RoboPhilo PS2 Controller Upgrade User Guide

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Chapter 2. RoboPhilo PS2 Upgrade setup

2.1 Plug cable to the Receiver

   a. Connect the cable to the PS2 receiver as shown

⚠️ Plug the six different color wires to the PS2 receiver according to the order.

- Red
- Orange
- Brown
- Blue
- Yellow
- Green
Chapter 1. RoboPhilo PS2 Upgrade Kit Overview

1.1 Overview

- The RoboPHILO PS2 upgrade kit contains the PS2 controller, Receiver, Cable, 2 plastic cable ties and wiring tubing. The Firmware, Philo software and motion file will be emailed to the user.
- User can specify 6 different fighting modes. Each mode can setup 12 different motions. Adding the different modes of direction motions, one PS2 controller can control up to 116 motions intuitively.
- With the analog mode enabled, user can use the 2 joystick to move the 2 arms in 3D directions in real time.
- User need to copy all the software packages on to the local hard disk.
- Follow the PS2 upgrade kit user guide to setup the PS2 receiver
- Run the new loadPhilo to download the new firmware (philops2.hex) to the robot similar to the steps in the robophilo manual.
- Run the PhiloPs2 program to create motion the same way as the original Philo program
- The new PhiloPs2 motion creation program is the same as the Philo program except a new PS2 tab to assign the motion to the PS2 controller instead of the InfraRed controller.
- User can assign the motion to the PS2 controller using the PS2 tab instead of the key tab
- User will create and save the motion the same way as for Robophilo
- The kit comes with the ps2 motion file that is used in the Ku Fu fighting competition and pre assigned for the PS2 controller (it has the turbo mode walking also)

Chapter 2. RoboPhilo PS2 Upgrade setup

2.2 Plug cable to the controller

a. Plug in the cable to the controller as shown.

Attention: Assemble the PCB board and connect the PS2 connecting wire to 8 pin jumper of the PCB as shown.
Chapter 2. RoboPhilo PS2 Upgrade setup

2.3 Jumper the controller for PS2 mode

The jumper have to be plugged on three different positions of 2-pin slot on the PCB board in order to provide correct functioning, tuning, PS2 remote normal function situation and Infra Red Remote normal function situation.

So pay attention for the position where the jumper is being located.

After changing the jumper position, switch on the power again to activate the new setting.

2.5 Final setup

a. Wrap around the cable wire with the wiring tubing
b. Run the wire thru the side of the lower right hand corner
c. Put in the receiver to the back as shown
Chapter 2. RoboPhilo PS2 Upgrade setup

2.4 Adding holder for the receiver

a. Drill 2 holes on the back cover
b. Plug in the 2 plastic cable ties as shown to hold the receiver
c. Do not tighten the tie yet, make sure the loop can hold the receiver and also can be easily removed

Chapter 3. RoboPhilo PS2 Operation

3.1 PS2 Controller

a. Command is executed when the keys are pressed and then released
b. Direction buttons control walking or turning in that direction
c. Mode buttons select 6 different modes, each mode defines the fighting directions, turbo mode and wakeup (demo) mode
d. Each mode can control 12 motions
e. Press mode button to turn on red LED for analog mode, off for digital mode
f. In analog mode, you can use the joystick to move the arms in 3D directions
g. In digital mode, the right joystick controls the direction button, the left joystick controls the 4 mode buttons

Strengthenessy press the multi-keys
Some motion require pressing multiple keys to start the movement. Pay attention to press then release those keys at the same time to start the command effectively. For example L+R1+R2 or L+R2+R1+R2
3.2 PS2 software tab

PS2 Tab  1. Routine assignment for selected mode of operation

Routine Name
- Select the Routine for the corresponding PS2 controller button pressed

Select
- Mark Routine assignments for deletion or Play

Mode Init routine
- the current High, mid, low routine will be run when the mode button is pressed.

High mode
= L1, L1+R1 or R1 is pressed.

Mid mode
= L1+L2, L1+L2+R1+R2 or R1+R2 is pressed

Low mode
= L2, L2+R2 or R2 is pressed

The pictures show the current mode and how the opponent is facing your robot.

LEFT = opponent’s left side is facing your robot.

CENTER = opponent’s face is facing your robot.

RIGHT = opponent’s right side is facing your robot.
Chapter 3. RoboPhilo PS2 Operation

2. Walking Routines
   (for North, West, East, South, South East, South West, North West)
   - Routine Name
     - Select the Routine for the movement direction.
   - Select Key
     - Mark Routine assignments for deletion or Play.

3. Play
   Run PHILO Junior with the selected Routine.
   - Select All
     - Mark all the routine assignment in this page for deletion and Play.
   - Clear All
     - Uncheck all the Routines for deletion or Play.
   - Delete
     - Delete the selected Routine assignments by setting it to no_op.
   - Update Changes
     - update all the new Key assignment changes.
   - Play
     - Run PHILO Junior with the selected Routine.
   - Reset
     - Reset assignments to previously saved version.
   - Save Keys
     - Save the current settings. You need to export the Key setting to a motion file; otherwise, the Key settings will be lost after you exit the program.

4. Mode Select
   Click the button to select different mode of operation. You can set different button routines for each mode. Each mode has its own 12 routines. With 6 modes, you can set 72 routine.
   - Defines the front mode where the opponent is in front of your robot.
   - Defines the right side mode where the opponent is on your robot’s right hand side.
   - Defines the back mode where the opponent is behind your robot.
   - Defines the left side mode where the opponent is on your robot’s left hand side.
   - Defines the turbo mode where you can defines the fast move motions.
   - Defines the Wake up mode when you start the robot or re-connect the robot. Press the start button to confirm the PS2 connection after power up.