1. DHT-U Overview

2. Features

1) Easy to bind and instant link between transmitter and receiver.
2) All-in-one combination of telemetry module, in-built display and alarm threshold settings.
3) Show in-flight data via in-built display.
4) Capable of setting failsafe during flight.
5) Alarms on monitored conditions (e.g. low voltage, poor reception, etc.).
6) Firmware upgradable.

3. Specification

1) Voltage: 6.0V-13.0V
2) Current: 50mA
3) Output Power: 60mW
4) DHT-U LCD Pixel: 128*64
5) Compatible Transmitter: Transmitters with PPM output
6) Compatible Receiver: FrSky D8R-II plus, D8R-II, D8R(V2), D8R-XP, D8RSP, D6FR, D4R-II, D4FR

4. Screen Structures

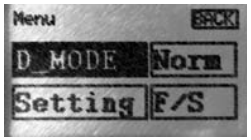
4.1 Main Screen

FrSky Logo	
Data Screen	Menu Screen
Module ID	Version No.

4.2 Menu Screen

Menu Screen 1

*D_Mode	Bind/Norm/Range Check
Setting	Failsafe



* **Note: DHT-U V2.3 data logger firmware disables V8 functions.**

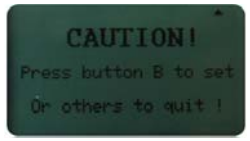
Menu Screen 2

Blade Number:		
Volt ratio:	A1	A2
Unit Set: Altitude/Temperature/Speed		
*Alarm Set: Voltage A1/Voltage A2/RSSI/ Lipo Voltage/Altitude		

***Note: To obtain the Volt Alarm value the following formula will be used: Alarm Value= Alarm volt/ratio /3.3 * 255.**

Menu Screen 3

Press button B to set failsafe during flight, or others to skip.



4.3 Data Screen

FrSky sensor hub, sensors and D8R-II plus/D8R-XP/D4R-II telemetry receivers are required if information collecting and processing, model monitoring and data feedback are required.

Data Screen 1

GMT(H/M/S)	Fuel Level
Volt 1	Temp 1
Ampere	mAH
Rx RSSI	Tx RSSI

Data Screen 2

GMT(H/M/S)	Fuel Level
Volt 2	Temp 2
*Altitude	RPM
Rx RSSI	Tx RSSI

***Note: Press Button A of DHT-U to change between absolute altitude and relative altitude.**

Data Screen 3

Acceleration X/Y/Z		
Longitude		*Home
Latitude		
Speed	Distance	

***Note: Press Button Home to know the distance away from the pilot's location.**

Data Screen 4
Lipo voltage display from FLVS-01 (6S on one page, 12S at most)

1. Roll the 3-way roller switch up and down to switch among data screens.
2. Press Button A and Button B at the same time for 0.5 second to switch from data screen back to main screen.
3. GMT(H/M/S) time display can not be modified.

5. Installation Process

1. Open the transmitter and find out the battery power supply line, GND and PPM signal line . Or connect directly to coresponding pins after original module is removed.
2. Solder the battery power supply line, GND and PPM signal line to corresponding wires of DHT-U(RED→V+; BLACK→GND; BROWN→PPM).
3. Clamp DHT-U to the transmitter's handle or antenna base via provided clamp and screw or FMS (FrSky Mounting Stand).
4. Connect the module antenna to DHT-U.

6. Bind Procedure

Binding is the process of uniquely associating a particular receiver and transmitter, to exclude and potentially interfering transmitters. A transmitter can be bound to multiple receivers (not to be used simultaneously). A receiver can only be bound to one transmitter. This association is a key component in newer 2.4GHz radio systems and must be done before the equipment can be used.

1) Ascertain that the transmitter is in **PPM** mode. Turn the transmitter off.
2) Turn the transmitter on and enter **MENU** page, select **Bind_Mode**.
3) Turn on the receiver while holding **F/S** button on the receiver. The RED LED on the receiver will flash, indicating the binding process is completed.
4) Turn off both receiver and transmitter.
5) Turn the transmitter on and enter **MENU** page, select **Normal**. Re-connect battery to the receiver. The RED SOLID LED on the receiver will indicate receiver is receiving commands from the transmitter.

After above steps are completed, both the transmitter and receiver are ready to be used. The bind procedure will not have to be repeated unless one of the two is replaced.

Note: there might be LED status difference among different receivers, please refer to receiver manual for more details.

7. Failsafe Setting

In some special circumstances, such as strong interference, the signal may be lost. When signal is lost in a short period, the receiver continues to try to search for the transmitter, at the same time it keeps the last command from the transmitter, until a new command is received. Failsafe is recommended to set when system is firstly used, or receiver has been re-bound.

Follow the steps below to set failsafe BEFORE flight:
Option-1. How to set failsafe to a user-determined state on lost signal:
1) Bind the receiver to the transmitter module first and turn on both the transmitter and the receiver;
2) Move the controls to desired failsafe position for all channels;
3) Press briefly the F/S button on the receiver and you are done.

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Option-2. How to set failsafe for no pulses on lost signal:
1) Just press briefly the F/S button on the receiver while the transmitter is off and you are done.

Note: If failsafe is not set, failsafe default will hold last position before signal is lost. In this case, there exists risk that your model will fly away or cause injury.

Follow the steps below to set failsafe DURING flight:
1) Bind the receiver first and turn on both transmitter and receiver;
2) Enter **MENU** page, select **F/S** to enter failsafe sub-page, press **Button B** to set failsafe at the desired failsafe position.

8. Range Check

A pre-flight range check should always be done before each flying session, especially with a new model. Reflections from nearby metal fences, concrete buildings or trees can cause loss of signal both during the range check and during flight.

The following steps are to be followed to perform the range check of the model before flight:
1) Place the model at least 60cm (two feet) above non-metal contaminated ground (e.g. on a wooden bench).
2) The receiver's antennas should be separated in the model and not touch the ground. Place the module antenna in a vertical position.
3) Turn the transmitter on and enter **MENU** page, select **R-CK**, connect battery to the receiver. The effective distance will be decreased to 1/30 of full range.
4) Walk away from the model while simultaneously operating the controls on the transmitter, confirming that all controls operate normally to a distance of 1/30 of the full range.

9. Difference between DHT-U V2.0 and V2.3:

9.1 Below functions have been disabled in V2.3:

1) Capable of selecting eight data to show on the first two data screens;
2) V8 functions;
3) Improving the Current display precision to 0.1A.

9.2 Data log function has been added in V2.3:

1) SD card logo will show up on the main screen after it is inserted into SD reader;
2) Press the top left button on DHT-U to enter setting menu for data log;
3) *Log time (time to start data log: 1/3/5 minutes after powering up) and *log step (time interval: 1/2/5 seconds) are selectable;
4) File format for data log: csv

* FrSky default log time is 3min while log step is 2sec. Both are selectable. Data will be recorded as per log time and log step.