16 Nov 1998

To: Rich Fabina
(oetech@fccsun07w.fcc.gov)
From: Ken Bass
(Kbass@metlabs.com)

Re: FCC ID: G8630ERC85 (correspondence ID: 4505)

Dear Rich:

The following items are in response to your inquires as provided in your e-mail (correspondence ID: 4505) in reference to the above listed application:

1) The Commission does not accept active Rod measurements in frequency range below 30MHz. Also, C63.4-1992, is not accepted method of measurement for radiated emissions below 30MHz. Remeasure the radiated emissions using a loop antenna.

A1) As indicated on page 5 of the test report, both antenna types were used for measuring the emissions below 30 MHZ. The following data and corrected levels are used to compare to the limits of 15.209(a):

(note: below 1.705 MHz a calibrated loop was used. To convert from dBuv to dBuA, subtract 51.5 dB)

$Fc_{(tx)}$ @ 1.500 MHZ =

9.4	dBuv w/ loop @ 3m		9.4	dBuv w/ loop @ 3m
0.2	cable loss		0.2	cable loss @ 1.5 MHZ
2.1	dB H -Field Antenna factor		53.6	dB E-field Antenna correction factor
11.7	dBuA/m	@ 3m	63.2	dBuv/m @ 3m

or

Limit @ 1.5MHz = 24000/F(kHz) uV @ 30 m, therefore:

24000/1500= 16 uV/m @ 30m
= 24.1 dBuv/m @ 30m

F < 30 MHz, use 40 dB/dec, therefore: Distance Correction Factor (DCF)

for 3 m to 30 m
= 40*LOG (d1/d2) d1=3 m, d2 = 30 m
= -40.0 dB

for 3 m to 300 m
= 40*LOG (d1/d2) d1=3 m, d2 = 300 m
= -80 dB

Thus the corrected level of the field at the specified measurement distance is:

measured:	63.2 dBuv/m	@ 3m
corr. factor:	-40.0 dB	3 m to 30 m DCF
corr. level:	23.2 dBuv/m	@ 30m

And by examination, the signal at the transmitting frequency is less than the limit at the 30 m distance.

2) What was the detector function and RBW of measurement instrument during RE testing?

2A) As per 15.33, and 15.31(f)(2), the detector function was set for CISPR Quasi-Peak detection. A Resolution Bandwidth of 9 kHz was used for measurements below 30MHz.

3) Provide results for AC line conducted Measurements as per 15.207(a).

3A) Please refer to the technical descriptions provided for the EUT. The EUT derives power from a DC powered controller, and thus the EUT and its controller do not connect to the AC mains.
Therefore, conducted emissions, as per FCC Rule 15.207(a), are not applicable.

4) Provide an operational description for the EUT in accordance with 2.1033(b)(4)

4A) Please refer to the submitted file descrip.pdf for a description of the operation of the EUT.

5) Resubmit the schematic diagram and the Userσ Manual exhibits.

5A) Please see the resubmitted file, schem.jpg for the schematic diagram.

Correspondence ID 4507
Confidentiality Fee: MET submitted the application with 2 associated checks to cover the fee: one check from the applicant in the amount of $1025, and one check from MET to cover the additional $50 increase in fees due to the September fee change. I will not be able to retrieve the cancelled checks. What other evidence do you need of full the payment of $1075.