Model LTM-5500FS User Manual

LAIRD
T E L E M E D I A ®

Blue Flame pro

DV Media Converter

LTM-5500FS
Blue Flame Pro IEEE 1394 Bidirectional
FireWire® Media Converter

CE

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Blue Flame Pro IEEE 1394 (DV) Bidirectional Media Converter

LAIRD® TELEMEDIA
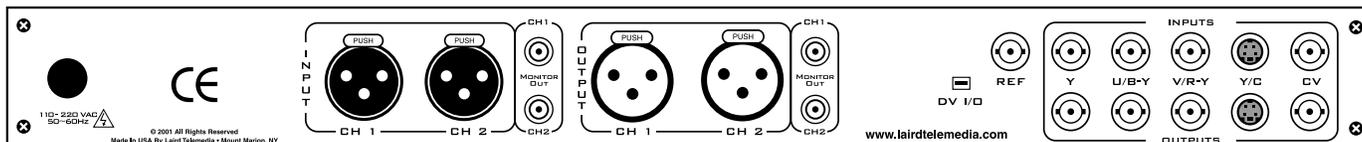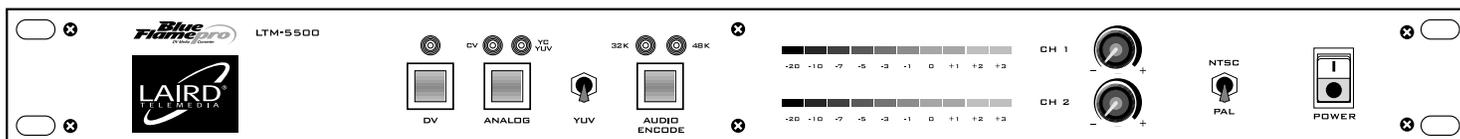
The LTM-5500FS provides a broadcast quality means of converting analog signals to IEEE1394, also known as FIREWIRE or ILINK. The unit accepts component (R-Y, B-Y, Y)(Y,U,V), YC, or Composite video and 2 channel balanced audio and converts it into 100Mbps IEEE1394 DV signals. The LTM-5500FS also works bidirectionally as it coverts DV signals to analog. Front panel controls allow audio level control and VU metering of audio signals. Balanced audio signals are also converted to unbalanced signals for standard amplifier monitoring. The LTM-5500FS delivers broadcast analog signals to the world of DV, and can add new life to older technology that is not DV compatible. The LTM-5500FS is housed in a 1RU cabinet.

Note: The LTM-5500FS powers up in DV mode: In this mode DV IEEE1394 firewire signals are converted to Analog signals via the associated connectors on the rear panel. The DV led above the DV switch will illuminate.

FEATURES

VIDEO

The LTM-5500FS will accept Component, Composite RS170A NTSC signals or Y/C (S-Video) signals.

AUDIO

Dual channel Balanced (XLR) audio signals can be fed to the LTM-5500FS. An unbalanced high impedance line level pair of outputs is provided for both input and output audio signals. These signals can be fed to standard power amplifier or powered speakers for monitoring purposes.

AUDIO LED VU METER

A front panel LED VU display is provided for monitoring of audio levels in either direction. The LED VU METER automatically tracks the audio signals in either mode of operation of the unit.

AUDIO LEVEL ADJUST

Front panel controls allow the adjustment of audio levels entering the unit. This allows the LTM-5500FS to be interfaced with various equipment signal levels.

AUDIO DIGITIZE SAMPLING MODE

The LTM-5500FS has two audio sampling rates:
32KHz & 48KHz

NTSC / PAL COMPATIBILITY

Front panel switch allows the user to select either NTSC or PAL standard for operation (see instruction manual).

VIDEO SELECTOR

Front panel switches allow the user to select either Composite, Component or YC video for input. In the DV to analog mode, the LTM-5500FS outputs both Composite and YC video simultaneously. Component signals can be output once the component toggle switch is enabled (see instruction manual).

LOW PROFILE RACKMOUNT

The LTM-5500FS is housed in a 1RU(1.75") standard EIA rackmount metal cabinet.

AUTOMATIC 110/220 VOLTAGE

The LTM-5500FS uses an automatic 110/220, 50/60 Hz power supply. The unit will automatically work in either 110VAC or 220VAC

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<div style="text-align:center">**SPECIFICATIONS**</div>

INPUTS

ANALOG VIDEO IN:
Component Video: R-Y, B-Y, Y (YUV) - 3 BNC
Composite Video: 1Vp-p into 75Ω - BNC
YC (S-Video): 1Vp-p Y into 75Ω - 4-Pin Din
.7Vp-p C into 75Ω

ANALOG AUDIO IN:
Balanced 2-Channel 600Ω: XLR female
Unbalanced 2-Channel Monitor Audio Outputs

OUTPUTS

ANALOG VIDEO OUT:
Component Video: R-Y, B-Y, Y (YUV) - 3 BNC
Composite Video: 1Vp-p into 75Ω: BNC
YC (S-Video): 1Vp-p Y into 75Ω: 4 Pin Din
.7Vp-p C into 75Ω

ANALOG AUDIO OUT:
Balanced 2 Channel 600Ω XLR male
Unbalanced 2-Channel Monitor Audio Outputs

DV INPUT/OUTPUT:
4-Pin IEEE1394 100Mbps FireWire® Connector

FRONT PANEL:
CONTROLS
Power, Audio Input Level, Composite, YC/Component Select
Digital Switch, Analog Switch, PAL/NTSC, Audio Encode Rate

DISPLAYS:
LED Audio VU Metering, 2 channel -20 to +3
0 VU Referenced at 0dBmV 1.23Vp-p
Digitize/Analog 10 LED per channel

POWER:
110/220 Volts AC 50/60 Hz 8.5Watts Automatic Switching

DIMENSIONS:
1.75"Hx19"Wx 9"D 1RU rackmount

WEIGHT:
7 LBS

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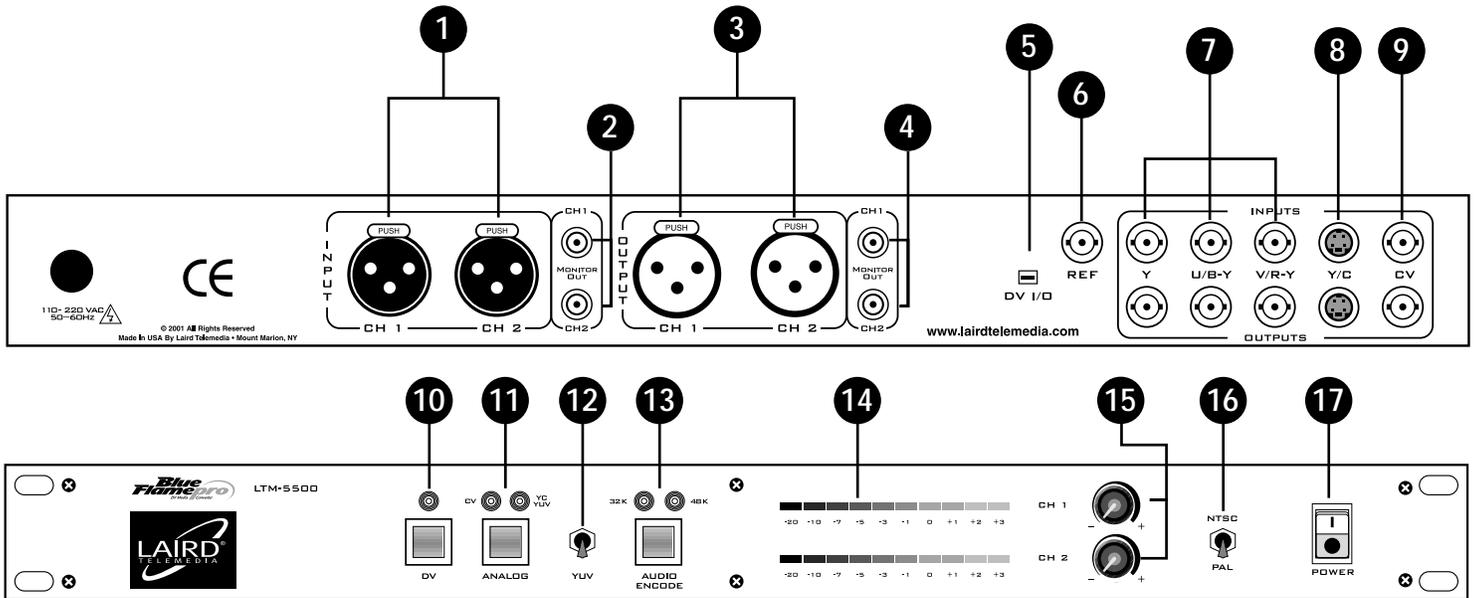
1 Balanced Audio Inputs, 600Ω Line Level

2 Unbalanced Audio **MONITOR OUTPUTS** for use with monitoring equipment (ie. amplifiers) **THIS IS NOT AN INPUT:** it is an unbalanced loop-out of the input Balanced Input signal

3 Balanced Audio **OUTPUTS,** 600Ω Line Level

4 Unbalanced Audio **MONITOR OUTPUTS** for use with monitoring equipment (ie. amplifiers) **THIS IS AN OUTPUT.** Works simultaneously with Balanced Outputs

5 IEEE 1394 FireWire Input/Output

6 In Component to DV mode (R-Y, B-Y, Y) (YUV), **composite video** must be connected to this input. House blackburst may also be used as long as it is synchronous with the component signal. Not required for Y/C or composite video operation.

7 Component Video Input/Output

8 Y/C Video Input/Output

9 Composite Video Input/Output

10 DV Mode Switch (Reset)

11 Analog Mode Switch

12 Component Mode Switch. **Toggle** in up position engages component mode.

13 Audio Digitize Sample Rate Mode Switch

14 LED VU Display: Audio Input/Output Level Metering

15 Audio Level Input Adjustment Knobs

16 NTSC/PAL Select Switch. **Note:** Power down and power up required after switching modes.

17 Power Switch: **Should the unit be powered off,** allow 10 seconds for system reset before turning on power again.

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GENERAL OPERATION

To convert analog signals to DV, the ANALOG button must be used. **The First push** of the Analog button sets the unit in Composite to DV mode. A **second push** selects the COMPONENT/YC mode. There is a Toggle switch located to the right of the ANALOG switch that is labeled YUV. If this switch is in the down position, then the LTM-5500FS will input the YC signals for DV conversion. If the switch is in the up position, then the LTM-5500FS will allow component signals to be converted to DV. If you are working in YC and require Component, then switch to DV mode first, set YUV toggle to UP position, then push ANALOG switch twice. The LED above the YUV toggle switch will illuminate indicating Component to DV mode.

AUDIO ENCODE: During analog to DV conversion, the LTM-5500FS has 2 choices for audio encoding: 32KHz and 48KHz. Press the pushbutton below the audio encode LEDs to select the desired rate. The LEDs will illuminate accordingly. NOTE: This function is for analog to DV only and is disengaged during DV to analog mode.

AUDIO LEVEL: The audio input level to the DV CODEC can be adjusted during analog to DV mode using the Level control knobs on the front panel. The unit has a limit of +3dbVU, which prevents over modulating the audio CODEC. During DV to analog mode, the VU meters will monitor the audio output from the CODEC. In this mode, the audio level control knobs will not have any effect on the signal.

NTSC/PAL: The LTM-5500FS can be used for either PAL or NTSC signals. To operate the unit in either mode, the toggle switch labeled PAL-NTSC must be in the desired position **before** power up. If there is a need to change video standard after power-up, then the unit must be powered off, the switch changed and then powered back on to initialize the setting.

TECH NOTES: The DV switch also serves as a RESET switch for the control microprocessor: In the event that a command is not executed after it has been entered, you may have to reset the unit by pressing the DV mode switch once. This will clear any data and reset the processor.

The LTM-5500FS has transcoding circuitry which controls the analog outputs during DV mode. With the YUV toggle switch in the DOWN position, the analog video outputs are COMPOSITE and YC. With the YUV switch in the UP position, the video outputs are COMPOSITE and COMPONENT.

If for any reason the LTM-5500FS should output incorrect signals during a format change, simply use the DV/Reset feature to correct the problem. It is recommended that for any change, the DV button should be pressed first.

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DV TO ANALOG CONNECTIONS

DV I/O

Balanced Audio CH 1
Balanced Audio CH 2
Component (YUV) Video
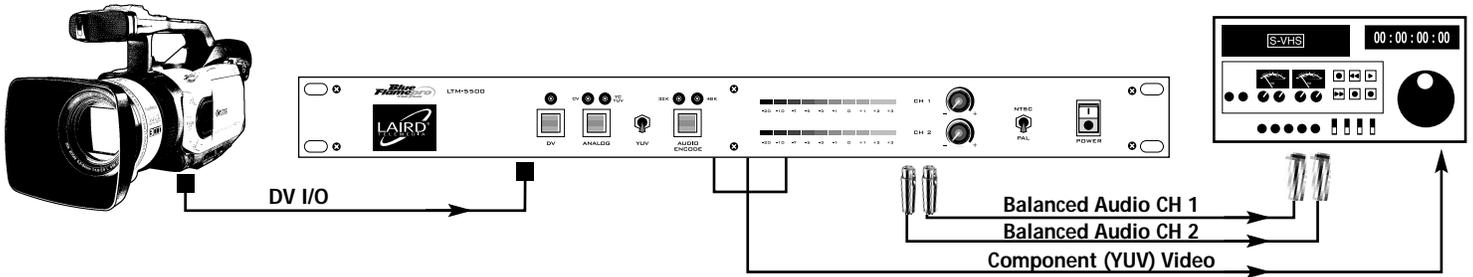
ANALOG TO DV CONNECTIONS

Balanced Audio CH 1
Balanced Audio CH 2
Component (YUV) Video

DV I/O

Analog To DV Conversion
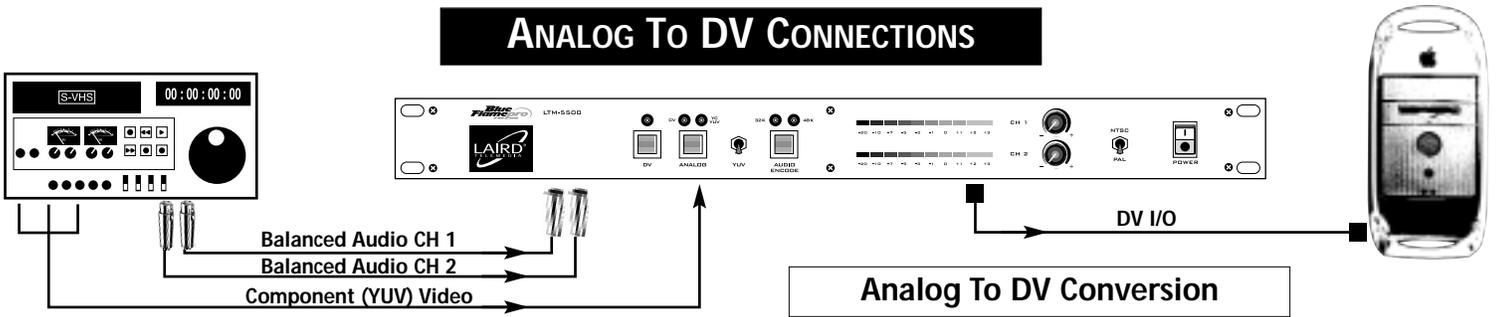
USING THE LTM-5500FS WITH OTHER ROUTING EQUIPMENT

The LTM-5500FS provides a professional interface for the demanding multimedia environment of modern telecommunications facilities. Indicated below are a few application diagrams, which display the flexible and cost effective use of the LTM-5500FS with other LTM products.

USING MULTIPLE SOURCES WITH THE LTM-5500FS

Audio
YUV Video

DV I/O
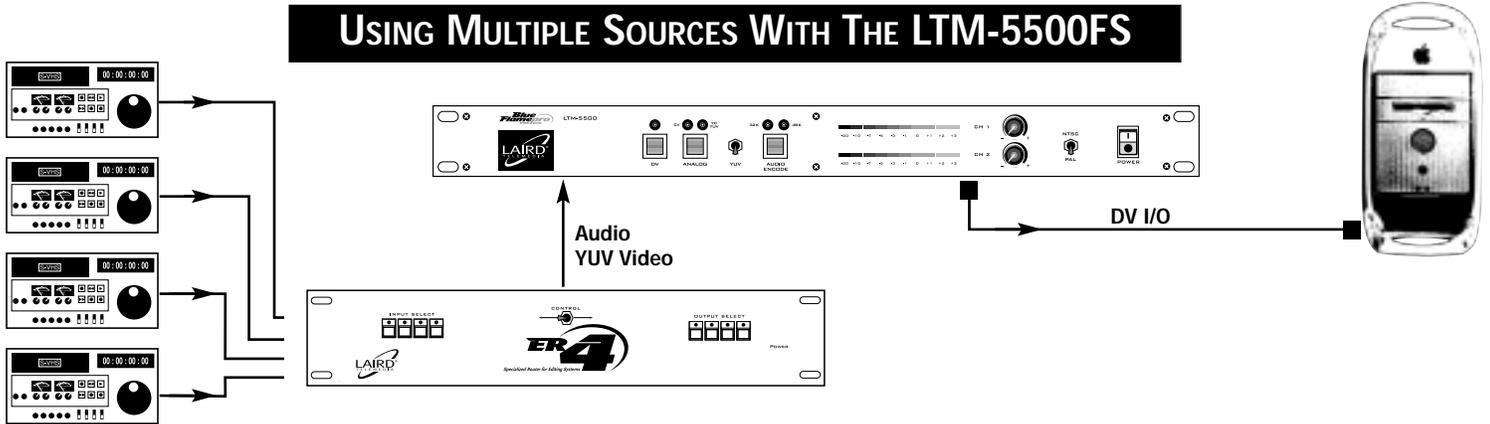
For more applications, diagrams & information, see the Laird website - www.lairdtelemedia.com

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⚠ Safety Precautions ⚡
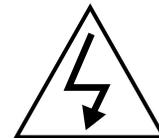
1. To prevent fire or shock hazard, do not expose this equipment to the environment of Humidity and/or dust. Do not use this equipment in an unprotected outdoor installation or any area classified as a wet area.
2. The operating temperature of this product must be kept between -40°C and +95°C. Direct sunlight or an intense source of heat, direct or ambient, must not be introduced to the product either by induction or contact.
3. Always keep the product on a stable and secure base or enclosure. Do not drop the product or subject it to sudden heavy impact.
4. Provide adequate ventilation so that thermal characteristics do not cause an increase in product temperature to resulting in overheating.
5. Do not clean the unit by using electrically conductive or corrosive chemicals. Always be certain to unplug the unit from AC wall power before any major cleaning. Use a damp cloth only for cleaning.
6. Do not subject the product to electrical mains power over voltage: The product must be used at the rated supply voltages indicated on the product rear panel only.
7. Do not plug the product into an overloaded electrical outlet. This may result in fire or electrical shock.
8. Object Ingress and Liquid Entry: Never insert or push sharp metal objects into the product or use such devices for an attempt at opening or servicing the product. Servicing should be referred to a trained and qualified technician only. Do not allow liquid of any type to enter the unit. Do not allow the unit to be submersed in water as this may cause a shock hazard.
9. A trained qualified technician should perform all servicing of the unit. There are no serviceable components within the unit for user access.

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