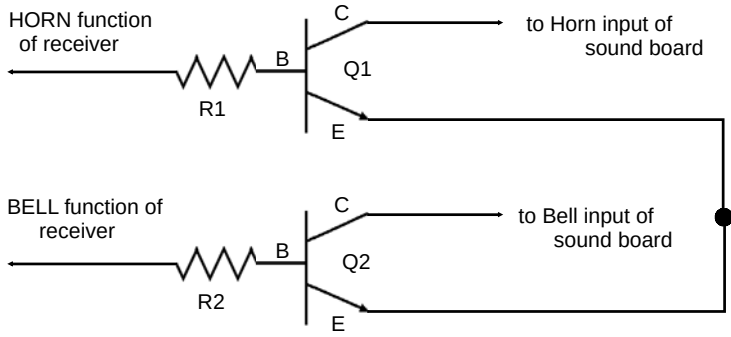
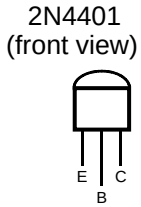
## using SIGNAL TRANSISTORS to invert remote control of the HORN, BELL, and other functions.

Some receivers have an inverted output signal and they require the function inputs inverted to operate the sound card functions correctly. This circuit relies on the receiver having a logical "HI" voltage when the remote functions are activated. Older Keithco and other users requiring an inverted signal can use this optional interface circuit. If you don't know what your receiver has, connect it as normal and if the Horn continuously plays until you activate the function, then you have an inverted receiver output.

If you have more functions available you could operate more sound functions such as a forced full RPM. Connect another transistor as the Horn and Bell transistors but connect the collector of the transistor to the S3 function input.



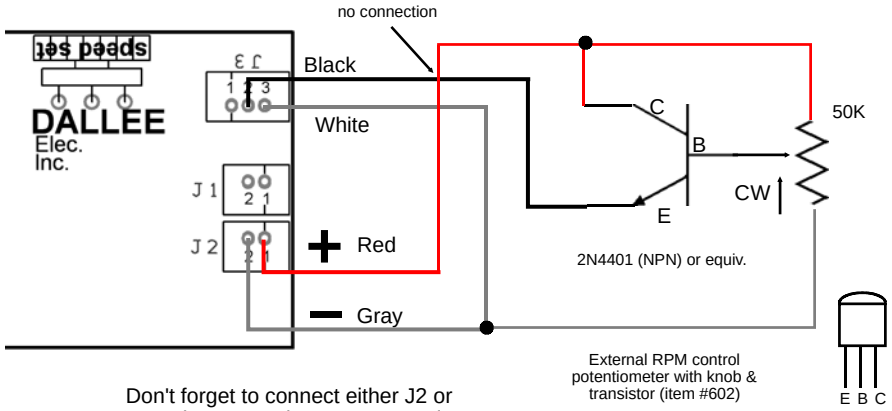

R1, R2 - 1.0k 1/4 watt (Brown, Black, Red)
Q1, Q2 - 2N4401 or equivalent NPN transistor

These parts can be obtained directly from us but they do not appear on the price schedule - call or write for prices.

### adding manual control to the IN LOCOMOTIVE DC SOUND system as a stationary unit to adjust diesel notches or steam chuff rate.

Connect input power, speaker, and all other connections as shown in stationary or other types of installations except no input connections should be applied to the DC motor/track input header (J3) pins 2, or 3. Instead, connections should be done as shown below. All other input power, speaker, switch connections should be done as before.

Basic setup for both types of operation: **Set NOTCH CONTROL (speed set) full CCW**. The potentiometer, transistor, and a knob can be obtained directly from us as item#602 but they may not appear on the price schedule - call or write for prices.

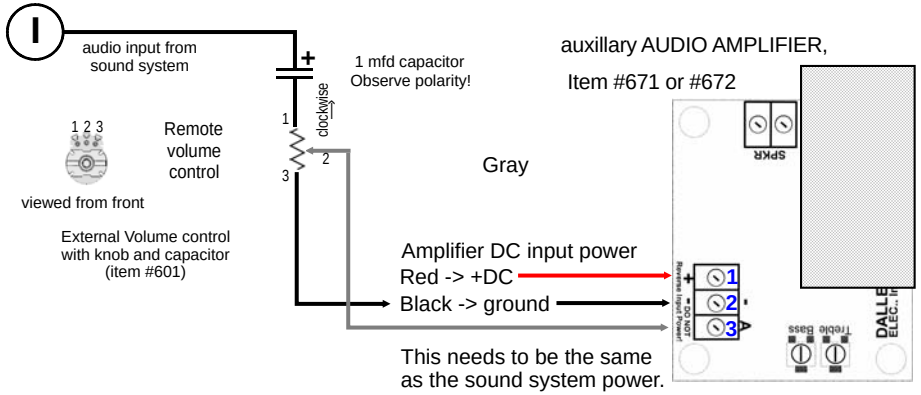



Don't forget to connect either J2 or J1 to the appropriate power supply.

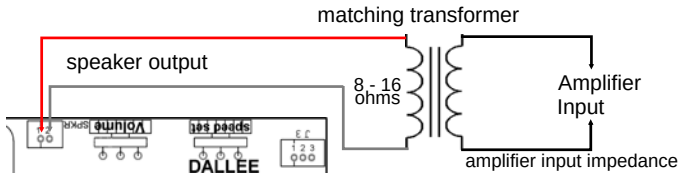
### adding remote volume control when using an Auxiliary Amplifier

With single sound systems, connect the gray wire from the speaker output to input "I". Connect the rest as shown.

If using two sound system as shown on page 9, connect the junction of the two sound systems to the capacitor as shown on page 9, then merely add the potentiometer as shown. This will only work properly if the amplifier has an industry standard auxillary input.




### using an Auxillary Amplifier with matching transformer input




matching transformers can be found in many audio shops. They are used for power amplifiers found in car systems.