



Horn.ell.a 2.1

KEY FEATURES

- **Horn Expansions:** Hypex family (Catenoid, Exponential, Hyperbolic Cosine, Hyperbolic Sine, Conic), Tractrix, Spherical, Spherical Closed and Waveguide
- **Aspect Ratio:** it is referred to the horn mouth representing the ratio between mouth major axis and minor axis. It is required for the horn beam-width, to arrange different horizontal and vertical coverage angle.
- **Mouth Ratio= 1 horn types:** Circular and Square horns
- **Mouth Ratio> 1 horn types:** Pseudo-Elliptical and Rectangular HCD horns (Hybrid Constant Directivity)
- **Corner Radius:** possibility to design a corner radius for Square and Rectangular mouth horns
- **Aperture Angles:** Complete control of angles down to the horn sections in horizontal and vertical planes (very helpful for ex. to manage Waveguide coverage angles, or to link different segments to connect the throat initial section of the horn with a specified compression driver exit)
- **Solid Radiation Angles:** Free space placement (4π steradian solid angle), Floor (2π), Wall (π), Corner ($\pi/2$)
- **3D Plots Method:** Full Angle solid geometry, $\frac{1}{2}$ of the solid geometry, $\frac{1}{4}$ of the solid geometry
- **Environment Information:** Environment working temperature and humidity of the horn
- **Saved Data Precision:** 2D and 3D file extension .asc with floating-point numbers by 6 fractional format digits
- **Unit:** SI units and units from other systems of measurement. Conversion possibility between units with standard SI prefix

