## 19-78

### CHELTON

### Lightweight ILS VOR/LOC Antenna

The 19-78 antenna, in conjunction with an appropriate phasing coupler unit, provides for reception of LOC (Localiser) and VOR (VHF Omni Range) signals.

The antenna comprises a pair of blades for horizontally opposed mounting on an aircraft, one on each side of the vertical stabiliser or fuselage.

The balanced loop design assures an omnidirectional radiation pattern at the horizon to obtain maximum signal for standard VOR/LOC.

The 19-78 is designed to be used with a Type 7-47-1 or 7-78 coupler.

The antenna is available with either a TNC or BNC RF connector.

Each loop assembly is housed within a one-piece glass-fibre moulding. The loop assembly is protected against the effects of moisture.





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### Lightweight ILS VOR/LOC Antenna

#### **ELECTRICAL**

Frequency   108 MHz - 118 MHz     VSWR   ≤ 5.0:1     Polarisation   Essentially horizontal when mounted horizontally     Radiation   Nominally omindirectional in azimuth     Power Rating   25 W CW maximum 30 MHz-512 MHz 1.5 kW peak 0.04% duty cycle1000 MHz-1100 MHz     Impedance   50 ohm (nominal)     Connectors   Model   Connector 19-78     Instrume   TNC Female 19-78B   BNC Female			
Polarisation   Essentially horizontal when mounted horizontally     Radiation   Nominally omindirectional in azimuth     Power Rating   25 W CW maximum 30 MHz-512 MHz     1.5 kW peak 0.04% duty cycle1000 MHz-1100 MHz     Impedance   50 ohm (nominal)     Connectors   Model   Connector     19-78   TNC Female	Frequency	108 MHz - 118 MHz	
Radiation   Nominally omindirectional in azimuth     Power Rating   25 W CW maximum   30 MHz-512 MHz     1.5 kW peak 0.04% duty cycle1000 MHz-1100 MHz     Impedance   50 ohm (nominal)     Connectors   Model   Connector     19-78   TNC Female	VSWR	≤ 5.0:1	
Power Rating   25 W CW maximum   30 MHz-512 MHz     1.5 kW peak 0.04% duty cycle1000 MHz-1100 MHz     Impedance   50 ohm (nominal)     Connectors   Model   Connector     19-78   TNC Female	Polarisation		rizontal when mounted
1.5 kW peak 0.04% duty cycle1000 MHz-1100 MHz   Impedance 50 ohm (nominal)   Connectors Model Connector   19-78 TNC Female	Radiation	Nominally or	nindirectional in azimuth
Impedance 50 ohm (nominal)   Connectors Model Connector   19-78 TNC Female	Power Rating	25 W CW max	imum 30 MHz-512 MHz
ConnectorsModelConnector19-78TNC Female			0.04% duty cycle1000 MHz-1100
19-78 TNC Female	Impedance	50 ohm (nom	inal)
	Connectors	Model	Connector
19-78B BNC Female		19-78	TNC Female
		19-78B	BNC Female

#### **ELECTRICAL**

Dimensions (LxWxH)	150 x 365 x 48.3 mm (maximum)	
Weight	0.5 kg (maximum)	
Mounting	4 holes fixed location	

#### **ENVIRONMENTAL**

Altitude	RTCA/DO160C, Section 4, Category D2
	15240 metres
Temperature	RTCA/DO160B, Section 4, Category C2
	Operational: -55°C to +70°C
	Occasional: -55°C to +70°C
	Storage: -55°C to +85°C
	RTCA/DO160C, Section 4, Category D2
Temperature Variation	RTCA/DO160B, Section 5, Category A
Humidity	RTCA/DO160B, Section 6, Category C
Operational	RTCA/DO160B, Section 7
Shocks and Crash Safety	Operational: 18 shocks, 6 g, 11 ms
crash salety	Crash Safety: 6 shocks, 15 g, 11 ms (Impulse)
	Crash Safety: 12 shocks, 3 s in 6 directions (Sustained)
Vibration	RTCA/DO160B, Section 8, Categories L, J, R
Explosion Proofness	RTCA/DO160C, Section 9, Category X
Waterproofness	RTCA/DO160B, Section 10, Category R
Fluids Susceptibility	RTCA/DO160C, Section 11, Category F
Sand and Dust	RTCA/DO160C, Section 12, Category X
Fungus Resistance	RTCA/DO160C, Section 13, Category F
Salt Spray	RTCA/DO160C, Section 14, Category X
Magnetic Effect	RTCA/DO160B, Section 15, Zone Z

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