

Operation Manual

Digital Video Image Generator

DCG-200M



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Warnings

Do not use a power supply that is not factory approved as it can damage or destroy the DCG-200M and could result in unsafe conditions.

No user serviceable parts – see Technical Support Section.

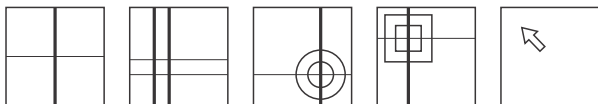
Do not mix video input and output signals (i.e. S-video input and composite output). Damage to the unit may result.

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.

The DCG-200M is a fully adjustable digital video generator.

The DCG-200M creates adjustable reticles on a live video image.

The DCG-200M creates seven different reticle patterns (single crosshair (rotatable), fixed in center single crosshair, dual crosshair, box, single crosshair with 2 sizeable circles, single crosshair with 2 sizeable squares and arrow pointer).



The created reticles can be set to four different line types (solid black, dashed black, solid white, dashed white). Additionally, the live video image can be viewed without reticles.



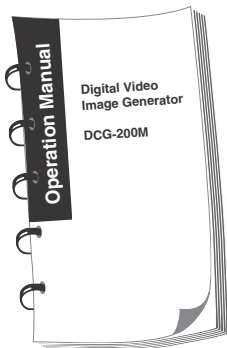
The DCG-200M is compatible with NTSC, PAL, EIA and CCIR video formats. It is also can be used with S-video or composite video signals.

The DCG-200M utilizes 12VDC for power and therefore can be configured to meet any input power requirements.

The DCG-200M 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 DCG-200M to be turned off and still remember the previous position of each reticle pattern.

Standard Composition

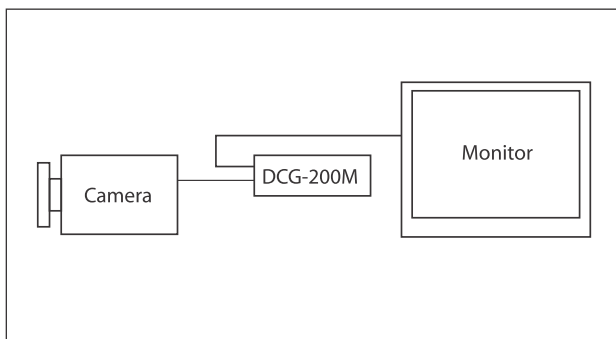
- | | | |
|----|--------------------|------|
| a) | DCG-200M Unit body | 1 Ea |
| b) | Power Supply | 1 Ea |
| c) | Operation Manual | 1 Ea |



- Seven built in reticle patterns (single crosshair (rotatable), fixed in center single crosshair, dual crosshair, box, single crosshair with 2 sizeable circles, single crosshair with 2 sizeable squares and arrow pointer)
- Four built in line types (solid black, dashed black, solid white, dashed white) and no lines.
- Convenient “Hold” or lockout capability
- Digital circuitry for maximum stability
- Digital memory of reticle position and line type when powered off
- Accommodates both composite and S-video
- Operates in Color or B & W
- Phase locked to camera
- NTSC, PAL, EIA and CCIR compatible

The DCG-200M connects in series between the video camera and the monitor. Video input and output connectors for composite (BNC) and S-video (4 pin mini DIN) 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.



Connect the video output from the camera to the appropriate video input connector located on the rear of the DCG-200M. Connect the same type video cable to the video output connector of the DCG-200M and then to the monitor (Ref. Figure 1).



Figure 1. Rear Panel

Flip the video selection switch (located on the bottom right of the rear panel) toward the video in connector being used (right = composite, left = S-video).

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 DCG-200M located just to the right of the power switch.

Turn the power switch of the DCG-200M 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 use.

Upon initial startup, the DCG-200M is defaulted to "HOLD" or lockout mode. This is indicated on the monitor in the upper right hand corner. When the "HOLD" is present, all keyboard functions are locked out.



Figure 2. Keyboard

“Hold” Lockout Mode

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 (center button on the keyboard) until the indicator in the top right of the monitor changes from “1” or “2” to “HOLD”. All keyboard functions are now locked out.

To remove the unit from lockout mode, press and hold the lock button (center button on the keyboard) until the indicator in the top right of the monitor changes from “HOLD” to “1”. Keyboard function is now restored to the unit.

Reticle Type

The unit has seven choices of reticle types to be displayed. Each time the “Reticle” button (located on the top left of the keyboard) is pressed, you change to a new type of reticle. Repeated pressing allows the user to toggle through the seven reticle types. The seven reticle types are as follows:

- 1) Single crosshair (rotatable)
- 2) Dual crosshair
- 3) Box
- 4) Crosshair with 2 sizable centered circles
- 5) Fixed in the center single crosshair
- 6) Crosshair with 2 sizeable squares
- 7) Arrow pointer

Line Style

The unit has five choices of line styles to be displayed. Each time the “LINE” button (located on the bottom left of the keyboard) is pressed, you change to a new style of line. Repeated pressing allows the user to toggle through the five line styles. All line styles are available for each reticle type. The line styles are as follows:

- 1) Solid black lines
- 2) Dashed black lines
- 3) Solid white lines
- 4) Dashed white lines
- 5) No lines

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

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

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 right 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 (the crosshair rotates when the arrow buttons are pressed) the single crosshair with 2 circles and the single crosshair with 2 squares.

The single crosshair reticle, when the selection “2” is made, rotates the vertical line clockwise when the up arrow button is used and rotates counter clockwise when the down arrow is used. The crosshair (vertical and horizontal lines) rotate clockwise together when the right arrow button is used and counterclockwise when the left arrow button is used.

The single crosshair with two circles (square) reticle, when “2” is selected, the first circle (square) of the single crosshair with 2 circles (squares) reticle can be sized using the up and down arrows. The second circle (square) of the single crosshair with 2 circles (squares) reticle can be sized using the left and right arrow buttons.

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.

Video

- Signal: Ø.7-1.4vp-p @75 ohms (NTSC, PAL, EIA, CCIR)
- Video Input: RS170, Composite and S-video
- Video Output: Unity gain, loop through
- Power Input: 12V DC 400ma

Mechanical

- Dimensions: (w) x (h) x (l) 5.75" x 4.25" x 1.375"
(includes rear connectors)
(w) x (h) x (l) 14cm x 10.8cm x 3.5cm
(includes rear connectors)
- Weight: 0.5 lbs.

Power Adapter

Input:

USA Only

110 VAC - 220VAC Autoswitching, 47 – 63 Hz

International

Call with plug specifications.

Output:

12 VDC, 1.0 ampere

Connector:

2.1 mm female

Service Information

Oem-Optical offers qualified repair services for all its products. Please contact us for a quotation.

How To Contact Technical Support

Oem-Optical's products are offered worldwide by a network of skilled resellers, who, in most instances, can provide localized technical support. Check first with the reseller.

Factory support is available directly from Oem-Optical's Technical Support Team. We are available to assist from 8 – 5 pm Pacific Time Monday to Friday.

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Warranty

Oem-Optical warrants this product to be free from defect in material and workmanship for a period of 12 months following original purchase. This warranty excludes any product which may have been misused, neglected, damaged, or altered – including non-factory authorized repairs. Oem-Optical's obligations under this warranty are limited to the repair, replacement, or reimbursement of the product only, and in no event is Oem-Optical liable for any consequential or special damages, or any cost related to transportation, installation, or any other cost related to a warranted product.



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