

instruction manual  
video screen splitter model 613gs

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**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 613GS Video Screen Splitter

### 1.2 PURPOSE OF EQUIPMENT

The Model 613GS Video Screen Splitter is a two-channel device that allows sharing a single monitor between two video sources. Except in anamorphic mode, this unit does not compress or manipulate the sources, so the split can show only different parts of the two different sources. The split can be either a top/bottom or right/left split.

### 1.3 DESCRIPTION OF EQUIPMENT

The 613GS consists of a single printed circuit board mounted in an ABS case with external power supply.

### 1.4 SPECIFICATIONS

Size:	2.4 X 9 X 6.9
Weight:	2 lbs. with power supply (wall-mount transformer)
Mounting:	Free standing
Power:	5 VDC
Inputs/Video:	Composite, 1 V p-p. (2) 75 ohms. 525 Line RS-170 (625 line CCIR optional)
Outputs:	Composite video, 1 V p-p into 75 ohms.
Controls:	Front Panel: Split: Top/Bottom Left/Right Reverse Positions Position (potentiometer) Anamorphic/Normal
Performance:	Resolution: 720x480 Split Position: Full Raster H & V

## SECTION II

### OPERATING INSTRUCTIONS

#### 2.1 INTRODUCTION

This section contains the general operating instructions and procedures for the Model 613GS Screen Splitter.

#### 2.2 SYSTEM SETUP

Connect the two video sources to the Video In connectors. Connect Video Out to a terminated monitor or other destination. Connect the power.

Set the split selection switch to either position and center the position control. The split between the two sources should be approximately mid-screen in the direction chosen.

Set the controls as desired.

# 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.

# no color?

**Turn off the Line-Lock** feature of any video source connected to this equipment.

Most likely, any loss of color is because your video signal source does not conform to Electronic Industry Association (EIA) requirements.

Colorado Video equipment requires video input signals that conform to EIA RS-170A and NTSC specifications. These industry standard specifications require that color subcarrier frequency be  $3,579,545 \pm 10$  Hz, horizontal sync frequency be 15,734.263 Hz, and vertical sync frequency be 59.94 Hz. Video equipment must strictly adhere to these frequencies in order to maintain proper phase relationships between these three signals.

Cameras operating in Line-Lock mode violate these standards by synchronizing vertical sync to the 60 Hz (not 59.94 Hz) sine wave from the power line. To maintain proper phasing between horizontal and vertical sync, these cameras further have to violate the horizontal frequency specification by running at 15,750 Hz, not 15,734 Hz.

Colorado Video equipment runs at the horizontal and vertical sync frequencies present at its input. In order to maintain industry mandated phase relationships between vertical, horizontal, and color subcarrier, the subcarrier frequency may be forced too high for some monitors to display color. Many times in this situation, some monitors will display color while others will not.

**To set your camera for proper operation**, find a switch or jumper on the camera that refers to “line-lock” (sometimes “line-loc”) or “external” and switch it away from that position. Proper settings are referred to as “int”, “internal”, “internal crystal” or line-lock “off”. If this setting is not available, you can install a Time Base Corrector in series between the camera output and Colorado Video input. It is also possible that running your camera on a power adapter with a DC, not AC, output will solve the problem. It may be necessary to try both polarities when using a DC adapter.

**PAL Users:** The frequencies are different but the same principle applies.