

How to Test Emergency Lights and Exit Signs

Most emergency lights installed in businesses are simple lighting devices that contain a small battery. The device is connected to the building's electrical supply, which provides a constant charge to the battery. In the event of a power failure, circuitry in the fixture activates the lights, so that occupants can see to exit the building. Most emergency lights are only designed to work for the code's required minimum of thirty minutes on battery power.

Exit signs that are internally lighted operate in much the same way as emergency lights. Because they stay on all the time, many of them have two sets of bulbs. One set, that is normally on, operates on 110 volt building power. The second set, which comes on only when there is a power failure, are low voltage bulbs that operate on the battery only. Therefore, an exit sign that appears to be working normally may not work at all during a power failure, because the low voltage bulbs have burned out.

In some larger buildings emergency power to exit signs and emergency light fixtures is provided by an emergency generator. Testing of emergency lighting in these facilities is normally done at the same time that the generator is tested, and is usually done by either an electrical or mechanical contractor, or by full time building maintenance staff. Contact our office if further information is needed regarding testing of these types of systems.

What type of testing does the fire code require?

The fire code requires that the emergency lights or lighted exit signs be inspected and tested at least once a month. The test must include a thirty-second test of the lights. An annual test is also required, with the lights being operated on emergency power for the full minimum of thirty minutes. Written records documenting the testing must be maintained and available for review by the fire inspector. *See our Resources link for a sample record form that you may use.*

How do I test them?

Most emergency lights or exit signs have a small "push to test" button somewhere on the casing. You can push and hold this button for thirty seconds to test the bulbs and battery. This works ok if you have a small number of devices that can be easily reached. The lights should come on and remain at the same brightness level for the full thirty seconds. If the lights dim right away, or some of the bulbs don't work, then you should contact your electrician for repairs.

For exit signs you should also check to see if the sign is properly lighted when in normal power mode.

For a large number of devices, or for the thirty-minute test that is required each year, there is a second option that may work better. Locate the circuit breaker or fuse that supplies power to the emergency lights or exit signs. (You may need to contact an electrician if they are not properly labeled.) The circuit breaker should be turned off, and the lights observed to determine if they work for the thirty-minute (annual) or thirty-second (monthly) testing period. Caution: You may want to make sure that you first save data on computers or similar devices, if they are connected to the same circuit.

If you're still having trouble, our fire inspector will be happy to show you how to perform the test during the fire inspection of your business.

Why do I need to test the lights for thirty seconds?

Many defective batteries will maintain just enough charge to fully light up the bulbs for a few seconds, but they will quickly lose power. If you don't test for thirty seconds you may find that the lights work each month, only to find that they go out in just a few seconds when you really need them. By testing the lights for at least thirty seconds you can make sure the batteries don't just have this type of "surface charge".