

instruction manual
model 441C series frame store

s/n _____

boulder, colorado

june 2003

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

INTRODUCTION

This instruction manual is to be used as a guide to the installation, adjustment, operation and maintenance of the Colorado Video Model 441C Video Frame Store.

DESCRIPTION OF EQUIPMENT

The Model 441 series Frame Store is a full frame, high resolution, video memory. Upon command, it captures a full video frame in 1/30th of a second from a standard NTSC video input (1/25th for PAL 625-line). The FREEZE command can be given by means of a front panel push button or rear panel external contact-closure input. Resolution is 720 x 480 for standard units conforming to EIA RS-170A specifications and 720 x 580 for units ordered to conform to PAL 625-line specifications.

SPECIFICATIONS

Size:	441C: 1 3/4" X 11" X 8" 441CS: 2.5: X 4.9" X 6.9"
Mounting:	Free standing (1 3/4" X 19" rack mount fro 441C optional)
Weight:	441C: 3.5 lbs 441CS: 1 lbs.
Power:	441C: 100-240 VAC, 50/60 Hertz, 75 VA 441CS: 5VDC regulated, 2A
Inputs:	Composite Video: 1 V p-p, 75Ω 525-line NTSC (625-line PAL optional): Ext. Freeze Command: Contact closure to ground to freeze picture
Outputs:	Composite Video: 1 V p-p into 75Ω load (TV monitor)
Controls:	Front Panel: Power: On/Off (441C only) Update Normal/Freeze Field/Frame
Connectors:	Video: BNC Freeze Control: BNC
Performance:	Resolution: 720 pixels per line x 480/580 lines

SECTION II

OPERATING INSTRUCTIONS

INITIAL INSTALLATION

System Connections

The Model 441 Frame Store is usually used with a television camera and monitor. The video interconnections are made using 75Ω coaxial cables. The most commonly used cable is Type RG-59/U with BNC connectors on each end, and are available from Colorado Video or almost any electronics supply store.

Use of the remote "Freeze" control signal is optional. To use the external control, place the normal/freeze switch in the normal position. To freeze the picture, the two conductors in the rear panel BNC should be shorted with a contact closure or equivalent. Opening the short or pressing the "Update" button will cause the picture to update until closed again.

Initial Operation

Set the FIELD/FRAME switch to FRAME and the NORMAL/FREEZE switch to FREEZE. Turn on the power for all units in the system. Push the UPDATE pushbutton. A stored image of whatever the camera is looking at should appear on the monitor. You can hold down the UPDATE pushbutton or set the NORMAL/FREEZE switch to NORMAL to get a "real time" image on the monitor which may be useful in framing and focusing the camera.

For proper video output, whether in normal or freeze mode, a proper NTSC or PAL video signal must be present at the input.

OPERATING CONTROLS

Front Panel Controls

The Model 441's controls have the following functions:

Power	ON/OFF with internal indicator light.
Field/Frame	Selects whether the stored information comes from a single field or a full frame of the input video signal. The Field position is sometimes useful when grabbing images with fast motion in them. The Frame position provides better vertical resolution.
Update	Push this pushbutton to "grab" and store an image. The storage process continues as long as this push button is pushed, and the 441 holds the last field or frame after the pushbutton is released.
Normal/Freeze	Selects whether input video is passed through to the output continuously (Normal) or only when the Grab button is pressed (Freeze). Also, to use the external freeze control, this switch must be in the normal position.

External Control Signal

Rear panel BNC:

A remote switch can be connected here. Short the center pin and shield to freeze the picture. Open to update the picture. Be sure the normal/freeze switch is in the normal position to use this control input.

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.