# *STALKER®* ENHANCED DUAL SL SPECIFICATIONS

## General Specifications

**Type:** Dual Antenna Moving/Stationary Doppler Radar

**Operating Frequency:** 33.4 GHz - 36.0 Ghz (Ka-Band)

**Stability:** ±100 Mhz (Ka-band)

**Power Requirements:** 9.0 to 16.0 VDC. (currents are typical at 12VDC)
(With 2 Antenna)
XMIT with all displays on: 1.3A (Ka)
XMIT with all displays off: 1.1A (Ka)
XMIT with moving target: 1.3A (Ka)
XMIT with no target: 1.2A (Ka)
Standby with no target: .7A (Ka)

**Environmental:** -30 to +70 C, 90% Relative Humidity Operating
-40 to +85 C, non-operating

**Display:** Triple 3-digit Light Emitting Diode (LED) for target, lock, and patrol, plus LED icons

**Mechanical:**
**Display Unit**     Wt. - 0.5 lb.
1.65" Height, 1.05" Depth, and 5.50" Width

**Counting unit**     Wt. - 1.6 lbs.
1.65" Height, 3.90" Depth, and 5.50" Width

**Antenna**     Wt. - 1.4 lbs. (Ka)
2.50" Dia. X 4.60" (Ka)

**Remote**     Weight - 0.4 lb.
.80" Height, 6.50" Length, and 2.70" Width

**Accuracy:** +1, -2 mph stationary, ±2 mph moving
+1.6 km/h, –3.2 km/h stationary, ±3.2 km/h moving

**Automatic Self-Test:** Performed every 10 minutes

**Stationary Speed Range:** 12 mph to 200 mph Standard
2 mph to 200 mph (set-up menu selectable)

**Moving Speed Range:**
**Patrol speed** - Selectable with **P.S. 5/20** key:
**5** in patrol window for acquisition of 5 to 90 mph
**10** in patrol window for acquisition of 10 to 90 mph
**20** in patrol window for acquisition of 20 to 90 mph
Patrol speed, once locked, will track to 150 mph
Same lane patrol speed must be greater than 15 mph

**Opposite lane target speed** - 200 mph Max closing
For 5 mph patrol speed: 20 mph to 195 mph
For 70 mph patrol speed: 35 mph to 130 mph.

**Same lane target speed -** Related to patrol speed:
±70% of patrol speed to within 5 mph of patrol speed
i.e. For 50 mph: 15 → 44 mph and 55 → 85 mph

**Fastest Speed -** Same speed range as opposite lane speed

## Microwave Specifications

**Antenna:** Conical horn with corrective lens

**Polarization:** Circular

**3 db Beam width:** 12° nominal

**Microwave Source:** Gunn-Effect diode

**Receiver Type:** Two Direct Conversion Homodyne receivers using four low-noise Schottky barrier mixer diodes

**Power Output:** 10 mw min (Ka-band)
25 mw nom (Ka-band)
50 mw max (Ka-band)

**Power Density:** 2 mw/cm$^2$ maximum at 5 cm from lens

## Display Messages

**PASS:** **PASS** spelled out in display with a 4-beep "happy" tone indicates the unit has just passed self-test.

**FAIL:** **FAIL** spelled out in display with a 15-beep tone indicates a circuit malfunction has been detected, in which case speed readings are inhibited. Remove the unit from service and repair. **FAIL** will remain on the display until reset by being powered off.

**SEn 1, SEn 2, SEn 3 or SEn 4:** **SEn 1** thru **SEn 4** is used to indicate the current range (sensitivity) setting . **SEn 1** is minimum; **SEn 4** is maximum. Opposite lane sensitivity is independent of same lane sensitivity. They are separately set.

**5, 10, or 20:** **5, 10,** or **20** spelled out in the patrol window indicates the low-end patrol speed is set to either 5 mph, 10mph, or 20 mph

**Aud 0, Aud 1, Aud 2, Aud 3, or Aud 4:** **Aud 0** thru **Aud 4** spelled out on the display unit indicates the current speaker volume setting. **Aud 0** is off; **Aud 4** is loudest.

**bri 1, bri 2 bri 3, bri 4, bri 5, or bri 6:** Used to indicate display brightness. **bri 1** is the dimmest; **bri 6** is the brightest.

**Hot:** The display flashes **Hot** and powers down when the internal temperature exceeds specifications.Automatically resumes operating when the temperature drops.

**rFI:** **rFI** is displayed in the Target window indicating the presence of an interfering signal. Operation is inhibited during an **rFI** indication.

**ULo:** **ULo** is displayed in the Target window when the input voltage falls below approximately 8 volts. Operation is inhibited, but normal operation will resume automatically when the input voltage is restored to a normal voltage (>9.0 volts).

## Remote Control Functions

**SAME/OPPOSITE:** The **SAME/OPPOSITE** key is used to alternate between same lane moving mode and opposite lane moving mode. The **SAME** icon toggles on and off to indicate same lane mode.

**LOCK/RELEASE:** The **LOCK/RELEASE** key is a dual function key. This key alternates between the lock and the release functions. **LOCK** is used to transfer the contents of the target window to the lock window. **RELEASE** clears the locked contents of the lock window and the patrol window. During lock, the patrol window will lock the present patrol speed and the **LOCK** icon will light. The target window and Doppler audio remain active after locking.

**ANT:** Used to switch between the front and rear antenna. The **FRONT** or **REAR** icon will light. A 1-beep tone corresponds to the front antenna while a 2-beep tone corresponds to the rear antenna. The counting unit can sense the presence or absence of either antenna.

**XMIT/HOLD:** Toggles between xmit and hold (standby). The **XMIT** icon will light.

**MOVING/STATIONARY** Toggles between moving and stationary modes.

**FASTER:** In opposite lane and stationary modes, the **FASTER** key is used to select *faster* mode. A high-pitched beep tone (for fast) indicates that *faster* mode is selected. A normal beep tone indicates that faster mode is turned off.
When the *faster* mode is selected and when no **LOCK** target is present, the middle window is used to track the *faster* target in the radar beam. *Faster* mode is turned on and off by alternately pressing the **FASTER** key. The presence of the **FAST** icon indicates that the *faster* mode is selected. **FASTER is not active in the Same Lane mode.**

**SEn :** Used to adjust the range (sensitivity) at any time. Maximum sensitivity is **SEn 4**; minimum sensitivity is **SEn 1**. Opposite lane sensitivity is independent of same lane sensitivity. They are separately set.

**SQL:** Toggles the squelch override off and on. In the normal (off) position, audio will only be heard when a target is being tracked.

**P.S. 5/20:** Used to select a low-end patrol speed of either 5 mph, 10 mph, or 20 mph. For example:
   **5** in patrol window for speed of 5 to 70 mph
   **10** in patrol window for speed of 10 to 70 mph
   **20** in patrol window for speed of 20 to 70 mph

**TEST:** Performs a complete self-test on display/counting unit and the selected antenna. The display unit shows speeds of **10**, **35**, and **65**; temperature inside the display/counting unit in °F (e.g., **110 °F**); and input battery voltage (e.g., **bAt 13.8**); followed by "**PASS**" and a 4-beep "happy" tone or "**FAIL**" and a 15-beep tone..

(((►    Used to adjust the volume of the Doppler audio up or down. **Aud 0** is off; **Aud 4** is loudest.

**P.S. BLANK:** Dual function key. Used to re-acquire patrol speed. Also, blanks the patrol speed after a target speed and patrol speed are locked. Pressing the **P.S. Blank** key again restores the blanked speed.

💡    Dual function key. A single depression of the 💡 key activates the keyboard backlight for six (6) seconds. Two rapid depressions of the 💡 key activates the display brightness control. Additional depressions of the 💡 key toggles display brightness from bri 1 (low) to bri 6 (high).