

Setup Guide — VTG 400D/400 DVI

This guide provides basic instructions for an experienced installer to set up and operate the Extron VTG 400D/VTG 400 DVI

IMPORTANT:
Refer to www.extron.com for the complete user manual and installation instructions before connecting the product to the power source.

Installation

Step 1 — Connect video outputs

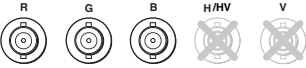
Attach output devices to the VTG.

For RGBHV, RGBS, or RsGsBs output:

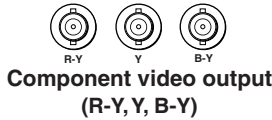


RGBHV output

RGBS output



RGsB, RsGsBs output



Component video output
(R-Y, Y, B-Y)

NOTE The 15-pin HD RGB output connector outputs RGBHV, RGBS, RGsB, and RsGsBs.



For composite video output:



COMPOSITE

For S-video output:



S-VIDEO

For SDI/HDSDI output (VTG 400D only):



SDI/HDSDI

For DVI output (VTG 400 DVI only):

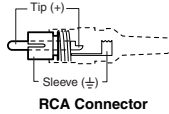


DVI-D

Step 2 — Connect audio outputs

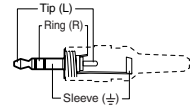
Attach audio output devices to the VTG. Wire the connectors as shown below.

RCA (unbalanced mono audio) output 1:



RCA Connector

3.5 mm mini phone jack (unbalanced mono left and right channels) output 2:



XLR (balanced mono) output 3:

3-pin XLR Pin Configuration			
Application	Pin 1	Pin 2	Pin 3
Balanced audio (std.)	gnd (shield) (on sending/female connector)	positive (+) (hot/live)	negative (-) (cold/return)



3-pin
Male
3



3-pin
Female
3

Step 3 — Connect scope trigger

When using an oscilloscope, connect the scope's external trigger to the trigger connector of the VTG.



TRIGGER

Step 4 — Power up

Power up the VTG by holding down the Power button for 1 second. Continue on the next page for operation instructions.



POWER

Video Adjustments

Test pattern selection buttons

Depending on the currently selected video rate, press the Video Test Pattern ▲ and ▼ buttons to select from up to 28 different video test patterns. The newly selected test pattern displays on the LCD for 3 seconds before returning to the previous menu. Refer to the Test Pattern Chart in Appendix A of the user's manual for the table of available test patterns and their features.


Video output range button

Press the Video Range button to select from eight output range categories.



Video output rate buttons

Press the ▲ and ▼ Video Rate buttons to select an output rate for the chosen output range. The output rates are displayed two-at-a-time on the LCD. **After choosing the desired rate, press the Select button to activate the highlighted rate.**

Test pattern invert/special function button

Use the  on-screen button to toggle the selected test pattern between normal and inverted (special) state, when available.

Video level adjustment buttons

Use the  and  on-screen buttons (next to the pattern name) to adjust the test pattern's video level between 0% (0 IRE) and 100% (100 IRE), when available.

Audio Adjustments

Signal type selection button

The VTG 400D/400 DVI can output seven different audio signal formats: pink noise, white noise, sine wave, square wave, frequency sweep, polarity test, and sine burst.

Audio level selection buttons

The RMS audio output level for each audio signal type is adjusted between a range of values using the ▲ or ▼ Level buttons.

Audio frequency selection buttons





The frequency for each audio signal type is adjusted between a range of values using the ▲ or ▼ Audio Frequency buttons. The following frequencies are available for the signal types below:

- **Sine wave and sine burst:** 20 Hz - 20 kHz in 1/12 octave steps
- **Square wave:** 20 Hz - 5 kHz in 1/12 octave steps
- **Frequency sweep speed:** 1 - 120 seconds

Quick Select Preset Buttons

Saving a Preset

Up to four video and/or audio settings can be saved to one of the four Quick Select buttons:

1. Press and hold the desired Quick Select button for about 2 seconds until the Quick Select setup menu appears.
2. Use the  or  on-screen buttons to select Audio settings, Video settings, or All settings (audio and video).
3. Use the  on-screen button to save the setting(s) to the Quick Select button or use the  on-screen button to cancel the operation and not save the setting(s) to the Quick Select button.

Recalling a Preset

Press the desired Quick Select button to recall the stored settings.

Scope Trigger Adjustments

Scope trigger cursor buttons

Press the ▲ and ▼ selection buttons to move the trigger point between lines (y axis) and press the ◀ and ▶ selection buttons to move the trigger point between pixels (x axis) on the current line.

Scope trigger shape button

Press the Shape button to toggle the on-screen cursor's shape between crosshair (useful for locating the cursor on the display screen) and single pixel (useful for locating the cursor on the oscilloscope screen).

Scope trigger hide button

Press the Hide button to toggle the cursor on (visible) and off (hidden).

Executive Mode

Press and hold the Signal Type and Test Pattern ▲ buttons simultaneously for 2 seconds to enable/disable the top panel buttons.

Menu Adjustments

Press the Menu and Next buttons to navigate through the menus. Use the four arrow selection buttons adjacent to the LCD to make changes to the settings.

Audio Setup menu

- **Audio level units:** dBu or dBV
- **Output 2 enable:** left and right channel output, left output, or right output
- **Burst interval (cycles per interval):** from 00001 to 65535
- **Burst on (cycles per burst):** from 00001 to 65535; must be < or = to burst interval
- **Frequency sweep start frequency:** 20.0 Hz to 19.0 kHz
- **Frequency sweep stop frequency:** 21.2 Hz to 20.0 kHz
- **Frequency sweep format:** logarithmic (default) or linear
- **Frequency sweep direction:** low-to-high (start frequency to stop frequency - default) or high-to-low (stop to start)
- **Audio mute:** on or off (default)
- **Square wave automatic attenuation:** on (autoattenuate to -40 dBu) or off (default) when toggling through the audio signals

Video Setup menu

- **RGB sync format:** RGBHV (default), RGBS, RGsB, or RsGsBs
- **Raster border:** 1-pixel white border on or off (default)
- **On-screen display:** on or off (default)
- **Autosequence mode:** on or off (default)
- **Autosequence interval (display period per test pattern):** 15 sec. (default), 30 sec., 60 sec.
- **RGB color channel enable:** enable (on) or disable (off) red, green, and/or blue channels (default is all channels on)

Advanced Setup menu

- **Timeout interval (for screensaver):** 5, 10, 15, or 30 minutes, or never (default)
- **Screensaver mode:** blank (black screen, default), or cycle (through test patterns in 4-second intervals)
- **LCD display contrast:** level 000 through 063 (default is 032)
- **LCD backlight:** always On, or Auto
- **Internal temperature:** displays the VTG 400's internal temperature in degrees Fahrenheit/Celsius
- **Native rate for DVI device:** displays the preferred resolution of the device attached to the DVI connector (VTG 400 DVI only)
- **System reset (to default settings):** yes or no; if yes is selected, a confirmation menu appears. Custom rates are not affected or overwritten during reset.

Setup Guide — VTG 400D/400 DVI

Output Type	Pixel x Line	Horiz Rate (kHz)	Vert Rate (Hz)	Supported Formats	Output Type	Pixel x Line	Horiz Rate (kHz)	Vert Rate (Hz)	Supported Formats
PC Rates					Stereographics Rates				
VGA	640 x 480	31.5	60	RGB, DVI	Stereographics VGA	640 x 222	31.5	120	RGB, DVI
VESA 2 (VGA)	640 x 480	37.9	72	RGB, DVI	SGI stereo	640 x 480	60.84	120	RGB, DVI
VESA1 (SVGA)	800 x 600	35.2	56	RGB, DVI	SGI stereo	640 x 512	65.28	120	RGB, DVI
VESA5 (SVGA)	800 x 600	37.9	60	RGB, DVI	SGI stereo	1024 x 768	96.84	120	RGB, DVI
VESA6 (SVGA)	800 x 600	48.1	72	RGB, DVI	SGI stereo	1024 x 768	77.47	96	RGB, DVI
VESA3 (XGA)	1024 x 768	48.4	60	RGB, DVI	SGI stereo	1124 x 840	84.38	96	RGB, DVI
VESA4 (XGA)	1024 x 768	56.4	70	RGB, DVI	SGI stereo	1280 x 1024	124.60	114	RGB
XGA5	1024 x 768	57	70	RGB, DVI	SGI stereo	1280 x 1024	131.16	120	RGB
VESA8 (XGA)	1024 x 768	60	75	RGB, DVI	SGI stereo	1280 x 492	63.96	120	RGB, DVI
VESA9 (XGA)	1024 x 768	68.7	85	RGB, DVI	16:9 Hi Res Rates				
VESA10 (XGA+)	1152 x 864	67.5	75	RGB, DVI					
1280 x 960	1280 x 960	60	60	RGB, DVI	16:9	848 x 480	31.02	60	RGB, DVI
1280 x 960	1280 x 960	70	70	RGB, DVI	16:9	852 x 480	31.8	60	RGB, DVI
1280 x 960	1280 x 960	75	75	RGB, DVI	16:9	960 x 540	33.78	60	RGB, DVI
VESA11 (SXGA)	1280 x 1024	64	60	RGB, DVI	16:9	1024 x 576	44.04	60	RGB, DVI
VESA12 (SXGA)	1280 x 1024	91.1	85	RGB, DVI	16:9	1024 x 576	52.85	72	RGB, DVI
SXGA+1	1400 x 1050	63.9	60	RGB, DVI	WXGA1	1280 x 768	45.11	56	RGB, DVI
SXGA+2	1400 x 1050	65.32	60	RGB, DVI	WXGA2	1280 x 768	48.0	60	RGB, DVI
VESA13 (UXGA)	1600 x 1200	75	60	RGB, DVI	WXGA3	1280 x 768	47.77	60	RGB, DVI
VESA14 (UXGA)	1600 x 1200	87.5	70	RGB	WXGA4	1280 x 800	49.7	60	RGB, DVI
VESA15 (UXGA)	1600 x 1200	106.3	85	RGB	WXGA5	1360 x 765	47.7	60	RGB, DVI
QXGA1	2048 x 1536	99.46	60	RGB	WXGA6	1360 x 768	47.72	60	RGB, DVI
QXGA2	2048 x 1536	115	71.8	RGB	WXGA7	1365 x 768	47.7	60	RGB, DVI
LCoS1	1360 x 1024	80	75.1	RGB, DVI	WXGA8	1366 x 768	47.8	60	RGB, DVI
LCoS2	1365 x 1024	65.2	60	RGB, DVI	WSXGA	1440 x 900	55.94	60	RGB, DVI
Workstation Rates					WSXGA+1	1680 x 1050	64.67	60	RGB, DVI
					WSXGA+2	1680 x 1050	65.29	60	RGB, DVI
SGI	640 x 480	31.5	60	RGB, DVI	1080p PC	1920 x 1080	67.2	60	RGB
SGI	640 x 512	32.22	60	RGB, DVI	WUXGA1	1920 x 1200	74.52	60	RGB, DVI
SGI	800 x 600	37.8	60	RGB, DVI	WUXGA2	1920 x 1200	74.6	60	RGB
SGI	960 x 680	42.84	60	RGB, DVI	WQXGA	2560 x 1600	99.46	60	RGB
SGI	960 x 620	39.06	60	RGB, DVI	HDTV Rates				
SGI	1024 x 768	48.36	60	RGB, DVI					
SGI	1024 x 768	40.3	50	RGB, DVI	480p	720 x 483	31.42	59.94	YUV, RGB, DVI
SGI	1200 x 900	68.04	72	RGB, DVI	576p	720 x 576	31.25	50	YUV, RGB, DVI
SGI	1280 x 1024	53.25	50	RGB, DVI	720p	1280 x 720	44.96	59.94	YUV, RGB, HDSOI, DVI
SGI	1280 x 1024	63.9	60	RGB, DVI	720p	1280 x 720	45	60	YUV, RGB, HDSOI, DVI
SGI	1280 x 1024	76.68	72	RGB, DVI	720p	1280 x 720	37.5	50	YUV, RGB, HDSOI, DVI
SGI	1500 x 1200	75.6	60	RGB, DVI	720p	1280 x 720	22.5	29.97	YUV, RGB, HDSOI, DVI
SGI	1600 x 1024	63.38	60	RGB, DVI	720p	1280 x 720	22.48	30	YUV, RGB, HDSOI, DVI
SGI	1600 x 1200	75	60	RGB, DVI	720p	1280 x 720	18.75	25	YUV, RGB, HDSOI, DVI
SGI	1760 x 1100	71.04	60	RGB	1080i	1920 x 1080	33.72	29.97	YUV, RGB, HDSOI, DVI
SGI	1920 x 1035	33.75	60/30	RGB, DVI	1080i	1920 x 1080	33.75	30	YUV, RGB, HDSOI, DVI
SGI	1920 x 1080	33.72	60/30	RGB, DVI	1080i	1920 x 1080	28.13	25	YUV, RGB, HDSOI, DVI
SGI	1920 x 1080	70.31	60	RGB	1080p	1920 x 1080	67.5	60	YUV, RGB, DVI
SGI	1920 x 1080	84.37	72	RGB	1080p	1920 x 1080	33.75	30	YUV, RGB, HDSOI, DVI
SGI	1920 x 1200	77.52	60	RGB	1080p	1920 x 1080	33.72	29.97	YUV, RGB, HDSOI, DVI
SGI	1920 x 1200	85.27	66	RGB	1080p	1920 x 1080	56.25	50	YUV, RGB, DVI
SGI	2048 x 1120	83.45	72	RGB	1080p	1920 x 1080	28.13	25	YUV, RGB, HDSOI, DVI
Sun	1152 x 900	61.8	66	RGB, DVI	1080p	1920 x 1080	27	24	YUV, RGB, HDSOI, DVI
Sun	1152 x 900	71.7	76	RGB, DVI	1080p	1920 x 1080	27	24	YUV, RGB, HDSOI, DVI
Sun	1280 x 1024	81	76	RGB, DVI	1080p (24PsF)	1920 x 1080	26.97	23.98	YUV, RGB, HDSOI, DVI
Sun	1600 x 1280	89.3	67	RGB	1035i	1920 x 1035	33.75	30	YUV, RGB, HDSOI, DVI
Sun	1920 x 1080	84.4	72	RGB	1035i	1920 x 1035	33.72	29.97	YUV, RGB, HDSOI, DVI
Sun	1920 x 1200	87.2	70	RGB	Video Rates				
Sun	1920 x 1200	93.6	75	RGB					
Super Hi Res Rates					NTSC	720 x 485	15.7	60/30	VID, Y/C, YUV, RGB, SDI
Cornerstone	1600 x 1800	105	76	RGB	NTSC 0 IRE (JPN)	720 x 485	15.7	60/30	VID, Y/C, YUV, RGB, SDI
Extron	1280 x 1024	92	86.8	RGB, DVI	PAL I	720 x 575	15.6	50/25	VID, Y/C, YUV, RGB, SDI
Extron	1600 x 1280	95	70.9	RGB	PAL B, G, H	720 x 575	15.6	50/25	VID, Y/C, YUV, RGB, SDI
Extron	1800 x 1440	105	70	RGB	PAL N	720 x 575	15.6	50/25	VID, Y/C, YUV, RGB, SDI

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