

**GRIFFIN Model 50 pH Meter  
PHJ-260-V**

**Description**

The instrument is designed for pH measurements both in the laboratory and in the field using an accessory combination pH electrode with BNC connector (see accessories). Readings are given on a liquid crystal display. The instrument has the facility for manual temperature compensation and calibration using buffer solutions of known pH.

**Battery**

A 9V battery of the 6LR61 (PP3) type is required to operate the instrument. Access to the battery compartment is obtained by removal of the back panel of the case. When fitting the battery, care should be taken to ensure correct polarity.

**Controls**

Controls include a positive on/off switch on the top panel and temperature selection control dial, range 0 to 100°C, adjacent to the BNC socket on the front panel. To the reverse of the instrument two further controls are located:

- i) Set 7: for setting the central position of the scale using buffer solution pH7.
- ii) Set scale: for setting the span of the scale using other known buffer solutions e.g. pH4 or pH9.

**Calibration Procedure**

Remove the storage cup from the end of the accessory pH electrode, fit the protective skirt supplied and connect to the pH meter via the BNC socket. Immerse the end of the electrode in buffer solution pH7. It is important to ensure that the electrode is immersed to a level slightly above the protective skirt. Set the temperature selection control to the temperature of the buffer solution and switch on the instrument. Adjust the Set 7 control using a small screwdriver so that the display reads 7.00. Remove the electrode from the buffer solution and rinse it well with distilled or deionised water. Repeat the above using another known buffer solution and adjust the Set Scale control accordingly i.e. pH4 buffer solution to give a read out of 4.00. Again the electrode should be rinsed well. This calibration procedure can be repeated at intervals to maintain the accuracy of the instrument.

**pH measurement**

Immerse the electrode in the solution under test. Adjust the temperature selection dial to that of the solution. Switch on the instrument and agitate the electrode gently, read off the pH value from the display.

**Electrode care**

The pH electrode recommended for use with this instrument covers the complete pH range and is suitable for a majority of general applications at temperatures up to 100°C. The accuracy and repeatability of pH determinations will depend upon the state of the electrode. To obtain optimum electrode performance and thus dependable pH measurements, the electrode should be treated with care and the glass membrane should never be allowed to become dry as this will drastically shorten its life. When not in use, the storage cup filled with distilled or deionised water should be fitted. The electrode should then be stored in a cool part of the laboratory.

**Accessories**

For general purpose use

PHP-100-010Y                      Combination pH electrode (1m lead length)

For field work

PHP-100-110E                      Combination pH electrode (2m lead length)

Long life alkaline battery

BMT-680-090H                      Battery, 9V, 6LR61 (PP3)

Buffers to make 100ml solution

145-036-020X                      Buffer tablets pH4, pack of 50

145-038-020C                      Buffer tablets pH7, pack of 50

145-040-020U                      Buffer tablets pH9, pack of 50