

# MIT® Shotgun™ AC Series

Essential Components for Clean Power

## The Shotgun AC Series

### An essential component for clean power.

Power...without it, nothing happens. Unfortunately, quite often *too* much happens. The very power that drives your audio (or home theater) system can have a negative effect on audio and video fidelity by allowing extraneous noise into your playback system.

### It is the *quality* of the power that counts.

Most audio and home theater equipment (in the US) is designed to function at 120 volts at a frequency of 50 –60 Hertz. Usually, power lines feeding AV components not only carry usable frequencies (50-60Hz), but also carry frequencies above and below this operative range. *It's those unnecessary frequencies that introduce distortions directly into the audio and video signal.* Even before power gets to the building, external and internal sources are corrupting your power with extraneous frequencies that result in distortions you can see *and* hear.

Generally, most utilitarian equipment plugged into your wall is not sensitive to these problems. When it comes to lights or the refrigerator, the quality of the power does



Shotgun AC1 and AC2 Powercords

**Q:** Where do these interferences come from?

**A:** Power-line noise can come from a number of sources.

Noise coming directly through the power-line or, “*direct-coupled*” noise, is caused by equipment such as electric motors, arc welders, power-supply switching-circuits (found in computers, etc.), as well as household appliances. Any equipment on your AC line will be another source of distortion. Many times, a noise source might be coming from down the street!

Noise that is induced from indirect contact with the line is called “*field-coupled*” noise. This mode occurs when the line itself behaves as an antenna to external fields. These fields are generated by broadcast stations, radar, and many other sources of field radiation, including other unshielded cables.

Some equipment can cause both direct and field-coupled noise. Computers, video components, and digital audio equipment all cause noise to actually feed back into the AC power line! They can also radiate a broad spectrum of radio frequencies (RF). Power cords, signal cables, and antennas inject field-coupled noise into any nearby equipment.

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Shotgun Z Trap

Universal/Modular Power filter

operational difference. Normal household power is not conditioned for precision audio or video equipment. The higher the fidelity, the more noticeable the distortions.



Music Interface Technologies™

**Q:** How does dirty power affect my **audio** system?

**A:** With audio components, everyday power line problems result in:

- Reduced power output
- Poor imaging and soundstaging
- Higher background noise
- Unnatural tonality
- Grainy, gritty distortion
- Digital data loss and errors

**Q:** How does dirty power affect my **video** system?

**A:** With video components, power line problems show up as:

- Video noise (grain, grit or snow)
- Hum-bars passing through the picture
- Loss of contrast, definition and depth of field
- Unnatural color shifts

Even in tiny amounts, power line problems are interfering with the quality of the audio and video reproduction you have already paid for. Every piece of electronic equipment in your home adds to power line noise. These sources would include refrigerators, lights, computers, even air conditioning!

## Solutions for clean power –

### Shotgun AC1 with MIT's patented Z Circuitry



An economical version of our patented (3 filter-pole parallel filter) circuitry integrated into one of our most popular (Z-Cord II) designs. This unique parallel circuitry removes most

unusable frequencies in the audio range, other than 50-60 Hz @ 120 volts, leaving only clean AC power...and nothing extra!

### Shotgun AC2

An upgraded version of the AC1, also featuring MIT's patented Z-circuitry. A second enclosure features 7 filterpole



networks, providing greater noise control to the widest usable bandwidth possible. Great for video applications, this second enclosure also works to deliver even greater power factor correction, delivering the cleanest AC power for the money.

## Shotgun AC Series Power Cords provide:

- Greater Clarity
- Increased Contrast
- Enhanced Dynamics
- Greater Depth of Field
- Better Imaging at All Volume Levels

Patented Z-Circuitry does not restrict the flow of current or distort AC like ordinary filters or transformers. MIT's Z-Circuitry delivers pure, clean power that lets audio and video components run cooler and more efficiently, thus extending component life.

### Shotgun Z Trap: 0.5 meter only

The Shotgun Z Trap offers a modified version of the famous Z-Stabilizer, optimized for the most common frequencies near the ideal 50/60 Hz. 110V—250V; 20amp. Modular design means it can be used with any IEC power cord, in any country!



#### Features:

- 0.999999% pure copper
- Foil shielded · 300V, 60° shielded, 100% coverage
- 3X20 AWG with drain wire
- UL/CSA/FT4 approved
- 100% shielding
- 0.402 outer diameter, cable only

### Shotgun Z III:

This high quality power cable can be terminated with NEMA standard plugs. 110V—250V; 20 amp.



#### Features:

- 0.999999% pure copper
- Foil shielded
- 300V, 60° shielded, 100% coverage
- 20 AWG drain wire
- UL/CSA/FT4 approved
- 100% outer shield covering
- 0.402 outer diameter, cable only

For more information on issues such as power factor correction (chapters 6-7 of Power Paper: *Transporting Power in Audio Cables*), please visit the MIT website at [www.mitcables.com](http://www.mitcables.com).

*Always Perfect Power!*

All MIT® products using Z circuitry are protected by one or more of the following U.S. Patents: 5,920,468; 5,227,962 and 5,260,862.