

# 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](http://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

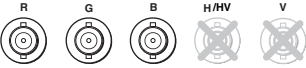
Attach output devices to the VTG.

For RGBHV, RGBS, or RsGsBs output:

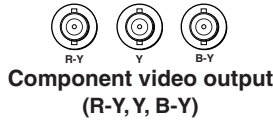


RGBHV output

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:



For S-video output:



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



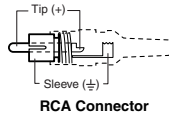
For DVI output (VTG 400 DVI only):



### Step 2 — Connect audio outputs

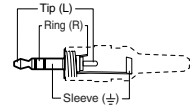
Attach audio output devices to the VTG. Wire the connectors as shown below.

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)



### Step 3 — Connect scope trigger

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



### 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.



## 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
<b>PC Rates</b>					<b>Stereographics Rates</b>				
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	<b>16:9 Hi Res Rates</b>				
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
<b>Workstation Rates</b>					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	<b>HDTV Rates</b>				
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, HDSI, DVI
SGI	1280 x 1024	63.9	60	RGB, DVI	720p	1280 x 720	45	60	YUV, RGB, HDSI, DVI
SGI	1280 x 1024	76.68	72	RGB, DVI	720p	1280 x 720	37.5	50	YUV, RGB, HDSI, DVI
SGI	1500 x 1200	75.6	60	RGB, DVI	720p	1280 x 720	22.5	29.97	YUV, RGB, HDSI, DVI
SGI	1600 x 1024	63.38	60	RGB, DVI	720p	1280 x 720	22.48	30	YUV, RGB, HDSI, DVI
SGI	1600 x 1200	75	60	RGB, DVI	720p	1280 x 720	18.75	25	YUV, RGB, HDSI, DVI
SGI	1760 x 1100	71.04	60	RGB	1080i	1920 x 1080	33.72	29.97	YUV, RGB, HDSI, DVI
SGI	1920 x 1035	33.75	60/30	RGB, DVI	1080i	1920 x 1080	33.75	30	YUV, RGB, HDSI, DVI
SGI	1920 x 1080	33.72	60/30	RGB, DVI	1080i	1920 x 1080	28.13	25	YUV, RGB, HDSI, 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, HDSI, DVI
SGI	1920 x 1200	77.52	60	RGB	1080p	1920 x 1080	33.72	29.97	YUV, RGB, HDSI, 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, HDSI, DVI
Sun	1152 x 900	61.8	66	RGB, DVI	1080p	1920 x 1080	27	24	YUV, RGB, HDSI, DVI
Sun	1152 x 900	71.7	76	RGB, DVI	1080p	1920 x 1080	27	24	YUV, RGB, HDSI, DVI
Sun	1280 x 1024	81	76	RGB, DVI	1080p (24PsF)	1920 x 1080	26.97	23.98	YUV, RGB, HDSI, DVI
Sun	1600 x 1280	89.3	67	RGB	1035i	1920 x 1035	33.75	30	YUV, RGB, HDSI, DVI
Sun	1920 x 1080	84.4	72	RGB	1035i	1920 x 1035	33.72	29.97	YUV, RGB, HDSI, DVI
Sun	1920 x 1200	87.2	70	RGB	<b>Video Rates</b>				
Sun	1920 x 1200	93.6	75	RGB					
<b>Super Hi Res Rates</b>					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

Extron **USA - West**  
Headquarters  
+800.633.9876  
Inside USA / Canada Only  
+1.919.863.1794  
+1.714.491.1517 FAX

Extron **USA - East**  
+800.3987.9876  
Inside USA / Canada Only  
+1.919.863.1794  
+1.919.863.1797 FAX

Extron **Europe**  
+800.3987.6673  
Inside Europe Only  
+31.33.453.4040  
+31.33.453.4050 FAX

Extron **Asia**  
+800.7339.8766  
Inside Asia Only  
+65.6383.4400  
+65.6383.4664 FAX

Extron **Japan**  
+81.3.3511.7655  
+81.3.3511.7656 FAX

Extron **China**  
+400.883.1568  
Inside China Only  
+86.21.3760.1568  
+86.21.3760.1566 FAX

Extron **Middle East**  
+971.4.299180  
+971.4.2991880 FAX

68-786-50  
Rev. A  
03 09