

SSIT-1001(e)4 Flasher Operation

Purpose

These instructions describe the tests required to test the flash rate and flasher equipment at grade crossing warning systems to verify they are functioning as intended.

Test Intervals

Tests are performed when installed, as required, and at least once every twelve (12) months as prescribed in *SSIT-7 Signal System Inspection and Test Intervals*.

Rail Safety

Employee shall ensure the site is safe for employees, the public, vehicular traffic and train operations as defined in *SSIT-8 Protecting Train Operations* prior to performing tests and inspections.

Equipment Manuals

A copy of the flasher device manufacturer's manual should be on hand for reference when performing tests.

Procedure

The following tests are to be performed at each crossing warning system location:

Step	Procedure
1. Activate Warning System	<ul style="list-style-type: none"> Open Test Switch. <p>If crossing not activated: Protect crossing until resolved. Report to the ONR S&C Supervisor. Record in site Log Book.</p>
2. Test Flasher Device Failure	<ul style="list-style-type: none"> Open the circuit to the coil of the flasher relay (or equivalent). → Check one lamp in each pair of flashing light unit assemblies remains steadily lit. → Check gate tip light and one other light on the gate arm is steadily lit. → Check the same light unit (left or right) on every assembly is lit. <p>If lights do not stay lit: Adjust circuits. Perform equipment repairs or replacement as required. For major repairs, report to the ONR S&C Supervisor prior to performing repairs. Record in site Log Book.</p>
3. Restore Flasher Device	<ul style="list-style-type: none"> Close the circuit to the coil of the flasher relay (or equivalent). → Check the lights return to a synchronized alternating flashing state.
4. Inspect Flash Rate	<ul style="list-style-type: none"> → Check the lights alternate on and off in a consistent manner → Check multiple flashers are synchronized properly (if applicable). <p>If lights are flashing incorrectly: Adjust relay voltage or solid state driver as required. Perform equipment repairs or replacement as required. For major repairs, report to the ONR S&C Supervisor prior to performing repairs. Record in site Log Book.</p>

Continued on next page...

**ONR Signal Standards
Signal System Inspections & Tests (SSIT)**

Step	Procedure
5. Time flash Rate	<ul style="list-style-type: none"> Count number of flashes in 5 seconds. → Check lights alternate at a rate between 45 and 65 flashes per minute (9-12 flashes in 5 seconds). <p>If crossing was installed prior to May 18, 1983: the flash rate shall be between 30 to 50 flashes per minute, unless otherwise defined in the design.</p> <p>If flash rate incorrect: Adjust relay voltage, flasher module, number of washers, or solid state driver as required. Perform equipment repairs or replacement as required. For major repairs, report to the ONR S&C Supervisor prior to performing repairs. Record in site Log Book.</p>
6. Restore Warning System	<ul style="list-style-type: none"> Close Test Switch.
7. Update Log Book	<ul style="list-style-type: none"> Add any notes of issues observed, or adjustments made.
8. Complete Test Form	<ul style="list-style-type: none"> Record the test as completed on Grade Crossing Warning System Test Form.