Operation Manual

Digital Video Pattern Generator

DVPG

Contents

The DVPG is a fully integrated camera switcher, split screen and adjustable digital video reticle generator that allows simultaneous viewing of two cameras on a video or computer monitor. The DVPG creates adjustable reticles on each live video image independently. The DVPG creates six different reticle patterns (single crosshair, fixed in center single crosshair, dual crosshair, box, single crosshair with 2 sizeable circles and no reticles).

The created reticles can be set to two different line types (solid and dashed). Additionally, the lines have adjustable matte from black to white.

The DVPG is compatible with NTSC, PAL, EIA and CCIR video formats. It can be used with S-video or composite video signals. The DVPG can also output directly to a computer monitor or a standard video monitor. The DVPG utilizes 12 VDC for power and therefore can easily be configured to meet any input power requirements.

The DVPG incorporates a hold, or lockout, feature that prevents the user from moving the reticle once desired positioning is set. Additionally, the hold function triggers the memory function. The memory function allows the DVPG to be turned off and still remember the previous position of each reticle pattern.

a)	DVPG Unit body	1 Ea
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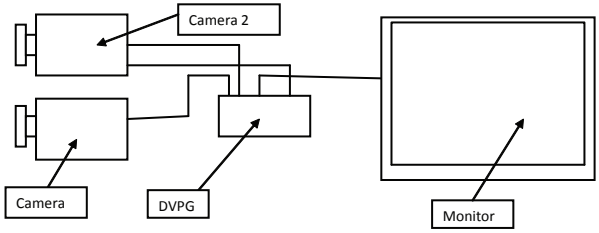
- Split screen and switcher capability for two cameras (Horizontal or Vertical split).
- Can be used with single camera.
- Six built in reticle patterns (single crosshair, fixed in center single crosshair, dual crosshair, box, single crosshair with 2 sizeable circles and no reticle)
- Two built in line types (solid, dashed).
- Lines have adjustable matte from black to white.
- Convenient "Hold" or lockout capability
- Digital circuity for maximum stability
- Digital memory of reticle position and line type when powered off
- Accommodates both composite and S-video
- Outputs directly to a standard video monitor or directly to a computer monitor
- Operates in Color or B & W
- External sync is provided
- NTSC, PAL, EIA and CCIR compatible

The DVPG connects in series between the video camera(s) and the monitor. Video input connectors for composite (BNC) and S-video (4 pin mini DIN) are located on the rear of the unit. Video output connectors for composite, S-Video and a computer monitor are located on the rear of the unit.

CAUTION: You cannot mix video input and output signals (i.e. S-video input and composite output). Damage to the unit may result. Additionally, do not simultaneously connect both S-video and composite video signals from two cameras (or the same camera), damage to the unit and or the camera(s) may result.



4.1 Camera Installation

NOTE: It is desirable to use cameras of the same type when using the DVPG

Using Black and White Video Cameras

Connect the video output from the camera(s) to the appropriate camera video input connector(s) located on the rear of the DVPG. Connect the sync output (located on the rear of the DVPG) to camera 2 external sync connection (on camera 2). In a two camera configuration, camera 2 is required to have external sync capability. In a single camera configuration, the camera 1 input of the DVPG must be utilized.

Using Color Cameras with composite (BNC) output

Connect the video output from the camera(s) to the appropriate camera video input connector(s) located on the rear of the DVPG. Connect the sync output (located on the rear of the DVPG) to camera 2 external sync connection (on camera 2). In a two camera configuration, camera 2 is required to have Gen Lock capability or external sync capability with phase control adjustment. In a single camera configuration, the camera 1 input of the DVPG must be utilized. If a camera with external sync and no phase control adjustment is utilized in the camera 2 position, the color may not be correct.

Using Color Cameras with S-Video (4 pin DIN) output

Connect the video output from the camera(s) to the appropriate camera video input connector(s) located on the rear of the DVPG. Connect the composite video output (located on the rear of the DVPG) to the camera 2 external sync connection (on camera 2). In a two camera configuration, camera 2 is required to have Gen Lock capability or external sync capability with phase control adjustment. In a single camera configuration, the camera 1 input of the DVPG must be utilized. If a camera with external sync and no phase control adjustment is utilized in the camera 2 position, the color may not be correct.

4.2 Monitor Installation

Using a video monitor

Connect the same type video cable to the video output connector of the DVPG and then to the monitor (Ref. Figure 1) then make sure the output switch has video mode selected.

Using a computer monitor

Connect the computer monitor to the SVGA connector and make sure the output switch has SVGA mode selected.

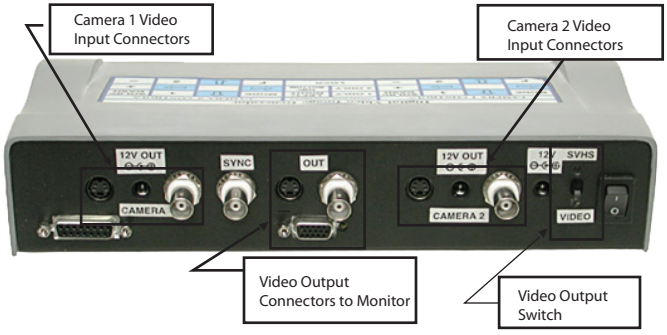


Figure 1 Rear Panel

Make sure the unit power switch (located on the far left of the rear panel) is in the off position (“0”).

Plug the 12 VDC power supply (supplied with unit) into the line voltage and into the power connector on the rear of the DVPG located next to the output switch.

Turn the power switch of the DVPG to the on position. The green LED on the upper left of the front panel should now be lit (Ref. Figure 2)

The unit is now ready for usage.

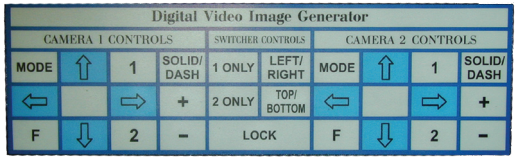


Figure 2 Keyboard

5.1 "Hold" Lockout Mode

Upon initial startup, the DVPG is defaulted to "HOLD" or lockout mode. This is indicated on the monitor in the upper left corner. When the "HOLD" is present, all keyboard functions are locked out.

To remove the unit from lockout mode, press and hold the "LOCK" button until the indicator in the top left of the monitor changes from "HOLD" to "1". Keyboard function is now restored to the unit.

Once proper position of a reticle is established, it may be desirable to prevent the reticle from accidentally being moved; this is accomplished by placing the unit back in lockout mode.
To place the unit in lockout mode, press and hold the "LOCK" button until the indicator in the top left of the monitor changes from "1" or "2" to "HOLD". All keyboard functions are now locked out.

5.2 Reticle Type

The unit has six choices of reticle types to be displayed for each camera. Each time the "MODE" button (located on the top left of each individual camera control) is pressed, you change to a new type of reticle. Repeated pressing allows the user to toggle through the six reticle types. The six reticle types are as follows:

1) Single crosshair
2) Dual crosshair
3) Box
4) Crosshair with 2 sizable centered circles
5) Fixed in the center single crosshair
6) No reticles

5.3 Line Style

The unit has two choices of line styles to be displayed (solid and dashed). The line stlye is selcted by pressing the "SOLID/DASH" button for each desired camera (located on the top right of each individual camera control)

5.4 Reticle Movement

Pressing the arrow buttons on the keyboard in the desired direction will relocate the displayed reticle. The buttons can be pressed a single time to move the reticle a small amount or pressed and held to move the reticle a large distance rapidly.

Horizontal lines use the up and down buttons to move
Vertical lines use the left and right buttons to move

The first circle is sized using the up and down buttons. The second circle is sized using the left and right buttons

5.5 Selecting Reticle Feature to Move

There is a minimum of two and maximum of four features to each reticle. Features are grouped into pairs, one vertical and one horizontal feature. Each reticle has a minimum of one horizontal and one vertical line. Choosing what feature to move is done by pressing the "1" or "2" button on the keyboard. The selection of "1" or "2" is shown in the top leftt hand corner of the monitor. When "1" is selected, the first horizontal and

vertical feature pairs may be moved using the appropriate arrow buttons. When "2" is selected, the second pair of horizontal and vertical features may be moved using the appropriate arrow buttons. The exceptions to this are the single crosshair reticle (there is no second feature pair) and the single crosshair with 2 circles. When "2" is selected, the first circle of the single crosshair with 2 circles reticle can be sized using the up and down arrows. The second circle of the single crosshair with 2 circles reticle can be sized using the left and right arrow buttons.

5.6 Memory Function

The memory function allows the user to return to the desired reticle position and line type after the unit has been powered off. To enable memory, the user places the unit in "Hold" Lockout Mode prior to powering the unit off. See section 5.1 for instructions to place the unit in "Hold" mode.

5.7 Switcher and Split Screen Control Functions

The switcher and split screen functions allow the user to view two cameras on the screen simultaneously or individually. To enable the switcher and split screen functions, the unit must be removed from lockout mode (See section 5.1). To view camera 1 only, press the "1 ONLY" button (located in the center of the DVPG keyboard). To view camera 2 only, press the "2 ONLY" button (located in the center of the DVPG keyboard). To view the cameras simultaneously split vertically, push the "LEFT/RIGHT" button (located in the center of the DVPG keyboard). To view the cameras simultaneously split horizontally, push the "TOP/BOTTOM" button (located in the center of the DVPG keyboard).

Video

- Signal: .7-1.4vp-p @75 ohms (NTSC, PAL, EIA, CCIR)
- Video Input: RS170, Composite and S-video
- Video Output: Unity gain, loop through, or SVGA
- Power Input: 12 VDC regulated

Mechanical

- Dimensions:
  (w) x (h) x (l) 10. 50" x 2.00" x 6.50" (includes rear connectors)
  (w) x (h) x (l) 26.7 cm x 5.1 cm x 16.5cm (includes rear connectors)
- Weight: 1.5 lbs.

Power

Specify 110 or 220VAC, 110VAC standard (if not specified).

TECHNIQUIP

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