

Re: FCC ID OWDTR0001-E
Applicant: Com-Net Ericsson Critical Radio
Systems, Inc.
Correspondence Reference Number: 15026
731 Confirmation Number: EA96787
Date of Original E-Mail: 07/12/2000

Note: Device has 2 different antennas but one set of revised ERP measurement. Maximum conducted output measured at 3.45 W. This device operates in two separate bands, EDACS (806-824 MHz) and talk-around (851-870 MHz) with different maximum output but filing has requested 3.0 W for both bands. According to SAR report, EDACS has 3.2 +0.20 W maximum output and talk-around band has 2.64 +0.14 W maximum output. Device is for occupational use only and requires 50% duty factor to satisfy occupational SAR limit.

1. The information in the reply for "control of exposure conditions" for this device to qualify for occupational use is insufficient. The users should have the knowledge to control their exposure duration and conditions to satisfy the higher occupational exposure limit. Just have control of the PTT button without knowing about the RF exposure requirements and how to satisfy the requirements for the higher limit is not acceptable. Please address issues, incorporate the corresponding information at a conspicuous location in the manual and clearly indicate that these requirements must be satisfied in order for someone to operate the radio and meeting FCC RF exposure compliance requirements for occupational use. The revised manual pages should be uploaded. If the manual information is insufficient for providing users with the needed training for satisfying occupational exposure requirements, separate training will become necessary.

2. Please revise the proposed label to indicate "CAUTION: Device must be restricted to occupational used to satisfy FCC RF exposure compliance. See owner's manual for specific operating requirements" and confirm label size.

The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information within 60 days of the original e-mail date may result in application dismissal pursuant to Section 2.917 (c) and forfeiture of the filing fee pursuant to section 1.1108.

DO NOT reply to this e-mail by using the Reply button. In order for your response to be processed expeditiously, you must upload your response via the Internet at www.fcc.gov, Electronic Filing, OET Equipment Authorization Electronic Filing. If the response is submitted through Add Attachments, in order to expedite processing, a message which informs the processing staff that a new exhibit has been submitted must also be submitted via Submit Correspondence. Also, please note that partial responses increase processing time and should not be submitted.

Any questions about the content of this correspondence should be directed to the e-mail address listed below the name of the sender.

MODEL: EDACS 300P
FCC ID: OWDTR0001-E

FORM 731

FCC Rules Parts	Frequency Range	Output Power (W)	Freq. Tolerance	Emission Designator
90	806 - 824 MHz	3.0	1.5 ppm	16K0F3E
90	851 - 869 MHz	2.5	1.5 ppm	16K0F3E
90	806 - 824 MHz	1.0	1.5 ppm	16K0F3E
90	851 - 869 MHz	1.0	1.5 ppm	16K0F3E

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X.0 PART 2.1046 (A) RF POWER OUTPUT: CONDUCTED

X.1 Test Procedure

ANSI/TIA/EIA-603-1992, section 2.2.1

The EUT was connected to a coaxial attenuator having a 50 Ohm load impedance.

X.2 Test Data

The following channel (in MHz) were tested: 806.025, 820.9875, 821.0125, 851.025, 858.150, 860.145
The worst-case Output Power (highest) levels are shown.

CARRIER OUTPUT POWER (UNMODULATED)

EDACS Mode:

Power Setting	Frequency (MHz)	RF Power measured (Watt)*
HIGH	806.025	3.4
	820.9875	3.3
LOW	806.025	1.2
	820.9875	1.2

* Measurement accuracy: +/- 3%

Talk-around mode:

Power Setting	Frequency (MHz)	RF Power measured (Watt)*
HIGH	851.0125	2.8
	858.150	2.8
LOW	851.0125	1.2
	858.150	1.2

* Measurement accuracy: +/- 3%

Rated Power:

MODE	POWER SETTING LOW (W)	POWER SETTING HIGH (W)
EDACS	1.0	3.0
Talk-around	1.0	2.5

X.3 Test Equipment

Power Meter HP437B s/n 2949A02966
 HP 8901A s/n 2545A04102 (power mode)
Power Sensor HP8481B s/n 2702A05059
Frequency Counter HP8901A s/n 2545A04102 (Frequency mode)

Y.0 PART 2.1046 (A) RF POWER OUTPUT: RADIATED – ERP

Y.1 Test Procedure

Substitution Method:

The EUT was setup at an antenna to EUT distance of 3 meters on an open area test site. The EUT was placed on a nonconductive turntable approximately 0.8 meters above the ground plane.

The physical arrangement of the EUT and associated cabling was varied in order to determine the effect on the EUT's emissions in amplitude, direction and frequency. At each frequency, the EUT was rotated 360 degrees, and the antenna was raised and lowered from one to four meters in order to determine the maximum emission levels. Measurements were taken using both horizontal and vertical antenna polarizations.

The worst-case, maximum radiated emission was recorded and used as reference for the ERP measurement.

The EUT was then replaced by an ½ wave dipole antenna and polarized in accordance with the EUT's antenna polarization. The ½ wave dipole antenna was connected to a RF signal generator with a coaxial cable.

The search antenna height, and search antenna polarity was set to levels that produced the maximum reading obtained in step 3. The signal generator was adjusted to a level that produced the radiated emission level obtained in step 3.

The signal generator level was recorded and corrected by the power loss in the cable between the generator and the antenna and further corrected for the gain of the ½ wave dipole used relative to an ideal ½ wave dipole antenna. The signal generator corrected level is the ERP level.

Calculation Method:

$$P_{Watt} = \frac{(E_{v/m} \times d_m)^2}{30 \times 1.64}$$

Y.2 Test Data

Settings:

- HIGH Power: 3 Watt delivered to antenna
- $\frac{1}{2}$ Wave antenna

Mode	Frequency (MHz)	ERP** substitution method (dBm)	ERP (W)
EDACS	806.025	34.9	3.1
	820.9875	34.8	3.0
Talk-around	851.0125	34.8	3.0
	858.150	34.3	2.7

**Measurement accuracy is +/- 1.5 dB

Antenna as specified by manufacturer (unity gain)

Settings:

- HIGH Power: 3 Watt delivered to antenna
- $\frac{1}{4}$ Wave antenna

	Frequency (MHz)	ERP** substitution method (dBm)	ERP (W)
DACS	806.025	35.0	3.2
	820.9875	35.2	3.3
Talk-around	851.0125	34.5	2.8
	858.150	35.0	2.9

**Measurement accuracy is +/- 1.5 dB

Antenna as specified by manufacturer (unity gain)

Y.3 Test equipment

Spectrum Analyser HP 8566B
Antenna Roberts $\frac{1}{2}$ wave dipoles