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M U L T I M E D I A

There were some very cool products released at this year's CES in Las Vegas. One of the most innovative was the Pioneer AVIC-N1. What is an AVIC-N1? The question should be, what isn't it?

The AVIC-N1 looks like a conventional flip-screen head unit. It has a DVD player, an excellent AM/FM tuner with digital processing, great audio performance and a touch-screen to make adjustments easy. It features MP3 decoding and an excellent video navigation system. Something completely new to the world of head units is a Vehicle Dynamics Monitor. We'll get to the audio stuff and save the toys for last.



Pioneer | AVIC-N1

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Features

The N1 is a single-DIN unit with a hide-away module. The screen measures 6.4 inches in diagonal size. The motorized panel can be adjusted electronically for depth and position. When closed, there is a small LCD display on the front edge to facilitate operation. The volume control is on the left of the removable panel under the display and a joystick-style navigation control is on the right.

The radio tuner on the N1 is Pioneer's Supertuner IIID. This tuner uses digital signal processing to down-convert and decode music from the broadcast signal. The N1 will also accept an input from a stand-alone XM Radio tuner, giving you coast-to-coast coverage of your favourite tunes.

The CD / DVD transport is located centrally in the DIN unit. All the usual playback features are available for CDs and DVDs, including easy-to-use on-screen menu navigation for the DVD system. All operating features, other

than the volume control, can be accessed through the user-friendly touch-screen.

The navigation system operates from the combination of a DVD-based map, Point-of-Interest information log, and a GPS-locating antenna. You can select your destination using an address, phone number, or pre-compiled choice of bookmarked locations. The AVIC-N1 will plot several routes for the trip and should you stray from the planned route, it will automatically re-calculate a new route to get you back on track. There are more than 12 million points of interest on the pair of DVDs, and they are grouped into 12 different categories for easy selection. All the keyboard-style menus have intuitive word prediction, only highlighting the letters available to complete a word in its known dictionary. This saves time and reduces errors. The map software included with the N1 is even smart enough to allow you to search for a destination by a business phone number. Say you want a Radisson Hotel in Toronto, but only know the phone number. Type in the

number and it will search through its database, find the hotel, and plot you a route based on your current location.

Pioneer has included tri-zone operation on the N1. Once you have chosen your destination and allowed the N1 to plot your route, it will load map information into its 16MB memory buffer. For most trips, this will be enough to store all the information required. However, if you are traveling through a densely populated area, you may need to load more information. So what does this have to do with the tri-zone operation? Once the information is loaded, you can eject the map DVD and load a movie DVD. Your backseat passengers can now view the movie through an auxiliary monitor using wireless headphones. You can tune to your favourite radio station or play a CD from a CD changer and listen through the front speakers. At the same time, the N1 will continue to display route information, warning you of upcoming exits, turns and so forth.

The Vehicle Dynamics Monitor (VDM)

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allows you to select three of seven available analogue or digital graphs for display on the monitor. Vehicle speed, direction, lateral G-forces, acceleration and braking forces, battery voltage, slope (or incline) and angular velocity. There is a compass, a group of accelerometers and a gyroscope inside the hide-away chassis of the AVIC-N1 that takes all the measurements to perform the calculations. A wire is connected to the vehicle speed sensor to provide velocity information and the eight-channel GPS system locates your position. No longer will you require devices 'stuck' to your windshield to capture performance data: the N1 has it all built-in.

The VDM is just one of many display modes on the N1. You can see your position on the navigation map in plan view (from above), in a semi-three-dimensional view just above the horizon, or view the map and turn information in a split window. The split window options include navigation information as well as your choice of rear view camera input, the map view, driver's view, audio view and more.

Additional features include a digital three-band parametric equalizer. A video input for a mirrored-signal backup camera is provided, as well as an input for an external video source such as a game system or a VCR. The rear view system is perfect for people with a motor-home or who are towing a trailer, as they can monitor route progress while keeping an eye on what's going on behind. A video output is provided to run additional monitors like the Pioneer AVD-W8000 eight-inch widescreen. Pioneer included a bookmark feature on the DVD playback system. If your passengers are viewing a movie, and you have arrived at your destination, you can remove the DVD, use the radio, play a CD or anything else, and when you put the DVD back

in, it will return to the same point in the film and continue playing.

Performance

I set the N1 up on my bench for some measurements. The power amp section, rated at 50 x 4, produces 8.64Vrms at 1% distortion into a 4Ω load. This equates to 18.66W, about average for a good quality deck. The pre-amp outputs of the N1 produced 2.03V at 548Ω.

I loaded up my Avia Guide to Home Theatre DVD to evaluate the unit's video playback. Up first, screen wash-out. The N1 is good from directly on-axis to below the line perpendicular to the screen. Below horizontal, image shadows below 20% output disappeared. Side-to-side viewing was good. At about 45 degrees, the image colours shifted to a slightly green hue, but this won't be a problem unless you like to watch from outside your car. The contrast remained very good, as was the image colour. All the regular video adjustments (colour, brightness, contrast, etc.) are available via on-screen menus to fine-tune the unit to suit your tastes.

Conclusion

The AVIC-N1 truly has everything you'd ever fantasize about in a head unit. It can play almost any media format, you can enjoy full surround-sound movie playback, it will help you get where you want to go, and tell you how you are doing as you get there. The AVIC-N1 is the first head unit to get on the 'Tuner' bandwagon with something other than simple styling. The AVIC-N1 redefines the term 'all-in-one.' Now that Pioneer has introduced a new category into the head unit game, I just have to get one for my WRX! **PAS**

