

ICOM IC-7000 audio noise analysis by RA3DQT

Tranceiver: IC-7000 serial number 0501238.

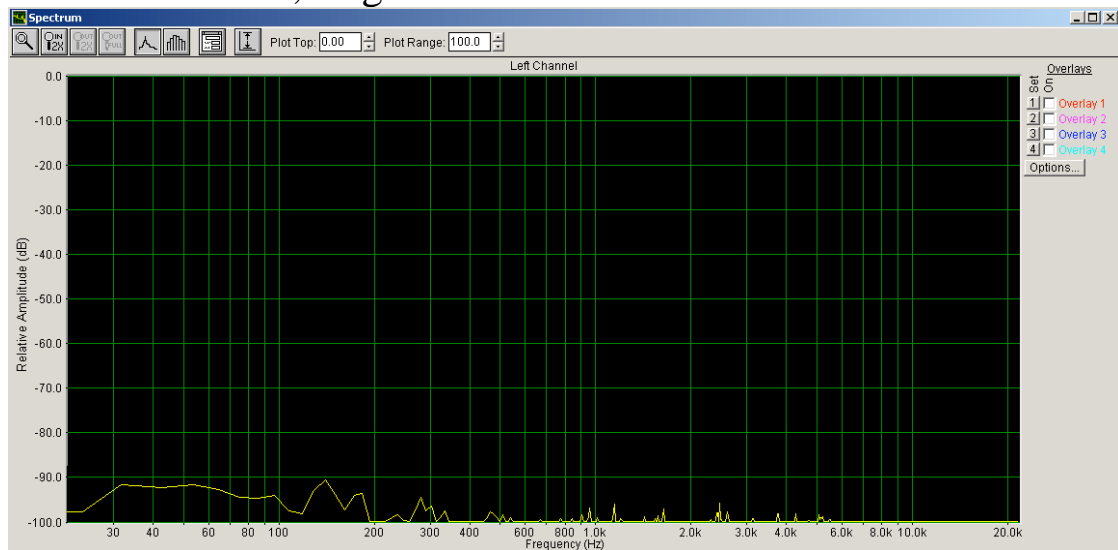
Power supply: Diamond GSV3000

Software: SpectraLab 4.32.17

Sound Card: Audigy2ZS 96000kHz 24 bit

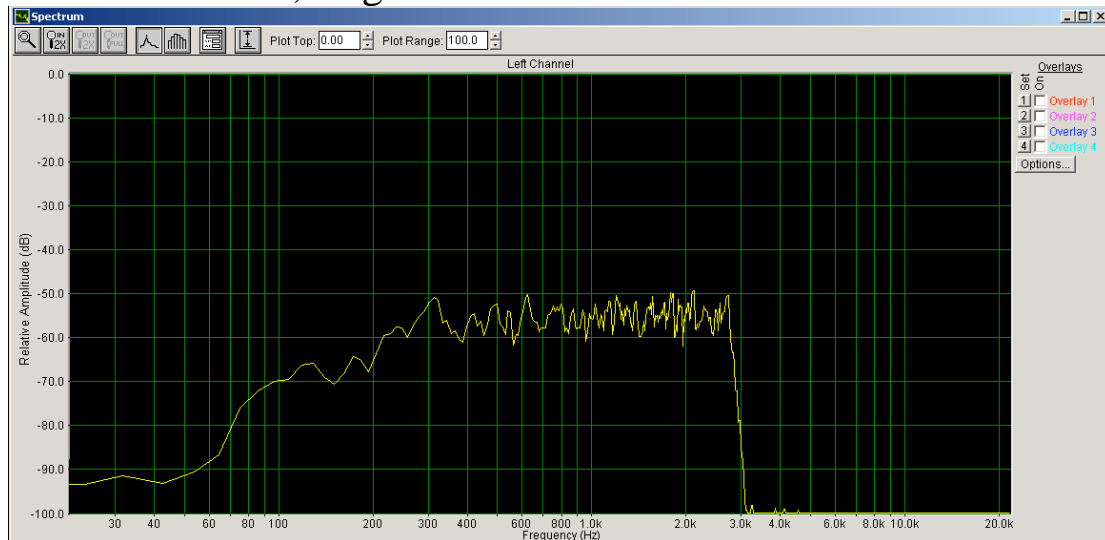
Cable: double shielded stereo 3 ft

1. Freq 1830kHz, AF-out ACC 13pin (red and blue wires),
Mode LSB, IF gain – minimum.



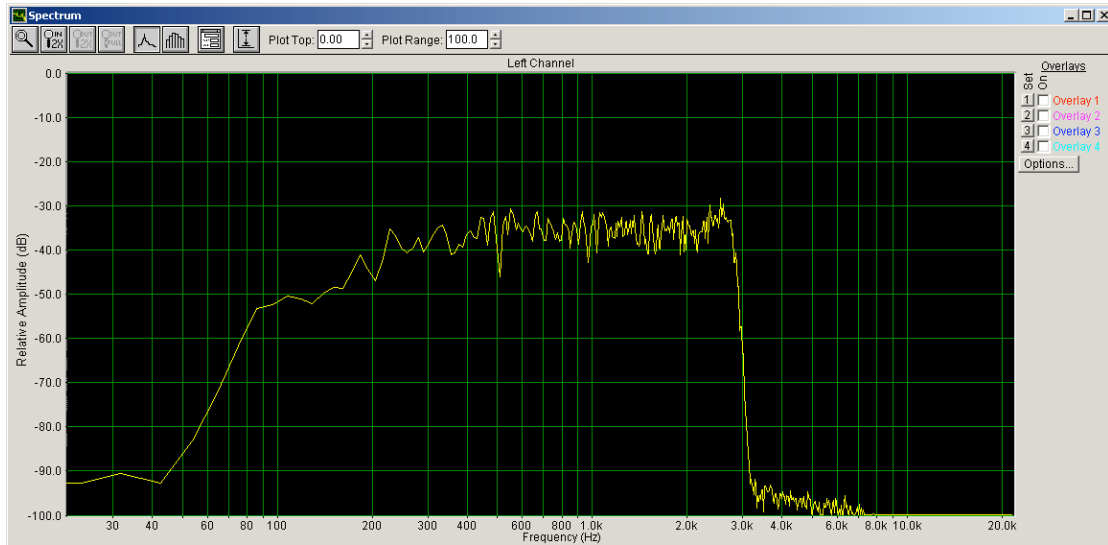
Comments: Very weak background noise.

2. Freq 1830kHz, AF-out ACC 13pin (red and blue wires),
Mode LSB, IF gain – maximum.



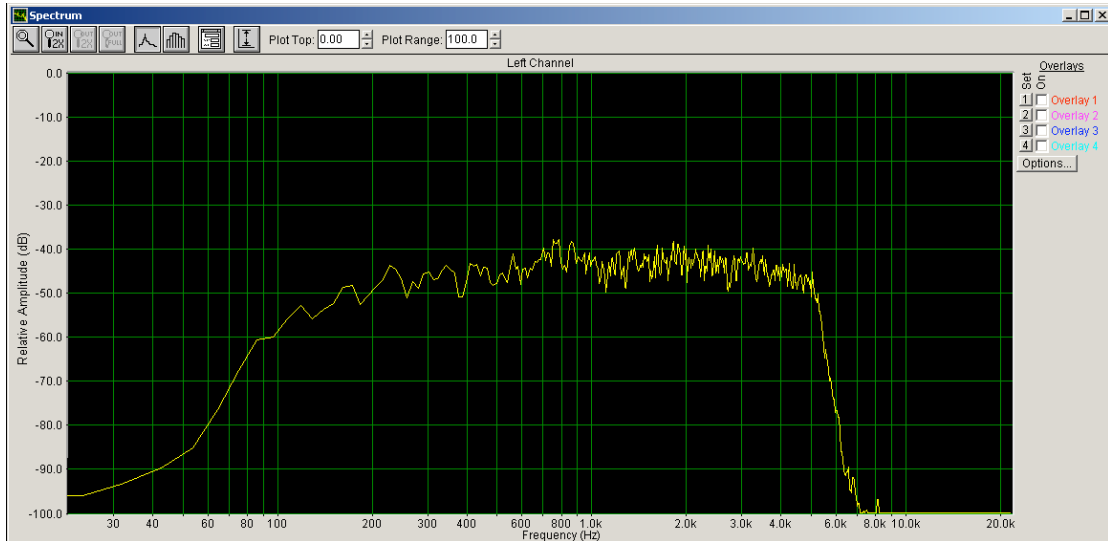
Comments: Good shape of spectrum, no parasitic peaks

3. Freq 1830kHz, AF-out ACC 13pin (red and blue wires),
Mode LSB, IF gain – maximum, wire antenna 30ft.



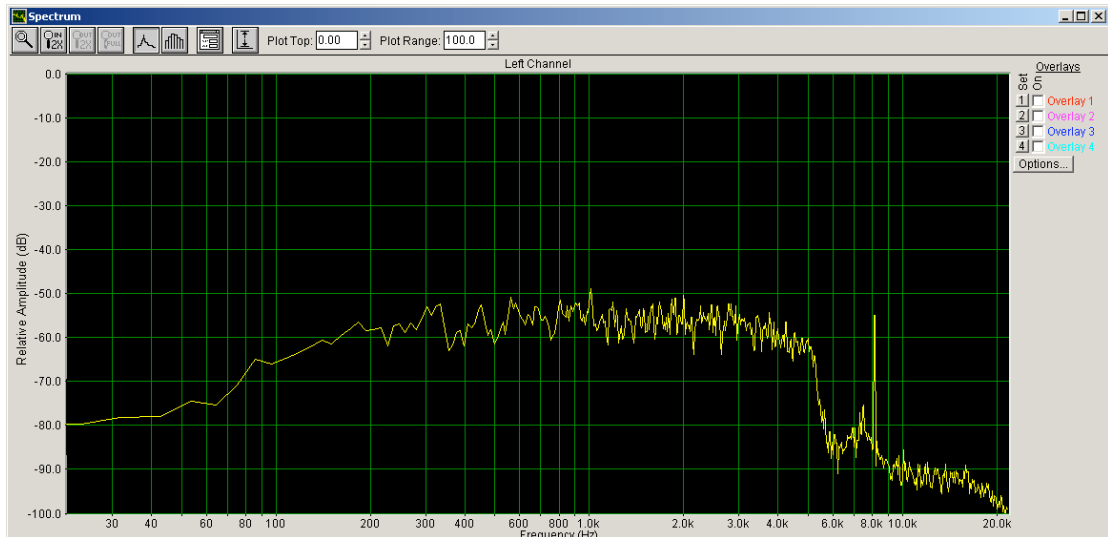
Comments: Noise +20db, everything quite well.

4. Freq 1830kHz, AF-out ACC 13pin (red and blue wires),
Mode AM, IF gain – maximum, wire antenna 30ft.



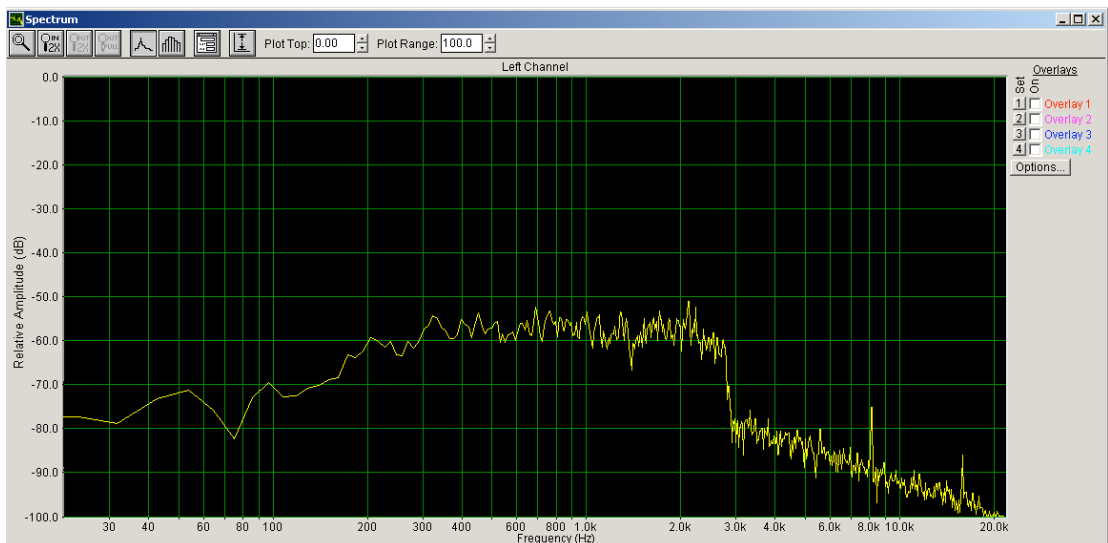
Comments: Good filter shape, very small peak at 8000 Hz

5. Freq 1830kHz, Phones/sp out (phones-speaker switch in phones position), Mode AM, IF gain – maximum, AF gain at 10 o'clock, antenna off.



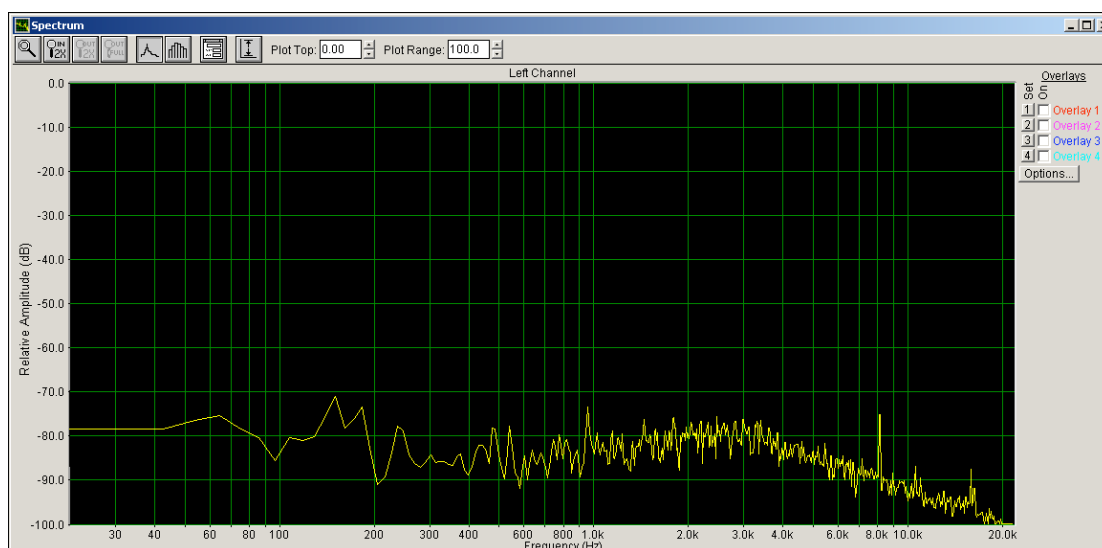
Comments: Wide band noise and strong 8 kHz peak.

6. Freq 1830kHz, Phones/sp out (phones-speaker switch in phones position), Mode LSB, IF gain – maximum, AF gain at 10 o'clock (comfortable listening position), antenna off.



Comments: Wide band noise over 3000kHz, moderate peak at 8000Hz and small on 15200Hz.

7. Freq 1830kHz, Phones/sp out (phones-speaker switch in phones position), Mode LSB, IF gain – minimum, AF gain at 10 o'clock (comfortable listening position), antenna off.



Comments: Significant white noise (+20db), and 8000hz peak, 15kHz almost masked in noise.

Conclusion: ***Something wrong in audio amplifier.***
(Excessive gain, RF leakage, bad noise factor IC, etc.)

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