

PIONEER AVH-P5900DVD

Review and Measurements by Garry Springgay

If you are like me, you don't watch a lot of movies in your car. Consequently, while I do want a video screen in my dash, I don't need all the digital audio processing that usually accompanies (and raises the price of) an in-dash DVD player. I have been looking for a really good quality source for my music, with a video screen almost as a secondary function just to make the display easier to read, and the unit simpler to operate. As luck would have it, that's just the type of video player Pioneer is about to start shipping and should be in stores by the time you read this.

Pioneer just sent us a pre-production (but near-production) sample of the company's new in-dash single DIN sized DVD / CD receiver. And as it turns out, the new Pioneer AVH-P5900DVD might be just what you and I have been looking for. Instead of including all the multi-channel video soundtrack bells and whistles of Dolby Digital and DTS, the way-cool "5900" is a more "audio-focused" video player. These features were available, however, with the appropriate optional products.

Although the Pioneer AVH-P5900DVD has a ton of the expected bells and whistles, for this review I'm going to focus on the real reason I'd buy one, and that's the audio performance. Of course, I'll give you the rundown on the cosmetics and functions, but what I care most about is not what colour I can make the displays, but what the unit sounds like and what it's like to operate and live with on a daily basis. If you are more into the display and cosmetics, have a look at the pictures accompanying this text, but even better, drop into your local dealer and play with one in person.

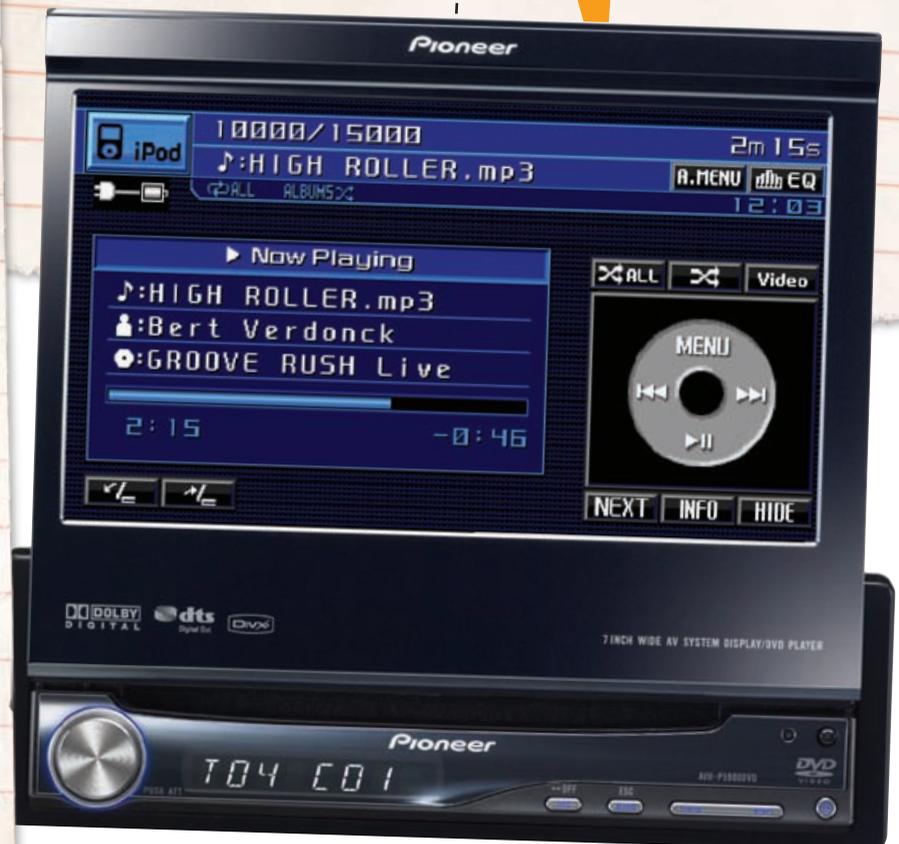
FEATURES AND FUNCTIONS

The new Pioneer AVH-P5900DVD model has a good quality (but not WVGA) 7-inch touch-panel LCD that is customizable in your choice of five colours, as well as full iPod control, and also interfaces with USB mass storage devices, (adapters required) as long as they don't use DRMs. The unit has an ISO mounting depth of about 6.25 inches, and like most motorized screen monitors, the front protrudes about 1.25 inches from where the sleeve meets the dashboard.

There are also two auxiliary inputs on the back panel that can be enabled or disabled in the software, allowing for another video source like a game, or any other widget you might want to plug in. Plus, with the incorporation of a Bluetooth-ready interface (you'll need the Bluetooth adaptor and obviously a Bluetooth phone...duh...) you can take or make calls using the audio system and never touch or connect a wire to your phone. You can also >>

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wirelessly stream music to the unit from a compatible media player or music phone. This convenience adds to both the safety and cool factors simultaneously.

MAIN FEATURES:

- A 7-inch motorized touch panel LCD
- Removable faceplate
- DVD / CD player
- iTunes AAC playback from CD or DVD
- MP3 / WMA playback from CD or DVD
- DivX video playback from CD or DVD
- MOSFET internal 4-channel amp
- Front / Rear / Subwoofer Hi Volt pre-outs
- 7-band graphic EQ
- High-pass and low-pass filters built in with selectable frequency
- Selectable volume-dependent loudness controls
- Bluetooth adapter ready (needs CD-BTB200 adapter)
- iPod direct control (audio and video) (CD-1200 required)
- USB adapter ready (CD-UB100 required)
- XM / Sirius ready
- Built-in Aux inputs
- Optional remote control (CD-R55)
- Customizable colours on both displays

LISTENING

I unpacked the unit, and began the process of hooking it up, sans instruction manual. Luckily, I'm pretty good at figuring out how to twist two wires together, and all the wires were either clearly marked or used a very obvious colour-coding scheme. After getting the connections dialed in, I fired it up and since I had no manual on this pre-production unit (it was still being written at the time), I just began to fiddle with it.

The motorized screen operates exceptionally smoothly and very quietly as well, and has very convenient screen angle controls right on the touch panel. There is also a button that just folds it flat for quick A/C control adjustments, which is also really handy here in Arizona.

The screen itself is easy to read, and very easy to use. All the menus were easily accessed with even clumsy big fingers like mine, which is more than I can say for some other touch panel products in recent memory. The amount of pressure needed to activate an LCD button was about perfect in my estimation, and did not require the kind of pressure that left big greasy fingerprints all over the display. After stepping through the myriad of screens, controls and settings, (more on these later) I got the unit set for a flat response, and began an extended listening session.

I used the Pioneer AVH-P5900DVD as a direct replacement for my Yamaha DVD / SA-CD home

player and Hafler preamp in my lab's reference system. I was pleasantly surprised to hear how similar it sounded to the expensive home audio gear it was substituting. The sound was smooth and natural, with good imaging as well. The Pioneer unit is very quiet and provided more than enough output voltage to drive my studio reference amps. I did not notice any evidence of digital artifacts nor were there any weird "zipper" noises when operating any of the software-based controls. As you'd expect, there is some DSP processing built in for certain types of staging and so on, as well as either custom or built-in selectable EQ curves for different tastes, but I preferred to listen to it flat.

My only complaint (and this niggle is quite common to most head units using rotary encoders these days) is that the volume knob is rather insensitive to rapid changes. For example, if you're playing music at a setting of 30, and you give the knob a fast crank down, it will only drop the volume a few steps. But if you turn the volume knob slowly enough for the encoder changes to be read by the microprocessor, the volume is reduced more effectively, which is sort of counter-intuitive, especially if you're in a hurry to reduce the volume.

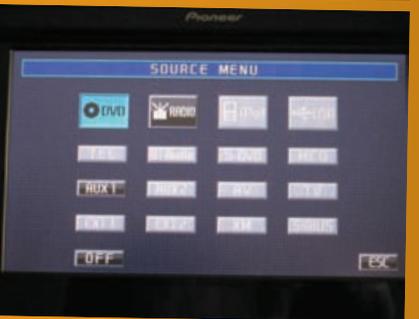
I switched to the tuner to have a listen to it as well, but to be frank, the Pioneer SupertunerIII's have been among the top performers in the aftermarket for some time, and this one is really no different. Great tuner performance these days is simply expected, and the Pioneer delivers. I did not have the required adapter to interface my iPod to be able to report on the control functions, but I did get a demo of a different model in the Pioneer booth at CES this year and I recall the interface was easy to use and fast.

Overall, the player proved to be a very good sounding source, with good musicality and enough control available to allow a knowledgeable tuner to make all the basic vehicle- / system-specific adjustments.

The AVH-P5900DVD is a great cornerstone for the beginnings of a very "source-flexible" high performance audio system.

ON-THE BENCH

After an impressive listening session, I set out to make some measurements with my trusty Audio Precision and determine what kind of specs made the unit sound as good as it did. >>>



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BUILT-IN POWER

With the battery voltage at 14.4V, I measured the maximum power of the player at 4Ω, with all four channels loaded. I have some experience with the MOSFET output amplifier used in these units, so I had a pretty good idea of what to expect, and my results were right on the money at about 17.5 watts per channel at 1kHz, or a total of 70 watts of usable power.

Remember... regardless of what the brochure or sticker says, there are no 50W x 4 head units when you limit the distortion to 1.0%.

After measuring the power output, I wanted to see what the distortion and signal-to-noise levels were on the amplifier outputs as well. (Have a look at the measured data chart for detailed results of all these tests.) The internal amp proved to be relatively quiet, at -64.8 dB referenced to 1 watt / 4 ohms, and did offer inaudible levels of distortion. Extensive listening sessions using this amplifier have indicated that although it lacks the power of even a modest outboard amplifier, the internal amp sounds quite good. Even more important are the measurements on the pre-amp outputs, as that's what most of us will use if we buy this piece as our source unit. In my experience, the most important specs are maximum unclipped output voltage, signal-to-noise ratio, and source impedance. I could include frequency response in there too, but most quality players have a very flat response.

The maximum usable output voltage measured 3.9Vrms, when terminated with a 20K Ohm load, which simulates an amplifier's input. The preamp output did not clip, even at full volume. This was a promising start, and it got better.

The next measurement was output or "source" impedance. Think of source impedance as one indication of the quality of the preamp line amplifiers and circuit design in the output stage. The measured value is equal to the value of resistance needed to reduce the output of the head unit by 6dB, from a -10dB reference. I look for numbers under 200Ω here for very good real-world performance, and the Pioneer was excellent, with a very low 39Ω measurement.

In the real world, the lower the output impedance, the better the head unit's ability to drive all the amplifiers it's connected to properly, without loss of signal or shifts in frequency response and, maybe even more importantly, to drive a noise-free signal over a noisy car chassis.

MEASURED SPECIFICATIONS

Amplifier

CEA-2006A Power per channel (all channels driven, @ 4 ohms)	17 watts/ch
A Wtd S/N Ratio (ref to 2V/1W @ 4 ohms) output	-68.4dBA
THD+N @ 2V/1W @ 4 ohms, 1kHz	0.08%
Frequency Response (-1.0dB)	20Hz-20kHz

PREAMP SECTION

Max Usable Output Voltage	3.9Vrms
A Wtd S/N Ratio ref to full output voltage	-88.9dBA
Output Impedance	39 Ohms
Frequency Response	20Hz-20kHz

Preamp signal-to-noise was also excellent, at a dead quiet -88.9dBA, prior to the 0 bits muting function, which dropped the number another few decibels. Frequency response also measured good, with less than +/- 0.5dB of variance from 20Hz to 20kHz.

As it turns out, the preamp section of the AVH-P5900DVD is truly a high-performance source.

CONTROLS AND FUNCTIONS

The removable front panel is simple and uses a rotating knob for volume. In my opinion, the rotating knob is the easiest and most logical method for adjusting volume. The knob has good tactile feel, with enough friction to simulate a "weighted" knob.

As you'd expect with a touch-screen user interface, there is a logical sequence of screens to step through and choose from to get to the adjustment or control that you're looking for. I found the Pioneer unit to be very intuitive to use, and I really didn't need a manual to access the various menus and settings. Everything is quite logically displayed in several main control categories. Have a look at the photos for a good idea of the layout and controls.

The very smooth moving screen had good picture quality for a non-WVGA LCD, and I had no problems with glare in my installation. As you'd expect, there are adjustments available for brightness and contrast so it's quite easy to dial in the picture you want.

On the back end of the unit, there are all the normal wires and connections, as well as the proprietary Pioneer connectors for all the available accessories that can be interfaced with the AVH-P5900DVD.



CONCLUSION

If you are looking for an easy-to-use, great-performing audio source first and a video screen second, you owe it to yourself to check out this new Pioneer. I'm really impressed with the audio performance and the smooth, simple, yet full-featured performance of the AVH-P5900DVD. This pre-production sample is going to be in my personal vehicle until they force me to pry it out, especially since I'm going tonight to buy all the required adapters for my Bluetooth-enabled Blackberry and my iPod. And when I do have to give it back, I'll probably have to go buy my own to replace it. **PAS**

Pioneer

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