MRC SOUNDERTM
Diesel Sound Decoder with 28 Accessory Functions
Item 0001662
Thank you for purchasing our highly advanced DCC diesel sound only decoder. Combined with any non-sound power decoder installed in your locomotive, and used with your favorite DCC System, our new sound only decoder with “Carnegie Hall” sound quality will make your model locomotive come to life.

- Easy installation - two wire only
- Two types of synchronized diesel prime mover, with random associated locomotive sounds
- 28 functions (F1 - F28)
- 2 or 4-digit (1-9999) addressing
- Programmable 14, 28, 128 speed steps
- Programmable acceleration rate, deceleration rate
- Programmable accessory lighting for either ditch lights, Mars light, gyra lights, prime strato lights, strobe light, or steady on/off
- Programmable user selectable different horns and bells
- Programmable individual sound volumes
- Supports advanced consisting (CV19)
- Supports programming on the main (OPS mode)
- Compatible with NMRA DCC standards
- Complies with the part 15 of FCC
- 28mm speaker included
- Dimensions: 17.4mm x 17.4mm x 4.0mm

*Note- Instead of using CV3 and CV4, the decoder uses CV120 and CV121 as acceleration and deceleration rates. So you can change its acceleration and deceleration rates without changing CV3 or CV4 in your power decoder, if you already have these rates tailored for your locomotives optimum performance.

ADDRESS PROGRAMMING
The “MRC Sounder” comes with a factory default address of #3, and 28 speed steps. If your locomotive has a different address, and speed step already programmed into it, place the locomotive, with decoder and MRC Sounder installed, on your program track and re-program it to the address you had originally programmed it to. While it is on the program track, also re-program the locomotive to the speed step of your choice, (14-28/128). Since the decoder does not have a motor driver, you can’t read back its CV.

ADDITIONAL INFORMATION
The MRC Sounder synchronized diesel sound only decoder should perform well when used with other brand command systems, and decoders. See your DCC command stations manual to learn how to program and operate any decoder. For more information about register/CVs and their functions, please refer to the NMRA DCC Standard & Recommended practices, RP-9.2.2 available directly from the NMRA or their website at www.nmra.org.

FCC COMPLIANCE
This device complies with part 15 of FCC rules. 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 may cause undesired operation.

RETURN PROCEDURE
If you experience any problems with the MRC Sounder, please contact MRC first by either phone, 732-225-6360, or by e-mail, rrtech@modelrectifier.com. Please have the following information ready: Make/model of your DCC system and decoder. Make/scale of locomotive, and the type of problem you are experiencing. This way you can possibly avoid unnecessarily returning the MRC Sounder.

Should it become necessary to return your MRC Sounder, un-solder the Sounder and return the Sounder 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 $10.00 check to cover shipping and handling. Be certain to return only the MRC Sounder.

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 08837-3817 U.S.A

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80 NEWFIELD AVENUE
EDISON, NJ 08837-3817
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INSTALLATION
Since there is no motor output in this sound decoder, it can be used in any locomotive, regard-
less of scale that already has a working power decoder installed. If used in large scales where
track voltage exceeds 16 volts, (O/G scales), a special voltage reducer is required to be used
in-line to the Sounder. Contact Model Rectifier Corp. for details and price.
To install the Sounder into a locomotive, simply solder the red and black wires to any power pick
up points, left and right side wheel pick ups, along with the red and black wires of your power
decoder. If using with higher voltage DCC applications for larger scales, solder the MRC voltage
reducer to either the red or black wire between the Sounder, and the power pick up point. You
should have some basic electrical knowledge and soldering skills. If you do not have the above
requirements, please ask the dealer for help with the installation.

LIGHT EFFECTS WIRING*
If your locomotive has ditch lights, or any type of accessory lights, you can solder wires to the
electric three solder tabs on the Sounder. The center tab is the common for the light effects. You would
then program CV’s #118 and #119 to choose the desired light effect. Both light effects are
controlled on & off by function 3 (F3). There is no independent selection of either light effect. If
you program the effect for ditch lights, F3 turns them steady on/off, but activation of your horn
function, F2, makes them alternately blink automatically.

LIGHT EFFECTS PROGRAMMING CHART FOR CV118/CV119
You would program CV #118/119 to choose the desired light effect. CV118 for ACC1 and CV119
for ACC2. For ditch light both CV118 and CV119 must to 0.

<table>
<thead>
<tr>
<th>Function</th>
<th>CV118/119 value</th>
<th>ACC#1/ACC#2 Light effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>1</td>
<td>Ditch light</td>
</tr>
<tr>
<td>F2</td>
<td>2</td>
<td>Gyra light</td>
</tr>
<tr>
<td>F3</td>
<td>3</td>
<td>Marslight</td>
</tr>
<tr>
<td>F4</td>
<td>4</td>
<td>Prime strato light</td>
</tr>
<tr>
<td>F5</td>
<td>5</td>
<td>Single strobe light</td>
</tr>
<tr>
<td>F6</td>
<td>6</td>
<td>Double strobe light</td>
</tr>
</tbody>
</table>

*Note- The light effects operate on the track output voltage supplied by your DCC system. Please
contact the locomotive manufacturer as to the operational voltage of these extra lights, so you
then choose the proper current limiting resistor (1k to 3k) to add into the circuit to prevent
light bulb or LED failure. Also be careful not to bridge the tabs with solder or wire strands, as to
cause a short circuit and damage the MRC Sounder.

SPEAKER SELECTION
The “MRC Sounder” diesel sound only decoder comes with a 28mm round 8-ohm speaker. If it is
too large for your application, smaller speakers, 20mm, or 16 X 35mm rectangular, can be
bought from MRC, or other manufacturers. Reducing speaker size will affect the overall
sound quality of this decoder. Placement of the speaker inside the locomotive is up to you. Use
hot glue or double-sided sticky tape to affix the speaker inside the locomotive shell.

OPERATION
There are sixteen horn sounds and six bell sounds, along with an “off” setting for each built into
this decoder for you to choose from. See programming chart for selecting the type you want.
The “off” setting is useful for trailing locomotives in a consist so only the lead unit sounds its
horn and bell.

If your DCC system supports higher functions, F13 to F28, you can use these functions to
change the type of bell sound, F18, or horn sound, F19 on the move, without having to go into
"ops mode" programming or by changing CV values.

*Note- Bell, Dynamic Brake, and Rail-Wheel Clack, cannot play at the same time. If you activate
the bell sound, F1, while either the Dynamic Brake or Rail-Wheel Clack sounds are activated, the
Bell sound will override the other two sounds.