instruction manual

s-video
pattern generator
model NSSN625S

s/n_____

boulder, colorado

WARNING

This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual, may cause interference to radio communications.

It has been tested and found to comply with the limits for a claSS A computing device pursuant to subpart of J of part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

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SECTION I

GENERAL DESCRIPTION

1.1 INTRODUCTION

This instruction manual is to be used as a guide to the installation, adjustment, operation and maintenance of the Colorado Video Model NSSN625S S-Video Marker.

1.2 PURPOSE OF EQUIPMENT

The Model NSSN625S S-Video Marker is used to generate an overlaid pattern on an s-video monitor. It allows rapid alignment of subject material with a predetermined location when used in conjunction with a standard s-video TV camera and monitor.

1.3 DESCRIPTION OF EQUIPMENT

The Model NSSN625S accepts s-video at a terminated input, adds a pattern to the video and provides an s-video output of the video/lines combination for display on an s-video monitor. The pattern can consist of a combination of four rotatable lines, two circles, and a rectangle, each displayed in its own color; black, gray, white, or invisible.

The unit is free standing with a sloping face for bench top use.

1.4 SPECIFICATIONS

Size:	6.9"W x 4.9"L x 2.4"H sloping to 1.4"H
Mounting:	Bench Top
Construction:	Solid-state, SMT PC Board
Power:	+5VDC, 1000mA regulated
Input Signal:	**S-**Video, 1 V p-p, 75 Ω
Output Signal:	**S-**Video, 1 V p-p, 75 Ω
Controls:	Pattern: Off/On Mode: Run/Setup/Hold to Save Select: Line 1/Line 2/Line 3/Line 4/Rectangle/Circle 1/Circle 2 Color: White/Black/Gray/Invisible Move All (hold down while operating a position control) Move Selected Object or All Left Move Selected Object or All Down Move Selected Object or All Up Move Selected Object or All Right Decrease Line Length or Rectangle Width Increase Line Length or Rectangle Width Rotate Line CCW or Decrease Rect. Height or Circle Dia. Rotate Line CW or Increase Rect. Height or Circle Dia.
Indicators:	Pattern Off (red) Run Mode (controls are locked when lit) Setup Mode (controls are active when lit) Line 1 Selected for adjustment Line 2 Selected for adjustment Line 3 Selected for adjustment Line 4 Selected for adjustment Rectangle Selected for adjustment Circle 1 Selected for adjustment Circle 2 Selected for adjustment
Connectors:	**S-**Video In: 4-pin Mini-DIN Female **S-**Video Out: 4-pin Mini-DIN Female +5 VDC Power: Coaxial 5.5mm x 2.5mm, center pin positive

SECTION II

OPERATING INSTRUCTIONS

2.1 INTRODUCTION

This section contains the general operating instructions and procedures for the Model NSSN625S S-Video Marker.

2.2 INSTALLATION AND OPERATION

Connect a camera or other source of an s-video signal to the "input" connector on the rear of the NSSN625S. Connect a s-video monitor to the "output" connector.

Connect the coaxial power input to a regulated 5VDC, >900mA, center pin positive power source. The "Run" LED should appear steady and the "Setup" LED should flash for about ten seconds while the unit boots. About two seconds after booting, the unit should function according to previously saved settings.

Run/Setup: The S-Video Marker can be toggled between two modes of operation by means of the Run/Setup button. Push the button briefly to change modes. In the **Run Mode**, all other controls are locked. Controls are active in the **Setup Mode**. Either mode can be used indefinitely.

Adjustment: The S-Video Marker can superimpose seven different objects onto video including four lines, two circles, and a rectangle. Each object is independently adjustable as to position, dimension, color, and in the case of the four lines, rotation.

To adjust the characteristics of a particular object, place the S-Video Marker in "Setup" mode by pressing the "Run/Setup" button until the "Setup" LED is illuminated. Press the "Select" button repeatedly until a green LED indicates the object to be adjusted. A full-screen cross-hair, of similar color, will appear to indicate the center of the selected object. If a line that is perfectly horizontal or vertical is selected, the similar cross-hair line will disappear.

The horizontal and vertical **positions of all objects can be individually set** by selecting an object and then using the four position buttons; left, down, up, and right. A brief press of each button will move the object only a little at a slow rate. Holding a button down will cause the object's rate of movement to increase thereby facilitating large changes in position.

The horizontal and vertical **positions of all objects can be changed simultaneously** by holding down the "Move All" button while operating the desired position buttons.

The color of all objects can be individually set by selecting an object and then pressing the "Color" button to step through the available colors until the desired color is displayed.

Lines can be rotated. Use the "Select" button to select the desired line and then hold down the rotate buttons, labeled with gray circular arrows, to rotate the lines. While the buttons are held down, rotation will be very slow at first to allow fine adjustment. Then, rotation will speed up to facilitate larger adjustments.

Lines can be shortened and lengthened. Use the "Select" button to select the desired line and then hold down either of the two line dimension buttons, labeled with gray arrows, to adjust the line to the desired length. While the buttons are held down, change will be slow at first to allow fine adjustment. Then, dimensional change will speed up to facilitate larger adjustments.

The rectangle's dimensions can be adjusted. Use the "Select" button to select the rectangle and then hold down any of the four line dimension buttons, labeled with black arrows, to adjust the rectangle to the desired width an height. While the buttons are held down, change will be slow at first to allow fine adjustment. Then, dimensional change will speed up to facilitate larger adjustments.

The circles' diameter can be adjusted. Use the "Select" button to select the desired circle and then hold down either of the two circle diameter buttons, labeled with vertically oriented black arrows, to adjust the circle to the desired diameter. While the buttons are held down, change will be slow at first to allow fine adjustment. Then, the change will speed up to facilitate larger adjustments.

The unit can be left indefinitely in the "Setup" mode to allow the controls to remain active. Use the "R**un/Setup**" button to toggle to "run" mode in order to make the controls inactive.

S**ettings can be saved** in order to preserve them while power is absent. While the unit is in "setup" mode, press and hold the "Run/Setup" button. Release the button once the "Setup" LED has extinguished. Settings will be saved until this process is repeated for new settings.

warranty

Colorado Video, Incorporated warrants the equipment of its manufacture to be free of defects in material and/or workmanship under normal use and service. Colorado Video, Incorporated's obligation under this warranty is limited to making good at its laboratories any part or parts thereof , which shall within one (1) year after delivery to the original purchaser be returned to Colorado Video, Incorporated at its laboratories, with transportation charges prepaid, and which Colorado Video, Incorporated's examination shall disclose to its satisfaction to have been defective.

This warranty is expressly in lieu of all other warranties and representation, express or implied, and of all other obligations or liabilities on the part of Colorado Video, Incorporated. In no event shall Colorado Video, Incorporated be liable for damages of any kind connected with the use of its equipment or its failure to function properly.

This warranty shall not apply to any equipment which shall have been repaired or altered outside of Colorado Video, Incorporated's laboratories so as to, in Colorado Video, Incorporated's judgement, affect its use, function, reliability, or which shall have been subject to misuse, alteration, improper installation, negligence, or accident.

Before any equipment is returned to Colorado Video, Incorporated for repairs or adjustments, shipping instructions should be obtained from Colorado Video, Incorporated. Colorado Video, Incorporated assumes no responsibility for unauthorized returns.