

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

RATED: 1 to 11 Watts, variable  
MEASURED: Refer to Exhibit 6A

**Maximum Power Rating:** 11 Watts

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

Output power is continuously variable over the range of 1 to 11 Watts. The output power is field programmable to any power level within this range.

**B. Frequency Range: 146 to 174 MHz****C. Frequency Stability:**

RATED:  $\pm 0.00025\%$   
MEASURED: Refer to Exhibits 6H and 6J

**D. Types of Emissions:**

11K0F3E, or 16K0F3E, programmable per channel.

**E. Spurious Emissions:**

RATED: 50  $\mu$ W (-13dBm) maximum that corresponds to -43 dBC at the 1 Watt setting, and -53.4 dBC at the 11 Watt setting.

MEASURED: Refer to Exhibits 6F and 6G.

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

Refer to Exhibit 6A.

**II. Transmitter Application**

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

**A. Power Supply:** AC-DC Converter**B. Antenna:** External 50  $\Omega$  antenna**C. Squelch Types:**

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

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

1. DTMF Microphone
2. Desk Microphone

**E. Maximum Transmit Channel Capability:** 16 channels.**F. Housing Style:**

The transmitter is enclosed in a metal, shielded chassis as shown in the accompanying photographs. The transmitter power amplifier circuitry is contained on a single printed circuit board (PCB) that is mounted to a cast metal chassis that also serves as a heatsink. The transmitter frequency generation circuitry is contained on the RF board within metal shields that are soldered to the RF board PCB. The low level power amplification of the transmitter circuitry is also contained on the RF board PCB under metal shields that are soldered to the PCB. The chassis has a removable cover to allow servicing. A plastic housing encloses the top, bottom and front of the chassis.

**G. Available Accessories**

HLN3037A	GR1225 Repeater Housing
HKN9234A	GR1225 Add-on Controller Cable Kit
HKN9235A	GR1225 Internal Duplexer RF Cables
HKN9026A	GR1225 External Duplexer RF Cable
HKN9006A	GR1225 SmarTrunk Controller Cable
HLN9455A	GR1225 Battery Revert Kit
HLN9471A	GR1225 Portable Carry Case
HLN3100A	R1225 Retrofit Kit
HKN9016A	R1225 Retrofit External Duplexer RF Cables
HKN9025A	R1225 Retrofit Internal Duplexer RF Cables
HLN3102A	GR400 X-Pand Repeater Housing
HLN3103A	GR500 X-Pand Repeater Housing
HLN9447A	i20R Controller
HLN3094A	SmarTrunk II Controller
HLN9119A	ZR340 Controller
HLN8388B	ZR310 Community Tone Panel
HLN9120A	i750R Advanced Interconnect Signaling
HFD8188A	VHF Duplexer, 150-160 MHz
HFD8189A	VHF Duplexer, 155-162 MHz
HFD8190A	VHF Duplexer, 162-174 MHz
HFD8465A	VHF Duplexer, 150-160 MHz
HFD8461A	VHF Preselector, 144-160 MHz
HFD8462A	VHF Preselector, 160-174 MHz
HLN9242A	16 Pin Accessory Kit
HMN3175A	DTMF TX LED Microphone, 7 foot cord
HMN3000B	Desk Microphone, Black
TDD7559A	VHF Antenna, 144-149 MHz, 3 dB Gain
TDD7544A	VHF Antenna, 150-158 MHz 3 dB Gain
TDD7545A	VHF Antenna, 158-166 MHz, 3 dB Gain
TDD7546A	VHF Antenna, 166-174MHz, 3 dB Gain
L1473A	Extended Local Control Desk Set

**Description (continued)**

L1474A	DC Remote Control Desk Set
L1475A	Tone Remote Control Desk Set
L1547A	DC Remote Adapter & Service Manual
L1548A	Tone Remote Adapter & Service Manual
RRX4025A	Type "N" connector coax in-line arrestor
RRX4032A	Tower mount hardware / in-line arrestor
ST788	1/2" jacketed Heliax coax ground clamps
ST853	7/8" jacketed Heliax coax ground clamps
RLN4264A	120 Vac 15A Duplex Surge Protector)

**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.**