

AV Surround Receiver AVR-687

DENON

7.1 AV Surround Receiver features Autosetup, Component Video conversion, XM-HD Surround and iPod command and control capability.



Audio section

■ Fully discrete 7-channel high power amplifiers

Front	75 W + 75 W	(8 ohms, 20 Hz - 20 kHz, 0.08 % THD)
Center	75 W	(8 ohms, 20 Hz - 20 kHz, 0.08 % THD)
Surround	75 W + 75 W	(8 ohms, 20 Hz - 20 kHz, 0.08 % THD)
Surround Back	75 W + 75 W	(8 ohms, 20 Hz - 20 kHz, 0.08 % THD)

■ High-quality surround sound reproduction

- High resolution 32bit floating point DSP
- 96 kHz processing circuit

■ Denon's basic design for high-quality sound reproduction

- Power transformer for high power driven
- Twin drive rectifier
- Large aluminum extruded heatsink

■ Wide-range play capability for DVD-Audio and Super Audio CD

The power amp circuits of the AVR-687 have been meticulously designed to reproduce the exceptionally high sound quality with wide frequency response from 10 Hz to 100 kHz.

■ Dual channel surround back power amp for 7.1 surround

The AVR-687 is equipped with a total of 7 power amps including 2 for the Surround Back channel speaker to give you more clearly defined sound localization at the rear for 6.1-channel surround sources such as DTS-ES Discrete 6.1, DTS-ES Matrix 6.1, Dolby Digital EX, and DTS-ES NEO:6.

■ Cinema Equalizer

The sound from movie sources recorded in Dolby Digital, DTS or other formats emphasizes high-frequency range due to a theater's front speakers being placed behind the movie screen. If this sound is reproduced in the home theater without correction, the high-frequency range is too strong. The AVR-687 features a Cinema Equalizer to correct these high-frequency components so that the sound is clearer and easier to listen to. (For Dolby Digital, Dolby Pro Logic II, Dolby Digital EX and DTS surround modes)

■ Supports the most advanced surround playback formats

- DTS 96/24 Decoding for DVD-Video
- DTS-ES Discrete 6.1 and Matrix 6.1
- DTS NEO:6
- Dolby Digital EX
- Dolby Pro Logic IIx
- Neural Surround

■ Denon DSP Surround Modes Add Listening Excitement

Put yourself in the middle of your favorite concert hall and music environments with Denon's DSP acoustic environment simulation modes. These DSP modes add spacious surround sound enhancements to your favorite music and video sources, and include these distinctly different sounding effects:

- | | | |
|-------------------------|---------------------|---------------|
| 1. 5 / 7 Channel Stereo | 2. Virtual Surround | 3. Rock Arena |
| 4. Jazz Club | 5. Video Game | 6. Matrix |
| 7. Mono Movie | | |

Video section

■ Component video circuits which maintain flat response up to 100MHz, ensuring sharp image quality

■ Video Up/Down conversion function

(Composite <-> S-Video, Composite -> S-Video/Component)

■ 3 Sets of Component Video Inputs

■ 3 Sets of S-Video Switching

Connectivity / Usability

■ ASD-1R Control Dock for iPod® (option): Supports iPod playback when connected to the AVR-687

iPod (*1) playback can be enjoyed through the AVR-687 when the ASD-1R, Denon's original Control Dock for iPod (sold separately), is connected to the dedicated control terminal of the AVR-687. The iPod can also be controlled via the remote controller supplied with the AVR-687.

*1) Supports 3rd-generation and later iPods equipped with a Dock connector. Some functions may not work depending on the generation of the iPod and the version of the software..

Please visit <http://blog.denon.com/asd-1r/>

for more details on compliant models and connection procedures.

■ XM Mini-Tuner Ready*

(Supports XM 5.1ch surround powered by Neural Audio)

*Optional XM Mini-Tuner and subscribes are required.

■ Auto Setup with microphone

The AVR-687 is equipped with an Auto Setup function, to achieve the most ideal sound field for your room. With the microphone placed at your listening position, the powerful 32bit floating point DSP automatically and accurately analyses, adjusts and sets the speaker configurations of your system.

■ Configurable surround back amplifiers

- **Multi-zone system:** a 5.1-channel theater in the main room and a stereo environment in a second room.
- **"Bi-amp" system:** Front (L/R) channels are bi-wired in a 5.1-channel theater to improve playback quality in the front for enhanced listening enjoyment.

■ 8ch analog Ext. IN terminal

■ New simple remote for easy operation

■ 3 User Mode buttons



Black version is also available.

AVR-687

Other features

■ Acclaimed customization feature

As with all of Denon's high-grade A/V receiver, the AVR-687 lets you adjust delay times and other parameters so that you can customize the performance of the AVR-687 to suit your own home theater and enhance operating ease. The adjustments are easy to make via a dialog format on the fluorescent display on the front panel. These customized features are then stored, for each source input and surround mode, in Personal Memory Plus so constant readjustments are not required.

■ 5 Channel / 7 Channel Stereo Mode

Denon's popular 7 Channel Stereo mode transforms your favorite 2-channel sources such as CD, tape, stereo radio and stereo video sources into exciting surround sound, free of delay effects and unnatural artifacts, from all 7 speakers. This 7 Channel Stereo mode was originally developed by DENON to enhance music lovers' enjoyment with home theater ambience.

■ Audio Delay Function (0 - 200 msec.)

Audio delay function corrects slight lags between sound and picture that can occur when a video signal is processed, such as in a Progressive Scan DVD player or outboard video processor.

■ Variable subwoofer crossover switching (40/60/80/90/100/110/120/150/200/250Hz)

■ Personal Memory Plus, for easy operation

■ Night Mode for not disturbing others

■ Front panel inputs

■ Front A/B speaker terminals

■ High-grade speaker terminals (all ch)

■ Frequency synthesis tuning

- 56-station AM/FM/XM random preset memory tuning
- Auto preset memory

Input/Output Terminals For Every A/V System

Audio Inputs

8 sets of Analog Inputs

CD, (TUNER), DVD/VDP, TV/DBS, AUX, VCR, CDR/TAPE, V.AUX(FRONT)

8 Analog EXT. Input

FRONT L/R, CENTER, SURROUND L/R, SURROUND BACK L/R, SUBWOOFER

4 Digital Inputs

OPTICAL X 2
COAXIAL X 2

Audio Outputs

1 Analog PRE OUT Terminals

SUBWOOFER

2 sets of Analog REC OUT Terminals

VCR, CDR/TAPE

Video Inputs

3 sets of Component Inputs

DVD/VDP, TV/DBS, VCR

3 S-Video Inputs

DVD/VDP, TV/DBS, VCR

4 Composite Inputs

DVD/VDP, TV/DBS, VCR, V.AUX(FRONT)

Video Outputs

1 set of Component Output

MONITOR

2 S-Video Outputs

VCR, MONITOR

2 Composite Outputs

VCR, MONITOR

Specifications

Power Amplifier Section

Rated output *THD figures are power amp stage values.

Front	75 W + 75 W	(8 ohms, 20 Hz - 20 kHz, 0.08 % THD)
	110 W + 110 W	(6 ohms, 1 kHz, 0.7 % THD)
Center	75 W	(8 ohms, 20 Hz - 20 kHz, 0.08 % THD)
	110 W	(6 ohms, 1 kHz, 0.7 % THD)
Surround	75 W + 75 W	(8 ohms, 20 Hz - 20 kHz, 0.08 % THD)
	110 W + 110 W	(6 ohms, 1 kHz, 0.7 % THD)
Surround Back	75 W + 75 W	(8 ohms, 20 Hz - 20 kHz, 0.08 % THD)
	110 W + 110 W	(6 ohms, 1 kHz, 0.7 % THD)

Preamplifier Section

Input sensitivity/Impedance

CD, DVD/VDP, TV/DBS, VCR, CDR/TAPE, AUX, V.AUX(FRONT)

Output level/Load impedance

200 mV/47 kohms	
SUBWOOFER 1.2 V/10 kohms	
CDR/TAPE, VCR 200 mV/47 kohms	
Frequency response	10 Hz - 100 kHz (+1, -3 dB) (Tone Defeat On)
Signal-to-noise ratio	98 dB (IHF-A weighted) (Tone Defeat On)
Tone control	Treble: ±12 dB at 10 kHz Bass: ±12 dB at 100 Hz

FM Section

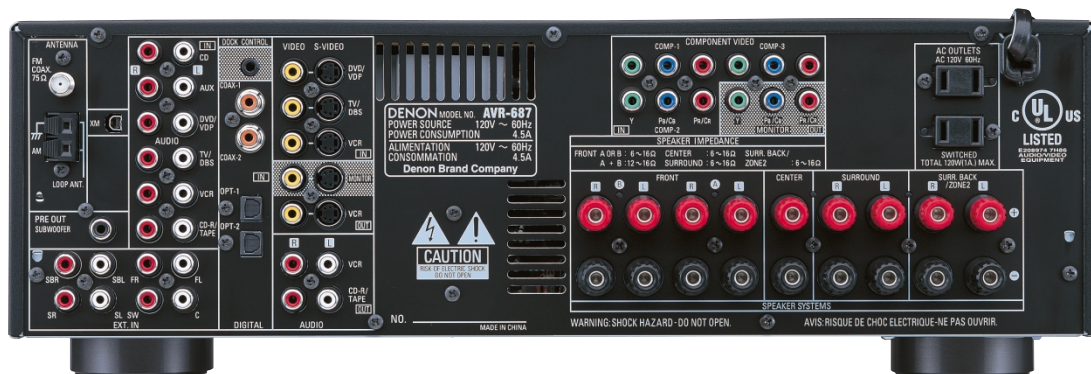
Tuning frequency range	87.5 - 107.9 MHz
Usable sensitivity	1.0 µV (11.2 dBf)

AM Section

Tuning frequency range	520 - 1710 kHz
Usable sensitivity	18 µV

General

Power supply	AC 120 V, 60 Hz
Power consumption	4.5 A
Dimensions	17-3/32" (W) x 5-25/32" (H) x 16-9/64" (D)
Weight	434 (W) x 147 (H) x 417 (D) mm 11.4 kg, 25 lbs 2 oz



*Design and specifications are subject to change without notice.
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 *DTS is registered trademarks of DTS Technology.
 *iPod is a trademark of Apple Computer, Inc., registered in the U.S. and other countries.
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