**The Stalker Surface Velocity Radar (SVR)**

**General Specifications**

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| Type | Surface Velocity Radar Sensor |
| Operating Frequency | 34.7 GHz (Ka-Band) |
| Stability | +/-100 MHz |
| Power Requirements | **Voltage:** 9-16 VDC  **Current:** (at 12 VDC nominal) Transmitter on: 470 mA Transmitter off: 100 mA |
| Environmental | Operating: -22° F (-30° C) to +158° F (+70° C) , 90% relative humidity, Non-operating: -40° F (-40° C) to +185° F (+85° C) |
| Mechanical | Weight: 2.15 lb. (0.98 kg) with battery handle attached ) Length: 7.35 in. (18.5 cm) Width – 2.83 inches (7.2 cm) Radar Body Material – Aluminum and Magnesium die castings Handle Case Material – ABS polymer |
| Accuracy | +/- 0.1 m/s |
| Auto Self-Test | Performed every 10 minutes while transmitting |
| Speed Range | 0.2 m/s to 18 m/s |
| Verticle Angle Accuracy | +/- 2° |
| Verticle Angle Resolution | 1° |
| Ingress Protection | IP67 dust and water proof |

**Microwave Specifications:**

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| Antenna | Conical horn |
| Polarization | Circular |
| 3DB Beamwidth | 12° +/- 1° |
| RF Source | Gunn-Effect diode |
| Receiver Type | Two Direct-Conversion Homodyne receivers using four low-noise Schottky battier mixer diodes |
| Power Output | 20 mW minimum 25 mW nominal 50 mW maximum |
| Power Density | 2 mW/cm2 maximum at 5 cm from lens |

**Factory Configuration (defaults in bold)**

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| Units | ft/s (feet.sec), cm/s (centimeters/sec), m/s (meters/sec), mph (miles/hour), or km/h (kilometers/hour) |
| Leading Character Zero | **Space** (ASCII 20h) or “0” (ASCII 30h) for ASCII formats (A, B, S) |
| Serial Port Baud Rate | The serial port operates at 8 data bits, no parity and 1 stop bit (8N1) with the following selectable baud rates: 300, 600, 1200, 2400, 4800, **9600**, 19200, 38400 |
| Serial Port Data Format | None – no data output ‘A’ – Averaged velocity output (continuous) ‘AP’ – Peak Speed only (continuous) |
| Communications Protocol | **RS-232** |
| Auto Test Mode | Automatic test runs **always** or only when the radar transmitter is on. |

**Field Configuration (defaults in bold)**

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| Transmit/Hold | Turns the microwave transmitter **On** or Off |
| Radar Zone | Away, **Closing** or Auto directional sensitivity may be selected |
| Horizontal Angle | Angles from 0° to 60° may be selected in 5° increments |
| Sensitivity | 4 levels of field sensitivity may be selected (1/2/3/**4 max**) |
| Test Mode | Initiates a speed sensor self-test followed by a 60 second tuning fork mode, during which time directionality screening is disabled and the speed sensor will respond to any target direction (away or closing) or to non-directional targets (like tuning forks) |