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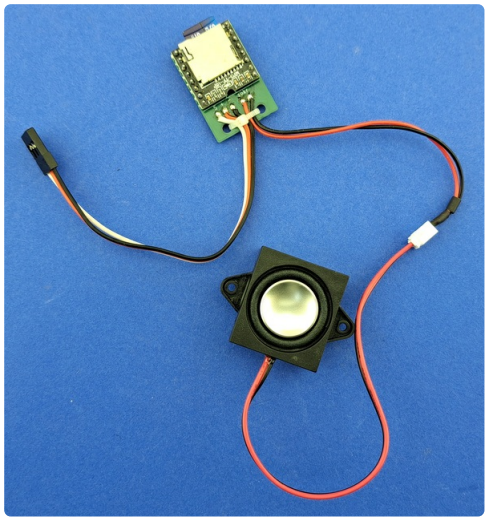
Micron MSND03 Whistle for Live Steam Locomotives

MSND03 comprises a whistle unit with an attached speaker. There is a plug/socket connection in the speaker wire in case the speaker and whistle unit need to be located in different loco compartments.



MSDN03 with Speaker

The whistle unit is 35 x 22mm (not including wires) and the speaker is 28 x 31mm. The input lead is 100mm and the speaker lead is 250mm.

The whistle unit plugs into one of the servo sockets on the radio control receiver (e.g. MR001d). The whistle sounds are triggered by operating the transmitter control corresponding to the chosen servo output. The sound can be trigged by either a LOW or HIGH servo signal; the default is LOW and this can be changed - see Configuration.

The whistle unit contains a micro SD card on which six whistle tracks are stored. Each time the transmitter control is actioned the next sequential whistle track is played returning to the beginning after the sixth.

The SD card is loaded with the whistle you chose when ordering. Different whistles can be dowloaded from either the MyLocoSound or Micron web sites.

MyLocoSound: www.mylocosound.com/whistles.htm
Micron: www.micronrc.co.uk/sound.html#mrc-msnd03

If you have a basic knowledge of editing sounds, you can create your own.

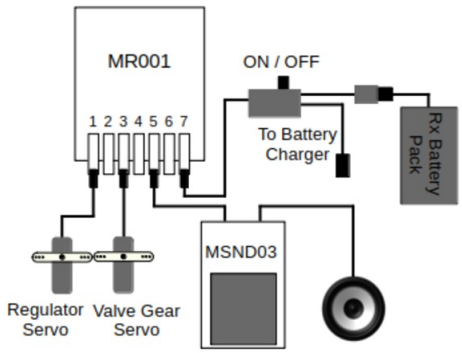
Connection to Receiver

The whistle unit needs to be connected to a receiver output that is configured for servo. The whistle sounds are emitted when the servo output goes either LOW (<1.3ms) or HIGH (>1.7ms). When a servo is at the MID point, the output will be approx 1.5ms.

The default whistle unit configuration is for LOW ONLY input so that a HIGH signal is ignored. This suits all Micron transmitter push button controls. For example, the bind button operates R/C ch5 and this controls the P5 servo output on MR001, LOW when pressed and HIGH when not pressed.

The configuration can be changed - see 'Configuration'.

A **brief** press on the transmitter control will trigger the whistle sound. A **long** press will reduce the volume; the volume level is reset each time the whistle unit is powered on.



MSDN03 with MR001d

- Choose a transmitter control to operate the whistle - e.g. push button or toggle switch
- Determine which receiver servo output corresponds to this transmitter control. The transmitter manual lists the R/C channels for each control and how operating the control affects the value on the R/C channel (e.g. LOW, MID, HIGH)
- With the receiver switched off, plug the whistle unit into the receiver
- Make sure that the micro SD card is fully home in the whistle unit socket
- Switch the transmitter and receiver on and test by briefly tapping the transmitter control

- The red LED will light for as long as the transmitter control is pressed. The blue LED will come on, and stay on while the whistle sound is playing, If the LED comes on but there is no sound then the micro SD card may not be fully home or you may be holding down the transmitter button too long

Important: do not hold the transmitter button down for more than half a second. The button needs to be tapped, not held down. If you hold the button down then the whistle will not sound and the volume will reduce.

When the whistle unit is installed in the cab of a steam loco, there is a risk that live steam will enter the open end of the whistle unit, condense and cause a short circuit. Once the micro SD card has been inserted with your chosen whistle, we recommend that you cover the open end with electrical insulating tape or similar.

If the whistle unit does not work then please email info@micronrc.co.uk.

Configuration

The whistle unit will be configured for a LOW or HIGH servo signal as you specified when purchasing. This can be easily changed at any time to match the behaviour of the receiver output you chose to use.

There are 4 options and the LED on the whistle unit will emit a flash pattern to indicated the configured mode:

1-flash = LOW ONLY to action
2-flash = HIGH ONLY to action
3-flash = LOW/HIGH to action
4-flash = HIGH/LOW to action

The LOW ONLY and HIGH ONLY modes are obvious: the whistle sound is triggered by a **brief** press on the transmitter control and this is appropriate for all Micron transmitter push buttons. The HIGH ONLY mode is available for other manufacturer's R/C equipment that generates a HIGH servo signal when a transmitter button is pressed.

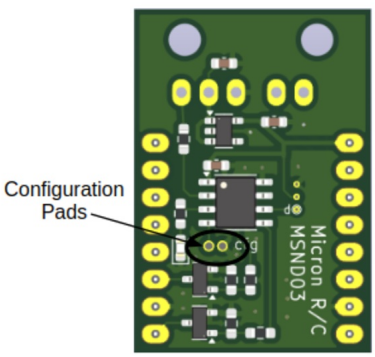
A **long** press on the transmitter control reduces the volume level.

Refer to your transmitter manual to determine how the receiver output changes when the transmitter control is actioned. For example, for Micron transmitters:

bind button:	R/C ch5, MR001d P5, LOW when pressed
S1 toggle switch:	R/C ch3, MR001d P3, LOW when pressed down, HIGH when pressed up
Tx22X S2 button:	R/C ch4, MR001d P4, LOW when pressed
Tx24v2 S1 toggle:	R/C ch4, MR001d P2 with Selecta enabled, LOW when pressed down, HIGH when pressed up

The LOW/HIGH and HIGH/LOW modes are appropriate for transmitter toggle controls. Micron transmitter toggle switches produce a LOW servo signal when pressed down and a HIGH signal when pressed up. These 2 modes support volume increase and decrease with long presses on the control. A short press in either direction will trigger a whistle sound. A long press for the first reduces the volume and the second increases the volume - e.g. if LOW/HIGH mode is configured, a long press LOW reduces volume and HIGH increases volume.

To change operating mode, the 2 circuit board pads marked **cfg** must be connected before power is applied. This can be done by making a small window incision in the heatshrink cover using a sharp scalpel and then using needle nose tweezers to make the connection. When switched on, the red LED will emit a sequence of flashes corresponding to a mode (1, 2, 3 or 4). Each pattern is shown twice before advancing to the next. When the desired flash count is shown, remove the tweezers and the red LED will flash rapidly to acknowledge that the change has been stored. Switch off and back on again when the red LED will show the mode flash count.



MSDN03 Configuration Pads

Loading Whistle Sounds

The micro SD card contains six sound files named:

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01.mp3      02.mp3      03.mp3      04.mp3      05.mp3      06.mp3
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When you receive your whistle unit, these files will contain the sounds you selected when purchasing. If you want to have a different whistle you will need a micro SD adapter for your computer.

The procedure is:

- On your computer, go to one of the sound file web pages listed above
- Select one of the whistle sets to download a zip file containing the six sound files
- Open the zip file (e.g. double click on the file icon); a browser window will open to show the files
- Remove the micro SD card from the whistle unit, place it into the adaptor and insert the adapter into your computer
- Copy the sound files onto the micro SD card
- Click on the 'Eject' to disconnect the adapter from your computer, remove the micro SD card and replace it into the whistle unit
- Test the new whistles