JETI model

MEZON evo

ELECTRONIC SPEED CONTROLLER FOR BLDC MOTOR

EN User manual

QUICK SETUP

Complete manual is available on www.jetimodel.com

Setup DC/DS

MEZON evo

1 Introduction

MEZON EVO is a series of controllers in aluminium case* with efficient cooling, full telemetry and advanced functions. Controller is designed for RC model planes, helicopters and other vehicles. Controller`s setup is intuitive and together with JETI Duplex transmitter very simple.

Features:

- full EX telemetry (voltage, current, capacity, revolution etc.)
- setup of device through EX Bus communication from JETI Duplex transmitter
- accurate governor and full support of helicopter models
- F3A mode for acrobatic planes
- adjustable brake with back energy recovering into accumulator
- powerful BEC with adjustable output voltage
- wide range of supply voltage 2 - 12 Lixx (max. 51V)
- bidirectional motor run is possible

2 Overview

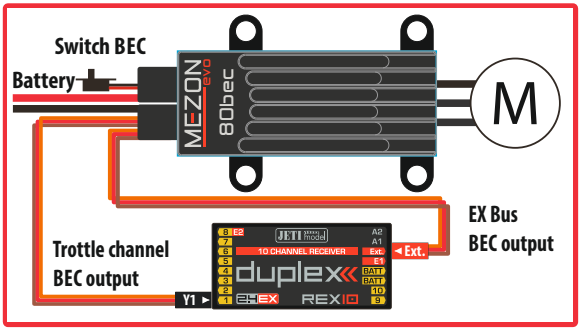
Basic parameters of MEZON EVO controllers:

Type	Sustained current [A]	Description
MEZON Evo 40 BEC LMR*	40 (max 30s)	Light weight controller,adjustable BEC
MEZON Evo 70 BEC LMR*	70 (max 30s)	Light weight controller,adjustable BEC
MEZON Evo 50 BEC	50	Aluminium case, adjustable BEC
MEZON Evo 80 BEC	80	Aluminium case, adjustable BEC
MEZON Evo 85 OPTO	85	Aluminium case, optocoupler separation

Listed currents are valid with sufficient air flow cooling

* Light weight controllers **LMR** (**L**imited **M**otor **R**un) are not in aluminium case

2.1 MEZON EVO BEC controllers

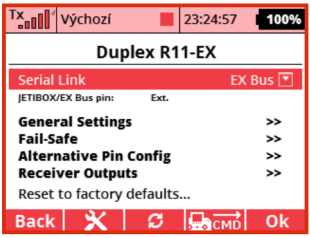


***Pic.1** - standard connection between controller and receiver suitable for **JETI Duplex** transmitters users*

- **black JR** connector is connected into throttle channel output of receiver
- **red JR** connector is connected into receiver output Ext., E1 or E2

If **E1** or **E2** receiver output is used then user has to manually configure E1 or E2 output to ***„EX Bus"*** functionality.
REX receivers dispose of automatic communication detection and manual configuration is not necessary.

For elderly Rx receivers configure "EX Bus" in menu ***„ M o d e l > D e v i c e Explorer>receiver>Serial link"***.
- for sufficient power supply from BEC we strongly recommend connect both of JR connectors



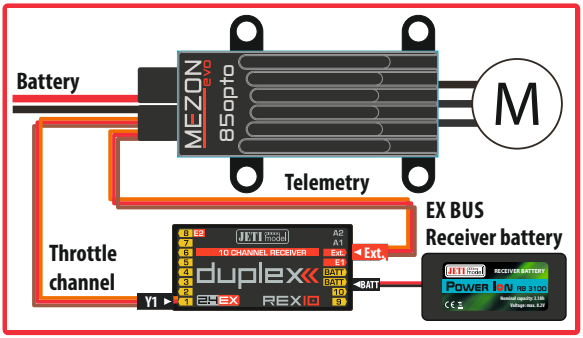
If you don´t want to use BEC power supply, take out from JR connectors middle pins (red wired) and isolate correctly.

Switching BEC technical data	
average current	15A
max. current	30A (1s)
max. temperature	100°C

listed values are valid with sufficient air flow cooling

2.2 MEZON EVO OPTO controllers

MEZON EVO OPTO controllers have input separation by optocoupler and BEC power supply is not available. For correct functionality it is necessary to supply receiver, servos and other electronic equipment with an external battery. Instead of a battery, it's also possible to use a separate power supply (JETI SBEC 30D EX for example, po-wered direct from main accumulator).



***Pic. 2** -standard connection between controller and receiver suitable for JETI Duplex transmitters users*

3 Configuration (setup)

MEZON EVO controllers can be configured from JETI Duplex transmitters (described below), Jetibox or USB interface with JETI Studio application for PC (see *CM)

There are two configuration possibilities:
"Quick setup" - configuration through wizard (described below)
"Expert setting" - full access for all controller possibilities (see *CM)
Quick setup with predefined parameters for RC model type is normally sufficient for most users.

Warning:
during configuration motor run is blocked for safety reasons

3.1 Configuration procedure for planes, cars and boats models

- choose model type, content of menus are automatically adapted for chosen model type

Basic parameters:
Start acceleration - motor start up time from zero revolution
Response - speed reaction of running motor on throttle changing
Timing - set up with information from motor producer
Brake
Soft/Medium/Hard - predefined brake profiles
Manual - brake values defined by user
Proportional - brake strength depend on throttle position

Number of cells Auto – automatic detection of the number accu`s cells

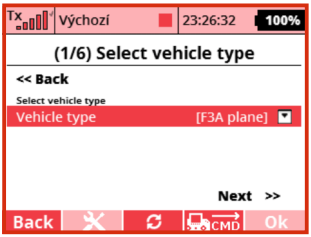
BEC voltage – set BEC voltage for electronic equipment, range 5 - 8.4V

Warning!
The Automatic mode only works properly if you connect fully charged batteries to the controller.

Warning!
Damage risk of connected electronic equipment if incorrect BEC output voltage is configured.

3.2 Configuration procedure for F3A planes

Choose model type, content of menus are automatically adapted for chosen model type.



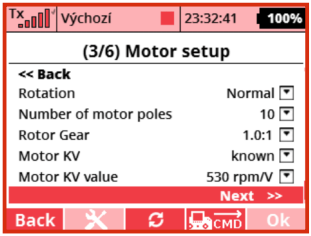
MEZON EVO controllers support special mode for **F3A** acrobatic planes ***„Menu>Model>Device explorer>MEZON EVO>Quick SetUp>F3A Plane"***.

Brake strength depend on throttle position in this mode. This function provides activeplane speed stabilizing for downline figures. It`s similar as cruise control of car, but demanded speed depend on throttle position. Back nergy recovering into accumulator is automatically enable in this mode.

Other possibilities - see chapter ***„Basic parameters"***.

3.3 Configuration procedure for helicopters

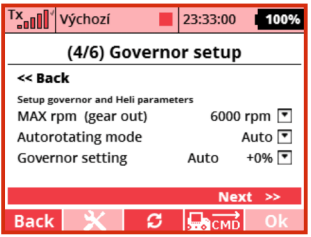
Choose model type, content of menus are automatically adapted for chosen model type.



Number of motor poles - set the number of motor poles regards motor producer information.

Motor KV - set value of motor`s **KV** regards motor producer information. If both of above-mentioned parameters are unknown see ***CM**.

Rotor Gear - set gear ratio between motor and helicopter`s rotor



MAX rpm (**gear out**) - set revolution of helicopter`s rotor regards recommendation helicopter producer

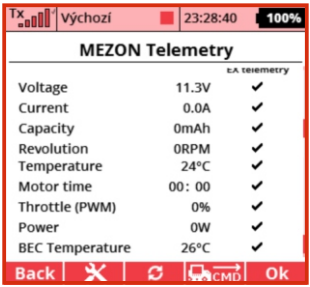
Autorotating mode - see ***CM**

Governor setting - we recommend to keep **„Auto"**, „**Auto +0%**". If automatic values are not suitable see ***CM.**

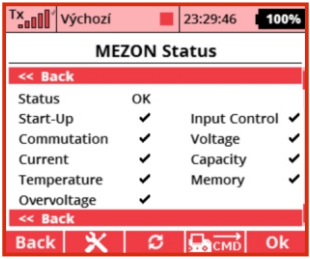
Other possibilities - see chapter „**Basic parameters**".

4 Telemetry

MEZON EVO controllers integrates full telemetry with selectable recorded data set. All the selected data is saved and available for later analysis.



Possible faults which occurred during operation are recorded in "**Status**" menu.
This menu helps with faults solving and diagnoses.
See ***CM** for detail items description.



Menu telemetry **„Min/Max"** consists recorded minimum and maximum values of important parameters during controller operation.

***CM - C**omplete **M**anual is available on**:**
www.jetimodel.com

5 Package contents - assembly

Warranty and service

This product is covered by warranty for 24 months after the day of purchase provided that it has been operated in accordance with these instructions at the specified voltage and is not mechanically damaged. When claiming warranty repairs for the product, always attach a proof of purchase. Warranty and post-warranty service is provided by your dealer or the manufacturer.

Technical support

In case you are not sure about the setup or some functions of the product contact our technical support. You can contact either your dealer, or directly the manufacturer JETI model s.r.o.

For further information see our webpages ***www.jetimodel.com***

Safety instructions

- use quality power connectors designated for appropriate load current
- keep power supply within the allowed voltage/cell range
- set BEC voltage within servo producer instructions
- ensure sufficient air flow cooling
- isolate reliably all wires, conductors and connectors
- reverse polarity causes damage to controller with loss of warranty
- during controller configuration remove propeller or rotor blades
- treat model with respect, after connection of power supply motor/model is live. Risk of injury!

ENGLISH

Information on Disposal for Users of Waste Electrical & Electronic Equipment (private households)

This symbol on the products and/or accompanying documents means that used electrical and electronic products should not be mixed with general household waste.
For proper treatment, recovery and recycling, please take these products to designated collection points, where they will be accepted on a free of charge basis. Alternatively, in some countries you may be able to return your products to your local retailer upon the purchase of an equivalent new product.
Disposing of this product correctly will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling. Please contact your local authority for further details of your nearest designated collection point.
Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

For business users in the European Union
If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.

Information on Disposal in other Countries outside the European Union
This symbol is only valid in the European Union.
If you wish to discard this product, please contact your local authorities or dealer and ask for the correct method of disposal.

Declaration of Conformity

in accordance with the regulations of EU Directive
EMC 2014/30/EU, RoHS 2011/65/EU and (EU) 2015/863
This declaration of conformity is issued under the sole responsibility of the manufacturer.

Producer: **JETI model s.r.o.**
Lomená 1530, 742 58 Příbor, Česká republika
IČ 26825147

Declares, that the product

Type designation:	MEZON EVO
Model number:	40 BEC LMR, 50 BEC, 70 BEC LMR, 80 BEC, 85 OPTO
Country of origin:	Czech republic

The stated product complies with essential requirements of EMC 2014/30/EU, RoHS Directive 2011/65/EU and (EU) 2015/863.

Harmonised standards applies:

Protection requirements concerning electromagnetic compatibility [6]
EN 61000-6-3:2007 + A1:2011

Electrical Safety and Health [3.1(a)]
EN 62368-1:2015

RoHS
EN 50581:2012

Ing. Stanislav Jelen
Managing Director

Příbor, 11.8.2022

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CE