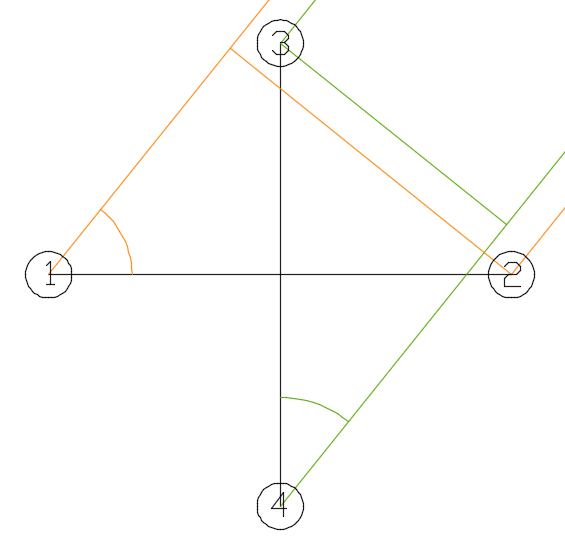
Sound Source Scenarios

There are four scenarios of where sound is sourced, based on angle quadrant.

Base calculation is as follows.

With and , the above equation will be

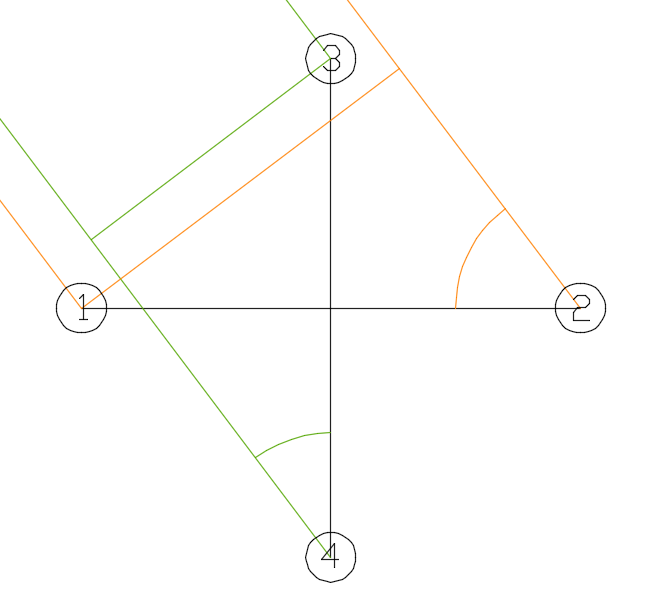
# First Quadrant



For this scenario, the location angle of the source is between 0° and 89°. Valid results are obtained by and , so encoder output of and will be 255.

We know that and , so the equation for first quadrant will be

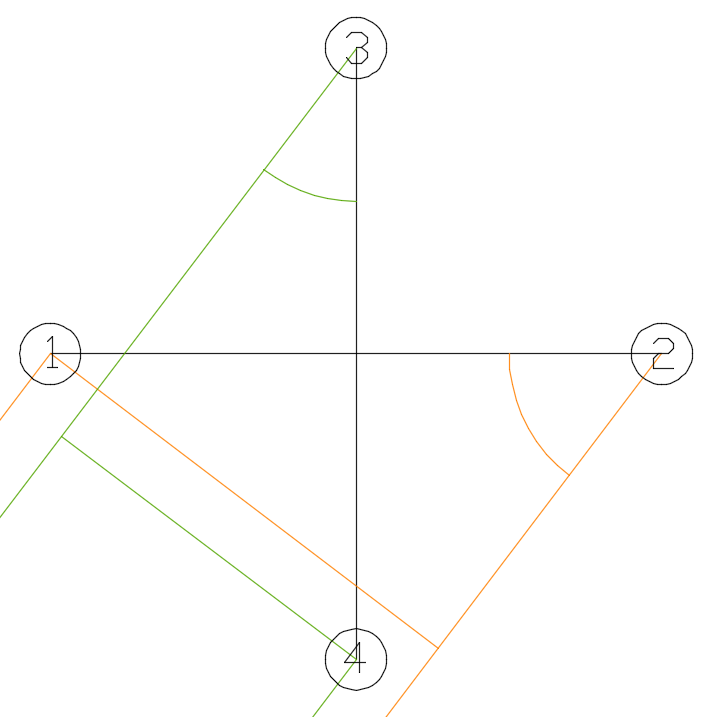
# Second Quadrant



For this scenario, the location angle of the source is between 90° and 179°. Valid results are obtained by and , so encoder output of and will be 255.

We know that and , so the equation for second quadrant will be

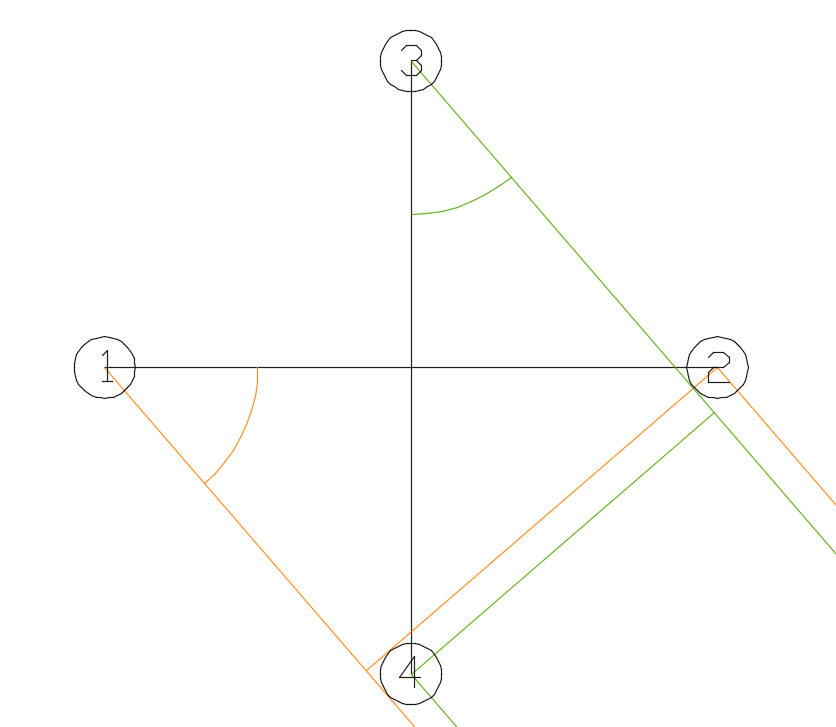
# Third Quadrant



For this scenario, the location angle of the source is between 180° and 269°. Valid results are obtained by and , so encoder output of and will be 255.

We know that and , so the equation for third quadrant will be

# Fourth Quadrant



For this scenario, the location angle of the source is between 270° and 359°. Valid results are obtained by and , so encoder output of and will be 255.

We know that and , so the equation for fourth quadrant will be