

I. INTRODUCTION

Review of functions in Main Control Panel

Setting defaults for Units, Frequency, etc.

Types of Grounds

Types of pattern projections (Elevation vs. Azimuth).

Far Field patterns

SWR Calculations

II. A 40 METER DOUBLET

Setting up the Antenna Structure

The x-y-z description

Antenna origin vs. height above ground

Setting up the WIRES table (lengths vs. end coordinates).

Number of Segments

Inserting a Source

Calculating patterns and SWR in Free Space

Set Ground to Free Space

Calculate Elevation Pattern (pick out Major Lobe).

Select Azimuth Pattern

Set Elevation Angle to Major Lobe

Calculate Azimuth Pattern

Calculate SWR over Frequency Range.

Point out: cosine structure, gain in dbi, beam width

Calculating patterns and SWR over real ground

Set Ground to Real

Calculate Elevation Pattern (pick out Major Lobe).

Select Azimuth Pattern

Set Elevation Angle to Major Lobe

Calculate Azimuth Pattern

Calculat SWR over Frequency Range.

Point out: cosine structure, gain in dbi, beam width

III. A 300 foot HORIZONTAL LOOP

Setting up the Antenna Structure

The x-y-z description

Antenna origin vs. height above ground

Set up a Horizontal Loop (inputs to WIRES table).

Number of Segments

Inserting a Source

Calculating patterns and SWR in Free Space

Set Ground to Free Space

Calculate Elevation Pattern (pick out Major Lobe).

Select Azimuth Pattern

Set Elevation Angle to Major Lobe

Calculate Azimuth Pattern

Calculate SWR over Frequency Range.

Point out: cosine structure, gain in dbi, beam width

Calculating patterns and SWR over real ground

Set Ground to Real

Calculate Elevation Pattern (pick out Major Lobe).

Set up Azimuth Pattern

Set Elevation Angle to Major Lobe

Calculate Azimuth Pattern

Calculate SWR over Frequency Range.

Point out: cosine structure, gain in dbi, beam width

IV. CONCLUSION

Things we have NOT done

Naming and documenting files

Applying common sense to results

Scaling to adjust to desired frequency

Adjusting antenna height