

iBis



OPERATOR'S MANUAL

Version 1
20090110

CRANE SONG LTD.

2117 East 5th Street
Superior, WI 54880 USA
tel: 715-398-3627
fax: 715-398-3279
www.cranesong.com

CE

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions
2. Keep these instructions
3. Heed all warnings
4. Follow all instructions
5. Do not use this apparatus near water
6. Clean only with dry cloth
7. Install in accordance with the manufacturer's instructions
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat
9. Protect the power cord from being walked on or pinched particularly at plugs and the point where they exit from the apparatus
10. Only use attachments/accessories specified by the manufacturer
11. Unplug this apparatus during lightning storms or when unused for long periods of time
12. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped
13. CAUTION: To disconnect the unit completely from the MAINS, unplug the unit. Turning the power switch off does not disconnect the unit completely from the MAINS.

THE BASICS

The IBIS equalizer can do some very different things.

First, each band has 24 frequencies. 12 switch positions and a “+ one step button” this button moves the frequencies up one whole musical step. The high and low bands also can be shelving by pushing the shelving button.

The frequency chart shows how each of the bands overlap and how frequencies and musical notes relate. As an example, with the +1 step button pushed in, the frequency moves up two positions on the chart. 32.7 Hz which is the lowest frequency will become 36.7 Hz

There is a dead zone of about plus and minus .3 db on the “boost / cut” controls where the EQ is flat in response. This allows an easy way to set your bands flat. The range is plus or minus 12 db and is not stepped. The mastering version has a range of 6 db in .5 db steps with a 1 db step between 5 and 6.

The Bandwidth is not stepped on the standard version and is stepped on the mastering version. the range is from 0.2 Oct to 4 Oct this is at 12 db of boost

The low cut is 12 db per octave, but the steep button increases the slope to 24 db per octave.

The filters are of a special type that provide a very clean and smooth sound. To add flexibility to the equalizer a color knob is included.

The color knob is an additive second / third harmonic distortion type of process, it can be applied to the full program or any one of the 4 bands. When doing a “cut” it will subtract the harmonic content. The Color Knob is not stepped on the standard version and is stepped on the mastering version

The use of the color function will allow you to change the equalizer from a very transparent sound to a colored sound. Using it on the low frequencies, band 1, it will add warmth. On band 3 it will add presence and some nice upper midrange detail. On the high frequency band it will add air.

IBIS FREQUENCY CHART

C	C#	D	D#	E	F	F#	G	G#	A	A#	B
32.7	34.6	36.7	38.9	41.2	43.7	46.2	49	51.9	55	58.3	61.7
65.4	69.3	73.4	77.8	82.4	87.3	92.5	98	104	110	116.6	123.5
131	139	147	155.6	165	175	185	196	208	220	233	247
262	277	294	311	330	349	370	392	415	440	466	494
523	554	587	622	659	698	740	784	830	880	932	988
1047	1109	1175	1245	1319	1397	1480	1568	1661	1760	1865	1976
2093	2218	2349	2489	2637	2794	2960	3136	3322	3520	3729	3951
4186	4435	4699	4978	5274	5588	5920	6272	6645	7040	7459	7902
8372	8869	9397	9956	10548	11175	11839	12544	13289	14080	14917	15804
16744	17740	18794	19912	21096							

Band 1 + 1 step lowest frequency is 36.7 Hz

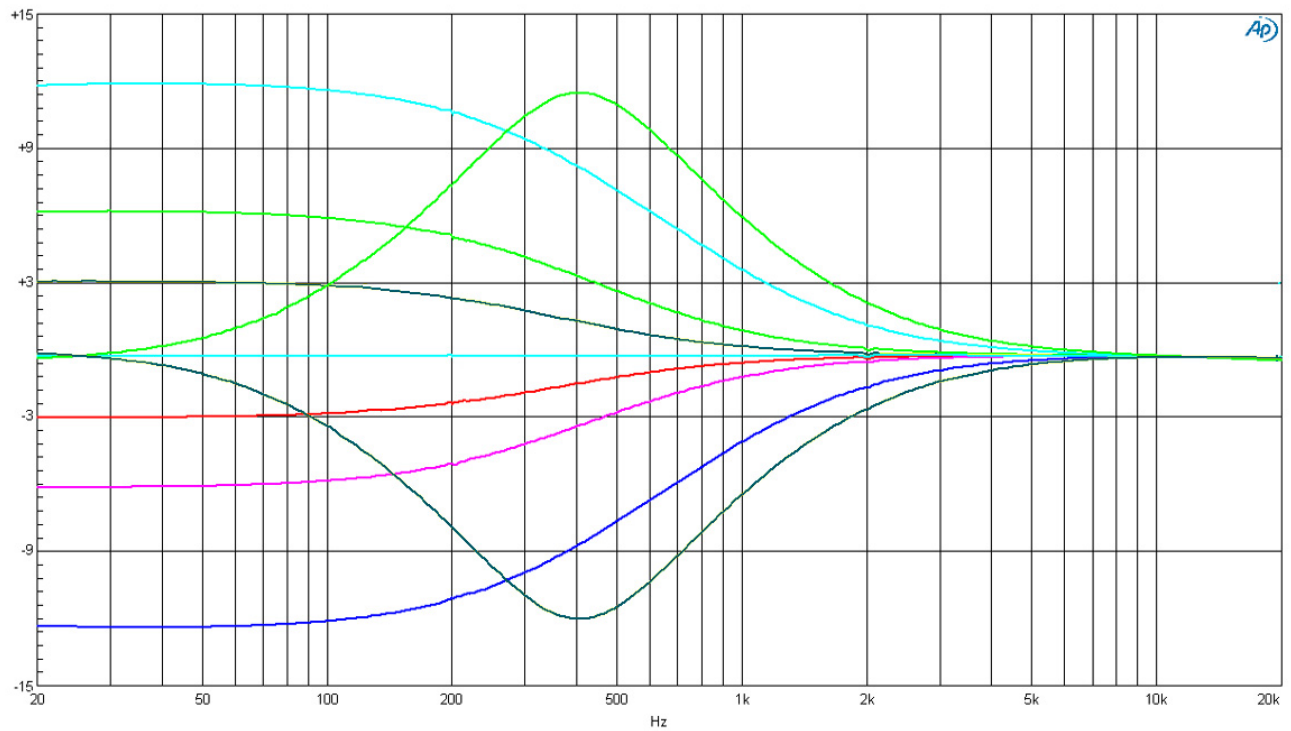
Band 2 + 1 step lowest frequency is 155 Hz

Band 3 + 1 step lowest frequency is 523 Hz

Band 4 + 1 step lowest frequency is 1760 Hz

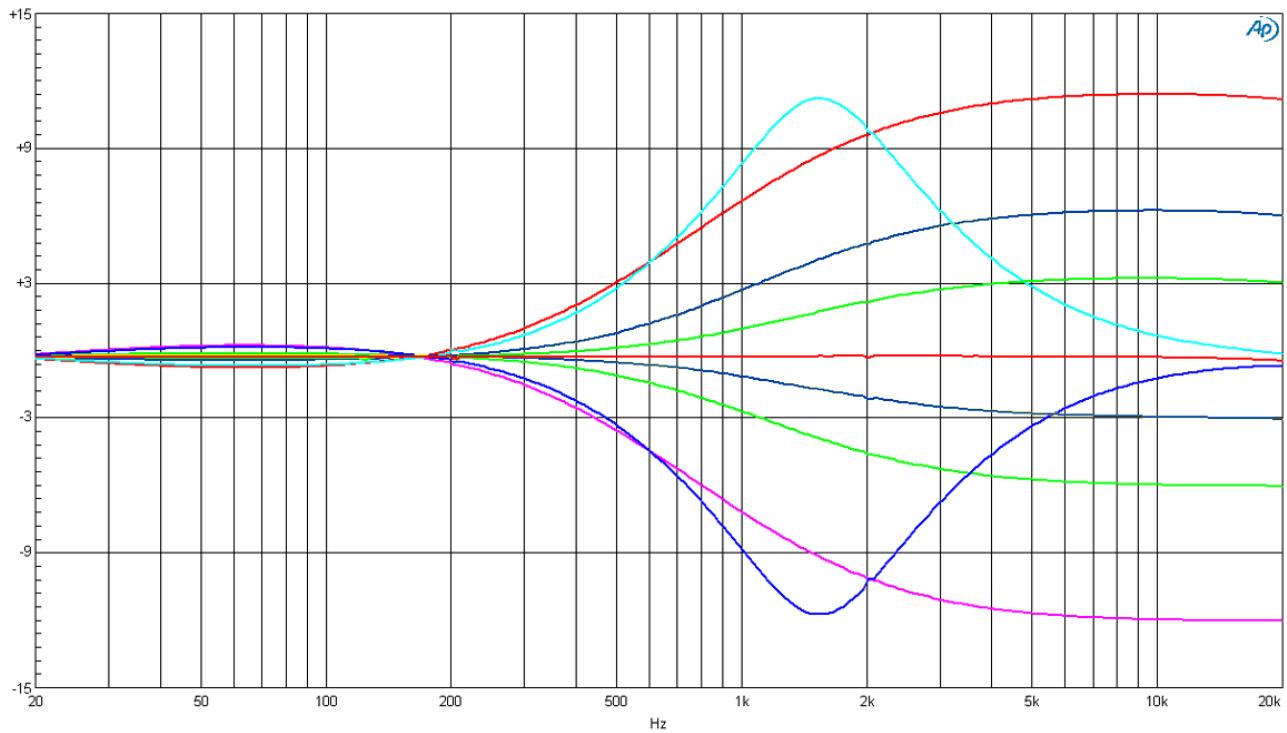
BAND 1 EQ CURVES

This graph shows band 1 the low frequency band, The peaking curve is at a bandwidth 1.5 octaves and is for reference. The shelving curves are with the shelf button pushed in. Only one frequency is shown for clarity



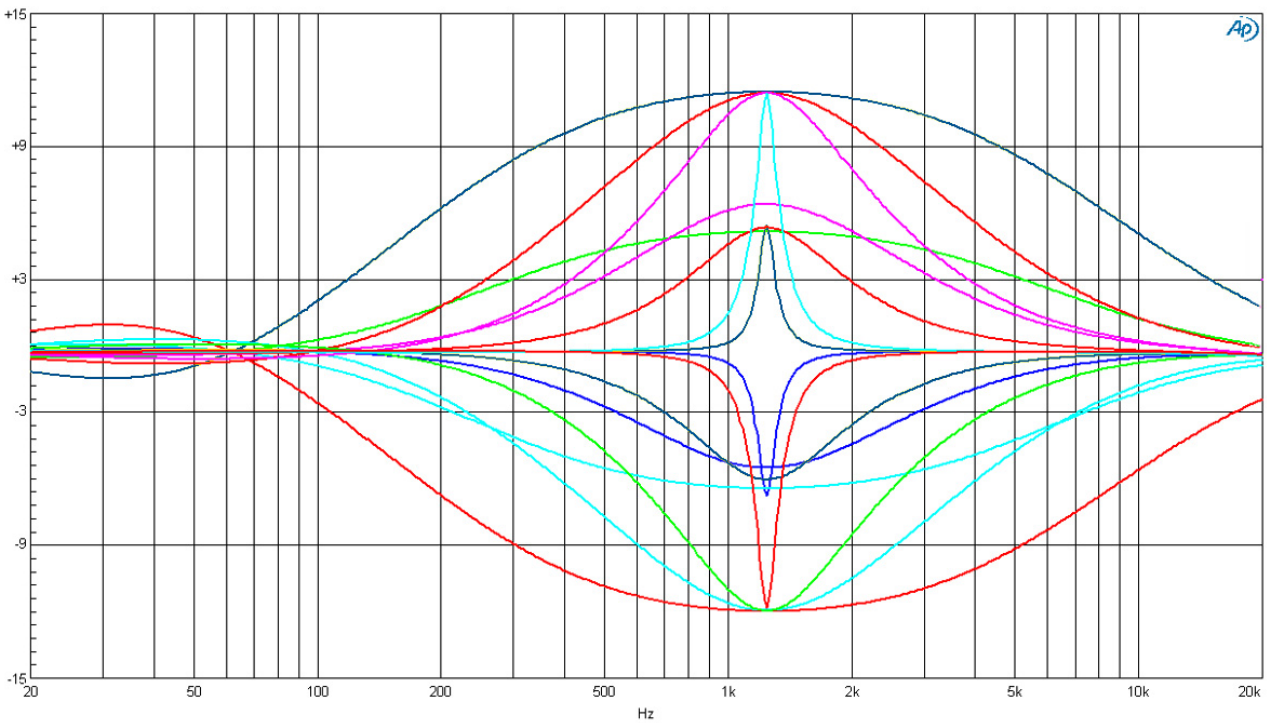
BAND 4 EQ CURVES

This graph shows band 4 the high frequency band, The peaking curve is at a bandwidth 1.5 octaves for reference. The shelving curves are with the shelf button pushed in. Only one frequency is shown for clarity



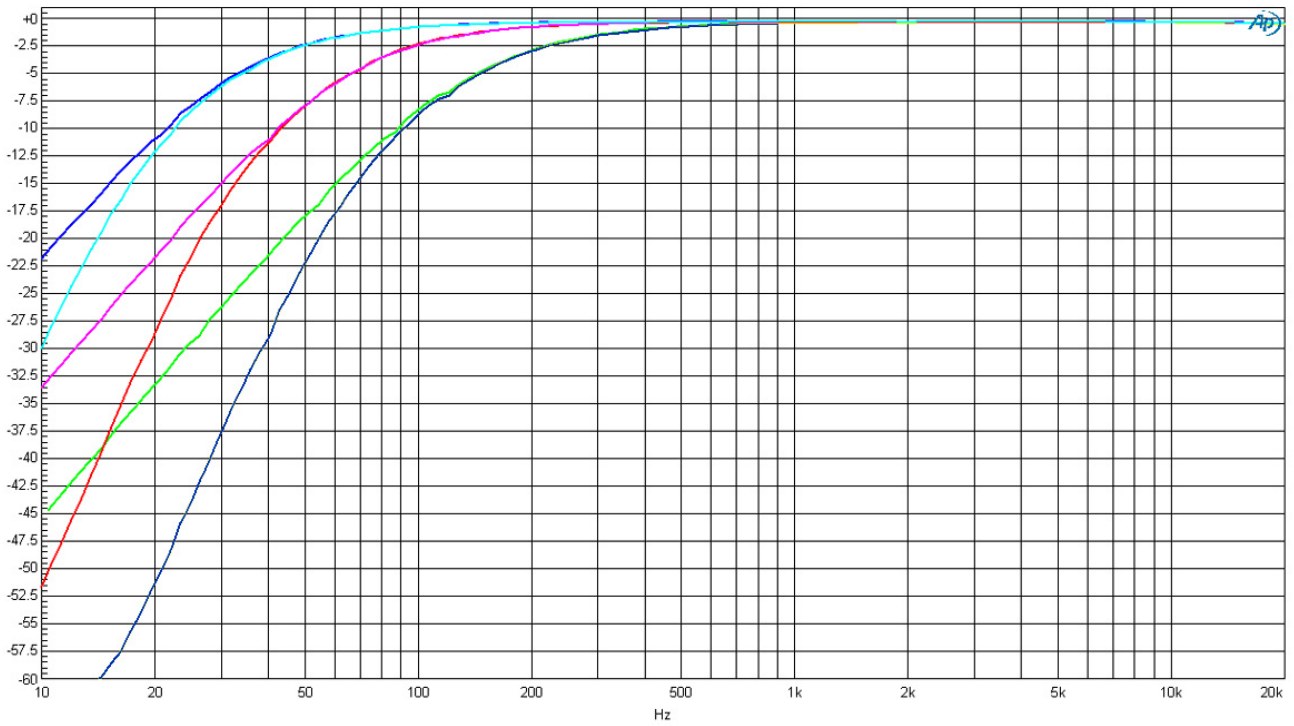
BAND EQ CURVES PEAKING

This graph shows a typical peaking eq curve. This was measured on band 3. Only one frequency is shown for clarity. There are several boost and cut levels at different bandwidths. These curves apply to all 4 bands for a total of 96 different frequencies.



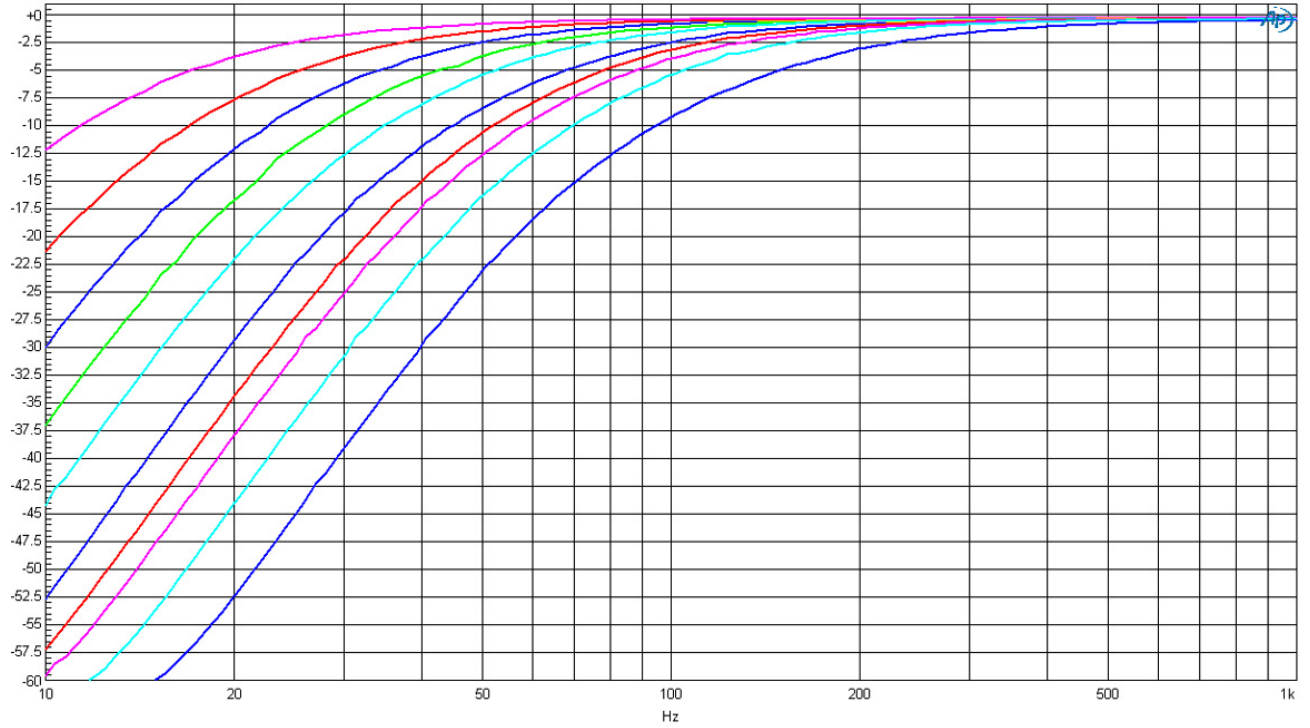
LOW CUT EQ CURVES

This graph shows a typical low cut curve. Three frequencies are shown for clarity. Each showing the 12 db pre octave slope and the 24 db per octave slope. Frequencies of 40 , 80, and 150 Hz are shown.

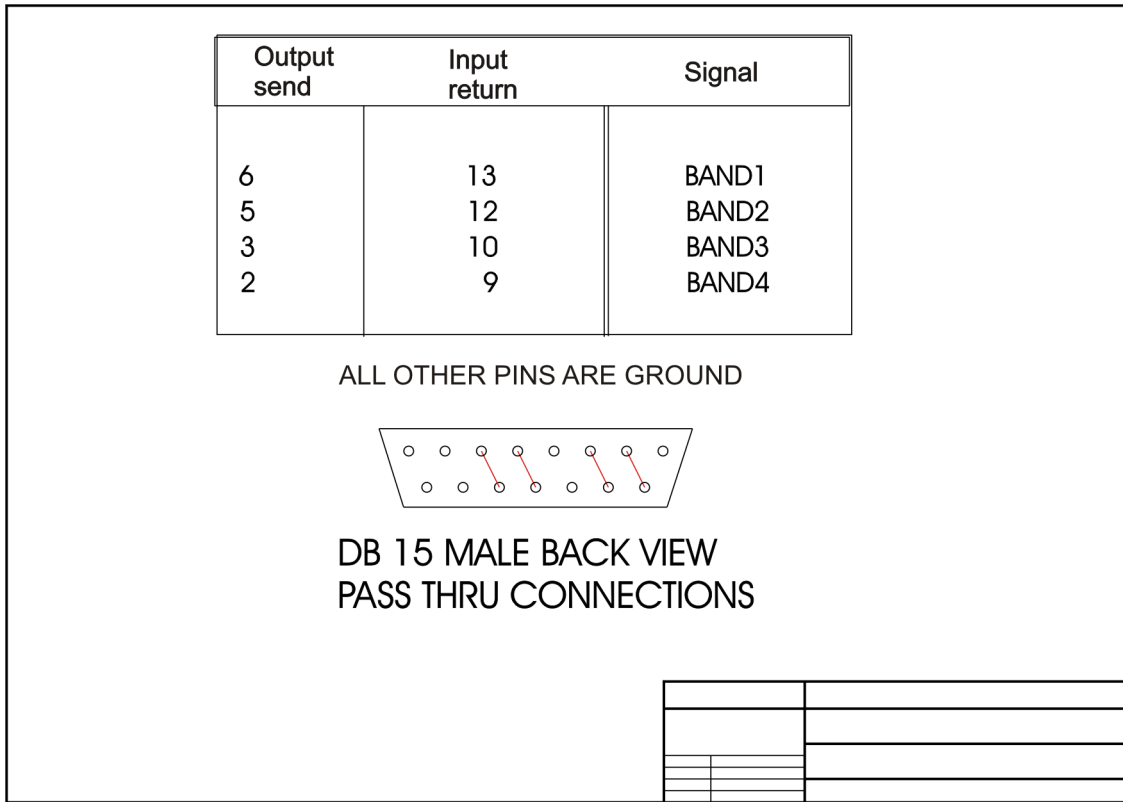


LOW CUT EQ CURVES

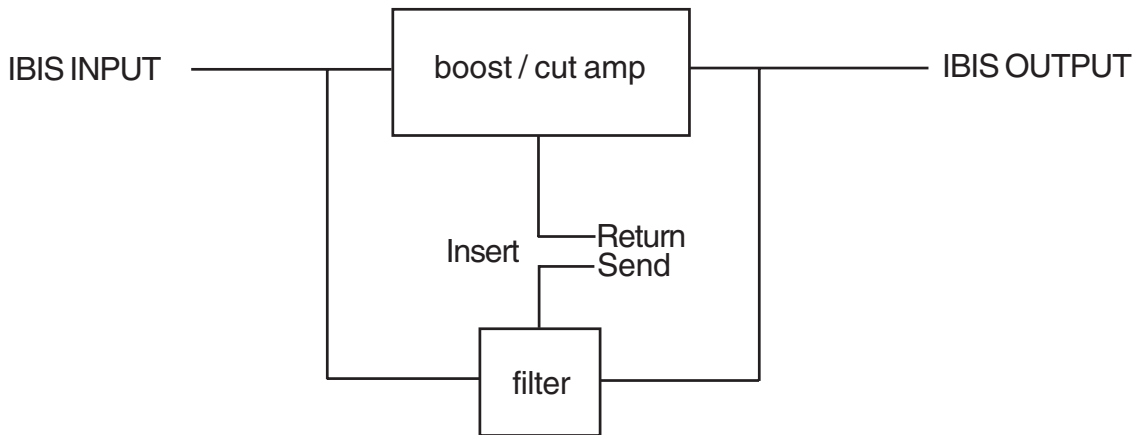
This graph shows the range of the low cut curves. All frequencies are at the 24 db per octave slope.



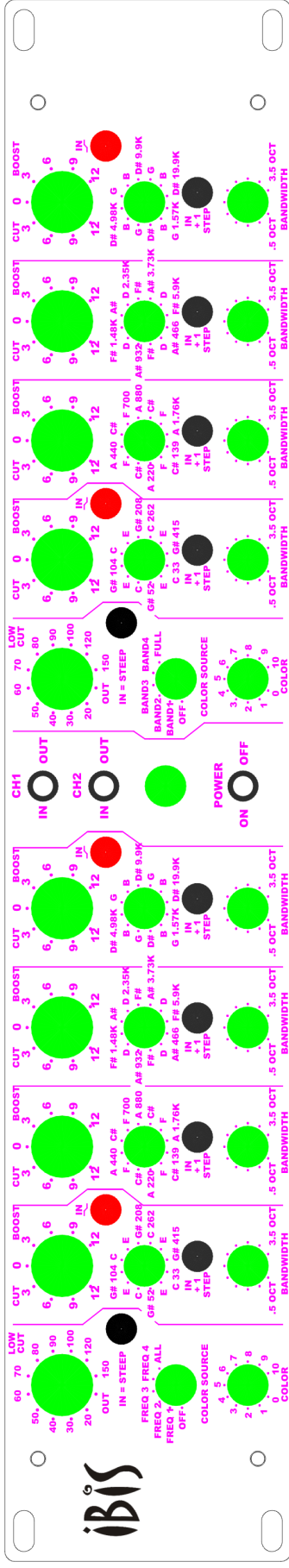
IBIS INSERT CONNECTOR



If you are going to use this, use it with caution. The inserts are a loop and must be normalized for the band to work correctly. If there is a phase inversion in the inserted device it is possible that the system will be an oscillator. This will not hurt Ibis, but your Speakers.



There are 4 filter circuits in parallel in Ibis. When using the insert with a compressor you are modifying the filter output before it sums back into the audio path. The inserts are unbalanced



INTERFACING - SPECIFICATIONS

Input:	Floating, balanced. Maximum input is +25 dBm. The connectors are XLR.
Output:	Floating, balanced. Maximum output is +25 dBm. The connectors are XLR.
Input and Output : Connections	Pin 2 is Sig + , Pin 3 is Sig- , Pin 1 is GND
Power:	100, 120, 230,240 volt; 50/60 Hz; 55 watts MDL .6A Fuse for 100V and 120V MDL .3A Fuse for 230V and 240V
Noise:	Measured with the eq set flat and the bandwidth controls at max -85dbm
Clipping:	+25 dbm
Distortion:	With the eq set flat measured at +20 dbm 0.001%
Pilot Lamp:	# 327
Shipping Weight:	19 lbs. (8.6 kg)
Depth Behind Panel:	12.5 inches (31.75 cm) plus cabling
Panel Height:	2 rack spaces
Frequencies:	There are 24 frequencies per band for a total of 96 frequencies with the bands overlapping. They are stepped on both the mastering and standard units
Boost-Cut:	The standard equalizer has a range to plus or minus 12 db on each band. The Mastering version has a range of plus or minus 6 db This is stepped 0.5 db steps to 5 db and a 1 db step to 6db on the mastering version.
Bandwith:	Bandwidth in octaves is measured at full boost. The maximum is 4 octaves and a minimum is 0.2 octaves. This is a Q range from 0.15 to 17 On the mastering unit this is stepped with 12 steps.