T 163 A/V Tuner Preamplifier



- Dolby Digital, Dolby Digital EX, ProLogic II, DTS, DTS ES, DTS NEO:6, Matrix 7.1, EARS, Enhanced Stereo
- HDCD®
- Stereo Bypass
- 24 bit/192kHz DACs for all channels
- 6 Video Inputs all S-Video and Composite, 2 Tape Loops
- Component Video, 3 Inputs and 1 Output HDTV Compatible
- 3 Audio Inputs, 1 Tape Loop
- 6 Digital Inputs, 4 Coaxial, 2 TOS Link freely assignable
- 2 Digital Outputs, 1 Coaxial, 1 TOS Link
- 7.1 Analogue Input
- Analogue input levels are adjustable for best S/N ratio
- Pre-amp Outputs employ discrete component buffer amps for ultra-low output impedance and high current drive
- Zone 2 A/V Preout with independent source and volume
- RS-232 port interface for advanced control systems and software upgrades
- IEC Detachable Power Cable
- 3 x 12V Trigger Outputs, 12V Trigger Input
- 3 x IR Outputs, IR Input
- All Inputs can be renamed, and preferred surround mode is saved
- 5 Custom Scenario Presets store unique speaker setting (Bass Management) surround mode and tone control settings for instant recall
- HTR-2 8 Device Illuminated Learning Remote with Macro function
- ZR-2 Second Zone Remote included, discrete codes for independent zone

For the enthusiast that seeks the highest levels of performance and flexibility, NAD has created the T 163 A/V Tuner Preamp. When matched with an NAD multichannel power amp, the T 163 clearly achieves NAD's 10/10 Rule: adding 10% more performance would increase the price by a factor of 10! Whether your primary interest is Hollywood movies, music videos, or just listening to music, the T 163 delivers on the NAD promise of creating an intense and involving home entertainment experience at a price that competes with "ordinary" components from the mass-market brands.

Separates vs. Receivers

Separate components have always been used in professional applications, and occupy the highest tier of performance for consumer electronics products. Simply put, the receiver concept makes compromises in performance and flexibility in favor of convenience and price. This is especially true for the power amplifier section of the receiver. The large power supply and output stage heat sinks of the power amp must be compromised to fit in the single chassis format of the receiver. These high power parts can also cause interference with the lowvoltage sensitive circuits used in preamplifier, tuner, and decoder sections of the receiver. The T 163 combines all the control and decoding functions in one compact chassis, giving up nothing to the convenience of the receiver, yet by separating the power amp stages gives a big jump in performance and flexibility.

Features

The T 163 offers remarkable system flexibility, with all audio, video and digital inputs freely assignable to a nonvolatile memory. Inputs can also be renamed to add a custom touch to your system. This is easily accomplished via the OSD (On Screen Display) or via the RS-232 and available PC program.

The T 163 also includes rear panel IR input and outputs in addition to a 2-way RS-232 communications port to allow easy interface to advanced control systems like Aegis and Crestron. With a Zone 2 audio and video output, the T 163 is really two components in one, allowing fully independent programs to be played in two different rooms simultaneously. We even supply a ZR-2 remote handset to control all Zone 2 functions from the local or remote location via IR sensors. NAD has addressed two of the most common complaints with advanced surround sound systems: the inability to make adjustments 'on-the-fly' without entering a complex menu system, and the inability to have different speaker settings for different types of source material. With direct access to channel volumes on the HTR-2 remote control, it is easy to make fine level adjustments to the subwoofer, center channel, and surround channels without stopping the movie or music to enter the speaker set-up menu. A/V Presets allow you to store up to five unique speaker configurations for instant recall. Input section, speaker selection and size, crossover frequency, level, distance, and surround mode can all be adjusted to suit and saved to the non-volatile A/V Preset memory.

Naturally, all the popular surround decoding formats are supported, including the latest 6.1 and 7.1 programs from Dolby and DTS. In addition to Dolby ProLogic II and DTS Neo:6, NAD has included four custom modes for listening to 2 channel stereo music on a surround sound speaker system. EARS places the listener in the audience, with a solid front stage and a very natural acoustic envelopment best enjoyed with acoustic recordings. Matrix 7.1 uses all 7 channels to place the listener "on stage" with the musicians, right in the middle of the action. Stereo Enhanced 1 simultaneously directs the stereo signal to both front and rear speakers for maximum SPL (sound pressure level). Stereo Enhanced 2 redirects the front channels to the rear channels for late night or background music listening.

Performance

The primary reason for choosing Component Hi-Fi is to enjoy the highest levels of sonic performance, and for this the T 163 delivers in spades! Whether decoding Dolby or Digital 5.1, 6.1 or 7.1 surround formats, creating multi-channel surround from two channel sources with EARS or ProLogic II, or simply listening to HDCD encoded CD's in pure Stereo, the T 163 delivers the precision, accuracy, and musical integrity that has been an NAD hallmark for the last 30 years. Vanishingly low distortion under real world conditions means that the promise of the spec sheet is easily realized in the listening room, due to the high performance 24 bit/ 192kHz DACs and discrete component buffer amps for the preamp outputs.

Special attention has been paid to all aspects of the engineering and design of the T 163 to give the highest performance for the money. From the wide bandwidth video switching, to the highly accurate digital processing and digital to analogue conversion and analogue amplification, parts selection and circuit layout has been optimized for the best possible sound quality. Even the FM/AM tuner offers a high level of sonic performance and signal pulling capability thanks

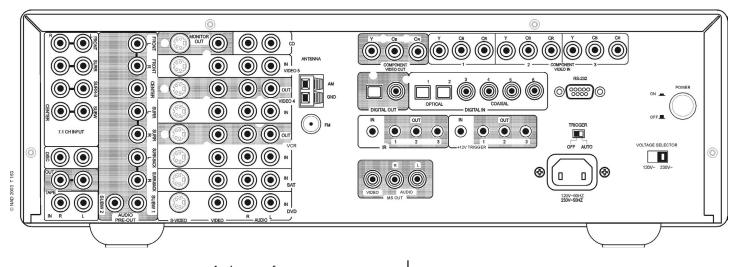
to its MOS/FET front end, PLL tuning, and accurate IF stage. This is topped off with an easy to program 30 station preset memory and RDS display.

Bass Management is comprehensive, offering 4th order low pass and 2nd order high pass filtering with adjustable frequency from 40Hz to 200Hz in 20Hz increments. And with NAD's unique A/V Preset feature, you can easily set up different bass management scenarios for different types of music or movies.

Value

You can pay several times the T 163's price, but it will be very difficult to top the performance or flexibility offered in this extraordinary component. The T 163 is really two components in one, with its Zone 2 output (with independent AV source switching and volume) making the T 163 capable of controlling two independent systems at the same time! We even provide a Zone 2 remote handset with unique IR codes.

Upgradable firmware and extensive connection options make the T 163 an investment that won't soon become obsolete. As a command center combined with one of NAD's award winning power amplifiers, the price to performance ratio is nearly untouchable by competing systems, and even rivals NAD's own more costly components.



Analogue performance	
Analogue input impedance	15K /100pF
Analogue frequency response	5Hz to 20K -/±0.8dB
Maximum input level	8V
THD+N	0.008%
Signal/noise ratio	>90dB
Dynamic Range	95dB
Analogue channel separation	70dB
Crosstalk	70dB
Maximum output level	5V
Output impedance	
Main pre-out	150 ohms
Tape out	330 ohms
Multi-room output	330 ohms
Tone Controls	
Bass	±10dB
Treble	±10dB
Digital input performance	
THD+N (Bandwidth 10Hz - 20kHz)	0.008%
Video Section	
Input and output impedance	75Ω
Component Video Bandwidth	50MHz
Composite and S-Video	≥ 12MHz
Tuner Section	
Input sensitivity Mono	16.1dBf
50dB Stereo:	36.1dBf
Harmonic Distortion; FM Mono	0.25%
Harmonic Distortion; FM Stereo	0.5%
Signal/noise; Mono	60dB
Signal/noise; Stereo	55dB
Stereo separation at 1kHz	40dB
Frequency response; + 1.5dB	30Hz - 15kHz
Physical Specifications	
Dimensions (W x H x D)	17 1/8 x 5 15/16 x 15 3/8"
	(435 x 150 x 399 mm)
Net Weight	17.6 lbs (8kg)
Shipping Weight	22.4 lbs (10.2kg)
	I



NAD Electronics International reserves the right to change specifications or features without notice. NAD is a registered trademark of NAD Electronics International. All rights reserved. No part of this publication may be reproduced, stored, or transmitted in any form whatsoever without the written permission of NAD Electronics International. © 10/03 NAD Electronics International.

www.NADelectronics.com