

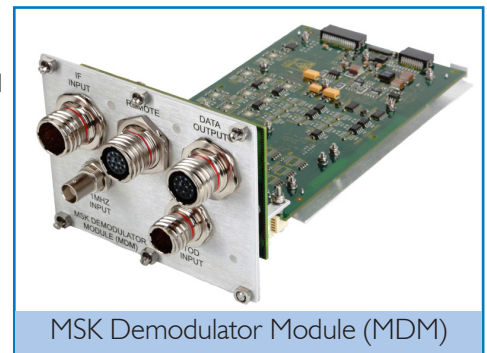
VLF/LF Demodulator Equipment



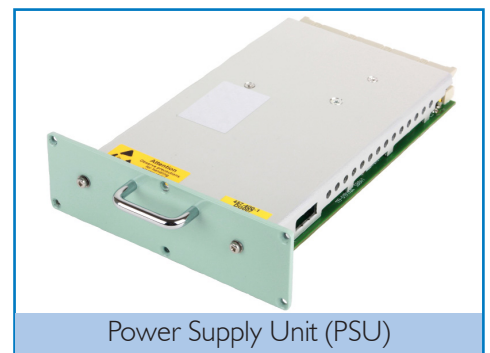
Drumgrange has been actively involved in the Strategic VLF Submarine Broadcast Communications program since the 1980s having developed bespoke items of equipment that span the entire VLF communications chain from headquarters, transmitter sites, to submarine platforms. We continue to support, refine and refresh those systems via long-term contracts with National Governments, NATO and Prime Contractors.

Key Features

- Demodulation Modes: FSK, MSK1, MSK2 or MSK4 at 50 or 75 (Option) baud
- IF input: 600 ohm, 0dBm, 1KHz IF signal
- Four Data Output Channels + Strobe per demodulator
- Data Formatting: NATO STANAG 5030/MIL-STD-188-140A
- Local or Remote Control: Serial Connection or Ethernet (Option)
- Dual Demodulator Configuration: Two independent VLF/LF Demodulators with separate IF feeds
- Dual power supplies, one per demodulator or dual redundant (Option)
- Audible Alarm with Mute Facility
- Time of Day input: PTFE (Station Standard), or NTP (Option)
- 1MHz and 1PPS inputs: PTFE (Station Standard)
- Extensive Built in Test Facilities
- Alarm relay contact outputs for external system
- Future STANAG 4724 compliant – hardware interfaces available



MSK Demodulator Module (MDM)



Power Supply Unit (PSU)



Front View

Technical Specification

Interfaces:

Characteristic	Description
IF Input:	1 KHz, 0dBm, 600 ohm
1 MHz Input:	1MHz, 13dBm +/- 2dBm, Sinewave, 50R, Harmonic Distortion < 40dB below fundamental
TOD Input:	V.II/RS422 (1 PPS/TOD TDI Format)
Data Output:	V.II/RS422 or V.28/RS232 Standard or Ethernet (Option)
Audio Output:	600 ohm (Headset compatible)
Fault Output:	Fault relay changeover contacts (volts free)
External Remote Control:	Individual RS-232 standard (V.28) serial remote control interfaces are provided for each Demodulator. Common Remote Control V.28/RS232 (Option) Common or Individual Ethernet (Option)

EMC:

Characteristic	Description
Radiated:	CE, EN 60945, MIL-STD-461F CE101, CE102 and CS114
Conducted:	CE, EN 60945, MIL-STD-461F RE101 and RE102
Susceptibility:	CE, EN 60945, MIL-STD-461F RS101, RS103 and CS109

Power:

Characteristic	Description	
Rack Mount:	Voltage:	93 – 253 VAC
	Frequency:	47 – 63 Hz
	Power Factor:	<25W in all modes of operation

Physical:

Characteristic	Description
Size (HxWxD):	2U x 482mm x 413mm
Weight:	Rack Mount: 12.0kg
Cooling:	Natural convection
Climatic:	Operating Temperature: 0°C to +55°C Storage Temperature: -20°C to +70°C Relative Humidity: 95% (non-condensing)



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