

# SoundMaster 210™

by Model Rectifier Corporation

## Caution - Electrically Operated Product

Not recommended for children under twelve years of age.

As with all electric products, precautions should be observed during handling and use to reduce risk of electrical shock.

The SoundMaster 210 should be grounded during operation.

### TRANSMITTING FREQUENCY:

SoundMaster Console: 400KHz, FM Modulation

### POWER REQUIREMENTS:

SoundMaster Console: 19VDC, 300Ma DC (Plug-In Power Supply included)

On-Board Speaker System: 9 Volt Battery (not included)

### AUDIO OUTPUT:

SoundMaster Console: 1.5 watts, A/B Output Terminal Impedance: 8 ohms

On-Board Speaker System: 300 Milliwatts, Impedance: 8 ohms

FCC ID #BTQSM210: This device complies with Part 15 of the FCC Rules.

## OWNER'S MANUAL

Congratulations! You've purchased one of the world's most exciting and technologically advanced model railroad sound systems. The SoundMaster 210 will dramatically enhance the realism of any HO or larger model railroad by its ability to generate two analog engine sounds and ten digitally recorded sound effects. It also features a Tape Input Jack, which gives you the ability to patch your own recorded effects into the system.

The SoundMaster 210's analog Steam and Diesel locomotive sounds respond to track voltage and can be synchronized to precisely match the performance output curves of most HO and larger model railroad engines. The synchronization rate and volume are fully controllable. Your choice of Steam or Diesel locomotive sound can be selected at any time.

In addition to the SoundMaster 210's Steam and Diesel analog sounds, ten different digital sound effects can be activated by the touch switches on the SoundMaster Control Panel. Each of these ten digital sound effects helps to create the ambiance of a live, working railroad. Further, these effects can be produced through the SoundMaster 210's On-Board Speaker System or through its "A" or "B" Fixed Speaker. As soon as you've installed your SoundMaster 210 System, you will be in complete command of your railroad empire's sound.

For your convenience, this manual is divided into seven primary sections.

1. SoundMaster 210™ System Components
2. Understanding the SoundMaster 210™ Control Console
3. Installing the Fixed Speakers "A" and "B"
4. Connecting the System Components
5. Testing the System
6. Installing the On-Board Speaker System
7. Operating the SoundMaster 210™ Sound System

MRC has created the SoundMaster 210 System for you, the modeler who wants more realism and fun from your layout than ever before. Follow our instructions carefully and you will enjoy your SoundMaster 210 for many years to come.

Model Rectifier Corporation  
80 Newfield Avenue  
Edison, NJ 08837  
(908) 225-6360

© 1995 Model Rectifier Corporation

## SECTION 1

### SoundMaster 210™ System Components

**SoundMaster 210 Control Console:** The Control Console is the heart of the SoundMaster 210 System. It houses the system's electronics and provides a single, compact control station for the system's many operating features. The SoundMaster 210 Control Console is powered by the DC Power Adaptor.

**DC Power Adaptor:** This simple electrical transformer converts the current from typical 110 volt electrical outlets to the DC current required to operate the SoundMaster 210 Control Console.

**Control Console Ground Wire:** This 7' green wire is used to ground the SoundMaster 210 Control Console. It connects the Control Console to a retaining screw on your electrical outlet's cover plate.

**On-Board Speaker System:** This factory-assembled, self-contained unit consists of a 1" diameter Speaker, a printed circuit receiver and the receiving antenna, all factory-mounted to a sturdy and convenient mounting board. The complete On-Board Speaker System will be permanently mounted on the inside of a single piece of your train's rolling stock. A 9-volt transistor battery (not included) is required.

**3" Diameter Speaker:** This Speaker is the SoundMaster 210 System's Fixed Speaker. It should be installed in your layout and selected from either the "A" or "B" Fixed Speaker position of your SoundMaster Control Console's Fixed Speaker Selector. If operation of both the "A" and "B" Fixed Speakers is desired, you may purchase an optional second Fixed Speaker for your SoundMaster 210 System.

*Note: In large trains, the 3" Speaker can be used to replace the smaller On-Board Speaker, then larger speakers can be purchased for use as Fixed Speakers "A" and/or "B."*

## SECTION 2

### Understanding the SoundMaster 210™ Control Unit

#### Power Switch

**Power Switch:** This Switch is located in the upper, right corner of the SoundMaster 210 Control Console. In its "ON" position, this switch allows the SoundMaster to receive power from typical 110 volt electrical outlets through the compact DC Power Adaptor provided with the system. When the SoundMaster Control Console is switched on, the Pilot Light in the SoundMaster Master Control Panel will glow.

When the Power Switch is in its "OFF" position, the Control Console will receive no power and cannot operate. As a safety precaution, we recommend that you unplug the DC Power Adaptor from the outlet at the end of each day's operation.

#### Selector Panel

Three (3) two-position Selectors are located on the lower, right side of the SoundMaster 210 Control Console.

**Diesel/Steam Selector:** This two-position Selector allows you to choose between the SoundMaster 210 System's two analog engine sounds. You choose the rumble of a powerful Diesel engine when the Selector is positioned to the left. The chuffing sound of a live Steam engine is chosen when the Selector is positioned to the right.

**Speaker System Selector:** This two-position Selector allows you to reproduce the SoundMaster 210's digitally recorded sounds through the speaker system of your choice. When the Speaker System Selector is positioned to the left, sounds will be heard through either the "A" or "B" Fixed Speaker. When the Selector is positioned to the right, sounds will be heard through the On-Board Speaker System.

**Fixed Speaker Selector:** Positioning this Selector to the left will cause the SoundMaster 210's effects to be reproduced through Fixed Speaker "A" on your layout. Effects are reproduced through Fixed Speaker "B" when the Fixed Speaker Selector is positioned to the right and an additional Fixed Speaker (optional) is added to your layout.

Fixed Speakers "A" and "B" are not intended to reproduce simultaneously.



## Master Control Panel

The Master Control Panel is located at the lower, left of the SoundMaster Control Console. It consists of two Volume Slide Controls, one Rate Adjustment Slide Control, one LED (Light Emitting Diode) Pilot Light and one Tape Input Jack.

**LED Pilot Light:** This indicator emits a bright red glow when the SoundMaster 210's Power Switch is on and the DC Power Adaptor is connected to a 110 volt electrical outlet and the rear of the SoundMaster Control Console.

**Fixed Speaker Volume:** This left Slide in the Master Control Panel establishes the loudness of the sound effects as they are reproduced through the "A" or "B" Fixed Speaker on your layout. When the slide is at its "MIN" position at the bottom of its track, no sound will be heard. As the Slide Volume Control is moved upward toward "MAX," the level of sound through the "A" or "B" Fixed Speaker will increase.

**On-Board Speaker Volume:** The center Slide in the Master Control Panel establishes the loudness of the sound effects as they are reproduced through the SoundMaster 210's On-Board Speaker System. When the slide is at its "MIN" position at the bottom of its track, no sound will be heard. As the Slide Volume Control is moved upward toward "MAX," the level of sound through the "A" or "B" Fixed Speaker will increase.

*Note: Reproducing sounds at "MAX" sound levels for extended time periods is positively not recommended and will seriously reduce the life of your speakers.*

**Rate Adjustment:** The right Slide in the Master Control Panel is used to synchronize the SoundMaster 210's engine sounds to the speed of your model railroad engine. When the slide is at its "MIN" position at the bottom of its track, the engine sound will not be heard. As the Slide Volume Control is moved upward toward "MAX," the sound will become audible through the On-Board Speaker System and the speed of the sound effect will increase. Synchronizing instructions are given on Page 11, in Section 7 of this manual, "Operating the SoundMaster 210 Sound System."

*Note: The SoundMaster 210 may not be able to synchronize perfectly to the speed of every model railroad engine. Results may vary with individual locomotives and motors.*

Steam or Diesel engine sound will be heard whenever you run your engine. You may stop the sound effect at any time by simply moving the Rate Adjustment Slide to its "MIN" position at the bottom of its track. Regardless of the Speaker system selected, "A" or "B" Fixed or On-Board, the analog Steam and Diesel engine sounds can only be reproduced by the SoundMaster 210's On-Board Speaker System. In Section 6 of these instructions, you will permanently install the On-Board Speaker System into a dedicated piece of rolling stock.

**Tape Input Jack:** This Mini-Phone Jack is in the lower, right corner of the Master Control Panel. It is used to connect your own optional audio source to the SoundMaster 210 Control Console.

Connecting a cassette player to the Tape Input Jack will permit you to reproduce any prerecorded sound through the SoundMaster 210's Fixed or On-Board Speaker Systems. Any audio component with an Audio Output Jack can be connected to the SoundMaster 210 Control Console's Tape Input Jack.

By connecting an optional tape recorder/player to the SoundMaster 210's Tape Input Jack, you can make your favorite music become a part of your layout, you can record and play back any available sound effect, and you can even record personal station announcements for the arrival or departure of the trains on your layout.

*Note: Sound sources that are connected to the SoundMaster 210 through its Tape Input Jack may be operated simultaneously with any of the SoundMaster 210's built-in sounds.*

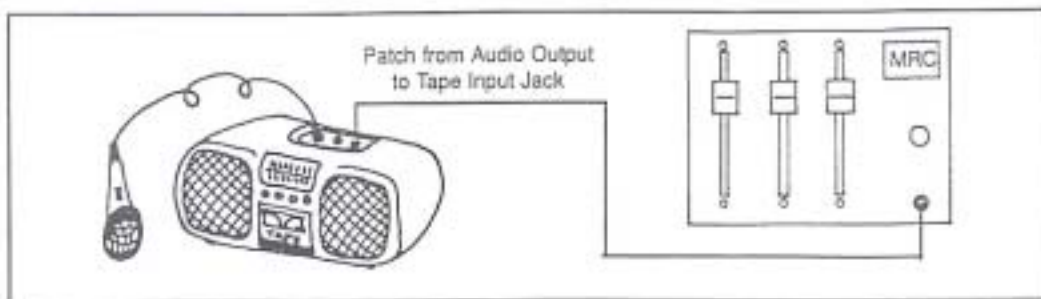


Figure 1: Patching an Audio Component into the SoundMaster's Tape Input Jack.

## Digital Sound Switch Control Panel

The Digital Sound Switch Control Panel is located in the center of the SoundMaster 210's Control Console. There are ten momentary contact Button Switches on the Panel. When depressed, each of these Switches will digitally reproduce an authentic railroad sound.

The digital sound effects may be operated simultaneously with either of the two analog engine sounds. For example, if your SoundMaster's On-Board Speaker System is producing the throb of a Diesel engine, you can press any one of the ten Button Switches and hear the selected sound effect along with the Diesel sound. Reproduction of the analog engine sounds will *not* be interrupted by the digital sound effects.

The ten digital sound effects and their descriptions are:

1. **Steam Whistle:** three (3) long whistle tones from a travelling steam locomotive
2. **Steam Whistle:** a single extended whistle tone
3. **Diesel Horn:** four (4) short horn blasts
4. **Diesel Horn:** a series of horn blasts from a travelling diesel
5. **Engine Bell:** the repeated clang of the bell
6. **Crossing Gate:** gate bells clanging as a gate is lowered
7. **Rail Clack:** a train travelling over the track
8. **Conductor:** station conductor blowing his whistle twice, then announcing; *"All aboard!"*
9. **Circus Sound:** a circus calliope - great for a circus train or a layout's amusement park
10. **Air Release:** the air release of a steam locomotive in a station

These ten digital sound effects may be reproduced through the Fixed Speakers "A" or "B," or through the SoundMaster 210's On-Board speaker system.

## SECTION 3 Installing the Fixed Speakers "A" and "B"

The Fixed Speaker feature of the SoundMaster 210 is used to reproduce the system's ten digital sounds from one or more locations on your layout. Your SoundMaster 210 Control Console is equipped with two Fixed Speaker outputs, "A" and "B."

One 3" diameter Fixed Speaker, 12 feet of hookup wire and mounting hardware are all provided with your SoundMaster 210 System. We suggest the use of this 3" Speaker as Fixed Speaker "A." If the reproduction of sound effects from more than one location is desired, an additional speaker can be purchased for use as Fixed Speaker "B." For the even greater distribution of sound effects across your layout, MRC offers optional 2-Way, Ported Speaker Enclosures, featuring a 4" woofer and a 2" tweeter, which may be connected to the SoundMaster Control Console's Fixed Speaker "A" and "B" Outputs.

Sound effects are directed to the Fixed Speakers by selecting either "A" or "B" with the Fixed Speaker Selector on the SoundMaster Control Console. Fixed Speakers can be installed on the insides of buildings or gate houses, under bridges or in any location that would best suit your particular layout's need.

The SoundMaster's 3" diameter Fixed Speaker should be permanently mounted in your layout. Choose a Fixed Speaker location that will allow sound to project, such as inside a building with open windows and doors, or high inside a tunnel with the cone of the speaker directed toward a portal. You must also plan for the Fixed Speaker's wire routing to the SoundMaster Control Console. Running the wire under the layout is the preferred method.

If additional Fixed Speakers are used, all the above installation criteria should be considered.



### Mount the Fixed Speaker

1. Cut a 2-3/4" hole in the location where the Fixed Speaker will be mounted.
2. Hold the Fixed Speaker in position over the 2-3/4" hole. Use the Speaker's metal frame as a guide to pencil-mark the location of the four mounting holes.
3. Remove the Speaker and drill a 1/8" hole at each of the four marks. Insert a Mounting Screw into each of the four holes.
4. Install the Fixed Speaker over the 2-3/4" hole, passing the threaded portion of the four Mounting Screws through the metal frame.
5. Secure the Speaker with the eight Washers and four Hex Nuts provided.

**Note:** There are two terminals on the back of your Fixed speaker, Positive and Negative. The Positive Terminal is marked with a plus sign (+) and the Negative Terminal is marked with a minus sign (-). The 12' Speaker Wire provided with your Fixed Speaker is a two-conductor wire. The Positive Conductor is marked with a white stripe. The Negative Conductor is unmarked.

6. Insert the bare wire end of the Positive Conductor Wire into the hole in the Positive Terminal of the Fixed Speaker. Retain the Wire by twisting it tightly around the Terminal. Secure the connection by soldering or with a small piece of electrical tape.
7. Insert the bare wire end of the Negative Conductor Wire into the Negative Terminal of the Fixed Speaker. Twist tightly to retain. Solder or tape.
8. Drill a 1/8" hole through your layout for the Speaker Wire.
9. Pass the Speaker Wire through the hole. The wire can be taped or carefully stapled to the underside of your layout board as it runs toward the location of your SoundMaster Control Console. The Speaker Wires will be connected to the Control Console on Page 6, in Section 4, "Connecting the System Components."

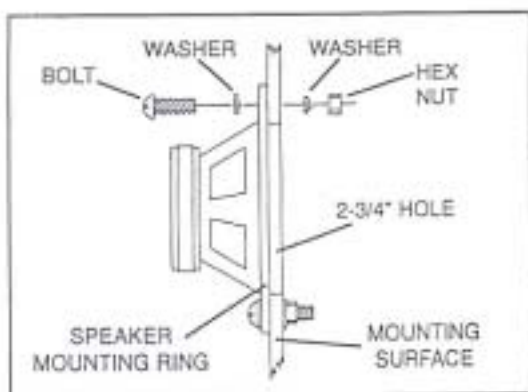


Figure 2: Mounting the Fixed Speaker.

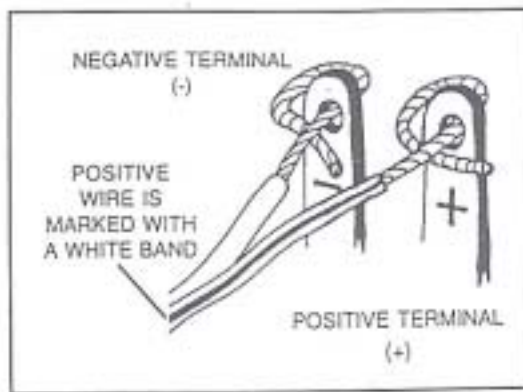
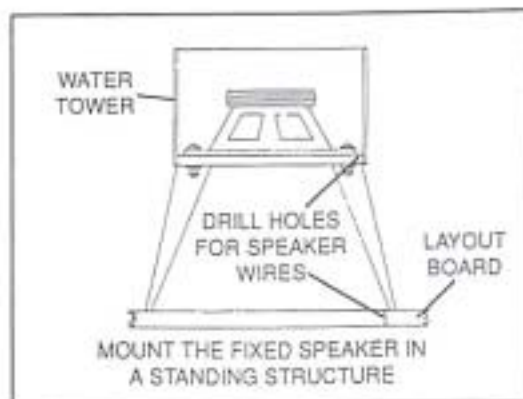
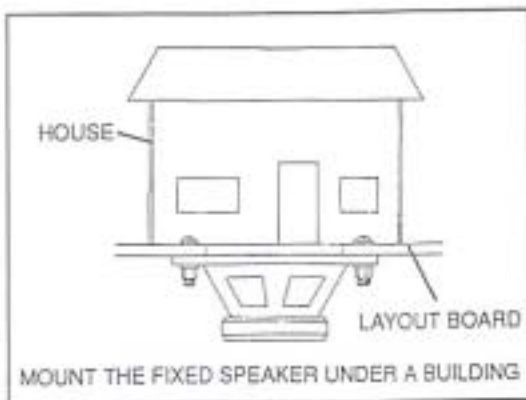


Figure 3: Connecting the Speaker Wire



Figures 4 and 5: Suggested Fixed Speaker Locations

## SECTION 4

### Connecting the System Components

- Choose an easily accessible location for the SoundMaster 210 Control Console. If your layout is a single-operator system, the most practical location is near your primary power pack.

#### Fixed Speaker "A"

1. The Positive Conductor Wire (with the white stripe) from Fixed Speaker "A" connects to the Positive (+) Terminal of Fixed Speaker Output "A" on the back of the SoundMaster Control Console. Loosen the Terminal Screw, twist the bare end of the Positive Wire tightly around the Terminal Screw, making certain that there are no frayed wires, then tighten the Terminal Screw.
2. The Negative Conductor Wire from Fixed Speaker "A" connects to the Negative (-) Terminal of Fixed Speaker Output "A." Loosen the Terminal Screw, twist the Negative Wire tightly around the Screw, then tighten the Screw.

#### Fixed Speaker "B"

If you have installed an optional Fixed Speaker "B" in your layout, the Speaker Wires should be connected to Fixed Speaker Output "B." Use the Positive and Negative Output "B" Terminals exactly as described for Fixed Speaker "A."

#### Ground Wire

1. Loosen the Ground Terminal Nut on the back of the SoundMaster 210 Control Console.
2. Slide the spade connector on one side of the 7' green Ground Wire under the Ground Terminal Hex Nut. Tighten the Nut.
3. Loosen the screw that holds the cover plate over the electrical outlet where your DC Power Adaptor will be connected.
4. Slide the spade connector on the opposite end of the Ground Wire under the electrical outlet cover screw. Tighten the screw.

*Note: To ensure proper operation of your SoundMaster System, the SoundMaster 210 Control Console should always be grounded to the electrical outlet during use.*

#### Track

You may disregard any consideration of Positive and Negative polarity when connecting the SoundMaster Control Console to your layout's track; polarity is irrelevant to this particular connection. Your layout connections may be made via terminal track, terminal connectors or your own preferred methods.

1. Loosen the two Track Terminal Screws on the back of your SoundMaster 210 Control Console.
2. Run the two wires from your layout's track to the rear of the SoundMaster 210 Control Console. Twist the bare wire ends of the wires around the two Terminal Screws and tighten the Terminal Screws.

#### DC Power Adaptor

1. Insert the plug on the end of the DC Power Adaptor into the DC Power Jack on the rear of the SoundMaster 210 Control Console.
2. Connect the DC Power Adaptor to the 110 volt electrical outlet previously grounded to the SoundMaster 210 Control Console.

*Note: Make certain that the DC Power Adaptor's cord is free from obstruction and has a clear run from the SoundMaster 210 Control Console to your electrical outlet. The DC Power Adaptor should not be located where it could be accidentally pulled from the outlet, or where its cord could cause you or others to trip.*

#### On-Board Speaker System

1. Connect a fresh 9-volt transistor battery (not included) to the Battery Connector which exits from the Printed Circuit Receiver.

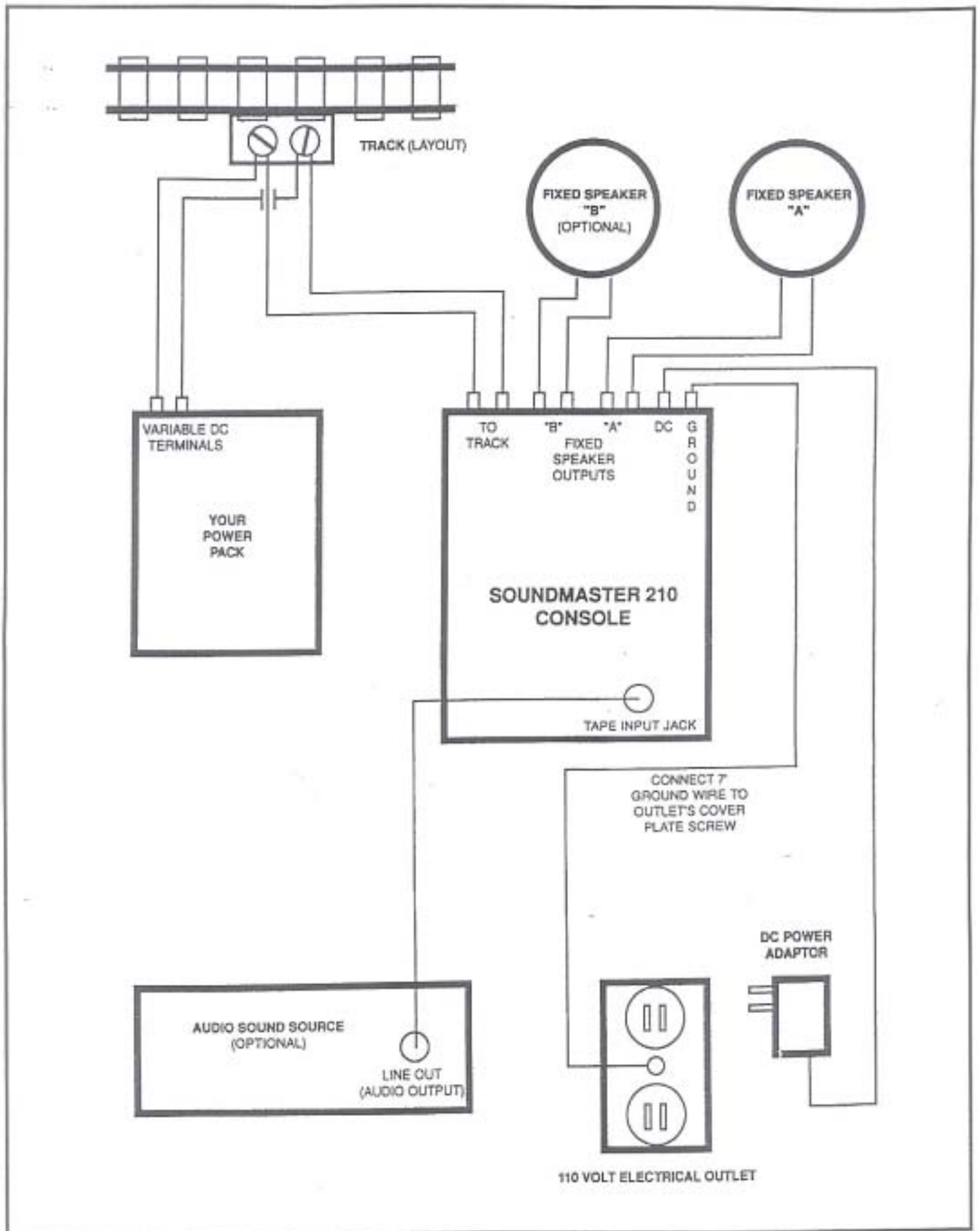


Figure 6: Connecting the SoundMaster 210™ System Components.



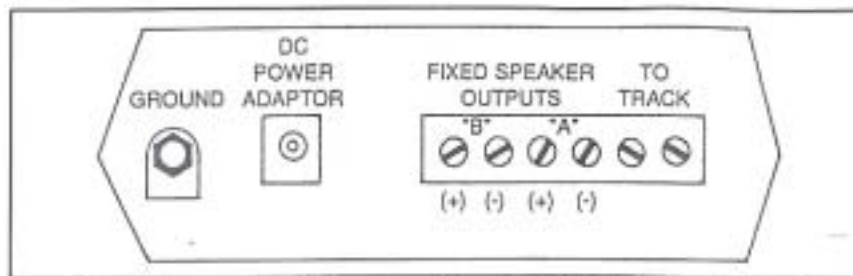


Figure 7: Rear view of the SoundMaster 210™ Control Console.

## SECTION 5 Testing the System

1. Refer to Page 7, Figure 6. All system connections must be secure and correct. An engine is not required for the system test.
  2. Place the On-Board Speaker System close to your track, with the 8" black Receiver Antenna laying directly over the track.
  3. Turn on your layout's power pack, but leave its throttle control in the "zero" or "off" position.
  4. Turn on the SoundMaster 210 Control Console. The LED Pilot Light should glow red.
  5. Position the Speaker System Selector to the right, which selects its On-Board function.
  6. Move the On-Board Speaker Volume Controls upward toward its approximate center position.
  7. The "ON" position of the On-Board Speaker System's Power Switch is toward the two switch wires. The "OFF" position is opposite the wires. Turn the On-Board Speaker System's Power Switch to "ON."
  8. Move the Rate Adjustment Slide Control upward toward its approximate center position.
  9. Move the throttle control on your power pack toward "full." Depending on which is selected, you should hear Steam or Diesel sound being reproduced through the On-Board Speaker System.
  10. Move your power pack's throttle back to "zero" or "off."
  11. Press any of the ten Button Switches on the SoundMaster Control Console's Digital Switch Control Panel. You should hear that sound effect from the On-Board Speaker System.
  12. Now position the Speaker System Selector to the left, which selects its Fixed Speaker function.
  13. Position the Fixed Speaker Selector to the left, which selects Fixed Speaker "A."
  14. Move the Fixed Speaker Volume Slide Control upward to its approximate center position.
  15. Press any of the ten Button Switches on the Digital Switch Control Panel. The selected sound effect should emit from Fixed Speaker "A."
- Note: If you have installed the optional Fixed Speaker "B," you must also test its operation.*
16. Position the Fixed Speaker Selector to the right, which selects its Fixed Speaker "B" function.
  17. Press any of the ten Button Switches on the Digital Switch Control Panel. The effect should emit from Fixed Speaker "B."

This completes the testing procedure and assures you that your SoundMaster 210 System is functioning correctly. If any part of the system is not functioning correctly, please go back to Page 6, Section 4, "Connecting the System Components." Repeat the procedures in Section 4, then repeat the entire test procedure outlined here in Section 5. Be certain the 9-volt transistor battery in the On-Board Speaker System is fresh and strong.



## SECTION 6

### Installing the On-Board Speaker System

**Note:** Before attempting to install the On-Board Speaker System, you must have completed all previous procedures in this manual, with particular emphasis on those in Section 4, "Connecting the System" and in Section 5, "Testing the System." All connections must be in place and a fresh 9-volt battery should be connected to the On-Board Speaker System's Battery Connector.

The SoundMaster 210's On-Board Speaker System must be permanently installed into a dedicated piece of your train's rolling stock. For HO scale, we recommend choosing a 41' wooden stock car with opening doors. When this car is used, sound is able to exit the car through its slatted sides and the On-Board Speaker System's Power Switch is easily accessible through the car's sliding doors. This allows the factory-assembled On-Board Speaker System to be installed with no cutting and no modification.

#### Installing the On-Board Speaker System into an HO Scale, 41' Wooden Stock Car with Opening Doors

1. Remove the body of the car. If any other parts restrict your access to the body's interior, they must also be removed. Remove weights; they will not be necessary after the On-Board Speaker System and battery have been installed.
2. The correct position of the 8" black Receiver Antenna is critical to the On-Board Speaker System's operation. Use a few small pieces of tape to fasten the Receiver Antenna along the inside edge of the mounting plate, *exactly* as it is illustrated in Figure 8.
3. Be certain that a fresh 9-volt battery is connected to the On-Board Speaker System's Battery Connector.
4. Place the body of the 41' wooden stock car, upside-down, on a clean work surface and insert the factory-assembled On-Board Speaker System, complete with its taped Receiver Antenna, inside the body of the car. Use caution and avoid loosening wires or bending components on the Printed Circuit Receiver.  
**For proper function of the On-Board Speaker System, route all wires as far away as possible from the receiver printed circuit board. These wires should be placed in the area under the 9 volt battery.**  
When installed correctly, the On-Board Speaker System's Mounting Board must be against one wall of the car, with its Printed Circuit Receiver toward the car's interior. The Power Switch must be accessible through the door opening.
5. When the On-Board Speaker System is in position, it must be retained. Cut a 2" square piece of bubble-wrap from the SoundMaster packaging and gently wedge this small piece of bubble-wrap between the Printed Circuit Receiver and the opposite side of the car.
6. Place the 9-volt battery, still attached to the Printed Circuit Receiver's Battery Connector, inside the car between the 1" On-Board speaker and the opposite wall of the car. The battery can be held in position with another small piece of bubble-wrap.
7. Return the body and any other small parts pack to their proper positions on the car's chassis.
8. Place the car on your track and test the SoundMaster's On-Board Speaker System. If the On-Board Speaker System is operating correctly, your SoundMaster 210 System is ready for use. If the On-Board Speaker System is *not* operating correctly, please review and repeat the complete procedure outlined on Page 8, Section 5, "Testing the System."

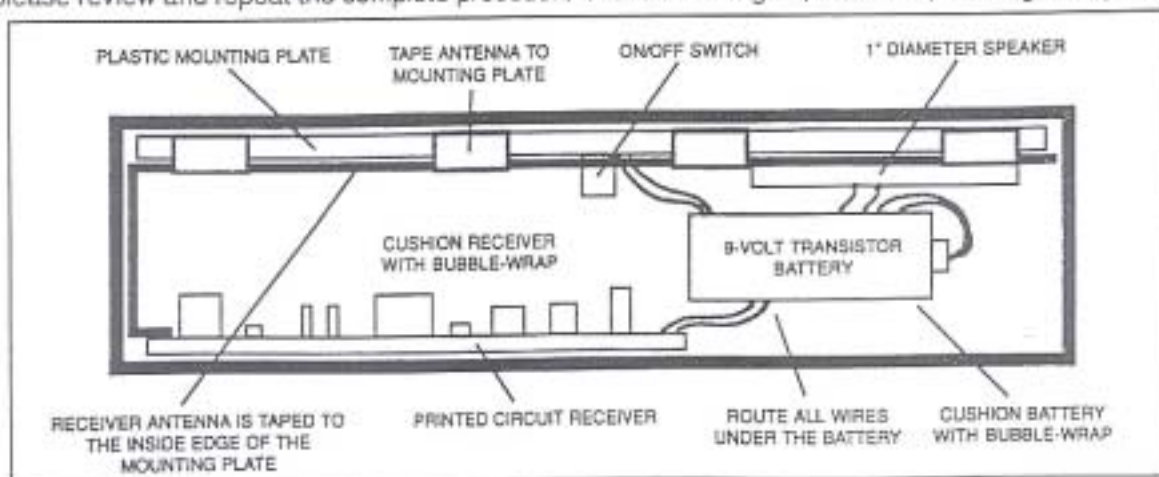


Figure 8: Installation of the On-Board Speaker System into an HO scale, 41' Wooden Stock Car.

### Installing the On-Board Speaker System into Alternate Rolling Stock

The On-Board Speaker System's design is best suited to fit inside of HO scale, 41' wooden stock cars with opening doors, but we realize that your layout's purpose may not include freight cars of any kind and that it may be of a larger scale than HO. If you prefer, the On-Board Speaker System may also be installed into other types of rolling stock, like box cars, tank cars or even passenger cars. The only requirement is having enough inside the car for the On-Board Speaker System's components.

Your installation is not limited to HO scale trains. You can install the On-Board Speaker System into almost any HO or larger car, but modifications to the car, the On-Board Speaker System's mounting plate, or both, are likely to be needed. In many cases, the On-Board Speaker System components will have to be carefully removed from the plastic mounting board.

Understanding the installation criteria of the On-Board Speaker System's components will allow you to better determine the most practical locations for the On-Board Speaker System's essential components in your particular train car. The components are the Printed Circuit Receiver and its 8" black Receiver Antenna and Battery Connector, the Power Switch and the 1" diameter On-Board Speaker.

#### Installation Criteria

**Printed Circuit Receiver:** The Receiver can be placed anywhere inside the car, but it should be gently wedged in place with bubble-wrap to protect it from vibration and prevent it from shifting when the train car is being handled or run.

*For proper function of the On-Board Speaker System, route all wires as far away as possible from the receiver printed circuit board.*

**Receiver Antenna:** The 8" black Receiver Antenna must be positioned inside the car, but as close to the track as possible. Always test your On-Board Speaker System installation before permanently fastening the Receiver Antenna with tape or adhesive.

**Battery Connector:** This fitting allows a 9-volt transistor battery to connect to the On-Board Speaker System. The battery can be placed anywhere inside the car, but it must be placed within reach of the Battery Connector. The 9-volt battery, just like the Receiver, should be gently wedged with bubble-wrap.

**Power Switch:** This Switch turns the On-Board Speaker System on and off, so it must be easily accessible from outside the train car. It should be mounted in an inconspicuous, but practical location.

**1" Diameter On-Board Speaker:** Sound must be able to project outward from the cone of the On-Board Speaker, so it must be mounted over an opening of some sort. With the On-Board Speaker mounted nearby, sound can be heard from a train car's open windows or doors, through wooden slats or through roof hatches. If these or similar openings are not available, you will have to create an opening in your train car. You can cut a single hole, you can drill a series of smaller holes, or you can cut slots. Whatever your preference, sound from the On-Board Speaker must be able to exit the car. Refer to Figure 9 below.

*Note: For very large scale trains and layouts, you may prefer to replace the 1" diameter On-Board Speaker with the 3" Fixed Speaker, then purchase one or more larger speakers for use as Fixed Speaker "A" and/or "B." See Page 12 for available options and order form.*

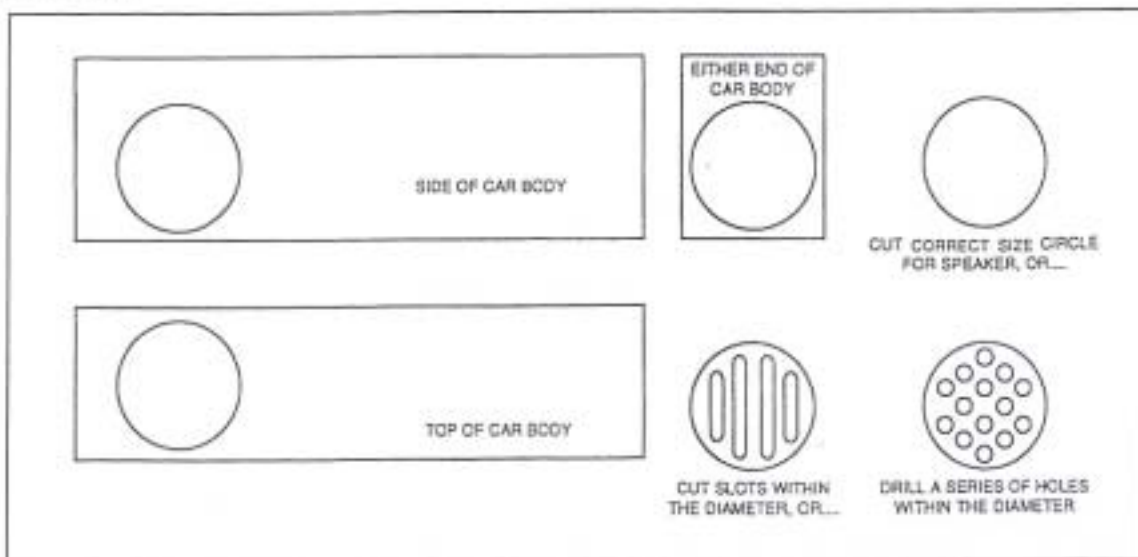


Figure 9: Alternate On-Board Speaker Mounting Suggestions.



## SECTION 7

# Operating the SoundMaster 210™ Sound System

### Synchronizing the SoundMaster 210™ to Your Engine

Your system should be plugged in, turned on and fully operational. Your layout's power pack should also be on and connected to your layout, with its throttle at "zero" or "off." Your locomotive and the train car into which you've installed the On-Board Speaker System should be on the track.

1. Move the Rate adjustment Slide Control in the Master Control Panel to its "MAX" position.
2. With your locomotive on the track, increase throttle control on your power pack until your locomotive is moving at a suitable medium speed for your layout.
3. Move the Rate Adjustment Slide Control slowly downward toward "MIN" until the Steam or Diesel sound effect and your engine's motion appear to be well matched.
4. Move your power pack's throttle control to "zero" or "off." Slowly move your throttle forward, gradually increasing your engine's speed. Compare the synchronization of sound and engine speed as the throttle is increased to "MAX."
5. If the synchronization is not correct, move the Rate Adjustment Slide Control until the sound and the speed of your engine are in synch.

### Combined Sound Effects

**Engine Sound:** Engine sound is reproduced through the On-Board Speaker System only. Engine sound does not reproduce through Fixed Speakers "A" or "B.". Your choice of Steam or Diesel engine sound can be selected at any time, but both sounds do not reproduce simultaneously; one or the other must be selected.

*Note: Engine sound is heard whenever the SoundMaster 210 System is turned on and your engine is operating. It is always on. To operate your engine without engine sound, move the On-Board Speaker Rate Adjustment Slide Control fully down to "MIN."*

**Digital Sound Effects:** These 10 sound effects may be reproduced through either the On-Board or Fixed Speaker System, but not through both systems simultaneously. If the Fixed Speaker option is selected, the sound effects may be directed to your choice of Fixed Speaker "A" or Fixed Speaker "B," but not to both Fixed Speakers simultaneously.

The SoundMaster 210 will reproduce one digital sound effect at a time, but the digital sound effects will *not* interrupt the Steam or Diesel engine sounds. Engine sound and digital sound effects *will* reproduce simultaneously.

Any of the 10 digital sound effects may be repeated continuously by pressing a Button Switch and holding it down. You may also repeat an effect by pressing its Button Switch again as the sound effect's cycle completes.

**Tape Jack Input:** Audio sources (cassette players, CD players, etc.) with audio output jacks may be connected to the SoundMaster 210's Tape Jack Input. Audio devices connected to this input will reproduce simultaneously with the engine sounds and with any of the 10 digital sound effects, or both. Audio sources in the Tape Input Jack may be directed to the On-Board or Fixed Speaker Systems in the same manner as the 10 digital sound effects.

*Note: Refer to Page 2, in Section 2, "Understanding the SoundMaster 210 Control Console," for a brief review of the SoundMaster 210's exciting sound effects and their descriptions.*

CUT ALONG DOTTED LINE AND MAIL TODAY!

## SoundMaster 210™ Options Order Form

COMPLETE THE REVERSE SIDE OF THIS FORM TO ORDER OPTIONAL EQUIPMENT FOR YOUR SOUNDMASTER .

Do not send cash. Please include check or Money Order for the total amount. Mail order and payment to:

Model Rectifier Corporation  
80 Newfield Avenue  
Edison, NJ 08837  
ATTN: Dept. SM210

### Important Rules of the Road

1. Ensure that the Ground wire is connected at all times during operation of the SoundMaster 210 System.
2. Use only the DC Power Adaptor provided with your SoundMaster 210 System.
3. Make certain that the DC Power Adaptor's cord is free from obstruction and has a clear run from the Console to your outlet.
4. When operating your SoundMaster System, always use a fresh 9-volt battery.
5. Never store a train car with the 9-volt battery connected.
6. Never connect the DC output from your power pack to the Fixed Speaker Output Terminals of the SoundMaster Console.
7. Always disconnect the DC Power Adaptor at the end of a day's operation.
8. Always use extreme caution when working with tools, including razors, knives, drills, soldering irons, glue guns or glue.
9. Never leave the unit "On" without the "To Track" terminals connected to the layout.

**Parental Note:** As with any electrically operated unit, it is always best to examine it periodically and replace or repair any damaged or potentially hazardous part. This product is not recommended for children under 12 years of age.

**Safety First:** Exercise common sense when using any product that plugs into an electrical outlet.

### Servicing the SoundMaster 210™ Sound System

Your SoundMaster 210 System has been thoroughly tested at the factory. If, for some reason, your SoundMaster 210 System is properly connected and still not functioning correctly, it may have to be returned for service. Please telephone our service department at (908)225-6360 before returning your unit.

If it should ever become necessary to return your system, pack it in its original carton, then pack the original carton into a larger carton with at least three inches of packing material all around. Include a clearly printed letter with your name, your address and daytime telephone number, and a detailed description of the problem you are experiencing.

Send your system by Parcel Post Insured or United Parcel Service to: Model Rectifier Corporation, 80 Newfield Avenue, Edison, NJ 08837.

CUT ALONG DOTTED LINE AND MAIL TODAY!

## SoundMaster 210™ Options Order Form

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Daytime Telephone (\_\_\_\_) \_\_\_\_\_

Item	Price Ea.	Quant.	Total
One 2-Way Speaker Enclosure <small>Available only through MRC direct</small>	\$29.98		
On-Board Speaker System	\$29.98		
3" Fixed Speaker & Wire	\$ 8.98		
12' Speaker Wire	\$ 2.98		
Total .....			
Shipping and Handling .....			\$ 4.50
<b>TOTAL ENCLOSED FOR ORDER .....</b>			<b>\$ .</b>

Allow 2 to 4 weeks for delivery. Prices subject to change without notice.