

TA-2

High Definition Tuner Amplifier

The Vision To Be Different

Among mid-power receivers, one stands out – the Nakamichi TA-2 High Definition Tuner Amplifier. Conceived by a company with the vision to be different, the TA-2 brings STASIS Technology to the realm of the receiver. So different is this remarkable amplifier topology that the TA-2 has established a standard of musicality heretofore attainable only with the most costly separate components. The Nakamichi TA-2 High Definition Tuner Amplifier – designed for those whose vision matches our own.

- STASIS Inherently Stable/Uniform Impedance Power Amplification
- System Remote Control
- Continuously Variable Loudness
- Nakamichi-Concept Tone Controls
- Quartz PLL Tuner With 10 Presets & Auto-Seek Tuning
- Nakamichi Multi-Regulated Power Supply With Isolated-Ground Topology



TA-2 High Definition Tuner Amplifier

STASIS — Inherently Stable/Uniform Impedance Amplifier

The TA-2 High Definition Tuner Amplifier sounds better than other receivers because it uses a radically different power amplifier design — STASIS — that neither needs nor uses global negative feedback to correct for design flaws. The significance of this statement can't be overestimated! As much as one might attempt to distinguish among amplifiers on the basis of "class of operation," trick biasing schemes, or what have you, other designs have one thing in common: the use of global feedback to correct for nonlinearity and to reduce output impedance and distortion. Reliance on global feedback works in theory — but not in practice. It works on the test bench — but not in the real world. It works with resistive loads — but not with loudspeakers. And therein lies the difference!

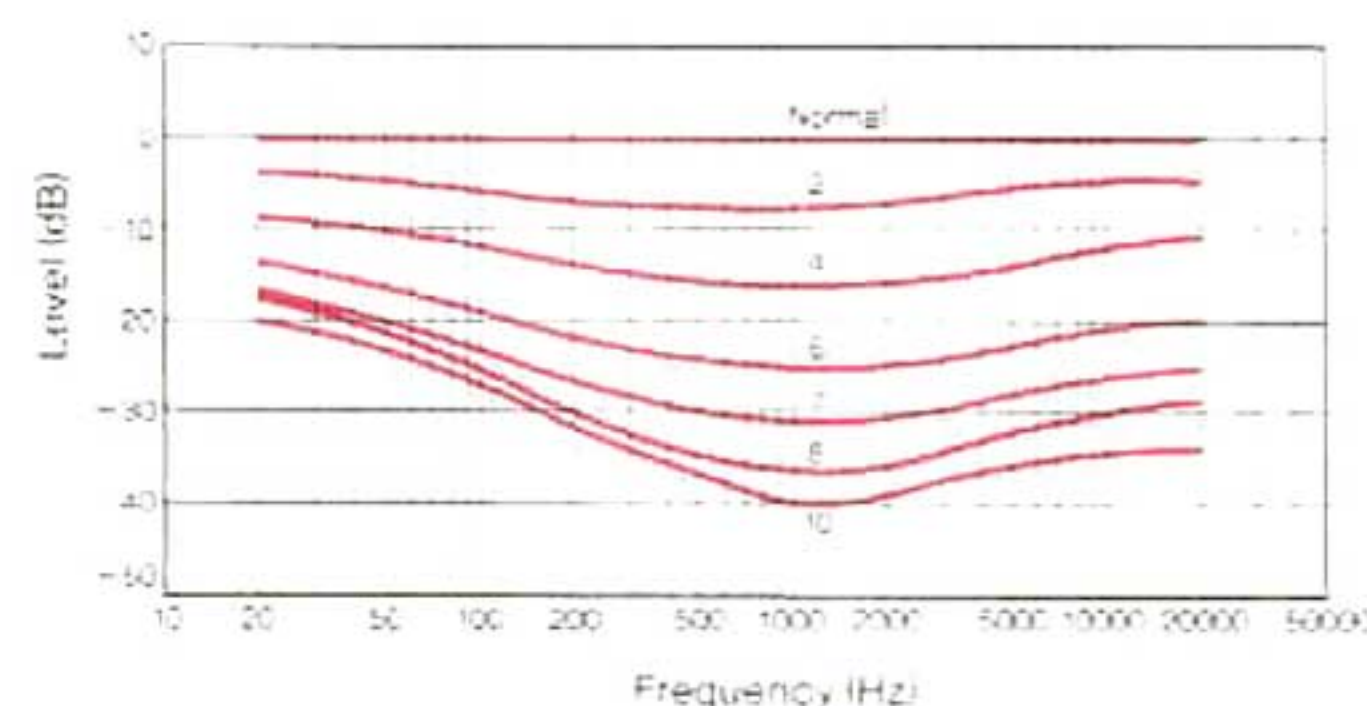
By applying ever increasing amounts of feedback, designers have been able to reduce distortion to the vanishing point — on the test bench. But each increase in feedback increases the chance of amplifier instability, a disastrous situation in which the amplifier oscillates and can destroy itself and your speakers. To prevent that, NFB amplifiers are designed with less feedback at high frequencies (which means that distortion and output impedance increase with frequency) and use an output coil to isolate the amplifier from the speaker. That means more distortion, a further increase in output impedance and an amplifier whose response and distortion when driving a speaker are likely to be worse than the specifications indicate.

STASIS operation is completely different. Two amplifiers drive each speaker: a high-quality, low-power stage with low output impedance, and a high-impedance current-mirror bootstrap that provides muscle. *Neither uses global feedback.* The low-impedance amplifier delivers only enough power to correct for distortion in the bootstrap — perhaps 1% of the total — so it operates in a "state of equilibrium" or "stasis" condition and generates negligible distortion. However, because of its low output impedance, it determines the output voltage and the total power becomes as clean as the STASIS section itself. Without global feedback, the amplifier is *inherently stable* and doesn't need an output coil so the *output impedance is uniform* and the frequency response and distortion are just as good when driving a real speaker as when measured on the test bench.

Nakamichi-Concept Tone Controls & Variable Loudness

Nakamichi recognizes that neither speakers nor listening environments are perfect and, even if they were, humans do not hear equally well at all sound pressures and frequencies. So, the TA-2 has *Bass, Treble and Variable Loudness* controls. But, once again, Nakamichi's design is different!

TA-2 tone controls are useful — not flashy — and you can defeat them for absolutely flat response when desired. Their range is limited and restricted to the frequency extremes so you can make subtle corrections in the extreme bass and treble without altering the midrange. Rather than a fixed loudness contour, the TA-2 has a *Variable Loudness* control. Set the Volume control for your maximum listening level and, as you reduce the level with the *Variable Loudness*, it automatically corrects for changes in your hearing sensitivity over a 40-dB range.



TA-2 Variable Loudness Contour

Quartz PLL Synthesized Tuner

The TA-2's *Quartz PLL Synthesized Tuner* uses four sets of twin varicap diodes to provide accurate drift-free reception, 10 station presets and a choice of *manual or auto-seek tuning*. A special buffer amplifier produces a "floating" ground to isolate the tuner, prevent interference, and ensure perfect sound quality.

Unified System Remote Control

The *RM-2TA Remote Control Unit* supplied with the TA-2 gives armchair control of an entire Nakamichi system including CD player and cassette deck. Instead of the electronic volume control used on some remote-control receivers, Nakamichi chose a motor-driven audiophile-quality potentiometer to prevent the noise and distortion often introduced by an electronic control.

Other Features



- Independent Listen & Record-Out Selectors
- Pre-Out/Main-In Loop
- High-Performance Phono Preamp With Built-In Subsonic Filter
- Audio Mute
- Speaker Selector (A/B/A+B)
- Detachable AM Loop Antenna
- Two Switched Convenience Outlets

TA-2 Specifications

Power Amplifier Section

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|---------------------------------------|--|
| Continuous Average Output Power..... | 50 watts per channel into 8 ohms, both channels driven, 20–20,000 Hz at no greater than 0.1% THD |
| Dynamic Output Power | 66 watts/channel into 8 ohms 80 watts/channel into 4 ohms |
| Power Bandwidth | 5–50,000 Hz |
| Frequency Response | 20–20,000Hz, +0, –0.5dB; 5–75,000Hz, +0, –3dB |
| S/N Ratio (A-wtd, Input Shorted)..... | Better than 100 dB re Rated Power |
| Total Harmonic Distortion..... | Less than 0.1 % |
| Peak Output Current Capability..... | 14 A per channel |

Preamplifier Section

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|--|------------------------------|
| Sensitivity (for rated output)/Input Impedance | |
| Phono MM..... | 2.5 mV/47 k ohms |
| CD/Tape..... | 150 mV/20 k ohms |
| Main In..... | 1.0 V /20 k ohms |
| Phono Maximum Input Level (1 kHz)..... | 180 mV |
| Phono THD (1 kHz, 1 V at Rec Out)..... | Less than 0.01 % |
| Phono S/N Ratio (IHF-A-202)..... | Better than 78 dB |
| RIAA Deviation | 30 – 20,000 Hz ± 0.5 dB |
| Record Output Level/Impedance..... | 150 mV/1.5 k ohms |
| Bass Control | 20 Hz, ± 10 dB |
| Treble Control..... | 20 kHz, ± 10 dB |
| Loudness (at maximum attenuation)..... | 20 Hz, +20 dB; 20 kHz, +6 dB |

Tuner Section

—FM—

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|------------------------------------|---|
| Frequency Range | 87.5 – 108.0 MHz in 100-kHz steps |
| IHF Usable Sensitivity (Mono)..... | 12.0 dBf/2.2 μV |
| 50-dB Quieting Sensitivity | Mono: 15.7 dBf/3.3 μV; Stereo: 38.5 dBf/46.1 μV |
| Signal-to-Noise at 65 dBf..... | Mono: > 79 dB; Stereo: > 74 dB |
| Muting Threshold | 30 dBf/17.3 μV |
| Frequency Response..... | 20 – 15,000 Hz ± 1 dB |
| THD at 1 kHz | Mono: < 0.1 %; Stereo: < 0.1 % |
| Capture Ratio..... | 2.0 dB |
| Alternate Channel Selectivity..... | 55 dB (± 400 kHz) |
| Stereo Separation at 1 kHz | Better than 50 dB |
| Spurious Response Rejection..... | Better than 90 dB |
| Image Rejection | Better than 75 dB |
| IF Rejection..... | Better than 80 dB |
| AM Suppression | Better than 60 dB |

—AM—

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|--------------------------------|------------------------------------|
| Frequency Range | 520 kHz – 1710 kHz in 10-kHz steps |
| Sensitivity | 53 dBμ/m |
| Signal-to-Noise Ratio | Better than 52 dB at 90 dBμ/m |
| Total Harmonic Distortion..... | Less than 0.5 % at 90 dBμ/m |
| Selectivity..... | Better than 20 dB (± 10 kHz) |

General

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|----------------------------------|---|
| Power Source..... | 120, 220, 240 or 110/120/220/240 V AC, 50/60 Hz (according to country of sale) |
| Maximum Power Consumption..... | 290 W max. |
| Convenience Outlets | Switched: 2 |
| Dimensions (excluding feet)..... | 430 (W) × 100 (H) × 370 (D) mm 16-15/16 (W) × 3-15/16 (H) × 14-9/16 (D) inches |
| Approximate Weight..... | 8.6 kg; 18 lb 15 oz. |

*Specifications and appearance subject to change for further improvement without notice.
*STASIS manufactured under license from Threshold Corporation.
*STASIS is a trademark of Threshold Corporation.

NOTE: "A" & "E" Version Models

Nakamichi components are sold in more than 50 countries many of which have strict safety regulations to which Nakamichi products must comply. Models designated by an "A" have been produced for the United States and Canada and comply with Underwriters Laboratories (UL) and/or Canadian Standards Association (CSA) standards as well as with applicable state/provincial and federal safety requirements. Models designated by an "E" have been produced for Europe and comply with EEC Recommendation 82/499 as well as with applicable European safety standards. Models without an "A" or "E" have been produced for countries other than North America, Europe and Japan and comply with applicable safety standards. Nakamichi has authorized its local distributors to warrant only products which have been produced for their respective areas.