



DVB-1000

DVB-ASI, SMPTE 310M, ATSC
PORTABLE SERVICE MONITOR

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Product Overview

The DVB-1000 Portable Service Monitor is designed to provide TV Stations and similar broadcast environments with a comprehensive, portable analysis tool. The DVB-1000 is a triple input monitor and can display DVB-ASI streams, SMPTE-310M streams or ATSC antenna input.

The monitor aids Quality of Service (QoS) monitoring and general problem analysis throughout the system via the ability to interpret and display the any DVB-ASI or SMPTE 310 compressed streams in real time. It can monitor and decode both MPEG2 and MPEG4 streams making the DVB-1000 suitable for current and future broadcast, cable, head-end and other similar environments.

The monitor can decode and display the picture content of each of the channels in a stream on any of the three inputs. It can also display an overlaid On Screen Display (OSD) that provides a real time analysis of the stream by displaying the number of programs in the stream, video format and bit rate, audio format and bit rate and selectable closed caption display.



DVB-1000 shown with optional Battery Pack installed

Other Features

The DVB-1000 features a high-resolution (1024 x 768) 8.4" LCD mounted in a robust enclosure designed for portable use. The monitor features adjustable backlight brightness for use in all ambient light conditions and a protective glass front shield. Rubber bumpers and convenient handles enable the monitor to be used in all environments. The DVB-1000 is delivered in a custom plastic carrying case for convenient storage or transportation.

A built-in speaker allows for verification of audio presence and a headphone jack is provided on the rear panel. An optional model of the monitor is available that will operate from a high-performance camera battery. An industry standard serial port provides for field software upgrades for corrections and to add new features.

Other standard features include an automatic function to continuously scan and display all programs, and large format on screen displays of video and audio information summaries.

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Options

Optional features for the DVB-1000 include an Anton Bauer Goldmount battery bracket to enable the unit to be self powered when used with a suitable capacity Anton Bauer battery.

Other optional configurations include a model that supports DVB-ASI only for countries not using SMPTE-310 or ATSC. See Model Number section for ordering details.

Unpacking

The DVB-1000 monitor is shipped in a custom protective case to limit possible damage during shipping. The external carton should be examined for damage prior to unpacking the unit, since any shipping damage claim will need to be made with the freight carrier.

Open the cartons and ensure that the following items are included:

- > DVB-1000 Monitor
- > Manual
- > 12V AC
- > Power Cord

If the any of the components are missing or damaged, then contact your local reseller.

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Installation

Connect the A/C power cord to the power supply and insert the power connector into the monitor until it locks. Connect to an A/C wall outlet.

Turn on the master power switch on the rear of the unit. The monitor will power on automatically after about 10 seconds. At that time a diagnostic action will sequentially light all of the LED buttons and then enable the LCD display.

At initial power on, the monitor will default to the ATSC input.

User Controls

The user buttons are aligned along the top surface of the monitor and have the following functions:



1 **STANDBY** Power - Controls Display Power

The Standby switch shuts off the display and audio, but does not turn off power on the monitor logic. The master power switch for the unit is located on the rear panel.

2 **INPUT** Input - Selects Input Mode

The input button selects the input mode between DVB-ASI, SMTE-310M or ATSC inputs. The default setting is to the last stored station on the ATSC input

The current input selection is illustrated on the top right field of the Status line at the top of the page (when the OSD mode is selected).

The field will indicate one of the following input modes

Input = - SMPTE 310M
Input= - DVB_ASI_1
Input= - RF CHxx SIGxx.

3 **↑ INCREMENT** ATSC Channel

Increments the ATSC channel selection to the next station number. Rolls over at 69 .

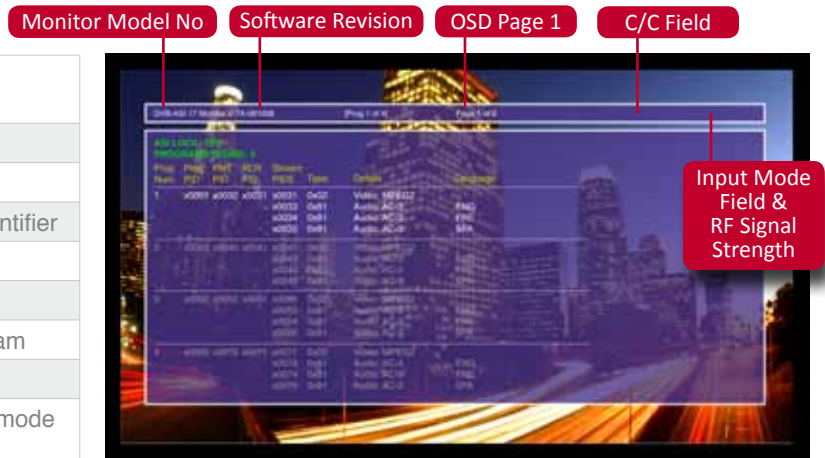
4 **↓ DECREMENT** ATSC Channel

Decrements the ATSC channel selection to the next lower station number. Rolls over at 2

5 OSD
On Screen Display - Primary OSD Page

The OSD button enables and disables the OSD display overlaid on the picture. The translucency of the OSD display may be adjusted via the front panel potentiometer. The OSD has a total of 3 pages and displays various information regarding the DVB-ASI stream.

Prog Num	Number of the program within the data stream
Prog PID	Program package Identifier
PMT PID	Program Map Table package identifier
PCR PID	Program Clock Reference package identifier
Stream PIDS	Packet identifier within the stream
Stream Type	Stream identifier
Details	Defines format of video and audio stream
Language	Language identifier
C/C Field	Indicates CC when the closed caption mode is enabled
Input Mode	Indicates current Input mode (ASI, SMPTE, RF)
RF Channel	When in RF input mode, it indicates current channel number
Signal Strength	When in RF input mode, it indicates the signal strength between 00 and 08



6 PAGE
Page - Displays the Video Analysis page (#2)

Video Analysis Page

Video PID	Display the Program Identifier number within the stream
Encoding Type	MPEG format, MPEG2 or MPEG4
Profile	Encoding level MP@HL or MP@ML
Bitrate	Bit rate of the current program within the stream
Resolution	Resolution of the current program
Scan Format	Interlaced or Non-Interlaced
Frame rate	Vertical refresh rate
Aspect Ratio	16:9 or 4:3
Scrambled	Yes or No (Only Unscrambled video displayed)
Last AFD Code	Indicates last received value for this program



6 PAGE
Page - Displays the Video Analysis page (#3)

Indicates the number of audio streams and their formats within the stream

Audio Number	Sequential number of the audio channel
PID	Program identifier
Encoding Type	AC-3, MPEG1, MPEG2, AAC
Bit Rate	Audio bit rate within the stream
Sample Rate	Sampling rate
Audio Mode	1/0, 2/0, 3/2 etc.
Scrambled	Yes/No
Language	Variable



7 PROG
Program - Advance Program

The Program button advances to display the next program in sequence in the stream. On reaching the last program, the sequence will wrap back to the first

8 C/C
Close Caption Enable or Disable

The closed caption button enables and disables the display of the closed captioning on the display at the bottom of the screen regardless of the OSD mode. When in OSD mode, the status line field indicates "CC".





9 AUDIO
Audio - Displays Audio Summary

Displays Audio Summary in large format



10 VIDEO
Video - Displays Video Summary

Displays Video Summary in large format



12 -- SPEAKER

The speaker button controls the rear mounted speaker (or headphones if inserted).

The speaker button has three states and the following messages are displayed at the top right of the screen when the OSD is enabled:

Audio Out	Off (default)
Audio Out	Main – primary audio program
Audio Out	SAP – secondary audio program

16 POTENTIOMETERS

There are two potentiometers mounted on the right hand side of the unit

Brightness Controls the back light display intensity

Translucency Controls the translucency of the OSD overlay



13 MASTER POWER SWITCH

Located on the rear panel of the unit



Model Numbers :

586841600-3 US Version DVB-ASI, SMPTE-310, ATSC

586841610-3 US Version with Anton Bauer GoldMount battery connector

586841620-3 International Version DVB-ASI Only

Product Specification

8.4" LCD DISPLAY

Resolution: XGA, 1024 x 768
Brightness: 400 cd/m²
Contrast: 400:1
Color: 16.7m
Viewing Angle: 170° Horizontal 170° Vertical

DISPLAY FORMATS

4:3
16:9
AFD (Automatic Format Descriptor)

INPUT FORMATS

DTV - SD & HD Formats

ON SCREEN DISPLAY

Current Active Program Display
Number of Programs in Stream
ASI Status
Video Format and Bit Rate
Audio Format and Bit Rate

POWER

Consumption 55W
110V 60Hz or 220V 50Hz

SIDE PANEL CONNECTORS

1 x 75 ohm BNC Connector – ASI Input
1 x 75 ohm BNC Connector – SMPTE-310M
1 x "F" Type – ATSC Antenna
DB9 RS232C Serial Port - Firmware Upgrade Port

CONTROLS

Illuminated Push Buttons

- Standby
- Input Select
- Increment
- Decrement
- OSD On/Off
- Page
- Program
- Closed Caption
- Audio
- Video
- Store
- Speaker

INDICATORS

16 x 9 or 4 x 3 AFD Mode Indicator

PHYSICAL

Height: 180mm 7.0"
Width 330mm 12.9"
Depth 70.5mm 2.8"
Weight 2.2 Kg 4.4 lbs

ENVIRONMENTAL

Operating Temperature 0°C to 50°C
Storage Temperature -25°C to 65°C

Warranty

The products are warranted against defects in workmanship and material for a period of one (1) years from the date of purchase provided no modifications are made to it and it is operated under normal conditions and in compliance with the instruction manual.

The warranty does not apply to:

- Product that has been installed incorrectly, this specifically includes but is not limited to cases where electrical short circuit is caused.
- Product that has been altered or repaired except by the manufacturer (or with the manufacturer's consent).
- Product that has subjected to misuse, accidents, abuse, negligence or unusual stress whether physical or electrical.
- Ordinary wear and tear.

Except for the above express warranties, the manufacturer disclaims all warranties on products furnished hereunder, including all implied warranties of merchantability and fitness for a particular application or purpose. The stated express warranties are in lieu of all obligations or liabilities on the part of the manufacturer for damages, including but not limited to special, indirect consequential damages arising out of or in connection with the use of or performance of the products.

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Caution

Whilst care has been taken to provide as much detail as possible for use of this product it cannot be relied upon as an exhaustive source of information. This product is for use by suitably qualified persons who understand the nature of the work they are doing and are able to take suitable precautions and design and produce a product that is safe and meets regulatory requirements.

Limitation of Liability

The manufacturer's liability for damages to customer or others resulting from the use of any product supplied hereunder shall in no event exceed the purchase price of said product.

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Trademarks

The following are trademarks of J7 Broadcast Ltd:

J7 Broadcast

DVB-1000

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