

PRELIMINARY

Overview

Southwest Antennas Part # 1000-045 is an omni-directional blade monopole antenna designed for use with manpack and hand-held military radio systems operating in the 30 - 88 MHz VHF band. This antenna includes a TNC(m) RF connector, as well as an integrated 9" flexible gooseneck base.

The unique blade design allows the antenna to bend and return to vertical when encountering objects such as tree limbs and branches. The antenna design allows the product to fold in on itself for compact storage and transportation and for body worn applications when the operator cannot have the antenna fully extended. Disengaging the product's velcro strap allows for rapid deployment and in its extended position allows for maximum RF link distance and communication quality. An integrated gooseneck base offers flexible positioning options for the radio operator.

Note: Matching network can be modified by Southwest Antennas to optimize antenna performance on specific radio systems. Contact Southwest Antennas to discuss custom tuning needs.

Features:

- Rugged design for harsh outdoor environments
- Omni-directional radiation pattern
- 30 - 88 MHz frequency coverage
- SINCGARS - Single Channel Ground and Airborne Radio System compatible
- 50 Ohm impedance
- TNC(m) non-rotating RF connector
- Vertically (linear) polarized
- Optimized to several radio chassis counterpoise sizes
- Multi-blade construction with rugged heat shrink sleeve
 - Self-erecting for rapid deployment
 - Compact storage and transport
 - Velcro strap to secure blade while folded
- Versatile on and off body use
- Integrated low pass filter for FM broadcast band rejection
- Gooseneck base for flexibility
- Rugged end cap for eye protection
- Low visibility / reflection matte black finish



PRELIMINARY

Antenna Specifications

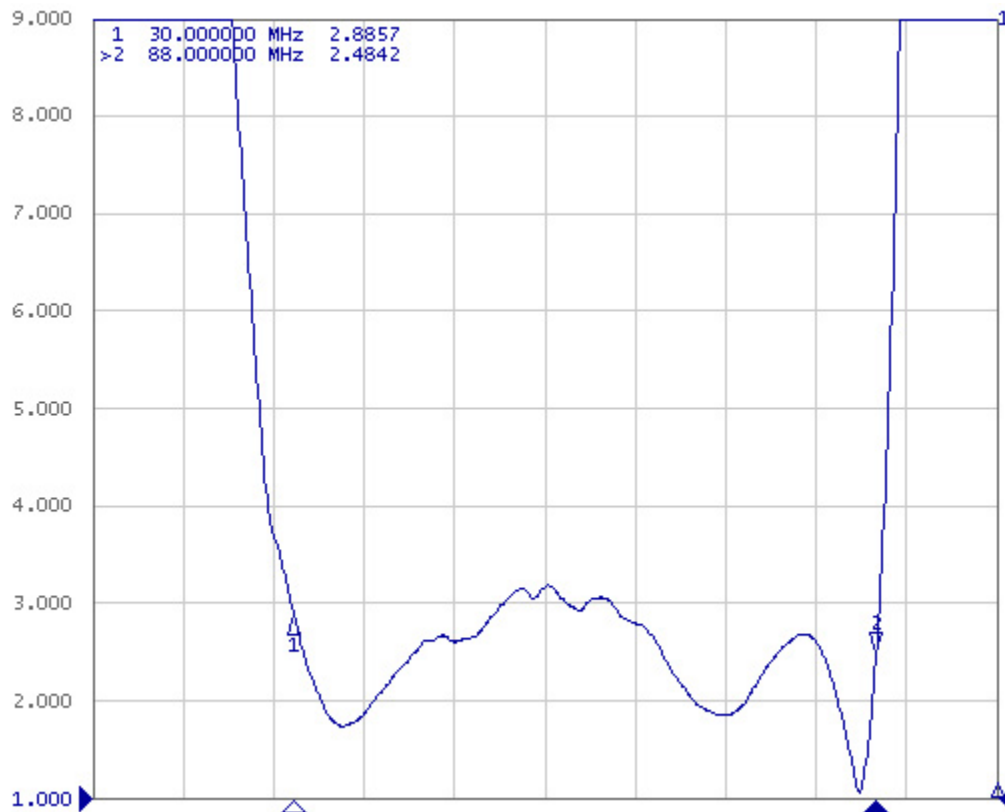
Parameter	Value	Units	Tolerance
Antenna Pattern	Omni Antenna		
Frequency Band	VHF		
Impedance	50	Ohms	
Minimum Frequency	0.03 / 30	GHz / MHz	
Maximum Frequency	0.088 / 88	GHz / MHz	
Frequency Bandwidth	0.058 / 58	GHz / MHz	
Maximum VSWR	3.2:1	Ratio	
Maximum Gain	-8	dBi	at 30 MHz (-3 dBi at 60 MHz, -4 dBi at 88 MHz)
Polarization	Vertical (Linear)		
Horizontal (AZ) Beamwidth	360	Degrees	
Antenna Labeling	Heat Shrink Label		
Color	Black matte finish		
Spring or Gooseneck	Gooseneck		
Gooseneck Length	9.00 / 228.60	inches / mm	±.13"
Gooseneck Diameter	0.46 / 11.68	inches / mm	
RF Connector Type	TNC(m)		
Operating Temperature Range	-40 to +85	C	
Product Length	49.00 / 1,244.60	inches / mm	Maximum when fully extended
Product Diameter	0.98 / 24.89	inches / mm	at base (.800" end cap)
Product Weight	12.0 / 340.2	oz / grams	Estimated maximum

PRELIMINARY

Filter Specifications

Parameter	Value	Units	Tolerance
Filter Type	Low Pass Filter		
Filter Min Frequency	30		
Filter Max Frequency	88		
Insertion Loss	<1	dB	30 - 88 MHz
Rejection 1	10	dB	Minimum, 92 - 106 MHz

PRELIMINARY



VSWR measurement across antenna's operational frequency range

PRELIMINARY



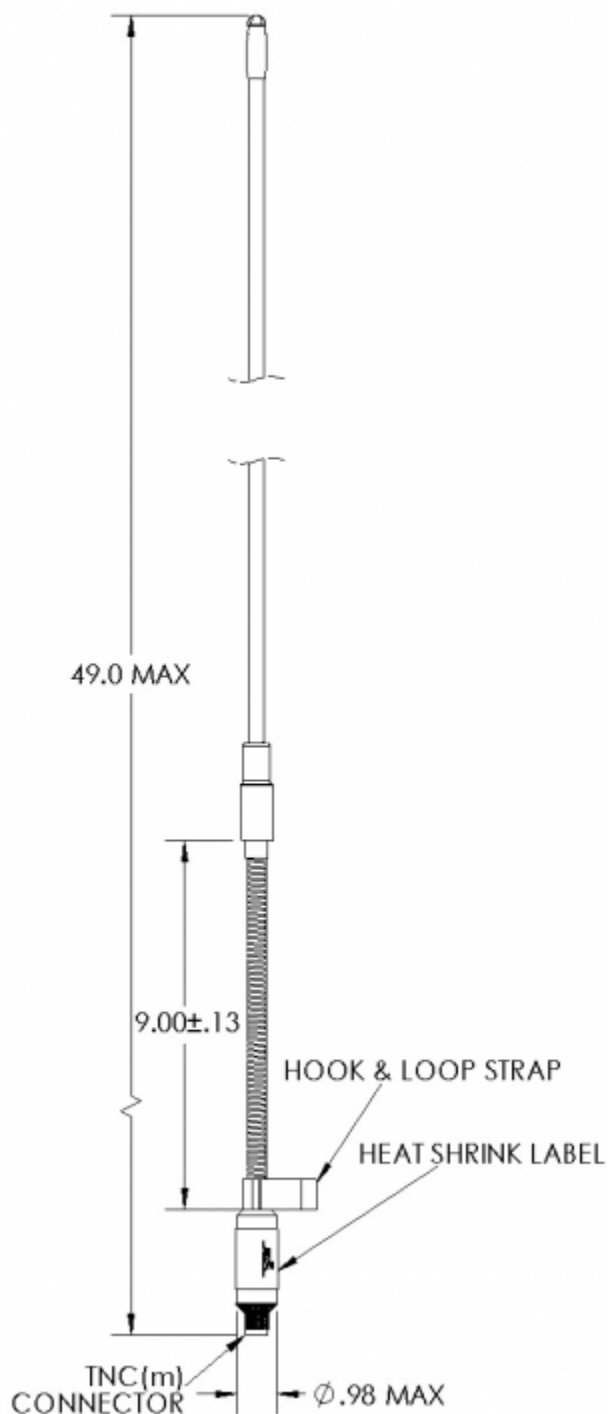
Antenna shown in folded configuration

PRELIMINARY



Antenna shown deployed / unfolded configuration

PRELIMINARY



Engineering Drawing

All dimensions are in inches