

FrSky 2.4GHz ACCST Taranis Q X7 Manual

Introduction

Thank you for purchasing the FrSky 2.4GHz ACCST TARANIS Q X7 digital telemetry radio system. In order to make the best use of your system and to fly safely, please read this manual carefully. If you have any difficulties while using your system, please consult the manual, your hobby dealer, or FrSky technical support.

Due to unforeseen changes in production, the information contained in this manual is subject to change without notice.

Meanings of Special Markings

Pay special attention to safety where indicated by the following marks:

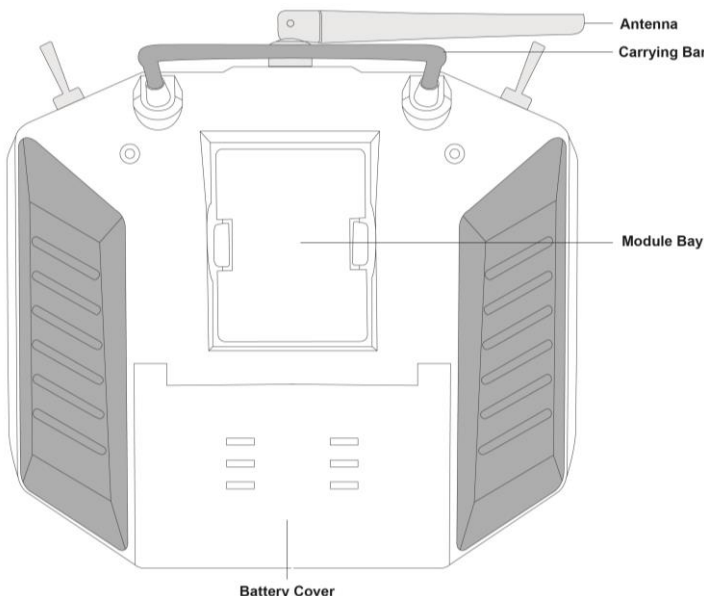
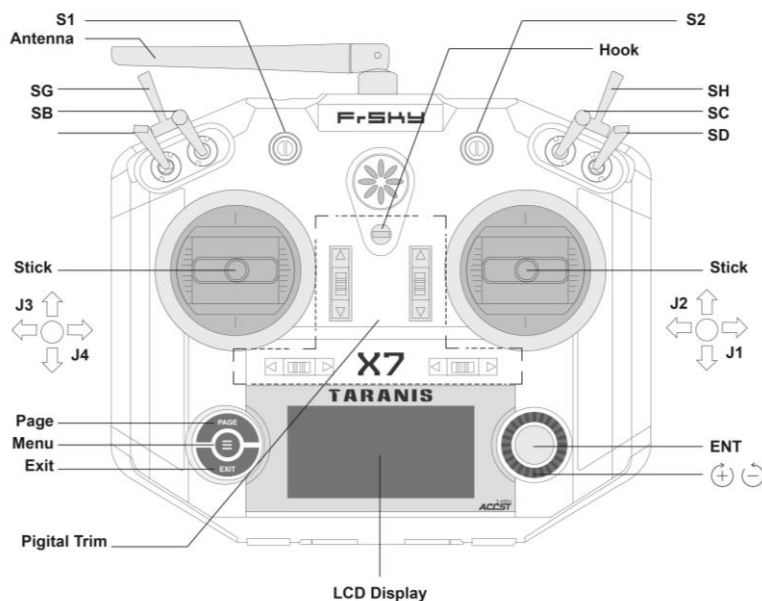
⚠ DANGER - Procedures which may lead to dangerous conditions and cause death/serious injury if not carried out properly.

⚠ WARNING - Procedures which may lead to a dangerous condition or cause death or serious injury to the user if not carried out properly or procedures where the probability of superficial injury or physical damage is high.

⚠ CAUTION - Procedures where the possibility of serious injury to the user is small, but there is a danger of injury, or physical damage, if not carried out properly.

ⓘ = Mandatory ⓧ = Prohibited

⚠ Warning: Always keep electrical components away from small children.



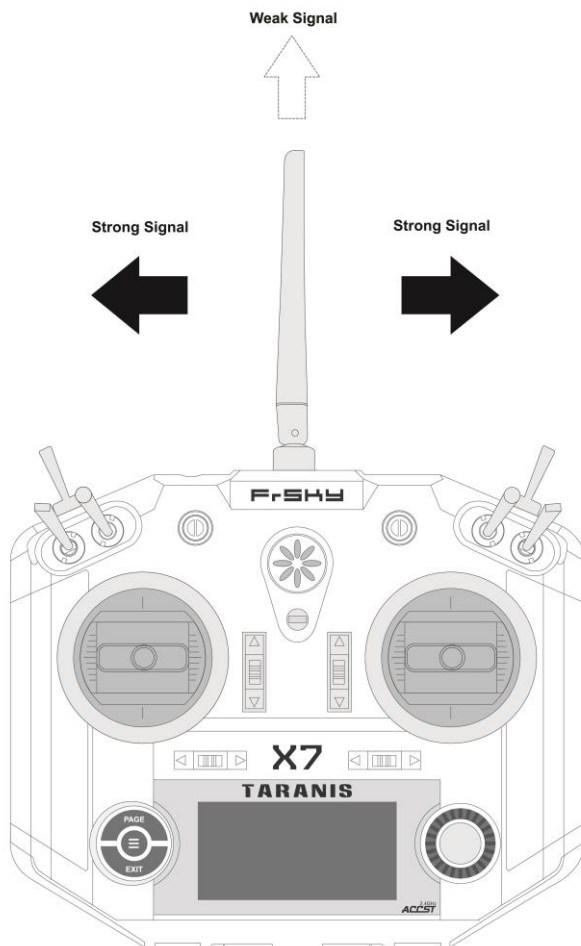
Overview

(Switch Default Settings)

- SA: 3 positions; Short Lever
 - SB: 3 positions; Long Lever
 - SC: 3 positions; Long Lever
 - SD: 3 positions; Short Lever
 - SF: 2 positions; Short Lever
 - SH: 2 positions; Momentary; Long lever
- You can choose the Switch and define its positions in the Mixer menu.

⚠ Cautions on handling antenna

- ⊗ Do not touch the antenna during operation. Doing so could interfere with transmission, causing a crash.
- ⊗ Do not carry the transmitter by the antenna. The antenna wire could break and prevent transmission.
- ⊗ Do not pull the antenna forcefully. The antenna wire could break and prevent transmission.



Rotating Antenna

The antenna can be rotated 180 degrees and angled 90 degrees. Forcing the antenna further than this can cause damage to the antenna. The antenna is not removable.

Angle adjustment of the antenna

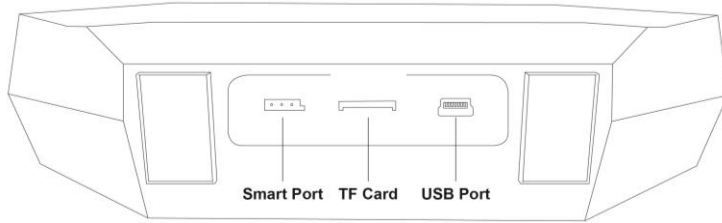
The antenna rotation and angle can be adjusted. The antenna features weak radio signal in the forward direction and strong radio signal in the sideways directions. Adjust the antenna angle to match your flying style.

Specifications

Model Name: Taranis Q X7
 Operating Voltage Range: 6~15V (2S, 3S Lipos are acceptable)
 Operating Current: 210mA maximum (both RF module and backlit are on)
 Operating Temperature: -10~45°C
 Backlight LCD Screen: 128*64 outdoor readable LCD
 Model Memories: 60 (extendable by SD card)
 Compatibility: FrSky X series, D series and V8-II series receivers (plus other receivers if an external module is used)

Features

- Quad Ball Bearing Gimbals
- Receiver Match
- Audio Speech Outputs (values, alarms, settings, etc.)
- Antenna Status Detection and Adjustment
- Real-time Flight Data Logging
- Receiver Signal Strength Indicator (RSSI) Alerts
- Super Low Latency
- Smart Port Supported
- Vibration Alerts



Battery Connector Polarity

Ensure that the battery connector polarity is correct when connecting batteries into the battery compartment, otherwise the Taranis Q X7 might not be powered on.

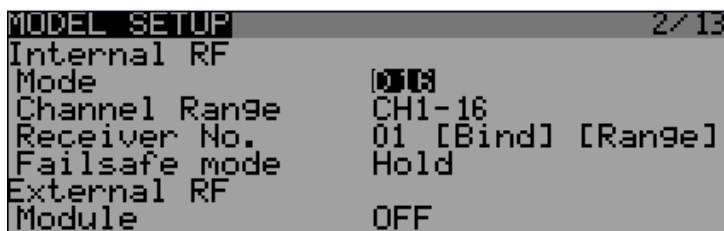
⚠ Notes and Warnings for Battery (Not provided)

- ⊗ Please connect a battery in the battery compartment before use.
- ⊗ The voltage range should be DC 6-15V.
- ⊗ Be careful not to drop the battery.
- ⊗ Don't pull the battery wires as this could produce, short-circuits and cause the battery to explode.
- ⊗ Do not remove the battery from the TARANIS Q X7 transmitter while the voltage warning is blinking as this could cause internal settings and memories to be destroyed.
- ⊗ Do not use the transmitter if a "Backup Error" warning occurs.

Model Setup for Taranis Q X7 Internal RF Module

The internal RF module of FrSky Taranis Q X7 is newly developed by FrSky under the name of XJT.

Enter the MODEL SETUP menu (for details, refer to the Guide included on the SD card, or download it from FrSky website).



Step 1: Set the **Mode** for Taranis Q X7 Internal RF

Refer to the table below and set the Taranis Q X7 to the mode corresponding to your receiver (D8, D16 or LR12).

Mode of Taranis Q X7	Compatible Receivers	Number of Output servo Channels
D8	V8-II series in D mode (V8FR-II, V8R7-II, V8R4-II, VD5M, etc.) D series (D8R-II plus, D8R-XP, D6FR, D4R-II, etc.)	8
D16	X series (X8R, etc.)	Up to 16
LR12	L series (L9R, etc.)	12

Note: older V8 receivers are not supported by the internal module but can be used with an external DJT module in V8 mode.

Step 2: Set the **Channel Range**

The internal RF module of Taranis Q X7 supports up to 16 output servo channels. The channel range is configurable, and needs double check before use.

Step 3: Set the **Receiver Number**

When you create a new model, the system will assign you a receiver number automatically, but this can be easily changed. The range of the receiver number is 00-63, with the default number being 01 (use 00 is not recommended). Once the receiver is set to the desired number and is bound to the Taranis Q X7, the bind procedure will not need to be repeated

unless the receiver number is changed, In this case, either set the receiver number to the previous one, repeat the bind procedure.

Step 4: Bind

Bind refers to Taranis Q X7 binding mode. Move the cursor to “**Bind**”, press **ENTER** button, the cursor will flash and the speaker will beep to remind you that the RF module has entered the bind mode. Then put your receiver into binding mode and finish the bind procedure (refer to the receiver’s manual for details). Press **Enter** or **EXIT** to exit.

Step 5: Set Failsafe mode

There are 4 failsafe modes: No Pulse, Hold, Custom, Receiver (this mode only used above opentx-v2.0.0 firmware).

- No Pulse: on loss of signal the receiver produces no pulses on any channel. To use this type, select it in the menu and wait 9 seconds for the failsafe to take effect.
- Hold: the receiver continues to output the last positions before signal was lost. To use this type, select it in the menu and wait 9 seconds for the failsafe to take effect.
- Custom: pre-set to required positions on lost signal. Move the cursor to “**Set**” and press **ENTER**, you will see FAILSAFE SETTING screen below. Move the cursor to the channel you want to set failsafe on, and press **ENTER**. When moving the corresponding sticks or switches, you will see the channel bar moving. Move the channel bar to the place you want for failsafe and long press **ENTER** to finish the setting. Wait 9 seconds before the failsafe takes effect.
- Receiver: set the failsafe on the receiver(see receiver instructions) in D16 or LR12 mode, select it in the menu and wait 9 seconds for the failsafe to take effect.

Notice:

The above instructions do not apply to D-series receivers, which require the internal RF module of Taranis Q X7 to be in D8 mode. For these receivers, failsafe must be set on the receiver side (see receiver instructions)

- SBUS port always outputs, No Pulse could not perform properly on it. Set “Hold” or “Custom” for SBUS port.

Step 6: Range

Range refers to Taranis Q X7 range check mode. A pre-flight range check should be done before each flying session. Move the cursor to “**Range**” and press **ENTER**. In range check mode, *the effective distance will be decreased to 1/30*. Press **Enter** or **EXIT** to exit.

Model Setup for Taranis Q X7 External RF Module

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Internal RF
Mode          [ON]
Channel Range CH1-16
Receiver No.  01 [Bind] [Range]
Failsafe mode Hold
External RF
Module        OFF
  
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The external RF module can be powered on or off by software. The setup process is the same as that for the internal RF . If you use other brand RF module than FrSky, please choose PPM mode.

FCC Statement

§ 15.19 Labelling requirements.

This device 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.

§ 15.21 Information to user.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

§ 15.105 Information to the user.

Note: 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 television 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.

* RF warning for Portable device:

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

CE

The product may be used freely in these countries: Germany, UK, Italy, Spain, Belgium, Netherlands, Portugal, Greece, Ireland, Denmark, Luxembourg, Austria, Finland, Sweden, Norway and Iceland.

France: the law permits the emission band 2400 to 2483.5 MHz with the limitation of transmission power of 100 mW (reduced to 10 mW between 2454 and 2483.5 MHz for outdoor flying).



FLYING SAFETY

⚠ Warning:

To ensure the safety of yourself and others, please observe the following precautions.

- ① **Have regular maintenance performed.** Although your TARANIS Q X7 protects the model memories with non-volatile EEPROM memory (which does not require periodic replacement) and of a battery, it still should have regular check-ups for wear and tear. We recommend sending your system to your FrSky Service Center annually during your non-flying-season for a complete check-up and service.

- ① **Always pay particular attention to the flying field's rules,** as well as the presence and location of spectators, the wind direction, and any obstacles on the field. Be very careful flying in areas near power lines, tall buildings, or communication facilities as there may be radio interference in their vicinity.

At the flying field

- ① To prevent possible damage to your radio gear, turn the power switches on and off in the proper sequence:
 1. Pull throttle stick to idle position, or otherwise disarm your motor/engine.
 2. Turn on the transmitter power and allow your transmitter to reach its home screen.
 3. Confirm the proper model memory has been selected.
 4. Turn on your receiver power.
 5. Test all controls. If a servo operates abnormally, don't attempt to fly until you determine the cause of the problem. (For PCM systems only: Test to ensure that the Failsafe settings are correct by waiting at least 2 minutes after adjusting then, turning the transmitter off and confirming the proper surface/throttle movements. Turn the transmitter back on.)
 6. Start your engine.
 7. Complete a full range check.
 8. After flying, bring the throttle stick to idle position, engage any kill switches or otherwise disarm your motor/engine.

If you do not turn on your system on and off in this order, you may damage your servos or control surfaces, flood your engine, or in the case of electric-powered or gasoline-powered models, the engine may unexpectedly turn on and cause a severe injury.

- ① **Make sure your transmitter can't tip it over.** If it is knocked over, the throttle stick may be accidentally moved, causing the engine to speed up. Also, damage to your transmitter may occur.

- ① In order to maintain complete control of your aircraft it is important that it remains visible at all times. Flying behind large objects such as buildings, grain bins, etc. must be avoided. Doing so may interrupt the radio frequency link to the model, resulting in loss of control.

- ⊗ Do not grasp the transmitter's antenna during flight. Doing so may degrade the quality of the radio frequency transmission and could result in loss of control.

- ⊗ As with all radio frequency transmissions, the strongest area of signal transmission is from the sides of the transmitter's antenna. As such, the antenna should not be pointed directly at the model. If your flying style creates this situation, easily move the antenna to correct this situation

- ① **Before taxiing, be sure to extend the transmitter antenna to its full length.**
A collapsed antenna will reduce your flying range and cause a loss of control. It is a good idea to avoid pointing the transmitter antenna directly at the model, since the signal is weakest in that direction.

① **Don't fly in the rain!** Water or moisture may enter the transmitter through the antenna or stick openings and cause erratic operation or loss of control. If you must fly in wet weather during a contest, be sure to cover your transmitter with a plastic bag or waterproof barrier. Never fly if lightning is expected.

Secure Digital (SD) Memory Card Handling Instructions

The MicroSD card (TF Card) (not provided with Taranis Q X7) can store various files, such as model data, music, sound files, pictures and text. The card is locked when it is pushed in all the way in. To remove the card, push in on the card again, it will pop out allowing you to remove it.

⚠ Warning

- ① Be sure to turn off the power of the transmitter before inserting or removing a MicroSD card.
- ⊘ As the MicroSD card is a precision device, do not use excessive force when inserting.
- ① If model data generated by a transmitter with a new software version is copied to an one with older software, the transmitter may not operate correctly. Before copying the model data, update the destination transmitter to the new software version.
- ① Do not expose the MicroSD card to dirt, moisture, water or fluids of any kind.
- ⊘ Never remove the MicroSD card or turn off power while entering data.
- ⊘ Never store the MicroSD card where it may be subject to strong static electricity or magnetic fields.
- ⊘ Do not expose the MicroSD card to direct sunlight, excessive humidity or corrosive environments.
- ⊘ Be certain to insert the MicroSD card in the correct direction.

Read data from a PC

Music and image files edited by a PC can be transferred onto the MicroSD card and used on your TARANIS Q X7 transmitter. Equipment for reading and writing MicroSD cards is available at most electronics stores.

Stored data

The life of the MicroSD card is limited due to the use of Flash memory. If you have a problem saving or reading data such as picture data after a long period of use you may need to purchase a new MicroSD card.

- We are not responsible for, and cannot compensate for any failure to the data stored in the memory card for any reason. Be sure to keep a backup of your models and data in your MicroSD card.
- TARANIS Q X7 transmitters and MicroSD cards use non-volatile memory devices so that the data stored is retained, even without a backup battery. Nevertheless, it is good practice to back up the data in the transmitter to the MicroSD card. The clock for the transmitter does depends on the lithium battery, which may need to be replaced occasionally.

Updates

FrSky is continuously adding features and improvements to our radio systems. Updating (via the MicroSD card in Taranis Q X7) is easy and free. To get the most from your new transmitter, please check the download section of the FrSky website www.frsky-rc.com, for the latest update firmware and how-to guide.

* The currently pre-installed firmware of FrSky Taranis Q X7 is modified from OpenTX firmware, improved and well tested by FrSky and the developing union.

* More information about OpenTX can be found on: <http://openrcforums.com>.