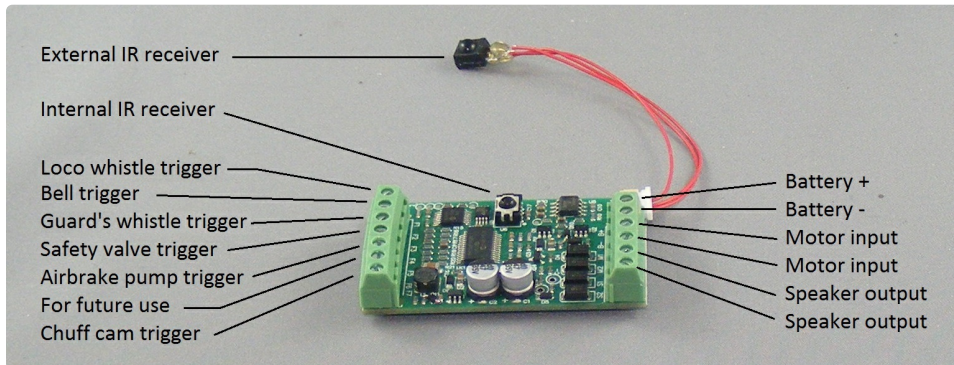


## MyLocoSound Large Scale Sound Module - Steam

### Overview

- Easy installation using screw terminals with no soldering.
- Uses a TV remote control to adjust the volume and sounds to match the prototype loco.
- Provides an chuff sound which matches the loco speed and load.
- Plain and chime whistles with adjustable tone to suit the loco.
- Full remote control of the whistle, bell, safety valve, guard's whistle and optional brake pump.
- For track powered DC or battery powered radio controlled railways



The MyLocoSound module generates synthesised sound which is adjustable to reproduce the sounds of most steam locos and railmotors. The terminal connections on the right are necessary for the sound module to generate a chuff which varies with the loco speed and load. The terminal connections on the left trigger the various sounds where the locomotive controller has the appropriate outputs available

Sounds can also be triggered by the infra-red TV remote control which is available as an option with purchase of the sound card. Only one remote is required for configuring and operating several sound cards. Although the remote can be used when running in the garden, it is intended mainly for the adjustment and testing of sounds.

The remote control communicates with the sound module via two infra-red receivers. One is located on the sound module and the other is on a flying lead which allows it to be fixed to any external surface of the loco.



Adjustments to the sounds can then be made without taking the loco apart to access the sound module.

### Speakers and Sound Quality

The sound module requires an 8 ohm loudspeaker which is not included. A 4 ohm speaker can also be used but you may cause the sound module to overheat and temporarily shut down if the volume is very high and the sound module is in a confined space. Your choice of speaker is highly important because it determines the quality of the sound produced. Use the largest which you can fit in your loco; 2 smaller 4 ohm speakers can be wired in series if you do not have the space for a larger 8 ohm speaker.



For a better quality sound and more volume, the speaker needs to be baffled. That means that it needs to be built into the front face of an airtight box so that sound is heard only from the front of the speaker and none from the back. The plastic top of a spray paint can is good for making a baffle as shown in the diagram.

Speakers can be connected to the terminals either way around.

It is also possible to boost the volume by using a commercial stereo amplifier. Section 13 of these instructions shows how this can be done. Use of an external amplifier is recommended for ride on railways.

### Installing in a Battery Powered Locomotive

The wiring diagram below shows a typical installation with a Deltang model rail receiver for battery powered locomotives. Installation with other R/C systems is possible.

The MyLocoSound module has 5 inputs for triggering various sounds. The input is connected to ground/negative to trigger and is at 5V when open (not connected). All of the Deltang land-based receivers have 'P' outputs for switching external circuits but these have a maximum working voltage of 3.3V so must not be connected directly to the sound module input. A 4k7 ohm resistor between the P output and the module input will keep the receiver 'hi' output voltage within specification and allow it to trigger a sound when the output is taken 'lo'.

The Rx65 has 3 high voltage 'F' outputs and these may be connected directly to the trigger inputs without a series resistor.

## Infrared Receiver

The infra-red receivers accept commands from the handheld remote control to adjust or trigger sounds. Two receivers are provided: one is fixed in the middle of the sound module, the other is on a flying lead which plugs into the small white socket as shown at the beginning of this manual.

In some installations, the sound module is visible when installed in the loco. This usually occurs when the sound module is mounted on the floor of a cab, with or without windows. In this case, the remote control can be pointed directly at the sound module and the on-board receiver is all that is needed.

If the sound module is within the loco and is not visible then the remote IR receiver needs to be used. Plug it into the white socket and glue the black receiver, round side outwards, to any external surface of the loco to which you can easily point the remote control. The IR receiver may also be mounted inside the loco body with the domed part visible through a hole. Do not paint the IR receiver.

## IR Remote Control

The sound module will operate with any Sony™ TV remote control using the buttons described in this section. It will also operate with any universal remote control when the code is set to 0140.

A suitable remote control, as shown on the right, is available as an optional extra on the Micron R/C [web page](#) for MyLocoSound. This is configured for use with the sound module and has labels to remind you of the button functions. (some IR remotes have the sound volume buttons reversed so that UP reduces the volume and DOWN increases the volume). Do not hold down the mute button for more than a second since this can cause the remote control to lose its coding. If your remote control stops working then please refer to the [Trouble Shooting Guide](#) at the end of these instructions to re-establish the coding.

Note that the buttons on the MyLocoSound remote control auto-repeat if held down. If you want a single event to occur, like turning on the safety valve, then press the safety valve key and release it immediately. If you want to make a large change in volume or tone then you can hold the button down to avoid the need to press the button repeatedly.

## Configuring the Sound Module

The first step is to tell your sound module where your loco comes from. Specifically, is it a North American loco or is it European. Your sound module has been delivered set for European sounds. If you wish to change then do the following:

1. Power up the sound module, you should hear a static hiss.
2. Press the Mute button on the remote control.
3. Press the 8 button on the remote control. One beep will indicate that it is set for European sounds and two beeps for North American sounds.
4. Press the Mute button again to restore normal operation.

In European mode, the 3 button triggers a guard's whistle. In North American mode, the 3 button triggers "All aboard" and US whistle sequences in automatic mode.

There are a few settings which need to be specified to match the sounds to the particular locomotive or railmotor. Place the loco on the track and switch it on. Then proceed as follows:

### Button Operation

- 1 **Whistle tone and volume.** Press the 1 button to start the whistle. Use the channel up/down buttons to set the tone and the volume up/down buttons to set the volume.
- 2 **Bell volume.** If North American locos have been selected, the 2 button will sound the bell. Use the volume up/down buttons to set the bell volume to the desired level.
- 5 **Brake pump.** Press the 5 button to turn the optional Westinghouse brake pump on or off. Use the volume up/down buttons to set the pump volume to the desired level.
- 6 **Control mode buttons.** Press the 6 button on the remote control to change the control mode. Each time the 6 button is pressed, the sound module will emit one or more beeps to indicate the mode:
  - One beep – **Manual Mode.** In this mode all sounds are triggered only by pressing a radio control function or by using the remote control buttons. The whistle will sound for as long as its button is pressed.
  - Two beeps – **Timed Whistle Mode.** This is designed for controllers which have no function buttons, or at exhibitions, etc. where you don't want to operate manually. The whistle will sound once automatically when the loco moves off and then once more three times a minute when the loco is on motion. A reed switch can be placed under the loco and be connected to the one of the trigger terminals to make a sound when the loco passes over a magnet.
  - Three beeps – **Automatic Mode.** Again this is designed for controllers which have no function buttons, or you don't want to operate manually. When the sound module is set for North American locos, it follows American whistle sequences.

The whistle will sound two long toots when the loco moves off forwards or three short when backing up. If these occur the wrong way around then reverse the leads at the motor terminals. When the loco stops, a single short toot will indicate brakes on. A reed switch can be placed under the loco and be connected to the whistle trigger terminal to make the whistle sound the grade crossing sequence when the loco passes over a magnet.

Multiple reed switches can be used, each connected to a different sound trigger terminal.

When the sound module is set for European locos, the whistle will sound once when the loco moves off. A reed switch can be placed under the loco and be connected between the whistle trigger terminal and negative to make the whistle sound a longer blast when the loco passes over a magnet.

- Four beeps – **Two Function Mode.** If your radio control only has two function buttons then connect them to terminals F1 (whistle) and F3 (Guard's whistle or "All aboard"). The three remaining sounds then operate as follows:
  - Brake pump. This will sound when the loco is stationary and will turn off when starts moving.
  - Bell. For North American locos only, this will start ringing when the loco moves off and will continue until a certain speed is reached. That speed can be set using the IR remote's 2 button. When you press that button the soundcard will rotate from

- Button Operation** one to five beeps. The more beeps the higher the speed at which the bell will stop ringing. The bell does not operate when the plain whistle is in use.
- Safety valve. If you turn up the power a little, but not so much that the loco starts moving, then, after a second's delay, the safety valve will turn on. It will stay on until you turn the power off or start the loco moving.
- If you don't want any of these sounds then use the remote control to change to Manual Mode, reduce the volume to zero and then switch back to Two Function Mode.
- 7 **Number of cylinders.** Press the 7 button on the remote control. If a double beep sounds then the sound module is set three cylinder locos. If there is a single beep then the sound module is set to two or four cylinder locos, both of which emit four chuffs per revolution.
- 9 **Whistle type.** A single beep means that the soundcard is set to a plain, European style whistle with a low to medium pitch. Two beeps means that American chime whistles are selected. Three beeps is for a hooter style whistle, four beeps is a "Thomas the Tank Engine" TV whistle and five beeps is another plain whistle with a higher pitch range. Six beeps is the plain whistle used in early versions of the soundcard and is provided for customers who preferred it.

## Operation

When the loco is running, the engine sounds should operate automatically, getting louder when accelerating and softer when slowing down or idle.

Where your controller has function buttons then you can use them as follows:

- Button 1. Sounds the whistle for as long as the button is pressed.
- Button 2. Operates the bell for as long as the button is pressed.
- Button 3. Sounds the guard's whistle or "All aboard".
- Button 4. Sounds the safety valve blowing off.
- Button 5. Turns the Westinghouse brake pump on and off.

## Troubleshooting Guide

This is a list of common problems. If you cannot find a solution in the descriptions below, please [contact](#) Micron R/C.

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