
FIGURE 1, THE COSINE EFFECT

TYPICAL DISPLAYED SPEEDS RESULTING FROM A 100MPH TARGET BASED ON THE ANGLE OF BORESIGHT TO LINE OF TARGET TRAVEL

THE RADAR UNIT WILL READ TARGET SPEEDS ACCURATELY FOR BOTH TARGETS MOVING TOWARDS THE BORESIGHT, OR MOVING AWAY FROM THE BORESIGHT OF THE RADAR UNIT. FOR OPTIMUM PERFORMANCE AND ACCURACY THE RADAR UNIT SHOULD BE NO MORE THAN 12 FEET FROM EITHER THE RELEASE POINT, OR END POINT OF THE TARGET (FIGURE 2).

FIGURE 2 GENERAL SET UP for optimal performance
MEASURING PRACTICE SWINGS WITH THE SR3500 OR SR3600 RADAR GUN.
THE UNIQUE SPEED DETECTION METHOD OF THESE RADAR GUNS ALLOWS VARYING SPEED, SHORT
TRAVEL TARGETS TO BE ACCURATELY RECORDED. FIGURE 3 SHOWS A TYPICAL SET UP TO READ THE
MAXIMUM SPEED OF A BASEBALL BAT, GOLF CLUB, HOCKEY STICK OR OTHER TARGET.

WARNING!!!
KEEP THE RADAR UNIT BORESIGHT IN LINE, OR AS CLOSE
AS POSSIBLE TO THE LINE OF MAXIMUM TARGET SPEED.
FOR GOLF OR HOCKEY, THE RADAR UNIT SHOULD BE AS
LOW AS POSSIBLE BECAUSE THE MAXIMUM SWING SPEED
SHOULD BE AT GROUND LEVEL.

FIGURE 3, MEASURING DRY SWING SPEEDS
BORESIGHT OF RADAR UNIT
DIRECTED AT MAXIMUM SPEED
POINT, TYPICALLY THIS IS THE
“TIP” OF THE BAT OR CLUB.

ALWAYS SWING
TARGET AWAY FROM
THE RADAR UNIT

TARGET, BASEBALL BAT,
GOLF CLUB, ETC.

STICK OR OTHER TARGET.

TIP:
WHEN MEASURING BAT OR CLUB
SPEED, OR TARGETS WITH
VARYING SPEEDS AND / OR NON
LINEAR MOTION, THE INTENDED
TARGET SHOULD BE AS CLOSE AS
IS SAFELY POSSIBLE TO THE
BORESIGHT OF THE RADAR UNIT
AND THE INTENDED MAXIMUM
SPEED POINT OF THE TARGET.
MEASURING BATTED BALLS OR HIT GOLF BALL SPEEDS.

Typically when a ball is struck with a club the ball speed will be greater than the club speed. The radar unit will typically display the fastest speed recorded, however other moving objects, such as the bat or club can be seen as a “larger target”, and these “target” speeds may be registered. Two methods can be used to reduce the possibility of the radar unit registering the wrong target speed.

1. Using trigger timing to start the speed reading.
2. Placing the radar unit in front of the contact point.

Figure 4 depicts the 2 methods. Note that small radar cross section targets such as a golf ball require the radar unit to be closer to the moving target in order to get an accurate reading.

**Figure 4, Two Methods of Radar Device Position for Reading Launched Targets**

1. Using the trigger mode, time the trigger pull just after the target is struck.
2. When placing the radar device in front of the target launch point always use the continuous mode and mount the radar device on a tripod, or other ‘hands free’ method to avoid being struck by the target.

WARNING!!!

Using the trigger always maintain a safe distance from the swing arc and behind the target launch point.

Position the radar device boresight in the same line as the intended target line of travel.

TIP:

You can make a short “monopod” stand for the radar gun with a standard short piece of 1/4-20 threaded rod and a nut. Screw one end into the radar gun handle about 3 turns, and tighten the nut. Plug the other end into the ground to make a “short monopod” stand.

**Figure 4:**

- Radar Unit
- Boresight Line
- Player
- Target, Baseball, Golf Ball, Etc.