

# TX-SR603

7.1-CHANNEL HOME THEATER RECEIVER

**ONKYO**  
IMAGINATIVE SIGHT & SOUND



Available in Black or Silver

## Balancing Power and Processing with a Whole Lot of Functionality

Compared to what's currently available in the mid-range home theater receiver category, the TX-SR603 is a class balancing act. The challenge lies in having surround processing circuits and amplifier components work effectively together with the same power supply. By tapping into Onkyo's core design competencies, this receiver delivers, even at peak moments. Building on the power of its predecessor, the TX-SR603 supports seven channels at a full 90 watts each—driven by the high current capability of a massive power transformer. For easy selection of digital processing decoders and listening modes, the front panel buttons and preprogrammed learning remote control (with macros) bring straightforward yet effective fine-tuning options to both the newcomer and the experienced enthusiast. As a mid-range receiver, the TX-SR603 owes a lot to committed engineering and superb functionality.

### VLSC (Vector Linear Shaping Circuitry) for Left and Right Channels

One of the major challenges in the circuit design of any receiver is to mitigate any noise that affects the audio signal. Onkyo has found an effective way of overcoming this problem. With VLSC, data is continuously sampled between two discrete points with a signal comparison generator. The difference between the two is joined with analog vectors in real-time to produce a smooth output waveform—a virtually pulse-noise-free audio signal that faithfully reproduces the acoustic detail and subtle nuance of your movies and music. The TX-SR603 employs VLSC in the front left and right channels—where your most prominent sounds are based.

### Component Video Upconversion with TBC (Time Base Corrector)

The latest HDTV displays have taken the video quality of home theater to unbelievable heights. The TX-SR603 converts both composite and S-Video signals to component video enabling connection to compatible televisions and HDTV displays via one connection. During the upconversion process, video signals incorporate a synchronization pulse that need to be highly precise in amplitude and timing to eliminate the clock jitter that can substantially degrade the picture, particularly on high-resolution displays. The TX-SR603 incorporates a TBC (Time Base Corrector) in the conversion process to correct inconsistencies in the signal's timing thereby ensuring the highest-quality picture possible.

### 192 kHz/24-Bit DACs for All Channels

The TX-SR603 incorporates 192 kHz/24-bit DACs for all channels—a superb feature for any entry-level receiver. With a much higher resolution than the incoming signal, these DACs enable the TX-SR603 to generate more accurate audio playback. Also, the DAC's 128x oversampling rate optimizes the signal-to-noise ratio and increases clock jitter tolerance.

### Auto Speaker Set-up with Microphone

The TX-SR603 uses a high-sensitivity microphone to pick up test tones from your favorite listening spot, and then uses an acoustic analyzer to adjust the sound pressure level and time delay of each channel. Test tones are output by each speaker, detected by the microphone and shown through an onscreen display (the process only takes two minutes). This ensures that each channel is delivered synchronously, so you get the most accurate frequency response from your favorite listening spot. If you decide to switch rooms, or even move to another home, this function determines the ideal positioning of your home theater.

### Multiroom Playback Capabilities through Powered Zone 2

Powered Zone 2 gives you the option of different sources throughout your home. With the Powered Zone 2 function, you can enjoy one input source in the main room and a different source in another room through two different connection methods: using a receiver/integrated amp in Zone 2 or using only a pair of speakers in Zone 2. In the former method, you can enjoy 7.1 surround sound in the main room and play a different AV source in Zone 2. With the latter method, you can use 5.1 surround sound in the main room and play a different AV source (stereo) in Zone 2.



Silver model

# TX-SR603

7.1-CHANNEL HOME THEATER RECEIVER



## Amplifier Features

- 90 watts per channel minimum into 8 ohms, 20 Hz-20 kHz, FTC
- VLSC (Vector Linear Shaping Circuitry) for L/R channels
- H.C.P.S.—massive isolated transformer
- WRAT (Wide Range Amplifier Technology)
- Extended frequency response (10 Hz to 100 kHz)
- Full bandwidth power to all 7 main channels
- Optimum Gain Volume Control Circuitry
- Oversized electrolytic capacitors
- Fully discrete output stages for all channels
- Auto-protection circuitry
- High-grade aluminium heatsink

## Audio/Video Features

- DTS, DTS-ES Discrete/Matrix 6.1, DTS 96/24, DTS Neo:6, Dolby Digital EX, Dolby Pro Logic IIx
- 192 kHz/24-bit DACs for all channels
- Advanced 32-bit DSP chip
- Non-scaling configuration
- Auto Speaker Set-Up with Microphone
- Component video upconversion with TBC (Time Base Corrector)
- Composite to S-Video upconversion with TBC (Time Base Corrector)
- Digital upsampling
- HDTV-capable (50 MHz) component video switching
- Powered Zone 2 capability
- Double Bass function
- A-form listening mode memory
- CinemaFILTER
- Crossover Adjustment (60/80/100/120/150 Hz) for bass management
- 3 component video inputs and 1 output
- 6 digital inputs (4 optical/2 coaxial)
- 1 digital output (optical)

- 5 S-Video inputs and 3 outputs
- 2 audio and 4 AV inputs
- Color-coded 5.1-multichannel inputs for DVD-Audio and Super Audio CD
- Subwoofer pre out
- Heavy-duty color-coded speaker binding posts
- Front panel video, S-Video, audio and digital inputs
- Pure audio mode
- Direct mode
- Automatic signal detection
- Late night mode (high/low/off)
- Rec out selector (audio) for tape dubbing

## FM/AM Tuner Features

- Outstanding selectivity and sensitivity
- 40 FM/AM random presets
- FM auto scan tuning
- FM stereo indicator
- 75-ohm antenna input
- FM indoor antenna supplied
- AM loop antenna supplied

## Other Features

- Illuminated blue-lit volume control
- Precision digital speed-sensitive volume control
- Absolute volume display
- 3-mode display dimmer (bright/normal/low)
- Headphone jack (standard size)
- Audio mute (via remote)
- Sleep timer (via remote)
- Battery-free memory backup
- Heavy-duty power cord
- Large non-resonant feet
- Heavy-gauge, anti-resonant, reinforced steel chassis
- Vibration-resistant cover

- Preprogrammed RI (Remote Interactive) compatible learning remote control with 3 macros and mode-key LEDs



## SPECIFICATIONS

### AMPLIFIER SECTION

<b>Power Output</b>	
Front L/R.....	90 W + 90 W (8 Ω, 20 Hz-20 kHz, FTC)
Center.....	90 W (8 Ω, 20 Hz-20 kHz, FTC)
Surround L/R.....	90 W + 90 W (8 Ω, 20 Hz-20 kHz, FTC)
Surround Back L/R.....	90 W + 90 W (8 Ω, 20 Hz-20 kHz, FTC)
<b>Dynamic Power</b> .....	225 W + 225 W (3 Ω, Front)
	175 W + 175 W (4 Ω, Front)
	105 W + 105 W (8 Ω, Front)
<b>THD (Total Harmonic Distortion)</b> .....	0.08 % (Rated Power)
<b>Damping Factor</b> .....	60 (Front, 1 kHz, 8 Ω)
<b>Input Sensitivity and Impedance</b>	
Line.....	200 mV/47 kΩ (CD, Tape, etc.)
<b>Output Level and Impedance</b>	
Rec out.....	200 mV/470 Ω (Tape, Video)
<b>Frequency Response</b> .....	10 Hz-100 kHz/+ 1 dB, - 3 dB (Direct mode)
<b>Tone Control</b> .....	± 10 dB, 50 Hz (BASS)
	± 10 dB, 20 kHz (TREBLE)
<b>Signal-to-Noise Ratio</b> .....	106 dB (CD, IHF-A)
<b>Speaker Impedance</b> .....	4 Ω

### VIDEO SECTION

<b>Input Sensitivity/Output Level and Impedance</b>	
Video.....	1.0 Vp-p/75 Ω (Component and S-Video Y)
	0.7 Vp-p/75 Ω (Component Pb/Cb, Pr/Cr)
	0.28 Vp-p/75 Ω (S-Video C)
	1.0 Vp-p/75 Ω (Composite)
<b>Component Video Frequency Response</b> .....	
	5 Hz-50 MHz

### TUNER SECTION

<b>[FM]</b>	
<b>Tuning Frequency Range</b> .....	87.5 MHz-108.0 MHz
<b>Usable Sensitivity</b>	
FM Stereo.....	17.2 dBf, 2.0 μV (75 Ω IHF)
FM Mono.....	11.2 dBf, 1.0 μV (75 Ω IHF)
<b>Signal-to-Noise Ratio</b>	
FM Stereo.....	70 dB (IHF-A)
FM Mono.....	76 dB (IHF-A)
<b>Total Harmonic Distortion</b>	
FM Stereo.....	0.3 %
FM Mono.....	0.2 %
<b>FM Stereo Separation</b> .....	45 dB at 1 kHz
<b>[AM]</b>	
<b>Tuning Frequency Range</b> .....	522 kHz-1,611 kHz/530 kHz-1,710 kHz
<b>Usable Sensitivity</b>	
AM.....	30 μV
<b>Signal-to-Noise Ratio</b>	
AM.....	40 dB
<b>Total Harmonic Distortion</b>	
AM.....	0.7 %

### GENERAL

<b>Power Supply</b> .....	AC 230-240 V, 50 Hz
<b>Power Consumption</b> .....	630 W
<b>Stand-by Power Consumption</b> .....	0.5 W
<b>Dimensions (W x H x D)</b> .....	435 x 174 x 377 mm
<b>Weight</b> .....	11.1 kg

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