

# MARINENAV ULTRASONIC THICKNESS GAUGE SYSTEM

## Fitment Instructions

PART#: ROV-ACC-UTG



### Packaged Contents

- A** Cygnus MINI ROV Mountable Thickness Gauge Case and Contents. (See Cygnus operation manual (Included) for Cygnus accessories list).
- B** Cygnus G1 Probe Handler.
- C** 6 - 8/32" Stainless Steel Pan Head Screws (4 required 2 extra).
- D** MarineNav Topside Multiport to Serial Cable.
- E** MarineNav ROV Thickness Gauge Mount Adaptor.
- F** MarineNav 9-Pin ROV to Cygnus Tether Whip.

### Tools Required (Not Included)

- 1.** 2 mm Allen Key
- 2.** 3 mm Allen Key
- 3.** 9/64" Allen Key

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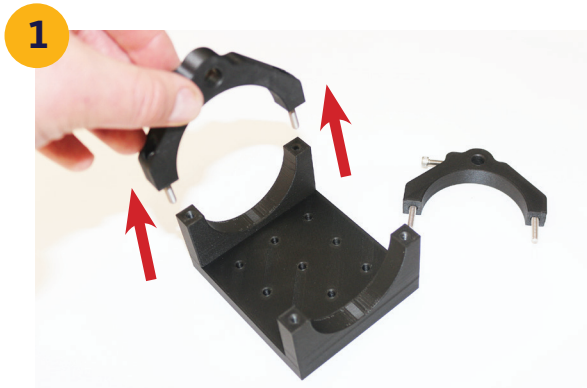


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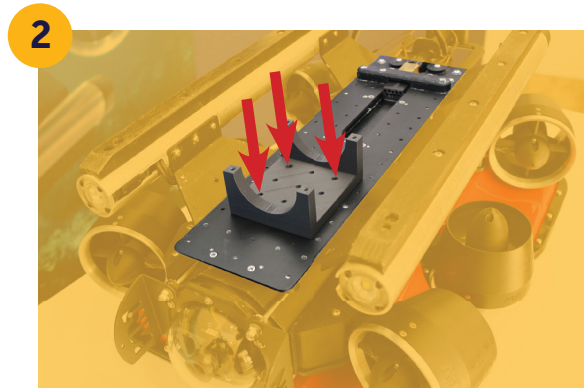
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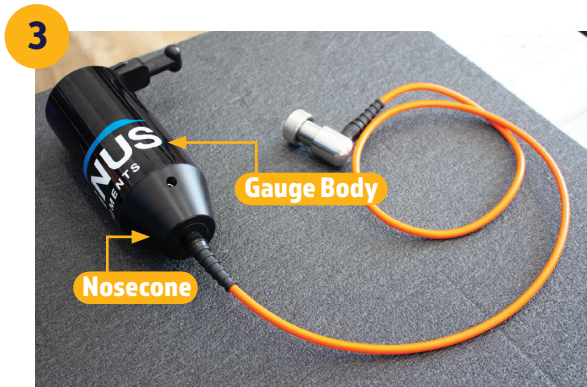
## (A) ROV Fitment Instructions



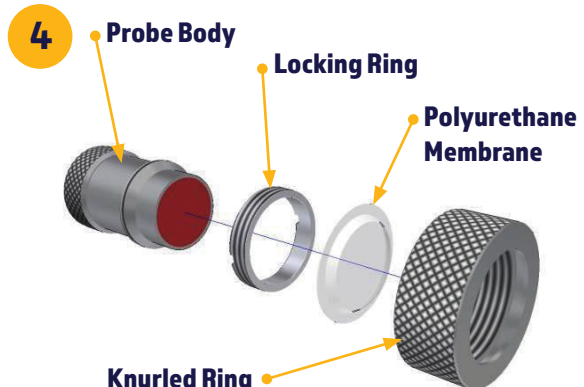
- Loosen the top 4 Bolts and fully remove the Top Brackets of the ROV Thickness Gauge Mount Adaptor (E).



- Mount the Base of the ROV Thickness Gauge Mount Adaptor (E) to the bottom of the ROV using 4 - 8/32" Pan Head Screws (C). Position Base (E) (center / forward).



- At the end of the Probe Assembly's Cable is a Nosecone Connector, Securely screw the Nosecone Connector onto the Cygnus Gauge Body (Check O-rings as per Cygnus Manual (Pg 40) and replace or grease as necessary). **Incorrect fitting will result in the instrument leaking.**

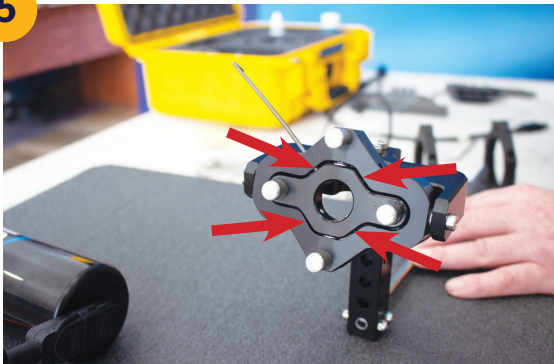


- Remove Knurled Ring from the end of the Probe.  
(See Pg 36 & 37 of Cygnus Manual for more information on Probes & Membranes).

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## (A) ROV Fitment Instructions

5



- Using 2 mm Allen Key pull back 4 Grub Screws in the Gimbal (Part of the Cygnus G1 Probe Handler (B)).

6



- Push Probe through the Gimbal as shown and tighten the 4 Grub Screws to secure the Probe. Make sure the Probe is seated flush.

7



- Place a few drops of Membrane Couplant on to the Probe face. Slowly tighten the Knurled Ring onto the Probe while keeping pressure on the Membrane with your thumb or finger to keep air bubbles out. Ensure the Probe is secure in the Gimbal and keeps solid contact. Also make sure the Membrane is free of any air bubbles.

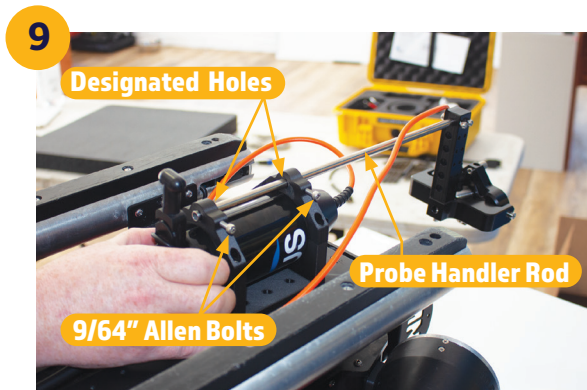
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- Slide Cygnus Gauge Body onto the ROV Thickness Gauge Mount Adaptor (E). Place the 2 Top Brackets over the Gauge Body and secure with 4 - 9/64" Allen Screws. The Cygnus Gauge Body Connector Faces away from the ROV body.

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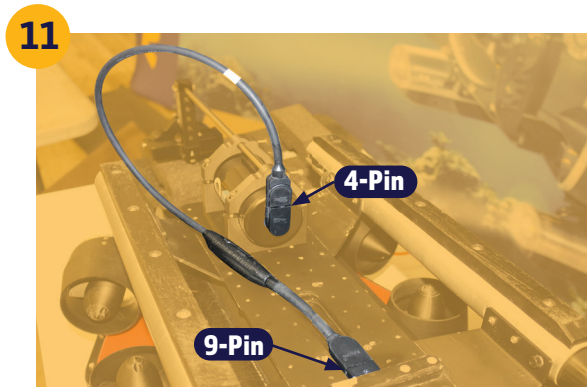
## (A) ROV Fitment Instructions



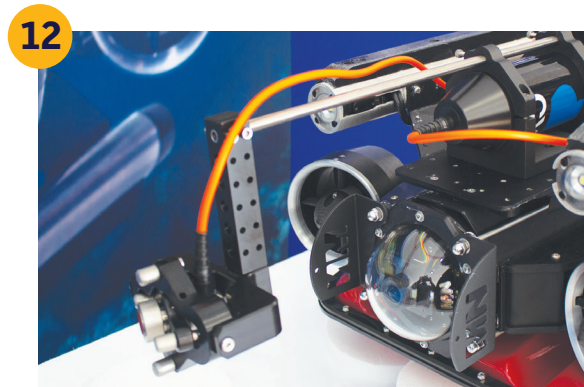
- Insert the Cygnus G1 Probe Handler Rod (B) into the designated holes on the ROV Thickness Gauge Mount Adaptor (E) as shown. With the Gimbal facing Frontwards lock the Probe Handler Rod into place using a 9/64" Allen Key.



- Remove 4-Pin Blank from the rear of the Cygnus Gauge Body.



- Connect MarineNav 9-Pin ROV Tether Whip (F) to the underside of the ROV and the 4-Pin Connector to the rear of the Cygnus Gauge Body.



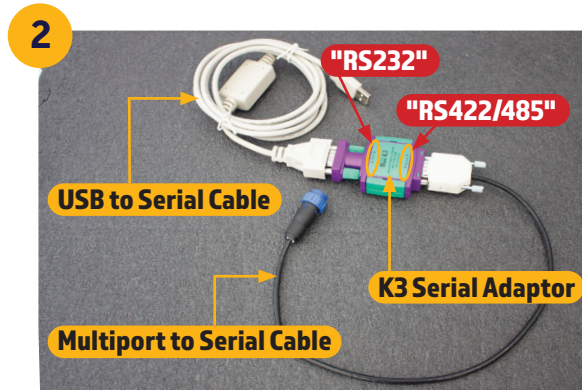
- Tidy up Wires using Wire Ties or Zip Ties and ensure the Probe has sufficient slack at the front of the ROV to allow for movement.

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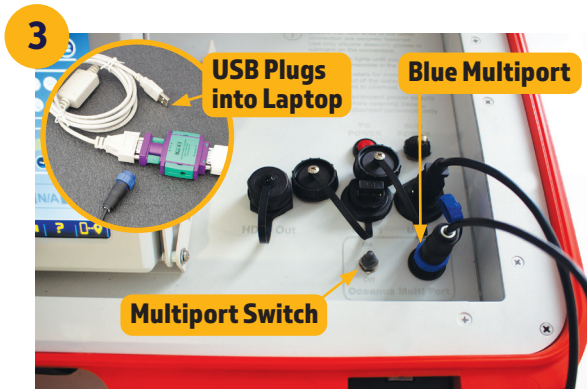
## (B) Topside Fitment Instructions



- With the USB Flash Drive provided in the Cygnus Yellow Case install CygLink Software on a suitable PC Laptop.



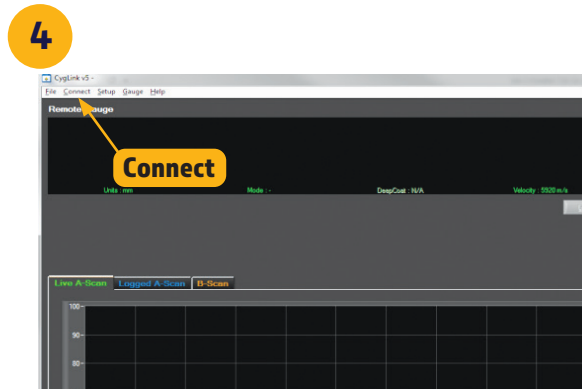
- Connect the Multiport to Serial Cable to the K3 Serial Adaptor end which says "RS422/485".
- Connect USB to Serial Cable to the opposite end of the K3 Serial Adaptor which says "RS232".
- Ensure all connections are screwed together securely.



- Connect Blue Multiport to the ROV Topside. Make sure the Small Switch for Multiport is "ON".
- Connect USB to laptop.
- Power up ROV and start CygLink Software on the laptop.



**DO NOT CHANGE** the Dip Switch settings on the K3 Serial Adaptor, these settings should be set with 2 & 3 in the ON position with the remaining in the OFF position as shown.



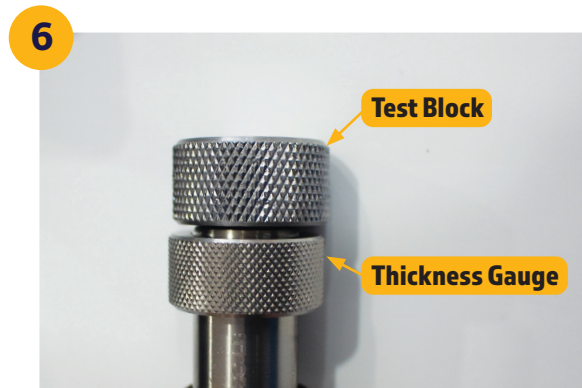
- Within CygLink Software go to the menu and click "Connect" then Discover New Gauge and click "Connect". This process will likely take 10-15 seconds to find the New Gauge on the ROV. Once it is found a Notification Window will appear on screen, hit "OK". You are now ready to use the Gauge.

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## (B) Topside Fitment Instructions



- Before using in the water preform a test with the provided 0.5" Test Block pictured above.



- Apply provided Ultrasonic Couplant Lube onto the Block and hold the Probe against the Test Block firmly. The thickness of the Block should now appear on screen within CygLink.

**THIS THICKNESS GAUGE SHOULD BE CALIBRATED AFTER 12 MONTHS FOR THE MOST ACCURATE READINGS. PLEASE SEND THIS UNIT BACK TO MARINENAV TO HAVE THE UNIT TESTED AND CALIBRATED.**

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