

Radar System Functions

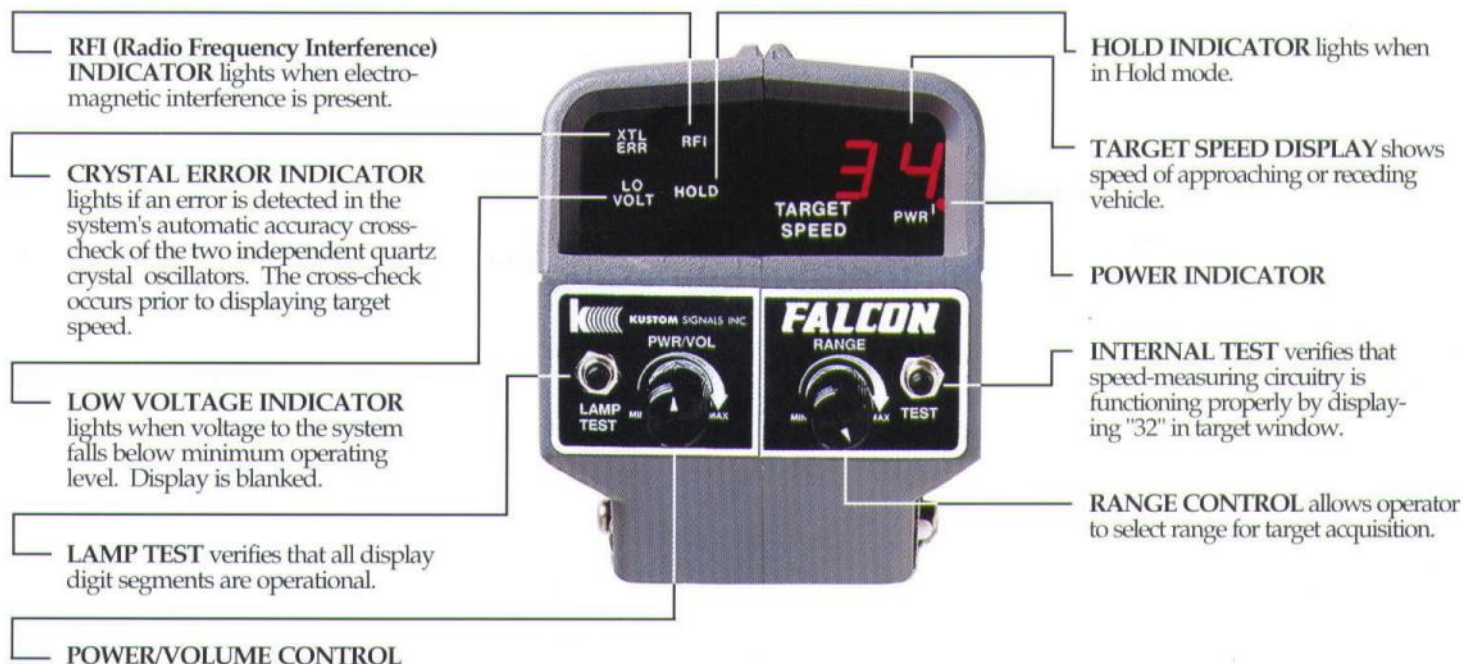


RF HOLD controls the transmission of signal, preventing discovery by radar detectors. Upon activation, provides immediate target acquisition. RF Hold is controlled by the trigger on the cordless model.

LOCK-RELEASE TRIGGER freezes and releases target speed display; controls the transmission and lock functions on the cordless model.

SQUELCH CONTROL overrides the Doppler audio squelch circuit, allowing the operator to determine whether interference is present.

NYLON STRAIN RELIEF prevents excessive bending, eliminating shorts and downtime (standard model).



RFI (Radio Frequency Interference) INDICATOR lights when electromagnetic interference is present.

CRYSTAL ERROR INDICATOR lights if an error is detected in the system's automatic accuracy cross-check of the two independent quartz crystal oscillators. The cross-check occurs prior to displaying target speed.

LOW VOLTAGE INDICATOR lights when voltage to the system falls below minimum operating level. Display is blanked.

LAMP TEST verifies that all display digit segments are operational.

POWER/VOLUME CONTROL

HOLD INDICATOR lights when in Hold mode.

TARGET SPEED DISPLAY shows speed of approaching or receding vehicle.

POWER INDICATOR

INTERNAL TEST verifies that speed-measuring circuitry is functioning properly by displaying "32" in target window.

RANGE CONTROL allows operator to select range for target acquisition.

Falcon Radar System Specifications

System—General

Measurement:	Available in miles or kilometers per hour.
Style:	Handheld Stationary.
Type:	True Doppler Radar.
Operating Frequency:	24.15 GHz (K-Band) ± 100 MHz.
Operating Environment:	-22°F to +158°F (-30°C to +70°C); 90% relative humidity at +99°F (+37°C), non-condensing.
Electronic Components:	100% Solid State.
Power Requirements:	10.8 to 16.5 VDC, 1.5A maximum.
Reverse Polarity Protection:	No damage will result, due to reversal of power supply.

Antenna

Antenna Type:	Circular polarized, conical horn.
Microwave Source:	Cunn-Effect Diode.
Power Output:	12 mW typ., 50 mW max.
Power Density:	.31 mW/cm ² typ., 1.3 mW/cm ² max. (measured at antenna face).
Beam Width:	12°. Variance $\pm 1^\circ$ at max. manufacturing tolerance.
Side Lobes:	25 dB below main beam.
Receiver:	Low-noise Schottky Barrier Diode (100 mW rating).
Aiming Sight:	For proper setup.

System—Operational

Lamp Test:	Indicates display's digit segments are operational.
Accuracy Test:	Automatically cross-checks the system's dual independent, quartz crystal, time base oscillators. Occurs prior to displaying target speed.
Circuit Test:	Displays "32" in window when speed-measuring circuitry is functioning properly.
Audio:	Operator-controlled circuit amplifies the true Doppler audio.
Squelch/Unsquelch:	Allows operator to unsquelch audio to determine level of potential interference at a particular location of operation.
Range Control:	Allows operator to select range for target acquisition.
Target Speed Display:	Seven segment, high brightness LED.
Speed Range:	10 to 199 mph (16 to 320 km/h).
Accuracy:	± 1 mph.
Lock-Release:	Freezes and releases the displayed target speed. On cordless model, trigger controls signal transmission and lock functions.
Indicators:	XTL ERR (Crystal Error): Lights if automatic Accuracy Test fails. Indicates crystal frequency drift or failure. RFI (Radio Frequency Interference): Lights when electromagnetic interference is present. No speeds displayed or locked; retains previously locked speed. LO VOLT (Low Voltage): Lights when voltage to the system falls below minimum operating level. No speeds displayed or locked; retains previously locked speed. HOLD : Lights when unit placed in non-transmit mode to defeat radar detectors. Audio automatically turned off. PWR (Power): Lights when unit receiving power.

Fuse:	2 amp fuse located in tip of power plug for ease of replacement.
Construction:	Single-piece unit, self-contained antenna. Cast aluminum housing with removable hood for easy access to electronic components.
Power Cord:	Coiled, 5 ft. (1.8m). Permanently attached to base of grip. Strain relief prevents cord damage. Fused plug for cigarette lighter or battery pack.
Dimensions:	Height: 8 in. (including grip) (20.32 cm) Width: 3.3 in. (8.38 cm) Length: 10 in. (25.40 cm) Weight: 3 lbs. 4 oz. (1.4 kg) 3 lbs. 5 oz. (cordless) (1.42 kg)
Option:	<i>Trigger-operated signal transmission.</i>

Accessories—Included:

Standard and Cordless Models

- Tuning Fork: 50 mph
- Operator's Manual

Cordless Model

- 12 VDC Charging Plug and Cable
- 120 VAC Charger

Accessories—Optional:

- Battery Pack: 12 Volt with 120 or 240 VAC Charger
- Carrying Case: Heavy-Duty or Soft-Sided
- Seat Holster
- Snap-In Mount
- Tripod and Tripod Mount
- Giant PR Display
- **Falcon Marine**: Knots and Tenths of Miles per Hour available

The Falcon is included on the NHTSA/JACP Consumer Products List (CPL). In keeping with Kustom Signals' policy of continued refinement and development of its products, these specifications are subject to change without notice. Kustom Signals' warranty includes parts and labor, and warrants all components against defects in materials and workmanship. For your convenience, service can be performed by an Authorized Service Center near you, or by the Kustom Signals manufacturing facility. Lease/finance available. For more information, a quote, or to place an order, call toll-free: 1-800-4KLUSTOM (458-7866).