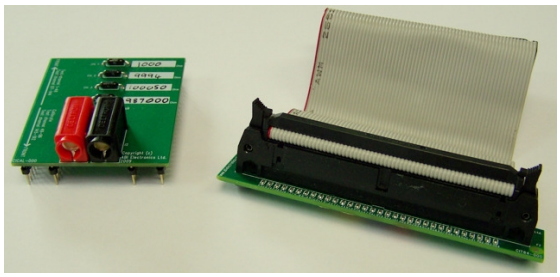
Technical Procedure

SENTRY Calibration

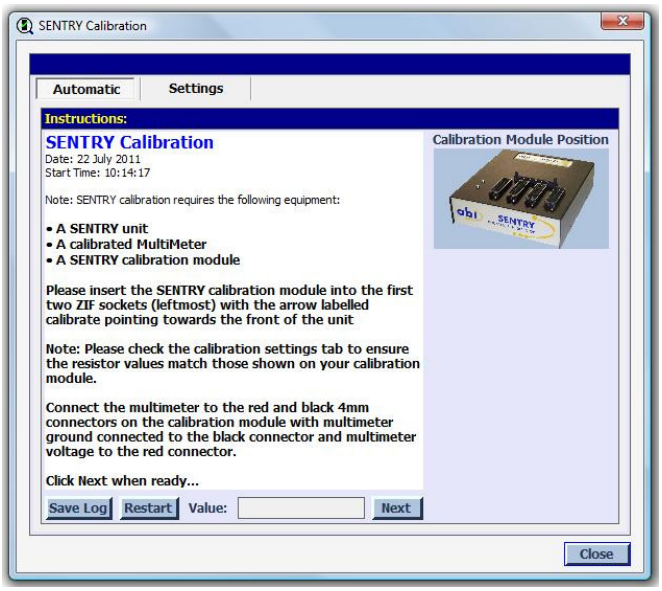
Introduction

The SENTRY Counterfeit IC Detector is a precision instrument designed for the acquisition of electrical signals. The hardware was purposely specified to include precision and low-drift components to ensure stability and durability. A calibration option is integrated within the SENTRY software to ensure long term consistency. ABI Electronics recommends running the calibration procedure once a year.



Calibration Kit

Note: A calibrated Voltmeter/Multimeter with two 4mm leads is required for this procedure.



Access to calibration

In order to initiate the calibration procedure, the hardware must be switched on and connected to a PC. In the SENTRY software, select the HARDWARE tab and click on the "Calibrate" button at the bottom left of the screen (next to "Log Out"). The window beside will appear.

Settings

The calibration module provided is fitted with precision resistors which have been measured accurately prior to dispatch. Each calibration module is different and the settings must be entered in the software. As described in the procedure, click on the *Settings* tab and enter the value of the resistors as displayed on the calibration module.

Calibration

Click on the *Automatic* tab and follow the instructions given on the screen. The calibration module needs to be fitted to the ZIF sockets. The required position of the module is illustrated in the top right corner of the window, under "Calibration Module Position". The leads of the multimeter need to be connected to the 4mm plugs on the module. Three voltage measurements will need to be acquired in total, one of which will need to be entered in millivolts (1 mV = 0.001 V). Make sure to wait a few seconds for the voltage readings to stabilise before entering the values. The SENTRY unit will then automatically calibrate the various ranges and source settings.

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Typical calibration setup

Testing

Once the calibration procedure is complete, the calibration data will be stored in the unit. A testing procedure follows the calibration to check all channels available on the SENTRY. Follow the instructions on the screen and change the position of the calibration module as displayed in the top right corner of the window.

The calibration and testing procedure is complete. Note that a log can be created for traceability by clicking the "Save Log" button.