# Windbox

USB flight joystick ground station manual

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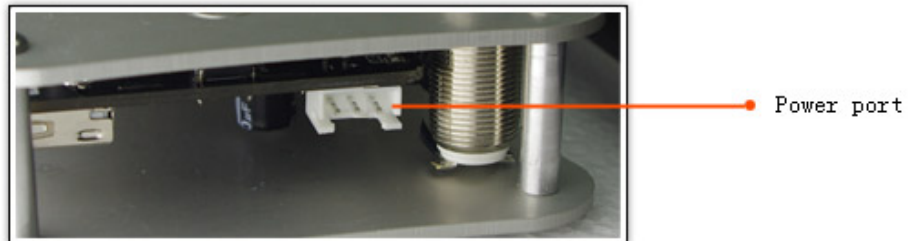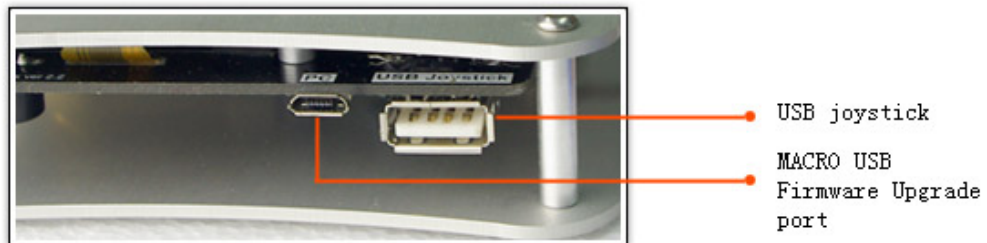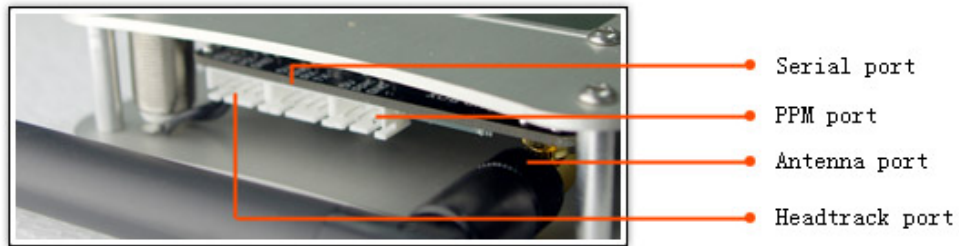
Windbox is a remote control system instead of the traditional mode. With the Windbox, USB flight joystick, USB gamepad, steering wheel, and other plug and play USB peripherals can be used to remote control fixed-wing model aircrafts, quadrotors, toy cars and boats. You will get close to the real fight experience. This product contains a ground station box, and an 8/10/12-channel 2.4G receiver.
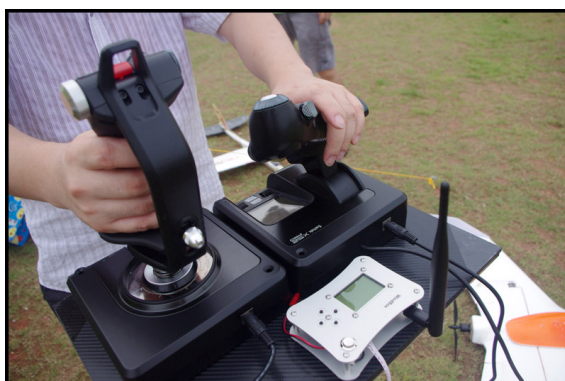
Video: http://www.youtube.com/watch?v=m27zin0mj_k

www.opuav.com

# 1. The overall layout of the ground station

Antenna

Power switch

LCD display

Top button

Right button

Down button

Left button

Serial port

PPM port

Antenna port

Headtrack port

USB joystick

MACRO USB
Firmware Upgrade
port

Power port
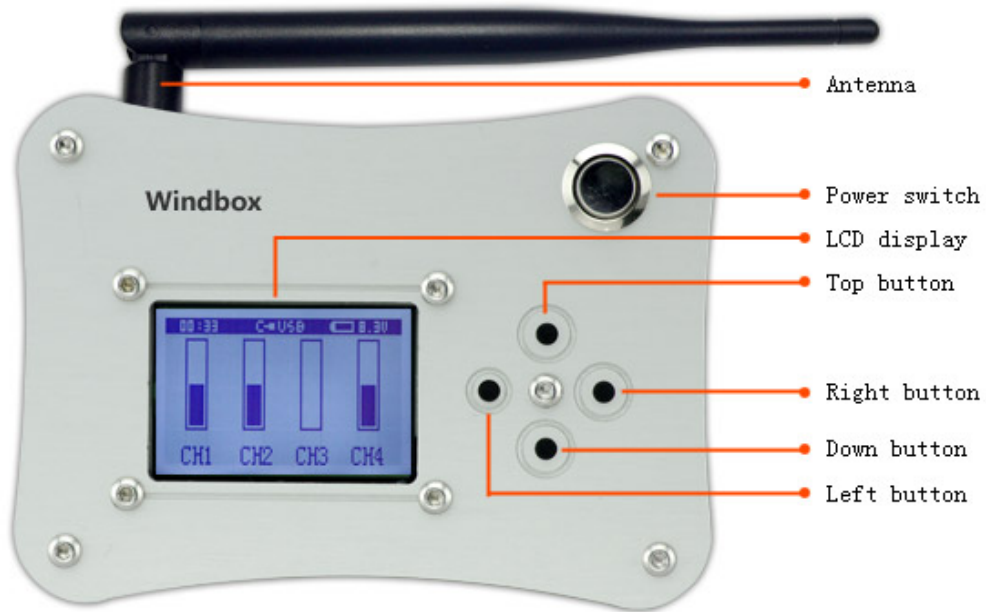
2. Home Screen

● A timer is on the left of the information bar

● The battery voltage is on the right of the information bar

● Inserted USB joystick status is in the middle of theinformation bar

● 4-channels data is in the middle of the screen

● Press the menu button [Right] to enter the main menu, press the menu button [Down] to enter the channel information screen.
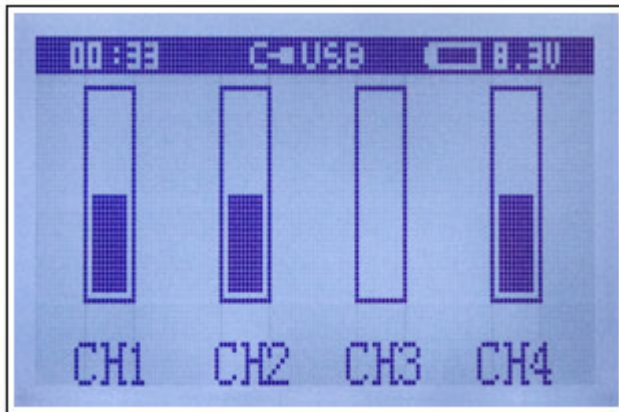
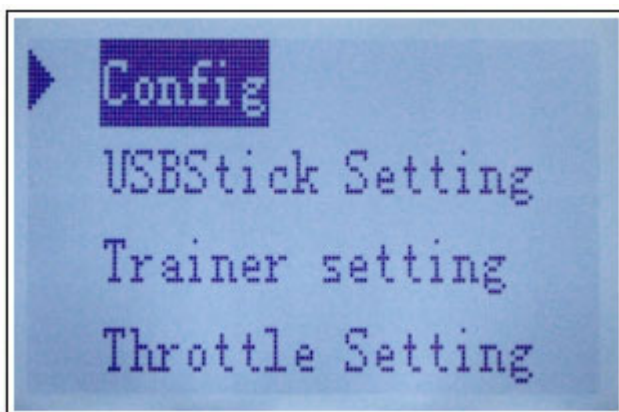
3. Home 2 Screen

● CHANNEL, 1-8 channel data

● BTN, all stick button detection

● Press the menu button [Up] button to return to the main screen, press the menu button [Right] button to enter the main menu.
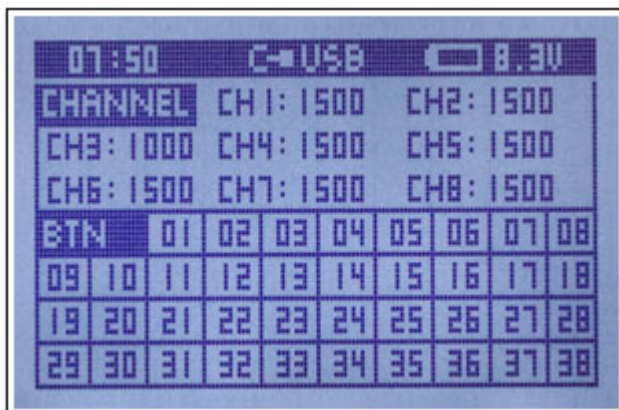
4. Introduction Of Main Menu

Menu operation, select Menu item "Back" and Press the left button to return the parent directory, press the up or down button to select menu items.
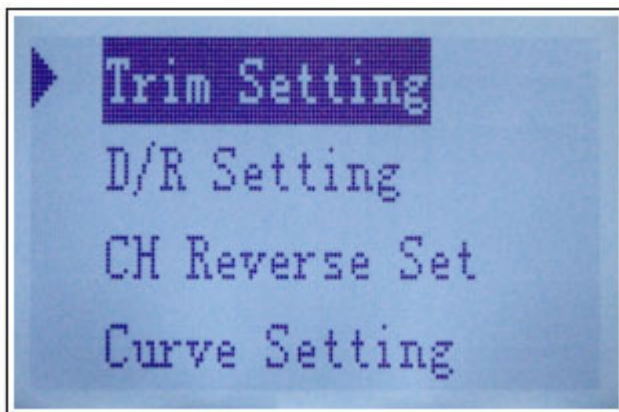
4.1 Trim Setting

● Option one, fine-tuning is for all channel

● Option two, the value of fine-tuning

● Option three, provides two sets of fine-tuning data, one set is for manually flying, and the other set is avaiable when the fly controller is switched to autopilot mode

4.2 D/R Setting
● Option one, close or open all channels proportional functions.
● Option two, choose the channel of proportional functions.
● Option two, change the proportional value of the channel.
Note: the proportional modes of the throttle channel and the common channel are different, please set the throttle channel in the throttle settings.

4.3 Channel Reverse Setting
● Option one, choose the channel to reverse servo
● Option two, reverse servo

4.4 Curve Setting

● Option one, open or close the curve functions of all channels
● Option two, choose the channel of curve functions
● Option three, change the curve value
● Option one, the curve graph is displayed in the next page
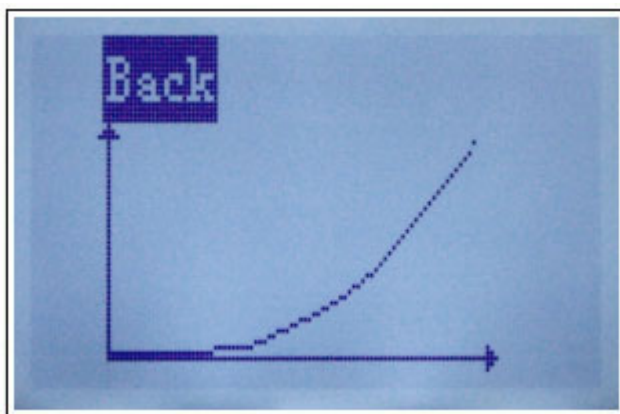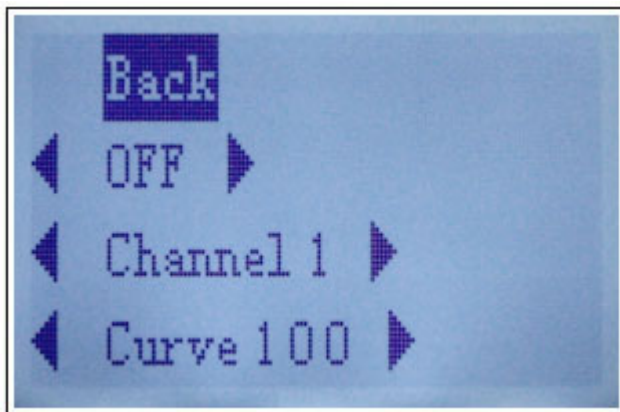
4.5 Mixing Setting

● Option one, open or close the mixing functions
● Option two, set the main mixing channel

● Option three, set the secondary mixing channel
● Option four, set mixing ratio
● Option five, set mixing mode: Delta wing, car controller

For example, Delta wing should choose: mixing channels: 1 and 2, ratio: 50%, mixing mode: Delta wing

For mixing of a car controller or a USB steering wheel, throttle and brake pedal should be mixed to a main channel


4.6 Output Mode

● Option one, choose the output mode: serial data transmission, futaba PPM, JR PPM, built-in 2.4G

● Option two, the switch of frequency detection settings

● Option three, the switch of out of control settings

● Option three, when opening, the channel 1 outputs servo-test signal to test communication

● Option five, select the number of 2.4G channels. 5, 8, 10, 12 channels can be chose depending on the receiver and the PPM will outputs data of the same number of channels.

● Option six, reset the unique ID of the remote controller. This function can generate a new identification ID preventing conflict with other controllers.

4.7 Button Mapping

● Option one, for the buttons to be set

● Option two, for the channels to be set

● Option three, for the actions to be set

Detailed actions of button mapping refer to the following sixth chapters: the use of button mapping
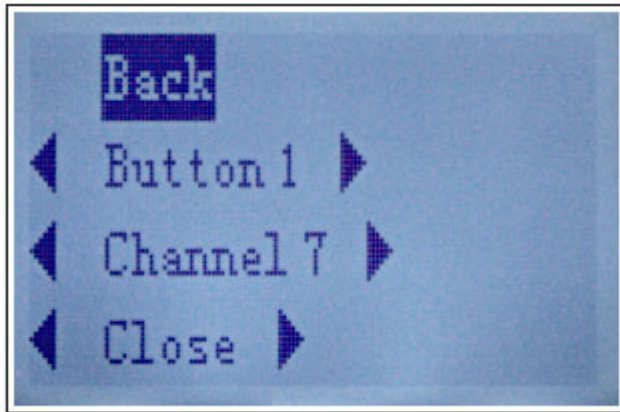
4.8 Battery Setting

● Option one, choose the alarm voltage value

● Option two, choose the battery type

● Recommend the 2S battery to choose 7.2V, and 3S battery to choose 11V
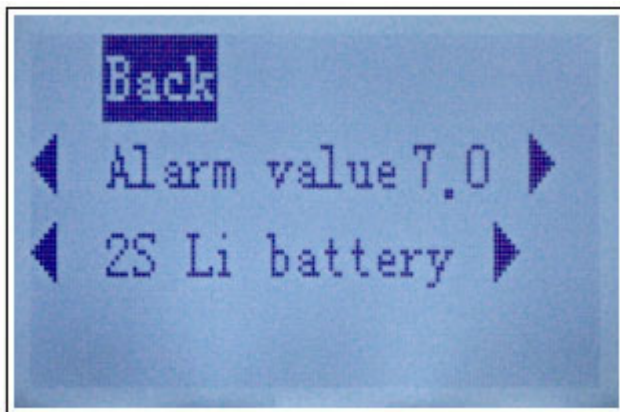
4.9 Config Setting

● Option one, save the configuration

● Option two, reset the configuration

● Option three, version number

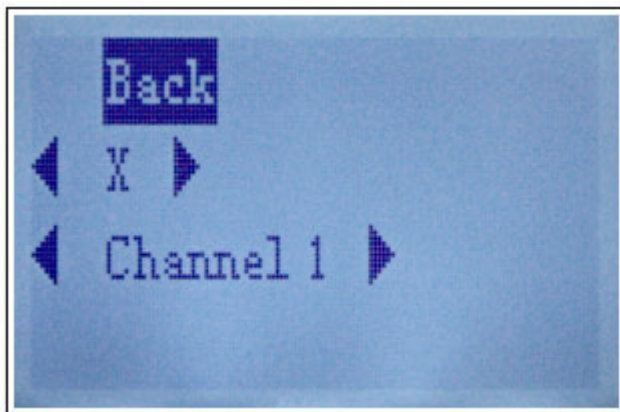## 4.10 USB Joystick Setting

● Option one, select the ratio shafts of a stick. The shafts of different sticks are different. Generally the shafts can be x, y, z, rx, ry, rz, slider

● Option two, select the above selected axis, and map it on the channel of receiver

4.11 Trainer Setting

● Option one, coach switch, which can be opened or closed by button mapping

● Option two, select the channel of coach

● Option three, select the data sources of the channel: USB joystick, PPM, Phone, head tracker
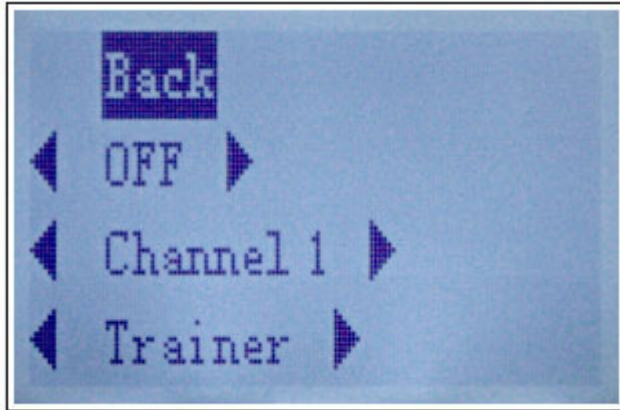
4.12 Throttle Setting

● Option one, the switch of throttle close. If opened, the throttle is locked in the minimum throttle position. The throttle can be controlled by stick only when the switch is closed
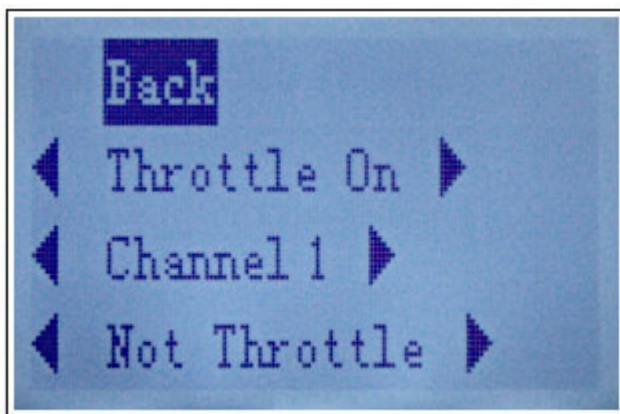
● Option two and three, set the throttle and other channels. Generally, the third channel is set to throttle channel.

5. Support devices

The tested supported devices: Logitech F510, Saitek X52/X52 Pro, Saitek CYBORG V.1 STICK, Saitek CYBORG X, Saitek Fly5, DELONG 303

6. Button Mapping

First, switch to the second screen from the main screen, and get the button number which you want to map. In the second screen, when you press a button of the USB stick, a grid of the BTN list corresponding with the button becomes black. You should remember the button number and go back to the button

mapping menu of the main menu. Then set the button number, channel and actions of the button to be mapped.
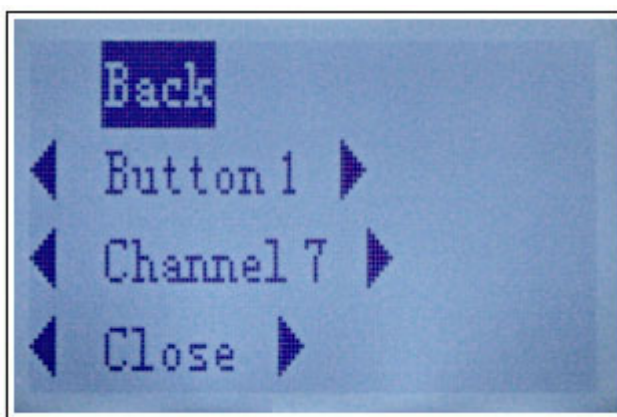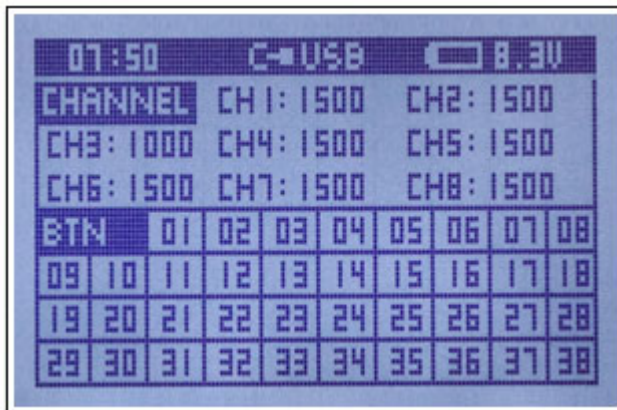
Details of the items

a、 Close: do not map the current button

b、 High: Analog channel is a three-stage switch and set it to high

c、 Middle: Analog channel is a three-stage switch and set it to middle

d、 Low: Analog channel is a three-stage switch and set it to Low

e、 Three-stage Switch: Simulate a three-stage switch,swich the three stage by order.

f、 Two-stage Switch: Simulate a two-stage switch,swich the two stage by order.

g、 The channel value+: Press the button, the channel value is increased.

h、 The channel value-: Press the button, the channel value is decreased.

i、 Fine-tuning+: Press the button, the Fine-tuning value is increased.

j、 Fine-tuning-: Press the button, the Fine-tuning value is decreased.

k、 Open or close the proportion function

l、 Open or close the curve function

m、 Switch fine-tuning mode: two groups of fine-tuning which can be switch for different applications.

n、 Map buttons to the menu control: down, up, left, right.

o、 Clear timer

p、 Coach switch on: open the coach function

q、 Coach switch off: close the coach function

r、 switch the coach ON/OFF

s、switch the out of control ON/OFF

7. The Settings Of Matching Code And Failsafe

● Set the frequency detection

a、When you get a new receiver,do not power on it.

b、2.4G Select built-in 2.4G in the output menu.

c、Select <frequency detection set open> in the menu

d、Re-power on to the receiver

e、After frequency detection, the led of the receiver will flash 5 times and the turn off.Now power off the receiver.

f、Select <frequency detection set close> in the menu

g、Re-power on to the receiver.If the communication is connected, the led of the receiver will keep light. If not, the led will turn off, then you should repeat the setp a.

● Set out of control

a、For a new receiver

b、2.4G Select built-in 2.4G in the output menu.

c、Re-power on to the receiver.If it works well, the led will keep light.

d、Select <out of control set open> in the menu, then the led of the receiver will turn off.

e、Keep the stick channel value at the position which you want it to be when out of control.Do not move.

f、Select <out of control set close> in the menu, then the led of the receiver will keep light and the set is done.

g、Power off the windbox and test the servo position when out of control.

8. Output Mode

1、Built-in 2.4G mode. You can use the built-in 2.4G transmitter and receiver.There are 5,8,10,12 channels to be chose.

The frequency detection and out-of-control protection can refer to chapter 7.

2、Futaba PPM/ESKY PPM, on this mode,PPM signal will output from the external interface on the top of the Windbox.

● 433 extended range system could be connected to increase remote control distance.

● A Windbox can be used as a slave and connected to another Windbox host. Use the coach function.

● A Windbox can be used as a slave and connected to other remote control systems (such as futaba, JR), use the coach function.

3、Wireless Serial data transmission equipment.