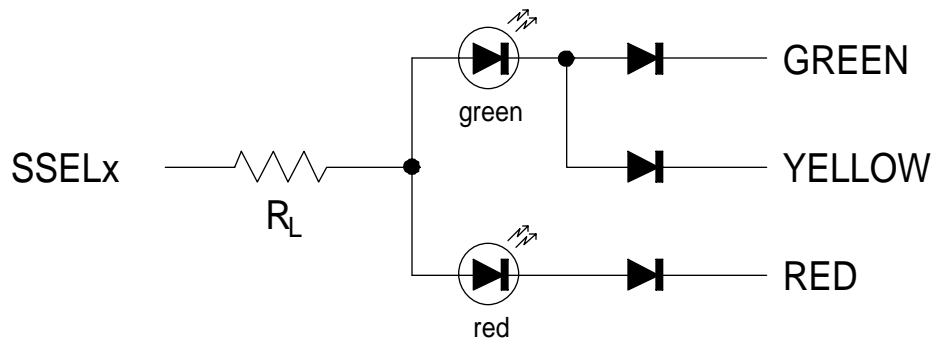

BlockMaster™/SignalMaster™ Application Note #1 **Connecting two-color signal heads**

When using two-color signal heads with the *BlockMaster*™ or *SignalMaster*™ it is necessary to combine the “normal” green and yellow signal control outputs into one control output for the green LED of the two-color signal head. This combining of outputs is necessary in order to properly control the green LED. You will need to add some inexpensive external diodes (such as the popular 1N914; Radio Shack #276-1122) to properly control the signal. This is shown in Figure 1 below assuming common anode LED wiring. If you’re using common cathode wiring then simply reverse the polarity of the LEDs AND the external diodes.



The lines labeled GREEN, YELLOW and RED are the standard 3-color signal outputs from the circuit board (via the ribbon cable). Use the appropriate set of signal outputs according to the location of the signal on the track diagram and the corresponding configuration table in the installation guide. You may want to slightly lower the value of the current limiting resistor, R_L , (try 56Ω) since there is some voltage drop across the diodes. Although functionally unnecessary, the diode in the “red” path helps balance the relative brightness between the red and green LEDs.

Using a two-color signal head in a 3-color signaling system will cause the clear (green), approach medium (flashing yellow), and approach (yellow) indications to “collapse” to clear (green). It is recommended that you do NOT enable flashing yellow on the circuit board if you’re using any two-color signal heads. If you have flashing yellow enabled then a two-color head will flash green instead of yellow when approach medium is indicated. If you still desire flashing yellow for your 3-color signals in this situation and you’re using the *SignalMaster*™ then please contact us. We can customize the *SignalMaster*™ for you so that you can have it the way you’d most prefer.

If you have any questions about this application note please contact us at any of the numbers/addresses listed below.