4.2.2 Sensitivity mode

In this calculation mode the function $block_{Max\ Interf\ Signal}$ (*Df*) that you entered represents the absolute power level (in dBm) of maximum interfering signal (maximum acceptable interfering power), which might be tolerated by the receiver at a given frequency separation (see A8.7).

In this case SEAMCAT calculates the receiver attenuation, Attenuation (*Df*), to be applied to the interfering signal by using the following expression:

$$\mathrm{Attenuation(Df)} = \mathrm{blockMaxInterfSignal(Df)(dBm)} - \mathrm{sensVLR(dBm)} + \mathrm{C/(N+I)(dB)} - \mathrm{I/N(dB)}$$

(Eq. 23)

where:

- D*f* = (f_{ILT} - f_{VLR}) is the frequency separation;
- $sens_{VLR}$ is the sensitivity of the VLR (dBm) as defined in the simulation scenario.

To achieve a realistic value, you may define the sensitivity ($sens_{VLR}$) as (see the figure below):

Sensitivity = Noise Floor + C/(N+I)

Sensitivity = -110 dBm + 16 = -94 dBm

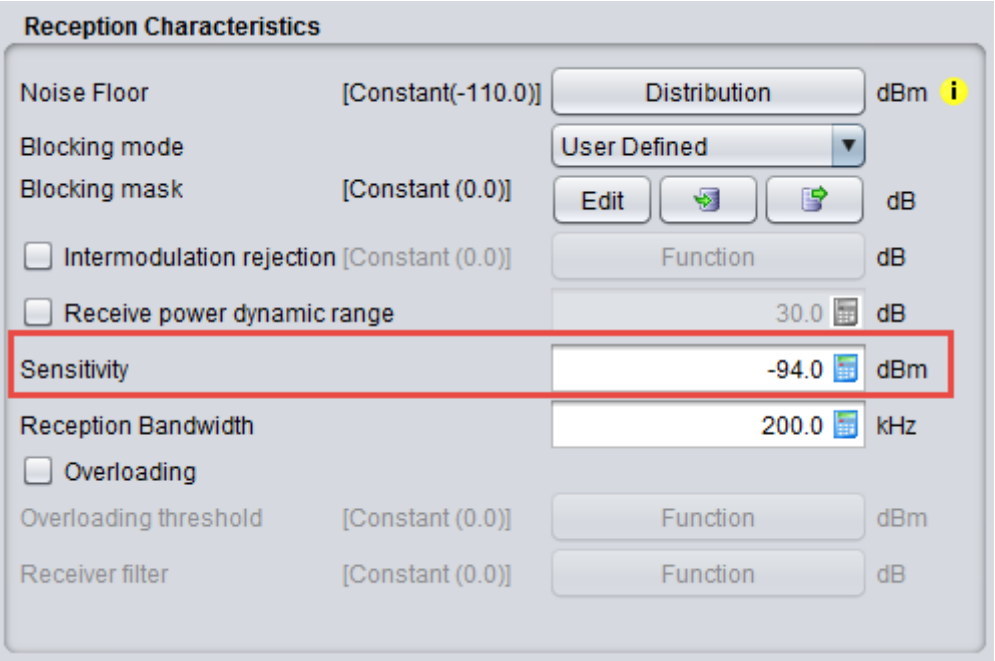

Figure 103: Setting up the sensitivity in SEAMCAT

Then the attenuation may be evaluated:

Attenuation (Df) = 40 + 94 + 16 - 0 = 150 dB

$iRSS_{blocking}$ *= Interfering Signal Level (f it)= -54.5 - 150 = -204.5 dBm*

This can be checked by running a simulation and displaying the $iRSS_{blocking}$ in case of Sensitivity mode calculated by SEAMCAT see Figure 104.

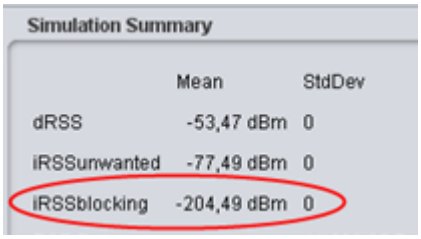

Figure 104: Mean $iRSS_{blocking}$ in case of Sensitivity mode

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Revision #1
Created 2026-04-15 04:41:40 UTC by ECO TECH
Updated 2026-04-15 04:43:09 UTC by ECO TECH