

HD200B

Product Manual of Fixed Base Station

Please read this manual carefully before you use the fixed base station.
Please keep it properly for future reference.





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01 Product Introduction

- 1.HD200B fixed base station is used for high-precision navigation and positioning operations, and can provide centimeter-level positioning services.
- 2. Please ensure the normal use of navigation equipment without mobile phone signal network.
- 3. With highly integrated design.
- 4. Stable radio station: The signal transmission distance and low power consumption are perfectly balanced, with stable signal transmission, and the effective transmission distance is >10km.
- 5. Solid body: Industrial modulated PC shell is sued , with resistance to 1m free fall.

02 Product Composition

| Description | Application | Pictures |
|----------------------------|--|---|
| Host of fixed base station | The system host is used for receiving, transmitting, displaying and setting navigation and positioning signals |  |
| Radio station antenna | Radiostation signal transmitter |  |
| gnss antenna | Receive satellite data |  |
| Power adapter | Power connecting wire for fixed base station |  |

| Description | Application | Pictures |
|-------------------------------------|--|--|
| Power amplifier of radio station | Increase the signal power of the radio station |  |
| Fixture of base station | Used for fixing radio station antenna and gnss antenna |  |
| Connecting wire for power amplifier | |  |
| Anchoring setscrew | For fixing |  |
| Fixed kits | Used for fixing the mounting box of base station |  |

03 Interface Description

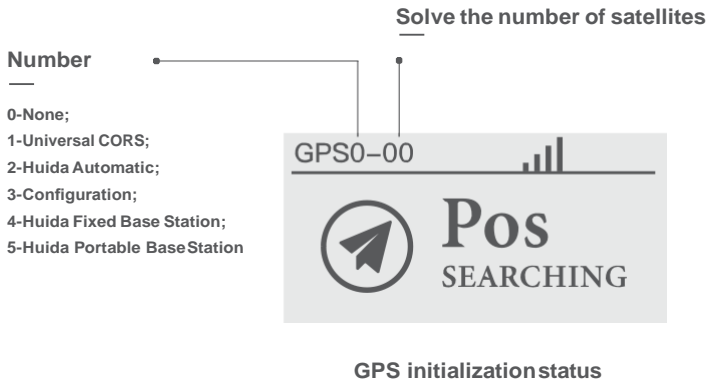


Front view



Description of keys and indicator lights

| Functions | Prompt Information |
|------------------------|--|
| Power lamp | After the equipment is turned on normally, the red indicator light is always ON |
| Radio station lamp | After the device is in the broadcast state, the green indicator light flashes |
| Network interface lamp | Status of device connecting network |
| Up/Down keys | Main interface: switch radio station channel Menu interface: switch of function options |
| Return key | Main interface: Click the OK key three times in a row to enter the menu interface. Menu interface: Select the required function and click the key to enter the secondary interface of the selected function |
| Confirm key | Menu interface: Execute the operation of return to exit the current interface |



04 Requirements of Site Selection and Station Building

Site selection requirements

1. The construction site should be far away from tall buildings, trees, water bodies and areas prone to water accumulation, and the distance should be greater than 200m;
2. No obstacles around the installed gnss antenna, and the inclination angle of installed gnss antenna should not be greater than 10°;
3. It should be more than 200m away from electromagnetic interference areas such as radio transmitting stations and high-voltage line crossing the zones;
4. Avoid mining areas, railways, highways and other vibration-prone areas;
5. Guarantee 24-hour uninterrupted power supply (UPS);

Station building requirements

1. Site selection requirements must be met
2. For building station and power supply, it is necessary to lead electricity from the line to prevent artificial power failure
3. gnss antenna must be fixed to ensure that it does not swing in a large range while shaking by hand
4. To ensure the stable operation of equipment, waterproof measures must be taken
5. The installation distance between gnss antenna and radio station antenna shall not be less than 50cm

05 Installation Instructions

1: Take out the base station installation kits, screw the two anchoring setscrew (remove the expansion ring) into the two screw holes of kit 1, then put them into the holes of corresponding kit 2, and fix them with nuts. When fixing, please put the corresponding washer into them for reinforcement. Installation effect is shown in the following figure.



2. Take out the gnss antenna and screw the gnss antenna bracket pole into the bottom of the antenna. If the roof is iron flat surface, it can be fixed by magnetic disk. If the roof is uneven or not iron material, it can be fixed by base station installation kit. Screw the extension rod 1 into the bottom of the gnss antenna bracket pole. If the height is still insufficient, it can be added with extension rod 2, and the effect is shown as follows



3: Fix the base station installation kit at the selected position with dovetail screws or anchoring setscrew. The installation requirements should be noted. The position interval between the two base station installation kits is more than 50cm.

4: Screw the assembled gnss antenna and radio station antenna into the reserved hole position on the base station installation kit. Note to ensure that the antenna is perpendicular to the ground and facing up.

5: A fixing kit is used to fix the base station mounting box on the wall in place.

6: Put the base station host into the mounting box.

7: Screw one end of the gnss antenna connecting wire into the interface at the bottom of the antenna, and connect the other end with the interface on the left side of the base station host through the opening at the bottom of the mounting box, as shown in the following figure.



Notes of external interface of GNSS-power amplifier:

4-core power interface, TNC antenna input interface, TNC antenna output

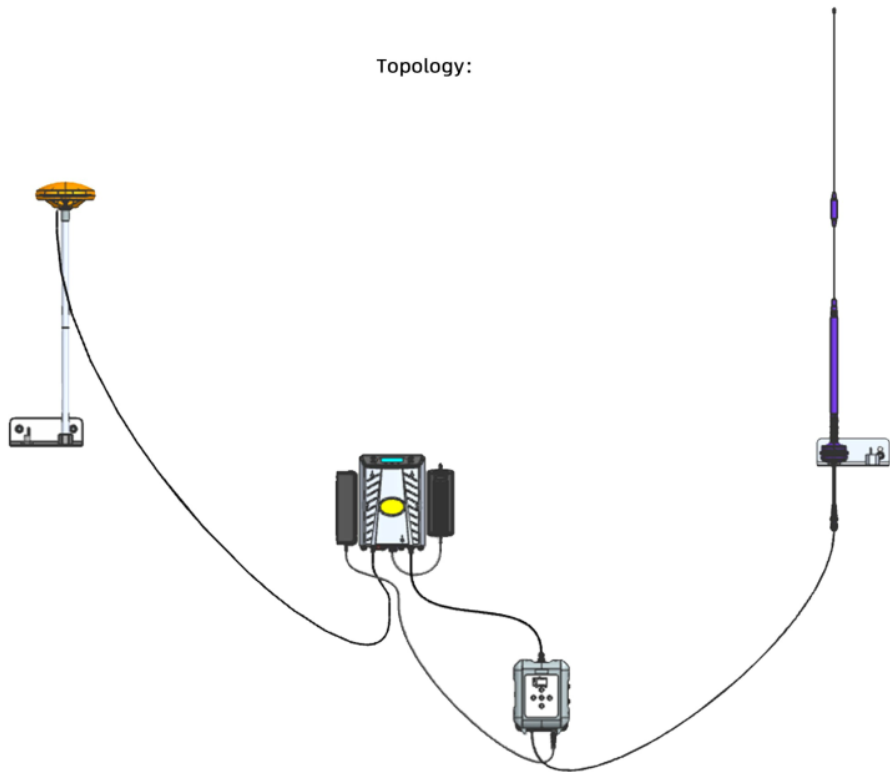


8: Screw one end of the connecting wire of radio station antenna into the interface at the bottom of the antenna, and the other end is connected with the interface corresponding to the power amplifier, as shown in the following figure. The interface connection identification of the power amplifier is shown in the following schematic diagram. The connecting wire of power amplifier is connected to the interface corresponding to the power amplifier, and the other end is connected with the right interface of the base station host through the opening at the bottom of the mounting box. According to the length of the wire, the power amplifier can be placed inside or outside the box. And, the overall installation effect diagram inside box is shown as follows.



9: The two power adapters are assembled and connected with the base station host and the power amplifier host respectively, which can be used when they are powered on.

Topology:



06 Instructions for Use

Startup & Shutdown

- (1) After the power supply is connected, the equipment starts by default.
- (2) After startup, the base station type is defaulted by inactivated state, which requires operation activation, \ as shown in the following figure:



- (3) Relevant operations are required to activate the base station. First, press the "OK" key three times on the home page to enter the hidden page, and press the Up/Down keys to switch to the following page:



(4) Press "OK" key to enter the switch interface of base station type:



(5) Press any Up/Down key once to enter the password page:



(6) The password key is

"Up-Down-Down-Up-Down-Up-Down-Down-Down-Up".

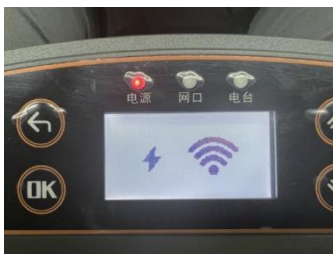
After entering the password, press "OK". After waiting for a while, the base station program with correct password will restart and enter the home page of the changed base station type, as shown in the following figure. At this point, the configuration is completed.



(7) After entering the new interface, press "OK" three times again to enter the hidden interface, and press the Up/Down keys to switch to the following interface.



(8) Press "OK" to enter the interface, press the Up/Down keys to switch to the following interface, press "OK" to confirm, and then constantly press "Return" key to return to the main interface.



| Description | Application | Pictures |
|--|--|---|
| Mounting box of base station | For placement of fixed base station |  |
| Connecting wire of radio station antenna | Connecting wire for radio station antenna and hose of fixed base station |  |
| Connecting wire of gnss antenna | Wire connecting gnss antenna and host of fixed base station |  |
| Network cable | |  |
| Bracketpole of gnss antenna | Fixed gnss antenna |  |
| Extension rod of gnss antenna | |  |

•Channel switch

After the equipment enters the broadcast state, the Up/Down keys on the key panel can be clicked to switch channels, and the user can select channels 9 to 18 according to the situation.



07Precautions

- (1) The base station needs to be firmly placed in a suitable position before starting the equipment.
- (2) The base station must not move in the broadcasting state of the radio station, in order not to affect the positioning accuracy.
- (3) When cleaning the surface of the product, please gently wipe it with soft cloth;
- (4) Do not squeeze and hard objects hit the screen;
- (5) Do not disassemble, repair or modify this product for any reason;

08requently Asked Questions

| Failure | Prompt Information |
|---|---|
| Power light is OFF | <div>1. Unstable power supply</div> <div>2. Power harness connector is not plugged in</div> <div>3. Damage to power wiring harness</div> <div>4. Failure of fixed base station</div> |
| The number of satellites is 0 or less than 15, and the satellite signal at the receiving end is not fixed | <div>1. Unstable power supply</div> <div>2. There are obstructions or high-voltage lines above the fixed base station</div> <div>3. There are strong signal interference sources such as signal shielding facilities or signal towers near the fixed base station</div> |

FCC regulatory conformance:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

NOTE: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user' s authority to operate the equipment.

RF Exposure

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 50 cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.