Installation Guide
Single-Channel Analog Input Board on 6890 GC
Accessory G1556A
Safety Information
The Agilent Technologies 6890 Gas Chromatograph meets the following IEC (International Electrotechnical Commission) classifications: Safety Class 1, Transient Overvoltage Category II, and Pollution Degree 2.

This unit has been designed and tested in accordance with recognized safety standards and designed for use indoors. If the instrument is used in a manner not specified by the manufacturer, the protection provided by the instrument may be impaired. Whenever the safety protection of the Agilent 6890 has been compromised, disconnect the unit from all power sources and secure the unit against unintended operation.

Refer servicing to qualified service personnel. Substituting parts or performing any unauthorized modification to the instrument may result in a safety hazard. Disconnect the AC power cord before removing covers. The customer should not attempt to replace the battery or fuses in this instrument. The battery contained in this instrument is recyclable.

Safety Symbols
Warnings in the manual or on the instrument must be observed during all phases of operation, service, and repair of this instrument. Failure to comply with these precautions violates safety standards of design and the intended use of the instrument. Agilent Technologies assumes no liability for the customer’s failure to comply with these requirements.

WARNING
A warning calls attention to a condition or possible situation that could cause injury to the user.

CAUTION
A caution calls attention to a condition or possible situation that could damage or destroy the product or the user’s work.

Indicates a hot surface

Indicates earth (ground) terminal

Sound Emission Certification for Federal Republic of Germany
Sound pressure Lp < 68 dB(A)
During normal operation
At the operator position
According to ISO 7779 (Type Test)

Schallemission
Schalldruckpegel LP < 68 dB(A)
Am Arbeitsplatz
Normaler Betrieb
Nach DIN 45635 T. 19 (Typprüfung)
Overview

This section reviews the procedure for installing a single-channel analog input board on an Agilent 6890 Gas Chromatograph (hereafter called the GC.) With the analog board installed, you can connect non-Agilent detectors with 1 V of analog output to the GC. The voltage is then digitized and can be sent to a workstation or INET integrator.

Before following this procedure, refer to the safety information on the inside front cover.

Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input voltage</td>
<td>-10 mV to +1.05V (between + and - inputs)</td>
</tr>
<tr>
<td>Input noise</td>
<td>5 mV peak to peak, 0.01 to 2.5 Hz frequency</td>
</tr>
<tr>
<td>Input common mode range</td>
<td>±5 V DC (measure + or - to ground)</td>
</tr>
<tr>
<td>Common mode rejection ratio</td>
<td>80 db</td>
</tr>
<tr>
<td>Scaling</td>
<td>1 display count = 15 µV at the input</td>
</tr>
</tbody>
</table>

Parts List

- 1 single-channel analog input board
- 1 general-purpose analog cable

Required Tools

- Electrostatic protection such as grounded wrist strap (part no. 9300-0969 for large wrists, part no. 9300-0970 for small wrists)
- T-20 Torx screwdriver
Overview

Steps
1. Preparing the GC
2. Positioning and securing the analog input board
3. Connecting the cable
4. Restoring the GC to operating condition
Preparing the GC

**WARNING** Hazardous voltages are present in the mainframe when the GC power cord is plugged in. Avoid a potentially dangerous shock hazard by unplugging the power cord before removing the side panels.

1. Turn off the GC and unplug the power cord.
2. Remove the electronics side cover. Loosen the two screws with a T-20 Torx screwdriver, slide the cover to the right, and lift it off.
3. Remove the electronics top cover by disengaging the clips underneath the cover and lifting it up.
Positioning and securing the AIB

**Caution**
Board components can be damaged by static electricity; use a properly grounded static control wrist strap when handling the board.

1. Remove the board from its static control bag and slide into the front or back detector slot on the main board until it is plugged in. Tighten the screw on the AI board bracket with a T-20 Torx screwdriver.

2. Make certain switches 1 and 2 are in the On position:

   - Switches 0 and 3 are in Off position:
   - switches 1 and 2 are in On position
3. Attach the signal cable to the board.

4. Position the cable so that it runs down and out through the first slot to the left of the cryogenic tube outlet opening on the rear panel of the GC. Tie a knot on the cable where it exits for strain relief.
Connecting the cable

Connect the cable to your non-Agilent detector. The following are the cable pinouts. The red, brown, and blue leads are not used and can be cut off, if desired.

<table>
<thead>
<tr>
<th>Connector 1</th>
<th>Signal Name</th>
<th>Connector 2 Quick Disconnects</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No connection</td>
<td>Brown</td>
</tr>
<tr>
<td>2</td>
<td>1 V (-)</td>
<td>White</td>
</tr>
<tr>
<td>3</td>
<td>No connection</td>
<td>Red</td>
</tr>
<tr>
<td>4</td>
<td>1 V (+)</td>
<td>Black</td>
</tr>
<tr>
<td>6</td>
<td>No connection</td>
<td>Blue</td>
</tr>
<tr>
<td>Shield</td>
<td>Ground</td>
<td>Orange</td>
</tr>
</tbody>
</table>
Restoring the GC to operating condition

1. Replace the electronics side panel
2. Replace the electronics top cover.
3. Plug in the GC and turn it on.
4. Press [Front Det] or [Back Det]. Observe the Output line of the display. If the lines are connected or shorted, and a 0 Volt input is being supplied, the Output should be between -25 and +25.
Restoring the GC to operating condition