The next generation Ground Grid Systems module enables engineers to quickly and accurately design and analyze ground protection. Advanced 3-D technology integrates with one-line diagrams, enabling engineers to visualize their ground systems and seamlessly utilize short circuit results. Flexible design methodologies allow for quick auto-designed layouts or very detailed schemes. Color-coded graphical plots provide impressive results.
Three-Dimensional Design View

Key Features

- **IEEE 80 & 665 Methods**
- **Finite Element Method**
- **Rods & Conductors in any 3-D Direction**
- **Rod & Conductor Optimization**

Flexible Operation

- Automatically use short circuit results
- Optimize number of conductors with fixed rods
- Optimize number of conductors & rods based on cost
- Check the allowable current for grid conductors

Capabilities

- Two-layer soil configuration plus surface material
- Table of potentials at the earth surface
- External boundary extensions
- Handle irregular configurations of any shape
- Variable weight & temperature options
- Compare allowable currents against fault currents
- User-expandable conductor library
- Ground grid configurations showing conductor & rod plots

Standards & Methods

- IEEE 80-1986
- IEEE 80-2000
- IEEE 665-1995
- Finite Element

Calculate

- Reflection factor (K)
- Decrement factor (Df)
- Ground potential rise (GPR)
- Ground system resistance (Rg)
- Surface layer derating factor (Cs)
- Compare potentials to tolerable limits
- Step, touch, & absolute potentials inside & outside grid

Plotting/Reporting

- 3-D touch potential plots
- 3-D step potential plots
- 3-D absolute voltage plots
- Color coded contour plots
- Graphical display of overlimit voltages
- Conductor segments oriented in any 3-D direction
- Output results in Microsoft Access databases format
- Use Crystal Reports® for full color, customizable reports
- Export output reports to your favorite word processor

Plot Options

- Rotation animation
- Rotation increment (-15 to 15 degrees)
- Rotation detail – wire frame/plotting style/full detail
- Viewing style – color/monochrome
- Shading style – white/color
- Font size – small/medium/large
- Numeric precision – 0, 1, 2, 3 decimals
- Grid lines – no grid, X and/or Y axes
- Plotting method – wire frame/surface/surface with frame/surface with contouring/pixels
- Show bounding box – while rotating always/never
- 2-D contour • Off • Lines on top/bottom • Color on top/bottom

Unlimited Rods & Conductors
Multiple Interconnected Systems
Links with One-Line Diagrams
Customizable Font Types, Sizes, Styles, & Colors
Customizable Display of Ratings & Results
Automatic Error Checking
Graphical Display of Overpotential Areas
Dynamically Adjust Display of Results