2.1051 Supplemental Data – Intermodulaton Products

Definition: Intermodulation products shall be measured by injecting two carriers using the CDMA modulation mode. The frequency spectrum from the lowest frequency utilized up to the tenth harmonic shall be investigated. The two CDMA carriers were spaced 1.25 MHz apart and were injected at both the low end and high end of the band. The carriers were injected 2.5 MHz from the lower and upper band edge (two channel widths). The low end carriers were placed at 871.50 MHz and 872.50 MHz. The high end carriers were placed at 890.25 MHz and 891.50 MHz. Note that because of the nature of CDMA modulation, the discrete carriers cannot be resolved on the data plot. This is the only modulation type that will be applied to the amplifier's RF input port.

Test Method: The test setup shown in FIGURE 2 shall be utilized for this test. The amplifier's maximum power output for two carrier operation is 90 Watts. Hence, these tests were performed at a 90 Watt power level (49.5 dBm) only.

Test Results: The two-carrier CDMA drive level required to produce a 90 Watt output was established to be –14.7 dBm using a power sensor and meter. The test results shown in the following plots indicated that all intermodulation products are below the FCC limit of 43 +10*log(90W) or 62.5 dBc up to the tenth harmonic for the low end and high end carrier pairs.

Customer: Paradigm Wireless Technology **Test Procedure:** FCC, Part 22, 90

EUT: UHF Amplifier, 869 – 894 MHz **Test Specification:** Intermodulation Test

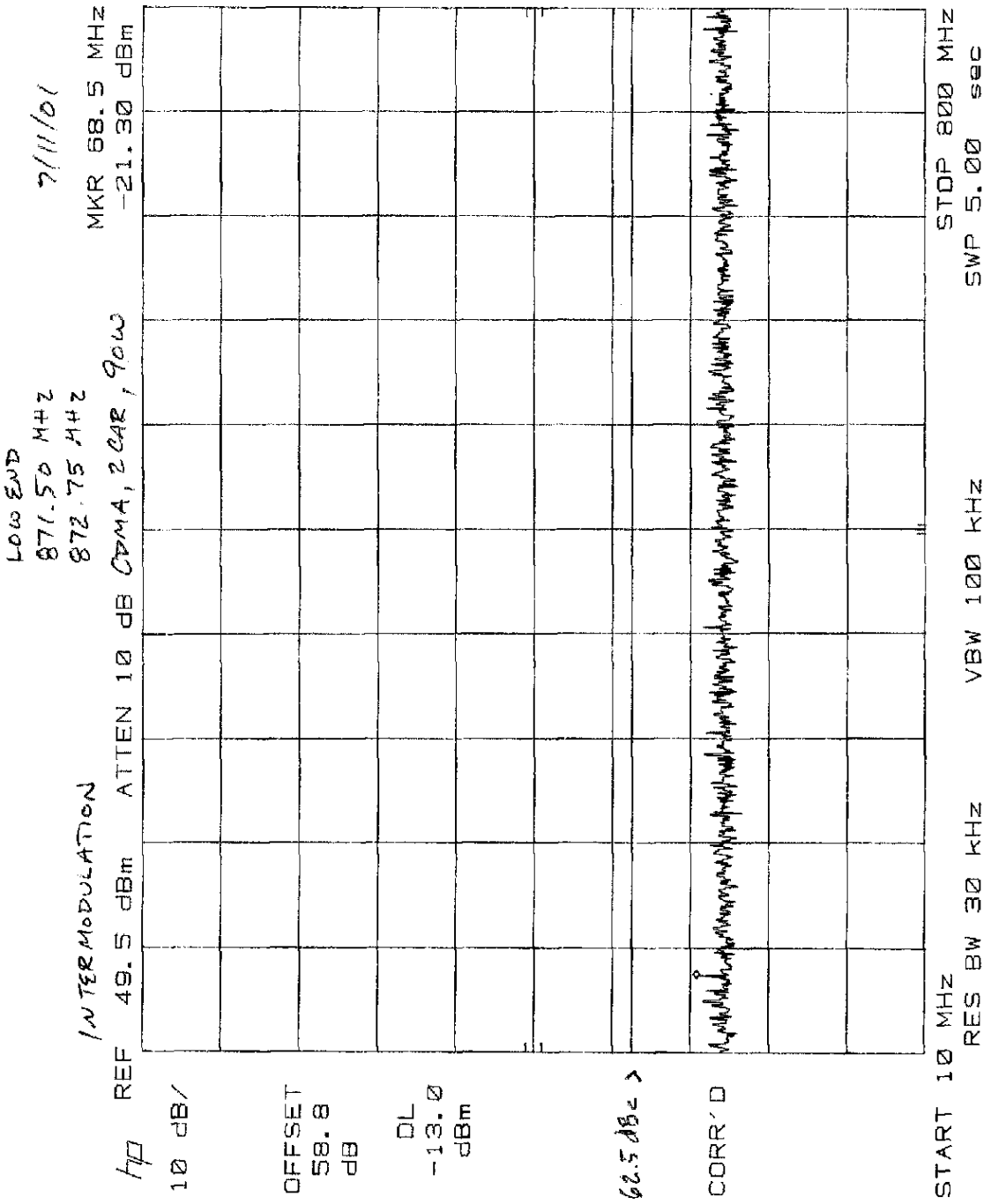
Model / Part #: MAP800-70S **Test Engineer:** John Stanford

Date July 11, 2001 **Customer Rep:** Charlie Lipsey

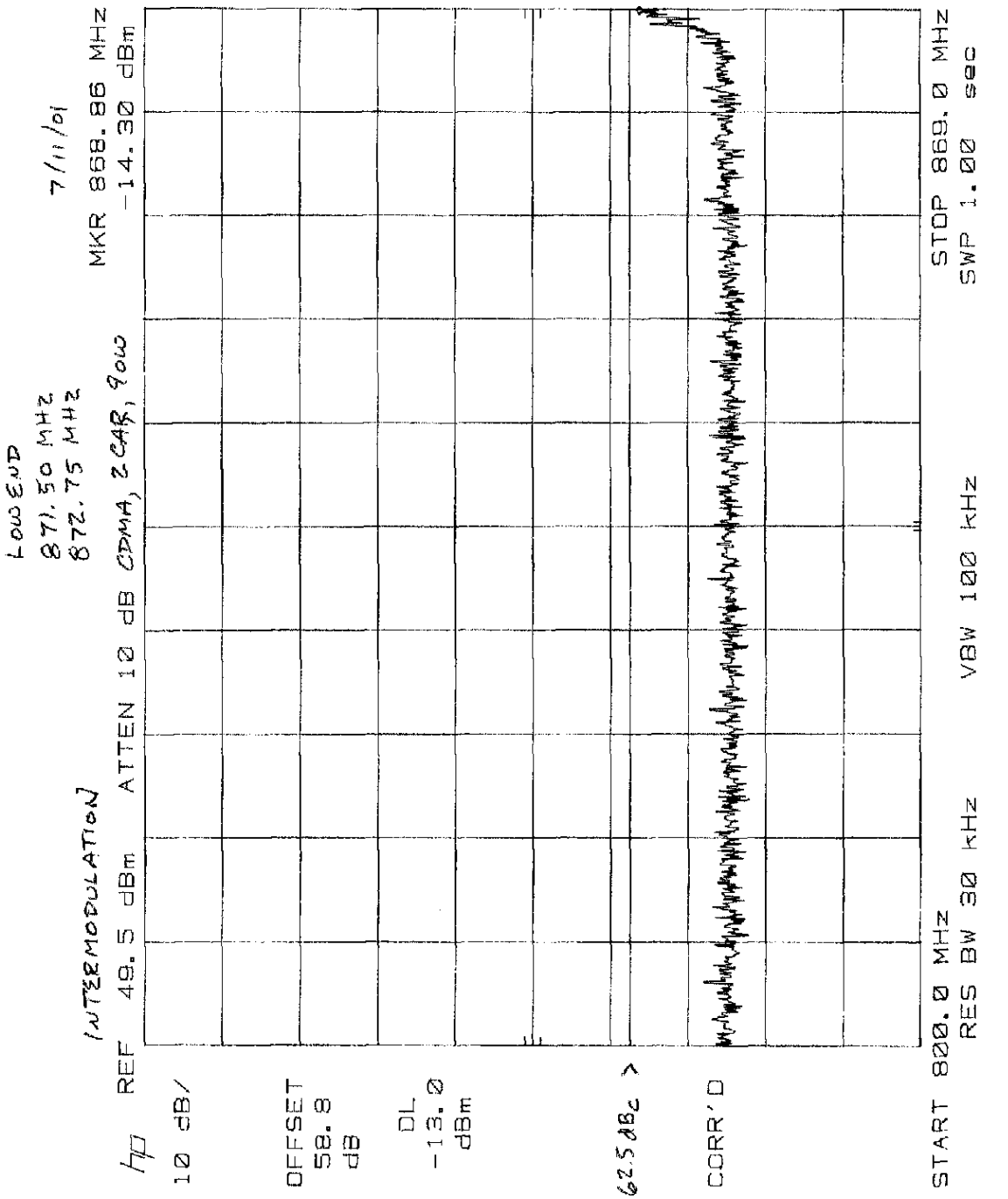
DESCRIPTION	MANUFACTURER	MODEL # / SERIAL #	CAL DUE
Spectrum Analyzer	Hewlett-Packard	8566B/2673A03865	07/02/02
Directional Coupler	HP	778D	Cal prior to test
Directional Coupler	HP	11691	Cal prior to test
Attenuator (20 dB)	Pasternack	N/A	Cal prior to test
Attenuator (20 dB)	Inmet	18N50W/64671	Cal prior to test
Signal Generator	Marconi	2024, 112266/068	02/12/02
Signal Generator (*)	Agilent	E4432B / U540053059	08/08/01
50 ohm load (500W)	Electro Impulse Labs	DA-242A/U, 7940097	Reference
50 ohm load (5W)	Narda	370BNM	Reference
Power Supply (*)	Sorenson	DHP 30-50	Reference
Coaxial Cable	RG-214/U	N/A	Cal prior to test
Power Meter (*)	Agilent	E4418B / GB40204001	06/14/02
Power Sensor (*)	Agilent	8482A / 1925A04382	06/15/02
Power Meter	Bird	43P	Reference

* - Customer furnished

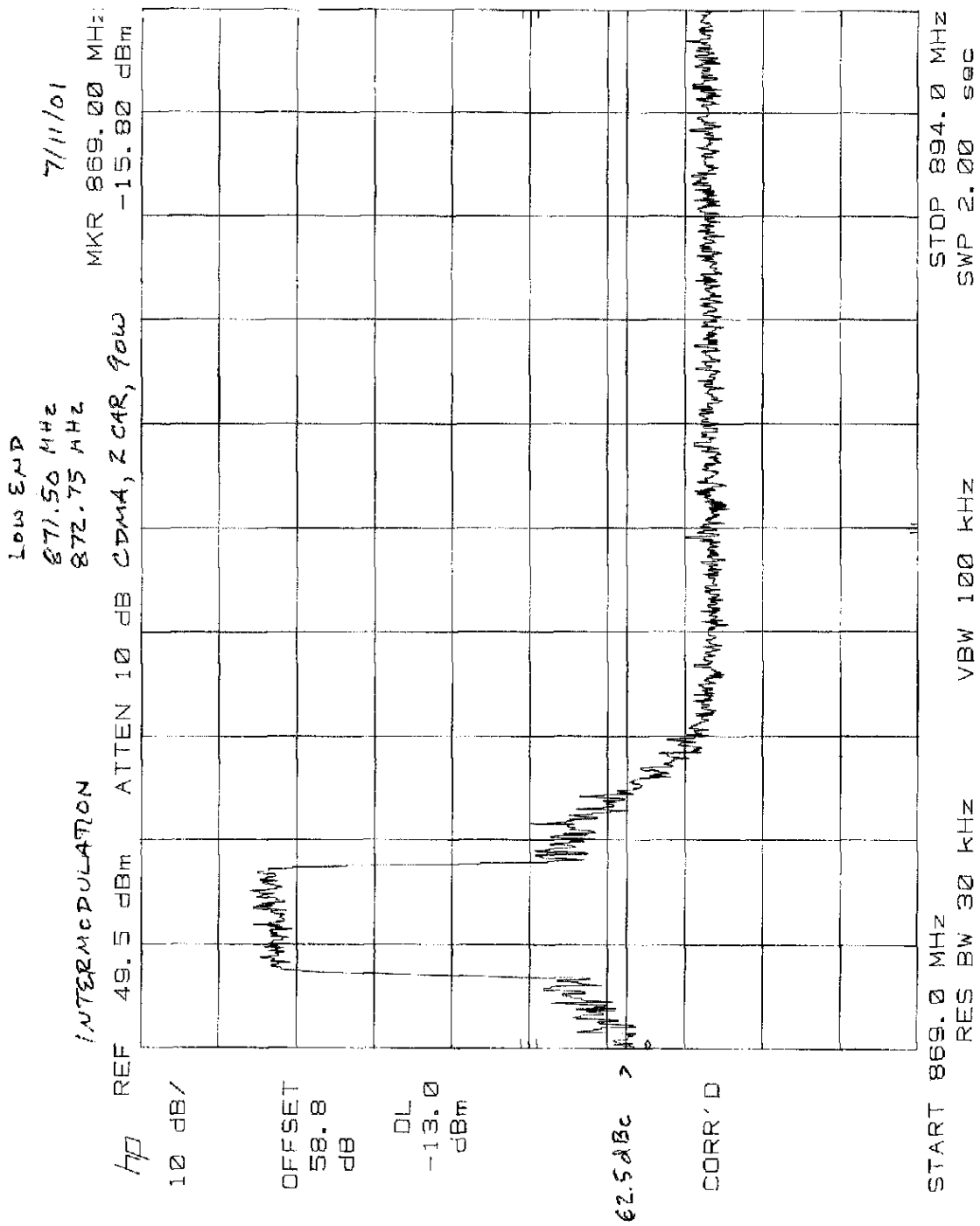
Plot 1 – 10-800 MHz - Low End



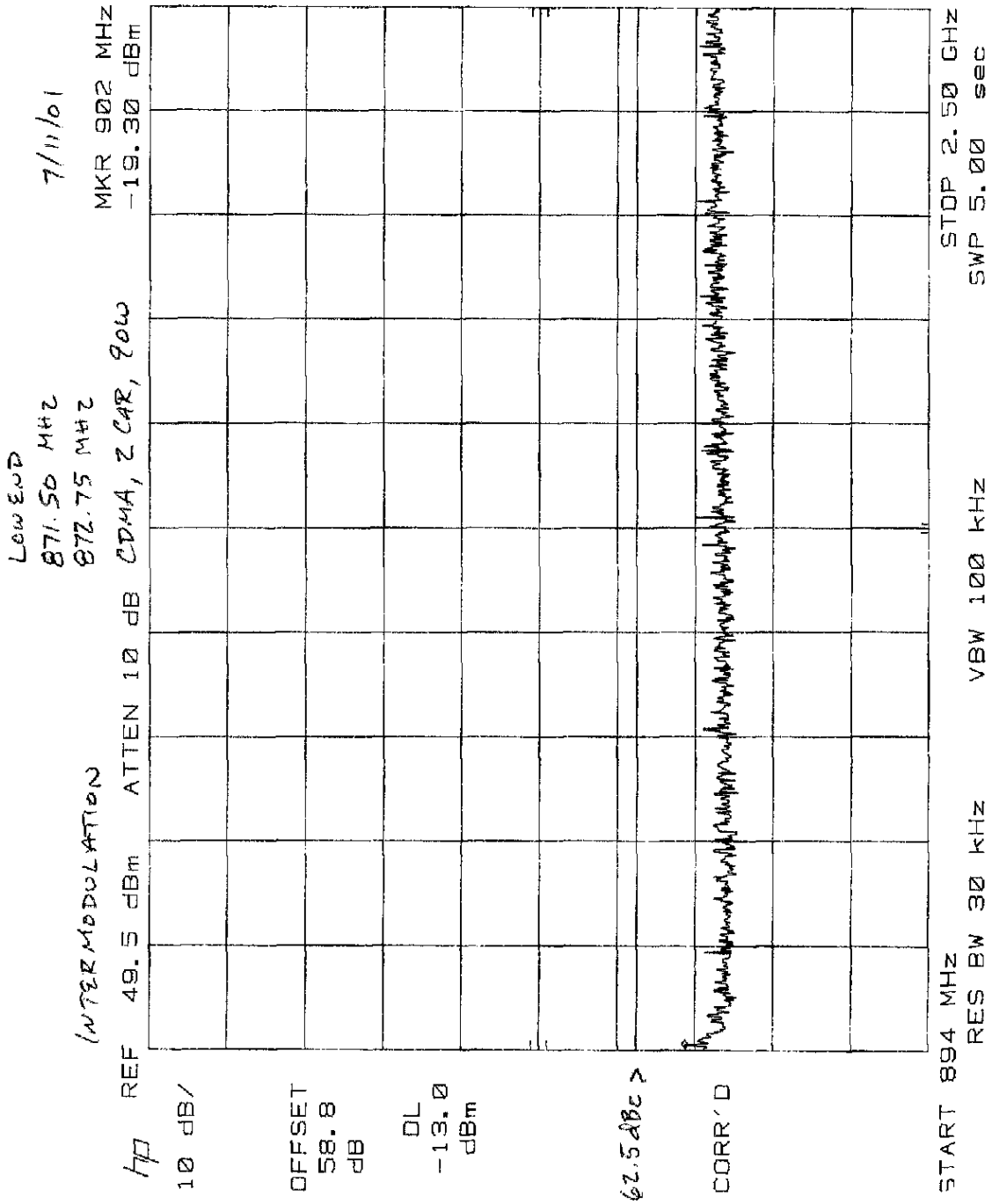
Plot 2 – 800 MHz – 869 MHz - Low End



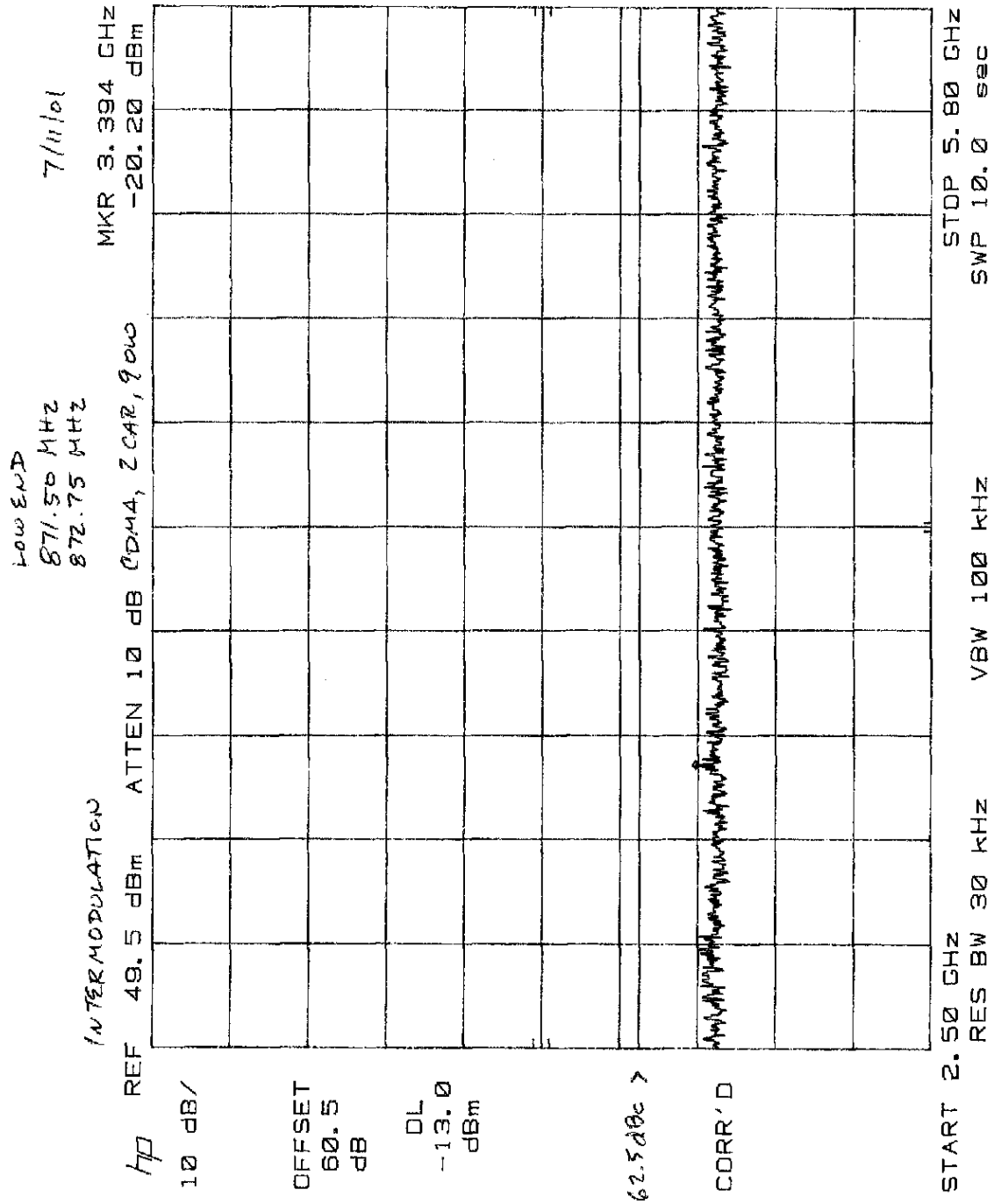
Plot 3 – 869-894 MHz – Low End



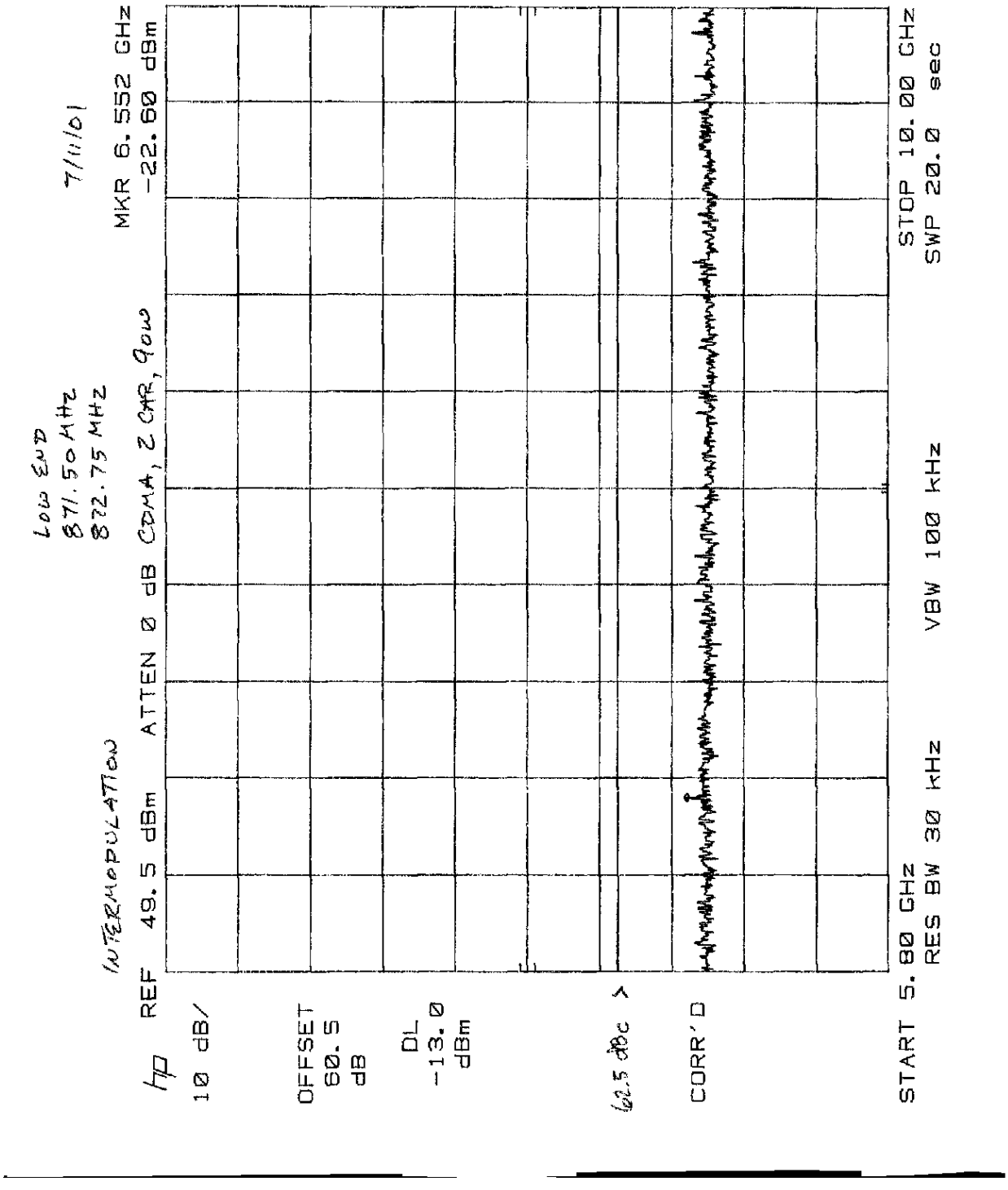
Plot 4 – 894 GHz – 2.5 GHz - Low End



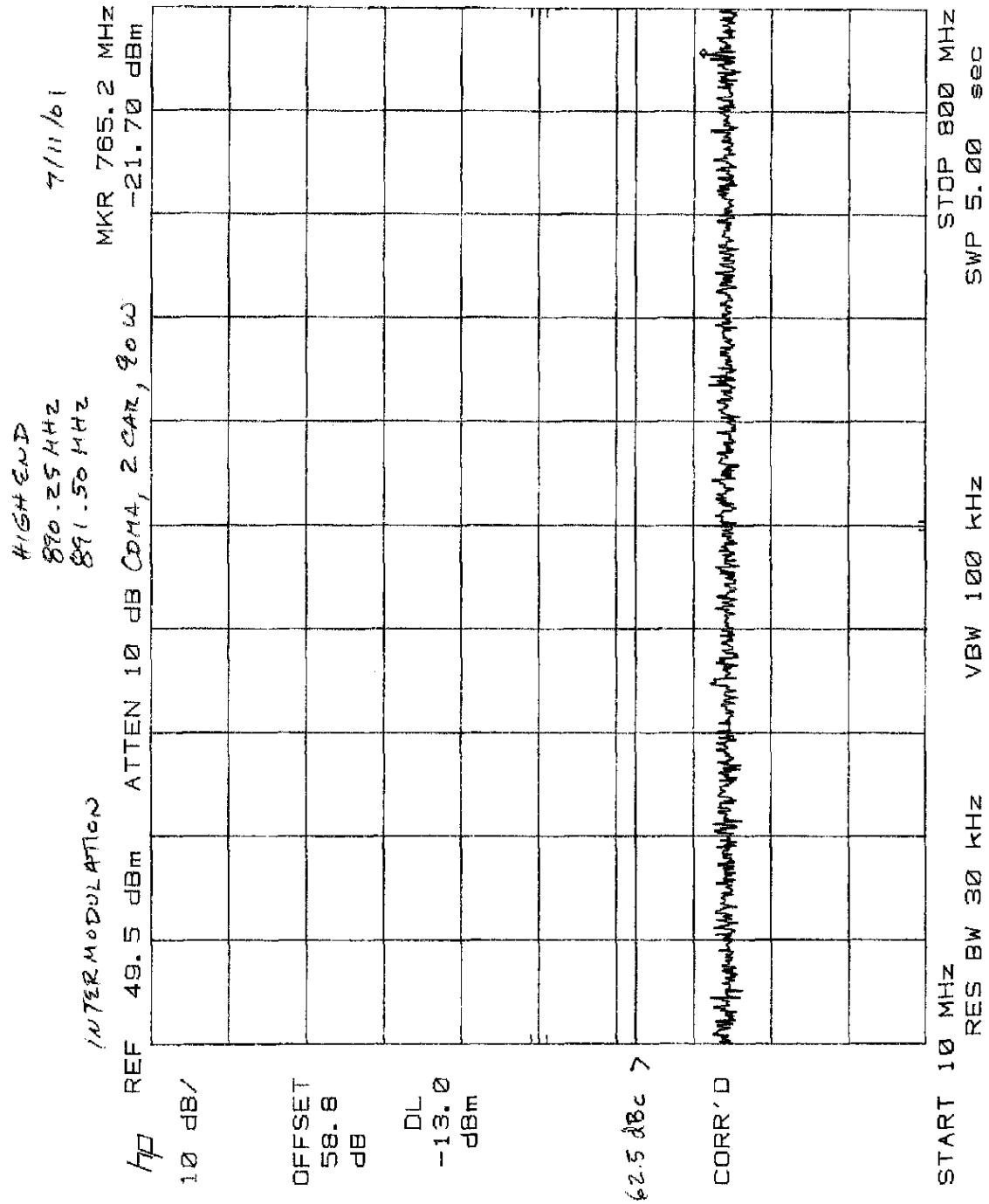
Plot 5 – 2.5 GHz to 5.8 GHz - Low End



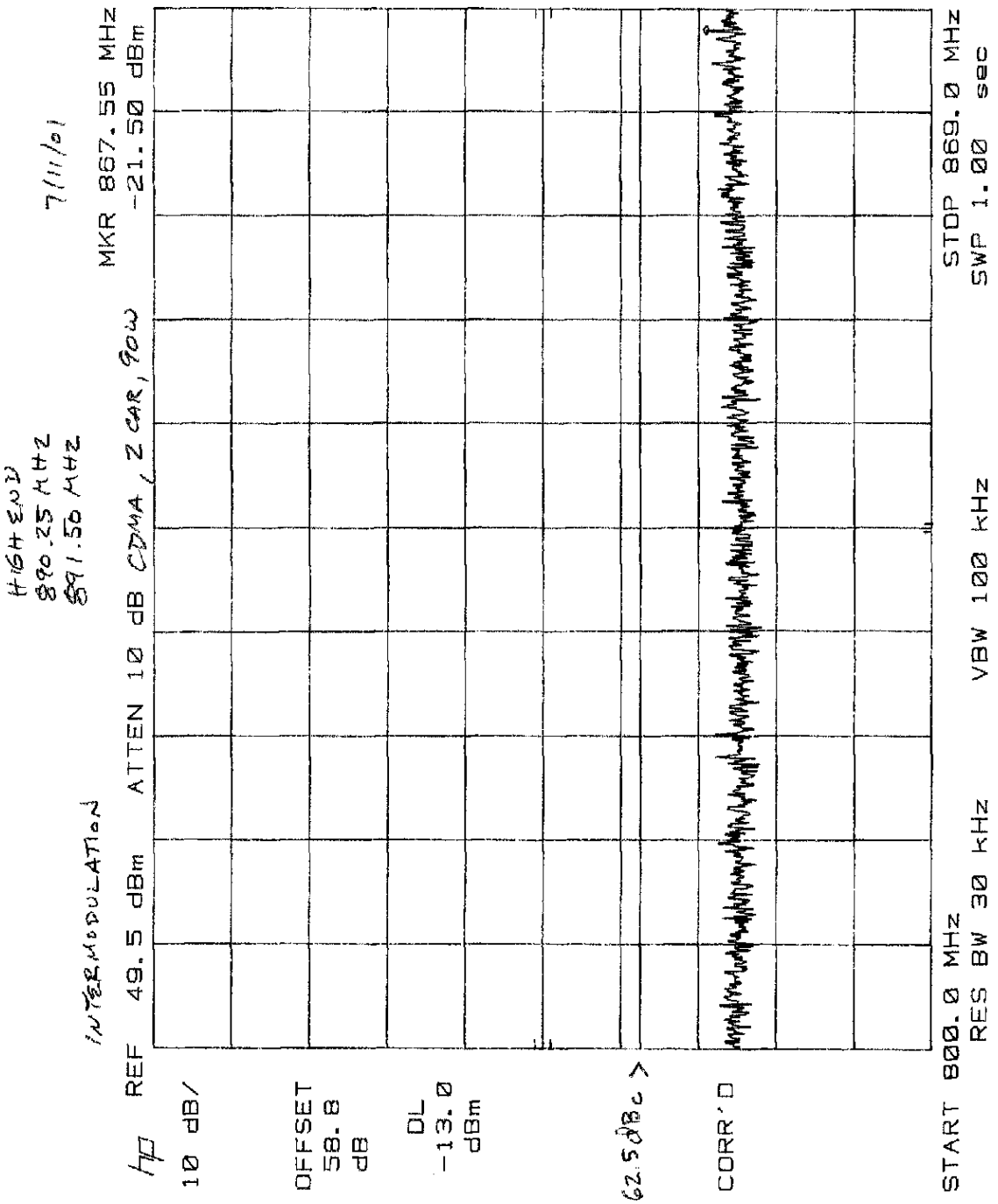
Plot 6 5.8 GHz to 10 GHz - Low End



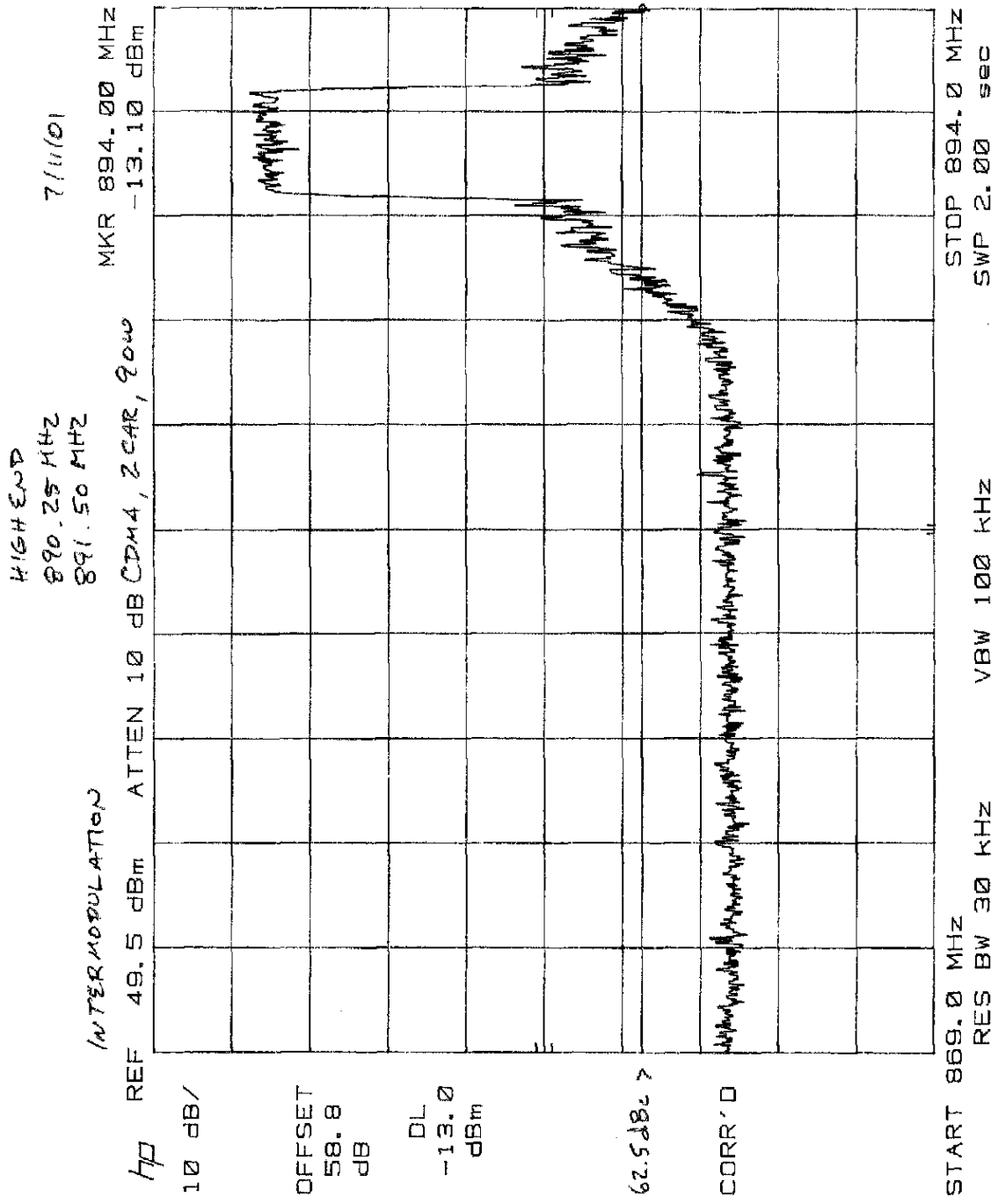
Plot 7 – 10-800 MHz - High End



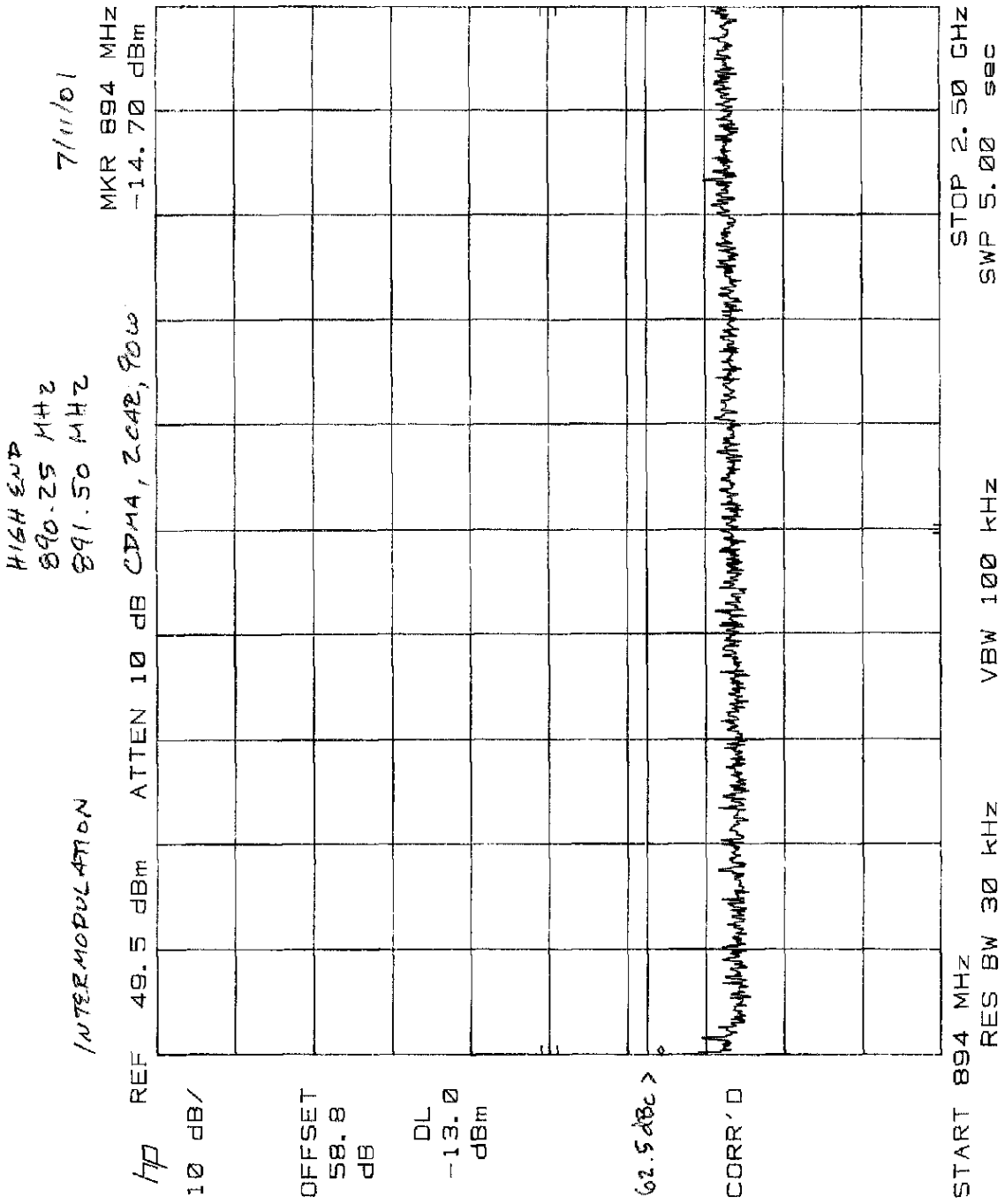
Plot 8 – 800 MHz – 869 MHz - High End



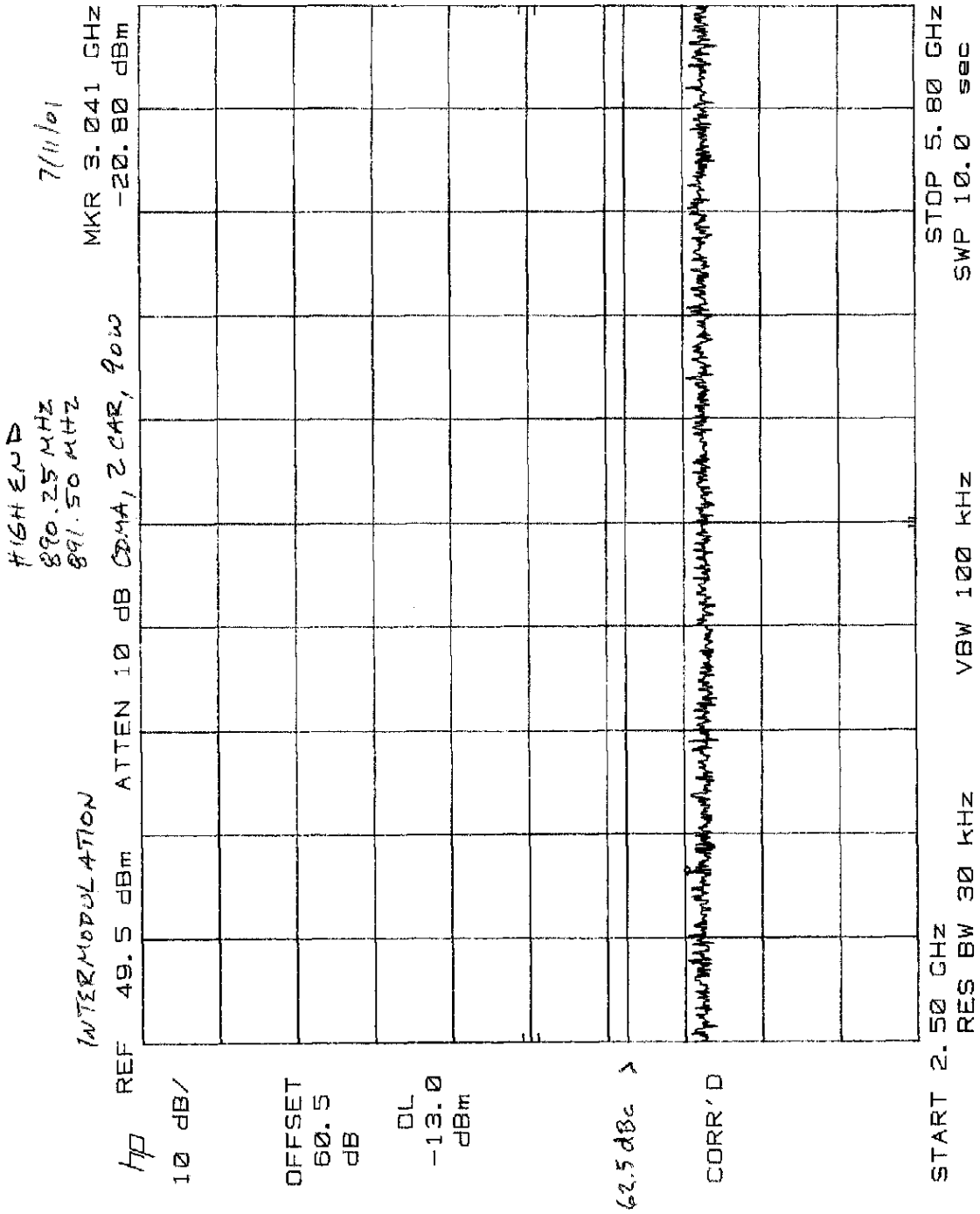
Plot 9 – 869-894 MHz – High End



Plot 10 – 894 GHz – 2.5 GHz - High End



Plot 11 – 2.5 GHz to 5.8 GHz - High End



Plot 12 - 5.8 GHz to 10 GHz - High End