

**SB-V16 /  
SB-V35****VERTICAL HF WHIP  
ANTENNAS**

*for use in shelter,  
vehicular, deployable  
and fixed-site  
applications*

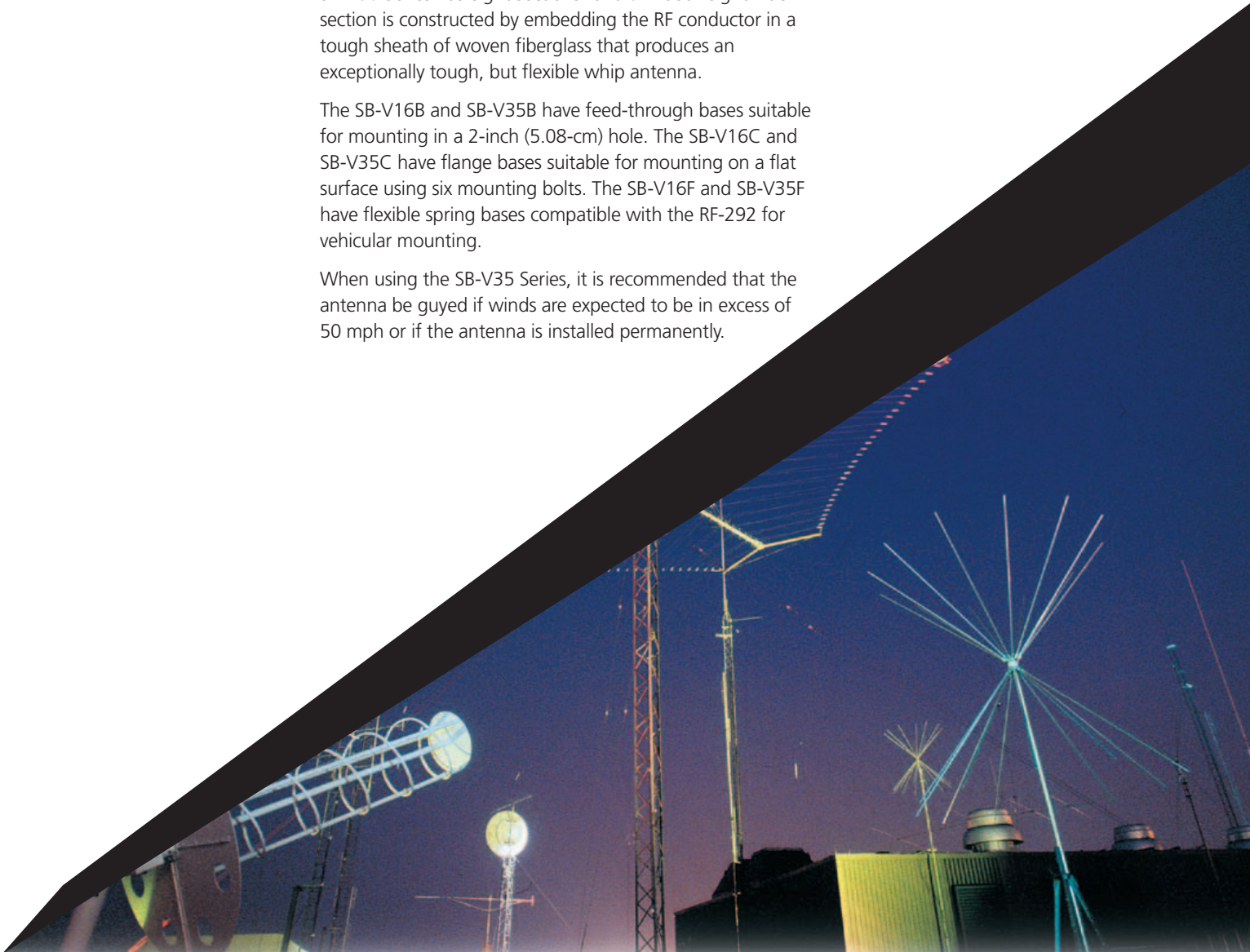


The SB-V16 / SB-V35 Series provide easily assembled and erected vertical HF whip antennas. These provide omnidirectional low-angle radiation patterns for ground-wave and skywave propagation from 2 to 30 MHz. They can be assembled and erected by one man in minutes. Broadband operation does require an antenna couplers such as the RF-382 or RF-2601 Series.

The SB-V16 / SB-V35 Series HF Whip Antennas consist of an antenna base and tapered 4-foot (1.2m) sections. The SB-V16 Series has four whip sections for a 16-foot height and the SB-V35 Series has eight sections for a 32-foot height. Each section is constructed by embedding the RF conductor in a tough sheath of woven fiberglass that produces an exceptionally tough, but flexible whip antenna.

The SB-V16B and SB-V35B have feed-through bases suitable for mounting in a 2-inch (5.08-cm) hole. The SB-V16C and SB-V35C have flange bases suitable for mounting on a flat surface using six mounting bolts. The SB-V16F and SB-V35F have flexible spring bases compatible with the RF-292 for vehicular mounting.

When using the SB-V35 Series, it is recommended that the antenna be guyed if winds are expected to be in excess of 50 mph or if the antenna is installed permanently.



## **Electrical**

- **Frequency Range**  
2 to 30 MHz with RF-382 or RF-2601  
Antenna Coupler
- **RF Power Capacity**  
-B: 400 watts  
-C and -F: 1000 watts
- **Input Impedance**  
Compatible with RF-382 or RF-2601 Series  
Antenna Coupler
- **Radiation Pattern**  
Elevation: see radiation patterns below  
Azimuth: omnidirectional
- **Polarization**  
Vertical
- **VSWR**  
In accordance with RF-382 and RF-2601  
Coupler Specifications
- **Gain**  
SB-V35: >2 dBi  
SB-V16: >0 dBi

## **Environmental**

- **Temperature**  
Operating: -40°C to + 60°C
- **Relative Humidity**  
0 to 100%
- **Wind**  
SB-V35: -45 mph without guys  
-100 mph with guys

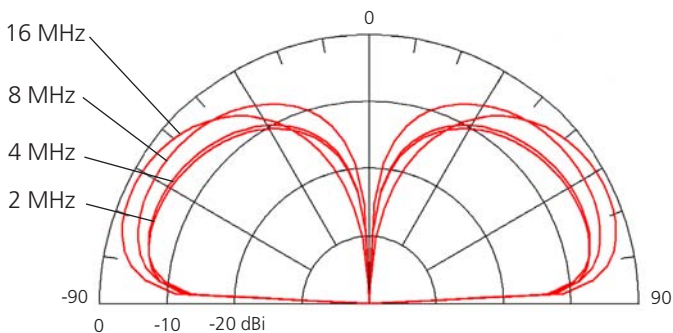
## **Mechanical**

- **RF Connector**  
-B and -F: threaded brass rod (1/4" by 20 UNC)  
-C: side feed with termination band
- **Weight**  
SB-V16B: 5 lbs (2.3 kg)  
SB-V35B: 11 lbs (5 kg)  
SB-V16C: 9 lbs (4.1 kg)  
SB-V35C: 15 lbs (6.8 kg)  
SB-V16F: 14 lbs (6.4 kg)  
SB-V35F: 20 lbs (9.1 kg)
- **Mounting Interface**  
SB-V16B or SB-V35B: Feed through base (2" hole,  
1.5" thread depth, 12 NF thread)  
SB-V16F or SB-V35F: Spring Base compatible with  
RF-292 (4-3/8" holes equally  
spaced on 4.5" diameter)  
SB-V16C or SB-V35C: Flange Base (6-13/32" hole equally  
spaced in a 7.75" diameter)
- **Installation Time**  
2 minutes, 1 person

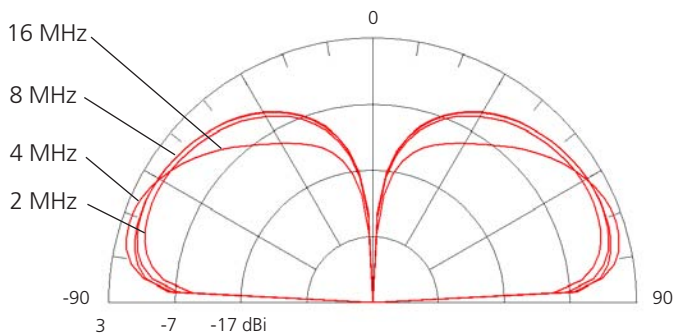
## **Options**

- **RF-351-09**  
Antenna Siting Kit with ground radials and coupler  
feed cables
- **SB-V/GND**  
Whip Ground Kit with ground radials and ground rods
- **RF-1980F-AT001**  
Tilt Whip Adapter with spring base
- **RF-1980-AT001**  
Tilt Whip Adapter
- **RF-292**  
Universal Antenna Mount for vehicles

## **Radiation Patterns Over Average Ground**



**SB-V16 above 8-18 Ground Radials**



**SB-V35 above 8-18 Ground Radials**

Specifications are subject to change without notice.