

## TX-NR616 7.2-Channel Network A/V Receiver

BLACK | SILVER



## Escape into THX®-Certified Surround Sound

Movie, music, and gaming enthusiasts can now step up to realistic THX® Select2 Plus™-certified surround sound for less money down with the new TX-NR616 Network A/V Receiver. Onkyo's acclaimed WRAT amplifier with three-stage inverted Darlington circuitry delivers cinema-like power in the home. With Audyssey DSX® expansion, you can add extra Front Height channels for more enveloping surround sound, while 2EQ® acoustic correction guarantees optimal performance in any room. Eight HDMI® inputs handle 3D content, HD audio, and video display upscaled to 4K with onboard Qdeo™ technology. The MHL/HDMI input lets you connect a smart phone for smooth 1080p playback on your TV. Wireless home networking, meanwhile, opens up an exciting world of internet radio and cloud-based music streaming. You can even enjoy your multi-format PC-based music collection over Wi-Fi with an optional USB adapter. Intuitive system control—including audio distribution in multiple rooms—is provided by Onkyo's remote apps for iPod touch/iPhone and Android phone, or press the Quick Set-Up button on the supplied remote for instant mid-program adjustments. Visual input selection with InstaPrevue™ technology rounds out what is an exceptionally refined and affordable THX receiver.

## ADVANCED FEATURES

- THX® Select2 Plus™ Certified
- HDMI® Support for 3D, Audio Return Channel, DeepColor™, x.v.Color™, LipSync, Dolby® TrueHD, DTS-HD Master Audio™, DVD-Audio, Super Audio CD, Multichannel PCM, and CEC
- Three-Stage Inverted Darlington Circuitry
- HDMI Video Upscaling to 4K with Qdeo™ Technology by Marvell
- MHL (Mobile High-Definition Link) for Smart Phone Content on HDTV
- Direct Digital Connection of iPod/iPhone via Front-Panel USB Port
- Picture-in-Picture Input Source Preview with InstaPrevue™ Technology
- Internet Radio and Cloud Music Streaming Service Connectivity (Last.fm, MP3tunes, Spotify, AUPEO!, Simfy, vTuner)<sup>\*1</sup>
- Playback of Audio Files Through Local Network (MP3, WMA, WMA Lossless, FLAC, WAV, Ogg Vorbis, AAC, LPCM)
- Supports Onkyo Remote Apps for iPod touch/iPhone<sup>\*2</sup> and Android Phone<sup>\*3</sup>
- Audyssey DSX® and Dolby® Pro Logic® IIz for Expanded Surround Channels
- Overlaid On-Screen Display (OSD) with Quick Set-Up and Home Menu
- Powered Zone 2 and Zone 2/3 Line-Outs for Distributed Audio Playback in Multiple Rooms

<sup>\*1</sup> Availability of services depends on region. Some services may require a firmware update. <sup>\*2</sup> Compatible with iPod touch (3rd generation or later) and iPhone 3GS or later. All models require iOS 4.2 or later. <sup>\*3</sup> Requires Android OS 2.1 or later.

## AMPLIFIER FEATURES

- 160 W/Ch (6 Ω, 1 kHz, 1% THD, 1 Channel Driven, IEC); 175 W/Ch (6 Ω, 1 kHz, 1 Channel Driven, JEITA)
- WRAT (Wide Range Amplifier Technology)
- H.C.P.S. (High Current Power Supply) Massive High Power Transformer
- Discrete Output Stage Circuitry
- Optimum Gain Volume Circuitry
- PLL (Phase Locked Loop) Jitter-Cleaning Circuit Technology for S/PDIF Audio

## PROCESSING FEATURES

- TI Burr-Brown 192 kHz/24-Bit DACs for All Channels
- Advanced 32-Bit Processing DSP Chip
- 4 DSP Modes for Gaming: Rock, Sports, Action, and RPG
- Advanced Music Optimizer for Compressed Digital Music Files
- Theater-Dimensional Virtual Surround Function
- Direct Mode and Pure Audio Mode

## CONNECTION FEATURES

- 8 HDMI Inputs (1 Front/7 Rear) and 2 Outputs
- 2 USB Ports (1 Front/1 Rear)
- Mass Storage Class USB Memory Playback Capability
- Compatible with Optional UWF-1 Wireless LAN Adapter via USB
- HDTV-Capable (720p/1080i) Component Video Switching (1 Input and 1 Output)

- 5 Composite Video Inputs (1 Front/4 Rear) and 1 Output
- 4 Digital Audio Inputs (2 Optical and 2 Coaxial)
- 6 Analog Audio Inputs
- 2 Parallel Subwoofer Pre-Outs
- Color-Coded, Banana Plug-Compatible Speaker Posts (Except Zone 2)

## OTHER FEATURES

- Audyssey 2EQ® for Room Acoustic Correction
- Audyssey Dynamic EQ® for Loudness Correction
- Audyssey Dynamic Volume® to Maintain Optimal Listening Level and Dynamic Range
- Hybrid Standby Function to Reduce Power Consumption
- Independent Crossover Adjustment for Each Channel (40/50/60/70/80/90/100/120/150/200 Hz)
- A/V Sync Control (Up to 800 ms at 48 kHz)
- Tone Control (Bass/Treble) for Front L/R Channels
- Light Dimming (Display: Normal/Dim/Dimmer; Volume Knob LED: On/Off)\*
- RDS (PS/RT/PTY/TP) (European Model only)
- 40 FM/AM Random Presets
- Certified with Windows® 7 and DLNA Version 1.5
- Firmware Updates via Ethernet and USB
- RIHD (Remote Interactive over HDMI) for System Control
- Preprogrammed RI (Remote Interactive) Remote Control

<sup>\*Note:</sup> Volume knob LED is always off when display is dimmed.



# TX-NR616 7.2-Channel Network A/V Receiver

## Wireless Cloud Streaming, Internet Radio, and PC-Based Music

Connecting to your home network wirelessly via a UWF-1 Wireless LAN Adapter (sold separately), or using a standard LAN cable, the TX-NR616 makes streaming audio and internet radio easy. You can also play MP3, WMA, WMA Lossless, FLAC, WAV, Ogg Vorbis, AAC, and LPCM audio files stored on your PC through your Onkyo home cinema system with stunning power and fidelity. The receiver offers easy access to internet radio channels from Last.fm and vTuner, plus cloud-based music streaming from Spotify, AUPEO!, Simfy, and MP3tunes\*.

\*Availability of services depends on region. Some services may require a firmware update.

## Mobile High-Definition Link for Smart Phone Movies and Photos on HDTV

The TX-NR616's front-panel HDMI port is designed for the connection of mobile phones and other portable electronic devices using the new MHL standard. MHL allows you to display full 1080p video and still images on your HDTV with up to 7.1 channels of surround sound. Use the receiver's remote to control playback from your phone as it receives a handy recharge.

## InstaPrevue™ Technology Makes Switching Sources Easy

The TX-NR616 incorporates InstaPrevue visual port management technology, making input source selection much easier. InstaPrevue technology provides a live video thumbnail of the available content on your devices connected via HDMI. You no longer have to remember that your gaming console is connected to Port 3, or your Blu-ray player to Port 1, for example—you can see what's playing and choose accordingly.

## THX® Select2 Plus™ Certified

THX Select2 Plus certification is specified for rooms where the screen-to-seat viewing distance is three to four meters and the room volume is around 56 cubic meters. To achieve THX Select2 Plus certification, the TX-NR616 had to meet the world's most demanding standards for home cinema audio quality and performance, and play at reference volume levels with minimal distortion.

## 4K Video Upscaling and Processing via Qdeo™ Technology

The TX-NR616 offers full 4K (4096 x 2160) upscaling of standard video sources such as 480i/p, 720p, and 1080i/p. Interlaced-to-progressive conversion and scaling are performed by high-quality Qdeo technology from Marvell. Qdeo is a versatile video processor that uses algorithms designed to erase video noise and artifacts such as jaggies and feathering. Played back on a compatible wide-screen display, your Blu-ray Discs and DVDs will look more detailed and cinematic than ever.

Note: 4K video playback requires a 4K-compatible TV. HDMI pass-through of 4K content from source devices is not supported. 4K upscaling of analog video is only available at 480i.

## Onkyo Remote Apps for iPod touch/iPhone and Android Phone

The Onkyo Remote App 2 for iPod touch/iPhone®¹ and Onkyo Remote for Android phone®² both provide an intuitive way to operate Onkyo network A/V receivers. Control input sources, adjust settings, and play audio stored in a smartphone wirelessly (Android phone only) using the application's interactive graphical display. The two Remote Apps are available separately as free downloads.

\*¹ Compatible with iPod touch (3rd generation or later) and iPhone 3GS or later. All models require iOS 4.2 or later. \*² Requires Android OS 2.1 or later.

## Innovative Design and Premium Build Deliver Spectacular Sound

The receiver's front-panel three-stage inverted Darlingtong circuitry, a high-quality enhancement to Onkyo's proven WRAT (Wide Range Amplifier Technology). The circuit design ensures low negative feedback for reduced distortion and improved handling of speaker impedance fluctuations. Quality circuitry dovetails with a heavy-duty power supply to deliver instantaneous current in response to signal gains. The result is clear, effortless sound under heavy loads. Furthermore, the TX-NR616 features separate electronic components at the output stage—there are no cheap shortcuts to THX® sound.

## Overlaid On-Screen Display with Quick Set-Up Menu

The receiver's HDMI-linked On-Screen Display (OSD) makes initial set-up and in-program calibration very easy. The 'Q' button on your remote overlays a 'Quick Setup' menu on the program you're watching. This handy shortcut includes the most frequently used settings, and helps you optimize your home cinema's performance with the minimum of disruption. The 'Home' button accesses standard set-up menus for more detailed adjustment.

## Direct Digital iPod/iPhone Connection for Cleaner Sound

The receiver's front-panel USB port lets you play MP3 and AAC stored on an iPod/iPhone, and MP3, WMA, AAC, and FLAC audio files stored on a flash-memory device using the system's own remote for track selection and playback. Your music will also sound much cleaner and clearer, as the audio signal is transported in digital form (rather than analog) via the direct digital connection.

## Audyssey DSX® and Dolby® Pro Logic® IIz for Three-Dimensional Surround Sound

The TX-NR616 incorporates surround-sound technologies from Audyssey and Dolby to offer greater flexibility in the setup of your home cinema. Audyssey DSX can expand 5.1-channel audio soundtracks to incorporate additional Front Height channels, while the Dolby system also adds two Height channels and stereo source expansion. A seven-channel set-up provides a more detailed, realistic, and three-dimensional soundtrack, with the extra channels carrying subtle directional and ambient effects.

## SPECIFICATIONS

### Amplifier Section

| Power Output                                     |                                                                                                           |
|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Front L/R                                        | 160 W/Ch (6 Ω, 1 kHz, 1% THD, 1 Channel Driven, IEC)<br>175 W/Ch<br>(6 Ω, 1 kHz, 1 Channel Driven, JEITA) |
| Center                                           | 160 W (6 Ω, 1 kHz, 1% THD, 1 Channel Driven, IEC)<br>175 W<br>(6 Ω, 1 kHz, 1 Channel Driven, JEITA)       |
| Surround L/R                                     | 160 W/Ch (6 Ω, 1 kHz, 1% THD, 1 Channel Driven, IEC)<br>175 W/Ch<br>(6 Ω, 1 kHz, 1 Channel Driven, JEITA) |
| Surround Back L/R, Front High L/R, or Zone 2 L/R | 160 W/Ch (6 Ω, 1 kHz, 1% THD, 1 Channel Driven, IEC)<br>175 W/Ch<br>(6 Ω, 1 kHz, 1 Channel Driven, JEITA) |

|               |                                                                |
|---------------|----------------------------------------------------------------|
| Dynamic Power | 240 W (3 Ω, Front)<br>210 W (4 Ω, Front)<br>120 W (8 Ω, Front) |
|---------------|----------------------------------------------------------------|

|                                           |                                  |
|-------------------------------------------|----------------------------------|
| THD+N (Total Harmonic Distortion + Noise) | 0.08% (20 Hz–20 kHz, Half Power) |
|-------------------------------------------|----------------------------------|

|                |                        |
|----------------|------------------------|
| Damping Factor | 60 (Front, 1 kHz, 8 Ω) |
|----------------|------------------------|

|                                 |                     |
|---------------------------------|---------------------|
| Input Sensitivity and Impedance | 200 mV/47 kΩ (Line) |
|---------------------------------|---------------------|

|                                      |                          |
|--------------------------------------|--------------------------|
| Rated RCA Output Level and Impedance | 200 mV/2.2 kΩ (Line Out) |
|--------------------------------------|--------------------------|

|                                        |                         |
|----------------------------------------|-------------------------|
| Maximum RCA Output Level and Impedance | 2.0 V/2.2 kΩ (Line Out) |
|----------------------------------------|-------------------------|

|                    |                                        |
|--------------------|----------------------------------------|
| Frequency Response | 5 Hz–100 kHz/±1 dB, -3 dB (DSP Bypass) |
|--------------------|----------------------------------------|

|              |                                                 |
|--------------|-------------------------------------------------|
| Tone Control | ±10 dB, 30 Hz (Bass)<br>±10 dB, 20 kHz (Treble) |
|--------------|-------------------------------------------------|

|                       |                      |
|-----------------------|----------------------|
| Signal-to-Noise Ratio | 106 dB (Line, IHF-A) |
|-----------------------|----------------------|

|                   |                          |
|-------------------|--------------------------|
| Speaker Impedance | 4 Ω – 16 Ω or 6 Ω – 16 Ω |
|-------------------|--------------------------|

### Video Section

|                                              |                                                                                                             |
|----------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| Input Sensitivity/Output Level and Impedance | Video<br>1.0 Vp–p/75 Ω (Component Y)<br>0.7 Vp–p/75 Ω (Component Pb/Cb, Pr/Cr)<br>1.0 Vp–p/75 Ω (Composite) |
|----------------------------------------------|-------------------------------------------------------------------------------------------------------------|

|                                    |                           |
|------------------------------------|---------------------------|
| Component Video Frequency Response | 5 Hz–100 MHz/±0 dB, -3 dB |
|------------------------------------|---------------------------|

### Tuner Section

|                        |                                                                        |
|------------------------|------------------------------------------------------------------------|
| Tuning Frequency Range | FM<br>87.5 MHz–108 MHz<br>AM<br>522 kHz–1,611 kHz<br>530 kHz–1,710 kHz |
|------------------------|------------------------------------------------------------------------|

|                     |             |
|---------------------|-------------|
| FM/AM Preset Memory | 40 Stations |
|---------------------|-------------|

### General

|              |                                                            |
|--------------|------------------------------------------------------------|
| Power Supply | AC 230 V~, 50 Hz<br>(Asian Model: AC 220–240 V~, 50/60 Hz) |
|--------------|------------------------------------------------------------|

|                   |       |
|-------------------|-------|
| Power Consumption | 620 W |
|-------------------|-------|

|                           |       |
|---------------------------|-------|
| Standby Power Consumption | 0.2 W |
|---------------------------|-------|

|                        |                      |
|------------------------|----------------------|
| Dimensions (W x H x D) | 435 x 173.5 x 328 mm |
|------------------------|----------------------|

|        |         |
|--------|---------|
| Weight | 11.0 kg |
|--------|---------|

### CARTON

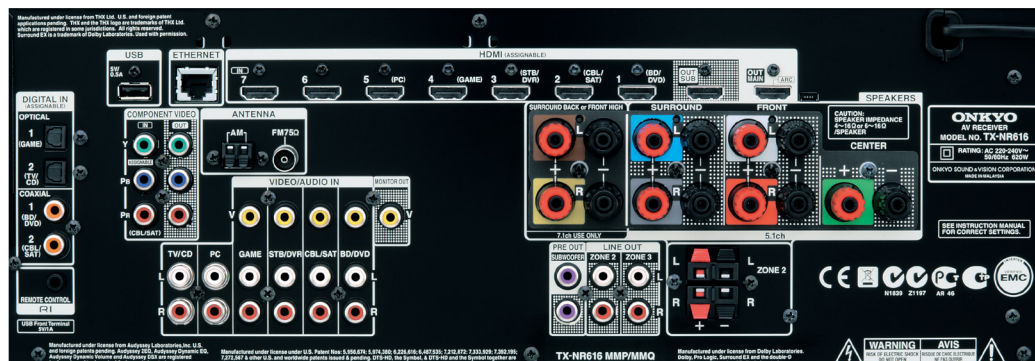
|                        |                    |
|------------------------|--------------------|
| Dimensions (W x H x D) | 570 x 297 x 423 mm |
|------------------------|--------------------|

|        |         |
|--------|---------|
| Weight | 13.5 kg |
|--------|---------|

### Supplied Accessories

- Indoor FM Antenna • AM Loop Antenna • Speaker Cable Labels
- Speaker Set-Up Microphone • Instruction Manual
- Quick Start Guide • Remote Controller • AA (R6) Batteries\* x 2

\*Not included with Chinese model.



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