

instruction manual

video multiplexing system
multiplexer model 496-2C-F
demultiplexer model 497-2C-F

s/n _____

December 2005

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.

TABLE OF CONTENTS

Section I	GENERAL DESCRIPTION	Page
	1.1 Introduction	1
	1.2 Purpose of Equipment	1
	1.3 Description of Equipment	1
	1.4 Specifications	2
Section II	OPERATING INSTRUCTIONS	3
	2.1 Introduction	3
	2.2 Initial Installation	3
	2.3 Operation	3

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 496-2C Video Multiplexer and Model 497-2C Video Demultiplexer.

1.2 PURPOSE OF EQUIPMENT

This multiplexer/demultiplexer pair doubles the number of video signals that can be transmitted through a video channel or recording.

1.3 DESCRIPTION OF EQUIPMENT

The Video Multiplexer Model 496-2C-F takes two unsynchronized video sources and interleaves one half of the frames from each create a standard video signal suitable for transmission or recording. This is accomplished by taking alternating frames from each input, synchronizing them, and then combining them to generate one standard video output. The multiplexed output can be viewed on a standard video monitor but in most cases will be sent over microwave link or recorded.

Installed at the receive or playback end of the process, the Demultiplexer Model 497-2C-F separates the interleaved frames and provides them separately at its two outputs. This is accomplished by using each frame twice in order to compensate for the half of the frames discarded in the multiplexing process by the Model 496-2C-F.

While doubling signal capacity, the entire multiplexing/demultiplexing process reduces the frame update rate from 30 (25) to 15 (12.5) per second. Although the update rate is reduced, 30 (25) frames per second are still provided at the demultiplexer's output by using each frame twice.

1.4

SPECIFICATIONS

Size:	1 ¾" X 8" X 8"
Mounting:	Tabletop (rack mount optional)
Power:	420C 117/220 VAC, 50/60 Hz, 75VA
Input Signal:	Video, composite, 1 V p-p, 75 ohms
Output Signal:	Video, composite, 1 V p-p, 75 ohms
Controls,	Front: Power On/Off
Indicators:	Power On
Connectors;	Video: BNC Power: IEC
Resolution:	NTSC: 720 X 480, 4:2:2 picture elements, 15FPS PAL: 720 X 580, 4:2:2 picture elements, 12.5 FPS

SECTION II

OPERATING INSTRUCTIONS

2.1 INTRODUCTION

This section contains the general operating instructions and procedures for the Model 420 Mirror.

2.2 INITIAL INSTALLATION

Connect video sources to the Ch-1 and Ch-2 inputs on the back of the 496-2C. These sources do not need to be genlocked or synchronized, but they should be time-base corrected if they are from analog tape, line-lock cameras, or other sources with an out-of-specification SCH-phase relationship. Always use Ch-1 (Ch-2 may be left unconnected) to assure proper output. Connect the Multiplexed output to your transmission or recording equipment video input. Connect power and turn the 496-2C on.

Connect the output of your reception or playback equipment to the Multiplexed Input on the back of the 497-2C. Output from analog playback equipment should be time-base corrected before being fed to the 497-2C. Enable reception or playback and turn on the 497-2C. The Ch-1 and Ch-2 outputs will present the 496-2C's corresponding inputs.

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.