

FAST-18 POLE-MOUNT RADAR SPEED DISPLAY SIGN USER MANUAL



CONTENTS

1. Unpacking and Checking Carton Contents 3

Section A - Installation

1. Location Selection..... 3
2. Hanging the Sign..... 3
3. Final Positioning/Fine Tuning 4
4. Wiring 4

Section B - Operation

1. Power Up 4
2. Programming the Display 5
3. Readout Results 8
4. Advanced Features 9
5. Setting the Clock and Timed Events..... 10

Section C - Technical Information

1. Specifications..... 12
2. Warranty 13
3. Troubleshooting Tips 13
4. Contact Information 13

Section D - Optional Data Recording System

1. Quick Start Guide - Data Recording Unit 14
2. In-Depth Setup Guide and Setting
Commands - Data Recording Unit 15

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Thank you for the purchase of a FAST -18 Pole Mount Radar Speed Display Sign. This Manual will guide through the minor assembly, mounting, programming and use. Please read and understand this Manual and review the checklist in **"Unpacking and Checking Carton Contents"** below to be sure that you've received everything you need prior to starting.

Take a moment to record the model and serial numbers below so that you have them in a safe place for future use.

MODEL NUMBER: _____

SERIAL NUMBER: _____

DATE OF PURCHASE: _____

OPTIONS PURCHASED: _____

1. UNPACKING AND CHECKING CARTON CONTENTS

Item	Qty	Description
A	(1)	FAST-18 Enclosed Sign W/Internal Radar
B	(3)	Black ¼-20x3/4" Tamper-Resistant Bolts
C	(1)	"YOUR SPEED" Sign
D	(1)	Key For Enclosure Latch
E	(1)	"L" Key For Signage
F	(2)	Key for "On/Off" Switch
G	(-)	Mounting Hardware For A 4" Pole



Figure 1a

SECTION A - INSTALLATION

1. LOCATION SELECTION

In-order to optimize your traffic calming results, there are a few simple things to keep in mind and simple steps to follow. You'll want a mounting location that's on a relatively flat stretch of road and is not too close to any stop signs, intersections, or sharp curves in the road. A clear line-of-sight relatively free of obstructions such as large trees, fences or other landscape features is desired. The radar unit is single-directional, so only the speed of oncoming vehicles is displayed. If solar powered, solar panel should be mounted on the South side of the pole and be clear of shade from trees and buildings. Any shade over the panel will significantly reduce the effectiveness of the charging system.

2. HANGING THE SIGN

Your FAST-18 includes mounting hardware for a 4" (4.5" OD) pole. Please do not over tighten mounting hardware at this step as you may wish to "fine tune" the exact angle of your sign for optimum results as described in **"Final Positioning/Fine Tuning"**. Drilling or modification of sign housing will void warranty.

3. FINAL POSITIONING/FINE TUNING

See Figure 3a for some basic positioning tips. Keep in mind that the 18" tall characters are readable to 1000 feet. If the radar unit is picking up vehicles too far away, simply rotate the unit clockwise so that it's facing the opposite curb a bit more. Likewise, if the unit is picking up vehicles up too close or not far away enough, rotate counter-clockwise. Remember, you may adjust the radar gun angle (aim) in the FAST-18 as well as the mounting angle of the enclosure on the pole for maximum fine-tuning, Figure 3b.

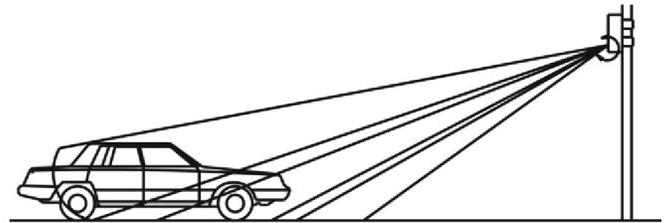
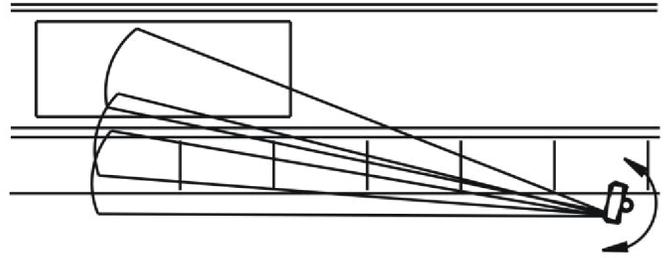


Figure 3a

4. WIRING

Your FAST-18 comes equipped to be powered by 12 volts D/C. The required voltage is shown on the rating tag on rear of sign and on the inside of the enclosure. This tag also includes your serial number and model information. If you are unsure what you've purchased, please contact us before proceeding. Enlist the services of a licensed electrical contractor for installation assistance if needed.

- **For D/C powered units, open the power and data cabinet and wire the sign wire:**
 - WHITE = Positive, BLACK = Negative, and GREEN = Data.
- **For A/C powered units, open the power/data cabinet and wire the sign wire as noted above for D/C:**
 - Use a qualified electrician to wire the A/C power to AC Neutral, AC line, and the ground lug on the bottom corner for earth ground



Figure 3b

SECTION B - OPERATION

1. POWER UP

Now that your enclosure is pole-mounted securely, the "YOUR SPEED" sign is affixed, and your wiring is completed, you are ready to power up. Find the included key, insert into the switch at the bottom, right side of the enclosure. Turn clockwise ¼ turn to the "ON" position.

When first turned on, the display will show a number between zero and 9. This number indicates the brightness level of the display indicating the brightness is being set automatically due to the surrounding sun light.

Note: The brightness control is always on automatic but it can be checked for proper operation by the user, if needed. To check this, refer to codes 1003 and 1004 in **Advanced Features**.

You will see there is a small programming push button located underneath the display at one bottom corner (blue arrow Figure 4a). This button or the remote will set all display features.



Figure 4a

KEY CHAIN REMOTE CONTROL

Your unit may have come equipped with a key-chain size remote control (photo). It can be used in place of the sign-mounted pushbutton as shown above.



Figure 7b

- The bottom left button directs the numbers up with the bottom right directing down. When the sign is in run mode, holding both buttons in for 1 second resets the sign without having to cycle the power key, To replace its battery, replace with a type CR2032, 12volt alkaline cell.

2. PROGRAMMING THE DISPLAY

THE SPEED CODES AND THEIR MEANINGS:

Read over the following programming codes listed in the Speed Code Table below to become familiar with the two-letter groups (modes) you want to set in the sign using the push button. Concentrate on the “Normal Mode” (NM) and “Violator Alerts” (VA) modes only, for now. Notice that they are grouped so that for example, when “VA” is selected, you can set the “Minimum Speed”, Flash (speed), Blank (speed), etc. As the last numbers are entered, the display is ready and goes blank.

Speed Code Table		
Two-Letter Mode	Meaning	Description
NM =>	“Normal Mode”	Sign shows all speeds normally with no speed filtering
VA =>	“Violator Alert”	“Violator Alert” MENU
	↓	↓
MS =>	“Minimum Speed”	Min. speed for sign to display
SL =>	“Slow”	Speed at which “SLOW” shows
RB =>	“Red and Blue”	Flashing “Red and Blue” speed
FL =>	“Flash”	Speed at which to flash readout
BL =>	“Blank”	Speed at which to blank screen
LF =>	“White Strobe”	Speed at which to flash strobe
**ND =>	“No Display”	Unit collects radar data with no display Feature must be enabled - See Advanced Features Mode Section

SETTING THE SIGN IN “NORMAL MODE”

The simplest mode to put the sign into is the “NM” (Normal Mode). Instructions:

1. Turn the power on with the key. After the brightness number changes, start pushing the button and stop on the two letter code “NM”.
2. As the display goes dark, it is now running in “Normal Mode”. In other words, the sign will display the speed of oncoming vehicles from 5 mph (down to 1 mph is also available, see Advance Features Section) to 99 MPH without showing any alerts. So for this code only, no further programming would be needed.

PROGRAMMING THE SIGN IN “VIOLATOR ALERT” MODE

This section covers setting the standard “Violator Alert” functions including the optional “Slow”, “Red & Blue” flashing signals.

Note: The pushbutton instructions described in the following paragraphs also apply to the use of the key chain remote control buttons.

Turn power on. After the brightness number changes, push the button and stop on “VA”. The display is now in “Violator Alert” setup mode. The Violator Alerts 1 to 5 will then begin to appear in the order of the photos.

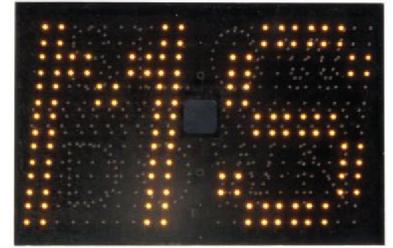


“Violator Alert”

Note: If the Timer is enabled, (see **“Setting the Clock and Timed Events”**) the sign will run in Violator Mode (or any other mode) only during the selected event timed program. Otherwise, if the timer is disabled, the sign will run continuously (not recommended for overly long periods of time when on battery power only).

VIOLATOR ALERT 1: MS - MINIMUM SPEED

After seeing the “VA” screen, the display will show “MS” (see photo below) along with a number. The number represents the lowest speed at which the display will start showing all oncoming vehicles. When this number appears, the operator has 5 seconds within to start pushing the button in-order to program this “MS” speed setting. Press the button until the desired speed setting is reached.



“Minimum Speed”

Note: If the button is held down, the numbers will increment FAST without having to press the button many times. The numbers will start over after 99 if you miss your desired speed without turning off the power. If using the key chain remote, simply press either button to move the numbers forward or backward.

Once the desired setting is reached, stop and wait for the next screen to appear after approximately 5 seconds. The screen will then change to the next screen for speed setting.

VIOLATOR ALERT 2: SL - SLOW DOWN

The display will now show the “SL” (Slow Down) message and flashes with the desired speed setting number. The red “Slow Down” message is effective in helping to calm traffic. When the operator sees the setting number appear, push the button within 5 seconds in-order to change this number until the desired speed setting is reached.



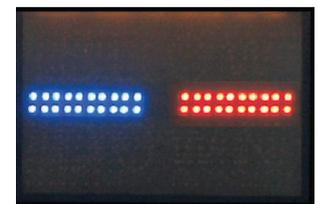
Note: You can set the numbers even when the words “Slow” are flashing.

Once the desired setting is reached, stop pressing the button and wait for the next screen, after approximately 5 seconds.



VIOLATOR ALERT 3: RB - RED AND BLUE FLASHING LIGHTS

The display will now show “RB” which effectively flashes the Red and Blue flashing light pattern at the driver while displaying their speed. The operator has 5 seconds to start pushing the button in-order to change the number setting.

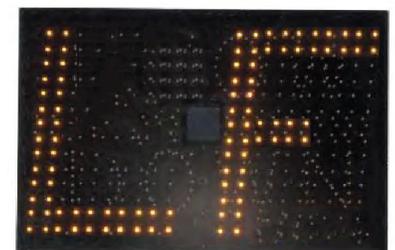


Note: You can set the numbers even when the “Red & Blues” are flashing.

Press the button until the desired speed setting is reached. Once the desired setting is reached, stop and wait for the next screen after approximately 5 seconds.

VIOLATOR ALERT 4: LF - FLASHING WHITE STROBE

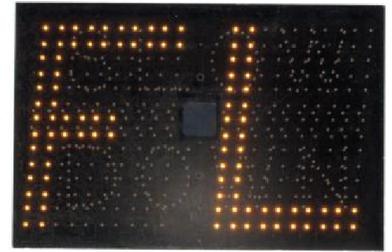
The display will now show “LF”. When drivers go over this setting, the white flashing strobe. The operator has 5 seconds to start pushing the button in-order to change the speed setting. Press the button until the desired speed setting is reached. Once reached, stop and wait for the next screen to appear after approximately 5 seconds.



“Flashing White Strobe”

VIOLATOR ALERT 4: FL - FLASHING SPEED

The display will now show “FL”. When drivers go over this setting, they will see their over-the-limit speed flash. The operator has 5 seconds to start pushing the button in-order to change the speed setting. Press the button until the desired speed setting is reached. Once reached, stop and wait for the next screen to appear after approximately 5 seconds.



“Flashing Speed”

VIOLATOR ALERT 5: BL - BLANKING SPEED

The display will show “BL” which is the speed limit that the display will no longer show the oncoming vehicles speed. This setting will prevent drivers from increasing their speed over this speed limit to see how they can go. Press the button until the desired speed setting is reached. Wait approximately 5 seconds and the sign will go dark. The display is now in service and operating in “Violator Alerts” mode.



“Blanking Speed”

NOTES:

- After this last “BL” screen, all of the violator alert settings have been saved even after the sign is switched off. When the sign is turned on again, it will run through all of the modes and their speed settings for the operator to review.
- If changes are needed, press the sign mounted button for 5 seconds which will start the mode settings to display again. If using the key chain remote, hold the left button in for 1 second for the same effect.
- If desired, the sign can be pre-set at your base facility for transportation and set-up at a different location.
- The violator alerts can be set in any order, but not at the same speed. If attempted, this setting will skip to the next available number. To get the best effect from the alerts, set the speeds at least 3-4 MPH difference. If you wish to not use one of the violator alert settings, set the speed higher than the blanking speed threshold.
- Holding the button will scroll through the numbers for quicker setup. If the desired setting is passed, the numbers will start over after 99.
- If using the optional key chain remote, the bottom left button advances the numbers while the bottom right button reverses them.
- To start over, either turn off/on the sign with the power key OR when using the key chain remote, hold the bottom left button in for 3 seconds.

After setting the clock, (see **“Setting the Clock and Timed Events”**) the sign will revert back to Normal Mode (NM). If Violator Alert mode is desired, it will have to be set to “VA” mode again.

VIOLATOR ALERT SETTINGS SUMMARY

1. Push button until display shows "VA"
2. Wait five seconds for MS (Minimum Speed) to display.
 - Push the button to set the desired speed.
3. Wait five seconds for SL (SLOW) to display.
 - Push the button to set desired speed.
4. Wait five seconds for RB (Flashing Red & Blue) to display.
 - Push the button to set desired speed.
5. Wait five seconds for LF (Flashing Strobe) to display.
 - Push the button to set desired speed.
6. Wait five seconds for FL (Flashing Speed) to display.
 - Push the button to set desired speed.
7. Wait five seconds for BL (Blanking Speed) to display.
 - Push the button to set desired speed.
8. After five seconds the last speed sets and the display goes dark

TRAFFIC SET-UP EXAMPLES

35 MPH NEIGHBORHOOD SPEED LIMIT

Set the "MS" (the radar detected Minimum Speed limit) at 5 mph, the "SLOW" message at 35, "Flashing Speed" at 40mph, the "Red & Blues" at 50 and the Blanking Speed at 60. This is what will happen: Oncoming vehicles speeds will be shown on the sign traveling from 5 to 34 MPH. If the vehicle is traveling 35 to 39, the SLOW message will flash. Between 41 and 49, their speed will be displayed while flashing. Over 50MPH, the display will show the Red & Blue flashing lights pattern. At 60 and above, the display is blank. As the vehicle slows, the appropriate "Violator Alert" will show for their speed until they reach 34 MPH where their speed is displayed normally.

SCHOOL ZONES

Set the "MS" (the radar detected Minimum Speed limit) at 15 mph (so drivers in a school zone obeying the speed limit are not distracted), the "Flashing Speed" at 16mph and the "Blanking Speed" for 40mph. This is what will happen: For speeds under 15 MPH, no speed will be displayed. The display will flash the speed for vehicles traveling between 16 and 39 MPH. No speed will be displayed above 40 MPH.

3. READOUT RESULTS

The readings from the radar unit are filtered. The radar unit is very sensitive, so for continuity of the oncoming driver, not every reading may be displayed. If there is a difference between vehicle speeds of more than 3 miles per hour per second (extreme acceleration or deceleration), the display will simply hold the last recorded speed for a few seconds rather than jumping back and forth between speeds. A couple of examples:

Example 1: If a vehicle is traveling at 35mph and the car behind him is traveling at 40mph, the sign will display the first vehicle at 35 until it passes. The first vehicle's speed will show for 1-1/2 seconds after it passes, so the radar can establish and display vehicle two's speed at 40mph.

Example 2: If a vehicle accelerates towards the sign from a stop at greater than 3 miles per hour per second, no speed will be displayed. If a vehicle accelerates at 3 miles per hour per second or less, the sign will display the speed as it increases.

4. ADVANCED FEATURES

A	B	C	D	
1	0	0	2	Key Fob Pairing Mode
1	2	3	5	Demo Mode
1	0	0	3	Constant Brightness Toggle
1	0	0	4	Constant Brightness Strength
9	9	7	1	Alternate Slow Down Mode
9	9	9	2	White Flasher Mode Toggle
9	9	8	9	Time Availability Toggle
9	9	9	7	KPH Display Toggle
9	9	6	9	Min Speed Toggle
9	9	6	3	Skip Settings Toggle
9	9	8	3	Speed Filter Toggle
9	9	8	4	Speed Filter Strength
9	9	8	7	No Display Toggle
9	9	9	3	Offset Mode Toggle
9	9	9	5	High-Low VA Toggle
8	0	0	8	Serial Number

KEY FOB PAIRING MODE (CODE 1002)

After entering key fob pairing mode, you will be instructed to press the pushbutton. After pressing the pushbutton, a green LED will flash on the board. When the green LED is flashing you must press either the right or left button the key fob repeatedly to pair it. You will know that it is paired when you press either of the two buttons and the green light turns on. If the green light doesn't react to pressing buttons on the key fob repeat the process and try again, it could take a few attempts.

DEMO MODE (CODE 1235)

After entering demo mode, the word 'DEMO' will scroll across the display it will play a series of LED displays that you can cycle through by pressing the pushbutton each time. First the words 'SLOW DOWN' will flash. Pushing the button will flash the red and blue alternating flashers, another button push will flash the white flasher, another button push will flash the red and blue flasher with a number (20), and another button push will flash 'SLOW DOWN' with a number (20). Pressing the pushbutton again will repeat the cycle. To exit DEMO MODE turn off or reset the sign.

CONSTANT BRIGHTNESS TOGGLE (CODE 1003)

Select whether you want constant brightness to be on or not, if you want it on you will have to select the constant brightness value in the constant brightness strength feature code.

CONSTANT BRIGHTNESS STRENGTH (CODE 1004)

Select the constant brightness level assuming it's toggled on (from constant brightness toggle feature). Pick a value from 0-9 with 0 being the dimmest and 9 being the brightest.

ALTERNATE SLOW DOWN MODE (CODE 9971)

The display can show either the "Slow Down" (default) or "Red-Blues" flashing alert in two ways. The first is that either one is shown if the vehicle speed is over a set speed. The other is that either one shows then the vehicle speed will show alternating between the two until the vehicle slows below the set speed. Both are very effective but one could be preferred above the other. To switch from one or the other, push-button in the code 9971 then push-button select either "SL" or "RB". Now select either "ON" or "OF" (off). If you selected "ON", then only the "Slow Down" (or "RB") message will display. If "OF" (off) is selected, then the display will alternate between "Slow Down" (or "RB") and their speed.

WHITE FLASHER MODE TOGGLE (9992)

This allows the user to toggle the brighter flash mode option. Displays the scrolling text "LIGHT FLASH VA". Then the user chooses between options 'OF' and 'ON' using a button input

TIME AVAILABILITY TOGGLE (9989)

This feature simply leaves the Set Time mode in or out of the main menu. "On" means the Set Time Availability was off and will now be turned on. "Off" means the Set time Availability was on and will now be turned off. We recommend the Set Time Availability be "Off" for most applications.

KPH DISPLAY TOGGLE (9997)

The display will show 'KPH MODE' where you can toggle between 'OF' and 'ON'. 'OF' being MPH and 'ON' being kph.

MIN SPEED TOGGLE (9969)

Lower speeds of 5 mph are distracting in most applications but are desirable in some. As a default, the display will only show down to 5 mph but down to 1 mph is available. FOR NORMAL MODE, does not apply to VA mode. Putting in the minimum speed code will turn on and off the down to one mode. If after putting in the minimum speed code, the display shows "1" then the speed will show down to 1 mph. If "5" shows then the speed will only show down to 5 mph.

SKIP SETTINGS TOGGLE (9963)

This allows the user to control whether they want to skip the settings menu. Display the scrolling text "SKIP SETTING". Then choose between options 'OF' and 'ON' using a button input.

SPEED FILTER TOGGLE (9983)

This allows the user to toggle the speed filtering option. Displays the scrolling text "SPEED FILTER". Then the user chooses between options 'OF' and 'ON' using a button input.

SPEED FILTER STRENGTH (9984)

This allows the user to set the speed filter strength. Displays the scrolling text "FILTER HOLD". The user then selects a value between 0 and 40 by using a button input to scroll through the values.

NO DISPLAY TOGGLE (9987)

This allows the user to toggle the no display menu option. Displays the scrolling text “NO DISPLAY”. Then the user chooses between options ‘OF’ and ‘ON’ using a button input. Turning this on will completely hide the display when the sign is in VA or NM mode.

OFFSET MODE TOGGLE (9993)

This allows the user to toggle the offset mode option. Displays the scrolling text “OFFSET MODE”. Then the user chooses between options ‘OF’ and ‘ON’ using a button input. Turning offset on will give you the option to set an offset value in the violator alert settings, this value will be added to all your VA thresholds when the option relay is activated.

HIGH-LOW VA TOGGLE (9995)

This allows the user to toggle between the high and low max speed options (low=max of 99mph, high=max of 199mph). Displays the scrolling text “VIOLATOR MAX”. Then the user chooses between options ‘LO’ and ‘HI’ using a button input.

SERIAL NUMBER (8008)

Display the 6-digit serial code by showing digits 3 and 2 for 3 seconds, digits 1 and 0 for 3 seconds, and the 2-digit sign/trailer designation (48 or 52) for 3 seconds.

5. SETTING THE CLOCK AND TIMED EVENTS

Note: Unless the sign is to be powered on and off automatically at certain times, it is not necessary to set the clock

The internal timer is a 24 clock used to turn off the display’s system to extend battery life or to prevent disturbing residents at late or early hours. This feature will not take into account weekends, holiday or daylight savings time. The Set Time function must first be “turned on” in-order to set the On/Off times. See **“Advanced Features”**, code 9989 to activate this function.

Once the feature is activated, you will see the following codes added to the startup display setting:

Timer Code Chart

ST	=>	“Set Time”	Time Set Menu
EN	=>	“Enable”	Turn on the timer feature
DS	=>	“Disable”	Turn off the timer feature
OH	=>	“On Hour”	Hour at which sign is to turn on
OM	=>	“On Minute”	Minute at which sign is to turn on
FH	=>	“Off Hour”	Hour at which sign is to turn off
FM	=>	“Off Minute”	Minute at which sign is to turn off
HR	=>	“Hour”	Set current time hour (24 hour)
MN	=>	“Minutes”	Set current time minute

SETTING THE EVENT TIMER

Note: If you become lost while setting any of the numbers, the settings operate the same as the display set. In other words, if any numbers are missed the first time around, they will repeat again by holding in the pushbutton. Also, the power key can be cycled on and off to start over from the beginning or the key chain remote option allows you to advance or reverse all numbers using both of its buttons.

As an example, let's set the sign to operate only during normal to high traffic hours (for conserving the battery) to run daily from 5:30 AM to 11:45 PM. The current time is 8:17 AM. These would be the programming steps:

- Turn power on. After the brightness number changes, push the button and stop on "ST", the "Set Time" mode. Push the button until the display shows "EN" (Enable):
 1. Wait five seconds for "OH" ("ON" Hour) to display.
 - "OH" displays. Push the button to see 05 (hours) on the display
 2. Wait five seconds for "OM" ("ON" Minute) to display.
 - "OM" is displayed. Push the button to see 30 (minutes)
 3. Wait five seconds for "FH" ("OFF" Hour) to display.
 - "FH" is displayed. Push the button to see "23" (11PM)
 4. Wait five seconds for "FM" ("OFF" Minute) to display.
 - "FM" is displayed. Push the button to see "45" desired time
 5. Wait five seconds for "HR" (Current Hour) to display
 - "HR" is displayed. Push the button to set "08"
 6. Wait five seconds for "MN" (Current Minute) to display
 - "MN" is displayed. Push the button to set "17"

SECTION C - TECHNICAL INFORMATION

1. SPECIFICATIONS

a. Overall:

- **Dimensions:** 40" W x 34.5" H x 4" D
- **Shipping Weight:** 50 lbs
- **Operational Temperature Range:** -22°F to +158°F
- **Speed Detection Range:** 5-99 mph

b. Casework:

1. 1/8" thick welded aluminum construction, front panel access to critical components.
2. All stainless steel hardware
3. White powder coat finish inside and out
4. "YOUR SPEED" reflective sign included.
5. 1/8" clear polycarbonate lens with a non-glare textured finish.
6. Universal mounting bracket included – please specify application

c. **Electronics:**

1. K-band, single-directional (approach only) radar gun.
2. Latest generation, high intensity LED's.
3. 18" Full Matrix (rounded) characters for quick recognition.
4. Minimum Speed Display
5. High Speed Blanking & Flashing Digital Violator Alert – standard
6. Automatic intensity adjustment to ambient light conditions.
7. 12VDC operation
8. Keyed On/Off switch.
9. Single cycle ON/OFF clock – standard
10. Automatically defaults to last settings upon power up.

2. **WARRANTY**

Adaptive warrants parts and workmanship on the LED display for one year. The radar unit is warranted by the manufacturer for one year. On-site labor is not included. Parts are repaired within five business days of receipt, and include ground service shipping. Warranty does not include physical damage from misuse, acts of nature, terrorism or vandalism. Wear and tear items such as tires are not covered. Please forward any warranty issues to the *Shipping Address* found in **"Contact Information"**.

Please call for authorized RMA before returning any parts.

3. **TROUBLESHOOTING TIPS**

- a. If no speed is displayed:
 1. Check battery(s) with a voltage meter to be sure they are outputting at least 12 volts.
 2. Check battery charger indicator lights. Be sure there is power to the charger from your outlet and power out from the charger measures higher than 12 volts.
 3. Check your "Set Time" feature and be sure your clock is set properly to display at the correct times. If in doubt, disable the set time feature.
- b. If a "NR" is displayed:

Please note the radar can be accessed via a panel on the back side of the LED display. Use the "L" key to remove the tamper resistant screws and slide the cover over.

 1. Check the radar gun connector to be sure of a good connection.
 2. Check the indicator light on the back of the radar unit:
 - A solid red LED indicates a vehicle traveling away from the unit is being measured.
 - A solid Green LED indicates a vehicle traveling towards the unit is being measured.
 - A flashing red LED indicates power but no target is being acquired.
- c. If you loose keys:
 - The On/Off key and enclosure "triangle" key can be purchased from Adaptive. Please call for pricing.

4. **CONTACT INFORMATION**

Address

Adaptive Micro Systems, LLC
7840 N 86th Street
Milwaukee, WI 53224

Phone Number (800) 558-7022

Website adaptivedisplays.com

Email connect@adaptivedisplays.com

SECTION D - DATA RECORDING SYSTEM

1. QUICK START GUIDE - DATA RECORDING UNIT

1. Record Data:

- a. When powered on, the data recorder's LCD screen will display the "Main Menu" similar to Figure 1, below. Check the time and date listed.
 1. If the time needs to be corrected, see "**Setting the Date and Time**" below.
 2. If the time is correct, insert the SD (Serial Data) card into the small slot located on the right side of the Data Recorder until it locks.



Figure 1 - Main Menu

2. Retrieving Data:

- a. When you have finished collecting traffic data, hold any key and the display will read "Remove SD Card".
- b. To remove the card, press the SD card in and it will pop out.

3. Setting the Date and Time:

- a. **Before inserting the SD card**, first power up as described above. Next, press "Enter" to get to the Settings Menu, Figure 2.
- b. Press "Enter" when the display reads "Set Time".
- c. Using the "+" and "-" keys, set the correct Month, Day, Year, Hour, and Minutes. When you have the correct number entered for each, press the "Enter" key to get to the next field. Please note: Military time is used, i.e. 2:00 PM should be entered as 14:00.
- d. When all the fields have been completed, the display will show "Time Set Successful" and then it will return you to the main menu.



Figure 2 - Set Time

4. Data Recording Notes:

- **Inserting the SD card will not automatically erase the previous data.** See the paragraph "Format Card" (part of the **In Depth Guide**) for the information on deleting all of the files on a full SD card.
- The data recording unit will save the previous settings, including date, time and custom file name, if custom name set up and enabled.
- The backlight on the display will turn off after 1 minute of inactivity from the user. If a card is in the unit, it will continue recording data and display speeds, Figure 3. Press any key to turn on the backlight again.



Figure 3 - Speed of oncoming vehicles being recorded

2. IN-DEPTH SETUP GUIDE AND SETTING COMMANDS - DATA RECORDING UNIT

Use the + and - buttons to navigate through the Settings Menu. To select the displayed options, press the Enter button.

The Settings Menu allows you to:

1. **Set Distance** - Set the distance at which the radar is picking up vehicles. The distance units automatically align with the speed units being used by the radar (e.g. miles if MPH and kilometers is KPH).
2. **Your File Name** - This is helpful if you decide to move the trailer to a different location on the same day. Each file can list, for example, the street name so when you are ready to run the reports, you can easily identify each location. If you have multiple trailers/signs, each unit can have a unique name or number.
 - a. **Make Your File Name** - The file name is (8) characters long and can be any combination of letters, numbers, and spaces. The default file name is in "MMDDYY.RU2" format. If the first file is not deleted and the card is used again **on the same date**, the next file will read "MMDDYY-1.RU2". It will automatically rename the files up to "MMDDYY-9.RU2". When 10 such automatically renamed files are already present, you will get an error message.

To input a new file name, press the "Enter" key at the **Your File Name** screen. Use the + and - keys to select the characters and press "Enter". The cursor will move to the next space. Once all (8) characters are entered, the screen will read "Custom File Name Successfully Set", then the screen goes back to the **Return to Main Menu - + Enter** screen. Press "Enter" to return to the main screen.

- b. **Format SD Card** - Erasing data on the SD card can be done while the data recorder is mounted inside the trailer enclosure. This feature is used to delete any existing files on the SD card. Press the Enter button to use this feature. The display will read "Insert card (- to cancel)". To erase the card, insert the card into the memory slot located on the right side of the data recorder. When it's finished, the display will read "Format Done, Remove Card". The SD card must now be removed to return to the menu features.
- c. The **Radar Type** and **Radar Speed** should only be changed if directed by an authorized technician.
- d. **Error Messages**

ERR! Card Lost (Press any Key)

If the SD card is removed without stepping through the saving data section, this error will appear. Go back to "**Quick Start Guide - Data Recording Unit**" to record new data.

- **Note:** Data is written to the card as vehicles are recorded. The data can be recovered if the card is not cleared.

Write Error/Card Error! Try another SD or Format Card.

If the SD card is bad or full, this message will appear. If the card is bad, try re-formatting it in the data recorder side slot or your personal computer (if equipped to do so, see NOTE under "formatting card, as listed above). If this does not remove the error, the card is likely bad and needs to be replaced.

File Name Max Reached, Clear SD Card or Set Custom Name

If you have tried to use the same file name 10 times, this error will display. To resolve the error, you can do any or all of the following:

- Create a new file name and clear the file name (so the date will be used)
- Format the SD card, erasing the older files



Figure 4 - Settings Menu

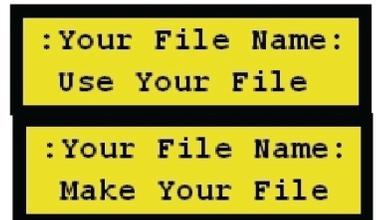


Figure 5 - Settings Menu