

Introduction

The following instructions can be used to install Turner Designs' Antifouling Copper Plate and Collar (P/N 2300-507) onto the C3 Submersible Fluorometer's Optical Head. The copper plate deters settling and growth of organisms on or near the optical sensors to help maintain sensor accuracy and precision during long term deployments.



Preparation

Before installing the copper plate onto your C3 Submersible Fluorometer's optical head, prepare the area where the copper plate will be installed by making sure to:

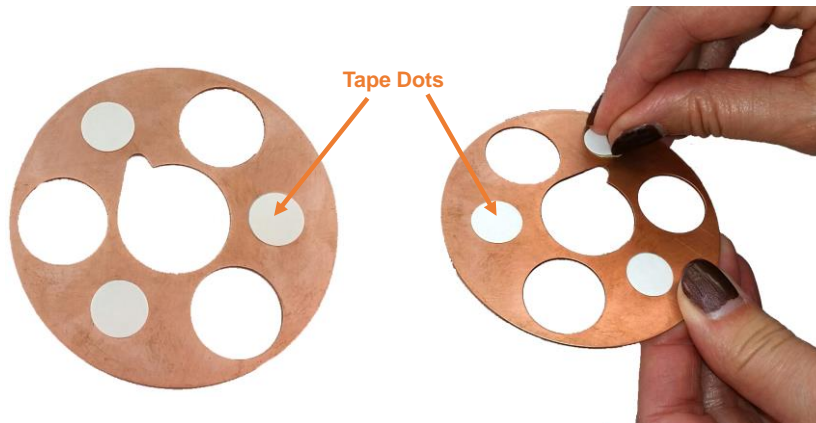
- Remove the tightening nut and wiper assembly from the optical face of the C3, if applicable. Refer to the [C3 Mechanical Wiper Installation](#) Instructions for details.
- Remove all existing copper (if any) by peeling it away from the optical head
- Clean the area using a soft cloth and warm soapy water
- Dry the area completely



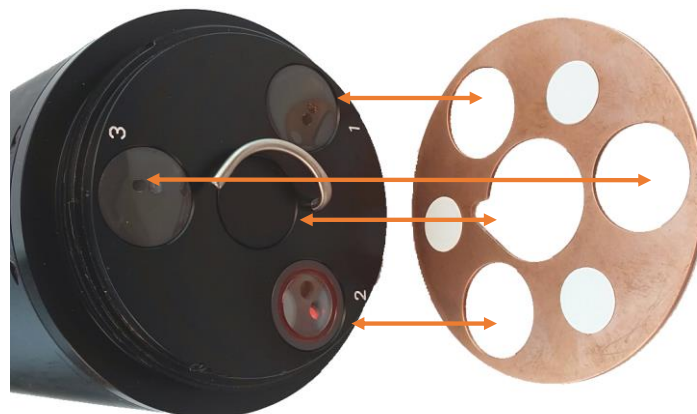
Note: *It is important to make sure the area is completely clean and dry before installing the copper plate.*

Installation

- 1) Remove the adhesive backing from the three (3) tape dots on the back of the copper plate.



- 2) Line up the holes in the copper plate with the optical sensors and temperature probe as shown in the diagram below.



- 3) Make sure the copper plate is properly aligned so that it is not covering sensor windows and is aligned with the temperature probe and press down on the copper plate allowing it to stick to the C3's optical head. To ensure good adhesion, firmly press down on the copper plate to avoid having it move when tightening the retaining collar.

Note: *It is important to make sure that the copper plate does not come in contact with the temperature probe.*



- 4) Place the collar down on top of the C3 optical face and hand tighten it to secure the copper plate. Do not use tools to tighten. If applicable reinstall the wiper assembly and tightening nut. The C3 Shade Cap P/N 2300-500 and the C-Ray Shade Cap P/N 2300-502 can be installed onto the collar.

Note: *The Solid Secondary Cap P/N 2300-905 can NOT be used with the copper plate. The copper plate must be removed when using the Solid Secondary Cap. When removing the copper plate, determine if the tape is still suitable for reapplication and proper adhesion. Tape should be replaced as needed with double-sided sticky tape.*



Recommendation for Copper Plate Replacement

The degradation rate of the copper plate is dependent on environmental conditions. The copper plate may need to be replaced more often in highly productive or extreme areas. Under the majority of sampling conditions the lifespan is lengthy. We do not recommend scrubbing or cleaning the copper plate; it is most effective as it oxidizes. The copper plate should be replaced if it becomes thin/weak or has visible cracks or holes.

