

Ref: Triton 28 GHz transceivers,
FCC ID :OQT-28-SNP-03 and OQT-28-ETP-FE (related filings)

Kwok

I may have given you erroneous info in the previous message on RF safety on the -SNP- version of this product as a consequence of a typo in the antenna gain factor.

The correct antenna gain is 36 dBi (typical), 36.5 dBi worst case (maximum) and not 16.5 as I may have stated earlier.

With a rated output power of 30 dBm I cannot categorically exclude these devices from MPE evaluation. On the following pages is an excerpt of a RF safety report made for Triton by an independent firm. The output power for these radios is listed as 2 or 4 Watts, but that is the physical maximum (under non-operating fault conditions). At those power levels no effective communication can take place because of distortion. These radios are limited by the operating firmware to 30 dBm (1 Watt).

Most of the time the radios operate in the -20 dBm range. The full power output is only expected under long-link, heavy rain conditions.

I eliminated most of the boilerplate in the report in order to keep the file size down.

Regards

Peter Boers

4. FIELD MEASUREMENT METHODOLOGY

Electromagnetic field strength measurements were made using a test set, composed of a Narda radiation meter, model 8716, serial number 10053, calibrated in units of milliwatts per square centimeter (mW/cm^2); and a Narda isotropic conformal field probe, model 8722B, serial number 08025.

The test set (meter and probe) processes all incident radio signals in the frequency band of 300 kHz to 40 GHz regardless of their number, direction, polarization or modulation characteristics. The meter normalizes each RF field reading to a percent of the ANSI/IEEE Standard for Safety Levels with Respect to Human Exposure to RF Electromagnetic Fields.

Because the standard relates to whole body absorption, the measurements are spatially averaged over a plane of six (6') feet high by two and a half (2.5') feet wide (approximate plane of the human body). If there are variations of the measurements over the plane, an average of the readings are taken since this would be the total of the emissions absorbed by the body.

5. RESULTS

Facility at 8529 South Park Circle

Rooftop

Field measurements were taken with respect to the FCC controlled/occupational MPE standards. All percentages stated in this section are controlled/occupational MPE percentages.

RF measurements were taken right at the surface of the SONET microwave dish mounted seven feet high and located at the southwest section of the screening wall. The output power was set at 2W with a transmitting frequency of 38 GHz and registered a peak value of 6% of the MPE, and a spatial average of 1.6 % of the MPE. At a distance of one foot away from the dish, directly in the beam, a peak value of 3% or the MPE was recorded, with a spatial average of 1% of the MPE limit. The second SONET microwave dish (set at an output power of 4W at 28 GHz) registered a peak value of 25% of the MPE standards right at the antenna surface with a spatial average of 5.4 % of the MPE. At a distance of one foot away from the dish directly in the beam, a peak value of 15 % of the MPE was registered with a spatial average of 3.4 %. All values were found to be well with FCC RF exposure standards.

Engineering Lab, 4th Floor

Field measurements were taken with respect to the FCC controlled/occupational MPE standards. All percentages stated in this section are controlled/occupational MPE percentages.

RF measurements taken in the engineering lab (measuring 37' by 52') using the controlled MPE standards were well within FCC standards. Spatially averaged RF emissions were less than 1% throughout the entire room.

Facility at 8403 South Park Circle

Rooftop

Field measurements were taken with respect to the FCC controlled/occupational MPE standards. All percentages stated in this section are controlled/occupational MPE percentages.

RF measurements taken on the rooftop directly in front of the 38 GHz Fast Ethernet microwave dish as well as the rooftop in general registered values of less than 1% of the allowable MPE limit.

Manufacturing area, ground floor

Field measurements were taken with respect to the FCC controlled/occupational MPE standards. All percentages stated in this section are controlled/occupational MPE percentages.

RF measurements taken in the manufacturing area using the controlled MPE standards were well within FCC standards. Measurements were taken around the anechoic testing chamber with no discernable readings. Spatially averaged RF emissions were less than 1% throughout the entire building.

6. CONCLUSIONS & RECOMMENDATIONS

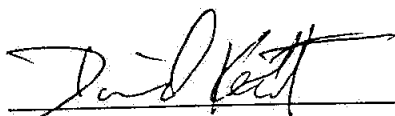
The two Triton facilities are compliant with the current FCC RF emissions standards for controlled areas. The rooftops, engineering lab and manufacturing areas all contained minimal RF emissions well within current FCC standards for RF exposure. Nevertheless, we recommend RF notice signs be placed at the entrances to these areas.

Recommendations for the FCC and OSHA compliance issues in regard to the two Triton facilities are:

- 1] Continue to restrict and monitor access to areas subject to RF emissions.
- 2] Post RF notice signs advising of potential RF exposure at the access points to the roof as well as in the engineering labs and manufacturing area
- 3] All engineers, personnel or installation contractors employed by Triton Network Systems should be aware of the potential for exposure, be properly trained in RF Radiation Safety and be familiar with proper antenna site guidelines procedures. An RF Safety Plan should also be in place for the site.

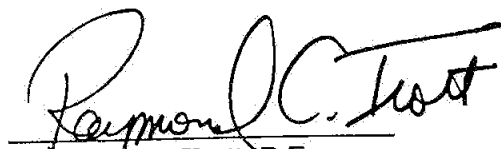
In conclusion, the Triton facilities are currently compliant with the FCC and OSHA environmental rules with respect to human exposure to RF fields.

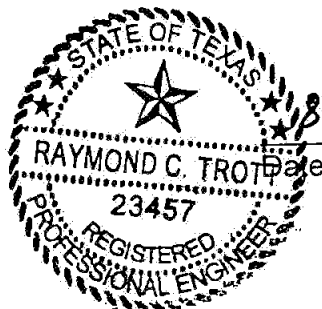
Report prepared by :


David L. Kent

8/19/99
Date

And approved by:


Raymond C. Trott, P.E.



8/19/99
Date