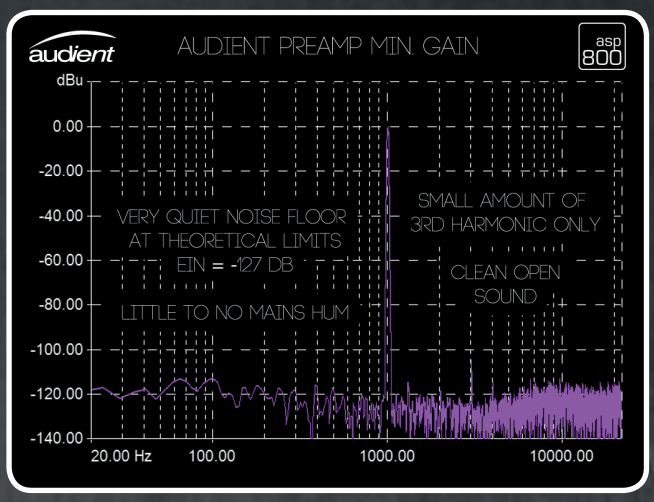
asp 800 SPECIFICATIONS

MICROPHONE PREAMPLIFIER:
(measured to balanced DB25 analogue outputs)

MIC GAIN:	0 to 70 dB (extra gain stage for more!)
SWITCHABLE PAD:	-15 dB (all channels front panel switchable)
LINE GAIN:	-10 to 60 dB (-25 to 45 dB inc. PAD)
PHANTOM POWER:	48V ±4V @ 10mA / channel
MIC EIN:	<-127.0 dBu
CMRR:	>80 dB @ 100Hz to 2kHz
MAXIMUM INPUT LEVEL:	+20 dBu (+35 dBu with PAD)
INPUT IMPEDANCE (Mic):	>2k Ω balanced (approx. 2.2k Ω)
INPUT IMPEDANCE (Line):	>8k Ω balanced (approx. 8.6k Ω)
FREQUENCY RESPONSE:	±0.5 dB 10Hz to 100kHz @ min. gain
CROSSTALK:	<-90 dBu 10Hz to 10kHz
THD+N @ 0dBu (1kHz):	<0.003% (-90.5 dBu) mostly 3rd harmonic
SNR:	>90 dB @ min. gain
XLR COMBI FEMALE:	Pin 2 (Hot), Pin 3 (Cold) & Pin 1 (Shield)
1/4" TRS JACK:	Tip (Hot), Ring (Cold) & Sleeve (Shield)

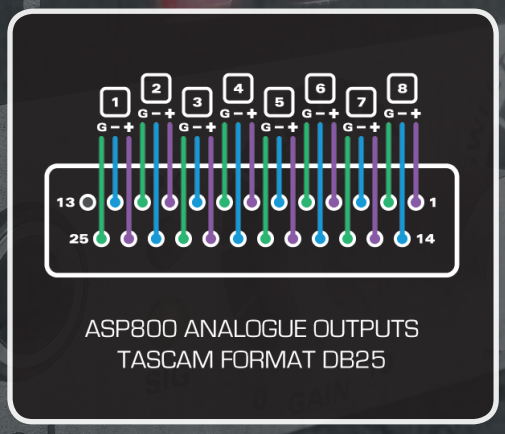


DISCRETE JFET D.I:
(measured via microphone preamplifier circuitry)

D.I GAIN:	0 dB unity gain (0 to 70 dB)
MAXIMUM INPUT LEVEL:	+17 dBu
INPUT IMPEDANCE (D.I):	1Meg Ω unbalanced
FREQUENCY RESPONSE:	±0.5 dB 10Hz to 50kHz
THD+N @ 0dBu (1kHz):	<0.01% (-80 dBu) mostly 2nd & 3rd
SNR:	>85 dB @ min. gain
1/4" TS JACK:	Tip (Hot) & Sleeve (Shield)

BALANCED ANALOGUE LINE OUTPUTS:
(ground sensing compensation scheme)

MAXIMUM OUTPUT LEVEL:	+22 dBu
OUTPUT IMPEDANCE:	<200Ω ground sensing <100Ω unbalanced
8-CHANNEL DB25:	25-Pin Tascam Format



ASP800 ANALOGUE OUTPUTS
TASCAM FORMAT DB25

A-D CONVERTER:
(measured under AES-17 sans microphone preamplifiers)

CHIPSET:	Burr-Brown PCM4204 24-bit PCM
DIGITAL REFERENCE LEVEL:	Selectable via Rear Panel 0 dBFS = +18 dBu (iD22 Professional) 0 dBFS = +12 dBu (iD14 Prosumer)
FREQUENCY RESPONSE:	±0.1 dB 20Hz to Fs/2 (Nyquist)
CROSSTALK:	<-110 dBFS @ 1kHz & <-90 dBFS @ 10kHz
THD+N @ -1 dBFS (1kHz):	0.0015% (-96.5 dB)
THD+N @ -6 dBFS (1kHz):	0.0009% (-101 dB)
DYNAMIC RANGE:	113.5 dB un-weighted 116.0 dB A-weighted
PEAK LED LINEUP:	-2 dBFS (moves with reference level)
SIGNAL LED LINEUP:	-38 dBFS (moves with reference level)

DIGITAL OUTPUT:

ADAT 8 CHANNEL SMUX:	44.1 to 96.0 kHz
CLOCK:	Internal Crystal or External Source
WORDCLOCK INPUT:	75Ω BNC - switchable 75Ω termination

POWER SUPPLY:

LOW NOISE SHIELDED LINEAR PSU	CUSTOM TRANSFORMERS
FANLESS, QUIET OPERATION:	35W Maximum Consumption
INTERNAL D.C POWER RAILS:	±15V, +48, +30V & +9V
SWITCHABLE MAINS VOLTAGE:	100, 120, 220 or 230Va.c
FUSE:	200mA (UK) or 315mA (US) Time Delay (T) Slow-Blow Type

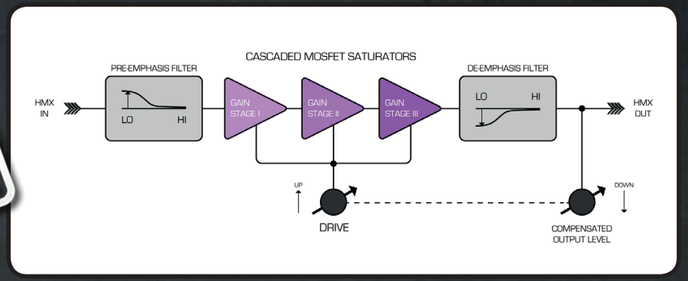
WEIGHT:
4.5 kg

DIMENSIONS:
1RU
482mm x 286.5mm x 44mm

HMX & IRON >>

HMX & IRON SPECIFICATIONS

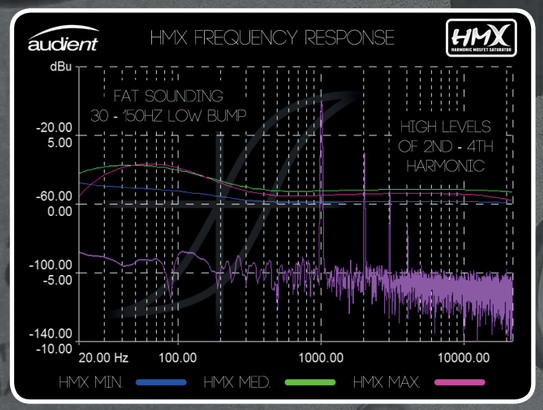
asp 800

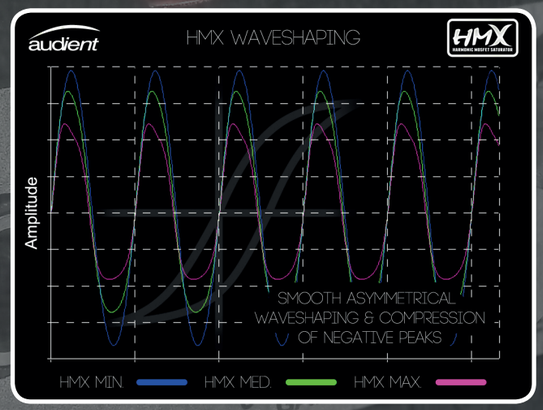


HMX MOSFET SATURATOR:

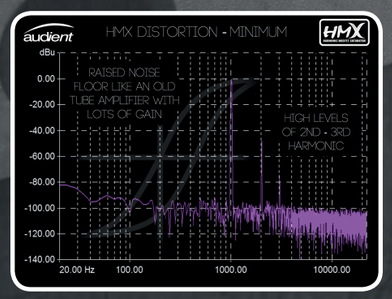
THD+N @ 0 dBu Min. Drive (1 kHz):	0.35% (2nd & 3rd only)
THD+N @ 0 dBu Max. Drive (1 kHz):	2.73% (2nd to 4th dominate)
NOISE @ Min. Drive	-73 dBu (like an old tube amp!)
FREQUENCY RESPONSE:	30 to 150Hz low frequency emphasis bump - see below
WAVESHAPING:	Asymmetrical Tube-like soft clipping

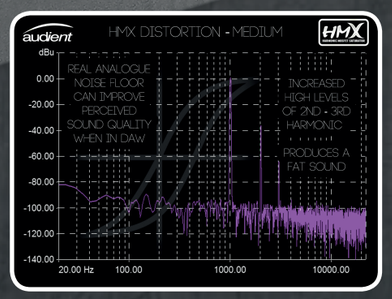
HMX offers a valve (tube) like soft clipping that is pre and de-emphasised with passive filtering to achieve a fat low frequency response with a softened midrange. It uses three cascased MOSFET class-A amplifiers to reach high levels of musical distortion, but the output level is always held constant so your ears are not biased by loudness. Some extra noise will act as a nice analogue dither when inside the DAW, why use a plugin to add analogue modeled noise when you can have the real thing?!

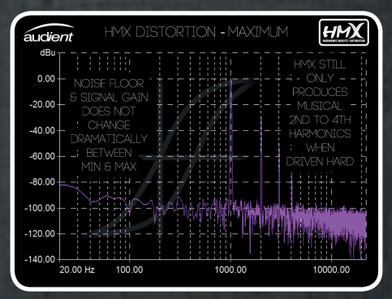




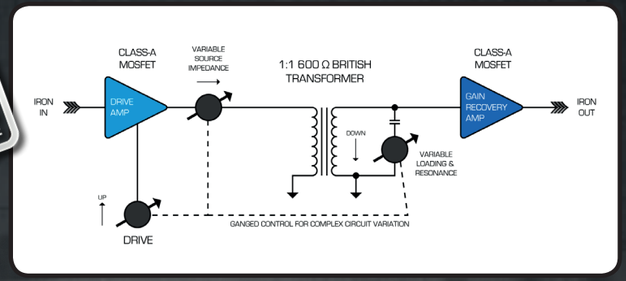
HMX PROVIDES THICK LOW FREQUENCY ENHANCEMENT & SOFT WAVEFORM CLIPPING







REAL ANALOGUE NOISE CREATES SONIC GLUE & RICH HARMONICS ADD SIZE

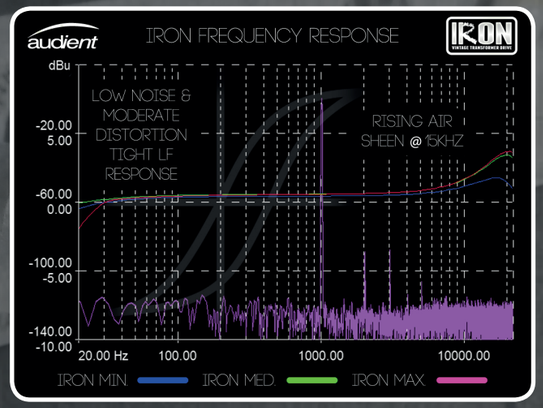


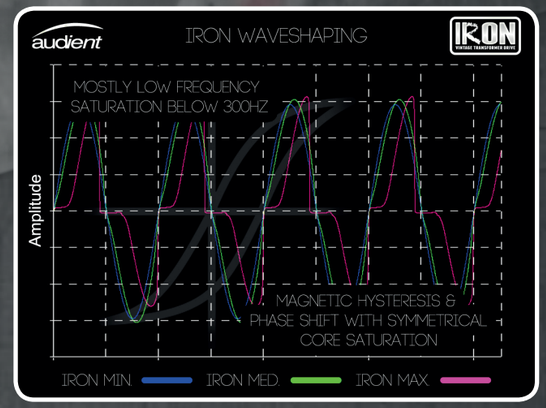
IRON TRANSFORMER SATURATOR:

THD+N @ 0 dBu Min. Drive (1 kHz):	0.11% (2nd & 3rd mostly)
THD+N @ 0 dBu Max. Drive (1 kHz):	0.006% (cleans up as driver load changes)
THD+N @ L.F (<300 Hz):	Complex variance with level and frequency - distorts bass content
NOISE @ Min. Drive	-84 dBu (like a 2" tape machine)
FREQUENCY RESPONSE:	4k to 15kHz rising air boost / resonance - see below
WAVESHAPING:	Symmetrical/Magnetic Loop Transient Shaping & Phase Shift

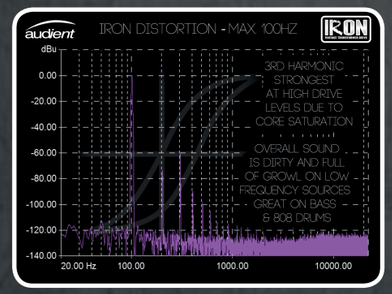
IRON provides a complex variable effect with one simple control that can shift phase, tighten sub frequencies, slew transients and distort low frequencies with symmetrical magnetic core saturation. There is also a small amount of asymmetrical saturation present in the drive & recovery amplifiers for a very complex but subtle palette of tone!

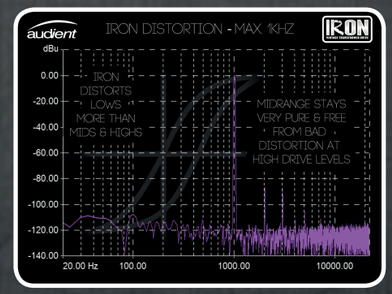
The frequency response has an air boost present that is manipulated with secondary loading of the 1:1 transformer to replicate the magic of the 70's, adding the smooth, zingy air to high frequencies that can add to perceived depth in the top end. Combine with HMX for big tone from ASP800.





IRON ADDS SPARKLE & AIR (4-15kHz) BUT MOSTLY DISTORTS L.F BELOW 300 Hz





IRON KEEPS MIDRANGE RELATIVELY PURE BUT ADDS DEPTH IN LOWS & EXTREME HIGHS

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