

TX-NR646 7.2-Channel Network A/V Receiver

BLACK | SILVER



Home Cinema at the Cutting Edge

Experience the cutting edge of home cinema with the 7.2-channel TX-NR646 Network A/V Receiver, the first in its class to feature the revolutionary DTS:X™ and Dolby Atmos® multi-dimensional audio formats. Onkyo's high-current amplification system drives your speakers to reproduce soundtracks with maximum impact and fidelity at 160 W/Ch. UltraHD video capability is equally impressive, with eight HDMI® 2.0a terminals including dedicated HDCP 2.2 compatible inputs for premium 4K video content and two HDMI outputs for video in separate rooms. The TX-NR646's high-grade 384 kHz/32-bit AKM DAC not only brings movies to life, but your Hi-Res and streamed music as well. Conveniently stream music over built-in Wi-Fi®, Bluetooth, AirPlay, or internet music services including Spotify Connect and Deezer. Use the free Onkyo Remote app to stream audio stored on your mobile device, browse and select tracks from online services, and control playback in two zones. Plus, for fans of vinyl, the TX-NR646 has a phono equalizer input to connect a turntable.

HIGHLIGHTS

- DTS:X™ Compatible
- Supports Dolby Atmos® up to 5.1.2 Channels
- 160 W per Channel
- Hi-Current Amp Design for Authentic Sound Reproduction
- HDMI® 8 In / 2 Out Including 1 Front (4K UltraHD / HDMI 2.0a / HDCP 2.2)
- Bluetooth Audio / Wi-Fi® with Spotify and AirPlay
- DSD 5.6 MHz, FLAC 192 kHz/24-bit Hi-Res Audio Capable
- 384 kHz/32-bit Hi-Grade DAC
- AccuEQ Room Acoustic Calibration

ADVANCED FEATURES

- New DTS:X™ New Generation Sound Format Ready
- Supports Dolby Atmos® Format for Exciting Multidimensional Sound
- 4K/60 Hz-Capable 4:4:4 HDMI® 2.0a Terminals for UltraHD Entertainment^{*1}
- Supports HDCP 2.2 for Future 4K/Full HD Video Streaming and Broadcast^{*2}
- 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
- Internet Radio and Music Streaming Subscription Services Included (TuneIn Radio, Spotify, and Deezer)^{*3}
- Playback 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^{*4}, and Dolby® TrueHD)
- Proprietary AccuEQ Room Calibration with Mic Included
- Advanced Music Optimizer to Improve Compressed Digital Audio

Quality (Bluetooth Audio Included)

- Control and Stream with Free Onkyo Remote Streaming Apps for iPod touch/iPhone^{®5} and Android™ Devices^{*6}
- PM Bass Boost for Deep Bass and Clear Mid-Range
- Powered Zone 2 and Zone 2 Line-Out for Distributed Audio Playback in Another Room
- Bi-Amping Capability for Front Channels

*1 6G video is supported on HDMI inputs 1/2/3, Main Out, and Sub Out. *2 HDCP 2.2 is supported on HDMI inputs 1/2/3, Main Out, and Sub Out. *3 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. *4 LPCM is supported via DLNA only. *5 Compatible with iPod touch (3rd generation or later) and iPhone 3GS or later. All models require iOS 4.2 or later. *6 Requires Android 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

- HDMI 2.0a Support for 4K/60 Hz, 3D, Audio Return Channel, DeepColor™, xv.Color™, LipSync, Dolby Atmos®, Dolby® TrueHD, DTS:X™, DTS-HD Master Audio™, DVD-Audio, Super Audio CD, Multichannel PCM, and CEC
- Dolby® TrueHD and DTS-HD Master Audio™ Decoding
- AK4458 384 kHz/32-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

CinemaFILTER™

- Direct Mode
- Double Bass Function
- Non-Scaling Configuration
- A-Form Listening Mode Memory

CONNECTION FEATURES

- 8 HDMI Inputs (1 Front/ 7 Rear) and 2 Outputs
- USB Port
- Mass Storage Class USB Memory Playback Capability
- 2 Component Inputs
- 3 Composite Video Inputs
- 3 Digital Audio Inputs (2 Optical and 1 Coaxial)
- 8 Analog Audio Inputs
- Phono Input for Turntable Connection
- 2 Parallel Subwoofer Pre-Outs
- Location Numbered Speaker Terminal

OTHER FEATURES

- Crossover Adjustment for Each Channel (40/50/60/70/80/90/100/120/150/200 Hz)
- A/V Sync Control (Up to 500 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)
- 3-Mode Display Dimmer (Normal/Dim/Dimmer)
- 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
- Preprogrammed RI (Remote Interactive) Remote Control

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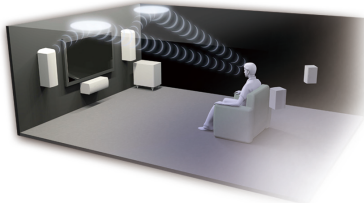
DTS:X™ Compatible

DTS:X is a next-generation object-based surround sound technology that includes height to deliver a fully-immersive listening experience to your living room. DTS:X provides listeners the ultimate in flexibility, immersion, and interactivity.



Supports Dolby Atmos® Up to 5.1.2 Channels

Dolby Atmos transports you from an ordinary moment into an extraordinary experience with captivating, multidimensional sound that fills your room and flows all around you to move your mind, body, and soul.



Hi-Current Amp Design for Authentic Sound Reproduction

High instantaneous current enhances speaker control for accurate and dynamic audio reproduction. It's the cornerstone of Onkyo's amplification philosophy.



HDMI® 8 In / 2 Out Including 1 Front (4K UltraHD / HDMI 2.0a / HDCP 2.2)

All HDMI terminals support 4K/60Hz, as well as HDCP 2.2 for next-generation UltraHD streaming and broadcasting.



HDCP2.2

Bluetooth Audio / Wi-Fi® with Spotify and AirPlay

Stream virtually any audio from your smartphone, tablet, or PC to your home cinema for clear and powerful sound. Available internet radio and music subscription services include Spotify and many more.



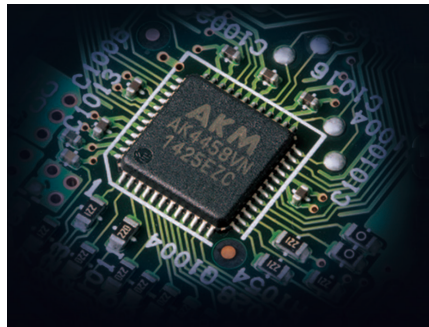
DSD 5.6 MHz, FLAC 192 kHz/24-bit Hi-Res Audio Capable

Onkyo A/V receivers are engineered for universal Hi-Res compatibility and ease of use. Use the remote app to locate your 192/24 and 96/24 albums (including 5.6 MHz DSD playback) on PC or NAS and bask in the clarity, depth, and detail of high-resolution music.



384 kHz/32-bit Hi-Grade DAC

A premium-quality AK4458 digital-to-analog converter from Asahi Kasei unlocks the full potential of any audio format, thanks to unique low-distortion filtering technologies for clear sound.



SPECIFICATIONS

Amplifier Section

Power Output	All Channels 160 W/Ch (6 Ω, 1 kHz, 1%THD, 1 Channel Driven, IEC) 175 W/Ch (6 Ω, 1 kHz, 1 Channel Driven, JEITA)
Dynamic Power	240 W (3 Ω, Front) 210 W (4 Ω, Front) 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) 3.5 mV/47 kΩ (Phono MM)
Rated RCA Output Level and Impedance	100 mV/2.2 kΩ (Zone 2 Line Out) 200 mV/470 Ω (Subwoofer Pre Out)
Maximum RCA Output Level and Impedance	1.0V/2.2 kΩ (Zone 2 Line Out) 200mV/470 Ω (Subwoofer Pre Out)
Phono Overload	70 mV (MM, 1 kHz, 0.5%)
Frequency Response	10 Hz-100 kHz/+1 dB, -3 dB (Direct Mode)
Tone Control	±10 dB, 20 Hz (Bass) ±10 dB, 20 kHz (Treble)
Signal-to-Noise Ratio	100 dB (Line, IHF-A) 80 dB (Phono MM, IHF-A)
Speaker Impedance	4 or 6 Ω-16 Ω

Video Section

Input Sensitivity/Output Level and Impedance	Video 1.0Vp-p/75 Ω (Component Y) 0.7Vp-p/75 Ω (Component Pb/Cb, Pr/Cr) 1.0Vp-p/75 Ω (Composite)
Component Video Frequency Response	5 Hz-13.5 MHz/+0 dB, -3 dB

Tuner Section

Tuning Frequency Range	FM 87.5 MHz-108 MHz 87.5 MHz-107.9 MHz (Taiwan Model) AM 522 kHz-1,611 kHz 530 kHz-1,710 kHz 530 kHz-1,710 kHz (Taiwan Model)
FM/AM Preset Memory	40 Stations

General

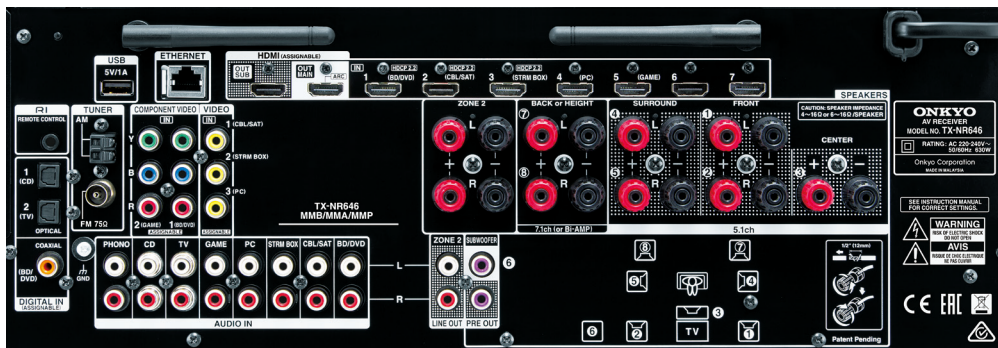
Power Supply	AC 220-240V~, 50/60 Hz AC 120V~, 60 Hz (Taiwan Model)
Power Consumption	630 W
No-Sound Power Consumption	70 W
Standby Power Consumption	0.15 W
Dimensions (W x H x D)	435 x 173.5 x 329 mm
Weight	9.4 kg

CARTON

Dimensions (W x H x D)	570 x 287 x 423 mm
Weight	12.5 kg

Supplied Accessories

- Indoor FM antenna • AM loop antenna
- Speaker set-up microphone • Instruction manual
- Remote controller • AA (R6) batteries x 2



Text on receiver may vary with region.

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