RadioLink

AT10II

Quick Start Guide

(Helicopter/Fixed-wing/Glider/Multirotor/Car/Boat/Robot)

12 channels transmitter

CE FCC RoHS

Safety Precautions

⊗ Never operate your model during adverse weather conditions. Poor visibility can cause disorientation and loss of control of your model.

⊗ Never use this product in a crowded and illegal area and strictly comply with the local regulations.

⚠ Always ensure the trim levers at 0 and battery properly charged before connecting the receiver.

⚠ Always check all servos and their connections prior to each run.

⚠ Multi-rotor must check whether the motor rotation direction is normal.

⚠ Always be sure about turning off the receiver before the transmitter.

⚠ The AT10II transmitter cannot be restored to factory settings, but the currently used model can be reset in "BASIC MENU"-"MODEL TYPE".

⚠ Please strictly abide by local laws and regulations and use it safely!

This product is not a toy and is NOT suitable for children under the age of 14. Adults should keep the product out of the reach of children and exercise caution when operating this product in the presence of children.

Packing List

AT10II Transmitter×1

R12DS Receiver×1

PRM-01 Telemetry Module×1

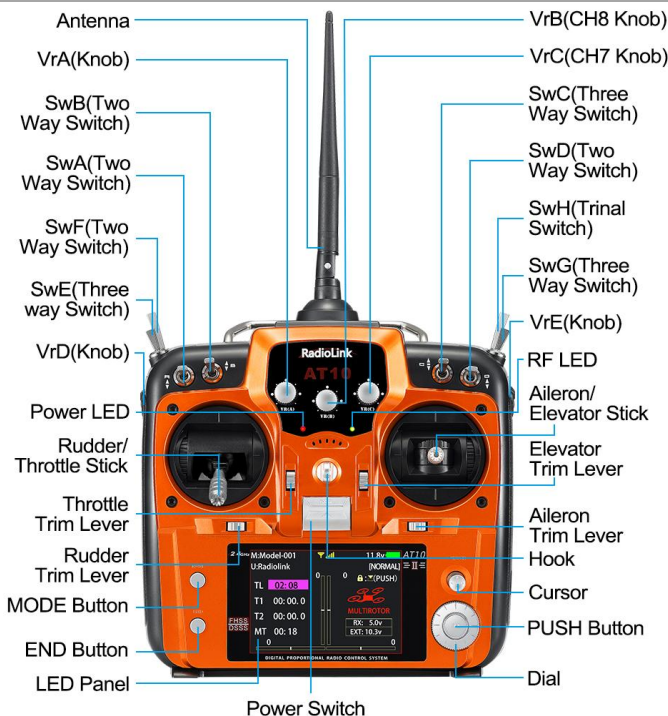Packing Box×1

Quick Start Guide×1

THR Return Accessories×1

Specifications

AT10II Transmitter	
Size	180*95*220mm (7.1"*3.7"*8.7")
Weight	0.95kg(2.1 lb)
Channel Quantity	12 (all twelve channels can be customized)
Control Range	More than 4000 meters air, the actual control distance depends on the flying environment
Operating Current	<105mA
Operating Voltage	7.4 ~ 15.0V (8pcs AA battery, a 2S-4S LiPo or 18650 Lithium battery, Li-ion, NiMH or NiCad battery)
ACPR	>38dbm
Transmitter Power	<100mW (20dbm)
Frequencies Band	2.4GHz ISM band (2400MHz~2483.5MHz)
Modulation Mode	QPSK
Bandwidth	5.0MHz
Spread Spectrum Mode	DSSS&FHSS
Storage Model Quantity	15
Battery Box Size	115*32*30.5mm(L*W*H=4.53"*1.26"*1.2")
Low Voltage Alarm	Support. Voltage alarm can be customized
Signal Output	PWM/SBUS/PPM
Simulator Mode	Yes, with the radio frequency off to save battery power
Screen	3.5 inches 16 colorful screens, 320*480 pixels
Operating Temperature	-20° to 85° C (-4° to 185° F)
Adaptable Models	include all 120-degree and 90-degree swash-plate helicopters, all fixed wings, gliders, multirotor, RC cars, RC boats, and Robot
Compatible Receivers	R12DS(Standard), R12DSM, R9DS, R6DS, R6DSM

R12DS Receiver	
Size	50*32*14.5mm (1.97"*1.24"*0.57")
Weight	14g (0.49oz)
Antenna Length	215mm (8.46")
Channel Quantity	11 channels for PWM signal output; 12 channels for SBUS&PWM signal output
Control Range	4000 meters(2.49 miles) in the air. The maximum range tested in unobstructed areas free of interference and may vary depending on local regulations
Operating Current	38~45mA@5V
Operating Voltage	3.6-12V
Signal Output	PWM/SBUS&PWM
Section Precision	4096, 0.25us per section
Compatible extended telemetry module	Connect PRM-01 for model voltage telemetry. Connect PRM-03 and flight controller crossflight, PIXHAWK, Mini Pix, and TURBO PiX, APM for OSD information telemetry
Compatible Transmitters	AT10II/AT10/AT9S Pro/AT9S/AT9

Antenna

VrA(Knob)

SwB(Two Way Switch)

SwA(Two Way Switch)

SwF(Two Way Switch)

SwE(Three way Switch)

VrD(Knob)

Power LED

Rudder/ Throttle Stick

Throttle Trim Lever

Rudder Trim Lever

MODE Button

END Button

LED Panel

Power Switch

VrB(CH8 Knob)

VrC(CH7 Knob)

SwC(Three Way Switch)

SwD(Two Way Switch)

SwH(Trinal Switch)

SwG(Three Way Switch)

VrE(Knob)

RF LED

Aileron/ Elevator Stick

Elevator Trim Lever

Aileron Trim Lever

Hook

Cursor

PUSH Button

Dial

Note: The picture above takes the left-hand throttle as an example.

Carrying Handle

Trainer/Simulator Function Connector

Battery Box for 2S-4S LiPo Battery

JST Battery Connector (Anti-polarity connect protection intelligent)

Battery Box for 8pcs AA Batteries

Battery Cover

OUT –

IN –

– GND

– NC

– VCC

- |ıı : GND
-NC : No Output
-VCC : Voltage Output(7.4-15V)
-OUT : PPM Signal Out:
-IN : RSSI Signal Input

3

Basic Operations

Step 3
MODE Button: Long press MODE button to enter BASIC MENU or ADVANCE MENU. Short press the MODE button to switch the MENU

Step 2
Switch on AT10 II

Step 4
CURSOR: Toggle the CURSOR to select the parameter to setup

Step 6
END Button: Press END button once to go back to the previous menu. Press END button once on the main interface to switch to the SERVO display, and twice to the RECEIVE display

Step 5
PUSH Button/Dial: Press PUSH button to confirm and enter the selected menu; Rotate the dial to increase/decrease the value

Step 1
Power on AT10 II with 8pcs AA batteries or 2S-4S LiPo battery

Note：For normal functions, short press the PUSH button to confirm, but when modifying the "MODEL SEL" and "MODE TYPE", long press the PUSH button for 1 second to confirm.

- Aileron/Elevator/Throttle/Rudder Stick controls 1 to 4 channels by default. Set STK-MODE in PARAMETER menu. If you set the STK-MODE to "-" and then the AUX-CH in BASIC MENU, you can assign other switches to control channel 1 to channel 4.

- Three VR knob switches on the front and two VR slider switches on the side meet the needs of pan/tilt control, and the functions of these switches can be customized.

- AT10II has 4 two-way switches, 3 three-way switches and a reset switch. Function of all switches can be customized. For details, please refer to the detailed manual of AT10II www.radiolink.com/at10ii_manuals.
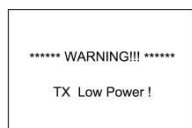
Basic Settings

1. Language Settings: Long press the MODE button to enter the menu, if the language is displayed as Chinese, please rotate the PUSH button to move the cursor to PARAMETER(系统设置), short press the PUSH button to enter the setting interface, and change the language from Chinese (语言选择:简体) to English.
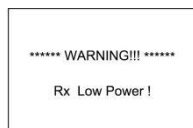
［系统设置］
语言选择：简体   发射报警：8.6v
摇杆模式：2
发射模式：打开   语言选择：简体
背光调节：20
用户名字：RadioLink   声音：打开
About us
www.radiolink.com
Versions:v1.4.6a(AT12S)

4

2. Alarm Settings: The low voltage alarm of the transmitter, receiver, model battery and RSSI(Received Signal Strength Indicator) alarm can be customized on AT10II. The factory low voltage alarm is 8.6V for transmitter; 4.0V for receiver; 11.1V for model battery. When the voltage is lower than the set alarm value, the transmitter will send out an alarm (See pictures below), and

```
[PARAMETER]
LANGUAGE:English      TX-ALARM: 8.6v
STK-MODE: 2           RX-ALARM: 4.0v
RF-MODE:ON            EXT-ALARM:11.1v
                       ockScreenOFF
TX-ALARM: 8.6v         Sound:ON
RX-ALARM: 4.0v    s
EXT-ALARM:11.1v   nk.com
                  ba(AT12S)
```

the low battery alarm can be set according to the actual voltage of the battery to avoid battery over-discharge.
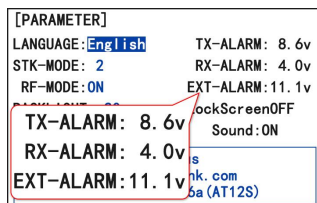
Setting steps: BASIC menu - PARAMETER - TX-ALARM/RX-ALARM/EXT-ALARM. (Voltage alarm reference: 2S lithium battery -7.4V; 3S lithium battery -11.1V; 4S lithium battery -14.8V.)

The RSSI alarm is turned off by default. The alarm value can be customized. When the signal strength is lower than the set alarm value, the transmitter will send out an alarm (See picture below). **Setting steps: BASIC menu - SYSTEM - RSSI ALM.**
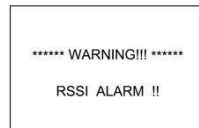
| ****** WARNING!!! ****** | ****** WARNING!!! ****** | ****** WARNING!!! ****** | ****** WARNING!!! ****** |
| TX Low Power ! | Rx Low Power ! | Ext. Low Power ! | RSSI ALARM !! |

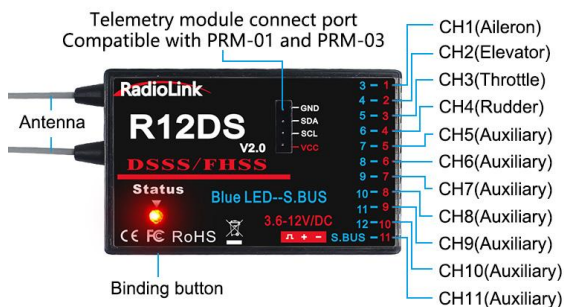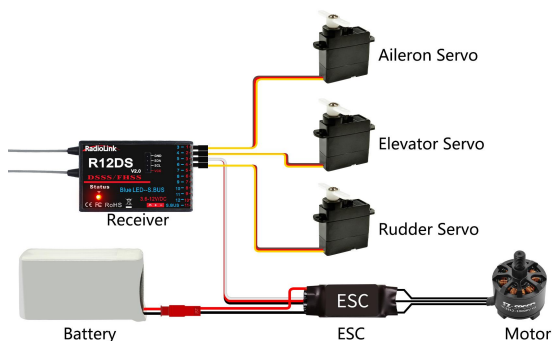| Radio Low Power | Receiver Low Power | Model Low Power | RSSI Low Alarm |
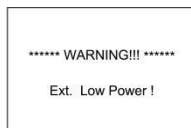
R12DS Receiver

Working Modes

R12DS, with 2.4G DSSS&FHSS spread spectrum technology, is a 11-channel receiver when working with PWM signal output (red LED) or a 12-channel receiver when with SBUS&PWM signal output (purple/blue LED).

1. PWM Signal Mode : Red LED indicates PWM signal output, 11 channels totally.

Telemetry module connect port
Compatible with PRM-01 and PRM-03

RadioLink
R12DS V2.0
DSSS/FHSS
Status
Blue LED--S.BUS
3.6-12V/DC
CE FC RoHS

GND
SDA
SCL
VCC

Antenna

Binding button

CH1(Aileron)
CH2(Elevator)
CH3(Throttle)
CH4(Rudder)
CH5(Auxiliary)
CH6(Auxiliary)
CH7(Auxiliary)
CH8(Auxiliary)
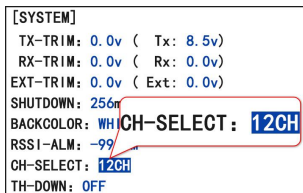CH9(Auxiliary)
CH10(Auxiliary)
CH11(Auxiliary)

2. SBUS&PWM Signal Mode: Blue/purple LED indicates SBUS&PWM signal output at the same time with 12 channels totally. The eleventh channel outputs SBUS signal while the original CH1 outputs CH3 PWM signal and original CH2 to CH10 output CH4 to CH12 PWM signal at the same time.
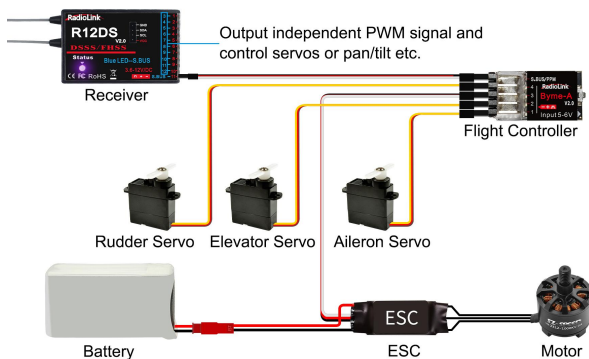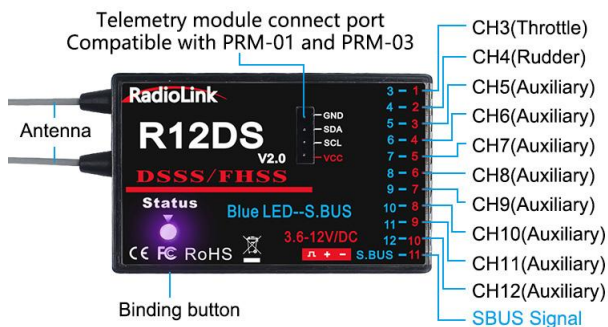
Switch Signal Mode : Short press binding button (ID SET) twice within 1 second, the working mode will be switched.

Channel Settings

AT10II is a 12-channel transmitter. The channel is selected as 12 channels by default (See the right picture). When using the standard packed R12DS receiver, there is no need to modify the settings; but when using R9DS, R6DS or R6DSM receiver, channel of AT10II should be selected as 10channel, 10CH. For the channel selection of AT10II when using different receivers , please refer to the figure below:

```
[SYSTEM]
 TX-TRIM: 0.0v ( Tx: 8.5v)
 RX-TRIM: 0.0v ( Rx: 0.0v)
EXT-TRIM: 0.0v ( Ext: 0.0v)
SHUTDOWN: 256m
BACKCOLOR: WH    CH-SELECT: 12CH
RSSI-ALM: -99
CH-SELECT: 12CH
TH-DOWN: OFF
```

Receiver Model	AT10II CH-SELECT		Receiver Model	AT10II CH-SELECT
R9DS	10CH		R12DS	12CH
R6DS	10CH		R12DSM	12CH
R6DSM	10CH			

Setting steps: BASIC menu - SYSTEM - CH-SELECT.

Note: If the channel of AT10II is selected incorrectly, the servo may vibrate all the time.

Binding

AT10II and R12DS have already finished binding by default. Turn on AT10II and R12DS, the signal tower will be displayed on the top of the screen (See the right picture), which means the transmitter and receiver have finished binding. If you purchase a new R12DS receiver separately, you need to bind the receiver to the transmitter. Each receiver has an individual ID code. When the binding is done, the ID code will be stored in the transmitter and there's no need to rebind.
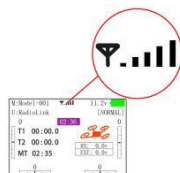

Binding Steps:

1. Put the transmitter and the receiver close to each other (about 30 centimeters).

2. Power on AT10II and R12DS, the LED of R12DS will be on.

3. There is a black binding button (ID SET) on the side of receiver. Press the button for more than one second and release, the LED of the receiver will flash, meaning binding process is ongoing.

4. When the LED stops flashing and is always on, binding is complete. There will be a signal tower shown on top of the LCD screen of the transmitter. If not succeed, the LED will keep flashing slowly to notify, repeat the above steps.

Note：Since RadioLink radio control systems are not open sourced, RadioLink transmitters are ONLY compatible with RadioLink receivers.

Installment of Antenna

1. Receiver Antenna Installment

(1) Please test RSSI (Received Signal Strength Indicator) before operating models. For methods on how to test it, please refer to https://www.radiolink.com/newsinfo/477894.html.

(2) If the antenna of the receiver is damaged, replace it with a new antenna or receiver in time.

(3) Keep antennas as straight as possible and 90° as shown on the right, or the effective control range will reduce.

(4) Big models may contain metal parts that influence signal emission. In this case, antenna should be positioned at one side of the model to ensure the best signal status in all circumstances.

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

(6) Keep antennas away from motor, ESC, or other possible interference sources.

(7) Receiver contains some electronic components of high-precision. Be careful to avoid strong vibration and high temperature.
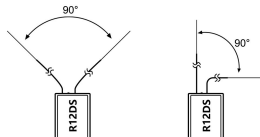
2. Transmitter Antenna Orientation

(1) The transmitter antenna orientation is adjustable. Please make sure that the antenna never points directly at the model when flying as this may possibly decrease the receiver signal. (See Picture 1 below).

(2) If the antenna is upright, the antenna signal mainly diverges in the horizontal direction, which is beneficial to flying farther (See Picture 2 below); if the antenna is horizontal and parallel to the ground, the signal mainly diverges in the vertical direction, which is beneficial to fly higher (See Picture 3 below), so it is best to place the transmitter antenna perpendicular to the connection line between the remote control and the aircraft during flight.

(3) During the flight, please ensure that there is no obstruction between the transmitter antenna and the receiver antenna to maximize the communication distance.
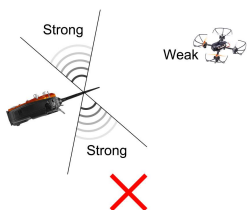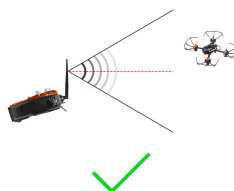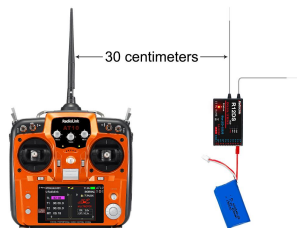
| Picture 1 | Picture 2 | Picture 3 |

8

RSSI Testing

RSSI stands for Received Signal Strength Indicator. Before flight, always remember to do the RSSI testing to avoid the possible unexpected signal loss.

1. Power on transmitter and receiver, keep them with the distance of about 30 centimeters and both antennas straight (See the right picture).


2. Enter the basic menu. Rotate the PUSH button to select RECEIVE and press PUSH button to enter and check the RSSI value. RSSI value between 0 to -30dBm is normal when the transmitter keeps about 30 centimeters distance from the receiver. The RSSI value is closer to 0, the signal is stronger.

Real-time Built-in Telemetry

R12DS receiver integrates telemetry of signal strength and receiver voltage by default. It can also realize the telemetry of model battery voltage or flight controller and GPS information when used with RadioLink PRM-01 or PRM-03 telemetry module, and the telemetry information can be displayed on the screen of AT9S Pro or AT10II transmitter.

Model battery voltage telemetry: When connecting R12DS to telemetry module PRM-01, the model voltage will be displayed on the screen of AT10II (See picture below).

Note: PRM-01 is sold separately. PRM-01 only supports R9DS or R12DS receiver.

Receiver

PRM-01
Telemetry Module

1S-6S LiPo battery
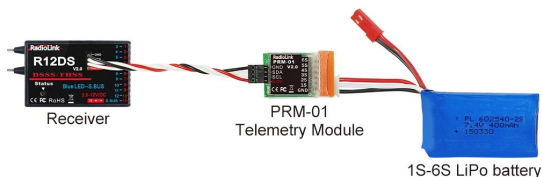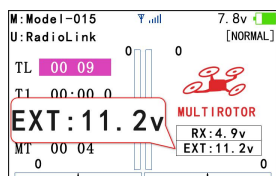
Flight controller and GPS information telemetry: When connecting R12DS to telemetry module PRM-03 and flight controller, more information will be displayed on the screen of AT10II, including the model battery voltage, speed, climb, throttle, longitude, latitude, altitude, GPS, RSSI, flight mode, yaw, roll, pitch, and distance (See picture below).

Note: PRM-03 is sold separately. PRM-03 only supports R9DS or R12DS receiver, and it works with flight controller crossflight, PIXHAWK, Mini Pix, TURBO PiX or APM.

```
[RECEIVE]      00:00.0        7.8v
SPEED:   0.0m/s         GPS: 0(nGPS)
RISE:    0.0m/s         RSSI:NULL
THRO: 94%              MODE:NORMAL
VOLT: 0.0v             YAW:   0.0°
LONG: 0°000000         ROLL:  0.0°
LATI: 0°000000         PITC:  0.0°
ALT.: 00.0m            DIST: 00.0m
```
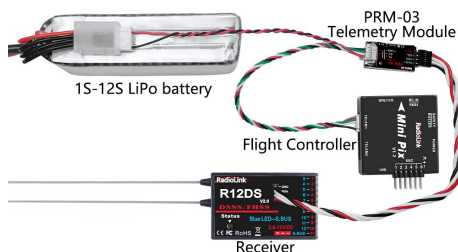
Multiple Function Port

The simulator port of AT10II outputs PPM signal by default. So it can be connected to devices that supports PPM input via simulator port such as head track, trainer cable, simulator etc..

Note:

1. Scan the QR code on the last page of the Quick Start Guide to view detailed video tutorials for connecting AT10II to all the above devices.

2. Wireless trainer cable is sold separately. Please refer to the official website www.radiolink.com for more information and purchase.

Technical Support Here
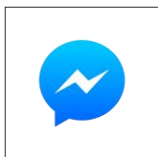
Contact **RadioLink RL** via Facebook Messenger

AT10II User Manual

AT10II Tutorials

If the above information cannot solve your problem, you can also send emails to our technical support: after_service@radiolink.com.cn

This content is subject to change.

Download the manual of AT10II from https://www.radiolink.com/at10ii_manuals

Thank you again for choosing RadioLink product.