Install and set up the app

Open the directory 4. Tutorial_Arduino\5_APP and install " btcontroller .apk " to the Android phone

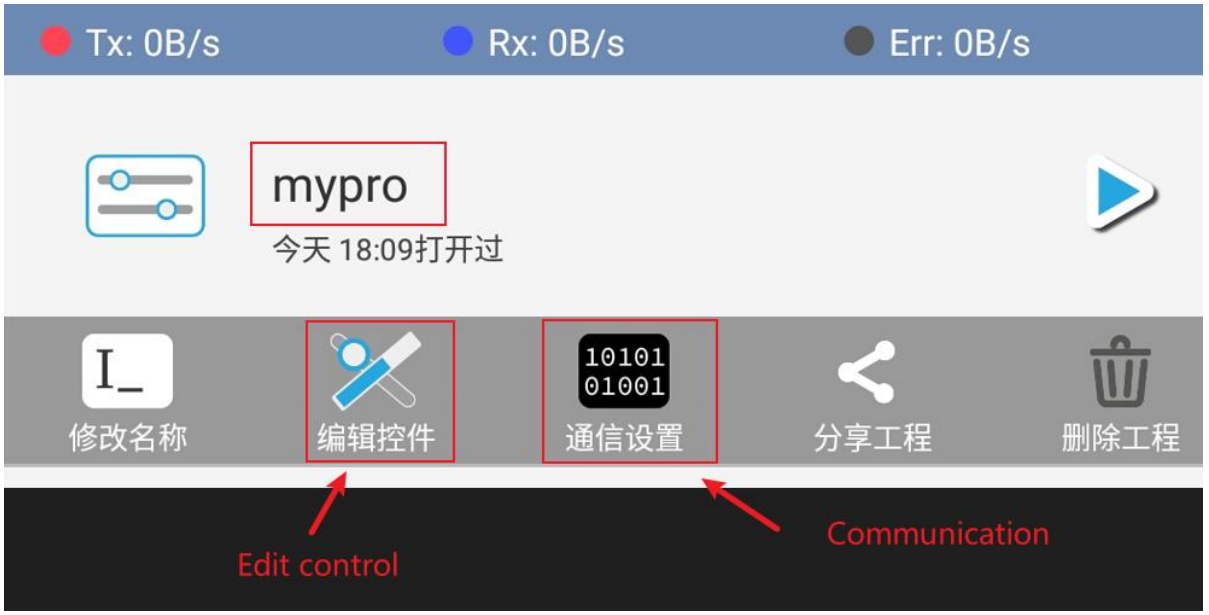
Next , we use an Android phone to demonstrate how to control the ZHIYI intelligent robotic arm car through this application:

Enter the professional debugging interface, click the add button "+"

You need to fill in the project name of the project name.

Click OK to see the built project

Click on the project name and the option to modify the project will appear



First configure the communication settings , click the "+" sign, add a boolean value , and enter the boolean value name.


数据包结构设置
发送数据包 – 共 3 字节
包头
1字节
bool
0字节
byte
0字节
short
0字节
int
0字节
float
0字节
校+尾
2字节
逻辑值
0*bool
字节值
0*byte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float
0字节
校+尾
2字节
逻辑值
0*bool
字节值
0*byte
添加一个BOOL变量
变量名称
free
取消
确定

You can see that the created Boolean values will be arranged and displayed in this column, and 11 Boolean value variables will be created in the same way. Tracking, Avoid, follow, dungeon, save, auto, empty, claws_open, claws_closed, count-clockwise, clockwise

Click the "+" sign in the byte value column, add the byte value "byte" , and enter the byte value name

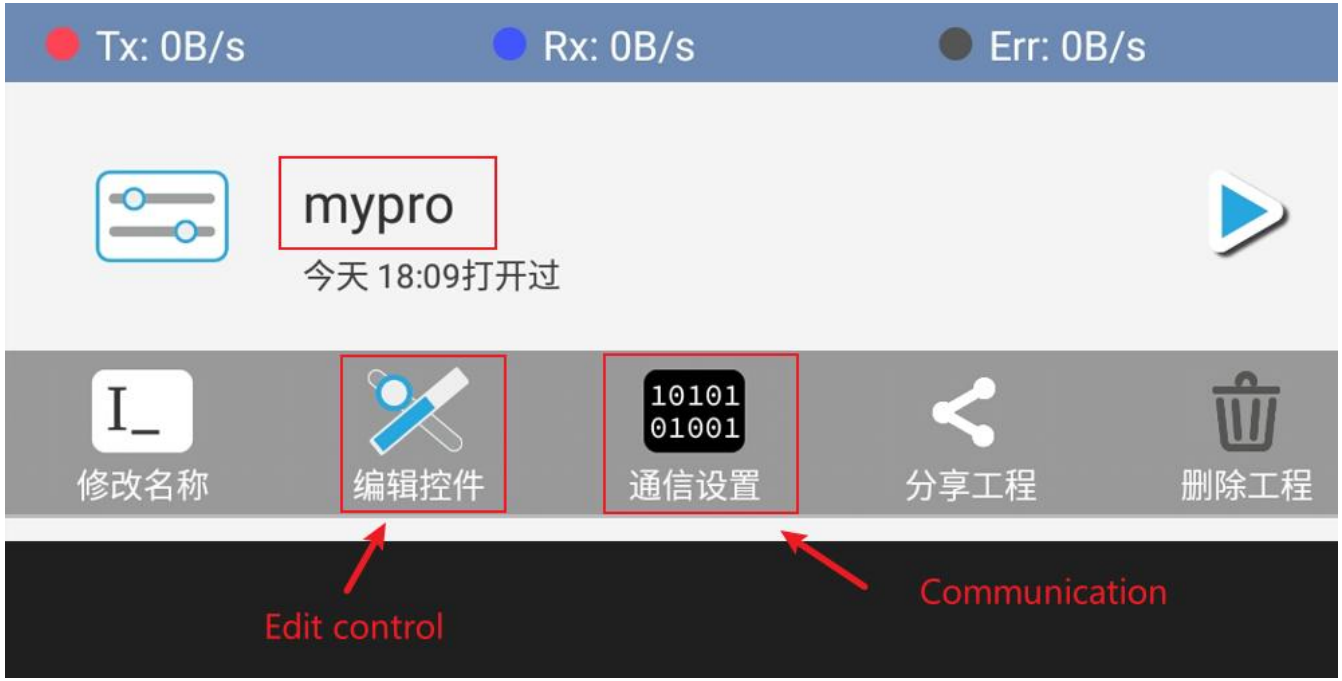

添加一个BYTE变量
变量名称
change name
BYTE0
取消
确定

Take setting a variable X that controls the direction of left and right movement as an example, change the name to X

You can see that the created byte values will be arranged and displayed in this column, and use the same method to create 4 byte value variables. respectively Y, speed, Base, Arm

Click the second option at the bottom to create two received byte values, namely: Distance, Actions

After all the above are added, return to the layout " Edit Controls " to add controls .



Click the "+" sign in the upper right corner to create a new control, taking the slider control for speed control as an example;


添加一个控件
按钮
开关
Text
文本
Text
可编辑文本
能量槽
滑动条
摇杆
Y-X二维曲线图

Select the data type to be connected and the variable value just set, byte and speed

Then set the upper and lower limits, click OK to complete;

Add a joystick control to control the direction of the car:

Select the connection data type byte and the variable name X/Y , then check Release Auto Reset :

Add another same joystick control to control the opening and closing of the paw, the variables are Base and Arm

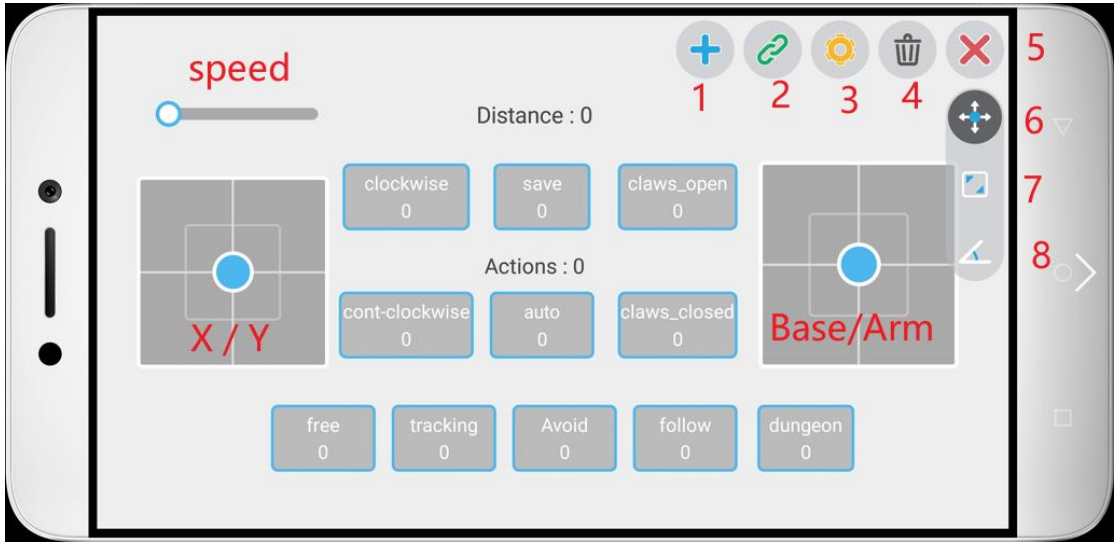
Add a text control to display the ultrasonic distance :

Add Actions in the same way;

Next, add a control button and click the green button in the upper right corner to link the data:


添加一个控件
按钮
开关
Text 文本
Text 可编辑文本
能量槽
滑动条
摇杆
Y-X二维曲线图
Distance : 0
free
tracking
Avoid
follow
dungeon
save
选择要链接的数据
1 Transmit
bool
首先请确认你已经在数据包中添加了变量，在
X坐标: 69mm
Y坐标: 38mm
宽度 : 10mm
高度 : 6mm
角度 : 0°

Add 11 more controls in the same way : tracking , Avoid, follow, dungeon, save, auto, empty, claws_open, claws_closed, count-clockwise, clockwise. Please drag and place these controls in your own way.



The functions of each icon button in the upper right corner of the screen:

1 Add various controls,

2 Connection variables

3 means setting control parameters

4 is to delete the control

5 Exit the current control layout

6 Mobile controls

7 Zoom in and zoom out controls

8 control rotation angle

When the controls are all adjusted, start connecting to Bluetooth, go to Device Connections and click Search.

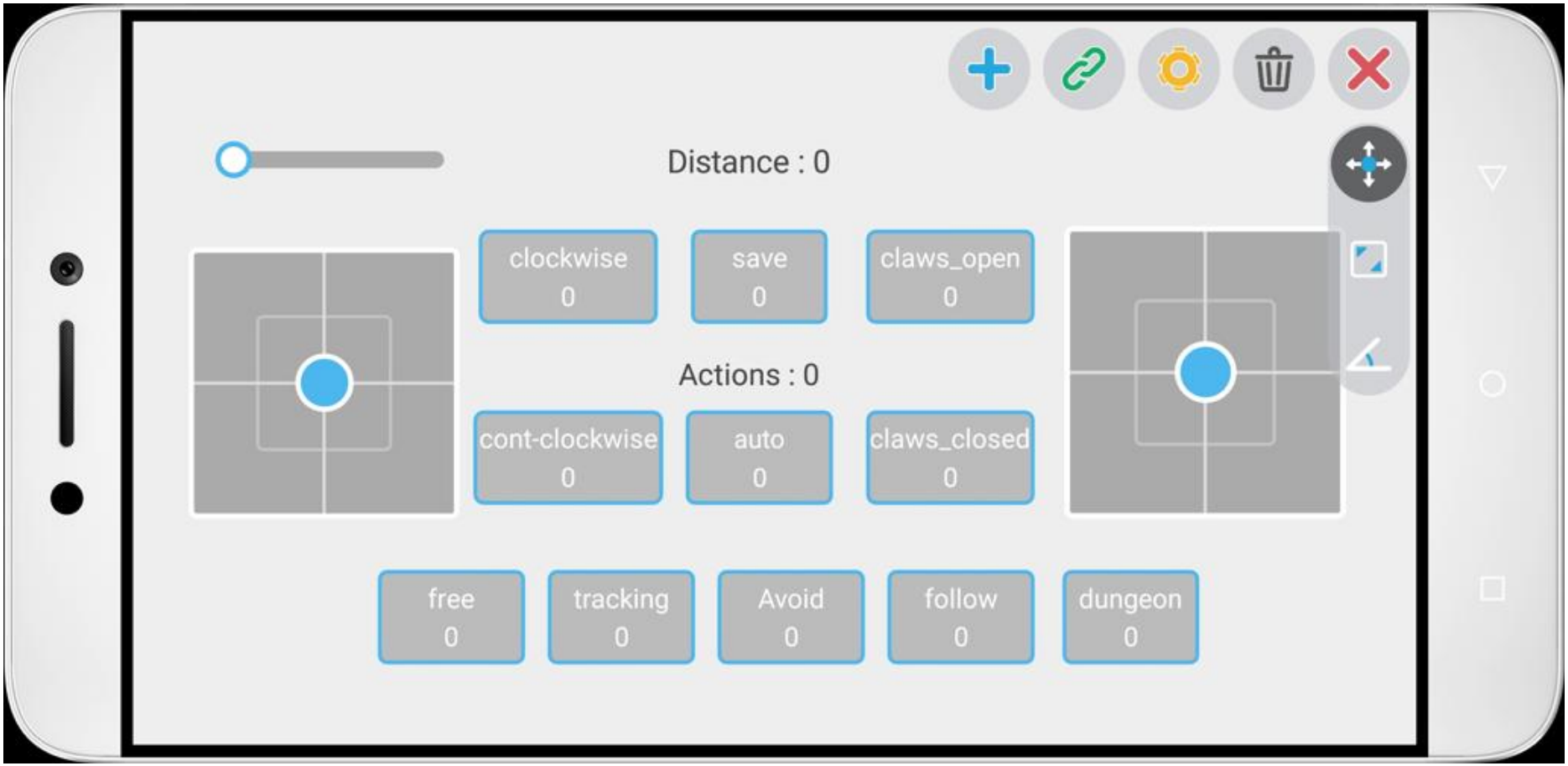
Find " JDY-31-SPP " and click "Add Device". If a password is required, enter the password as 1234 or 0000. (If you find that connecting to Bluetooth is slow in future use, first "forget" the Bluetooth in the phone settings. Then search for and connect to Bluetooth in the APP.)

Click "+" again

When a red "x" appears, it means the Bluetooth connection is successful :

After the connection is successful, click Start and operate the car :

The final operation interface is as follows



Notice:

In free mode, the ultrasonic detection distance can be displayed in real time, and other modes are not displayed in real time;

Other modes are automatic execution, and if you want to stop, you need to switch back to free mode;

During operation, pay attention to observe that the servo motor cannot be left in the unfinished state for a long time to prevent heat generation and damage;

Memory function operation: (every time a servo motor is remotely controlled, one action must be saved, and a maximum of 19 steps can be recorded)

The initial robot arm state is remotely controlled to state 1, and the save button is pressed to record 1;

In the remote control from state 1 to state 2, press the save button to record 2;

Remote control from state 2 to state 3, and then press the save button to record 3;

In this way, to the end action, it should be noted that the end action should be consistent with the initial action, so that a continuous and consistent action can be maintained when starting the automation execution.