

# GD2039

# CHELTON

## 3 Port VHF/UHF Antenna

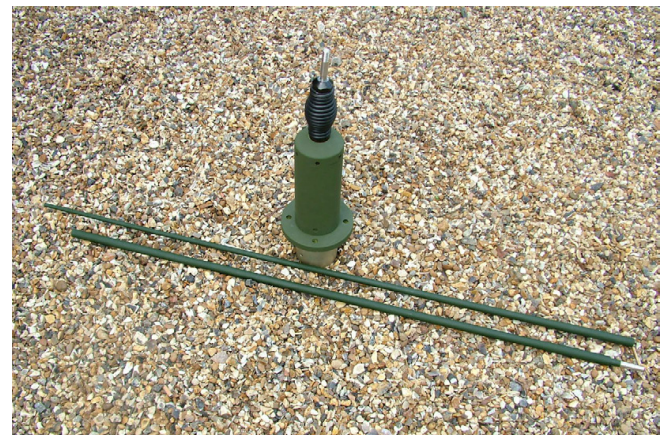
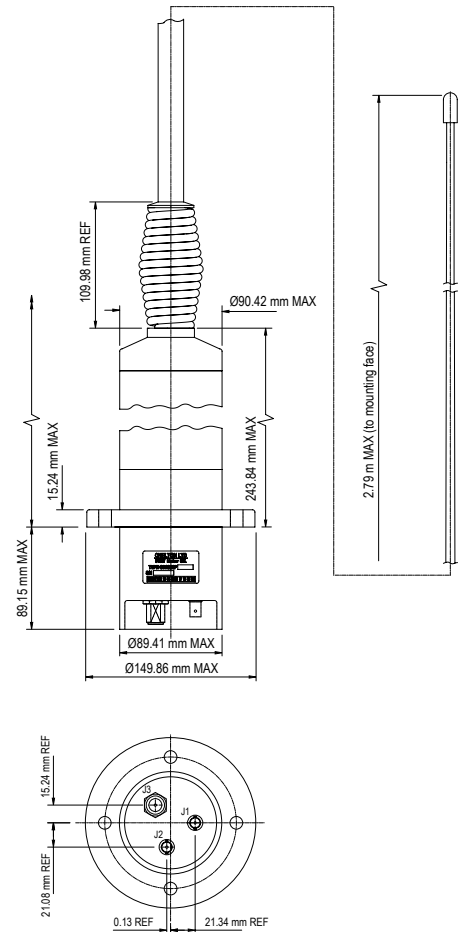
The **GD2039 3 Port VHF/UHF Antenna** provides communications in the frequency bands 30 MHz to 88 MHz

and 420 MHz to 450 MHz, and is intended for use in ground vehicular installations.

The antenna offers two isolated ports suitable for use with VHF/SINCGARS (Single Channel Ground and Airborne Radio System) tactical radios. The third isolated port is suitable for use with Enhanced Position Location Reporting System

(EPLRS) applications. The **GD2039** is configured as a shunt fed EPLRS monopole surmounted by an elevated monopole to fulfil the VHF/SINCGARS function.

The EPLRS element is housed in a composite cylinder that is mounted onto an aluminium alloy baseplate. The VHF element is provided by the detachable, spring mounted whip, which is made up of two Glass Reinforced Plastic sections.



## 3 Port VHF/UHF Antenna

### ELECTRICAL

<b>Frequency</b>	30 MHz - 88 MHz	VHF (2 ports)
	420 MHz - 450 MHz	EPLRS (1 port)
<b>Gain</b>	-6.5 dBi	30 MHz
	-2.5 dBi	40 MHz
	-3.0 dBi	50 MHz
	-3.5 dBi	60 MHz
	-4.5 dBi	70 MHz
	-3.5 dBi	80 MHz
	-5.5 dBi	88 MHz
	≥ 2 dBi average	420 MHz - 450 MHz
<b>Polarisation</b>	Predominantly vertical when vertically mounted	
<b>Radiation Pattern</b>	Essentially omnidirectional in azimuth	
<b>Power Rating</b>	70 W CW max	30 MHz - 88 MHz
	10 W CW max	420 MHz - 450 MHz
<b>Impedance</b>	50 ohm (nominal)	
<b>VSWR</b>	2.5:1 max	30 MHz-88 MHz
	2.25:1 max	420 MHz-450 MHz
<b>Isolation</b>	≥ 12.5 dB	VHF to VHF
	≥ 40 dB	VHF to EPLRS
<b>Bit Resistance (EPLRS)</b>	7,500 ohm ± 10%	
<b>Connectors</b>	VHF:	BNC Type Female
	VHF:	BNC Type Female
	EPLRS:	N Type Female

### MECHANICAL

<b>Height</b>	
<b>Overall</b>	2.79 m (maximum)
<b>Whip</b>	2.43 m (maximum)
<b>Width</b>	150 mm (maximum)
<b>Weight</b>	3.93 kg
<b>Mounting</b>	4 holes fixed location

### ENVIRONMENTAL

<b>High Temperature</b>	MIL-STD-810F, Method 501.4, Procedures I and II
	Operational: +49°C
	Storage: +71°C
<b>Low Temperature</b>	MIL-STD-810F, Method 502.4, Procedures I and II
	Operational: -31°C
	Storage: -33°C
<b>Altitude</b>	MIL-STD-810F, Method 500.4, Procedures I and II
	Operational: 4876.8 m
	Storage: 10,668 m
<b>Shock</b>	MIL-STD-810F, Method 516.5, Procedures I, IV, V and VI
Functional:	20 g, 11 ms, terminal sawtooth
Transit Drop:	26 drops from 122 cm
Crash Hazard:	40 g, 11 ms, terminal sawtooth
Bench Handling:	Four drops with one end lifted four inches off the surface
<b>Impact Shock</b>	25 impacts in any direction against a 4 inch by 4 inch oak beam with the vehicle travelling at 25 mph
<b>Vibration</b>	MIL-STD-810F, Method 514.5, Procedure I
Category 5	Loose cargo in ground vehicles
Category 8	Cargo on propeller driven aircraft
Category 9	Cargo on helicopters
Category 10	Ship borne cargo
Category 11	Rail cargo
Category 20	Ground vehicle operation
<b>Humidity</b>	MIL-STD-810F, Method 507.4
	95% RH at 60°C
<b>Salt Fog</b>	MIL-STD-810F, Method 509.4, Procedure I
	2 cycles each comprising 24 hours exposure
<b>Fungus</b>	MIL-STD-810F, Method 508.5
<b>Magnetic Effect</b>	DO-160E, Section 15, Category Z
	Less than 1° deflection at 300 mm

