

5200-9003

CHELTON

VHF Ground Spike Antenna

The 5200-9003 VHF Ground Spike Antenna kit contains the equipment required to extend the operating range of a portable manpack radio.

The kit also allows personnel to operate the radio from a secure position (such as a shell scrape, tent or building) while the antenna is some distance away.

By connecting the antenna onto the Antenna Matching Unit (AMU), securing the AMU onto the ground spike inserted into the ground, and connecting the radio using the coaxial cable, the radio operator can remain concealed.

When poor earth conditions are encountered (on sandy or dry ground, for example) the performance of the antenna can be improved by attaching the ground radials and laying them out in a line away from the antenna.

To extend the operating range of the radio, the antenna-AMU assembly can be elevated onto the branch of a tree, the roof of a building or a 28 mm diameter mast. The AMU mates directly with Chelton's 5.4 metre portable mast, type 3025-900.

When elevating the antenna, better performance can be achieved by using the ground radials supplied. Best performance can be obtained with the ground radials at 45 degrees to the vertical. The vertical element is fed via a tuned circuit to enhance gain at 30 MHz, and a frequency dependent resistive pad network provides acceptable match at lower VHF frequencies.



Equipment	Qty	Part Number
2.3 metre VHF Whip	1	37306
Antenna Matching Unit (AMU)	1	37257
Ground Spike	1	37258
Radial/Guy	3	37302
Coaxial Cable (15 metres)	1	37304
Throwing Cord (20 metres)	1	37303
Carrying Case	1	37305

ELECTRICAL

The specifications in this section apply when the antenna is mounted in the ground mounted role or when mounted in the 5.4 metre manpack mast.

Frequency Range	30 MHz - 88 MHz
Polarisation	Vertical
Horizontal Radiation Pattern	Nominally omnidirectional
VSWR	3.5:1 (typically <3:1 dependent on ground conditions; <3.5:1 on 8 X 4 foot groundplane)
Impedance	50 ohm
Power Rating	25 W CW
Connector	BNC Female

Broadband UHF Antenna

MECHANICAL

Height	2.7 m (when ground mounted)
Size for Shipping (mm)	250 x 380 x 100
Weight (kg)	1.726 overall 0.220 antenna 0.143 ground spike 0.200 AMU 0.657 coaxial cable
Mounting Configuration	Ground or mast mounted

ENVIRONMENTAL

Temperature	Specification Temperature Operational: -40°C to +70°C Storage: -55°C to +85°C
Humidity	Up to 95% RH up to 55°C

