From: Clyde Shaver Preco Inc. cshaver@preco.com
To: Joe Dechoso
Date: 4-28-00

Re: FCC ID OXZPV2000
731 Confirmation Number EA97146

In Response to Correspondence Ref. Number 13583
Date of Original E-Mail 4-21-2000

Dear Joe Dechoso,

1) See Attracted Confidential letter that list exhibits Preco wants held Confidential.

2) Preco's PV2000 radar has a center frequency of 5.80 Ghz.
The Pulse Repetition frequency is 5 Mhz.

This radar was designed to meet FCC part 15 for Transmitters, by lowering the power Out of the transmitter to below the noise floor. (-54dB uV/Meter @ 3 meters) Transmitters below this level are considered to be a non transmission, and pose no Threat to any equipment in its proximity.

We have compared our Transmit power level to other products, at the same frequency, And the same Pulse length (10-12 Nano seconds). We found our radar transmits the same or less energy than Sentrol Corp's product that uses the same pulsed RF technology.

HP Application note 150-2 contains the desense chart and parameters the determine is the Desense is applicable.
We find that like the app. Note states, that if the PRF of the transmitter is less than the Video BW of the Spectrum Analyzer, the factor does not apply.

We find that at the output power levels of our transmitter, even with a PRF of 10 Mhz does not require a Desense factor. At 1.25 Mhz or 2.5 Mhz or 5Mhz the output power Does not change and the factor does not apply. We attribute this to high dynamic range Spectrum Analyzer, and that until the power level reaches greater than 1mW the internal mixer does not go non linear, and the filters do settle and give accurate readings.

HP produced an abstract named Pulsed-RF Measurements:
Considerations in Using Spectrum Analyzers
Author: Joe Gorin (R&D Engineer with HP.

Abstract does not have a number, I only have this in hard copy form.
If you don't have this abstract, and would like a copy, please feel free
To request it, and I can scan, or fax it to you.

This 15 page abstract was presented at a RF & Microwave Measurement Symposium
This abstract covers Spec. An considerations when measuring Pulsed-RF transmitters.
Subjects covered Accuracy degradations: 1) Video-response errors 2) Dynamic-range
Limitations 3) Misresponses to pulses 4) Time-domain aberrations.
Measures of spectrum-analyzer performance: 1) Sensitivity-related figures of merit
2) Repeatability 3) Performance comparisons

We concur in the lab with this abstract. Power levels measured into a HP 8590 series analyzer that are at or below –10dBm are not distorted power wise because of the dynamic range of the analyzer.

Intertek Testing Services has been through these same measurements, and concur with these findings.

Thanks for your time and Consideration
208 850-6510 cell
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