

## HI 12302/ HALO™ pH PROBE QUICK START INSTRUCTION GUIDE

Thank you for selecting a Hanna Instruments product. Please read this manual before using the HALO™ probe on your iPad® with Hanna Lab App or with edge®blu. Consult Hanna Lab App “HELP” or the edge®blu instruction manual or for additional information on probe maintenance and calibration.

**IMPORTANT!** During servicing and measurement, *handle probe with care. Do not drop probe on a hard surface. It will permanently damage the probe.* During storage or transport, utilize the clear protective cap to protect and keep the pH bulb hydrated.

### **PREPARATION:**

Remove the probe from the plastic storage tube by unscrewing the top collar to vent the cap before removing. Save cap and collar for probe storage.

1. Rinse off any storage solution or salts that may be on the glass body.
2. Check to verify there is solution inside the pH bulb, shaking the probe down can restore continuity as the solution may have moved up the stem during shipping.

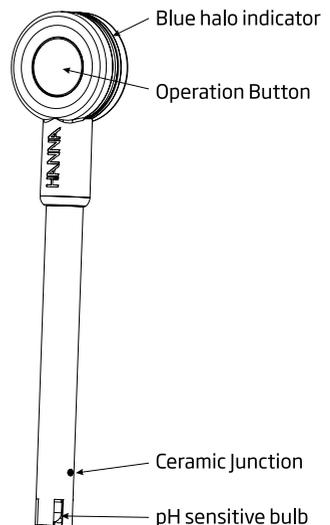
### **CONNECTION SETUP:**

#### Using Hanna Lab iPad® App

1. To begin using the HALO™ probe, start the Hanna Lab app and tap the Bluetooth icon on the iPad®.
2. Press the operation button located on the top of the probe. The blue LED halo will begin to flash in half second intervals, indicating it's in discoverable mode and the probe ID will appear in the list of probes.
3. Touch the probe ID once it appears in the list of probes. The blue LED will slow down and flash every 2 seconds.

#### Using edge®blu

1. To begin using the HALO™ probe, turn ON edge®blu. The meter will start scanning for probes.
2. Press the operation button located on the top of the probe. The blue LED halo will begin to flash in half second intervals, indicating it's in discoverable mode and the probe ID will appear in the list of probes.



3. Select your probe in the list of visible probes and press **CFM**. The blue LED will start flashing 4 times a second while connecting, then it will slow down and flash every 2 seconds showing it is connected and ready to measure.

#### **MEASUREMENT SETUP:**

1. Calibrate the pH probe.
2. Take measurements using the pH probe.
3. When probe is not in use, place the hard protective storage cap over glass bulb.

#### **MEASUREMENT GUIDES:**

1. Always clamp or support probe during use.
2. Frequent calibrations are suggested for critical pH applications.
3. To eliminate thermal or sample gradients stir buffers and samples using a magnetic stirrer.

#### **CALIBRATION:**

1. Calibration can be performed using up to five calibration buffers. For accurate measurements, a minimum of a three-point calibration is recommended.
2. Enter calibration screen (using Hanna Lab App or edge®blu).
3. Place the probe in the first buffer.
4. Confirm the calibration point when the reading is stable.
5. Repeat the procedure for up to five calibration points. For details, please see edge®blu manual or Hanna Lab App HELP.

#### **STORAGE:**

1. Rinse off the HI 12302/HALO™ probe with deionized water to remove sample.
2. Blot off using a soft tissue.
3. Pour 1 cm of HI 70300 storage solution into plastic storage cap. Place probe bulb into cap and tighten the threaded collar.