



Drawing Line Definition :

Solid - Cut Away Side View of Enclosure

Dotted - Transmission Line Path

Dashed - Section Area Definitions

MathCad Models :

TL Open End - Models the line as one long path from the closed end to the open end. The driver is assumed to be at the closed end. This is a very simple model that was used to represent the test line in my original article.

TL Offset Driver - Models the line in two pieces, the closed end above the driver and the open end below the driver to the terminus. The driver is on the boundary of the two pieces.

TL Sections - Models the line using discrete sections as shown in the drawing. This drawing is the basis for the input in the sample worksheet.

General Comments :

All of the sample TL worksheets are based on this enclosure and the Focal 8V 4412 driver. The total line length is approximately 76 in. The driver is offset 6 in from the closed end. The first two articles, from Project #1, develop these models. Many corrections and upgrades have been done since the articles were first written. The calculation algorithm is presented in the theory section of the site.

When designing a TL from scratch, it is probably best to start with the simple models to see what potential exists for the selected driver. Sketch out the proposed enclosure geometry and draw in the TL path along the center of the cross-section from the closed end to the open end.

If a TL geometry looks promising, then the most complex worksheet can be used to refine the design and optimize the enclosure dimensions and the stuffing density and location. The "TL Sections" worksheet can be used to model the most complicate details of an enclosure.