instruction manual

video peak store Model 443C & 443CS

s/n_____

colorado video, inc

boulder, colorado

january 2006

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 443C, or 443CS Video Peak Store.

1.2 **PURPOSE OF EQUIPMENT**

The Model 443 Video Peak Store is a memory-based device capable of capturing either the whitest or darkest level for each pixel in the input video over time. This function is useful for displaying a feature's path over time through the fieled of view or capturing brief flashes. A decay function allows pixels to fade back to background levels over an adjustable period of time. Frames can be frozen when desired and field (instead of frame) mode maybe selected to eliminate flickering of rapidly moving subjects.

1.3 **DESCRIPTION OF EQUIPMENT**

The Model 443 employs a single SMT PC board. The 443C is housed in an optionally rack mountable painted aluminum chassis with built-in 100-240 VAC power supply. The 443CS is housed in a desk top style ABS plastic case and uses an external 100-240VAC adapter for power.

1.4 **SPECIFICATIONS**

Model:	**443CS**	**443C**
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	PAL, S-Video, Rack mount
Indicators:		Power
Input Signal:	Video, 1 V p-p 525 line NTSC (625 line PAL optional) 75Ω	
Output Signal:	Video, 1V p-p into 75Ω load	
Resolution:	NTSC: 720H X 480V, 30FPS	
	PAL (opt): 720H X 580V, 25FPS	
Controls:	Power (443C only)	
	Resolution: Field/Frame	
	Peak Detect: White/Off/Black	
	Run/Freeze	
	Reset (momentary button)	
	Decay/Normal	
	Decay Time (in frames):	
	Multiply by 256/1	
	Multiply by 16/1	
	Multiply by 4/1	
	Multiply by 2/1	

SECTION II

OPERATING INSTRUCTIONS

2.1 **INTRODUCTION**

This section contains the general operating instructions and procedures for the Video Peak Store Models 443C and 443CS.

2.2 **SYSTEM SETUP**

Connect the camera VIDEO OUT to the VIDEO IN connector on the 443. Connect the VIDEO OUT to a video Monitor.

Set the Front-panel controls on the 443 as follows:

FIELD/FRAME	FRAME
BLACK/WHITE	OFF (center position)
FREEZE/RUN	RUN
DECAY/NORMAL	NORMAL
POWER (443C only)	ON

The monitor should be displaying a live image.

Set WHITE/BLACK to WHITE. Moving the camera or the subject should produce “trails” where light areas or points move. Setting BLACK/WHITE to BLACK will cause dark trails.

From here on, operation becomes quite application-specific. Some controls interact and certain combinations of settings will produce no visible effect. The following are tips and suggestions:

RESET acquires normal non-peakstore images, regardless of WHITE/BLACK setting.

Your preferred BLACK/WHITE setting will depend on your subject and background.

If FREEZE/RUN is on FREEZE, no new images will be acquired. This is useful for studying an image after it’s acquired.

Pixels can be caused to fade to their present values at the input over time using the “decay” function. This is analogous to a jet leaving a contrail (its path or track) and then having the contrail fade or decay. The DECAY/NORMAL switch should be put in the DECAY position and the DECAY TIME switches set as desired. Each of the four DECAY TIME switches multiples the decay time by its marked value. For example, for NTSC (30 FPS) video, the 16 switch will cause the decay time to be about a half-second (16 frames). Flipping up the 4 switch will multiply that time by four, thereby making it about two seconds.

2.3 **INTERNAL ADJUSTMENTS: COLOR**

The color provided at the 443's output depends entirely on the input color. Peak storing is purely a luminance (brightness) function. This combination of facts may sometime cause undesirable color at the output. Color can be eliminated by opening the unit and removing a jumper (the only jumper in the unit) installed over two pins at the connector labeled "J22". Do not remove the connector installed over the adjacent pins.

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.