

Space Electronics designs and manufactures a variety of Igniter Circuit Testers that measure the resistance of eletro-explosive circuits such as rocket igniters, explosive bolts, squibs, and blasting caps, using a test current that is as much as 1,000 times less than a conventional precision low resistance ohmmeter. These instruments have been approved by the US Navy for the measurement of munitions and rocket motor igniters.

Model Technical Specifications

- 101-5HJ-NAV: Military approved
- 101-5HJ-NAVR: Rack mount version
- 101-5HJ-NAV-3: Lower cost, no mA meter, reduced accuracy

Range (Ohm)	Resolution (Ohm)	Accuracy (Ohm)	
		NAV, NAVR	NAV-3
19.999	0.001	± 0.01	± 0.03
199.99	0.010	± 0.05	± 0.10
1999.9	0.100	± 0.50	± 1.00
199.99K	0.01K	± 1.0K	± 2.0K

Alternate ranges are available and additional options and more versions of our testers are available.



Model 101-5HJ-NAV Igniter Circuit Testers

Fail-Safe Concept

Since excessive test current could cause bodily injury or death, protection for all modes of failure or operator error must be built into the tester. In our instruments, a sealed, tamper-proof, fail-safe module guarantees that the test current will be less than 10 mA even under worst-case conditions of simultaneous failure of multiple circuit elements.

To prevent anyone from bypassing the critical fail-safe circuitry, it is sealed in a potted module attached directly to the output connector. This module will continue to limit test current even if the instrument is dropped on a concrete surface from a height of 100 ft (30 m).

Portability

These testers are housed in a small "military" type case with a carrying handle and space for storage of test leads.

More Safety Features

The AC charger must be unplugged in order to connect the test leads, making it impossible for a test to be run with the AC still connected. We use a special re-chargeable nickel metal hydride battery pack which is totally sealed in a thick plastic case to guard against leakage and has an output connector that does not match any off-the-shelf battery of higher voltage. A fuse inside the case protects the instrument in the event of a short circuit.

Ease of Operation

Our instruments give a direct reading with no bridge to balance. The 4-wire test leads, which automatically compensate for lead resistance, are attached to the igniter circuit and the appropriate range button is depressed. The digital LCD readout then displays resistance. A milliammeter and three built-in precision resistors permit verification of test current and accuracy.