

## Telemetry

This page is based on [This RCGroups Post](#)  
See also this other [RCG post](#).

### Quick Devo setup:

The quad should have telemetry enabled by default

- Devo: select protocol Bayang, set protocol option "Telemetry" to on
- Add one or more of "**Loss, Holds, Batt/Volt2, RxV/Volt1**" to the main screen
- You should now see the data on the main screen after binding

### Devo 7e and other versions update info:

The telemetry is present in deviation firmware in the latest nightlies, currently. That means you may need to flash a recent nightly ( dec 2016 or newer) to make use of telemetry with the bayang protocol, and your flashed quadcopter.

Please back-up the model files, and perhaps other files just in case, when upgrading the transmitter firmware.

To enable telemetry, hit enter when selecting bayang protocol, the same as enabling telemetry for other protocols, such as DSMX

The protocol with telemetry enabled will **only bind to a quad with telemetry capability**. With telemetry off, it will bind to all quads, including factory firmware, and telemetry quads.

### Telemetry data:

The quad sends battery voltage, battery voltage- compensated against throttle, packets received ( reception quality indicator ), and battery low -led flash signal

Additionally, the tx generates telemetry reception stats.

### Telemetry names:

Telemetry names are shared with the dsm2 protocol, and as such, their names are not very appropriate to describe the quantity they represent.

\***Fades\_L** - led battery low flashing= 100, otherwise 0

\***Loss** - TX's telemetry reception quality indicator in packets per seconds (max 200)

\***Holds** - quad's reception indicator in packets per seconds (max 200)

\***RxV -Volt1**- real battery voltage

\***Batt -Volt2**- compensated battery voltage

**Alarms:** Some alarms could be setup for telemetry data. Make sure to fly in range of telemetry if you rely on them only. Telemetry range is smaller than the range of a tx with a PA module.

FadesL > 1 will create an alarm that sounds if the leds flash a low battery code

Batt  $\leftarrow$  3.40 is ok for low battery alarm - using voltage compensation settings from config.h

Rxv  $\leftarrow$  2.90 - real battery voltage - this would be more like a traditional lvc that sounds on max throttle sometimes

The real voltage goes down a lot, so it may not be very useful. An alarm of 2.8 - 3.0 could be used.

**Additional:**

Since the telemetry range is shorter compared to the tx range ( with PA ) , there is no point setting an alarm for quad reception strenght, as the telemetry will probably fail before that level is reached.

The quadcopter only sends telemetry after a packet is received from the transmitter. This is to avoid on-air clashes when the code hopping becomes unsynchronized. Because of this, the telemetry rate will go down when reception is poor on the quadcopter.

**HACKs:**

[MCU Utilisation](#)

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Last update: **2018/05/14 00:28**

