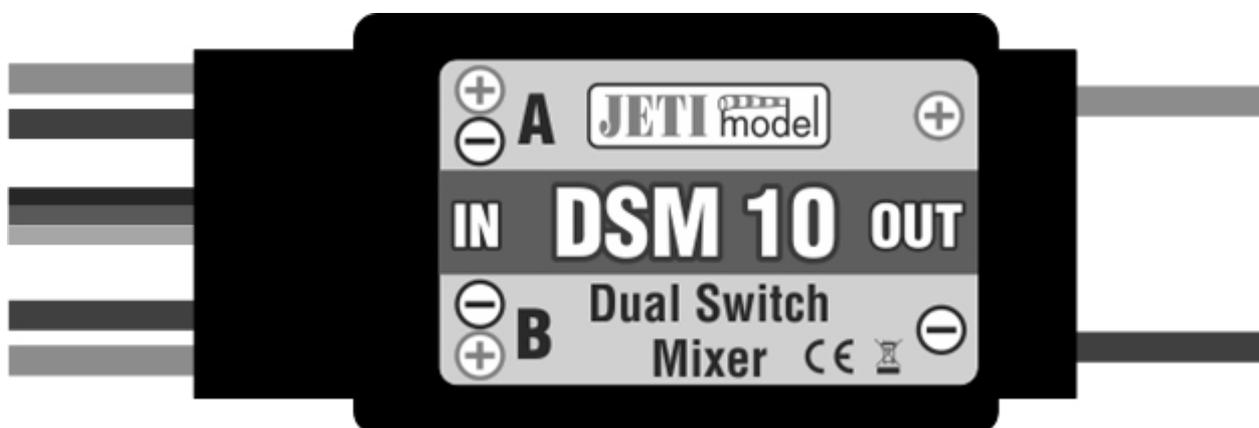




INSTRUCTION MANUAL

DUAL SWITCH MIXER

DSM 10



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1. Introduction

The DSM 10 is an electronic switch used for automatic switching between two receiver batteries which are connected to one receiver as a redundant power supply system. The DSM 10 also includes a receiver power supply switch. The voltage of the batteries connected to the inputs of the DSM10 are constantly measured and compared to each other by the DSM10's internal processor. The DSM10 then automatically switches between the batteries so that your receiver is always powered by the battery with the higher voltage. The DSM 10 output is equipped with an MPX connector which can be used for directly connecting output power to your receiver. The mating MPX connector is used on the EPC (External Power Connector) labeled Duplex receivers: Currently; R11US, R14(US) and R18(US).

The DSM 10 is not equipped with a voltage regulator circuit for the connected batteries. The voltage at the DSM 10 output will always be equal to the voltage of the connected battery with the higher voltage. Make sure that your receiver, servos and other equipment supplied by the DSM 10 are designed for the voltage being supplied. Any voltage regulator should be connected between the batteries and the DSM10.

The DSM 10 is controlled by a magnetic switch which can be activated using the magnetic key from outside of your model airplane fuselage. By touching the target with the magnetic key as shown in the picture in chapter 2.1, the system is switched on or off.

2. DSM 10 Circuitry

Batteries are connected to the DSM 10 through two pairs of 1.5mm² (16AWG) wire using your own connectors. The output voltage is supplied through two 1.5mm² (16AWG) wires, which are connected using an MPX connector to the receiver. The „-“ input terminals of both batteries and the output are **galvanically (electrically) connected**.

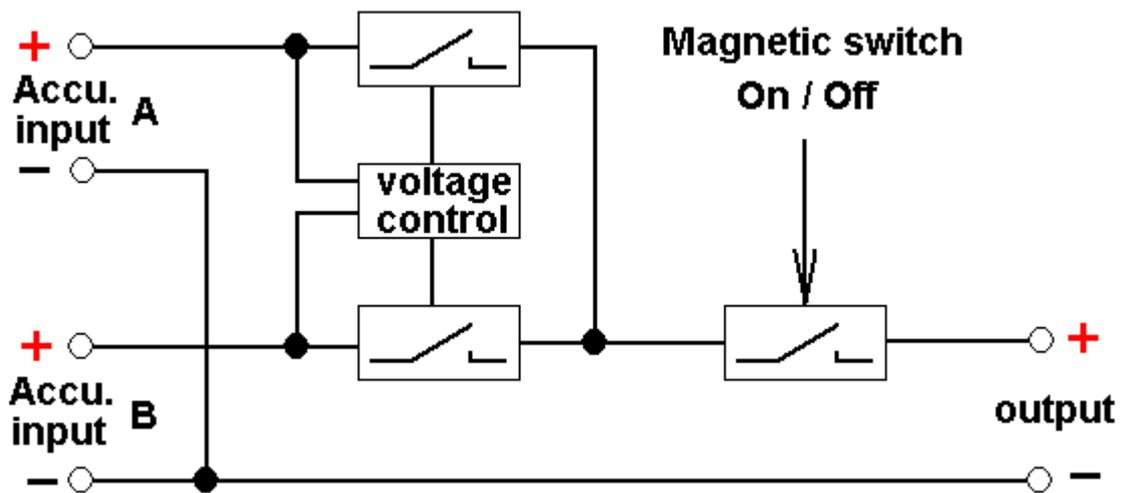
The DSM 10 is connected to the magnetic switch by a three-wire, servo type cable.



Be sure to correctly connect the input and output cables, red cables must always be connected to positive poles, black cables to negative poles.

Attention!! Pay attention to the correct IN and OUT polarity!! Connecting your DSM10 with incorrect polarity can cause irreversible damage!! Only connect batteries to the IN input and only connect the OUT output to your receivers, servos etc.

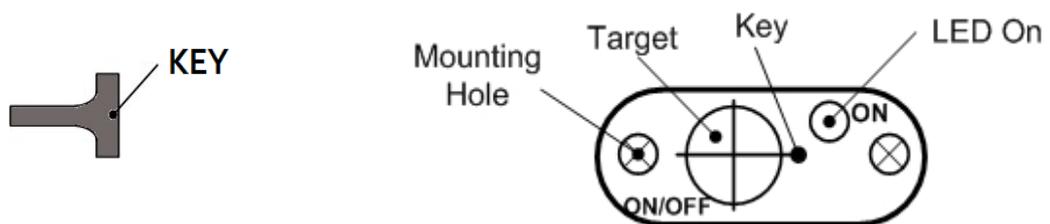
Both battery inputs and the output use the “-” pole for common supply.



2.1 Magnetic Switch Control

The DSM 10 is switched on and off by a magnetic switch. For switching on, the magnetic key must be placed on the small target in such a way that the small hole in the key and the dot on the switch target have the same orientation. The magnetic switch is equipped with a green LED indicating the „switched on“ condition.

- LED ON**
- blinking light indicates magnet range
 - steady light indicates switched on condition



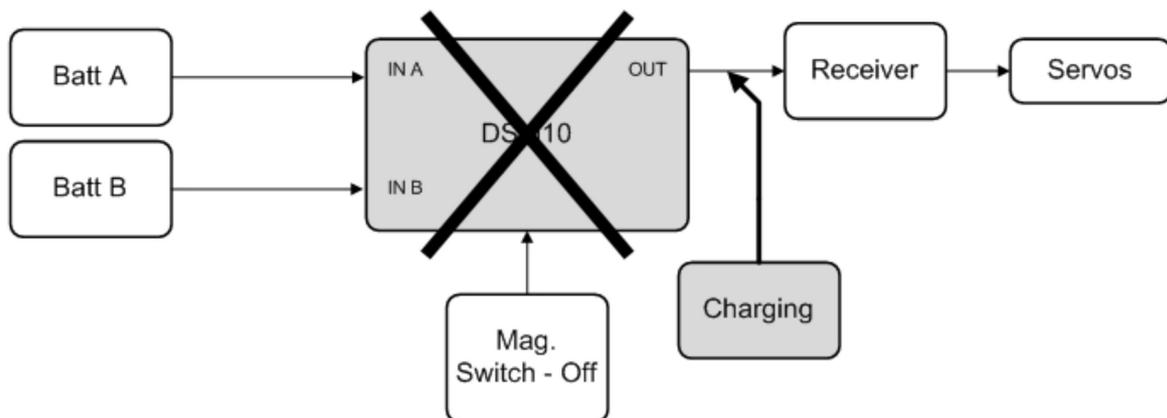
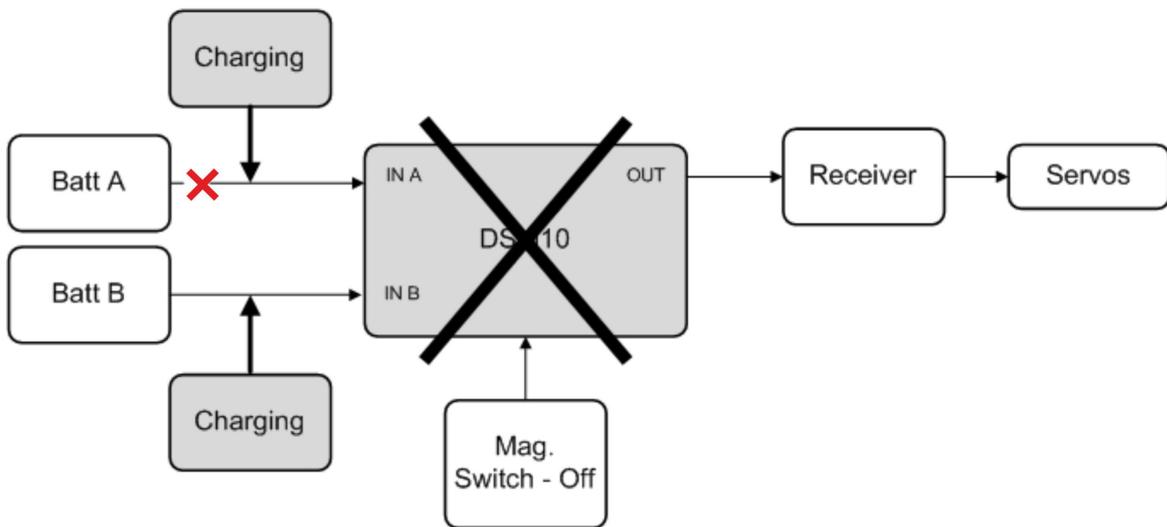
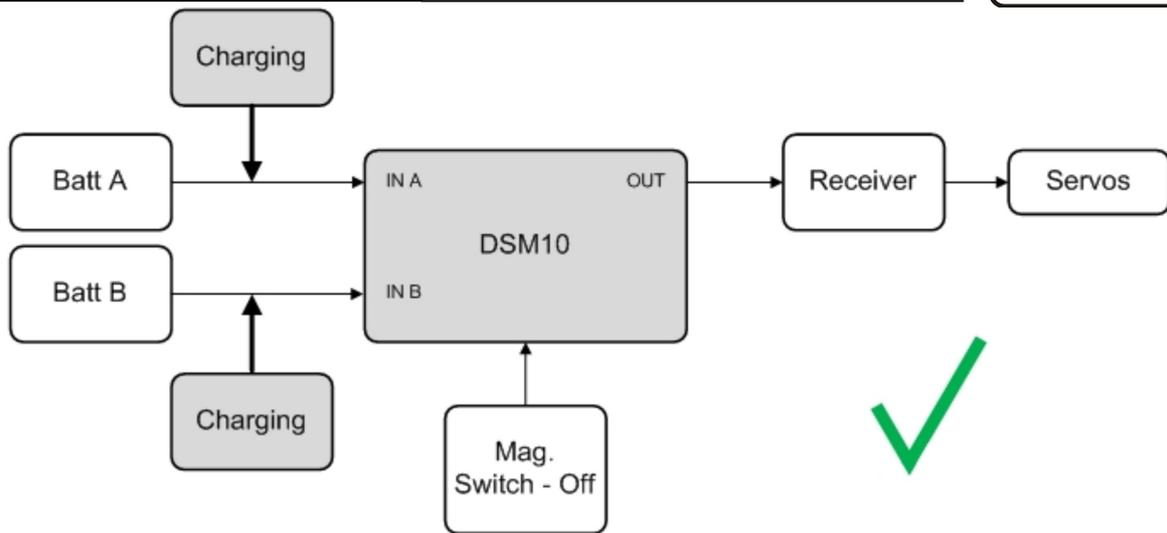
When you correctly position and hold the magnet on the target as described, after 1 sec, the green LED will turn on as a steady light, showing that the electronic switch is ON. Switching off is done in a similar way. When the magnet touches the target in the proper orientation again and is held in place for 1 sec., the green LED turns off and the system switches OFF.

The switch system remembers its last switch position. This means that if you switch it on with the magnetic switch and then disconnect the batteries, it will automatically return to the on position after you connect the batteries again. **For safety reasons always switch the system off with the magnetic switch before removing the supply batteries.**

When switching on the electronic switch, first connect both batteries and only afterward switch the system on by using the magnetic switch. When switching-off, follow the same rule. First switch the system off using the magnetic switch and only afterward disconnect the batteries.

2.2 Battery Charging

The batteries can be charged when they are connected to the DSM10 (Only when the DSM10 is switched off – the green LED must be off), but never disconnect one or both of the batteries while you are charging. Also, the charging voltage must be connected directly to the battery, not to the DSM10 output!! If it is necessary to disconnect a battery during the charge process, disconnect the charging voltage first! If you ignore this rule, your DSM10 will be destroyed!



3. Installation

The magnetic switch can be mounted to the model using the provided mounting holes. When drilling holes for the magnetic switch, use the outer cover as pattern. The outer cover of the magnetic switch is designed to be attached to the outside of the model fuselage and is mechanically connected by bolts to the base. The DSM 10 can be mounted inside the model with double-sided tape or Velcro.

4. Magnet Handling Safety Rules

As the electronic switch system is operated by a magnet, it is necessary to observe safety measures as far as handling magnets is concerned. The magnet in the magnetic key is mounted inside a light weight alloy carrier.

1. Keep a safe distance from equipment which could be damaged by magnetism, like for instance TV sets, credit cards, PCs etc. A magnet may disturb operation of pacemakers!
2. Keep the magnet out of reach of children, it may be swallowed or cause bruises!

5. Technical Data

Technical Data:	DSM 10
Recommended input voltage	5 – 8.4 V
Max. input voltage	13 V
Current consumption in switched-off state	130 uA
Output Burst current	20 A
Output constant current	10 A
Voltage loss in switched-on condition (@10A)	0,12 V
Operation temperature	- 20°C to +85°C
Weight including cables	24 g
Module size	38 x 20 x 7 mm
Size of magnetic switch	30 x 21 x 5 mm

6. Warranty

For this product JETI grants a warranty of 24 months from the day of purchase under the assumption, that it has been operated in conformity with these instructions at recommended voltages and that it has not been damaged mechanically. Warranty and post warranty service is provided first by your JETI dealer and alternately by the manufacturer.

We wish you successful flying with the products of JETI model s.r.o. Příbor, www.jetimodel.cz