

Rapid Start and Circline 1-Tube:

Most ballasts of this type should have continuity (sound and light indication on meter) from each wire to every other wire.

High Intensity Discharge Ballasts

⚠ Caution:

Under no circumstances should this tester be used to test the high voltage output side of an High Intensity Discharge Ballast! Disconnect from power before testing.

1. Touch either probe to the center contact in the empty bulb socket.
2. Touch the other probe to the socket threads.
3. Listen for a rapidly decreasing sound, dwindling to nothing. A constant sound or no sound indicates a defective fixture.

Note: If the fixture being tested contains a photocell, it must be disconnected before testing fixtures, or test results will be invalid. This test procedure should be monitored for each brand of fixture in use to be certain of test validity.

HID Fixture — Component Testing

Capacitor

Use the leads across the capacitor and listen for the sound of the capacitor being charged. The sound should start at a high pitch and rapidly drop off to nothing as the capacitor is charged. To repeat this test you must reverse the leads and test again. If charging is indicated in both directions, the capacitor should be considered good. If the sound is continuous, the capacitor is shorted and is defective. If no sound is heard, the capacitor is open and is defective.

Igniter

Connect the leads across the red and white leads of the igniter. A very quick capacitor charge or click should be heard, and the light on the tester should flash. Any other sound across any other combination of wires should be an indication of a defective igniter.

Note: Certain types of specialized electronic starter boards cannot be tested in this manner. Some of the components on the circuit board can be individually tested however, following the already described procedures. If necessary, determine the faulty component by process of elimination. Since there are various manufacturers of HPS igniters, wires do not always have the same color coding. If the igniter being tested has a different color coding, you should first test

a new igniter of the same type to determine the appropriate wires for testing.

Ballast

Ballasts are sensitive to heat. Check for signs of overheating. Test the ballast for continuity between each terminal and every other terminal. There should be no open circuits. Verify the level of continuity by comparing the pitch of continuity indication to the pitch from testing the same winding on a known good ballast.

If the fixture still does not work after all components have been tested good, further testing may be required.

Photocell

For accurate test results disconnect the photocell from the fixture for these tests.

1. Connect the test leads between the line-in and the line-out terminals and listen for continuous sound. No sound indicates a defective photocell.
2. Connect one lead to the neutral terminal with the other lead connected to the line-in. With light shining on the photocell you should hear a continuous sound (not as loud as the sound heard when connected to the line-in and line-out).
3. Using your hand, cover the eye of the photocell and listen as the sound diminishes to nothing. This verifies that the photocell is responding to light properly.

MAINTENANCE

General

- Keep tester clean and dry.
- Wipe clean with a damp cloth. Let dry completely before using.

Battery Condition

- Plug test leads into meter. With no test clips attached, touch plugs together. The meter should produce a loud continuous tone and LED should light brightly. Also test a known good bulb and verify brightness of test. Replace battery if either test produces questionable results.

Battery Replacement (Fig. 2)

1. Remove back cover by prying with small screwdriver.
2. Remove batteries from holder.
3. Install new batteries and replace back cover. For best results, use alkaline batteries only.

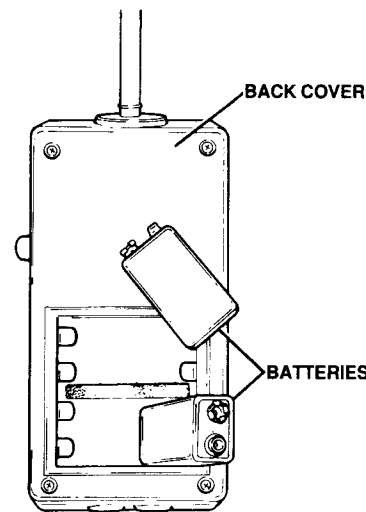


Fig. 2

WARRANTY

The Model 5715 Gas Lamp Tester is warranted against defective materials and workmanship for one year from the date of purchase. This warranty does not cover damages due to tampering, misuse, loss, unauthorized alterations or repairs. To avoid service charges, always check batteries before sending testers in for warranty repairs.

Should the Model 5715 Gas Lamp Tester fail due to defective materials and/or workmanship during the one year warranty period, return it to the place of purchase with the dated bill of sale that identifies the instrument by model number. Any additional questions and concerns may be addressed to:

Greenlee Textron Inc.
4455 Boeing Drive
Rockford, IL 61109 USA
(815) 397-7070

The above limited warranty covers repair and replacement of the instrument only. No other obligation is stated or implied.

For additional copies of this manual at no extra cost, call or write to the above address.

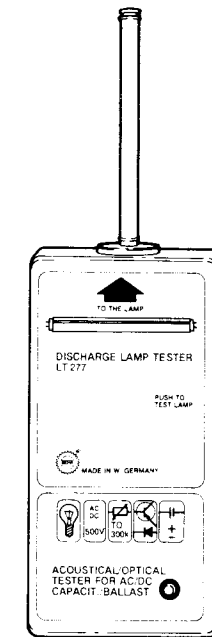
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INSTRUCTION MANUAL

GAS LAMP TESTER



MODEL 5715

SPECIFICATIONS

Voltage stable:	To 500 V AC/DC
Continuity test range:	To 300 K Ohms
Indicators:	Audible and Visible
Antenna length:	3 feet (replaceable)
Battery:	Two 9 Volt

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PURPOSE

This tester is used to test ballasts, ignitors, starters, capacitors, resistors, and the following types of lights:

- Fluorescent
- High and Low Pressure Sodium
- Metal Halide
- Neon
- Mercury Vapor

FEATURES (Fig. 1)

- Telescoping **Antenna** for long reach and convenience.
- **Test Button** for high intensity discharge bulb testing.
- Indicator **LED** for voltage and continuity testing.
- **Test Lead Jacks**.

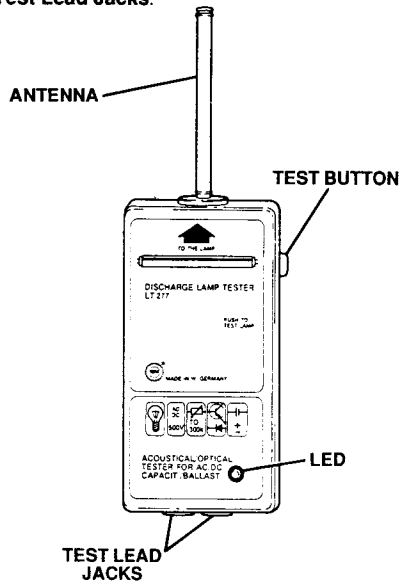


Fig. 1

SAFETY



- Contact with live power can cause serious injury or death.
- Do not use instrument if wet or damaged.
- The output from the antenna can cause burns. Do not touch it while the test button is pressed.

INSTRUMENT PRECAUTIONS

- Read all instructions thoroughly and follow them.
- Never store instrument in hot (135° F or more) or humid (more than 85% relative humidity) area.
- Replace a weak or discharged battery as soon as it is detected (see Maintenance section).

OPERATION

Check Bulbs

1. Observe the operation of the light when powered normally. Check for bad connections to the bulb if it does not light normally.
2. Press the antenna against the bulb (or base of the bulb if applicable) and press the test button. The bulb should light. Check for the following conditions:
 - Batteries must be good. See Maintenance Section.
 - Do not touch the base of the bulb with your hands (this can cause test to fail).
 - **Fluorescent bulbs:** if the bulb lights with the tester, but does not light in the fixture with the power applied, the filaments or ballast may be defective. The filaments can be tested for continuity to verify.
 - **Low Pressure Sodium bulbs:** Test the bulb out of the fixture by touching the antenna to the pins at the base of the bulb and checking whether the inner tube glows. In some cases only half of the bulb lights. The other half should light when the antenna touches the other pin.
 - **High Pressure Sodium bulbs:** Touch the antenna to the base of the bulb. Any result other than a clean blue line through the length of the arc tube indicates a faulty bulb.
 - **Neon bulbs:** Touch the antenna to the bulb or base and press the button. Replace the bulb if it does not glow.
 - **Mercury Vapor and Metal Halide bulbs:** Touch the antenna to the base of the bulb and press the test button. If the arc tube does not glow steadily, the bulb is defective. If the bulb is good outside of the fixture but cycles on and off or appears unstable in the fixture, check to see whether the fixture and

bulb are being subjected to unusual or excessive heat. Unusual or excessive heat could cause the thermal switch inside the bulb to open and close repeatedly.

Continuity Testing

This tester provides audible and visible indication of continuity. Continuity is tested using the test leads plugged into the bottom of the tester and the test clips plugged into the ends of the leads.

Continuity range is from 0 to about 300 K Ohms. The resistance value can be determined relatively by observing the intensity of the LED and noting the pitch of the tone produced by the meter. Higher pitch and light intensity of the LED indicate a resistance value closer to 0 Ohms.

Ballast Testing

Fluorescent Ballasts

The general procedure for testing ballasts is described under Rapid Start 2-tube ballasts. Follow the same general sequence of steps for the other ballast types included below.

Rapid Start 2-Tube Ballasts:

1. Disconnect ballast from power before testing!
2. Connect test leads to the tester.
3. Connect one alligator clip to the black lead of the ballast and the other clip to the white lead. You should hear a loud, continuous sound from the speaker and the continuity light should be on, indicating that the input windings on the ballast are not open.
4. Repeat this test procedure on the other ballast windings by connecting the test lead clips, one on each red ballast lead. Then test the blue leads, and finally test the yellow leads. If continuity is not indicated (by tone or light) when testing red to red, blue to blue, or yellow to yellow wires, then the winding being tested is open and the ballast is defective.
5. If ballast windings are not open, continue testing as follows. Connect one test lead to the black wire, and connect the other test lead to either blue wire to check for continuity. Remove the test lead from the blue wire and connect it to the red wire. The tester should produce a

momentary "chirp" sound, and the light on the meter should flash once. This step checks the capacitor in the ballast. If no sound, or a continuous sound is heard, the ballast is defective.

6. Disconnect the test clip from the red lead of the ballast and connect it to one of the yellow leads. A continuous tone from the tester indicates a defective ballast. A very brief "chirp" sound is acceptable.

Note: Open windings are easy to detect since they produce the same tester reaction each test (no sound or light indication). Short circuits are more difficult to determine. An effective technique for detecting shorts is to compare the sound produced by the meter when testing a known good winding on a good ballast to the sound produced when testing same winding on the ballast being tested. A major difference in sound indicates a defective ballast.

Instant Start 2-Tube 277 Volt Ballast:

Connect the test leads to check continuity between the following wires, and look for the desired result.

- Black and white wires — no sound or light
- Yellow and yellow wires — no sound or light
- White and one yellow wire — continuous sound and light
- Black and other yellow wire — continuous sound and light
- White and blue wires — continuous sound and light
- White and red wires — "chirp" sound and flash on light

Instant Start 1-Tube Ballast:

Connect the test leads to check continuity between the following wires, and look for the desired result.

- Black and white wires — continuous sound and light
- Black and blue wires — "chirp" sound and flash on light

Note: Not all ballast manufacturers follow the same color coding of wires. If ballast being tested is different than described, check for continuity between the input wires, and expect a "chirp" from testing either input wire to the output wire. Compare test results with a known good ballast of same type.