

instruction manual

video color synthesizer Model 606 & 606S

s/n_____

colorado video, inc

boulder, colorado

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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 606S or 606 Video Color Synthesizer.

1.2 PURPOSE OF EQUIPMENT

The Video Color Synthesizer, synthesizes a color video signal based on shades of gray in a real-time monochrome video input signal. Common uses for this technique include adding color to monochrome satellite images or thermal (IR) images in order to make features more easily discernible. This unit also provides a freeze function.

Color is "mapped" onto the monochrome input based on its amplitude (intensity). In normal operation, as brightness increases, color will progress from blue, to cyan, green, yellow, red, and then magenta. The direction of the color map can be reversed with the flip of a switch. A multifunction knob also allows the phase (hue) of the color to be rotated with respect to the amplitude of the monochrome input. This knob can also control the amount of the monochrome input (intensity) and the amount of false color (saturation) present at the output. The user can also turn on and off a legend, presented on the left side of the screen, showing the resulting output as it progresses from dark to bright.

1.3 DESCRIPTION OF EQUIPMENT

The Model 606 employs a single SMT PC board. The 606 is housed in an optionally rack mountable painted aluminum chassis with built-in 100-240 VAC power supply. The 606S is housed in a desk top style ABS plastic case and uses an external 100-240VAC adapter for power.

1.4 SPECIFICATIONS

Model:	606S	606
Power Connector:	5.5x2.5mm Coaxial	IEC (Cord included)
Size:	6.9"W X 4.9"D X 2.4" H sloping to 1.4"H	1.75"H X 8" W X 8"D
Mounting:	Free standing desktop	Free standing, rack mount opt.
Power:	5VDC, 900 mA (Adapter included)	100-240 VAC, 50/60 Hz
Chassis:	Black Plastic	Painted Aluminum
Options:	PAL, S-Video	Rack mount, 12VDC Power Input
Indicators:		Power
Input Signal:	Video, 1 V p-p 525 line NTSC, 75 Ω	
Output Signal:	Video, 1V p-p into 75 Ω load	
Resolution:	NTSC: 720H X 480V, 30FPS	
Controls:	Power (606 only, not functional for optional 12VDC power input)	
	Color Legend: On/Off	
	Color Phase: Normal/Reverse	
	Live/Freeze	
	Set Saturation (momentary button)	
	Set Phase (momentary button)	
	Set Luma (momentary button)	
	Set (potentiometer, function selected by momentary buttons)	

SECTION II

OPERATING INSTRUCTIONS

2.1 INTRODUCTION

This section contains the general operating instructions and procedures for the Video Color Synthesizer Models 606 and 606S.

2.2 SYSTEM SETUP

Connect a monochrome camera VIDEO OUT to the INPUT connector on the 606. Connect the 606's OUTPUT to a color video monitor input.

Set the Front-panel controls on the 606 as follows:

COLOR LEGEND	Off
COLOR PHASE	Normal
FREEZE/LIVE	Live

Connect the power cord and turn on the power switch. The monitor should be displaying a live image with false color.

Turning on the COLOR LEGEND displays a vertical bar on the left side of the monitor showing the progression of mapped color from darkest input at the top to brightest input at the bottom. Pressing and holding the SET PHASE button (center of three buttons) while simultaneously turning the SET knob will cause the color phase/intensity map to change as shown by the color legend bar display. The COLOR PHASE switch selects the direction of progression through the color wheel as luminance changes, observable in the color legend bar.

The amount of synthesized color in the output can be adjusted with the SET knob while pressing the SET SATURATION button (top or left of the three buttons).

The amount of monochrome contrast in the output can be adjusted with the SET knob while pressing the SET LUMA button (bottom or right of the three buttons).

Switching to FREEZE mode freezes the output to facilitate examination of a desired image.

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.