SET UP
Connect the two wires from the Synchro Sound^2 to the track outputs from your DCC System or any convenient section of your track rails. Polarity does not matter.
Go to address #3. The Synchro Sound^2 is pre-programmed with address #3 and zero momentum at the factory. Select the locomotive on your layout that you wish to pair with the Synchro Sound^2. Program the Synchro Sound^2 to have the same DCC address as the locomotive. Once completed the locomotive and Synchro Sound^2 will operate seamlessly together. NOTE: The Synchro Sound^2 will only pair with one locomotive at a time, and must have its address changed to pair with a different locomotive address. To change Synchro Sound^2 address without changing the locomotive address, you must remove the locomotive currently paired from the track.

OPERATION
The Synchro Sound^2 has a start up and shut down feature. If the locomotive was previously shut down you have to start up the engine. Press any function key to start up the engine before operating the locomotive. To shut down the engine you must bring the locomotive to idle and then press F8 three times.

Double pressing F1 (two pressings within approximately 1 second) will turn on/off the diesel rumble.

Double click F0 will turn on/off sound (CV49). You can't turn off the horn which is always on. The system has four types of diesel prime movers, plus "off". You can use F12 to select this feature or use CV 123. You can use F19 to select 34 different horn sounds and use F18 to select 8 different bell sounds. With MRC Prodigy DCC which has 28 functions, you can easily setup and access all the decoder's functions. If your DCC System is limited in functions or can not program CV's you may not be able to access all the features of the Synchro Sound^2. With some DCC Systems you will have to use CV programming to set up your Synchro Sound^2.

The Synchro Sound^2 default is set to automatic notch. You can program CV122 to 3 for manual notch for realistic operation. And then use F9 to notch up and use F8 to notch down.
There are many more program features available with the Synchro Sound^2. Please refer to the CV Chart to explore other features of the system.

FCC COMPLIANCE
This device complies with part 15 of the 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 interfer-ence that may cause undesired operation.

RETURN PROCEDURE
This system carries a 6 month warranty against factory defects. This warranty **does not** include abuse, misuse, neglect, improper installation, or any modifications made to this system. If it should become necessary to return the system 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 $14.00 to cover return shipping and handling. If the system is no longer considered under warranty, then please include a check or a money order for $29.00 to cover the cost of repair or replacement and return shipping and handling. **Be certain to return the system only. Any questions regarding Warranty Policy can be directed to our Customer Service Department by calling 732-225-6360 between the hours of 9am and 5pm EST, or by emailing: rrtech@modelrectifier.com**

MRC
TECHNOLOGY. PERFECTED.
MODEL RECTIFIER CORPORATION

MRC Synchro Sound^2
No. 0000750

Congratulations! You have just purchased one of the most advanced DCC sound systems available today. The Synchro Sound^2 will bring your model railroading to life with realistic model railroading sounds for Non-Sound DCC Decoders.

- Four types of synchronized diesel prime mover sounds to choose from: **EMD645E, EMD567, ALCO244 & EMD710**
- 34 different types of horns and 8 types of bells
- Programmable individual sound volumes
- Programmable either 2-digit or 4-digit addresses
- Programmable start voltage and top voltage
- Programmable acceleration and deceleration rates
- Programmable 14, 28, 128 speed steps
- Selectable factory default speed curve
- Advanced speed table control CV67-CV94
- Kick start voltage control CV65
- 28 accessory functions (F1-F28)
- Supports advanced consisting (CV19)
- Supports programming on the main (OPS mode)
- Compatible with NMRA DCC standards
- Complies with Part 15 of FCC regulations

Set up & operational instructions on the back of this guide.

PROGRAMMING

CV	Register	Description	Range	Default
CV1	R1	Short address	1-127	3
CV2	R2	Start voltage	0-32	0
CV3	R3	Acceleration	0-32	0
CV4	R4	Deceleration	0-32	0
CV5	---	Top voltage	0-32	32
CV6		Speed curve select (0=linear, 1=slow increase, 2=fast increase at slow speed	0-2	0
---	R6	Page number	---	---
CV29	R5	Basic configuration	---	2
CV7	R7	Manufacturer version number	---	32
CV8	R8	Manufacturer ID	---	143
CV17	---	Long address upper byte	192-231	192
CV18	---	Long address lower byte	0-255	3
CV19	---	Advanced consist address	0-127	0
CV21	---	When CV21=0, functions follow its own address. CV21=1, functions follow the consist address	---	0
CV49		Sound on/off except horn that is always on	0-1	1
CV50	---	Horn type (34 types)	0-33	4
CV51	---	Horn volume	0-3	3
CV52	---	Bell type (8 types)	0-7	3
CV53	---	Bell volume	0-3	3
CV54	---	Bell ring rate	0-50	3
CV55	---	Diesel rumble volume	0-3	3
CV56	---	Brake squeal volume	0-3	3
CV57	---	Dynamic brake volume	0-3	3
CV58	---	Air release volume	0-3	3
CV59	---	Air pump volume	0-3	3
CV60	---	Safety pop valve volume	0-3	3
CV61	---	Engine cooling fan volume	0-3	3
CV62	---	Coupling volume	0-3	3
CV64	---	Rail wheel clack	0-3	3
CV65		Kick start voltage	0-63	63
CV67-94		28 speed steps table while CV29.4=1	1-255	linear
CV105	---	User identification number	0-255	0
CV106	---	User identification number	0-255	0
CV113	---	Coupling fire volume	0-3	3
CV114	---	Brake release volume	0-3	0
CV115	---	Auto brake squeal enable/disable	0-1	1(enable)
CV122	---	Notch mode, 0=auto, 3=manual	0-3	0
CV123		Prime mover types: 0=EMD645, 1=EMD567, 2=ALCO244, 3=EMD710, 4= ON/OFF	0-4	2
CV125	---	Programming to "1" will restore some CV's to factory settings	---	0

Function	Idle/Moving
Double F0	Double click F0 within 1 second will turn on/off sound (CV49)
F1	Bell on/off
F2	Horn
F3	Air release
F4	Uncoupling lever
F5	Brake release (idle) / brake squeal (moving)
F6	Dynamic brake on/off
F7	Air hose firing/uncoupling lever
F8	Click 3 times during idle will shut down / notch down while CV122=3
F9	Engine cooling fan / notch up while CV122=3
F10	Rail wheel clack (only moving)
F11	Traction air compressor
F12	Select four prime diesel mover types and diesel off
F13	Air release
F14	Coupling
F15	Air pump
F16	Associated loco sound
F17	Flange noise 1
F18	Change bell type (use F1 to turn off bell after adjustment)
F19	Horn type select (total 34 different horns)
F20	Associated loco sound
F21	Change bell volume (use F1 to turn off bell after adjustment)
F22	Change horn volume
F23	Change diesel rumble volume
F24	Air Release
F25	Flange noise 2
F26	Associated loco sound
F27	Sand drop
F28	Air release

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 in use, the Bell sound will override the other 2 sounds. Rail Wheel Clack cannot play while the locomotive is in idle. When you turn off Dynamic brake and Rail Wheel Clack sound there will be one second delay.