

RoboMaster Youth Championship Participant Client Interface Instructions

This version is released on January 12, 2023. The pictures and texts are for reference only. The actual effect and usage are subject to the latest version.

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Note:

* indicates the newly added or adjusted content for the new client in accordance with the rules of RoboMaster 2023 Youth Championship.

The client display for primary and junior/senior categories are similar. Specific differences can be found in actual usage.

User Interface - Main Interface

1. Overview

The image shows a top-down view of a game arena with a central crosshair. At the top, there are two horizontal bars representing the Red Team (left, red) and Blue Team (right, blue). Each bar shows a '4000' HP value and a shield icon. Between the bars, there is a 'Round' indicator showing '3' and a 'Countdown' timer showing '5:00'. A 'Score' indicator shows '40004 X 40000'. Below the bars, there are three robot icons for each team, numbered 1, 2, and 3. In the bottom left corner, there is a 'Current Robot Status' panel showing a robot icon, a '500' value, and a '1700 / 2000' HP bar. Below this panel are four status indicators: 'Robots', 'Server', 'Battery', and 'Wi-Fi'. In the bottom right corner, there is a 'Mechanical Arm Operation' panel with a joystick and buttons, and a 'Custom Skills' panel with buttons labeled '1', '2', '3', '4', 'C', 'Q', 'E', 'R', 'T'. The central arena has a large circular area with a crosshair in the center. There are also several lines of placeholder text in the bottom left area.

HP

Base

Red Robot

School Badge and Name

Round

Countdown

Score

Total HP Damage Comparison

Blue Robot

Base Armor Value

4000

Red Team

3

5:00

2

Blue Team

4000

40004 X 40000

1 2 3

1 2 3

A short English text for neutral information

A short English text for neutral information

A short English text for advantageous information

A short English text for disadvantageous information

A short English text for neutral information

500

1700 / 2000

120

Robots Server Battery Wi-Fi

1 2 3 4 C

Q E R T

Module Status

Current Robot Status

Marquee prompt area

Aim point

Mechanical Arm Operation

Custom Skills

User Interface - Main Interface

2. Description

1) Base HP Bar on the Top



During the Automatic Movement Phase (the first minute of the match), since both Bases have no armor value, the panel displays “HP” .



When the Base is frequently attacked in a short period of time or suffers a critical attack, a foreshowing HP segment will appear to indicate the extent of HP deduction.

When the Base's HP is lower than 20%, the remaining HP segment will be dimmed, flashing at a breathing rate.

The current armor value is displayed on the shield icon. A team's Base Armor Value will decrease as its robots are defeated and its Base is hit by a Large Projectile.

When the enemy's Aerial Robot successfully hits the Base with a Large Projectile, the Base Armor Value will be temporarily deducted, with the HP Bar dimmed, a armor-breaking icon and remaining HP displayed on the panel.



If no robot is defeated or ejected in the Automatic Movement Phase 1, the Base will be invincible when entering the Manual Operation Phase. During Automatic Movement Phase 2, the Base will be invincible. (for junior/senior category)

User Interface - Main Interface

2. Description

2) Score Board



Score Countdown Match number

The score board displays the match number, countdown and score of the current game. In the last 10 seconds of the match, the countdown bar will turn red and flash.

10 seconds before entering the Automatic Movement Phase 2, the countdown number will become larger and yellow, and after the 10-second countdown ends, it will return to the normal digital state (For junior/senior category)

3) Robot Status on the Top



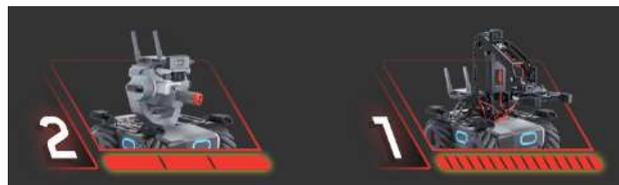
No. Profile HP Bar

Profile: Display the robot type and status

HP Bar The HP Bar indicates the current remaining HP, as well as the upper limit of the robot's HP.



Revived after defeat



Invincible after revival



Activate the Power Rune



Ejected



Disconnected

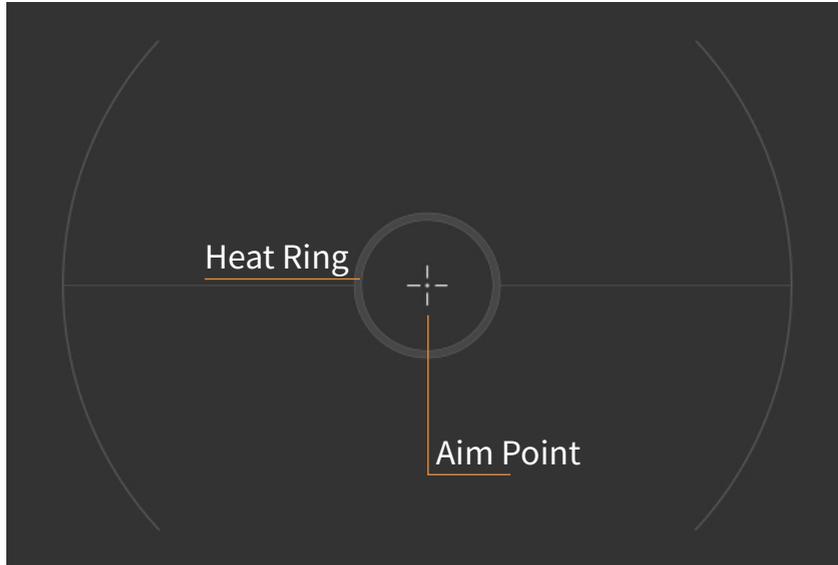


Not logged in

2. Description

4) Shooting-Assistance Zone

a. Aim Point



Shooting Assistance Zone consists of an aim point and a heat ring. The upper limit of the robot's barrel heat is set as Q_0 . Whenever the barrel detects that a projectile is launched, the heat ring will indicate a certain amount of heat increase. When the real-time heat Q_1 reaches the limit Q_0 , the heat limit will be overrun, so the system will suspend the robot from launching projectiles within a certain period of time.

Note: Users can set and adjust the position of the aim point on the RoboMaster APP. The system will record the new position, so that RoboMaster Champion can read the updated aim point when the robot is connected to the system.

b. Barrel Heat Status



Empty
 $Q_1=0$



Normal
 $0 < Q_1 < 1/2 Q_0$



Yellow
 $1/2 Q_0 < Q_1 < 3/4 Q_0$



Red
 $3/4 Q_0 < Q_1 < Q_0$



Overheat
 $Q_1 \geq Q_0$

User Interface - Main Interface

2. Description

5) My Robot

The image shows two side-by-side UI panels for a robot. Each panel features a circular robot profile on the left with a red '2' in a circle. To the right of the profile is a menu icon with the number '50'. Below the profile is a red bar with '200 / 200' and a blue bar with '400'. The left panel includes a 'Buff' icon with 'x.5' and a 'Projectile allowance' icon. Labels with orange lines point to various elements: 'Profile' points to the robot image, 'No.' points to the '2', 'Launching Mechanism's Durability' points to the '50' menu icon, and 'HP' points to the '200 / 200' bar.

Projectile allowance

Buff

50

200 / 200

400

2

Profile

No.

Launching Mechanism's Durability

HP

6) Robot Module Status

A horizontal bar with four indicators: a red bar for 'Robots', a green bar for 'Server', a red bar for 'Battery', and a green bar for 'Wi-Fi'. Labels with orange lines point to the 'Server' indicator and the text 'Module Name'.

Robots

Server

Battery

Wi-Fi

Module Status Indicator

Module Name

Module without scale (robot, client)



Abnormal Normal

Module with scales (battery, Wi-Fi)



Full 75% 50% 25%

User Interface - Main Interface

2. Description

7) Flutter Text

a. Neutral System Information (blue and white background)



b. Favorable Information (green background)



c. Unfavorable Information (red background)



8) Marquee Text Zone

这是一条简短的的中文中立信息。

这是一条简短的的中文中立信息。

这是一条双行的中文有利信息。最多承载五条比赛信息提示，从下往上刷新。10秒无新信息消失。

这是一条简短的的中文不利信息。

这是一条双行的中文中立信息。最多承载五条比赛信息提示，从下往上刷新。10秒无新信息消失。



Robot Defeat Information [Profile of the defeated robot] + “defeated”

The flutter text mainly indicates information of robot defeat and battlefiled components.

e.g. Our/enemy’ s robot defeated
Our/enemy’ s Power Rune activated
Our Base is under attack

30/10 seconds to enter the Automatic Movement Phase 2, get ready! (for junior/senior category)

Categorize information by font color

Neutral information - white

Favorable information - green

Unfavorable information - red

The marquee text mainly indicates the acquisition of buffs of both teams, including HP gain, armor value gain and projectile allowance gain.

e.g. Our/enemy receives HP Gain
Our/enemy breaks the armor
Obtains/automatically receives 25 points of projectile allowance

User Interface - Main Interface

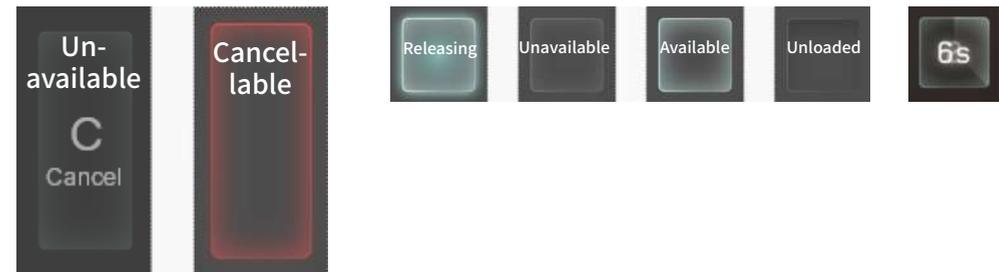
2. Description

9) Mechanical Arm



- a. Use the space key and up/down/left/right direction keys to control the posture of the mechanical arm. When the posture exceeds the limit in a certain direction, the corresponding direction keys will become red.
- b. The small panel on the left displays the real-time posture information of the mechanical arm. Users can intuitively view the limit posture of the mechanical arm and adjust their operation in real time.
- c. Control the grip/release of the gripper with the space key and left/right mouse button

10) Custom Skills



There are [unloaded] and [loaded] skills. The loaded skills are [available]. When one skill is [released], other skills become [unavailable]. When the skill is cancelled, it enters the [cooling] state, while other skills returning to the [available] state.

11) Damage Detection of the Base Armor



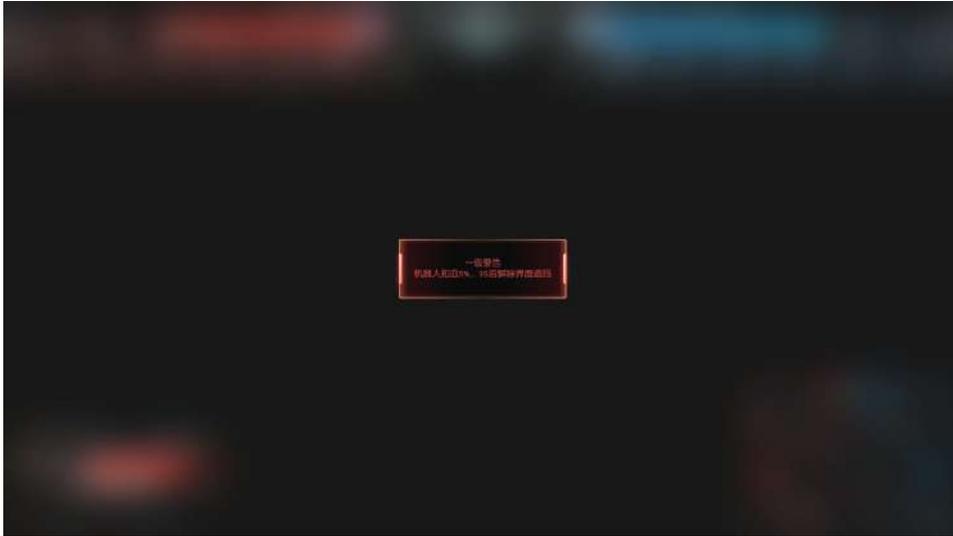
Attack opportunity represents the maximum times the current armor in attack detection state can be attacked. Green text indicates that the armor is in attack detection state; gray text indicates that the armor is in attack blockage state.

User Interface - Main Interface

2. Description

12) Prompts in Full Screen

a. penalty Prompt



b. Revival Prompt



c. Low HP Prompt



User Interface - panel

1. Tab panel - Press the tab key to display it and release the tab key to cancel it

1) Overview



User Interface - panel

2) Description

a. Robot Information



Robot Numbering

Robot Profile&Status

Attack buff factor

Armor Value

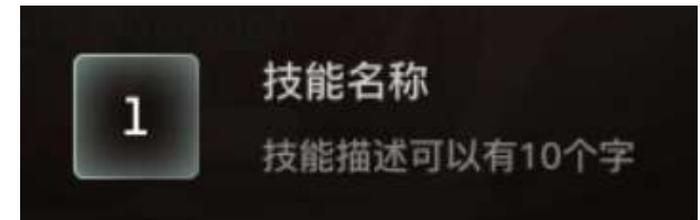
e.g. survived, revived, ejected, disconnected, not logged in

Robot Type
Current HP/ Maximum HP

Receive through activating the Power Rume

Receive through recognizing the Defense Marker "S" in Automatic Movement Phase

b. Custom program configuration



When a program is loaded, the corresponding key will light up, with the upper line displaying the first 8 characters of the program name, and the lower line the first 20 characters of the program description.

When the program is not loaded, corresponding key will turn gray, indicating that the skill is unavailable.

2. ~ Key panel - Press/release the ~ key to display/cancel the panel



The module status panel shows the status of the camera/motion controller/transmitter/ front, rear, left, and right chassis armors

Red/green font indicates an abnormal/normal module.



3. Settings panel - Press/release the P /key to display/cancel the panel



[Hardware settings] Adjust by the slider
Mouse sensitivity and headset volume

[Module setting] You can enable or disable the display and operation of the robotic arm module and robotic arm loading mode. For custom program module, you can choose to use APP skills or SDK skills.

[Aim point coordinates] It can read the aim point coordinates set on the RoboMaster APP and make corresponding adjustments on the FPV

1. Victory Animation

a. Victory prompt



b. Defeat prompt



c. Draw prompt



d. Abnormal termination prompt



[Result of victory and defeat] Victory prompt for the winner, and defeat prompt for the loser

[Draw] End in a draw

[Termination] The referee terminates the match and the current match is ineffective.

2. Settlement panel

