

PHA930, 932 and 934

Instructions for Mounting the 900-504 Polarization Voltage Source into PHA930, PHA932 and PHA934 Po₂ Modules

IMPORTANT These instructions presuppose a modification of the PHM71 or PHM72 Acid-Base Analyzer with which the module is to be used. A module modified in accordance with these instructions will NOT operate with an unmodified analyzer. Please refer to the separate instructions for modification of the analyzers.

WARNING An unmodified PHA930 or PHA932 Po₂ Module must NEVER be plugged into a modified analyzer. To do so will cause serious damage to the analyzer.

900-504 Polarization Voltage Source Modification Kit

The kit includes the following items:

- 1 970-488 PC-board
- 2 3 M mounting screws
- 2 3 M nuts
- 2 3 M lock washers
- 2 Spacer tubes
- 1 978-030 Label "INOPERATIVE" for PHM71/72 Mk2
- 1 978-033 Label "INOPERATIVE" for the earlier versions of the PHM71/72
- 1 Modification Instructions for PHA930, 932 and 934 Po₂ Modules, and the PHM71/72 and PHM71/72 Mk2 Acid-Base Analyzers.

Step-by-step modification procedure for modules PHA930, PHA932 and PHA934

- 1) Remove the plastic battery cover plate and the mercury cell. (These will no longer be used.)
- 2) Remove the 4 screws securing the rear panel of the module and carefully withdraw the rear panel from the module chassis taking care not to damage the leads from the cable form. This gives access to the battery holder and the multiconnector.

3) a. PHA930 ONLY

Unsolder the two leads from the centre terminal (-1.35 V) of the battery holder and

note the colour of the leads.

b. PHA932 ONLY

Unsolder the lead from the centre terminal of the battery holder and note the colour of the lead.

c. PHA934 ONLY

Unsolder the lead from the centre terminal of the battery holder (this lead will be discarded later).

- 4) Unsolder the lead from the side terminal (+1.35 V) of the battery holder and note the colour of the lead.
- 5) Unscrew the two screws securing the battery holder to the rear panel. Remove the holder and the circular retaining ring. (These items will no longer be used.)
- 6) PHA930 ONLY
 - a. Locate tag 1b on the multiconnector (tag identification is moulded into the insulation block of the multiconnector).
 - b. Unsolder the cable form lead and the uninsulated wire strap from tag 1b. Clip off the wire strap from tag 3b and discard. Resolder the cable form lead to tag 3b. (This leaves tag 1b free of connections.)

PHA932 ONLY

- a. Locate tag 1b on the multiconnector (tag identification is moulded into the insulation block of the multiconnector).
- b. Unsolder the uninsulated wire strap from tag 1b and clip off the other end from tag 3b.

7) PHA930 and PHA932 ONLY

- a. Locate tag 6a on the multiconnector.
- b. Unsolder the cable form lead from tag 6a and cut off this lead where it leaves the cable form, taking care not to damage any adjacent leads.

PHA934 ONLY

- a. Locate tag 6a on the multiconnector.
- b. Unsolder the two leads from tag 6a. The lead from the battery holder is now free. Discard this lead.

The other lead is connected to tag 101 on the PC-board. Unsolder this lead from tag 101 on the PC-board and discard.

- 8) Mount the Pol. Volt. Source PC-board Assembly (code 970-488), using the same mounting holes as used for the battery holder. Use the hardware supplied with the 900-504 Kit. The PC-board should be mounted with the print side towards the "inside" of the rear panel, with the tags located nearest tag 1b of the multiconnector. Mount the spacer tubes between the PC-board assembly and the rear panel.

9) PHA930 ONLY

Solder the two leads mentioned in step 3a above to tag 204 on the 970-488 PC-board assembly.

PHA932 ONLY

Solder the lead mentioned in step 3b above to tag 204 on the 970-488 PC-board assembly.

PHA934 ONLY

Using a piece of insulated wire, connect a new lead from tag 101 on the PC-board in the module to tag 204 on the 970-488 PC-board assembly.

- 10) Solder the lead mentioned in step 4 above to tag 203 on the 970-488 PC-board assembly.
- 11) Using a piece of insulated wire, connect a new lead from tag 6b on the multiconnector to tag 202 on the 970-488 PC-board assembly.
- 12) Using a piece of insulated wire, connect a new lead from tag 1b of the multiconnector to tag 201 on the 970-488 PC-board assembly.
- 13) Check the connections and ensure that none of the cable form leads are broken off. Reassemble the rear panel into the chassis of the module and secure with the 4 screws.
- 14) The modifications to the modules are now complete.
- 15) REMINDER. The modified modules will NOT operate with an unmodified analyzer. See the separate instructions for modifying the analyzers.
- 16) This issue substitutes all previous issues, which should be discarded.

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22/8/73	2	FF	PM	PN

PHM71 and 72
PHM71 and 72 Mk2

Instructions for modification of PHM71/71 Mk2 and PHM72/72 Mk2 Acid-Base Analyzers for use with PHA930, PHA932 and PHA934 Po₂ Modules supplied or modified with a 900-504 Polarization Voltage Source instead of a mercury cell

IMPORTANT These instructions presuppose the modification of the Po₂ Module with which the Analyzer is to be used. An Analyzer modified in accordance with these instructions will NOT operate with an unmodified Po₂ Module.

Please refer to the separate instructions for modification of the Po₂ Modules.

WARNING An unmodified PHA930, 932 or 934 Po₂ module must NEVER be plugged into a modified Analyzer. To do so will cause serious damage to the Analyzer.

Step-by-step modification procedures for PHM71/71 Mk2 and PHM72/72 Mk2 Acid-Base Analyzers.

- 1) Disconnect the Analyzer from the line supply. Remove all modules or blank panels from the front of the Analyzer.
- 2) PHM71/71 Mk2 ONLY
 - a) Remove the six screws securing the Analyzer into the case. (Large screws at top and bottom of front panel.)
 - b) Carefully, but firmly, pull the open end (right-hand) of the Analyzer chassis a little forward, and then slide the chassis first a little to the right (to free the electrode receptacle panel from the left-hand end panel) and then swing it outwards from the case. Check that the fixed line cord passes freely through the hole in the side panel of the case.

PHM72/72 Mk2 ONLY

- c) Remove the four screws securing the Analyzer into the case (large screws at top and bottom of the front panel).
 - d) Proceed as in 2b above.
- 3) Turn the Analyzer round to face its rear and locate the rear of the multiconnectors for the modules (left-hand end of chassis).
- 4) Refer to Fig.1 and locate tag 1b on the multiconnector for the Po₂ Module and tag 6b on the multiconnector for the Pco₂ Module. (Tag identification is moulded into the front and rear of the insulation blocks of the multiconnectors).

!
0 Aftelip den vride ledning på 1b
Cut the white wire on 1b

- 5) Connect an insulated wire between these tags as shown in Fig.1.
- 6) Check the connections. Replace the Analyzer into the case and secure with the screws on the front panel. (Remember to pass the line cord through the hole in the end panel first.)
- 7) Using a suitable adhesive (not supplied), stick the label "INOPERATIVE" (supplied with the 900-504 Polarization Voltage Source Kit) over the word "BATTERY" on the front panel.

NOTE:

The long label, code 978-030, is intended for the Mk2 versions of both PHM71 and 72, while the square label, code 978-033, is intended for sticking over the words "BATT.TEST" at the left-hand side of the battery test switch on the earlier versions of both PHM71 and 72.

- 8) This completes the modifications to the Analyzers.
- 9) This issue substitutes all previous issues, which should be discarded.

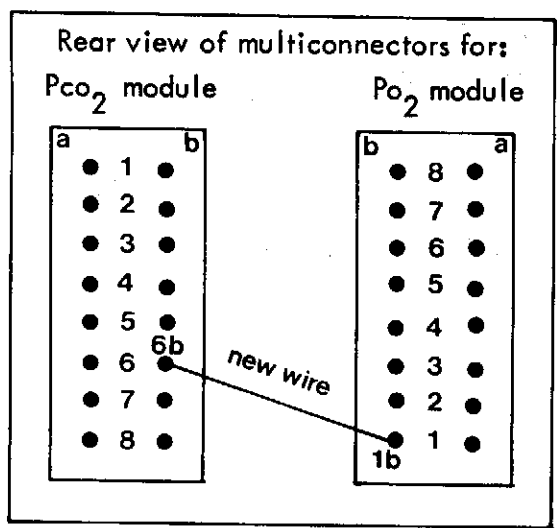


Fig.1. Rear view of multiconnectors for the modules

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