

CARVER

MAGNETIC FIELD POWER AMPLIFIER

MODEL M-500



Why you need more amplifier power than you think you need.

If you think two hundred and fifty watts a channel with peak reserves of up to 800 watts is overkill, read on. You'll change your mind. The reasons are logical and ultimately surprising.

RULE 1. Power is not loudness. Certainly to play music at high sound levels, speakers require more power. But we're talking high fidelity not sound reinforcement. Assume you don't intend to play your music any louder than you do now after you've bought a Carver M-500... the improvement will still be audible.

RULE 2. LOW power kills speakers. NOT high power. Yes, illogical as it may seem, the lowly 40-watt receiver can kill a speaker faster than the M-500! Here's why.

To produce a bass note, a woofer cone must move up to a half inch in a few hundredths of a second against the static room air mass. That can take up to 80% of an amp's power.

That's fine until you ask a woofer to move faster or farther than your receiver can provide power for. At this point the amplifier circuitry generates a high-frequency harmonic spike, a sort of electronic "squeal of anguish." The speaker crossover duly routes this nasty pulse directly to the tweeter which either produces horrible distortion or cumulatively results in the eventual burn-out of the tweeter. Thus the tweeter (and your ears) are punished for the woofer's inability to get power.

RULE 3. Adequate power makes an audible difference. While the burned tweeter example is an extreme one, some audible clipping occurs virtually every time a low bass pulse sounds, even at moderate listening levels. Sluggish meters may not record it, but the strike of a floor tom, beat of a tympani or snap of a Fender bass all can draw short peaks of over 200 watts per channel. When your modestly-powered amplifier can't handle it, there are audible consequences in the mid and high ranges.

Prove it to yourself by auditioning a good speaker with the same pre-amp, switching between power amps: the Carver M-500 and any 100-watt unit (which is probably more power than you have now.) It won't take a Golden Ear to hear the tight, crisp bass notes and the sudden absence of annoying high-end distortion you previously accepted as a normal part of music.

The M-500 doesn't color music, it frees your entire signal chain from the tyranny of insufficient power.

And if the new PCM/analog records excite you, along with the prospect of full digital sound sources within the decade, healthy power reserves are a total must. Hybrid digital technology's tremendously expanded dynamic range taxes many conventional amps: true digital will make many obsolete. Thus, an amplifier which has the power to make any record sound better now, will be the cornerstone of any conceivable future system.

An amp like the Carver M-500.

Why you need the Carver model M-500 Magnetic Field Power Amplifier.

If you're wisely sold on the electronic and sonic benefits of generous power resources, read on. We'll explain why you needn't invest in a massive "arc welder" power amp to satisfy those needs.

While the M-500 is a bit larger than our remarkable M-400 cube amp, it weighs just 22 pounds. Less than some preamps!

No cooling fans vent its behind, no extruded fins protrude and the unit runs barely warm to the touch.

You see, while conventional amps continually court meltdown by converting up to 60% of their energy into heat, the M-500 transforms fully 80% of its power into useable audio energy. We have originated a more advanced, more elegant and more practical approach to the design of power supply sections. Even if we charged \$3000 an amp for exotic components, palladium wiring and kryptonite-covered capacitors, we'd still design our power supply to incorporate this new major invention. Gone are the coffee-can sized capacitors, massive power transformers and gigantic heatsinks that make old-style amps cost thousands of dollars. In their place is a patented, compact Magnetic Field coil which stores and controls energy, eliminating all need for heavy, costly parts required by the very best traditional designs.

Check under the hood of a fine conventional stereo amp and you'll see two mono amps with dual transformers, capacitors, etc. The M-500's Magnetic Field design couldn't be farther from this approach. Each channel of the M-500 can actually BORROW unused power from the other channel during peak loads. Indeed, the M-500 can be operated as a 600-watt mono amp without any special switching!

Conventional amps may have protection circuits for themselves and speakers. But such circuits (one common design is referred to as a "crowbar circuit") are crude next to the M-500's micro-computer monitor system. Instead of controlling input stages, which can cause delays and distortion, the M-500's computer acts as a FINAL gate, just before the speaker terminals, for instant overload protection. Thus sonic perfection stands no risk of being marred even while fully protecting your valuable loudspeakers against potential damage. And the same circuitry lets the M-500 automatically adjust for any speaker impedance.

Dual, lighted, precision VU-ballistic meters pro-

vide a musically accurate picture of power output, averaging yet reacting to important transients.

We made sure the M-500 has a completely neutral signal path transparent in sonic character, resulting in zero listener fatigue. Combined with virtually unlimited dynamic headroom, the M-500's performance surpasses any traditional amplifier made.

Hardware, buzzwords and specmanship aside, your final decision should be made by the sound of an amplifier. Compare the Carver M-500 to any 250-400 watt/channel conventional power amplifier around, Class A, B, H, G, Z, Q or otherwise. The class that stands out will be the superb colorless sound of the cool, unruffled, light-heavyweight M-500.

Next compare price tags and discover what designing away all that scrap metal does to the watts-per-dollar price of a Carver Magnetic Field Amplifier.

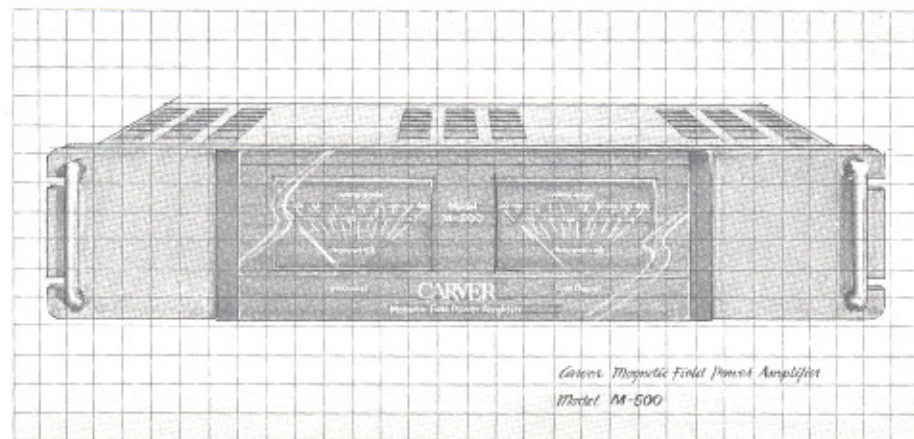
You will be amazed at how an amp can be at once affordable, powerful and above all absolutely accurate and musical.

Specifications

Power, 251 watts/channel into 8 ohms 20Hz-20K Hz with no more than .05% THD; Power at Clipping, 270 watts/channel into 8 ohms at 1K Hz, 350 watts into 4 ohms at 1K Hz, 700 watts RMS into 8 ohms single channel; Noise, < 100dB down, IHF-A weighted, Harmonically related commutation noise is equal to or less than non linear distortion components, IHF-A weighted; IM Distortion, 0.05% SMPTE; TIM Distortion, Unmeasurable; Frequency Bandwidth, +0-3dB, 1Hz-100K Hz at 1 watt; Slew Factor, >200, Display Tracking, ± 1 dB; Display Ballistics, Peak responding 1 millisecond attack, 1 second decay; Input Impedance, 15K ohms.

How to make a 250-watt receiver.

You like the tuning, switching and pre-amp sections of your receiver or integrated amplifier but want to improve the 40-watt weakling power section? Simply route patch cords from the receiver pre-out or through a Carver Z-1 Wideband Accessory Coupler and into a M-500. Now you have the power you've always needed.



Optional rack mount handles shown.

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