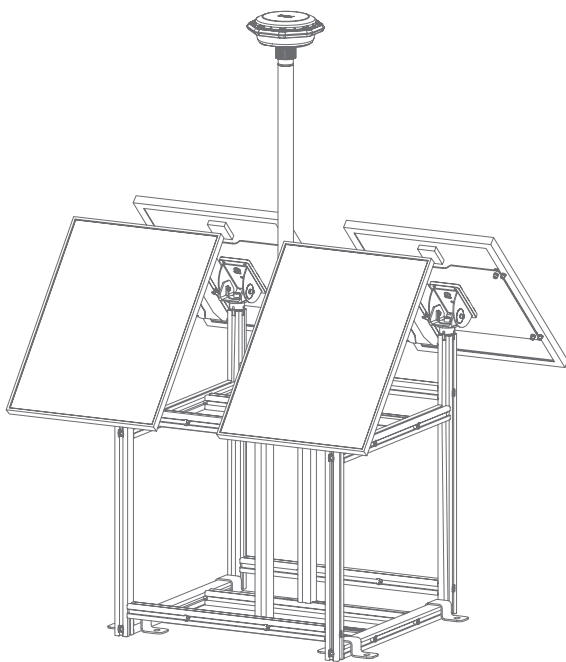


Agricultural Fixed RTK Base Station

User Manual

Version 1.1 **EN**



To Users

Dear user, thank you for choosing XAG products.

For safety purposes and better user experience, it is highly recommended that you read this manual carefully and strictly follow the instructions hereof.

Contact Us

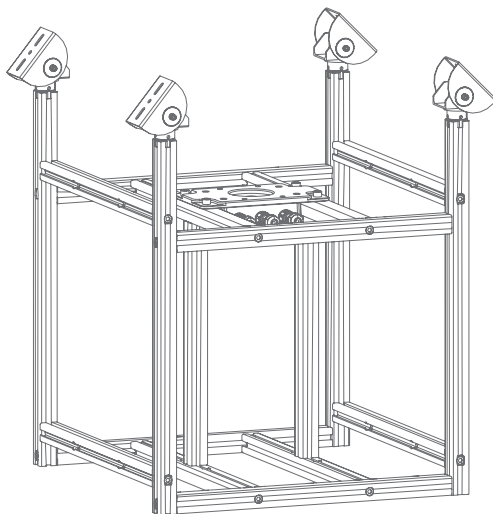
If you have any questions about this document, please contact our Technical Support team via email: info@xa.com

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List of Items

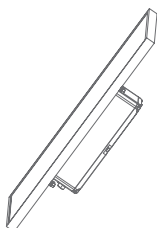
Please check that the following items are all present when unpacking the box. Should there be any items missed, please contact your dealer.



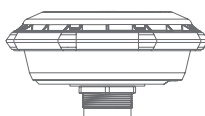
Holder
×1



Fixed Pole
×1



Solar Panel
×4



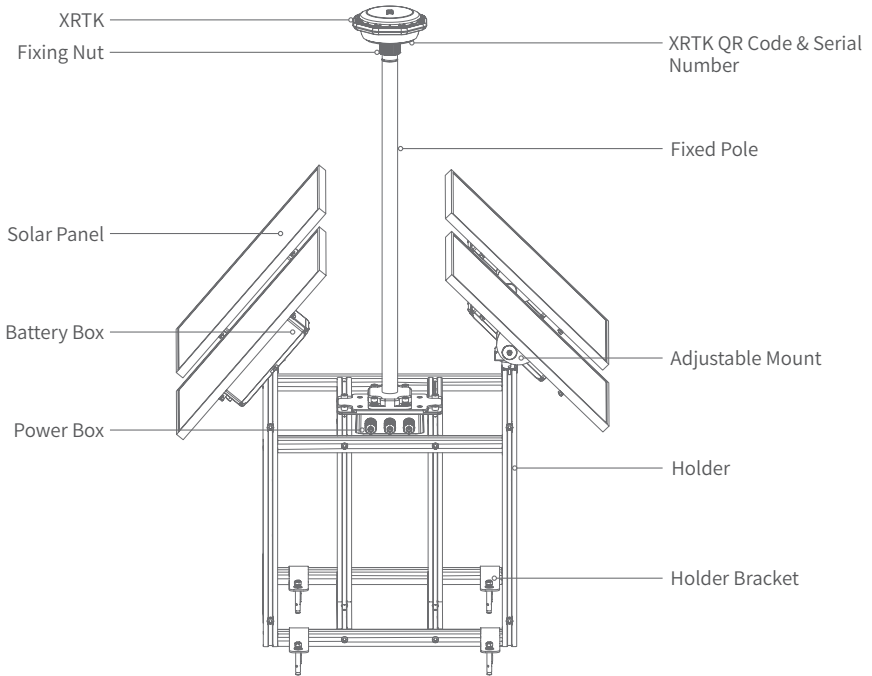
XRTK
×1



Screw Kit
×1

Structure

Agricultural Fixed RTK Base Station (hereinafter referred to as "Base Station") mainly includes XRTK, solar panel and holder.



Install Base Station

Site Selection

To ensure the normal operation of the base station, site selection should be guided by the following principles:

- ① There should be no obstructions creating a shielding angle of over 15° around the level surface of the base station.
- ② Keep a minimum of 100m distance from the objects that are likely to produce multipath effect, including trees, water bodies, beaches, waterlogged areas and metals.
- ③ Keep a minimum of 100m distance from areas generating electromagnetic interference, such as microwave stations, radio towers, areas along the high-speed railway. The selected site should also be far from areas subject to vibration like those along the railway and highway.
- ④ See that the 4G signal is normal, and no tall buildings, obstructions of the satellite signal, will be built around the base station.
- ⑤ Make sure that no radio stations like microwave stations will be built around the base station in the future. The selected site should be far from areas with fragile geological structures, fault fracture zones and places being prone to landslide, settlement other local deformations, such as mining areas, oil and gas fields, groundwater funnel settlement areas, etc. In addition, flood-prone areas or places with great variation in water level should also be avoided.

Install Fixed Base Station Holder

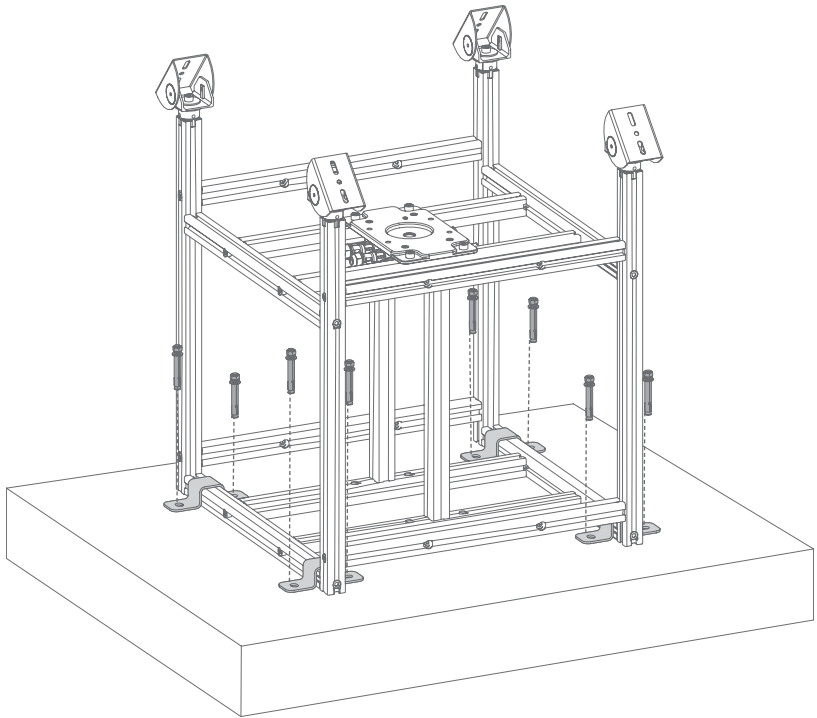
When installing the holder for the fixed base station, ensure that the adjustable mount of the solar panel is facing 5 to 10 degrees clockwise from due south, and there is no obstruction.

1. Drill and Install Directly

If the conditions are right, you may install directly the four brackets wherever possible on the ground by drilling holes for eight expansion bolts and secure the holder. This is the easiest as well as time- and cost-effective way to install the holder.

2. Build a Platform Before Installation

Build a concrete platform with dimensions of 1 x 1 x 0.15 m. Make sure the four brackets are properly installed on the platform after it hardens. Drill holes for the eight expansion bolts and secure the holder.

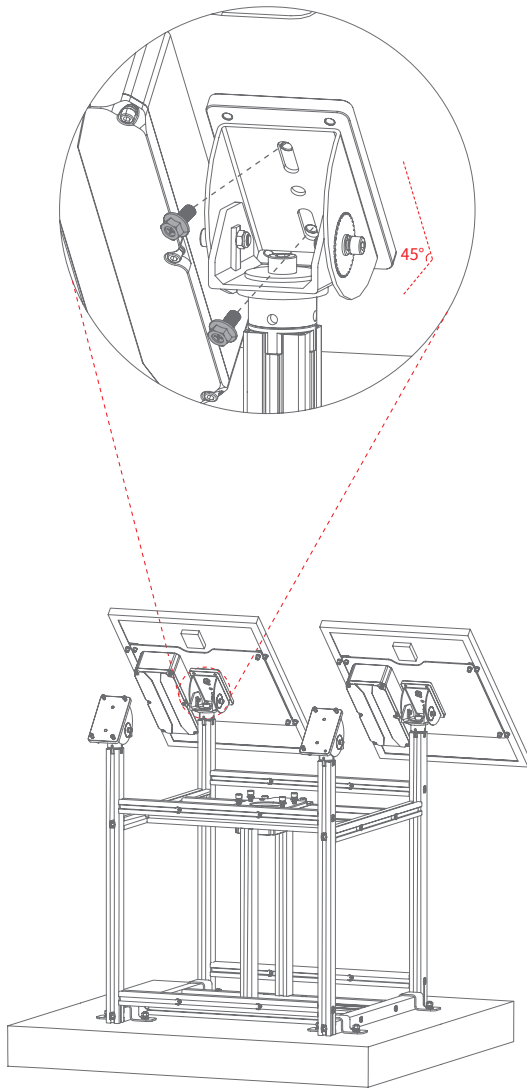


Caution

⚠ Keep the holder level as the bottom of it is anchored to the ground. Be careful with the drill and avoid causing damage to the brackets.

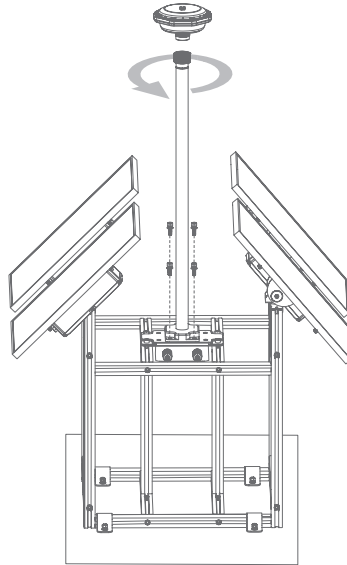
Install Solar Panels

Refer to the figure below and make sure the four solar panels are aligned with the screw holes on the adjustable mounts. Tighten the screws (two screws per panel) with a screwdriver. When this is done, adjust the angle of the solar panels to 45 degrees.



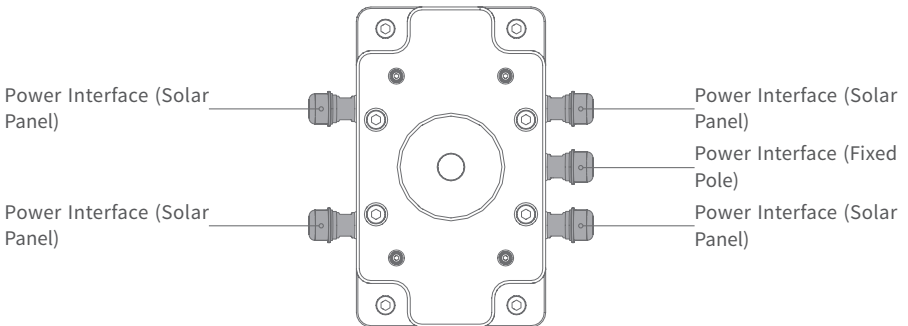
Install XRTK

1. Make sure the fixed pole is erected vertically and its bottom is in line with the reserved hole on the holder. Tighten the four screws with a screwdriver.
2. Insert the XRTK slot into the top of the fixed pole, and tighten the fixing nut by rotating it counterclockwise.



Wiring Quick Guide

Refer to the power wiring guide below and connect the 4pin power cables of the four battery boxes to the holder's power box respectively. After this, connect the power cable of the fixed pole to the power box.



⚠ Caution

- ⚠ When installing, make sure the power cables of the solar panels and the fixed pole are properly connected and in place to avoid the interfaces' exposure to moisture, which could lead to corrosion or burnout.

Specifications

Physical Property

| | |
|-----------------------|-----------------------------------------------------|
| Dimensions | XRTK: 154.0mm × 83.6mm Solar Panel: 465×350×18mm |
| Weight | <1.5kg (Battery Not Included) |
| Operating Temperature | -20°C~ 65°C |
| Storage Temperature | -40°C~ 85°C |
| Relative Humidity | 100%, Condensation |
| Protection Rating | IP67 (with battery installed) |
| Service Life | > 3 years |

Communications

| | |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Signal Tracking | BDS: B1/B2I/B3I/B1C/B2a GPS: L1/L2/L5 GLONASS: L1/L2 Galileo: E1/E5a/E5b QZSS: L1/L2/L5 |
| Accuracy and Reliability | RTK Horizontal Accuracy: ±10mm + 1ppm (RMS) RTK Vertical Accuracy: ±15mm + 1ppm (RMS) |
| 2.4GHz Frequency Range | 2.400-2.4835GHz |
| Mobile Network Frequency Range | GSM: B2/B3/B5/B8 WCDMA: B1/B2/B4/B5/B6/B8/B19 LTE-FDD: B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/ LTE-TDD: B38/B39/B40/B41 |
| Communication Interface | One CAN interface, one Bluetooth, three GPRS communication modules |
| External Hardware Interface | One power interface, three SIM card interfaces |
| External Software Interface | The interface between the host and CORS server conforms to Ntrip Protocol. |

Solar Panel

| | |
|-----------------------------|----------|
| Battery Capacity | 10400mAh |
| Rated Output Voltage | 14.4V |
| Panel Charging Voltage | 18~22V |
| Max. Load Power Consumption | < 20W |
| Operating Time | > 7h |



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