OPERATIONAL DESCRIPTION

A. **Transmitter Technical Characteristics -- Pursuant 2.983 (d)**

a. RF Power Output:	25W to 48W Variable Power
b. Transmit Frequency Range:	450 – 512 MHz
c. Receive Frequency Range:	450 – 512 MHz
d. Frequency Stability:	+/- 2.0 PPM
e. Emissions	16K0F3E & 11K0F3E (See Exhibit 8-5)
f. Spurious Emissions	-74dBc (25W) & -76.8dBc (48W)
g. DC Voltage and Current into the final RF amplifier stage/stages	13.6 VDC 11A

B. **Transmitter Application**

This transmitter is primarily intended for use in a mobile environment. It is characterized by the following features, options, and accessories.

a. Power Supply Available:
   i. Vehicular battery, or AC-DC Converter

b. Antenna Available:
   i. Whip Antenna
   ii. Roof Top Antenna
   iii. ¼ wave Antenna
   iv. Other External 50-ohm Antenna

c. Squelch Type Available:
   i. Carrier Squelch
   ii. Tone "Private Line"
   iii. Digital "Private Line"
   iv. DTMF

d. Microphone - Control:
   i. Hand-held Microphone
   ii. Hand-held Conventional with DTMF
   iii. Base Station Desk Top
   iv. Telephone Style Handset

e. Maximum Transmit Channel Capability:
   i. 4 to 160 Channels, depending on model.

f. Housing:

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. Other Options:

i. Time out Timer

h. Available Accessories:

GKN6272A	External alarm relay
GLN7318A	Desktop mounting tray w/out speaker
GLN7323A	External PTT/ emergency foot switch
GLN7324A	Low profile mounting trunnion
GLN7326A	Desktop mounting tray w/speaker
GTF347B	Mobile Programming Cable
HAE4003	UHF 450-470 MHz, ¼ Wave Roof Antenna
HAE4011	UHF 450-470 MHz, 3.5 dB Gain Roof Antenna
HAE4019	UHF 450-470 MHz, 5 dB Gain Roof Antenna
HAE4004	UHF 470-512 MHz, ¼ Wave Roof Antenna
HAE4012	UHF 470-494 MHz, 3.5 dB Gain Roof Antenna
HKN4013	UHF 494-512 MHz, 5 dB Gain Roof Antenna
HKN9019B	Enhanced connector
HKN9402A	12V Battery Power Cable 25-45W
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)
L3146AC200	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	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)

j. 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.

i. The minimum voltage for the micro-P to operate is 2V.