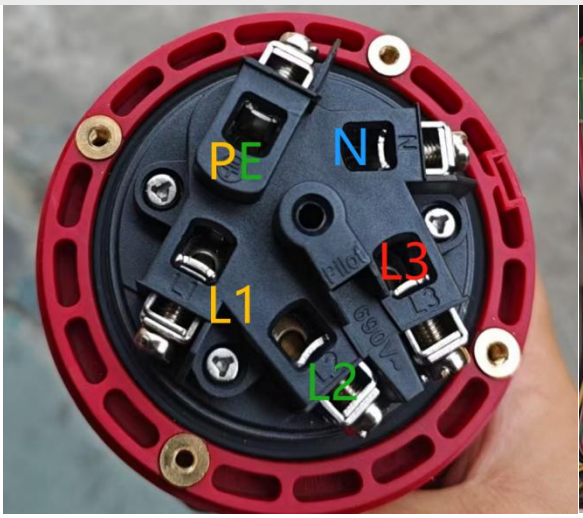
T120 Dual-tethered cleaning UAV system

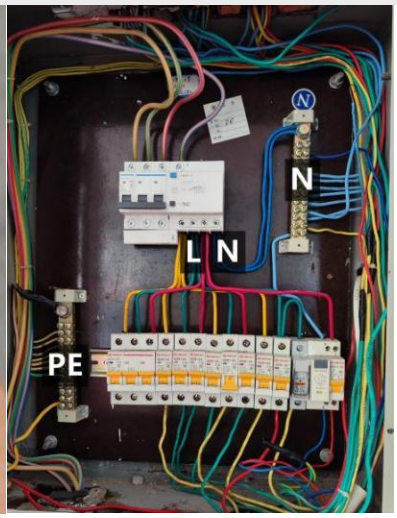
Quick Guide

1.Install

1.1. Connect to a 380VAC/63A power supply.

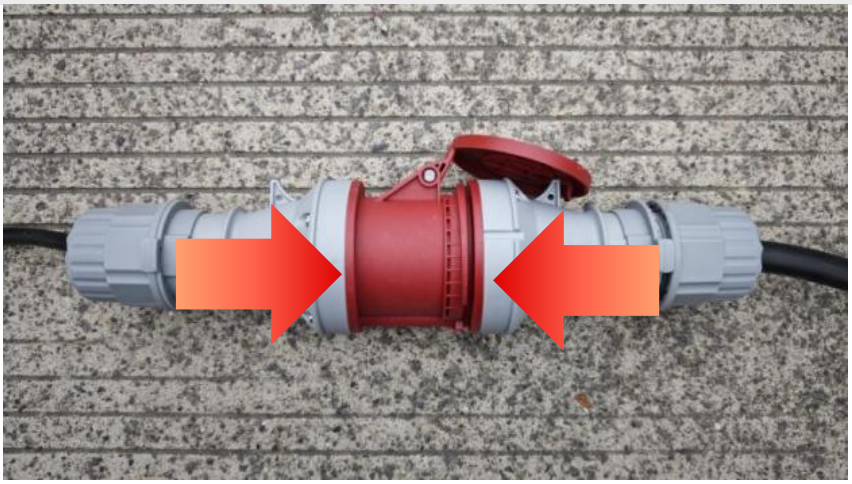
Note: Do not turn on the main power at this time! Turn on the air switch after all procedures are completed.



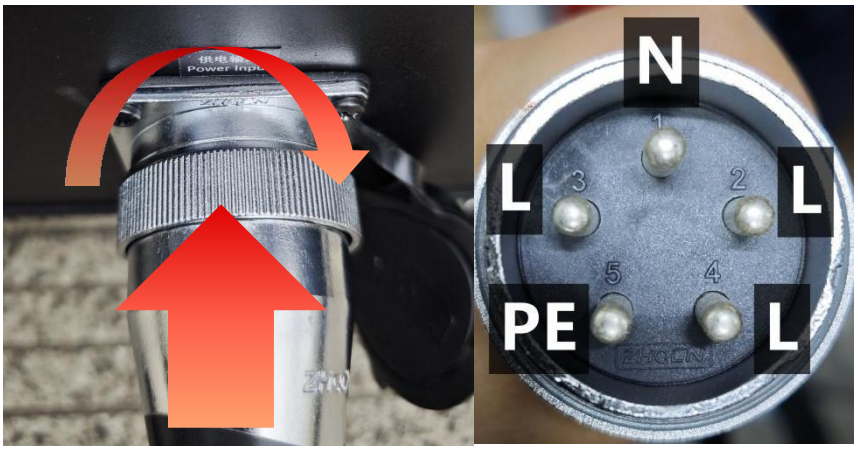


1.2. Insert the industrial waterproof aviation plug (make sure the main switch is off).

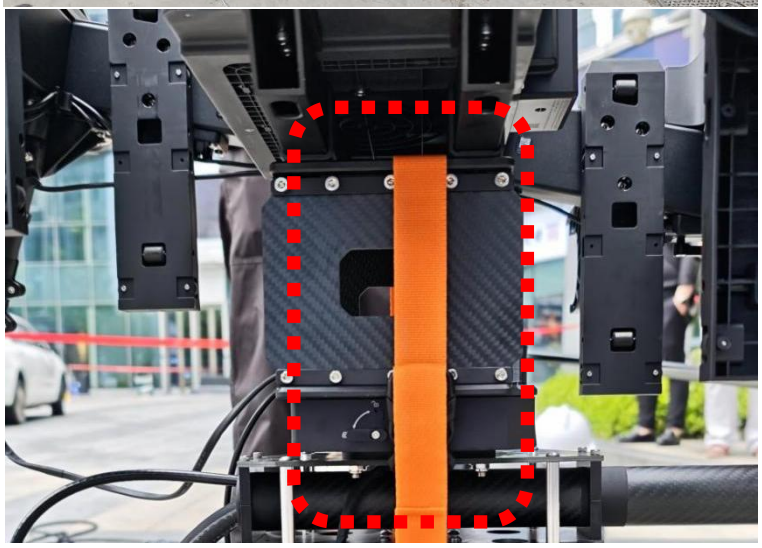
Note! Be sure to push it all in.



1.3. Plug in the aviation plug (make sure the main switch is off), insert it firmly and turn it tight to lock.



1.4. Install the spray gun fixed base, connect the power supply and control lines, insert the spray gun set and lock it. Suggestion! Fully extend the spray lance/nozzle, then retract it approximately 10cm.

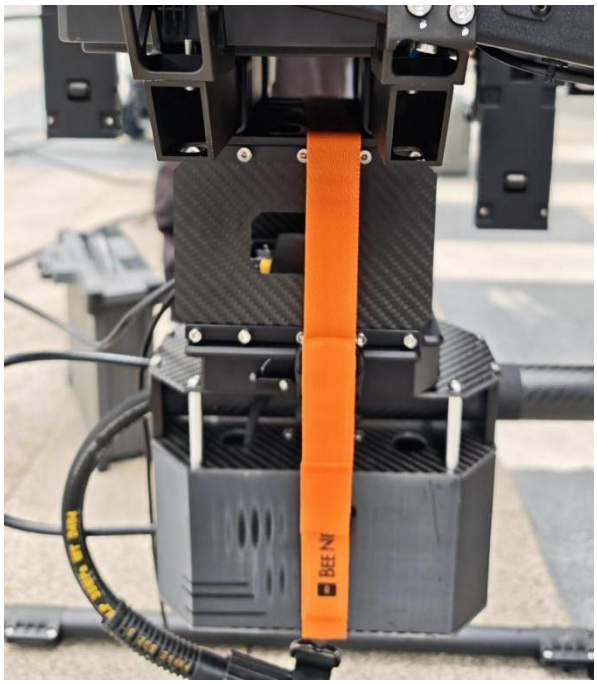


1.5. First open the main power supply switch of 380V, then open the air switch, and wait for 30 seconds for the system self-test to start.

1.6. Release the tether cable and connect the tether battery (insert the high position/back position battery, press again, and hear a click). Tighten the blue power plug at the bottom and make sure it is tightened.

1.7. Bind the tether cable to the following position.

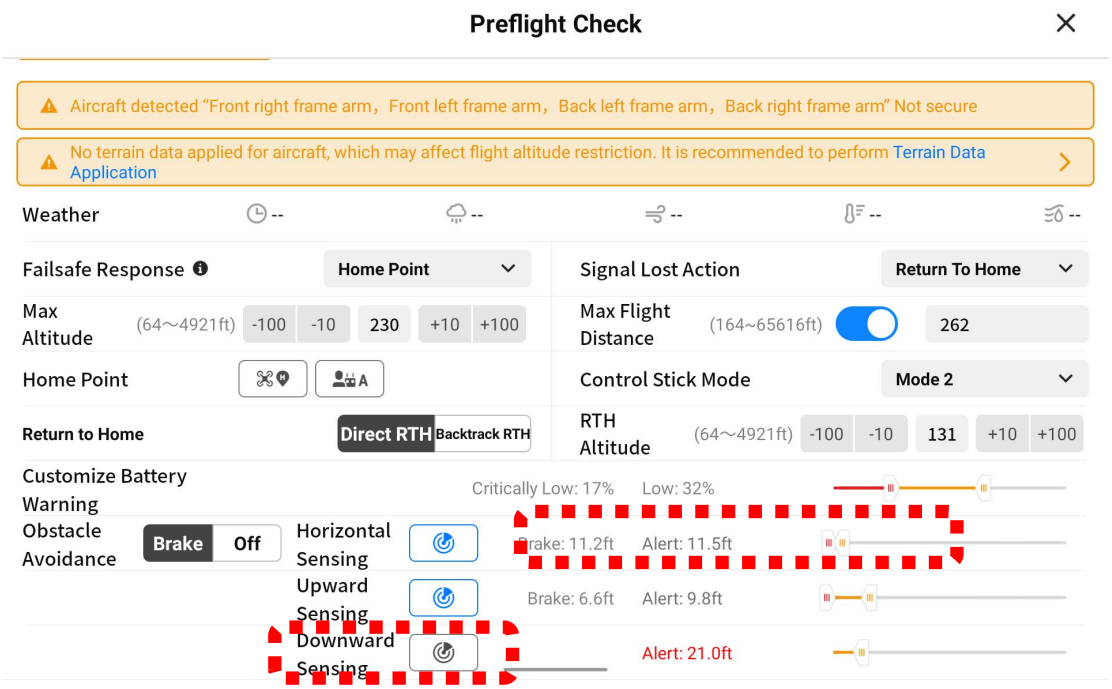
1.8. Connect the high-pressure water pump to the ground, bind the high-pressure water pipe, and fix it near the bottom of the UAV center. Note! Make sure that the water pipe is loaded by yellow straps and buckles, otherwise the spray gun motor is easily damaged.

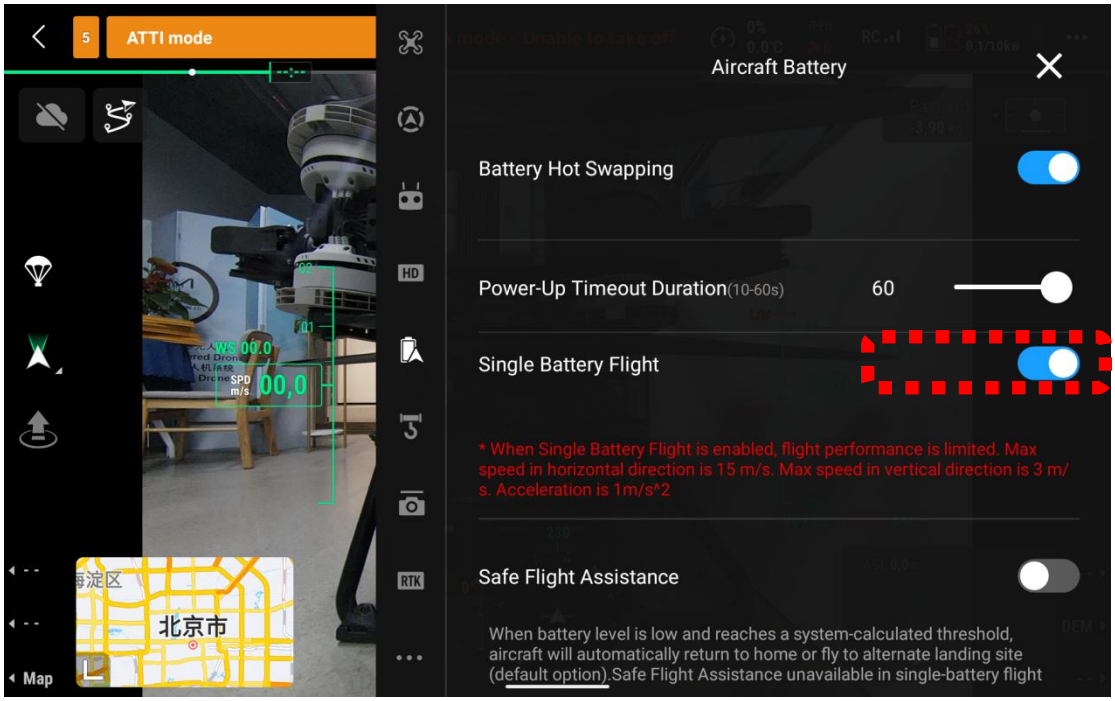


It is recommended to pull the nozzle to the longest position and back 10cm.

At the same time, ensure that the orange zip strap and black hook can hold the weight of the high pressure pipe below, and ensure that the high pressure pipe is not loaded by the spray gun itself, otherwise it is easy to overload the spray gun motor.

1.9. Turn on the battery, connect the remote control to the UAV, turn off the lower obstacle avoidance, open the single-battery operation mode, and set the front obstacle avoidance distance to 3.4m~3.6m depending on the building complexity. Ensure that the GPS and RTK signals are stable. If necessary, you can purchase D-RTK2 for RTK enhancement.




ATTI mode
Aircraft Battery
Battery Hot Swapping
Power-Up Timeout Duration(10-60s)
60
Single Battery Flight
* When Single Battery Flight is enabled, flight performance is limited. Max speed in horizontal direction is 15 m/s. Max speed in vertical direction is 3 m/s. Acceleration is 1m/s^2
Safe Flight Assistance
When battery level is low and reaches a system-calculated threshold, aircraft will automatically return to home or fly to alternate landing site (default option).Safe Flight Assistance unavailable in single-battery flight
北京市
Map

The RTK information is shown as FIX

The standard deviation of STD is less than 1m

2.Taking off

Pay attention：

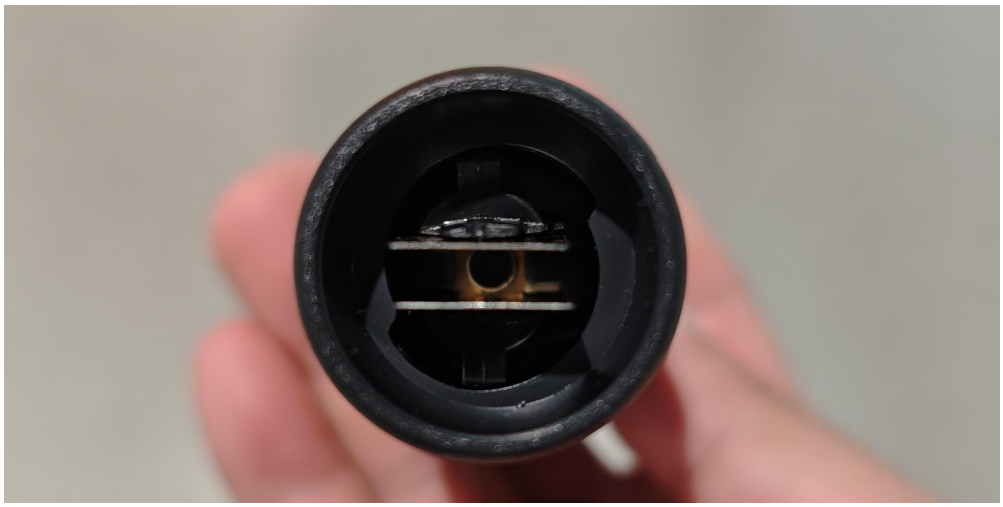
When flying, the high pressure pipe should be as vertical as possible below the drone, not pulled too much horizontally.

The tether is light and can be angled to ensure that the tether base station faces the direction of the drone.


Make sure the base station is facing the drone

Basic cleaning process (ground test must be performed first)

1. The proportion of cleaning agent is 1:10-1:20 (depending on the specific situation). Use a special foaming nozzle, spray the cleaning agent first, cover the surface evenly, and soak for 3-10 minutes (depending on the specific situation). Note that the second rinse should not be carried out after the cleaning agent dries.



2. Rinse with clean water and wait for natural drying. If possible, use soft water for better effect.

3.When the Drone is in the air

Turn the winch ctrl to gear 2-3 to keep the tether cable following the drone height.

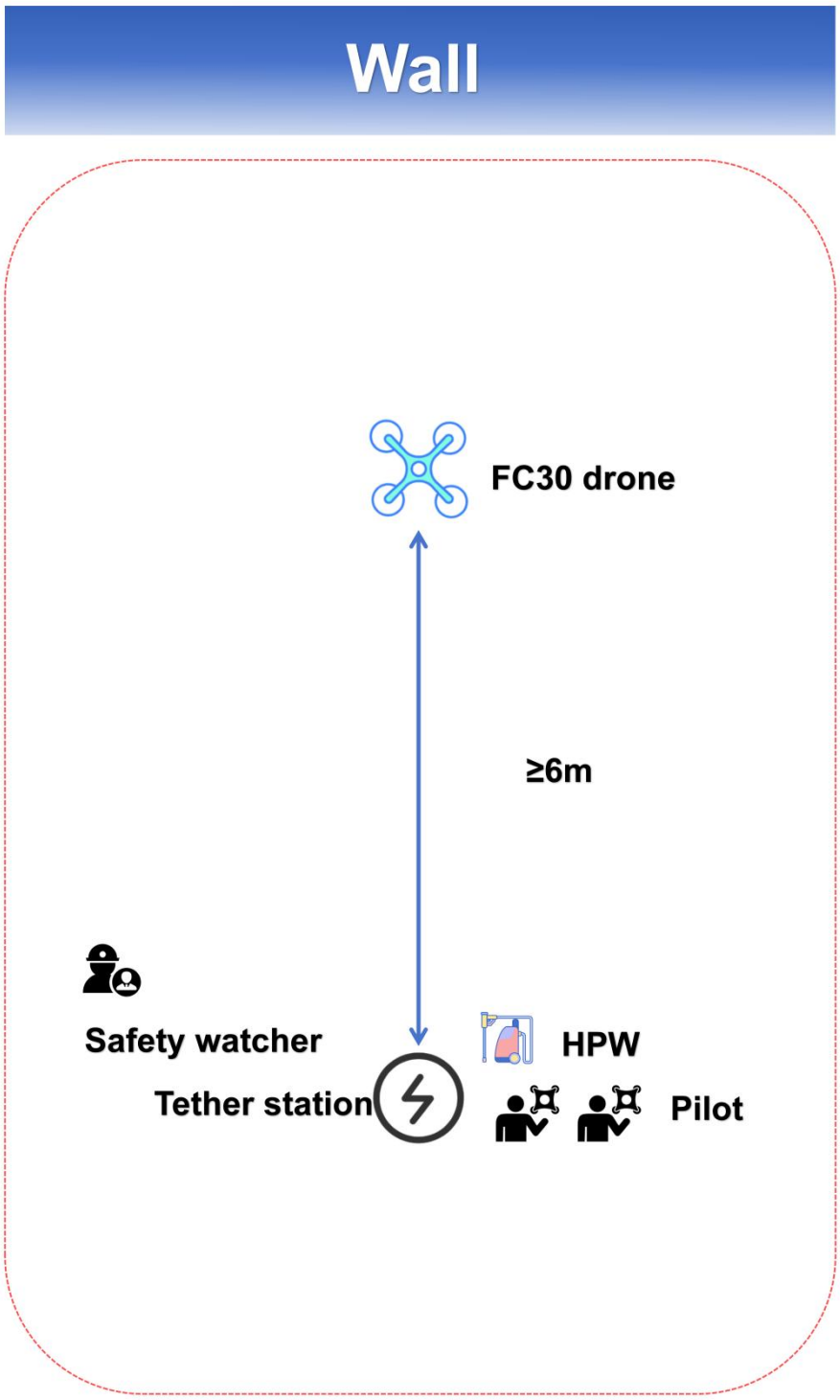
4.Landing

Adjust the winch to 2 -3gear and lower the UAV synchronously. If

you need to wind the line faster, adjust it to 4-6 gear. When approaching the ground, adjust the winch to 0 gear and land the UAV.

Release the tether and Operate the winch to retract the remaining cable.

Job scenario simulation



Important safety notice!

The following are important tips about 380V electricity safety, which are applicable to industrial, commercial or high voltage electricity use. Please be sure to strictly comply with:

I. Basic safety principles

1.Certificate operation

-380V belongs to high voltage (China standard), only professional personnel with electrician certificate can carry out installation, maintenance or operation, non-professionals are prohibited from working without authorization.

2. Power-off operation

-Before repairing or maintaining the equipment, the power must be completely cut off and checked to confirm that there is no electricity (using a voltage tester or multimeter). When necessary, lock and hang a sign (LOTO system).

3. Insulation protection

-Wear insulated gloves and shoes, use insulated tools, ensure that the working environment is dry, avoid wet hands or wet environment

4. Standard wiring

-Ensure three-phase load balance, the connection of neutral/ground line is firm, and private connections are prohibited.

II. Emergency handling

(1). First aid for electric shock

-If someone is electrocuted, immediately cut off the power supply (do not pull the victim directly with your hands), use an insulating object (such as a dry stick) to remove the wire, and dial for emergency help.

2. Electrical fire

-After power failure, use dry powder or carbon dioxide fire extinguisher to put out the fire, do not use water! If power failure is not possible, use special insulation fire extinguishing equipment.

III. Warning signs and environment

1. Clear identification

-Warning signs such as "High Voltage Danger" and "Do not approach" are set up in high voltage areas. Power distribution boxes are kept closed to avoid contact with irrelevant personnel.

2. Keep your distance

Keep a safe distance between the human body and the charged equipment (≥0.7 meters)

IV. Other matters needing attention

-Avoid operating outdoor high voltage equipment during thunderstorms.

-Power must be cut off and residual charges must be confirmed before moving or modifying the line.