

User Manual for AR Ruler



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01/Introduction and Packing List



No.	Item	QTY	Unit
1	AR Ruler	1	PCS
2	Bracket	1	PCS
3	Mount Bracket	1	PCS
4	O-ring 12.42*1.78	2	PCS
5	M3*10 Hex Socket Head Cap Screws	6	PCS
6	Hexagonal Spanner	1	PCS
7	<i>User Manual</i>	1	PCS



Before operating FIFISH products, please be sure to receive relevant training and take practices, and read this document thoroughly before performing underwater operations. Operations in violation of QY safety rules may result in the consequence that your safety and interests cannot be guaranteed.

- 1.Regarding the damages to accessories and underwater vehicle caused by unauthorized modification, disassembly or opening in violation of regulations, or damages to accessories and underwater vehicle caused by improper installation, improper use or operations not in accordance with official regulations, QY doesn't bear any legal responsibility and the warranty will also be ineffective.
2. When installing the accessories, the underwater vehicle shall be shut down.
3. Please check whether all the parts of the product are complete. If there is any part missing, please contact QY after-sales service personnel in a timely manner.
4. Please check whether all interfaces, plug-ins and O-rings are kept dry and tidy, otherwise they should be replaced as soon as possible.

Item	Specification
Depth	100m
Laser Tube Type	Spot Laser
Wavelength	650nm（Red）
Scale Length	10cm
Sensor	Embedded
Work temperature	-5℃~35℃
QYSEA AR Application	AR Ruler
	AR Grid

Precautions before usage

1. Please get the latest APP ready before using the products.
2. Before usage, please check whether all accessory interfaces, plug-ins, and O-rings are damaged or missing, and whether they are kept dry and clean.
3. Before connecting the AR Ruler with the underwater vehicle, the underwater vehicle shall be powered off.
- 4 Check the battery level of the underwater vehicle to ensure that there is sufficient and stable power.
5. Before entering the water, please check whether the probes and connectors of the accessories are tightly sealed.
6. When connecting the connectors on the underwater vehicle, they must be aligned with the positioning pin, forcible inserting may cause damage to the connector.
7. Check whether the underwater robot and the remote control are working normally when connected to the connector on the underwater vehicle.
8. Check the batteries of mobile phones, tablet PCs and laptops.
9. After-sales mailbox: support@qysea.com

05/Installation



1. Remove the protective cover of the accessory port at the bottom of the ROV's body

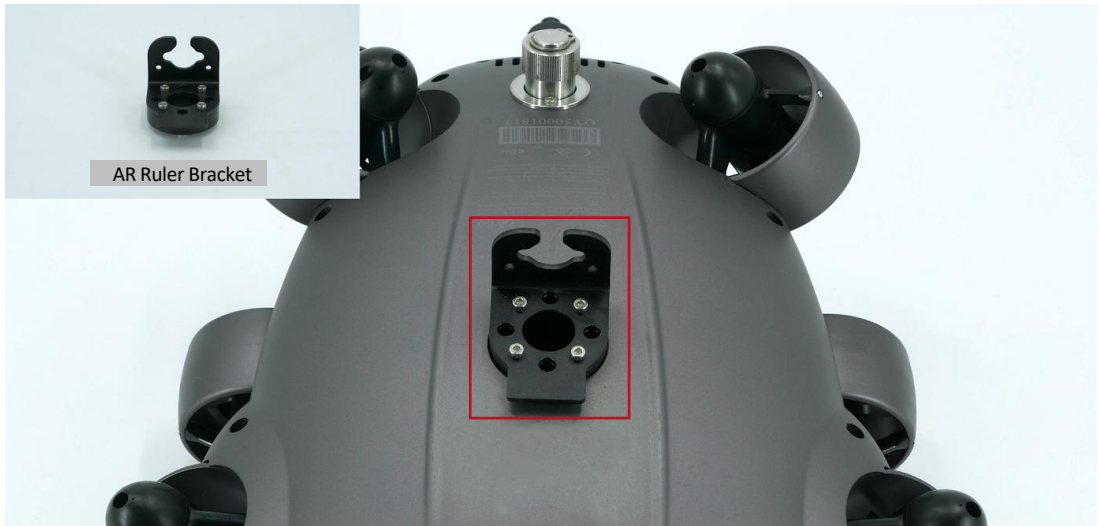


05/Installation



1. Remove the protective cover of the accessory port at the bottom of the ROV's body

1.1 Install bracket into the accessory port and fix it with four M3 screws



05/Installation



2. Install the AR Ruler onto the bracket (Please note: the slot of the AR Ruler must be facing downward to be inserted into the latch of the bracket)



2. Install the AR Ruler onto the bracket (Please note: the slot of the AR Ruler must be facing downward to be inserted into the latch of the bracket)

2.1 Fix the AR Ruler to the bracket with two M3 screws



05/Installation

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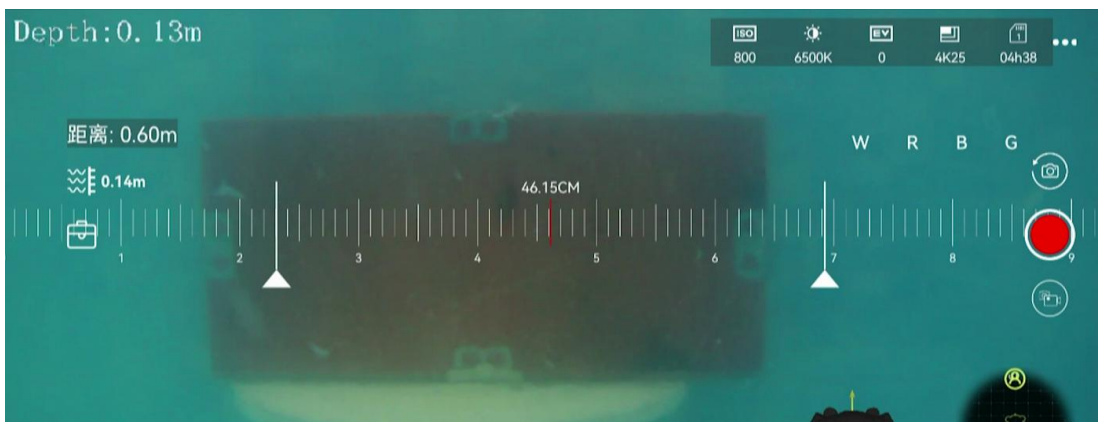
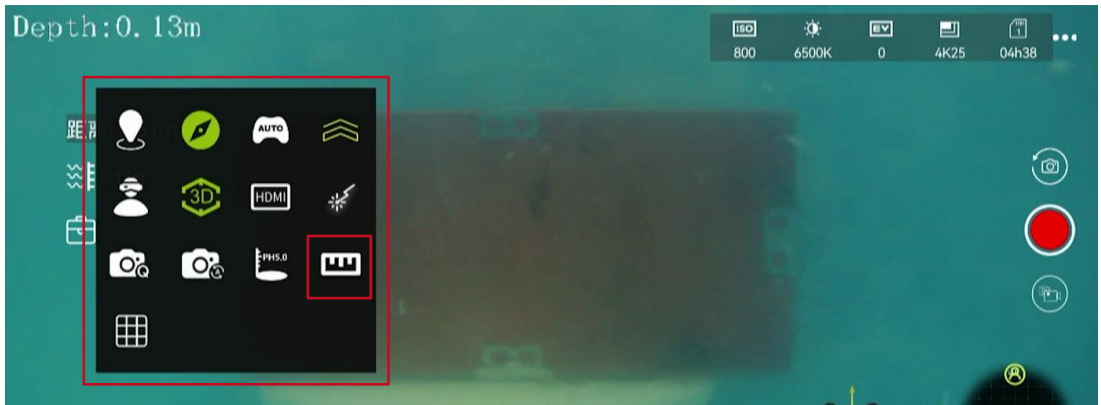
3. Remove the cover of the accessory port under the FIFISH V6 EXPERT, connect the to the cable of the AR Ruler, and tighten its cap



06/Operation(AR Ruler Function)



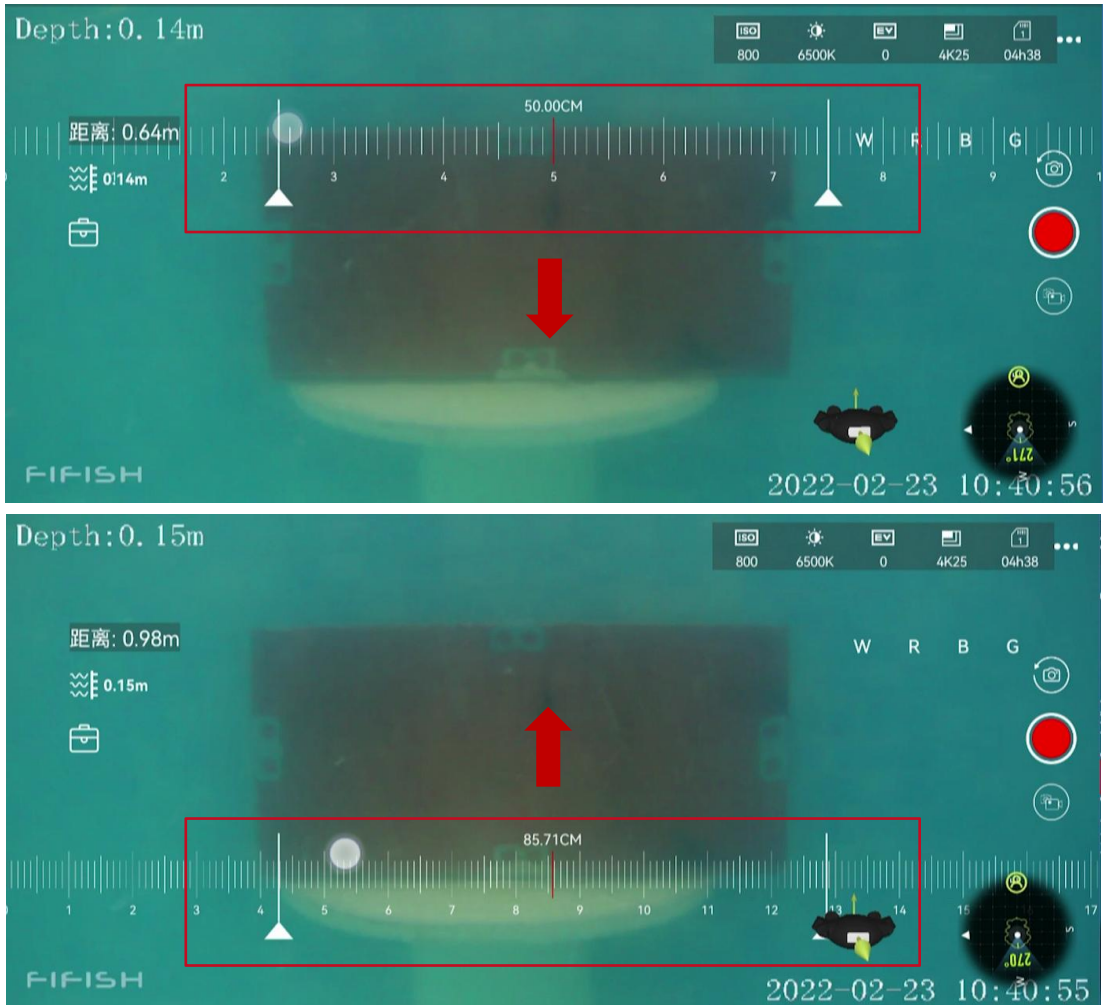
1. Open the toolbox and click the AR ruler function button



06/Operation(AR Ruler Function)



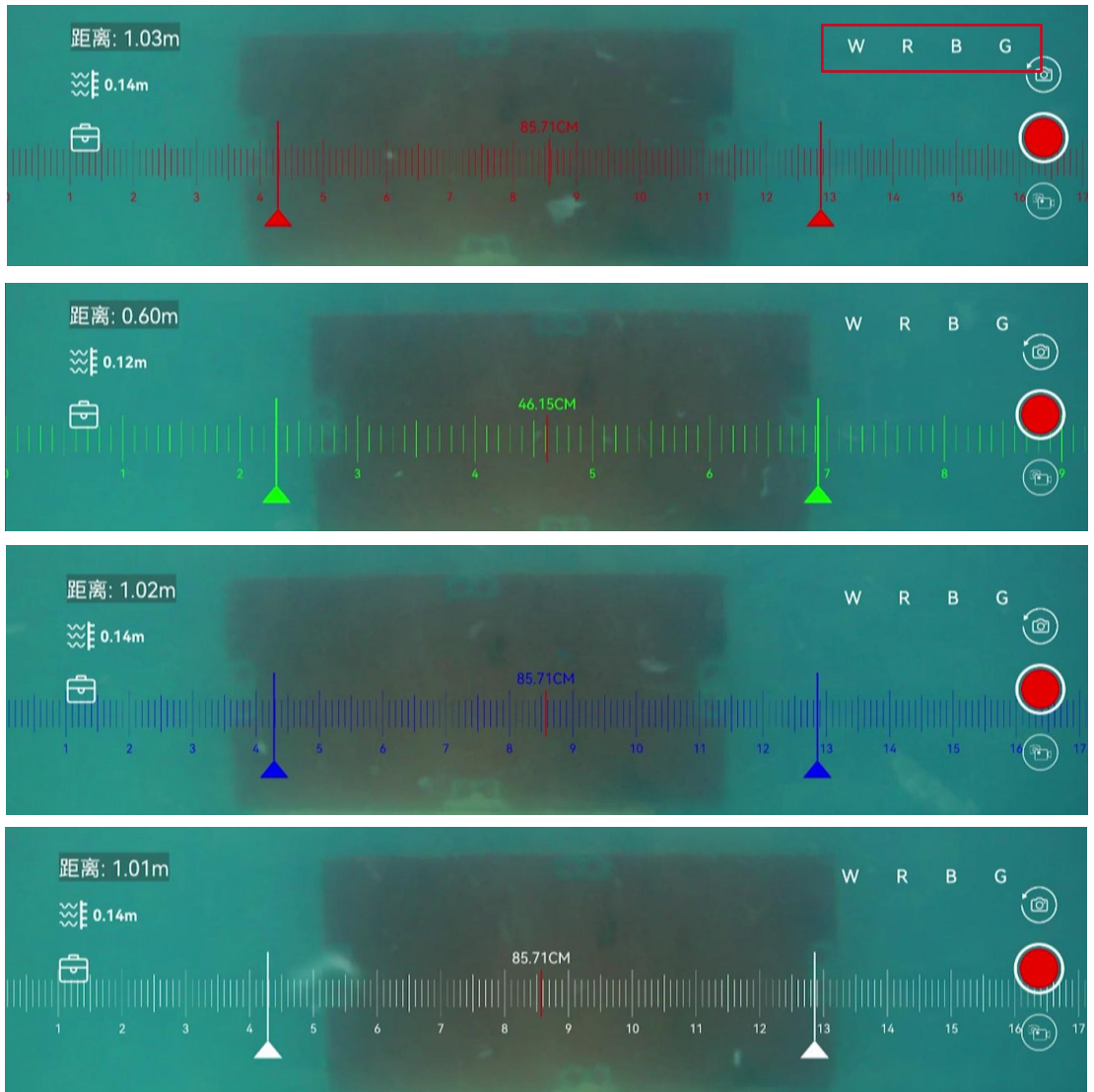
2. The AR ruler can be dragged up and down



06/Operation(AR Ruler Function)



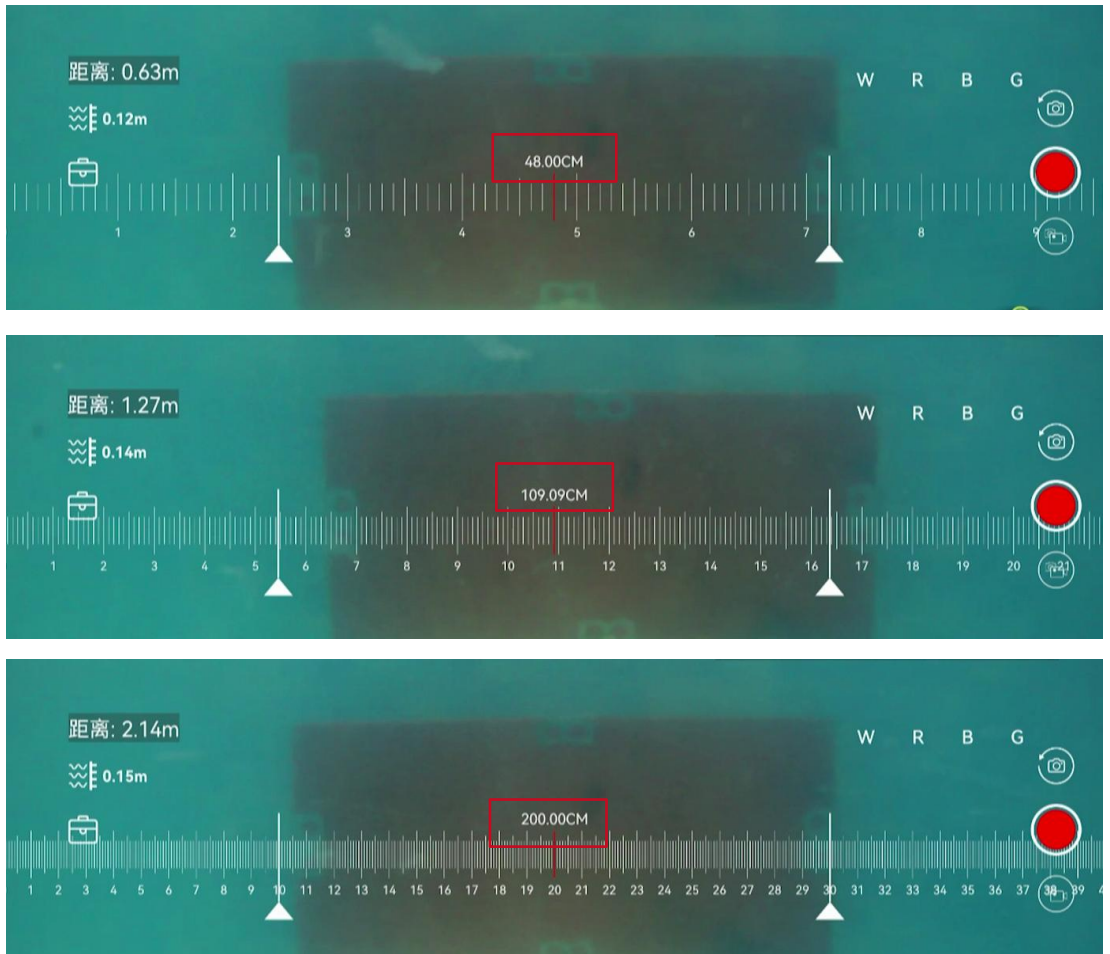
3. Switchable multiple AR ruler colours (red/green/blue/white)



06/Operation(AR Ruler Function)



4. AR ruler size switches with distance



06/Operation(AR Ruler Function)



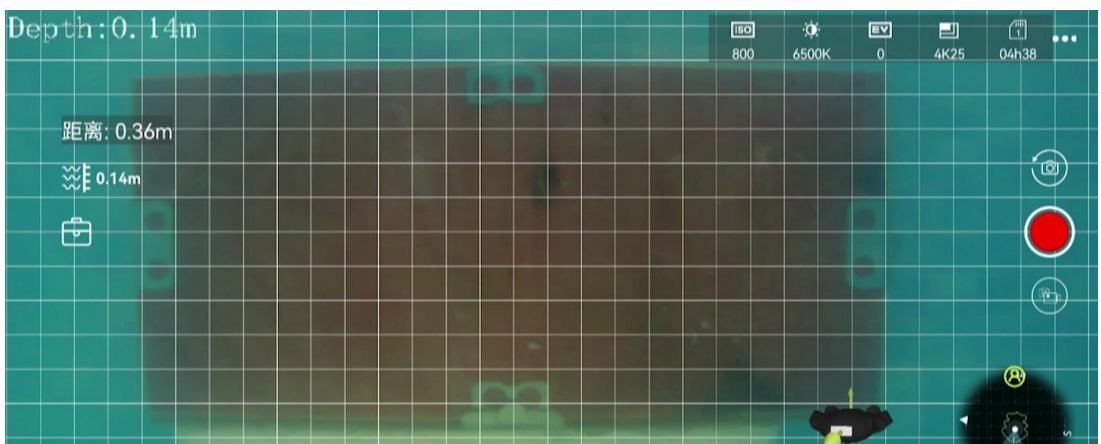
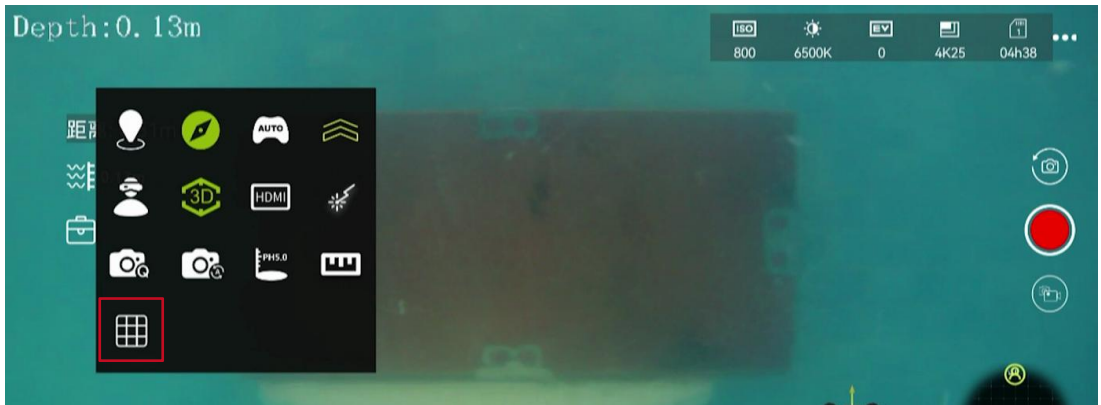
5. The AR ruler measures the length of the target about 44.64cm
The actual measurement target length is about 44.48cm and the error is 0.16cm



06/Operation(AR Grid Function)



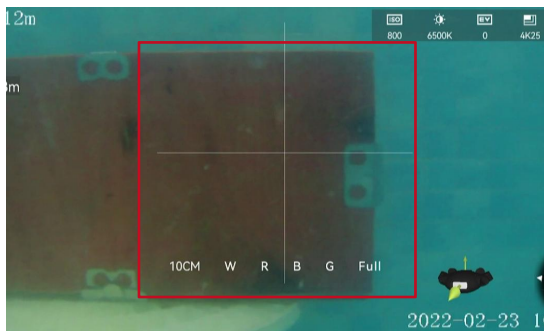
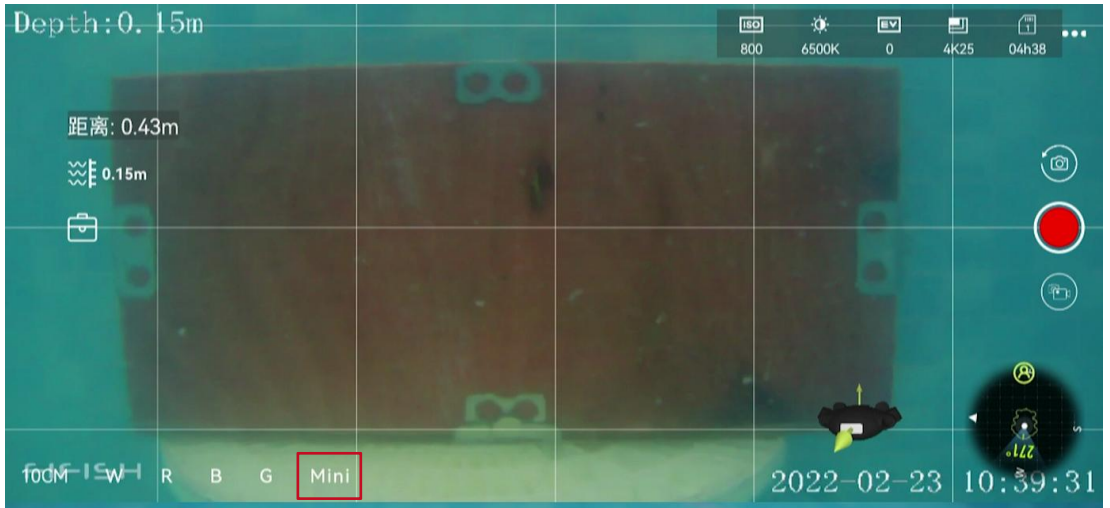
1. Open the toolbox and click the AR grid function button



06/Operation(AR Grid Function)



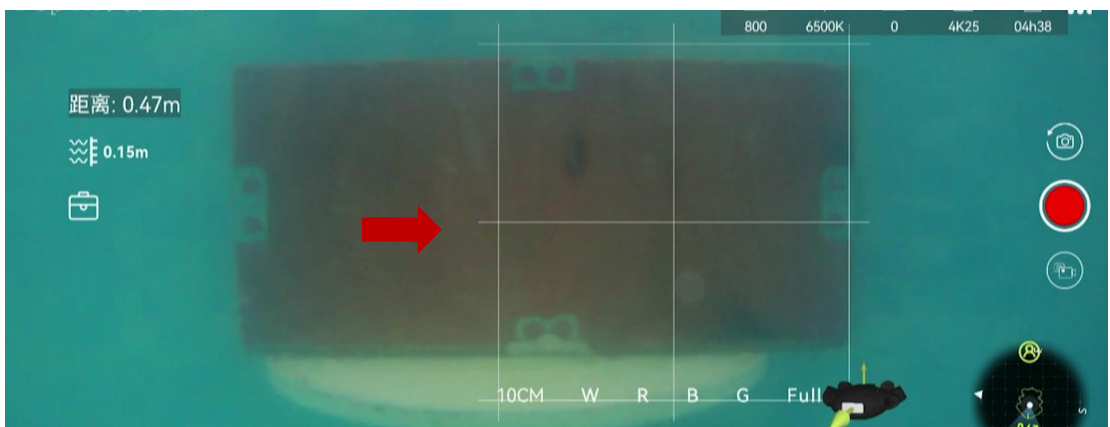
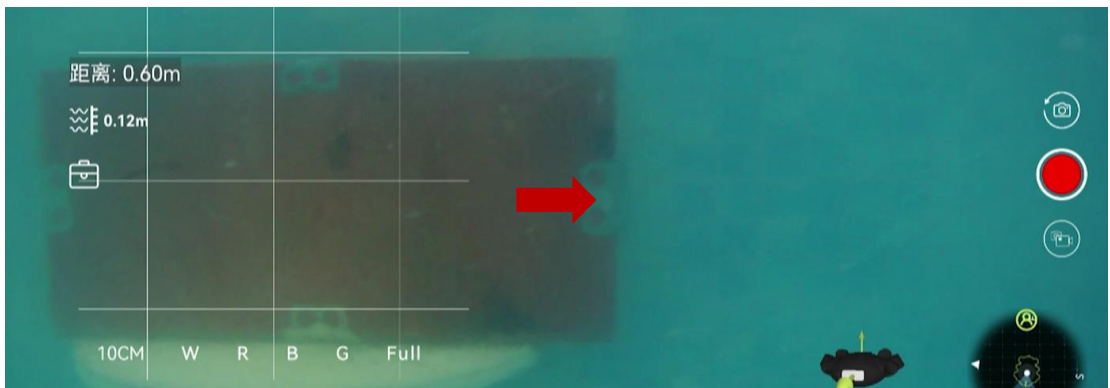
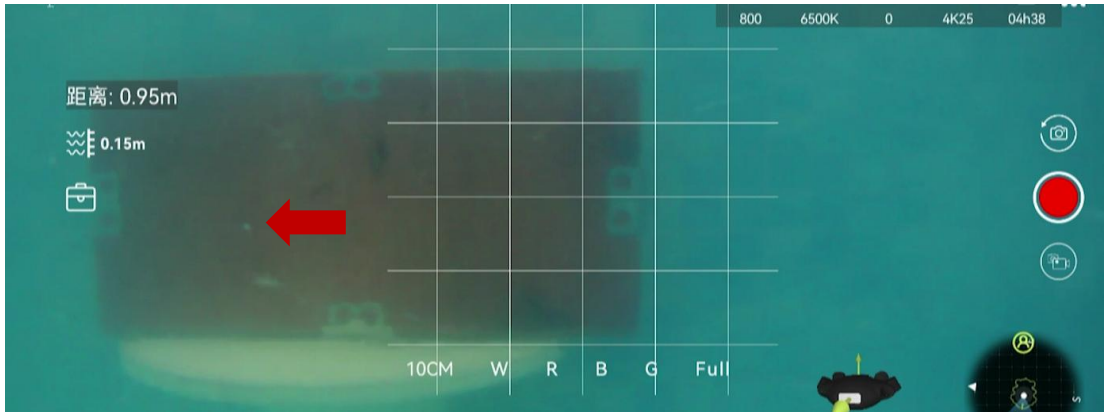
2. Switchable from global mesh to local mesh



06/Operation(AR Grid Function)



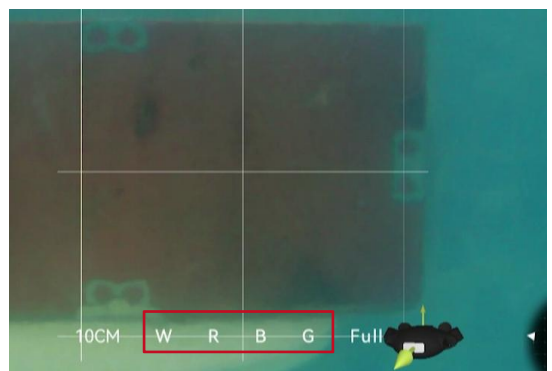
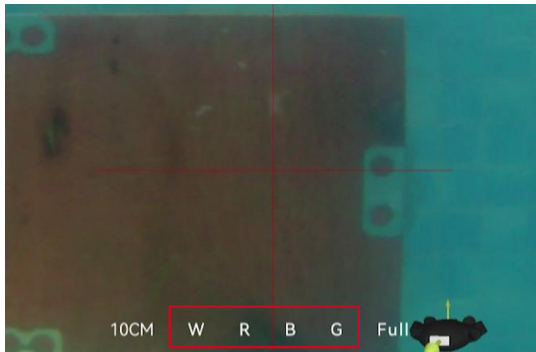
3. AR grid drag-and-drop operation



06/Operation(AR Grid Function)



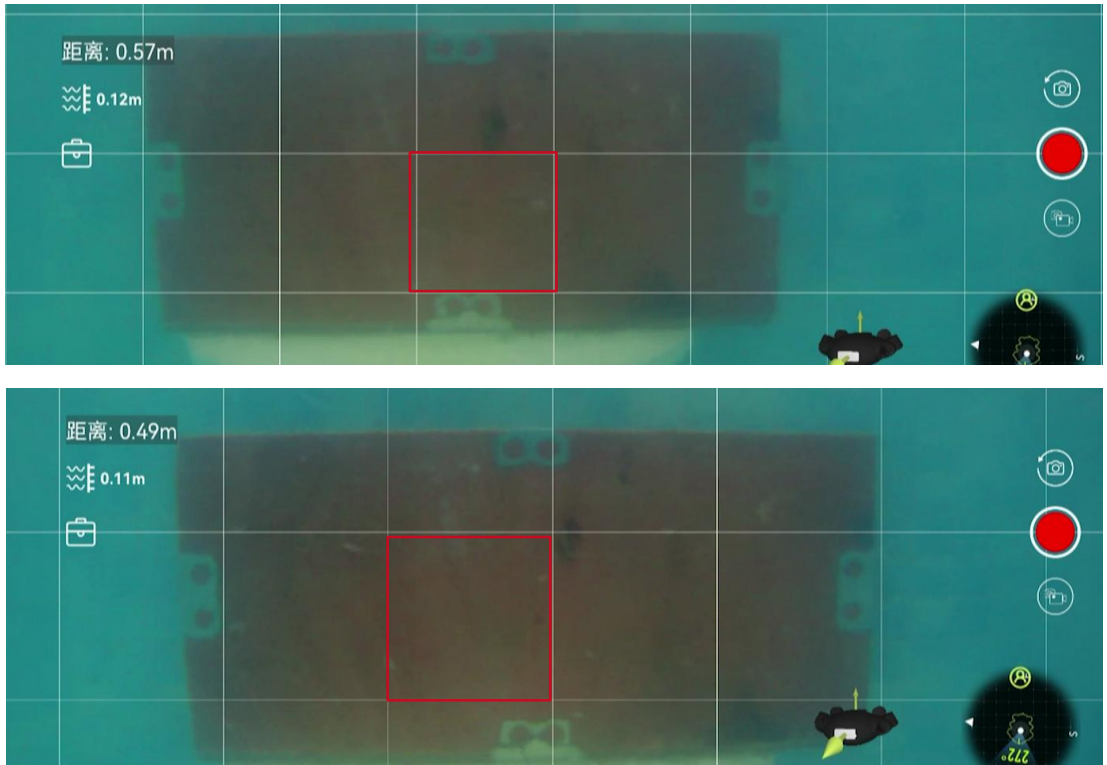
4. Switchable multiple AR grid colors (red/green/blue/white)



06/Operation(AR Grid Function)



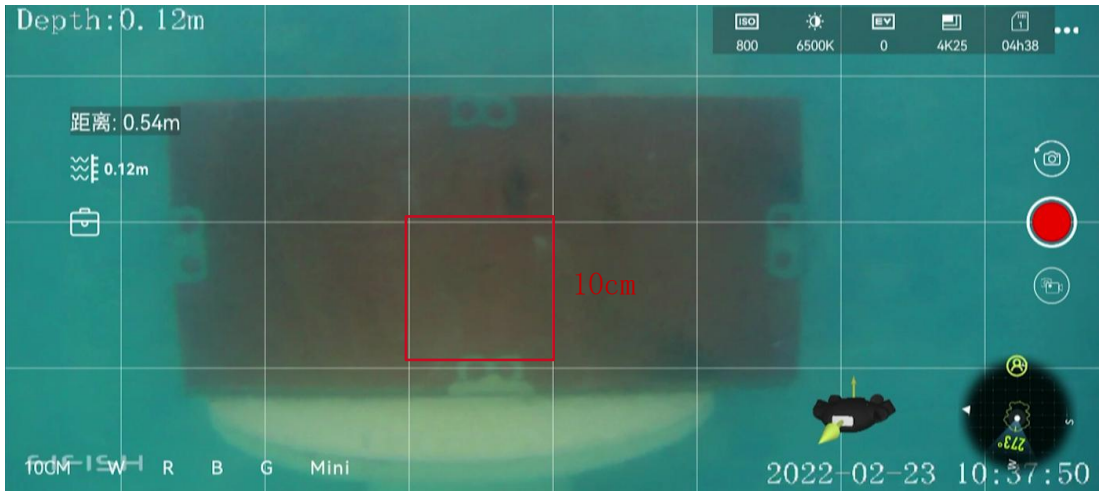
5. AR grid size switches with distance



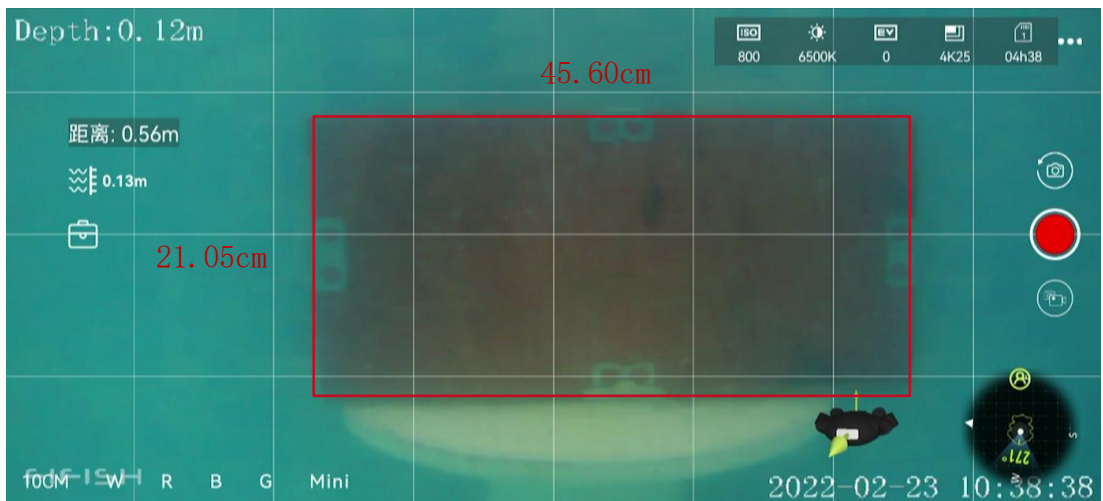
06/Operation(AR Grid Function)



6. A single square of the AR grid has a side length of 10cm



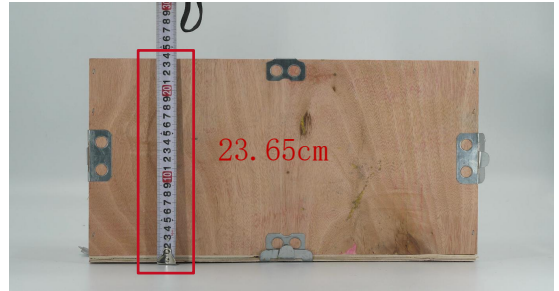
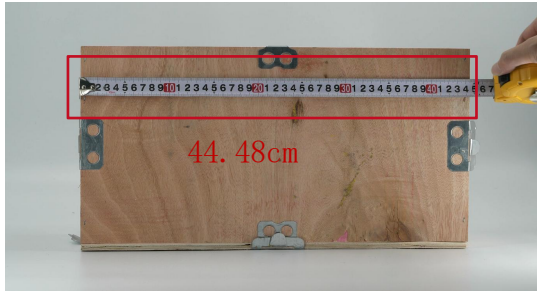
7. AR grid measurement target length is about 43.50cm, height is about 22.15cm



06/Operation(AR Grid Function)



8. The actual measurement target length is about 44.48cm, and the actual measurement target height is about 23.65cm



AR grid measurement target length is about 43.50cm
The actual measurement target length is about 44.48cm
The error is about 0.98cm

AR grid measurement target height is about 22.15cm
The actual measurement target height is about 23.65cm
Error about 1.50cm

Maintenance

1. All connectors (ports and plugs) shall be kept clean and dry and covered with protective caps if not in use.
2. Check the sealing parts and rubber sealing washers, and replace them if they are worn or damaged.
3. Please keep the product in a dry and cool place after usage.
4. After usage, please put the protective cover back on the submersible.
5. Usage in a strong acid/alkali environment may reduce the service life of the underwater vehicle and its accessories.

After-sales support

If needing any help, please contact QY after-sales personnel

1. Online customer service: you can find the entrance of customer services via the FIFISH APP, WeChat official account (FIFISH Underwater Robot) and the official website.
2. Contact number: +86-755-2266-2313 Working hours: Monday to Friday, 9:00-22:30 (GMT+8)
3. Email: support@qysea.com
4. If there is a machine malfunction, please record the malfunction video in advance, as well as providing the machine SN number and purchase invoice, so that we can provide you with a solution faster.

For more information about FIFISH Authorized Service Center, please visit <https://www.qysea.com/support/repair-center/>

We provide after-sales services to our customers, except for the following situations:

Collision damages caused by non-manufacturing factors, including but not limited to user faults.

Damages caused by unauthorized modification, disassembly, or opening of the enclosure that is not in accordance with official instructions or manuals.

Damages caused by improper installation, improper use or operation not in accordance with official instructions or manuals.

Damages caused by unauthorized service providers.

Damages caused by unauthorized modification of circuits and mismatch or misuse of the battery and charger.

Damages caused by underwater operations without following the instructions and manual recommendations.

Damages caused by working in harsh water conditions (such as strong acid, strong alkali, strong current, huge waves, etc.).

Damages caused by product operations in an environment with electromagnetic interference (namely, mining areas or the areas near radio towers, caves, muddy areas, environment with radiation, tunnels, etc.).

Damages caused by operating the product in an environment that is interfered by other wireless devices (namely, transmitters, video downlinks, Wi-Fi signals, etc.).

Damages caused by forced diving with aging or damaged components.

Damages caused by using unauthorized third-party parts that have reliability or compatibility issues.

Damages caused by operating equipment with insufficient power or defective batteries.

Continuous or error-free product operation

Loss or damage of user data caused by the product

Any software, no matter it is provided with the product or subsequently installed.

Failures or damages caused by any third-party products (including products that QYSEA may provide or integrate into QYSEA products at the request of users).

Any damage caused by non-QYSEA technology or other support (for example, the support for solving the "operation method" problem or incorrect product settings, installation and firmware upgrades).

Damages caused by operating ROV in sensitive areas (such as military areas, natural resource reserves, marine reserves, marine conservation areas, etc.).

Damages caused by unpredictable factors (such as water flow, cave collapse, animal swallowing, etc.).

Products or parts whose identification labels have been changed or without identification labels

Do not place heavy objects on the product, and handle it with care.

Water droplets or stains on the ROV may be caused by testing in the water in the manufacturing plant, which will not affect the characteristics and functions of the FIFISH underwater robot.

For more information, please view the explanation video on our website, or refer to the FAQs section in "FIFISH Application/Help/FAQs".

For the latest version of the user guide/manual and other instructions, please visit our website.

<https://www.qysea.com/support/user-manual/>

Please email us via support@qysea.com to contact our technical support



Notice:

This content is subject to change without notice.

