# Bushnell



# **RADAR SPEED GUN**









Congratulations on the purchase of your Bushnell® Speedster™ III. The Speedster III is a precision speed radar instrument. These instructions will help you achieve optimum performance by explaining the features and adjustments of this precise speed measuring instrument. To ensure optimal performance and longevity, please read these instructions before using your Bushnell Speedster III.

#### INTRODUCTION

Your Bushnell Speedster III uses digital technology to provide instantaneous speed measurements to +/-one mile-per-hour (MPH) accuracy. The Bushnell Speedster III is an easy to use, point and shoot radar gun for all kinds of sports enthusiasts. The Bushnell Speedster III can measure the speed of a baseball/softball at 10-110 MPH from up to 90 feet away from the ball, and the speed of a race car from 10-200 MPH from up to 1,500 feet away.

#### **BATTERY INSTALLATION**

Your Bushnell Speedster III operates on two "C" size alkaline batteries. To install, remove the battery cover by rotating the battery cap counterclockwise. Insert both batteries positive end first and replace cap by depressing and rotating clockwise.

#### **HOW TO USE**

- 1. Turn the Speedster III "ON" by pressing the power button on the back of the unit, underneath the LCD display.
- 2. Aim the Speedster at your target, then press and release the trigger button on the handle once. A "radar" icon (•>>>)) will appear in the upper right hand side of the LCD display, and the Speedster will start reading the current speed of whatever it is pointed at, updating the display constantly as the target's speed changes. For best results with maximum accuracy, keep your target's direction of travel in a direct line to you (moving straight towards or away from) and not perpendicular (at an angle) to you. Press and release the trigger again when you are finished measuring the speed of your target. The radar icon is no longer shown on the display, and the display indicates the highest speed that was measured between the first and second press of the trigger. To check the speed of the target again (or after aiming at a new target), repeat the process.
- 3. Turn the Speedster "OFF" by pressing the power button underneath the LCD Display for 3 seconds or until display shuts off.

NOTE: The Speedster has an automatic shut-off feature to extend battery life. After 10 minutes of inactivity, the Speedster will automatically power off.

When a battery symbol appears on the lower right hand corner of the display, this indicates that battery voltage is low and new batteries should be inserted. Remove the batteries when storing your Speedster for a long period.

# TARGET SPEED ACQUISITION

A target can be anything that is moving faster than 10 MPH. To acquire the speed of a target, with the Speedster III powered on, aim the Speedster III at the target and depress the trigger. An icon will appear in the upper right corner of the LCD display. This indicates the Doppler Radar is functioning. The radar will continue to be active searching for speed until the trigger is released. Upon release of the trigger, the fastest speed captured within that series will automatically be displayed. The speed of the target will appear on the LCD display in MPH.

There are certain mathematical properties of Doppler Radar that affect the accuracy of your Bushnell Speedster III. Please read "COSINE EFFECT ON TARGET VELOCITY" below. To ensure optimum accuracy, remember to keep your targets direction of travel in a direct line with you, and not perpendicular.

#### **COSINE EFFECT ON TARGET VELOCITY**

The Speedster III will measure the relative speed of a target as it approaches the Speedster III. If the target is in a direct line (collision course) with the Speedster III, the measured speed will be exact. As the angle of incidence increases (if you move either right or left of this direct line), the accuracy will decrease. The measured speed will decrease as you move off this centerline. This phenomenon is called the "Cosine Effect". It is called this because the measured speed is directly related to the cosine of the angle between the Speedster III and the target's direction of travel.

## **ADJUSTMENTS**

The Speedster III will register speeds in both miles-per-hour (MPH) and kilometers-per-hour (KPH). Speed units can be switched from MPH to KPH and vice-versa by pressing the trigger and then the power button underneath the LCD display.

#### TRIPOD SOCKET

The Speedster III is designed with a tripod socket to mount and use the radar gun on a tripod. The Bushnell SpeedScreen (sold separately, Bushnell product #101922) is an optional external display that includes a tripod that can be used with your Speedster III radar gun.

#### **SPECIFICATIONS**

Speed Performance: Ball: 10-110 MPH, up to 90 Feet

Car: 10-200 MPH, up to 1500 Feet

Accuracy: +/- One MPH

Battery Type: C (2)

Operating Time: Up to 20 hours
Operating Temperature Range: 32-104 F / 0-40 C
Radar Transmitter: 24.125 Ghz (K band)

Data transmitter: 916.68 MHZ



#### WARRANTY / REPAIR — One Year Limited Warranty

Your Bushnell® product is warranted to be free of defects in materials and workmanship for one year after the date of purchase. In the event of a defect under this warranty, we will, at our option, repair or replace the product, provided that you return the product postage prepaid. This warranty does not cover damages caused by misuse, improper handling, installation, or maintenance provided by someone other than a Bushnell Authorized Service Department.

Any return made under this warranty must be accompanied by the items listed below:

- 1. A check/money order in the amount of \$10.00 to cover the cost of postage and handling
- 2. Name and address for product return
- 3. An explanation of the defect
- 4. Proof of Date Purchased
- 5. Product should be well packed in a sturdy outside shipping carton, to prevent damage in transit, with return postage prepaid to the address listed below:

#### IN U.S.A. SEND TO:

Bushnell Outdoor Products Attn.: Repairs

9200 Cody Overland Park, KS 66214

#### IN CANADA SEND TO:

**Bushnell Outdoor Products** 

Attn.: Repairs

25A East Pearce Street, Unit 1 Richmond Hill. Ontario L4B 2M9

For products purchased outside the United States or Canada please contact your local dealer for applicable warranty information. In Europe you may also contact Bushnell at:

Bushnell Germany GmbH European Service Centre Mathias-Brüggen-Str. 80 D-50827 Köln GERMANY

Tel: +49 221 995568-0 Fax: +49 221 995568-20

This warranty gives you specific legal rights.

You may have other rights which vary from country to country.

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## INFORMATION TO THE USER

Changes or modifications to the Bushnell Speedster III Speed Gun, instruction manual or printed materials, not expressly approved by Bushnell for compliance could void the user's authority to operate the equipment.

# Caution: Please read the following before using the Speedster III radar gun:

The Speedster III does not contain any user serviceable parts. Repairs should only be made by a Bushnell Authorized repairs center. Unauthorized repairs or modifications could result in permanent damage to the equipment, and will void your warranty and your authority to operate this device under FCC Part 15 regulations.

- This product has been tested and confirmed to operate within FCC guidelines. However, some
  equipment may not be adequately shielded against the transmissions from the Speed Gun.
- Any changes or modifications to the product not expressly approved by Bushnell, Inc. could void
  your rights to operate the equipment as such changes can compromise the products ability to
  operate within the limits of FCC part 15 certification.
- If the product should become damaged and the internal circuitry exposed, please do not attempt
  to operate. Skin contact with certain internal parts of the transmitter can cause minor burns.
- HIMA (the Health Industry Manufacturers Association) recommends that a wireless radio transmitter be kept at a distance greater than 6 inches from any pacemaker to avoid any possible interference.
- Turn off and do not use the Speedster III in health care facilities when such facilities instruct you to turn off Cell phone or radio equipment. Some medical equipment has been found to be sensitive to outside RF energy.
- Be sure to turn off the Speedster III in any areas where posted notices say to turn off cell phones or radio transmitters.
- Commercial airlines do not permit the use of non approved transmitters on board. Do not operate
  the speedster while aboard an aircraft.
- Radio interference has been shown to interfere with blasting operations. Turn your speedster off
  when in a blasting area or when your see areas posted "turn off two-way radio." Always obey
  such signs and instructions.
- Do not use your Speedster III in areas containing any potentially explosive gasses.
- Do not remove the batteries in the presence of potentially explosive gasses as sparks from the breaking connection could cause explosion.
- This product contains low power radio transmitters/receiver. When on it sends and receives RF signals.

This product has been found to comply with the safe RF exposure limits as adopted by the FCC in 1996.

For further questions or additional information please contact:

Bushnell Outdoor Products 9200 Cody, Overland Park, Kansas 66214 (800) 423-3537 • www.bushnell.com

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