



FM PRO-1



Digital Audio Processing for FM Transmission:

Loud, Clean, and Bright!

BENEFITS:

- Loud, clean, and bright audio for FM 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 specifications
- Automatically and intelligently adjusts levels if output from the studio is too low

APPLICATIONS:

- Audio processing - FM Stereo applications which do not require an integral encoder:
- Network FM Radio
- Satellite feed uplinks
- Local Radio
- Community Radio
- RSLs

FEATURES:

- 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
- Bass enhancer improves bass experience on small speakers
- Presence Enhancer to brighten programme if needed
- Stereo Enhancer for greater envelopment and stereo effect, 100% mono-compatibility
- Choice of pre-emphasis to meet national requirements including 50us and 75us
- Brick-wall Low-pass filters at 15kHz
- Sophisticated peak control dramatically increases loudness without digital grunge
- Factory presets deliver exactly the results you need for any application ...fast
- Bright, Always-Visible LED bargraphs for audio confidence checks
- Low audio latency (9 milliseconds), fast boot-up (<1 second).

SPECIFICATIONS

Frequency Response (All filters set for minimum action):

DIGITAL-DIGITAL: 20Hz-15kHz +/-0.1dB
ANALOGUE-ANALOGUE: 30Hz-15kHz +/-0.5dB

Noise:

DIGITAL-DIGITAL (rms 20Hz-20kHz): <-105dBFS
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 +21dBu)
DIGITAL: AES-3 (XLR); 32, 44.1, 48, 88.2, 96kHz sample rate. 16, 20, or 24 bits

Outputs:

ANALOGUE: Active true balanced, standard operating level -6dBu to +14dBu
DIGITAL: AES-3 (XLR); full 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: Independent compressor, Nominal 2:1 slope above knee

Bass Enhancer: Psycho-acoustic bass enhancer improves bass experience on small speakers

Presence Enhancer: Boosts selected frequencies for competitive FM brightness

Stereo Enhancer: Matrix-Mode stereo enhancer, 100% mono compatible

Limiter: look-ahead limiters plus NDCS anti-aliasing clipper for competitive loudness

Low-Pass Filters: Cut-off frequency 15kHz (-0.1dB)

HF Limiter: independently accommodates 50us or 75us emphasis curve

Front Panel Control:

LCD and Jog-wheel based system. A simplified set of controls allows quick setup in the field without the need for a PC. Front panel can be 'Locked Out' with password

PC Control:

Full control including access to time-constants is available via the front panel. 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

Power:

100 - 230V AC / 10 Watts

Dimensions & weight:

1-RU: 44 x 482 x 290mm deep / 1.75" x 19" x 11.25" deep. Weight: 2kg / 4.45lbs

Warranty:

3 year return-to-base warranty

Approvals:

CE (EMC & LVD), RoHS

