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Name of Test:

R.F. Radiation Exposure

FCC Rules:

1.1307, 1.1310, 1.1311, 2.1091

Description, EUT:

See page 2 of Test Report

Test Frequency, MHz

= 901.475

Antenna Gain

= 3 dBi Omni

Antenna Model

1/4 Wave X 5/8 Wave _____ Other dBd _____ Other _____Limits: Uncontrolled
Exposure
47 CFR 1.1310
Table 1, (B)0.3-1.234 MHz: Limit [mW/cm²] = 100
1.34-30 MHz: Limit [mW/cm²] = (180/f²)
30-300 MHz: Limit [mW/cm²] = 0.2
300-1500 MHz: Limit [mW/cm²] = f/1500
1500-100,000 MHz: Limit [mW/cm²] = 1.0Pre-test
Calculations
$$\text{Power}_{[\text{W EIRP}]} = \text{P}_{[\text{conducted}]} \times \text{G}_{[\text{antenna}]} = 7\text{W}$$

$$\text{Limit}_{[\text{mW/cm}^2]} = 0.600$$

$$\text{Limit}_{[\text{W/m}^2]} = 10 \times \text{Limit}_{[\text{mW/cm}^2]} = 6.00$$

$$R_{[\text{m}]} = [\text{P}_{[\text{W EIRP}]} / (4\pi \times \text{Limit}_{[\text{W/m}^2]})]^{1/2} = 0.293$$
Results:
at tested distance

30cm

	Probe Height, m	Power Density, mW/cm ²
	2.0	0.230
	1.8	0.345
	1.6	0.437
	1.4	0.483
	1.2	0.575
	1.0	0.552
	0.8	0.460
	0.6	0.391
	0.4	0.276
	0.2	0.230

Power Density
Calculations:The measured power density readings were summed and the
results divided by the number of readings to calculate the average.

For whole body:

Average of 0.2 to 2.0 m, mW/cm² = 0.398

For lower body:

Average of 0.2 to 0.8 m, mW/cm² = 0.339

For upper body:

Average of 1.0 to 2.0 m, mW/cm² = 0.437

Supervised By:



Morton Flom, P. Eng.

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R.F. Radiation Exposure

FCC Rules:

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Description, EUT:

See page 2 of Test Report

Test Frequency, MHz

= 901.475

Antenna Gain

= 10 dBi Yagi

Antenna Model

1/4 Wave _____ 5/8 Wave _____ Other dBd 7.85 Other _____

Limits: Uncontrolled
Exposure
47 CFR 1.1310
Table 1, (B)0.3-1.234 MHz: Limit [mW/cm²] = 100
1.34-30 MHz: Limit [mW/cm²] = (180/f²)
30-300 MHz: Limit [mW/cm²] = 0.2
300-1500 MHz: Limit [mW/cm²] = f/1500
1500-100,000 MHz: Limit [mW/cm²] = 1.0Pre-test
Calculations
$$\text{Power}_{[\text{W EIRP}]} = \text{P}_{[\text{conducted}]} \times \text{G}_{[\text{antenna}]} = 7\text{W}$$

$$\text{Limit}_{[\text{mW/cm}^2]} = 0.600$$

$$\text{Limit}_{[\text{W/m}^2]} = 10 \times \text{Limit}_{[\text{mW/cm}^2]} = 6.00$$

$$R_{[\text{m}]} = [\text{P}_{[\text{W EIRP}]} / (4\pi \times \text{Limit}_{[\text{W/m}^2]})]^{1/2} = 0.293$$
Results:
at tested distance

30cm

	Probe Height, m	Power Density, mW/cm ²
	2.0	0.046
	1.8	0.184
	1.6	0.299
	1.4	0.437
	1.2	0.529
	1.0	0.552
	0.8	0.437
	0.6	0.345
	0.4	0.207
	0.2	0.138

Power Density
Calculations:The measured power density readings were summed and the
results divided by the number of readings to calculate the average.

For whole body:

Average of 0.2 to 2.0 m, mW/cm² = 0.317

For lower body:

Average of 0.2 to 0.8 m, mW/cm² = 0.282

For upper body:

Average of 1.0 to 2.0 m, mW/cm² = 0.341

Supervised By:



Morton Flom, P. Eng.

(The following will be placed in the Instruction Manual)

Mandatory Safety Instructions to Installers & Users

Use only manufacturer or dealer supplied antenna.

Antenna Minimum Safe Distance: 30cm.

Antenna Gains: Three dBi on High Power with whip (+0.85dB referenced to a dipole) and ten dBi on Low Power with Yagi (+7.85dB referenced to a dipole). Rule Part 24D limit is 7W ERP

The Federal Communications Commission has adopted a safety standard for human exposure to RF (Radio Frequency) energy which is below the OSHA (Occupational Safety and Health Act) limits.

Antenna Mounting: The antenna supplied by the manufacturer or radio dealer must not be mounted at a location such that during radio transmission, any person or persons can come closer than the above indicated minimum safe distance to the antenna i.e. **30cm**

To comply with current FCC RF Exposure limits, the antenna must be installed at or exceeding the minimum safe distance shown above, and in accordance with the requirements of the antenna manufacturer or supplier.

Base Station Installation: The antenna should be fixed-mounted on an outdoor permanent structure. RF Exposure compliance must be addressed at the time of installation.

Antenna Substitution: Do not substitute any antenna for the one supplied or recommended by the manufacturer or radio dealer. You may be exposing person or persons to excess radio frequency radiation. You may contact your radio dealer or the manufacturer for further instructions.

Warning: Maintain a separation distance from the antenna to a person(s) of at least **30cm**.

You, as the qualified end-user of this radio device must control the exposure conditions of bystanders to ensure the minimum separation distance (above) is maintained between the antenna and nearby persons for satisfying RF Exposure compliance. The operation of this transmitter must satisfy the requirements of Occupational/Controlled Exposure Environment, for work-related use. Transmit only when person(s) are at least the minimum distance from the properly installed, externally mounted antenna.