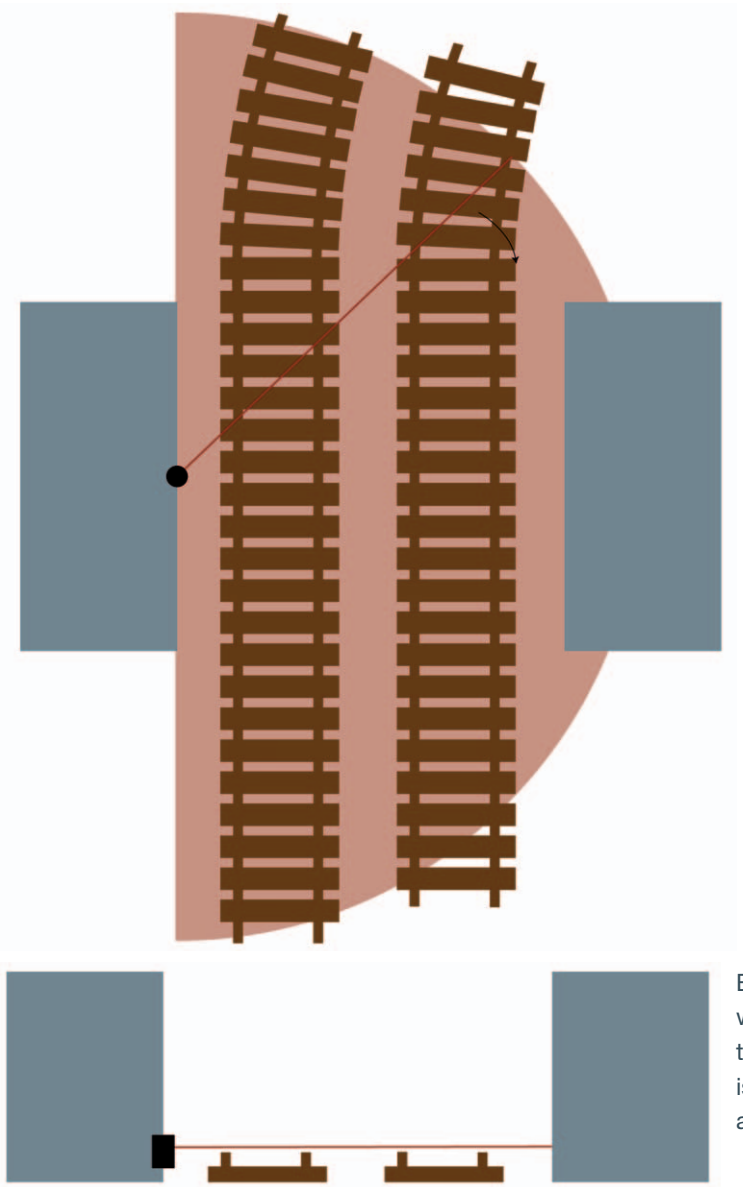
RAILWAY SAFETY IN STATIONS & CROSSINGS

The MDL laser will scan 360 degrees as it rotates. If 0 degrees is vertically upwards in this drawing and 180 is vertically down, the laser would see the opposite platform from about 50 to 130 degrees in this diagram. From 0 to 50 it would be looking up the track and from 130 to 180 it would be looking down the track. The basic laser has a typical range of 150m, so by placing the laser here, you would be able to cover a 300m length of track and 2 platforms 150m apart (unlikely as this may be). The laser does one full rotation in 1/10 second and so the whole area will be checked 10 times every second. There is an option to increase the range of the units if needed.

The pink area shows the coverage of the laser as it scans round and draws on a PC screen for example



Each dot (and there would be 3600 of them per revolution) is a co-ordinate of angle and distance.

MDL Laser Systems

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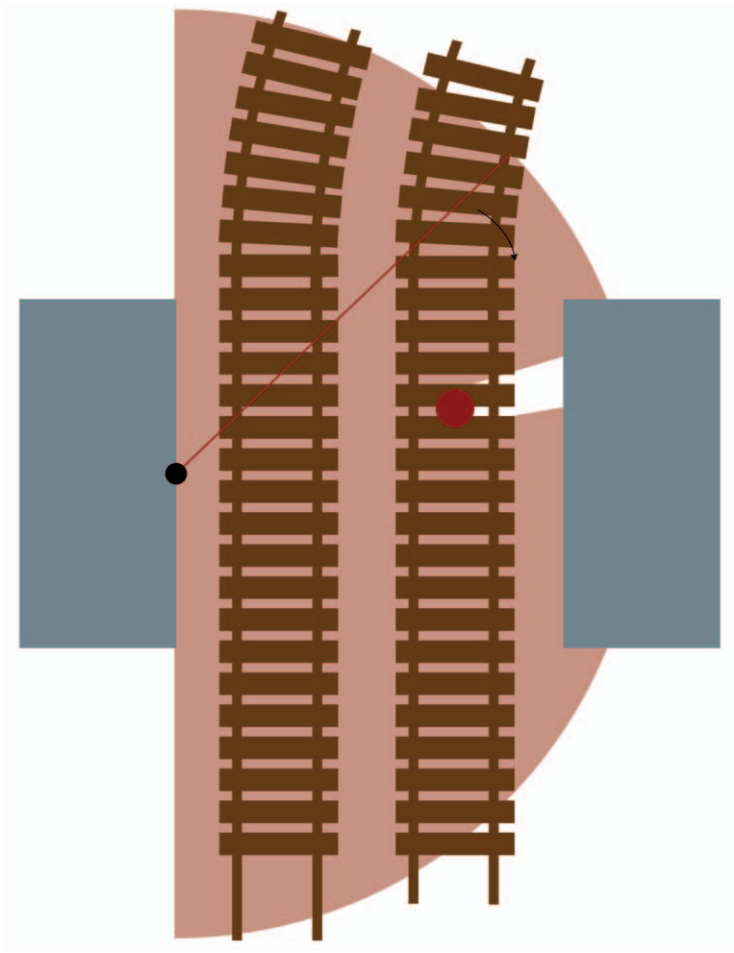
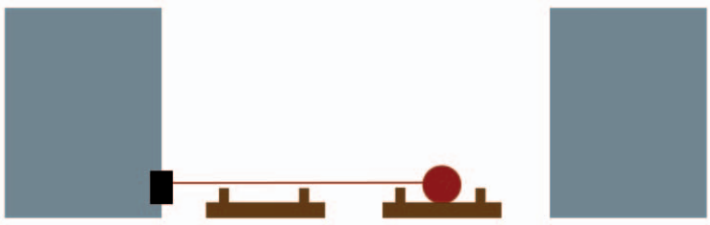
Now I have added a red football to the same image. Look how the data output by the laser scanner (pink area) shows an effect where part of the opposite platform is shadowed. From this data change, you know that there is an abject on the track, you know what distance it is from the scanner and some basic information about its size too.



If the ball was moving along the track, the laser would see it in a different location each time it rotated. This could be used to plot the movement or even measure the speed of movement.



Equally this could have been the train that was detected, as it approached the platform you would see the front of the train and when it was parked along side, you would see all of the wheels (or the body if the laser was mounted high enough).