



# Product Specification

## Shield 18 with Message Matrix for Speed Dependent Messaging

### Shield 18 with Message Matrix Display

- Dimensions: 2 1/4" x 30" x 40"
- Message Matrix: Full matrix, 18 x 48 pixels, 0.6"x1" pitch
- Speed Display: 18" x 12" 7 segment digits, 216LED/digit
- LED pixels: Amber 595nm, 30 degree viewing angle, 100,000 hrs life, black background, universal display modules and digits
- Power saving circuitry and automatic dimming for ambient light conditions; Manual display brightness override for up to 6 time windows per day
- Conformal coating on all circuit boards
- Weight: 50 pounds (AC power)
- Weatherproof, inherently sealed design; Drip proof, vented battery compartment
- 1/4" tinted, UV stabilized, non-glare polycarbonate window, silicone gasket seal
- Aluminum chassis, 12 ga., black powder coat finish
- Flexible mounting provisions
- -40 F to 160 F operating temperature range, 95% humidity, non-condensing (-20F for Bluetooth communication)
- Withstands 70 mph winds
- Firmware field upgradable
- Meets MUTCD Specifications

### Shield Speed Display

- K Band radar (24.15 GHz), FCC Certified, no license req'd, +/-1 mph accuracy
- 12 degree radar cone
- Radar pickup range: up to 1200 ft., 5-150mph
- Adjustable radar sensitivity range, 7 levels
- Violator Strobe white LED flash to alert violators, activation available for any message that includes YOUR SPEED display
- Real time clock with minimum 3 year battery

### Message Matrix Variable Message Sign

- 1-2 line messages
  - 1 line: 10 1/4" H x 5.75" W characters, 4 per line
  - 2 lines: 7" H x 4" W characters, 6 per line
- Up to 3 screens per message
- Variable display time for each screen of a message
- Full graphics capability, each LED individually controlled
- Actual message preview on PDA or PC controller

### Speed Dependent Message Programming

- Speed dependent message group for 5 speed ranges
    - No cars
    - Cars <= speed limit
    - Cars > Speed Limit, < intermediate speed
    - Cars > intermediate speed < upper speed
    - Cars > upper speed
- where speed limit, intermediate and upper speed user set

- Minimum 10 SpeedALERT message groups stored on sign with 5 conditional messages per group
- Unlimited message and message group storage on PC and PDA
- Up to 30 messages stored in sign for use in message groups
- Up to 6 changes display parameters and message groups per day (6 events), stored a Day Message Group, time change resolution of 15 minutes
- Annual Schedule of Day Message Groups can be programmed for weekdays, weekends, individual days, holidays/specific dates, ranges of days and can be copied from one display to another display
- "Schedule Override" function, overrides sign schedule for user set time window of 1 to 99 hours; after override time window sign returns to regular scheduled program
- Sign can be named by customer for communication purposes
- Schedule and messages on sign not erased when power removed
- Sign returns to current schedule at power up
- Programming options:
  - Program annual schedule with PC or PDA
  - PDA uses wireless Bluetooth communication. Program from a safe location – up to 30' minimum
  - USB Cable from PC
  - Programs and messages can be saved on SD card
- Wireless PDA connection tools:
  - PDA connection easily switches between multiple signs
  - locates and identifies sign to which connected
  - load temporary message using "schedule override" function, using signs from PDA memory or created on PDA/PC
  - Create annual schedule with all day schedules, message groups and messages and load into sign's memory
  - Adjust all sign settings
  - Sync time to SpeedALERT SZ sign
- Display battery level indicator on sign, PDA and/or PC
- Sign displays "data received" when settings or schedules are sent to sign's memory.
- No display when power not available, sign returns to scheduled program when power reapplied



### Display Settings



## Product Specification

### Shield 18 with Message Matrix for Speed Dependent Messaging

- Automatic dimming for ambient light conditions; Manual display brightness override for up to 6 time windows per day
- Data logging can be enabled for constant recording or for up to 6 time windows per day
- Global maximum speed displayed, overrides upper speed condition in conditional message groups
- Radar sensitivity, data logging schedules, brightness schedules and max speed displayed can be saved and loaded onto multiple signs. Multiple sign setting configurations can be saved on PC or PDA for upload to multiple signs. Settings can be downloaded from sign.
- Sign time can be synced to PC or PDA time, through Bluetooth or cable connection to sign.
- Software compatible with Windows XP, Vista

#### SPEEDsentry Data Software Option

- Display speed and vehicle count data in adjustable increments
  - Summary page with average and 85<sup>th</sup> or other user selected percentile speed, 10 mph pace speed, maximum speed, average speed for current data file
  - Display traffic counts by speed range and time of day; speed range for all times, 7 speed ranges, user adjustable, hourly windows
  - Display traffic counts by time range and total cars per day, hourly windows
  - Handles variable speed limits
  - Save output charts in Excel
- Download methods:
  - USB cable to PC
  - PDA using Bluetooth, sync to PC
  - WebEmpowered remote management system
- Record a minimum 2,160,000 readings, recording every 1/2 second a car is in range, 12.5 days of constant traffic, over 30 days minimum heavy traffic typical
- Each data point has date, time with seconds and speed
- True data stored and preserved for binning in the analysis software
- Data recording rolls over so data is always current in sign
- Data can be recorded with display off
- Download data via USB cable or Bluetooth wireless to PDA
- Data can also be exported and analyzed in Excel
- Software compatible with Windows XP, Vista

#### Display Power

- 10-15VDC input, 12VDC typical input, 4.5A max @12VDC (54 Watts max @ 12VDC)
- Compatible Power Supplies include:
  - 120 or 220 VAC Power supply attached to unit with current and voltage surge protection
  - Battery box: (156Ah, (6) 26Ah batteries x 21 lbs each for 126 lbs total), Sealed, non-leaking AGM batteries with fused cable and battery strap; 6A 120VAC automatic charger included. Mounted separately from the display. Requires solar assist.

- Solar panel assist options
  - 60W solar panel and bracket
  - Solar controller mounted in battery box for pole mount, or on ATS 5 Trailer for trailer mount

#### Standard Display Components

- Shield 18 with Message Matrix display
- PC programming software for Windows
- USB cable for connection to PC
- Mounting bracket provisions with tamper resistant design
  - Mount to 4" aluminum pole (U bolts provided)
  - Bolt to any other acceptable pole or support
- Battery cabinet and solar system
- Keys for power cabinets

#### Display Mounting Options

- Pole Mount
- ATS 5 Trailer (refer to ATS 5 specifications for more info)

#### Optional Display Components

- PDA Controller with Pocket SpeedALERT SZ software and Bluetooth communication
- Web-Based Remote Management Option (contact ATS for details)
  - Remote Data Management System for flexible filter driven reporting
  - Remote configuration of schedules and sign settings
  - Remote tamper, low battery alarms
- Metric display
- Bullet resistant face
- Relay closure, 8A, 30VDC or 10A 120VAC max, 100mA 5VDC min, no power supplied, simply a contact closure

#### Warranty

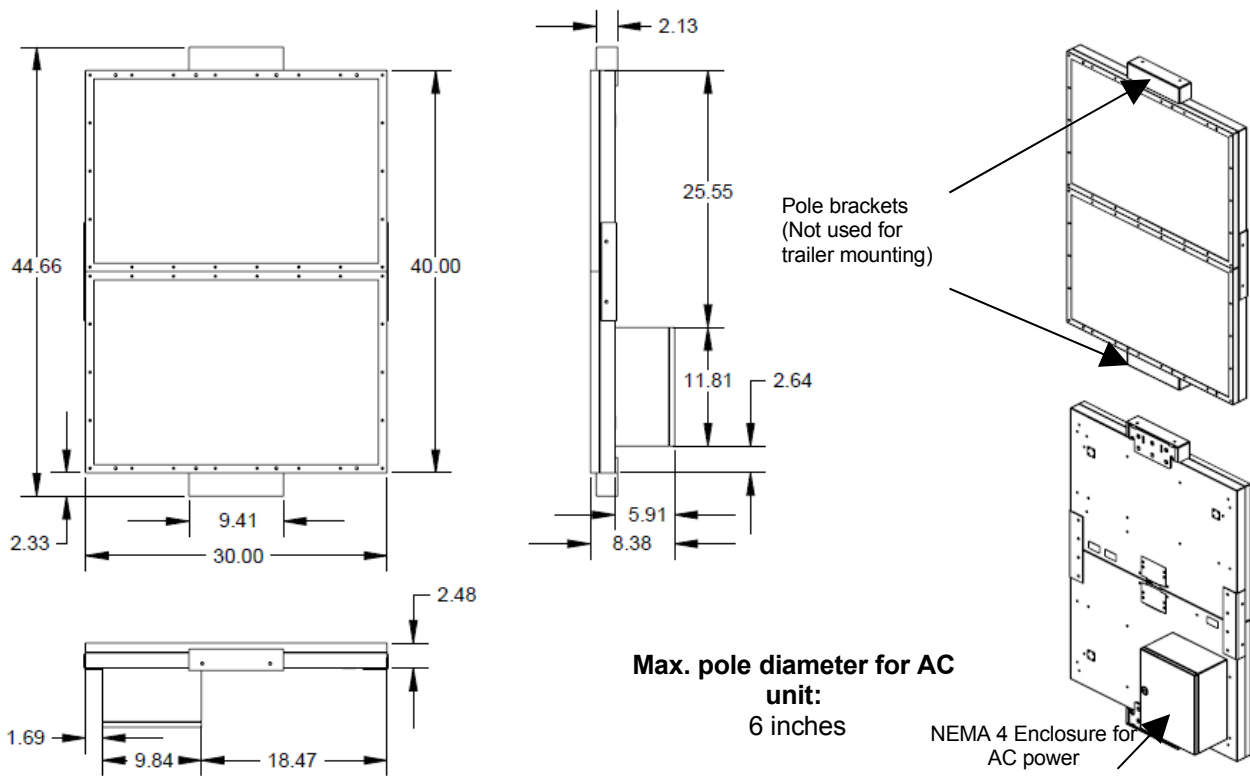
- 1 year warranty (3 months on sealed batteries)
- Premier Care option (1 year and 3 year options)
  - Warranty service fully covered
  - Product software upgrades free
  - Product hardware upgrades at 50% off list price
  - Vandalism and accidental damage (non-warranty) at 50% off list price

#### Made in the United States of America



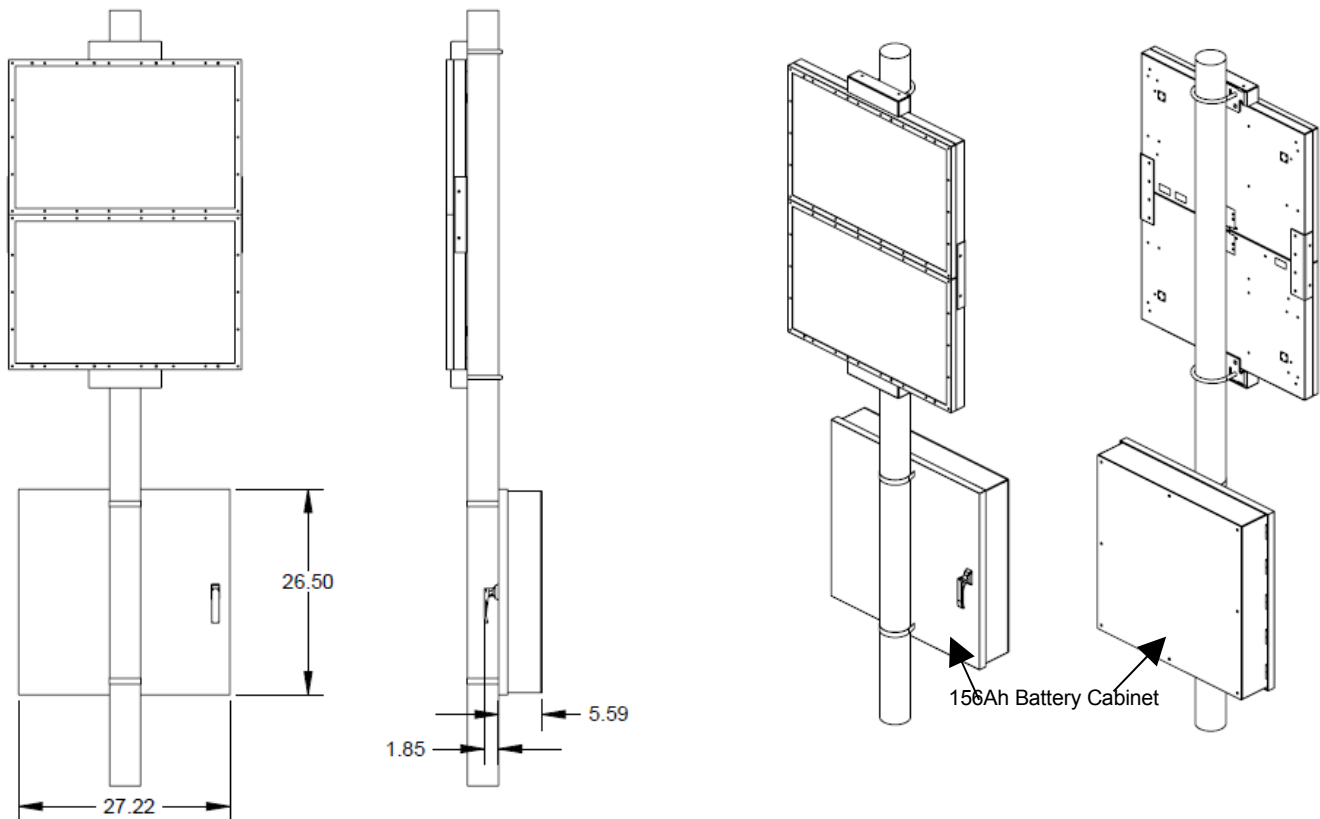
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## SpeedALERT SZ AC Unit Dimensions

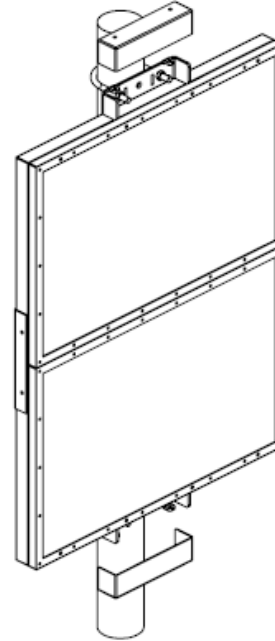
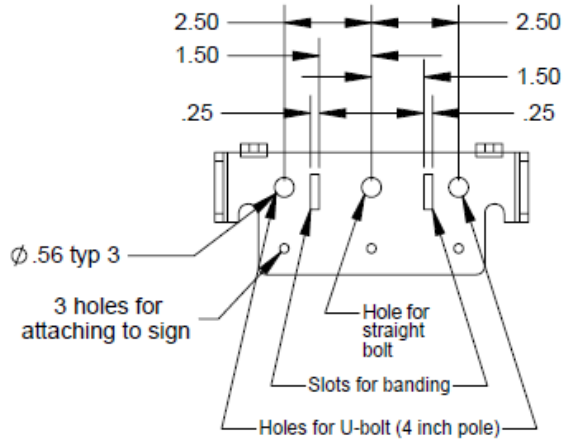


**Max. pole diameter for AC unit:**  
6 inches

## SpeedALERT SZ Solar Battery Cabinet Dimensions

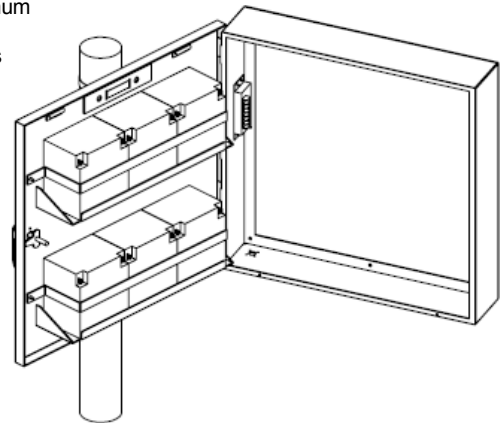
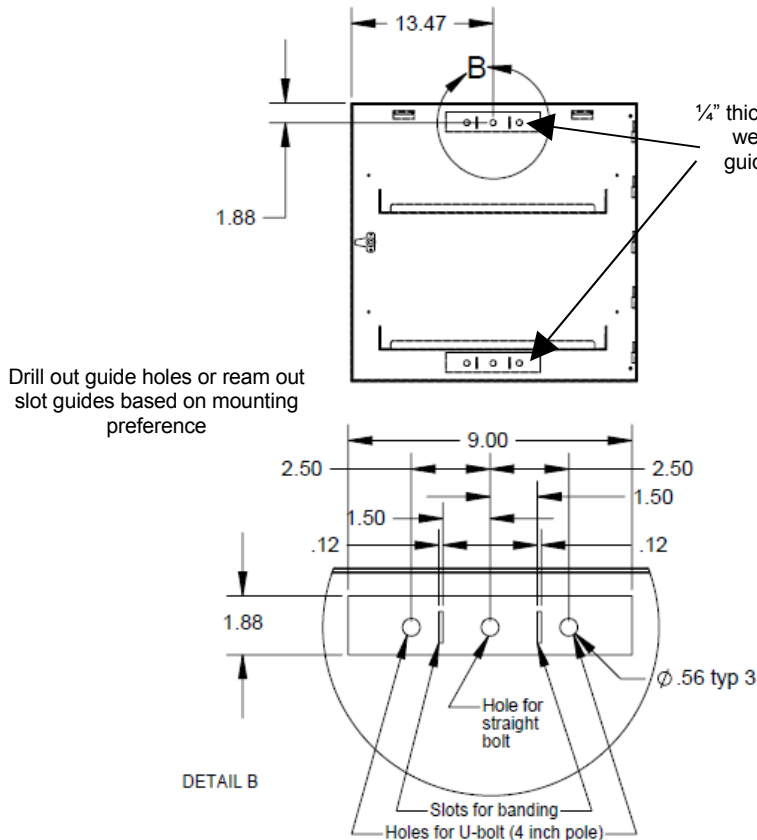


**SpeedALERT SZ Pole Bracket Mounting**



Shown mounted to a 4" diameter pole using U-bolts

**SpeedALERT SZ Solar Battery Cabinet Mounting**



Shown banded to a 4" diameter pole



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