

# SPILOT



## Support & Maintenance

AMR (Autonomous Mobile Robot)



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# Precautions for daily use

## 1. Robot positioning lost

### Overview :

Location loss refers to the mismatch between the map location of the robot and the actual environmental location.

### Cause :

- Positioning loss caused by manually pressing the emergency stop switch to move the machine
- During the robot's movement, it will match the current map based on actual laser data. If the current environment is too different from the map, it will cause the robot to fail to match the map, resulting in localization loss. Localization loss will cause the robot to lose its path planning ability and be unable to move
- Someone is surrounding the machine in front, causing a loss of positioning. If too many people surround the machine, it will block the laser, and the matching degree between the laser and the terrain will become very low, leading to a loss of positioning

### Resolvent :

- Move the machine to the location of the charging station and restart the machine within 2m of the charging station (note: the target point of the charging station should be marked on the map)
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- Enter the map interface and manually issue relocation instructions

## 2. Robot does not navigate

### Overview :

Robot non navigation refers to allowing the robot to navigate to a certain point without moving

### Cause :

- Check if the emergency stop switch of the machine is turned on. Only when the machine is turned on can it navigate autonomously (turning the emergency stop switch to the right indicates opening, pressing it indicates closing)
- Check if the machine has lost its positioning (if the orange laser and black obstacles on the map do not completely overlap, it indicates a loss of positioning)
- Check if the machine is close to obstacles or virtual walls (approaching obstacles or virtual walls can cause the machine to be unable to navigate)
- Check if the target point is close to obstacles or virtual walls

### Resolvent :

- Move the machine to the location of the charging station and restart the machine within 2m of the charging station (note: the target point of the charging station should be marked on the map)
- Enter the map interface and manually issue relocation instructions

### 3. Robot navigation charging did not respond

#### Overview :

Sending navigation charging commands to the machine, the robot has not started navigation

#### Cause :

- Check if the calibration of the charging station point is done by using the charging station button after the machine is connected to the charging station
- Check if the charging station target is close to obstacles or virtual walls

#### Resolvent :

- Please refer to the calibration method for the charging station in the 'Calibration Location' section
- It is best not to have any obstacles within 1.5m on the left and right sides of the charging station

### 4. Repositioning

#### Overview :

Recalibrating the incorrect position of the machine

#### Cause :

- The on-site environment and map scanning have significant changes
- During machine operation, manually press the emergency stop switch to move the machine to an area that has not been scanned before moving it back
- Not turning on at the charging station position

## Resolvent :

- Please refer to the calibration method for the charging station in the 'Calibration Location' section
- It is best not to have any obstacles within 1.5m on the left and right sides of the charging station

### Be careful :

When the machine loses its positioning (i.e. the laser does not match the current terrain, as shown in Figure 1), it needs to be repositioned. The repositioning operation method is shown in Figure 1, and Figure 2 has successfully repositioned. If the repositioning is not successful, try again using this method.

line indicates the actual direction of the machine) to relocate it.





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