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Section 1: Introduction

This manual explains the installation of several baseball speed of pitch systems. By connecting a JUGS® radar gun to an All Sport® 5000 control console, the user is able to output data to Daktronics scoreboards, matrix display controllers (Venus®, Show Control), and the Daktronics Scoring-Timing Interface (DSTI). This manual is not specific to a particular installation.

Important Safeguards:

- Please read and understand all instructions before beginning the installation process.
- Do not drop control equipment or allow it to get wet.
- Do not disassemble control equipment; failure to follow this safeguard will make the warranty null and void.
- Disconnect display power when not in use or when servicing.
- Disconnect display power before servicing power supplies to avoid electrical shock. Power supplies run on high voltage and may cause physical injury if touched while powered.

Project-specific information takes precedence over any other general information found in this manual.

1.1 General Pitch & Speed Information

Section 5 of the All Sport 5000 control console manual (ED-11976) contains complete instructions for operating the Pitch & Speed mode. Drawing A-130895 in Appendix A shows the All Sport insert (LL-2482) used to operate this mode.

The manufacturers of the Jugs and Stalker radar guns also provide fully detailed operating instructions in their respective manuals.

1.2 Resources

Figure 1 illustrates a Daktronics drawing label. The drawing number is located in the lower-right corner of a drawing. This manual refers to drawings by listing the last set of digits and the letter preceding them. In the example, the drawing would be referred to as Drawing C-325405.

Reference Drawing:
System Riser Diagram ................................................................. Drawing C-325405

Daktronics identifies manuals by the DD or ED number located on the cover page of each manual. For example, this manual would be referred to as ED-12224.
Section 2: Radar Gun Placement & Mounting

Refer to Figure 2 and Figure 3 for general placement guidelines. Refer to the gun manufacturer's manual for precise placement. **Radar gun should be located no more than 300' (91 m) from pitcher’s mound.**

If a radar gun is located in a control room, the gun may not read correct speeds through glass and tinted glass.

**Note:** Daktronics does not provide any standard enclosure or rain shield for radar guns.

The Jugs radar gun package includes both a tripod (preferred) and a wall mount bracket. Refer to Drawing B-1023369 in Appendix A for instructions on how to attach a radar gun to these devices.

**Note:** The tripod can be set as low as 22.5" (570 mm) to not block the view of fans. It can also be set as high as 55" (1390 mm) to provide a good angle for accurate speed measurements.

If the gun is still off angle after mounting, speed adjust calculations can be performed to offset this. Refer to the instructions in Drawing A-243741 in Appendix A and enter the final coefficient value into the All Sport console.

**Figure 2: Radar Gun Placement, Horizontal Angle**

**Figure 3: Radar Gun Placement, Vertical Angle**
Section 3: Wired Speed of Pitch Configurations

3.1 Interface Configurations

Drawing B-130818 shows the four radar gun configurations that are explained in the following sub-sections. Each configuration corresponds to a radar gun interface kit from Daktronics. The table below lists the number, description, and Daktronics part number for each interface kit:

<table>
<thead>
<tr>
<th>Interface Kit Description</th>
<th>Part #</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1 Radar gun remote from All Sport; wired scoreboard feed and current loop RTD</td>
<td>0A-1196-0032</td>
</tr>
<tr>
<td>#2 Radar gun remote from All Sport; wired scoreboard feed and RS-232 RTD</td>
<td>0A-1196-0033</td>
</tr>
<tr>
<td>#3 Radar gun within 10' (3 m) of All Sport; wired scoreboard feed and current loop RTD</td>
<td>0A-1196-0034</td>
</tr>
<tr>
<td>#4 Radar gun within 10' (3 m) of All Sport; wired scoreboard feed and RS-232 RTD</td>
<td>0A-1196-0035</td>
</tr>
</tbody>
</table>

Note: The following setups describe the installation of a JUGS radar gun package. Installation procedure will vary depending on the gun in use. Any substitute gun must have the ability to output RS-232 signal to work with this system.

Kit #1: Remote Radar Gun – Current Loop Scoreboard & RTD

In this configuration, the All Sport console receives speed-of-pitch information from a remotely-located radar gun. The All Sport then transmits the radar data directly to a scoreboard via current loop signal. Refer to the instructions below and Drawing B-130818 in Appendix A to set up the system.

1. Connect the 25-pin to 25-pin signal cable (W-1247) between the J6 port on the back of the All Sport console and the 25-pin J-box (0A-1067-0056).

2. Route one-pair cable minimum (W-1077) from the 25-pin J-box to the scoreboard, and another to a 1/4" phone J-box (0A-1091-0227) near the radar gun. Refer to the installation section of the scoreboard manual for signal connection information.

   Note: To send the data to a display controller or DSTI, an additional one-pair cable minimum may be routed to another signal converter (not included in this kit).

3. Connect the 1/4" phone jack cable (W-1236) between the 1/4" phone J-box and the signal converter (0A-1065-0173). The cable is cut in half, and the other end is connected to TB1 on the signal converter (red wire to 1 CL1+, black wire to 2 CL1-). Plug the signal converter into a 120 V AC power source.

4. Connect the 9-pin to 9-pin cable (0A-1000-0121) between the J1 jack on the signal converter and the 9-pin plug on the 30' (9 m) data cable (W-2453).
5. Connect the data cable to the 9-pin jack on the radar gun handle. The power adapter (A-3010) may also be plugged into the handle and a 120/240 VAC power source, or the gun may run off internal rechargeable batteries.

6. Ensure that any radar gun menu settings are properly configured for baseball. Refer to the documentation included with the radar gun.

7. Plug in and power on the All Sport console, and set to code “5500” to enter the Pitch & Speed mode.

**Kit #2: Remote Radar Gun – Current Loop Scoreboard & RS-232 RTD**

In this configuration, the All Sport console receives speed-of-pitch information from a remotely-located radar gun. The All Sport then transmits the radar data directly to a scoreboard via current loop signal and to a Daktronics display controller via RS-232 signal. Refer to the instructions below and Drawing B-130818 in Appendix A to set up the system.

1. Connect the 25-pin to 25-pin signal cable (W-1247) between the J6 port on the back of the All Sport console and the dual 25-pin J-box (0A-1166-0027).

2. Connect the 9-pin to 25-pin signal cable (W-1249) from the dual J-box to an available serial (COM) port on the display controller or DSTI computer. The COM port must be set to 1200 baud, No parity, 8 bits, 1 stop bit, Standard RTD.

3. Route one-pair cable minimum (W-1077) from the dual 25-pin J-box to the scoreboard, and another to a 1/4” phone J-box (0A-1091-0227) near the radar gun. Refer to the installation section of the scoreboard manual for signal connection information.

4. Connect the 1/4" phone jack cable (W-1236) between the 1/4" phone J-box and the signal converter (0A-1065-0173). The cable is cut in half, and the other end is connected to TB1 on the signal converter (red wire to 1 CL1+, black wire to 2 CL1-). Plug the signal converter into a 120 VAC power source.

5. Connect the 9-pin to 9-pin cable (0A-1000-0121) between the J1 jack on the signal converter and the 9-pin plug on the 30' (9 m) data cable (W-2453).

6. Connect the data cable to the 9-pin jack on the radar gun handle. The power adapter (A-3010) may also be plugged into the handle and a 120/240 VAC power source, or the gun may run off internal rechargeable batteries.

7. Ensure that any radar gun menu settings are properly configured for baseball. Refer to the documentation included with the radar gun.

8. Plug in and power on the All Sport console, and set to code “5500” to enter the Pitch & Speed mode.
Kit #3: Radar Gun Near All Sport – Current Loop Scoreboard & RS-232 RTD

In this configuration, the All Sport console receives speed-of-pitch information from a radar gun that is located no more than 10' (3 m) away. The All Sport then transmits the radar data directly to a scoreboard via current loop signal and to a Daktronics display controller via RS-232 signal. Refer to the instructions below and Drawing B-130818 in Appendix A to set up the system.

1. Connect the J4 end of the radar gun Y-cable (0A-1000-0123) to the J6 port on the back of the All Sport console and the J1 end to the dual 25-pin J-box (0A-1166-0027).

2. Connect the JUGS end of the radar gun Y-cable to the 9-pin plug on the 30' (9 m) data cable (W-2453).

3. Connect the data cable to the 9-pin jack on the radar gun handle. The power adapter (A-3010) may also be plugged into the handle and a 120/240 VAC power source, or the gun may run off internal rechargeable batteries.

4. Connect the 9-pin to 25-pin cable (W-1249) between the dual J-box and an available serial (COM) port on the display controller or DSTI computer. The COM port must be set to: 1200 baud, No parity, 8 bits, 1 stop bit, Standard RTD.

5. Route one-pair cable minimum (W-1077) from the dual 25-pin J-box to the scoreboard. Refer to the installation section of the scoreboard manual for signal connection information.

6. Ensure that any radar gun menu settings are properly configured for baseball. Refer to the documentation included with the radar gun.

7. Plug in and power on the All Sport console, and set to code “5500” to enter the Pitch & Speed mode.

Kit #4: Radar Gun Near All Sport – Current Loop Scoreboard & RTD

In this configuration, the All Sport console receives speed-of-pitch information from a radar gun that is located no more than 10' (3 m) away. The All Sport then transmits the radar data directly to a scoreboard and to a Daktronics display controller via current loop signal. Refer to the instructions below and Drawing B-130818 in Appendix A to set up the system.

1. Connect the J4 end of the radar gun Y-cable (0A-1000-0123) to the J6 port on the back of the All Sport console and the J1 end to the 25-pin junction box (0A-1067-0056).

2. Connect the JUGS end of the radar gun Y-cable to the 9-pin plug on the 30' (9 m) data cable (W-2453).

3. Connect the data cable to the 9-pin jack on the radar gun handle. The power adapter (A-3010) may also be plugged into the handle and a 120/240 VAC power source, or the gun may run off internal rechargeable batteries.

4. Route one-pair cable minimum (W-1077) from the 25-pin J-box to TB1 on the signal converter (0A-1065-0173). Connect the red wire to 5 CL+ and the black wire to 6 CL-. Plug the signal converter into a 120 VAC power source.
5. Connect the 9-pin to 9-pin cable (W-1267) between the J1 jack on the signal converter and an available serial (COM) port on the display controller or DSTI computer. The COM port must be set to: 1200 baud, No parity, 8 bits, 1 stop bit, Standard RTD.

6. Route another one-pair cable minimum (W-1077) from the 25-pin J-box to the scoreboard. Refer to the installation section of the scoreboard manual for signal connection information.

7. Ensure that any radar gun menu settings are properly configured for baseball. Refer to the documentation included with the radar gun.

8. Plug in and power on the All Sport console, and set to code “5500” to enter the Pitch & Speed mode.
Section 4: Radio Speed of Pitch Configurations

4.1 Radio Settings

Radio receivers in the scoreboard are set to both a broadcast (BCAST) and channel (CHAN) number. These numbers must correspond to the settings on the radio-equipped All Sport. Single-controller systems typically use the default setting of BCAST 1 and CHAN 1. If the primary scoreboard is already using a wireless system, these settings may have to be adjusted (the speed of pitch digits are controlled from a separate radio receiver).

- For information about radio receiver installation/troubleshooting, refer to the Gen V Radio Installation Manual (ED-13831) or the Gen VI Radio Installation Manual (DD2362277).
- For setting the proper broadcast/channel transmitting settings, refer to Section 2 of the All Sport 5000 Series Control Console Operations Manual (ED-11976).

All manuals referenced above are available online at www.daktronics.com/manuals

4.2 Interface Configurations

Drawing B-159255 shows the four radar gun configurations with the radio All Sport option that are explained in the following sub-sections. Each configuration corresponds to a radar gun radio interface kit from Daktronics. The table below lists the number, description, and Daktronics part number for each interface kit:

<table>
<thead>
<tr>
<th>Interface Kit Description</th>
<th>Part #</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1 Radar gun remote from All Sport; wireless scoreboard feed and wired current loop RTD</td>
<td>0A-1196-0122</td>
</tr>
<tr>
<td>#2 Radar gun remote from All Sport; wireless scoreboard feed and wired RS-232 RTD</td>
<td>0A-1196-0123</td>
</tr>
<tr>
<td>#3 Radar gun within 10’ (3 m) of All Sport; wireless scoreboard feed and wired current loop RTD</td>
<td>0A-1196-0124</td>
</tr>
<tr>
<td>#4 Radar gun within 10’ (3 m) of All Sport; wireless scoreboard feed and wired RS-232 RTD</td>
<td>0A-1196-0125</td>
</tr>
</tbody>
</table>

Note: The following setups describe the installation of a JUGS radar gun package. Installation procedure will vary depending on the gun in use. Any substitute gun must have the ability to output RS-232 signal to work with this system.
Kit #1: Remote Radar Gun – Radio Scoreboard & Current Loop RTD
In this configuration, the All Sport console receives speed-of-pitch information from a remotely-located radar gun. The All Sport then transmits the radar data directly to a scoreboard via wireless radio signal. Refer to the instructions below and Drawing B-159255 in Appendix A to set up the system.

1. Connect the 25-pin to 25-pin signal cable (W-1247) between the J6 port on the back of the All Sport console and the 25-pin J-box (0A-1067-0056).

2. Route one-pair cable minimum (W-1077) from the 25-pin J-box to a 1/4" phone J-box (0A-1091-0227) near the radar gun.

   Note: To send the data to a display controller or DSTI, one-pair cable (W-1077) minimum may be routed to another signal converter (not included in this kit).

3. Connect the 1/4" phone jack cable (W-1236) between the 1/4" phone J-box and the signal converter (0A-1065-0173). The cable is cut in half, and the other end is connected to TB1 on the signal converter (red wire to 1 CL1+, black wire to 2 CL1-). Plug the signal converter into a 120 VAC power source.

4. Connect the 9-pin to 9-pin cable (0A-1000-0121) between the J1 jack on the signal converter and the 9-pin plug on the 30' (9 m) data cable (W-2453).

5. Connect the data cable to the 9-pin jack on the radar gun handle. The power adapter (A-3010) may also be plugged into the handle and a 120/240 VAC power source, or the gun may run off internal rechargeable batteries.

6. Ensure that any radar gun menu settings are properly configured for baseball. Refer to the documentation included with the radar gun.

7. Plug in and power on the All Sport console. Ensure the radio broadcast and channel settings are correct, and set to code “5500” to enter the Pitch & Speed mode.

Kit #2: Remote Radar Gun – Radio Scoreboard & RS-232 RTD
In this configuration, the All Sport console receives speed-of-pitch information from a remotely-located radar gun. The All Sport then transmits the radar data directly to a scoreboard via wireless radio signal and to a Daktronics display controller via wired RS-232 signal. Refer to the instructions below and Drawing B-159255 in Appendix A to set up the system.

1. Connect the 25-pin to 25-pin signal cable (W-1247) between the J6 port on the back of the All Sport console and the dual 25-pin J-box (0A-1166-0027).

2. Connect the 9-pin to 25-pin signal cable (W-1249) from the dual J-box to an available serial (COM) port on the display controller or DSTI computer. The COM port must be set to 1200 baud, No parity, 8 bits, 1 stop bit, Standard RTD.

3. Route one-pair cable minimum (W-1077) from the dual 25-pin J-box to a 1/4" phone J-box (0A-1091-0227) near the radar gun.
4. Connect the ¼" phone jack cable (W-1236) between the ¼" phone J-box and the signal converter (0A-1065-0173). The cable is cut in half, and the other end is connected to TB1 on the signal converter (red wire to 1 CL1+, black wire to 2 CL1-). Plug the signal converter into a 120 VAC power source.

5. Connect the 9-pin to 9-pin cable (0A-1000-0121) between the J1 jack on the signal converter and the 9-pin plug on the 30' (9 m) data cable (W-2453).

6. Connect the data cable to the 9-pin jack on the radar gun handle. The power adapter (A-3010) may also be plugged into the handle and a 120/240 VAC power source, or the gun may run off internal rechargeable batteries.

7. Ensure that any radar gun menu settings are properly configured for baseball. Refer to the documentation included with the radar gun.

8. Plug in and power on the All Sport console. Ensure the radio broadcast and channel settings are correct, and set to code “5500” to enter the Pitch & Speed mode.

**Kit #3: Radar Gun Near All Sport – Radio Scoreboard & RS-232 RTD**
In this configuration, the All Sport console receives speed-of-pitch information from a radar gun that is located no more than 10' (3 m) away. The All Sport then transmits the radar data directly to a scoreboard via wireless radio signal and to a Daktronics display controller via wired RS-232 signal. Refer to the instructions below and Drawing B-159255 in Appendix A to set up the system.

1. Connect the J4 end of the radar gun Y-cable (0A-1000-0123) to the J6 port on the back of the All Sport console and the J1 end to the dual 25-pin J-box (0A-1166-0027).

2. Connect the JUGS end of the radar gun Y-cable to the 9-pin plug on the 30' (9 m) data cable (W-2453).

3. Connect the data cable to the 9-pin jack on the radar gun handle. The power adapter (A-3010) may also be plugged into the handle and a 120/240 VAC power source, or the gun may run off internal rechargeable batteries.

4. Connect the 9-pin to 25-pin cable (W-1249) between the dual J-box and an available serial (COM) port on the display controller or DSTI computer. The COM port must be set to: 1200 baud, No parity, 8 bits, 1 stop bit, Standard RTD.

5. Ensure that any radar gun menu settings are properly configured for baseball. Refer to the documentation included with the radar gun.

6. Plug in and power on the All Sport console. Ensure the radio broadcast and channel settings are correct, and set to code “5500” to enter the Pitch & Speed mode.
Kit #4: Radar Gun Near All Sport – Radio Scoreboard & Current Loop RTD
In this configuration, the All Sport console receives speed-of-pitch information from a radar gun that is located no more than 10' (3 m) away. The All Sport then transmits the radar data directly to a scoreboard via wireless radio signal and to a Daktronics display controller via wired current loop signal. Refer to the instructions below and Drawing B-159255 in Appendix A to set up the system.

1. Connect the J4 end of the radar gun Y-cable (0A-1000-0123) to the J6 port on the back of the All Sport console and the J1 end to the 25-pin junction box (0A-1067-0056).

2. Connect the JUGS end of the radar gun Y-cable to the 9-pin plug on the 30' (9 m) data cable (W-2453).

3. Connect the data cable to the 9-pin jack on the radar gun handle. The power adapter (A-3010) may also be plugged into the handle and a 120/240 VAC power source, or the gun may run off internal rechargeable batteries.

4. Route one-pair cable (W-1077) minimum from the 25-pin J-box to TB1 on the signal converter (0A-1065-0173). Connect the red wire to 5 CL+ and the black wire to 6 CL-. Plug the signal converter into a 120 VAC power source.

5. Connect the 9-pin to 9-pin cable (W-1267) between the J1 jack on the signal converter and an available serial (COM) port on the display controller or DSTI computer. The COM port must be set to: 1200 baud, No parity, 8 bits, 1 stop bit, Standard RTD.

6. Ensure that any radar gun menu settings are properly configured for baseball. Refer to the documentation included with the radar gun.

7. Plug in and power on the All Sport console. Ensure the radio broadcast and channel settings are correct, and set to code “5500” to enter the Pitch & Speed mode.
Section 5: Troubleshooting

5.1 Troubleshooting

Setup for any of the speed of pitch configurations should produce few problems for installers. However, if there are difficulties or if any component fails to operate, refer to the following table for possible solutions.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible Solution / Items to Check</th>
</tr>
</thead>
</table>
| All Sport is not receiving/displaying data                              | • Press the [SPEED •] key on the All Sport keypad to manually display the speed. If this does not work, check the wired signal cabling running to the display or wireless radio settings on the radio receiver or All Sport console. Refer to the scoreboard or display manual, or All Sport 5000 manual (ED-11976).  
  • Check the All Sport menu and verify the correct gun model is selected.  
  • Check wiring between the gun and All Sport.  
  • Check the gun for power and the communication equipment (if applicable) at the gun location. |
| All Sport is receiving/displaying data, but the speed is too high/low by a considerable amount every once in awhile | • Verify the radar gun is installed within the specifications it requires. Refer to radar gun manufacturer’s manual.  
  • Verify the radar gun’s menu settings are set correctly, if applicable. Refer to radar gun manufacturer’s manual.  
  • If there is a “once in awhile” high speed or low speed and all other speeds are accurate, the gun maybe reading the catcher’s throw back to the pitcher or other flying objects. Use the All Sport Menu to set a Min. and Max. speed to avoid displaying these type of readings. Refer to All Sport 5000 manual (ED-11976). |
| All Sport is receiving/displaying data, but the speed is consistently slightly off (1-5 mph/kph) | • Verify the radar gun is installed within the specifications it requires. Refer to radar gun manufacturer’s manual.  
  • Verify the radar gun’s menu settings are set correctly, if applicable. Refer to radar gun manufacturer’s manual.  
  • Use Section 5.4 in All Sport 5000 manual (ED-11976) along with Drawing A-243741 to calculate and enter a speed adjustment/co-efficient so every speed sent to the All Sport will be adjusted before being displayed. |
## 5.2 Replacement Parts

<table>
<thead>
<tr>
<th>Part Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable Assembly, radar gun to signal converter</td>
<td>0A-1000-0121</td>
</tr>
<tr>
<td>Y-Cable, radar gun &amp; All Sport data</td>
<td>0A-1000-0123</td>
</tr>
<tr>
<td>Signal converter</td>
<td>0A-1065-0173</td>
</tr>
<tr>
<td>J-box, 25-pin</td>
<td>0A-1067-0056</td>
</tr>
<tr>
<td>J-box, 1/4&quot; Phone</td>
<td>0A-1091-0227</td>
</tr>
<tr>
<td>Scoreboard radio receiver kit (Gen VI)</td>
<td>0A-1110-0052</td>
</tr>
<tr>
<td>J-box, dual 25-pin</td>
<td>0A-1166-0027</td>
</tr>
<tr>
<td>All Sport 5010, 120V</td>
<td>0A-1196-0001</td>
</tr>
<tr>
<td>All Sport 5010R6, 120V (Gen VI)</td>
<td>0A-1196-0214</td>
</tr>
<tr>
<td>Cable Assembly, JUGS Power/Data Y-cable</td>
<td>0A-1196-0188*</td>
</tr>
<tr>
<td>Wall mount, telescopic</td>
<td>A-1279</td>
</tr>
<tr>
<td>JUGS radar gun package (model R2000)</td>
<td>A-2735*</td>
</tr>
<tr>
<td>JUGS radar gun package (model R2050)</td>
<td>A-3008**</td>
</tr>
<tr>
<td>Transformer, JUGS 120/240 VAC to 12 VDC</td>
<td>A-3010**</td>
</tr>
<tr>
<td>Cable, 22 AWG shielded pair, red &amp; black</td>
<td>W-1077</td>
</tr>
<tr>
<td>Cable, 1/4&quot; phone jack, 20'</td>
<td>W-1236</td>
</tr>
<tr>
<td>Cable, 25-pin male to 25-pin male, 25'</td>
<td>W-1247</td>
</tr>
<tr>
<td>Cable, 9-pin female to 25-pin male, 6'</td>
<td>W-1249</td>
</tr>
<tr>
<td>Cable, 9-pin male to 9-pin female, 10'</td>
<td>W-1267</td>
</tr>
<tr>
<td>Cable, JUGS 9-pin to 4-pin, 20'</td>
<td>W-2453**</td>
</tr>
</tbody>
</table>

* Use for radar guns shipped between January 2010 and April 2012.

** Use for radar guns shipped after April 2012.
## Appendix A: Reference Drawings

<table>
<thead>
<tr>
<th>Drawing Title</th>
<th>Drawing Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Riser- Radar Gun Config- Wire</td>
<td>B-130818</td>
</tr>
<tr>
<td>Insert; LL-2482 A/S 5000, Pitch and Speed</td>
<td>A-130895</td>
</tr>
<tr>
<td>System Riser: Radar Gun w/ Radio A.S.- Config</td>
<td>B-159255</td>
</tr>
<tr>
<td>Speed Adjust Calculations, Radar Gun</td>
<td>A-243741</td>
</tr>
<tr>
<td>Installation Detail, Radar Gun Mounting Guide</td>
<td>B-1023369</td>
</tr>
</tbody>
</table>
This is a step-by-step explanation using geometry to calculate the "speed adjust" value in the menu of the all sport pitch and speed program, code 5500.

A calculator with ability to do sin, cos, tan is required. Do all calculations to .xxxx values.

Step 1.
Measure, in feet, distance from pitcher's mound. Straight back past home plate to the area where gun is. Write your measurement on the _____ provided on the triangle picture below.

Step 2.
Measure, in feet, how high the gun is off the ground. Write your measurement on the _____ provided on the triangle picture below.

Step 3.
Calculate the "length #1" value. Use
length #1 = \(\sqrt{D^2 + H^2}\)

Step 4.
Calculate the "angle #1" value. Use
angle #1 = \(\cos^{-1}(D/\text{length #1})\)

Step 5.
Measure, in feet, how far over the gun is "offset" from home plate. Write your measurement on the _____ provided on the triangle picture below.

Step 6.
Copy the "length #1" value which found above, to this picture. You will reuse that number.

Step 7.
Calculate the "angle #2" value. Use
angle #2 = \(\tan^{-1}(O/\text{length #1})\)

Step 8.
Add calculated angle #1 to calculated angle #2. Enter value here ________

Calculate speed adjust value. Use
speed adjust value = \(\cos(\text{angle #1 + angle #2})\).

Calculations shown will not be 100% exact. Additional adjustments can be made as required. **The lower the number, the faster the speed the gun reads. All adjustments should be done at .00xx level.***
REFER TO AS DOCUMENT ID-1564097 FOR GENERAL RADAR GUN PLANNING. USE DL-12224 FOR SETUP AND CONFIGURATIONS.

PREFERRED METHOD, TRIPOD MOUNTING AT FIELD LEVEL. NO ENCLOSURES ARE PROVIDED BY DAKTRONICS.

SIDE VIEW

AAS RADAR GUN, R-2500 IN PACKAGE KIT FROM DAKTRONICS

MOUNTING THREADS

"TOUCH EXTENSION" FOR TRIPOD MOUNTING, IN RADAR GUN KIT

REMOVE TRIPOD MOUNTING UNIT WITH OUTSIDE OF TRIPOD.

SCREW TO EXTENSION.

**DO NOT FULLY TURN THE GUN HANDLE WILL PREVENT THE LATCH FROM CLAMPING ON THE MOUNT. LEAVE A SMALL CLEARANCE FOR THE GUN HANDLE TO PERPENDICULAR WITH THE TRIPOD MOUNT. CAN BE LATCHED BACK ON.

SWING THE GUN AROUND TIGHTENING THE NUTS AND SO THE HANDLE IS NEXT TO THE TRIPOD HANDLE SEE BELOW DETAIL.

TOP VIEW

HANDLE ON GUN

MOUNT AND STAND OFF TRIPOD HANDLE

AFTER LATCHED TO TRIPOD, SWING GUN AROUND. PREVENTING THE TURNING OF ROD AND GUN IS POINTED IN CORRECT DIRECTION.

HANDLE ON GUN IN FINAL LOCATION

WALL MOUNT METHOD WITH OPTIMAL ANGLES TO PITCHERS MOUND. SLED ADJUSTMENTS MAY BE NEEDED. NO ENCLOSURES ARE PROVIDED BY DAKTRONICS.

SIDE VIEW

AAS RADAR GUN, R-2500 IN PACKAGE KIT FROM DAKTRONICS

MOUNTING THREADS

A-1279 STAND. ADD ALL COMPONENTS THAT COME IN PACKAGE. PLACE THE STAND SO THE TOP SNAP TO THE MOUNT FOR THE SUN TO POINT TO THE PITCHER'S MOUND. WATCH WITH INCLINE SLED.

CUSTOMER PROVIDED PLATFORM SECURED TO WALL BY CUSTOMER ATTACHMENT HARDWARE TO PLATFORM BY OTHERS.

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