Step 9: Repeat Step 6, using the velocity vs. time plotter.

7. Sketch the shape of the resulting graph.

Analyze motion on an incline.

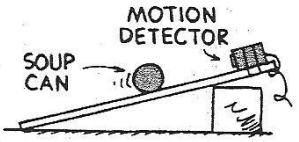

Fig. F

Going Further

Step 10: Set up the sonic ranger as shown in Figure F, to analyze the motion of a can or a large steel ball rolled up an incline. Initially position the can at least 40 cm (the minimum range) from the sonic ranger. Predict what the shapes of the distance vs. time and velocity vs. time graphs will look like for the can or ball rolled up and down the incline.

8. Sketch your predicted shapes in the following space.

Now observe the two graphs, distance vs. time and velocity vs. time.

9. Sketch the shape of the distance vs. time graph.

10. Sketch the shape of the velocity vs. time graph.