

# SMC Mobile NVIS Loop Antenna



Frequency Range: 3.0 - 15.0 MHz  
 Unit Weight: 15kg excluding fixings  
 Retracted: 1.7m x .95m x .12m  
 Deployed: 1m height

## The NEW Rugged Loop, designed with strength and durability in mind.

Traditional vertical 'whip' antennas fitted to vehicles for high-frequency communication suffer from a 'skip zone', where little or no communication is obtainable in a given area.

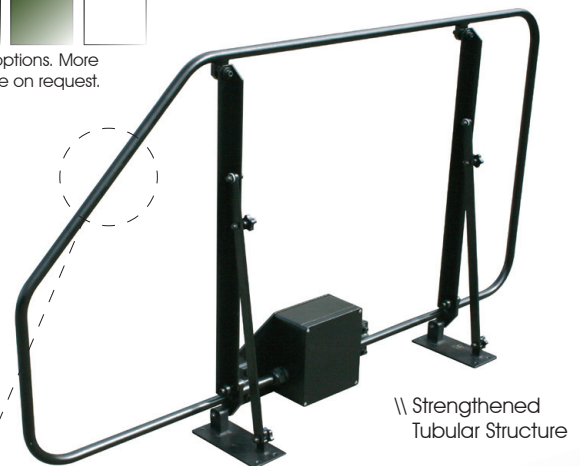
The SMC Mobile HF Loop Antenna, developed for NVIS (Near Vertical Incidence Skywave) communication across 3-15MHz, overcomes these limitations by having high radiation efficiency and no skip zone whatsoever.

Capable of automatically tuning across its frequency range in less than a 50th of a second, it is compatible with virtually any HF transceiver including frequency hopping types without the need for a separate control.

Based on the tried and tested SMC mobile NVIS loop which is in use by organisations throughout the world, this latest version incorporates a significant upgrade to ruggedized thick-walled tubing for performance and durability.



Colour options. More available on request.



\\ Strengthened Tubular Structure

The front edge of the loop is angled to deflect low overhead obstacles such as small tree branches.

The standard loop roof bar attachment is designed for roof bars 32mm x 22mm in cross section. However attachments can be manufactured to suit your individual requirement.

### Test Specification:

MIL-STD-810E: Method 514.4:  
 Vibration, Category 8 - Ground  
 Mobile, to Figure 514.4-16 Minimum Integrity Test General.

### Other versions are available for:

- » Vehicle roof-bar fitment with a 'fold-down' facility
- » Side mounting on the vehicle.

TX Power Input Range	1.5-200 Watts PEP
Continuous TX CW/Data Power	80W
Number of operating channels	Unlimited
Non-Volatile Channel Memory Addresses	170 (165 TX, 5 RX)
Input Impedance Range	50 ohms nominal
VSWR	Typically less than 2:1 when tuned, (3:1 max)
DC Operating Range	10.0V to 18.5 V DC, (+13.8 V DC nominal) 24V DC nominal also available on request
DC Current	230 mA average
Initial tuning response time (initial memory setting only)	2-20 sec per channel
Recurrent tuning response time (on-air use inc. freq hopping)	Typically less than 10 ms per channel
Operational Temperature	-35° to +70°C
Coaxial cable	RG58 5m in length
Power cable	2 Core Screened, 5m in length

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# SMC Fixed Station Loop Antenna



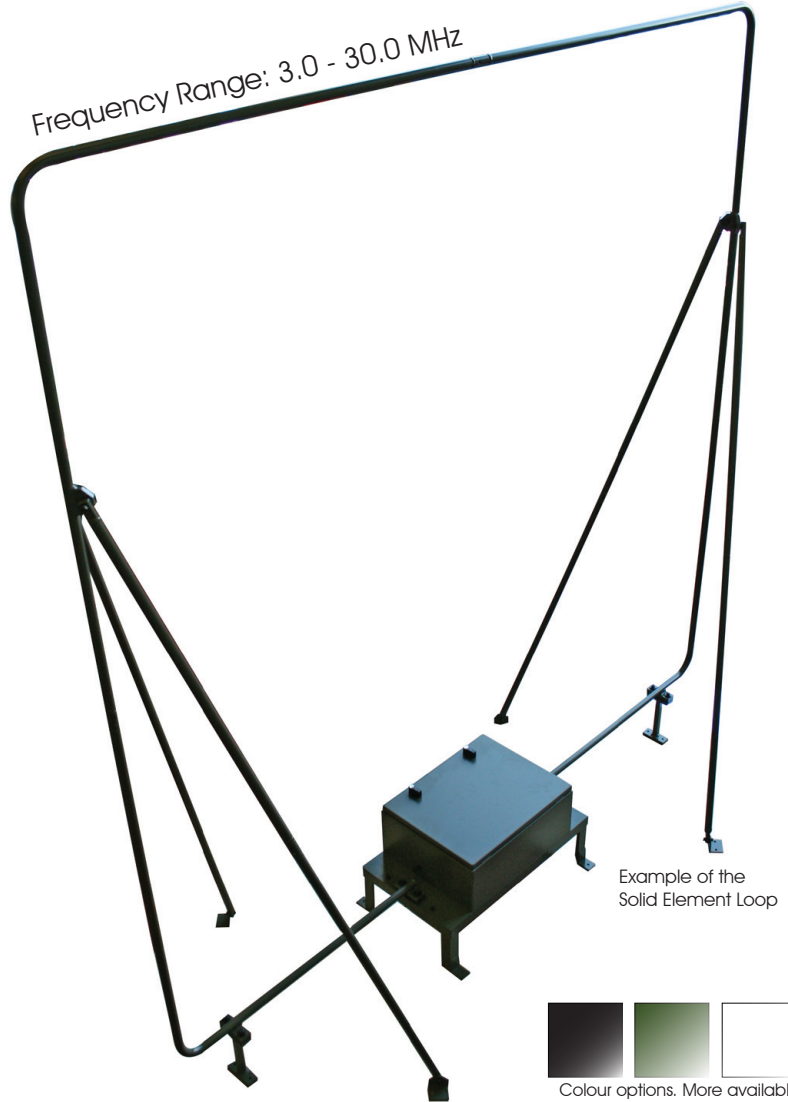
## Operating both NVIS and Long Distance Sky Wave

As well as the compact mobile HF loop, two versions of fixed station loop antennas are also available, which operate on both NVIS and long distance sky-wave propagation modes across 3-30MHz.

The two versions are a wire element loop with 3m sides, and a solid element loop with 2.5m sides, each offering similar high efficiency. These are ideal for use where space is limited, and rival the performance of much larger wideband HF wire antennas.



Example of the Wire Element Loop



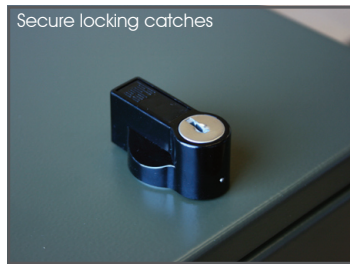
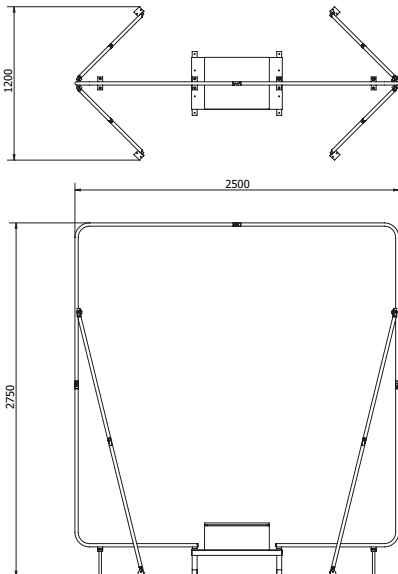
Example of the Solid Element Loop



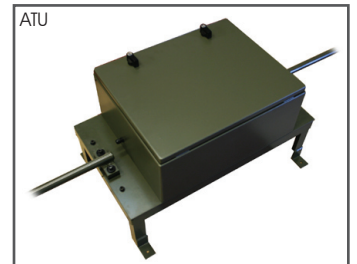
Colour options. More available on request.

Like the mobile loop, the fixed station loop is capable of automatically tuning across its frequency range in less than a 50th of a second, it is compatible with virtually any HF transceiver including frequency hopping types without the need for a separate control.

Other sizes can be made upon request.  
Design changes may be made at any time.



Secure locking catches



ATU

TX Power Input Range	1.5-200 Watts PEP
Continuous TX CW/Data Power	80W
Number of operating channels	Unlimited
Non-Volatile Channel Memory Addresses	170 (165 TX, 5 RX)
Input Impedance Range	50 ohms nominal
VSWR	Typically less than 2:1 when tuned, (3:1 max)
DC Operating Range	10.0V to 18.5 V DC, (+13.8 V DC nominal) 24V DC nominal also available on request
DC Current	900 mA average
Initial tuning response time (initial memory setting only)	2-20 sec per channel
Recurrent tuning response time (on-air use inc. freq hopping)	Typically less than 10 ms per channel
Operational Temperature	-35° to +70°C
Control cable	Standard 50 ohm coaxial cable plus DC feed 3m in length

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