A Natural Leader of the Pack, by Any Standard You Choose

Multi-dimensional, superbly crafted, and loaded with impressive specs, the TX-NR906 A/V home network receiver is a true champion for the age. With seemingly endless abilities—including HQV Reon-VX video processing, dual high-def HDMI outputs, Audyssey room correction technologies, and multi-room audio and video distribution—the TX-NR906 leaves no base uncovered. Built around an isolated power block and pre-processing unit, this network receiver reveals the full potential of virtually any media. This includes any internet- or computer-based sources accessed via its network apparatus (which incorporates a new vTuner interface and Certified for Windows Vista® status). The TX-NR906 is the first receiver of its kind to include ISF (Imaging Science Foundation) video calibration, further enhancing its groundbreaking pedigree.

Network for Streaming Audio Files and Internet Radio

The network capability of the TX-NR906 gives you access to digital music files (including AAC, W MA, MP3, and WAV) and internet radio, via an Ethernet network between the TX-NR906 and your computer. It also enables you to access music files (including OGG and FLAC files) from a USB mass storage device or a portable audio player, through a USB port. You can use a portal site—vTuner—to access internet radio, podcasts, and media content. At the heart of the network is Windows Media Connect or Windows Media Player (the TX-NR906 is Certified for Windows Vista).

Advanced Video Processing and 1080p Upscaling with HQV Reon-VX

HQV Reon-VX is the most sophisticated video processing chip available for home theater. It provides the ultimate support for 1080p scaling for filtering of jaggies and artifacts, and for the reduction of random, “mosquito” and block (coded) noise. HQV Reon-VX also enables color region enhancement and the rendering of more than one billion colors.

1080p Video and High-Def Surround Sound via HDMI® (with Dual Output)

With the latest version of HDMI and advanced A/V processing capabilities, the TX-NR906 is a powerful control center for all high-definition media, including Blu-ray Disc and HD broadcasts. The TX-NR906 accepts up to four components via HDMI. Receiving and switching compatible sources, it can send a 1080p video signal through two outputs (Main or Sub). You have support for the two major high-definition surround-sound codecs—Dolby® TrueHD and DTS-HD Master Audio™—to extract lossless, studio-master audio from Blu-ray Disc.

ISF (Imaging Science Foundation) Video Calibration for Accurate Video Reproduction

The TX-NR906 is one of the first A/V receivers equipped with industry-leading ISF (Imaging Science Foundation) video calibration to dramatically improve your home theater by enabling sharper-focused, fuller-resolution images and a more accurate color balance. Transforming your A/V receiver into a true video hub, this function ensures that every video source is independently calibrated for your connected high-definition display. With that said, the video calibration has been shown to improve energy savings in displays and projectors by up to 50%.
The Leading Edge in Power and High-Def A/V Processing

With the source— including Blu-ray Disc and DVD video, HD broadcasting, gaming and video—audio and video are more demanding than ever. The TX-NR906 is designed to meet those needs. For high-definition 1080p video and audio mastering, the TX-NR906 offers a wide range of resolutions and formats—such as Dolby TrueHD and DTS-HD Master Audio—the TX-NR906 provides the right mix of amplification power, precision processing, and smart technological application.

Dynamic Volume™, which maintains the desired listening level for all content, moment-by-moment, for the best listening experience at any volume; and (2) while optimizing the dynamic range.

THX Ultra2 Plus Certified with New THX® Loudness Plus® Technology

THX Ultra2 Plus certification ensures that the TX-NR906 can perform superbly in even the largest of rooms (for example, where the screen-to-seat viewing distance is greater than 4 meters, and the room size is approximately 85 cubic meters). Meanwhile, a new technology, THX Loudness Plus, improves the movie experience at lower volume levels. To counteract the loss or distortion of ambient and bass sounds at lower volumes, THX Loudness Plus automatically adjusts the front-to-back speaker levels and frequency balance. This ensures that you can experience all the details of your movies when listening below the reference level.

A Suite of Audyssey Technologies to Tailor Multichannel Audio to the Home

The TX-NR906 is equipped with Audyssey MultEQ XT, Audyssey’s most powerful built-in solution for creating and maintaining the best sound. Audyssey MultEQ XT, which takes account of both frequency response and time domain, uses measurements from up to eight array points to deliver a clear, well-balanced and natural sound. The TX-NR906 also features two other Audyssey technologies:

1. Dynamic EQ— which responds to the wide dynamics of home theater and delivers a clear, well-balanced and natural sound.
2. Dynamic Volume— which maintains the desired listening level for all content, while optimizing the dynamic range.

Network Capability for Integrating Controllers

With the TX-NR906, it’s possible to make a network connection with Crestron and AMX controllers, enabling control of integrated home theater applications such as lighting and volume. Integrating the TX-NR906 into a sophisticated home theater system becomes a precise, yet simple, process.

A Fresh Approach to the Internal Construction of A/V Receivers

Our design philosophy for the TX-NR906 is based on a consideration of how each individual part interacts with the others and how it affects audio and video performance. The end result is a receiver where the power amplifier block and the pre-amplifier core, but are perfectly isolated. Taking it even further, the circuit boards have been affixed to the chassis, so that vibrations from the base are suppressed. As Onkyo’s flagship model for the high-definition era, the TX-NR906 is forged further ahead with gold-plated A/V inputs and outputs; a brass bus plate for perfect grounding; and custom-made, gold-plated speaker posts.

Parallel Push-Pull Amplification with Three-Stage Inverted Darlington Circuity

Parallel push-pull amplification uses different transistors to separately amplify the positive and negative halves of the waveform, bringing greater efficiency to the TX-NR906. It also uses three-stage inverted Darlington circuitry to remove any instances of distortion.

Bi-Amping and BTL (Bridged Transistor) Capability

Taking a cue from the world of high-end audio, the TX-NR906 allows for a number of different home theater set-ups beyond the standard surround-sound configurations. Compatible front speakers can be bi-amped for separate tweeter and woofer inputs. Also, BTL enables you to double the power output to compatible front speakers.

Harnessing Power for Audio Performance

Onkyo’s H.C.P.S. (High Current Power Supply) concept is based on power transformers with the capability to respond to the wide dynamics of home theater. In the case of the TX-NR906, a massive toroidal transformer improves power efficiency and radiates very little noise into the surrounding circuitry, while two separate transformers cater specifically to audio and video processing. The TX-NR906 also employs high-quality capacitors (operating at up to 18,000 microfarads) that store the charge necessary to support an effective power supply.

WRAT (Wide Range Amplifier Technology)— A Total Design for Amplification Power

Uncommonly Low Negative-Feedback Design—Get cleaner sounds on program peaks

Negative feedback (NFB) is the most cost-effective way to reduce noise at lower frequencies, but it can severely inhibit an amplifier’s ability to respond to musical crescendos and to produce sound at high frequencies. We use a low negative-feedback design with audiophile-grade, close-tolerance components at critical points in the signal path. This design achieves a frequency response out to 100 kHz for high-definition and regular DVD formats, high-resolution DVD-Audio and Super Audio CD, regular CDs, digital music files, and the latest gaming software.

Closed Ground-Loop Circuits—Enjoy distortion-free audio at any volume

If an amplifier’s ground potential (voltage) fluctuates during playback, you can expect noise. In an open-loop circuit design, where all circuits are connected to the power supply via one loop (as on many amplifiers), the noise multiplies exponentially. Onkyo’s sophisticated closed-circuit design enables each circuit to go and return directly to the power supply, thus canceling any individual circuit noise and keeping the ground potential free of distortion.
High Instantaneous-Current Capability—Experience home entertainment with greater impact.

After an amplifier outputs an audio signal, the speakers accumulate energy, reflect, and send energy back to the amplifier. The amplifier must immediately cancel the speakers’ reflex energy and instantaneously send out the next signal. A high current is necessary to handle speaker impedance fluctuations, which can force an amplifier to provide four to six times its usual current load. The instantaneous current capability of even Onkyo’s least expensive WRAT receivers exceeds that of most conventional units, which commonly have less than half the current capability. An Onkyo receiver will deliver movie soundtracks with cinema-standard dynamics and clarity.

VLSC (Vector Linear Shaping Circuitry)

In conventional digital-to-analog conversion methods, it is impossible to completely remove noise, which taints the analog signal and ultimately degrades the sound emitted from your speakers. With O -N R906’s VLSC, data is continuously sampled between two discrete points (via a signal comparison generator), and the difference is joined with analog vectors in real-time to produce a smooth output waveform. The VLSC digital-to-analog conversion method results in a smooth, virtually noise-free audio signal that faithfully reproduces the acoustic detail and subtle nuances of all your audio sources, and breathes life into digital media.

Linear Optimum Gain Volume Circuitry

In conventional volume attenuation methods, the signal comes close to the noise floor at low volumes and is therefore susceptible to interference. Even if the amount of noise is minimal, it taints the signal as it is amplified. Onkyo’s Linear Optimum Gain Volume Circuitry adjusts the gain so that less than half the typical amount of attenuation is necessary. The signal never comes close to the noise floor thereby eliminating the possibility of the noise contamination that plagues conventional volume-attenuation designs.

Burn-Brown 192 kHz/24-Bit DACs for All Channels

The TX- N R906 incorporates three Aureus™ DSP chips in advanced Texas Instruments DAC architecture (PCM1796) to achieve excellent dynamic performance and improved tolerance to clock jitter.

Texas Instruments DSP (Digital Signal Processing) Chips

The TX- N R906 incorporates three Aureus™ DSP chips in the audio processing chain. They support the latest and most innovative audio signal processing features and help create a richer listening experience.

Neural-THX® Surround Decoding Technology

Neural-THX® Surround enables content to be encoded into 5.1 or 7.1 channels and transmitted to the TX- N R906, where it is decoded onboard. This technology reduces the bandwidth needed by broadcasters to deliver sound content and enables 7.1-channel support for gaming and movies.

Playback of Different A/V Sources (Including Video) in Up to Three Different Locations

The TX- N R906 gives you the option of playing back a separate two-channel source with video images (such as a movie or TV broadcast) at the same time as playing back a 5.1-channel A/V source in the main room. Alternatively, you can use the Zone 2 and Zone 3 pre outs to connect to amplifiers in two other rooms. With the latter option, all 7.1 channels can be kept active in the main room. The TX- N R906’s remote control lets you adjust volume levels and balance in both zones, as well as bass and treble in Zone 2.

RIHD (Remote Interactive over HDMI) for System Control*

The TX- N R906 offers integrated system control with certain HDMI-compatible high-definition displays, DVD and hard-disk recorders, and Blu-ray Disc players. With one remote control, you can control functions such as Standby, Volume, and Direct Change. The TX- N R906 can seamlessly integrate with other leading brand-name devices, including those with Panasonic VIERA Link™ or Toshiba REGZA LINK™ capability, as well as selected Sharp displays.

* Compatibility depends on model.

RI (Remote Interactive) System Capability and the iPod

With O -N R906’s RI system, you can integrate and operate all RI-compatible components through a single remote control. RI also enables you to integrate virtually any iPod model via one of O -N R906’s RI Docks for the iPod.

HQV Reon-VX Video Processing and Scaling

Images scaled by Reon-VX contain 80% new pixels to augment the original video data.
**ADVANCED FEATURES**

- THX Ultra2 Plus Certified
- Network Capability for Streaming Audio files and Internet Radio (with USB Port)
- DTS-HD Master Audio, DTS-HD High Resolution Audio, Dolby TrueHD, Dolby Digital Plus Decoding
- HDMI (Version 1.3a to Support Deep Color, x.v.Color), 1080i, 1080p, Dolby TrueHD, DTS-HD Master Audio, DVD-Audio, Super Audio CD
- HDMI Video Upscaling (Up to 1080p) with HDMI Reshaping
- HD Audio and Video Processing (4 Inputs and 2 Outputs [Main/Sub])
- Component Video Upscaling (Up to 1080i)
- Parallel Push-Pull Amplification Design with Three-Stage Inverted Darlington Circuity
- Massive Toroidal Transformer and Two Separate Transformers for Audio and Video Processing
- Burn-Brown 392 kHz/24-Bit Audio DACs (PCM1796) for All Channels
- Three (x) 32-bit D/A Chips for Advanced Processing
- Bi-Amping and BTL (Bridged Transistor) Capability for Music and Movie Sound Effects
- Auto Dynamic EQ for Extension of Dynamic Range
- Auto Dynamic EQ for Loudness Correction
- Auto Dynamic EQ for Volume for Optimal Listening
- w/SC (Vector Linear Shaping Circuitry) for All Channels
- Powered Zone 2 (Audio and Video); Zone 2 and Zone 3 Pre Outs Independent Control for Volume, Balance (Zone 2 and Zone 3) and Bass/Treble (Zone 2 only)
- DF (Digital Switching Fundament) Video Calibration Function
- KBD (Remote Interactive Over HDMI) for System Control
- Compatible with RI (Remote Interactive) Dock for the iPod

**AUDIO & VIDEO FEATURES**

- • 280 W RMS Minimum into 6 & 1 kHz, BITE (1 Channel Driven)
- • 280 W RMS Minimum into 6 & 1 kHz, IEC (1 Channel Driven)
- • DTS-ES Discrete/Matrix, DTS Neo:6, DTS 96/24, Dolby TrueHD, Dolby Digital EX, Dolby Pro Logic IIx Decoding
- • W RAT (Wide Range Amplifier Technology)
- • Certified for Widescreen TVs
- • USB Port for a USB Mass Storage Device (Audio Only)
- • Component Video Switching (3 Inputs and 1 Output)
- • 6 Digital Inputs (3 Optical, 3 Coaxial) and 1 Optical Output
- • A/V Linking Mode Memory
- • Linear 0.5% Gain Volume Control
- • Non-Scaling Configuration
- • Tone Control (Bass/Treble) for All Channels
- • Color-Coded 7.1-Multichannel Inputs and Pre Outs
- • Independent Crossover Adjustment for F/C/S/SB Outputs
- • 6 Digital Inputs (3 Optical, 3 Coaxial) and 1 Optical Output
- • A Form Linking Mode Memory
- • Linear 0.5% Gain Volume Control
- • Non-Scaling Configuration
- • Tone Control (Bass/Treble) for All Channels
- • Color-Coded 7.1-Multichannel Inputs and Pre Outs
- • Dynamic Power
- • THD (Total Harmonic Distortion)
- • Damping Factor
- • Input Sensitivity and Impedance
- • Power Consumption
- • FM/AM Preset Memory
- • Tuning Frequency Range
- • Speaker Impedance
- • Dynamic Power
- • THD (Total Harmonic Distortion)
- • Damping Factor
- • Input Sensitivity and Impedance
- • Power Consumption
- • FM/AM Preset Memory
- • Tuning Frequency Range
- • Speaker Impedance

**OTHER FEATURES**

- Music Optimizer to Support Compressed Digital Music Files
- Theater-Dimensional Virtual Surround Function
- Newly Designed GUI for System Set-up
- Neural THX Surround Decoder
- Network Capability for Installing Crestron and AMX Controllers
- Customized, Gold-Plated Speaker Posts
- Gold-Plated A/V Inputs and Outputs
- Speaker A/B Configuration
- Pure Audio Mode
- A/V Synchronization Function (Up to 250 ms in 5 ms Steps)
- 40 FM/AM Presets
- KBD/Port
- IR Input and Output
- 12 V Trigger
- 6 A/V Inputs and 1 Output
- Phono Input
- Direct Mode
- Input/Lines
- Speaker B/A Configuration
- AV Input: Line (Phono MM)
- A/V Synchronization Function (Up to 250 ms in 5 ms Steps)
- 40 FM/AM Presets
- KBD/Port
- IR Input and Output
- 12 V Trigger
- 6 A/V Inputs and 1 Output
- Phono Input
- Direct Mode
- Input/Lines
- Speaker B/A Configuration
- AV Input: Line (Phono MM)

**SPECIFICATIONS**

- **Amplifier Section**
  - **Power Output**
    - 280 W RMS into 6 & 100 W (280 W RMS into 8)
    - 5.1 Ch.
  - **Dynamic Power**
    - 420 W RMS into 6 & 100 W (420 W RMS into 8)
    - 5.1 Ch.
  - **THD (Total Harmonic Distortion)**
    - 0.05% (Rated power)
  - **Damping Factor**
    - 90 (Front 1 W & 8 W)
  - **Input Sensitivity and Impedance**
    - 220 W RMS into 6 & 100 W (220 W RMS into 8)
    - 5.1 Ch.
  - **Power Consumption**
    - 240 W RMS into 6 & 100 W (240 W RMS into 8)
    - 5.1 Ch.
  - **Frequency Response**
    - 20 Hz to 20 kHz (rated power)
  - **Signal-to-Noise Ratio**
    - 110 dB (Line, 0 dB)
  - **Speaker Impedance**
    - 4-8 Ohm

- **Video Section**
  - **Input Sensitive Effect**
    - 230 V RMS (Line, 0 dB)
  - **Power Consumption**
    - 1,000 W
  - **Power Supply**
    - 230 V AC, 60 Hz
  - **Power Consumption**
    - 1,000 W
  - **Dimensions (W x H x D)**
    - 47.5 x 146 x 569 mm
  - **Weight**
    - 24.3 kg

- **Carton**
  - **Dimensions (W x H x D)**
    - 587 x 382 x 571 mm
  - **Weight**
    - 29.7 kg

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