

RECEIVER EQUIPMENT CHARACTERISTICS

1. Nomenclature / Model No. GeoScope GPR	1a. Manufacturer's Name 3d-Radar AS Vestre Rosten, NO-7075 Tiller, Norway
2. System Nomenclature GeoScope GPR	3. Receiver Type Wideband Radar Receiver
4. Tuning Range 50 – 2050 MHz	5. Method of Tuning Direct Digital Synthesizer
6. RF Channeling Capability Yes	7. Frequency Stability $\pm 20 \times 10^{-6}$ over - 40°C to +85°C
8. Emission Designator(s) Step-frequency (2 MHz channel spacing)	9. RF Selectivity ☒ Calculated ☐ Measured (a) - 3 dB <u>49 MHz – 2051 GHz</u> (b) - 20 dB <u>10 MHz – 2.5 GHz</u> (c) - 60 dB <u>1 MHz – 3.0 GHz</u> (d) Type of Preselection Used Low Pass Filter
10. IF Selectivity (a) - 3 dB <u>640 MHz</u> (b) - 20 dB <u>780 MHz</u> (c) - 60 dB <u>1300 MHz</u>	
11. Maximum Bit Rate N/A	12. Maximum Post Detection Frequency 2.0 MHz
13. De-emphasis Available ☐ Yes ☒ No	14. Minimum Post Detection Frequency 0 Hz
15. IF Frequency 4450 – 4950 MHz	16. Sensitivity (a) <u>-117.0</u> dBm (d) Criteria 10 dB SNR, 10 ms integration time (e) Noise Temperature / Noise Figure <u>4</u> dB
17. Oscillator Tuned Above Tuned Frequency ☒ Below Tuned Frequency Either Above or Below Tuned Frequency	
18. Spurious Rejection - 70 dB	19. Image Rejection - 70 dB

20. Remarks

The receiver is a wideband up-conversion receiver with a DDS as a 2nd LO.