## *Voltage Monitor for R/C Receiver Batteries NiMh/LiFe/LiPo (4.8 V / 6 V / 7,4V)*

The **M-SAVER ultra** is a optical voltage monitor for 4-, 5- and 6-cell (Ni) and 2-cells (LiPo) receiver batteries. It informs the user precisely about the receiver voltage level of his model power supply. An ultra-bright twelve-segment LED bar digitizes the course of the receiver battery voltage in four ranges: green, yellow, orange, and red. Thanks to it's **memory function**, the current **battery voltage** and the **lowest voltage** measured in flight are displayed.

If any **red LED** is showing the model should not be flown. The **M-SAVER ultra** is simply connected into an unused servo output of the receiver.
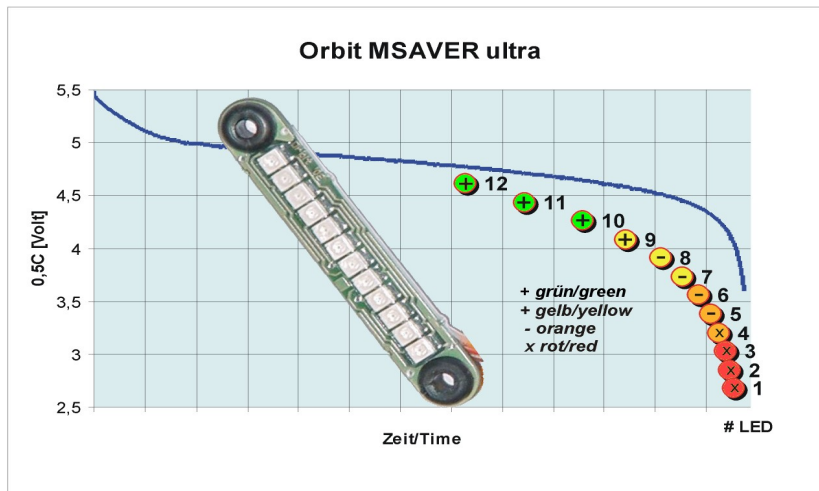
+ = Full battery voltage
green light

- = Voltage dropping
yellow/orange light

x = Discharged/weak

red light; very low voltage

The discharge curve clearly shows when the battery voltage starts to decrease and finally drops completely.

M-Saver ultra	4 NiMh cells	5 NiMh / 2 LiFe cells	6 NiMh / 2 LiPo cells
Green/yellow/orange/red	4,8 V - 4,1 V	6,0 V - 5,2 V	7,8 V – 6.0 V

Installation

1. Fix the **M-Saver ultra** in the model.
2. Select the number of battery cells by programming if necessary (see figure on the right). Factory setting: 4 cells NiMh
3. Now plug the cable into an unused servo output of the receiver.
4. Before each start, you can check the R/C receiver battery voltage under load by moving the rudders several times.
5. After the flight the current voltage and the lowest voltage can be read from the display.

Programming the display range

The different measurement ranges of the **M-SAVER ultra** for 4, 5, or 6 cells can be switched by applying a programming voltage of 12 V (DC) at the plug (red = +, black = -). After switching the 12 V voltage on, the **M-SAVER ultra** first displays the current selected cell number and after 10 secs cyclically switches to the next cell number in the following order: 4 => 5 => 6=> 4=> 5=> 6 => etc.

!Caution! The programming voltage must be between 11 V and 14 V. Check the polarity!

Technical specification: M-Saver ultra	
Operating current:	*12 mA for 4- 5- or 6 NiMh or 2 cells LiFe/LiPo*
Connection:	*JR/Futaba cable (20 cm) with gold contacts*
Operation:	*Checking of battery voltage under load by moving rudders several times*
Weight / dimensions:	*7 g (with cable) / 9,5 x6 x 56 mm*

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