



Instruction Manual

**DV-1394 Pro-SDI
Analog Converter**

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1.0 INTRODUCTION

Thanks for purchasing this DV-1394 PRO SDI Analog Converter from TV One. The DV-1394 PRO-SDI is a high performance bi-directional IEEE-1394 DV to Analog converter. Our professional video conversion products have been serving the industry for over twenty years. TV One offers a full line of high quality Video Scalers, Scan Converters, Analog-Digital (DV, SDI, DVI) Converters, Standards Converters, Digital Video Recorders, Frame Synchronizers, Time Base Correctors, LCD Monitors, Matrix Routing Switchers and Distribution Amplifiers.

1.1 Liability Statement

Every effort has been made to ensure that this product is free of errors. TV ONE cannot be held liable for the use of this hardware or any direct or indirect consequential damages arising from its use. It is the responsibility of the user of the hardware to check that it is suitable for his/her requirements and that it is installed correctly. All rights reserved. No parts of this manual may be reproduced or transmitted by any form or means electronic or mechanical, including photocopying, recording or by any information storage or retrieval system without the written consent of the publisher. TV ONE reserves the right to revise any of its hardware and software following its policy to modify and/or improve its products where necessary or desirable. This statement does not affect the legal rights of the user in any way.

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All rights of the DV 1394 Pro SDI hardware belong to TV ONE

1.2 Features

The DV-1394 PRO-SDI Analog Converter has many features that enable it to perform in a superior manner. Among those features you will find:

- Anything in-Anything out: Analog, DVI, SDI
- Bi-directional conversion of DV to SDI
- Analog to Analog Transcoding
- AES/EBU audio: Analog, Balanced or Unbalanced
- IEEE-1394 Compatible: DV, DVCAM, DVC-PRO
- RS-232 Control of the DV-1394 PRO-SDI
- RS-422 Path from Editor to VCR Via Firewire Link
- Genlockable for Easy Systems Integration
- NTSC/PAL Selectable
- AVID Certified
- Desktop Operation with Rack mount Hardware Included

2.0 IMPORTANT SAFETY INSTRUCTIONS

To insure the best from this product, please read this manual carefully. Keep it in a safe place for future reference.

To reduce the risk of electric shock, do not remove the cover from the unit. No user serviceable parts inside. Refer servicing to qualified personnel.

2.1 POWER AND CONNECTIONS

This unit is not disconnected from the AC power source as long as it is connected to the wall outlet. The off state for this unit is called standby mode. In standby mode the unit is designed to consume a reduced quantity of power compared to normal operating modes.

When not using the unit for a long period of time, insure that the AC power cord is disconnected from the wall outlet.

The AC wall outlet should be installed near to the unit and be easily accessible.

Do not plug in or attempt to operate an obviously damaged unit.

2.2 WATER AND MOISTURE

To reduce the risk of fire, do not expose the unit to rain, water or excessive moisture.

2.3 GENERAL CARE

Do not force switches or external connections.

When moving the unit, disconnect the serial port connections first then the power cable and finally the interconnecting cables to other devices.

Do not attempt to clean the unit with chemical solvents or aerosol cleaners, as this may damage the unit. Use a clean dry cloth.

2.4 LOCATION

Installation of this unit should be in a cool dry place, away from sources of excessive heat, vibration, dust, moisture and cold.

2.5 VENTILATION

Slots and openings in the sides of the unit are provided for ventilation. To insure reliable operation, avoid obstruction of these openings and insure the unit is installed in a well-ventilated area.

3.0 INTELLECTUAL PROPERTY

Some IC chips in this product include confidential and/or trade secret property. Therefore you may not copy, modify, adapt, translate, distribute, reverse engineer, reverse assemble, or decompile the contents thereof.

2.0 IMPORTANT: CONSIGNES DE SECURITE

Afin de tirer le meilleur de ce produit, merci de lire attentivement ce manuel. Gardez-le dans un endroit sûr pour pouvoir le consulter à nouveau.

Afin de réduire le risque de choc électrique, ne retirez pas l'unité de sa protection.

Aucune pièce réparable par l'utilisateur à l'intérieur. Référez-vous à des personnes qualifiées.

2.1 ALIMENTATION ELECTRIQUE ET CONNEXIONS

Cette unité n'est pas déconnectée de la source de courant électrique tant qu'elle est connectée à la prise murale. Le mode éteint de cette unité est appelé mode de veille. En mode de veille, cette unité est conçue pour consommer une quantité réduite de courant par rapport aux modes normaux d'utilisation.

Lorsque vous n'utilisez pas l'unité pendant une longue période, assurez-vous que le câble d'alimentation électrique est déconnecté de la prise murale.

La prise murale de courant doit être installée près de l'unité et aisément accessible.

Ne branchez pas et n'essayez pas d'utiliser une unité visiblement endommagée.

2.2 EAU ET HUMIDITE

Afin de réduire le risque d'incendie n'exposez pas l'unité à la pluie, l'eau ou à une humidité excessive.

2.3 ENTRETIEN GENERAL

Ne forcez pas les boutons ou connexions externes.

Lorsque vous déplacez l'unité, déconnectez d'abord les connexions de ports en série puis le câble d'alimentation et enfin les câbles de connexion avec d'autres appareils.

N'essayez pas de nettoyer l'unité avec des dissolvants chimiques ou des produits nettoyants en aérosol, car cela peut endommager l'unité. Utilisez un chiffon propre et sec.

2.4 EMPLACEMENT

L'installation de cette unité doit se faire dans un endroit frais et sec, éloigné de sources excessives de chaleur, de vibrations, de poussière, d'humidité et de froid.

2.5 AERATION

Les rainures et les ouvertures sur les cotés de l'unité servent à l'aérer. Pour permettre une utilisation sûre, évitez d'obstruer ces ouvertures et assurez-vous que l'unité est installée dans un endroit bien aéré.

3.0 PROPRIETE INTELLECTUELLE

Certaines puces IC dans ce produit contiennent des éléments propriétaires confidentiels et/ou des secrets commerciaux. Vous ne devez donc pas copier, modifier, adapter, traduire, distribuer, démonter, désassembler, ou décomposer leur contenu.

2.0 INSTRUCCIONES IMPORTANTES DE SEGURIDAD

Para sacar el mejor provecho de este producto, léase este manual con detenimiento. Guárdelo en un lugar seguro para poder hacerle referencia en el futuro.

Para reducir el riesgo de calambre, no quite la cubierta del aparato.

No hay piezas utilizables dentro. Remítase todo mantenimiento a personal cualificado.

2.1 CORRIENTE Y CONEXIONES

Mientras esté conectada a una toma de electricidad, el aparato seguirá conectado a la fuente de corriente CA. A la posición de «off» de este aparato se le denomina posición de espera. En la posición de espera, el aparato está diseñado a consumir una cantidad reducida de electricidad en comparación con los modos de operación normales.

Asegúrese de desconectar el cable de corriente CA de la toma de la pared cuando no va a utilizar el aparato por un periodo largo de tiempo.

La toma CA de la pared ha de estar instalada cerca del aparato y debe ser fácilmente accesible.

No enchufe ni intente operar un aparato que esté evidentemente dañado.

2.2 AGUA Y HUMEDAD

Para reducir el riesgo de incendio no exponga el aparato a la lluvia, el agua o la humedad excesiva.

2.3 CUIDADO GENERAL

No forzar interruptores o conexiones externas.

Al mover el aparato, desconecte las conexiones del puerto en serie primero, luego el cable de electricidad y finalmente los cables interconectados a otros aparatos. No intente limpiar el aparato con disolventes químicos o productos de limpieza aerosol, ya que podrían dañar el aparato. Utiliza un paño limpio y seco.

2.4 UBICACIÓN

Este aparato se debe instalar en un lugar seco y fresco, lejos de fuentes de calor excesivas, la vibración, el polvo, la humedad y el frío.

2.5 VENTILACIÓN

El aparato viene provisto de ranuras y agujeros en los lados para la ventilación.

Para asegurar una operación eficaz, se debe evitar la obstrucción de estos agujeros y también asegurar que el aparato se instale en una zona con adecuada ventilación.

3.0 PROPIEDAD INTELECTUAL

Algunos chips con circuito integrado de este producto incluyen propiedad confidencial y/o propiedad de secreto comercial. Por lo tanto queda prohibido copiar, modificar, adaptar, traducir, distribuir, usar técnicas retroactivas, desmontar, o recopilar los contenidos del mismo.

2.0 WICHTIGE SICHERHEITSVORSCHRIFTEN

Lesen Sie diese Bedienungsanleitung bitte sorgfältig, um Ihr Produkt optimal nutzen zu können, und bewahren Sie sie zum späteren Nachschlagen an einem sicheren Ort auf.

Entfernen Sie bitte keinesfalls die Abdeckung, um der Gefahr eines Stromschlags vorzubeugen.

Im Inneren des Geräts befinden sich keine Teile, die vom Benutzer gewartet werden können. Lassen Sie Wartungsarbeiten nur von Fachpersonal durchführen.

2.1 STROMVERSORGUNG UND ANSCHLÜSSE

Solange das Gerät mit einer Steckdose verbunden ist, bleibt die Stromversorgung aufrecht. Der Ausschaltzustand des Geräts wird als Standbymodus bezeichnet. Im Standbymodus verbraucht das Gerät weniger Strom als in den üblichen Betriebsarten.

Wird das Gerät über einen längeren Zeitraum hinweg nicht verwendet, ziehen Sie bitte das Stromkabel aus der Steckdose.

Die Steckdose sollte sich in der Nähe des Geräts befinden und leicht zugänglich sein.

Verbinden Sie ein offensichtlich beschädigtes Gerät keinesfalls mit einer Steckdose und versuchen Sie auch nicht, es zu bedienen.

2.2 WASSER UND FEUCHTIGKEIT

Setzen Sie das Gerät weder Regen, Wasser noch übermäßiger Feuchtigkeit aus, um der Gefahr eines Brandes vorzubeugen.

2.3 ALLGEMEINE PFLEGE

Wenden Sie bei der Handhabung von Schaltern und Anschlüssen keine Gewalt an.

Beim Umstellen des Geräts entfernen Sie zuerst die seriellen Anschlüsse, dann das Stromkabel und zum Schluss die Verbindungskabel zu anderen Geräten.

Versuchen Sie keinesfalls, das Gerät mit chemischen Lösungsmitteln oder Sprayreinigern zu reinigen, da dies das Gerät beschädigen könnte. Verwenden Sie ein sauberes, trockenes Tuch.

2.4 AUFSTELLUNG

Das Gerät sollte an einem kühlen, trockenen Ort aufgestellt werden, fern von übermäßiger Wärme, Vibrationen, Staub, Feuchtigkeit und Kälte.

2.5 BELÜFTUNG

Seitliche Schlitze und Öffnungen sorgen für die Belüftung des Geräts. Um die ordnungsgemäße Belüftung zu gewährleisten, dürfen diese Öffnungen nicht verdeckt werden. Sorgen Sie außerdem dafür, dass das Gerät an einem gut belüfteten Ort aufgestellt wird.

3.0 GEWERBLICHES EIGENTUM

Einige integrierte Schaltkreise in diesem Produkt enthalten vertrauliche

Informationen und/oder Betriebsgeheimnisse. Sie dürfen daher diese Inhalte nicht kopieren, modifizieren, adaptieren, übersetzen, verteilen, rückentwickeln, rückassemblieren oder dekompilieren.

2.0 BELANGRIJKE VEILIGHEIDSINSTRUCTIES

Lees deze handleiding zorgvuldig door om het beste uit uw product te halen. Bewaar het op een veilige plek voor raadpleging in de toekomst.

Haal nooit het omhulsel van de eenheid af, dit om de kans op een elektrische schok te verminderen. Maak het apparaat nooit open: er bevinden zich geen door de gebruiker in te stellen onderdelen in het apparaat. Laat service en onderhoud over aan een gekwalificeerde technicus.

2.1 ELEKTRICITEIT EN AANSLUITING

Deze eenheid is niet van de wisselstroom voedingsbron gescheiden wanneer de stekker nog in het stopcontact zit. Wanneer de eenheid uitstaat, staat deze nog in de stand-by modus. In de stand-by modus vergt de eenheid minder stroom dan in de normale "aan" modus.

Wanneer u de eenheid voor langere tijd niet gebruikt, zorg er dan voor dat de stekker van het wisselstroomsnoer uit het stopcontact is getrokken.

Het wisselstroom stopcontact moet dichtbij de eenheid geïnstalleerd worden en makkelijk toegankelijk zijn.

Als de eenheid duidelijk beschadigd is moet u deze nooit op het lichtnet aansluiten of bedienen.

2.2 WATER EN VOCHTIGHEID

Zorg ervoor dat de eenheid niet aan regen, water of extreme vochtigheid wordt blootgesteld, dit om brand te voorkomen.

2.3 ALGEMEEN ONDERHOUD

Forceer schakelaars of externe aansluitingen nooit.

Bij verplaatsing van de eenheid, de seriële poortaansluitingen eerst loskoppelen, dan de voedingskabel en als laatste de snoeren naar andere apparaten.

Probeer de eenheid nooit met chemische oplosmiddelen of schoonmaakmiddelen in een spuitbus schoon te maken, omdat dit de eenheid kan beschadigen. Gebruik een schone droge doek.

2.4 PLAATSING

Deze eenheid moet geïnstalleerd worden op een koele droge plaats, uit de buurt van bronnen van extreme hitte, vibraties, stof, vocht en kou.

2.5 VENTILATIE

De sleuven en openingen aan de zijkant van de eenheid zijn voor ventilatie. Zorg er voor dat de eenheid op een goed geventileerde plek geïnstalleerd wordt zodat deze betrouwbaar werkt.

3.0 INTELLECTUEEL EIGENDOM

Sommige IC chips in dit product bevatten vertrouwelijke informatie en/of fabrieksgeheimen. U mag daarom de inhoud hiervan niet kopiëren, wijzigen, aanpassen, vertalen, verspreiden, nabouwen, of decompileren.

4.0 SPECIFICATIONS

| | |
|-----------------------------|---|
| Video Inputs/Outputs | |
| Composite Video | 1x via BNC Connector |
| S-Video (Y/C) | 1x via 4-Pin Mini-DIN Connector |
| YUV Component | 1x via 3 BNC Connectors |
| SDI (270Mbits/Sec) | 1x SMPTE 259M/CCIR656-III via BNC Connector |
| Genlock (Looping) | 1x Composite Video via 2 BNC Connectors |
| Television Standards | NTSC, PAL-B,G |
| Audio Inputs/Outputs | |
| Unbalanced Stereo | 1x via RCA (R/L), 47K Ohms |
| Balanced Stereo | 1x via 2 XLR, 600 Ohms |
| AES/EBU Digital Stereo | 1x via XLR, 600 Ohms |
| General | |
| Local Control | Front Panel Buttons, LCD Display |
| Unit Remote Control | RS-232 via DB-9 Male Connector |
| Machine Control (DV) | RS-422 via DB-9 Male Connector |
| Sampling Format | |
| DV, DVCAM | NTSC 4:1:1, PAL 4:2:0 |
| DVC Pro | NTSC/PAL 4:1:1 |
| DV Audio | 48Khz, 44.1Khz and 32Khz |
| Warranty | |
| 2 Years Parts and Labor | |
| Mechanical | |
| Size (H-W-D) | 1.75"x19"x8", (44x482x203mm) |
| Weight (Net) | 4.4 lbs., (2 kg) |
| Environmental | |
| Operating Temperature | +32 to +110 Deg. F, (0 to +43 Deg. C) |
| Operating Humidity | 10% to 85%, Non-condensing |
| Storage Temperature | -40 to +150 Deg. F, (-40 to +65 Deg. C) |
| Storage Humidity | 10% to 85%, Non-condensing |
| Power Requirement | |
| External PS | 12 VDC, 1A, Center Pin + |
| Regulatory Approvals | |
| Converter Unit | FCC, CE |
| Power Supply | UL, CE, CSA |

5.0 CHECKING PACKAGE CONTENTS

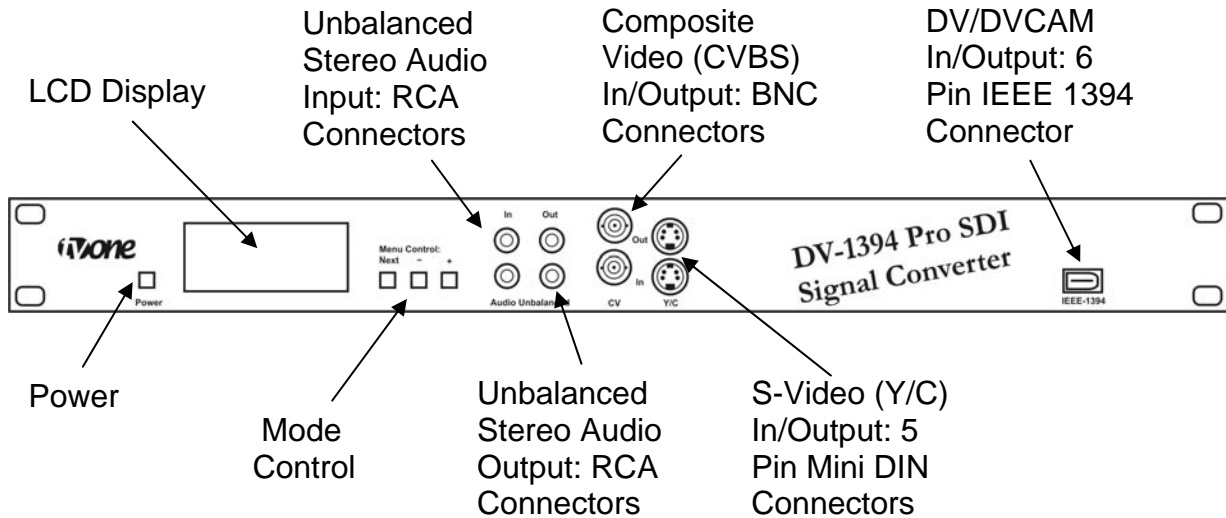
Before attempting to use this unit, please check the packaging and make certain the following items are contained in the shipping carton:

- DV-1394 Pro-SDI Analog Converter
- 1x AC Power Adaptor, 100-240 VAC to 12VDC@1A
- 1x Composite Video Cable, 6' BNC to BNC
- 1x S-Video Cable, 6' 4-Pin SV to 4-Pin SV
- 1x Firewire Cable, 6' 4-Pin DV to 6-Pin DV
- 1x Stereo Audio, 6' RCA to RCA (R/L)
- 1x Rackmount Kit, Ears and Hardware
- 1x AC Power Cord, 6' USA type 3-Pin

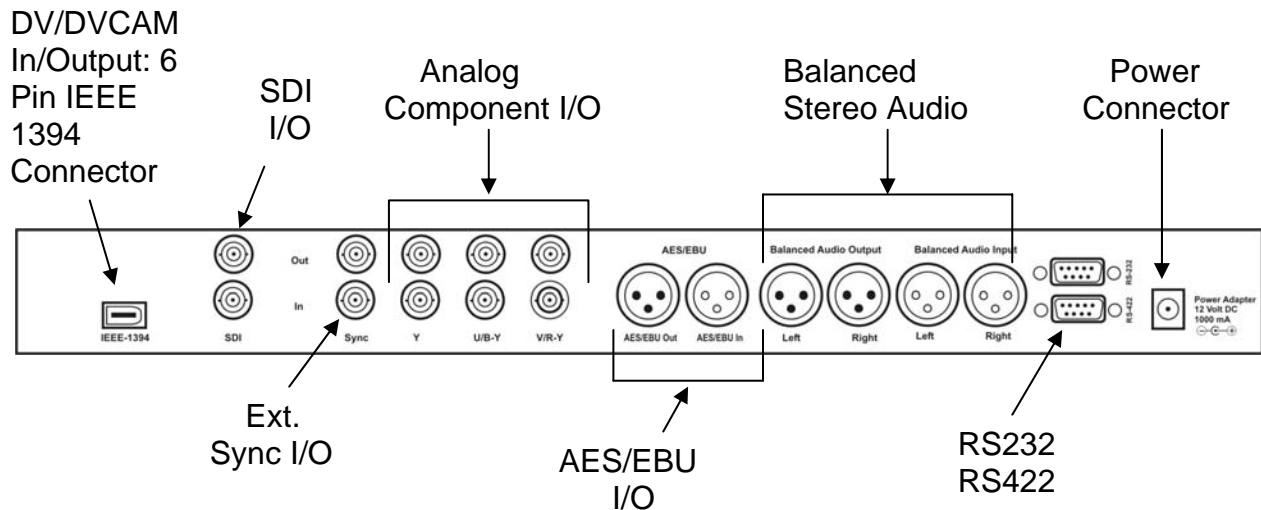
Note: Please retain the original packing material should the need ever arise to return the unit. If you find any items are missing, contact your reseller or TV One immediately. Have the Model Number, Serial Number and Invoice available for reference when you call.

6.0 CONNECTING THE HARDWARE

The DV-1394 Pro SDI has Video/Audio Connectors at the Front and Rear, so take a few minutes to become familiar with the connections:



DV-1394 Pro-SDI Front Panel Connections



DV-1394 Pro-SDI Rear Panel Connections

7.0 OPERATING THE UNIT

Before you turn the DV-1394 Pro-SDI on, connect and power up any Hardware or Computers you intend to use with the device. This is done so that the DV-1394 Pro-SDI will be able to identify the signals present on its input and output connectors.

7.1 Menu Structure:

An LCD display and 3 Buttons on the front panel are used to control the DV-1394 Pro SDI. The Display will show a series of Menus, one after the other.

If you want to change a Menu option, press the Next Button to switch to the relevant menu and press the “+” or “-“ button to change the value.

The DV-1394 Pro SDI will store the last settings and use those if you turn it on again.

The Display shows the Menu Caption on the 1st line and the 2nd line shows the selected value:

Example:

| |
|----------------------|
| Video System NTSC |
|----------------------|

The following Menus are available in this version:

Video System: PAL or NTSC

DV System: DV / DVCAM

DV Mode / OS: Win 98/ME/XP or Windows 2000 or DV Deck (DV devices) and Mac OS

Studio Genlock: On or Off

If the Genlock Mode is On then you will have the following Menus as well:

SC Phase Offset: Select the SC Phase Offset in 256 Steps

H Offset: Select the horizontal offset in +/- 128 Steps

V Offset: Select the vertical offset in 7 Steps (lines)

LCD Backlight: On/Off

Mode: Encode/Decode

If the Encode Mode is selected you can use the following Menus as well:

Video Input: CVBS, Y/C, YUV, SDI

Audio Input: unbalanced, balanced, AES/EBU

Audio Samplerate: 32 Khz 12 bit, 48 Khz-16 Bit

Analog Audio Out: Level Adjustment between 0-63 dB

7.2 Connecting the DV 1394 Pro SDI to a Windows PC

If your PC is equipped with a OHCI compatible IEEE 1394 Interface (Firewire board) you'll be able to connect the DV Interface of the DV 1394 Pro SDI with your PC. As soon as you have established the connection between the DV 1394 Pro SDI and your PC's IEEE 1394 Interface (and both PC and DV 1394 Pro SDI are powered on), the Windows PC should recognize the "new attached hardware". The DV 1394 Pro SDI will be most likely listed as a Philips Device. (This recognition depends on your Microsoft Operation System. You will find the choices listed in the Windows Device Control).

For DV Encoding make sure that you have selected the right Mode in the Menu DV Mode. Choose the following setting in the Menu DV Mode:

Windows 98, Windows ME, Windows XP:

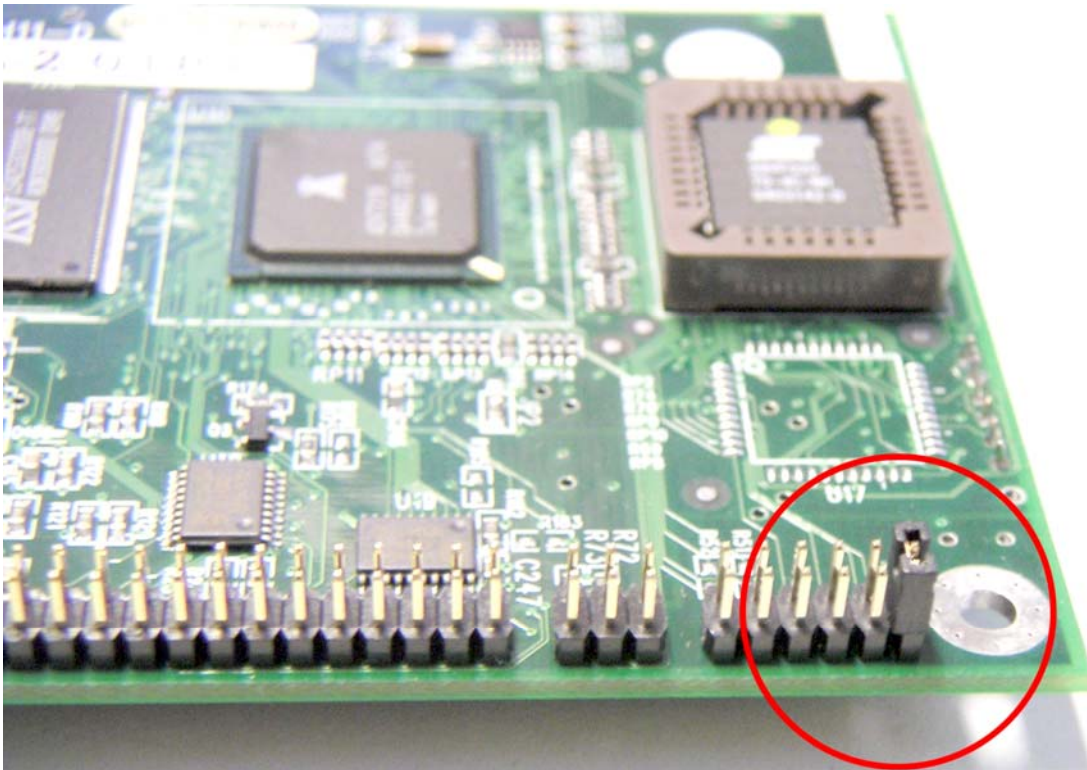
Windows 2000

DV Deck for Apple Macintosh OSX or DV VTR

7.3 NTSC – PAL Version

The DV-1394 Pro SDI is available in a PAL and NTSC Version.

This PAL/NTSC difference in the DV-1394 pro SDI is only relevant if you work with a PC System. If you just transcode Video signals from a Betacam (or other VTR) to a DV VTR or vice versa it does not matter which version you are using. You can switch the video system in the Menu (see Menu Structure). If you work with a PC NLE system you'll have to set a jumper on the DV Codec in the DV-1394 Pro SDI. This jumper is closed if it is a PAL Version. The jumper is located at the bottom of the DV Codec board.



7.4 RS 232 Interface:

The RS 232 Interface is designed to control the functions of the DV-1394 Pro SDI via a Windows PC and also to update the Firmware.

The detailed description of the command structure is included later in this manual

7.5 RS 422 Interface:

The DV-1394 Pro SDI has a RS 422 Interface that allows to control a Betacam protocol conform VTR by the NLE software and the Firewire Interface, so you don't need a extra RS 422 converter on your PC.

If you want to manufacture your own cable, please use the following pinout:

DB-9 male connector with: 2 – 8, 3 – 7, 4 – 4, 5 – 5, 7 – 3, 8 – 2 (The number on the left is for the DV-1394 Pro SDI connector and the number on the right is for the VTR's connector).

7.6 Supported TC Formats:

DV1394Pro SDI MKII tries all the time to read Timecode from a connected RS422 device. The time code type is LTC and/or VITC and can be LTC, interpolated LTC, VITC or interpolated VITC.

If the time code was read successful from the RS422 device, the DV-1394 Pro SDI shows a * in the lower right corner of the display. If this * is visible in the Display, it is possible to control a RS422 machine.

All mandatory Firewire FCP AVC Commands are translated into RS422 commands:

- Stop
- Play
- Pause
- Slowest forward (0.2x)
- Slowest backward (0.2x)
- Fastest forward (10x)
- Fastest backward (10x)
- Cue
- Review
- Single step forward
- Single step backward
- Record
- Record Pause

The Commands are tested to work with the following edit suits on a PC:

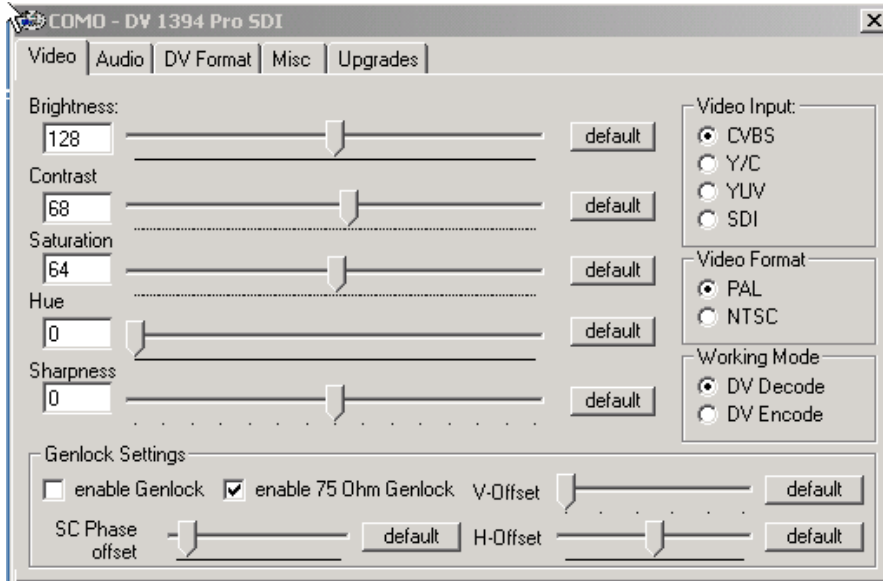
- Adobe Premiere 6.5
- Avid Xpress DV 3.5.4
- Canopus Storm edit
- Canopus Edius

The batch digitizing does not function with Ulead software however simple control commands are possible. The time code, which is inserted in the DV data stream and can be read via the editing software, may have a difference from up to two frames to the original time code of the RS422 machine. The average difference is zero to one frame.

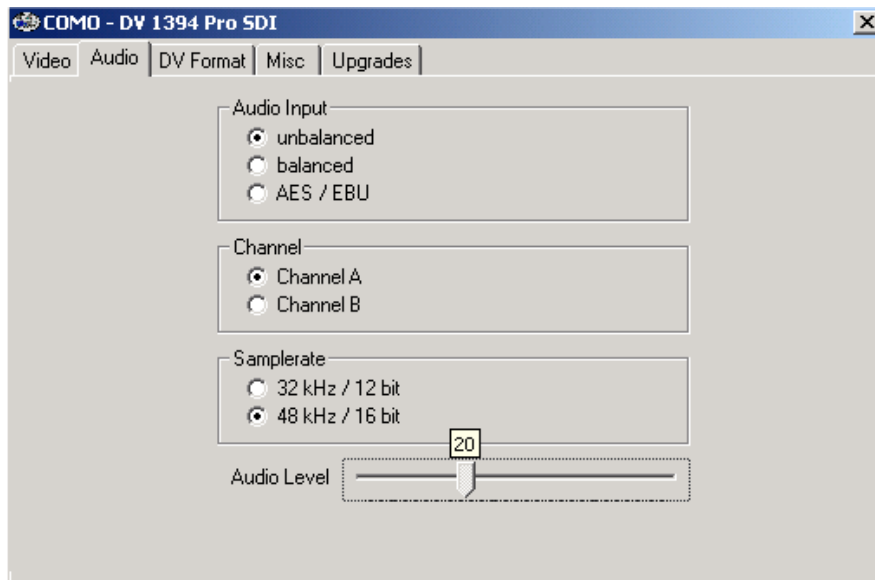
7.7 COMO Control Software

COMO Corporation provides a Windows based Control Software for the DV-1394 Pro SDI with an integrated Firmware Update Function. The User Interface is built in Tabs.

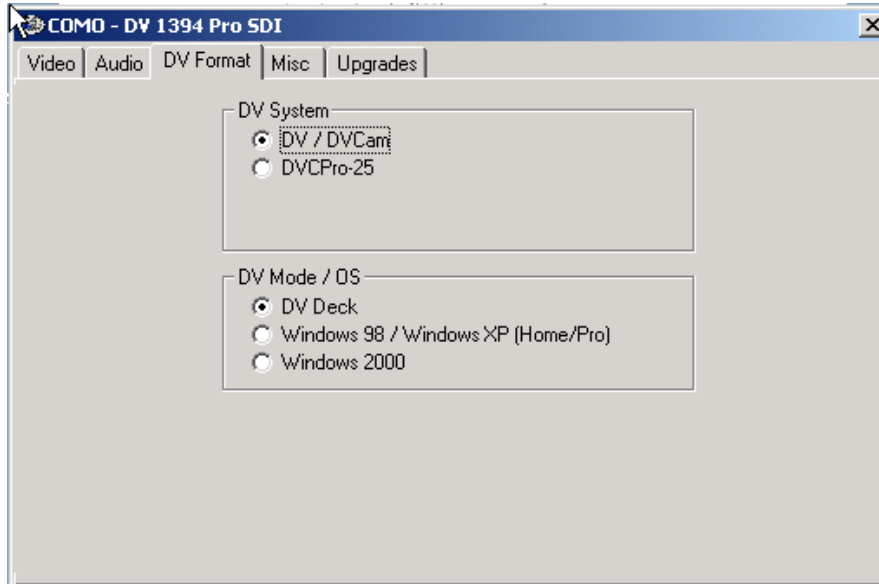
The first Tab is for the selection and adjustment the Video Inputs, Video Level etc. To adjust a Video Level, hold the Mouse Button on the Slider and move it. The Value will be shown above the Mouse Cursor.



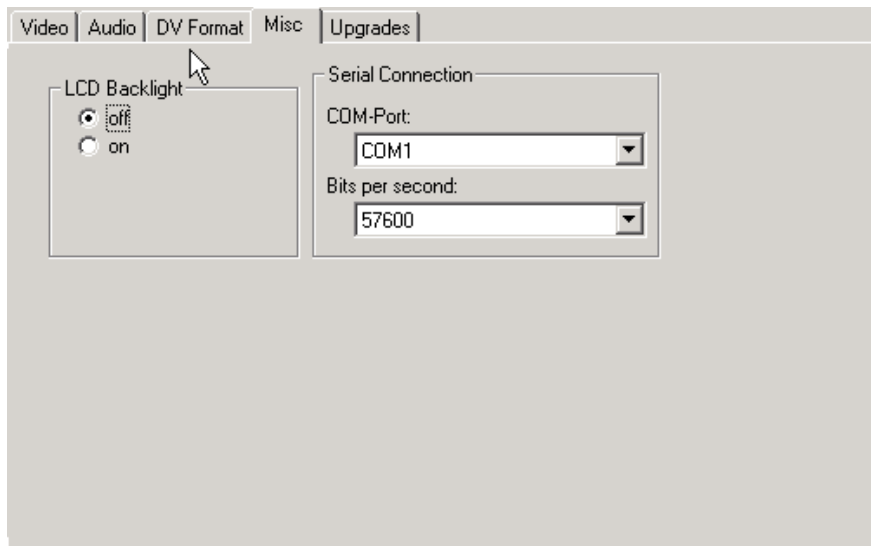
The second Tab shows the Audio settings and allows selection of the Audio Input and Audio Level.



The third Tab shows the DV Format settings. Please note that the DVC Pro only works in the decoding Mode: e.g. Deck to SDI.

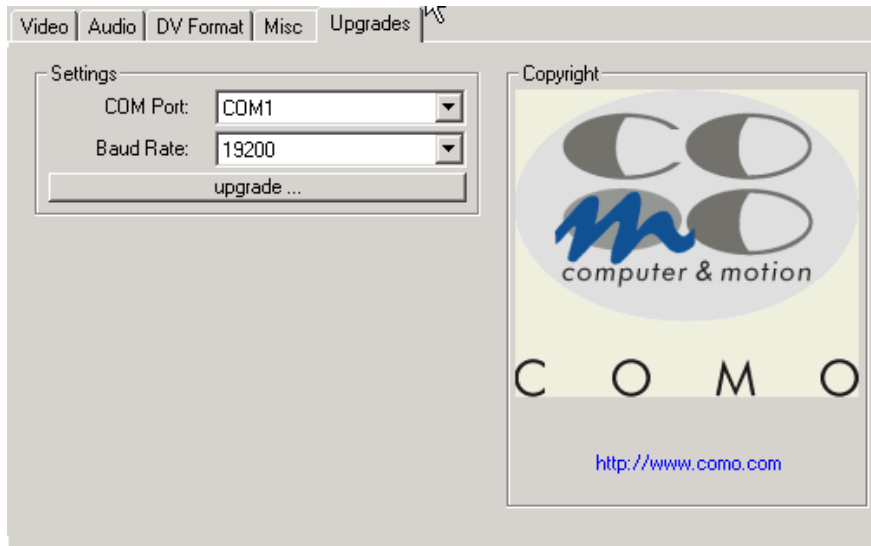


The fourth Tab shows the Misc. Settings. This is where you would select a COM Port for communication between PC and DV-1394 Pro SDI.



The fifth Tab shows Upgrade Section of the Control Software.

If you are unsure of your current firmware version status versus the latest available version, contact your dealer or TV One.



7.8 RS232 Command set

It's possible to control the DV1394Pro SDI via RS232. The Baud rate is fixed at 56700 Baud, 8 bit 1 stop bit, no parity. You'll need a one-to-one cable with a female connector for the PC side and a male connector for the DV1394Pro SDI side. The pinout of the cable is as follows:

Pin 2 – 2, RXD
Pin 3 – 3, TXD
Pin 5 – 5, GND

The commands via the RS232 port override the settings made via the switches on the front of the device. On the other hand, the settings via the front switches also override the RS232 settings. In other words, the last setting change is the controlling factor regardless of whether it is made from the RS-232 port or the front panel.

Commands are available to recover back the settings stored in the DV1394 Pro SDI. The values are stored in the DV1394Pro SDI in an EEPROM and will be valid even after a power down and until they are changed again. Also a firmware upgrade via RS232 won't change these settings.

Values in this doc are given decimal. Hex values are shown as 0xAA or similar.

7.8.1 Data format

Transmitting data to the DV1394Pro SDI:

The data format is as follows:

1. Start byte: 0xAA
2. command group byte: command group
3. Command byte: command code
4. data bytes: value (optional)
5. checksum: (command group byte + command byte + data bytes (optional)) & 0xFF

The checksum byte is simply added the three bytes. The command group and command byte are mandatory. The data is not necessary for the read back functionality. Overflow or carry bits are ignored, since it is only an eight bit value.

The DV1394Pro SDI returns the data as it was sent for control purposes. If the command value requests a status or time code or other value, the data byte contains this value. If only a command was sent to DV1394Pro SDI which is not requesting any information, the value is returned as it was. The DV1394Pro SDI returns 0xFF as return value, if the command is not implemented or out of range.

The data format is as follows:

1. Start byte: 0xAA

2. command group byte: command group
3. command byte: command code
4. data bytes: value / return value
6. checksum: command group byte + command byte + data bytes

The checksum is simply added the bytes. Overflow or carry bits are ignored, since it is only an eight bit value.

7.8.2 Command groups

The following command groups are available.

| Group | Name | Info |
|-------|-----------|---------------------------|
| 0x01 | Video | Video In and out settings |
| 0x02 | Audio | Audio In and out settings |
| 0x03 | DV Format | DV Format settings |
| 0x05 | MISC | miscellaneous settings |

7.8.3 Video

The command group value for the Video group is 0x01.

| Command code | Info | Range | return value @ 0x81 | default value |
|--------------|---------------------------|--|---------------------|-------------------|
| 0x01 | Brightness | 0..256 | 0..256 | 128 |
| 0x02 | Contrast | 0..128 | 0..128 | 68 |
| 0x03 | Saturation | 0..128 | 0..128 | 64 |
| 0x04 | Hue | 0..256 | 0..256 | 0 |
| 0x05 | Sharpness | -7..7 0x0f: -7 0x00: 0 0x07: +7 MSb from lower Nibble = sign | -7..7 | 0 |
| 0x06 | Video Input | 0..3 0:CVBS 1:Y/C 2:YUV 3:SDI | 0..3 | 0 |
| 0x07 | Video System | 0..1 0: PAL 1: NTSC | 0..1 | 0 |
| 0x08 | SC Phase offset | 0..256 | 0..256 | Pal:15 NTSC:53 |
| 0x09 | H Offset | 0..255 | 0..256 | 128 |
| 0x0A | V Offset | 0..15 | 0..15 | 7 |
| 0x0B | Genlock: off, on | 0..2 0: off 1: on | 0..2 | 0 |
| 0x0D | 75Ohm@Genlock: off, on | 0..1 | 0..1 | 1 |

If no return value is given, it returns the value written.

7.8.4 Audio

The command group value for Audio is 0x02.

| Command | Info | Range | return value @ 0x82 | default value |
|---------|---|---|---------------------|---------------|
| 0x01 | Audio input: unbalanced, balanced, AES/EBU | 0..2 0:unbalanced, 1:balanced, 2:AES/EBU | 0..2 | 0 |
| 0x02 | analog Audio out level/dB | 0..63 | 0..63 | 0 |
| 0x08 | Samplerate | 0..1, 0:32kHz/12bit, 1:48kHz/16bit | 0..1 | 0 |
| 0x09 | Channel selection (@32kHz/12bit Decoding) | 0..1 0: A, 1: B | 0..1 | 0 |

7.8.5 DV Format

The command group value for the DV Format is 0x03.

| Command | Info | Value | Return value @ 0x83 | default value |
|---------|---------------|--|---------------------|---------------|
| 01 | DV System: | 0, 3 0:DV/DVCam, 3:DVCPPro | 0, 3 | 0 |
| 02 | DV Mode / OS: | 0..2 0:DV Deck, 1:Win98/XP, 2:Win2k | 0..2 | 0 |

7.8.6 Miscellaneous Settings

The command group value for the miscellaneous settings is 0x05. These settings are global settings for the complete unit.

| Command | Info | Value | Return Value @ 0x85 | default value |
|---------|----------------|-------------------------------------|---------------------|---------------|
| 01 | Working mode: | 0..1 0:DV decode, 1:DV encode | 0..1 | 0 |
| 02 | LCD Backlight: | 0..1 0:off, 1:on | 0..1 | 0 |

8.0 TROUBLESHOOTING

The DV-1394 Pro-SDI is normally trouble free. Most reported problems turn out to be incorrect or poor quality cables, incorrect mode settings for the desired signal, attempting to use both the front and rear Firewire connection at the same time (only one may be used at a time) or inadequate AC power to the AC Adapter.

If after checking the above areas the problem still persists, contact your dealer for additional suggestions before contacting TV One. Should the dealer's technical personnel be unable to assist you, contact TV One via our support website: **<http://tvone.crmdesk.com>**. Create a technical support request on the site and our support team will respond within a short period of time.

9.0 LIMITED WARRANTY

LIMITED WARRANTY – With the exceptions noted in the next paragraph, TV One warrants the original purchaser that the equipment it manufactures or sells will be free from defects in materials and workmanship for a period of two years from the date of purchase. Should this product, in TV One's opinion, prove defective within this warranty period, TV One, at its option, will repair or replace this product without charge. Any defective parts replaced become the property of TV One. This warranty does not apply to those products which have been damaged due to accident, unauthorized alterations, improper repair, modifications, inadequate maintenance and care, or use in any manner for which the product was not originally intended.

Items integrated into TV One products that are made by other manufacturers, notably computer hard drives and liquid crystal display panels, are limited to the term of the warranty offered by the respective manufacturers. Such specific warranties are available upon request to TV One.

If repairs are necessary under this warranty policy, the original purchaser must obtain a Return Authorization Number from TV One and return the product to a location designated by TV One, freight prepaid. After repairs are complete, the product will be returned, freight prepaid.

LIMITATIONS - All products sold are "as is" and the above Limited Warranty is in lieu of all other warranties for this product, expressed or implied, and is strictly limited to two years from the date of purchase. TV One assumes no liability to distributors, resellers or end-users or any third parties for any loss of use, revenue or profit.

TV One makes no other representation of warranty as to fitness for the purpose or merchantability or otherwise in respect of any of the products sold. The liability of TV One with respect to any defective products will be limited to the repair or replacement of such products. In no event shall TV One be responsible or liable for any damage arising from the use of such defective products whether such damages be direct, indirect, consequential or otherwise, and whether such damages are incurred by the reseller, end-user or any third party.

10.0 REGULATORY COMPLIANCE

The DV-1394 Pro-SDI Analog Converter has been tested for compliance with: CE citation number IEC/CISPR 22 Class A /1997/ + A1 /2000 + A2 /2002/ and FCC Class A rules.

The Power Adaptor/Supply has been tested for compliance with UL, CE and CSA standards.

11.0 CONTACT INFORMATION

Should you have questions or require assistance with this product in areas not covered by this manual, please contact TV One at the appropriate location shown below:

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