



# AM PRO-1



## Audio Processing for AM Transmission: ... DIGITAL, COST-EFFECTIVE and TAMPER PROOF!

### BENEFITS:

- Loud, clean audio for AM broadcasting
- Handles speech just as well as music (not all digital audio processors manage this!)
- Improves audibility and clarity of programme
- Meets all national and international spectral occupancy and other specifications
- Automatically adjusts programme levels if output from studio is too low

### APPLICATIONS:

- Audio processing for all AM broadcast applications:
- LW
- MW (AM)
- SW/HF

### FEATURES:

- Complete digital air-chain processing for AM radio broadcasters in a compact package
- Adjustable input High-pass filter 3Hz to 200Hz
- Phase rotator to reduce programme asymmetry
- Advanced AGC as used in our 'ALPS' levellers offers unsurpassed rapid control of levels
- Independent programme compression stage
- Presence enhancer to brighten programme and cut through noise
- Choice of pre-emphasis to meet national requirements including NRSC
- Adjustable low-pass filter for all applications Fco 4.5kHz to 10kHz
- Sophisticated peak control dramatically increases loudness without digital grunge
- Positive peak asymmetry up to 145% (where legal)
- Tilt Corrector
- Factory presets deliver exactly the results you need for any application ...fast
- No-tamper front panel (set-up by PC only: GUI software, USB and RS-232 ports provided)
- Bright, Always-Visible LED bargraphs for audio confidence checks
- Low audio latency (4 milliseconds), fast boot-up (<1 second).



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## SPECIFICATIONS

### Frequency Response (All filters set for minimum action):

DIGITAL-DIGITAL: 20Hz-14.9kHz +/-0.1dB  
ANALOGUE-ANALOGUE: 20Hz-14.9kHz +/-0.2dB

### Noise:

DIGITAL-DIGITAL (rms 20Hz-20kHz): <-110dBFS  
ANALOGUE-ANALOGUE: (rms 20Hz-20kHz): <-75dB ref: Limit point +8dBu

### Distortion:

DIGITAL-DIGITAL (6dB limiting): <-90dB / 0.003% THD  
ANALOGUE-ANALOGUE (6dB limiting): <-70dB / 0.03% THD

### Inputs:

ANALOGUE: Active balanced, 10k (bridging), standard operating level -6dBu to +14dBu (clip +22dBu)  
DIGITAL: AES-3 (XLR); 32, 44.1, 48, 88.2, 96kHz sample rate. 16, 20, or 24 bits.

### Output:

ANALOGUE: Active true balanced, standard operating level -6dBu to +21dBu  
DIGITAL: AES-3 (XLR); full input rate / half rate.

### Processing blocks:

**High-Pass:** 3dB Frequencies 3Hz [DC block], 20Hz, 30Hz, 45Hz, 75Hz, 90Hz, 135Hz, 150Hz, 180Hz.

**Phase Rotator:** Cancels asymmetry in certain programme material

**Gated AGC:** Capture range 40dB (+/-20dB); maximum positive gain can be set.

Advanced AGC enables faster, programme-dependent operation.

**Compressor:** Nominal 2:1 slope

**Presence Enhancer:** Boosts selected frequencies for intelligibility and / or brightness.

**Limiter:** look-ahead limiters plus NCDSCS anti-aliasing clipper.

**Low-Pass Filter:** Cut-off frequency 4.5kHz, 5kHz, 5.5kHz, 6kHz, 7.5kHz, or 10kHz NRSC compliant

**HF Limiter:** 50us or modified 75us (NRSC) emphasis curve

**Tilt Corrector:** Reduce tilt due to LF problems in some transmitters. Increases loudness.

### Control:

Setup is via PC GUI only. Select a factory preset, modify it, set levels etc, save to Flash memory. USB on front panel, plus RS-232 on rear panel. ASCII Text based command format. Choice of 'Easy' mode (simplified, with Wizard), or Expert mode for GUI control.

### Power:

100 - 240V AC Nominal (acceptable range 88V to 264V AC) / 6 Watts / 9VA.

### Dimensions & weight:

1-RU: 44 x 482 x 290mm deep / 1.75" x 19" x 11.25" deep. Weight: 1.8kg / 4lbs

### Computer Control:

Every processing parameter, including all thresholds and time constants, can be accessed and modified under PC control (GUI included).

### Warranty:

3 year return-to-base warranty

### Approvals:

CE (EMC & LVD), RoHS

