Gap Transmitter Calculator

The Gap Transmitter Calculator (GapTxCalc) is a utility tool designed by Gap GeoTek (http://www.gapgeo.com/divisions/gap-geotek/) to assist with a number of geophysical challenges.

Features

Transmitter performance modelling

GapTxCalc models the performance of the Gap GeoPak high current transmitters for various loop configurations. It has proven to be invaluable for optimising loop design and wire selection. It also remains a useful reference when selecting safe operating parameters by providing improved awareness of the current carrying limitations of various wire sizes as well as relevant voltage considerations.

Step potential

A high voltage or 'potential difference' between the shoes of a person (the 'step potential'), poses a danger to field operatives and animals for electrocution. Gap GeoTek has created a feature that calculates the threat of 'ventricular fibrillation' (a likely prelude to sudden cardiac death or brain damage) based off a variety of input parameters, and certain defined assumptions.

This tool is primarily for educational purposes, so that field crews have a better awareness of the factors that contribute to electrical danger, and the various issues of concern for maintaining electrical safety.

Primary field Calculator

Based off either an open or closed wire loop, a user can model the primary field strength and direction. This visualisation is useful for determining how to lay out a wire loop to maximise the energising of an ore body. (This feature is available in the Advanced version only.)

Determining electrode resistance to ground

There are many kinds of layouts and electrodes used in Induced Polarisation. GapTxCalc now has the capability to determine the ground contact resistance based off a multitude of likely variables in an electrode setup.
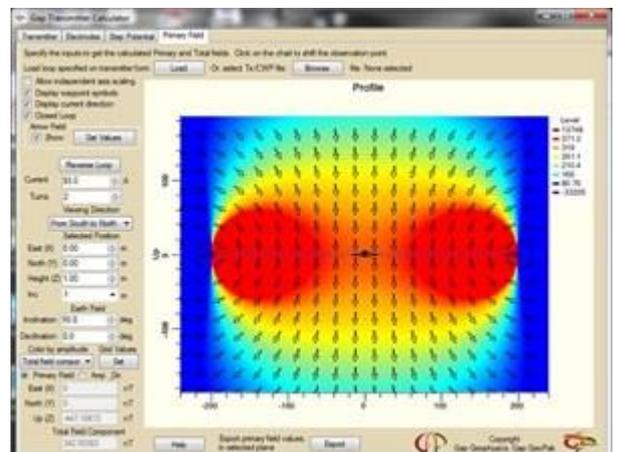
Safety and knowledge

In the interest of improving electrical safety within the exploration industry, we are making the software available as a free version to other geophysicists, operators and interested parties. Consequently, we have now incorporated a range of commonly available transmitters for wider use and comparison. An Advanced version is also available with additional features – contact us if you are interested.

We are keen to improve the software for ourselves and others and we welcome any feedback or suggestions. We will also consider adding other transmitters as information becomes available to us.

Please contact us (http://www.gapgeo.com/contact-us/) for the details of how to download the installer.