

Name: APENST804V01**Description:****Type:** Earth station, Receiving and Transmitting

Non-standard generic earth station antenna pattern described by 2 main coefficients: A and B.

Region(s): 123**Required Input Parameters:**

gain,coefa,coefb

Validation Warnings/Errors:

Type	Message
Error	CoefB () is out of limits [10:50].
Error	CoefA () is out of limits [18:47].
Error	Gmax () is less than CoefA (). Gmax is too low.

Pattern Information:

Pattern is equal to the maximum antenna gain in the main-lobe range (angles less than 1 degree).

Co-Polar Component:

$$G = G_{\max} \quad \text{for } 0^\circ \leq \varphi < 1^\circ$$

$$G = \text{CoefA} - \text{CoefB} * \log \varphi \quad \text{for } 1^\circ \leq \varphi < \varphi_b$$

$$G = G_{\min} \quad \text{for } \varphi_b \leq \varphi \leq 180^\circ$$

where:

$$\varphi_b = 10^{\left(\frac{\text{CoefA}+10}{\text{CoefB}}\right)}$$

$$G_{\min} = -10$$