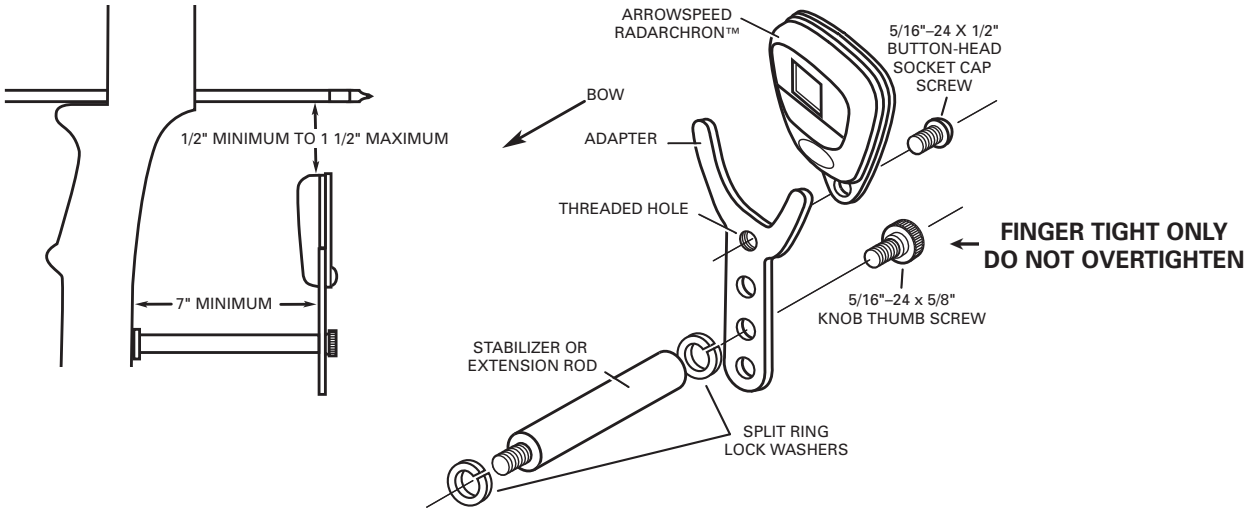
Congratulations on purchasing your Arrowspeed RADARchron™.
If used and cared-for as described herein, you should enjoy many hours of constructive use. The Arrowspeed RADARchron™ is a small, inexpensive microwave Doppler radar velocity sensor that measures the speed of a metal or graphite/carbon arrow as it is propelled from the bow. The purpose of the RADARchron™ is to assist archers in optimizing the performance of their bow and arrow system by providing immediate velocity data. It is easily attached to compound bows via a Radar Adapter that interfaces with most stabilizers, or with an extension rod available for mounting to the bow.

Powered by a single cell lithium battery, the RADARchron™ transmission level is well below that of most "wireless" consumer products such as cellular and portable telephones, for example. Transmission characteristics are well within FCC requirements and prescribed safety levels. The RADARchron™ is microprocessor controlled, and indicates calculated feet-per-second arrow speed on a liquid crystal display. The RADARchron™ is packaged in a rugged plastic housing, enclosed to protect the internal electronics from dust, dirt and moisture encountered during normal use. However, the unit is not hermetically sealed and is not intended to be immersed in water or exposed to prolonged rain or snow.

The electronics are in the "sleep" mode until activated by depressing the push-button "on" switch. This action applies electrical power from the battery to the microcontroller and display electronics. The liquid crystal display will indicate the last feet-per-second velocity reading. Depressing the push-button again will cause the display to show two dashes, indicating that the RADARchron™ is transmitting. Upon receipt of a velocity signal produced by an arrow propelled from the bow, the arrow speed is calculated and displayed. The 2-digit display will first show the "hundreds" digit; then the tens and single digits together. The display will toggle back and forth from hundreds to the tens and single digits. For example, 275 fps will be displayed as 2, then 75; then 2 again, followed by 75. Receipt of a velocity signal turns-off the radar transmitter until the "on" switch is again depressed. If a velocity signal is not received within thirty seconds after depressing the "on" switch, electrical power is automatically removed from the radar transmitter until the switch button is again depressed. Limiting the "on" time of the radar transmitter conserves battery power, maximizing life. After inactivity of about one minute, battery power is also removed from the display and the electronics go into the "sleep" mode.

USING THE RADARchron™
1. The RADARchron™ is attached to an Adapter plate by a 5/16" x 24 x 1/2" button head socket cap screw which screws into the threaded hole in the Adapter. The Adapter is then attached by a knob thumb screw to the threaded 5/16" x 24 receptacle in the end of most stabilizers, or to an Extension Rod provided with the RADARchron™. Three Adapter hole locations are provided to assure that **the top of the RADARchron™ is located between 1/2" and 1 1/2" below the bottom of the arrow as it passes over the RADARchron™. The RADARchron™ must be located at least 7" forward of the bow. In some cases, up to 14" is desireable for maximize accuracy and consistency.** Two Extension Rods can be used, or a combination of Extension Rod and stabilizer is often preferred. Position the RADARchron™ such that the LCD Display and pushbutton "on" switch are facing the archer and the label side is directed toward the arrow flight path.



2. Press the large push button "on" switch to energize the display electronics. The display will show the last fps reading.
3. Press the push button "on" switch a second time. Two dashes indicate that the radar is transmitting.
4. The RADARchron™ is now ready for measuring the velocity of a propelled arrow.
5. After the arrow is "shot", read the exit velocity in feet per second as the displays toggles from the hundreds digit to the tens and single digit speed value.
6. Press the "on" button to turn the transmitter back on for measuring the next shot.
7. If the next shot does not occur within thirty seconds, the power-saving timer will turn off the radar transmitter. Therefore, when preparing to measure the next shot, again depress the push button "on" switch. Two dashes on the fps display indicate that the radar is transmitting and ready to record the arrow speed.
8. When speed-measuring activities have ceased, and the RADARchron™ is dormant for about one minute, it automatically switches into the "sleep" mode, conserving battery power. The display will then be blank until the above sequence is resumed.

SPECIFICATIONS

Size: Triangular , 2 1/2" w; 3 11/16" lg; 1 3/16" th.	Weight: 3 oz.
Display Type: Toggling 2 Segment LCD	Speed Units: Feet per second (fps)
Speed Range: 150 to 450 fps	Accuracy: ± 2%

(specifications continued)
Battery: 3 Volt, 160 mAh, Lithium CR-1/3N, DL-1/3N, 2L76BP
Battery Operating Life: Approx. 30 hours of "on" time; over 3600 speed measurements
Operating Temperature: 40-110 degrees F Storage Temperature: 32-120 degrees F
U.S. Patent 5,864,061; 6,079,269; 425,435; and others pending

EMISSION AND SAFETY STANDARDS

The radar has been tested and certified to meet requirements established by the Federal Communications Commission. The FCC ID is NVE 360. "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 might cause undesired operation." The radar has been certified by Industrie Canada; Certificate No. 11285; Certification No. 35431021769. The radar complies with current standards established for safety levels of human exposure to radio frequency energy, including the requirements of C95.1-1992.2 defined by the American National Standards Institute (ANSI) and the Institute of Electrical and Electronics Engineers (IEEE); and those of the Canadian Department of Health and Welfare, Safety Code 6. Use of the RADARchron™ or any other radiating device, may create problems when in close proximity to electronic medical devices, such as heart monitoring equipment or pacemakers/regulators. Avoid such use.

CARE OF YOUR RADARchron™

The RADARchron™ is a unique microwave electronics product. Although the rugged design will withstand the rigors of normal use, it should not be intentionally dropped, thrown, or otherwise abused, and should not be immersed in water or other liquids. Do not leave outdoors during inclement weather. Store the RADARchron™ in typical indoor environments, avoiding excessive temperature extremes, humidity, dust and dirt. The plastic assembly housing of the RADARchron™ is sealed and not intended to be taken apart except for battery replacement. Remove the battery if the unit will not be used for extended periods. The RADARchron™ can be cleaned with a slightly damped, soft cloth. Do not use alcohol, solvents, or chemical cleaners which can cause permanent damage.

PROBLEMS/TROUBLESHOOTING

The RADARchron™ is designed to provide trouble-free performance when used properly, and given proper care. Battery replacement is the primary corrective action that can be taken by the user. Symptoms of a low or dead battery are no dashes after the radar "on" button is pushed. Other anomalies can be caused by weak battery or loose battery contacts. (Please see below).

BATTERY REPLACEMENT

Replace the battery by removing the two screws which hold the Cover in place, exposing the battery. Remove the battery and replace it with a new one, being careful to insert the new battery with the negative terminal toward the spring in the center of the contact nest, and the positive terminal (case) protruding outward toward the Cover which has been removed. Carefully place the battery into the contact nest, being sure that the three upright contacts are snug against the battery case, but do not let any of the three upright contacts touch the battery center element, thus shorting the battery. (Loose battery contacts can cause an intermittent electrical connection, indicated by a "88" reading on the LCD Display.) Engage the two tabs on the Cover with the slots in the Housing, and pivot the Cover down over the battery, which is positioned in the contacts nest. Replace the two screws that hold the Cover in place. Tighten the screws snugly, but do not over-tighten. Depress the radar "on" button and perform the operating sequence described earlier.

Batteries can be purchased at many stores which sell camera supplies or similar electronic devices. Batteries can also be ordered from Sports Sensors, Inc. by mail, telephone, FAX, or via our Web Site ordering form. The cost is $5.00 each, which includes normal ground shipping and handling charges.

WARRANTY & SERVICE

What is covered?--This limited warranty covers all defects in workmanship or materials in your RADARchron™ that is purchased either directly from Sports Sensors, Inc. or from an authorized reseller. This warranty applies only to defects that occur while your RADARchron™ is being used in the normal manner described herein. This warranty does not apply to any defects that are caused by misuse, abuse, neglect or improper storage, handling or maintenance, or any modifications or re-pairs performed by anyone other than Sports Sensors, Inc. Except as expressly stated in this warranty, Sports Sensors Inc. makes no implied warranties, whether of merchantability or fitness for a particular purpose or use or otherwise with respect to RADARchron™, for more than 180 days from the date of purchase.

How long is the coverage period?--This limited warranty runs for 180 days from the date that you buy the RADARchron™, as shown on your receipt of purchase.
What will Sports Sensors Inc. do?--If your RADARchron™ fails during the warranty period and you return it before the end of this period, Sports Sensors Inc. will, at its discretion, and at no additional charge, repair or replace the defective unit. In no event shall Sports Sensors Inc. be liable for, or pay, any indirect, special, incidental or consequential damages in connection with your RADARchron™.
How can you get service?--You must send the RADARchron™ , appropriately protected and packaged, shipping charges prepaid, to Sports Sensors, Inc.,c/o Electronics Development Corp., 9055F Guilford Rd., Columbia, MD 21046. Evidence of date and place of purchase, such as a copy of your sales receipt or other "proof of purchase", must accompany the returned unit. Please describe the nature of the problem or reason for return.
How does state law apply?--This warranty gives you specific legal rights which vary from state to state. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty is governed by the State of Ohio.
For technical support or service information, call, toll-free (800) 394-6650. For ordering information, or non-technical questions, call toll -free (800) 589-3805. Visit our Web Sites at: www.archeryradar.com , www.gloveradar.com or www.paintballradar.com.