



Digital Video Test Systems

E6288A Option 002 MPEG NTSC Decoder Test Bit Streams Product Release Notice

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Features Summary

The HP E6288A MPEG NTSC Decoder Test Bit Streams are transport streams designed to test a decoder's compliance with various aspects of MPEG-1 and MPEG-2 video. You can use HP E6277A MPEGscope Plus to send the bit streams to the decoder, then visually inspect the results of each test from a monitor attached to the decoder. In most cases, the word "VERIFY" clearly displayed on a gray background is the expected result.

For detailed information on the test streams, refer to "Sarnoff Compliance Bitstreams for MPEG Video—User's Manual" (version 1.1), included on the E6288A CD-ROM.

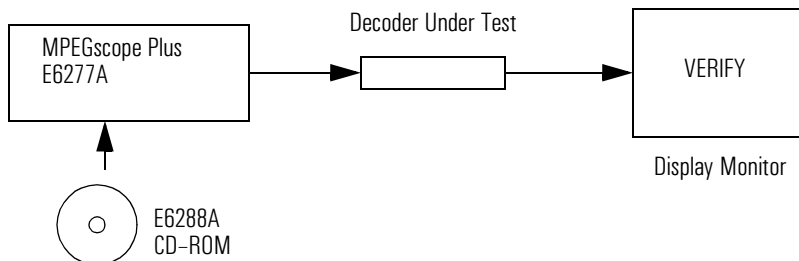
Note

Before you can view this manual, you must install MS Word viewer on your hard drive, as follows:

- 1** Load the E6288A CD-ROM into your CD-ROM drive.
- 2** Doubleclick on `wd97vwr32.exe` to begin installation.
- 3** Once the viewer is installed, doubleclick on `525 Decoder Bitstream.doc.doc` to view the manual.

Using the Bit Streams

A typical test set-up for the NTSC Decoder Bit Streams is illustrated below:



The E6288A CD-ROM contains 88 bit streams in the form of 204-byte MPEG-2 transport streams. You can load the streams onto the HP E6277A MPEGscope Plus to play them to the decoder under test. In most cases, the word “VERIFY” displays on the monitor if the decoder successfully passes the test. For further details on test results, refer to “Sarnoff Compliance Bitstreams for MPEG Video—User’s Manual”.

Except for bit streams with a video elementary stream rate exceeding 5.5 Mb/s, the bit rate for all streams is $(5.5 \times 204 / 188)$ Mb/s.

Streams with a higher bit rate have a file name of `brxxxxxxk.tsp`, where “xxxxxx” is the video elementary stream bit rate in Kb/s. To obtain the correct bit rate for these streams, add 500000 to the elementary stream bit rate and multiply by the $(204 / 188)$ factor. For example, the bit rate for `br05500k.tsp` would be $(5500000 + 500000) \times (204 / 188)$ bits per second.

You must also set the decoder to decode video elementary streams containing the correct packet identifier (PID). For all bit streams, the video PID is 32 (0x20).

Note

If you are using MPEGscope to transmit the transport streams, there is no need to adjust the transmit rate by the $(204 / 188)$ factor. MPEGscope automatically calculates the correct rate.

Once you have connected the equipment, follow these test steps:

- 1** Load the E6288A CD-ROM into HP E6277A MPEGscope Plus.
- 2** Copy the test file from the CD-ROM to E: drive.
- 3** Launch the Recorder/Player application.
- 4** Configure the decoder under test to display video streams with PID 32 (0x20).
- 5** Start transmitting the bit streams while viewing the display monitor for test results.

If the word “VERIFY” is not clearly displayed, refer to “Sarnoff Compliance Bitstreams for MPEG Video–User’s Manual” for more information.

Known Limitations

Originally in video elementary stream format, these test bit streams were designed to test only the video decoder portion of a set top box. For compatibility with the set top box input format, they have been multiplexed and converted to transport streams. The following are known limitations:

- **Set top box may have difficulty locking on to the video PID**

The transport streams are not fully MPEG/DVB compliant; for example, PAT and PMT tables appear only once in the transport stream.

Consequently, the set top box may have difficulty locking on to the video PID. As a workaround, manually configure the set top box to decode PID 32 (0x20). You may also have to retransmit the stream a few times.

- **Video ES buffer must be at least 0.25 MB**

The video elementary stream buffer of the set top box must be at least 0.25 MB, instead of the minimum required for MP@ML (1,835,008 bits, or approximately 0.23 MB). Buffer overflow may occur during decoding if the buffer size is not at least 0.25 MB.