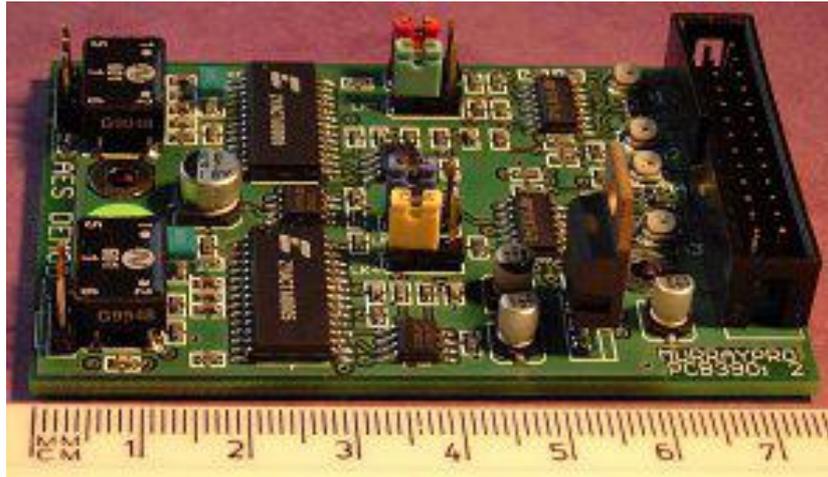


# A.E.S & SPDIF

## AUDIO



### AES & SPDIF DIGITAL AUDIO DEMODULATOR

**Cat: 390A, AEScard only Option, for inclusion within existing equipment.**

**Cat: 390S, SPDIF card only Option, for inclusion within existing equipment.**

**Cat: 325HM, self contained, stand alone, utility AES demodulator and**

**Headphone Monitoring Unit.**

Murraypro offers this attractive, elegant, compact and low cost solution to the problem of demodulating and monitoring monitoring AES/SPDIF digitally encoded audio.

The Cat: 390A/S demodulator has been designed to be fitted within analogue audio equipment, lacking a dedicated AES/EBU digital input, and provides a transparent interface with the external digital input. Two channels are housed on the compact card only 80 x 50 mm, each furnishing a balanced audio OP. The modest power requirements of the card are drawn from the host equipment, removing the requirement for a separate external power supply.

The Cat 330A-2 fully conforms with the input requirements of the AES 3: 1992, Specification, requiring that equipment inputs are wired as a single, transformer coupled, 110 ohm load.....whilst,

The Cat 330S-2 option fully conforms with the input requirements of the SPDIF Specification, IEC958, requiring that equipment inputs are wired as a single 75 ohm ( $\pm 5$  ohm) load.

BOTH the Cat 390"A" and "S" demodulator boards are also available with only a single channel, identified by the "-1" suffix.

The card automatically adjusts internal parameters to enable locking to the 44.1 or 48KHz standardised sampling frequencies. Output drives are available for LED indicators.

The Cat 390\* provides better than "CD quality" low distortion demodulated audio, with low background noise, that is suitable for loudspeaker monitoring, headphone monitoring or meter driving. Whilst working in a natural 18 bit environment, the system automatically adjusts to accept up to 24 bit resolution input signals.

The Murraypro card is normally supplied so that the EBU Standard level of -18dBFS corresponding with a Peak Program Meter deflection to "4"=0.775V RMS, 0dBu

To accommodate operation with systems using USA digital modulation levels, adjustment is provided to ensure that their Reference level of -20dBFS may be correctly displayed.

Naturally, the Cat 390\* will handle the maximum 0dB FS level, without clipping or distortion.



#### UTILITY AES demodulator & Headphone monitor

Murraypro offer a low cost, mains powered, free standing version of the Unit (Cat: 325HP), that is intended to be used as a utility AES demodulator and/or headphone monitor. The **Cat 325HM** does **NOT** require a large or cumbersome "wall-wart" external PSU, as the compact 240 x 160 x 35mm "modem" sized Unit is *completely* self contained, with internal PSU. Balanced, demodulated A1 & 2 outputs appear on rear panel XLR3-M. Space limitations, however, preclude the provision of the AES active loop.

**Headphone monitoring** of AES signals are facilitated by the addition of a buffer amplifier, front panel volume control and standard 1/4" stereo jack. These provide headphone drive that is totally independent of the rear panel balanced line outputs.

Ample space exists within the case for the addition of BBC designed headphone hearing protection limiters, if required. This protection is *only* valid if the headphone *type* **and** *fitted limiter* are matched. Murraypro can advise on suitable combinations.

## SPECIFICATION

### Cat: 390\*

- Number of bits: 18, better than CD resolution.
- Number of audio outputs: 4 or 2, assumed as one or two stereo pairs.
- Sample clock frequency: 44.1, 48 KHz, auto selection.
- Input impedance: 110 ohms @ HF, (>30KHz) rising at audio frequencies > 5K ohms @ 1KHz. Transformer coupled.

- AES operational level: 100mV - >5V pp, (eye height > 50%)
- Audio frequency resp: 25Hz - 22KHz  $\pm 0.1$ dB
- Audio sig/noise: 80dB minimum
- Audio distortion: 0.05% maximum
- Audio op level: 0dBV.7 nominal, low impedance, (on XLR3-M).
- OP level adjustment:  $\pm 3$ dB minimum on internal preset adjustments.
- Power requirements: +12v 60mA, no lamps illuminated. (Board only) -12v 10mA.
- Stand alone Case: 2411 x 161w x 35h (mm)
- Mains powered: 4 VA max @ 230V ac, 50Hz. Internal PSU, fused at 63mA T

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