

**DESCRIPTION****1. Single Channel -- Transmitter Technical Characteristics -- Pursuant 2.983 (d)**

A. RF Power Output	<u>Variable from 5 Watts to 70 Watts (Average)</u>
B. Frequency Range	<u>851 MHz to 870 MHz</u>
C. Frequency Stability	<u>0.00001 %</u>
D. Emissions	<u>17K7D7W</u>
E. Spurious Emissions	<u>Better than -60.5 dBC</u>
F. DC Voltage and Current into the final RF amplifier stage/stages	<u>28.5 Volts</u> <u>14.7 Amps maximum</u>
G. Maximum Power Rating	<u>420 Watts maximum</u>

**2. Transmitter Application****A. Power Supply Available**

- ☐ AC 120V 60 Hz                      ☐ AC 240V 60 Hz  
☐ AC 120V 50 Hz                      ☐ AC 240V 50 Hz  
☒ DC Supply  $\pm 48$  / 60 Volts DC

**B. Squelch Type Available**

- ☐ Carrier Squelch                      ☐ Tone Private Line  
☐ Digital Private Line

**C. Microphone Available**

- ☐ Handheld Conventional      ☐ Handset

**D. Maximum Channel Capability**

All models are fully synthesized and capable of tuning 5 and 6.25 kHz increments to transmit channels within the range of 851 to 870 MHz.

**E. Housing Styles Available**

The transmitter is designed to be a rack mounted unit, as shown in the accompanying photos.

**F. Digital Modulation Techniques**

This transmitter is capable of digital modulation where the modulating signal is fed directly to the modulator.

**3. Electro-Magnetic Exposure (EME) -- Pursuant 1.1307**

This transmitter is intended for use at fixed base station sites only, and is not to be marketed for mobile use. As such, under Section 1.1307 of the FCC Rules, the transmitter is not currently subject to the Commission's environmental rules pertaining to the routine evaluation for RF exposure prior to equipment authorization.

## Human Exposure Compliance

This equipment is designed to generate and radiate radio frequency (RF) energy by means of an external antenna. When terminated into a non-radiating RF load, the base station equipment is certified to comply with Federal Communications Commission (FCC) regulations pertaining to human exposure to RF radiation in accordance with the FCC Rules Part 1 section 1.1310 as published in title 47 code of federal regulations and procedures established in TIA/EIA TSB92, Report on EME Evaluation for RF Cabinet Emissions Under FCC MPE Guidelines, Compliance to FCC regulations of the final installation should be assessed and take into account site specific characteristics such as type and location of antennas, as well as site accessibility of occupational personnel (controlled environment) and the general public (uncontrolled environment). This equipment should only be installed and maintained by trained technicians. Licensees of the FCC using this equipment are responsible for insuring that its installation and operation comply with FCC regulations Part 1 section 1.1310 as published in title 47 code of federal regulations.

Whether a given installation meets FCC limits for human exposure to radio frequency radiation may depend not only on this equipment but also on whether the “environments” being assessed are being affected by radio frequency fields from other equipment, the effects of which may add to the level of exposure. Accordingly, the overall exposure may be affected by radio frequency generating facilities that exist at the time the licensee’s equipment is being installed or even by equipment installed later. Therefore, the effects of any such facilities must be considered in site selection and in determining whether a particular installation meets the FCC requirements.

FCC OET Bulletin 65 provides materials to assist in making determinations if a given facility is compliant with the human exposure to RF radiation limits. Determining the compliance of transmitter sites of various complexities may be accomplished by means of computational methods. For more complex sites direct measurement of power density may be more expedient. Additional information on the topic of electromagnetic exposure is contained in the *Motorola Standards and Guidelines for Communications Sites* publication. Persons responsible for installation of this equipment are urged to consult the listed reference material to assist in determining whether a given installation complies with the applicable limits.

In general the following guidelines should be observed when working in or around radio transmitter sites:

- All personnel should have electromagnetic energy awareness training.
- All personnel entering the site must be authorized.
- Obey all posted signs.
- Assume all antennas are active.
- Before working on antennas, notify owners and disable appropriate transmitters.
- Maintain minimum 3 feet clearance from all antennas.
- Do not stop in front of antennas.
- Use personal RF monitors while working near antennas.
- Never operate transmitters without shields during normal operation.
- Do not operate base station antennas in equipment rooms.

**General Safety Information**

For installations outside of the U.S., consult with the applicable governing body and standards for RF energy human exposure requirements and take necessary steps for compliance with local regulations.

**References:**

TIA/EIA TSB92 "Report on EME Evaluation for RF Cabinet Emissions Under FCC MPE Guidelines", Global Engineering Documents: <http://global.ihs.com/>

FCC OET Bulletin 65 "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields"; <http://www.fcc.gov/oet/rfsafety/>

Motorola Standards and Guidelines for Communications Sites, Motorola manual 68P81089E50

IEEE Recommended Practice for the Measure of Potentially Hazardous Electromagnetic Fields-- RF and Microwave, IEEE Std. C95.3-1991, Publication Sales, 445 Hoes Lane, P.O. Box 1331, Piscataway, NJ 08855-1331

IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz, IEEE C95.1-1991, Publication Sales, 445 Hoes Lane, P.O. Box 1331