



DD422CS Hi-Def Video Scan Reverser

Users' Manual

Colorado Video



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.

If Your Unit Carries the Optional CE Mark:

Colorado Video Inc., Boulder CO, USA, declare under our sole responsibility that the Model DD422CS, if installed and operated in accordance with instructions, is in conformity with the following European, harmonized and published standards at date of this declaration:

Safety:

EN/IEC 60950-1:2001: safety of information technology equipment

Electro-Magnetic Compatibility:

EN 55022:1998: Electro magnetic *emissions:* Class A

EN 61000-3-2:1996: Harmonic current emissions

EN 61000-3-3:1995 Limitation of voltage fluctuations

EN 55024:1998: Product group *immunity* standard IT equipment:

EN 61000-4-2: electrostatic discharge (ESD) immunity

EN 61000-4-3: Radiated Electro-Magnetic field immunity

ENV 50204:1995: Digital radio telephones immunity

EN 61000-4-4:1995: Electrical fast transients (EFT) immunity

EN 61000-4-5:1995: Surge transient immunity

EN 61000-4-6: 1996: Conducted Radio-Frequency disturbances imm.

EN 61000-4-8: 1993: Power frequency magnetic field immunity.

EN 61000-4-11: 1994: Immunity to voltage dips and short interrupts

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SECTION I

GENERAL DESCRIPTION

1.1 PURPOSE OF EQUIPMENT

The Model DD422CS provides four selectable transforms for a DVI-D, Single Link Video Picture: Left/Right Mirror, Top/Bottom Flip, Rotate 180°, and Normal.

An HDMI signal at the input is also acceptable provided it is not HDCP Encrypted. The DD422CS will not pass any audio that may be present in an HDMI signal.

1.2 DESCRIPTION OF EQUIPMENT

The Model DD422CS accepts DVI-D Single Link Video at its input, performs the user-selected transform, and provides a DVI-D Single Link Video output for display on a compatible monitor.

The DD422CS, constructed in an ABS plastic and aluminum chassis with an internal EMI shield coating, is free standing with a sloping face for bench top use. It requires an external power supply to provide 5 Volts DC regulated, 1 Amp, at its 5.5x2.5mm coaxial power connector.

The Input/Output connectors are physically compatible with all DVI cables. The signal must be DVI-D Single Link or HDMI without HDCP Encryption. Passive adapters and cables to interconnect DVI and HDMI equipment are widely available. Generally, cameras are free of HDCP but DVD, Blu-Ray, and Satellite sources are frequently encrypted. If a source is found to be encrypted, use of its Hi-Def Component-Analog outputs, if present, and a Model CC422CS or CD422CS Scan Reverser should be considered.

1.3 SPECIFICATIONS

Size:	8.875"W x 6.5"L x 2.75"H sloping to 1.25"H
Mounting:	Table Top
Construction:	Solid-state, SMT PC Board, Optionally RoHS Compliant
Power:	+5VDC, 1000mA regulated
Input Signal:	DVI-D, Single Link (HDMI with adapter) HDCP not permitted
Output Signal:	DVI-D, Single Link
Controls(1):	Mode: Normal/Mirror/Flip/Rotate (pressing toggles through modes)
Indicators(5):	Power Video OK Picture Normal Picture Mirrored Picture Flipped Picture Rotated 180°
Connectors:	Video In & Out: DVI Power: Coaxial 5.5mm x 2.5mm

SECTION II

INSTALLATION AND OPERATION

Connect a camera or other source of a DVI-D or HDMI video signal to the “input” connector on the rear of the DD422CS. If the video source provides HDMI, a simple HDMI-DVI adapter or cable will be required. HDCP encrypted video is not permitted and any audio will not pass through the DD422CS.

Connect a DVI-D video monitor to the “output” connector. HDMI monitors are also suitable with use of a DVI-HDMI adapter or cable.

Connect the coaxial power input to a regulated 5VDC, >1000mA, center pin positive regulated power source. The “Power/Video OK” LED should appear steady. If the LED flashes, power is present but the signal at the video input is absent or incompatible.

A steady green “Video OK” indicator but blank picture indicates that the DVI or HDMI source is HDCP encrypted and processing by the DD422CS is not permitted..

To select Normal, Mirrored, Flipped, or Rotated Mode, press the button repeatedly until a green LED indicates the desired mode. The Mode setting will remain when the unit is powered down and up again.

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.