# STALKER® Radar Traffic Speed Sensor

## General Specifications

**Type:** Moving/Stationary Doppler Radar Speed Sensor

**Operating Frequency:** 34.7 GHz (Ka-band)

**Stability:** ±100 MHz

**Communication Interface:** RS-232

**Power Requirements:**
- Voltage: 9 - 16 VDC for SN ST6560 and below
- Current: (at 12 VDC nominal)
  - Transmitter on: 370 mA
  - Transmitter off: 100 mA

**Environmental:**
- Operating: -30°C to +70°C, 90% relative humidity
- Non-operating: -40°C to +85°C

**Mechanical:**
- Weight: 1.15 lb. (0.52 kg)
- Diameter: 2.6 in. (6.7 cm)
- Length: 4.7 in. (11.8 cm)
- Case Material: Aluminum die cast

**Accuracy:**
- +1, -2 MPH stationary, +2, -3 MPH moving
- +1, -2 KPH stationary, +2, -3 KPH moving

**Audio Output:**
A 3.3Vpp pulse-width modulated (PWM) audio output signal is provided – must be filtered and amplified for best audio quality.

**Auto Self-Test:** Performed every 10 minutes while transmitting

**Stationary Speed Range:**
Stationary low speed threshold configurable:
- 1 MPH to 200 MPH (8 to 321 KPH)
- 12 MPH to 200 MPH (19 to 321 KPH)

**Moving Speed Range:**
Patrol speed – Low patrol acquisition threshold configurable:
- Standard acquisition of 1 to 90 MPH (8 to 144 KPH), when Patrol Lo Cutoff = Low
- Optional acquisition of 20 to 90 MPH (32 to 144 KPH), when Patrol Lo Cutoff = High

Patrol speed, once acquired, will track to 199 MPH (320 KPH)

Opposite lane target speed - 200 MPH Max combined closing speed (321 KPH)
- For 5 MPH (8 KPH) patrol speed: 20 MPH to 195 MPH (32 to 313 KPH)
- For 70 MPH (112 KPH) patrol speed: 35 MPH to 130 MPH (56 to 209 KPH)

Same lane target speed – Related to patrol speed:
- ±70% of patrol speed within 5 MPH (8 KPH) of patrol speed
- i.e. For 50 MPH: 16→45 MPH and 55→85 MPH
- For 80 KPH: 25→72 KPH and 88→136 KPH

Same lane patrol speed must be greater than 16 MPH (25 KPH)

## Microwave Specifications

**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 barrier mixer diodes

**Power Output:**
- 10 mW minimum
- 15 mW nominal
- 25 mW maximum

**Power Density:** 1 mW/cm² maximum at 5 cm from lens

## Control and Configuration Settings

**Basic Configuration:**
- Transmitter Control Mode
- Unit of Measure
- Unit Resolution
- Faster Target Tracking
- AUX Pin Configuration

**Serial Port Configuration:**
- Baud Rate
- Output Format
- Leading Zero Character
- Message Period

**Target Recognition:**
- Opposite Lane/Stationary Sensitivity
- Same Lane Sensitivity
- Fine Sensitivity Adjust

**Target Filtering:**
- Stationary Low Cutoff
- Patrol Speed Low Cutoff
- Double Suppression

**Speed Presentation:** Holdover Delay

**Locking Targets:**
- Lock Option
- Faster Locking Enable
- Strongest Lock
- Fast Lock

**Speed Alarm:**
- Alarm Speed Threshold

**Audio:**
- Doppler Audio Volume
- Aud 0 Enable
- Variable Doppler Loudness
- Squelch
- Beep Volume

**Testing:**
- Fork Enable
- Auto Test Period
- Auto Test Mode
- Enhanced Test

**System:**
- Get Product ID
- Get Product Type
- Get Software Version