Fr SKY

Delta 8

2.4GHz Receiver with CPPM/RSSI output mode
Compatible with FrSky D8/V8, Futaba S-FHSS/FHSS and Hitec AFHSS systems

Thank you for purchasing an FrSky Delta receiver. The FrSky Delta receiver is the first multi-brand 2.4GHz receiver for the R/C market, allowing you all the flexibility gained from not being locked into a single brand. Please read these instructions fully, as setting up this receiver may differ from what you are used to.

Usage

ⓘ Always set the failsafe. As a minimum, any electric motors should be set to stop and IC engines to be either idling or stopped.

ⓘ Always perform a range check. This should be done as a minimum before the first flight of the day.

▪ The receiver needs to be protected from vibration. Wrap it in foam or other similar vibration absorbent materials.

▪ Electronic devices and fluids do not mix! If the receiver is going to be used in an area of high moisture or where it could get wet, please ensure it is put into a sealed container to protect it.

Antenna mounting

ⓘ Mount the antenna at 90° angles to each other for optimum performance.

ⓘ The antenna should not be situated near areas of electric noise such as motors, ESCs, gas engines and ignition units.

ⓘ When mounting in a carbon fibre aircraft, ensure that the exposed area of the antenna is mounted outside the aircraft.

▪ Do not bend the antenna cable around a sharp radius. The exposed tip should be kept straight.

▪ Do not cut the antenna cable shorter or wrap it into a coil.

Specifications

- Channel: 8
- Dimensions: 44 x 24 x 14mm
- Weight: 9.3g

- Operating Voltage Range: 3.0v to 16.0v
- Operating Current: 30mA
- Typical Range: >1.5km (Full Range)

LED Status Indication

Receiving mode

Red	Green	Indication
Off	Flashing	No Signal
Off	Solid	Receiving Signal
Solid	Solid	Receiving Signal + PPM Output
Alternating		Link / Failsafe Memory Error

Linking mode

Red	Green	Indication
Off	Fast Pulse	FrSky D8
Off	Slow Pulse	FrSky V8
Fast Pulse	Off	Hitec AFHSS
Slow Pulse	Off	Futaba S-FHSS/FHSS
Fast Pulse	Fast Pulse	Linked with Transmitter
Solid	Fast Pulse	Linked in PPM output mode

Linking to your Transmitter

When linking your receiver, it switches between the different formats to lock onto your transmitter until it finds it. There are two methods of doing this. Either through an automatic search or manually specifying which brand you wish to link to.

Automatic Linking

FrSky D8/V8 Module

- Push and hold the button on the back of the module. Power on the transmitter.
- Push and hold the button on the receiver. Power on the receiver.
- When the red and green LED's flash together, the receiver is now bound.

FrSky Taranis Transmitter

1 Power on the transmitter. Select bind from the menu options.
2 Push and hold the button on the receiver. Power on the receiver.
3 When the red and green LED's flash together, the receiver is now bound.

Futaba S-FHSS/FHSS

1 Power on the transmitter.
2 Ensure that any drive motors are disconnected.
3 Push and hold the button on the receiver. Power on the receiver.
4 When the red and green LED's flash together, the receiver is now bound.
5 Power cycle the receiver and check that your transmitter is the one linked to the receiver. Failure to do this could lead to injury.

Hitec AFHSS

1 Push and hold the link button on the back of the transmitter. Power on the transmitter.
2 Check that the Blue LED is flashing. If the Red LED is flashing, tap the link button again to turn it Blue.
3 Push and hold the button on the receiver. Power on the receiver.
4 When the red and green LED's flash together, the receiver is now bound.

Manual Linking

In some cases, it may be beneficial to manually specify which brand the receiver should bind to. The procedure is the same as above – except before binding put the supplied jumpers into the following positions.

FrSky D8   FrSky V8   Hitec AFHSS   Futaba S-FHSS/FHSS
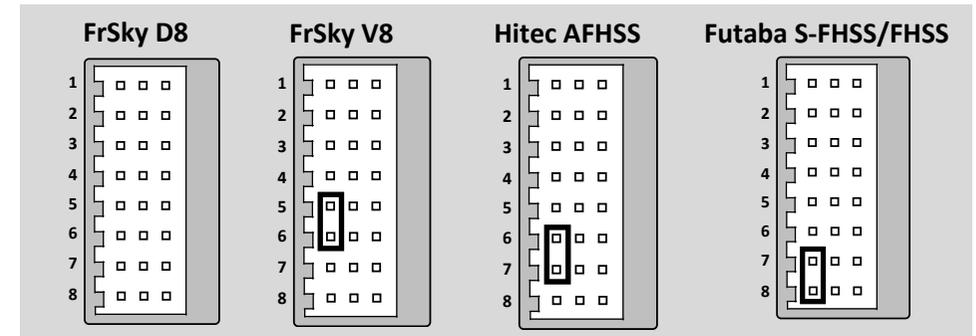
CPPM and RSSI output mode (Advanced Users)

For some applications such as OSD, FBL Helicopters, Flight Controllers, Return to Home systems etc., they may require CPPM and/or RSSI input. If you need this for your application, you can enable it by putting a jumper between pins 3 and 4, then link your receiver as described above. Once successfully linked, the receiver will output CPPM on Servo Connector 1, and output RSSI on Servo Connector 2. As the RSSI output is a digital square wave, some units may require an analogue filter for their RSSI input. In Hitec AFHSS mode, Servo Connectors 5 to 8 will become Channels 6 to 9. Please refer to your unit instructions for more information.

Failsafe

The failsafe function, in the event of signal loss, will move the servos to a designated position and to stop any propulsion system. This is to try and prevent a model from causing damage or harm. Note, in many countries, it

is a legal requirement that a Failsafe is set up correctly – as a minimum to idle/stop any motors, engines or any other form of propulsion system. The receiver's Failsafe operates on all channels – irrespective of the transmitter model or brand. If your transmitter has its own Failsafe function, it's recommended to disable it to prevent any conflicts.

Setting the Failsafe

1   Ensure that the transmitter and receiver are both switched on and linked first.

2   Move all controls to the desired positions that you wish to set the Failsafe too.

3   Push and hold the receiver button for 5 seconds.

4   The Red LED will flash rapidly for a short period to indicate that the Failsafe has been set.

ⓘ To disable the Failsafe, re-link the receiver.
ⓘ If your transmitter has a Failsafe facility, this will not take effect. It is recommended to disable the transmitter Failsafe to prevent any conflict.

▪ Always ensure that the Failsafe is set to turn off any motors and idle/stop any IC engines.

▪ If you have reversed any channels or changed the linkage setup, reset the Failsafe to ensure it is set correctly.

ⓘ To prevent accidental setting, the Failsafe can only be set once per power cycle. To set again- power cycle the receiver first.
ⓘ After setting the Failsafe, check that it is set up correctly by turning off the transmitter with the receiver still switched on. Ensure that the prop area is clear and the model is tethered before doing this.

Issue	Solutions
Receiver does not power on/No LEDs are lit on the receiver.	Check that the receiver battery is not empty.
	Check that the servo connectors are orientated correctly.
	If the receiver is subjected to moisture, it can cause it to fail. It may function once dried out; however, its performance cannot be guaranteed. Ensure that the receiver is protected from moisture.
Unable to link receiver.	Move the transmitter closer or further away from the receiver.
	Avoid any areas near other 2.4GHz devices, such as Wi-Fi Routers, Laptops, Phones, Video Repeaters and other transmitters.
	Try setting the receiver into manual linking mode for the brand type in question.
	Note, this receiver does not support Futaba FASST. Please see the other FrSky Futaba range for a compatible receiver.
Receiver loses signal in close range.	The receiver has a highly sensitive RF front end to give superb range. If a transmitter is too close, it can cause it to become overwhelmed and loose signal. Also if the receiver is in CPPM/RSSI output mode, the RSSI output signal may become unstable. Move the transmitter further away from the receiver's antenna.
Hitec Transmitter is not flashing Blue LED in bind mode.	Briefly press the bind button again. This should change between a flashing red LED and a flashing green LED (vice versa).
	If this still does not work, you may need to update the transmitter's module. It needs to be on version 3.01 or greater. Please contact your local Hitec distributor.
In Hitec mode, the servos jitter and are slow to react.	You may have accidentally put your Hitec module into rescan and retune mode. This can happen if the link button is held too long. Please relink your receivers.
Receiver does not lock on to a signal when changing between Futaba S-FHSS and FHSS modes.	For safety reasons, the receiver will only lock onto either S-FHSS or FHSS, depending on what the transmitter was set to during linking. To change between S-FHSS and FHSS modes, please relink the receiver.
Futaba FHSS mode only controls 4 channels.	Futaba FHSS only supports 4 channels. If you need more than this, use S-FHSS mode (if your transmitter supports it). Unless your transmitter only supports FHSS mode, there are no benefit using it over S-FHSS mode.
Transmitter Failsafe has no effect.	This receiver does not support setting of its Failsafe using your transmitter. Please refer to the Failsafe setting advice above.
Receiver lights flash alternatively on power-up.	On every power-up the receiver verifies that its internal link and Failsafe data is correct for safety. If this should fail, you will get a warning indication. Try linking again and the receiver will use an alternative storage area for the link data. If this error repeatedly occurs, the receiver's memory may have failed. Please contact your local FrSky reseller for advice.

Troubleshooting