

# TX-NR828 7.2-Channel Network A/V Receiver

BLACK | SILVER



Microphone for Audyssey



## Live Life to the Fullest with an Onkyo Home Cinema

The TX-NR828 gives you—the avid music and movie fan—power to make your home entertainment dreams a reality. From the aluminum faceplate through to the banana plug-compatible speaker posts, it's easy to pick this as a heavyweight contender. Three-Stage Inverted Darlington Circuitry on all seven channels effortlessly handles big dynamic gains without distorting—as THX® Select2 Plus™ certification attests—with musicality to render audio in extraordinary detail. On the hardware side, 7.2 multichannel pre-outs, powered Zone 2 outputs, and bi-amping capability grant the flexibility to customize. Eight 4K-ready HDMI® inputs including frontside MHL™ enable Dolby® TrueHD and DTS-HD Master Audio™ decoding. Audio processing comes courtesy of Audyssey MultEQ®, Audyssey DSX®, and Dolby® Pro Logic IIz, while Marvell's outstanding Qdeo™ technology upscales standard video to 4K. Need music right now? With a tap on your smartphone screen, you can serve lossless audio to your home cinema—whether its stored on handset, NAS, PC, or online streaming service—using built-in Wi-Fi, or pair up and stream with onboard Bluetooth technology. Owning an Onkyo A/V receiver is not just about having big sound on movie night—it's about maximizing the enjoyment of your daily life.

### ADVANCED FEATURES

- THX® Select2 Plus™ Certified
- 4K Passthrough from Compatible Source Devices via HDMI®
- Built-in Wi-Fi-Certified Wireless LAN Capability
- Bluetooth Version 2.1 + EDR Capability (Compatible Profile: A2DP v1.2, AVRCP v1.3)
- Three-Stage Inverted Darlington Circuitry with Discrete Output Stage on All Channels
- HDMI Video Upscaling to 4K with Qdeo™ Technology by Marvell
- MHL™ (Mobile High-Definition Link) for 1080p Smart Phone Media on HDTV
- Internet Radio and Music Streaming Service Connectivity (TuneIn Radio, Last.fm, Spotify, AUPEO!, and Simfy)<sup>1</sup>
- Playback of Audio Files Over Wireless Home Network (MP3, WMA, WMA Lossless, FLAC, WAV, Ogg Vorbis, AAC, Apple Lossless, DSD, LPCM<sup>2</sup>, and Dolby® TrueHD)
- Audyssey DSX® and Dolby® Pro Logic® IIz Upmixing for Front High or Front Wide Channels
- Audyssey MultEQ® for Room Acoustic Correction
- Picture-in-Picture Video Preview with InstaPrevue™ Technology
- Supports Onkyo Remote Apps for iPod touch/iPhone<sup>3</sup> and Android Devices<sup>4</sup> for Housewide System Control
- Phase-Matching Bass Boost
- Powered Zone 2 and Zone 2/3 Line-Outs for Distributed Audio Playback in Multiple Rooms
- Whole House Mode for App-Controllable Housewide Audio
- 7.2 Multichannel Pre-Outs
- Bi-Amping Capability

<sup>1</sup> Availability of services depends on region. Some services may require a firmware update. <sup>2</sup> LPCM is available via DLNA only. <sup>3</sup> Compatible with iPod touch (3rd generation or later) and iPhone 3GS or later. All models require iOS 4.2 or later. <sup>4</sup> Requires Android OS 2.1 or later.

### AMPLIFIER FEATURES

- 180 W/Ch (6 Ω, 1 kHz, 1% THD, 1 Channel Driven, IEC); 215 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

### PROCESSING FEATURES

- HDMI Support for 3D, 4K, Audio Return Channel, DeepColor™, x.v.Color™, LipSync, Dolby TrueHD, DTS-HD Master Audio™, DVD-Audio, Super Audio CD, Multichannel PCM, and CEC
- TI Burr-Brown 192 kHz/24-Bit DAC 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
- Double Bass Function
- Non-Scaling Configuration
- A-Form Listening Mode Memory

### CONNECTION FEATURES

- 8 HDMI Inputs (1 Front/7 Rear) and 2 Outputs
- 1 USB Port (Front)
- Mass Storage Class USB Memory Playback (Wide Selection of File Formats Supported)

### 2 Component Video Inputs and 1 Output

- 5 Composite Video Inputs and 1 Output
- 5 Digital Audio Inputs (2 Optical and 3 Coaxial)
- 7 Analog Audio Inputs (1 Front/6 Rear)
- Phono Input for Turntable Connection
- RS232 Port
- IR Input and 12V Trigger Outs (Zone 2)
- Color-Coded, Banana Plug-Compatible Speaker Posts
- Headphone Jack

### OTHER FEATURES

- Audyssey Dynamic EQ® for Loudness Correction
- Audyssey Dynamic Volume® Listening-Level Adjustment
- Overlaid On-Screen Display (OSD) with Quick Set-Up and Home Menu
- 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 in 10 ms Steps at 48 kHz)
- Tone Control (Bass/Treble) for Front L/R Channels
- Display Dimmer (Normal/Dim/Dimmer, Volume Knob LED: On/Off)<sup>\*</sup>
- RDS (PS/RT/PTY/TP) (European Model Only)
- 40 FM/AM Random Presets
- Certified with DLNA Version 1.5
- Firmware Updates via Network and USB
- Aluminum Front Panel and Volume Control Knob
- Compatible with RI Dock for iPod/iPhone and AirPlay (DS-A5)
- RIHD (Remote Interactive over HDMI) for System Control
- Bi-Directional RI (Remote Interactive) Remote Control

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

# TX-NR828 7.2-Channel Network A/V Receiver

## THX® Select2 Plus™ for Reference-Level Sound

To be awarded THX Select2 Plus certification—the most rigorous performance benchmark for this type of product—the home cinema receiver must play at studio reference volume levels with minimal distortion. Select2 Plus is specified for screen-to-seat distances of three to four meters and room volumes of about 56 cubic meters.

## Onboard Wi-Fi and Bluetooth Streaming Technology

The TX-NR828 connects to the wireless home network without LAN cables or adapters. Send a huge range of hi-res, lossless, and compressed files to your home cinema from smartphone, PC, tablet, NAS, and online sources using our remote control app. Or pair devices for quality wireless streaming using the built-in Bluetooth technology.

## Music Streaming and Internet Radio Services

The TX-NR828 comes preloaded with popular music streaming and internet radio services including Spotify, Last.fm, and Tunes Radio. They're easily selectable using the receiver's GUI or the remote control app. Explore more than 10,000 radio stations and enjoy albums and playlists with theater-fidelity sound.

Note: Availability of services depends on region. Some services may require a subscription and a firmware update. Availability of services advertised here is accurate at the time of publication but may be subject to change without notice.

## HDMI® for High Resolution Playback

The TX-NR828 features eight HDMI inputs to accept hi-res content from your media players and gaming consoles. HDMI enables Dolby® TrueHD and DTS-HD Master Audio™ audio formats, and supports 3D video. Two outputs (one with Audio Return Channel) are included to connect your TV and projector.

## Supports 4K Video Content

With 4K televisions, media players, and projectors hitting the market, it's reassuring to know your A/V receiver is compatible with this new technology. Passthrough of native 4K from source devices to an appropriate display is fully supported.

## 4K Video Upscaling via Qdeo™ Technology

The TX-NR828 uses Qdeo technology from Marvell to upscale standard video sources to brilliantly smooth 1080p (for regular HDTVs) and to an incredible 4K on compatible displays.

## MHL™ for Mobile Phones and Tablets

A frontside HDMI/MHL terminal is included to connect smartphones and other electronic devices. MHL allows you to display 1080p video and other media on your HDTV with 7.1 channels of surround sound.

## Quick and Easy Remote App Control

Our remote apps for iPhone and Android devices offer a convenient way to control your entertainment from anywhere within wireless range. The app offers a clear interface for managing content, settings, and playback across multiple zones.

## Hassle-Free Video Switching

Switching between games, movies, and cable TV should be easy. InstaPrevue™ technology names your HDMI devices and displays video thumbnails of available content. Now you can switch sources without having to remember what device is connected where.

## Overlaid Menus for Quick Adjustments

Touch the Quick Set-Up button on your remote to overlay menu in-program. You can now access useful settings without interruption to your viewing. The Home Menu, meanwhile, offers simple icons for choosing a media source, and more detailed system adjustment.

## An Introduction to Premium Hi-Fi Sound

Onkyo's WRAT (Wide Range Amp Technology) includes discrete low-negative-feedback amplifiers for punchy, true-to-life sound; closed ground-loop circuits to reduce noise; and high instantaneous current to counter impedance fluctuations. Three-Stage Inverted Darlington Circuitry is featured on all channels to handle reference-level playback without distorting.

## Audyssey MultEQ®

MultEQ equalizes your system to suit the unique shape of your room. Measuring six listening positions, MultEQ applies filters to satellites and subwoofers to create a perfectly balanced soundstage.

## Audyssey Dynamic EQ®

Dynamic EQ solves the problem of deteriorating sound quality at low volume. It selects the best frequency response and surround levels moment-by-moment, resulting in an optimal listening experience at any volume.

## Audyssey Dynamic Volume®

Audyssey Dynamic Volume® compensates for volume fluctuations in different audio content—for example, during noisy commercial breaks—and adjusts the volume in real time.

## Audyssey DSX® and Dolby® Pro Logic IIz®

Audyssey DSX lets you augment your setup with two Front Wide channels, expanding the width of the soundstage, or two Front Height speakers to add a vertical dimension to movies and games. Dolby Pro Logic IIz offers Front Height channels with 7.1-channel upmixing from stereo sources.

## App-Controllable Multi-Zone Audio

The TX-NR828 features Powered Zone 2 outputs and Zone 2/3 line-outs. This lets you assign two channels to power audio in a room equipped with speakers. An existing hi-fi system in a third room can also be connected via the line-out, enabling the use of the A/V receiver as a pre-amp and audio server. Control content in all three zones via remote app; play the same song in all zones using Whole House Mode; or enjoy a different song in every room.

## Phase-Matching Bass Enhancement

Onkyo's PM Bass optimizes low frequencies while preserving mid-range clarity. It counters phase shifting (which can affect sound quality) by synchronizing frequency timing. The result is deep, well-defined bass that won't overwhelm vocals or strings.

## Hybrid Standby Power-Saving Mode

HDMI passthrough and network connectivity are maintained while the receiver is powered down. This facilitates use of your TV and other devices without turning on the receiver.

## SPECIFICATIONS

### Amplifier Section

<b>Power Output</b>	
All Channels	180 W/Ch (6 Ω, 1 kHz, 1% THD, 1 Channel Driven, IEC)
	215 W/Ch (6 Ω, 1 kHz, 1 Channel Driven, JEITA)
<b>Dynamic Power</b>	300 W (3 Ω, Front)
	250 W (4 Ω, Front)
	150 W (8 Ω, Front)
<b>THD+N (Total Harmonic Distortion + Noise)</b>	0.08% (20 Hz–20 kHz, Rated Power)
<b>Damping Factor</b>	60 (front, 1 kHz, 8 Ω)
<b>Input Sensitivity and Impedance</b>	
	200 mV/47 kΩ (Line)
	2.5 mV/47 kΩ (Phono MM)
<b>Rated RCA Output Level and Impedance</b>	200 mV/470 Ω (Line Out)
<b>Maximum RCA Output Level and Impedance</b>	
	4.6 V/470 Ω (Line Out)
<b>Phono Overload</b>	70 mV (MM, 1 kHz, 0.5%)
<b>Frequency Response</b>	5 Hz–100 kHz/±1 dB, -3 dB (Direct Mode)
<b>Tone Control</b>	±10 dB, 20 kHz (Treble)
	±10 dB, 20 kHz (Bass)
<b>Signal-to-Noise Ratio</b>	106 dB (Line, IHF-A)
	80 dB (Phono MM, IHF-A)
<b>Speaker Impedance</b>	4 Ω – 16 Ω or 6 Ω – 16 Ω

### Video Section

<b>Input Sensitivity/Output Level and Impedance</b>	
Video	1.0 Vp-p/75 Ω (Component Y)
	0.7 Vp-p/75 Ω (Component PB/CB, PR/CR)
	1.0 Vp-p/75 Ω (Composite)
<b>Component Video Frequency Response</b>	5 Hz–100 MHz/±0 dB, -3 dB

### Tuner Section

<b>Tuning Frequency Range</b>	
FM	87.5 MHz–108 MHz
AM	522 kHz–1.611 MHz
	530 kHz–1.710 MHz
<b>FM/AM Preset Memory</b>	40 Stations

### General

<b>Power Supply</b>	AC 220–240 V~ 50/60 Hz
<b>Power Consumption</b>	720 W
<b>No-Sound Power Consumption</b>	240 W: 80 W, 230 V: 75 W
<b>Standby Power Consumption</b>	0.2 W
<b>Dimensions (W x H x D)</b>	435 x 198.5 x 398 mm (Height 260.3 mm with antennas raised)
<b>Weight</b>	15.0 kg

### CARTON

<b>Dimensions (W x H x D)</b>	576 x 331 x 508 mm
<b>Weight</b>	18.5 kg

### Supplied Accessories

- Indoor FM antenna • Antenna isolator\* • AM loop antenna • Speaker cable labels • Speaker set-up microphone • Instruction manual • Quick start guide • Remote controller • AA (R6) batteries\* x 2

\*Included with Chinese model only.

\*\*Not included with Chinese model.



Text on receiver may vary with region.

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