

99B, 95C AND 110A TEST SETS

DESCRIPTION AND MAINTENANCE

1. GENERAL

1.01 This section describes the 99B, 95C, and 110A Test Sets used in locating grounds and crosses in long or loaded cables by the exploring coil method using 20-cycle tracing current.

1.02 This section is reissued to include information on the 95C Test Set which replaces the 95B (MD) Test Set.

2. DESCRIPTION

99B TEST SET

2.01 The 99B Test Set (Fig. 1) is a portable, battery-operated amplifier-detector enclosed in a hinged metal case with a carrying strap. The set with batteries weighs approximately 20 pounds.

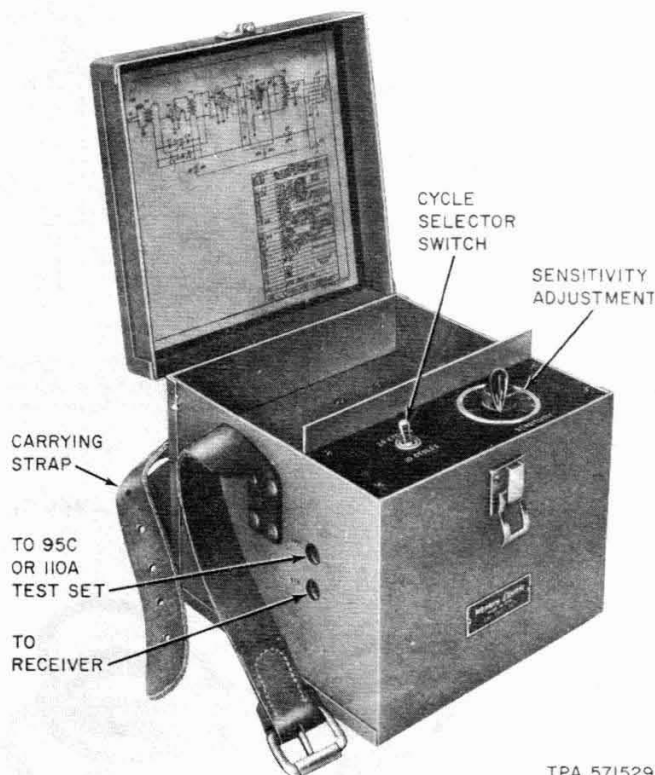
2.02 The set is designed to respond to a 10 or 20 Hz input signal and to provide an audible signal to a receiver. A sensitivity control is provided on the front panel which varies the gain of the vacuum tube tuned amplifier.

2.03 Two KS-14495 and two KS-14369 batteries (Fig. 2) are required for operation and must be ordered separately. The superseded 99A Test Set is similar to the 99B set except for the input transformer.

2.04 The 95C Test Set (Fig. 3) which supersedes the 95B Test Set consists of a low-impedance exploring coil potted in a case of insulating material. The set is provided with a 4 1/2 foot 2-conductor cord terminated in a 347C plug. The 95C Test Set is designed for holding by hand and should never be attached to a pruner handle, stick, etc.

110A TEST SET

2.05 The 110A Test Set (Fig. 4) contains a high dielectric strength coil encased in a plastic guard which is mounted on a platform protected by a rubber bumper. This assembly is mounted on a flexible section which facilitates positioning



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Fig. 1—99B Test Set

the coil against the cable sheath. An insulated extension handle which can be coupled to a tree pruner extension section is used to position the test set. A hook is provided on the extension handle for hanging on a strand or cable. The 22-foot W3AM cord from the coil is terminated in a 379A plug.

3. MAINTENANCE

3.01 The 99-type set is of sturdy construction and should require little maintenance aside from battery renewals. The KS-14495 and KS-14369 Dry Batteries should be replaced when the voltages, with the set in operation, measure 1.2 and 38 volts or less, respectively. The batteries should be tested with a voltmeter having a resistance of at least 1000 ohms per volt.

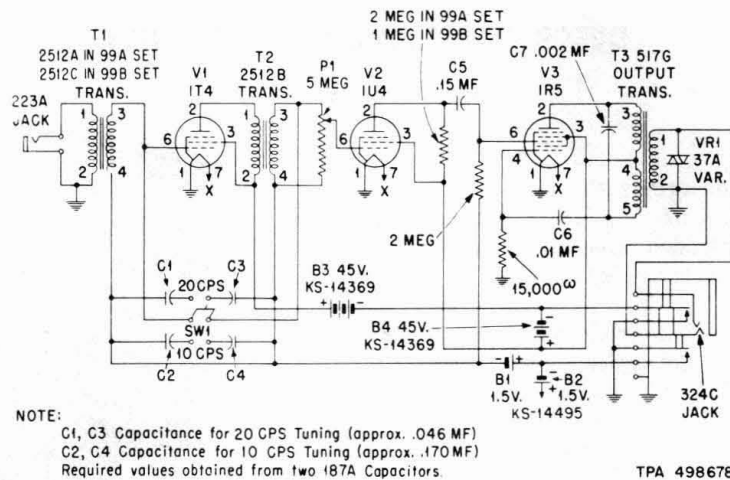


Fig. 2—99B Test Set—Circuit Diagram



Fig. 3—95C Test Set

the wiring and the transformer windings should be tested with an ohmmeter. The approximate dc resistances of the transformer windings are:

TRANSFORMER	LOW WINDING (OHMS)	HIGH WINDING (OHMS)
Input (2512A)	6	10,000
Input (2512C)	2	10,000
Interstage (2512B)	950	10,000
Output (517G)	50	3,000

3.04 If repairs are necessary, other than the replacement of tubes, the set should be returned in accordance with local procedures.

3.05 Replacement Parts:

Battery, Dry, KS-14369

Battery, Dry, KS-14495

Cord, R2CF

Cord, W2CG

Tube, Electron, 1T4

Tube, Electron, 1U4

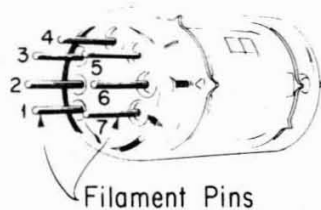
Tube, Electron, 1R5

3.02 The filaments of the 1T4, 1U4 and 1R5 electron tubes can be tested for opens with an ohmmeter. The resistance between Pins 1 and 7 (Fig. 5) of each tube should measure about 30 ohms.

3.03 If the set is inoperative and the tubes and batteries are satisfactory, the continuity of



Fig. 4—110A Test Set



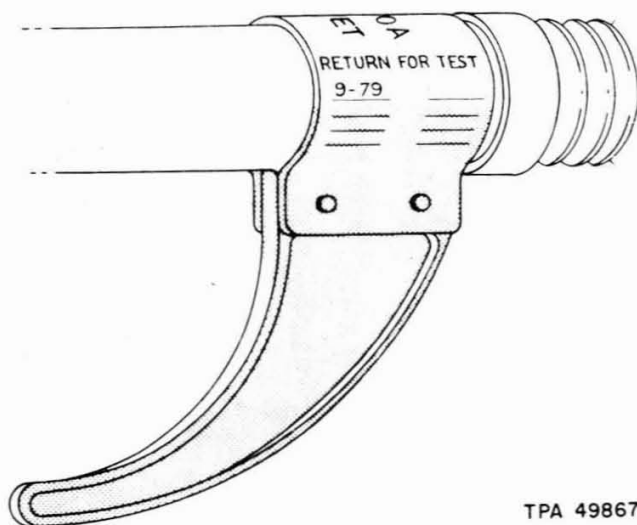
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Fig. 5—Vacuum Tube Pin Arrangement

3.06 The 95C Test Set should require no maintenance except cord replacement.

3.07 Annual Electrical Test of 110A Set: Each 110A set shall be returned annually for electrical tests. The date (month and year) the set should be returned is indicated on the hookband underneath the marking "Return for Test" (Fig. 6). Each time the set is retested a new date will be stamped on the band.

3.08 The coil and handle of the 110A set should be kept clean and dry to not impair their dielectric strength. If repairs are necessary, the set should be returned in accordance with local procedures.



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Fig. 6—Return Date Location