

# TX-NR838 7.2-Channel Network A/V Receiver

Dolby Atmos Upgradable

BLACK | SILVER



## Spellbinding Entertainment, However You Like It

Destined to intoxicate hi-fi enthusiasts as much as film lovers, the TX-NR838 boasts the absolute latest in high-resolution A/V processing. This heavyweight marries Onkyo's Emotion, Delivered high-current amplification with Dolby Atmos® multidimensional sound\*, a format that locates and moves directional audio above and around the listener in a seamless sphere of living sound. Thanks to the massive customized transformer and discrete Three-Stage Inverted Darlington Circuitry, you can feel the awesome power of multiplex movies in your own home. Hi-fi credentials are further cemented with Pure Direct Analog Path, a selectable mode that shuts down all digital circuitry when you're listening to LPs or other analog audio sources for pristine sound. Devotees of high-resolution can stream their network-attached hi-res albums using the remote app and Wi-Fi®, or get an instant fix with a smartphone and DSP-enhanced Bluetooth. The TX-NR838 is also packed with cutting-edge features for movies and gaming, with 4K/60 Hz-ready HDMI® terminals, HDCP 2.2 for future Ultra HD video streaming, and the sheer power you need for a convincing surround-sound experience. \*Firmware update required.

### ADVANCED FEATURES

- Supports New Dolby Atmos® Format for Exciting Multidimensional Sound
- THX® Select2™ Plus Certified for Cinema Reference Sound
- 4K/60 Hz-Capable HDMI® Terminals for Ultra HD Entertainment<sup>1</sup>
- Supports HDCP 2.2<sup>2</sup> Copy Protection for Future 4K Streaming, Broadcasting, and Premium Studio Content
- Zone 2 HDMI Output for HD Video in a Second Room
- Built-in Wi-Fi® Certified Wireless LAN Capability
- Bluetooth Version 2.1 + EDR Capability (Compatible Profile: A2DP v1.2, AVRCP v1.3) with Advanced Music Optimizer DSP Technology
- Three-Stage Inverted Darlington Circuitry on All Channels
- Customized Capacitors and Transformer for High-Current Capability
- Pure Direct Analog Path Mode for Interference-Free Hi-Fi Stereo Listening
- HDMI® Video Upscaling to 4K with Qdeo™ Processing Technology by Marvell
- Internet Radio and Music Streaming Subscription Services Included (TuneIn Radio, Pandora®, Spotify, AUPEO!, and Deezer)<sup>3</sup>
- Play Compressed, Lossless, and Hi-res Audio via Local Network (MP3, WMA, WMA Lossless, FLAC, WAV, Ogg Vorbis, AAC, Apple Lossless, DSD 5.6 MHz, LPCM<sup>4</sup>, and Dolby® TrueHD)
- AccuEQ Room Calibration with Mic for Clear and Balanced Sound
- Dolby® Pro Logic® IIz Upmixing for 7.1-Channel Surround Sound
- Advanced Music Optimizer to Improve Compressed Digital Audio Quality (Bluetooth Included)
- Control and Stream with Free Onkyo Remote Streaming Apps for iPod touch/iPhone<sup>5</sup> and Android Devices<sup>6</sup>
- Frontside MHL™ for 1080p Video and Stills from Smartphone and Tablet
- Overlaid Input Source Preview with InstaPrevue™ Technology
- Bi-Amping Capability for Front Channels

- Powered Zone 2 and Zone 2/3 Pre/Line-Outs for Distributed Audio Playback
- Whole House Mode for Synchronized Housewide Audio
- 7.2 Multichannel Pre-Outs
- PM Bass for Deep Bass and Clear Mid-Range

<sup>1</sup> 4K/60 Hz video is supported on HDMI inputs 1/2/3/4, the frontside input, Main Out, and Sub Out. <sup>2</sup> HDCP 2.2 is supported on HDMI input 3 and Main Out only. <sup>3</sup> Availability of services depends on region. Some services may require a paid subscription and firmware update. Availability of third-party services advertised here is accurate at the time of publication, but may be subject to change without notice. <sup>4</sup> LPCM is supported via DLNA only. <sup>5</sup> Compatible with iPod touch (3rd generation or later) and iPhone 3GS or later. All models require iOS 4.2 or later. <sup>6</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, and Optimum Gain Volume Circuitry
- PLL (Phase Locked Loop) Jitter-Cleaning Circuit Technology for S/PDIF Audio

### PROCESSING FEATURES

- HDMI for 4K/60 Hz Video, 3D, Audio Return Channel, DeepColor™, x.v.Color™, LipSync, Dolby Atmos®, Dolby® TrueHD, DTS-HD Master Audio™, DVD-Audio, Super Audio CD, Multichannel PCM, and CEC
- TI Burr-Brown 192 kHz/24-Bit DAC (8 Channels x 1)
- Dual 32-Bit Digital Signal Processing Engines
- 4 DSP Modes for Gaming: Rock, Sports, Action, and RPG
- Theater-Dimensional Virtual Surround Function
- Direct Mode and Pure Audio Mode

### CONNECTION FEATURES

- 7 HDMI Inputs (1 Front/6 Rear), Zone 1 and Zone 2 Outputs
- Mass Storage Class USB Memory Playback Capability
- Component Video Switching (1 Input and 1 Output)
- 4 Composite Video Inputs (1 Front/3 Rear) and 1 Output
- 5 Digital Audio Inputs (2 Optical and 3 Coaxial)
- 7 Analog Audio Inputs (1 Front/6 Rear)
- Phono Input (MM) for Turntable Connection
- IR Input, 12V Trigger Out (Zone 2), and RS232 Port
- 2 Parallel Subwoofer Pre-Outs

### OTHER FEATURES

- 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)
- Graphical Overlaid On-Screen Display (OSD) via HDMI with Quick Set-Up
- Hybrid Standby Function with HDMI Passthrough
- Smart Grid-Ready
- Tone Control (Bass/Treble) for Front L/R Channels
- 3-Mode Display Dimmer (Normal/Dim/Dimmer, Volume Knob LED On/Off)
- RDS (PS/RT/PTY/TP) (European Model Only)
- 40 FM/AM Random Presets
- Certified with DLNA Version 1.5
- Firmware Updates via Ethernet and USB
- RIHD (Remote Interactive Over HDMI) for System Control
- Aluminum Front Panel and Volume Control Knob
- Preprogrammed RI (Remote Interactive) Remote Control

\*Note: Volume knob LED is always off when display is dimmed

# TX-NR838 7.2-Channel Network A/V Receiver

## Dolby Atmos® Multidimensional Sound

Onkyo is among the first to introduce Dolby Atmos sound to home cinemas. Dolby Atmos uses object-oriented mixing techniques to layer independent audio elements through discrete channels, placing and moving sound effects above and around the listener with astonishing realism. The format adapts to any home cinema layout augmented by two or more in-ceiling height speakers or Dolby Atmos-enabled front speakers to bring sound alive from all directions.

## Onkyo Sound is Emotion, Delivered

Drivers don't judge sports cars on top speed alone. Acceleration, cornering, and braking are equally important. It's the same with A/V receivers—wattage is an indication of loudness, not sound quality. The real test is current. High instantaneous current enhances speaker control for accurate and musical audio reproduction, from delicate piano passages to the full-throated roar of an orchestra. It's the cornerstone of our amplification philosophy, and no one can match Onkyo for dynamic driving power. We don't just translate signals into sound. We create sound you can feel.

## Engineered for Pure Exhilaration

High current is achieved with Wide Range Amplifier Technology (WRAT). The design is built around a custom high-output transformer, customized 15,000 µF capacitors, and low-impedance copper bus-plates. Three-Stage Inverted Darlington Circuitry amplification features a discrete low-impedance output stage with high-current transistors for instantaneous power and extremely low distortion. The culmination of over 60 years' audio engineering know-how, WRAT preserves the life and character of the master recording.

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

THX certification guarantees the same high volume, low-distortion sound you experience in a multiplex cinema. Your TX-NR838 receiver passed more than 2,000 laboratory tests to ensure every aspect of audio performance meets THX standards for cinema-reference sound. THX Select2 Plus is recommended for screen-to-seat viewing distances of three to four meters.

## Pure Direct Analog Path for Interference-Free Hi-Fi Amplification

Pure Direct Analog Path mode brings higher fidelity to vinyl, SACD, or CD playback via your home cinema. With this mode engaged, every digital circuit is physically shut down to prevent interference. Signals pass directly from the phono or analog audio inputs to the amplifiers and arrive at your front loudspeakers in pure analog form. The improvement in audio quality is quite dramatic, with the rich tonal character of your LPs shining through. This mode lets your A/V receiver double a dedicated all-analog hi-fi stereo amplifier.

## Latest HDMI® for 4K/60 Hz Video and HDCP 2.2

All HDMI terminals (except Input 5/6) feature the latest HDMI supporting 4K video at 60 frames per second and 21:9 cinema aspect. Now you can add enveloping surround-sound to next-generation Ultra HD games and video

for truly breathtaking entertainment. The TX-NR838 also supports HDCP 2.2 copy protection, which is essential for viewing future premium streamed and broadcast Ultra HD and Full HD content.

## 4K Video Upscaling with Qdeo™ Technology

The TX-NR838 features Qdeo™ video processing technology to upscale low-resolution video to liquid-smooth 1080p (for HDTV) and 4K for compatible displays. This means video from older games and DVDs looks sharp and clean, giving your old favorites a new lease on life.

## Share Your HD Video Sources in Two Zones

Use the HDMI Sub Out to connect a second display in another room. This allows you to route 1080p content from the media players connected to your receiver and play it back on another TV with easy smartphone control.

## Wi-Fi® and Bluetooth Inside

Wi-Fi and Bluetooth technology are built in. Download our free app and you've got a graphic remote control with a range of streaming options in the palm of your hand, or pair your Bluetooth-capable device and send almost any audio to your home cinema. With Advanced Music Optimizer enhancement, music via Bluetooth never sounded so good.

## Stream Music from Smartphone and Tablet

For lossless audio streaming, tap on the Onkyo Remote App icon on your smartphone to find your music loaded and ready with familiar song organization and playback controls. You can also browse and stream millions of tracks on Spotify and Deezer (as well as a variety of internet radio services) from within the app.

## Stream Network-Attached Hi-res Music via Remote App

You can also use the app to locate and stream your 192/24 and 96/24 hi-res albums (including 5.6 MHz DSD) via DLNA. Bask in the extraordinary clarity, depth, and detail of high-resolution music.

## Powered Multi-Zone Audio and Bi-Amping

Powered Zone 2 speaker terminals let you power audio in another room equipped with speakers, controlling content in both zones via smartphone. You can also assign surround back channels to bi-amp your front loudspeakers.

## AccuEQ Room Calibration

AccuEQ optimizes surround-sound and two-channel audio to suit your listening space. In particular, AccuEQ extracts the best possible performance from your front speakers to make stereo listening more dynamic and exciting. The system analyzes speaker setup and room acoustics from one listening position (which simplifies the calibration process) and optimizes frequency response and output levels for maximum clarity.

## 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, Half 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 Hz (Bass) ±10 dB, 20 kHz (Treble)
<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 kHz 530 kHz–1,710 kHz
<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>	90 W
<b>Standby Power Consumption</b>	0.15 W
<b>Dimensions (W x H x D)</b>	
	435 x 198.5 x 400 mm (Height 26.12 mm with antennas raised)
<b>Weight</b>	15.5 kg

### CARTON

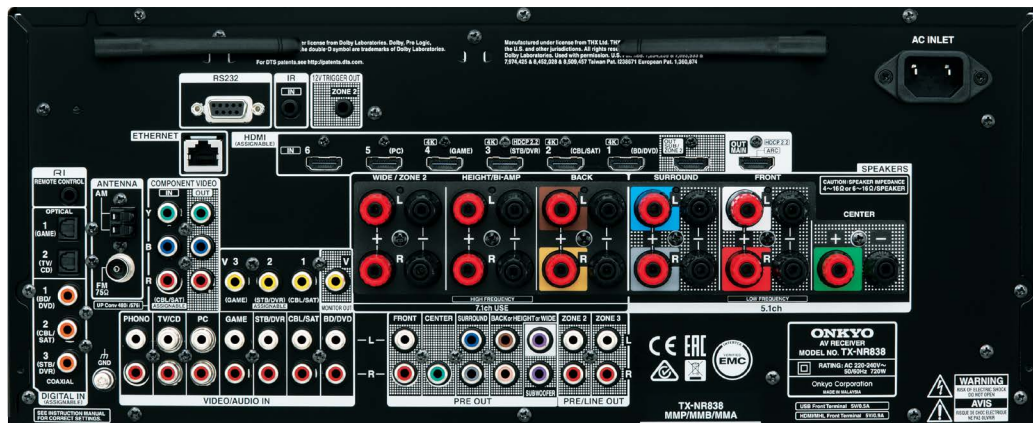
<b>Dimensions (W x H x D)</b>	576 x 331 x 508 mm
<b>Weight</b>	18.5 kg

### Supplied Accessories

• Indoor FM antenna • Antenna isolator • AM loop antenna • Color labels for speaker cables • Speaker setup microphone • Instruction manual • 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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