

# Common Problem Analysis

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1. The robot dog does not respond when the switch is pressed.
  - The power circuit of the switch may be broken.
2. When the switch is pressed, the switch indicator light does not light up and the robot dog stands.
  - The switch signal light circuit may be broken.
3. The switch is pressed, the switch indicator light is on, and the robot dog does not stand up.  
Check:
  - The red power indicator lights D4, D5, and D6 on the driver board light up, and the blue indicator light D7 lights up. This indicates that a servo failure affects the bus communication. You can unplug the servos one by one and turn them on. After locating the faulty servo, record the ID on the servo and replace it with a servo with the same ID. The servo ID is shown in the figure: the left front leg, right front leg, right hind leg, and left hind leg are the first digits of the servo ID 1, 2, 3, and 4, respectively. The lower, middle, and upper servos of each leg are the second digits of the servo ID 1, 2, and 3, respectively. So for example, the ID number of the middle servo of the right hind leg is 32.
  - All indicator lights on the driver board are off. This indicates that the driver board is faulty and needs to be replaced.
4. The robot dog can stand after being turned on, but the joint position is wrong?
  - Phenomenon 1: The joint position of the robot dog is abnormal after being turned on, but each servo unloads force. At this time, the servo works normally, but the servo angle is abnormal, and the robot dog needs to be recalibrated.
  - Phenomenon 2: The joint position of the robot dog is abnormal after being turned on, the joint is weak or the joint rotation position is wrong. This phenomenon is generally caused by damage to the servo potentiometer or excessive current of the servo MOS tube, resulting in burning, but the servo communication is normal, and the servo needs to be replaced.
5. The robot dog screen is not bright?
  - At this time, you need to check whether the 4-pin cable from the driver board is plugged in tightly. If the cable is fine, the carrier board should be damaged and you need to replace the CM4 carrier board.
  - The possible reasons at this time are that the SD card image burning failed, the system did not start normally, or the SD card contact was poor due to the SD card slot failure. Another possibility is that the cable connection between the screen and the carrier board is faulty, resulting in abnormal screen SPI communication. At this time, you need to replace the CM4 carrier board or screen, or re-burn the Raspberry Pi image.
6. The robot dog can't walk straight?
  - The robot dog is corrected by the gyroscope. When turning on the robot dog, you need to put it on the ground or on a table. After pressing the switch, the gyroscope will initialize for 3-5 seconds, and the power switch will flash at a high frequency. During this period, do not move the robot dog. Wait until the switch light is on before operating.
  - If the robot dog still deviates greatly after eliminating the problem of gyroscope initialization, the robot dog needs to be recalibrated.
7. Why are there no responses to the large model-related examples in the sample program?

- You need to fill in the API key of your registration number into the corresponding file according to the tutorial information.
- It may be that the free quota of the API key you registered has been used up. You need to go to the corresponding platform to change the model or choose to renew.

8. Xiaozhi's sample program stops responding while it is being spoken?

- You cannot keep asking in this example, otherwise the server will not return any results. If the server does not return any results, exit the program first, wait three minutes and try again.

9. The running AI interaction cases and basic control movement effects are abnormal or uncontrollable.

- Enter the sample program and check whether the underlying firmware is version 4.3.7. If not, burn this version of firmware first.

10. Screen distortion still occurs after the large program is finished running

- If you do not return to the main page before ending the program, click the main page return button to return to normal.