Exhibit 7. **Measurement Procedures**

This exhibit presents a brief summary of how the measurements were made. All radios under test were powered by nominal voltage of 3.6 V, using Hewlett Packard power supply listed as item 8.A in Exhibit 7.6.

7.1. RF Power Output -- Pursuant to 47 CFR 2.1046

Method of Measurement

The RF power output is not adjustable except by control from the base station using control channel signals. The transmitter power test procedure in the service manual describes the procedure to use radio embedded software to measure the highest level of transmitter power. This measurement is made with an antenna connector through a 30 dB attenuating load using RF power meter.

Due to the TDM pulsing, an average reading power meter will not correctly display the pulse mean power, as it must be corrected for the duty cycle of the pulse train. The Giga-tronics 8541-C Power Meter has a special mode of operation for this purpose termed “Burst Average Power” (BAP). In this mode, the power meter triggers the measurement on the rising edge of the pulse, samples the RF power during the pulse and displays the pulse average power. When the H.P. 438A Power Meter is used, a compensation factor is entered to the meter as an offset, depending on which mode of operation the radio is transmitting: for 1:6 multiplexing, an offset of 7.78dB is used (this is the default mode for test purposes); for 1:3 multiplexing, an offset of 4.77dB is used; and for the Packet Data Mode, during maximum duty cycle which is 81/120 (67.5%), an offset of 1.71dB is used.

7.2. Occupied Bandwidth -- Pursuant to 47 CFR 2.1049

Method of Measurement

1) Set the radio for measurement of RF output power using the power test procedure in the service manual which sets the radio transmit at “full training” per part 2.1049 (h), and attach it to a spectrum analyzer through an attenuator. The analyzer is to be set for peak detection with a video bandwidth of 10 times the resolution bandwidth setting, a span of 100 kHz, and a sweep period of 20 seconds.

2) Use a 100 kHz resolution bandwidth and a 100 kHz video bandwidth to assure that essentially all of the transmitted energy is measured, obtain a “rainbow” curve and adjust the analyzer setting so that the crest of the curve lies at the 0 dB reference location. This is portrayed as trace 1 on the analyzer display.

3) Set the radio transmit at “Pseudo Mode”, reduce the resolution bandwidth to 300 Hz, video bandwidth to 300 Hz to characterize the transmitter emission on-channel and

adjacent channels spectral performance characteristic. This is portrayed as trace 2 on the analyzer display of Figures 6-5 through 6-16.

4) Overlay the applicable emission mask (G mask or EA mask) on the analyzer display as trace 3.

5) Compare traces 2 and 3 to ensure that trace 2 never exceeds trace 3.

Repeat step 1 through 5 at the radio maximum and minimum transmit power settings.

7.3. Radiated Spurious Emissions -- Pursuant to 47 CFR 2.1053

Test Site:

The test site is: EMI TEST Ltd. test laboratory, Moshav Haniel, P.O.Box 65, D.N.Lev Hasharon, 42865, Israel. This open Area site is reasonably free from RF interference, and is a listed FCC site.

Method of Measurement

The equipment is placed on the turntable, connected to a dummy RF load and placed in normal operation using the intended power source. A broadband-receiving antenna (2 – 10 GHz), and dipole antennas (for the lower frequencies), located 3 meters from the transmitter picks up any signal radiated from the transmitter and its operation accessories. The antennas are adjustable in height and can be rotated for horizontal or vertical polarization. A broad band RF amplifier (1 – 10 GHz) was used to amplify the frequency band above the fundamental frequency. A spectrum analyzer covering the necessary frequency range is used to detect and measure any radiation picked up by the antenna.

The transmitter is modulated with a pseudo random digital signal and is adjusted to obtain peak reading of received signals wherever they occur in the spectrum by:

1. Rotating the transmitter under test.

2. Adjusting the antenna height.

The testing procedure is repeated for both horizontal and vertical polarization of the receiving antenna. Relative signal strength is indicated on the spectrum analyzer connected to this antenna. The spectrum analyzer resolution bandwidth was set to 10kHz for emissions below 1GHz, and 1MHz for higher frequency emissions. The spectrum analyzer was set to maximum hold, while rotating the transceiver and adjusting the antenna height. To obtain actual radiated signal strength a standard signal generator with calibrated output is connected to an antenna, that is substituted for the transmitter under test. The signal generator output level is adjusted until a reading identical to that obtained with the actual transmitter is observed on the spectrum analyzer. Signal strength is then derived from the generator and appropriate cable losses due to set up. Actual measurements for both maximum and minimum transmit power level settings are recorded in tables in exhibit 6.

7.4. Conducted Spurious Emissions -- Pursuant to FCC Rule 2.1051

Method of Measurement

To obtain conducted spurious emissions data, the equipment is connected to a notch filter which suppress the fundamental frequency. The radio is interfaced with a spectrum analyzer with sufficient dynamic range to permit the spurious emission level relative to the carrier level to be measured directly. Measurements at both maximum and minimum transmit power settings are made from the lowest radio frequency generated in the equipment to the tenth harmonic of the carrier, or as high as the state of the art permits, except for that region within 50 kHz of the carrier. The spectrum analyzer is set to use a resolution bandwidth of 10 kHz for spurious emissions below 1 GHz, and 1 MHz for higher frequency spurious emissions. The video bandwidth is set to three times the resolution bandwidth for both cases.

7.5. Frequency Stability -- Pursuant to FCC Rule 2.1055 and 90.213

Frequency Stability is independent of modulation scheme (QPSK, Quad-16QAM, and Quad-64QAM). Measuring the frequency accuracy of the iDEN time division multiplexed (TDM) transmitter needs special procedures for 3 reasons. First is the short (15 ms) nature of its TDM pulses, which preclude the use of an ordinary CW type digital frequency counter. Second, software in the radio prevents the radio from transmitting its TDM pulses unless it is receiving a signal on the trunking system control channel. Third, to maintain the very high stability (greater than that required by part 90 rules) needed for system operation, the radio transmitter frequency is controlled by an automatic frequency control loop in the radio's receiver which locks onto the system forward control channel produced by a Type Accepted part 90 base station. This process results in electronically adjusting the initial frequency of the reference oscillator in the synthesizer section of the radio, which is used for both transmission and reception.

As a result, unlike traditional transceivers which do not frequency lock to a remote base station reference frequency, the transmitter frequency accuracy is essentially independent of the Voltage and temperature induced variations of the subject transceiver’s frequency reference oscillator. Rather, the transceiver frequency stability is that of the remote base station, but degraded by any inaccuracy in the transceiver frequency locking process. This inaccuracy is primarily attributed to reference oscillator AFC resolution.

By locking onto a base station meeting the requirements of 47 CFR 90.213, which is necessary for the transceiver to function, the transceiver transmitter inherits the inherent 1.5 PPM or better stability of the base station. To assure attainment of the 2.5 PPM accuracy requirement of part 90.213 for this transceiver, the frequency error is measured when locked to ensure that it does not exceed 1.0 PPM.

Method of Measurement: (Proprietary)

Since the transmitter frequency is locked to the frequency of the base station via the receiver in this transceiver, frequency accuracy data was measured with the transceiver locked onto a base station transmitter emulated by a Motorola R2660C Service Monitor as shown in Figure 7-1. This was done using QUAD-16QAM time division duplex (TDD) characteristic of the transceiver wherein it was placed into a TDD mode of transmission as normally used to make a call to a landline phone.

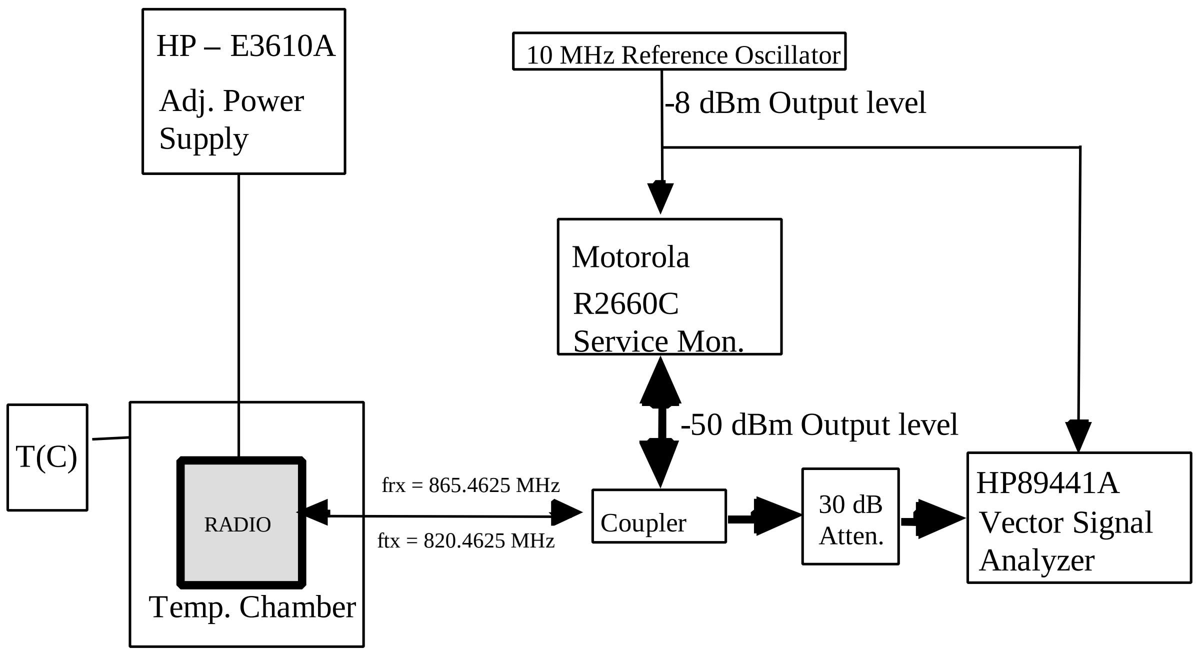

Figure 7-1: Transmit Frequency Accuracy Measurement Setup

During the test the transceiver was receiving a very high accuracy forward control channel frequency signal from the Service Monitor, and TDD transmitting a signal on the reverse control channel at a frequency 45.000000 MHz lower corresponding to the normally assigned frequency separation. A Hewlett-Packard model 89410A signal analyzer was used to measure the centroid frequency of the emission. This instrument also was locked to the same high stability frequency reference as the Service Monitor.

The frequency of the transceiver was measured as operating voltage or temperature was varied, and compared to the frequency of the R2660C service monitor signal. This produced an error from the expected frequency separation of 45.000000 MHz that was then recorded, and calculated in PPM relative to the expected transmission frequency.

7.6. Radiated Receiver Spurious Emissions -- Pursuant to 47 CFR 15.107, 15.109

EMI Test Ltd. Laboratory, who is FCC authorized Laboratory, has completed testing of iM1000 in accordance with the requirements of the FCC Part 15 Regulations for Class B equipment.

Test Site:

The test site is: EMI TEST Ltd. test laboratory, Moshav Haniel, P.O.Box 65, D.N.Lev Hasharon, 42865, Israel. This open Area site is reasonably free from RF interference, and is a listed FCC site.

Method of Measurement:

Measurements of radiated emission were made using a spectrum analyzer with 120KHz/6dB bandwidth and peak or quasi-peak detector, and appropriate broadband linearly polarized antennas. Tests were performed in the frequency range of 30MHz to 1000MHz.
The UUT was set and operated in a manner representative of actual use. During radiated emission tests the UUT was placed on wooden table located in the center of a non-conductive rotating platform, 80cm above the horizontal metallic ground plane.
The test antenna was located 3 meters from the UUT, and precise compliance measurements were performed.
The test antenna was installed on the antenna mast in vertical polarization. Small frequency ranges (5MHz or 10MHz, typically) were spanned in order to increase resolution and make easier identification of emissions emanating from the UUT. To locate maximum emissions from the test sample, the antenna was varied in height from 1 to 4 meters, and the UUT was rotated through 360 degrees.
For each emission the test results were recorded and emission levels were compared with the standard level. All significant emissions were recorded in tabular form.
Identical measurement procedure was repeated with antenna oriented horizontally.
During the compliance tests spectrum analyzer was set in quasi-peak detector mode.

The Test Configuration:

A linear regulated DC power supply was connected to the DC power connector. A personal computer was used to send commands to the UUT via the RS-232 serial port. A communication analyzer (R-2660 iDEN signal generator) was used to synchronize the modem’s receiver at the beginning of the receiving slot. This is necessary otherwise the receiver’s circuits will not be locked. The R2660 sends a known signal which synchronizes the receiver. The synchronizing signal was fed into the transceiver by temporarily disconnecting the dummy load from the antenna connector and a shielded RF cable, who’s other end was connected to the output of the iDEN signal generator, to the modem’s antenna connector. Once synchronization was accomplished, the RF cable was removed and the dummy load re-connected, and the R2660 RF output level was lowered to the minimum level. Both the computer and the communication analyzer were stored in a shielded box during the test so as to minimize radiated emissions other than that of the UUT.

7.7. Measurement Equipment List -----47 CFR. 2.948

1) Computer
   (One) IBM Pentium PC, Window 95.
   (Two) Ascentia laptop, 950N, Windows 95.
2) Spectrum Analyzer
   (One) H.P 8563E, 9 kHz-26.5 GHz Spectrum Analyzer.
3) Communications System Analyzer
   (One) Motorola R2660C MIRS Digital Communications System Analyzer.
4) RF Signal Generator
   (One) HP 8657B, 0.1 - 2060 MHz RF Signal Generator.
5) Power Meter
   (One) Giga-tronics 8541-C, Power Meter.
   (Two) H.P 438A, Power Meter.
6) Multimeter
   (One) H.P 34401A Multimeter.
7) Power Supply
   (One) H.P E3610A DC, Power Supply.
   (Two) Genius G-12-060, 12V DC to 220V AC, Power Inverter.
8) Directional Coupler
   (One) H.P 778D, Dual Directional Coupler.
9) R.F Amplifier
   (One) JCA 110-213, 1 - 10 GHz, 20 dB Gain Amplifier.
10) Temperature Chamber
   (One) Themotron, model 2800.

Additional equipment used by EMI TEST Ltd. Test Laboratory

1) Spectrum Analyzer:
   (a) 9KHz to 2.2GHz, Anritsu MS2601B/K.
2) Antennas
   (One) Biconical, 20MHz to 200MHz. EMCO Model 3110B
   (Two) Log-Periodic, 200MHz to 1GHz. EMCO Model 3146
   (Three) Double Ridge Guide, 1GHz to 18GHz. EMCO Model 3105
3) Preamplifier: (a) Microwave Technology, p/n SAO-4868.
4) Amplifiers:
   (One) 10MHz to 500MHz, MITEQ Model AU-1114.
   (Two) 500MHz to 2GHz, MITEQ Model AM-3A-0520.

5) Plotter: HP,Model 7440A-002