AUBO (BEIJING) ROBOTICS TECHNOLOGY CO., LTD

Control Handle User Guide

v1.0.0

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Please read this manual before installing or using the product.

Please keep this manual in a safe place for easy reading and reference.

All pictures in this manual are for reference only; please refer to the actual product received.

1 Use of Control Handle

1.1 Introduction

The control handle allows for quick operations on the robotic system. In the AUBO STUDIO teach pendant software, the function to turn on/off the control handle can be configured, and the control handle is turned on by default during delivery. A magnet is placed on the back of the control handle for easy attachment. Its structure is shown in Figure 1. For the function description of each button/indicator light, see Table 1.

Figure 1 Control Handle

Table 1 Function Description of Control Handle Buttons

No.	Name	Function
1	Emergency Stop button	Press the Emergency Stop button to enable emergency stop of the robot. To restore the normal mode, rotate this button as arrowed.
2	Power indicator light	It indicates the control box power status: Off: Control box is powered off. Flashing: Control box is powered on, and robot arm is powered off. Constantly on: Control box and robot arm are powered on.
3	Lock indicator light	It indicates the handle lock status: On: Handle is locked, and button operations are invalid. Off: Handle is unlocked, and button operations are valid.
4	ON/OFF button	It controls the control box to be powered on/off.
5	Enable button	It controls the robot arm to be powered on/off and enabled.
5	Start/Stop button	It is used for start/stop and pause/resume of robot arm program during operation, for quick operation without teach pendant software during operation, and for debugging and inspection during deployment or maintenance.
6	Custom button	Users can customize the function of this button in the AUBO STUDIO teach pendant software.
7	Handle locking button	It is used for locking and unlocking the control handle

1.2 Operation of Control Handle

1. Emergency stop
   - Activate emergency stop: In case of an emergency, pressing the Emergency Stop button can immediately stop all movements of the robot to protect the safety of the operator. At this time, the robot is in emergency stop mode.
   - Deactivate emergency stop: After troubleshooting, rotating the Emergency Stop button as arrowed on the button can exit the emergency stop mode, and the robot can return to normal mode.
2. Power on/off
   - Power on control box: Long press the ON/OFF button for 2s and then release it. The buzzer will make a "beep" sound, and the control box will enter the "boot process". Wait for about 20s until the buzzer makes a "beep" sound again, and the power indicator light will start flashing, indicating that the control box boot process is completed.
   - Power off control box: Long press the ON/OFF button for 2s and then release it. The power indicator light will go out, and the buzzer will make "beep" sounds, indicating that the control box power-off is completed.
   - Power off control box forcibly: In any status, long press the ON/OFF button for 10s to forcibly power off the control box. The power indicator light will go out, and the buzzer will make "beep" sounds, indicating that the control box power-off is completed. (Note: Forced power-off is only applicable in abnormal conditions of system)
3. Robot arm control
   - Power on robot arm: When robot arm is powered off, short press the Enable button. The buzzer will make a "beep" sound and the robot arm will start to be powered on. Wait for about 20s until the buzzer makes a "beep" sound again, and the power indicator light will change from flashing to constantly on, indicating that the robot arm power-on is completed.
   - Enable robot arm: When robot arm is powered on but not enabled, short press the Enable button. The robot arm will swing left and right, the six joints will make click sounds in sequence, and the brake system will be released, indicating that the robot enters an operational status.
   - Power off robot arm: When robot arm is powered on, long press the Enable button for 2s and then release it. The robot arm will be enabled and powered off, the power indicator light will change from constantly on to flashing, and the buzzer will make "beep" sounds, indicating that the power-off is completed.

4. Program control
   - Start program: When no program is running (just after power on or after the running program is stopped), long press the Start/Stop button for 2s and then release it to start the program. The buzzer will make a "beep" sound to prompt the program start; If no default program is set, the robot arm will not perform actions, and the buzzer will not make sound prompt.
   - Pause/resume program: When a program is running, short press the Start/Stop button to pause/resume the program. The buzzer will make a "beep" sound to prompt the pause/resume operation.
   - Stop program: When a program is running, long press the Start/Stop button for 2s and then release it to stop the program (the program cannot be resumed after stop and can only be restarted). The buzzer will make "beep" sounds to prompt the program stop.
5. Handle lock/unlock
   - Lock handle: When handle is unlocked, long press the handle locking button for 2s and then release it. The buzzer will make a "beep" sound, the handle locking indicator light will be constantly on, the control handle will be locked, and the buttons can not be used except for Emergency Stop button.
   - Unlock handle: When handle is locked, long press the handle locking button for 2s and then release it. The buzzer will make "beep" sounds, the handle locking indicator light will go out, the control handle will be unlocked, and the buttons can be used again.
6. Custom function
   - Set custom function: Users can set the function of Custom button in the teach pendant software. The functions that can be set are shown in the Table 14. For detailed operations, please refer to User Manual of AUBO STUDIO teach pendant software.

Table 2 Custom Button Function

Button	Function definition
Custom button	Return to Home
	HandGuide
	Record feature points
	Track playback

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