

CONTROLS

POWER SWITCH: The Power On-Off switch disconnects the input power from your AC SOUND & POWER 027 and shuts the unit down completely.

DIRECTION SWITCH: Most AC locomotives have a remote control reversing unit (which has been called an E-unit) which makes it possible to reverse the trains' direction of travel. To activate this remote control reversing unit just move the direction switch on the AC SOUND & POWER 027 to the right. This switch will momentarily shut down power to the tracks activating the reversing unit.

A locomotive that is equipped with a remote control reversing unit will also reverse direction after the speed control is turned to 0 and the speed control advanced twice. If you wish to keep the locomotive moving in the same direction after it has been stopped, you can advance the throttle slightly, and then pump the direction switch four times, so the locomotive will start moving in the correct direction. This switch will not control locomotives that do not have an E-unit or if the E-unit is deactivated. If you are going to operate the locomotive in one direction only, such as on a layout with automatic stations or insulated blocks, the E-unit must be turned off and the direction switch will be inoperative.

THROTTLE CONTROL: The throttle is used to set the speed of the locomotive you are controlling. Remember if your locomotive is equipped with an E-unit, the locomotive will reverse direction after the speed control is turned to 0 and the speed control advanced again.

WHISTLE SWITCH: This switch is a spring return slide switch. To activate a horn or whistle on your locomotive, pump the switch. The sound will stay on as long as the switch is held in the right side position.

INDICATORS

POWER MONITOR: The power monitor is used to give an approximate indication of the output voltage. You will find this very useful in detecting shorts, opens on your layout, etc. If the throttle is left in an "on" position and the light intensity increase as the locomotive continues to run, this indicates less current is being drawn. If the light becomes less intense, more current is being drawn. If the light goes out suddenly this indicates a short circuit and will shortly be followed by the light of the overload indicator. A slight flickering of this light during operation is normal and does not indicate a problem.

OVERLOAD LED INDICATOR: Your AC SOUND & POWER 027 unit is equipped with a sensitive thermal circuit protector. In the event of a short circuit or overload, the circuit protector will trip and begin to cycle on and off. Your overload LED indicator will light giving you a visual indication of a problem. When this occurs, turn your unit off, correct the source of the short circuit or overload, wait 2-5 minutes for the circuit protector to reset, then turn the unit back on. If the overload indicator is still lit, you have either failed to correct the source of the short circuit or overload, or you have not waited long enough for the circuit protector to reset.

TERMINALS

ACCESSORIES AC: These terminals supply AC voltage for use with AC Accessories. Polarity does not matter.

VARIABLE AC: The terminals marked 1 and 2 are for attachment of your AC SOUND & POWER 027 to the mainline of your layout. Connect terminal 1 to the inner rail or to clip 1 on a track lockon, and terminal 2 to the outer rails or to the clip 2 on a track lockon. If the whistle or horn does not operate after making this connection, reverse the connections to the rails from the power pack.

NOTE: When connecting to any terminal, care must be taken that wires do not touch more than one terminal at one time. Loose wires are a danger to your unit and layout; be certain wires are properly wrapped around terminal before tightening screws. IT IS ALWAYS A GOOD PRACTICE TO MAKE CERTAIN THAT THE UNIT IS "OFF" BEFORE CONNECTING ANY WIRES TO THE TERMINALS AND TO RECHECK YOUR CONNECTIONS AFTER YOU HAVE TIGHTENED THE TERMINAL SCREW.

SOUND SECTION

SOUND SELECTOR SWITCH: In the STEAM position, the system produces the "chuffing" sound of a steam locomotive and makes the HORN/WHISTLE SOUND CONTROL produce a steam WHISTLE sound when the slide control is moved upward. In the DIESEL position, the system produces the "throbbing" sound of a turbocharged diesel locomotive and makes the HORN/WHISTLE SOUND CONTROL produce a horn "blast" when the slide control is moved upward.

RATE ADJUSTMENT: This knob helps to synchronize the steam or diesel sound with the speed and motion of your particular locomotive. Results will vary with individual locomotive and motors, but we suggest to synchronize the sound by turning the RATE ADJUSTMENT knob fully counter clockwise. Then, with your locomotive on the track, increase THROTTLE CONTROL until your locomotive is moving at a medium speed suitable for your layout. Turn the RATE ADJUSTMENT knob until the sound and the locomotive's motion appear synchronized. Turn the THROTTLE CONTROL to 0 and compare the synchronization of sound as the throttle is increased from 0. If the synchronization is not correct, adjust the RATE ADJUSTMENT until it is satisfactory.

NOTE: THE STANDARD A.C. LOCOMOTIVE MOTORS THAT ARE USED IN MODEL TRAINS HAVE A HIGHER STARTING VOLTAGE AND LOWER STOPPING VOLTAGE WHICH MAKES CERTAIN LOCOMOTIVES DIFFICULT TO SYNCHRONIZE WITH THE SOUND PROPERLY. Not all locomotives will synchronize perfectly with the sound of the pack. However, with a little experience you will be able to adjust the synchronization of the sound versus the locomotive speed.

VOLUME CONTROL: This knob adjusts the volume of sound. Full volume is achieved by turning this knob fully clockwise.

HORN/WHISTLE SOUND CONTROL: To activate the horn or whistle sound move the slide control from the bottom towards the top, with the VOLUME CONTROL turned up. For best results, the slide control should be moved in a fluid continuous motion up and down to achieve the horn or whistle sound that you feel is most like a real horn or whistle. With a little experimentation you should achieve the full effect of the steam whistle or blare of the diesel horn you prefer.

TERMINALS

SPEAKER TERMINALS: The speaker is prewired, so you can connect the free ends of the wires to the two speaker terminals. Polarity does not matter.

CAUTION: When connecting speaker wires to the speaker terminals, make certain that the unit is OFF and unplugged. When connections are completed, reinspect them to make certain that no wires are shorting the terminals.

SPEAKER INSTALLATION: A drawing is supplied with these instructions so that you can cut out a hole for the speaker and its four mounting holes in your layout. For best sound reproduction and volume you will need a baffle to enclose the speaker. We suggest to use the unit carton in which your AC SOUND & POWER 027 was packed. Use the line drawing to cut out a hole for the speaker and its four mounting holes, preferably in one of the carton's side panels. Install the speaker into the inside of the carton with the face of the speaker outwards. Fasten the speaker to the box and your layout with the four screws, nuts and eight washers supplied. The wires should exit the carton and the edges of the carton sealed with cellophane tape (Scotch™) to prevent air from escaping. An alternative to using the cardboard carton is to use a wooden box of your own design. In any case, use your best judgement in selecting a method of installing and "hiding" the speaker in your layout. When mounting the speaker in your layout, you should choose a location where the sound will not be muffled. The speaker should be firmly mounted for best sound reproduction. Be careful not to allow any debris or material from your layout to touch the speaker cone as this will distort the sound.

The output impedance of the internal speaker amplifier is eight (8) ohms. The furnished speaker is also eight (8) ohms, a perfect match. If you choose to add another speaker, try to keep the speaker impedance as close as possible to eight (8) ohms.

You can add a second eight (8) ohm speaker to the unit but volume level must be kept below the distortion level. You can hear the distortion first when the horn is sounded against the diesel engine sound.

OUT

PARENTS, PLEASE NOTE: As with any electrically operated unit, it is always best to periodically examine it and have repaired any potentially hazardous part.

FOR YOUR PROTECTION

1. Never reverse a locomotive while running at fast speeds. To do so may damage the locomotive engine.
2. Turn power switch off at end of day's operation.
3. When a short circuit or current overload occurs and the circuit protector trips, turn the AC SOUND & POWER O27 unit off and correct the short or overload. Allow 2-5 minutes for the thermal circuit protector to reset before turning your unit back on.
4. Avoid prolonged overloads and short circuits. While your AC SOUND & POWER O27 is equipped with several safety devices to prevent accidental damage due to short circuits and overloads, it is unwise to subject it to these frequently or often.
5. Do not store in damp area.
6. For best performance, keep wheel and track surfaces clean. Intermittent and "jerky" operation are often caused by an oxide coating which has formed on the track and wheels.
7. Before returning your unit for repair or servicing, make certain it is defective. Do not shut down your layout unnecessarily.
8. If it is necessary to return your unit, repack it in its original carton and then in an outer carton, placing a least four (4) inches of packing material on each side, send the unit to:

MODEL RECTIFIER CORPORATION
200 CARTER DRIVE
EDISON, NEW JERSEY 08817

Be certain to send the unit Parcel Post insured or United Parcel Service, and include a letter with your name and address printed clearly, describing the problem you are experiencing.

All of us at MRC would like to join in wishing you many happy years of model railroading with your AC SOUND & POWER O27.

MODEL RECTIFIER CORPORATION

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INS-1255

CAUTION-ELECTRICALLY OPERATED PRODUCT

NOT RECOMMENDED FOR CHILDREN UNDER 12 YEARS OF AGE.

AS WITH ALL ELECTRIC PRODUCTS, PRECAUTION SHOULD BE OBSERVED DURING HANDLING AND USE TO REDUCE THE RISK OF ELECTRIC SHOCK.

ELECTRICAL SPECIFICATIONS:

INPUT: 120 VAC, 60HZ
OUTPUT: 0-18.5 VOLTS A.C. VARIABLE
19.0 VOLTS A.C. FIXED FOR ACCESSORIES
(A.C. VOLTAGES INDICATED ARE OPEN CIRCUIT NO LOAD VOLTAGES)
TOTAL OUTPUT - 90 VA

SOUND GENERATOR SPECIFICATIONS:

1 WATT AUDIO POWER INTO 8 OHMS IMPEDANCE
65db SIGNAL TO NOISE RATIO
STEAM/DIESEL SOUND SELECTION

OPERATING INSTRUCTIONS FOR THE AC SOUND & POWER O27

CONGRATULATIONS! You have just purchased one of the most advanced train controls on the market. MRC's New AC SOUND & POWER O27 is the latest in power pack technology.

The AC SOUND & POWER O27 is an advanced version of the type of power pack sold for use with A.C. powered locomotive sets, and includes such features as a 300 degree rotation speed control, pump type whistle and direction control switches, master on-off switch, overload and power monitor indicators and SOUND; all in a sturdy metal enclosure. It comes with a 4 inch speaker prewired to a 12 foot 2 conductor cable. Mount the speaker (hardware included) into a baffle and you are ready to run.

The Sound Generator is a circuit that responds to the track voltage and can be synchronized for many locomotives. The rate (synchronization) and volume through the included speaker is controllable. A steam or diesel locomotive sound can be selected; and the horn/whistle sound control allows you to create the shriek of a whistle or the blare of a horn as you want to hear it.

MRC has created the AC SOUND & POWER O27 for you, the modeler who wants more realism and fun from your layout than ever before. If this is your first purchase of an MRC product, we wish to welcome you to the ever growing ranks of those who purchase and use the best in Model Railroading Power Supplies: MRC.

MODEL RECTIFIER CORPORATION
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