

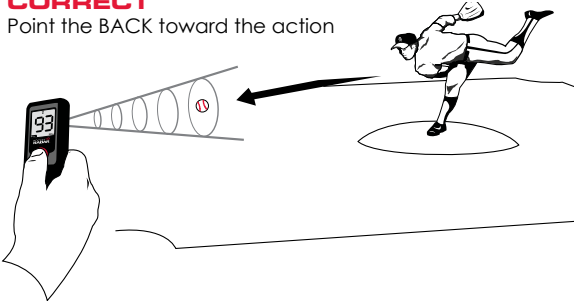
## HOW TO MEASURE A BASEBALL OR SOFTBALL PITCH WITH THE POCKET RADAR™

The Pocket Radar is a revolutionary new design in ultra-compact and low-power speed radar. It has the capability to do more things than a classic radar gun, once you understand how it is different.

The Pocket Radar projects a narrow beam of invisible radio waves shaped like a flashlight beam. You need to point the radar beam at what you want to measure just like you need to point a flashlight at what you want to light up. To get an accurate measurement, it is important to keep the radar beam in line with the path of the ball during the measurement. Make sure the Pocket Radar is held straight up and down vertically and the beam is in line with the pitcher and catcher. Just remember, if you can't see the ball, the radar can't see the ball either.

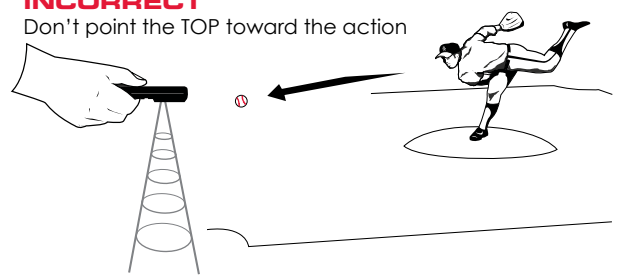
### CORRECT

Point the BACK toward the action



### INCORRECT

Don't point the TOP toward the action



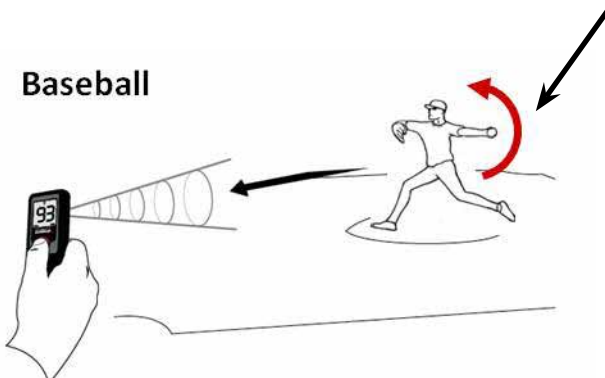
The Pocket Radar will measure a baseball or softball with a good radar reflection from up to 120 feet away. Not all balls are made the same. Some reflect radar better than others. To capture an accurate speed reading on a baseball or softball, it is important to know how to trigger the Pocket Radar.

As soon as the red button is pressed, the radar activates and takes a series of very quick measurements (each about 1/50th of a second), somewhat like the individual frames in a short movie clip. This sequence happens in about half a second. Then the computer inside the unit analyzes all of the measurement data and sorts out what was the pitcher's arm and body movement versus what was the ball. To read the maximum speed out of the hand, it is important to press and release the button before the ball leaves the pitcher's hand.

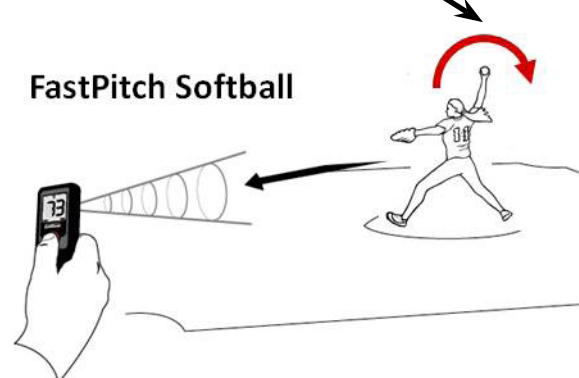
Unlike other radar guns, **do not hold the button down**. Instead you need to **quickly "Press and Release" the red button when the pitcher is about mid-way through their throwing motion, well before the ball is released**. The button action is similar to pushing a stopwatch button. This will give you an accurate reading of the maximum speed of the ball out of the pitcher's hand. If you are used to other radar guns, this may take a few measurements to become comfortable with the timing of the trigger. We recommend getting used to the timing at a closer range before moving out to the maximum range. If you see readings that do not make sense to you, play around with pressing the button slightly earlier or slightly later.

Quickly press and release the button somewhere during **this part** of the motion, well before the ball is released

Baseball



FastPitch Softball



This same technique can be used to work on hitting mechanics by measuring to speed of the ball off the bat. Simply "Press and Release" the button just as the batter begins to swing the bat.

The Pocket Radar will display the peak speed seen during the measurement series after each button push. If it did not find a valid speed it will display "--". There is no need to clear the display. The last speed will remain on the screen for 30 seconds or until the button is pressed again and a new speed is displayed. The small black RECALL button can be used to read the previous ten speed readings.

If you hold the button down too long, and do not release it in time, the measurement sequence will repeat again every  $\frac{3}{4}$  of a second.

Holding the button down is not good for capturing release speed because you may not be controlling the timing of when the measurement happens. In this case you could possibly measure the ball after it has slowed down, or you could measure the motion of the swinging bat or the catcher instead of the ball.

Holding the button down is a good feature if you want to track your runners. For instance, when a player takes off after hitting the ball to run to first base, you can track their speed and acceleration all the way past first base. By using the recall function that stores the last ten speeds, you can show them if they slowed down before crossing the base. Many coaches find this to be a valuable training tool for young players. This can also be very helpful for evaluations and try-outs.

## **HOW DOES POCKET RADAR™ COMPARE TO THE OTHER LARGER RADAR GUNS?**

Most hand held radar units are called radar guns because they are held like a gun. They contain a radar transmitter that uses a long antenna called a horn. Inside the radar it actually looks like a horn or a megaphone. To focus the radar beam it needs to be long and the radar gun has to be big enough to fit the horn inside.

Pocket Radar uses a group of many small flat antennas working together to create the same type of focused beam that the horn creates. Because of this, and many other proprietary new inventions, it provides the key advantage of great performance in a very small size. This allows it to be used very discretely without drawing attention and possibly changing the behavior of the players. It also makes it easy to take with you anywhere.

It uses much less power than other radar guns. The Pocket Radar can make over 10,000 speed readings from a single set of 2 AAA alkaline batteries. Pocket Radar was designed to give you a very useful range for an affordable price in a very convenient and easy to carry size. This means you will be able to take it anywhere and have it with you when you need it. The Pocket Radar also has a much faster turn-on than other radar guns. It can go from completely off and in your pocket to a speed reading in less than a second.

Pocket Radar is designed to work well in all types of coaching and training situations. It can easily measure a baseball pitch from behind the pitcher or from the backstop on 90 foot baseball fields, but it is not intended for use sitting back in the stands as a fan at a baseball game. While it has less range than the most expensive guns, it has longer range than the less expensive, entry-level radar guns.

Used properly, the Pocket Radar will give you the same accurate measurements as the larger more expensive radar guns. However, it does not have quite as much range as the most expensive radar guns. If you absolutely need to capture the speed of a baseball right off the pitcher's hand from a very long distance away or if you want to measure speed with a resolution of 0.1 miles/hour, then perhaps you should consider a much more expensive radar gun. For the vast majority of coaching applications, the Pocket Radar offers a very portable and economical solution that is much more convenient and very easy to use.

