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FLYSKY FS-ST8B Digital Proportional Radio Control System Instruction Manual

FLYSKY

Manual
Digital Proportional Radio
Control System
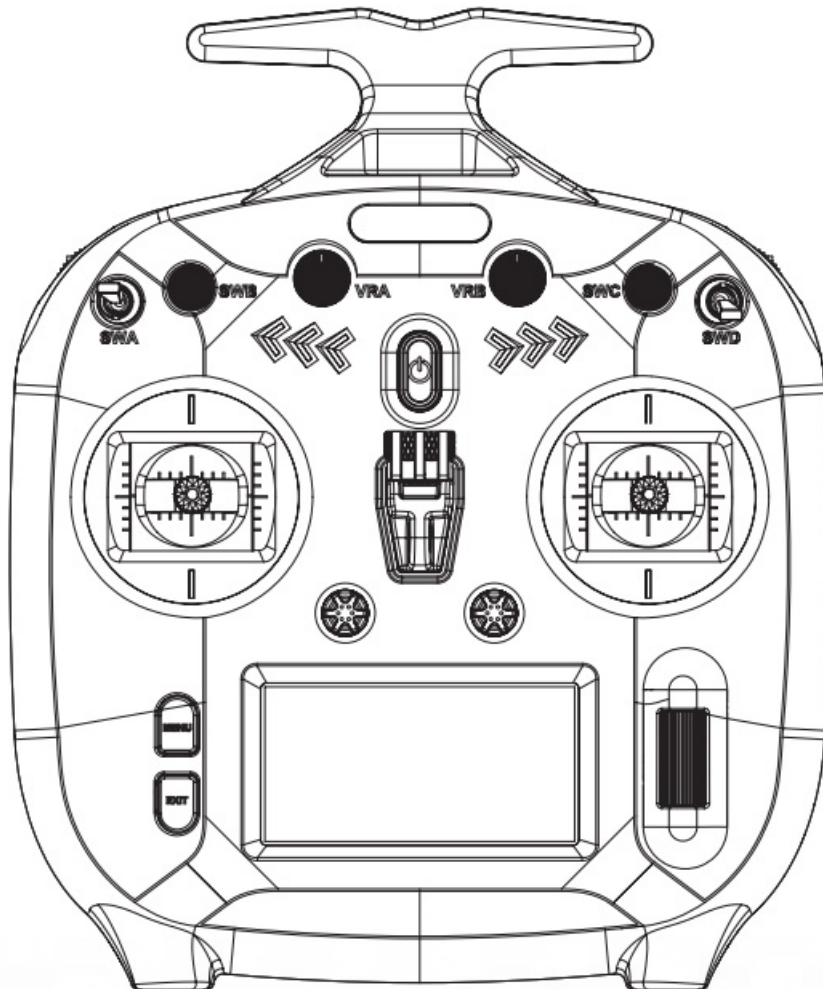
**WARNING:** This product is only for 15 years old or above

Contents

Introduction

This system consists of the FS-ST8B transmitter and FS-Br01 receiver, and is specially designed for the bait boat model.

This system needs to be used with the boat control board. Through the transmitter, users can remotely control the boat's driving, baiting, and light switch. Through the GPS satellite positioning system on the integrated control board, it can automatically navigate the model boat to multiple destinations and return back to the starting place, with the travel distance calculated. When the receiving signal is weak, the model boat will automatically turn back.

In order to facilitate the operator to control the bait boat, this transmitter is equipped with a display screen, to allow users to control the status of the bait boat in real time, such as the remote signal strength, number of satellites, transmitter battery level and boat, etc. In addition, it is also equipped with the audible alarm system. There will be an audible alarm when the battery power of the transmitter or boat is too low.

1.1 Transmitter Overview
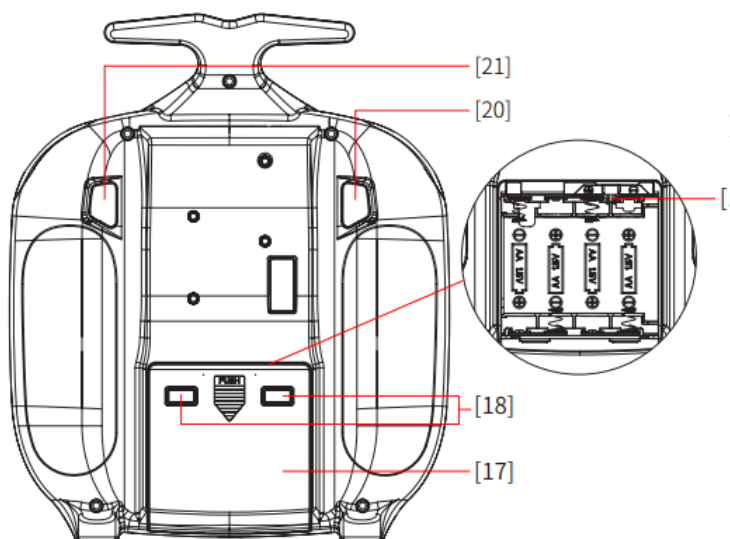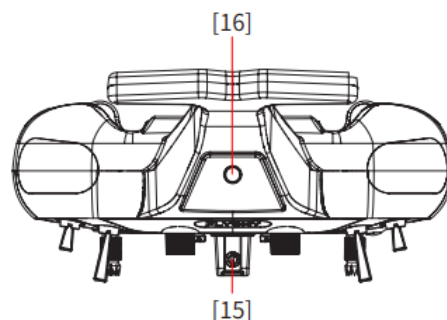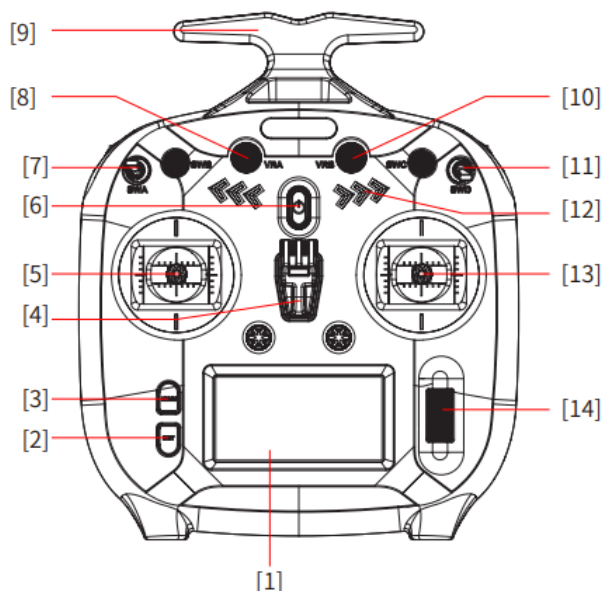
[1]	Display
[2]	EXIT Button
[3]	MENU Button
[4]	Neck Strap Hook
[5]	Left Stick(self-centering)
[6]	⏻ (Power Switch)
[7]	Three-position Switch
[8]	VRA Knob
[9]	Built-in Antenna
[10]	VRB Knob
[11]	SWD Two-position Switch
[12]	LED
[13]	Right Stick (self-centering)
[14]	Scroll Wheel
[15]	A Hole for Fixing the Cell Phone Holder
[16]	A Reserved Hole for Exterial Antenna
[17]	Battery Compartment
[18]	A Reserved Hole for XT30 Cable
[19]	JST Jack for 2S lithium battery
[20]	Right Button
[21]	Left Button

1.1.1 Controls Description

The matchup between the transmitter control and the bait boat function is described as follows (Note that the function is related to a specific protocol).

Left Stick: Controls the container.

- Up: N/A
- Down: When the left LED and right LED flash for three times at the same time, the left and right containers open.
- Left:When the left LED flashes for three times, the left container opens.
- Right: When the right LED flashes for three times, the right container opens.

Right Stick: Controls the bait boat to turn left or right and move forward or backward.

- Up: Controls the bait boat to move forward.
- Down: Controls the bait boat to move backward.
- Left: Controls the bait boat to turn left.
- Right: Controls the bait boat to turn right.

SWA Switch (three-position): Turns on and off the LED of the bait boat, and adjusts its

- Up: Turns off the LED.
- Middle: Turns on the LED, with low brightness.
- Down: Turns on the LED light, with high brightness.

VRB Knob: Adjusts the motor speed.
Left Button

- Press the button to start the auto return (Auto home) function. The boat will return to the starting point automatically. To exit the return function, press the button again or toggle the right stick (the travel exceeds 2/3 in any direction). The bait boat will travel at the speed as defined by the stick position after exit.

Right Button: Fixed speed

- When you press the button during the boat movement, the boat will move forward with the current throttle output speed. In this case, the stick can only control the boat to turn left or right or move backward. Note that the stick needs to toggle more than 2/3 of the travel so that the boat can move backward;
- When you press the button during the boat movement, if the throttle is in neutral position, the boat will stop. If the boat moves forward at this time, it will advance forward with the current throttle output speed.

1.2 Receiver Overview
FS-Br01 Receiver
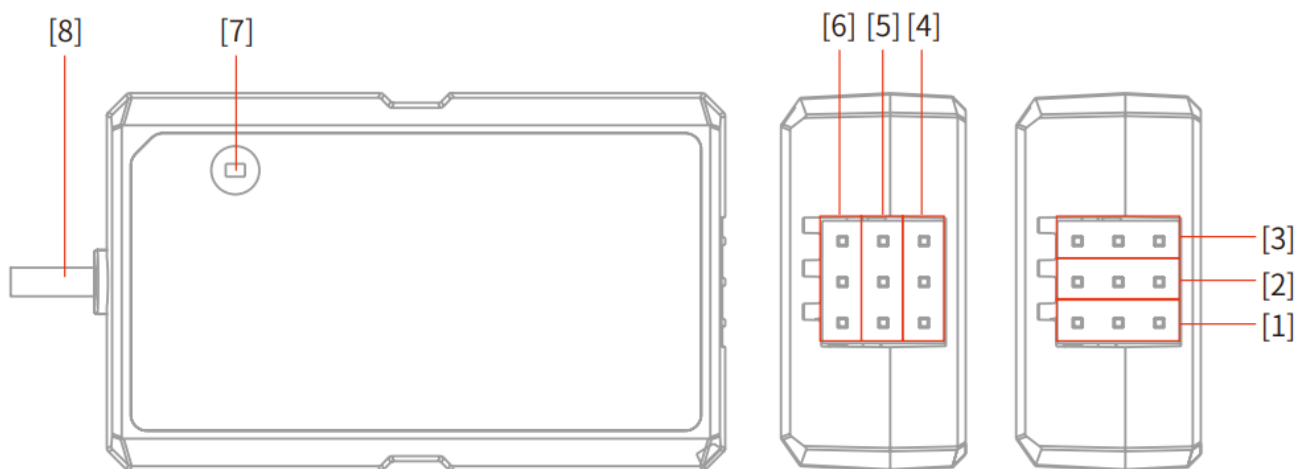
[1]	RX Interface	[5]	Power anode
[2]	TX Interface	[6]	Signal Pin
[3]	BIND Interface	[7]	LED
[4]	(Power cathode	[8]	Antenna

1.2.1 Receiver LED Status
The LED status indicates the power supply state of the receiver and its working state.
Three- flash- one-off slow flash): The receiver is waiting for firmware' update or forced firmware' update.
Three-flash-one-off Fast flash): The firmware of the receiver is upgrading.
Fast flash:The receiver is waiting for binding or in the bind mode.
Slow flash: The LED flashes slowly when the receiver is not received the signal, or losing signal.
Solid on: The receiver and the transmitter is conneted normally.

1.3 Antenna Related

This transmitter supports two antennas (internal antenna and external antenna).

Introduction Before Use

2.1 Transmitter Battery

You can AA batteries or 2S lithium batteries for this transmitter.

2.2 Turn ON/OFF The Transmitter

After the battery is installed, press and hold the power switch for seconds to turn on the transmitter.

Note: If the throttle stick is not at its neutral position when the transmitter is powered on. A pop-up menu will appear to remind you to put the throttle stick to neutral position and send a alarm sound.
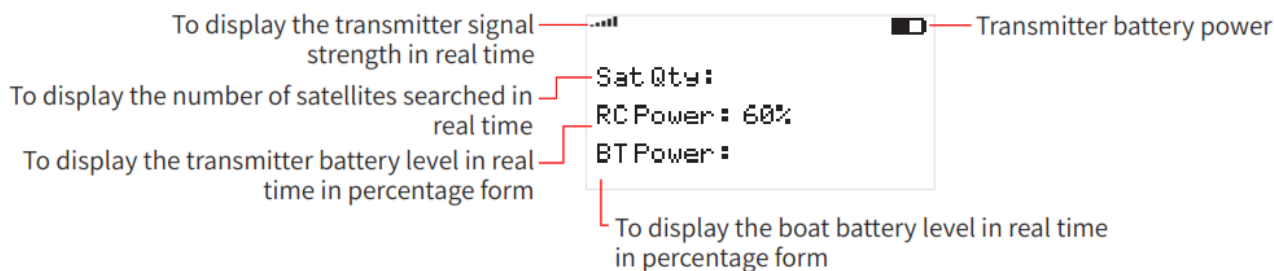
2.3 LED

This LED is a multi-color indicator. It displays in a variety of colors such as red, green, blue, yellow, cyan, purple, white, and dazzling colors. You may set it to none. In addition, you may set it to display the electricity level. The brightness of LED can also be adjusted.

The LED can be used to indicate the status of the transmitter or to give an alarm when the transmitter voltage is low, as shown in the following table:

LED Color	The Status	Corresponding Status	Note
Monochrome or dazzling color	Gradual	The transmitter's display is locked, or the transmitter is in idle mode.	Monochrome or 7 color cycles in sequence.
Red	Solid ON	The voltage of the transmitter is low.	

Main Menu

To display the transmitter signal strength in real time

To display the number of satellites searched in real time

To display the transmitter battery level in real time in percentage form

Sat Qty:
RC Power: 60%
BT Power:

Transmitter battery power

To display the boat battery level in real time in percentage form

Note:

1. There will be an audible alarm when the battery power of the transmitter, meanwhile, the battery icon will be slow flashing, and the buzzer will buzze to prompt.

2. When the system detects the battery power of the boat is lower than 20%, a popo-up prompt for low voltage alarm will be sent, meanwhile, and the boat will automatically return back to the starting place.

Function Menu

This transmitter function menu includes the following functions, which can be set by users as required, including Boat Psn, Fish spot setting, Auto Home, Bind setting, Basic setting and System settings.

```
(Main menu)          1/2    (Main menu)          2/2
Boat Psn                     Bind setting
Fish spot setting            Basic setting
Auto home                    System settings
```

4.1 Boat Psn(Boat position)

Use to display the position of the bait boat in real time, including the bathymetric data of the current location, the temperature, and the distance between the current position and the starting point. Ensure the transmitter and the receiver are connected normally and the starting point is saved before enabling this function. This function is related to the specific protocol.

```
(Boat Psn)

Depth: 0.0ft
Temp: 0°C
Dist to SP: 0m
```

4.2 Fish Spot Setting

You can set [Start point] and [Fishing point] through this function. A total of 30 fishing points can be set. You can navigate from one fishing point to another. As a result, you can start from the starting point and navigate to the fishing point automatically.

You can select [Manual] or [Auto]. When you select [Manual], the manual interface appears, displaying the current boat direction and distance between the boat and fishing point. The bait boat will approach the target fishing point through manual operation.

When you select [Auto], the bait boat automatically arrives at the fishing point saved according to the direction defined by the GPS. This function is related to the specific protocol.

```
(Start Point)        0/30
Distance
Direction

  AUTO    MANU    SAVE
```

4.3 Auto Home

When this function is enabled, the bait boat will automatically start to return to the starting point after the baiting is finished at the fishing point. Note that the starting point must be saved before enabling this function.

Note: The function is available only when the bait boat is enabled with the auto-cruise.

4.4 Binding Setting

It is used to complete the bind between the FS-ST8B transmitter and FS-Br01 receiver.

The transmitter supports two-way binding. The transmitter will display the information returned from the receiver after the two-way binding is completed. In addition, the bind settings (between the transmitter and receiver) has been completed before delivery from the factory.
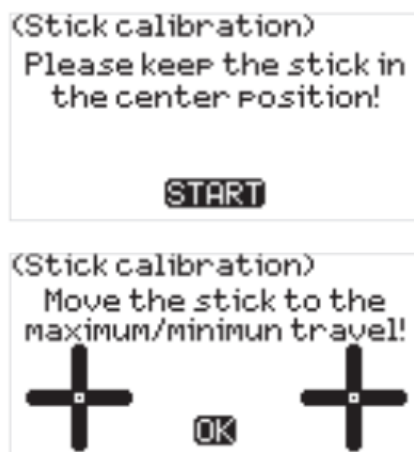
4.5 Basic Setting

Used to set basic functions, including Stick calibration, Firmware Update, About and More.

```
(Basic setting)      1/2    (Basic setting)      2/2
Stick calibration            More

Firmware update

About
```
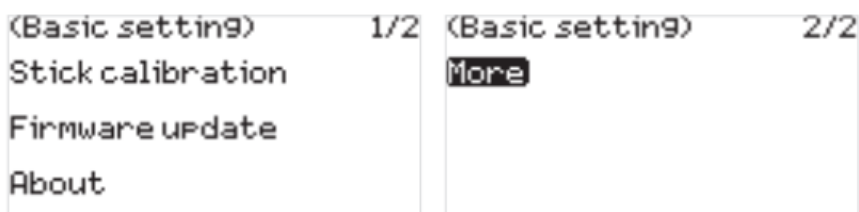
4.5.1 Stick Calibration

The calibration is required in case of data offset of the transmitter due to physical wear in long-term operations. At this time, we need to calibrate the output data and neutral angle of the stick, and potentiometers. The transmitter has been calibrated before ex-factory.
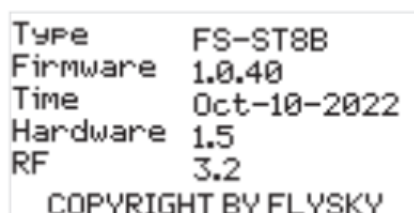
```
(Stick calibration)
Please keep the stick in
    the center position!


        START
```

```
(Stick calibration)
  Move the stick to the
maximum/minimun travel!
  ╋      ╋
        OK
```

4.5.2 Firmware Update

Put the transmitter into a firmware update state. When the firmware needs to be upgraded, it is need to put the transmitter into upgraded mode using this function first. You can update the firmware by downloading the latest version of the transmitter firmware from your computer or by using the Fly Sky Assistant.
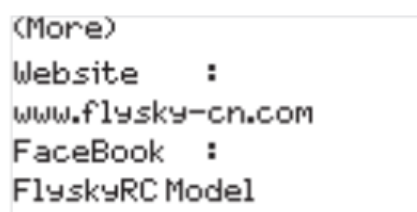
```
(Basic setting)      1/2
    Confirm firmware
Stic    update?
Firr
Abo      Yes  No
```
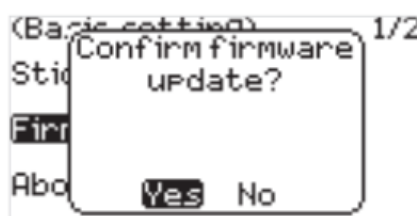
4.5.3 About

In this function, you can view some information, such as the product name, firmware version, firmware release date, and hardware version.

```
Type       FS-ST8B
Firmware   1.0.40
Time       Oct-10-2022
Hardware   1.5
RF         3.2
   COPYRIGHT BY FLYSKY
```

4.5.4 More

See more contact information's about our company.

```
(More)

Website   :
www.flysky-cn.com
FaceBook  :
FlyskyRC Model
```

4.6 System Setting

Used to set some functions, including Language, Sound, Volume, Standby timeout, Battery type, [LED color, LED brightness, LCD brightness, Contrast, Backlight time and Auto shutdown.

(System settings) 1/3	(System settings) 2/3	(System settings) 2/3	(System settings) 2/3
Language :ENGLISH	Standby timeout:OFF	LED brightness :50%	Backlight time :30S
Sound :SYS+ALA	Battery type :AA bat	LCD brightness :50%	Auto shutdown :30MIN
Volume :5	LED color :POWER	Contrast :5	

4.6.1 Language
To set the system language, including Chinese and English.
4.6.2 Sound
To set the sound for system and alarm. SYS+ALA means the same sound for system and alarm.
4.6.3 Volume
To set the volume of the sound.
4.6.4 Standby Timeout
To set the time of the standby timeout or whether to enable the standby timeout function.
4.6.5 Battery Type
To set the battery type.
4.6.6 LED Color
To set the color of the LED, or to turn off the LED.
4.6.7 LED Brightness
To set the brightness of the LED.
4.6.8 LCD Brightness
To set the brightness of the LED.
4.6.9 Contrast
To set the contrast of the LCD.

4.6.10 Backlight Time
To set the time of the backlight, namely how long the screen takes to turn off when not in use.
4.6.11 Auto Shutdown
To set the time of auto shutdown, and enable or disable it.

Product Specifications

5.1 Transmitter Specification

Product Model	FS-ST8B
Adaptive Receivers	FS-BrOl
Adaptive Models	Bait Boat
Distance	>200m (water distance without interference) for bulit-in antenna >400m (water distance without interference) for external antenna
Low Voltage Alarm	Battery Capacity <20%
Antenna Type	Two Antenna(one bulit-in antenna and one external antenna)
Dlspaly	128*64 LCD (Black and white dot matrix screen) .
Battery	1.5AA*4 / 2S Lipo (JST)
Temperature Range	-10°C – +60°C
Humidity Range	20%– 95%
Languages	Chinese, English
Charging Port	None
Color	Black
Dimensions	176*210.9*82.5mm
Weight	420g
Online Update	Yes
Certifications	CE, FCC ID:: N4ZST800

5.2 Receiver Specifications

Product Model	FS-BrOl
Adaptive Transmitter	FS-ST8B
Antenna Type	Single External Antenna
Distance	>400m(water distance without interference)
Input Power	3.5-9V/DC
Working Current	62mA
Online Update	Yes
Dlspaly Manner	In LED manner
Temperature Range	-10°C – +60°C
Humidity Range	20%- 95%
Dimensions	23.5.8*38.5*11.5mm
Weight	lOg
Certifications	CE, FCC ID: 2A2UNBRO100

Certifications

6.1 CE Warning

The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other transmitter. End-users and installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

6.2 FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or televison reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This equipment complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

Caution!

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user authority to operate the equipment.

1. The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-lacated or operating in conjunction with any other transmitter. End-users and installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

2. Move all your channels to the desired position.

3. Select [All channels] and then [Yes] in the confirmation box.

6.3 Environmentally Friendly Disposal

Old electrical appliances must not be disposed of together with the residual waste, but have to be disposed of separately. The disposal at the communal collecting point via private persons is for free. The owner of old appliances is responsible to bring the appliances to these collecting points or to similar collection points. With this little personal effort, you contribute to recycle valuable raw materials and the treatment of toxic substances.

Bilibili	Website	F
https://space.bilibili.com/439932670	http://www.flysky-cn.com/	https://www.faceb

Manufacturer ShenZhen FLYSKY Technology Co., Ltd.
Address: 16F, Huafeng Building, No. 6006 Shennan Road, Futian District, Shenzhen, Guangdong, China

Documents / Resources

FLYSKY FS-ST8B Digital Proportional Radio Control System [pdf] Instruction Manual
FS-ST8B, FS-Br01, FS-ST8B Digital Proportional Radio Control System, Digital Proportional Radio Control System, Proportional Radio Control System, Radio Control System

References

- **FlyskyRC**