PRODUCT SPECIFICATIONS

SHIELD RADAR SPEED DISPLAY

Shield Speed Display

- Two units to cover any application
  - **Shield 12:** 30.5 x 15.2 cm digits, 112 LED/digit
  - **Shield 15:** 38.1 x 20.3 cm digits, 140 LED/digit
- Size, weight without battery
  - **Shield 12:** 39.4 x 34.4 x 7.92 cm, 5.4kg
  - **Shield 15:** 61 x 43.2 x 7.92 cm, 8.2 kg
- **Universal Mounting System:** attach to pole, trailer or vehicle hitch mount
- Integral camera for awareness and alert driven images
  - 640 x 480 daylight images
    (optional in Sh12B, Sh15B)
- **Radar:** K Band (24.15 GHz), FCC Certified, n license required, +/−2 kph accuracy, 0.2 rad square pickup area, 8-150 KPH, range: 365+ m (12B, 15B range: 400')
  - Meets MUTCD Specification

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 13 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

**Onboard Programming (standard on all units)**

- Set speed limit
- Set display mode

**ATS PC Sign Manager Local Communication**

(**PC control/USB connection: Standard with on all signs**)

- PC-based client software
- Connect to sign via USB or Bluetooth (optional) ATS

**Android App Local Communication (Optional):**

- Android OS wireless Bluetooth control local to unit
- Android device can be phone or WiFi device with Bluetooth

Local Communication Features:

- Create and change modes and settings
- Local data retrieval and management
- Local image retrieval and management from internal camera
- Manage all unit settings, automatic sync with TraffiCloud when power applied
- Based Management (optional)
- All traffic data can be saved for online management and backup
  - Retrieve data and save to TraffiCloud, generate limited reports online from hosted data

**AllTrafficSolutions.com**
**TraffiCloud™ Web-based Management Services using integral cell modem for remote management**

*(See TraffiCloud specification for more information)*

- Turnkey system. Remote sign connection functional upon ship. Unit connects to TraffiCloud system when sign powered
- Fully hosted web-based management system
  - Internet-connected computer with browser provides anywhere access on all browser capable, connected devices
  - 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

**App**

All apps are included in Traffic Suite:

- **Equipment Management**: Change messages and settings remotely, monitor sign online
- **Reporting**: Online data retrieval and management, analysis and enhanced 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
- **PremierCare**: Enhanced warranty and real-time monitoring

**Shield Speed Programming**

- Configure the following parameters via ATS PC Sign Manager, ATS Android App or TraffiCloud Web Based Management Service (optional):
  - Speed limit
  - Maximum speed displayed
  - Display on/off/specific mph activation
  - Violator Alert on/off/specific mph activation
  - Radar sensitivity (range)

**Scheduling**

- **All Days**: Schedule up to six different modes for up to 13 different time periods in a 24-hour day, repeats in each 24-hour cycle
- **Seven Days**: Schedule up to six different modes for up to 13 different time periods in a 24-hour day for each of seven days, repeats in each 7-day cycle
- All messages and scheduling reside on the sign – no external hardware necessary
- Schedules can be saved for loading on multiple signs
- Program schedule via TraffiCloud, ATS PC Sign Manager or ATS Android App
- Camera activation available in schedule options
- Internal real time clock, time and schedule maintained with power disconnected

**Shield Data Logging Option**

- Traffic data reporting using TraffiCloud Reporting App
- Collect data with TraffiCloud automatic service
- local collection with ATS PC Sign Manager or ATS Android App with data saved to TraffiCloud
- 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 in TraffiCloud
  - Data retrieval at least eight times per day – near real-time reporting, memory never full
COMPATIBLE WITH THESE ATS PRODUCTS
Engineered and Manufactured in the United States of America

- 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, 16-kph pace speed, high and low speed, display mode
- Traffic counts by speed range, full day and time day over selected date range with 8-kph resolution
- Vehicle counts by time range per day by hour
- Vehicle counts by speed range and time of day
- Compliance by speed range with three ranges
- Enforcement report showing highest speed and volume violators over selected locations where data was collected

- Local Data Collection: ATS PC Sign Manager or Android App
  - All data collected hosted in online TraffiCloud database for anywhere access
  - Download traffic data from sign with USB or Bluetooth connection
  - 30 days of high volume data minimum, data collection rolls over when memory reaches capacity

Construction
- “YOUR SPEED” sign
  - High intensity prismatic reflective background
  - **Shield 12**: 39.4 x 34.3 cm
  - **Shield 15**: 61 x 20.3 cm
  - Sign stores for compact storage and protects sign face, thumbscrews and tamper proof hardware included
  - 8.9 cm high MUTCD ‘C’ letters
- **LED Pixels**: Amber 595nm, 0.52 rad viewing angle, 100,000 hours, 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)
- 0.64 cm 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 of digit visibility
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 & Features

- TraffiCloud Web-based Remote Management System
- Padded carrying case
- Extra mounting brackets
- Violator Alert, 12 white LED flash to alert violator
- Metric display
  - Shield 12: 2-digit KPM display
  - Shield 15: 3-digit KPM display
- Fully compatible with Speed Dependent Messaging option when used with an InstAlert Variable Message Sign – see Speed Dependent Message System section

Shield Mounting Options

- Pole mount standard with included bracket, hardware
  - NCHRP 350 approved on 10.2 cm aluminum pole (SS-135)
  - ATS 5 Trailer (Shield 15 only, refer to ATS 5 specifications for more info)

Standard Shield System Components

- 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 two 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 two 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 two 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

- **Shield Mounting Options**
  - **Standard Shield Components**
    - Protective polycarbonate corners also provide guide for YOUR SPEED sign storage
    - -40°C to 71°C operating temperature range, 95% humidity non-condensing (-29°C for Bluetooth communication, -15°C for internal camera)

- **Shield Power**
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  - **Shield 15 only:** 16Ah Li-Ion LFP battery, for longer unattended portable use, Capacity for up to two 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

- **Tamper alarm**: ATS 5 trailer

- **Shield Mounting Options**
  - **Pole mount standard with included bracket, hardware**
    - NCHRP 350 approved on 10.2 cm aluminum pole (SS-135)
  - **ATS 5 Trailer (Shield 15 only, refer to ATS 5 specifications for more info)**

- **Vehicle Hitch Mount**
  - Mounts sign 6.2 cm to bottom of sign from receiver tube (final height dependent on receiver height
  - Fits 3.2 cm or 5.1 cm receiver, adapter included, 1.3 cm hitch pin
PRODUCT SPECIFICATIONS: SHIELD RADAR SPEED DISPLAY

- Locking rotation adjustment on 0.26 rad increments over 3.14 rad, +/- 0.1 rad tilt
  - White powder coat finish
  - 24 x 30 speed limit sign and digits included for 8-105 kph speed limit signs

- Standard Folding Portable Post: (Sh12 and Sh15)
  - Folds for easy storage and portability
  - **Shield 12**: 152.4 cm to bottom, 185.4 cm to top, add 33 cm for upper leg position
  - **Shield 15**: 252.4 cm to bottom, 195.6 cm to top, add 33 cm for upper leg position

Warranty Options

- **Premier Care Perpetual Warranty** available with current TraffiCloud subscription. Ask your ATS sales representative for details.
- **ATS 3-year Manufacturer’s Warranty** comes standard on all Shield radar speed displays purchased after January 1, 2019.

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**SHIELD 12 AND 15 DIMENSIONS**

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<th>Dim</th>
<th>X</th>
<th>Y</th>
<th>Z</th>
<th>B</th>
<th>D</th>
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**SHIELD 12 AND 15 MOUNTING BRACKET**

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ALL TRAFFIC SOLUTIONS

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