



## Home Theatre Hands-on

### Yamaha RX-V2400

#### Plus

- Excellent performance
- Video upconversion
- Highly customizable surround modes

#### Minus

- Remote not as friendly as other models

#### Nuts & Bolts

**Rated power:** 7 x 120 watts

**Connections:** Two sets of component-video inputs, one set of component-video outputs; three coaxial digital audio inputs; four optical digital audio inputs; two optical digital audio outputs; one coaxial digital audio output; six-channel direct audio input (for DVD-Audio etc.); VCR 1 and 2 (in and out); DVD, DTV and cable (in only); CD-R and MD/tape (in and out); DVD, CD and phono

**Surround modes:** Dolby Digital, Dolby Surround EX, Dolby Pro Logic IIx (movie and music modes), DTS Surround, DTS 96/24, DTS-ES, DTS Neo:6 (movie and music modes), THX processing for Dolby and DTS, multiple DSP programs (hall, church, jazz club, rock concert), Yamaha Cinema DSP (for surround effects through two or three front speakers), Yamaha Silent Cinema (for surround effects through headphones)

**Size:** 43.5 x 17.1 x 43.3 cm (w/h/d)

**Weight:** 15.5 kg

**Price:** \$1,299

separate phono preamp.

The RX-V2400 has seven channels of amplification, each rated at 120 watts. If, like most people, you have a 5.1-channel speaker system, you can allocate the two unused amplifiers to remote speakers in another room.

The unit comes with a flexible "learning" remote control that can be taught to operate other components. It's very functional and not too forbidding; rarely used controls are hidden underneath a slide-down panel. But I didn't find the remote quite as intuitive as those for the other models reviewed here. The manual is thorough, but very readable, with a good setup section to guide you through initial connections and configuration.

Like many of its linemates, the RX-V2400 features YPAO (Yamaha Parametric Room Acoustic Optimizer), which automatically configures the receiver for your speakers and listening room. You plug in the calibration microphone, enter the setup menu and select auto setup. The speakers then emit a series of test tones. By the time things simmer down, the RX-V2400 will have determined the number of speakers you have con-

nected, selected speaker type (large, small) for each channel, set the distance for each speaker and adjusted levels.

With everything calibrated, it was showtime. In *Return of the King*, swords clashed impressively and oliphants stomped massively during the Battle of Pellenor Fields. Cannon whizzed overhead during the naval battles in *Master and Commander*; and in quieter moments, the creaking of the timbers made you feel you were sailing on the HMS Surprise. Music was very satisfying, with the receiver capable of providing plenty of oomph for fortissimo passages.

The YPAO system correctly identified all five speakers as being small, and correctly determined their distances, setting delay times appropriately. However, when I checked levels with my digital sound meter, I found that the centre speaker was 3 dB too low and the right surround speaker 2 dB too high. The RX-V2400's auto setup certainly got levels closer to correct than most people would get by ear alone. But a final manual adjustment made dialog a touch more intelligible and surround effects a touch more refined.

YPAO also tailors the sound for your room and speaker using the RX-V2400's built-in parametric equalizer. Parametric equalization lets you choose the exact range of frequencies you want to adjust, as well the exact level of boost or cut that you want. On movies, I preferred the equalized sound, finding it more detailed and intelligible. On music, there was a slight tradeoff: more detail, but at times an additional nasal character.

The RX-V2400 would serve well at the centre for any premium home theatre. It's got gobs of power and incredibly flexible surround modes; and can accommodate just about any component you want to connect. The YPAO feature is icing on the cake, making it easier to set the unit up, adjusting the sound for your room and speaker system, and ensuring that you get great sound right out of the box.

### Pioneer Elite VSX-56TXi

The VSX-56TXi is a receiver for demanding videophiles and audiophiles, with all the options any movie- or music-lover could desire. It has Pioneer's signature Elite-series cosmetics, complete with the elegant gloss-black finish.

There are two sets of component-video inputs and a set of component-video outputs for connection to a high-definition display. The VSX-56TXi has component-video upconversion, so you can route all video signals through the receiver's component-video outputs. That way, you need only one set of video cables going from the receiver to your TV, and you don't have to switch sources on the TV when you switch from a source that uses component video (your DVD player or HDTV receiver, for example) to one that doesn't (say a VCR or game console).

There are five sets of AV inputs, with both composite- and S-video

connectors and five assignable digital-audio connectors (three optical, two coaxial). Vinyl fans can hook a turntable to the receiver's phono input. There is also a USB connector for attaching a computer, and an IEEE-1394 (a.k.a. FireWire, i.LINK) connector for attaching select components with 1394 connectors, such as Pioneer's universal SACD/DVD-Audio/DVD-Video player.

I connected my Toshiba Satellite notebook PC to the receiver's USB port, and immediately the PC detected the receiver and configured it to act as the computer's audio adapter. Instead of playing music through the notebook's dinky speakers, I was able to play it through the receiver and the attached Infinity speaker system. It sounded fabulous! For people with a digital music library on their PCs, this is a really cool feature.

The VSX-56TXi has seven channels of amplification, each rated at 110 watts. If you're using five speakers in your main viewing room, you can use the two rear surround channels to drive speakers in another room.

Many premium speakers are "bi-ampable," with jacks that let you connect separate amplifiers to the bass and treble sections of the speaker. Not only does bi-amplifying deliver more power to your speakers, it prevents the large power demands of the bass section from affecting middle and high frequencies. The net result can be increased clarity and smoothness. If you have bi-ampable front speakers, the VSX-56TXi's setup menu offers a bi-amplification option that lets you re-allocate its two rear-surround channels to your two front speakers. For serious audiophiles with high-quality front speakers, this is a really, really great feature.

The unit has all the surround modes you'd expect, Dolby Digital, Dolby Pro Logic IIx (movie and music modes), Dolby Surround EX, DTS, DTS-ES, DTS Neo:6 (movie and music modes), plus 12



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**Pioneer VSX-56TXi:** "This is a receiver for demanding videophiles and audiophiles, with all the options any movie- or music-lover could desire."

Pioneer-specific DSP programs for mimicking environments like concert halls and jazz clubs. The receiver also features THX Select processing, so that movie soundtracks sound like the director intended.

The VSX-56TXi comes with a universal remote control that should be able to operate all the components in your home theatre. It has a library of remote commands, but if it lacks commands for one of your devices, you can add those commands using the remote's learning function.

The manual is a model of clarity and comprehensiveness. The second chapter, a "Five-Minute

Guide," is intended to get you through initial connections and calibration as quickly as possible. Five minutes might be a tad optimistic; but thanks to the receiver's Auto MCACC (Multi-Channel Acoustic Calibration) feature, it's not that far off the mark. The Auto MCACC feature on the VHX-56TXi senses how many speakers are connected, detects speaker type (large, small) for each channel, estimates speaker distance, adjusts levels, and adjusts tonal balance using the receiver's nine-band equalizer.

You start by plugging the calibration microphone into the front panel, and placing it at your main listening position. Then push the -

Setup button on the remote, and choose System Setup from the following onscreen menu. The receiver emits a loud series of noises, pulses and squawks through your speakers, and analyzes what it's heard.

After the auto setup process, it was showtime. The naval battles in *Master and Commander* were truly awe-inspiring, and the surround effects onboard the HMS Surprise utterly convincing. In *Return of the King*, the ringwraiths screaming overhead were blood-curdling, and the clashes of the opposing armies were staggering.

The VSX-56TXi is a hefty beast, with a massive power supply and heavy shielding. Weight might seem a crude measure by which to judge a sophisticated AV component, but with a model that uses traditional amplifier design, it's not far off the mark. With a big power supply, the amplifiers are never starved for energy. Certainly, this big Pioneer receiver never sounded the least bit strained.

In addition to movies, I played all kinds of music: orchestral, jazz, instrumental, vocal. Fortissimo passages sounded open and unstrained, acoustic instruments and voice sounded natural and detailed.

I wasn't surprised to find that the Auto MCACC system had set

distances and levels perfectly. The system had made some significant equalization adjustments: boosting some bands by 4.5 dB, cutting others by 2 dB. The Pioneer receiver lets you defeat the EQ adjustments, but I found I consistently preferred the equalization settings the receiver had chosen. The sound was more open, detailed and natural.

After completing my tests, I found myself listening to one CD after another, just for the sheer pleasure of hearing this fine receiver, matched to the equally fine Infinity Modulus II speaker system. In an age where you can buy a home-theatre-in-a-box for a few hundred dollars, it might seem a stretch to call a \$1,799 receiver a bargain. But given the VSX-56TXi's stellar performance, I'm willing to make such a stretch. It's that good.

## Harman Kardon DPR-2005

Compared to the hefty Elite-series Pioneer, this Harman Kardon receiver is a mere slip of a thing. But thanks to its groundbreaking digital design, the DPR-2005 punches far above its weight.

The "DPR" in the model number stands for "Digital Path Receiver." HK's digital path receivers keep audio signals in digital form at every stage, including amplification. HK says this results in ultra-quiet output, with no noise to mask fine details.

According to Harman Kardon, the analog amps in conventional receivers waste 45 per cent of the energy from the power supply as heat, compared to 20 per cent with the digital amplifiers in HK's digital path receivers. So with digital designs, the power supplies can be smaller while preserving high-power output (7 x 120 watts in the case of the DPR-2005). And large heat sinks aren't required to conduct heat away from the power transistors. Hence, the DPR-

### Pioneer Elite VSX-56TXi

#### Plus

- Fabulous sound quality
- Great connectivity
- Superb auto set-up

#### Nuts & Bolts

**Rated power:** 7 x 110 watts

**Connections:** Two sets of component-video inputs, one set of component-video outputs; two coaxial digital audio inputs; three optical digital audio inputs; two optical digital audio outputs; six-channel direct audio input (for DVD-Audio etc.); five AV inputs (including S-video), two AV outputs USB, IEEE-1394 (i.LINK)

**Surround modes:** Dolby Digital, Dolby Surround EX, Dolby Pro Logic II, DTS Surround, DTS 96/24, DTS-ES, DTS Neo:6, THX processing for Dolby and DTS, six DSP modes each for movies and music

**Size:** 42 x 18.8 x 46.4 cm (w/h/d)

**Weight:** 20.3 kg

**Price:** \$1,799

#### Minus

- Big and heavy