



NVIS

FG4200
SUPER
SKYSURFER

KEY FEATURES

- ELIMINATES COMMUNICATION GAPS OVER 0-500 km
- IMPROVES OPERATION IN MOUNTAINS & JUNGLES
- REDUCES JAMMING WARFARE EFFECTIVENESS
- MAKES DIRECTION FINDING DIFFICULT
- INCREASES GAIN BY 6-8dB
- CAPABLE TO HIGH RF POWER - 400W PEP
- COMPATIBLE WITH ALL 93XX ANTENNAS
- EASY TO INSTALL - FITS ANY VEHICLE
- RUGGED AND RELIABLE



SKIP ZONE

The sky wave radiation component of vertical short whip antenna is produced at low take-off angles and will reflect back to earth at 300-500 km distance, while the ground wave component of a radio wave becomes unusable at about 80 kilometers. Area between the maximum ground wave distance and the shortest sky wave distance is called skip zone. Depending on operating frequencies, propagation conditions and terrain features, the skip zone can start at 20 km and extend out to several hundred kilometers, making HF communications over most desired distances difficult or non-existent.

NVIS MODE

The Stealth FG4200 NVIS kit is an add-on accessory to enhance short range communications efficiency of Stealth 93XX Automatic Tuning Whip Antennas using Near Vertical Incidence Skywave (NVIS) mode. Longer and horizontal FG4200 NVIS whip increases signal level by additional 6-8dB and improves higher take-off angle radiation efficiency. Utilization of vertical take-off angles sky wave radiation component at frequencies below 10 MHz ensures most of vertically radiated RF energy is reflected back to earth at all angles and about the same strength over 0-500km distances, regardless terrain and vegetation conditions.

PROTECTION FROM ELECTRONIC WARFARE

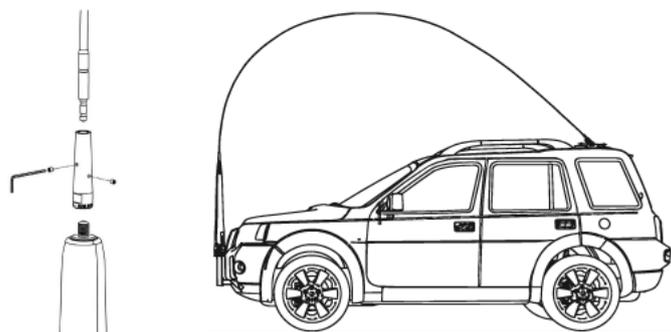
Ground-wave jammer signals are subject to path loss. It will be attenuated by terrain, while the sky-wave NVIS path loss will be constant and signal strength will not degrade. This will force the jammer to move very close to the target or put out more power. Either tactic makes jamming more difficult. As a counter measure, the NVIS station can successfully use very low power HF sets. This will result in much lower probabilities of intercept/detection (LPI/LPD) and providing jammer with correct coordinates.

FG4200 NVIS KIT APPLICATIONS

- The FG4200 NVIS KIT is recommended for use under following conditions:
- Operation in urban, mountainous and other not conducive to ground-wave HF communications areas.
- Operation in heavy wet jungle (or other areas of high signal attenuation).
- When prominent terrain features are not under friendly control.
- When operating against enemy ground-wave jammers and direction finders.
- In emergency communications where mobile groups arrive at distress area with existing channel presets.

ROBUST AND EASY TO USE

The tough design of the FG4200 NVIS kit has been proven through extensive field testing. Made from high quality flexible composites, the FG4200 is designed for sustaining hard knocks from tree branches and is easily transported in a rolled shape. Using standard package hardware and optional mounting options, it can quickly and easily be attached to a wide variety of vehicles or used in base station application.



SPECIFICATIONS

Frequency Range	1.5 to 16MHz
Mechanical length	4200mm (166 inch)
Wind Rating	150 km/h (90 mph)
Temperature Range	-45°C to +60°C (-50°F +140°F)
Weight	NVIS Whip 800g (1.8lbs), Shipping Weight 4.5kg (10lbs)
Color	Black (White for marine antennas)

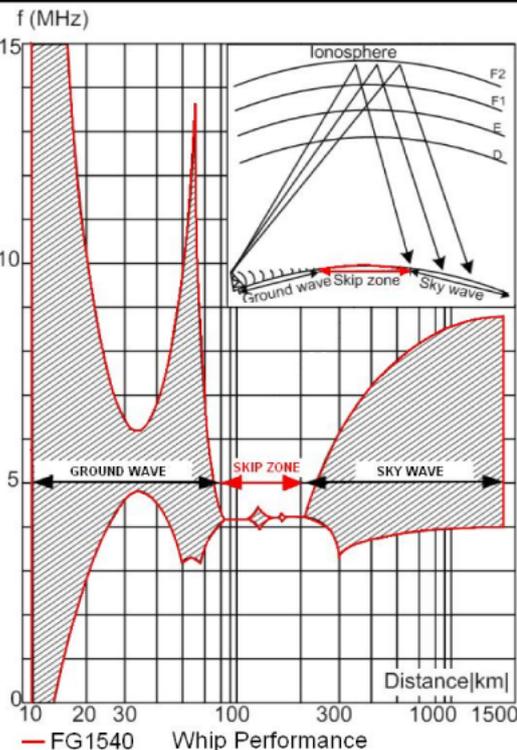
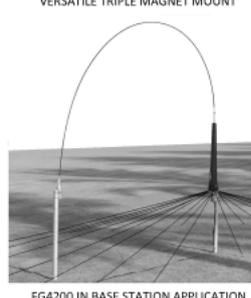
- Notes: 1. Specifications may change without prior notice. Please verify updated specifications on order.
2. With the FG4200 attached vehicle height will not exceed height with standard FG1540 whip.

STANDARD PACKAGE

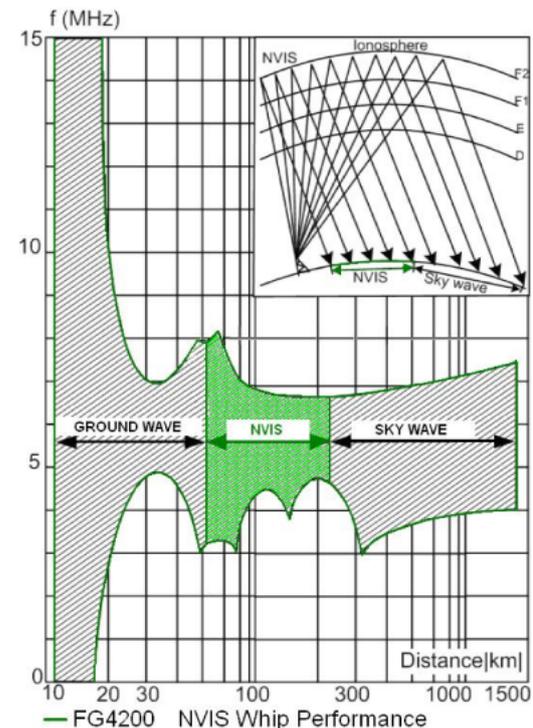
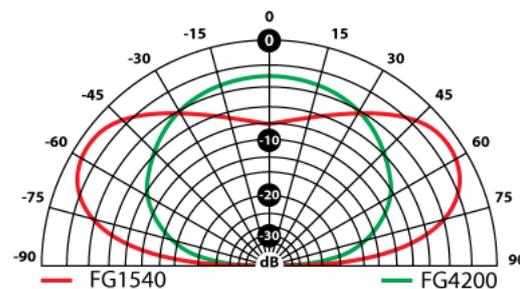


OPTIONAL ACCESSORIES

Note: NVIS Whip Mounting Options cost shall be added to the 9300.B35.080 Standard Package price.



Charts illustrate relative gain performance and communication ranges between FG1540 and FG4200 equipped antennas.



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