Using a DC-V3 sound system with standard AC track power and conventional E-Unit.

It is possible to use this sound system with a conventional E-Unit with AC track power. However, Horn/Whistle, Bell, and other sound operations require the use of the LocoMatic™ Controller (#755). The main sounds, such as the prime mover for diesel's, exhaust chuff's for steam, and cooling fans for electic's, will work without the controller. If space permits, more than one DC-V3 sound board may be used and / or amplifier's such as item 671 (11 watt) or 672 (22 watt) may also be used.

Connect motor leads from E-Unit to sound system as shown. The resistor may be eliminated but better diesel notch control and steam auto-chuff is obtained with a 1k, 1/4 watt, resistor inserted in series with the motor connection as shown.

Set the "SPEED SET" control on the main board to full CCW with no resistor used. Otherwise adjust for a sound speed setting desired.

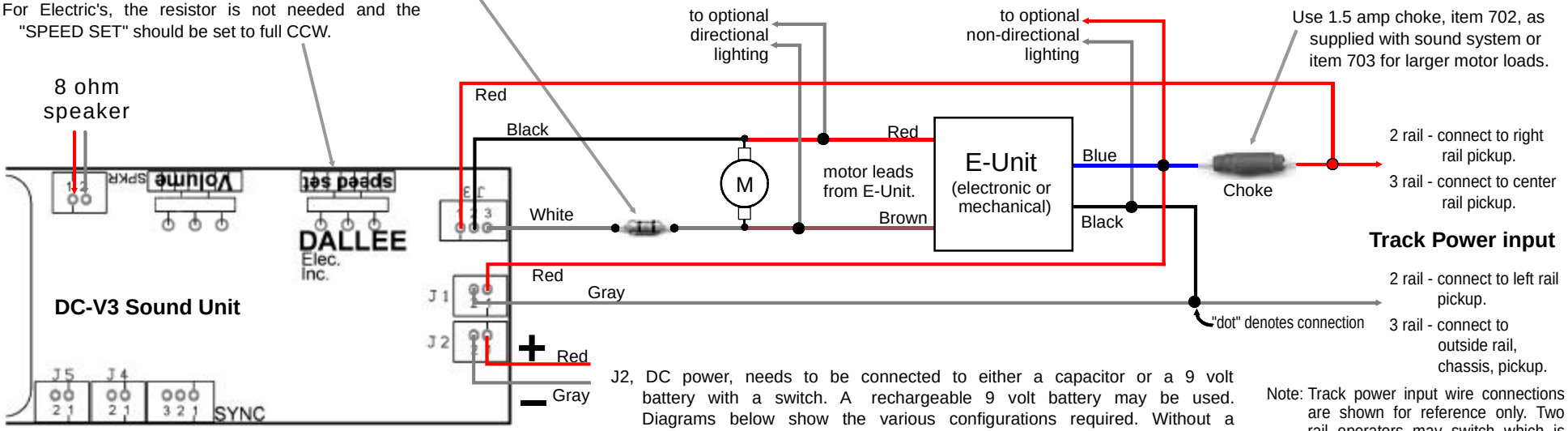
For Electric's, the resistor is not needed and the "SPEED SET" should be set to full CCW.

All lighting must be connected after the choke for proper operation. If diode directional lighting is used, connect lamps to motor leads as needed.

For directional lighting, use items #550 (WHITE LED), #562 (small 2.4mm lamp), or #560 (small 1.2mm lamp), are appropriate units to connect to the motor leads.

For constant lighting, use items #551 (WHITE LED), #563 (small 2.4mm lamp), or #561 (small 1.2mm lamp), are appropriate units to connect to the input track power leads (after the choke).

Motor leads from E-Unit shown are for permag motors. If your engine has a series motor, these wires would be the brush wires. Field wires would remain connected as normal.



J2, DC power, needs to be connected to either a capacitor or a 9 volt battery with a switch. A rechargeable 9 volt battery may be used. Diagrams below show the various configurations required. Without a storage element, as shown below, the sound system will reset on each power interruption and have distortion or no sound at low track voltages. Proper polarity must be observed!

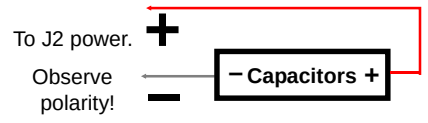
Note: Track power input wire connections are shown for reference only. Two rail operators may switch which is which for ease of installation.

E-Unit wire colors are shown for a DALLEE E-Unit #400.

It may not be necessary to connect the choke but sound control will always be better with the choke in the circuit.

If you are only using the sound system for the main sounds (prime mover, exhaust chuffs, electric fans, etc.) and you do not want to use the LocoMatic™ controller for operation of the Horn / Whistle, Bell, or other sound functions you do not need to connect the choke or the red wire from J3.

rev 1



EMD's require two or more capacitors rated at 4700mfd@25 (item 205).

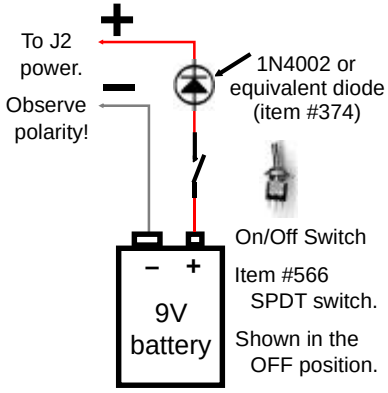
Other systems, one or more 4700mfd@25.

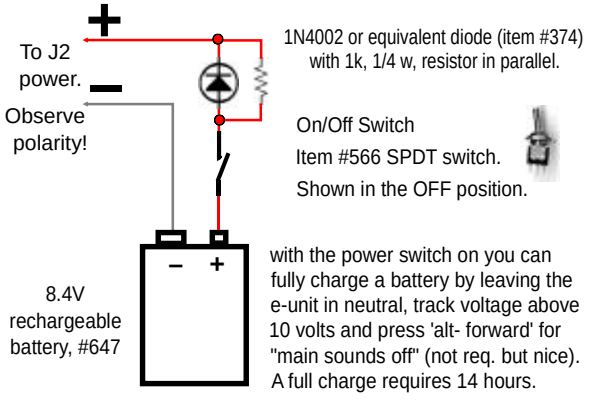
For tighter fits, use four 2200mfd@25 (item 206).

All capacitors should be wired in parallel.

For all systems, the larger the better!

The higher the volume, the more capacitance you need to keep the sound unit alive during sequence operation.





with the power switch on you can fully charge a battery by leaving the e-unit in neutral, track voltage above 10 volts and press 'alt- forward' for "main sounds off" (not req. but nice). A full charge requires 14 hours.

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