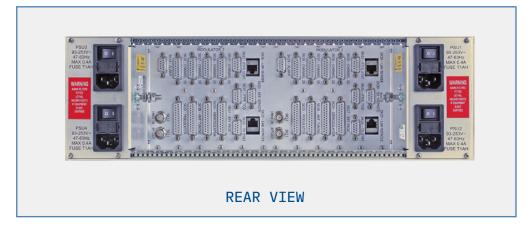
# VLF Modulator Equipment

Part No. DG-478-7-100





### **Key Features**

- Modulation Modes: FSK, MSK1, MSK2 or MSK4
- Baud Rate: 50/100/200 baud
- Keystream Input Channels: 4 Synchronous
- Keystream Data Control: 4 Status lines, Strobe
- Data formatting: NATO STANAG 5030 and 4724 RED REM Compliant
- Frequency Range: 10KHz 160KHz in 10Hz Steps
- 1MHz: PTFE (Station Standard)

- Clock Output: Key Stream Source Synchronization
- Internal Clock: Stability 3x10-9 Per Day
- Emergency Key Input: Synchronous or Asynchronous
- Local or Remote Control: Serial Connection
- RF Output level adjustment
- RF Output Curbing: Selectable from a number of curves

- Dual Modulator Configuration: 2 independent Modulators in a 19" Sub-Rack
- Dual Redundant Current Sharing Power Supplies
- Audible Alarm with Mute Facility and volume control
- Alarm relay contact outputs for external system
- Extensive Built in Test Facilities including a variety of test messages

## **Technical Specifications**

#### **RF Output**

Power Output 1Vpp – 10Vpp, Adjustable via front or remote control

(Maximum 250mW into a 50Ω load)

Phase Jitter Less than ± 0.5° in a 50Hz bandwidth

Amplitude Symmetrical about the centre frequency within ± 0.5dB

In Band Noise Better than -42dB relative to un-modulated carrier in a

240Hz bandwidth centred on carrier

Out of Band Noise Better than -72dB relative to un-modulated carrier in 100Hz

bandwidth outside the range fc ±500Hz

Hum The individual, discrete hum sidebands is at least 48dB

below the un-modulated carrier

**Harmonics** Better than -55dB down relative to the carrier at any carrier

frequency setting

#### **Data Management Unit Interface**

Channels 4 Data and 4 Status lines V.24 synchronous

**Data Rate** 50/100/200 baud

Strobe Input 50 Hz

Fault Output Relay changeover contact (volt free)

### **Electromagnetic Compatibility**

Radiated CE, EN 60945, MIL-STD-188-140A, ITU-R SM.329-12

Conducted CE, EN 60945, MIL-STD-461

Susceptibility CE, EN 60945

**Power** 

Rack Mount Voltage: 93-253 VAC; Frequency: 47-63 Hz; Power Factor:

>0.6

#### **Physical Properties**

**Size (HxWxD)** 2U x 482mm x 413 mm

Weight Rack Mount: 12 kg
Cooling Natural convection

Climatic Operating Temperature: 0°C to +55°C

Storage Temperature: -20°C to +70°C Relative Humidity: 95% (non-condensing)

#### **Upgradable Options**

**Expansion Capability** Demodulator (OTAM), Keystream Interface and

Aerial Tuning Unit

External Remote Control LAN
Strobe Input 75 Hz

Time of, Day input V.11/RS422 (1 PPS/TOD TD1 Format), NTP