



Product Specification Shield Radar Speed Display

Shield Speed Display

- 4 units to cover any application
 - Shield 12: 12" x 6" digits, 112 LED/digit
 - Shield 12s: Shield 12 with reduced range radar
 - Shield 15: 15" x 8" digits, 140 LED/digit
 - SpeedAlert 18: See SpeedAlert Specification
- Size, Weight without battery
 - Shield 12: 15.5" x 13.5" x 3.12", 12 lbs
 - Shield 15: 24" x 17" x 3.12", 18 lbs
- "YOUR SPEED" sign
 - High intensity prismatic reflective background
 - Shield 12: 15.5" x 13.5"
 - Shield 15: 24" x 8"
 - sign stores for compact storage and protects sign face, thumbscrews and tamper proof hardware included
 - 3.5" high MUTCD 'C' letters
- Universal mounting system: attach to pole, trailer or vehicle hitch mount
- LED pixels: Amber 595nm, 30 degree viewing angle, 100,000 hrs, black background, (MUTCD compliant)
- Local web-based management with Bluetooth or USB
- SmartApps Remote Management System with integral active cell modem
- Integral camera for awareness and alert triggered images: 640x480 daylight images
- Power saving circuitry and automatic dimming for ambient light conditions with adjustable dimming range and manual display brightness override
- Power Input, Max:
 - Shield 12: 12 VDC, 1.1 A, 15 W
 - Shield 15: 12 VDC, 1.5 A, 20 W
- K Band radar (24.15 GHz), FCC Certified, no license req'd, +-1mph accuracy
- Adjustable sensitivity radar, 12 degree square
- Radar pickup range:
 - Shield 12s: 300 ft., 5-105mph (8-168 kph)
 - Shield 12 & 15: 1000 ft., 5-105mph (8-168 kph)
- Conformal coating on all circuit boards
- Integral handle
- Weatherproof, NEMA 4, IP65 sealed electronics compartment; Drip proof, vented battery compartments
- 1/4" tinted, non-glare, UV stabilized polycarbonate face
- Entire face removable for service
- Tamper resistant mounting hardware pocket, hardware secured behind enclosure lock
- 14 ga aluminum chassis, white powder coat finish, black powder coat front for maximum contrast for digit visibility
- Protective polycarbonate corners also provide guide for YOUR SPEED sign storage
- Internal real time clock, time maintained with power disconnected



- Set time via wireless PDA, PC or sync with cell signal
- Sign firmware field and remotely upgradeable
- -40 to 160 F operating temperature range, 95% humidity non-condensing (-20F for Bluetooth communication)

Shield Operation Modes

- Speed Display: Display approaching vehicle's speed and record traffic speed and volume data
- Stealth or Display Off: Collect traffic speed and volume data with no display
- Dependent Message: Send speed data to a linked instALERT Variable Message Sign to display messages tailored to vehicle's speed
- Changeable speed limit sign

Shield Speed Settings

- Configure the following parameters via wireless PDA, PC or SmartApps Web-Based Management System:
 - Speed limit
 - Maximum speed displayed
 - Display on/off/specific mph activation
 - Violator strobe on/off/specific mph activation
 - Radar sensitivity (range)
- Speed limit sign operation
 - Change speed limit up to six times per day
 - Sign flashes when car passing over speed limit, blanks when car over maximum speed displayed

Shield Programming Methods

Program and monitor the sign three ways:

- SmartApps Web-Based Management System using integral cell modem for remote management; Traffic Suite includes following apps:
 - Equipment Management: Manage settings, monitor sign online
 - Reporting: Online data retrieval and management, analysis
 - Image Management: Online image retrieval and management of images from internal camera
 - Alerts: Notifications for low battery and tampering, high speed and congestion with optional radar, alerts can include images
 - Mapping: Visually manage equipment and data



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- Premier Care: Enhanced warranty and real-time monitoring
- Password protected system with three levels of access
- Web-Based Local Management System using USB or Bluetooth connection between PC and sign:
 - Manage settings
 - Local data retrieval and management
 - Local image retrieval and management from internal camera
- Wireless PDA Programming
 - PDA automatically connects to one sign in range, connection easy to switch between multiple signs
 - locates and identifies sign to which connected
- On-Board Programming
 - Set speed limit and display mode

Scheduling

- All days: schedule up to 6 different modes for up to 6 different time periods in a 24 hour day, repeats in each 24 hour cycle
- 7 days: schedule up to 6 different modes for up to 6 different time periods in a 24 hour day for each of 7 days, repeats in each 7 day cycle
- all scheduling resides on the sign – no external hardware necessary
- schedules can be saved on the PDA for backup or for different events
- program schedule via SmartApps, wireless PDA or PC
- once enabled, schedule remains in action until disabled, even through a power interruption

Shield Data Logging Option

- Reporting with Web based local or SmartApps automatic remote data download
- Analyze data with ATS SmartApps Reporting
- Local Management with Web-based interface
 - Download traffic data from sign with wireless PDA or PC, or USB cable to PC
 - 30 days of high volume data minimum with local downloads, Data collection rolls over when memory reaches capacity

Reports:

- Summary page with average and 85th percentile speed, average daily volume, 10 MPH pace speed, high and low speed, display mode
- Traffic counts by speed range and time of day over selected date range with 5 MPH resolution
- Vehicle counts by time range per day by hour
- Traffic counts by speed range and time of day by individual day
- Data exportable to standard .csv format for further analysis in Excel
- Remote Management with SmartApps Reporting App and cellular link

- Daily data retrieval – near real time reporting, memory never full
 - All data in one database, available for analysis including compliance comparisons by location
 - Data visibility location from map
- #### Reports:
- Summary page with average and 85th percentile speed, average daily volume, 10 MPH pace speed, high and low speed, display mode
 - Traffic counts by speed range, full day and time of day over selected date range with 5 MPH resolution
 - Vehicle counts by time range per day by hour
 - Traffic counts by speed range and time of day by individual day
 - Review one location or compare two locations for speed limit compliance
 - Enforcement report showing highest speed and volume violators over all or selected locations where data collected

Compatible Shield Power Supplies

All Shield units can be powered interchangeably with any of the following power options; Unit can be outfitted to be powered by multiple sources selected in the field

- Shield 12, 12s and 15:
 - Capacity for 2 batteries in unit for extended portable use
 - 10.2Ah Lithium LFP Battery with built-in short circuit and reverse polarity protection circuitry, 1.5A 12.8 VDC output, 120VAC input automatic charger; Capacity for up to 2 batteries in unit for extended portable use
 - Solar panel assist: 20W or 40W solar panel and bracket, Solar controller panel w/18Ah or 26Ah lead acid battery, 6A 120VAC automatic charger optional
 - 100-220VAC AC power supply (6A 12VDC) in external NEMA 4 enclosure
- Shield 15 only: 16Ah Li-Ion LFP battery with connector, for longer unattended portable use, Capacity for up to 2 batteries in unit for extended portable use
- Shield 15 on trailer
 - Trailer batteries – 100, 235 or 470 Ah, solar option

Standard Shield System Components

- Shield Radar Speed Display
- Tamper resistant mounting plate and hardware
- Key
- USB cable
- Web based programming software for PC control

Optional Shield Components and Features

- SmartApps Web-based Remote Management System
- Padded carrying case
- Violator strobe, 12 white LED flash to alert violators



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- Metric display
 - Shield 12: 2 digit KPH display
 - Shield 15: 3 digit KPH display
- Fully compatible with Speed Dependent Messaging option when used with an instALERT Variable Message Sign - see Speed Dependent Message System section
- Bullet resistant face
- Tamper alarm – ATS-5 trailer
- Relay closure
 - 7A, 30VDC or 7A 120VAC max, 100mA 5VDC min, no power supplied, simply a contact closure
 - Trigger relay at specified speed with configurable duration from 1 to 10 seconds per radar event

Shield Mounting Options

- Pole mount standard with included bracket, hardware
 - NCHRP 350 approved on 4" aluminum pole (SS-135)
- ATS-5 Trailer (Shield 15 only)
- Vehicle Hitch mount
 - Mounts sign 30" to bottom of sign from receiver tube (final height dependent on receiver height)
 - Fits 1 1/4" or 2" receiver, adapter included, 1/2" hitch pin
 - Locking rotation adjustment on 15 degree increments over 180 degrees, +/- 5 degrees tilt
 - White powder coat finish
 - 24 x 30 speed limit sign and digits included for 5-65 mph speed limit signs
- Standard Folding Portable Post: (Sh12 and Sh15)
 - Folds for easy storage and portability
 - Sh12: 60" to bottom, 73" to top, add 13" for upper leg position
 - Sh15: 60" to bottom, 77" to top, add 13" for upper leg position

Speed Dependent Message System Option

Integrates the instALERT Variable Message Sign with any Shield Radar Speed Display to create a speed dependent messaging system.

- Different messages for each of 5 speed ranges
 - No cars
 - Cars <= speed limit
 - Cars > Speed Limit, < x
 - Cars > x < upper speed
 - Cars > upper speed
- Ranges dependent on speed limit setting only, so no message programming changes required with speed limit change to shift dependent message ranges.
- Independent Maximum Speed Displayed setting
- Speed display can display speed or be set to stealth mode with display blank during operation
- Speed Dependent Messages can be up to 3 screens each, including:
 - 1-3 line messages
 - 1 line: 24" H x 12.5" W characters, 4 per line

- 2 lines: 10 1/4" H x 5.75" W characters, 8 per line
- 3 lines: 7" H x 4" W characters, 12 per line
- 2 lines: (1) 7" char, 12 per line, (1) 10 1/4" char, 8 per line
- "YOUR SPEED" screen with 24" vehicle speed display digits and data supplied wirelessly by the speed display
- "SPEED LIMIT" screen with 24" speed limit display digits and speed limit data supplied wirelessly by the speed display
- Wireless Bluetooth communication between Speed Display and instALERT Variable Message Sign. No communications cables run between the units.
- Program system locally or remotely with SmartApps Web based Management System or wireless PDA.
- Speed display and message sign work independently when not connected as a speed dependent message system. Disable communication, turn one unit off or move one unit out of range and units operate independently. No settings have to be changed on either unit to have them work independently.

Dependent Message System Mounting

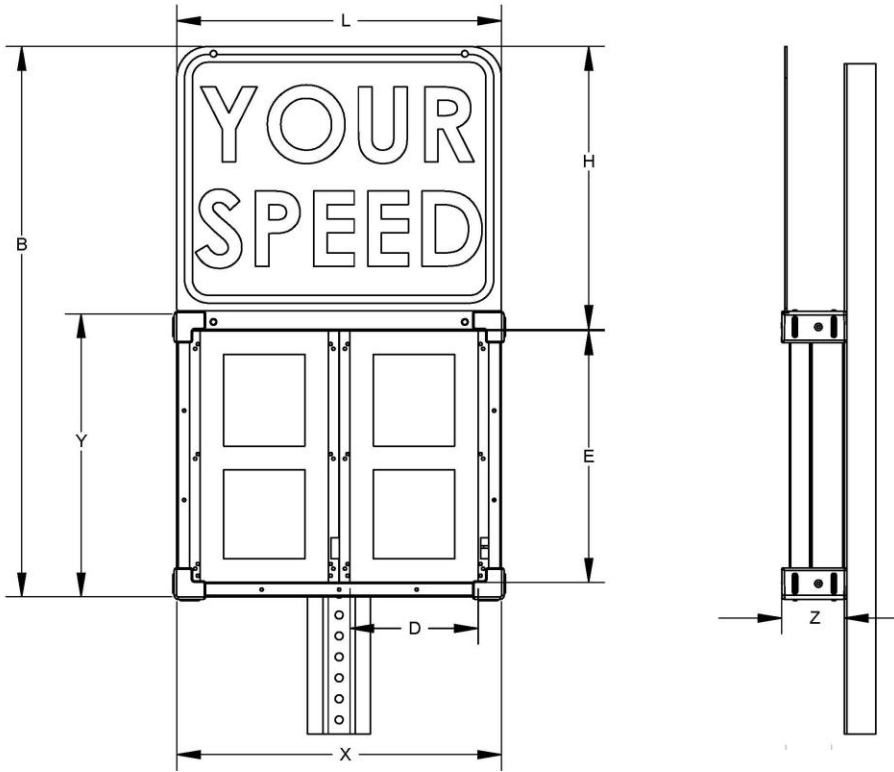
- System can be mounted on the ATS-5 trailer, on a pole or hitch mount
- The Shield Speed Display can be removed from the trailer for independent operation on a pole or post using internal batteries
- The instALERT variable message sign is removable from the trailer and can be folded to be placed in the trunk of a police cruiser. It can be used on a portable post or vehicle hitch mount, powered by the vehicle or by an ATS POWERcase

Warranty

- 1 year warranty (3 months on Li-Ion batteries)
- Premier Care SmartApp
 - Warranty service fully covered
 - Product software upgrades free
 - Vandalism and accidental damage (non-warranty) at 50% off list price

Made in the United States of America

SPEEDsentry Shield 12, 12s and 15 Dimensions



Dim	Sh12	Sh15
X	15.5	24
Y	13.5	17
Z	3.12	3.12
B	26.3	24.3
D	5.75	8
E	12	15
L	15.5	24
H	13.5	8

SPEEDsentry Shield 12, 12s and 15 Mounting Bracket

