

Trigger Trap Deployment Checklist
14 July 2025
I. Hu

Dive Objective: 3 month deployment of Trigger Trap at MARS, ³⁰⁰~400m from the previously deployed SES. SES will trigger the TT to sample on events as calculated using an adaptive sampling algorithm, as well as periodically throughout the deployment. Acoustic communications will try for 3 times or until a successful reply. TT collection period is ¹1 hour.

Deployment Date: 21 Aug 2025
Person performing checklist: IH

17 days interval between preprogrammed
→ it recalculates, so it'll trigger
17 days after last trigger if

Pre-deployment:

1. Check and, if necessary, change batteries; verify operation: none received
 - ✓ a. Trigger trap
 - ✓ b. TT acoustic modem
 - ✓ c. TT strobe, VHF beacon, and Argos beacon
 - d. TT HomerPro
 - e. Squirty – ensure pump is disconnected (use dummies), verify w/ LED
2. Connect USB cable from computer to Trigger Trap and start deployment [Rich].
3. ~~Calibrate O2, start deployment [Crissy/Irene].~~
4. ~~Change current meter batteries, start deployment [Crissy].~~
5. Install Trigger Trap cups [Crissy].

Morning of deployment, at dock:

1. Check that cups are installed on Trigger Trap carousel.
- ✓ 2. Confirm that Trigger Trap deployment has been started.
- ✓ 3. Check that TT drop weights are in place, and that release and safety pins are in position.
4. Check TT HomerPro
 - a. Channel number: 26 shiller says
 - b. Battery expiration date: ~~Sept 2024~~ June 2024
- ✓ 5. Check all cable connectors and plugs installed and tight on TT.
6. ~~Check that O2 sensors are installed on TT frame, secured and tight.~~
- ✓ 7. Check that bicycle flags are installed.
8. Check for tools left on and in frame.

After arriving at MARS:

- ✓ 9. Turn on Trigger Trap acoustic modem, listen for chirps.
10. Activate TT Strobe, VHF Beacon, and Argos beacon, noting Beacon frequency and Argos ID. Verify operation of all three.
 - a. Beacon frequency: 154580 MHz
 - b. Argos ID: 284951
11. ~~Check that O2 sensor cap is removed.~~
- ✓ 12. On TT, remove Squirty dummy plugs and plug in pump. ✓ 2x tie on cables
- ✓ 13. Double check all connectors and plugs on SES and TT.
- ✓ 14. Check again for any tools left on frame.
15. Remove Trigger Trap hold-down straps.

16. Record times and positions for Trigger Trap deployment:

	Time (PST)	Latitude (deg)	Longitude (deg)	Depth (m)
TT launch from deck	8:45	36° 42' 44.9	122° 11' 13.3	
TT discovered by ROV	9:22 ^{9:58}	36° 42' 44.9 46.504	122° 11' 15.888	877
TT placed by ROV	10:15 10:19	42' 46.5	11' 15.9	878

w/ bridle fixed in
baffle

22. Check modem comms by ranging from ship.

Boat log

8. Leave dock: ~6:05 PST
9. Arrive MARS: 8:15 PST
10. ROV launch: 9:22 PST
11. ROV on bottom: 9:57 PST
12. ROV begins ascent: 11:03 PST
13. ROV on deck: ~12:05 PST
14. Arrive back: 14:28 PST

Toolbox checklist

Magnet for beacons
Handheld radio receiver
Molykote 44 for Subconn connectors
Socket wrench for hose clamps
Electrical tape
Knife
Antiskid mat

Zip ties
diag cutters

Homer 28 is giving bad hits/data,
delay in launching ROV to decide launch location

VARIS is not working

found TT very quickly
rotate 180° so modem faces SES
move bridle off baffle

sit on bottom to watch as Rich tells
SES to trigger the TT

Rich was able to range to TT modem while
ROV diving, and between SES & TT (74 m
apart)

But after we sit & watch, TT not responding
to either SES or ~~the~~ ship

moved ROV away - that did the trick
triggered & watched it move. 10:30

check on SINKER - 10:36 arrived

check on SES - 10:55 arrived
fix the straps in the baffle