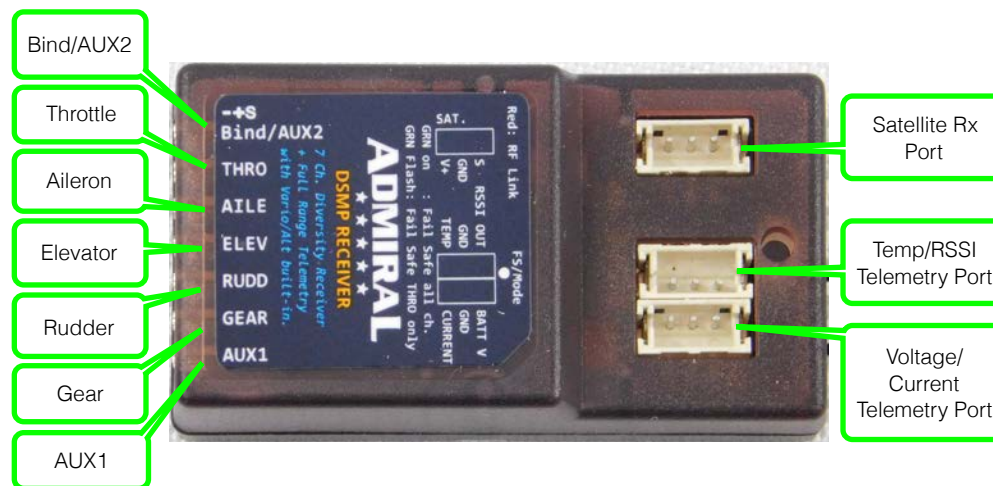


Identifying the RX700T's Ports

The RX700T has 7 servo ports. When a Bind plug is connected to Bind/AUX2, it is used for the Bind process; when a servo is connected to a bound receiver, it is controlled by the AUX2 channel. AUX1 is for surfaces or other controls, such as flaps or gyro control. The rest of the ports are labeled with their intended channels, but they can be used for other purposes.



The Satellite Rx port is to connect an external satellite receiver. The Temp/RSSI Telemetry port is to be used to send data about battery pack temp and the strength of the signal between the transmitter and receiver (RSSI)—note that you only need to use the external RSSI sensor to send the signal to an OSD; if you are only using the built-in RSSI sensor, you don't need to use the external RSSI sensor. The Voltage/Current Telemetry port is used with the Voltage (Only) sensor lead to obtain battery voltage or with the Voltage/Current sensor to obtain both battery voltage and current. The sensors that you use with the telemetry ports are included with the receiver.

The most common configuration for the external telemetry sensors is to use the Voltage/Current sensor to get battery pack voltage and current flow and the external temperature sensor to measure the temperature of the battery pack. This is the configuration described in this guide.

Reviewing the RX700T's Telemetry Options

The RX700T supports a number of telemetry options that you can use with a compatible transmitter, such as a Spektrum telemetry-capable DX-6, DX-8, etc. The RX700T supports the following:

- **Receiver Voltage.** The receiver reports its voltage using a built-in sensor.
- **RSSI.** The strength of the signal between the transmitter and receiver (RSSI) is reported with a built-in sensor. You can also report RSSI to an OSD by exposing the RSSI wire that is combined with the temperature lead on the Temperature sensor.
- **Temperature.** The RX700T reports its temperature with an internal sensor or you can get battery temperature with the external Temperature sensor.
- **Altitude.** The receiver has a built-in barometer so it can report altitude.
- **Vertical Speed.** The receiver also has a built-in vario sensor to measure vertical speed (climb or dive).
- **Battery Voltage (Only).** If the current flow will exceed 60 A, you can use the voltage sensor to measure the voltage of the battery pack. Connect the wire lead on the sensor to the pin on the battery's balance connector that has the largest voltage.
- **Battery Voltage and Current.** This sensor enables you to measure both battery voltage and current. Because this provides the most useful information, this guide shows details for this option. The sensor can be used up to 30 V or 60 A.



Voltage/Current Sensor



Voltage (Only) Sensor



Temperature Sensor

Connecting Servos to the RX700T

When connecting servos, ESC, retracts, etc. to the receiver, the control wire (orange or white depending on the direction of the servo) should be toward the top of the receiver.

Make sure you firmly insert the servo connectors into the receiver's ports so that the connectors don't come loose during flight maneuvers.

Connect servos so the control wire (white or orange) is at the top of the receiver



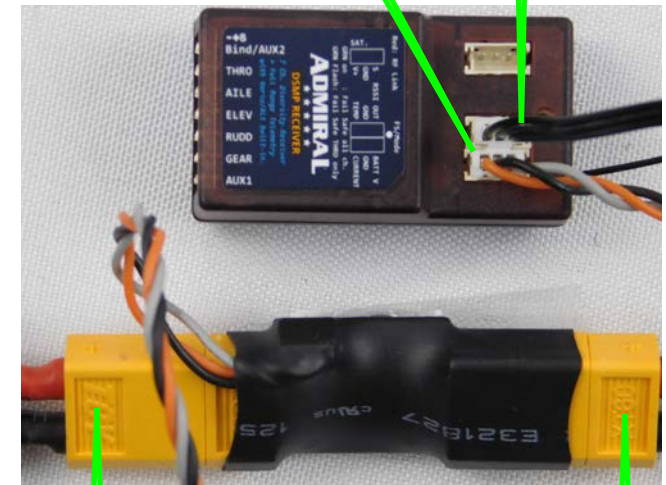
Preparing the Telemetry Sensors

To use the Voltage/Current sensor and external Temperature sensors, connect them as follows:

1. Plug the connector on the external Temperature sensor wire into the Temp/RSSI Telemetry Port, ensuring you orient the connector properly before inserting it into the receiver's port (the connector is keyed to fit into the port).
2. Attach the other end of the Temperature sensor wire to whatever you want to measure the temperature of; for example, you can attach the sensor at the end of the wire (which is heat-shrink wrapped) to the bottom of the battery tray so that when you install a battery, it comes into contact with the sensor. Or, you can use tape to tape the sensor directly to a battery. The sensor will measure the temperature of whatever surface it is in contact with.
3. Plug the lead from the Voltage/Current sensor into the Voltage/Current Telemetry Port, ensuring the connector is correctly aligned with the port (the connector is keyed to fit into the port).
4. Connect the Output side (the side to which the receiver connection wire is attached) of the Voltage/Current sensor to the power wires on the ESC.
5. When ready to power the ESC and receiver, connect the battery to the Input side of the Voltage/Current sensor.

Connect the Voltage/Current sensor here

Connect the external Temperature sensor here



Connect the Voltage/Current sensor to the ESC here

Connect the Voltage/Current sensor to the battery here

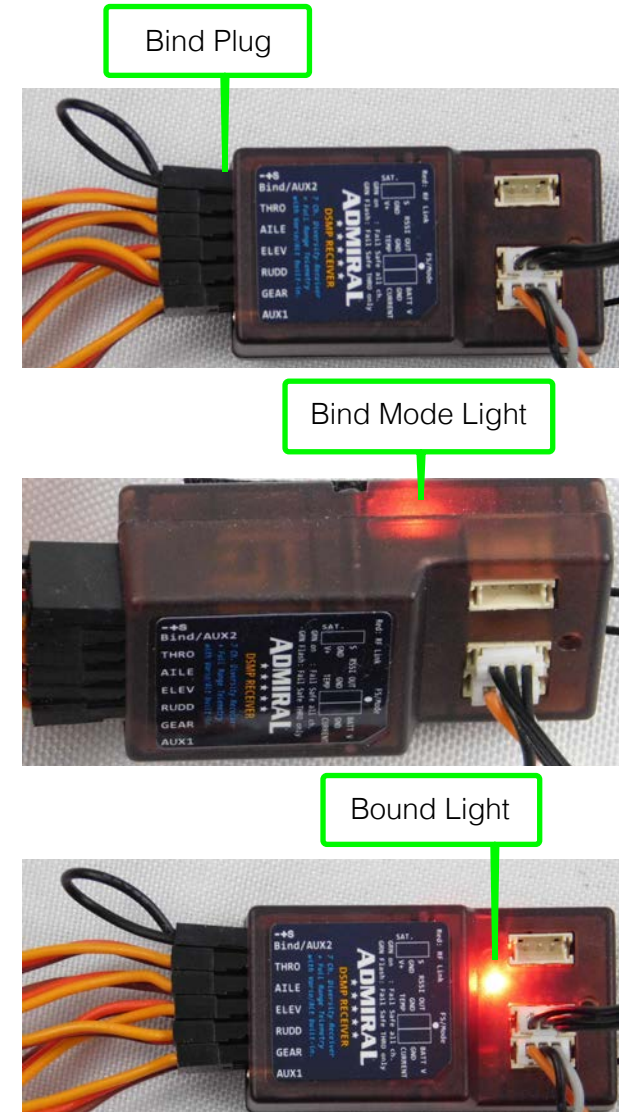
Binding the RX700T

To bind the RX700T to your transmitter, perform the following steps:

1. Insert the Bind plug onto the Bind/AUX2 port.
2. Connect the receiver to power by connecting the battery to the Input port on the Voltage/Current sensor. The receiver's Bind Mode light (located on the bottom of the receiver) flashes quickly, indicating it is ready to bind to the transmitter.
3. Turn on your transmitter and put it in Bind mode. Usually, this involves holding a switch or or pressing or button (such as the Bind button) while turning the transmitter on. (See the instructions for your transmitter for the details.)
4. When the red Bound light (located next to the Satellite Rx Port) illuminates, release the Bind switch or button on the transmitter. The RX700T is bound to the transmitter. (If you also want to configure Fail-safe settings for the receiver, skip the rest of these steps and move to the section called "Setting the RX700T's Fail-Safe.")
5. Remove power from the receiver by disconnecting the battery from the Voltage/Current sensor.
6. Remove the Bind plug from the receiver.
7. Turn off the transmitter.

Test the connection by turning on the transmitter and then powering the receiver. The Bound light should illuminate. Move controls on the transmitter to ensure that the associated servos move.

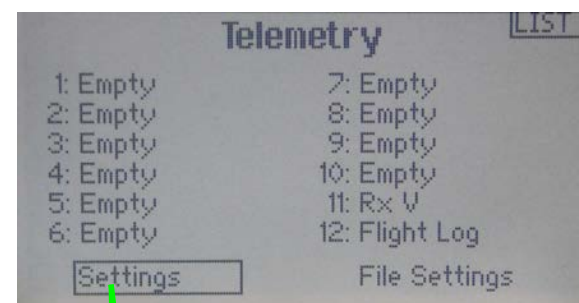
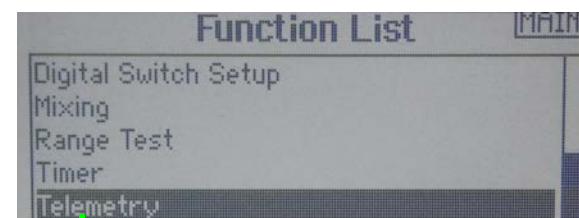
Always perform a range test before flying the model. See the instructions for your transmitter for the details.



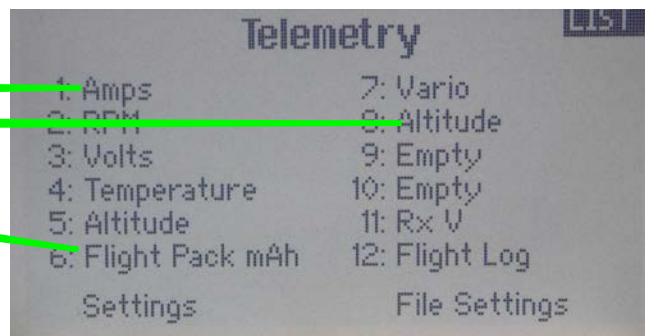
Configuring the RX700T's Telemetry on a Transmitter

To use the telemetry from the RX700T, you need to configure your transmitter to receive and use its telemetry signals. Many models of transmitters (for example, most of the current Spektrum transmitters) support telemetry provided by the RX700T; check the documentation for your transmitter to see if it does. You can usually configure the telemetry using the automatic configuration option, which is available on most Spektrum transmitters. The following steps show how to configure telemetry on a Spectrum DX6e, configuring other Spektrum transmitters is similar.

1. Turn the transmitter on and select the model to which the receiver is bound.
2. Power the receiver.
3. On the transmitter, move to the Function List and select the Telemetry option.
4. Select Settings.
5. Select Auto-Config. The transmitter communicates with the receiver to identify the telemetry signals. While this is occurring, you see the "Configuring..." status message. When the process is complete, you return to the Telemetry screen and see the results.
6. Review the telemetry signals that were configured, such as Amps, Volts, etc. You can view these values on the transmitter's screen and you can set alerts. For example, you might want to be alerted when the battery reaches a set voltage so you know it's time to land (these steps are in the next section).



Telemetry data that you can display on the transmitter's screen and use for alerts

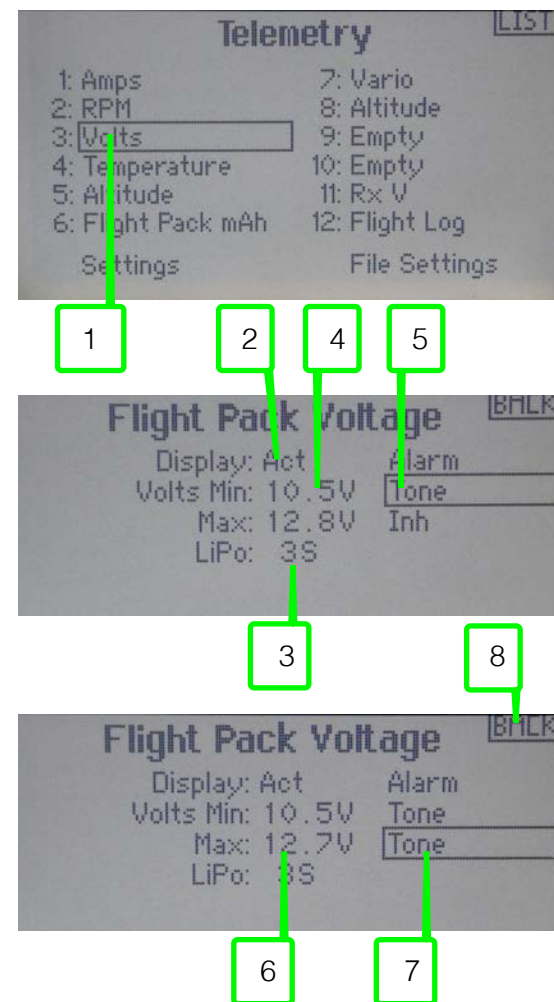


Configuring Telemetry Alerts

It can be difficult (and unsafe) to look at the transmitter's screen while you are flying in order to see telemetry information. Fortunately, you can set alerts to notify you when telemetry indicates there is something of which you need to be aware. For example, you might want to know when the battery voltage reaches a specific level or when you've used a defined amount of the battery's capacity so that you know when it is time to land. (Using telemetry is much better than a timer because telemetry is based on the actual performance of the model rather than just a set amount of time.)

Different models of transmitters support various types of alerts, such as tones being played or spoken alerts. The following steps show how to set a tone alert for battery pack voltage on a Spektrum DX6e. Steps to configure different alerts on a DX6e or to configure alerts (such as voice alerts) on other models are similar (consult the user manual for your transmitter for details).

1. Move to the Telemetry screen and select the data for which you want to set an alert, such as Volts.
2. To display the telemetry data on the screen, ensure Display is set to Act.
3. Select the number of cells in the model's battery, such as 3S. The minimum and maximum voltages are set automatically, but you can adjust them to suit your preferences.
4. Select Volts Min and set the threshold for the low battery voltage. For example, for a 3S pack, you might want to set this about 10.5 volts.
5. To set an alert when the minimum voltage is reached, change the Volts Min Alarm setting from Inh to Tone.
6. Select Volts Max and set the threshold for high battery voltage. For example, for a 3S pack, you might want to set this about 12.7 volts.
7. To set an alert when the maximum voltage is reached, change the Volts Max Alarm setting from Inh to Tone.
8. When you're done configuring the alert, select Back.
9. Configure alerts for other telemetry options, such as Flight Pack mAh to be alerted when: you reach a maximum amp draw, you've used a defined amount of battery capacity, or the maximum temperature is reached.



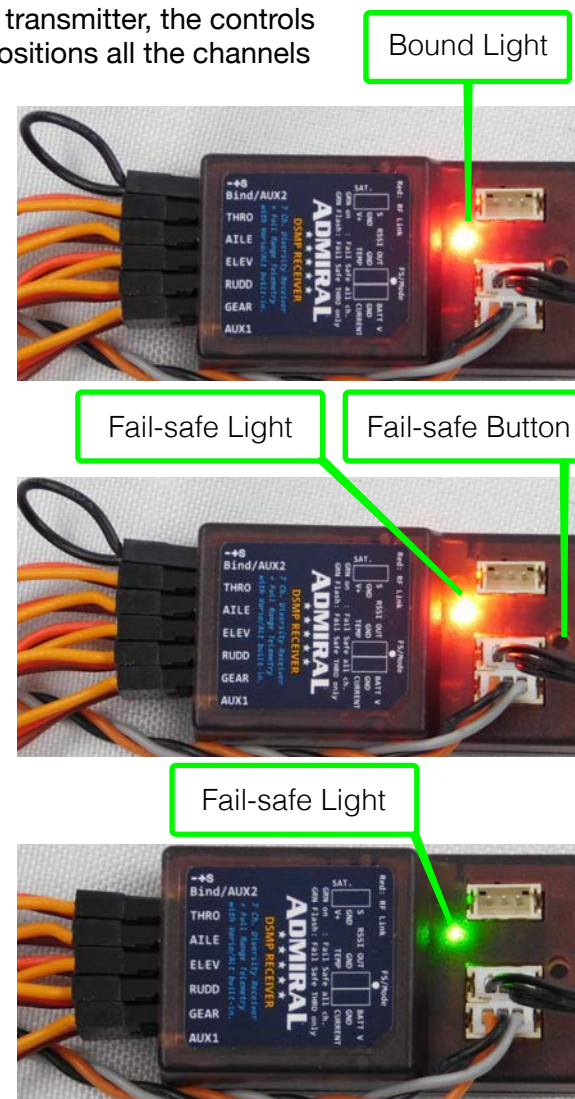
Setting the RX700T's Fail-Safe

The RX700T enables you to set fail-safe positions; if the receiver loses its connection to the transmitter, the controls move to their fail-safe positions automatically. There are two options. *All-channel* fail-safe positions all the channels you select. *Throttle-only* fail-safe sets only the throttle (the rest of the controls remain as they were when the connection was lost).

1. Follow Bind steps 1-4 (don't remove the Bind plug).
2. Remove the propeller from the model to ensure there isn't a safety issue if the motor spins.
3. To set the All-channel fail-safe, hold the transmitter controls in their fail-safe positions; for example, move the aileron and elevator sticks to put the plane in an orbit, set throttle position, configure flaps and retracts, etc. or to set a Throttle-only fail-safe, you only need to set the throttle position. If you are going to hold more than one stick, you'll probably need someone to help with this step.
4. To set the All-channel fail-safe, press the Fail-safe button briefly once; you should see the green Fail-safe light illuminate. (It's a bit hard to see because of the brightness of the Bound light so look closely.)
5. To set a Throttle-only fail-safe, rapidly press the Fail-safe button twice; you should see the green Fail-safe light flash.
6. Disconnect the receiver from power.
7. Remove the Bind plug.

Test the fail-safe operation as follows:

1. Make sure the model won't pose a danger should its controls (especially throttle) activate unexpectedly.
2. Power the receiver.
3. Turn the transmitter off. The controls you configured should be automatically set in their fail-safe positions, for example, if you set throttle off, the throttle should move to the off position. You should also see the solid green Fail-safe light, which indicates the receiver is operating in Fail-safe mode.
4. Turn the transmitter back on. You should regain normal control, and the Bound light on the receiver should illuminate, indicating the receiver has returned to normal operation.



Installing the RX700T

Use the double-sided tape to install the RX700T where you can access it as needed while placing it as far from the battery and other electronics as possible.

Secure the RX700T's antennas at a 90-degree angle ("L" shape) to each other to maximize signal reliability.

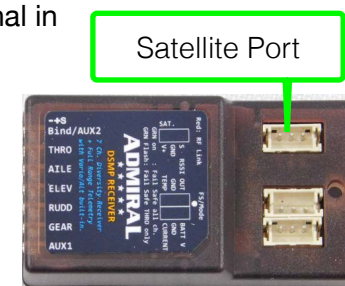
Using a Satellite Receiver

A satellite receiver provides a better connection between the transmitter and aircraft by providing additional antennas that you can position away from the primary receiver and other components to achieve a reliable signal in all orientations of the model.

You can purchase a satellite receiver for the RX700T here: [Satellite Receiver at Motion RC](#).

To use a satellite receiver:

1. Disconnect the receiver from power.
2. Connect the cable supplied with the satellite to the Satellite port on the RX700T and to the satellite.
3. Bind the RX700T to the transmitter and reset the Fail-safe mode (if you are using it).
4. Use the provided double-sided tape to install the satellite receiver; place it as far from the RX700T as possible while avoiding installing it next to batteries or other electronics.
5. Secure the satellite's antennas at 90-degree angles to each other and to the RX 600's antennas if possible.



RX700T Notes

- When a Bind plug is connected to the Bind/AUX2 port, the servo signal function to that port is disabled. When you remove the Bind plug, you can attach a servo and normal signals resume.
- The Voltage/Current sensor is calibrated only for the receiver with which it came. If you use the sensor with a different receiver, the data might not be accurate.
- Don't use the Voltage/Current sensor if the current will exceed 30 V or 60 A. Doing so will damage the sensor and could lead to loss of power for the model, leading to a crash.
- When using a satellite receiver, the Bound light on the satellite also illuminates when the receiver is powered on.
- To provide an RSSI signal to an OSD, remove the heat-shrink from the end of the Temperature Sensor wire. This exposes the external RSSI wire. Use that wire to provide the RSSI signal to an external device, such as a flight controller.