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# U.S. SPECIAL OPERATIONS FORCES
## Multi-Configurable Antenna Kit
# SOF230

MILITARY ANTENNA SOLUTIONS

The **SOF230** antenna was designed specifically for the **U.S. Special Operations Forces** for use in any environment that they may encounter. The antenna system has fifteen configurations including NVIS, Omnidirectional and Directional that cover short, medium and long range. The kit includes a counterpoise for use when poor ground conditions exist due to dry soil, such as desert conditions. The kit contains a 1:1 and 6:1 BALUN and terminating resistors that allow a broadband antenna to be erected if a tuner or coupler is not used or damaged in the field. All components are built to meet MIL-STD 810G and are extremely durable and long lasting.

The **SOF230** has been tested by the U.S. Special Operations Forces and strongly preferred by the groups that have used it in the field. They have noted many improvements over the former SORAK kit, including superior wire elements, BALUN design and the unique flexibility of this portable multi-configurable antennas kit to obtain good communications anywhere in the world.

With minimal training, the **SOF230** antenna can be rapidly erected in less than fifteen minutes using any suitable support. Built to military standards with easy-to-follow diagramatic instructions, the antenna can be used with HF man-pack or mobile transceivers for temporary or semi-permanent installations.



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# SOF230 Multi-Configurable Antenna Specifications

## ORDERING OPTIONS

Four versions are available, depending on transmitter power and accessories:

**SOF230** ..... 150W continuous power and 400W PEP
**SOF230/CW**..... 150W continuous power and 400W PEP with collapsible cable winder
**SOF230/1** ..... 500W continuous power and 1kW PEP
**SOF230/1/CW**..... 500W continuous power and 1kW PEP with collapsible cable winder

## GENERAL SPECIFICATIONS

| ELECTRICAL | |
|---|---|
| Frequency Range: | 1.6 - 30 MHz |
| Coverage: | Short Range = 0-150 km<br>Medium Range = 150-800 km<br>Long Range = 800+ km |
| Input Impedance: | Nominal 50 ohms |
| Power | SOF230 = 150W continuous 400W PEP<br>SOF230/1 = 400W continuous 1kW PEP |
| Polarization: | Horizontal or Vertical |
| **MECHANICAL** | |
| Materials: | Cords: 8 plait pre-stretched polyester<br>Conductor: PVC coated copper braid w/Kevlar high strength synthetic core<br>Resistors: Non-inductive wire wound<br>Balun Housing: GRP/Epoxy.w |
| Weight: | SOF230 = 15 lbs (6.8 kg); SOF230/1 = 18 lbs (8.2 kg) |
| Dimensions WxHxD (stowed): | 16.5 x 11.0 x 8.5 in (419 x 279 x 216 mm) |
| Connector Type: | SOF230 = Type BNC<br>SOF230/1 = Type N |
| Storage: | Nylon bag with handle and shoulder strap |
| Optional Accessories: | Quick deploy aluminum cable winder w/collapsible folding handle |

## SOF230 ANTENNA CONFIGURATIONS

The multi-purpose tactical antenna kit provides a flexible system from which one of the following 15 different HF antenna configurations can be quickly installed:

- 1/4 Wave Tuned Dipole
- Sloping Wire
- Crossed Dipole
- Inverted Vee
- Sloping Vee
- Base Fed Vertical
- Inverted "L"
- Bent Dipole
- Sloping Dipole
- Horizontal Dipole
- Beverage
- 250' Long Wire w/Counterpoise
- Vertical Half-Rhombic
- Folded Dipole
- Off Center Fed Dipole

Note: This antenna comes complete with a counterpoise for situations where poor ground conditions exist.

## HF ANTENNA SELECTION GUIDE

This is a comparison guide with competitor antennas showing the flexibility of the SOF230.

| | GROUND WAVE | SHORT (<500 MILES) | MEDIUM (500-1200 MILES) | LONG (>1200 MILES) | OMNIDIRECTIONAL | BIDIRECTIONAL | BISECTIONAL | HORIZONTAL | VERTICAL | WIDE | NARROW |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SOF230 | x | x | x | x | x | x | x | x | x | x | x |
| AS-2259/AS-2268 | | x | | | | | | | | x | |
| OE-85/86 | | | x | x | x | | | x | | x | |
| ABP-ANT-HF4119 | x | x | x | | | x | | x | x | | x |
| C&S MTA-XL | x | x | x | | | x | | x | x | | x |
| INVERTED "V" | x | x | x | | | x | | x | x | | x |
| LONG WIRE | x | | x | x | | x | x | | x | x | |
| INVERTED "L" | x | x | x | | x | x | | x | x | | x |
| SLOPING "V" | | | x | x | | x | | | x | x | x |
| SLOPING WIRE | x | | x | | | x | | | x | x | |
| VERTICAL HALF RHOMBIC | x | | x | x | | | x | | x | x | |
| HALF WAVE DIPOLE | | x | x | | | x | | x | | | x |
| VERTICAL WHIP | x | | | | x | | x | | x | x | |

Quoted performance parameters are provided to offer typical or range values only and may vary as a result of normal manufacturing and operational conditions. Extreme operational conditions and/or stress on structural supports is beyond our control. Such conditions may result in damage to this product. Improvements to product may be made without notice.

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