



## Product Specification Shield Radar Speed Display

### Shield Speed Display

- 3 units to cover any application
  - Shield 12: 12" x 6" digits, 112 LED/digit
  - Shield 15: 15" x 8" digits, 140 LED/digit
  - SpeedAlert 18: See SpeedAlert 18 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
- Universal mounting system: attach to pole, trailer or vehicle hitch mount
- Integral camera for awareness and alert driven images
  - 640x480 daylight images
- Radar: K Band (24.15 GHz), FCC Certified, no license req'd, +-1mph accuracy, 11 degree square pickup area, 5-105mph (8-150 kph), range: 1200+ ft.
- Meets MUTCD Specifications

### 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
- Changeable speed limit sign
- Dependent Message: Send speed data to an instALERT Variable Message Sign to display messages tailored to vehicle's speed
- Schedule: Change mode or speed limit up to 6 times/day
- Collect traffic data – vehicle volume by speed and time – in all modes
- Sign returns to last configuration when power applied

### Shield Programming Methods

*On-Board Programming* (standard on all units)

- Set speed limit
- Set display mode

*PC with Bluetooth or USB* connection to sign: (PC control with USB connection standard with all signs)

- Create and change messages and settings
- Local data retrieval and management
- Local image retrieval and management from internal camera

*ATS Mobile* for Android devices syncs with SmartApps

- Android OS wireless Bluetooth control local to unit
- Android device can be phone or WiFi device (must have Bluetooth)
- Manage all unit settings, automatic sync with SmartApps Web Based Management if subscribed
- All traffic data and messages automatically synced for online management and backup (included with ATS Mobile license)
  - Retrieve data and sync to SmartApps, generate reports online from hosted data

*SmartApps Web-Based Management System* using integral cell modem for remote management (See SmartApps specification for more information):

- Turnkey system. Remote sign connection functional upon ship. Unit connects to SmartApps system immediately when sign powered
- Fully hosted web-based management system



Shield 12 - 3 Views

- Internet connected computer with browser provides anywhere access.
- No IT involvement or support necessary. System bypasses customer network eliminating access issues
- Cellular provided by ATS, no separate cellular charges.
- Hosted database requires no setup or maintenance by customer
- Apps – All apps included in Traffic Suite:
  - Equipment Management: Change settings remotely, monitor sign online
  - Reporting: Online data retrieval and management, analysis and report generation
  - Image Management: Online image retrieval and management of images from internal camera
  - Alerts: Notifications for low battery and tampering, high speed and congestion, alerts can include images
  - Mapping: Visually manage equipment and data
  - Premier Care: Enhanced warranty and real-time monitoring

### Shield Speed Programming

- Configure the following parameters via ATS Mobile, PC or SmartApps Web-Based Management System:
  - Speed limit
  - Maximum speed displayed
  - Display on/off/specific mph activation
  - Violator Alert 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
- Set time via PC or sync with cell signal
- Sign firmware field and remotely upgradeable

### 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 messages and scheduling reside on the sign – no external hardware necessary
- Schedules can be saved on ATS Mobile for loading on multiple signs
- Program schedule via SmartApps, ATS Mobile or PC
- Camera activation available in schedule options



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- Internal real time clock, time and schedule maintained with power disconnected

### Shield Data Logging Option

- Traffic data reporting using SmartApps Online Reporting App,
- Collect data with SmartApps automatic service or Local collection with ATS Mobile or PC
- Reports include tables and charts to address all constituents with the most applicable data presentation
- All reports exportable to excel, csv and pdf
- Automatic Data Collection - SmartApps
  - Data retrieval at least 8 times per day – near real time reporting, memory never full
  - All data in one database, available for analysis including compliance comparisons by location
  - Access reports from interactive map view by location

#### 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
- Vehicle counts by speed range and time of day
- Compliance by speed range with 3 ranges
- Enforcement report showing highest speed and volume violators over selected locations where data collected
- Local Data Collection – ATS Mobile or PC
  - All data collected with ATS Mobile hosted in online database for anywhere access
  - Download traffic data from sign with ATS Mobile or PC with USB or Bluetooth connection
  - 30 days of high volume data minimum, 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

### Construction

- “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
- LED pixels: Amber 595nm, 30 degree viewing angle, 100,000 hrs, black background, (MUTCD compliant)
- Conformal coating on all circuit boards
- Integral handle
- Weatherproof, NEMA 4, IP65 sealed electronics compartment;
- Drip proof, vented battery compartments (2)
- 1/4” tinted, non-glare, UV stabilized polycarbonate face
- Entire face removable for service

- Tamper resistant mounting hardware pocket, hardware secured behind enclosure lock
- Aluminum chassis, 14 ga, 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
- -40 to 160 F operating temperature range, 95% humidity non-condensing (-20F for Bluetooth communication, 5F for internal camera)

### Shield Power

- Power Input, Max:
    - Shield 12: 12 VDC, 1.1 A, 15 W
    - Shield 15: 12 VDC, 1.5 A, 20 W
  - Power saving circuitry and automatic dimming for ambient light conditions with adjustable dimming range and manual display brightness override
- 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 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: 40W or 60W 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, for longer unattended portable use, Capacity for up to 2 batteries in unit for extended portable use
  - Shield 15 on trailer
    - Trailer batteries – 100 or 235 Ah, solar option
  - Auto recovery with solar for low battery

### Standard Shield System Components

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

### Optional Shield Components and Features

- SmartApps Web-based Remote Management System
- Padded carrying case
- Extra mounting brackets
- Violator Alert, 12 white LED flash to alert violators
- 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
- Relay closure
  - 7A, 30VDC or 7A 120VAC max, 100mA 5VDC min, no power supplied, simply a contact closure



# Product Specification Shield Radar Speed Display

- Trigger relay at specified speed with configurable duration from 1 to 10 seconds per radar event
- Bullet resistant face
- Tamper alarm – ATS-5 trailer

### 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, refer to ATS 5 specifications for more info)
- 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

### 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



Shield 15



Shield 15, Shield 12 on speed limit sign pole



Shield 15 in school zone

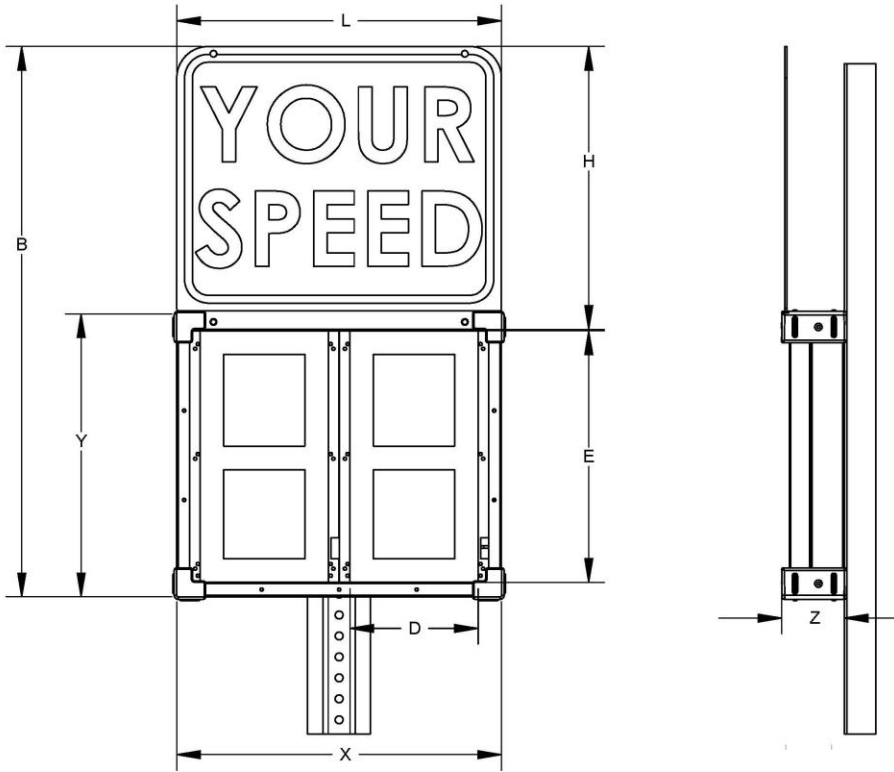


Shield 15 on ATS-5



Shield 15 on portable post

**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**

