

# TX-SR313 5.1-Channel Home Theater Receiver

BLACK



HDMI

DOLBY  
TRUEHD

DTS-HD

WRAT  
WIDE RANGE AMP TECHNOLOGYCINEMA  
FILTER

192 kHz/24-bit

USB

RIHD

Theater-Dimensional

RI

Made for  
iPod iPhone

## Affordable Home Theater Just Got Better

With the addition of Onkyo's acclaimed WRAT (Wide Range Amplifier Technology) to its entry-level A/V receivers, home theater fans on a budget can now enjoy greater fidelity than ever before. This 5.1-channel AVR packs an array of features into a compact and stylish cabinet—all designed to perfect audio performance and seamlessly integrate your A/V components into one intelligent and powerful system. Four HDMI® inputs and one output provide connectivity for your 3D TV, gaming consoles, and BD player, while a USB port offers a clean digital link to your iPod®/iPhone® or flash memory drive. An HDMI-linked interactive on-screen display makes set-up and mid-program adjustment easy. Naturally, the AVR decodes a range of high-definition codecs such as Dolby® TrueHD and DTS-HD Master Audio™. But it's the sound that really sets Onkyo apart, and you can rest assured that with the TX-SR313, you're getting the precision build, power, and fidelity that you might expect from a more expensive component.

### ADVANCED FEATURES

- 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
- Direct Digital Connection of iPod®/iPhone® via Front-Panel USB Port
- Dolby® TrueHD, DTS-HD Master Audio™, Dolby® Digital Plus, DTS-HD High-Resolution Audio™ Decoding
- WRAT (Wide Range Amplifier Technology)
- Discrete Output Stage Circuitry
- Overlaid On-Screen Display (OSD) via HDMI

### AMPLIFIER FEATURES

- 65 Watts per Channel (8 Ohms, 20 Hz–20 kHz, 0.7% THD, 2 Channels Driven, FTC)
- H.C.P.S. (High Current Power Supply) Massive High Power Transformer
- 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 (Role Playing Game)
- Advanced Music Optimizer for Compressed Digital Music Files
- Theater-Dimensional Virtual Surround Function
- CinemaFILTER™
- Direct Mode
- Double Bass Function
- Non-Scaling Configuration
- A-Form Listening Mode Memory

### CONNECTION FEATURES

- 4 HDMI Inputs and 1 Output
- Front-Panel USB Port
- Mass Storage Class USB Memory Playback Capability
- HDTV-Capable (720p/1080i) Component Video Switching (2 Inputs and 1 Output)

- 5 Composite Video Inputs (1 Front/4 Rear) and 2 Outputs
- 3 Digital Audio Inputs (2 Optical and 1 Coaxial)
- 6 Analog Audio Inputs (1 Front/5 Rear) and 1 Output
- Subwoofer Pre-Out
- Speaker A/B Terminals
- Color-Coded Speaker Terminals
- Headphone Jack

### OTHER FEATURES

- Crossover Adjustment (40/50/60/70/80/90/100/120/150/200 Hz)
- A/V Sync Control (Up to 400 ms at 48 kHz)
- Tone Control (Bass/Treble) for Front L/R Channels
- 3-Mode Display Dimmer (Normal/Dim/Dimmer)
- 40 FM/AM Random Presets
- RIHD (Remote Interactive over HDMI) for System Control
- Compatible with RI (Remote Interactive) Dock for iPod/iPhone
- Full-Function RI Remote Control



# TX-SR313 5.1-Channel Home Theater Receiver

## Audio Return Channel and 3D Video via HDMI®

Four HDMI inputs on the TX-SR313 allow you to easily integrate high-definition devices such as Blu-ray players, cable/satellite tuners, and gaming consoles. HDMI implementation on this receiver also supports an Audio Return Channel, allowing audio received directly by your TV's tuner to be sent "upstream" to the A/V receiver. That means you can enjoy television programs in magnificent Onkyo sound. HDMI also supports 3D video and numerous other high-resolution formats, and has the added advantage of reducing cable clutter for a cleaner and simpler install.

## Direct Digital iPod®/iPhone® Connection for Cleaner Sound

The receiver's front-panel USB port lets you play MP3 and AAC stored in 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 rather than analog form through the direct digital connection.

## Enjoy Lossless High-Definition Movie Soundtracks

The TX-SR313 can decode Dolby® TrueHD and DTS-HD Master Audio™—two "lossless" Blu-ray formats that deliver a soundtrack identical to the studio master, so you're hearing it exactly as it's meant to be heard. The TX-SR313 also handles Dolby® Digital Plus and DTS-HD High Resolution Audio™. Dolby Digital Plus is designed to accompany HD video delivered via disc media, television broadcasts, and online content. DTS-HD High Resolution Audio, meanwhile, offers a higher bit and sampling rate than the core DTS technology.

## WRAT (Wide Range Amplifier Technology) Gives Even Higher Fidelity

WRAT is a suite of innovative technologies Onkyo developed to improve signal-to-noise ratios, and enhance the fidelity of amplified audio. The technologies work to reduce noise across the frequency range, guaranteeing a well-balanced performance even with the most dynamic soundtracks. It achieves this by employing a low negative-feedback amplifier design; using "closed" ground-loop circuitry to cancel noise from individual circuits; and by ensuring high instantaneous-current capability to cancel reflex energy and impedance fluctuations from the speakers. The WRAT design has helped make Onkyo AVRs the firm favorite among discerning audio enthusiasts, and is incorporated for the first time on the entry-level TX-SR313.

## Discrete Output Stage Circuitry Boosts Audio Performance

A receiver's ability to deliver high power into low impedances is a vital factor in its performance. If the current flow through the amplification circuit is inconsistent, audio quality will suffer. Rather than using inferior 'all-in-one' amplification chips, Onkyo receivers feature separate components at the signal output stage. Discrete transistors help guarantee a consistent, stable supply of current to the speaker system for an open and assured performance, with less chance of distortion and cooler running temperatures.

## Convenient Overlay On-Screen Display via HDMI

The TX-SR313's overlaid On-Screen Display (OSD) feature makes changing the settings on your A/V receiver quick and easy. On-screen set-up menus appear overlaid on the video image you're watching. This means you can adjust the settings immediately, without having to stop the program and switch to a different screen to access menus.

## Get More Realistic Action with Four Gaming Modes

Select from four different optimized audio modes to match your gaming content for a highly realistic surround sound experience. Rock, Sports, Action, and RPG game modes will help to bring out the best in any soundtrack, from subtle ambient effects to thundering explosions.

## Top-Quality DACs Deliver Clearer Sound

Digital-to-Analog converters are of particular importance to audio fans seeking excellent sound reproduction, and the TX-SR313 features reliable, high-performance 192 kHz/24-bit chips from Burr-Brown. As well as optimizing analog performance, these DACs are highly resistant to "clock jitter", a subtle form of digital distortion.

## Advanced Music Optimizer to Enhance Compressed Digital Music Files

While MP3 or AAC files may sound fine through the headphones of your portable music player, the limitations of these files can be exposed when played back through a quality home entertainment system. This is because a significant amount of high-frequency bit information is lost during the file-compression process. To counter this, Onkyo has designed the Advanced Music Optimizer to compensate for lost bit information and improve the quality of compressed audio signals. This results in a clearer and more expansive sound. Also included in this technology is a loudness correction feature that further improves the audio character of compressed files.

## SPECIFICATIONS

### Amplifier Section

| Power Output                              |  |
|---|--|
| Front L/R                                 | 65 W/Ch (8 Ohms, 20 Hz–20 kHz, 0.7% THD, 2 Channels Driven, FTC) |
| Center                                    | 65 W (8 Ohms, 20 Hz–20 kHz, 0.7% THD, 2 Channels Driven, FTC)    |
| Surround L/R                              | 65 W/Ch (8 Ohms, 20 Hz–20 kHz, 0.7% THD, 2 Channels Driven, FTC) |
| Dynamic Power                             |  |
|   | 160 W (3 Ohms, Front)  |
|   | 125 W (4 Ohms, Front)  |
|   | 85 W (8 Ohms, Front)   |
| THD+N (Total Harmonic Distortion + Noise) |  |
|   | 0.08% (20 Hz–20 kHz, Half Power)                                 |
| Damping Factor                            |  |
|   | 60 (Front, 1 kHz, 8 Ohms)  |
| Input Sensitivity and Impedance           |  |
|   | 200 mV/47 k-ohms (Line)  |
| Rated RCA Output Level and Impedance      |  |
|   | 200 mV/2.2 k-ohms (Rec Out)                                      |
| Maximum RCA Output Level and Impedance    |  |
|   | 2.0 V/2.2 k-ohms (Rec Out)                                       |
| Frequency Response                        |  |
|   | 5 Hz–100 kHz/±1 dB, -3 dB (DSP Bypass)                           |
| Tone Control                              |  |
|   | ±10 dB, 50 Hz (Bass)   |
|   | ±10 dB, 20 kHz (Treble)  |
| Signal-to-Noise Ratio                     |  |
|   | 100 dB (Line, I/HF-A)  |
| Speaker Impedance                         |  |
|   | 6 Ohms–16 Ohms   |

### Video Section

| Input Sensitivity/Output Level and Impedance |   |
|--|---|
| Video  | 1.0 Vp-p/75 Ohms (Component)              |
|  | 0.7 Vp-p/75 Ohms (Component Pb/Cb, Pr/Cr) |
|  | 1.0 Vp-p/75 Ohms (Composite)              |
| Component Video Frequency Response           |   |
|  | 5 Hz–100 MHz/±0 dB, -3 dB                 |

### Tuner Section

| Tuning Frequency Range |                    |
|------------------------|--------------------|
| FM                     | 87.5 MHz–107.9 MHz |
| AM                     | 530 kHz–1,710 kHz  |
| FM/AM Preset Memory    |                    |
|                        | 40 Stations        |

### General

|                        |                            |
|------------------------|----------------------------|
| Power Supply           | AC 120V~, 60 Hz            |
| Power Consumption      | 3.4 A                      |
| Dimensions (W x H x D) | 17 1/8" x 5 7/8" x 12 1/2" |
|                        | (435 x 150 x 318 mm)       |
| Weight                 | 16.8 lbs. (7.6 kg)         |

### CARTON

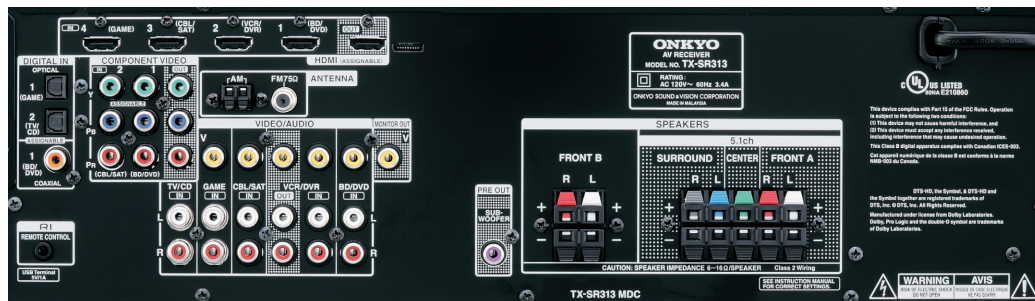
|                        |                              |
|------------------------|------------------------------|
| Dimensions (W x H x D) | 21 1/8" x 10 7/16" x 16 7/8" |
|                        | (537 x 268 x 416 mm)         |
| Weight                 | 21.6 lbs. (9.8 kg)           |

### UPC CODE

|     |              |
|-----|--------------|
| (B) | 751398010637 |
|-----|--------------|

### Supplied Accessories

- Indoor FM antenna • AM loop antenna • Speaker cable labels
- Instruction manual • Quick start guide • Remote controller
- AA (R6) batteries x 2



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**ONKYO**

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