Introduction

Thank you for purchasing the FrSky 2.4GHz ACCST Taranis A7 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.

⚠ 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.

Specifications

Model Name: A7
Number of channels: 47 channels
Operating Voltage Range: 6.5~9V (2S, 3S Lipos are acceptable)
Operating Current: 210mA maximum (both RF module and backlit are on)
Operating Temperature: -10~45℃

Features

● Quad Ball Bearing Gimbals
● Receiver Match
● Audio Speech Outputs (values, alarms, settings, etc.)
● Real-time Flight Data Logging
● Receiver Signal Strength Indicator (RSSI) Alerts
● Super Low Latency
● Vibration Alerts
● Model files are compatible with TARANIS X9D/X9D Plus/X9E.
● Open source firmware OpenTx installed.

⚠ Notes and Warnings for Battery

⊘ Please connect a battery in the battery compartment before use.
⊘ The voltage range should be DC 7.2 V.
⊘ Be careful not to drop the battery.
⊘ Don't pull the battery wires as this could produce short-circuits and may cause the battery to fire even explode.
⊘ Do not remove the battery from the A7 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 A7 internal RF Module

Enter the MODEL SETUP menu.

Step 1: Set the Mode for A7 Internal RF

Refer to the table below and set the A7 to the mode corresponding to your receiver (D8, D16 or LR12).

Mode of A7	Compatible Receivers	Number of Output 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.)	47 channels
D16	X series (X8R, etc.)	
LR12	L series (L9R, etc.)	

Notice:
Older V8 series receivers are not supported by the internal module of A7 but can be used with an external DJT module in V8 mode.

Step 2: Set the **Channel Range**
The internal RF module of A7 supports up to 47 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 A7, 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 or repeat the bind procedure.

Step 4: Bind
Bind refers to A7 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 and 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 A7 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 A7 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 A7 external RF Module

The external RF module can be powered on or off by software. The setup process is the same as that for the internal RF module.
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.

RF exposure statement
This device complies with FCC radiation exposure limits set forth for an uncontrolled environment .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, France and Iceland.

FLYING SAFETY

⚠ **Warning:**

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

ⓘ **Have regular maintenance performed.** Although your A7 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 Centre annually during your non-flying-season for a complete check-up and service.

Battery

ⓘUsing a fully charged battery (DC **7.2** V). A low battery will soon die, causing loss of control and a crash. When you begin your flying session, reset your transmitter's built-in timer, and during the session pay attention to the duration of usage. Also, if your model uses a separate receiver battery, make sure it is fully charged before each flying session.

ⓘ**Stop flying long before your batteries become low on charge. Do not rely on your radio's low battery warning systems, intended only as a precaution, to tell you when to recharge. Always check your transmitter and receiver batteries prior to each flight.**

Where to Fly

We recommend that you fly at a recognized model airplane flying field. You can find model clubs and fields by asking your nearest hobby dealer.

ⓘ**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

ⓘ 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.

ⓘ **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.

ⓘ 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

ⓘ **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.

ⓘ **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 (not provided with A7) 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**

ⓘ 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.
ⓘ If model data generated by a transmitter with a new software version is copied to one with older software, the transmitter may not operate correctly. Before copying the model data, update the destination transmitter to the new software version.
ⓘ 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.

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 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.

● A7 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 internal battery, which may need to be replaced occasionally.

Updates

FrSky is continuously adding features and improvements to our radio systems. Updating (via USB Port or the MicroSD card) 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 guide for adjusting your sticks.

● The currently pre-installed firmware of FrSky A7 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.

FrSky is continuously adding features and improvements to our products. To get the most from your product, please check the download section of the FrSky website www.frsky-rc.com for the latest update firmware and manuals