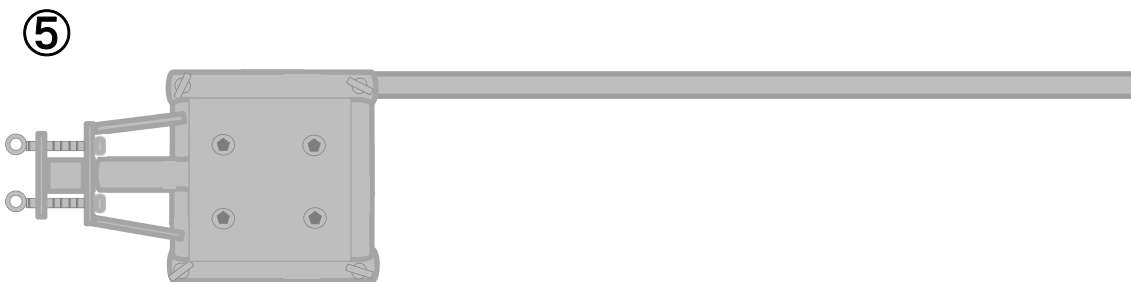
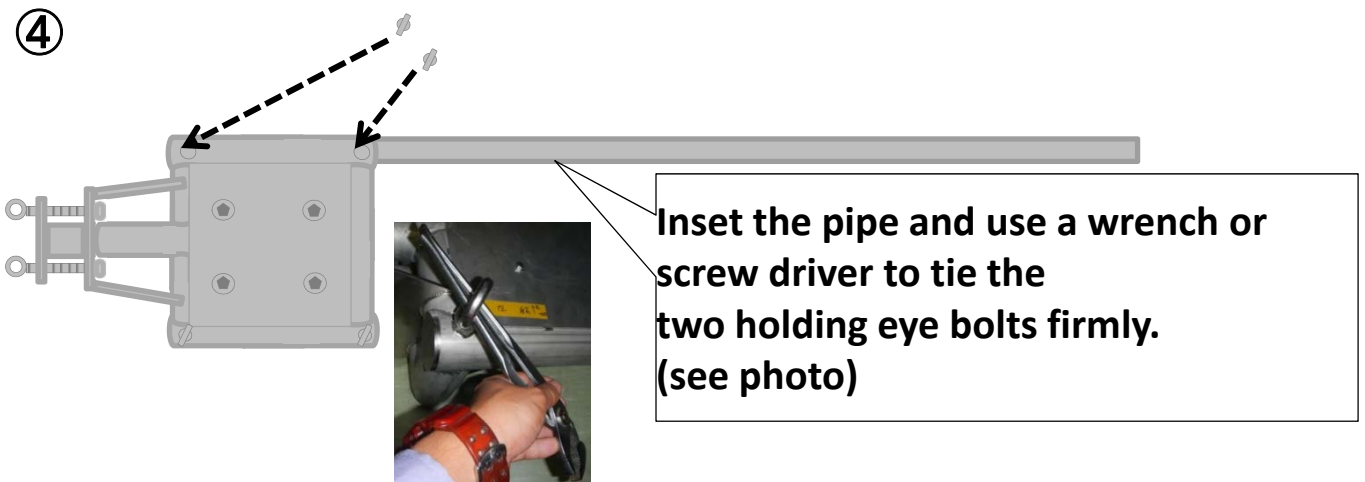
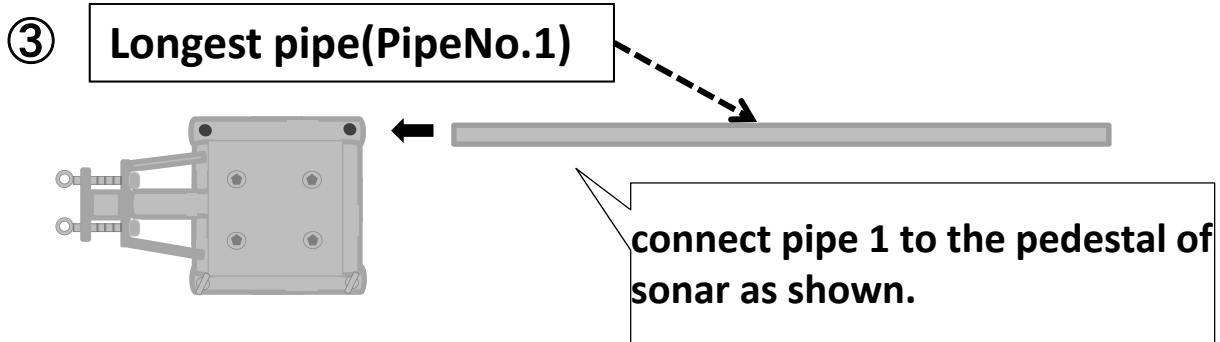
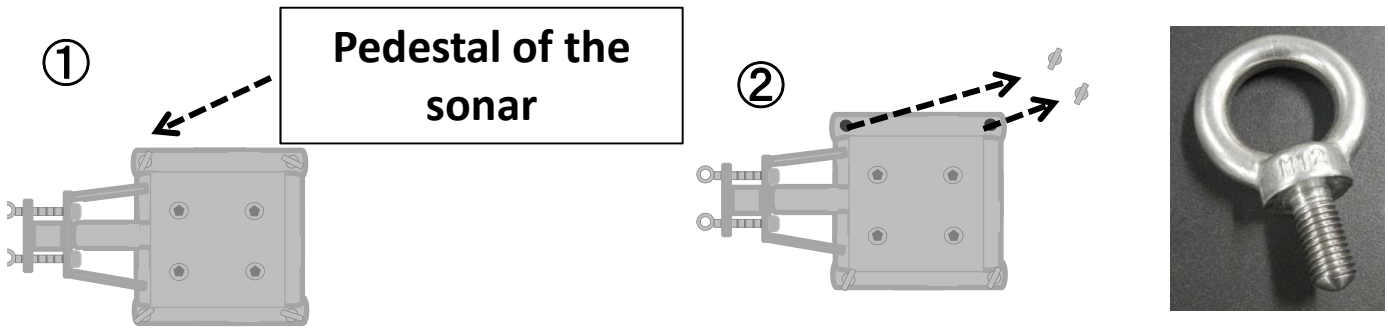


# Sonar's assembly and cable connection methods

# 1- Setting up of the apparatus supporting frame (1/6)

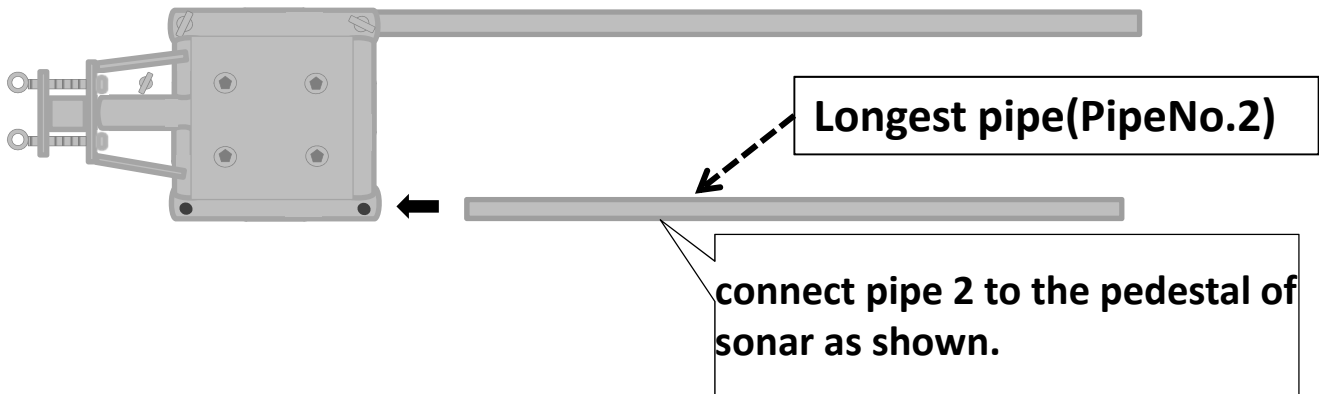


# 1- Setting up of the apparatus supporting frame (2/6)

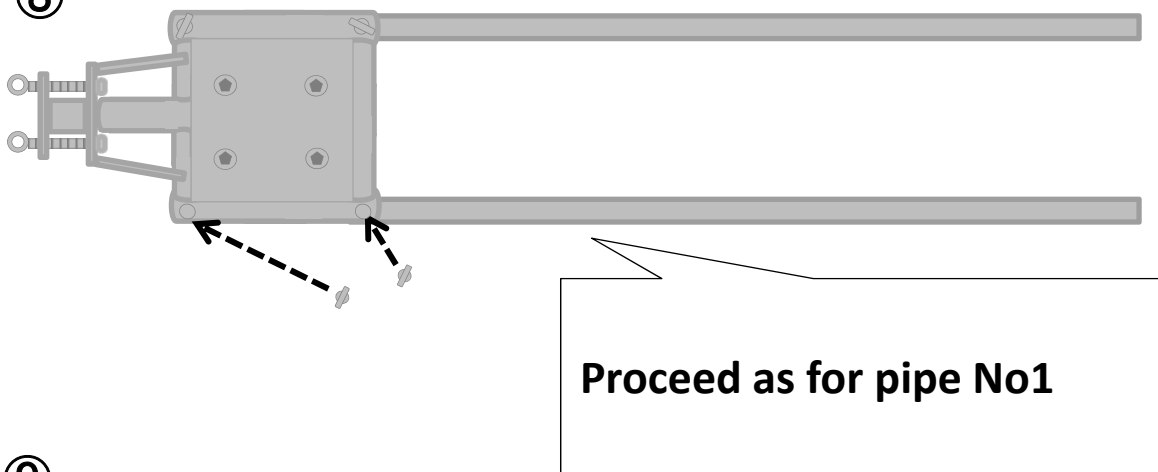
⑥



⑦



⑧

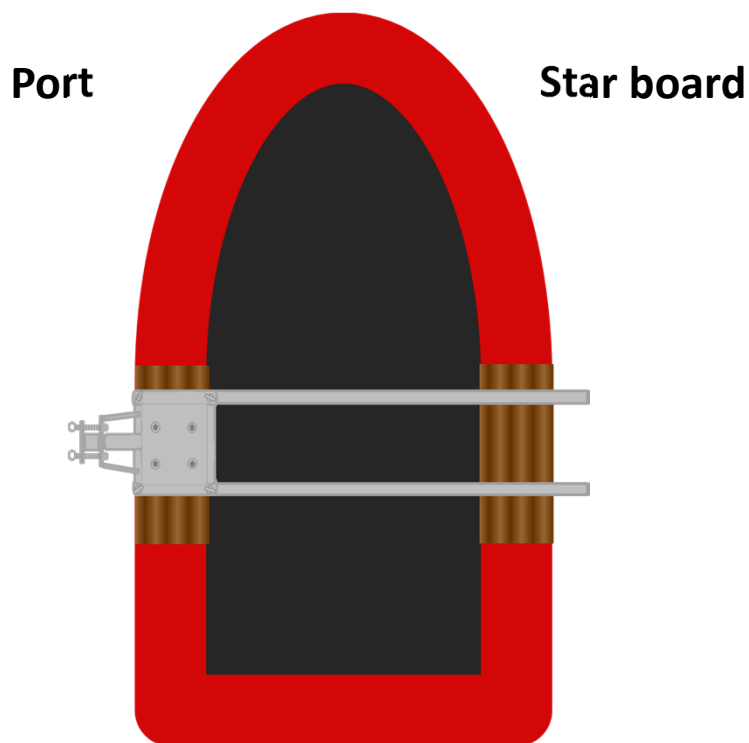
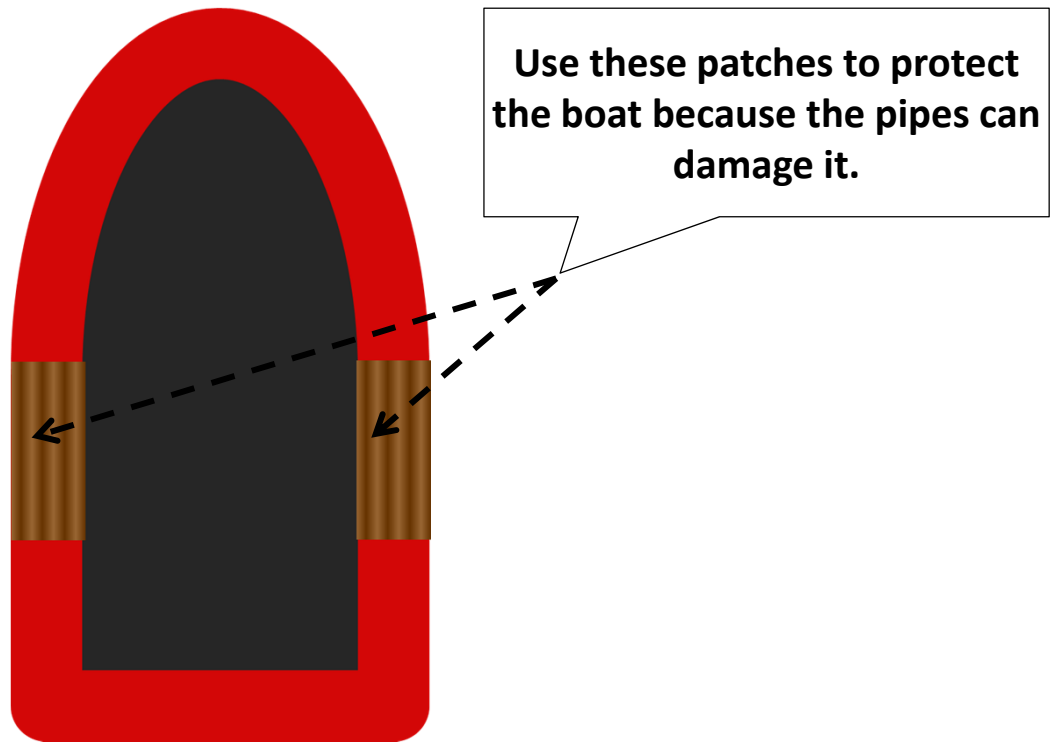


⑨

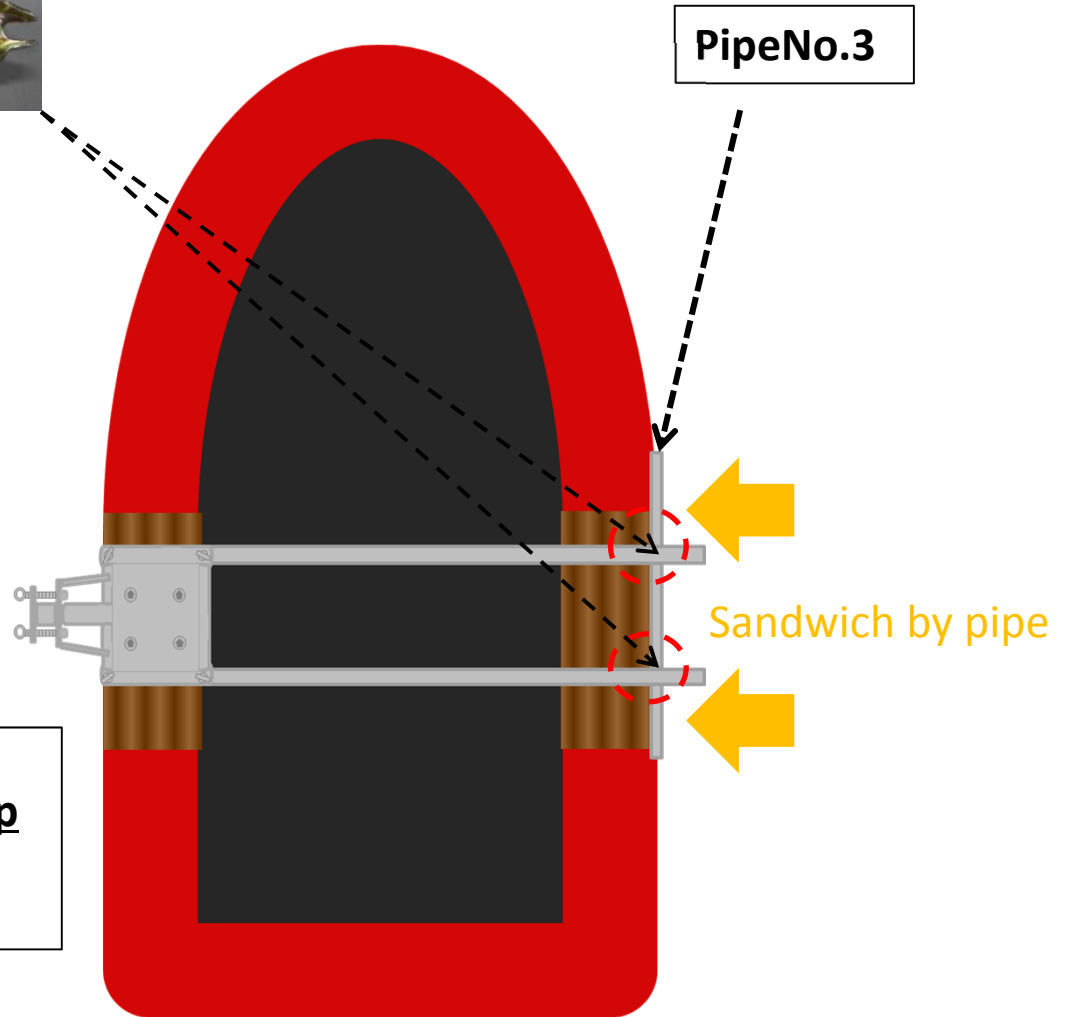


We do this process at shore.

# 1- Setting up of the apparatus supporting frame (3/6)



# 1- Setting up of the apparatus supporting frame (4/6)

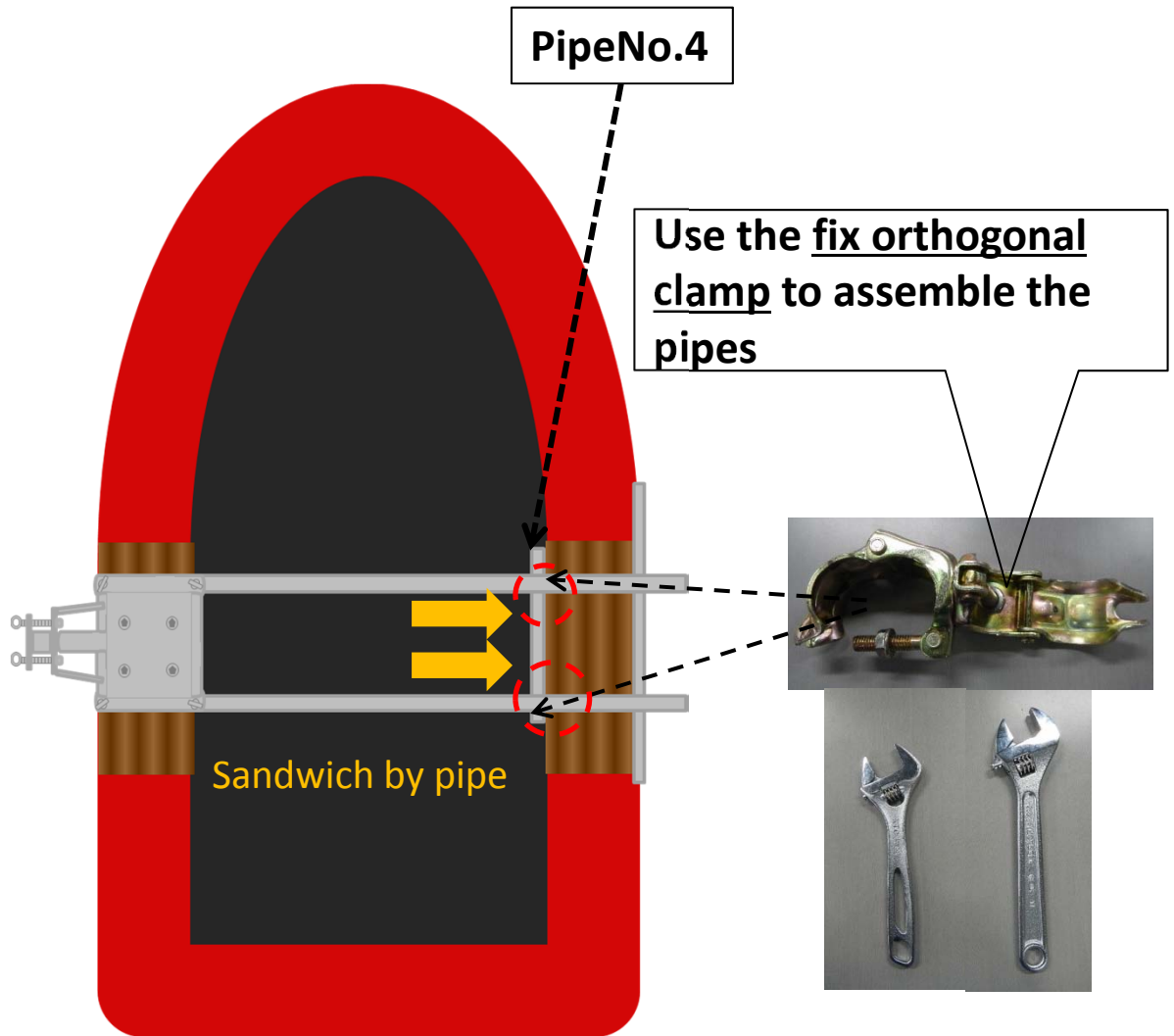


Use the fix orthogonal clamp to assemble the pipes



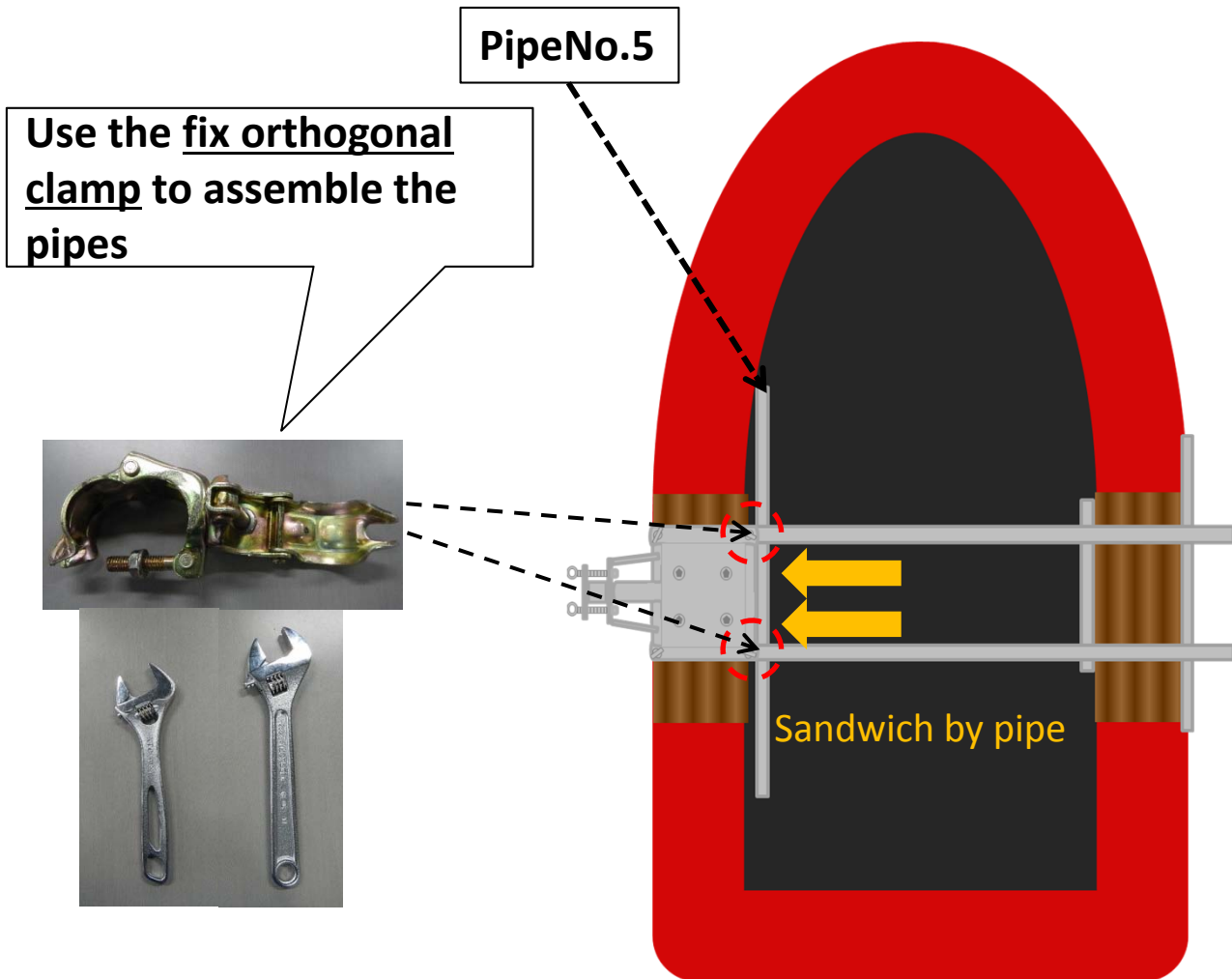
**Do not tie the nut too hard**

# 1- Setting up of the apparatus supporting frame (5/6)



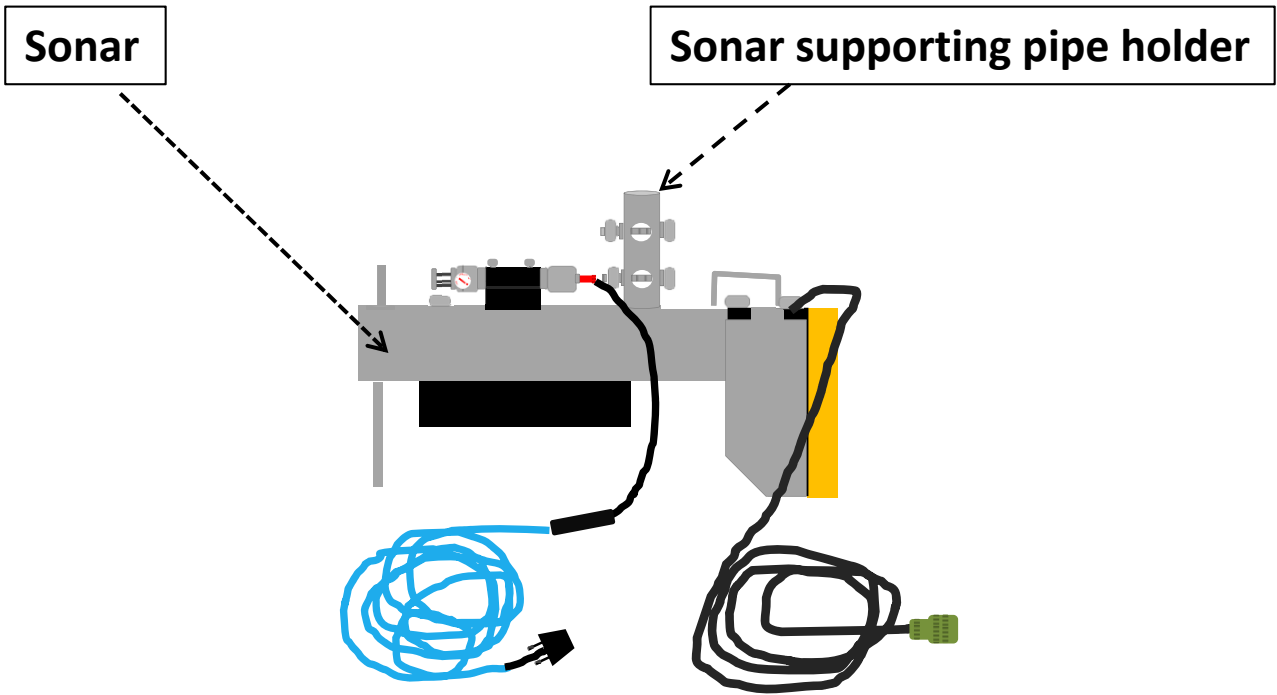
**Do not tie the nut too hard**

# 1- Setting up of the apparatus supporting frame (6/6)



**Do not tie the nut too hard**

# Setting up of the Sonar(1/3)



Sonar



Upper part pipe

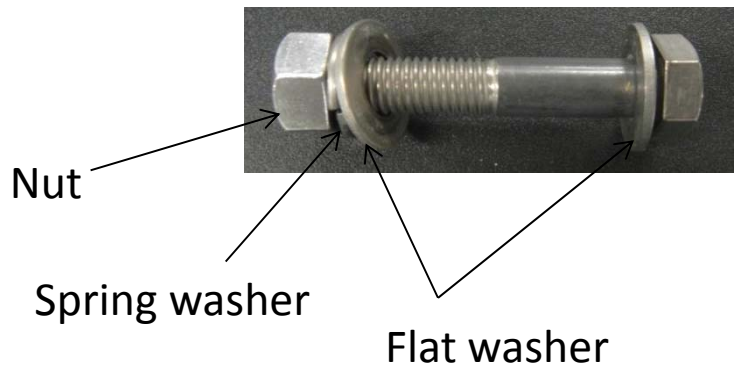
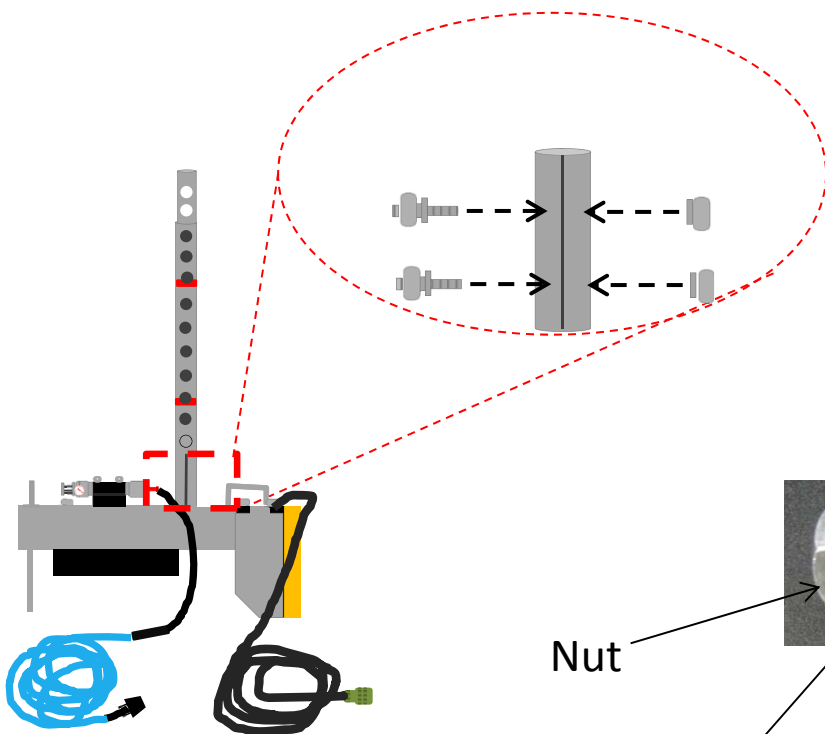
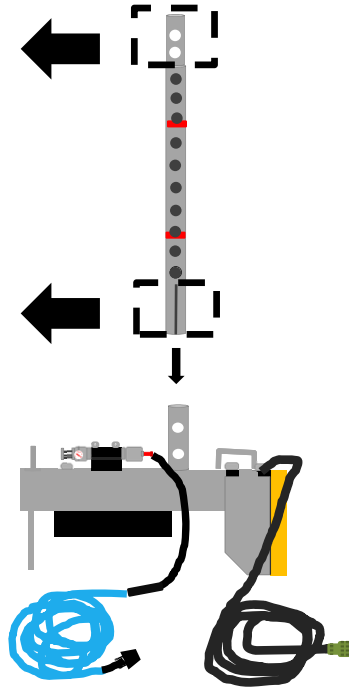


Under part pipe



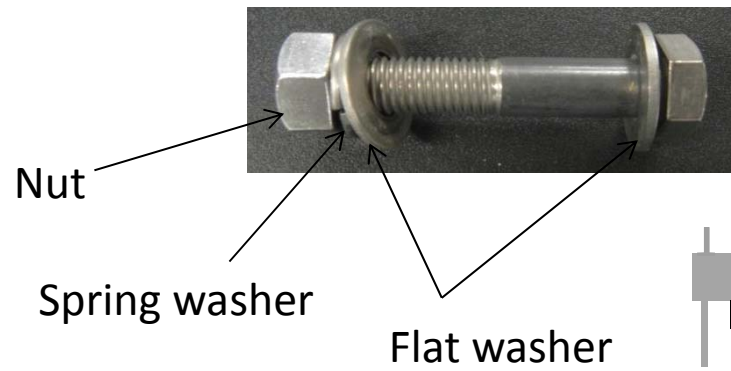
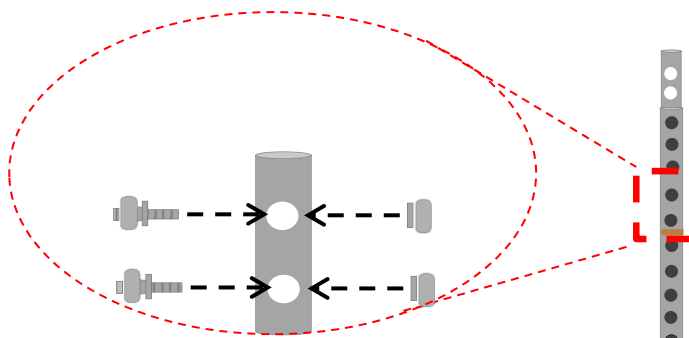
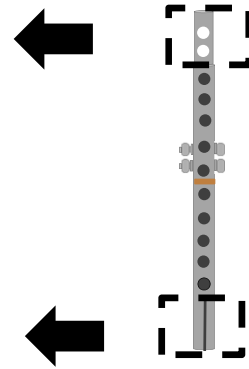
# Setting up of the Sonar(2/3)

Step 1-1: insert the lower part



# Setting up of the Sonar(3/3)

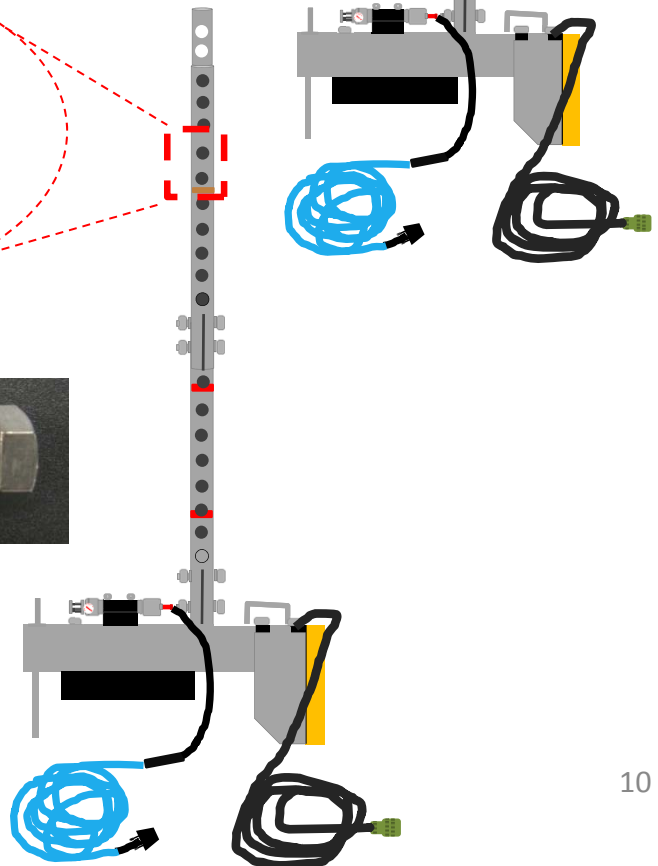
Step 2: Adjust the upper part



Nut

Spring washer

Flat washer

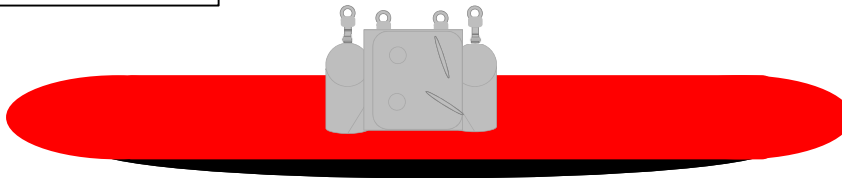


# Hook on the sonar onto the supporting frame(1/3)

This picture is after setting up of the apparatus supporting frame .

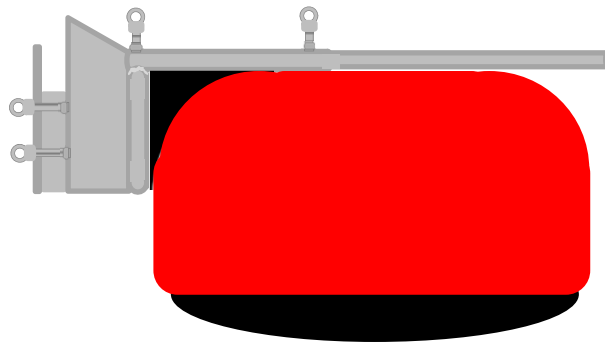
View from port side

Bow side

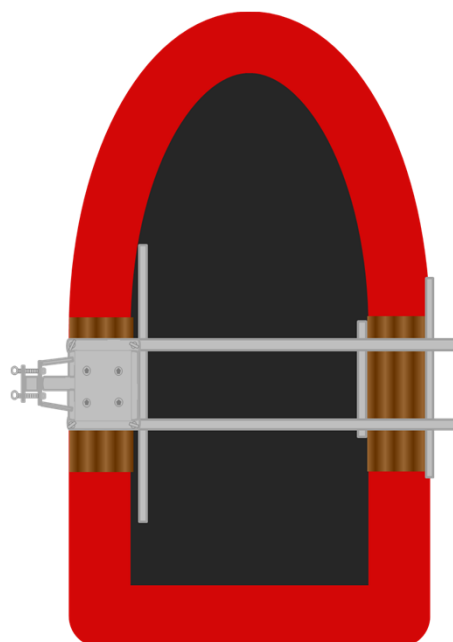


Aft side

View from aft side



View from top side

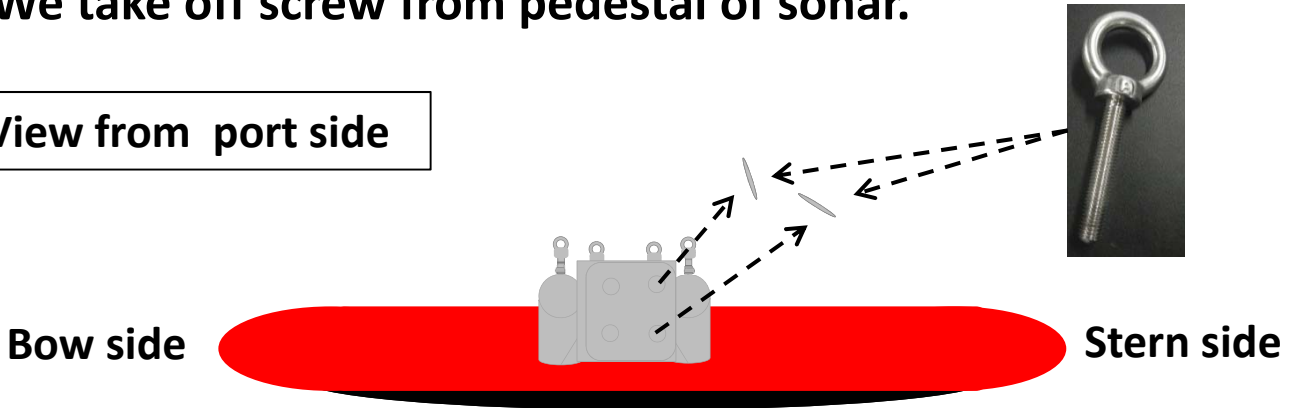


# Hook on the sonar onto the supporting frame(2/3)

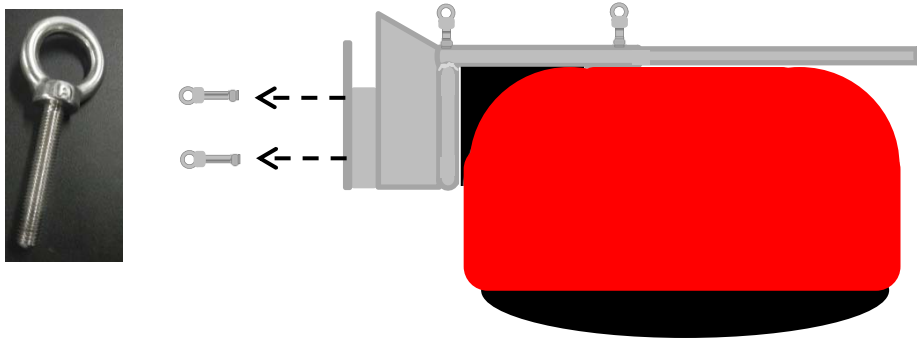
Next, we start connection pedestal of sonar and sonar.

We take off screw from pedestal of sonar.

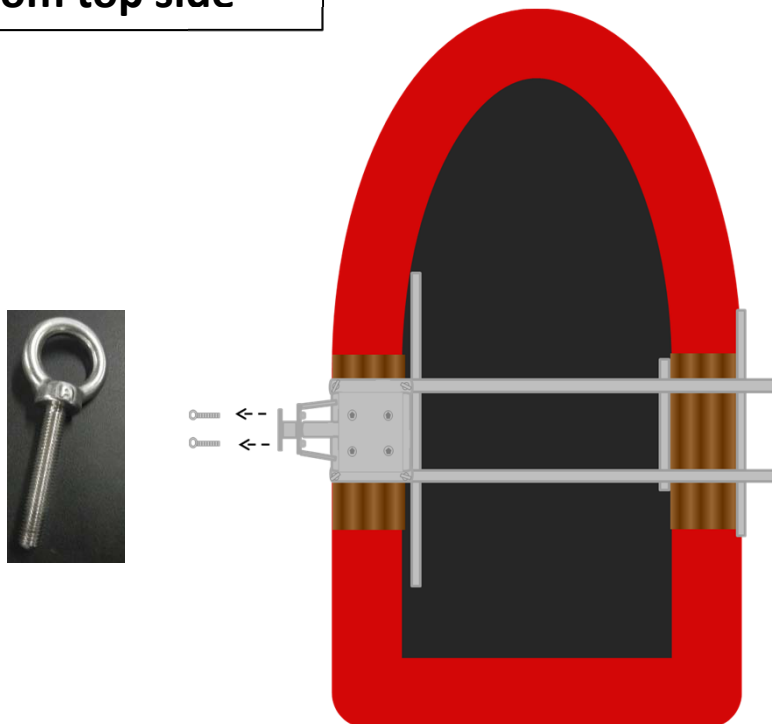
View from port side



View from aft side



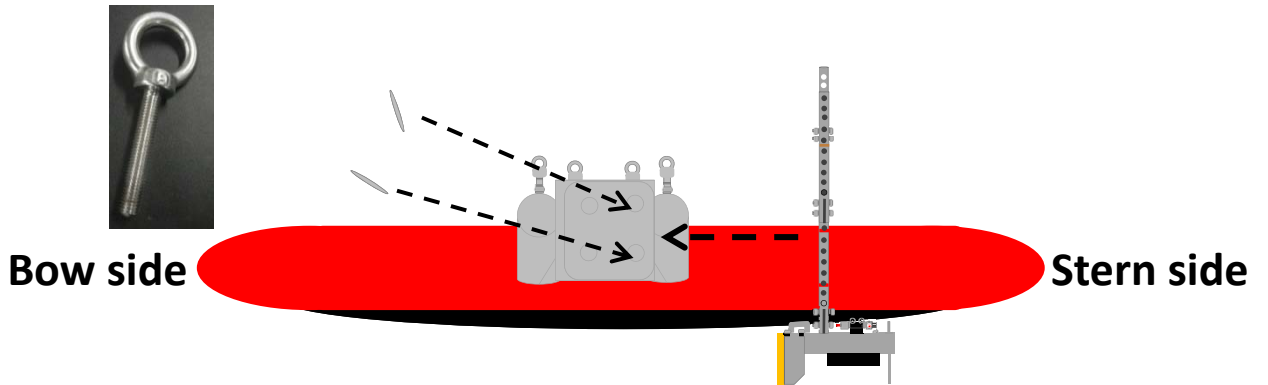
View from top side



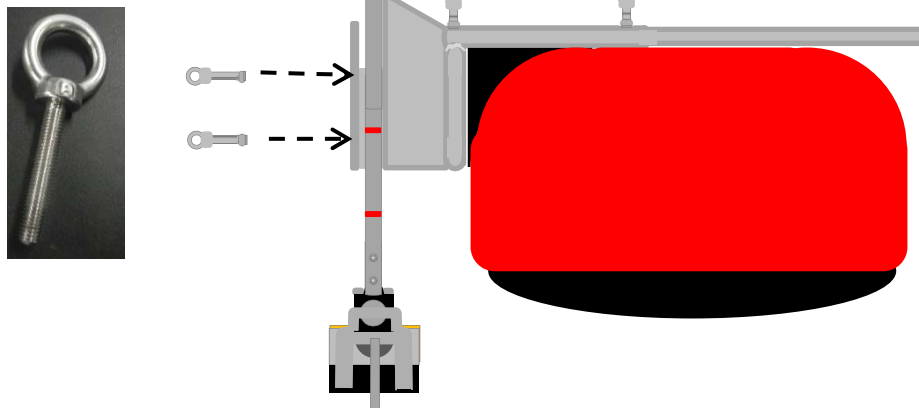
# Hook on the sonar onto the supporting frame(3/3)

We connect sonar to back side of pedestal of sonar.

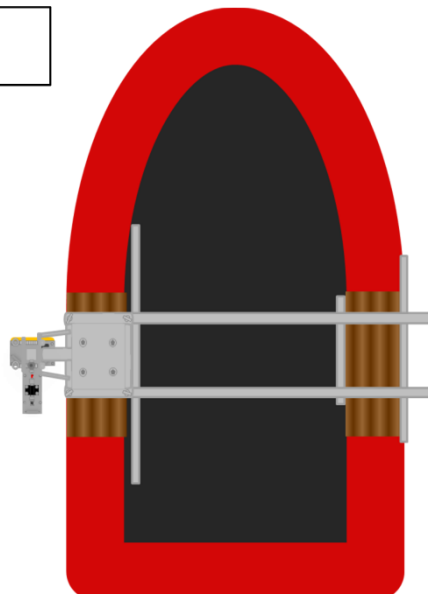
View from port side



View from aft side



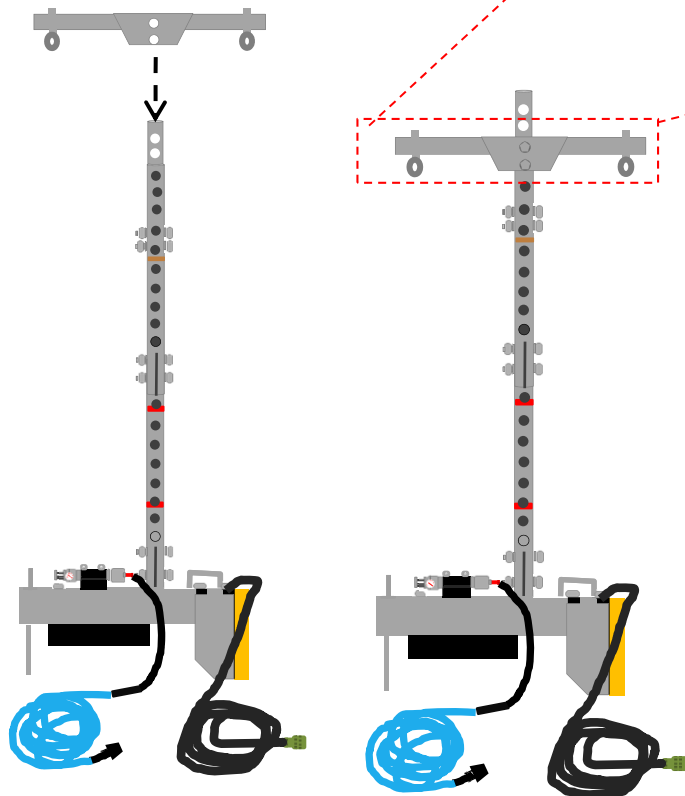
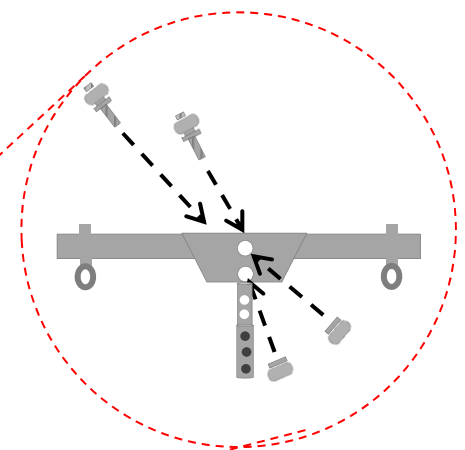
View from top side



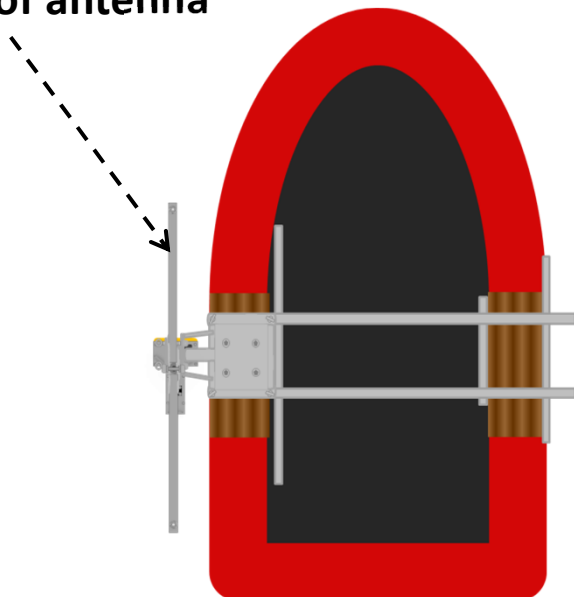
# Setting up of the antenna(1/3)



Pedestal of antenna



Pedestal of antenna



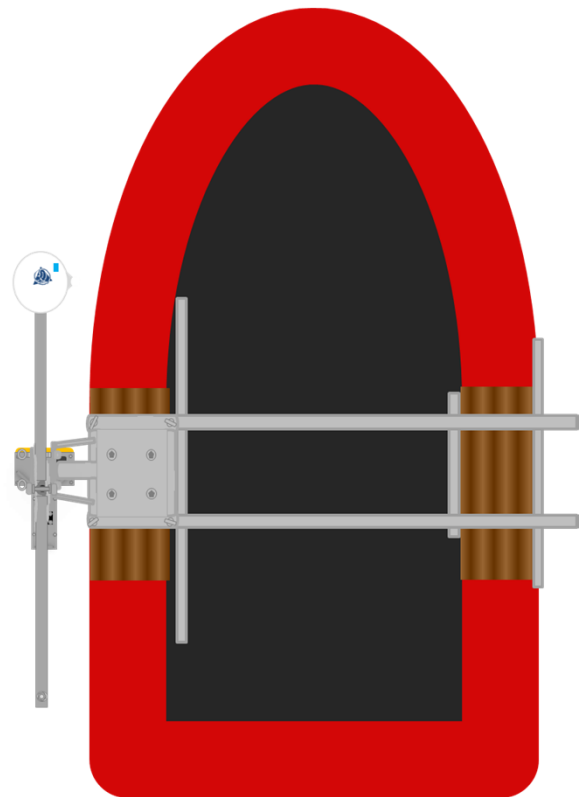
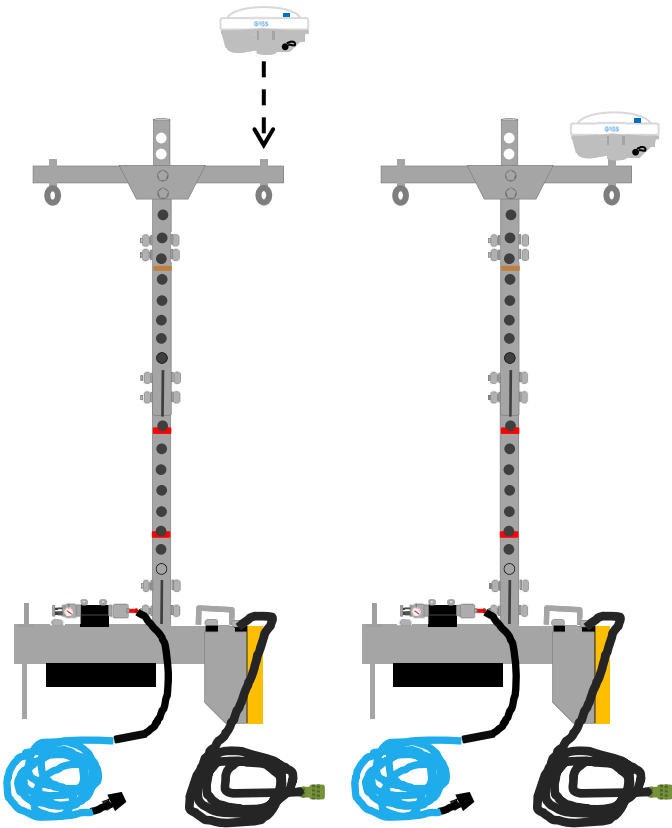
## Setting up of the antenna(2/3)



Antenna of frontside (blue vinyl)

View from right side

View from top side



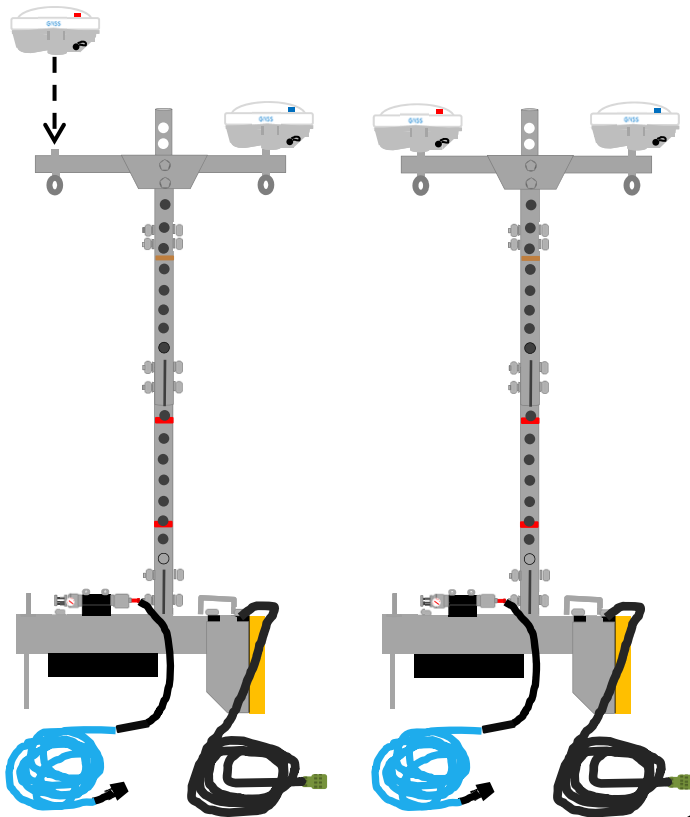
**When antenna connect to pedestal of antenna ,please projection turn to boat. If you keep this when we cable connect to antenna we can connect very easily.**

## Setting up of the antenna(3/3)

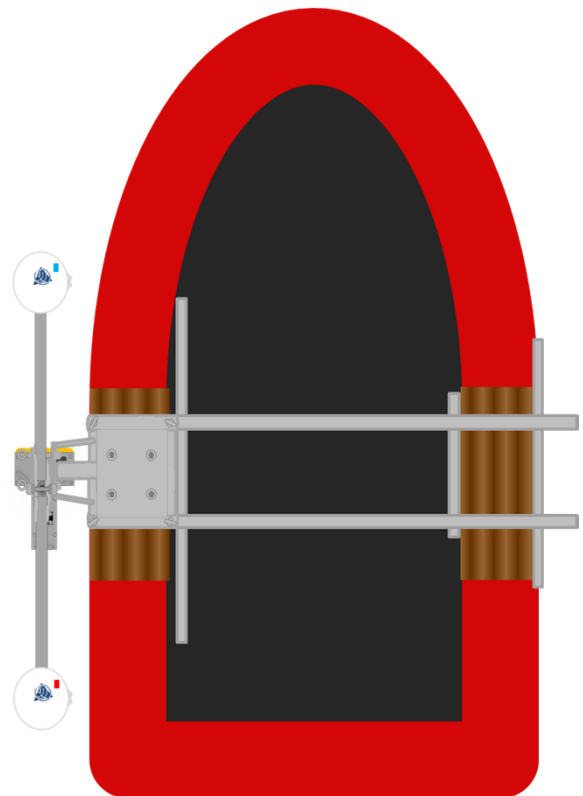


Antenna of backside (with red vinyl tape)

View from right side



View from top side



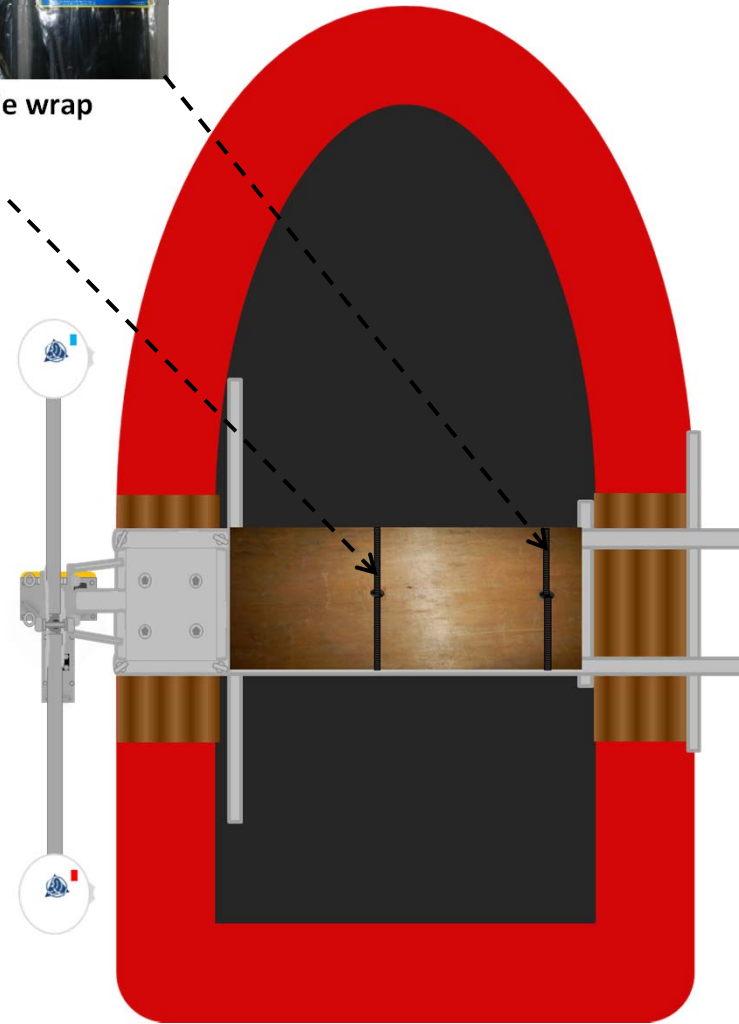
When antenna connect to pedestal of antenna ,please projection turn to boat. If you keep this when we cable connect to antenna we can connect very easily.



## Setting up of the machine(1/5)

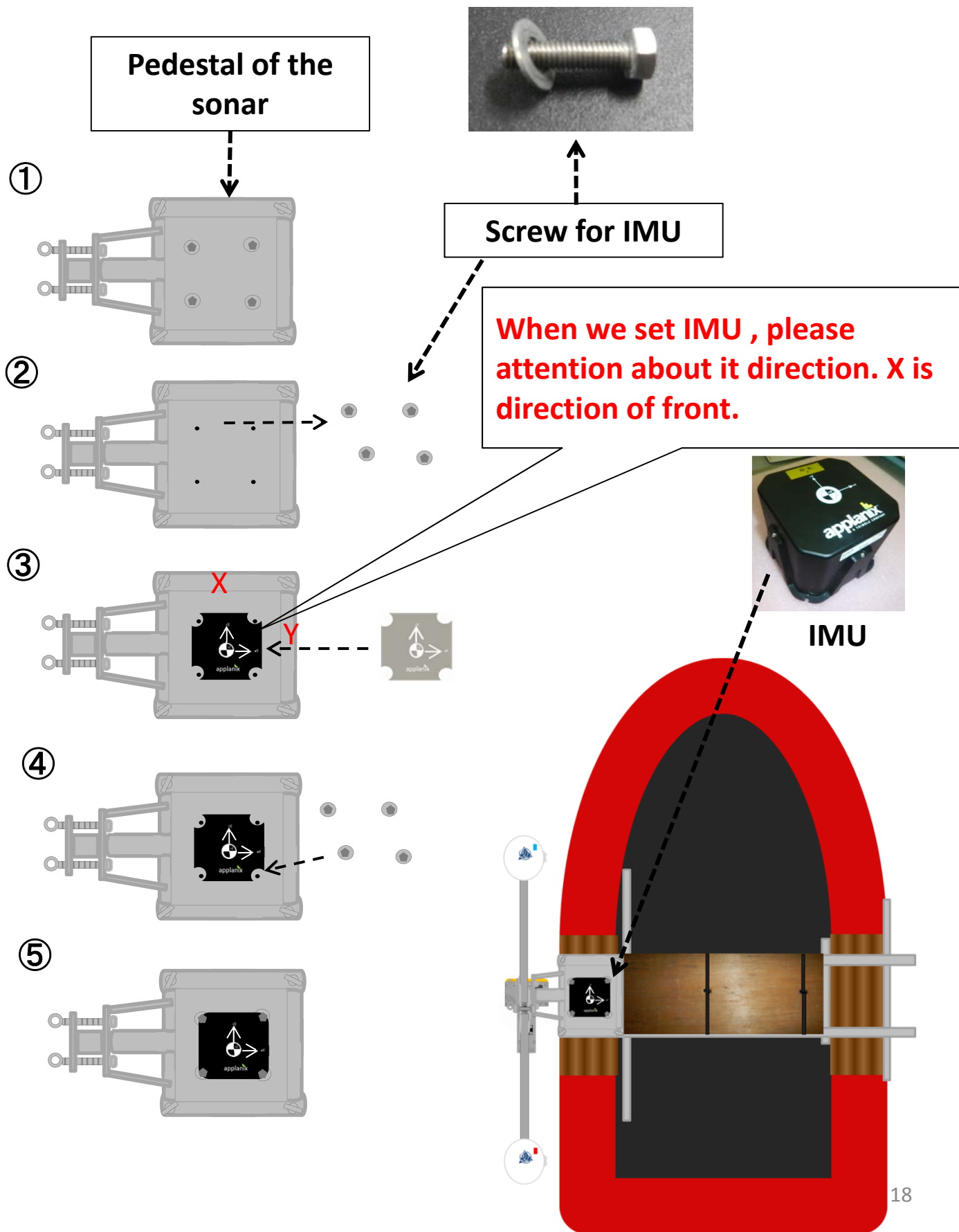


Tie wrap



Securely tie the plank board to the supporting frame as shown

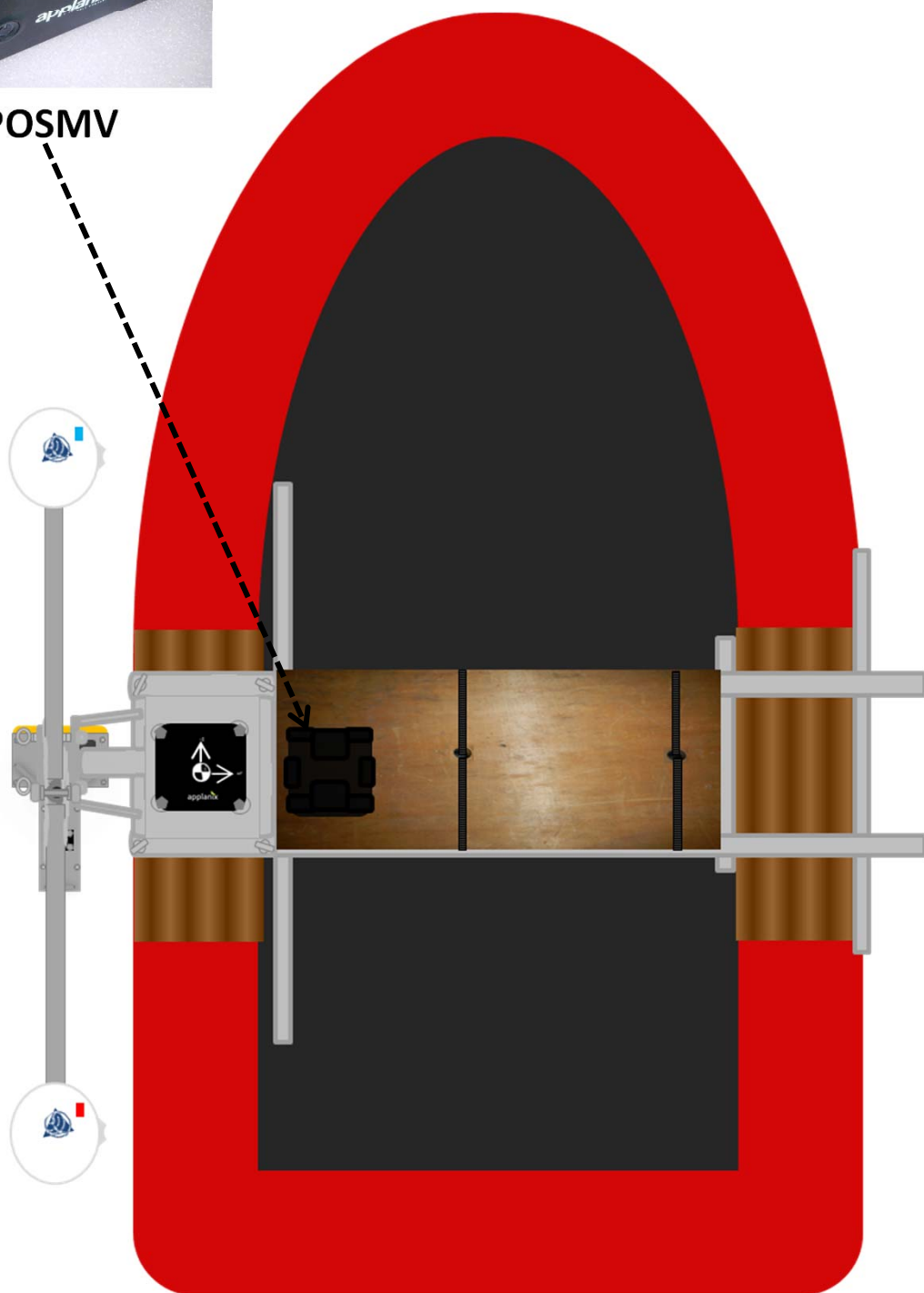
# Setting up of the machine(2/5)



## Setting up of the machine(3/5)



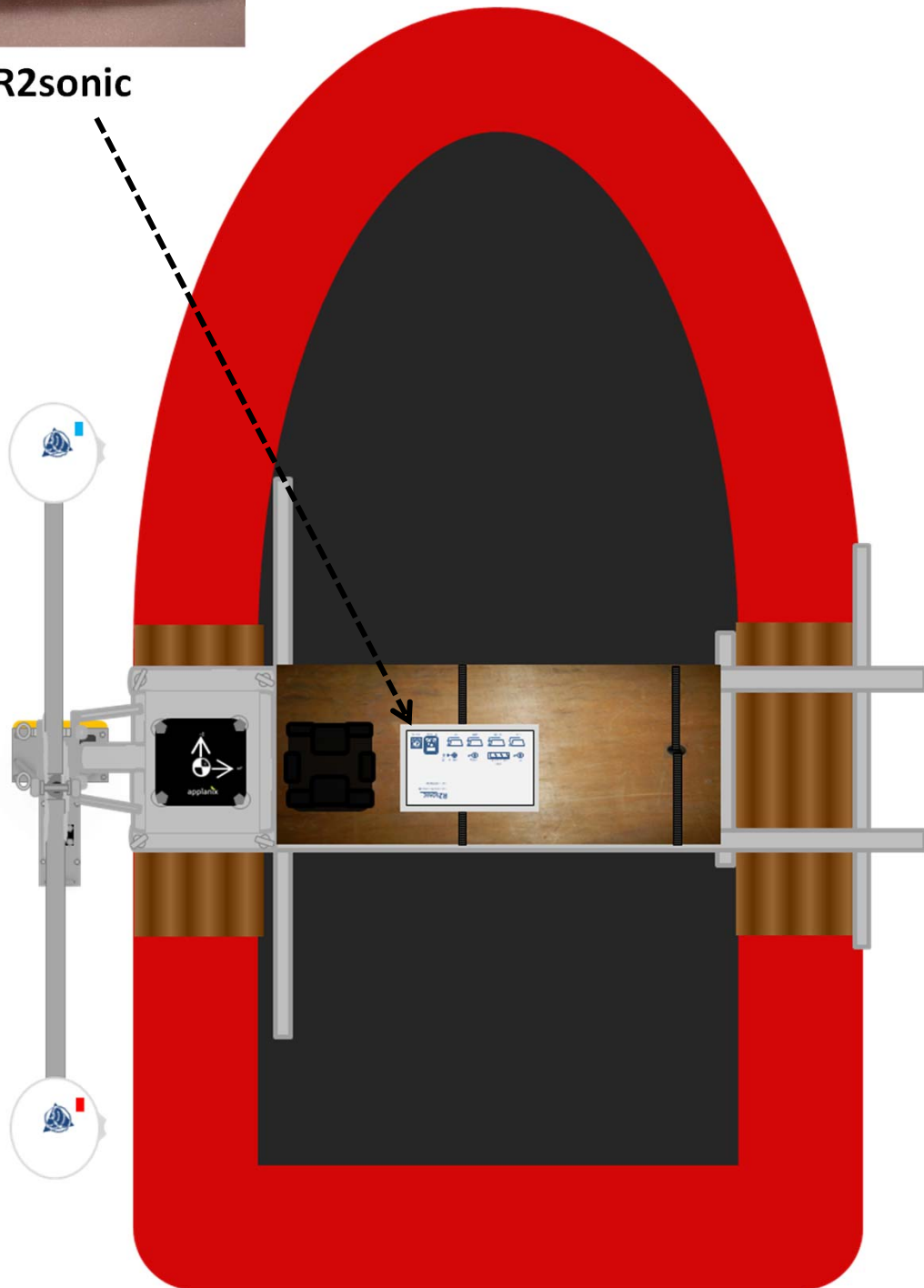
POSMV



# Setting up of the machine(4/5)



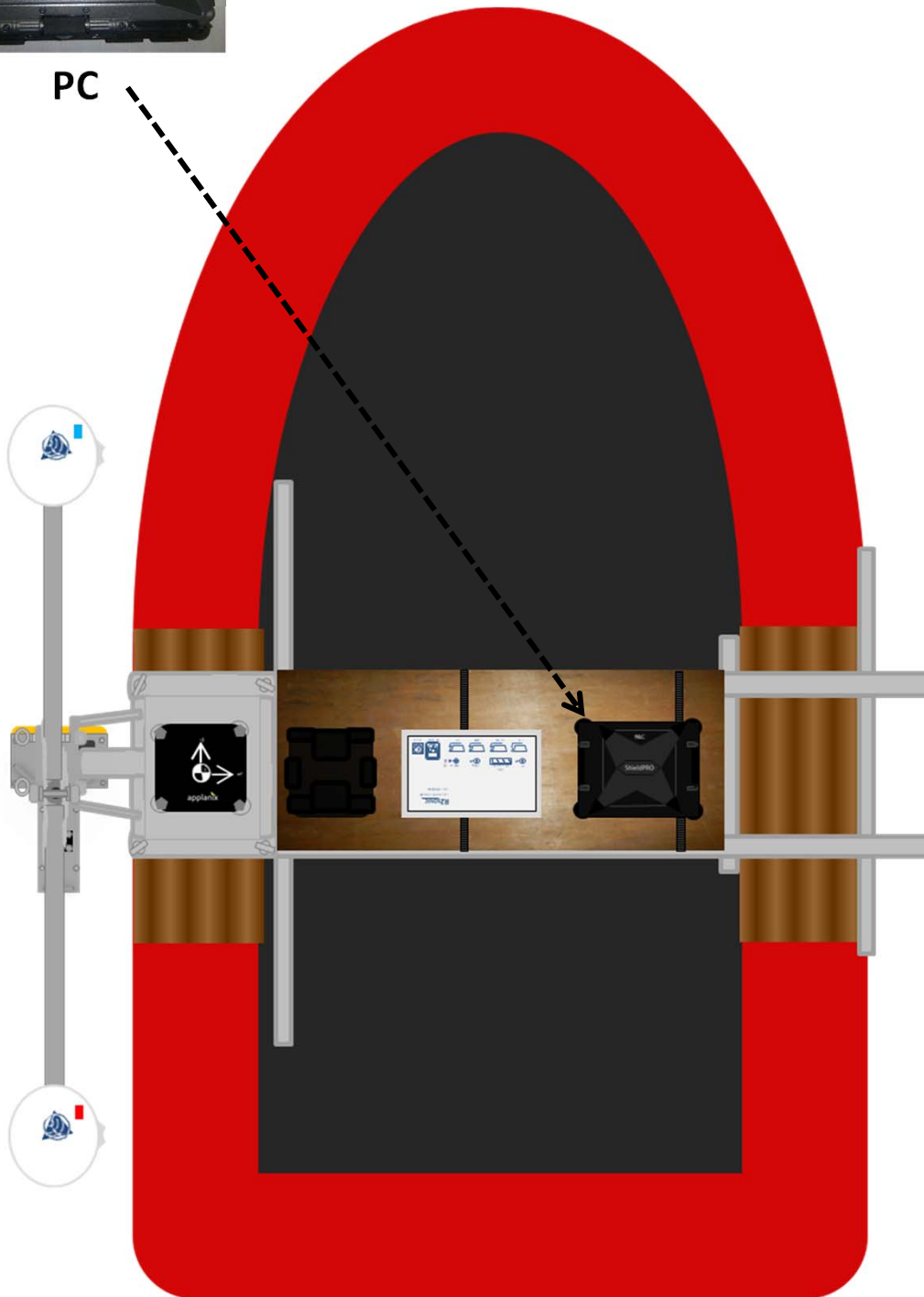
R2sonic



# Setting up of the machine(5/5)



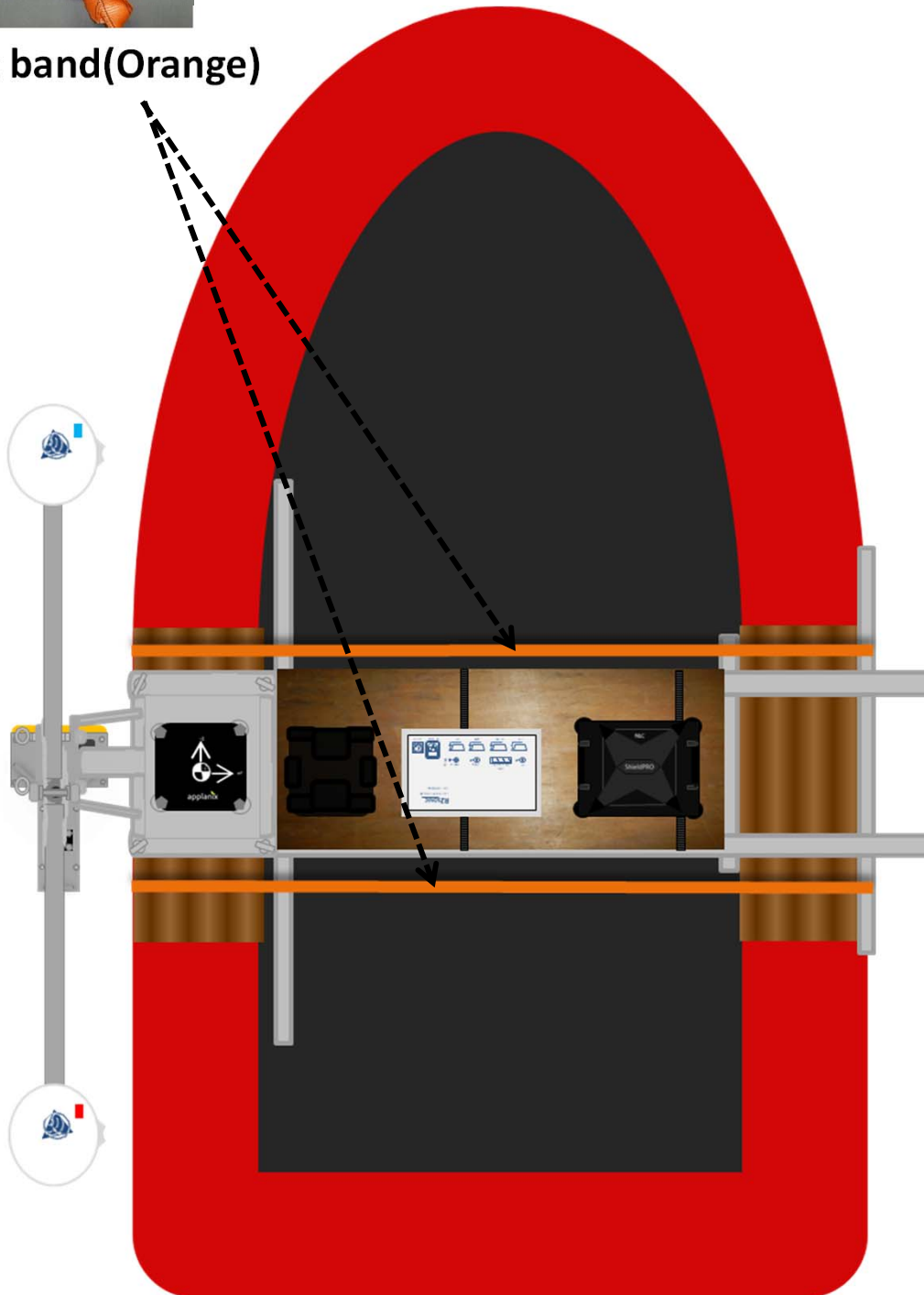
PC



# Setting up of the Ratchet band (Orange)

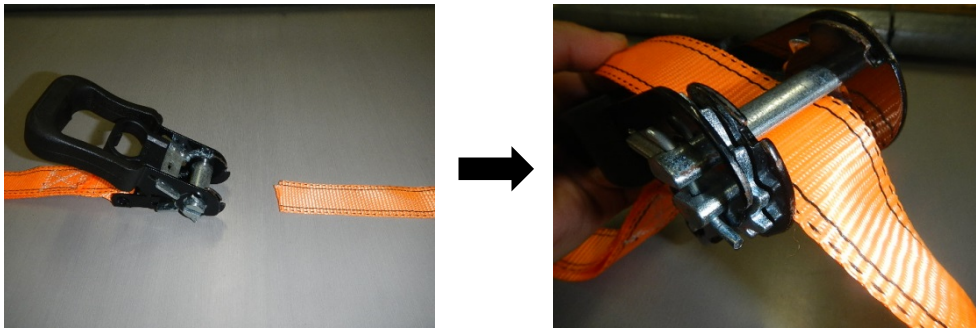


Ratchet band(Orange)



● How to wear ratchet band

① Ratchet band through to silver part like these picture.



② Ratchet band through in some extent.



③ When you use black handle, you can wind band.



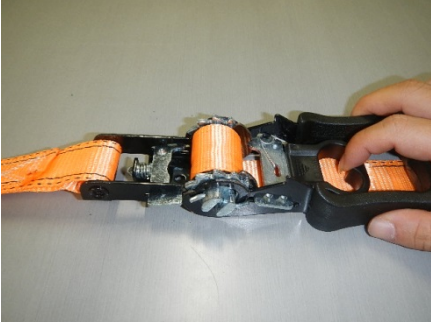
④ As a result of wound band, you can get like this picture.





● **How to remove ratchet band**

① **When you want remove ratchet band ,you pull black handle.  
And then you can release it.**



② **Only when you continue pulling, you can release band.**

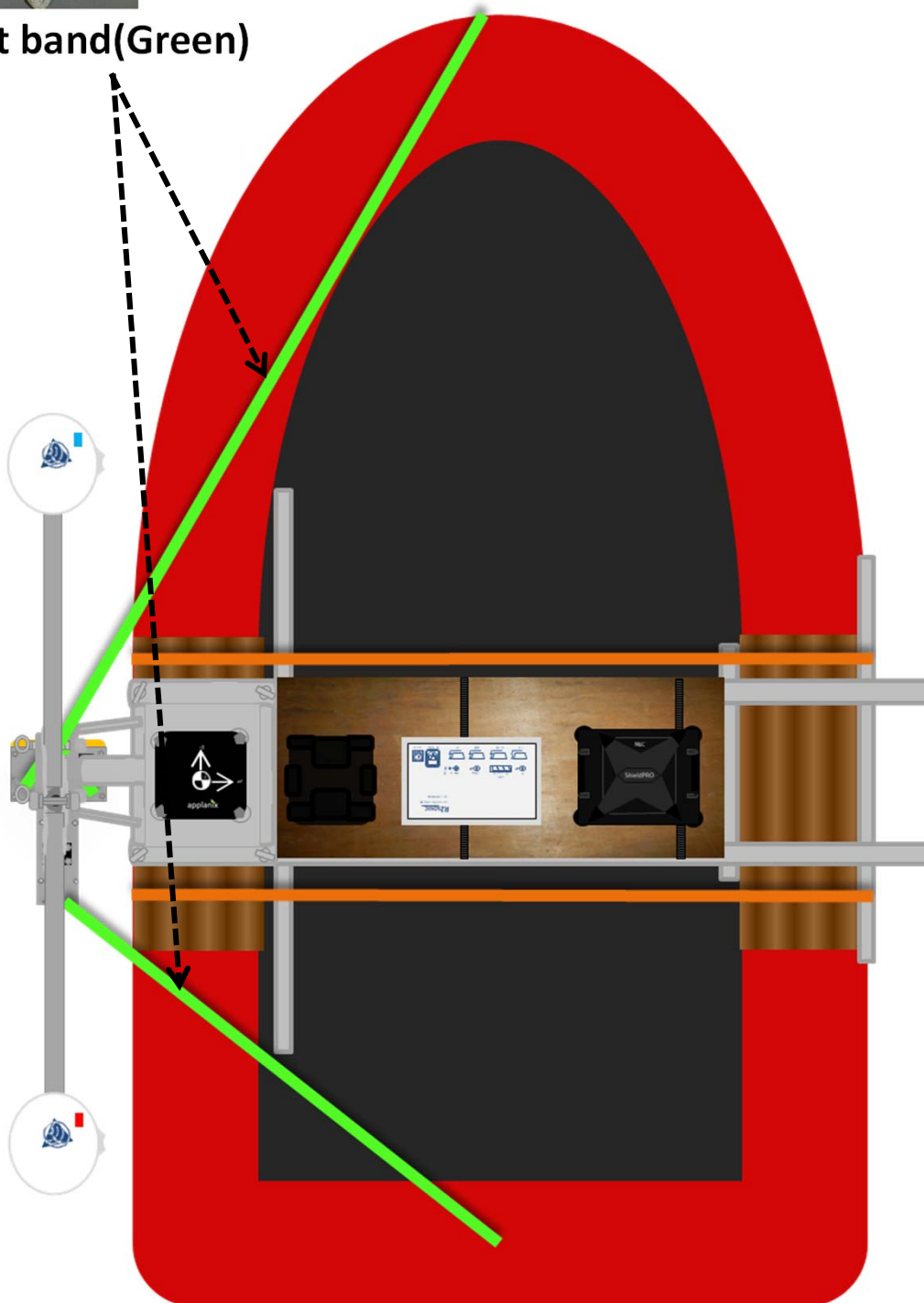




# Setting up of the Ratchet band (Green)



Ratchet band(Green)

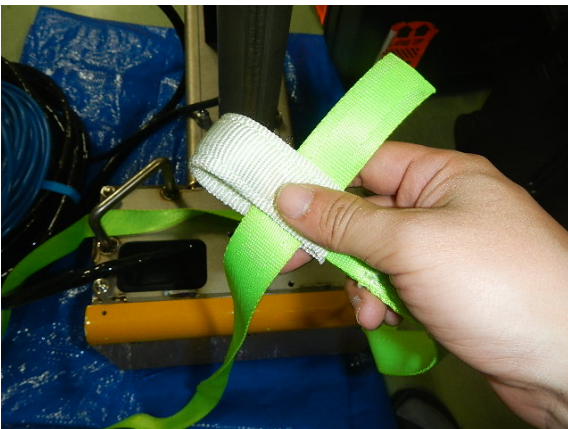


## ● How to connect band to sonar body

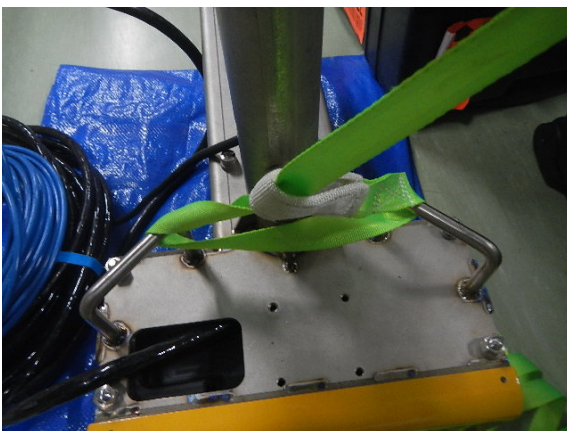
① Band with loop pass to sonar's handle.



② Other side's band pass to loop.



③ After other side's band passed to loop, you pull until last.



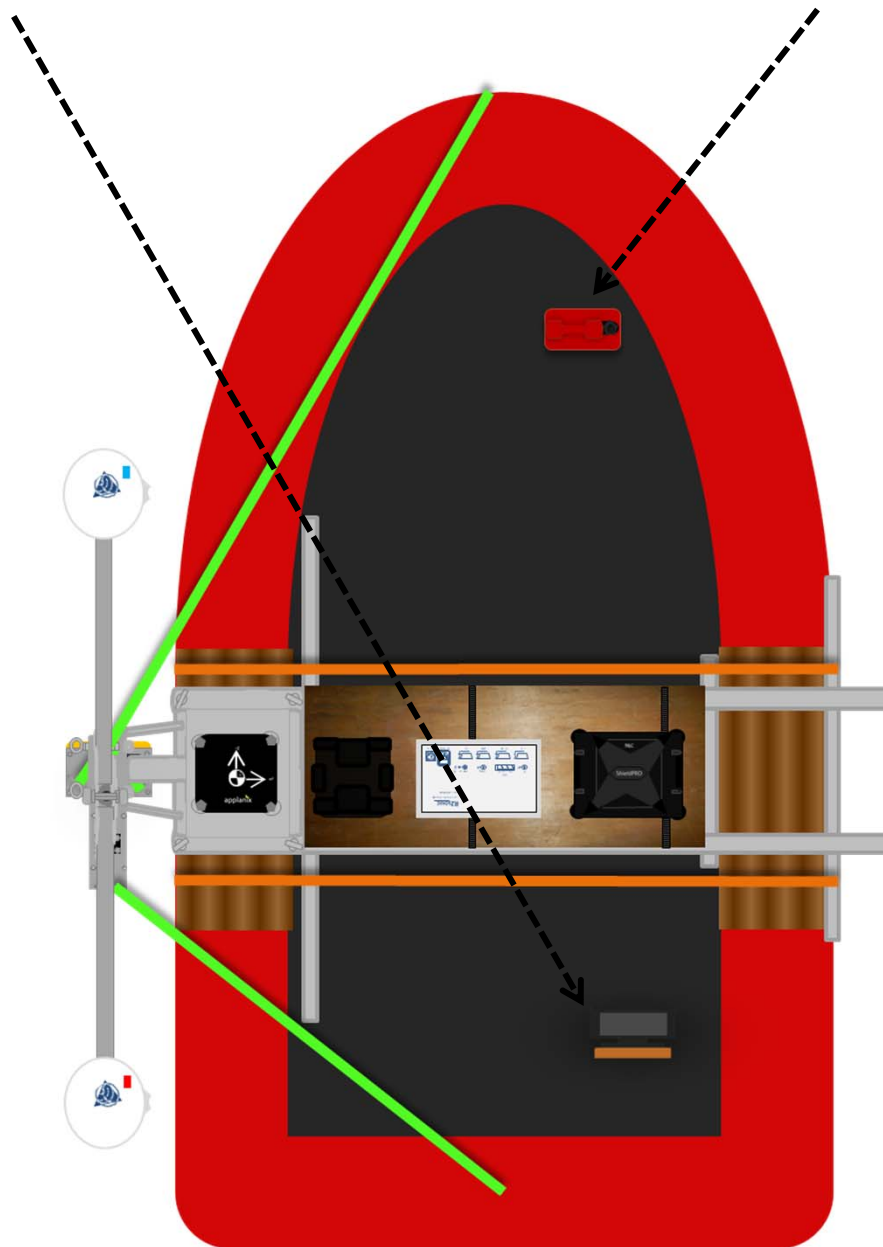
# Setting up of the Engine and monitor



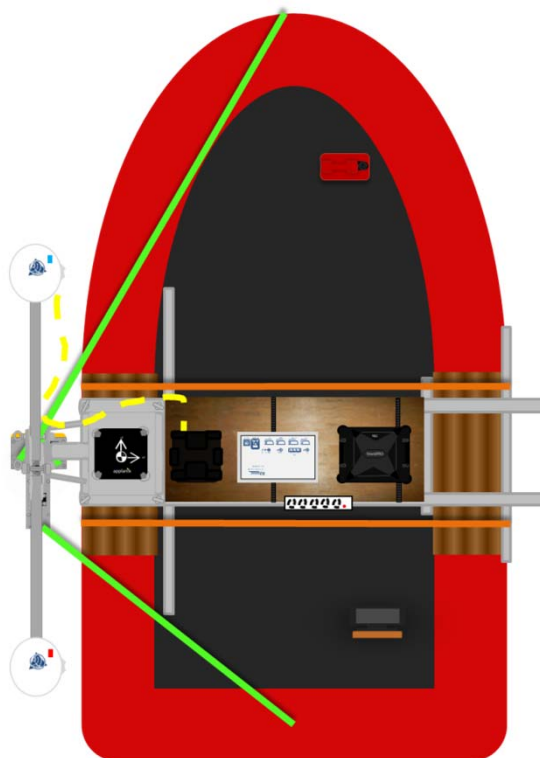
Monitor for driver



Engine for machine power



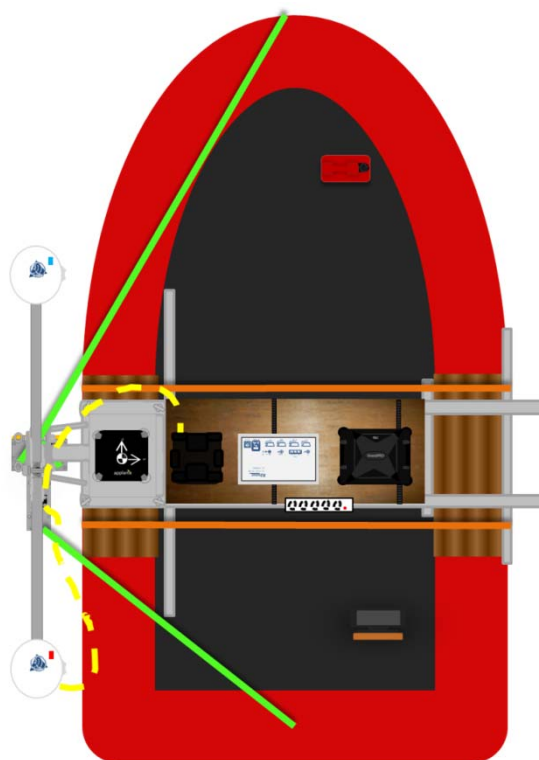
# Setting up of the Code(1/15)



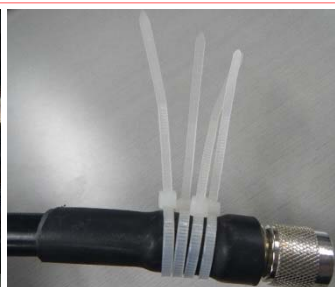
CodeNo.	POS	R2SONIC	PG	OTHERS	OTHERS2
1	A2			Antenna front	
2	A1			Antena aft	
3	PWR[A]			Power Tap[B]	
4	IMU[A]			IMU[B]	
5	COM[A]	MOTION[B]			
		GPS[C]			
6	LAN[A]		USB[B]		
7	IO1[A]	PPS[B]			
8		SONARRX		Sonar	
9		90-264VAC[A]		Power distributor[B]	
10		SVP		Sonar	
11		DATA[A]	LAN[B]		
12			Power[A]	Power distributor[B]	
13			Display[A]	Display[B]	
14				Display[A]	Power distributor[B]
15				generator	Power distributor[B]



# Setting up of the Code(2/15)



A1

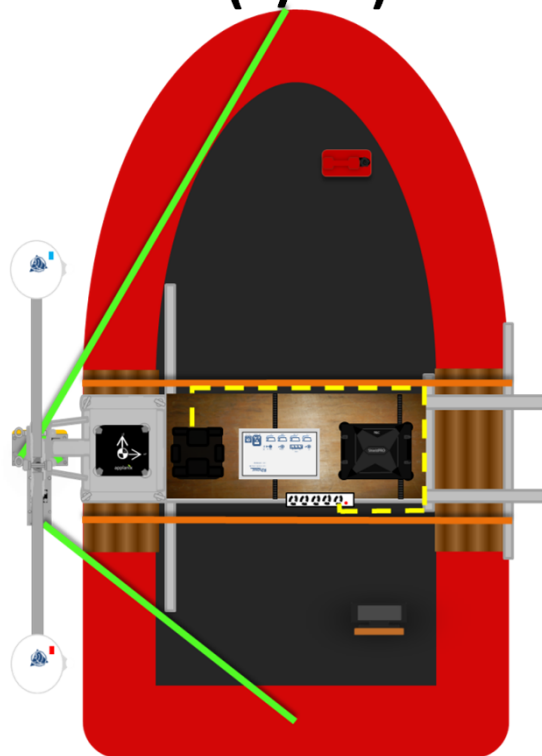


CodeNo.	POS	R2SONIC	PC	OTHERS	OTHERS2
1	A2			Antenna front	
2	A1			Antena aft	
3	PWR[A]			Power Tap[B]	
4	IMU[A]			IMU[B]	
5	COM[A]	MOTION[B]			
		GPS[C]			
6	LAN[A]		USB[B]		
7	IO1[A]	PPS[B]			
8		SONARRX		Sonar	
9		90-264VAC[A]		Power distributor[B]	
10		SVP		Sonar	
11		DATA[A]	LAN[B]		
12			Power[A]	Power distributor[B]	
13			Display[A]	Display[B]	
14				Display[A]	Power distributor[B]
15				generator	Power distributor[B]



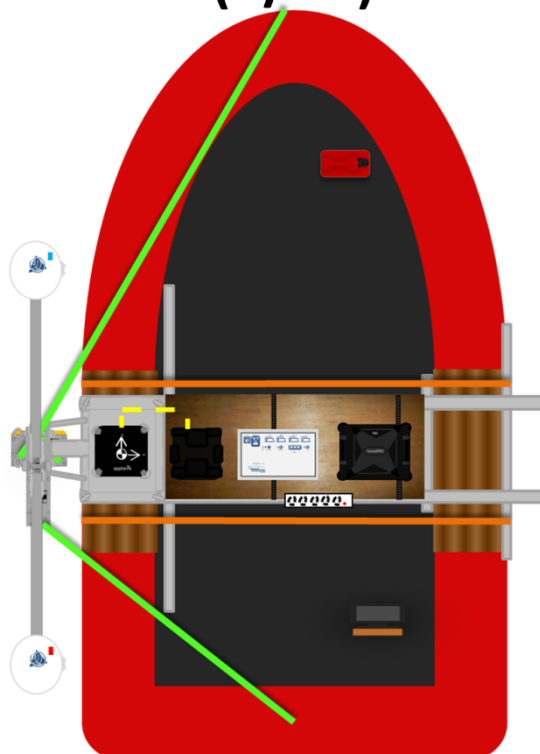
⌘ After connecting the antenna make sure the cables are not tensioned due to their own weight). You may use tape to tie them to the vertical pipe as shown.

# Setting up of the Code(3/15)



CodeNo.	POS	R2SONIC	PC	OTHERS	OTHERS2
1	A2			Antenna front	
2	A1			Antena aft	
3	PWR[A]			Power Tap[B]	
4	IMU[A]			IMU[B]	
5	COM[A]	MOTION[B]			
		GPS[C]			
6	LAN[A]		USB[B]		
7	IO1[A]	PPS[B]			
8		SONARRX		Sonar	
9		90-264VAC[A]		Power distributor[B]	
10		SVP		Sonar	
11		DATA[A]	LAN[B]		
12			Power[A]	Power distributor[B]	
13			Display[A]	Display[B]	
14				Display[A]	Power distributor[B]
15				generator	Power distributor[B]

# Setting up of the Code(4/15)



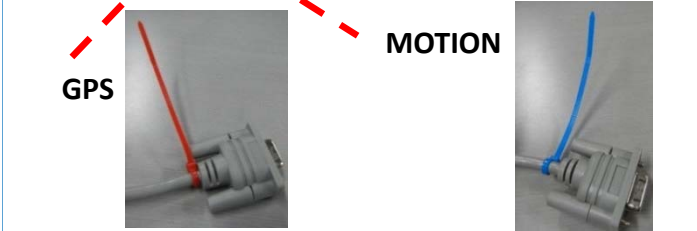
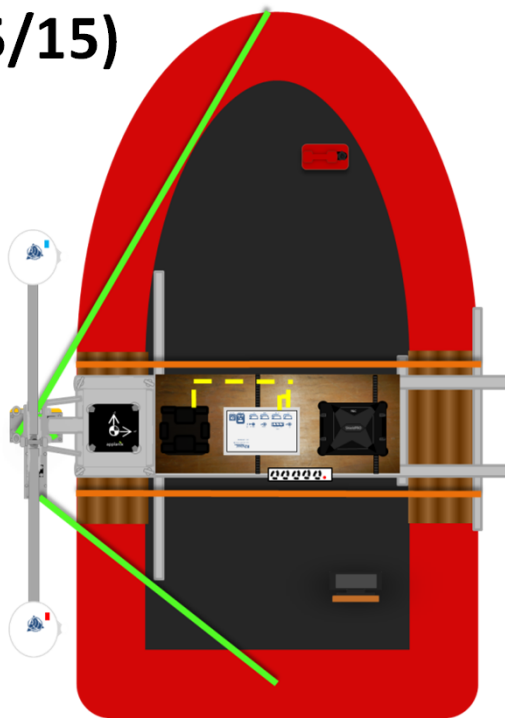
IMU



CodeNo.	POS	R2SONIC	PC	OTHERS	OTHERS2
1	A2			Antenna front	
2	A1			Antena aft	
3	PWR[A]			Power Tap[B]	
4	IMU[A]			IMU[B]	
5	COM[A]	MOTION[B] GPS[C]			
6	LAN[A]		USB[B]		
7	IO1[A]	PPS[B]			
8		SONARRX		Sonar	
9		90-264VAC[A]		Power distributor[B]	
10		SVP		Sonar	
11		DATA[A]	LAN[B]		
12			Power[A]	Power distributor[B]	
13			Display[A]	Display[B]	
14				Display[A]	Power distributor[B]
15				generator	Power distributor[B]

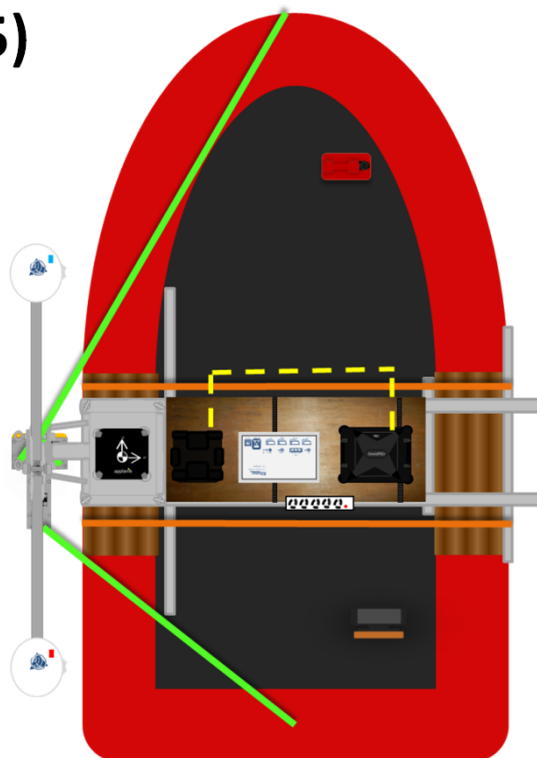


# Setting up of the Code(5/15)



CodeNo.	POS	R2SONIC	PC	OTHERS	OTHERS2
1	A2			Antenna front	
2	A1			Antena aft	
3	PWR[A]			Power Tap[B]	
4	IMU[A]			IMU[B]	
5	COM[A]	MOTION[B] GPS[C]			
6	LAN[A]		USB[B]		
7	IO1[A]	PPS[B]			
8		SONARRX		Sonar	
9		90-264VAC[A]		Power distributor[B]	
10		SVP		Sonar	
11		DATA[A]	LAN[B]		
12			Power[A]	Power distributor[B]	
13			Display[A]	Display[B]	
14				Display[A]	Power distributor[B]
15				generator	Power distributor[B]

# Setting up of the Code(6/15)

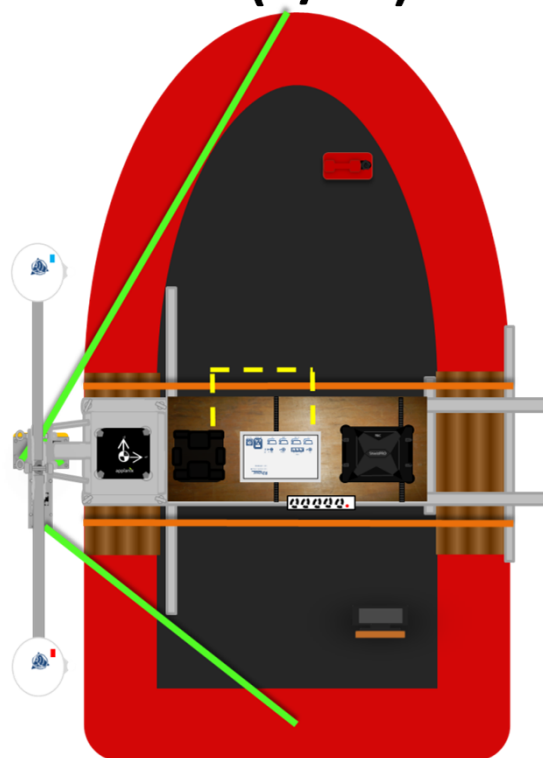


LAN2



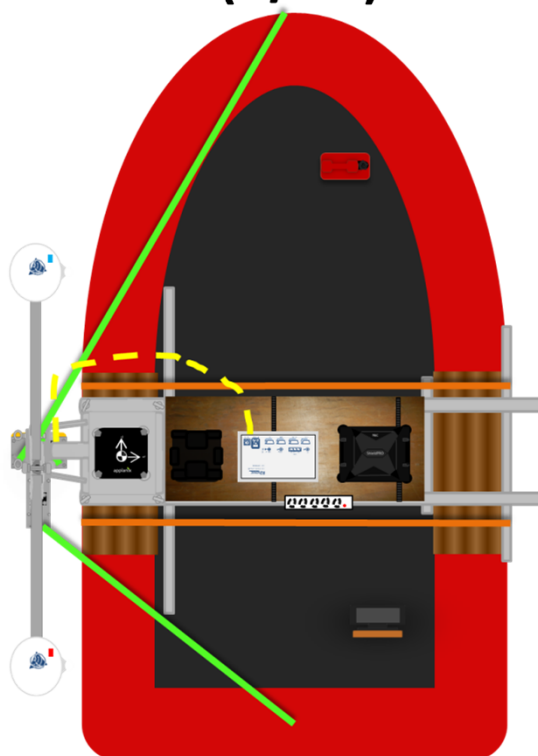
CodeNo.	POS	R2SONIC	PC	OTHERS	OTHERS2
1	A2			Antenna front	
2	A1			Antena aft	
3	PWR[A]			Power Tap[B]	
4	IMU[A]			IMU[B]	
5	COM[A]	MOTION[B] GPS[C]			
6	LAN[A]		USB[B]		
7	IO1[A]	PPS[B]			
8		SONARRX		Sonar	
9		90-264VAC[A]		Power distributor[B]	
10		SVP		Sonar	
11		DATA[A]	LAN[B]		
12			Power[A]	Power distributor[B]	
13			Display[A]	Display[B]	
14				Display[A]	Power distributor[B]
15				generator	Power distributor[B]

# Setting up of the Code(7/15)

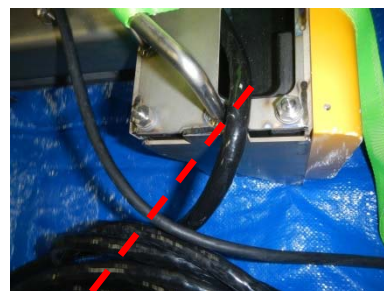


CodeNo.	POS	R2SONIC	PC	OTHERS	OTHERS2
1	A2			Antenna front	
2	A1			Antenna aft	
3	PWR[A]			Power Tap[B]	
4	IMU[A]			IMU[B]	
5	COM[A]	MOTION[B]			
		GPS[C]			
6	LAN[A]		USB[B]		
7	IO1[A]	PPS[B]			
8		SONARRX		Sonar	
9		90-264VAC[A]		Power distributor[B]	
10		SVP		Sonar	
11		DATA[A]	LAN[B]		
12			Power[A]	Power distributor[B]	
13			Display[A]	Display[B]	
14				Display[A]	Power distributor[B]
15				generator	Power distributor[B]

# Setting up of the Code(8/15)



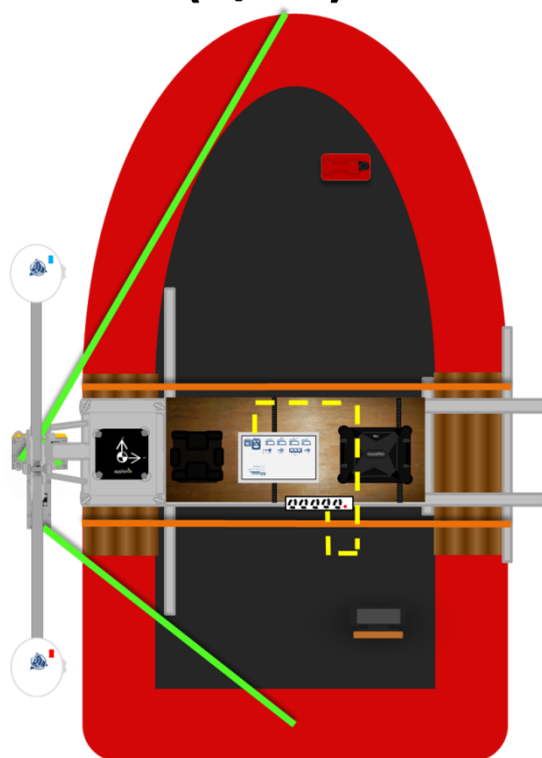
SONARRx



元々繋がっている

CodeNo.	POS	R2SONIC	PC	OTHERS	OTHERS2
1	A2			Antenna front	
2	A1			Antena aft	
3	PWR[A]			Power Tap[B]	
4	IMU[A]			IMU[B]	
5	COM[A]	MOTION[B]			
		GPS[C]			
6	LAN[A]		USB[B]		
7	IO1[A]	PPS[B]			
8		SONARRX		Sonar	
9		90-264VAC[A]		Power distributor[B]	
10		SVP		Sonar	
11		DATA[A]	LAN[B]		
12			Power[A]	Power distributor[B]	
13			Display[A]	Display[B]	
14				Display[A]	Power distributor[B]
15				generator	Power distributor[B]

# Setting up of the Code(9/15)



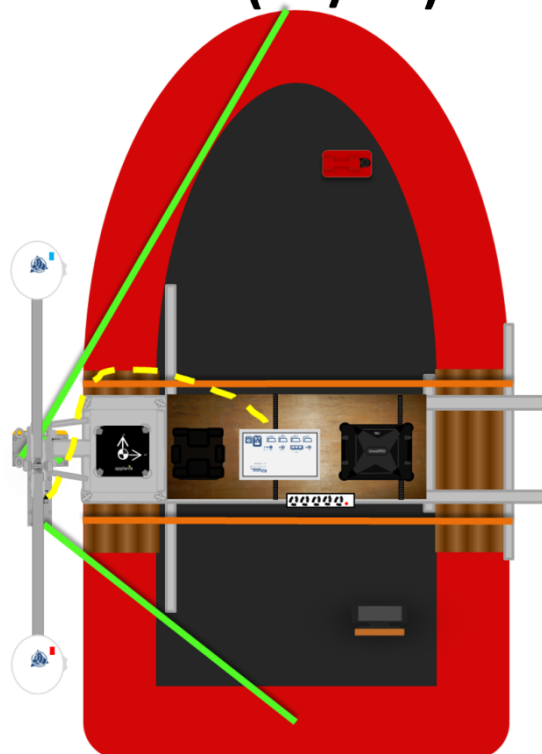
90~264VAC



CodeNo.	POS	R2SONIC	PC	OTHERS	OTHERS2
1	A2			Antenna front	
2	A1			Antena aft	
3	PWR[A]			Power Tap[B]	
4	IMU[A]			IMU[B]	
5	COM[A]	MOTION[B]			
		GPS[C]			
6	LAN[A]		USB[B]		
7	IO1[A]	PPS[B]			
8		SONARRX		Sonar	
9		90-264VAC[A]		Power distributor[B]	
10		SVP		Sonar	
11		DATA[A]	LAN[B]		
12			Power[A]	Power distributor[B]	
13			Display[A]	Display[B]	
14				Display[A]	Power distributor[B]
15				generator	Power distributor[B]

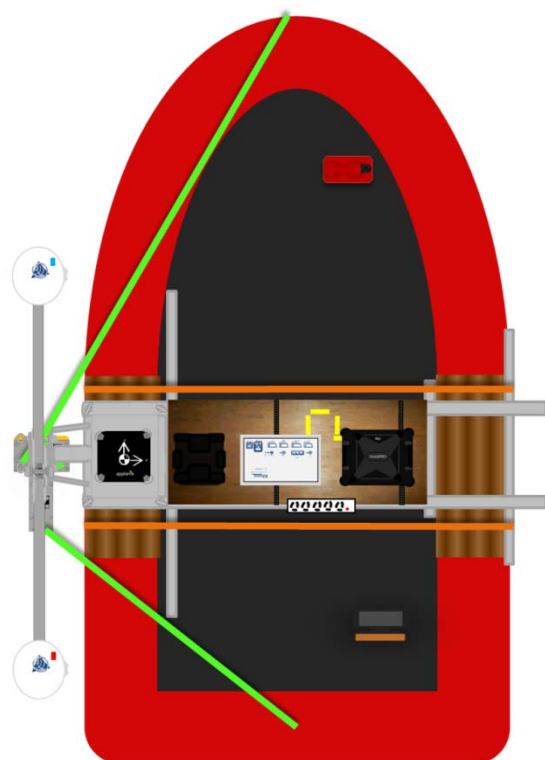


# Setting up of the Code(10/15)



CodeNo.	POS	R2SONIC	PC	OTHERS	OTHERS2
1	A2			Antenna front	
2	A1			Antena aft	
3	PWR[A]			Power Tap[B]	
4	IMU[A]			IMU[B]	
5	COM[A]	MOTION[B]			
		GPS[C]			
6	LAN[A]		USB[B]		
7	IO1[A]	PPS[B]			
8		SONARRX		Sonar	
9		90-264VAC[A]		Power distributor[B]	
10		SVP		Sonar	
11		DATA[A]	LAN[B]		
12			Power[A]	Power distributor[B]	
13			Display[A]	Display[B]	
14				Display[A]	Power distributor[B]
15				generator	Power distributor[B]

# Setting up of the Code(11/15)

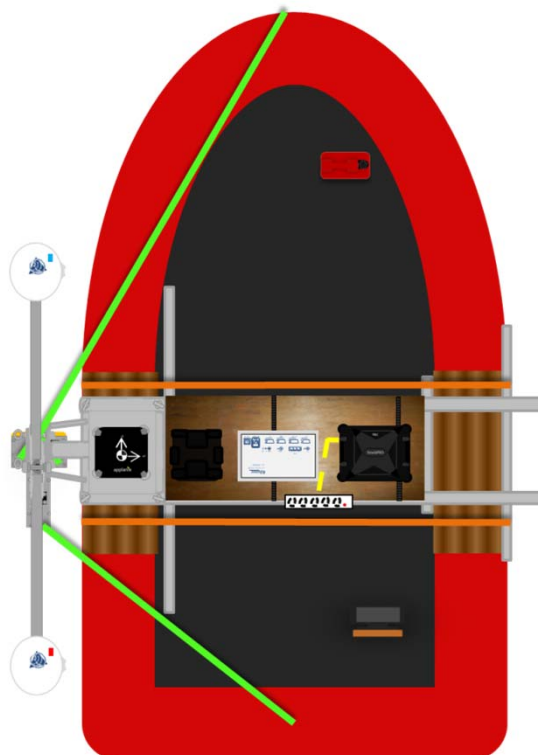


DATA



CodeNo.	POS	R2SONIC	PC	OTHERS	OTHERS2
1	A2			Antenna front	
2	A1			Antena aft	
3	PWR[A]			Power Tap[B]	
4	IMU[A]			IMU[B]	
5	COM[A]	MOTION[B]			
		GPS[C]			
6	LAN[A]		USB[B]		
7	IO1[A]	PPS[B]			
8		SONARRX		Sonar	
9		90-264VAC[A]		Power distributor[B]	
10		SVP		Sonar	
11		DATA[A]	LAN[B]		
12			Power[A]	Power distributor[B]	
13			Display[A]	Display[B]	
14				Display[A]	Power distributor[B]
15				generator	Power distributor[B]

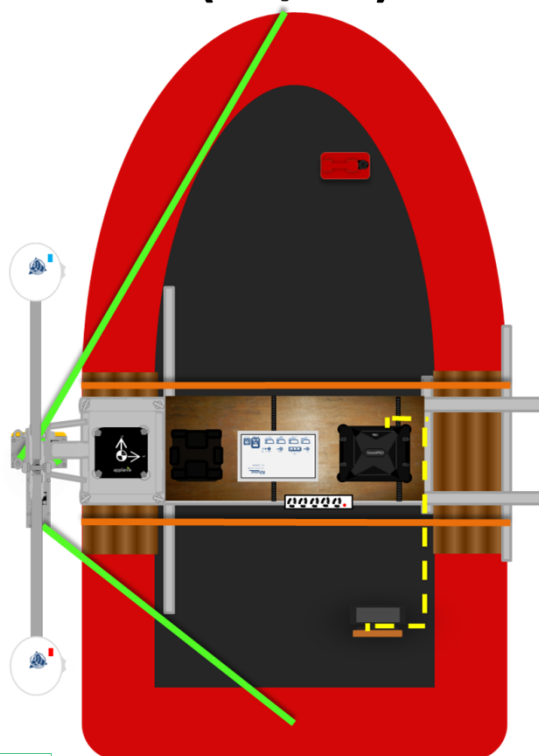
# Setting up of the Code(12/15)



CodeNo.	POS	R2SONIC	PC	OTHERS	OTHERS2
1	A2			Antenna front	
2	A1			Antena aft	
3	PWR[A]			Power Tap[B]	
4	IMU[A]			IMU[B]	
5	COM[A]	MOTION[B]			
		GPS[C]			
6	LAN[A]		USB[B]		
7	IO1[A]	PPS[B]			
8		SONARRX		Sonar	
9		90-264VAC[A]		Power distributor[B]	
10		SVP		Sonar	
11		DATA[A]	LAN[B]		
12			Power[A]	Power distributor[B]	
13			Display[A]	Display[B]	
14				Display[A]	Power distributor[B]
15				generator	Power distributor[B]

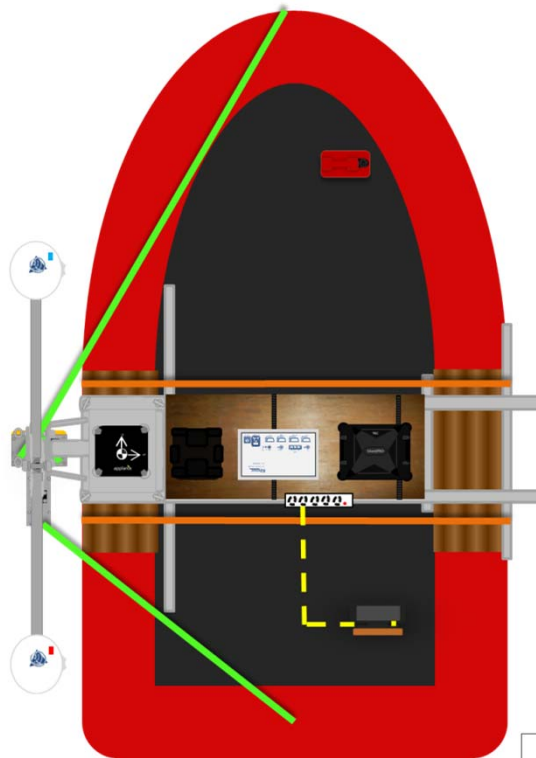


# Setting up of the Code(13/15)



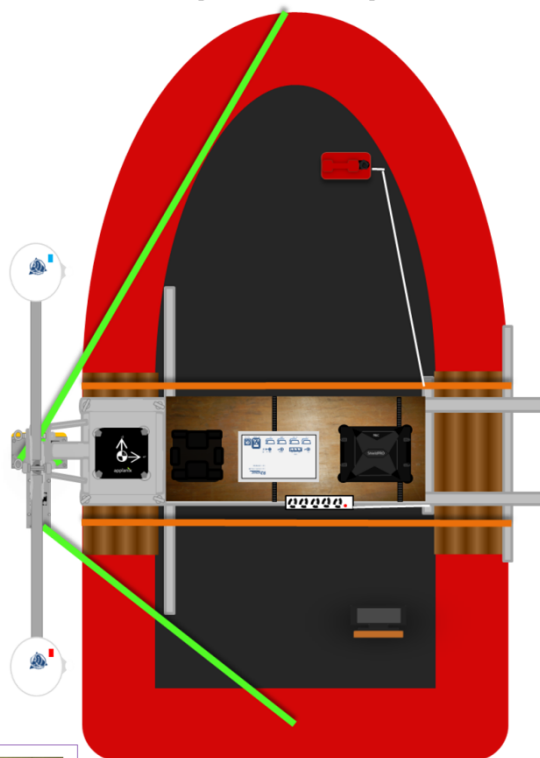
CodeNo.	POS	R2SONIC	PC	OTHERS	OTHERS2
1	A2			Antenna front	
2	A1			Antena aft	
3	PWR[A]			Power Tap[B]	
4	IMU[A]			IMU[B]	
5	COM[A]	MOTION[B]			
		GPS[C]			
6	LAN[A]		USB[B]		
7	IO1[A]	PPS[B]			
8		SONARRX		Sonar	
9		90-264VAC[A]		Power distributor[B]	
10		SVP		Sonar	
11		DATA[A]	LAN[B]		
12			Power[A]	Power distributor[B]	
13			Display[A]	Display[B]	
14				Display[A]	Power distributor[B]
15				generator	Power distributor[B]

# Setting up of the Code(14/15)



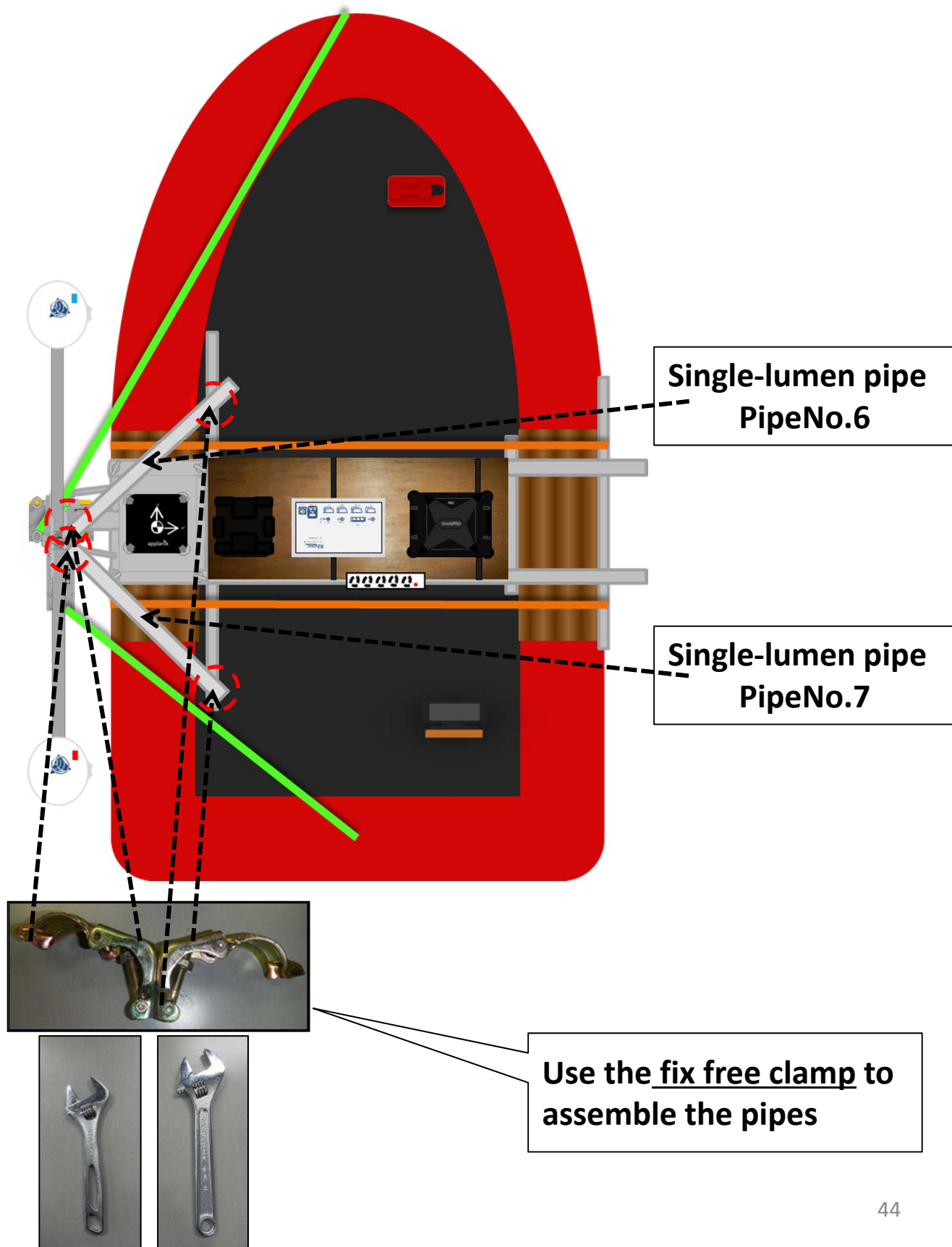
CodeNo.	POS	R2SONIC	PC	OTHERS	OTHERS2
1	A2			Antenna front	
2	A1			Antena aft	
3	PWR[A]			Power Tap[B]	
4	IMU[A]			IMU[B]	
5	COM[A]	MOTION[B]			
		GPS[C]			
6	LAN[A]		USB[B]		
7	IO1[A]	PPS[B]			
8		SONARRX		Sonar	
9		90-264VAC[A]		Power distributor[B]	
10		SVP		Sonar	
11		DATA[A]	LAN[B]		
12			Power[A]	Power distributor[B]	
13			Display[A]	Display[B]	
14				Display[A]	Power distributor[B]
15				generator	Power distributor[B]

# Setting up of the Code(15/15)



CodeNo.	POS	R2SONIC	PC	OTHERS	OTHERS2
1	A2			Antenna front	
2	A1			Antena aft	
3	PWR[A]			Power Tap[B]	
4	IMU[A]			IMU[B]	
5	COM[A]	MOTION[B]			
		GPS[C]			
6	LAN[A]		USB[B]		
7	IO1[A]	PPS[B]			
8		SONARRX		Sonar	
9		90-264VAC[A]		Power distributor[B]	
10		SVP		Sonar	
11		DATA[A]	LAN[B]		
12			Power[A]	Power distributor[B]	
13			Display[A]	Display[B]	
14				Display[A]	Power distributor[B]
15				generator	Power distributor[B]

# Fix of sonar(1/2)



## Fix of sonar(2/2)

When you move to shallow areas, make sure to uplift the sonar to avoid damage.

