SCAL for Windows™

SENSOR CALIBRATION PROGRAM (P/N 189-31G)

The TEGAM Model 189-31G, provides a software tool to automate the calibration of sensors used with the family of Giga-tronics power meters and sensors listed in the table below. The IEEE-488 bus is used to communicate with Giga-tronics power meters in order to download, upload and verify the sensor head calibration constants. Calibration constants are read from an ASCII disk file created by TEGAM Sensor Calibration (SCAL) software. The software tool operates under Windows 3.1 or Windows 95/98. In addition, a National Instruments IEEE-488 driver and hardware interface card must be installed on the computer used for the calibration.

CONFIGURATION: The software assumes a default IEEE-488 address of 14 for the power meter, and that sensor head A is the sensor to be calibrated. The software also defaults to two (2) decimal digits, to the right of the decimal point, when comparing and verifying calibration constants.

Digit Resolution. The software has the capability to operate with a different number of digits to the right of the decimal point. This feature is provided for power meters that may be added to the software in the future.

THEORY OF OPERATION: The software reads calibration constants created by SCAL, and stored in an ASCII file with an "ASC" file extension. This file is created in SCAL by saving the **linear** calibration data using the Export to ASCII file utility.

Once a file has been loaded and converted properly, the calibration constants can be sent [downloaded] to the Giga-tronics power meter. Calibration constants will be transmitted to the power meter via the GPIB bus, along with a command to store the constants in the selected sensor non-volatile memory.

If desired, data download verification can be performed when both the **"File Data Buffer"** and the **"Sensor Data Buffer"** are loaded.

Calibration factors uploaded from the Giga-tronics Power Meter can be saved as an ASCII file. This will allow the operator to read and store calibration data from many sensors. **"Save"** will display a dialog box, which allows a filename to be associated with the data as well as a drive and drive folder.

Meter	Sensors that can be programmed with the meter
8541, 8542	All Giga-tronics 300 Series Sensors
8541B, 8542B	All Giga-tronics 300 and 480 Series Sensors
8541C, 8542C	All Giga-tronics 300, 400 and 600 Series Sensors
8651, 8652	All Giga-tronics 300, 400 and 600 Series Sensors