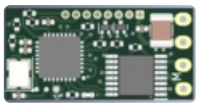
Micron MR601a DSM2/DSMX 13V Receiver with 1.2A Bi-Directional ESC


MR601a Top

Overview:

MR601a is a 2.4GHz DSM2/DSMX receiver which includes one integrated 1.2A reversable controller for brushed motors (ESC) plus 5 auxiliary outputs (2xF, 3xP) for lighting, sound trigger, couplers, etc. It can be used with any Spektrum DSM2/DSMX compatible transmitter; this includes all of the Micron model rail transmitters or a stick model aircraft type transmitter.

MR601a is 22.5 x 11 x 5 and weighs 0.9g without leads. The voltage range is 2.7V to 13v and the 1.2A motor current rating makes it suitable for 00/H0, 7mm narrow gauge and smaller Gauge 0 locos. MR601a is available as board-only for you to add wiring or with a range of pre-wired leads. The standard output configuration is described on the Outputs tab. If the wiring or configuration options do not meet your needs, please contact us to discuss your requirements.

An enormous range of programming features are provide to enable you to customise the operation of MR601a to suit your model. The current firmware version is 1.7. See MR601 Programming (v1.5) for full details or the user manual for brief information. Access to programming is either via a stick type transmitter or one of the Micron model rail transmitters. A stand-alone programmer with web interface is in development.

Specification:

Size:	22.5 x 11 x 5mm
Weight:	0.9g without leads
Protocol:	Spektrum DSM2/DSMX
Voltage:	2.7V - 13V
Motor Current:	1.2A max continuous
P outputs:	3 (P1..P3), 0V when off, 3.3V when on, max 20mA
F switches:	2 (F1..F2 or A..B) open when off, closed to negative when on

The default speed controller PWM frequency is 16kHz which works well for small and coreless motors. Larger motors may exhibit a reduced throttle response at this high frequency and will benefit from lowering to 1kHz or 500Hz - experience with Re280 type motors shows that 500Hz or 250Hz works best. The PWM frequency may be set using power-on programming changes (from v1.7, ident 'I') or by programming MR601a, which requires a transmitter capable of programming receivers (e.g. Tx20, Tx22, Tx24 - not Tx10 or Tx21).

Low Voltage Cutoff:

The default receiver setting is for the Low Voltage Cutoff (LVC) threshold to be determined from the voltage seen on initialisation - basically, the receiver firmware makes a 'guess' at the battery type. The algorithm used for this calculation means that a 9V Alkaline or NIMH battery can often be interpreted as an almost discharged 3S LiPo. The solution is to either disable LVC, or set it to the correct value for your battery; this is done by programming the receiver.

Instructions for programming receivers using your transmitter are at the end of the information leaflet that came with the transmitter.

The receiver programming steps for LVC are:

disable LVC: 4 2 1
enable auto LVC: 4 2 2
set LVC: 4 2 3 units tenths

e.g. to set the LVC to 6.5V, the programming steps are: 4 2 3 6 5

The receiver is supplied either as a bare board or with wiring options and heatshrink covering as specified in the menus below. MR601a is available only with a short wire arial. If the receiver is to be used with a metal bodied vehicle, it should be mounted so that the aerial wire can be fed through a small hole to the outside of the body or into the cab space.

The default behaviour of the P outputs and F switches are defined on the Configuration tab. F switches are

best used for sound card triggers - select configuration #2 or #3 to match your transmitter controls. If you need more than 2 x F switches, a selection of small FET buffers are available to convert P into F. The MR601a side connection pads for F and P are small and close together. If you are not confident of micro soldering, please order MR601a with one of the wiring options or, contact Micron if none of these match your need.

Price: from £34.00