

D.C. On-board Sound Module, [Diesel]

#0001000/1001

1.5 amp. Capacity

Thank you for purchasing our D.C. on-board sound module. This state of the art sound module gives you the D.C. users, the on-board sounds, which were normally reserved for DCC users.

The module comes with a wire harness that features an N.M.R.A. 8 pin plug, or by removing the harness from the module gives you a 9 pin JST connector, this makes installation into any of the newer locomotives as easy as just plugging it in.

In older locomotives the same wiring practices apply as in DCC decoder installation. The motor, chassis, trucks, lights, etc., must be isolated or damage can result to the module.

Note- This is a universal fit module. It is up to the user to fit the module and speaker inside the locomotive.

Note: The "x" marks indicate where to disconnect(isolate).

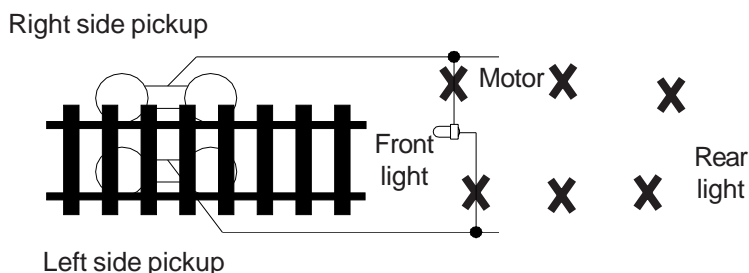


Figure 1. Connection to a non-DCC ready locomotive

Note- some older types of D.C. powerpacks may not be compatible with the electronics installed in this module or they may put out very high voltage spike during the first few seconds of operation when the throttle is turned up. We recommend that for D.C. use... Turn the throttle up slowly to a very low voltage setting, wait approx. 4 seconds, then operate the loco as the instructions state in the section titled "DC Operation-Analog Mode".

DC Operation - Analog Mode

This model will operate with a standard analog DC power pack. However, the locomotive's sound will not begin until the throttle is approximately at 50% of the throttle setting, and the locomotive will begin moving when the throttle has been turned about 60%.

The wireless remote transmitter features six buttons that control various sounds:

- **Button 1** will start or stop the bell ringing.
- **Button 2** will blow the air horn – the length of time the button is held determines the length of the horn blast.
- **Button 3** activates the sound of couplers connecting.
- **Button 4** controls the brake release sound (when the engine is in idle) or brake squeal (when the train is moving).
- **Button 5** turns the dynamic brake sounds on and off.*
- **Button 6** allows you to turn off the headlight, useful for when a locomotive is in idle.

* When the dynamic brake sound is turned off, there will be an approximate delay of 2 seconds while the sounds fades. (Pressing the button again before the sound fades will reactivate the dynamic brake sound unnecessarily.) Note that the dynamic brakes cannot be operated while the bell (button 1) is ringing.

The wireless remote transmitter is powered by a 12-volt battery (#A23.12). Replacement batteries are readily available at electronic or office supply stores. Although you can use the transmitter to control sound, we recommend you to purchase MRC Blackbox to for a better control the module.

Programming - Analog Mode

To program the various sounds, please follow the following steps:

1. Turn on the power pack
2. Within the first 2 seconds, move the throttle to approx. 50% open, making sure the locomotive is in idle or a low speed
3. Turn the Power Switch OFF, leaving the throttle in the open position, and wait 2 seconds
4. Press and hold **Button 6** while you turn the Power Switch to ON. When you hear the locomotive's speaker say "Program" quickly release **Button 6** and wait to hear a second "Program" to confirm that you are in the Program Mode. *Note: Program Mode is a slow process. Always wait 2 seconds after pressing a button. Do not press two buttons within that 2 second lag time, and do not press and hold a button while in Program Mode as the circuitry may "read" that as the button being pressed twice, causing an error. In the each Program Mode session, you will only be able to perform approx. 30 program operations.*
5. To return to Run Mode, turn the ON/OFF switch off and wait seconds before turning it back on.
 - While in Program Mode, press **Button 1** to change the bell type – there are seven from which to select, and you will hear a sample of each bell type ring four times each time Button 1 is pressed. When you hear "Program" when pressing Button 1, then the bell has been turned off, and pressing Button 1 again will begin the selection cycle with the first bell choice once again.

- Utilize **Button 2** to choose from 11 different air horn sounds (along with being able to turn the horn off, when you hear the loco say, "Program").
- **Button 3** can be used to program various accessory lighting, [see below]
- **Button 4** can be used to alter the rate at which the bell will ring
- **Button 5** is used to change the volume of the diesel prime mover sound.

Program Sound Volume

In the Program Mode you may individually adjust the volume of the five sounds (Buttons 1 through 5). To adjust the volume, press Button 6 and then select and press one of the sounds (Buttons 1 through 5). Each sound has four volume level settings. For example, to adjust the volume of the bell, press Button 6 (you will hear "Program"), wait 2 seconds and then press Button 1. At this point, you will hear a sample of the bell sound in order to judge the volume. Repeat pressing Button 6 and, two seconds later, Button 1 to hear the next volume level, stopping when the desired volume is heard.

Restoring Factory Default Settings

In the Program Mode, press Button 6 five times. After each press, you will hear "Program". After the fifth "Program", the locomotive will start up and automatically exit the Program Mode.

Accessory Lighting

There are two extra wires attached to the wire harness, one pink and one green. These are used to hook up accessory lighting to your locomotives. The following lights can be set up:

- 1- Ditch lights
- 2- Gyra light
- 3- Mars lights
- 4- Prime strato-light
- 5- Strobe light

Note- All accessory lighting remains on regardless of locomotive direction.

For ditch lights use both the green and pink wires plus the blue common wire for hook-up. For the other types of single lights, it does not matter whether you use the pink or green wire, use either one and the blue common wire. Or if you wish to have two of the other types of lights, use both the pink and green wires with the blue common wire. The accessory light wires put out 12 volts to the lights. Dropping resistors are needed for LED's or 1.5 volt bulbs.

LED's= 15k ohm resistors

1.5 volt bulbs= 1k ohm resistors

Programming Accessory Lighting

While in the Program Mode, each time you press button 5, you will hear a series of “clanks”. Each series of “clanks” turns on one of the accessory lights.

1 clank= ditch lights

2 clanks= gyra light

3 clanks= mars light

4 clanks= prime strato-light

5 clanks= strobe light

After turning on the accessory light feature you want, you can either exit the Program Mode, or program other features you want.

FCC Compliance

This device complies with the part 15 of FCC Rule. Operation is subject to the following two conditions. (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that causes undesired operation.

Return Procedure

If it should become necessary to return your module, unplug the module and return the module only. Please include a letter, [printed clearly], with your name, address, daytime phone number, and a detailed description of the problem you are experiencing. Please also include a \$25.00 check to cover shipping and handling.

Be certain to return only the module.

Warranty does not include abuse, neglect, or using this product for anything other than it's intended purpose. Warranty coverage will be handled on a case by case basis, and other charges may apply for repair/replacement of the product.

Send the decoder to:

Model Rectifier Corporation
Attn:Parts & Service
80 Newfield Avenue
Edison, NJ, 08837 U.S.A.

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