

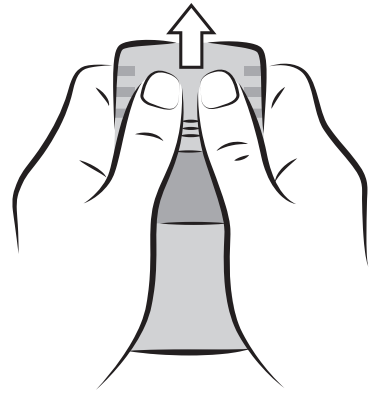


**CLASSIC Model**  
**PR1000**

**QUICK START**  
**GUIDE**

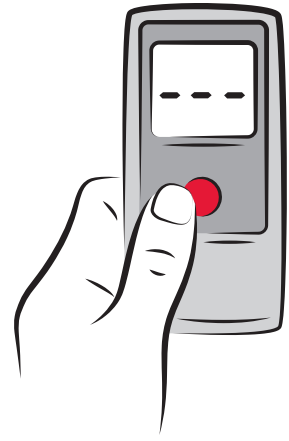


## BATTERY INSERTION AND GETTING STARTED



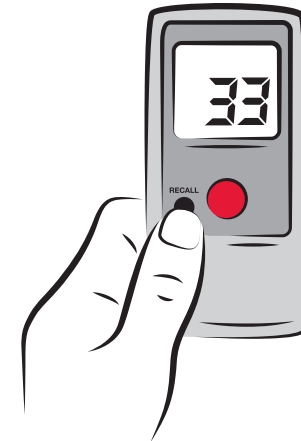
### INITIAL SETUP

- Remove the battery cover from the back of the Classic Model. Insert the batteries in the direction indicated by the polarity marks inside the battery compartment and replace the cover.
- Remove the clear plastic sticker that covers the red button and display on the front of the unit and the yellow sticker from the back of the unit.



### INSTANT ON

- The Classic Model will turn itself on and begin the measurement sequence as soon as you press the RED button.
- When the Classic Model senses a moving object it will display the speed. If it does not find anything it will display "--"
- There is no need to clear the display before making a new measurement. If you tap the button again the display will be updated with the new reading.



### RECALL READINGS

- To recall up to the last ten measurements, simply press the black RECALL button. Each time the button is pressed it will display a previously recorded speed, most recent first. A dash indicates that you have reached the end of the list.

### AUTOMATIC SHUT-OFF

- The Classic Model continues to display the last speed until the button is pushed again or it will automatically turn itself off after 30 seconds of inactivity.

## IMPORTANT NOTE

This model is specifically designed to accurately monitor the speeds of things that are in motion for several seconds or more like vehicles, runners, radio-controlled cars/planes, etc. This technology has been independently tested and certified accurate by the radar test lab designated by the International Association of Chiefs of Police, (IACP). However, it does not have all the features recommended for Law Enforcement use. This device is NOT intended for Judicial Speed Enforcement applications.

## NOT FOR BALL SPEEDS

This model is intended for vehicles and runners. It is not specifically designed to measure ball speeds. To accurately measure ball speeds, visit [www.PocketRadar.com](http://www.PocketRadar.com) for details on our other products.

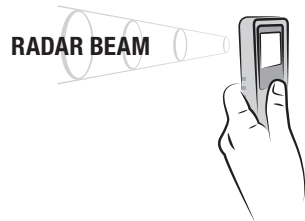
## NOT COMPATIBLE WITH APP

This model is NOT compatible with the Pocket Radar App (Apple or Android).

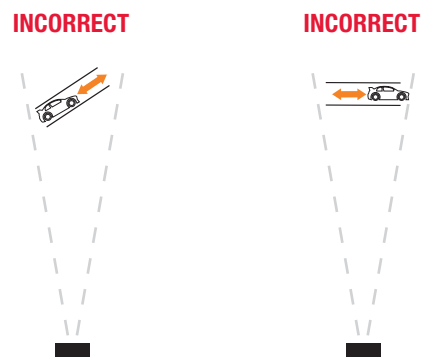
## HOW TO HOLD & AIM

The Classic Model Measures From the Back, Like a Camera Phone

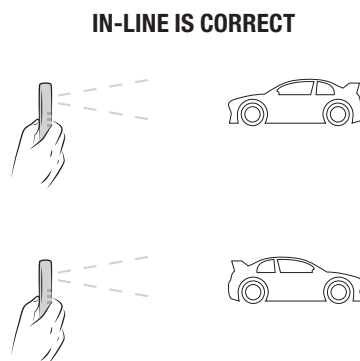
### SIDE VIEW



### TOP VIEW



### SIDE VIEW



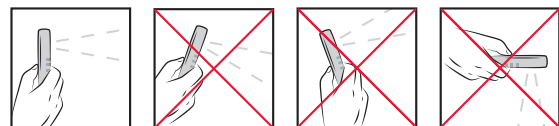
The Classic Model simultaneously measures traffic in either direction, moving towards and away

### VERTICAL IS CRITICAL

- The Classic Model makes a measurement by sending out very low power radio waves and looking for them to bounce off a moving object. These radio waves are focused in a small cone shaped like a flashlight beam which comes out of the raised square on the back of the Classic Model (the radar lens).
- Hold the Classic Model straight up and down vertically like a camera phone with the radar beam pointing in-line with the path of the moving object.
- If you tilt the Classic Model down, the beam may end up pointing into the ground and missing the moving object.
- Do not block the radar lens.

### WATCH YOUR ANGLES

- All Doppler speed radar technology measures objects moving in-line with the radar beam, not perpendicular. To get the most accurate readings, make sure the path of motion is within the narrow radar beam cone (about the shape of a focused flashlight beam). Tilting the Classic Model too far up or down may also cause the beam to miss the moving object.



Important to keep unit straight up-and-down. Do not tilt.



Keep the radar lens clear of any objects.

## KNOW YOUR RADAR

DISPLAYS SPEED OF A MOVING OBJECT

DISPLAYS REMAINING BATTERY LIFE

RECALL BUTTON DISPLAYS THE LAST 10 MEASUREMENTS FROM THE UNIT'S MEMORY

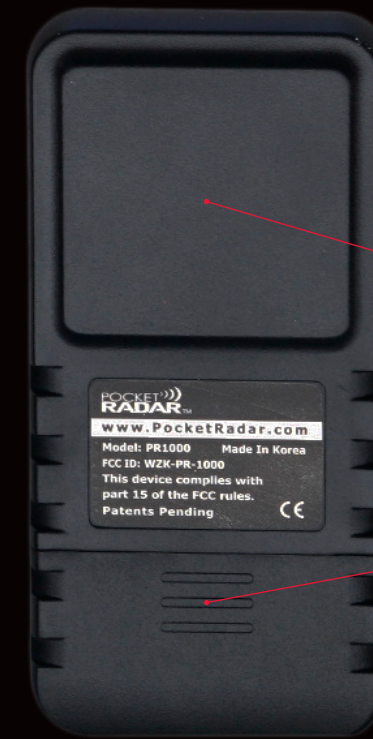


FRONT

INDICATES WHEN THE RADAR BEAM IS ACTIVE

DISPLAYS UNIT OF MEASUREMENT

HOLD OR TAP THE RED BUTTON DOWN TO TAKE SPEED MEASUREMENTS



BACK

VERY LOW POWER RADIO WAVES ARE EMITTED FROM THIS RADAR LENS IN A NARROW CONE ABOUT THE SHAPE OF A FOCUSED FLASHLIGHT BEAM.

BATTERY DOOR CONTAINING 2 AAA BATTERIES SUPPLYING POWER FOR OVER 10,000 MEASUREMENTS



# OPERATIONAL DETAILS

## Handheld Stationary Mode Radar

### RADAR MEASUREMENT

- The Classic Model is a stationary mode radar and is not intended to be used in a moving vehicle.
- The Classic Model radar tracks the strongest signal. It displays the speed of the vehicle with the strongest radar return, which is typically the closest vehicle.
- The Classic Model measures vehicles that are approaching and receding from the stationary radar position. It does not discriminate the direction of the moving vehicle.



### CHANGE UNITS

**Measurement Units:**  
 MPH = Miles per Hour  
 MPS = Meters per Second  
 FPS = Feet per Second  
 KPH = Kilometers per Hour

#### STEP ONE

To change the units of measurement, press both buttons at the same time, and then let go. The currently selected units indicator will blink.

#### STEP TWO

Press the RED button repeatedly until you have selected the desired units.

#### STEP THREE

Press the RECALL button to save the selected units and return to normal operation.



### RANGE

**CAR**  
 FROM 1/2 MILE (0.8 KILOMETERS)



**MOTORCYCLE**  
 FROM 1/4 MILE (0.4 KILOMETERS)



Radar technology works by sending a signal out to an object, and then measuring the reflected signal that bounces back. The larger the object, the greater the reflected signal and therefore the longer the range.

The Classic Model will accurately measure the speed of a car from 1/2 mile (0.8 kilometers) away, and a motorcycle from 1/4 mile (0.4 kilometers) away.

# ANGULAR INTERFERENCE

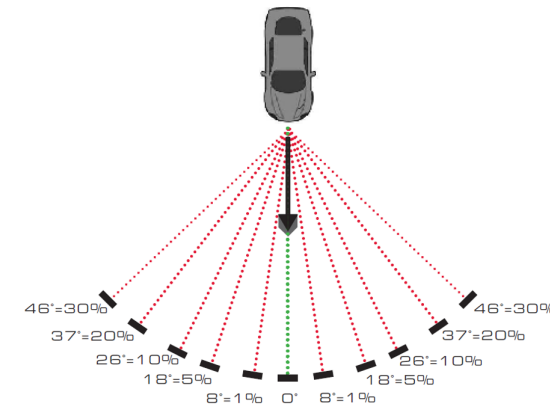
## How to Avoid the COSINE Error

Due to the nature of how Doppler speed radar works, all speed radars will only measure the relative speed of a target in the direction that it approaches or moves away from the speed radar. The Classic Model will measure speed most accurately when the path of the moving target runs directly in-line with the beam of the radar. (Note: Always be safe. Never put yourself in a position where you could be struck by a moving object.) If you point the beam of the Classic Model at an angle different than the path of the moving object, you will measure a slower speed than the object actually travels along its path. You may also find it more difficult to capture a small object within the narrow beam of the radar when you measure off angle. (Think of the beam like a focused flashlight beam, not like a floodlight).

#### TABLE OF EXAMPLES

For more details, visit: [www.PocketRadar.com](http://www.PocketRadar.com)

ANGLE DEGREES (+/-)	0°	8°	18°	26°	37°	46°
TRUE SPEED (MPH)	MEASURED SPEED (MPH)					
25	25	25	24	23	20	18
35	35	35	33	32	28	25
45	45	45	43	41	36	32
50	50	50	48	45	40	35
60	60	59	57	54	48	42
70	70	69	67	63	56	49
90	90	89	86	81	72	63
100	100	99	95	90	80	70
150	150	149	143	135	120	105
200	200	198	190	180	160	140
350	350	347	333	315	280	245
% ERROR DUE TO ANGLE	0%	1%	5%	10%	20%	30%



Each degree from center will cause your speed to read the noted % lower.

This off angle speed measurement error is referred to as the COSINE error, named after the mathematical function that allows you to calculate the exact speed versus angle. The measured speed will always read lower than the actual speed as you move off the centerline of the path of the moving object. For small angles, this error will be very small. The chart above right shows the percentage error for a given angle between the radar beam and the moving object.

### FCC STATEMENTS

#### FCC CLASS B PRODUCT LABEL STATEMENT

- This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
  - (1) This device may not cause harmful interference, and
  - (2) This device must accept any interference received, including interference that may cause undesired operation.

#### FCC CLASS B USER MANUAL STATEMENT

- NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
  - Increase the separation between the equipment and receiver.
  - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
  - Consult the dealer or an experienced radio/TV technician for help.
- Changes or modifications not expressly approved by the party responsible for compliance may void the user's authority to operate the equipment.

# SOURCES OF INTERFERENCE

## Mechanical and Electrical

Before taking radar speed measurements, always start by making a visual tracking history of the vehicle. All Doppler radar speed measurements need to be considered in the context of the total operating environment. This can include both mechanical and electrical sources of interference. Sometimes this interference can create unintentional readings, or so-called "ghost" readings. With a visual tracking history, these are readily identifiable as such in the presence of a valid target. These unintentional readings will disappear and be replaced by the target reading when the target vehicle gets close enough and will not affect the accuracy of the actual target reading.



Cell Towers



Appliances



Fan Motion



Computers



Cell Phones



Microwaves



Fluorescent Bulbs

### MECHANICAL

Any objects that rotate, move or vibrate can create a reading on a Doppler speed radar. Large amounts of vibration, such as very loud noises, can also result in readings. Things like motors, fans, or other motion can be detected by the speed radar. Aiming the radar beam away from the motion will eliminate the interference. In some cases, if you are measuring the speed of a vehicle at a very close distance, you may pick up the engine, the radiator fan, the heater or A/C fan inside the car, moving wheels or hubcaps, etc. In this case, try to make the measurement from a further distance away. You may also experience this type of interference when you are trying to measure speeds from inside a car with the engine running, as you may measure the speed of the internal fans and not the external moving objects.

### ELECTRICAL

Cell phones, wireless devices, radio and TV transmitters, computers, fluorescent lights, televisions, walkie-talkies, etc., can also possibly create unintentional readings.

### KEY SPECIFICATIONS

Speed Measurement Ranges:

- 7 to 375 miles per hour (MPH) (+/- 1 MPH)
- 11 to 600 kilometers per hour (KPH) (+/- 2 KPH)
- 10 to 550 feet per second (FPS) (+/- 2 FPS)
- 3 to 168 meters per second (MPS) (+/- 1 MPS)

Operating Frequency: K-band (24.125 GHz)

Size: 4.7 x 2.3 x 0.8 inches

Weight: 4.5 ounces with batteries

Battery Life: >10,000 readings with 2 AAA alkaline batteries



### POCKETRADAR.COM

Make sure to visit [PocketRadar.com](http://PocketRadar.com) for more details, a complete technical reference manual, tips and tricks, videos, support, FAQs, and more. If you ever have any questions please contact us at [Support@PocketRadar.com](mailto:Support@PocketRadar.com) or call toll-free in the U.S. at 888-381-2672.

### SUPPORT

We are happy to help. If you have any questions, concerns, or need any assistance, please contact us at:

[Support@PocketRadar.com](mailto:Support@PocketRadar.com)

[PocketRadar.com](http://PocketRadar.com)

888.381.2672



### CAUTION:

ALWAYS REMEMBER TO STAY SAFE WHEN MEASURING. NEVER PUT YOURSELF IN A PLACE WHERE YOU COULD BE STRUCK BY A MOVING OBJECT. WHEN POSSIBLE, MEASURE OBJECTS MOVING AWAY FROM YOU, RATHER THAN TOWARDS YOU.