

## General Description

The courtroom recorder plate eliminates the problems associated with connecting an FTR four-channel digital recorder and a Sony/Lanier analog recorder to the same source. Additionally, playback and record transformer isolation and summing cards are provided to prevent ground loops when interfacing to equipment external to the audio system.

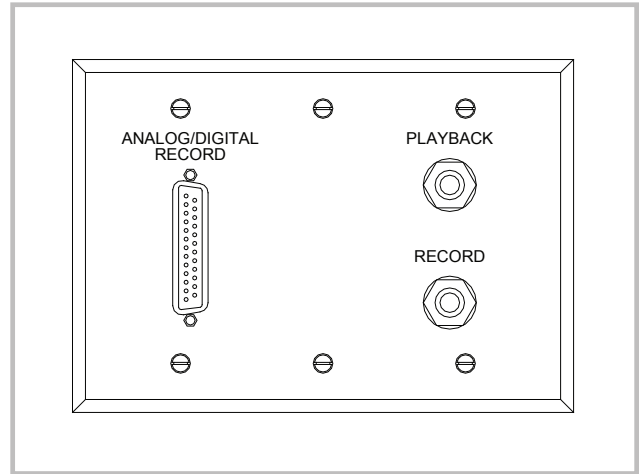
The dual four-track analog outputs are transformer isolated and incorporate 1% metal film resistive "T pads" to attenuate the +6dbu signal, required for the FTR Gold, to -57dBu for the Sony BM-246 minimizing AGC action.

The use of an off-the-shelf TASCAM DA-88 cable provides the eight outputs. Phoenix connectors are used for connecting the signal cables from the Matrix Mixer making field installation a snap. Additionally, two transformer isolated summing cards are used to provide stereo/mono -10 level Playback and Record connections. The Playback jack may be used for FTR playback and the Record jack may be used to drive headphone amplifiers or to record to reporter personal recorders.

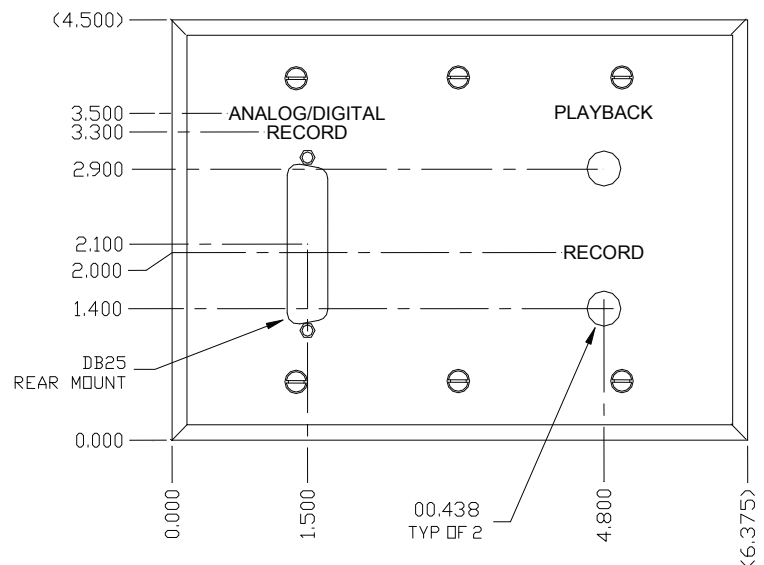
The Courtroom Recorder (P/N 002560) and Audio Transformer PCB (P/N 002520) assemblies may be purchased as separate products for applications requiring custom plates.

## Specifications

Plate Material:      Stainless Steel  
MSRP:                 \$159.00



**Figure I: Plate Mechanical** (Dimensions in inches)



# COURTRROM RECORDER PLATE - PLUS

P/N 002620

## Playback/Record

The “Playback/Record options fill two needs:

1. Summing, isolating and level shifting stereo signals from -10dBu to +4dBu/0dBu levels or the reverse. A center-tapped transformer permits the signal to be stepped down to 0dBu in the event the +4dBu is too much. A 0dBu or +4dBu signal may be inserted into the Phoenix connector to provide -12/-6dBu stereo outputs to VCR's, CODEC's, and tape machines, or any gear requiring a stereo signal that is summed and transformer isolated. The PCB is configured for stereo summing/drive by virtue of R1 and R2, which are 1.2K 1% metal film resistors.

The stereo signal is connected to the ¼” TRS connector as follows Tip = Left, Ring = Right and Sleeve = Shield/Ground. The Phoenix connector (P1) is for the mono signal. The Phoenix connector is labeled: R+ (Red/+) and B- (Black/-) and CT+. CT is ½ or 2:1 (depending on direction) of the Red/+ connection.

2. Mono Level translation from -10dBu to 0dBu/+6dBu or 0dBu/+6dBu to -10dBu. This is intended for mono signals requiring level translations and transformer isolation without summing.

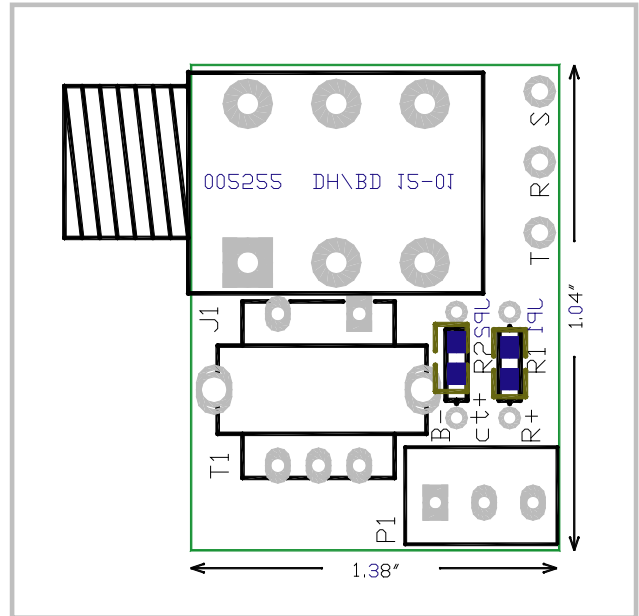
On the top of the board are R1 and R2 used for stereo summing operations. To modify the board to operate as a Level Translator/Isolator (mono to mono) two things must be done:

1. Cut the small trace between the Surface mount pads of JP2.
2. Solder bridge the two surface pads of JP1. NOTE: the trace running between JP1 and JP2 must remain.

The TRS pads behind the TRS connector are parallel connections to the TRS connector as labeled and may be used to connect other style of connectors.

**CAUTION:** The TRS connector is switched and the tip, ring and sleeve are shorted together to prevent noise pickup when not connected. If external connectors are used the traces connecting the TRS switches may need to be cut. Simply cut each trace next to the TRS switch pins (The pins nearest the edge of the board by the ¼” connector).

Figure II: Audio Transformer Board



## Specifications: Transformer PCB (P/N 002520)

Frequency Response:	20 to 20KHz +/- 2dB
IMD:	< 0.15% at rated level
THD:	< 0.12% at rated level
PHASE Response:	< 6 degrees from 20 to 20K
Level Transition:	
TRS Input:	-10dBu
Phoenix Output:	4.6dBu, 0dBu (CT)
Phoenix Input:	+4dBu
TRS Output:	-12dBu, -6dBu (CT)

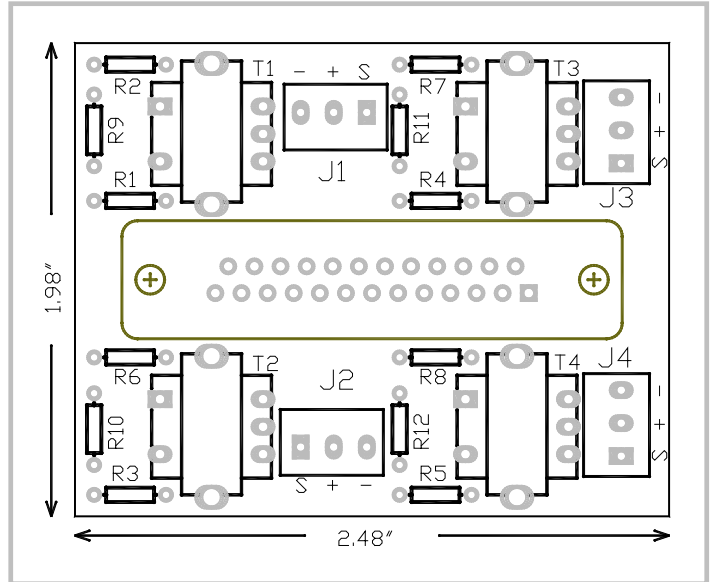
## Analog/Digital Record

Eight outputs are made available via the DB25 for connecting an FTR four-channel digital recorder and Sony BM246 or Lanier analog recorder via a standard DA-88 cable. The output level to the FTR is balanced +6dB line level and the BM246 connections are transformer isolated and attenuated to present the required -57dBu level. The -57dBu mic level causes the minimum AGC pumping and breathing. This solution removes the problems associated with the two signal types and levels. If the low level of -57dBu is not needed simply clip out resistors R9, R10, R11, R12. Transformer isolation is preserved, but the attenuator "T" leg is eliminated, thus removing the attenuation. Connection is as simple as connecting the Matrix Mixer outputs 1 thru 4 to the Phoenix connectors J1 thru J4. Connect the + Red, - Black and Shield connections to the PCB. *NOTE: The shield is lifted on the PCB to prevent ground loops and should be terminated at the source to provide proper RF shielding.*

Connect the DA-88 Cable DB25 to the plate DB25 connector and connect XLR connectors 1,3,5,7 to the BM246/Lanier and channels 2,4,6,8 to the FTR inputs.

*That's it - problem solved!*

**Figure III: PCB Assembly**



## Specifications: Recorder PCB (P/N 002560)

Input Level:	+6dBu from Matrix Mixer
Output Levels:	
CH 2,4,6,8:	+6dBu, pass thru - to FTR
CH. 1,3,5,7:	-57dBu, via transformer and pad - Sony/Lanier
Frequency Response:	20 to 20KHz +/- 3dB
IMD:	< 0.15% at rated level
THD:	< 0.12% at rated level
PHASE Response:	< 6 degrees from 20 to 20K

*The DA-88 cable has a male DB25 and eight male XLR connectors. These can be purchased from virtually any cable manufacturer such as RAPCO, Whirlwind, HOSA\*, etc.*

*\*The HOSA Part Number is DTM-803 (3m length).*

