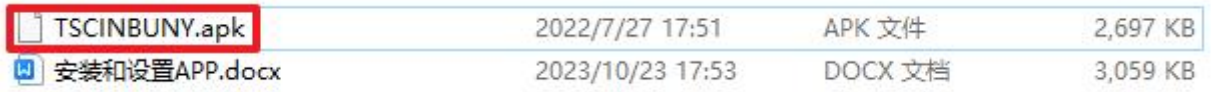
Install and set up APP

Open folder 3_APP and install " TSCINBUNY .apk " to your phone



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

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

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

Click OK to see the built project

Click on the project name and the options to modify the project will be displayed.

First configure the communication settings , click the "+" sign, add a Boolean value , and then 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


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
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 displayed in this column. Use the same method to create 11 more Boolean variables. They are 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 then enter the byte value name

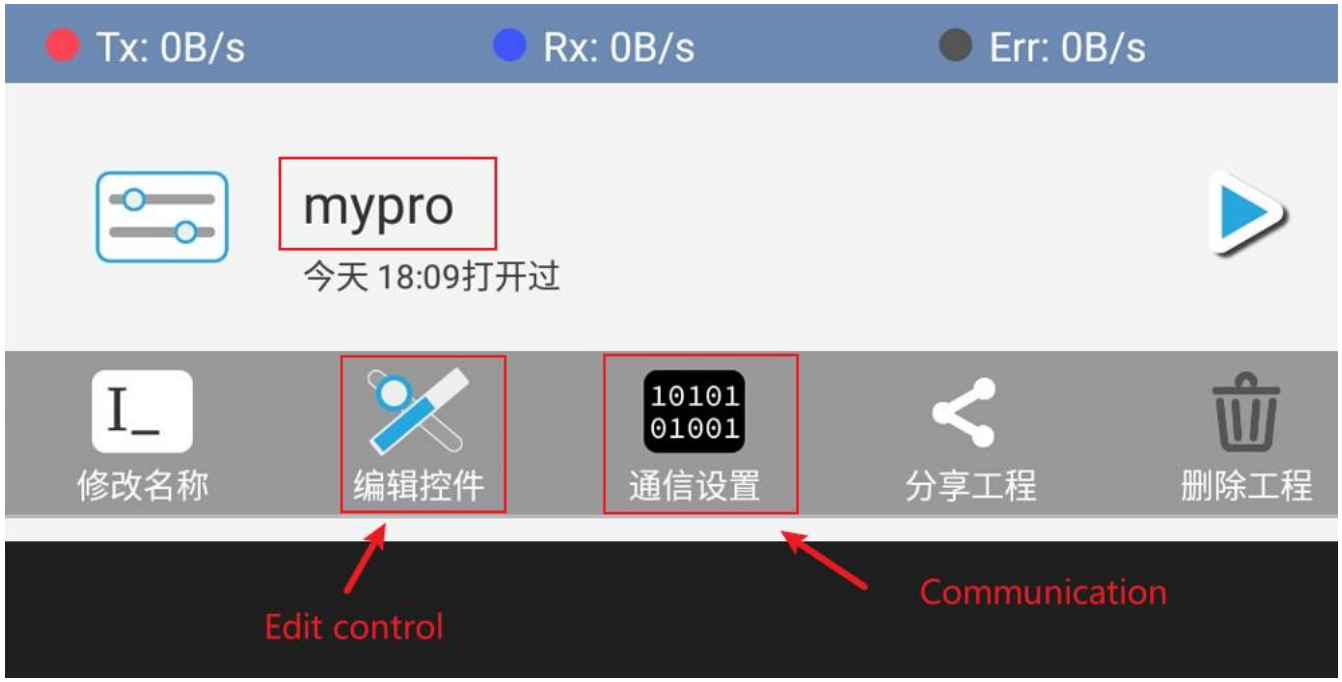

字节值
0*byte
添加一个BYTE变量
变量名称
change name
BYTE0
取消
确定
浮点数
0*float

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

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

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

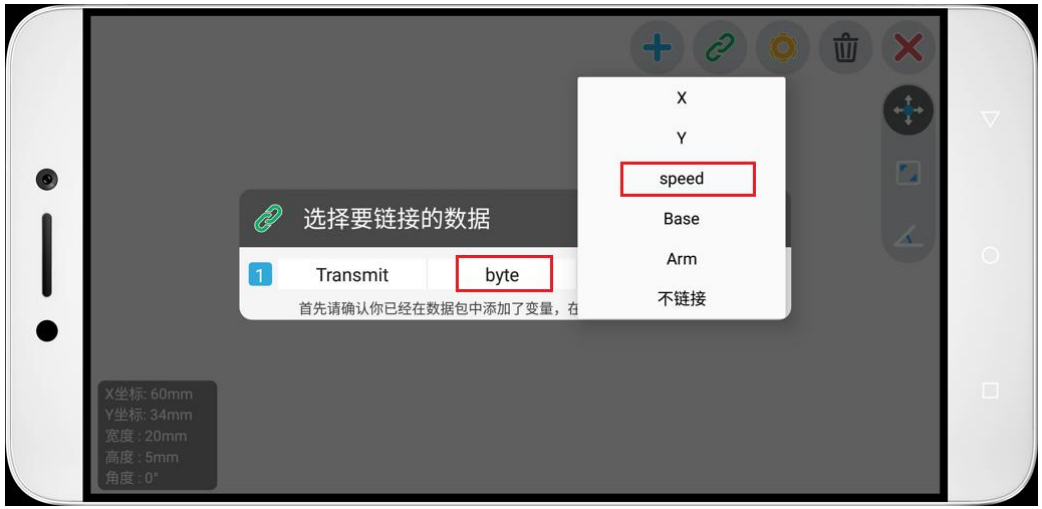
After all the above are added, return to the layout " Edit Controls " to add controls .



Click the "+" sign in the upper right corner to create a new control, taking the slider control that controls speed 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

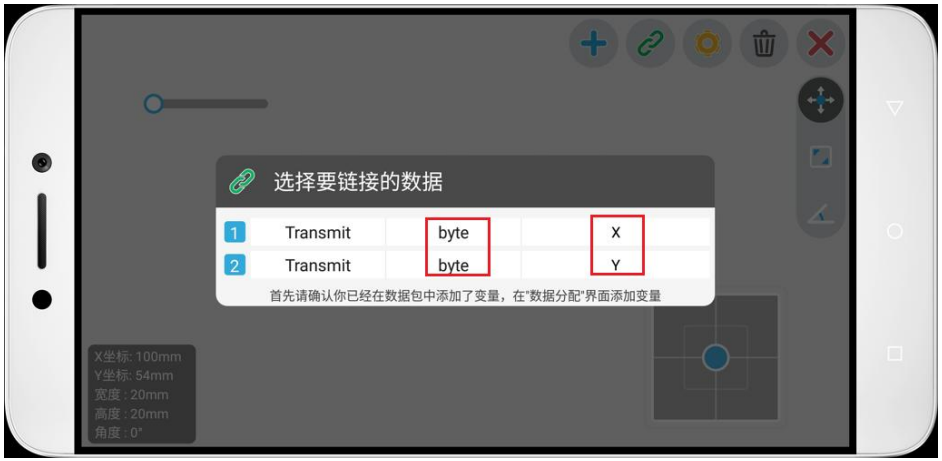
Select the data type to be connected and the variable values just set, byte and speed



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

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

Select the connection data type byte and variable name X/Y , and then check the release automatic reset :



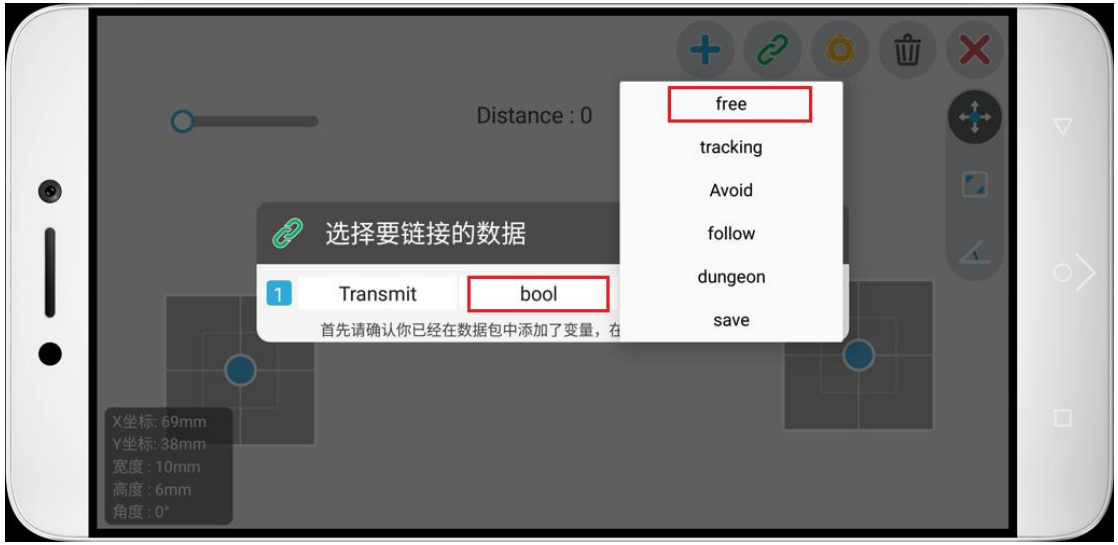
Add another same joystick control to control the opening and closing of the claws, and select Base and Arm as variables.

Add a text control to display the ultrasonic distance :

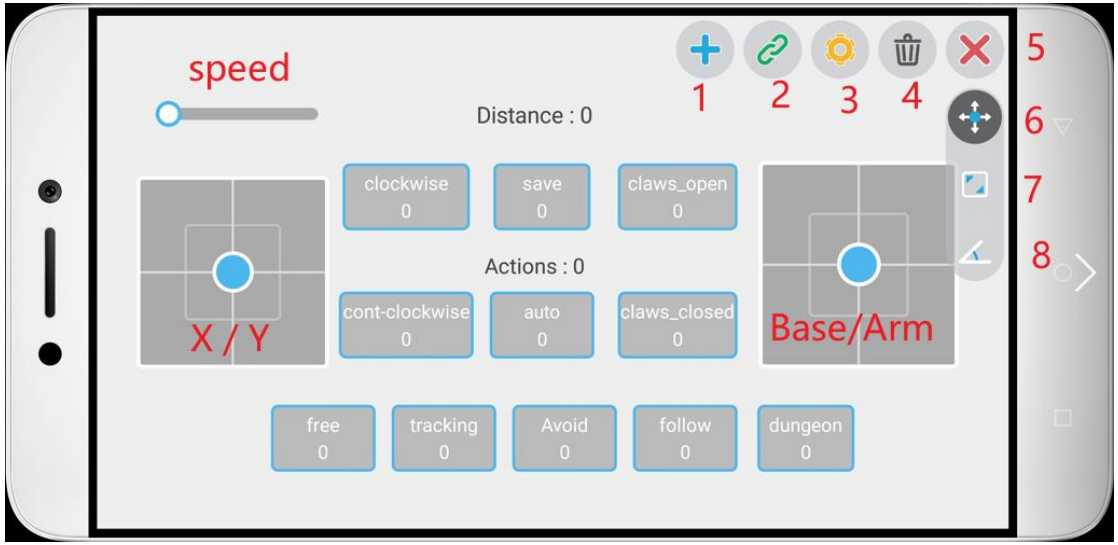
Use the same method to add Actions;

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°

Use the same method to add 11 more controls , namely: tracking, Avoid, follow, dungeon, save, auto, empty, claws_open, claws_closed, count-clockwise, clockwise. Please drag and place these controls according to your own convenience.



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

1Add various controls,

2 connection variables

3 means setting control parameters

4 is to delete the control

5Exit the current control layout

6Movement control

7 Zoom in and out controls

8 control rotation angle

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

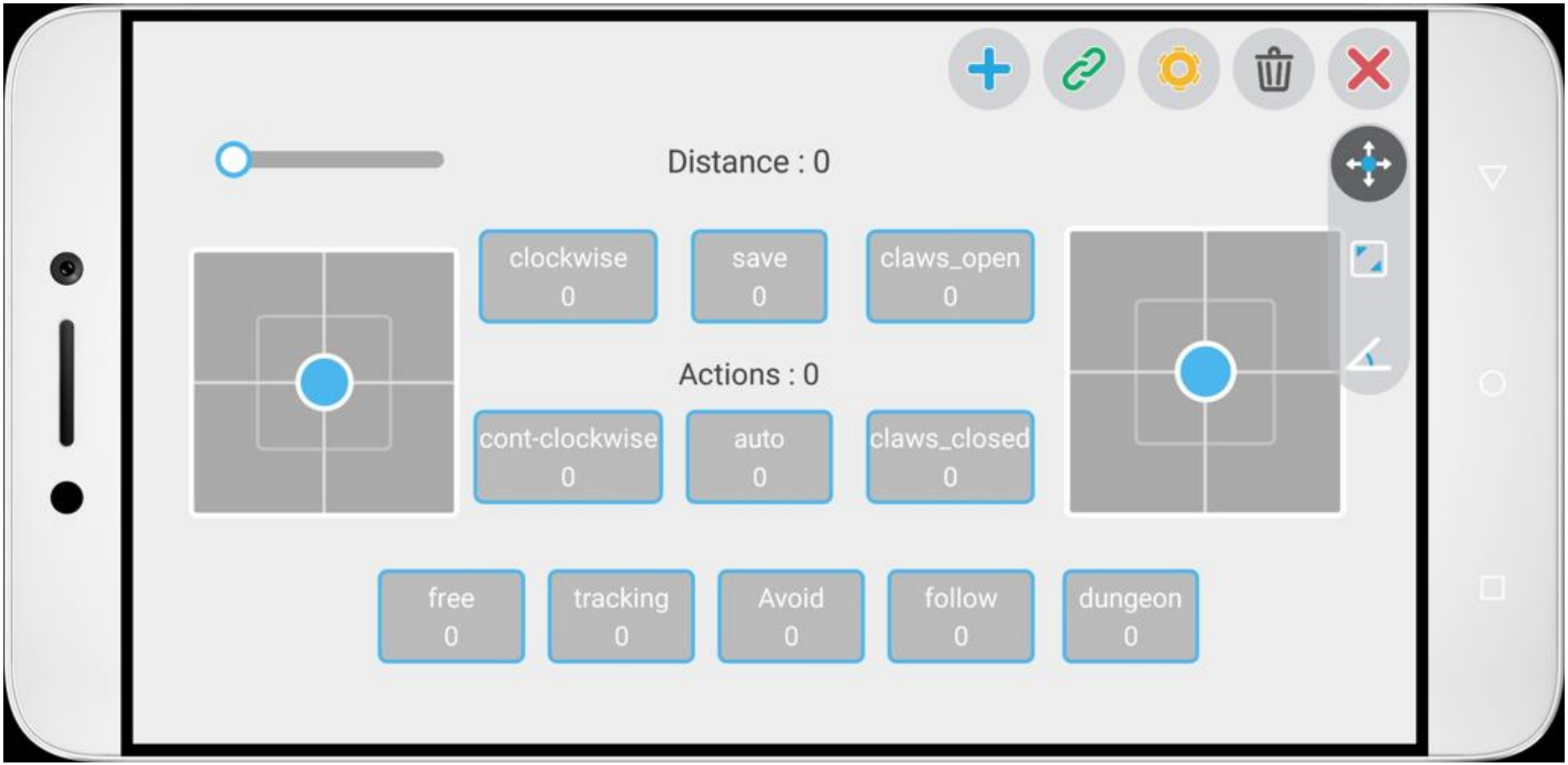
Find " BT05 " and click "Add Device". If a password is required, enter the password as 1234 or 0000. (If you find that connecting to Bluetooth is slow in future use, first "forget" the Bluetooth in the phone settings. Then search for and connect to Bluetooth in the APP.)

"+" 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



free: free control, tracking: line following, Avoid: obstacle avoidance, follow: follow, dungeon: dungeon mode

Notice:

In free mode, the ultrasonic detection distance can be displayed in real time, but in other modes it is not displayed in real time;

Other modes are automatically executed. If you want to stop, you need to switch back to free mode;

When operating, pay attention to observe that the servo motor cannot be left in an unfinished state for a long time to prevent heating and damage;

Memory function operation: (Every time a servo motor is controlled by remote control, an action must be saved, and a maximum of 19 steps can be recorded)

The initial robot arm state is remote controlled to state 1, press the save button to record 1;

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

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

This goes back and forth until the end action. It should be noted that the end action must be consistent with the initial action, so that continuous and consistent actions can be maintained when the automation execution is started.