

**OPERATIONAL DESCRIPTION****I. Transmitter Technical Characteristics -- Pursuant 2.983 (d)****A. Specific Operating Power Levels:**

RATED: 40 to 72 Watts, variable

MEASURED: Refer to Exhibit 7A

**Maximum Power Rating:** 72 Watts

**Means provided for variation of operating power:**

Output power is continuously variable over the range of 40 to 72 Watts. The output power is field programmable to any power level within this range.

**B. Frequency Range: 42 to 50 MHz****C. Frequency Stability:**

RATED:  $\pm 0.0005\%$  ( $\pm 5$  ppm)

MEASURED: Refer to Exhibits 7H-1 and 7H-2.

**D. Types of Emissions:**

16K0F3E (refer to Exhibit 5F)

**E. Spurious Emissions:**

RATED: 2.5  $\mu$ W (-26 dBm) maximum, which corresponds to -72 dBc at the 40 Watt setting, and -74.6 dBc at the 72 Watt setting.

MEASURED: Refer to Exhibits 7F and 7G.

**F. DC Operating Voltages and Currents of the Final Stage:**

Refer to Exhibit 7A.

**II. Transmitter Application**

The following features, options, accessories, and installations characterize the transmitter.

**A. Power Supply:** Vehicular battery, or AC-DC Converter

**B. Antenna:** Whip, roof top, 1/4 wave, or other external 50-ohm antenna

**C. Squelch Types:**

1. Carrier Squelch (CSQ)
2. Tone Private Line (TPL)
3. Digital Private Line (DPL)

**Description (continued)****D. Microphones Available:**

1. Hand-held conventional
2. Hand-held conventional with DTMF
3. Base Station Desk Top
4. Telephone Style Handset

**E. Maximum Transmit Channel Capability:** 4 to 160 channels, depending on model.**F. Housing Style:**

The transmitter is enclosed in a metal, shielded chassis as shown in the accompanying photographs. The transmitter circuitry is contained on a single printed circuit board that is mounted to a cast metal chassis that also serves as a heatsink. A cast metal shield cover is placed over the printed circuit board and secured to the chassis with screws.

Interior walls in both the chassis and shield cover form compartments that provide isolation between various circuit blocks. The frequency synthesizer, vco/buffers, transmitter stages, and low-pass harmonic filter are each contained in individual, isolated compartments. A conductive elastomeric coating is bonded to the edges of the metal chassis and shield enclosure walls, which come in contact with gold-plated areas of the circuit board when the circuit board and shield are assembled to the chassis.

A decorative plastic housing encloses the top and sides of the chassis. The operating controls, indicators and supporting circuitry are contained in a separate plastic housing which is mounted to the front of the chassis.

**G. Available Accessories:**

ENKN4000B	MAP27 cable
RKN4077A	3m Remote Mount cable
RKN4078A	5m Remote Mount cable
RKN4079A	7m Remote Mount cable
RKN4081A	Mobile Programming RIB Cable
RKN4083A	Mobile Programming RIBless cable
RLN4756A	Telephone style handset
RLN4774A	3 point / Lowband
RLN4780A	High profile mounting trunnion
RLN4782A	DIN mounting kit
RLN4801A	Remote Mount Control head A
RLN4802A	Remote Mount Control head B/C
RLN4829A	Conv Control head A Button Kit (no manual)
RLN4830A	Conv Control head BCD Button Kit (no manual)
RLN4836A	External PTT w/Emergency Footswitch
RLN4853A	10 pin Mic/20 pin DIN Adaptor
RMN4025A	Enhanced compact mic
RMN4026A	Smart mic
RMN4027A	Visor mounted mic
RMN4038A	Heavy Duty mic

RMN4041A	Footswitch with Remote PTT
RMN4042A	Pushbutton with Remote PTT
RMN4043A	Gooseneck PTT
RSN4001A	External speaker 13W
8180384J60	Housing Eliminator 45W
AARLN4832A	Modem Option Board (w/NA/LA manual)
RLN4832A	Modem Option Board (w/o Manual)
GKN6272A	External alarm relay
GLN7318A	Desktop mounting tray w/out speaker
GLN7323A	External PTT/ emergency footswitch
GLN7324A	Low profile mounting trunnion
GLN7326A	Desktop mounting tray w/spkr
GTF347B	Mobile Programming Cable
RAB4004A	Mini-U Lowband 42-50MHz
HKN9019B	Enhanced connector
HKN9402A	12V Battery Power Cable
HKN9557A	Mini-UHF to PL259 cable
HLN3333B	RICK with Mounting Bracket
HLN3948B	RICK with Mounting Tray
HLN8097A	Removable slide mount
HLN9457A	Accessory connector Kit
HLN9725B	Voice Storage Option Board
HLN9742A	Adaptor Flashing
HMN3000B	Black Desk Microphone
HPN4001B	Desktop power supply, 25-60W
HSN8145A	External speaker 7.5W
L3144A	C200 Basic Extended Local Control (Eng Manual)
L3145A	C200 Basic DC Remote Control (Eng Manual)
L3146A	C200 Basic Tone Remote Control (Eng Manual)
L3147A	C200 Advanced Extended Local Control (Eng Manual)
L3148A	C200 Advanced DC Remote Control (Eng Manual)
L3149A	C200 Advanced Tone Remote Control (Eng Manual)
NTN7373AR	US linecord (3060665A04) packaged
NTN7374AR	US linecord (3060665A05) packaged
NTN7375AR	US linecord (3002120F02) packaged
0902105F01	BNC Connector
AAHLN9725B	Voice Storage Option Bd (w/NA/LA Manual)
HLN9725A	Voice Storage Option Bd (w/o Manual)
AAHLN9729A	DTMF Decode Option Bd (w/NA/LA Manual)
HLN9729A	DTMF Decode Option Bd (w/o Manual)
AAHLN9726A	Transcrypt Option Bd (w/NA/LA Manual)
HLN9726A	Transcrypt Option Bd (w/o Manual)
AAHLN9727A	Scrambler Option Bd (w/NA/LA Manual)
HLN9727A	Scrambler Option Bd (w/o Manual)
AAHLN9728A	Smartrunk Option Bd (w/NA/LA Manual)
MDHLN9728A	Smartrunk Option Bd (w/o Manual)

**H. Programmability:**

Programming is accomplished by the use of an IBM PC computer or equivalent, a Radio Interface Box, and Radio Service Software. Adjustment of the transmitter, including programming of the channel frequencies, output power adjustment, frequency adjustment, and deviation adjustment are performed in this manner.

**NOTE: The transmitter is NOT programmable by the operator.**