UNI-RX Guide

Just bind and Enjoy!

Universal ACCST or UNI-RX for short is a firmware that can be installed on many FrSky ACCST (D16) receivers.

Our goal was quite simple, we wanted to develop a user-friendly ACCST firmware that would fix existing bugs. As a result UNI-RX recognises whether the transmitter is transmitting with V1 or V2 firmware as well as FCC or EU and adjusts to match it. This means UNI-RX combines four firmwares in one easy to use package.

Is that all?

Nope, we also focused on every single issue that ACCST has suffered from regardless of how rare they were. The results are a firmware that works and works VERY well. Some highlights:

- Added "Auto Tune" feature to lock into transmitter signal with improved precision.

- Added VFR (Valid Frame Rate) telemetry support.

- Eliminated transmitter "swamping" when receiver and transmitter are very close to one another. (No more: "Telemetry lost, telemetry found" errors)

- Eliminate the risk of entering failsafe when the transmitter and receiver are very close.

- Eliminated rare telemetry data errors (spikes) when RF quality is weak.

- Added a new Dual Bind feature. (Once you have bound one transmitter, you may bind to a second transmitter.)

- Protection from burning the wrong firmware version onto your receiver.

How do I use it?

UNI-RX firmware has a special protection method in place to thwart clone manufacturers. Sadly this means your initial install must be done by an authorized FrSky Service Dealer, these are Aloft Hobbies in the USA, Engel MT in Germany, T9 Hobby Sport in UK, and RC Studio in CZ. Each of these dealers will be able to flash UNI-RX onto your receiver, or sell you a brand new receiver with it already installed. Should an update be needed in the future they will be available online for download and you will be able to perform the update yourself, or send it back to one of the listed dealers.

Binding

Binding is very similar to the FrSky method, but may be a little slower as it searches for your radio type.

1. Power on holding the bind button on the receiver, Initially the red LED should be on solid, then every 0.5 seconds it should blip off, indicating it is trying a different mode. (If it is flashing slowly, then it did not enter bind mode and is indicating no Tx signal, try step 1 again.)

2. In the transmitter set the bind mode to D16 and enter the bind mode option.

3. Monitor the LEDs on the receiver, when the bind completes, the red LED is off and the green LED is flashing. (With the Rx in binding mode, the red LED is blipping off every 0.5 seconds indicating changing the protocol mode. When a Tx is then in bind mode, first the red LED stops blipping off, indicating the Rx has detected a particular protocol, and is then tuning. Any received packet then causes the green LED to flash on. Finally, at the end of binding, the red LED goes off and the green LED flashes.)

4. Power off the receiver and turn off binding in the transmitter. You are done. When you turn the receiver back on and it connects to the transmitter you will observe that both LEDs (red and green) will both be on indicating that all is good. (The green LED actually is on for 7mS every time a packet is received correctly. Packets should arrive every 9mS, so the green LED appears solid, but will flicker if many packets are not received OK.)

During binding, if signal pins for channels 3 and 4 are jumpered, then the SBUS output becomes a normal servo pulse output.

Optional manual mode binding: When in bind mode, pressing the bind button again stops searching for the bind mode and stays on a single mode. Each press of the bind button then changes to the "next" mode. The red LED flashes to indicate the current mode:

1 flash =	V1 FCC	2 flashes =	V1 EU
3 flashes =	V2 FCC	4 flashes =	V2 EU

Dual Bind:

Normally set the receiver to bind first, then the transmitter. The only time you need to set the transmitter first is if you are using this "Dual Bind" option.

1. Bind transmitter 1 (call it TxA) per the binding steps 1 - 4 above.
2. Now bind a second Transmitter (call it TxB) per the binding steps 1 - 4 above.
3. If you now wish to use TxA, set TxA into bind mode, then power the Rx on (no need to hold the bind button). TxA should then bind. You will then need to stop the Tx binding and power cycle the Rx. Changing back to TxB is then done using the same method.

Failsafe:

Failsafe should be set from the Tx, although after setting it on the Tx, you must wait at least 10 seconds to guarantee the values have been sent to the Rx (OpenTX limitation).

With this firmware, you may set failsafe on the Rx, just press the bind button in normal operation, the red LED should flash 3 times to indicate failsafe has been set.

X8R Version - The RSSI port is now an A2 port, this can be used like a normal A2 port for basic voltage monitoring. Voltages from 0V to 3.3V can be read directly. For higher voltages, an external voltage divider (e.g. FBVS-01) MUST be used.

X6R Version - The X6R gains an additional A2 input like the X8R. It's located on the pad labeled "P7" which was originally an RSSI output. This is not an easy pad to use.

This is not a FrSky project.

We have shared the project details with FrSky and they have given us permission. FrSky has not been involved with the development at all. If you have issues or concerns please share it with your local Service Dealer listed elsewhere in this document.

If you are not pleased with this UNI-RX, you are free to install any of the FrSky firmware onto your receiver. We have not altered the receiver in any way.

here are a few suggestions which you can include in the near future:

- **Flashing firmware**: Brief info about flashing new firmware should it be needed in the future.
- **Scripts**: How to install and use them.
- **VFR**: What it is and how to use it.