LINEAR ACOUSTIC®
by THE TELOS ALLIANCE®

Linear Acoustic® ARC
Automatic Realtime Control

Next Generation Television Loudness Processor

Until now, broadcasters looking for a straightforward, stereo television processor had to make some difficult compromises.

Less costly solutions were budget-friendly, but the savings came at the expense of audio quality. Products that delivered excellent audio performance also included features such as support for multi-channel, coded audio that simply aren't required in many regions - and with a price tag that put them out of reach to smaller broadcasters.

Linear Acoustic® ARC eliminates that compromise by offering a 1RU DTV audio processor for two independent stereo or mono program sources that delivers the viewer-pleasing audio upon which Linear Acoustic has built its reputation.

ARC features Linear Acoustic APTO® loudness adaptation technology, a processing algorithm that carefully controls levels in a way that preserves transients, sonic image, and the artistic intent of the original source audio while still ensuring full compliance for any loudness recommendation or regulation including EBU R-128 and ATSC A/85 (CALM).

ARC's 2-channel design is purpose-built for regions and installations where multi-channel and coded audio are not commonly employed. ARC provides loudness control for two program sources. Loudness logging for each program is included for compliance verification as a .csv file.

Setup is simple and straightforward: Select a suitable adaptation profile for your programming from the ample list of factory presets, adjust a single control to determine the amount of overall processing desired, set the desired loudness target, and walk away.

A front panel navigation cluster is used for initial setup, while a web-based, browser- and OS-agnostic remote user interface makes more detailed setup and monitoring easy and convenient on any computer or mobile device. A front panel color LCD display clearly shows audio levels and loudness information.

I/O includes AES-3, 3Gb/s HD/SD-SDI, and AES67, making ARC compliant with SMPTE 2110-30.

SNMP is standard as are two robust auto-sensing internal power supplies.

Specifications

Processing
Linear Acoustic® APTO® Loudness Adaption technology. Processing for two stereo or mono programs standard. Downmixing of 5.1 content prior to processing on first program

Sample Rate/Resolution/Frequency Response
48kHz, 24-bit, 20Hz to 20kHz below threshold

AES-3 I/O
One 2-channel input and one 2-channel output via 75 Ohm BNC female connectors, internally terminated; signal levels per SMPTE 276M/AES-3ID-2001

SDI I/O
One auto-sensing 3Gb/s HD/SD-SDI (SMPTE ST425/292M/259M) input and one output via 75 Ohm BNC female connectors, internally terminated; video formats up to 1080i/60/59.94/50Hz

AoIP (Audio over IP)
16-channels of bi-directional AES67 audio via dedicated RJ-45 Ethernet port

Parallel GPI/O Control Port
15-pin female D connector, 0-5V TTL levels for 5 inputs and 5 outputs; GPI controls for loudness measurement start/stop/reset, loudness logging start/stop/reset, and preset recall for each audio engine, plus system configuration recall. GPO controls for loudness above/below target, loudness within target window, loudness measurement reset, logging on/off, reference change, and loss of reference.

Ethernet Connections
Two Gigabit Ethernet ports support; one for AoIP connections, one for remote control and monitoring via web interface

SNMP
SNMP support standard; traps include loudness above/below target, loudness within target window, change in reference, and power supply status.

Front Panel Controls and Indicators
5-key navigation cluster; graphical color LCD display; LED status indicators for each power supply and reference

Power
Dual, redundant, internal auto-sensing power supplies, each rated at 100-264VAC, 50/60 Hz, 40 Watts maximum

Dimensions and Weight
1RU high; 1.75"H x 19"W x 9"D (44 x 483 x 229 mm); approximate net weight - 9 lbs (4 kg); approximate shipping weight - 12 lbs (5.4 kg)

Environmental
Operating range: 0 to 50 degrees C (32 to 122 degrees F); non-operating range: -20 to 70 degrees C (-4 to 158 degrees F)

Regulatory
NORTH AMERICA: FCC and CE tested and compliant, power supplies are UL tested and approved.

EUROPE: Complies with the European Union Directive 2002/95/EC on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS), as amended by Commission Decisions 2005/618/EC, 2005/717/EC, 2005/747/EC (RoHS Directive), and WEEE.

Warranty
Standard 2-year limited parts and labor

Specifications are subject to change without notice.