

**Fig 12a—How an Automatic Block Controls 2 Trains** (demonstrated on Videotape #2)

This is a modified version of page 142 of LGB 0028E.

1. Engine B is stopped on unpowered block B2—status RED.
2. Engine A, moving on the main line, crosses track contact T2. This closes relay M3—status GREEN—connecting track power to block B2.
3. Engine B exits block B2 onto the mainline, and crosses track contact T1. This opens relay M3—status RED.

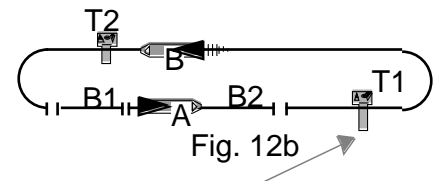
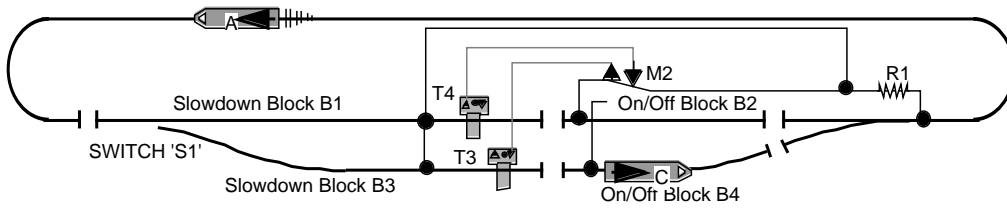


Fig. 12b

4. Engine A enters block B1, and continues onto unpowered block B2 and stops.
5. Fig 12b: Engine B crosses track contact T2. This closes relay M3—status GREEN—connecting track power to block B2.
6. Engine A exits block B2 onto the mainline, and crosses track contact T1. This opens relay M3—status RED. Engine B moves onto now-empty block B2 and stops.



**Fig 12c—How an Automatic Passing Siding Controls 2 Trains** (demonstrated on Videotape #4)

This is a slightly modified version of page 129 of LGB 0028E.

1. Engine C is stopped on unpowered block B4.
2. Engine A, moving on the mainline, eventually enters block B1, and crosses track contact T4. This changes relay M2 to connect to block B4, and sets switch S1 curved.
3. Engine C exits block B4 onto the mainline.

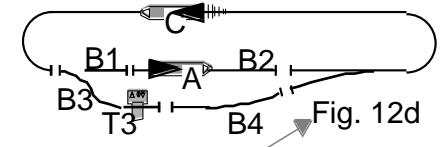
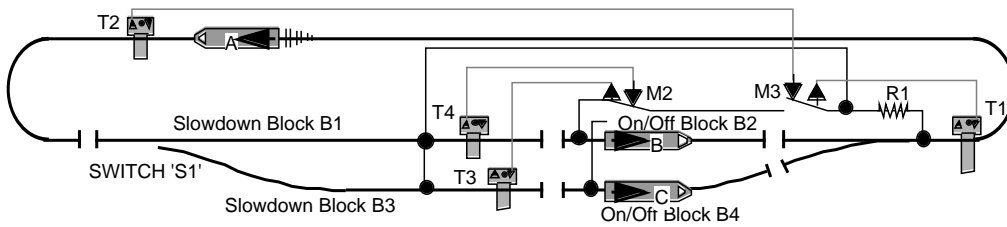


Fig. 12d

4. Engine A continues onto unpowered block B2 and stops.
5. Fig 12d: Engine C enters block B3, and crosses track contact T3. This changes relay M2 to connect to block B2, and sets switch S1 straight.
6. Engine A exits block B2 onto the mainline.
7. Engine C continues onto unpowered block B4 and stops.



**Fig 12e—How an Automatic Switching Block Controls 3 Trains** (demonstrated on Videotape #5)

This combines the circuitry of Automatic Block & Automatic Passing Siding.

1. Engines B and C are stopped on unpowered blocks B2 and B4—status RED.
2. Engine A, moving on the main line, crosses track contact T2. This closes relay M3—status GREEN—connecting track power to block B2.
3. Engine B exits block B2 onto the mainline, and crosses track contact T1. This opens relay M3—status RED.

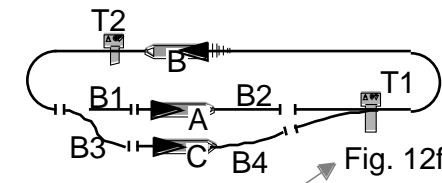
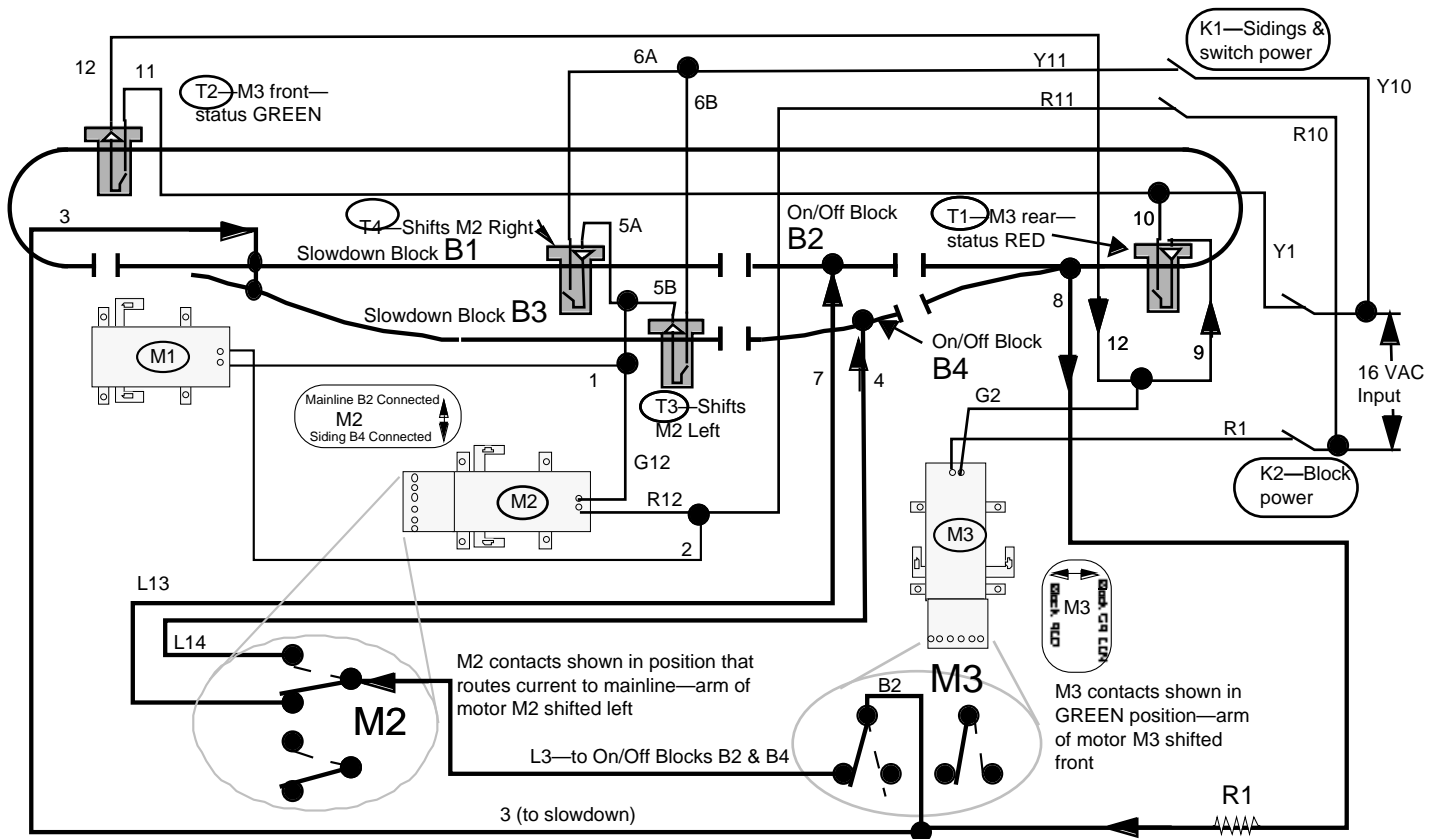


Fig. 12f

4. Engine A enters block B1, and crosses track contact T4. This changes relay M2 to connect to block B4, and sets switch S1 curved. Engine A continues onto unpowered block B2 and stops.
5. Fig 12f: Engine B crosses track contact T2. This closes relay M3—status GREEN—connecting track power to block B4.
6. Engine C exits block B4 onto the mainline, and crosses track contact T1. This opens relay M3—status RED. Engine B moves onto now-empty block B4 and stops.

**Summary:** The three logic diagrams show how an automatic switching block works. Figure 12e is the normal "full function" mode. Figures 12a and 12c are "reduced function" modes.

Figure 12g Schematic shows the wiring in simplest form.



**Figure 12g Schematic**

**Notes:**

- When arm of motor M3 is forward—status GREEN:
  - Slowdown block B1 is connected to rheostat R1.
  - On/off block B2 is connected to rheostat R1.
- When arm of motor M3 is to rear—status RED:
  - Slowdown block B1 is connected to rheostat R1.
  - On/off block B2 is disconnected (dead).
- For simplicity, optional target lights and 5094 semaphore motor M4 are not shown.

For the switching block, the slowdown blocks are always connected to R1, since trains are always expected to stop.

(For an automatic block (not shown), the slowdown blocks can be switched between R1 and a second rheostat R2 (R2 set faster than R1) since trains may travel through the block without ever stopping, and you want them to speed up in the slowdown section if the status changes from RED to GREEN.)