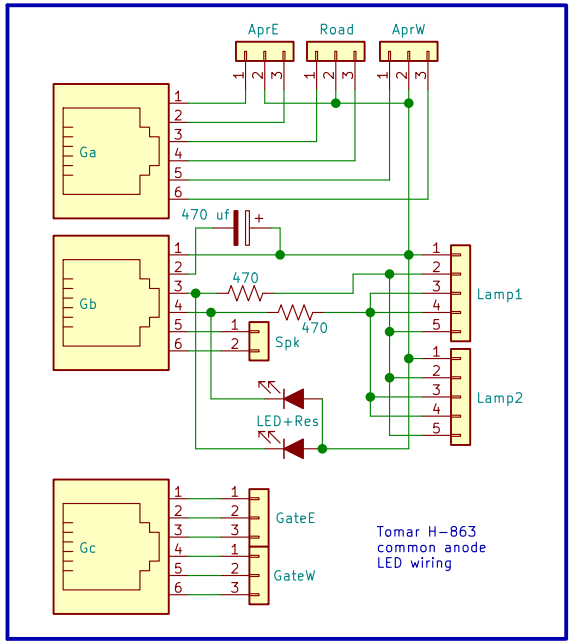
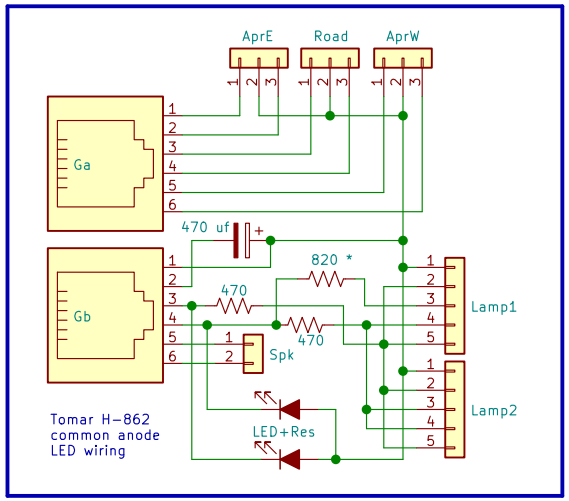
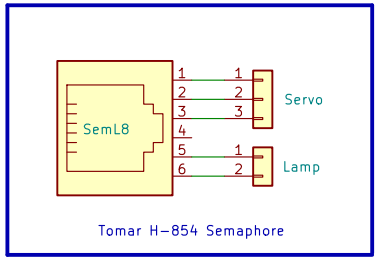
Grade Crossing Signals + Gates



Grade Crossing Signals Only



Semaphore



Semaphore flag board servo mechanical adjustment procedure.

1. Ensure flag board pushrod is detached from servo clevis.
2. Verify clevis attachment to inner hole of servo arm. Clevis size may prevent use of inner-most hole. Enlarge hole for clevis pin if needed. Clevis should move freely but have a snug fit.
3. Ensure proper attachment of external board to mainboard via 6 pin cable.
4. Edit TurnoutDataFile.txt. For semaphore servo, set Open, Middle, and Close values to 595, 600, and 605 respectively.
5. In RPi console, enter D&B.pl -m x (x is servo number) to set the semaphore servo to the middle position.
6. Connect 3 pin servo cable to external board.
7. Manually move semaphore flag board to yellow (mid) position. Then tignten colar to connect semaphore pushrod to servo clevis.
8. Enter D&B.pl -c x console command to set semaphore servo to the Close (Red) position.
9. Note flag board position and change value in TurnoutDataFile.txt in small increments to achieve desired red position.
10. Enter D&B.pl -o x console command to set semaphore servo to the Open (Green) position.
11. Note flag board position and change value in TurnoutDataFile.txt in small increments to achieve desired green position.
12. In RPi console, enter D&B.pl -s x (x is signal number) to run test and verify semaphore operation.

Grade crossing gate servo mechanical adjustment procedure.

1. Ensure gate pushrods are detached from both servo clevises.
2. Verify clevis attachment to inner hole of servo arm. Clevis size may prevent use of inner-most hole. Enlarge hole for clevis pin if needed. Clevis should move freely but have a snug fit.
3. Ensure proper attachment of external board to mainboard via 6 pin cables.
4. Edit TurnoutDataFile.txt. For gate servos, set Open, Middle, and Close values to 595, 600, and 605 respectively.
5. In RPi console, enter D&B.pl -m x (x is servo number) to set gate servo to the middle position.
6. Connect 3 pin servo cable to external board.
7. Manually move signal gate to mid position. Then tignten colar to connect gate pushrod to servo clevis.
8. Enter D&B.pl -c x console command to set gate servo to the Close position.
9. Note gate position and change value in TurnoutDataFile.txt in small increments to achieve desired gate lowered position.
10. Enter D&B.pl -o x console command to set gate servo to the Open position.
11. Note gate position and change value in TurnoutDataFile.txt in small increments to achieve desired gate raised position.
12. Repeat steps 5 through 11 for second gate servo.
13. In RPi console, enter D&B.pl -g2 to run test and verify desired gate operation.

Grade crossing signal lamp connection procedure.

1. Attach a female pin connector to each (5) grade crossing signal LED wire.
2. Ensure proper attachment of external board to mainboard via 6 pin cables.
3. In RPi console, enter D&B.pl -g1 to run grade crossing test.
4. Connect signal LED common to external board lamp header pin 1.
5. Attach LED wire to pin 2 of lamp header. Note flashing lamp.
6. Attach in turn the remaining LED wires to the lamp pin header to achieve desired alternating lamp pattern.
7. Repeat steps 4 through 6 for second signal.

* Replaced signal LED was dim. Seperate resistor added to balance brightness with other LEDs.

Grade crossings and Semaphores.
Each board mounted close to signal devices on layout.

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Title: External Boards

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