**TROUBLE SHOOTING**

This decoder should perform well with all DCC systems. The maximum DCC output should be less than 15 V. If the locomotive does not respond to commands, it may have lost its address. Please re-program the address and program CV19 to 0 (disable consist). If it responds slowly, you should clear its momentum by reprogramming CV120 and CV121 to zero. You should also clean the track to improve electrical pickup. Read your DCC system manual to learn how to program and operate the decoder. For more information about registers/CVs and their functions, please refer to the NMRA DCC Standard & Recommended Practices, RP-9.2.2. This is available directly from the NMRA or their website at www.nmra.org. Whenever the decoder doesn't work please use the program track to program CV# 125 with value 1 to restore the decoder to factory settings. This should bring the decoder to life with address #3.

*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**

This decoder carries a 6 month warranty against factory defects. This warranty does not include abuse, misuse, neglect, improper installation, or any modifications made to this decoder, including but not limited to the removal of the NMRA plug if applicable. If it should become necessary to return the decoder for warranty repair/replacement, please include a copy of the original sales receipt. 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 check or a money order for $8.00 to cover return shipping and handling. If the decoder is no longer considered under warranty, then please include a check or a money order for $12.00 to cover the cost of repair or replacement and return shipping and handling. Be certain to return the decoder only.

Any questions regarding Warranty Policy can be directed to our Customer Service Department by calling 732-225-6360 between the hours of 8:30am and 6:00pm EST, or by emailing: rrtech@modelrectifier.com

Send the decoder to:
Model Rectifier Corporation
Attn: Parts & Service
80 Newfield Avenue
Edison, NJ 08837-3817 U.S.A

Printed in USA
INSTALLATION

Since there is no motor output in this sound decoder, it can be used in any locomotive, regardless 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.

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 purchased 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 22 different horns sounds and 8 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.