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## **Procedure for Setting up Down Track Infrareads, Infrared Stands, and Foam Blocks**

Note: This procedure is the same for all down track infrareads ( 60 foot, 330 foot, 594 foot (mph), 660 foot, 1000 foot, 1254 foot (mph), and 1320 foot )  
Infrared height – all at 6 inches off of the racing surface except the 60 foot clock which is set up 10 inches off of the racing surface.

Step 1: Make sure that you have a reference mark at both sides of the race track which are properly measured and certified at each location.

Step 2: Run a pull line from one side of the race track to the other right through the opening in the wall. Make sure that the pull line is directly over the marks on the race track. You can stake off the pull line on both sides of the race track, but do not pull tight at this time. The stakes must be outside of where the sensors are to be mounted on the cement pads.

Step 3: Take a foam block that is 6 inches wide and lay it down on its side in the middle of the race track. The 6 inch height will be used to keep the pull line at the correct height in the middle of the track. This is the height that the center of the reflectors will be in the foam block when it is placed in position.

Step 4: Because most tracks have a crown or curve in the racing surface, it is necessary to pull the line tight and adjust the pull line to the 6 inch height in the middle of the racing groove. It is necessary to do this in both lanes. Where the pull line is tied off on the sides of the track, it may be much higher than 6 inches due to this crown. Make sure that is 6 inches off of the surface in the racing groove. Pull the line tight at this time. Make sure the line stays over the marks !

Step 5: After you are confident that the line is the correct height and that the line is directly over the marks, take a measurement from the cement pad where the sensors are to be mounted to the pull line. This will determine the height that the center of the infrared sensor (center of the lens on the sensor) will need to be mounted off of the cement pad.

Step 6: Provide enough shims or supports to properly locate the sensor boxes on the cement pads so that they will be the height measured in Step 5.

Step 7: Mount the sensor boxes to the cement pad directly under the location of the pull line and at the height that was determined in Step 5.

Step 8: Mark the center of the race track directly under the pull line where the Foam Blocks will be located. Mark either side of the location of the foam block so that it will be easy to locate. Remove the pull line

Step 9: Use a tape measure to determine the exact center of the track by measuring wall to wall (guard rail to guard rail) and locate the foam block exactly in the center of the track. Make sure that the reflectors on the foam block are directly in line with the marks that you have made under the pull line in step 7.

Step 10: Mount the Foam Blocks using Velcro Fasteners. Use Silicone RTV to place one part (side) of the Velcro on the bottom of the Foam block. You must use 3 – 2 inch wide strips on each Foam Block.

Step 11: The other side of the Velcro must be siliconed to the track and also must be fastened with nails or screws to the track so that they will not be pulled off when the foam blocks are removed. The foam blocks are porous so the Velcro will stay fastened to the foam blocks even when removed.

Step 12: Align the infrared sensors from side to side and up and down until the maximum pulse rate is attained on the sensor alignment light.

Repeat Steps 1 through 12 at each location on the race track.