

# MIT® Magnum™ AC Series

Essential Components for Clean Power

## The Magnum 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.

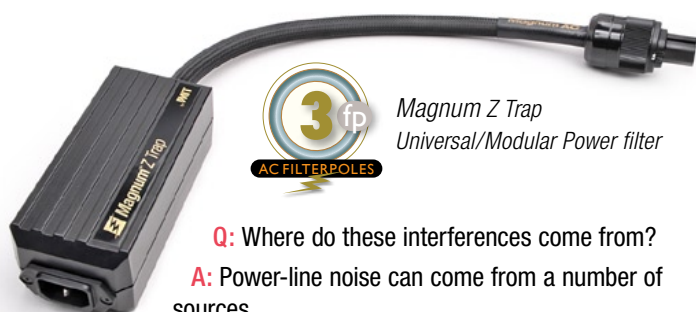
### It is the *quality* of the power that counts.

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



Magnum AC1 and AC2 Powercords



Magnum Z Trap  
Universal/Modular Power filter

**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.

**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

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Music Interface Technologies™

**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 –

### Magnum AC1

Magnum series powercords feature 11 gauge Ultra-pure OCC (continuous cast) pure copper conductors as the basis of this remarkable design. The Magnum AC1 delivers clear, clean power that is double shielded for field coupled noise rejection. MIT (patented) Z Series Power Conditioning circuits, including 3 parallel Filterpoles, are employed to trap and dissipate direct-coupled AC noise. Now available with 20A terminations.



### Magnum AC2

The Magnum AC2 Powercord also features 11 gauge Ultra-pure OCC (continuous cast) pure copper conductors as the foundation of this upgraded design. Double shielding provides field coupled noise rejection to eliminate RFI and EMI pollutants. This powerful combination of technologies includes 7 parallel Filterpoles to trap and dissipate direct coupled AC noise created by other components in your system, as well as Power Factor Correction.



## Magnum 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.

### Magnum Z Trap: 0.5 meter only

The Magnum Z Trap features 11ga. ultra-pure OCC (continuous cast) pure copper conductors as the basis for this remarkable design. The Magnum Z Trap delivers clear, clean power that is double shielded for field coupled noise rejection. The Z Trap employs 6 parallel AC Filterpoles to trap and dissipate AC noise. Because of its unique universal IEC in, and IEC out design, the Trap can be used with any IEC power cord, in any country! Finally, a truly universal AC line conditioner and noise trap for any high performance Audio or Video application.



#### Features:

- 3X12 AWG OCC (Ohno continuous cast) copper conductors for lowest resistance over distance
- Three separate conductors with TPE (Teflon®) dielectric (Red, Green, Black)
- Double shielded for optimal field coupled noise rejection
- Foil shield for UHF
- Braided shield for noise rejection of lower frequencies
- 110-220V 20 amp
- CL/3 and FT/4 rated for conformity to international fire regulations
- Precision twisted for optimal noise rejection
- Additional shield can be terminated to facilitate star grounding circuits

### Magnum Z III:

This premium quality power cable features the same highest quality 3X12 AWG OCC (Ohno continuous cast) copper conductors as the Magnum Z Trap. Uses three separate conductors with TPE (Teflon®) dielectric (Red, Green, Black). CL/3 and FT/4 rated for conformity to international fire regulations.



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.