

INSIGNA

500 SERIES TUBE EQ

A COLORING / SHAPING EQ

WITH 3 BANDS, HI CUT AND LOW CUT FILTERS



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VER 1.0

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Printed in the U.S.A.

Thank you and congratulations on your Cranesong Insigna acquisition.

The Cranesong Insigna is a 500-series module tube EQ designed by Dave Hill and comes from a long line of industry standard, high quality audio hardware.

The unit is based around a dual triode circuit with a 12AX7 tube, featuring 2 shelving EQs, a parametric band and a low and high pass filter set.

The filters are both 24 dB/Octave with 7 frequencies each.

The high and low frequency bands are both shelving with 8 frequencies a piece.

The mid frequency band is a peak EQ containing 8 frequencies.

All three bands employ buffered RC circuitry in the negative feedback path around the tube amps.

The output stage features a shielded Lundahl high level line output transformer, all the stepped frequency pots are high quality Grayhill series 56 Rotary Switches and Bourn pots for the gain.

The Frequencies

Let's have a closer look at the frequency ranges you'll get to work with.

The high pass filter ranges from 25 Hz to 150 Hz (25 - 40 - 50 - 60 - 90 - 120 - 150) and the low pass filter from 6kHz to 20 kHz (6 - 7.5 - 9 - 10.5 - 12 - 15 - 20).

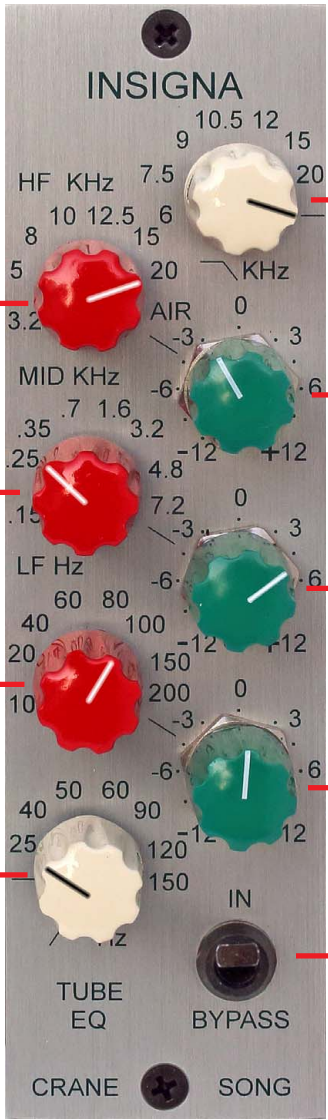
The filters will give you enough power to clean up low rumble, tidy up the low end on LF centric instruments and control harshness at the top like guitars for example. We'll cover some more application examples a little further on in the manual.

The HF shelf gently ranges from 3.2 kHz to 20kHz (3.2 - 5 - 8 - 10 - 12.5 - 15 - 20) with the addition of an ultra high AIR band centred around 40kHz.

On the other side of the spectrum, the LF band shelves from an extremely low 10 Hz up to 200 Hz.

Straddling the middle, the MID peaking band deals with anything from 150 Hz to 7.2 kHz and is centred around a proportional Q (bandwidth).

All three bands give you +/- 12 dB boost and cut.



INSIGNA

HF FRQUENCY

MF FRQUENCY

LF FRQUENCY

HIGH PASS FILTER

LOW PASS FILTER

HF GAIN

MF GAIN

LF GAIN

BYPASS

HF KHz 7.5 10.5 12 15 20
10 12.5 6
8 15
5
3.2
20 KHz
AIR 0
-3
MID KHz
-6
0.35 .7 1.6 3.2
25 4.8
15 7.2
0
-3
LF Hz
-6
20 100 150
10 200
-3
40 50 60 90 120 150
25 12
IN
TUBE EQ
BYPASS
CRANE SONG

INSTALLATION

The install is as straightforward as any other 500-series module; just slide it in, secure the screws and you're done.

Don't forget to power down before you embark on any installation!

Once your unit is securely installed in the 500-series slot, you can wire it in with the XLRs on the back of the 500-series rack. If you've installed the unit in a 500-series ready console, you're good to go.

The Insignia's 12AX7's voltage supply is 210 V, regulated down to an operating voltage of 185 V. The EQ draws about 120mA and won't generate too much heat. However, make sure that your 500-series rack is always well ventilated.

When it comes to the rack's power supply, it really pays to invest in a decent and stable one. This way you won't run into trouble if some of your 500-series modules draw more power, potentially leaving other slots underpowered.

The Insignia's shielded output transformer will help reduce crosstalk and the inevitable noise generated by inferior rack PSUs.

OPERATION

The Insignia couldn't be more intuitive to use.

It's as simple as putting the unit out of bypass mode, set your desired frequencies and boost or cut to taste.

Even though you have 12 dB of cut and boost, the Insignia remains very musical, even at extreme boost levels.

IN USE

One thing the Insigna is not, is a one trick pony!

This EQ is an extremely versatile recording and mix EQ.

If you track with EQ in the recording chain, the Insigna is a very powerful tool to help you clean up any low rumbles trying to sneak onto the recording through the mic stand.

The filter set is extremely effective in tidying up the low end in any low frequency emphasised instrumentation like kick drums, floor toms, bass, piano and guitars. At the high end of the spectrum, the low pass filter will aid in controlling any harsh content in acoustic and electric guitars and brass instruments.

When you're recording in lively environments, the high roll-off can come to your rescue when you're trying to get those higher room frequencies under control.

The Insigna will handle everything you throw at it. Here are a couple of practical "in the studio" applications.

Kick Drums: Since the High Pass drops as low as 25 Hz, you can safely set it for 25 Hz on kicks without losing any of the kick's body. It'll keep the unnecessary low frequency mush out of your recording or mix and make space for the other instruments. This will also allow you to dial in some extra thump anywhere between 40 and 100 Hz. Combine this with a healthy cut in the 250 Hz area to get rid of the mud and "cardboard" sound, add a touch of bite somewhere near 5kHz for some beater click if so desired and you're well underway to a killer kick sound.

If you've miked the kick from a slight distance, then you can use some of that Low Pass roll-off in order to get rid of the snare, hat and cymbal spills.

Snare Drums: These things can be pretty problematic and you'll probably end up EQ'ing them quite a bit. Once again, the High Pass filter will be very useful to clean out some of the kick spill and generally any low stuff that's not required on the snare channel. You can use the LF band to either roll out low thud if you're after a very crisp and snappy snare. On the other hand, if you want that rock gut punch snare, you'll want to magnify those lower frequencies between 100 and 150 Hz.

A lot of snares have that annoying shell ring in the 400Hz territory and the MID peak band can subdue that nicely. Add some 10kHz for that snare rattle or go a bit more extreme and open up the space around the snare by boosting the AIR band. This band will start sloping up gently from 10k onwards. This way you can address the snare rattle and spaciousness in one tweak.

Overheads: If you run two Insignas in your rack, you can strap both across the overhead channels (or any stereo application for that matter). Again, roll off some of that unwanted low rumble and open up the AIR band for those silky cymbals without making them harsh.

Basses: Electric and acoustic basses are two different entities entirely and the Insigna treats them both amazingly well.

On upright bass, you can achieve a lot of definition by rolling out the ultra low end, boost the body of the instrument if required, but more importantly, you can dial in some of the upper harmonics and allow the instrument to cut through the mix more. There's quite a bit of high end action going on like finger noise and string clatter that will just distract within the song, so you can tame that down with the Low pass filter.

You can treat the electric bass in a similar fashion, but you'll find you have to be a little more delicate with the frequencies. It'll be dependent on where the bass sits in the track versus the kick drum. That relationship will define what you do with the low frequencies. You can kick the MID band in to either get some of that extra harmonic content to make the bass sing (in the case of P-bass near the 800 Hz mark) or you may need it to get more slap out of a funky bass part.

Once again, the high roll-off can be employed to discard some of those pesky string squeaks and then add a little 3.2kHz if you want some extra string zing.

Guitars: Whether electric or acoustic, guitars need to cut through the mix with a lot of definition, otherwise they'll just add mud to the story.

The filters will be your best friends in this instance. They'll allow you to steer the guitars away from that solid Kick-Bass foundation you've established and you can keep the shrill top end at bay at the same time.

You can reach for the LF band to give more body to an instrument by boosting or making it thinner and bite more by cutting. The MID band will supply you with all the cut through you need and the HF band is particularly nice on the higher frequencies when you're working on acoustics. It'll allow them to breathe and give you that lovely organic and open sound.

Vocals: Maybe it's because the vocals are so important in a song, but this is where the Insigna shines.

The possibilities are vast on how to EQ a vocal. The Insigna's filters will tidy up the low end mess. You can add a lot of body on a vocal with the low band, making it sound nice, full and intimate.

The mid frequency band will allow you to make the vocal cut through the mix with extreme clarity and the high band can do wonders when it come to putting air around the vocal.

With some creative tweaking this EQ can bring lifeless vocal recordings back from the dead.

Keys, Brass etc.: We are living in a world where, at some stage, we'll have to deal with a plethora of programmed, in the box keyboards, strings pads, synths and brass sections.

This EQ will give you the power to creatively alter these sounds and make them sound more unique than just some template DAW sounds.

Even the real deal instruments can be turned into exciting song components when you push the Insigna to its limits.

Try boosting more than you normally would on bland key or synth sounds and let the tube create some second harmonic distortion for you.

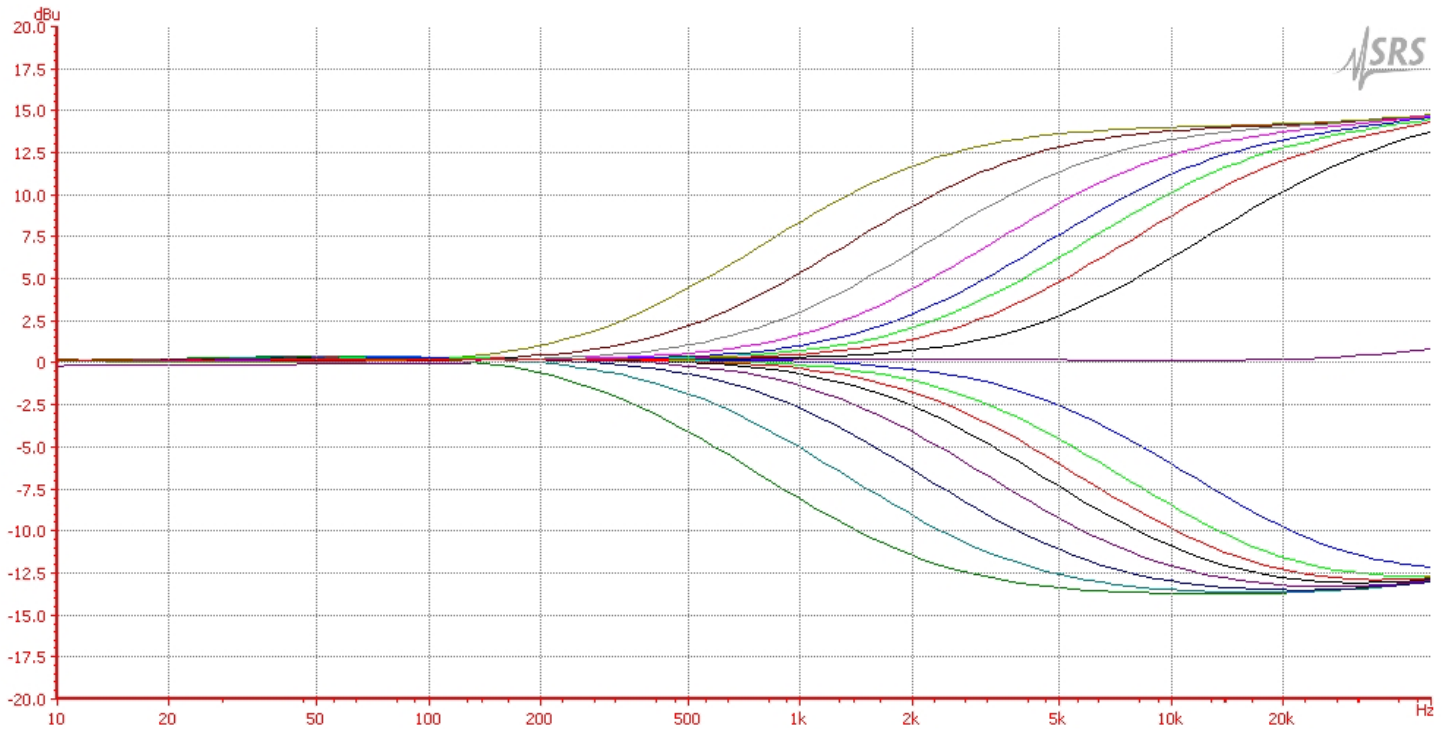
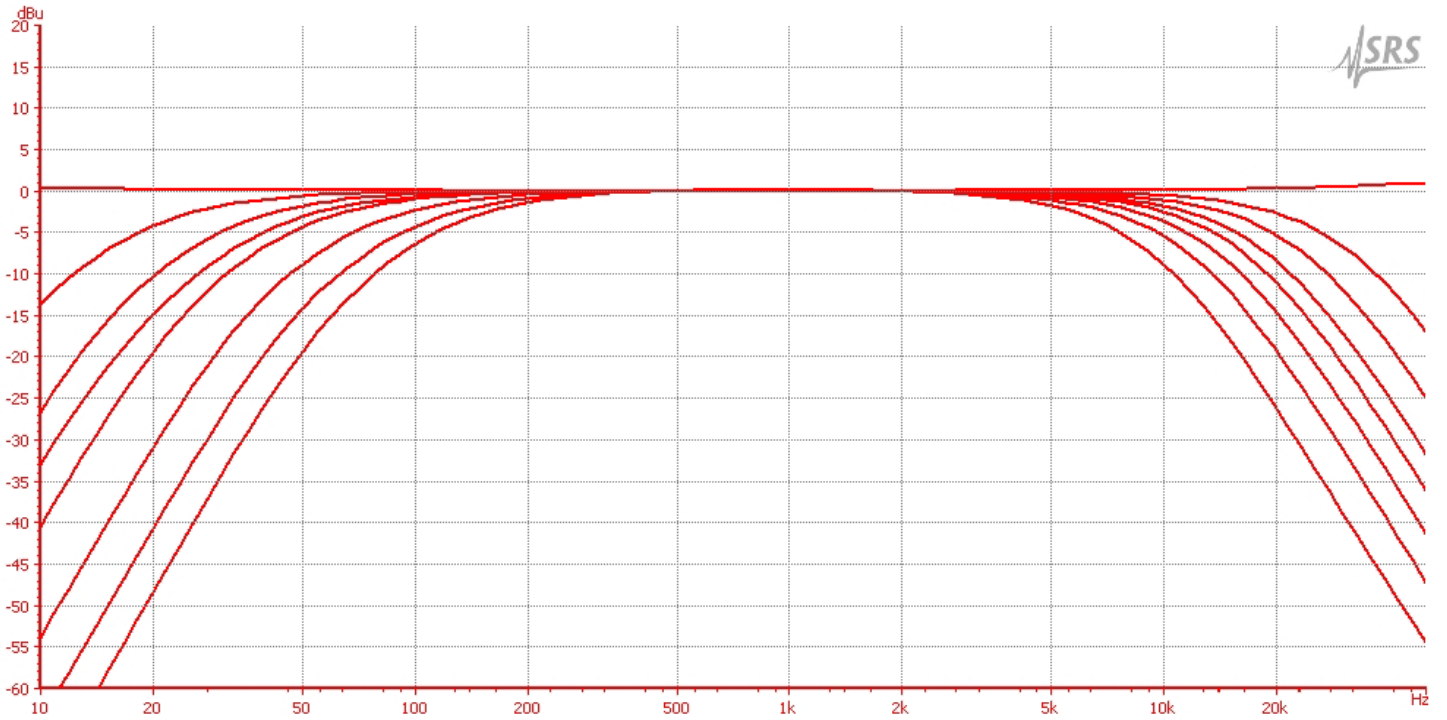
Maybe that Hammond isn't growling enough or the Rhodes isn't quite as gnarly as it could be. Drive that tube circuit. See and hear what happens.

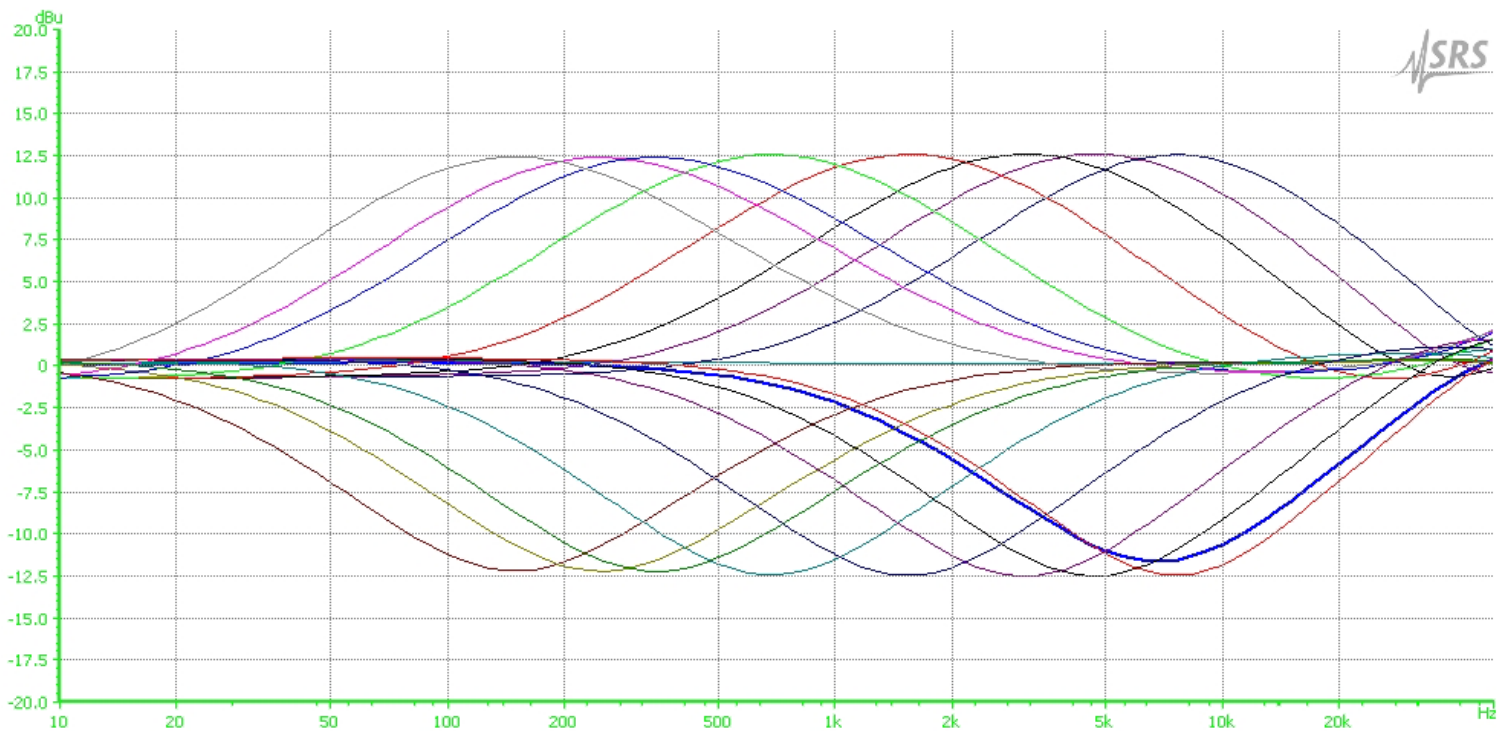
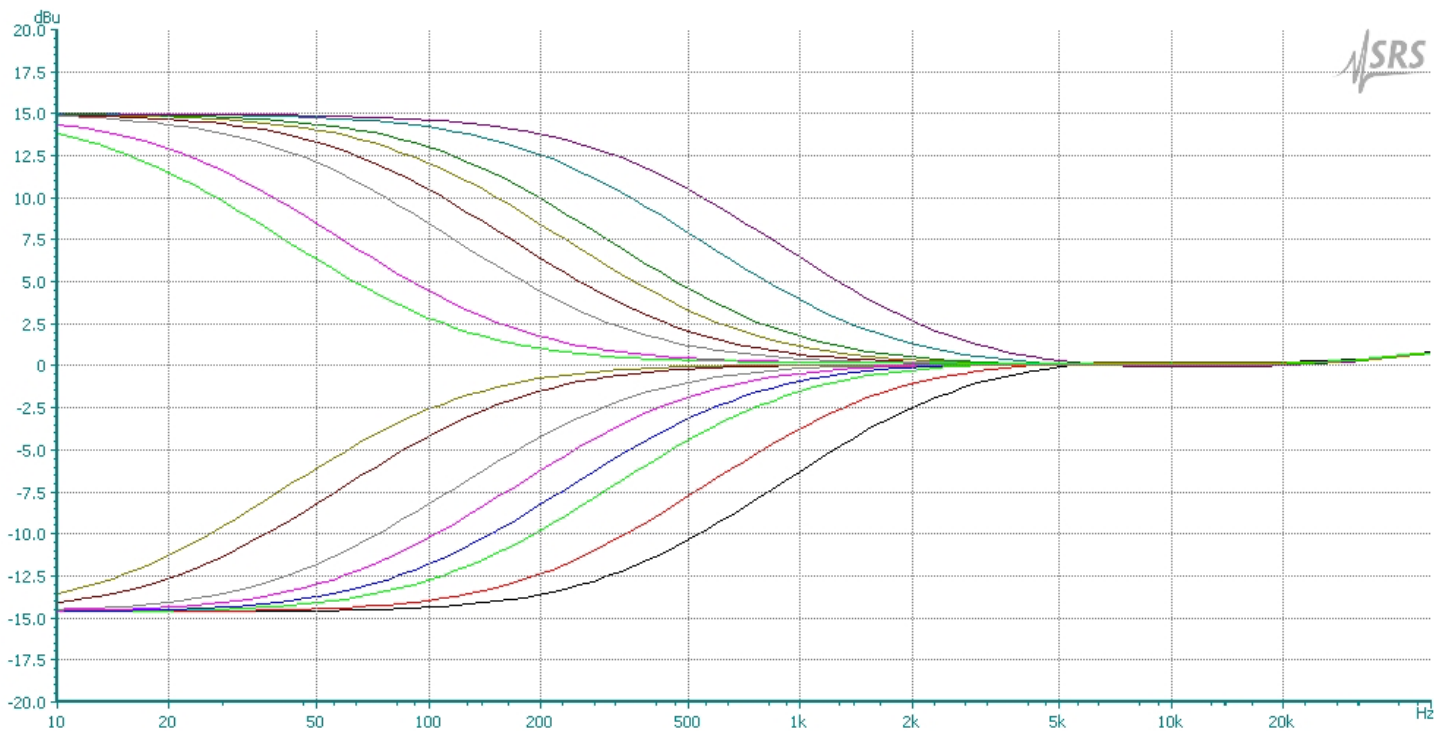
And don't forget to use the EQ on some horns. If you're looking for more barking from a sax or you want that trumpet solo to soar, you're reaching for the right unit.

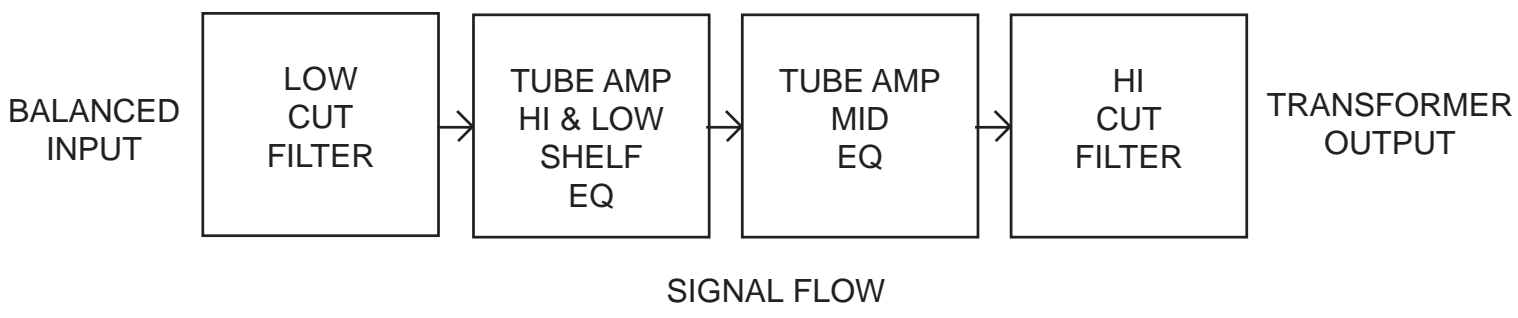
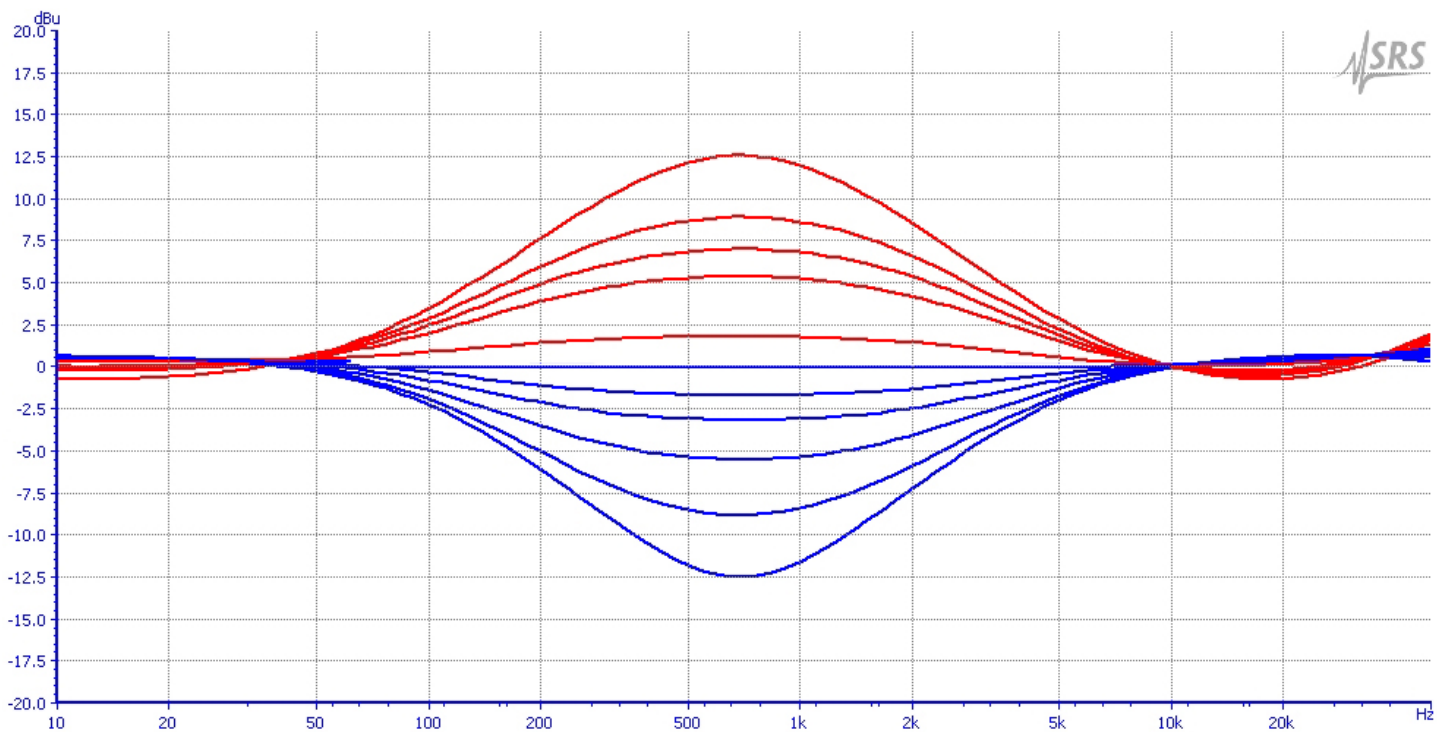
Before we get into the geek speak, I can only tell you that there are no rules to EQ. If it sounds good, do it!

Now get back to work, be creative and have fun with your new EQ.

Enjoy the fat, analogue and rich tube colour the Cranesong Insigna brings to the digital recording world.







TECHNICAL SPECIFICATIONS

Maximum input: +24dbu

Maximum Output: +25dbu

Frequency Response: 1Hz to 100KHz

Noise Floor: -84 dbu 20Hz to 20KHz

Input Impedance: 32K ohms

Output Impedance: 160 ohms

Current Consumption: 120mA

Weight: 1.7 lbs

Number of Channels: 1

Number of EQ Sections: 37

SWITCHED RANGES

High Pass: 7 + Flat

Low Pass: 7 + Flat

Low Shelf: 8 (10 Hz - 200 Hz)

Mid Bell: 8 (150 Hz - 7.2 kHz)

High Shelf: 8 (3.2 kHz - AIR)

Bypass Switch: True Bypass - Hard Bypass

Thanks to Wes Maebe for writing this manual