

# Thrill to the Visceral Power of Stereo

Music, when you hear it in all its glory, has the power to lift the spirits and transport you into another realm. Driving you there in audiophile style is Onkyo's newest hi-fi power amplifier, the M-5000R. Signal quality on the M-5000R is meticulously preserved by new AWRAT technology, while three-stage inverted Darlington circuitry provides extremely efficient power output. Massive twin toroidal transformers and four 27,000  $\mu$ F capacitors work to stabilize the power supply and current, respectively. And to minimize errors in stereophonic playback, the amplifier incorporates a totally symmetrical alignment of power devices for left and right channels.



**ONKYO®**

M-5000R POWER AMPLIFIER

- Max. Power: 170 W/Ch (4 Ω, 1 kHz, 1%, 2 Channels Driven, IEC)
- AWRAT (Advanced Wide Range Amplifier Technology)
- DIDRC (Dynamic Intermodulation Distortion Reduction Circuitry)
- Quad Push-Pull Amplification Design with Three-Stage Inverted Darlington Circuitry
- Symmetrical Layout of L/R Channels
- Two Massive Toroidal Transformers with Sub Transformer
- Four Large 27,000 μF Capacitors
- Separate Anti-Vibration Aluminum Panels for Top, Front, and Sides
- New Circuit Board Construction to Reduce Vibration
- Bi-Amping and BTL (Bridged Transless) Capability
- Balanced XLR Input for Monaural Amplification in BTL Mode
- Gold-Plated, Machined Solid Brass RCA Inputs
- Gold-Plated Large Speaker Posts
- 12 V Trigger Input and Output
- Extra-Large Fast-Response Peak Watt Meters

**AWRAT** ADVANCED WIDE RANGE  
AMPLIFIER TECHNOLOGY



Black model available

## AWRAT (Advanced Wide Range Amplifier Technology)

The M-5000R employs a host of proprietary Onkyo technologies to ensure optimal audio performance.

### 1. DIDRC (Dynamic Intermodulation Distortion Reduction Circuitry)

Since the advent of digital audio, signal-to-noise ratios have improved dramatically. However, the S/N ratio reflects static noise only, and takes no account of another type of noise that occurs as the byproduct of sound reproduction—dynamic noise. To reduce this type of noise, Onkyo has developed DIDRC technology for use in our hi-fi components. Despite being beyond the normal range of human hearing, frequencies above 100 kHz are susceptible to clock pulse and other forms of distortion from digital devices. Such distortion in the super high frequency range can generate “beat interference”, which in turn affects the character or atmosphere of the original sound. By improving linearity and reducing distortion in the super-high frequency range, Onkyo’s new DIDRC technology effectively reduces perceptible noise.

### 2. Low Negative-Feedback Design

Too much NFB makes a system susceptible to counter-electromotive force from the speakers, resulting in a drop in perceived sound quality. To avoid this, Onkyo focuses on improving the frequency response and reducing distortion, without relying so much on NFB.

### 3. Closed Ground-Loop Circuits

The M-5000R employs a sophisticated closed-circuit design in which each circuit has a separate link to the power supply. This helps to cancel individual circuit noise and keep the ground potential free of distortion.

### 4. HICC (High Instantaneous-Current Capability)

HICC enables an amplifier to immediately cancel the speakers’ reflex energy and instantaneously send out the next signal. The same high current required to achieve this also supports the amplifier’s ability to handle speaker impedance fluctuations.

### 5. Symmetrical Twin-Monaural Construction

Power devices for the left and right channels of the M-5000R are aligned symmetrically. Each channel has the same electrical and structural design, and signal pathways are uniform in length. This helps to minimize errors in stereophonic playback.

## Quad Push-Pull Amplification Design with Three-Stage Inverted Darlington Circuitry

Three-stage inverted Darlington circuitry brings greater efficiency to the M-5000R power amp by employing a low-NFB design to maintain voltage stability and enhance transient response. Extremely sensitive to oscillations, this circuitry requires very advanced control technology in order to be incorporated into the amplifier. Breaking further new ground, the M-5000R employs two extra transistors for each channel in a “quad push-pull” design that significantly enhances amplification power.

## BTL (Bridged Transless) Capability

The M-5000R offers the audiophile possibilities of BTL through its pro-grade XLR input. You can use the BTL feature in conjunction with a compatible pre-amp and a second power amp to double the power output for left and right channels.

## Audiophile-Quality Parts

The M-5000R incorporates two massive toroidal transformers that reduce magnetic flux leakage, improve efficiency, and keep the power supply stable. Also on-board are a sub-transformer and four 27,000 microfarad capacitors that work to make the current significantly smoother. Gold-plated, machined solid brass terminals ensure an extremely clean connection.

## New Circuit Board Construction

Rather than being directly connected to the chassis base, the circuit boards inside the M-3000R are cushioned by internal struts and affixed to the front, side, and rear panels. This method of construction prevents vibrations from the chassis from adversely affecting the circuit boards.

## Separate Panel Construction

The M-3000R features separate aluminum panels for the top, sides, and front to reduce unwanted vibrations caused by internal resonance. Compared to a one-piece chassis design, this construction method offers greater rigidity and improved noise reduction.

## SPECIFICATIONS

### M-5000R Power Amplifier

<b>Power Output (2-ch stereo)</b>	150 W/Ch (4 Ω, 20 Hz–20 kHz, 0.05%, 2 channels driven, IEC) 80 W/Ch (8 Ω, 20 Hz–20 kHz, 0.05%, 2 channels driven, IEC) 170 W/Ch (4 Ω, 1 kHz, 1%, 2 channels driven, IEC) 100 W/Ch (8 Ω, 1 kHz, 1%, 2 channels driven, IEC)
<b>Dynamic Power</b>	465 W (1 Ω) 320 W (2 Ω) 245 W (3 Ω) 196 W (4 Ω) 142 W (6 Ω) 110 W (8 Ω)
<b>THD (Total Harmonic Distortion)</b>	0.005% (1 kHz, Half power)
<b>Damping Factor</b>	130 (Front, 1 kHz, 8 Ω)
<b>Input Sensitivity and Impedance</b>	1.4 mV/10 kΩ (BTL) 700 mV/10 kΩ (RCA)
<b>Frequency Response</b>	5 Hz–100 kHz/0 dB, -1 dB (1 W)
<b>Signal-to-Noise Ratio</b>	110 dB (RCA, IHF-A)
<b>Speaker Impedance</b>	4 Ω–16 Ω or 6 Ω–16 Ω (BTL)
<b>General</b>	
<b>Power Supply</b>	AC 230 V~, 50 Hz
<b>Power Consumption</b>	280 W
<b>Dimensions (W x H x D)</b>	435 x 187.5 x 432.5 mm
<b>Weight</b>	23.5 kg
<b>CARTON</b>	
<b>Dimensions (W x H x D)</b>	627 x 332 x 546 mm
<b>Weight</b>	27.0 kg
<b>Supplied Accessories</b>	
• Instruction manual • AC power cord • 12 V trigger cable (1.8 m)	

