): -13.8dB @ 10 kHz, -41.0dB @ 100 kHz, -43.9dB @ 1 MHz hz. Dimensions: 37"H x 2.6"W x 2.5"D. Weight: 9 lbs. Safety Agency: cETLus. Warranty: Three Year.
BlueBOLT SMARTPLUGS

Bring BlueBOLT Power and Energy Management to any standard 120V Outlet

MD2-ZB

2 Surge Protected AC Outlets, individually monitored & controllable Outlet Status, Wiring, Network Status Indicators

Join Network Pushbuttons

Requires BB-ZB1 Sold Separately, See Below

MD2-ZB Specifications:

- **AC POWER.**
  - *Protect or Disconnect™ Circuitry:* Yes. *Line Voltage:* 120VAC, 50/60Hz. *Initial Clamping Level:* 200V.
  - *Voltage Protection Rating:* (UL1449 3rd Edition, 3,000A) L-N 400V, L-G 500V, N-G 400V. *Nominal Discharge Current:* 3,000A.

- **ELECTRICAL RATINGS.**
  - *Line Voltage:* 120 Vac, 60Hz.
  - *Current Rating:* 12 A.
  - *RF / ZigBee.*
    - ZigBee/802.15.4 Radio. 2.405-2.475 GHz, unlicensed ISM band.

SP-1000

2 AC Outlets, one bank of monitoring & control

Power and Network Status Indicators

Power/Join Network Pushbutton

Requires BB-ZB1 Sold Separately, See Below

SP-1000 Specifications:

- **ELECTRICAL RATINGS.**
  - *Line Voltage:* 120 Vac, 60Hz. *Current Rating:* 12 A.
  - *RF / ZigBee.*
    - ZigBee/802.15.4 Radio. 2.405-2.475 GHz, unlicensed ISM band.

BB-ZB1 Gateway

Allows easy access to multiple MD2-ZB & SP-1000 via a standard BlueBOLT account from any web enabled device.

Supports up to 15 Smartplugs

BB-ZB1 Specifications:

- **WIRELESS MESH NETWORK TECHNOLOGY.**
- **Management:** BlueBOLT cloud access, HTTP web interface. **Indicators:** BlueBOLT access status, ZigBee network status, Ethernet network link/activity. **Dimensions:** 5.3 in. x 4.0 in. x 1.3 in. **ZIGBEE.** **Antenna:** Internal. **RF:** ZigBee, 802.15.4. **Ports:** 1 RJ-45 port. **Physical Layer:** 10/100Base-T (auto sensing).

- **Power Input:** 5VDC (power supply provided). **Power Consumption:** 1W
POWER ACCESSORIES

**D10-PFP** Rackmount Power Distributor

The PF Power D10-PFP provides 10 circuit-breaker protected outlets in a compact, 1RU steel chassis. Safety Agency: cULus

**VT-EXT** Equipment Rack Power Distribution with Ground Isolation

8 outlet power strip designed specifically to be mounted to the vertical leg section of an equipment rack. The perfect way to extend the protection and filtration from an existing Panamax or Furman power conditioner. 10 ft. power cord. Safety Agency: cULus

**PLUGLock** Locking Outlet Strip

The PF Power PlugLock provides 5 circuit-breaker protected outlets with innovative locking mechanisms to secure wall warts and plugs in place. The PlugLock can be installed to a rack with attached mounting holes. Safety Agency: cTUVus

**SS-6B** Steel Power Strip

The SS-6B is a 6-outlet steel power block with standard level surge protection, EMI/RFI filtration, heavy duty steel construction, and 15 ft. power cord. Safety Agency: cULus

**ADP-1520B** Adaptor Cord

The ADP-1520B is an adapter cord for connection of a 20 amp device to a 15 amp power source. NEMA-20R Female receptacle to NEMA-15P Male plug. 12 AWG. Safety Agency: cULus.

RACK LIGHTS AND GOOSENECK LAMPS

**RL-LED** Rack Lights

Furman’s Rack Lights provide incandescent (RL-I) and LED (RL-LED) illumination on a 1RU, 19” rackmountable plate.

**GN-I / GN-LED** Gooseneck Lamps

Furman’s 12” gooseneck lamps provide incandescent (GN-I) and LED (GN-LED) illumination with a locking BNC connector, ideal for use with many Furman products that provide a rear BNC connector for discreet illumination at the back of an equipment rack.
ICON GLOSSARY
For advanced technology descriptions, see page 4 - 9

**ISOLATED OUTLET BANKS**
Isolation of rear panel outlet banks provides further noise reduction at the point of use by eliminating electrical crosstalk, which can be particularly troublesome when analog and digital equipment is plugged into the same circuit.

**“WALL WART” SPACING**
Many Furman products feature spaced outlets on the rear panel to accommodate bulky “wall wart” transformer plugs. 20A Classic Series and Prestige models also include “Secure Straps” to hold wall warts in place.

**FRONT PANEL RETRACTABLE LIGHTS**
Furman’s signature front panel retractable lights provide convenient, discreet illumination to a rack full of equipment. Standard models include incandescent lights. Advanced models feature long-lasting, cool running LED lights.

**DIAGNOSTIC LIGHTS**
Diagnostic lights provide information regarding power quality and operational status of the Furman unit, including Protection OK indicator, Extreme Voltage indicator, and color-coded Voltage Range indicator (on select models).

**LED VOLTMETER**
Segmented LED Voltage Meter. Indicates incoming voltage in 2V steps ranging from 90V to 128V. The LED’s are color coded (Red=Stop, Yellow=Caution, Green=Go) to inform users at a glance if voltage is within a nominal range.

**DIGITAL VOLTMETER**
Laboratory-precision Digital Voltmeter displays incoming voltage ±1.5V.

**DIGITAL VOLTMETER/AMMETER**
Switchable, dimmable digital meter displays incoming voltage ±1.5V, switchable to output current in amps. Display also features Protection OK, Extreme Voltage, and color-coded Voltage Range indicators for comprehensive power monitoring.

**USB CHARGER**
Front-panel USB charger provides convenient charging outlet for most personal media devices and cell phones.

**REAR PANEL BNC CONNECTOR**
Rear-panel BNC Connector allows connection of BNC gooseneck lamp for rear rack illumination.

**STANDARD LEVEL SURGE PROTECTION**
Standard level, MOV-based sacrificial surge protection.

**STANDARD LEVEL EMI/RFI FILTRATION**
Standard level non-linear AC noise filtration.