

Vclips™ – For Video Compression, Testing and Evaluation

► Vclips



Test Video Encoders and Decoders to Their Limits

Vclips™ are a diverse set of short video clips designed to test video encoders and decoders to the limits of their abilities.

The **Encoder** series is a set of uncompressed YUV clips that comprises many different video elements, designed to “stress” an encoder in many ways.

The series comprise sets of video clips with scenes which include different subjects, such as hard-to-encode movement and elements (such as clouds and water), high detail and synthetic “test cards.” Other clips have precisely defined characteristics – such as exactly specified motion – for testing the interpretation and encoding by an encoder.

The **Decoder** series of video clips is compressed to different video standards and tests video decoders not only to the limits of the video standard concerned, but also in their response to errors in encoded bitstreams.

The **Decoder** series includes sets of video clips encoded to different video standards: Some are encoded in a “typical” manner, some are at the limits of the permissible standards and some have deliberately introduced errors to test the reaction of the video decoder. These sets are provided specific to a video standard, at various sizes from sub-QCIF to HD.

The **Functional tests** check every allowable mode of a video standard by individually switching on each permissible syntax element in turn, and then in combinations.

The **Error test** sets have deliberately introduced errors, designed to test the decoder response when there are bitstream errors. These errors include such things as using features not allowed in the Profile/Level concerned, illegal values, inconsistent values and bit errors.



► Features & Benefits

Video Sizes: Test with Many Different Video Sizes: Sub-QCIF, QCIF, CIF, D1, HD (720p and 1080i)

Difficult Subjects: Test with Fine Detail, Night Time, Areas of High Contrast, Sharp Borders, Uniform Areas, Bright and Dull Colors

Visual Objects: People, Buildings, Vehicles, Trees, Landscapes, Clouds, Water and Synthetic Objects

Movement: Fast, Slow, Uniform, Random, Multiple Moving Objects. Also Pan, Zoom and Rotate

“Test Card” Sequences: Precisely Defined Motion, Bright Colors, Dull Colors, Lines, Patterns and Grids. Also for Strobing and White Noise

► Applications

Developing Video Compression

Testing the Performance of Different Codecs

Whether developing video compression or testing the performance of different codecs, using Vclips can save many work-weeks of time otherwise spent generating sequences.



► Ordering Information

► Encoder Test Series of Clips

Encoder clips are provided as un-encoded YUV planar 4:2:0.

Series no.	Title	Description	Video Sizes	Orig (see below)	Qty of DVDs	Qty of Clips
VC-001-A	E-Space	one scene (Earth, moon)	QCIF-CIF+	QV	1 CD	44
VC-002-A	E-Traffic	one scene (traffic)	CIF-D1+	PAL	2	50
VC-003-A	E-City	55 UK city scenes	QCIF, CIF, D1	PAL	6	165
VC-005-A	E-Synthetic	40 synthetic sequences	QCIF, CIF, D1	Nat	2 + CD	120
VC-006-A	E-USA SD PAL	40 U.S. scenes (New York, SF, Florida)	QCIF, CIF, D1	PAL	6	120
VC-007-A	E-Asia SD PAL	54 Asia scenes (Japan, Korea, China)	QCIF, CIF, D1	PAL	6	162
VC-013-A	E-City-HD	55 UK city scenes – High Definition (HD)	720p, 1080i	UpHD	Hard disk	110
VC-015-A	E-Synthetic-HD	40 synthetic sequences – HD	720p, 1080i	Nat	Hard disk	80
VC-021-A	E-USA SD NTSC	46 US scenes (New York, SF, Florida)	QCIF, CIF, D1	NTSC	6	138
VC-022-A	E-Asia SD NTSC	45 Asia scenes (Japan, Korea, China)	QCIF, CIF, D1	NTSC	6	135
VC-031-A	E-USA HD	55 US scenes (NY, SF, FL) – HD	720p, 1080i	720p	Hard disk	110
VC-032-A	E-Asia HD	48 Asia scenes (Japan, Korea, China) – HD	720p, 1080i	720p	Hard disk	96

QV = 320x240 synthetic original.

PAL originally filmed in PAL SD.

Nat = Created native at QCIF, CIF, D1, 720p, 1080i.

UpHD = upsampled from 720x576 to HD.

NTSC = Originally filmed in NTSC SD.

720p = Originally filmed in 720p HD (1080i created from this).

► Decoder Test Series of Clips

All Decoder clips are provided as compressed video elementary streams, encoded to the standard concerned.

Series no.	Title	Video Std.	Profile/Level	Main Tests	Qty CDs	Video Size	Qty of Clips
VC-101-A	D-Space	MPEG-4	Simple/L1/2	Header	1	QCIF	30
VC-102-B	D-Traffic	MPEG-4	Simple/L3	Header	1	CIF	36
VC-103-A	D-Space	MPEG-4	Simple/L1/2	VOP	1	QCIF	45
VC-104-B	D-Traffic	MPEG-4	Simple/L3	VOP	1	CIF	45
VC-105-A	D-Space	MPEG-4	Advanced Simple/ L1/2	Header	1	QCIF	40
VC-106-A	D-Traffic	MPEG-4	Advanced Simple/ L3+	Header	1	CIF	40
VC-107-A	D-Space	MPEG-4	Advanced Simple/ L1/2	VOP	1	QCIF	55
VC-108-A	D-Traffic	MPEG-4	Advanced Simple/ L3+	VOP	DVD	CIF	55
VC-111-B	D-Space	MPEG-4	Simple/L2	Error	1	QCIF	42
VC-112-B	D-Traffic	MPEG-4	Advanced Simple/ L3+	Error	DVD	CIF	50
VC-301-B	D-Traffic	H.264/AVC	Baseline	Hdr and frame	DVD	CIF	68
VC-302-B	D-Space	H.264/AVC	Extended	Hdr and frame	1	QCIF	76
VC-303-A	D-Traffic	H.264/AVC	Main	Hdr and frame	DVD	CIF+	61
VC-307-B	D-Traffic	H.264/AVC	Baseline (Level 1.2 and below)	Hdr and frame	1	QCIF	68
VC-311-B	D-Traffic	H.264/AVC	Baseline	Error	DVD	CIF	35
VC-312-B	D-Space	H.264/AVC	Extended	Error	DVD	QCIF	37
VC-313-A	D-Traffic	H.264/AVC	Main	Error	DVD	CIF+	40

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1 – **Vclips** are royalty-free clips which are licensed (not sold) for storage/use on a maximum of 20 computers on one site. This includes all copies stored or used anywhere, including all development and other computers, servers and web-servers.

2 – The clips may be used for test, development, promotional, marketing, sales and other similar purposes, but may not be resold, even in a substantially modified form.

3 – All clips are supplied watermarked "Vclips."

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Updated 28 February 2006

Our most up-to-date product information is available at:
www.tektronix.com



Product(s) are manufactured in ISO registered facilities.

Product(s) complies with IEEE Standard 488.1-1987, RS-232-C,
and with Tektronix Standard Codes and Formats.

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