Transformer HF Long Wire

SKU# ANT-TRNSF-HFLW

MAN-PACK HF NVIS ANTENNA

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The ANT-TRNSF-HFLW is a broadband matching long wire antenna kit for manpack communications in NVIS propagation conditions. Its is composed of the radiating wire and the 1:9 Un-Un Transformer matching unit.

Benefits

The ANT-TRNSF-HFLW antenna is light, portable and will provide a far better signal quality in the skip sone when a whip antenna is not effective.

The antenna does not require an elevation kit such as a mast since deployment could be on or just above the ground.

Parts List in Kit:

Transformer
Radiator wire
Sectional Whip (optional)
Counterpoise cable
Carry Bag
Quick Reference guide.

Specification	Typical Value
Frequency Range	1.6-30Mhz
Power Handling	100W SSB
Polarization	Skywave (NVIS)
Matching SWR	<1:2.5 typical
Mounting to Radio	Modified BNC-M / M25x1.25 Threaded spindle
Radiator Wire Length	... to ... m
Radiator wire attachment	M5 captive brass thumb screw for wire or spade
Radiator whip Length	2.7 – 5m sectional whip
Radiator Whip attachment	M14 x 1.5 thread
Grounding Point	4mm Diameter hole for counterpoise wire.
Weight	350g
Temperature range	-40 .....+70°C

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Deployment Conditions:

1. The antenna is optimized for NVIS deployment perpendicular to the target radio side on various heights depending on the soil density, dampness and surrounding vegetation.
2. The radiating wire element can be deployed in a reduced or full length on the ground when dry, or slightly above (<1m) if soils is damp.
3. In some instances, a sectional whip antenna can be installed in place of the wire. (DX communications)
4. The radiating wire should be elevated in sloping or inverted end fed configuration in some situations where the soil is highly absorbent.
5. The Matching Transformer unit has a position to attach a counterpoise ground wire which would provide improves performance in some instances

Deployment Procedure: Long Wire

1. Attach the Transformer to the radio.
2. Unroll the Long Wire radiating element on the ground perpendicular to the target communication direction.
3. Attach the Long Wire radiating element spade connector to the Transformer at the brass thumb screw.
4. Hook the strain relieve carabiner to the eyelid on opposite side.
5. Attach the counterpoise wire by inserting the banana connector to the ground pin hole and lay it out away from the radio.
6. PTT the radio and observe SWR figure on a whistle.
7. It should be below 2.5 if correct length is deployed.
8. Roll back the spindle to shorten the wire until VSWR of 2.5 is obtained.
9. Press the Antenna Tuner and after tuned, VSWR of about 1.5 should be obtained.
10. Radio and antenna are ready to communicate.
11. Antenna radiating wire may now be elevated a bit or rotated horizontally to optimize signal quality.
12. Retune the antenna from time to time to optimize.

Deployment Procedure: Vertical Whip

1. Attach the Transformer to the radio.
2. Install a vertical Whip on top of the Transformer.
3. Attach the counterpoise wire by inserting the banana connector to the ground pin hole
4. PTT the radio and observe SWR figure on a whistle.
5. It should be below 2.5 if correct length is deployed.
6. Press the Antenna Tuner and after tuned, VSWR of about 1.5 should be obtained.
7. Radio and antenna are ready to communicate.
8. Antenna radiating element may now be lowered perpendicular and rotated horizontally to optimize signal quality.

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