



TEXAS STREAM TEAM

TEXAS STREAM TEAM PROBE CORE MAINTENANCE GUIDE

The following guide describes the maintenance tasks that must be conducted for Probe Core equipment. Please keep in mind that the frequencies included are considered the minimum and tasks may be done at a greater frequency if needed.

MONITORING SUPPLY	FREQUENCY	MAINTENANCE
<u>Conductivity/pH Probe</u>	Upon receipt	<ul style="list-style-type: none"> Soak the electrode in tap water or pH 4 buffer solution for 10 minutes to dissolve any build-up.
<u>DO Probe</u>	Upon receipt	<ol style="list-style-type: none"> Unscrew the membrane cap. Take the new cap and place it on a hard, flat surface. Rinse the anode and cathode with DI water. Fill the bonded cap with the DO-600 Electrolyte Solution up to the bottom of the threads on the inside of the cap. Tap the side of the bonded cap to help free any trapped air bubbles from the electrolyte solution. Keeping the cap in a fixed position on a flat surface, carefully insert the electrode into the new bonded cap by first dipping and removing the electrode several times from the cap. With each dip, push the electrode progressively deeper into the bonded cap. Slowly screw the electrode onto the bonded cap in a clockwise direction until fully tightened. Excess electrolyte solution may leak during the process—clean off the excess solution before use.
Probe Core Kit	Daily	<ul style="list-style-type: none"> Store kit and reagents at room temperature (60°-80°F) away from extreme elements (direct sunlight, humidity, rain, etc.) Store items in the proper location in the kit and store the kit flat.
<u>Conductivity/pH Probe</u>	Daily	<ul style="list-style-type: none"> Store probe in cap with sponge soaked with tap water or pH 4 buffer. Do NOT use DI or distilled water.
<u>DO Probe</u>	Daily	<ul style="list-style-type: none"> Store probe in cap with sponge soaked in tap water. Do NOT use DI or distilled water.
<u>Conductivity/pH Probe</u>	Before each use	<ul style="list-style-type: none"> Soak probe electrode in tap water for 10 minutes to dissolve KCL crystal build up.
Reagents	Before each use	<ul style="list-style-type: none"> Check all reagent expiration dates and replace expired reagents when needed.

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		<ul style="list-style-type: none"> Gently invert the reagent bottle several times to dissolve any crystals.
<u>Conductivity/pH Probe</u>	During use	<ul style="list-style-type: none"> Do not touch the inner surface of the conductivity electrode to avoid damaging. Do not submerge probe in sample for longer than necessary.
<u>DO Probe</u>	During use	<ul style="list-style-type: none"> Do not touch the DO probe membrane to prevent skin oils from damaging the surface.
<u>Conductivity/pH Probe & DO Probe</u>	After each use	<ul style="list-style-type: none"> Rinse electrode with DI water twice before storing. Take out batteries when the probe is not in use to prevent corrosion.
Reagents	After each use	<ul style="list-style-type: none"> Do not interchange caps from containers. Tightly close all containers immediately after use. Do not leave reagents uncapped for extended periods. Wipe down the sides of reagent bottles/caps to remove any spilled liquid.
<u>Secchi Disk</u>	After each use	<ul style="list-style-type: none"> Allow the Secchi Disk rope to air dry before returning to the kit.
<u>Secchi Disk</u>	Quarterly	<ul style="list-style-type: none"> Rinse the Secchi disk twice with tap water every quarter. Allow the disk and rope to air dry.
<u>Secchi Disk</u>	Annually	<p>Check to see if the Secchi disk rope has stretched over time by taking a comparative measurement. Make sure the rope is marked every ½-meter, 1 meter, and 5 meters. If the markings are incorrect or have faded:</p> <ol style="list-style-type: none"> Bleach the rope to remove markings. Allow the rope to dry. Once dry, ensure the rope is attached to the disk and hold the rope straight against a meter stick. Place a black mark on the line 1/2 meter from the top of the disk. Continue placing a black mark every 1/2 meter, a red mark every meter, and a yellow mark every 5 meters. <p>Check line measurements annually for inaccuracy due to stretching.</p>
<u>Conductivity/pH Probe & DO Probe</u>	“BAT” icon appears on display	<ol style="list-style-type: none"> Unscrew the top battery compartment and pull out the battery carrier using the tabs. Remove the old batteries and replace them with new ones, ensuring the polarity is correct. Screw the battery compartment back on.
<u>Conductivity/pH Probe</u>	“RENEW” icon appears on display or	<ol style="list-style-type: none"> Clean the electrode <ol style="list-style-type: none"> Contaminated with water soluble substance – Scrub the electrode with a soft brush and DI water.

	electrode is contaminated	<ol style="list-style-type: none"> b. Contaminated with grease/oil - Scrub the electrode with a soft brush and a solution of warm water and mild detergent for no more than 10 minutes. c. Contaminated with heavy levels of grease/oil - Soak electrode in rubbing alcohol for no more than 5 minutes and scrub with soft brush. d. Contaminated by lime or hydroxide coatings – Soak in 10% acetic acid until coating is dissolved for a maximum of 5 minutes. <ol style="list-style-type: none"> 2. Rinse thoroughly with DI water. 3. Soak in pH 4 or 7 buffer for 1 hour to recondition.
<u>DO Probe</u>	Calibration fails repeatedly or damage is noted on cap	<ol style="list-style-type: none"> 1. Unscrew the old cap. 2. Take the new cap and place it on a hard, flat surface. Rinse the anode and cathode with DI water. 3. Fill the bonded cap with the DO-600 Electrolyte Solution up to the bottom of the threads on the inside of the cap. 4. Tap the side of the bonded cap to help free any trapped air bubbles from the electrolyte solution. 5. Keeping the cap in a fixed position on a flat surface, carefully insert the electrode into the new bonded cap by first dipping and removing the electrode several times from the cap. With each dip, push the electrode progressively deeper into the bonded cap. 6. Slowly screw the electrode onto the bonded cap in a clockwise direction until fully tightened. Excess electrolyte solution may leak during the process—clean off the excess solution before use.
<u>Conductivity/pH Probe & DO Probe</u>	Calibration fails repeatedly or meter is not responding	<ol style="list-style-type: none"> 1. Unscrew and completely remove the electrode collar by turning it counterclockwise. 2. Gently rock the electrode from side to side, pulling it downwards, until it disconnects from the meter. 3. To attach a new electrode, carefully plug it into the probe socket then tighten the electrode collar to make sure it's sealed properly. CAUTION: Take care to align pins carefully. Bent or broken pins will cause the meter to malfunction. 4. Firmly tighten the electrode collar to create a seal with the rubber gasket between the electrode and the meter.