

P R I M A R E

DVDi10 Integrated DVD / CD / DAB/FM or FM/AM Receiver

INTRODUCTION

The DVDi10 is the essence of a high quality compact system and represents Primare at its innovative best. One beautifully designed and perfectly crafted unit provides you with superb 2.1 channel audio, video in the highest definition, DAB/FM or FM/AM radio, state-of-the-art power amplification and iPod control.

Inputs and outputs

Full flexibility in system building is made possible by a wide range of inputs and outputs. Up to three audio sources can be connected to the analogue RCA sockets. In addition to these, a 3.5mm combined headphone output and line input jack plug is found at the front of the DVDi10. Two sets of analogue outputs and the analogue "sub" output are combined with a "tape out" for recording, and a "pre" output giving a variable-level output to a second preamplifier or power amplifier. The DVDi10 includes an analogue to digital converter, so that line sources are available on the optical and coax digital outputs for connection to an external device like a digital surround processor. Five different video outputs, including HDMI allow you to connect to a range of displays at up to Full HD resolution.

As with every other Primare component the DVDi10 features data and IR inputs, and RS232 control capability: a precondition for the integration in specialised automated multi-room applications.

The user interface

To satisfy Primare's signature desire for operational simplicity, full remote operation is supported by the major function controls, conveniently mounted on the top panel, together with an interactive graphical display.

Being a true multimedia component the DVDi10 allows you to enjoy all the widely distributed CD and DVD formats as well as MP3 files and even your digital photos in JPEG format from a CD-ROM. Furthermore, music enjoyed on the move can now be played through your 2.1 channel Hi-Fi system. When your iPod® is connected to the DVDi10 you can navigate through selections and play tracks using the DVDi10 remote control and front panel display. At the same time your iPod will automatically be recharged.

Compact high performance

The DVDi10 shares much of the same video technology as the DVD26. A high performance CD/DVD drive has been carefully modified by Primare prior to its integration with hand picked components in the innovative circuit topology. A highly specified Analog Devices video DAC combined with the latest digital video processing technologies offers a wide range of video outputs to embrace numerous display options. The HDMI output features up-scaling up to 1080p, via the well regarded Genesis FLI2300 video processor.

Tuners

The DVDi10 offers a choice between two radio tuners. Depending on the radio broadcasts you prefer, it comes with a DAB/FM or FM/AM tuner. Forty FM/AM presets and 10 DAB presets are available as well as high resolution 24bit/196kHz conversion for DAB reproduction.

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Amplification

The high performance 2.1 channel amplifier system is powered by a newly improved version of the modular Class D technology used by the highly acclaimed Primare CDI10. Generating very little heat while being extremely efficient, this technology is perfectly suited to the ultra-compact DVDi10 design, and draws from music and film sound a sense of authority that explodes the limitations traditionally associated with Class D as a hi-fi solution and belies the system's 75 watt per channel specification. The modules are designed and manufactured by Primare in cooperation with a Swedish partner. True to the Primare philosophy, excellent performance across the entire audio band has been achieved by an innovative choice of high quality components and the use of proprietary design.

Class D Analogue amplification background

The "D" in class-D is sometimes said to stand for "digital." This is not correct because the operation of the class-D amplifier is based on analogue principles. There is no digital coding of the signal. Before the advent of the class-D amplifier, the standard classes were class-A, class-AB, class-B, and class-C. The "D" is simply the next letter in the alphabet after "C." Indeed, the earliest work on class-D amplifiers involved vacuum tubes and can be traced to the early 1950s.

Amplification - Designer's notes

Developed by Primare in cooperation with a Swedish partner from the power supply industry, the self modulating class-D amplifiers used by the DVDi10 are of a proprietary design and are not ICE power modules! Their performance can be compared to some of the best of class-AB amplifiers.

The amplifier modules are self modulating which means that the switching is controlled by the delay in the loop. The amplifier starts increasing the output voltage as soon as it is a little too low and starts decreasing the output voltage as soon as it is a little too high. The inertia in this process causes the amplifier to oscillate in a controlled manner at about 550 kHz. You could say that the amplifier controls and corrects the output voltage 550000 times per second with close to zero error tolerance during each control cycle. The self oscillating modulator is so linear in itself that it does not need additional feedback paths and this gives a very robust amplifier with low cost and extremely good audio performance. The distortion is not only very low, it is also reasonably consistent across the audio band giving a very homogenous sound. The very low noise floor of about 70uVrms allows for every micro-detail to be displayed in the sound stage without deterioration.

The input signal is received by a differential stage built around a high precision op amp from Analog Devices. This eliminates potential ground loops and improves crosstalk between channels. The signal is forwarded to the modulator which is controlled by a second op amp, this one also a precision type from Analog Devices. All self oscillating amplifiers drop their switching frequency as the output signal approaches clipping and this may cause unpleasant high frequency distortion. In order to avoid this, a special "one point clipping circuit" has been developed which is completely transparent as long as it is not active. It measures and clips the signal in the same point thereby eliminating over shoots caused by delay at high frequencies. The result is a more pleasant clipping behaviour.

The output stage is controlled by a driver developed by International Rectifier. This driver is totally dedicated to class-D amplifiers and has patented solutions for pulse by pulse current limiting and dead time settings. A close relationship with International Rectifier has made it possible for the driver's behaviour to be optimised for the topology that is being used.

DVDi10 Features

High Performance DVD / CD Player
DAB/FM or FM/AM Tuner
1080p HDMI Output.
Component Video / Scart / S-Video
2 x 75Watts RMS 8ohms.
LFE Output
iPod Control With Meta Data Display
IR Input
RS232 Control

Titanium Finish

Specifications:

<p>Preamplifier</p> <p>Analogue inputs:</p> <p>3 Line inputs: RCA connector, 2.5V RMS, 50KΩ.</p> <p>Front panel input: 3.5mm stereo mini jack plug, 2.5V RMS, 50KΩ.</p> <p>Analogue outputs</p> <p>PRE output: RCA connector, variable output, 100Ω.</p> <p>REC output: RCA connector, 2.5V RMS, 100Ω.</p> <p>Digital outputs</p> <p>Optical output: Toslink connector.</p> <p>Coax output: SPDIF (RCA connector), 75Ω.</p> <p>Sample Rate 44.1kHz with CD playback, 48kHz with DAB receiver or line inputs.</p> <p>DVD player</p> <p>Drive: Shinwa SHD-2503</p> <p>Video signal systems: NTSC/PAL, color</p> <p>Video formats: > 500 lines</p> <p>HDMI output: 480p/576p, 720p, 1080i, 1080p</p> <p>Progressive Scan component outputs: 480p/576p</p> <p>Video output: 1Vp-p, 75Ω RCA</p> <p>S-Video Y-signal: 1Vp-p, 75Ω</p> <p>C-signal: 0.286Vp-p, 75Ω</p> <p>Component video output: Y=1Vp-p, B=0.7Vp-p, R=0.7Vp-p, 75Ω</p> <p>RGB output: 1Vp-p, 75Ω</p> <p>Video signal-to-noise: -75dB</p> <p>Video DAC: Analogue Devices ADV7320</p> <p>Formats supported: CD, VCD, SVCD, CD-R, CD-RW, DVD-R, DVD+R, MP3, JPEG</p>	<p>Amplifier</p> <p>Power output: 2x75 W into an 8Ω load. Class: Class D amplifier</p> <p>Distortion: 20Hz–20kHz 10W below 0.1% THD+N.</p> <p>Frequency response: 20Hz to 20kHz \pm0.3dB</p> <p>DAB receiver</p> <p>Tuning range: Band III 174-240MHz, LBand 1452-1492MHz</p> <p>Usable sensitivity: Band III 29dBuV, Lband 30dBuV.</p> <p>Number of presets: 10</p> <p>FM tuner</p> <p>Frequency range: 87.5-108MHz</p> <p>Usable sensitivity: FM Mono 10dBuV, FM stereo 20dBuV</p> <p>Number of presets: 40</p> <p>Antenna: 75Ω</p> <p>AM tuner</p> <p>Frequency range: 522–1620kHz</p> <p>Number of presets: 40</p> <p>Antenna: 75Ω</p> <p>General</p> <p>Supply voltage: 100/120 or 230V AC (must be set internally).</p> <p>Power consumption: Standby 6W, operational 210W.</p> <p>Size: 450 x 350 x 110mm (WxDxH)</p> <p>Weight: 8kg</p>
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All specifications subject to change without notice

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