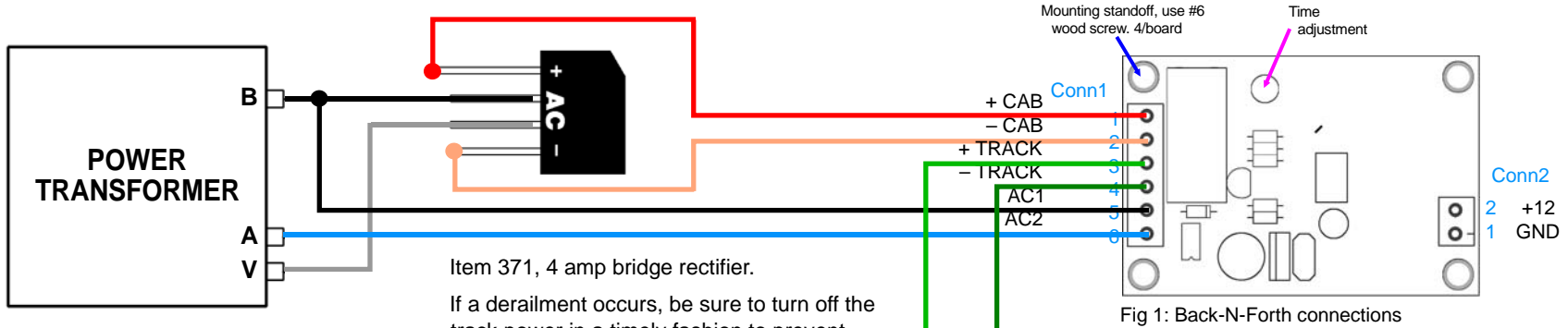


# Utilizing a DC Back-N-Forth, such as item 563, for AC trains.

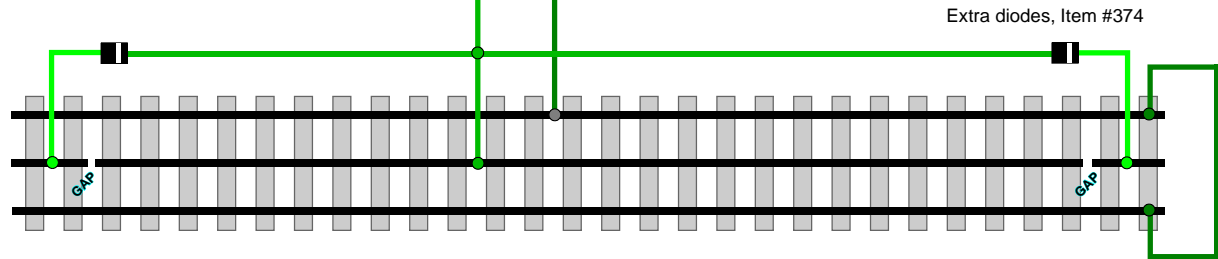
Utilizing a DC Back-N-Forth is not only more reliable but cost effective as well. A dedicated Back-N-Forth track is much better to convert to DC operation than to rely on E-Unit sequence operation. E-Units are very susceptible to track dirt for interruptions in direction control, especially at slow speeds. DC operated trolleys will not change direction when operating over dirty pickups's. The conversion of more modern units is a very simple process. Older series motors can also be converted to DC if necessary as well.



Item 371, 4 amp bridge rectifier.  
If a derailment occurs, be sure to turn off the track power in a timely fashion to prevent burning out the bridge rectifier.

- A - FIXED.....16vAC
- B - Common
- V - Variable AC.... 7-16V

The fixed AC is used to power the Back-N-Forth board while the variable is used to power the track voltage. If separate power sources are used, just connect the fixed AC directly to the Back-N-Forth board without any connection to the variable AC or DC power source.



3 rail track shown. As in all 3 rail wiring, it is always a good practice to connect the outside rails to each other. This is shown on the right side of the drawing above.

For 2 rail, use the center rail as the left rail and the right rail as the outside rail power.

When removing the AC reversing unit to convert to DC operation with DC can motors, the motor should be wired for center rail "+", outside rail "-" = forward. If you want to check your wiring out, simply attach clip leads to the "+" and "-" leads of the bridge rectifier.

If the engine runs off the end instead of stopping, simply reverse the direction of the diodes at the track ends. Both diodes need to point in the same direction.

Wire the trolley motor directly to the track pickup's. After this is done, do not operate this unit on AC track power!

If you want a E-Unit and DC operation, use a DPDT toggle switch (item 513) to select the operation desired. The center of the switch would be wired to the motor brushes. One side would then be the motor output from the E-Unit, the other side would be the roller and chassis pickup. Make sure to mark which direction of the toggle switch is which function.

