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.
## Specifications for the SB-V16 / SB-V

<table>
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<tr>
<th><strong>Electrical</strong></th>
<th><strong>Mechanical</strong></th>
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</thead>
<tbody>
<tr>
<td><strong>Frequency Range</strong></td>
<td>2 to 30 MHz with RF-382 or RF-2601 Antenna Coupler</td>
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</tbody>
</table>
| **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 |
| **VSMR** | In accordance with RF-382 and RF-2601 Coupler Specifications |
| **Gain** | - SB-V35: > 2 dBi  
- SB-V35: > 2 dBi |
| **RF Connector** | 2 to 30 MHz with RF-382 or RF-2601 Antenna Coupler |
| **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-5351-AT0xx: Antenna Coupler Siting Kits  
SB-V/GUY: Antenna Guy Rope Assembly  
RF-1980F-AT001: Tilt Whip Adapter with spring base  
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**

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**Environmental**

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