

Forssell Technologies Dual FetCode Mike Preamp

General Specification

Gain 15 - 60 dB (stock configuration)

EIN -125 to -128 dBu 20-22 KHz typical

Broadband Noise Floor at 15 dBu gain -90 dBu (20 - 22 KHz) typical

Broadband Noise Floor at 60 dBu gain -67 dBu (20 - 22 KHz) typical

Frequency Response 5 Hz to 160 KHz +0, -3 dB into 10k Load

THD+N at 30 dB gain 0 dBu Output level (20 -22 KHz) 0.005% typical

IMD (SMPTE/DIN) distortion at 0 dBu Output level 0.008% typical

DIM/TIM distortion (transient intermodulation distortion) 0.006% typical

Maximum Output Level (1% THD) is +38 dBu (100k load, +34 dBu into 10k)

Maximum Input Level (gain at Min) is +24 dBu

Power Consumption: 50 watts

Power Supply Regulation Voltages: +350 VDC (1) , +315 VDC (2 each), +24 VDC (1), - 24 VDC (2), and + 48 VDC (1)

Tube types: 12AX7A (4), 12AU7A (4)

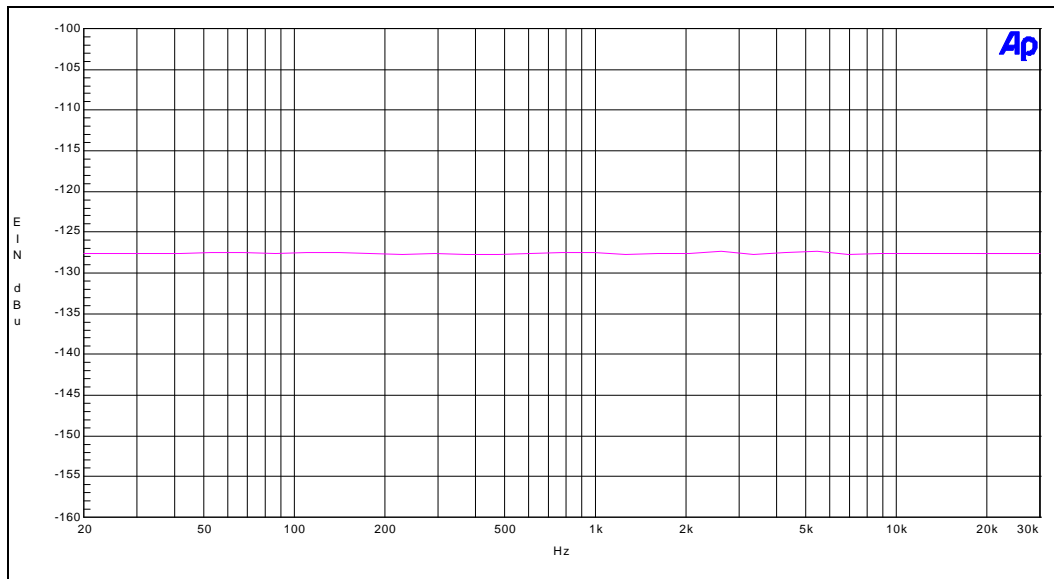
Junction Field Effect Transistors (JFET): 8 (6 for constant current regulators, 2 signal path)

Gain Controls: Optional 24 Position ELMA stepped or (stock) potentiometer.

Options: High Voltage B&K inputs, custom gain ranges (stepped only) from 0 dB to 70 dB, remote gain control (via stepper motor controlled gain w/100 discrete steps).

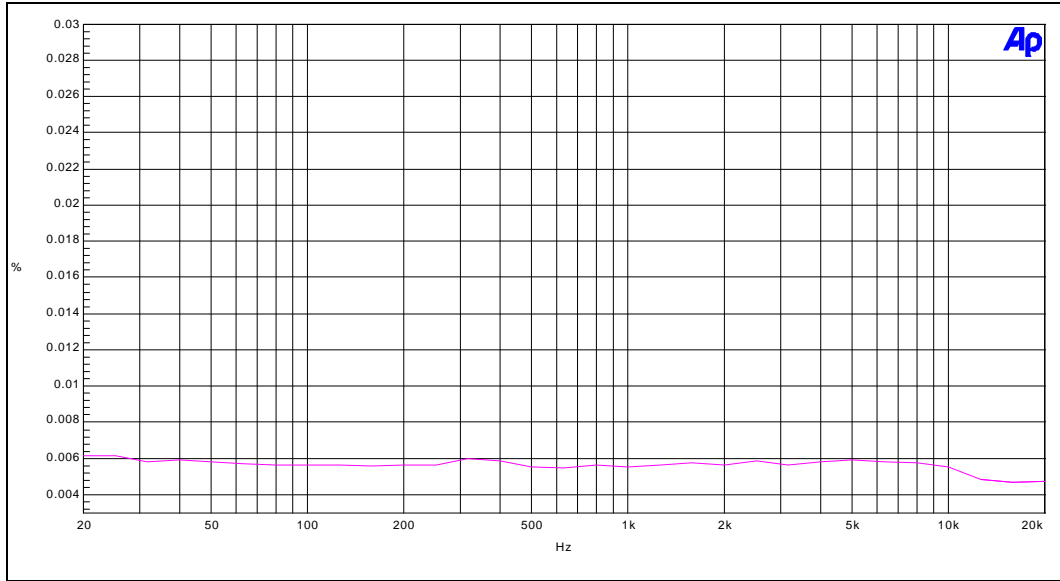
Test Data

All tests done with 10k || .01 mfd load unless otherwise noted.

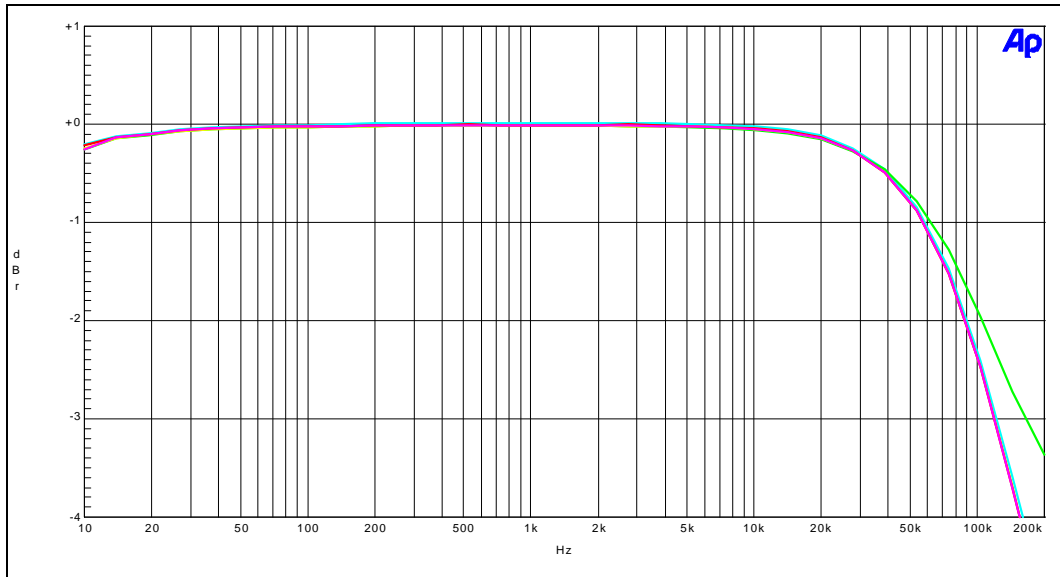


Typical Broadband (20 - 30k) EIN. Gain set at 60 dB

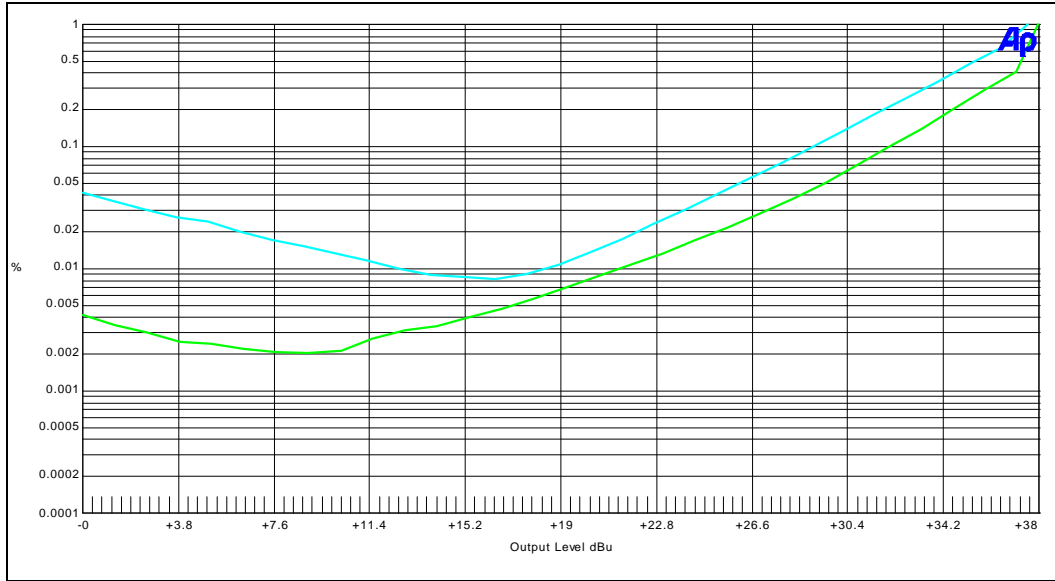
(Note... this is NOT a spot noise figure, but a full audio passband noise measurement)



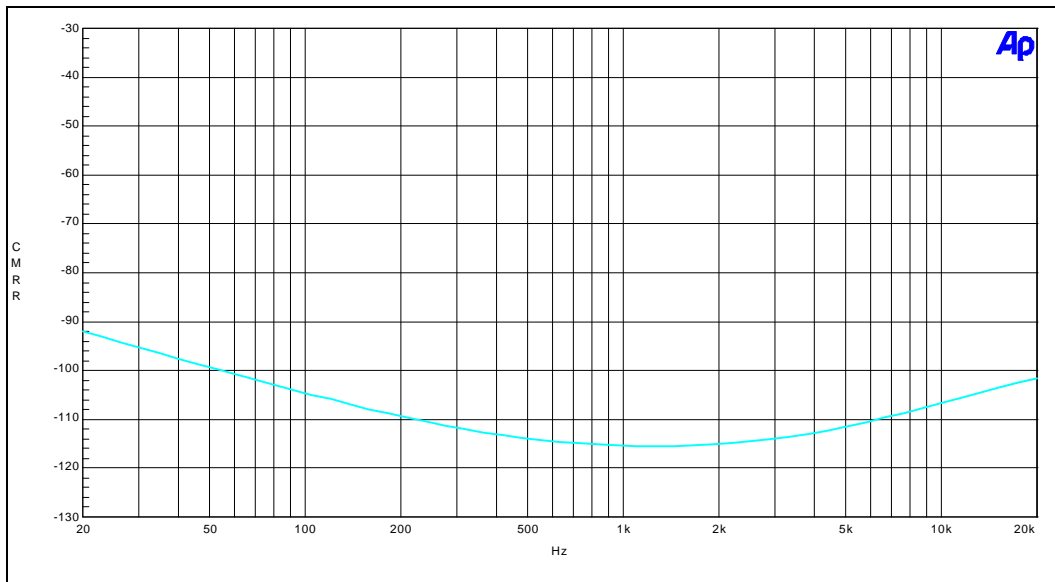
THD +N across the Audio Passband. 30 dB gain with 0 dBu output



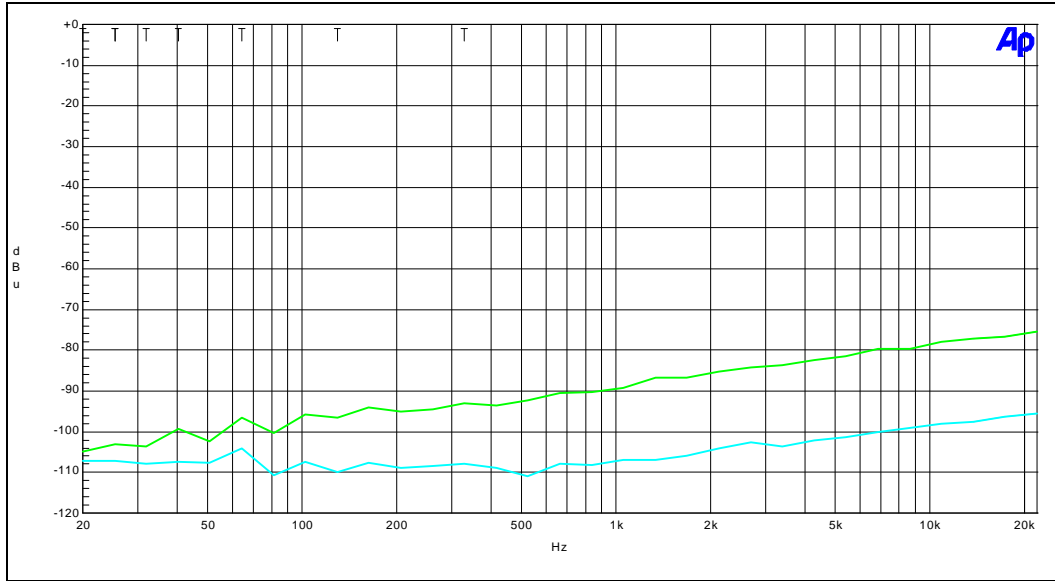
Frequency Response at 30, 40, 50, and 60 dB gain settings



THD+N at Output Level from 0 dBu to +38 dBu (63v RMS)
Cyan trace is with preamp set at 60 dB gain. Green trace is preamp at 15 dB gain.
Max input (1% THD) level is +23 dBu at 15 dB gain setting.



Common Mode Rejection Ratio at 60 dB gain setting



Spot Noise Floor Measurement at 15 dB gain (cyan) and 60 dB gain (green)

Note... this measurement was made by sweeping a 1/3 octave bandpass filter across the audio passband and measuring its output voltage. This technique produces measurements that increase in amplitude as the sweep center frequency increase, giving a characteristic HF increase. This is a function of the measurement technique not of the FetCode preamp noise characteristics.