

HF Vehicle Half Loop Antenna 2-30 MHz

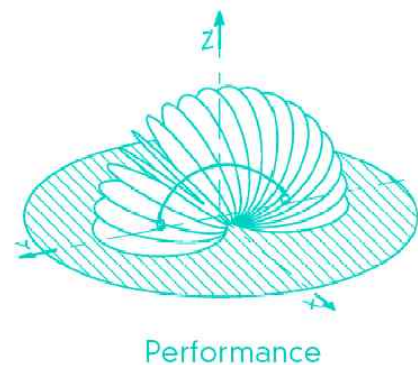
Type 3160-99

Racal Antennas Limited has many years of experience in design, development and manufacture of vehicle antennas for the military user. They have been developed after consultation with military users and radio manufacturers worldwide.

The 3160-99 is an HF (2-30MHz) 125W half-loop antenna offers substantial improvements over existing tactical whip antennas by providing an extra NVIS capability. Field tests between 50 and 150km have shown improvements of + 10 to + 20dB. It allows communications at all ranges from 0 to 1600km, eliminating the skip zone found in other antennas. Its radiation pattern is nearly hemispherical when fitted on a small vehicle. Providing a fast digital tune and a wideband reception, it can potentially handshake with any radio operating in fixed frequency (FF), frequency hopping (FH) and Automatic Link Establishment (ALE). It is Stanag 444 and FED STD 1045 and MIL STD 188-141A and B compliant. Producing a vertically and horizontally polarised signal, it replaces vertical and bent whip, inverted vee or dipole antennas using ground wave and ionospheric waves at short, medium (NVIS) and long range. Its high frequency selectivity improves the quality in signal-to-noise ratio, allows reception near high voltage power lines, and reduces spurious transmission. Lightweight, easy to install and dismantle, it can be fitted between two 4" ½ NATO whip supports, or it can be quickly fastened between two flat surfaces. Its vehicle retains aerotransportability.



Electrical Specification	
Frequency Range	2 - 30 MHz
Power Rating	125 W Average
Bandwidth	3.5 kHz
Input Impedance	50 Ω
VSWR	2.5:1
Channel Switching	5 ms after synchro Immediate in wideband RX
Gain on conductive plane	> - 15dBi @3.5 MHz > - 3dBi @ 30 MHz
Power Supply	12 – 32 V negative grounded
Consumption	TX: 25 W RX Scan: 8 W
Temperature Range	-40°C to +70°C
Mechanical Specification	
Dimensions	Whip length – 2.8m Overall length – 1.7 to 2.4m (adjustable) Overall length – 0.8 to 1.0m (adjustable)
Weight	9kg (antenna) 4kg (remote ACU)



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Racal reserve the right to vary in detail from the description and specification in this publication.