That is to say: $X^2 - R^2X + R_{mono}^4 = 0$

This equation has a real solution if:

$R^4 - 4R_{mono}^4 > 0$,

That is to say:

If $R < R_{mono}\sqrt{2}$, there is no particular solution to the above double-square equation for d_{inter} because all of the receiver positions on the circle are suitable.

For $R > R_{mono}\sqrt{2}$, the two inter-receiver spacing solutions d_{inter} are:

$d_{inter1} = R\sqrt{2}.\sqrt{1 + \sqrt{1 - \left(\frac{R_{mono}\sqrt{2}}{R}\right)^4}}$ and $d_{inter2} = R\sqrt{2}.\sqrt{1 - \sqrt{1 - \left(\frac{R_{mono}\sqrt{2}}{R}\right)^4}}$

Depending on the angle θ_1, it becomes:

$d_{inter} = 2R\ sin\theta_1$,

$d_{inter} \leq 2R_{mono}^2/R\ cos\theta_1$ becomes $2R\ sin\theta_1 \leq 2R_{mono}^2/R\ cos\theta_1$

Or else:

$sin2\theta_1 = 2R_{mono}^2/R^2$ having the following two angles as solutions:

$\theta_{1.1} = \frac{1}{2}\sin^{-1}(2R_{mono}^2/R^2)$ and $\theta_{1.2} = \pi - \frac{1}{2}\sin^{-1}(2R_{mono}^2/R^2)$ (32)

It should be noted that the solution d_{inter2} or the equivalent solution $\theta_{1.1}$ (smallest angle) is the one in which the receivers are closest to one another while at the same time being advantageously far from the transmitter TX in order to guarantee a better prior warning. The area of coverage between the respective detection areas of two adjacent receivers however decreases moving toward their maximum spacing of $2R_{mono}^2/D$. For example, figure 10 shows a spacing between adjacent receivers that is slightly smaller than the maximum spacing, with a very partial overlap between the receivers, this spacing however being able to be enough to trigger an alert with good prior warning. The example of figure 12 by contrast shows a spacing between adjacent receivers smaller than the maximum spacing, the overlap between neighbouring detection areas being greater. In figure 12, the point of overlap of the adjacent detection areas that is furthest from the transmitter is beyond the circle formed by the receivers. The following inequality is thus strictly complied with:

$sin\left(\frac{\theta_1}{2}\right) < {R_{mono}}^2/2R^2$ that is to say $\theta_1 < 2\ Arcsin(R_{mono}^2/2R^2)$

This solution of angle θ_1 is greater than $\frac{1}{2}Arcsin(2R_{mono}^2/R)$.