RadioLink

T8FB(BT)

(FHSS)
User Manual

8-Channel Remote Controller
APP Parameter Setting via Bluetooth Connection

Compatible with Fixed-wings/Gliders/Multirotors/Cars/Boats/Robots

CE   FCC   RoHS

Content

Chapter 1 Introduction

1.1 Operation precautions

1) Do not use the remote controller in the rain! Avoid moisture entering the transmitter. If it is unavoidable to use this product in humid weather (such as competitions), please cover your remote controller and receiver with a waterproof cloth, and do not fly if there is lightning.

2) Don't use it in rainy and snowy weather. This weather environment will interfere with the remote controller equipment, resulting in loss of control and accidents!

3) Don't use this equipment in crowded areas and places prohibited by national laws and regulations!

4) Do not allow children (Less than 14 years old) to touch this product. This product is not a toy. Please be careful when operating in scenes where children are present.

5) Please strictly abide by local laws and regulations when flying to ensure safe flight!

6) Make sure the throttle stick and trim button are set at the lowest end before turning on, then turn on the power button and check whether the power supply is sufficient, then turn on the receiver!

7) Check whether the various actions of servo are consistent with the direction of the corresponding joystick before operating the model. If they are inconsistent, please adjust before using!

8) Please turn off the receiver and controlled equipment before stopping use, and then turn off the power supply of the transmitter. If the operation is reversed, it may cause loss of control and cause an accident!

9) T8FB with an operating voltage of 4.8V~18V. Please do not use a battery outside this voltage range when replacing the battery by yourself.

10) The T8FB is compatible with R8EF/R8F/ R8FM/R8XM/R8SM/R8FG/R7FG/R6FG/R 6F/R4FGM/R4F receivers. Other brands of receivers cannot be used.

11) Please refer to the website to modify the throttle hand and return to the center position joystick: https://www.youtube.com/watch?v=hp4 g-NTMqMg

12) Any loss caused by the use of this product shall be borne by the user.

1.2 T8FB+R8EF introduction

1.2.1 Specification

T8FB Transmitter	
Size	173*102*206mm (6.8"*4"*8.11")
Weight ((with R8EF))	0.47kg (13.05oz)
Channel Quantity	8 channels
Control Range	about 2000 meters in the air (actual distance depends on the flight environment)
Operating Current	<80(±5)mA
Operating Voltage	4.8V~18V
ACPR	>36dBM
Frequencies Band	2.4GHz ISM band (2400MHz~2483.5MHz)
Modulation Mode	GFSK
Bandwidth	400KHZ
Spread Spectrum Mode	FHSS 67 channels pseudo-random frequency hopping
Compatible receivers	R8EF(Standard), R8SM, R8FM, R8XM, R8F, R8FG, R7FG, R6FG, R6F, R4FGM, R4F

R8EF Receiver	
Size	41.5*21.5*11.5mm (1.63"*0.85"*0.45")
Weight：	14g
Channel Quantity	8 channels
Control distance	about 2000 meters in the air (actual distance depends on the flight environment)
Operating Current	38-45mA@5V
Operating Voltage	3.0V~15V DC
Signals Output	SBUS&PPM&PWM
Compatible transmitter	T8FB/T8S/RC8X/RC6GS V3/RC4GS V3/RC6GS V2/RC4GS V2/RC6GS/RC4GS

1.2.2 Packing List

T8FB Transmitter *1   R8EF receiver *1   Packing Box *1

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User Manual *1

Hook and Spring *1

1.2.3 Recommended accessories

The following accessories are not the standard accessories of the T8FB. You can visit our

official website www.radiolink.com for more products and details.

R8SM Mini receiver (2 gram)

F121 Pro FPV Training Drone

Wireless Trainer Cable

Byme-A Flight Controller

1.2.4 Transmitter Hardware

T8FB (Mode 2) is shown as below

Note :The phases of the 4 channels can be easily changed by prodding the corresponding phase switches instead of modifying the parameter data in the software/APP.

T8FB Buttons and Switches:

Power button: Push it up or down to turn it on or off; or push it to confirm the connection when upgrading the firmware.

Throttle/Rudder/Aileron/Elevator Stick: The default Channel 1 to Channel 4 controls the roll, pitch, throttle and yaw of the aircraft.

Trimmer buttons: T8FB has 4 groups trimmer buttons (two for each group), which can trim roll, pitch, throttle and yaw respectively. The trimmer buttons are used to quickly adjust the model

during flight. When debugging the model, please adjust it through SUB function in the parameter setting APP.

Switch A and Switch B: CH7 (SWA) is two-way switch, and and CH5 (SWB) is three-way switch. which can be assigned to the auxiliary channel through APP to control the equipment connected to this channel. (Note: If you have purchased Radiolink RTF with a T8FB transmitter, the three-way switch CH5 (SWB) controls the switching of the flight mode by default.)

Slider switch: CH8 (VRA) and CH6 (VRB) can be set by parameter setting APP according to your needs, and is mostly used for Pan/Tilt/Zoom adjustment.

The back part of T8FB:

①   Earth Pole
②   Null
③   Voltage Input: 4.8-18V
④   Output: PPM
⑤   Input：RSSI

1.2.5 Transmitter Battery Charging

The working voltage of T8FB is 4.8V-18V, and the low voltage alarm is self-adaptive. For example: if you are using a 2S lithium battery to power T8FB, T8FB will send out a beep sound alarm when the battery voltage reaches 7.3V automatically, with no separate settings.

Power supply battery selection forT8FB: You can use the standard battery box to with 4 pieces 1.5V NiMH batteries for power supply, or use lithium batteries (2S/3S/4S) to supply power.

Note: When inserting the battery, please make sure the positive and negative poles are inserted correctly. Since the T8FB has anti-reverse insertion function, if the positive and negative poles are inserted reversely, T8FB will not be powered on, and the T8FB will not be damaged. So please insert the battery correctly when the positive and negative poles are reversed.
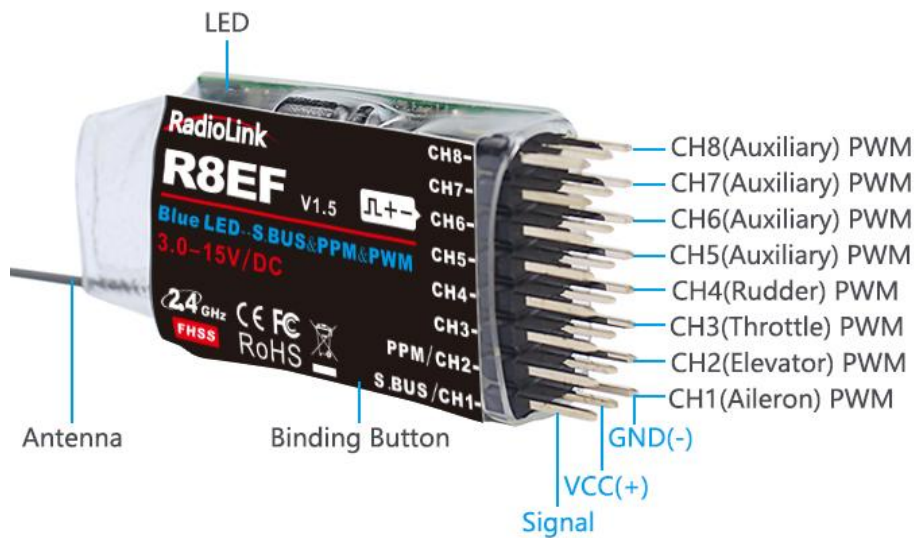
1.3 R8EF Receiver

1.3.1 Receiver Mode and Signal Switch

The standard receiver packed with T8FB is R8EF, 8-channel receiver with PWM and SBUS/PPM signal output supported.
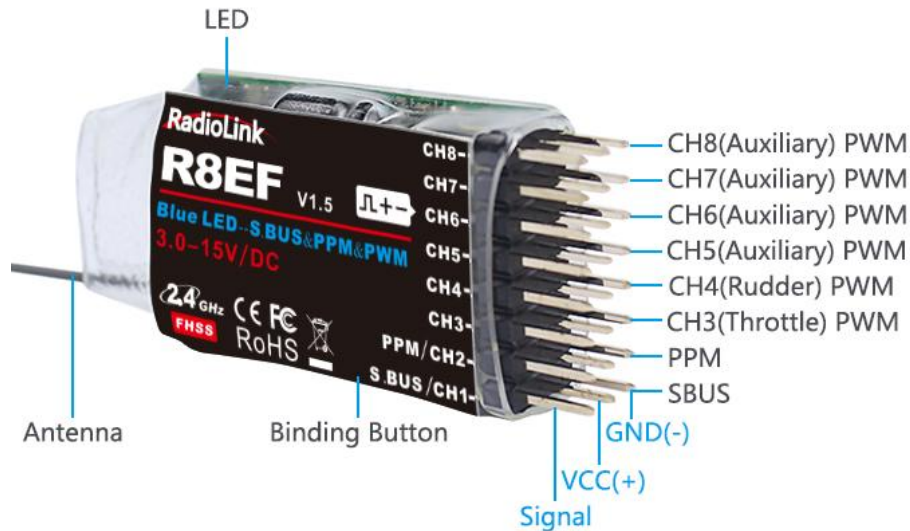
Signal Working Mode

(1) PWM Working Mode: Receiver indicator is RED with all 8 channels output PWM signal.
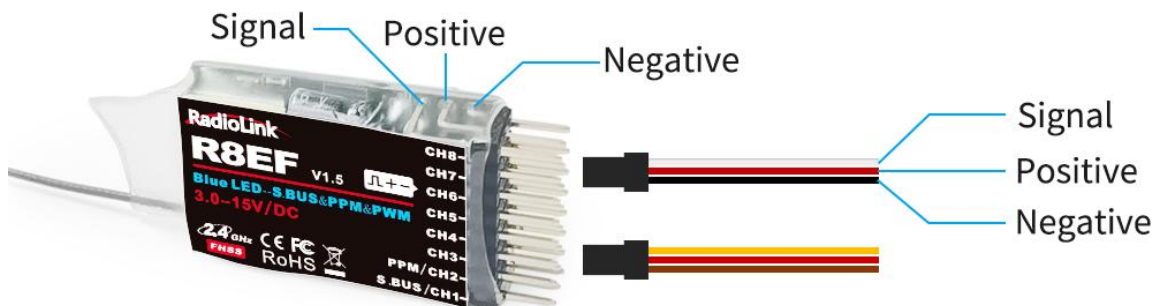

(2) SBUS/PPM Working Mode

Receiver indicator is Blue(Purple) with 8 channels output in total. Channel 1 is SBUS signal, channel 2 PPM signal and channel 3 to 8 PWM signal.

Signal Switch between SBUS&PPM and PWM

Short press the binding button on the receiver twice within 1 second to switch the SBUS/PPM signal to PWM signal.

1.3.2 Receiver Connection

The connection wire for receiver is shown in the picture above. The common ones are white/red/black wire or yellow/red/brown wire. The two types of servo cables both are the light-colored wire as the signal wire, the dark-colored wire as the ground wire, and the middle is 5V power supply, and the three wires correspond to "∫∟＋－".

Note:

1.Radiolink receivers are all designed with anti-polarity connect protection. When the servo cable is plugged reversely, the receiver will not work.

2.The receiver operating voltage is 3.0V-15V. When the receiver uses a separate battery for independent power supply, the receiver will not be damaged if the battery polarity is reversed, but if the servo is connected at this time, it will cause damage to the servo.

1.3.3 Guide of Receiver Install

① Keep antennas as straight as possible, or the effective control range will reduce. PS: Generally, the receiver's antenna is longer than the body of drone, but also shouldn't break or shrink the antenna into it.

② Big models may contain metal parts that influence signal emission. In this case, antennas should be positioned at both sides of the model to ensure the best signal status in all circumstances.

③ Antennas should be kept away from metal conductor and carbon fiber at least half inch away and no over bending.

④ Keep antennas away from motor, ESC or other possible interference sources.

⑤ Receiver contains some electronic components of high-precision. Be careful to avoid strong vibration and high temperature.

⑥ Special vibration-proof material for R/C like foam or rubber cloth is used to pack to protect receiver. Keeping the receiver in a well-sealed plastic bag can avoid humidity and dust, which would possibly make the receiver out of control. Putting the receiver into a plastic bag can also prevent fuel and residue from entering.

1.3.4 Binding

Every transmitter has a unique ID code. Before using, binding transmitter to receiver on aircraft is a must. When binding is finished, ID code will be stored in the receiver, no need to rebind, unless the receiver is going to work with another transmitter. If you purchase a new compatible receiver, binding needs to be done before using.

Binding steps of all transmitters and receivers from RadioLink are the same as follow:

① Put the transmitter and the receiver close to each other in parallel (about 50 centimeters).

② Push the Power Switch to power on T8FB.

③ Power on the R8EF, the LED of R8EF will start flashing slowly.

④ There is a binding button(ID SET) on the side of receiver. Press the button until the LED flashing quickly and release, binding process is ongoing.

⑤ When the LED stops flashing and turns to always on, binding is complete. If not succeed, the LED will keep flashing slowly to notify, repeat the above steps.

Check the binding tutorial here: https://www.youtube.com/watch?v=D2cwvloIMDM

Chapter 2 Parameters Setup APP

2.1 Mobile phone APP

2.1.1 Mobile Phone APP Installation

Android APP: Visit https://www.radiolink.com/t8fb_bt_app to download the android APP to setup T8FB parameters by Bluetooth connection.
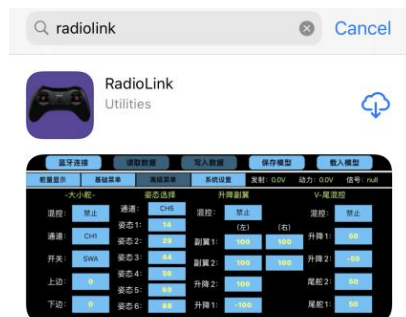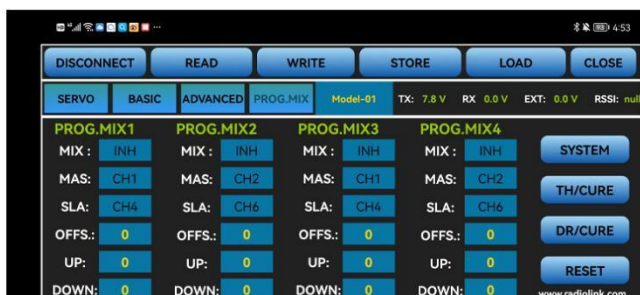
NOTE: The APP will not collect any user's information, you can even use this APP without Internet connecting. The APP asked for Location Permission only used for connecting and telemetry function.

Apple APP: Search Radiolink in Apple store and then click it to download.

2.1.2 Mobile Phone APP Connection

Connection of both Android APP and Apple APP to T8FB are the same as below:

① When the installation of parameter setup APP is complete, push the power button to turn on T8FB.

② Click to enter the APP, a message will pop out to ask for permission to turn on the Bluetooth function.

③ Click CONNECT on the top left of interface, a list of devices will pop out for selection.

④ Select RadioLink device, the two LED indicators at rightmost will flash with DD sounds.

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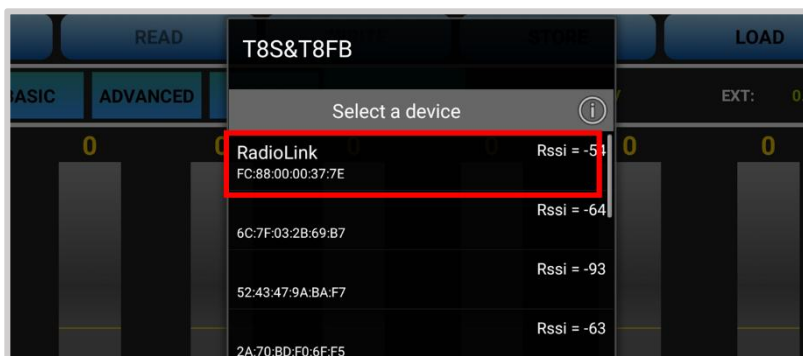
⑤ Push any of the trimmer buttons to stop the DD sounds and the servo range will display on the APP, meaning connection between the APP and T8FB succeed.

Note:

If there is no servo range display in APP, it means the connection is unsuccessful and you need to reconnect.

If you cannot find the Bluetooth device with the name "Radiolink" after clicking "CONNECT". Please
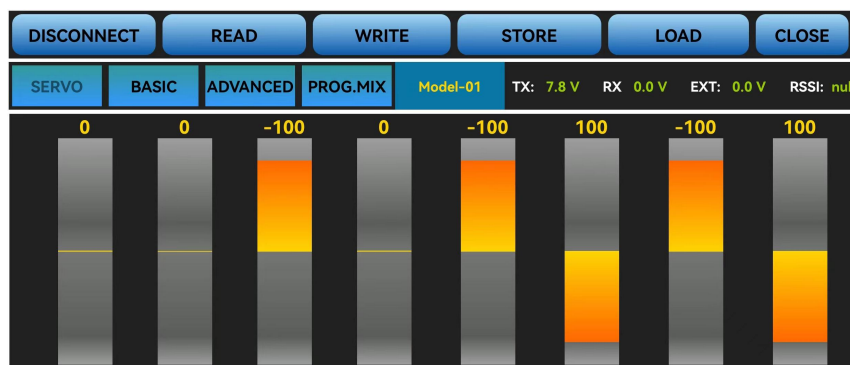
check whether the "Location Information" of your phone is turned on, if not, please open the "Location Information";

If the "Location Information" is on, but you still can't find "Radiolink Bluetooth device". Please open the application in the phone --settings-application management--T8S&T8FB

permissions--location information, change the location information from "only allowed during use" to "Prohibited", and then change to "allowed only during use" again.

If all the steps above have finished, but the mobile phone parameter setup APP still cannot connect the transmitter success, please download the version V603.

2.1.3 Mobile Phone APP Parameters Setup Menu

Parameters setup of both Android APP and Apple APP are the same.

The setup menu includes: SERVO, BASIC, ADVANCE, PROG.MIX. After click PROG.MIX, there are 4 PROG.MIX setting, SYSTEM, TH/CURE, DR/CURE, RESET. For detailed setting method, please refer to 3.2 Basic Menu.

The 8 rectangles show the CH1-CH8 servos range (4 basic channels and 4 auxiliary channels) from left to right. CH1--Aileron, CH2 - Elevator, CH3 - Throttle,CH4--Rudder, CH5 to CH8 -- Auxiliary channels. You can push the joystick or switches to know which channel it is.
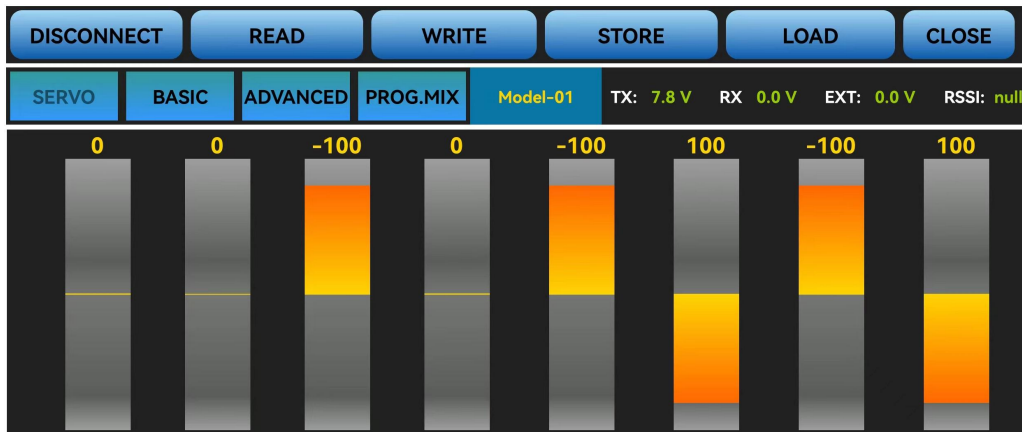
There are function keys on the top of the parameter setup interface.

(DIS)CONNECT: When APP is opened and T8FB is powered on, click CONNECT and a list of Bluetooth devices will pop out and select the RadioLink device to make connection. The two LED at the rightmost will flash with DD sounds, press any of the trimmer buttons to stop the DD sounds and the servo range will display on the APP. If fails, press DISCONNECT and CONNECT again.

READ: Click READ, two short D sounds will be heard and the APP starts reading the data in T8FB. Every time the APP is reopened, the data displayed is the initial default value. If the parameters are modified, you need to click to "READ" again to display the modified data.

WRITE: Click "WRITE" and three slow D sounds mean the modified data have been written successfully. If no D sound means written failure, please reconnect T8FB to the APP and re-write.

Note:

1. Click "WRITE" each time parameter is modified to make sure it's well input to the T8FB. The modified parameters won't be saved if "WRITE" is not clicked.

2. If you want restore the factory default settings, please reconnect to the APP, and click "Reset".

LOAD (Load/New/Delete model) :

There are three functions can be set by press LOAD, that is load or select model data that have set already and add a new model.

① Load model: A tooltip will pop out when Click LOAD, and then click "SELECT" to load the model data from this tooltip. If there is no model data have stored successfully, the tooltip will show blank.

② Create new model: Click "NEW" and name the new model, for example, "RacingDrone1". Click "YES" to save the new model's name, then click the model's name, the gray title bar on the top of tooltip will change to RacingDrone1, click "SELECT" to select the model's name, and then set up all the parameters depends on your drone, click "STORE" to save the settings, "/mode/RacingDrone1.txt" pop out means the new model have set successful.

③ Delete model: choose a model's name from the tooltip, for example, still the "RacingDrone1", the gray title bar on the top of tooltip will change to RacingDrone1, then click "DELECT", an alert box will pop out, click "YES" to delete the model data.

STORE: Click to save the APP data as a file in the mobile. T8FB support unlimited number of model data to store, and easy to search in the phone. If the new file created is forgotten to rename, but STORE as Model-New, the data in this file will be cleaned automatically when trying to create another new file sharing the same file name.

Note: Each interface can display the transmitter voltage, receiver voltage, RSSI signal strength value, power battery voltage telemetry (when using R8FG, R7FG, R8F, R8XM receivers with telemetry function)

CLOSE: Click "CLOSE" to exist the APP.

2.2 Software APP on Computer

2.2.1 Software APP Installation on Computer

Go to the official website https://www.radiolink.com/t8fb_bt_app to download the computer

software APP, and run the program below.
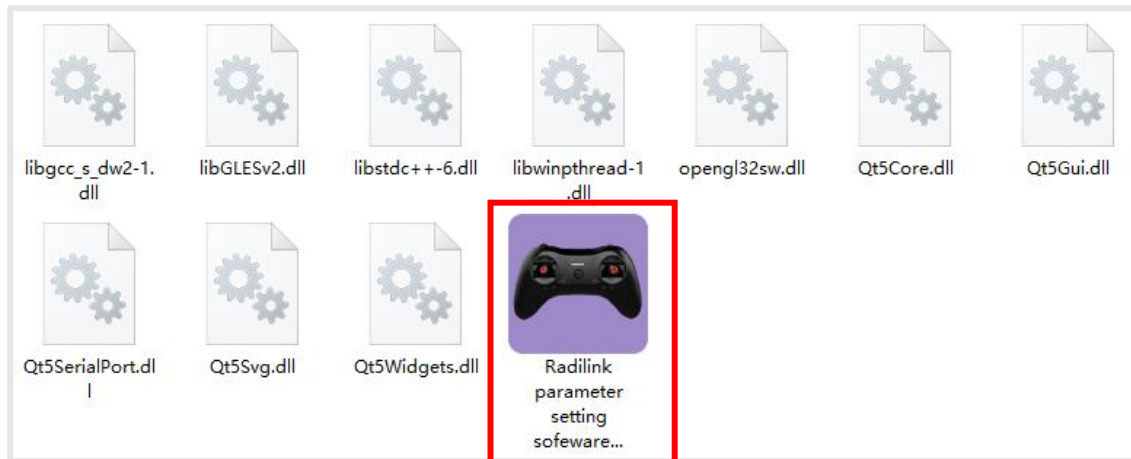
If it's your first time to use computer parameter APP, you need to install the driver before

using it. Please click the link below to download and install driver:

http://www.radiolink.com.cn/firmware/transmitter/T8FB(BT)/

or contact us by email at: after_service@radiolink.com.cn

2.2.2 Software APP Connection on Computer

After the driver is installed, T8FB transmitter can connect to computer parameter software.

① Turn on T8FB transmitter, and connect it to the computer with a USB data cable.

② Open the parameter software in the downloaded file. Choose Port Number (The COM

port of different computers will be different), click OPEN to connect.
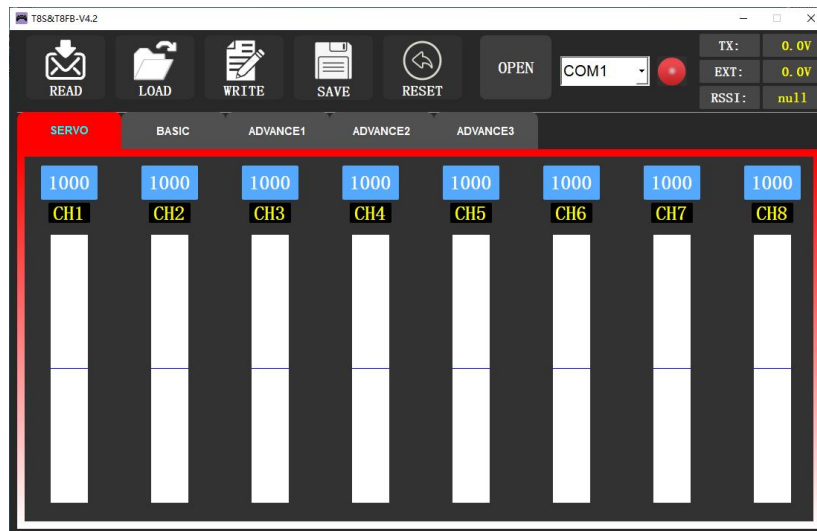
Note: If the driver is installed normally, but the COM port connected to T8FB cannot be detected, you could try another USB data cable. Do not use USB charging cable.

③ T8FB will continuously make D sounds, press any of the trimmer buttons to stop the DD sounds.
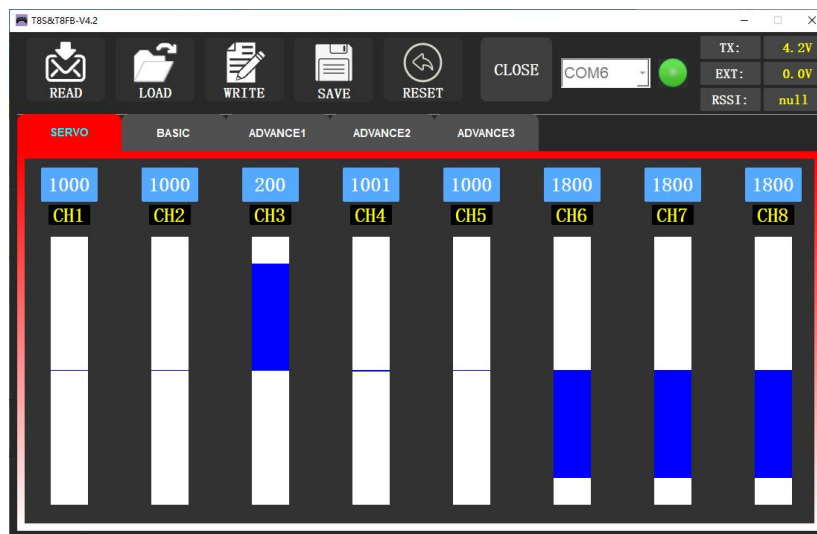
READ: Click READ, two short D sounds will be heard and the APP starts reading the data in T8FB. Every time the APP is reopened, the data displayed is the initial default value. If the parameters are modified, you need to click to "READ" again to display the modified data.

WRITE: Click "WRITE" and three slow D sounds mean the modified data have been written successfully. If no D sound means update failure, please reconnect T8FB to the APP and re-write. Click "WRITE" each time parameter is modified to make sure it's well input to the T8FB.

* After modifying the parameters, please click to write data, otherwise the modification will be invalid.

* If you want to restore the factory default settings, you can click "Factory Settings".

LOAD: Click LOAD and a pop out of 'Model Select' will display. If there is no successfully stored data, there will be no display. Besides, user also can create a new file or select among the saved files.

SAVE: Click to save the APP data as a file in the computer.

Note: Each interface can display the transmitter voltage, receiver voltage, RSSI value, and telemetry battery voltage (Telemetry function is available when using R8FG, R7FG, R8F, R8XM receivers).

Chapter 3 Function Setup Menu on APP

3.1 SERVO Menu

The 8 rectangles show the CH1-CH8 servos range instantly (4 basic channels and 4 auxiliary channels) from left to right. CH1--Aileron, CH2 - Elevator, CH3 - Throttle, CH4--Rudder, CH5 to CH8--Auxiliary channels.

There is a real-time display when you are toggle any channel switch, it is suitable for set up complex mix control functions.
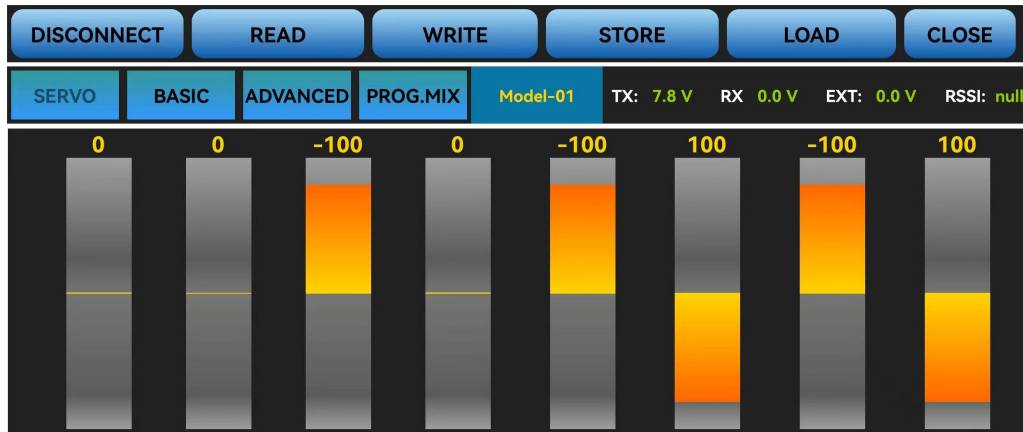
The interface of parameter setup APP on phone.
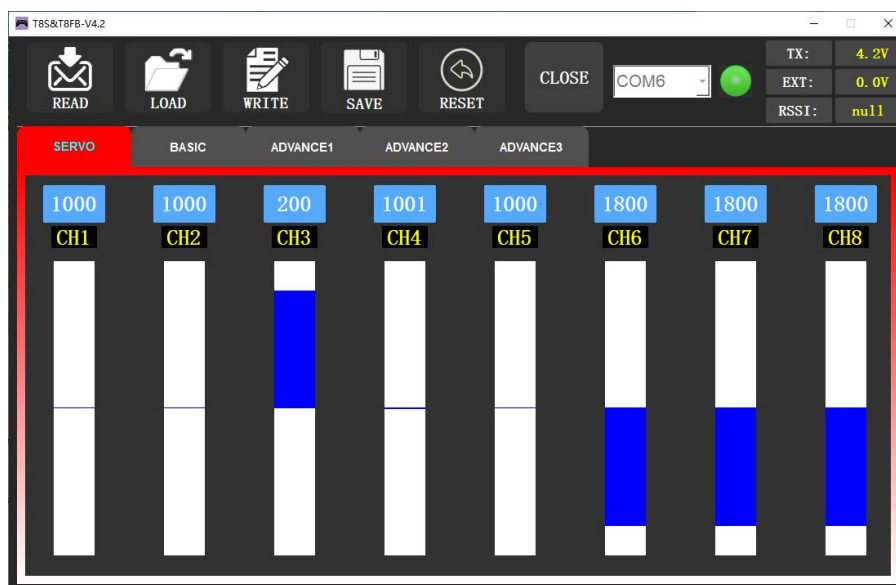
The interface of parameter setup software on computer.

3.2 BASIC Menu

3.2.1 REVERSE

This function is to change the direction of the servo in response to the remote controller input.

Make sure to check all servos move to the correct direction as wish under control.

Note: If programmable mix control function is used to control several servos for fixed wing/gliders, e.g. V-TAIL mix control, make sure to set the phase in advance to avoid possible confusion.

The interface of parameter setup APP on phone.

The interface of parameter setup software on computer.

After changing the channel phase, please check the control of the corresponding channel on the model, to make sure the response direction of the channel is correct. Make sure that the response of each servo with the operation of transmitter is correct.

3.2.2 SUB-TRIM

Makes small changes or corrections to the neutral position of each servo. The default is 0 setting by factory setting. That is, no SUB-TRIM. The range is from -100 to +100 and can be modified with actual need.

The interface of parameter setup APP on phone.

The interface of parameter setup software on computer.

This function is used to set the neutral position of the servo, not to set the servo surface to be horizontal. So, the recommended steps are as follows:

• Zero out the SUB-TRIM when the servo is not connected to servo surface, and adjust the neutral position of the servo through SUB-TRIM.

• Zero out the SUB-TRIM.

• Mount servo arms and linkages so that the control surface's neutral is as correct as possible.

• Modify with SUB-TRIM small range value to make fine corrections.

3.2.3 END POINT ADJUSTMENT (EPA)

This function is used to set travel range of the servo connected to the channel.

When setting the model or after the first flight, if you feel that the movement of the model is still relatively small when you move the joystick to the maximum position. You can increase the travel range percentage of the corresponding channel of the servo (the maximum can be adjusted to 120, The default is 96). EPA-L and EPA-R respectively represent the travel range on two sides of the neutral point. You can choose the side you want to modify to adjust travel range percentage.

SERVO	BASIC	ADVANCED	PROG.MIX	Model-01	TX: 7.8 V	RX 0.0 V	EXT: 0.0 V	RSSI: null
-CH-	-REV-	-SUB-		-EPA-L	-EPA-R		-F/S-	DELAY
CH1:	NORM	0		96	96		50	100
CH2:	NORM	0		96	96		50	100
CH3:	REV	0		96	96		0	100
CH4:	NORM	0		96	96		50	100
CH5:	NORM	0		96	96		50	100
CH6:	NORM	0		96	96		50	100
CH7:	NORM	0		96	96		50	100
CH8:	NORM	0		96	96		50	100

The interface of parameter setup APP on phone.

The interface of parameter setup software on computer.

3.2.4 FAIL SAFE (F/S)

If the flight has reached the limit control distance, there is strong interference in the flight area, there are obstacles between the transmitter and the receiver, or T8FB low voltage it will cause loss of control. At this time, you can set the Fail-Safe, so that the model can maintain working at the F/S value you set after loss of control. F/S needs to be set in advance. Each channel can be set independently.

According to your needs, set the servo travel range output by the channel. After setting it, the receiver will continue to output the servo travel range according to the value you set when the receiver loses the control of transmitter.

-CH-	-REV-	-SUB-	-EPA-L	-EPA-R	-F/S-	DELAY
CH1:	NORM	0	96	96	50	100
CH2:	NORM	0	96	96	50	100
CH3:	REV	0	96	96	0	100
CH4:	NORM	0	96	96	50	100
CH5:	NORM	0	96	96	50	100
CH6:	NORM	0	96	96	50	100
CH7:	NORM	0	96	96	50	100
CH8:	NORM	0	96	96	50	100

The interface of parameter setup APP on phone.

CHANNEL	REVERSE	SUB-TRIM	END POINT--L---R---		FAIL SAFE	DELAY	AUX-CH
CH1:	NOR	0	96	96	50	100	NC
CH2:	NOR	0	96	96	50	100	NC
CH3:	REV	0	96	96	0	100	NC
CH4:	NOR	0	96	96	50	100	NC
CH5:	NOR	0	96	96	50	100	SwB
CH6:	NOR	0	96	96	50	100	VrB
CH7:	NOR	0	96	96	50	100	SwA
CH8:	NOR	0	96	96	50	100	VrA

The interface of parameter setup software on computer.

Note:

1.The setting of the throttle F/S also applies to the low battery voltage. F/S value 0 means throttle stick at the lowest point while 50 means at the central point.

2.The F/S (Fail-safe) function can be used in certain competitions to ensure safe landing of the model prior to flying away and dropping. Besides, it can also be used make all servos neutral to maximize the flight time.

3.2.5 DELAY

Adjusts the synchronous ratio between the servos position and the actual operation. The
default value is 100 by factory setting meaning no delay.

The interface of parameter setup APP on phone.

The interface of parameter setup software on computer.

3.3 ADVANCED Menu

3.3.1 D/R (Dual Rate)

The model can be controlled to work on different servo travel range by a switch. Before using this function, set the state of "Mix" from "INH" to "ON".CH1/2/3/4 can be chosen to set separately. the switch can be set to SWA or SWB. "Up" and "Down" correspond to the positions of switch. The value of "Up" and "Down" is maximum servo travel range you set.

Channels 1 to 4 can be set for different servo travel range both individually and at the same time.

When setting one channel for different servo travel range, click "WRITE" after setting D/R value for the corresponding channel. When setting 4 channels for different servo travel range at the same time, click "WRITE" after setting D/R value for each channel. For example: after setting D/R value of channel 1, click "WRITE" to save the settings, and then switch the channel to "CH2". Set D/R value of channel 2, and then click "WRITE" to save the settings. Repeat this step for channel 3 and channel 4.

DR/CURE: It's an index. When it is not set, the value defaults to 0, and the output servo travel range of the corresponding channel will be output in proportion to the move of the joystick. The value can be set from -100% to +100%. The change of the index will not change the maximum and minimum servo travel range. When controlling the aircraft, the index setting value is usually negative.

● When the index is a negative value, the greater the negative value, the lower the sensitivity of the joystick in the neutral position and the higher the sensitivity at both ends position.

● When the index is a positive value, the greater the positive value, the higher the sensitivity of

the joystick in the neutral position, and the lower the sensitivity at both ends position.

The interface of parameter setup APP on phone.
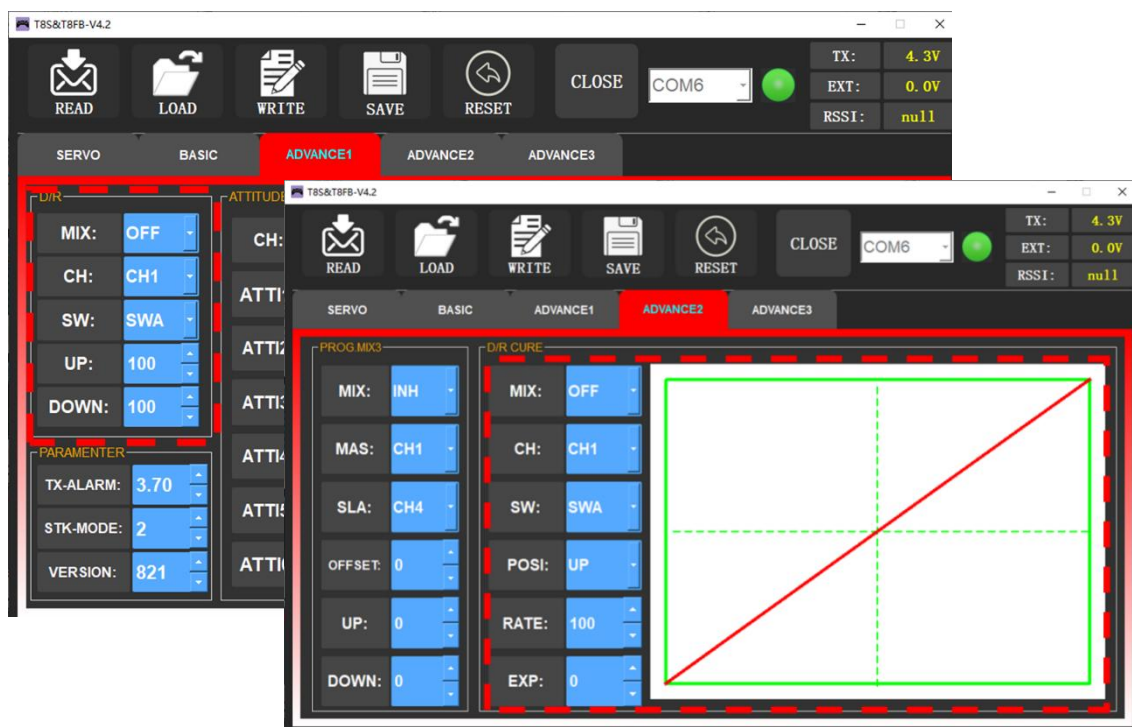
The interface of parameter setup software on computer.

3.3.2 ATTITUDE

Select the preferred channel from CH5 through CH8. CH5 is always the default switch to change attitude when connect to flight controller PIXHAWK/MINI PIX/APM/TURBO PIX with multi-rotor firmware, and CH8 is the default switch with fixed-wing firmware, while CH7 is default when connect to DJI flight controller. For the default channel to switch attitudes, please refer to the flight controller user manual.

Note: After open the "Attitude" function, the switch of CH5 and CH7 will be used by default to control the output of the "attitude channel".

The values behind each channel means different control percentage output different control signals. The default values of T8FB of each attitude is corresponding to the values of flight controller PIXHAWK/MINI PIX/APM/TURBO PIX. That is, when the above flight controllers are used with T8FB, attitude can be selected on the Mission Planner and no need to setup specific parameter.

Different values can be set for ATTI 1 to ATTI 6. Then you can change the flight attitude by press CH5/CH7.

The interface of parameter setup APP on phone.

The interface of parameter setup software on computer.

3.3.3 ELEVON

"Elevator mix" is also known as "delta wing mix". It is often used for delta wing aircraft. Two servos can control two servos surfaces that on the left and right sides of the aircraft separately, and operate aileron function and elevator function.
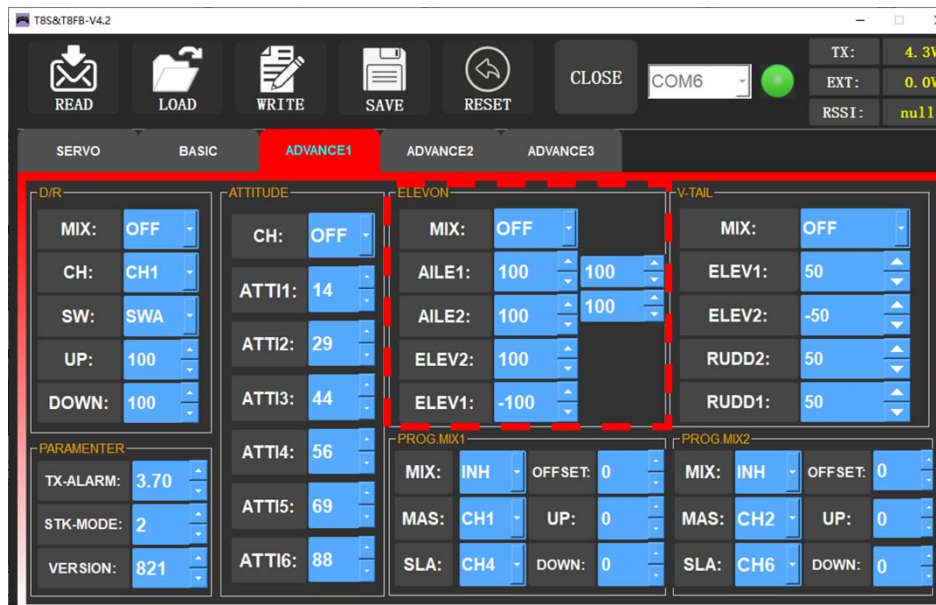
When "MIX" is set from "INH" to "ON", the "AILE" and "ELEV" function is turned on. When this function is turned on, then both CH 1 and CH2 will respond, and servo travel range can be adjusted individually.

- AILE 1 and ELEV 2 correspond to the response rate of channel 1 when performing aileron operation and elevator operation.

- AILE 2 and ELEV 1 correspond to the response rate of channel 2 when performing aileron operation and elevator operation.

The specific value is the amount of servo travel range when the corresponding channel performs the aileron or elevator operation. Positive and negative values represent different directions of movement.

The interface of parameter setup APP on phone.

The interface of parameter setup software on computer.

3.3.4 V-TAIL

V-TAIL used for fixed wing with v-tail. Two servos can control two servos surfaces that on the left and right sides of the aircraft separately, and operate aileron function and elevator function.

When "MIX" is set from "INH" to "ON", the "ELEV "and "RUDD "function is turned on. When this function is turned on, then both CH2 and CH4 will respond, and servo travel range can be adjusted individually.

SERVO	BASIC	ADVANCED	PROG.MIX	Model-01	TX: 0.0 V	RX 7.8 V	EXT: 0.0 V	RSSI: null

-D/R-		ATTITUDE		ELEVON			V-TAIL	
MIX :	INH	CH :	INH	MIX :	INH		MIX :	INH
CH :	CH1	ATTI1:	14		(L)	(R)	ELEV1:	50
		ATTI2:	29	AILE1:	100	100		
SW :	SWA	ATTI3:	44	AILE2:	100	100	ELEV2:	-50
UP:	100	ATTI4:	56	ELEV2:	100		RUDD2:	50
		ATTI5:	69					
DOWN	100	ATTI6:	88	ELEV1:	-100		RUDD1:	50

The interface of parameter setup APP on phone

ELEV 1 and RUDD 2 correspond to the response rate of channel 2 when performing elevator operation and rudder operation.

ELEV 2 and RUDD 1 correspond to the response rate of channel 4 when performing elevator operation and rudder operation.

The specific value is the amount of servo travel range when the corresponding channel performs the elevator or rudder operation. Positive and negative values represent different directions of movement.
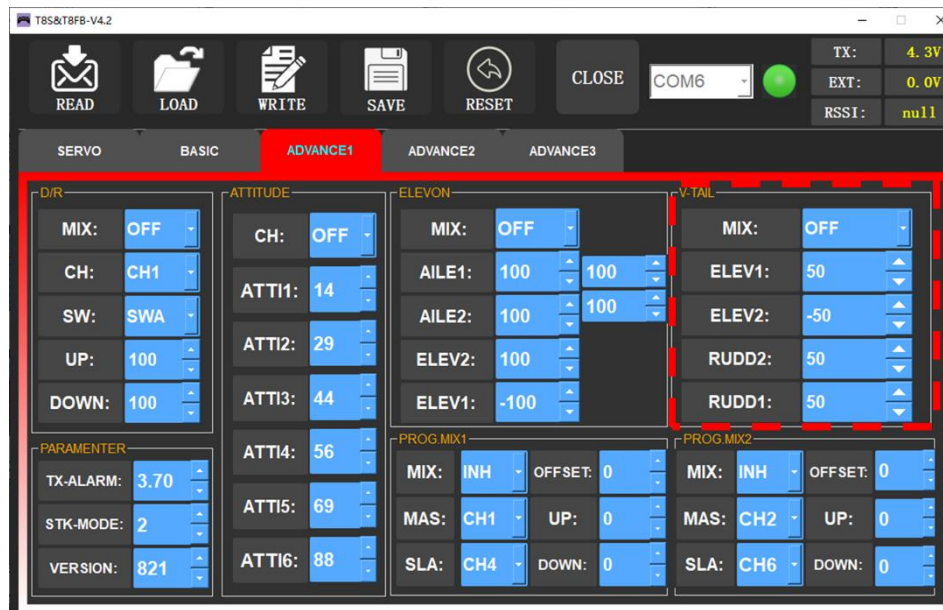
The interface of parameter setup software on computer

3.4 PROG.MIX Menu

3.4.1 PROG.MIX

Programmable mix control is custom mix settings, which can independently select the master channel and slave channel. It is often used to compensate for the attitude changes of the aircraft.

Programmable mixing controls are to:

① Diversify attitude changes of aircraft (e.g. Rolling to realize when rudder is commanded);

② Control a certain axis with two or more servos (e.g. 2 rudder servos);

③ Correct special movement automatically (e.g. Lower FLAP and ELEVATOR servos at the same time);

④ Control the second channel to respond to the movement of the first channel (e.g. Increase smoke oil to respond to high speed, but only when the smoke switch is activated);

⑤ Turn off the main control under certain circumstances (e.g. For dual-engine aircraft, turn off a motor or speed up/down one motor to assist rudder to turn).

MAS: Master channel. Other channels need to cooperate with movements of the master channels.
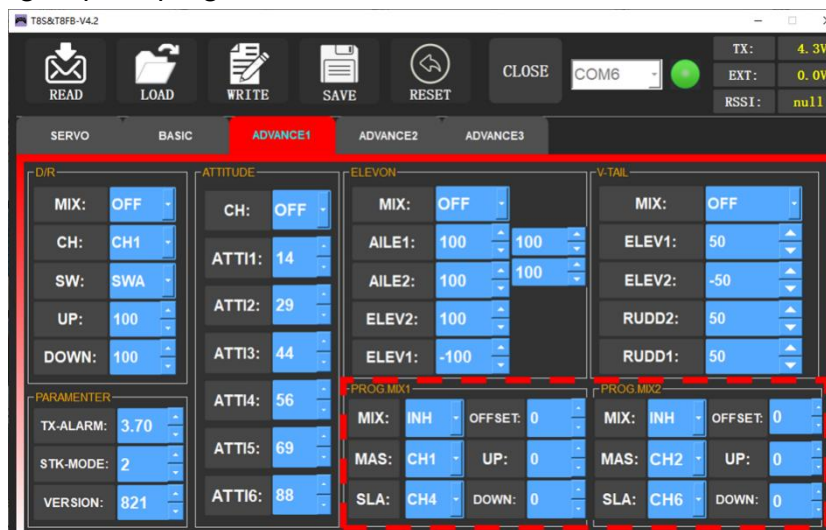
SLA: Slave channel. Many mix controls are controlled by one master channel.

You can turn the "MIX" from "INH" to "ON", and set master channel, slave channel. Set "UP" and "DOWN" to the same value. This value determines the servo travel range and movement direction of slave channel.

The interface of parameter setup APP on phone.

There are 4 groups of programmable mix control that can be set in the mobile phone APP.

The interface of parameter setup software on computer. There are also 4 groups of programmable mix control that can be set in the computer parameter software. It can be found in "Advanced Menu 1", "Advanced Menu 2" and "Advanced Menu 3".

3.4.2 TH/CURE

Throttle curve (TH/CURE) is the set output travel by throttle. It is to coordinate the motor response and the throttle operation. The horizontal ordinate is the joystick position while the vertical ordinate is the throttle output.

When "TH-SW" is set from "OFF" to "ON", the throttle curve function is turned on. Adjust the value of 7 points. The adjustable range is from 0 to 100. The larger the value it is, the larger the output throttle is when the throttle joystick moves to the corresponding position.

The interface of parameter setup APP on phone
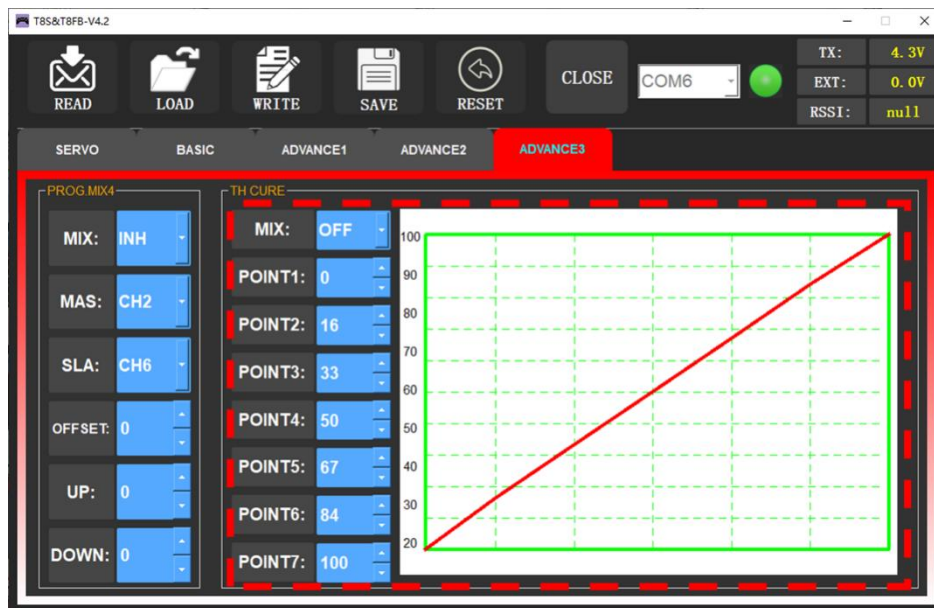
The interface of parameter setup software on computer

3.4.3 DR/CURE

Please refer to Chapter 3.3 ADVANCE Menu.

3.4.4 SYSTEM Menu
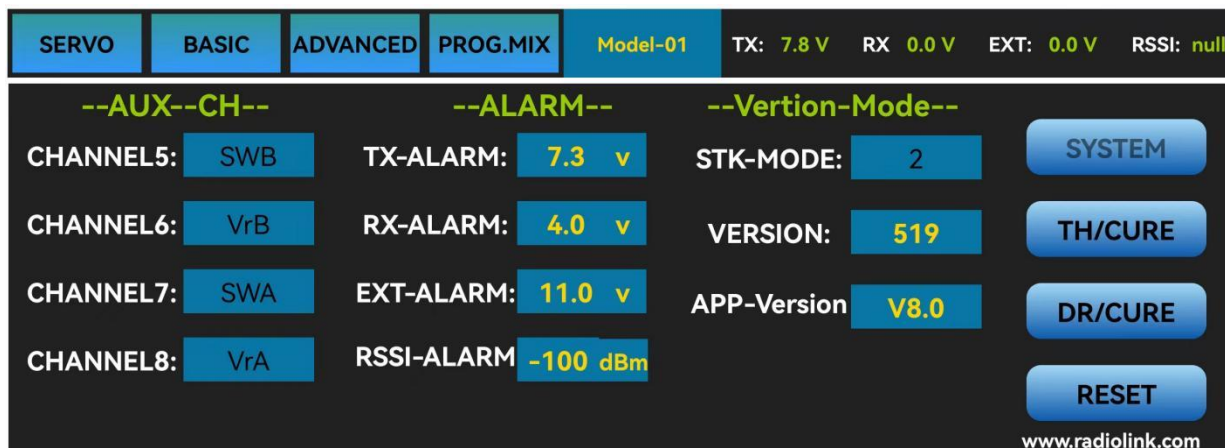
3.4.4.1 AUX.CH

The CH1/2/3/4 of the T8FB transmitter are 4 basic channels, and CH5/6/7/8 are auxiliary

channels. The switch of the basic channel cannot be modified. But different switches can do some

auxiliary functions by setting CH5/6/7/8, such as control the opening and closing of the bait hopper, control whether the machine releases smoke or not etc.

Each auxiliary channel can be customized with one of three-way switch, toggle-switch or push-switch. Any one of three-way switch, toggle-switch or push-switch can also be set to control different channels.

And the final effect can be seen on the "SERVO MENU" interface.

Note that If you flip any switch and two channels will change, please check whether the two auxiliary channels are set to the same switch.

Click the auxiliary function of CH5/6/7/8, there will be five options of "SWA", "SWB", "VrA", "VrB" and "NULL" for selection." NULL "means no switch control.
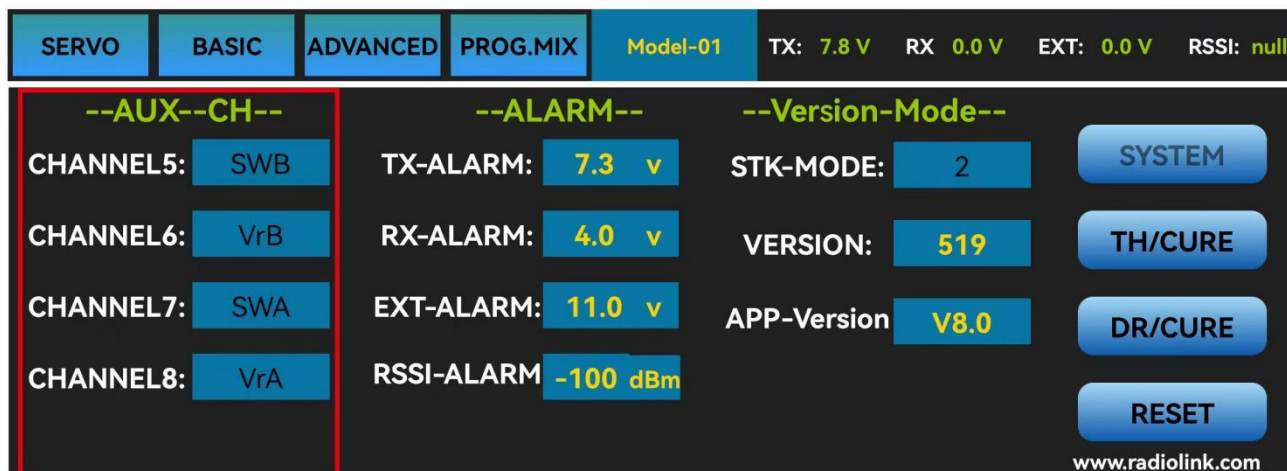
The interface of parameter setup APP on phone.

The interface of parameter setup software on computer.

3.4.4.2 ALARM

TX-ALARM

The default low voltage value of transmitter is automatically set according to the battery used. For 2S lipo battery, it is 7.3V. For 3S lipo battery, it is 11V. For 4 AA batteries with 1.5V, the default low battery alarm voltage is 5V. When the transmitter voltage is lower than the alarm value, T8FB will make D sound to warn.

RX-ALARM

The default low voltage value of receiver is automatically set 4V by default, and small adjustments are also supported. When the transmitter voltage is lower than the value set, T8FB will make D sound to warn.

EXT-ALARM

To return the model voltage, RadioLink receivers of telemetry functions R8XM, R8FG, R7FG or R8F should be used. small adjustments are also supported. When the model voltage goes lower than the set value, T8FB will make D sound to warn. We suggest that 7.4V set for 2S lithium battery, 11.1V set for 3S lithium battery, 14.8V set for 4S lithium battery.

RSSI-ALARM

The default signal strength alarm value of the T8FB is -100dBm. You can set a reasonable value according to the actual situation to prevent the model from losing control due to weak signal. When the RSSI goes lower than value you set, T8FB will make D sound to warn.

The best RSSI-ALM is depends on the control range test at your flying area. For example, you have tested the control distance of your T8FB is 2000 meters at your flying area, and the RSSI shows -86dBm at this time, then you can set the RSSI alarm data is -86dBm.
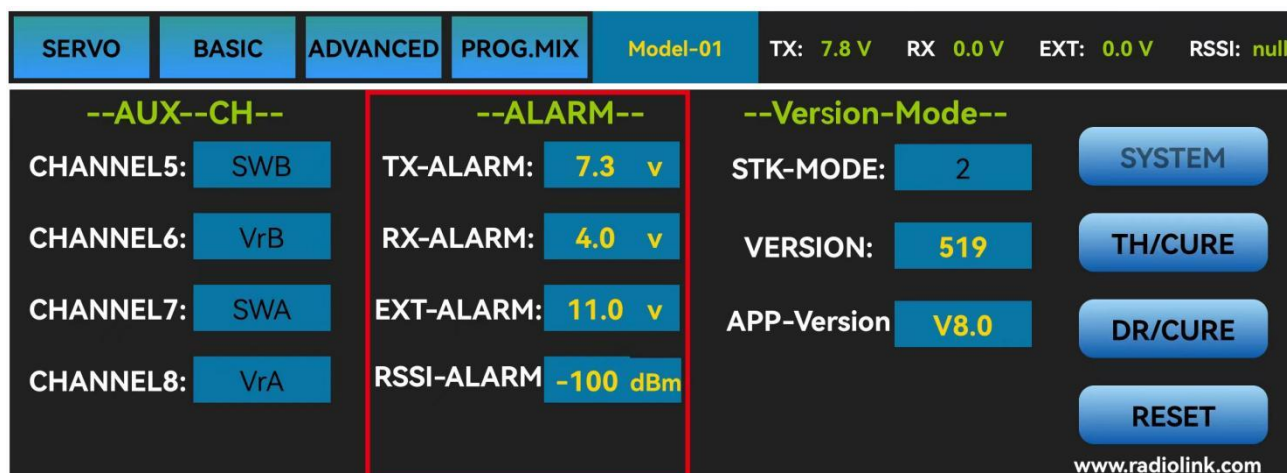
The interface of parameter setup APP on phone

(The EXT-Alarm and RSSI-Alarm only can be set on the mobile phone APP.)

VERSION

The numbers mean current firmware versions. The detailed steps of firmware upgrade please refer

to Chapter 2.

APP-VERSION

The numbers mean current Parameter Setup APP versions.
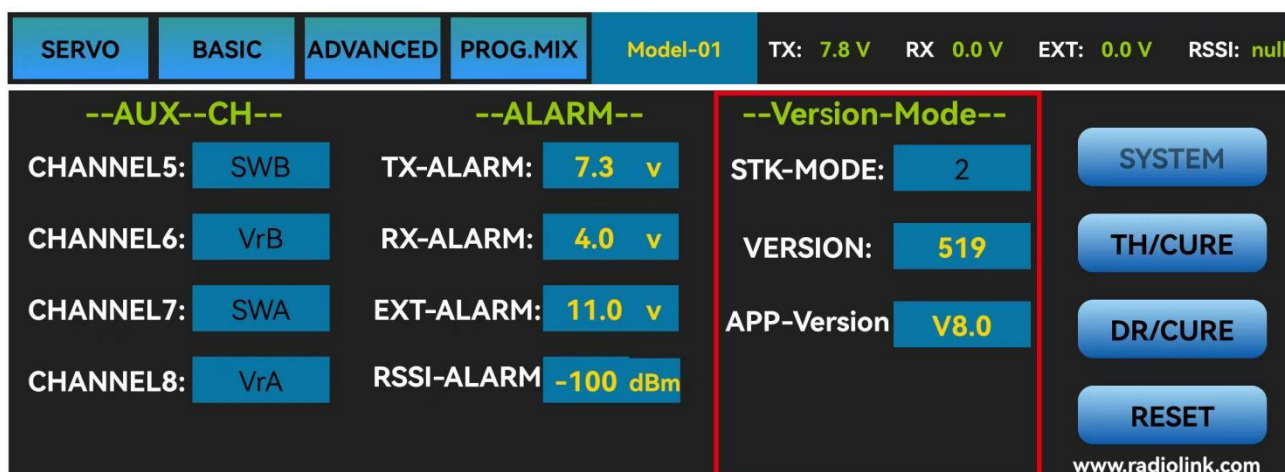
The interface of parameter setup APP on phone.
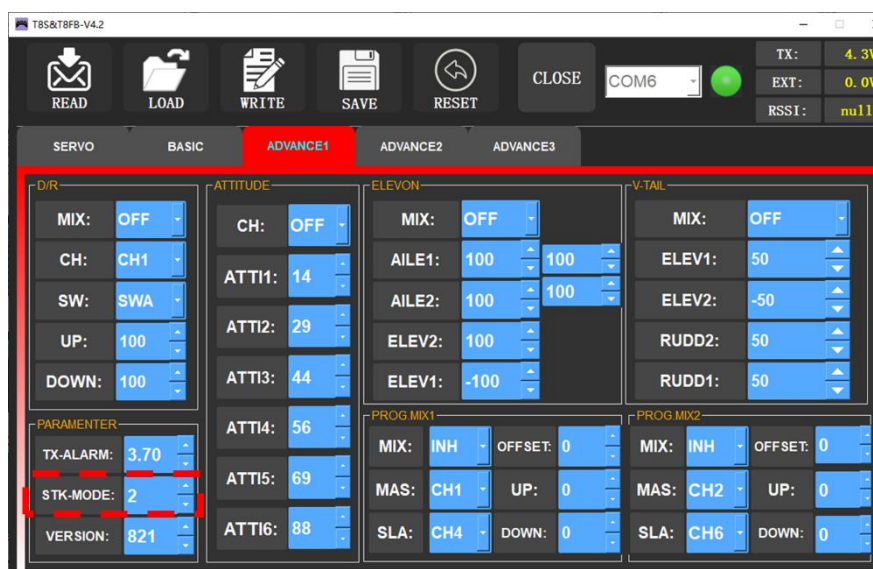
The interface of parameter setup software on computer.

3.4.4.4 RESET

This function is to restore the factory setting when necessary. When press this "RESET" button,

T8FB will make three slow D sounds, meaning default setting is set.
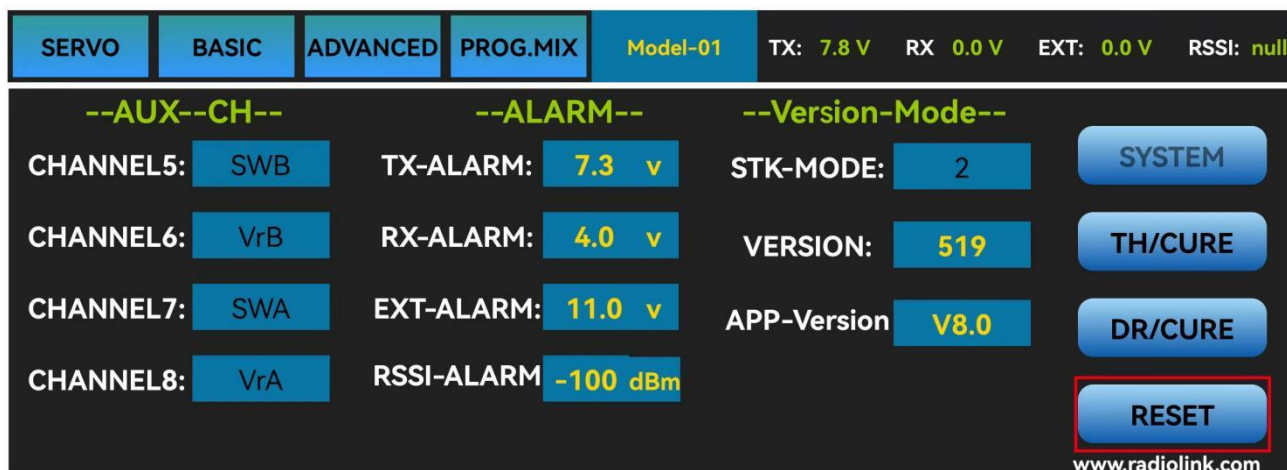
The interface of parameter setup APP on phone
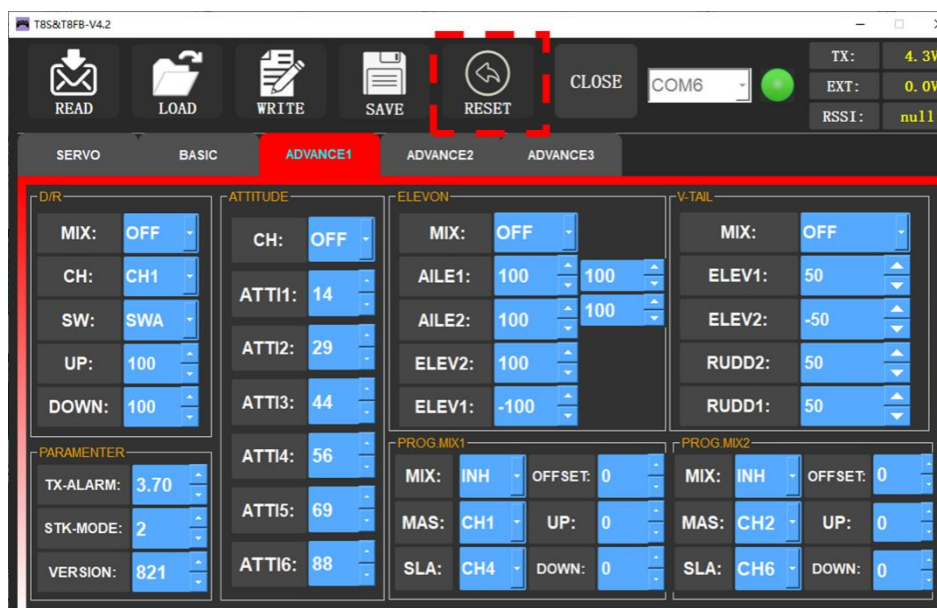
The interface of parameter setup software on computer

Chapter 4 Firmware Upgrade

4.1 Firmware Version

The firmware version can be checked through mobile phone or computer, and you can judge whether it is necessary to upgrade the firmware according to the current T8FB version number. Since T8FB was updated multiple versions before, the new firmware is not fit for all versions of T8FB. Therefore, please check your current firmware version before upgrading the firmware. If the firmware is not necessary and the T8FB transmitter can be used normally, then there is no need to upgrade. You also need to confirm if your T8FB is OTG version or BT version.

If it is T8FB (OTG), please download the latest firmware from the link:

https://www.radiolink.com/t8fb_bt_firmwares

If it is T8FB (OTG), please download the latest firmware from the link:

https://www.radiolink.com/t8fb_firmwares

Since there are many updates for T8FB, and not all T8FB is compatible to the latest firmware on the official website. Be sure to choose the suitable firmware for your T8FB. Please distinguish whether your T8FB is an OTG version or BT version before you update the firmware. Refer to the following picture, the word BT next to the T8FB model means it is the BT Bluetooth version, and it is the OTG version if there is no word BT. Check the picture on the right for reference. If you cannot confirm it is OTG version or BT version, please contact RadioLink after-sales for confirmation.
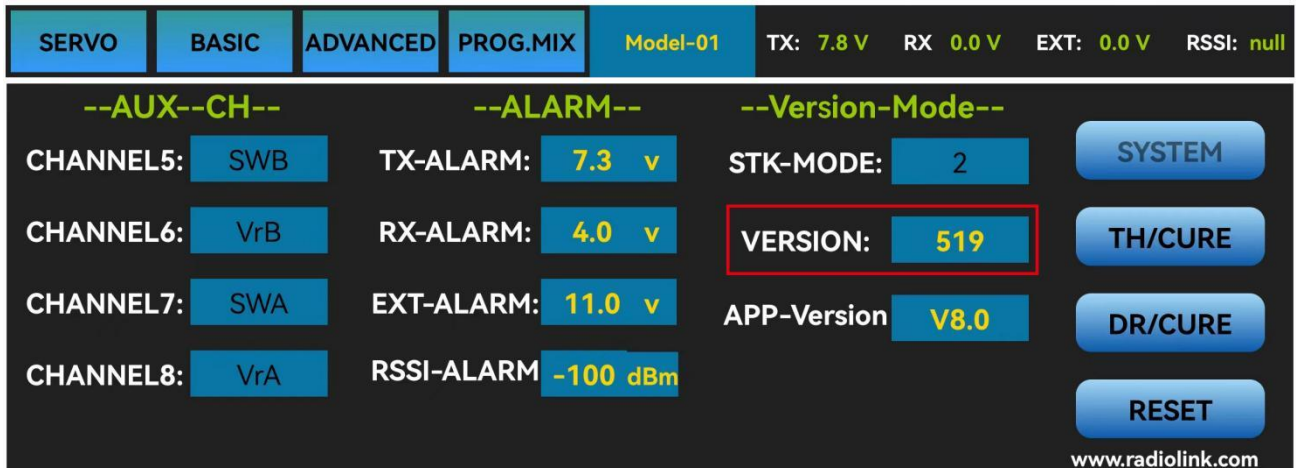
The interface of parameter setup APP on phone
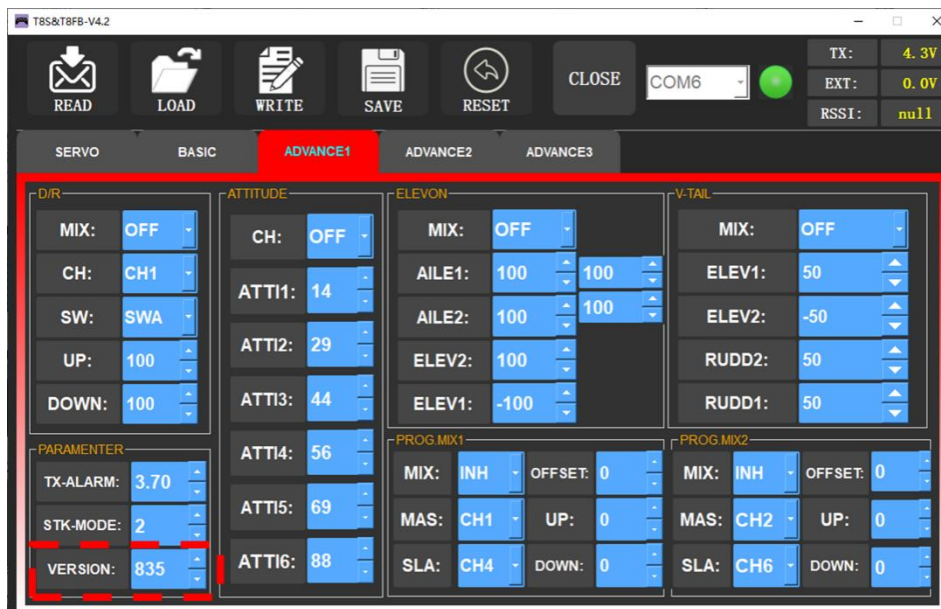
The interface of parameter setup software on computer (ADVANCED MENU 1)

4.2 Firmware Upgrade Steps

4.2.1 Driver Installation

Go to https://radiolink.com/t8fb_bt_firmwares to download "UpgradeDriver.zip", unzip and

install.

If the driver is not installed successfully, after T8FB connect to the computer, the computer will not

be able to recognize COM port, then you can't upgrade firmware. If you have already installed

the driver when using the computer parameter software, you can skip this step.

Note:

1) When the firmware upgrade tool fails to detect the COM port, it may be caused by not

installing the driver, or because you use USB charging cable wrongly instead of a USB data cable.

The T8FB remote controller packing list is equipped with a USB data cable, which can be charged,

and it can also use for computer parameter setting and firmware upgrade.

2) Please note that there are two drivers in this zip file. When using the T8FB transmitter, you only

need to install the driver marked out below. (This driver can use for Windows10 system)

CH340_Drive(USB Drive) for XP&WIN7	4/10/2020 11:41 AM
PL2303 dirve for WIN10 (COM &LPT)	4/10/2020 11:47 AM

Click on the "SETUP.EXE" program in this folder.

|	
DRVSETUP64	2019/7/15 17:51
CH341PT.DLL	2005/7/30 0:00
CH341S64.SYS	2011/11/5 0:00
CH341S98.SYS	2007/6/12 0:00
ch341SER.CAT	2011/11/25 7:22
CH341SER.INF	2011/11/4 0:00
CH341SER.SYS	2011/11/5 0:00
CH341SER.VXD	2008/12/18 0:00
readme.txt	2012/10/9 17:51
SETUP.EXE	2012/2/15 0:00

Click "INSTALL".
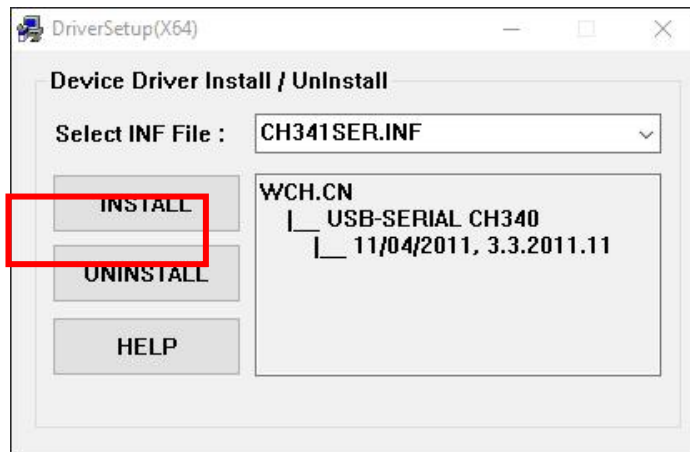
After the installation is complete, "The drive is successfully pre-installed in advance!" will pop up.
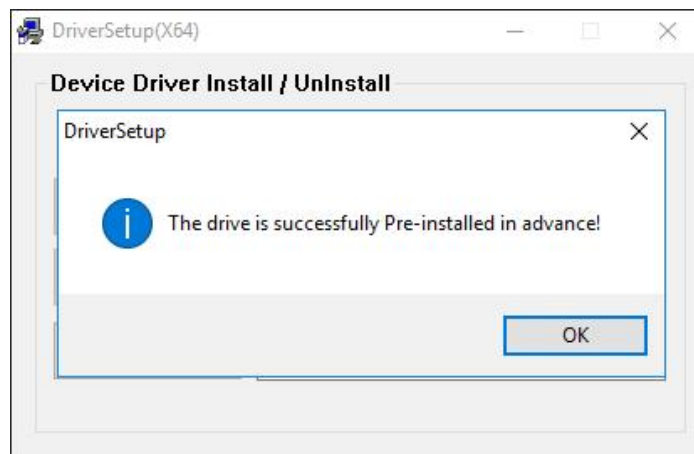
If "Driver install failure!" appears, please uninstall the driver and reinstall the driver.
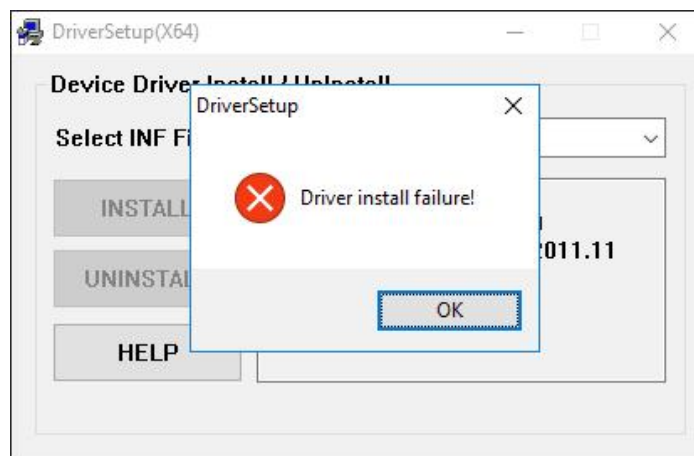
4.2.2 Download Software and Upgrade Firmware

Go to https://radiolink.com/t8fb_bt_firmwares to download "T8FB-T8S_APP For Firmware

Upgrade-ComputerOnly.zip" and unzip it, connect T8FB transmitter connect to the computer via

a USB data cable, then open the unzipped folder. Click the "T8FB&T8S_APP for firmware
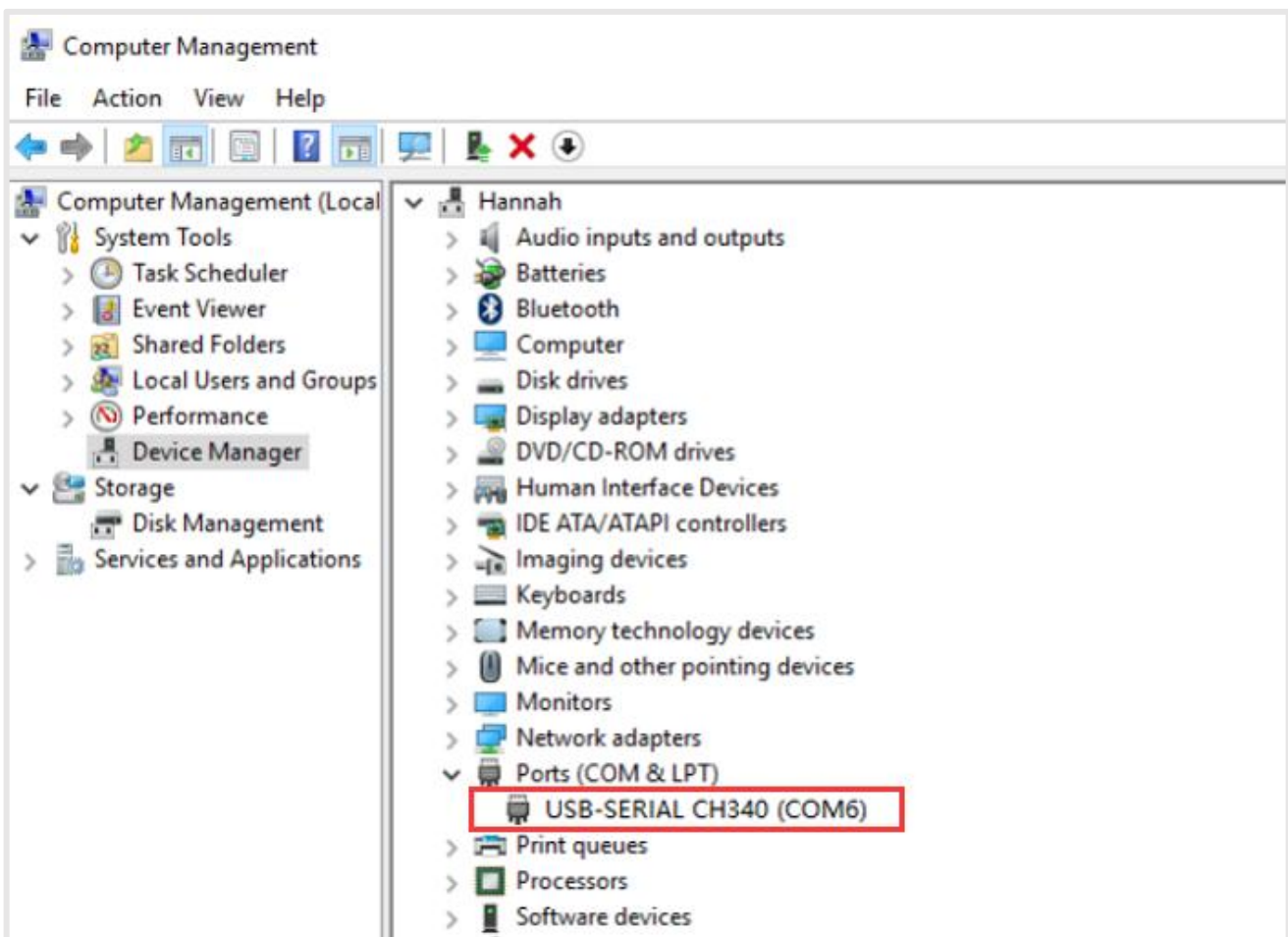
upgrade.exe" program.

Choose correct COM port.

After computers are connected to T8FB via a USB data cable, there may appear many selectable COM ports. The COM port can be found according to the following methods:

1) Press "win+R" on the keyboard;

2) Type "devmgmt.msc", and type "ENTER";

3) In device manager, click on "COM AND LPT", then you can find the correct COM port.

After computers are connected to T8FB via a USB data cable, there may appear many selectable COM ports.

   Note: If you had found COM port in the device manager, but the corresponding COM port is not displayed on firmware upgrade software. Then you can try to close this firmware upgrade software and reopen it.

After choosing the correct COM port, click the "Connect", and then the "Disconnected" will change to "Detecting…." . This indicates that the firmware upgrade software has entered the detection state.
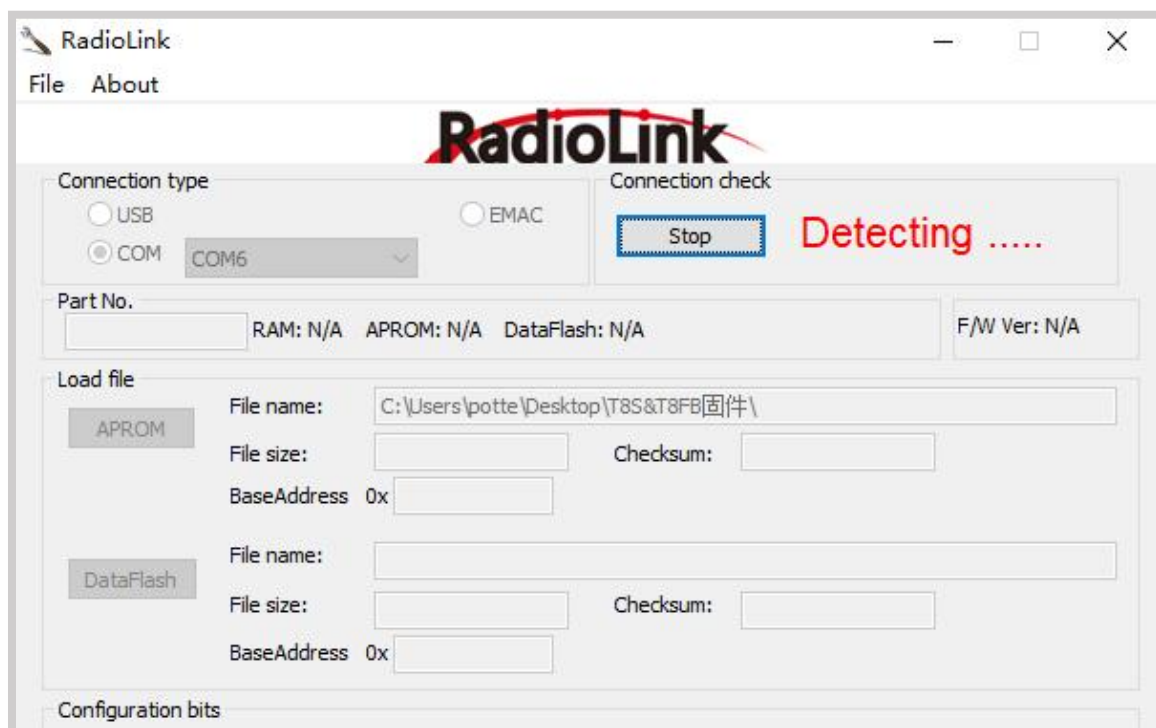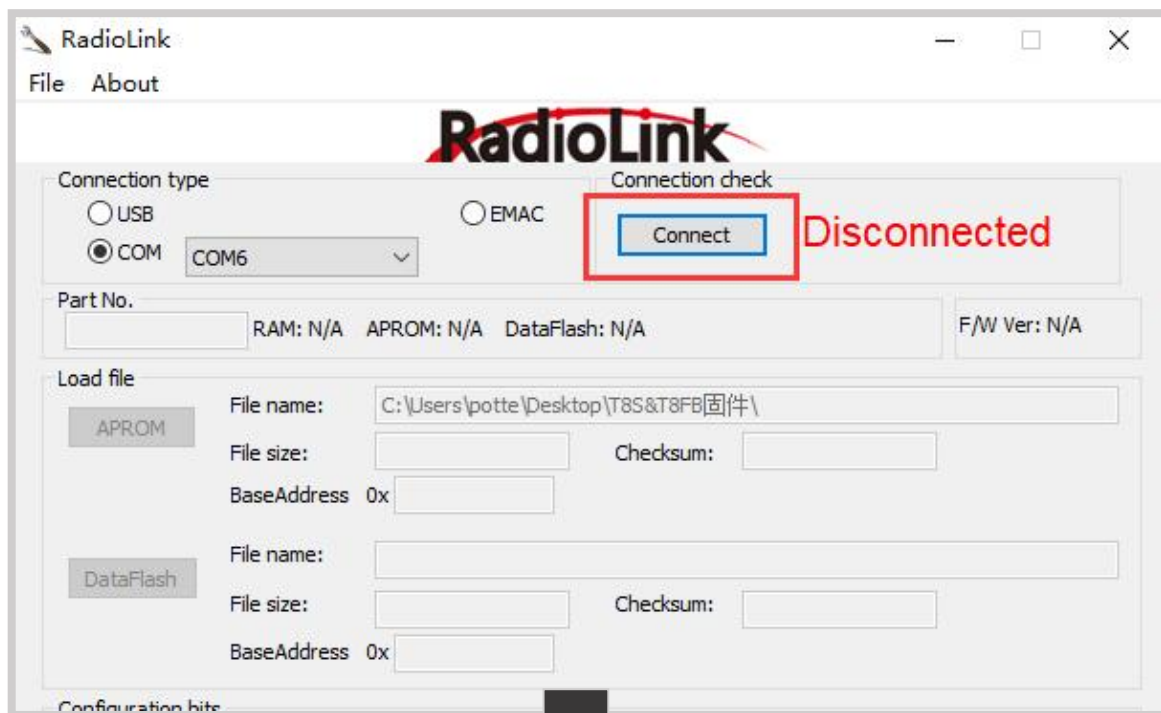
After entering the detection state, push T8FB power button, then "Detecting…." will turn to

"Connected", which means that the firmware upgrade software is successfully connected to
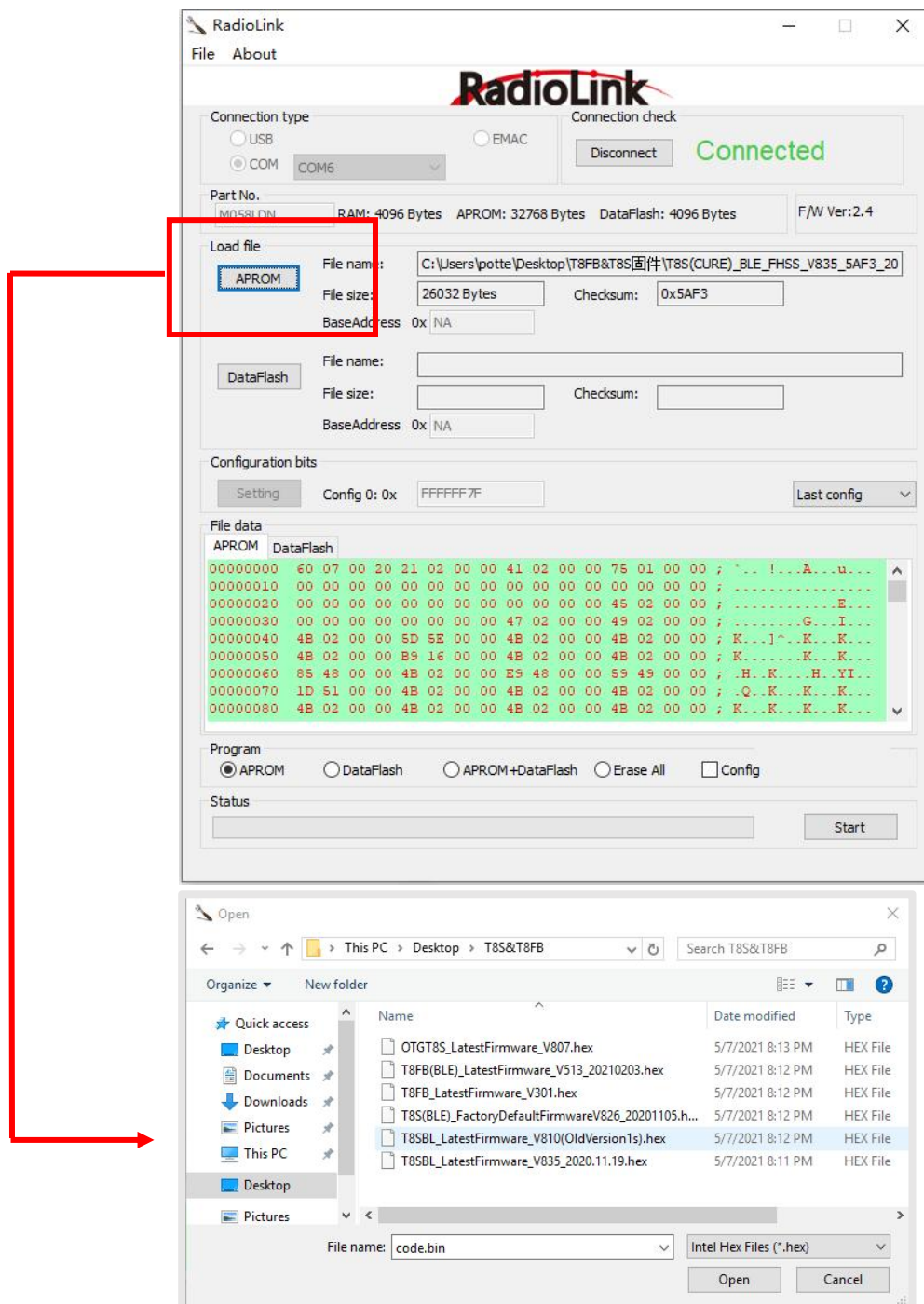
T8FB.
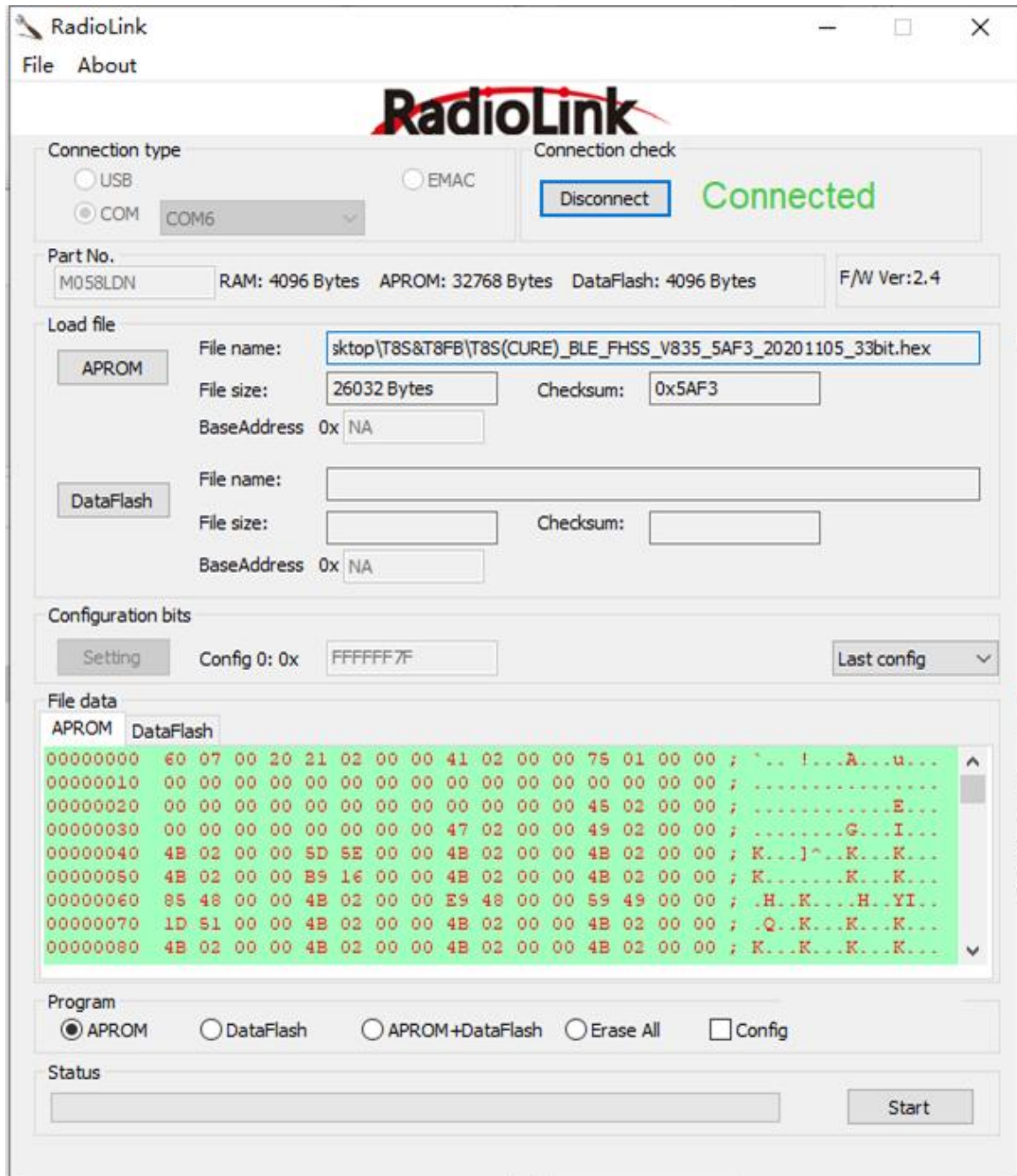
Note: 1. You need to open the upgrade software and click Connect before you push the power

button of T8FB. If the T8FB is turned on when or before you click "Connect", it will cause

connection failed.

2. If you push the power button of T8FB, but T8FB cannot be turned on, this may be caused by

firmware error. This problem can be solved by installing the right firmware.

After T8FB connected with the firmware upgrade software successfully, click the "APROM"

button to select the correct firmware.

 The firmware can be downloaded from https://radiolink.com/t8fb_bt_firmwares .

After selecting the correct firmware, make sure that "APROM" is selected in the "Program", and then click "Start".
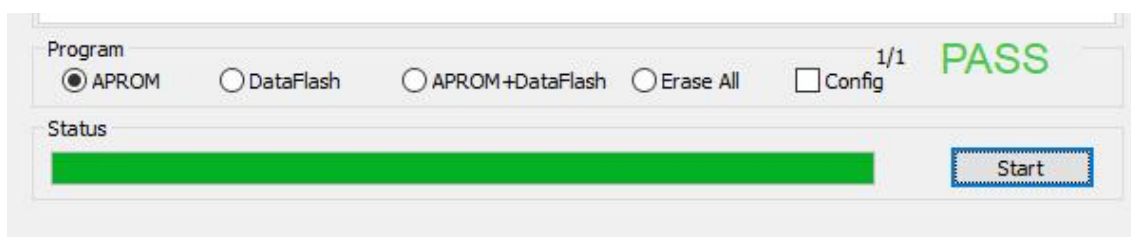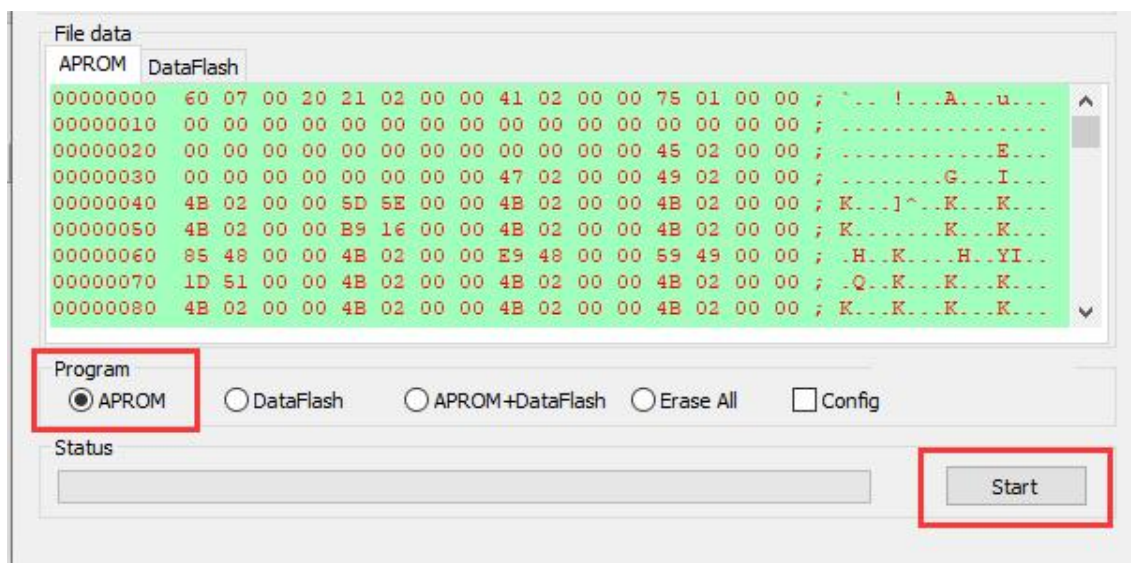
When the green "PASS" appears, it means that the firmware flashing is successful.

Chapter 5 T8FB Calibration

When the joystick of the T8FB is not in the center position, or there is large difference of the travel amount, T8FB needs to be calibrated. T8FB joystick calibration method is as follows:

1. When the transmitter is power-off, toggle both sticks at the central point. Press rudder trimmer left and turn on transmitter at the same time， red and green LED will start flashing and the T8FB is ready to be calibrated..

2. Range Calibration: Toggle both sticks (Ch1-4) to the highest point/maximum and the lowest point/minimum. Then back to the central point. (Refer to image below)

3. Central Point Calibration: When the joysticks are back to the central point, press rudder trimmer right, and then red and green LED always on means sticks calibration is done with success. Then turn off T8FB and repower it on.

Thanks

Thank you for purchasing RadioLink 8-channels remote controller T8FB. Please read the manual carefully and set up the device as instructed steps.

If any problems found during the operation process, contact your local dealer or contact us by e-mail at: after_service@radiolink.com.cn .

Visit our website at: www.radiolink.com to get online support.