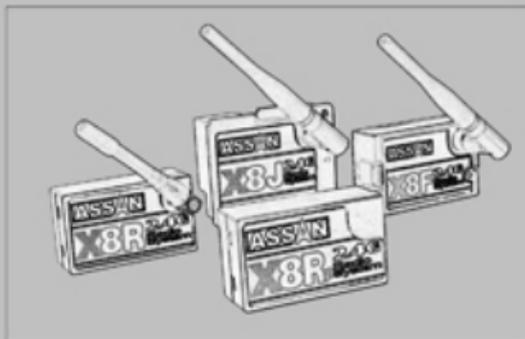




ASSAN X8 2.4GHz Radio System User Manual

EN



Dear customer,

Thanks for your purchasing ASSAN products. ASSAN is experienced in developing remote control model related electronic products. We offer advanced and high quality products and good service for RC fans. ASSAN X8 2.4GHz Radio System is a new generation of R/C products based on the most advanced digital communication system.

With the increasingly deepening application of 2.4GHz remote control technology in R/C industry, we can safely assume that 2.4 GHz remote control technology will certainly substitute AM/FM to be the new generation of R/C technical standard.

X8 employs fully intelligent design, replacing traditional RF model with digital control of high precision, bringing brand new experience to R/C fans.

Please read through this entire manual before you attempt the installation and usage of your ASSAN X8 2.4GHz Radio System.

Best regards

Declaration:

* ASSAN X8 2.4GHz Radio System Is only for civil application. Please abide by national laws; we will NOT bear any legal liabilities for the usage beyond national laws and regulations.

* This manual is only for instructing operation and application of ASSAN X8 2.4GHz radio system. We reserve the rights of revision of the product or amendment of instruction without notice.

* Names of third parties mentioned in FUTABA, JR, HETIC, WFLY etc in this manual are the trademarks or registered marks of corresponding company with copyrights reserved.

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1. Introduction

It is a revolutionary step to apply 2.4GHz technology in R/C industry while ASSAN is the forth independent researcher and manufacturer which can supply this high-tech product to the global market.

Precautions of Safety and Operation

It requires professional skills and technical knowledge to install and operate R/C model properly. Incorrect installation and operation can result in significant property loss and/or personal injuries.

ASSAN X8 radio system is exclusively designed for civil use of R/C models.

DON'T USE IT IN ANY MANNED AIRCRAFTS OR OTHER MANNED MACHINES.

Radio wave transfers in almost straight routine in 2.4GHz, please make sure there's no object between antenna and the controlled model. To ensure efficient control, antenna should point at the controlled model and please keep conductive material away from receiver and transmitter.

The governance of R/C differs from place to place, therefore, please consult your local regulatory body and follow the rules and regulations to operate legally.

ASSAN X8 radio system is only part of R/C model, please refer to and strictly follow the instruction of other part during assembling. Besides, there're some general norms in R/C fields should also be followed. For instance, don't start motor or turn the power on before system inspection; no objects before the moving parts like propeller; test the effective control distance and range beforehand; ensure the spot is safe enough: operate your model in an open area away from cars, traffic and people. Never play in the area where injury or damage might occur.

Protect the X8 2.4GHz Radio System unit against vibration, dust, humidity, collision or high pressure. Keep it in dry environment under normal temperature and free from static electricity. Should the device get wet, only reuse it again after long time drying and careful examine.

Use device only by outside temperatures between -10°C (50°F) and 50°C (122°F). In case extreme situation like crash, collision or rolling occurs; DO NOT use it before comprehensive inspection.

ASSAN's X8 2.4GHz Radio System units are designed with extensive protection features, but only effective when operated in a "normal" range.

2. Installation Requirement

X8 2.4GHz Radio System is designed as Plug and Play. It's consisted of a RF Module and Receiver which is easy to install.

The manual should have provided enough information to assist you install and use our new X8 2.4GHz products.

The installation does not require extra tools.

ASSAN X8 2.4GHz Radio System product series:

RF MODULE



X8F: RF Module for FUTABA /HETIC/WFLY transmitter

Compatible with following Futaba radio series:

3PK,7U , 8U , 8J , 9C , 9Z & FN series. HETIC's Optic 6,Eclipse 7, Agressor CRX, Agressor SRX, WFLY's 09



X8J: RF Module for JR transmitter

Compatible with following JR radio series:

347, 388, 783, U8, PCM10, PCM10S, PCM10SX, PCM10lis, 8103, 9303, MX-22, MX-24s.

STANDARD RECEIVER



X8R

X8R: standard 8 channels receiver with external antenna.

X8R is standard 2.4GHz receiver with 8 effective signal channels and a battery channel (9 channels totally). It is equipped with 2.4GHz high sensitive external antenna which is suitable for controlling large model or long distance.



X8Rp

X8Rp: standard 8 channels receiver with internal antenna.

X8Rp is standard 2.4GHz receiver with 8 effective signal channels and a battery channel (9 channels totally). It is equipped with 2.4GHz high sensitive internal antenna which is suitable for controlling small model or short distance.

MINI RECEIVER



X8R3



X8R6



X8R7

X8R3/R3-L is a 3 channels mini receiver.

X8R6/R6-L is a 6 channels mini receiver.

X8R7/R7-L is a 7 channels mini receiver.

X8R3/R6/R7 with a 3cm antenna.

X8R3-L/R6-L/R7-L with a 30cm antenna.



X8R3-L



X8R6-L



X8R7-L

3. Features of the ASSAN X8 2.4GHz Radio System

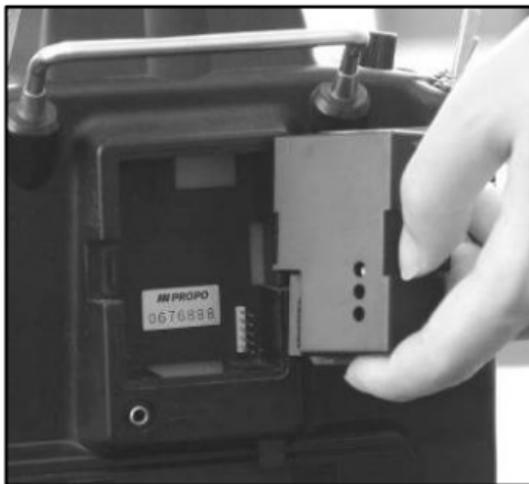
ASSAN X8 2.4GHz Radio System units are advanced electronic device, which are compatible with various types in R/C world by selecting different modes. Besides the function of normal units, ASSAN X8 2.4GHz Radio System has many powerful features.

Major features and functions are as follows

- Fully intelligent design, plug and play, update traditional controller quickly into 2.4 GHz.
- Automatic screening, No need of crystal or channel selecting switches
- No need of programming setting thus worry about mis-operation.
- No need to remove the original metal antenna, convenient and practical and can avoid accident during the system transforming.
- Support multi-users, no interference among each other
- Support one machine with multi-controls (one transmitter with multiple receivers)
- Support various gyroscopes of different levels
- Quick response, high precision
- Many safety features

4. Installation your X8 2.4GHz Radio System

4.1. Remove the stock RF Module



Different transmitters have different RF module connecting types. Therefore, before you purchasing our X8 system, you must make sure which one is suitable to your transmitter. The most popular Transmitters include Futaba and JR. But not all of them have isolate RF module and connect in the same way. Please read the instruction carefully and select right type.

4.2. Installing ASSAN X8 2.4GHz RF Module



Take 2.4GHz RF model out of the package (X8F/X8J). Do not install the antenna first. Be careful not to damage the exposing part of screwing threads on antenna base.

Put 2.4GHz RF module into corresponding place after taking the original TX module out. Pay attention to proper alignment of pins.

4.3. Installing removable antenna



Mount removable antenna and screw it into the connector at the back of ASSAN's X8 2.4GHz RF Module. Finger tight only.

For our X8 2.4GHz RF Module, you don't need to take the original metal antenna out. If you like to remove it, please remember to reinstall the antenna when you turn back to the normal FM mode, otherwise, the transmitter can be easily damaged.

4.4. Set the transmitter to the PPM mode

When use our X8 2.4GHz RF Module, the transmitter **MUST** set at PPM mode, PCM mode is not supported. (Please refer to your transmitter instructions)

4.5. Mounting the Receiver



4.5.1. Select a proper mounting spot, please note

- a) Keep the receiver far from engines, motors, battery and other metal parts as well as carbon fibers.
- b) Make sure the antenna is not blocked by any conductive or insulating objects. It's suggested to keep the receiver away from anything else out in open.

4.5.2. Tie the receiver up

After locating the mounting spots, bind the receiver. Don't use conductive material to bind the receiver.

Note: Be careful not to damage the exposing part of screwing threads on antenna base.

4.5.3. Wiring

Connect the controlled parts into corresponding ports. Please make sure signal line 3P must be of right polarity. Reverse polarity of some parts might cause invalidation or other severe damage.

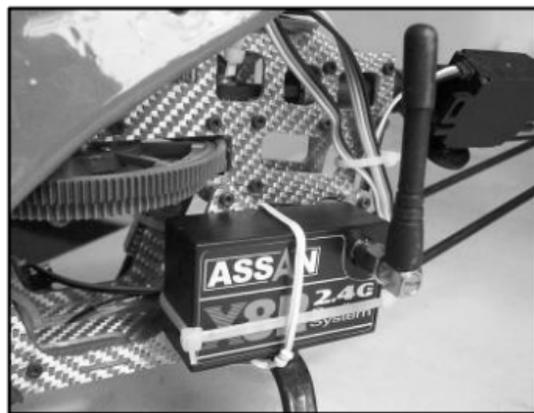
There're symbols at the bottom of receivers:



- indicates negative side, connect to the ground, corresponding to black or brown wire of 3P signal line.
- + indicates positive side, generally corresponding to red wire of 3P signal line.
- means signal, generally corresponding to yellow or white wire of 3P signal line.

Note: Do not start the engine before inspection ready. Make sure the power is sufficient when selecting the way of power supply. X8 receiver requires 4.2V minimum under any circumstance.

4.5.4. Mounting the antenna



Screw out the red plastic cap on the antenna base in counterclockwise direction. Screw the 2.4GHz antenna pin into receiver base in clockwise direction. Finger tight only to avoid damage to the threads. The connector of antenna is universal one. The antenna should point outwards during use.

5. Using your X8 2.4GHz Radio System for the first time

We design the X8 2.4GHz Radio System only for R/C entertaining purpose. It can be compatible with many types of transmitters but not suitable to all. Please make sure to choose the right series. It's highly recommended to inspect carefully and test your system first.

The intelligent programmed systems make the ASSAN's X8 2.4GHz Radio System powerful and flexible. But please remember only ASSAN's 2.4GHz Receiver can work with ASSAN's 2.4GHz RF Module and vice versa.

We advice you to test your system first, and make sure your system is safe and effective.

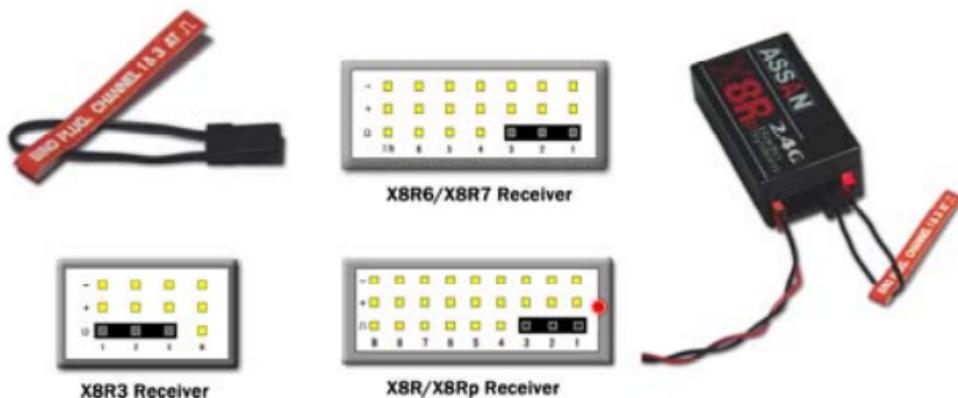
5.1. Binding

It's necessary to program the receiver to specific X8 RF Module or X8 compatible Transmitter, so that the receiver will only recognize that module or transmitter, ignoring signal from any other source. Once the receiver is not bound, the system will not operate.

Receiver can be re-Bind to the same RF module or other ASSAN's RF modules in different time with unlimited times. But at one time, one Rx can be Bind to only one RF module. More than one Receiver can be Bind to one RF module at one time, it's the same when use one transmitter to operate several models.

5.2. Binding process

HOW TO BIND



Binding is a process make the receiver know which one is his master. After bound, the receiver will only connect to that RF Module or Transmitter.

5.2.1 Insert the BIND PLUG in receiver's CH1 ~ CH3.

5.2.2 Turn on the Transmitter, which has been setting at PPM modulation. The RF Module's LED red first. In the mean time, pull the CH2 stick left to right or up to down 2 times. The RF Module's LED will begin fast flashing red. This indicates that the Transmitter is waiting for an X8 receiver to bind to.

5.2.3 Power on the receiver. The LED will begin fast flashing red too.

5.2.4 After a few seconds, the system should connect. The LED both side should go solid green, which indicate the system has been connected.

5.2.5 Remove the bind plug and store it in a convenient place.

5.2.6 Finished. You X8 2.4GHz radio system is ready to use.

5.2.7 The receiver recognizes that module now. If you needn't use this receiver to another X8 RF Module or not meet an accident, needn't "Binding" again.

Note:

CH2 stick position is different when use different Transmitter (such as in Futaba Tx, it's Elevator Channel; in JR's Tx, it's Aileron Channel, etc) or different operate way(such as Left Hand way or Right Hand way. If you don't clearly know which stick is CH 2, you can try pulling each stick at the first time, when one stick's move is right, the RF Module's LED will fast flashing. Otherwise, this LED light as solid red or green.)



- a) For FUTABA users, FUTABA indicators can reflect same information. During signal Binding process, LED on the FUTABA panel displays blue and keeps beeping. If Binding is successful, after beeping for a relatively longer time, blue LED on FATABA panel and green LED on X8F will be constantly on.
- b) If voltage supply to the Rx drops down below to much, Rx will lose communication with Tx. The Rx battery's quality will influence the control range too, we strong advise use Voltage Protector.
- c) When the model is out of the control range or lost signal in accident, in Rx, the red/green led flashes quickly, and the servos turn to fail safe setting position.

5.3. Failsafe Setting

The Failsafe condition occurs when data received is not valid for some period of time. This time is setting by the factory, it's 0.5 seconds.

X8 systems with a smart failsafe setting. It's so easy and even you should not need known.

Where your transmitter's stick position when X8 system connected, where is your failsafe CH's position.

That means at normal condition, before you power on your transmitter, your stick all in desire failsafe position: lowest throttle and neutral flight controls.

6. Flying with Your NEW X8 2.4GHz Radio System

6.1. Since ASSAN X8 remote control support multi-receiver working at same time, please make sure only receivers that you want to control are on and wait for before you turn the Transmitter power on.

6.2. Control distance: All the remote control device has an effective range. Radio wave transfers in almost I in 2.4GHz, please make sure there's no object between antenna and the controlled model. And the antenna should point to receiver's antenna in line of sight.

At time being, some features of 2.4 GHz are still controversial, so we suggest the effective controlling distance tested before flying, especially for controlling glider or other models with large fixed wings at long distance.

It's quite necessary for the users who want to control at a long distance to test effective distance beforehand. In practical use, it's not the same to play it on the ground, water surface or fly in the sky; it's not the same in flat ground and complicated layout; it's not the same to play it on raining days and sunny days; and besides, the external electrical environment is changing continuously.

6.3. Safety features

The movement of controlled model is retarded when approaching the edge of effective range, this is a safety feature designed by ASSAN. If the reaction of servos becomes insensitive, shorten the distance between the receivers and controlled model immediately.

If there's no signal available, the receiver will stay at the place where fail safe setting positions becomes unavailable and wait for communication.

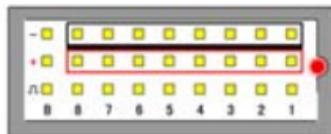
6.4. Sufficient Power supply

The system requires voltage supplies to X8 series receivers to be above 3.6V. If several servos or digital servos are applied, the user should take into full consideration that large amount of power consumption will result in decreased voltage supply. Battery power should be guaranteed to satisfy the needs of BEC and servos.

6.5. Voltage Protector



Voltage Protector



X8R/X8Rp Receiver

ASSAN's new Rx Voltage Protector prevents a receiver's voltage from dropping below the proper operating level in lower voltage applications. Its help keep the voltage smooth up or down than without it. Installation is as simple as plugging it into an open channel slot on the receiver unit.

Please also note that the practical supply and rated power has some certain gap in between. And instant insufficient voltage supply will reduce the signal paring into invalid status thus the model is out of control. Therefore, make sure the battery is powerful enough.

ALWAYS PERFORM A RANGE CHECK BEFORE FLYING!

At the spot, after you are fully prepared for X8 signal paring and other settings. You can pull your throttle and play.

Normally, you don't need to adjust or set up for X8. But sometimes, you need to fine tune some settings of channels according to electronic kits applied in your model. If you need any help, please contact us via e-mail at servers@assan.cn

7. FAQ and Trouble shooting

Q: What is the range of the X8, and can I fly large scale airplanes and large gas- or glow-powered helicopters with the system?

A: The X8's range depend on the flying spot's condition, especially at different RF environment will with different range, as normal the X8F/J with X8 series receivers is beyond visual limits, allowing even giant-scale airplanes and unlimited class sailplanes to be flown to the limits of sight. The X8Rp is with inside antenna and design for park fly and most helis.

Q: Can I use the X8 system with other brand 2.4GHz Radio System?

A: No, different system applies different communicate rule. We don't assist other brand 2.4GHz Radio System, vise visa.

Q: Can I use the X8 with the 2.4GHz wireless Video/Audio system in my RC plane?

A: We strongly advise not. Although other 2.4GHz Radio System will not disturb our X8 system, but they will weaken the Rx's sensitivity and shorten the control range.

Q: Why X8 Receiver only has one short antenna?

A: The antenna design is depend on what your need, especially in 2.4GHz Radio System. For X8 system, our current design is reasonable and skillful.

8. Warranty Information

X8 2.4GHz Radio System is warranted for 12 months from date of purchase. X8 2.4GHz Radio System may at its discretion either repair or replace the unit covered under warranty.

This warranty does not cover abuse, neglect, or damage due to incorrect wiring, over voltage, water or crash.

Contact your selling dealer with details of the problem before return products. In most cases, the problem is caused by improper radio or controller setup, and can easily be resolved without any cost.

9. Contact

If you have any questions, comments, or want to return your items for warranty or non-warranty repair/replacement contact ASSAN at:

ASSAN ELECTRONIC CONTROL TECHNOLOGY Co., Ltd

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