**Training Aid**

**S&TC-2-1, Instructor’s Guide**

**49 CFR 236, Subpart B**

1. The control circuits for home signal aspects with indications more favorable than "proceed at restricted speed'' shall be controlled automatically:
   1. By relays that directly repeat the head block signal aspect.
   2. By relays that indirectly repeat the head block signal aspect.
   3. By track circuits extending through the entire block.
   4. By repeaters of all switch circuit controllers in the block.
2. Signal governing movements over hand-operated switch is required to display its most restrictive aspect when:
   1. The switch points are not in the full normal position.
   2. The switch points are not in the full reverse position.
   3. The switch repeater relay is energized.
   4. The switch points are not in proper position.
3. When switch circuit controllers and track circuits are used to protect a crossover between main tracks all signals must be in their most restrictive state, when:
4. Either switch is not in the proper position.
5. Any of the track circuits are occupied by a train, car, or locomotive.
6. None of the above.
7. All the above.
8. When a train enters an Automatic Permissive Block Signal System the opposing head block signal must display an aspect no more permissive than:
   1. Proceed being prepared to stop before passing the next signal.
   2. Stop.
   3. Proceed at restricted speed.
   4. Proceed at slow speed.
9. In an Automatic Block Signal System intermediate signals must be:
   1. Stop and proceed signals.
   2. Permissive signals.
   3. Absolute signals.
   4. Spaced braking distance apart.
10. Automatic Block Signal System blocks between siding where there are two or less intermediate signal require special circuits. The special circuits are called:
    1. Overlap circuits.
    2. Overlay circuit.
    3. Audio Frequency circuits.
    4. Vital circuits.
11. Control circuits are required to be installed so that each signal will display its most restrictive aspect when the block it governs is:
    1. Occupied by a train, car, or locomotive.
    2. Switch not in the proper position.
    3. Independently operated derail equipped with switch circuit controller is not in derailing position.
    4. All the above.
12. Federal regulations requires that where open-wire circuit or common return circuit is used to energize control circuits:
    1. The energy source must feed away from any interlocking or crossing at grade.
    2. The energy source from multiple batteries must have all the common terminals tied together.
    3. The energy source must be independent from any other source of energy.
    4. The energy source must be located at the end of the circuit farthest from the relay.
13. Electric locks on hand operated switches are prohibited from unlocking the switch:
    1. Until control circuits controlling signals governing movements over such switches are opened.
    2. Approach or time locking must be provided.
    3. All the above.
    4. None of the above.
14. When approach or time locking is used in Automatic Block Signal territory it must:
    1. Be tested every three months.
    2. Be tested annual and a record made of such tests.
    3. All the above.
    4. None of the above.