

Stalker PATROL | Affordable Traffic Radar





3 Window Faster Speed Tracking



Stalker's patented Faster Speed Tracking assists the operator in making proper target identification by displaying both the Strongest and highest speed targets simultaneously on separate, high readability display windows.

True Doppler Audio

The Stalker PATROL compensates for patrol speed variations when generating the Doppler audio. Since the audio tones do not vary with patrol speed, the operator learns to correlate this true Doppler audio with target speed, which eliminates the need to constantly watch the display to determine target speed.

Vehicle Speed Sensing (VSS) Operation Is Standard

Connecting the radar to power and VSS has never been simpler. Plug the Stalker CAN/VSS cable into the car's OBD II diagnostic port located under the dash on the driver's side, and you're done. No cables to splice, no wire harnesses to locate, just simple plug-n-play.

LCD Display Technology

The new Stalker PATROL utilizes Liquid Crystal Display (LCD) technology. The LCD readout provides an excellent contrast ratio in bright sunlight, with a dimmable backlight feature for easy nighttime viewing. Other LCDs have a fixed backlight while the Stalker PATROL allows the operator to select various levels of lighting to best fit the ambient light conditions.

Prior generation LCD technology also had a limited viewing angle, and once that angle was exceeded, the readout became difficult to read. The viewing angle of the Stalker PATROL has been enhanced to allow the counting unit to be mounted in various positions within the patrol vehicle without loss of readability.



STALKER DATEROL

Waterproof K-Band **USB** Antennas

The Stalker engineers have developed the new K-Band digital antenna specifically for the Stalker PATROL. This new waterproof antenna utilize the same digital technology and shielding as our Ka-Band antennas, plus the innovative use of USB



connectors for computer-proven high-

speed data communications. In the process, the new antennas remain small and attractive - and one of the smallest K-Band horn type assembly antennas on the market.

Patented Digital Antenna Communication

The Stalker PATROL achieves superior range and noise immunity by digitizing the Doppler audio signal at the antenna and using a high-speed digital communication link to transmit data between the antenna and the counting unit.

Traditional two-piece radar units send a low-level Doppler audio signal from the antenna to the counting unit for processing and speed display. This method is susceptible to noise induced by the auto ignition, radio towers, and 2-way radio transmissions, which results in reduced range and increased potential for false targets.

By using digital antenna communication, we've virtually eliminated false signals and improved the range of our products.

Serial Port

The serial RS-232 port can interface with most video cameras, computers, remote readouts, printers, and the Stalker CopTrax In-Car Video System.





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Power to Enforce.

006-0493-00 Rev B

STALKER® PATROL SPECIFICATIONS

General Specifications

| Туре: | Dual Antenna Moving/Stationary Doppler Radar |
|---------------------------------------|---|
| Operating Freq: | 24.125 GHz (K-Band) |
| Stability: | ±50 Mhz (K-band) |
| Power Requirements: | 9.0 to 16.0 VDC. (currents are typical at 12VDC) |
| (With 2 Antenna) | XMIT ON: with maximum display brightness: 0.39A |
| | XMIT ON: with minimum display brightness: 0.29A |
| | XMIT OFF: with maximum display brightness 0.24A |
| Low Voltage Threshold: | 8 7 VDC (+ 0.3 VDC) |
| Environmontel: | -30° to $+70^{\circ}$ C Operating |
| Environmental. | 90% Relative Humidity at 37° C -40° to +85° C, non-operating |
| Display: | Sunlight viewable WHITE on BLACK Liquid Crystal |
| | Display (LCD) panel with seven icons and triple 3- digit windows for target lock/fast and patrol windows |
| | LCD has HEA film and 9:00 polarization |
| Mechanical | Counting unit $Wt = 1.1 \text{ lbs} (0.498 \text{ kg})$ |
| Wittenameai. | 1.68" Height, 3.59" Depth, and 5.52" Width |
| | (4.26 cm Height, 10.0 cm Depth, and 14.0 cm Width) |
| | Antenna Wt1.2 lbs. (0.544 kg) |
| | 2.89" Dia. X 5.26" (includes connector) |
| | (7.3 cn Dia. X 13.3 cm) |
| | Remote Weight - 0.4 lb. (0.181 kg) 1.25" Height 6 50" Length and 2 25" Width |
| | ((2.0 cm Height, 16.5 cm length and 6.8 cm Width) |
| Accuracy: | ±1 mph (or kph) stationary |
| | ±1mph (or kph) moving, when using Vehicle Speed |
| | ±2mph (or kph) moving, when Vehicle Speed Sensor |
| | is not used |
| Automatic Self-Test: | Performed every 15 minutes while transmitting |
| Stationary Speed Range: | 10 mph to 210 mph Standard (16 to 337 Km/h) |
| | 2 mph to 210 mph (3 to 337 Km/h(set-up menu selectable) |
| Moving Speed Range | Patrol speed Selectable with P.S. 5/20 key: |
| in oring opoor i range. | 5 in patrol window for acquisition of 5 to 90 mph (8 to |
| | 144 Km/h) |
| | 10 in patrol window for <u>acquisition</u> of 10 to 90 mph(16 to 144 Km/h) |
| | 20 in patrol window for <u>acquisition</u> of 20 to 90 mph (32 to 144 Km/h) |
| | Patrol speed, once acquired, will track to 150 mph (241 |
| | Same lane patrol speed must be greater than 19 mph |
| | (30 Km/h) |
| | Opposite lane target speed - 210 mph (337 Km/h)Max aloging |
| | For 5 mph (8 Km/h)patrol speed: 20 mph to 205 mph |
| | (32 to 329 Km/h) |
| | For 70 mph (112 Km/h)patrol speed: 35 mph to 140 $(564 - 225 \text{ Km/h})$ |
| | mpn(56 to 225 Km/n). |
| | +75% of patrol speed to within 5 mph (8 Km/h) of |
| | patrol speed |
| | i.e. For 50 mph (89 Km/h): $15 \rightarrow 44$ mph (24 \rightarrow 70 |
| | Km/h)and 55 \rightarrow 85 mph (88 \rightarrow 136 Km/h) |
| | Faster Speed - Same speed range as opposite lane |
| | speed |
| wicrowave Sp | ecifications |
| Antenna: | Conical horn with corrective lens |
| rolarization: 3 db Boom width: | Ulicular |
| J up deam witth: Microwaya Sources | 15 noninal, 15 maximum Gunn-Effect diode |
| Receiver Type | Direct Conversion Homodyne using low-noise Schottky |
| incurrer rype. | barrier mixer diode |
| Power Output: | 8 mw min (K-band) |
| - | 12 mw nom (K-band) |

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: Aud 0 Aud 9: | 5 , 10 or 20 spelled out in the patrol window indicates the low-end patrol speed is set to either 5, 10 or 20 mph (8,16 or 32 Km/h) Aud 0 thru Aud 9 spelled out on the display unit indicates the current speaker volume setting. Aud 0 is off; Aud 9 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. |
| Lo V: | A LoV message indicates the input voltage is too low. Operation is inhibited while the LoV message is displayed but normal operation will resume automatically when the input voltage is restored. All other speed windows will be blanked. |

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/STATIONAR | Y: Toggles between moving and stationary modes. |
| FASTEST: | Used to select <i>fastest</i> mode. A high pitched tone indicates that <i>fastest</i> mode is selected. Any power off event will reset the <i>fastest</i> mode to OFF. |
| SLOWER: | The SLOWER key is used to toggle between <i>fast target</i> same lane mode and <i>slow target</i> same lane mode. The SLOW icon is on for a slower target. |
| 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. <u>They are separately set</u> . |
| 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 (8 Km/h) 20 in patrol window for speed of 20 (32 Km/h) |
| TEST: | Performs a complete self-test on display/counting unit and the <u>selected</u> antenna. The display unit shows the 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 9 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 \clubsuit key activates the keyboard backlight for six (6) seconds. Two rapid depressions of the \clubsuit key activates the display brightness control. Additional depressions of the \clubsuit key toggles display brightness from bri 1 (low) to bri 6 (high). |

Power Density:

20 mw max (K-band) 2 mw/cm² maximum at 5 cm from lens