SOUTHERN TECHNOLOGIES CORPORATION

MODEL NO. 2100-810NG

SCANNER CALIBRATION UNIT

Description:

The 2100-810NG Scanner Calibration Unit is the recommended heat source used to calibrate STC bearing and wheel scanners. With the 2100-810NG in place over the opening of the scanner cover, the system can be calibrated at a precise value above ambient temperature.

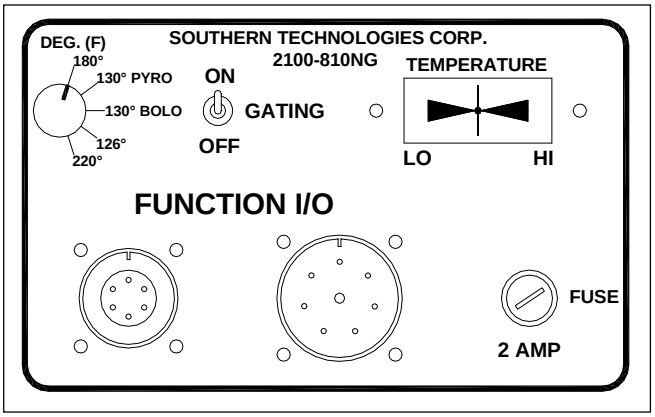
The 2100-810NG operates from a 120-volt 60-Hz power source. On the front panel is a knob that allows you to select one of five delta temperatures, ranging from 126°F to 220°F. The heat source contains a heat block that can reach a combined temperature of your delta temperature plus the ambient temperature. It can maintain this temperature for extended periods. The heat block is controlled by a circuit that references both ambient temperature and the temperature of the heat block and maintains the selected differential. For example, if the ambient temperature was 29.4°C (85°F) and the knob was set to 180°F (100°C), the heat block would be maintained at 129.4°C (265°F).

Infrared scanners respond to rapid changes in infrared radiation. The calibrated heat source accomplishes the rapid changes by employing a rotating wheel with an aperture in one side. As the wheel turns, the infrared radiation from the heat block is shielded from the scanner until the aperture lines up with the opening in the bottom of the heat source case. The wheel rotates at 300 RPM.

Recommended Service Interval:

The 2100-810NG should be serviced and recalibrated by the factory every two years, at minimum, to ensure the continued accuracy of the unit.

Front Panel:



Temperature Knob

The temperature knob allows you to select one of five delta temperatures. The label on each knob setting represents degrees Fahrenheit above ambient. The **180°** setting is normally used with all STC scanners.

Gating Switch

Toggling the **Gating** switch to the "ON" position causes gating signals to be sent to the Function I/O connectors - a simulated TO1 transducer signal and a simulated TO2 signal. As long as this switch is toggled on, this sequence continues at a rate of 10 signals per second (five of them being TO1s and five of them being TO2s). The gating signals aren't needed for calibration of the SmartScanNG² system.

Temperature Meter

The temperature meter, when stabilized, shows when heat block has reached the selected temperature setting and has stabilized within ± 2 degrees of set point. From a cold start, this could take 5 to 8 minutes.

Function Connectors

The function connectors provide the I/O lines to the heat source including AC power in and gating signals out. The six-contact circular connector (on the left side) is compatible with the power cord included with the system. One end of the supplied 2100-832 power cord is connected to the heat source. The other end is plugged into a stable, grounded, three-wire AC outlet capable of at least 105 VAC at 15 amperes.

The table below shows the pin assignment for the six-contact connector.

Pin	Assignment
A	AC Neutral
B	**AC Hot**
C	AC Ground
D	TO1 (positive output pulse)
E	TO2 (positive output pulse)
F	Ground

The eight-contact circular connector (on the right side) isn't used when calibrating STC scanners.

CAUTION: For safety's sake, always cover this connector with the supplied dust cap.

General Specifications

Temperature Range	Accurate operation from -18°C to +32°C (-0°F to +90°F)
Input Voltage	105 VAC to 130 VAC @ 60 Hz
Dimensions	13.00"L x 6.20"W x 5.50"H
Weight	9.50 lbs
Fuse	2-amp 250-volt fast-acting fuse