

Micron MR001 DSM2/DSMX Receiver for Land-Based Vehicles



Micron MR001 2.4GHz DSM2/DSMX Receiver

Description:

A small (30 x 18 x 11mm) 8 output DSM2/DSMX compatible receiver for model railway use on live-steam and large battery electric locos. It can drive speed controllers, servos and LEDs (auto-directional lights and manually switched from the transmitter). The dimensions allow it to fit easily into many 32/45mm steam or diesel locomotives. MR001 is a good replacement for the Deltang Rx102 receiver.

The voltage range is 3.45V to 8.4V so is best powered from a 4 or 5 cell NiMH battery for live-steam or from the 5V BEC speed controller output for battery electric locos.

MR001 is compatible with all Micron [model rail transmitters](#), with Deltang transmitters and Spektrum stick-type aircraft transmitters (e.g. DX6). Selecta is supported for use with [Tx22](#) and [Tx24](#). Selecta is disabled by default but easily enabled using the supplied jumper plug. MR001 must be bound to a transmitter before use; some MR001 require a jumper plug across signal pins 5 & 7 to put them in bind mode, others automatically enter bind mode if a previously bound transmitter signal is not found within 5 seconds of switch on.

7 outputs are available at the front of the receiver and there is 1 output at the rear. Most receiver versions have standard 0.1 inch pitch JR/Futaba pins at the front for servo or ESC plugs. The single aerial MR001a and MR001b is also available with no pins, just solder pads; this reduces the height to approx 5mm. Twin aerial diversity receivers have a JST-ZH socket for the 8th output, single aerial receivers have solder pads. MR001a outputs can be configured for servo or 0V/3.3V switched, MR001b outputs are fixed at the [standard configuration](#) (other configurations of servo and switched outputs can be provided to special order).

See the [MR001a user manual](#) or [MR001b user manual](#) for further information or view these wiring diagrams:

- [Servos for Live Steam](#)
- [MR001 ESC & Lighting](#)
- [MyLocoSound triggers](#)
- [MyLocoSound triggers using Tx20Sv2 transmitter](#)

Versions 'a' and 'b':

Two versions of MR001 are available which differ in the method of configuration:

MR001a: Fully programmable using a Micron model rail or stick type transmitter - see the [MR001a user manual](#) for details

MR001b: Servo reversing and travel adjustment using jumpers on servo pins, no programming

The default output configuration for both versions is:

- 5 servo outputs (ch1...ch5)
- 2 switched front/rear LED outputs

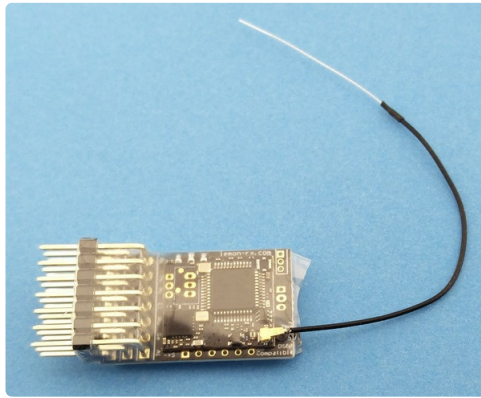
other configurations are available - see the [Configuration](#) tab. The version and bind type is identified on the label affixed to the bottom of the circuit board: e.g. 'MR001a (ab)' is a type 'a' supporting auto bind and 'MR001a (mb)' is a MR001a that can only be bound using the jumper plug.

The manual bind receivers with single aerial are available with horizontal pins (as shown in the image above) or vertical pins. The auto-bind dual aerial receivers are available only with horizontal pins.

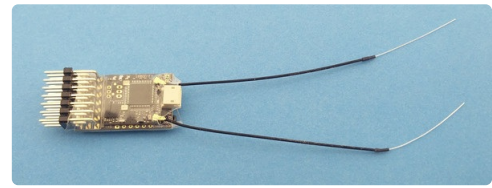
Two aerial types are available:

- single aerial (manual bind only) - 30mm antenna at the end of 60mm coax (total length = 90mm)
- twin 90mm aerials with diversity reception; the receiver takes data from the aerial with the strongest signal - useful on garden layouts with lots of obstacles, e.g. bushes, rockery

Images:



MR001 single aerial



MR001 twin aerial

Configuration:

The standard output pin configuration for MR001a and MR001b is:

- P1: servo on ch1, throttle
- P2: servo on ch2, F1 on Tx20
- P3: servo on ch3, toggle switch on Micron tx
- P4: servo on ch4, F2 on Tx20
- P5: servo on ch5, bind button on Micron tx
- P6: front LED & LED2
- P7: rear LED
- P8: idle 0V, 3.3V when ch3 is low (Micron tx toggle down)

MR001a supports configuration changes via programming using transmitter controls. The MR001b configuration is not user changeable, different configurations can be provided to special order at no additional cost. Two alternatives are available using the 'Output Config' product selection menu below. These are:

P2 = R/C chan 7

Transmitters with Selecta use R/C channel 2 to select and deselect loco receivers. Thus, P2 with R/C chan 2 on the standard configuration can not be used. This option maps R/C chan 7 onto P2 and enables Selecta.

P3/P4/P5 for MyLocoSound

This option configures P3, P4 and P5 as digital outputs for triggering a MyLocoSound card:

- P3: R/C chan 3 high (S1 toggle up)
- P4: R/C chan 3 low (S1 toggle down)
- P5: R/C chan 5 low (bind button down)

A 4k7 series resistor is required in each lead to avoid overloading the MR001 microprocessor. A [lead](#) is available with the resistors installed.

Weight: 4.5gm, dimensions: 30mm x 18mm x 11mm (30 x 18 x 5mm for the no pin version).

From: £20.00



JR Plug & 2 Wire Lead For MR00x Receiver (pair)

A pair of 150mm lead-out wires for front & rear lights (P6 & P7) on MR00x receivers.

See the [MR001 ESC & Lighting](#) document for LED connection information.

£ 1.45



JR Plug & 3 Wire Lead For Sound Triggers From MR00x Receiver

A JR plug and 3 x 150mm lead-out wires with series 4k7 ohm resistors for connecting MyLocoSound triggers to P3, P4 & P5 on MR00x receivers.

£ 1.95