

CUT-CLOSED SET
 (AT-8241, L1A TEST SET)

DESCRIPTION

	CONTENTS	PAGE
1.	GENERAL	1
2.	DESCRIPTION	2
3.	MAINTENANCE	3

1. GENERAL

1.01 This section describes the Cut-Closed Set (AT-8241, L1A Test Set) which provides a means for transferring working pairs in exchange cable without causing interference. The use of the Cut-Closed Set in making cable transfers is covered in Section 634-350-515.

1.02 This section is being reissued to conform with Section 634-350-515.

1.03 The Cut-Closed Set prevents interruption of service by providing a temporary transmission path or bridge between the old and new cable pairs being transferred. The set also incorporates the following additional features:

(a) The incidence of reversed pairs is minimized since the set will only bridge tip-to-tip and ring-to-ring sides of the corresponding old and new pairs.

(b) The set provides an audible signal to the craftsman which indicates whether or not he is performing the transfer operations properly.

1.04 The following equipment is required to operate the Cut-Closed Set. This equipment is not furnished with the set and must be ordered separately.

(a) *Either* a 723A Receiver with a 15A Headband, an R2CF Cord, and a 310 Plug.

(b) *Or* an AT-7888, L1A Loudspeaker with an AT-7888, L8A Cord and a 310 Plug.

1.05 The Cut-Closed Set may be used on the working voice frequency subscriber pairs covered in Section 634-350-515.

2. DESCRIPTION

2.01 The Cut-Closed Set (Fig. 1) is a portable, battery-operated test set housed in an aluminum case 8 by 10 inches wide and 9 inches high. The case is equipped with leather carrying straps which may also be used to support the set

at splice locations and a hinged, removable cover. The set weighs 12 pounds with batteries.

2.02 Two double-conductor cords are mounted on the front panel. Each cord is equipped with a special cable clip intended to be attached to the respective new and old cable pairs (Fig. 2).

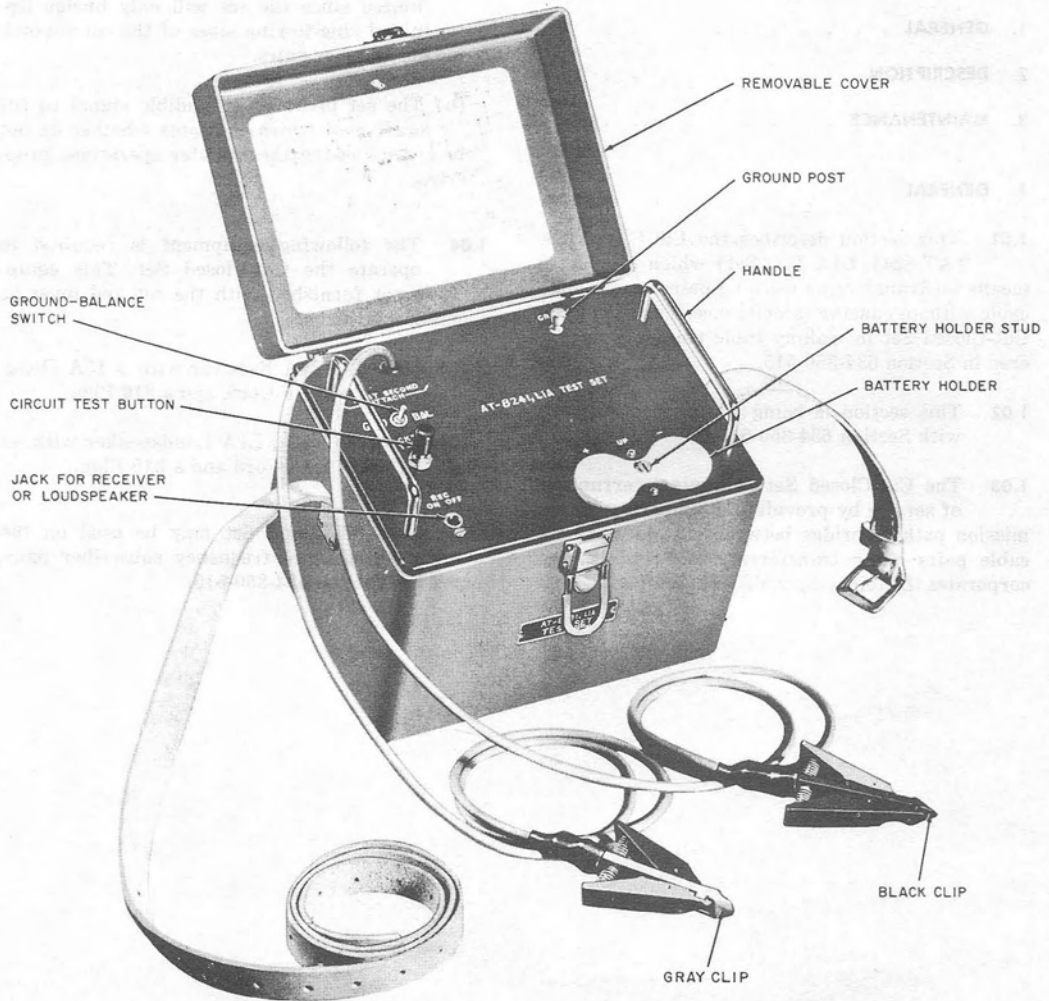


Fig. 1 — Cut-Closed Set

These clips are designed to be attached to both tip and ring sides of a pair at the same time and with the same motion without shorting out the pair. The body or stationary part of one clip is gray and the other black. This color-coding is necessary since the gray clip must be attached first for proper operation of the set. The jaws or movable parts of each clip are also of different colors; one jaw of each clip is red and the other black to ensure that the clips will be placed on the pairs in proper polarity.

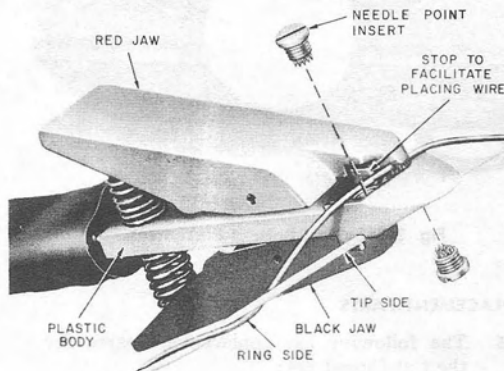


Fig. 2 — Cable Clip

2.03 Other features located on the front panel are as follows:

- (a) A GRD binding post for attaching a length of jumper wire or other suitable conductor to ground.
- (b) A REC ON-OFF jack that accepts a 310 Plug connected to either a 723A Receiver or AT-7888, L1A Loudspeaker. The set is turned on by inserting the 310 Plug into the REC ON-OFF jack.

Caution: When the Cut-Closed Set is not being used, disconnect the plug from the REC ON-OFF jack to prevent shortening the life of the batteries.

- (c) A CKT TEST button which, when depressed, indicates whether the set is operating properly and tests the condition of the battery.

- (d) A GRD-BAL toggle switch to change the mode of checking for removal of both cable clips before release of the bridging relay.

2.04 The front panel also provides access to the two KS-14711 Primary Batteries which provide power for the set.

2.05 The Cut-Closed Set is designed to operate over the temperature range of 0° to 140° F and at a maximum distance of five miles between the splice and the central office.

2.06 The Cut-Closed Set functions by placing 50-cps tone on the old cable pair when the gray-bodied clip is attached to it. This signal is received by the black-bodied clip when it is attached to the new pair. The transmitted and received signals are compared in phase to assure that the clips have been attached with proper polarity, and if the phase is correct the bridging relay will connect the old cable pair to the new cable pair at the splice.

2.07 Also incorporated in the test set is a 20-kc oscillator whose output is applied between the red jaw of the gray-bodied clip and the ground terminal or between the red and black jaws of the gray-bodied clip depending on the setting of the GRD-BAL switch. This signal is utilized by a circuit which releases the bridging relay in the set after both clips have been removed.

3. MAINTENANCE

3.01 No maintenance is to be performed in the field except replacement of batteries and parts specified in 3.05.

3.02 Although this set is designed for durability and operates under comparatively wide ranges of temperature, reasonable care should be exercised to protect the set from moisture and heat.

BATTERIES

3.03 Two 1-1/2 volt, KS-14711 Primary Batteries are required for operation of the test set. These D Batteries are not supplied with the set and must be ordered separately. The life of the batteries should be in excess of 50

hours. The condition of the batteries as well as the operation of the set may be determined by the following procedures:

- (a) Insert the 310 Plug of a headset receiver or loudspeaker into the REC ON-OFF jack.
- (b) Depress the CKT TEST button. If tone is heard and then ceases when the button is released, the set is operating properly. The test button should be depressed and held for a few seconds before releasing in order to permit the circuits in the test set to operate normally.
- (c) In the event that the set does not function in this manner, both batteries should be replaced. Should the test set still fail to function properly, it is defective and should be returned for repair in accordance with local procedures.

3.04 To replace the batteries, turn the battery holder stud (Fig. 3) 1/4-turn to the left and rotate the battery holder cover. Insert the new batteries into the holder, reposition the cover, push the stud down and rotate it 1/4-turn to the right.

Note: When replacing the batteries, position each battery in its holder so that the polarity of the battery agrees with the polarity marking on the set adjacent to the holder.

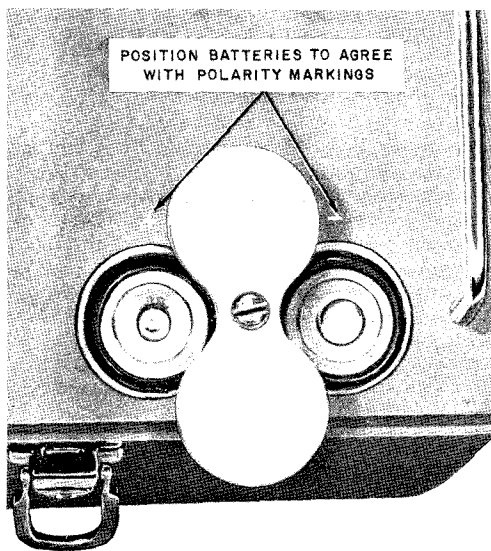


Fig. 3 — Correct Battery Placement

REPLACEMENT PARTS

3.05 The following are replacement parts for the Cut-Closed Set:

Battery, (Primary) KS-14711

Assembly, Insert, for (C, D, or E) Cable Clip Cover, AT-8241, L2A

- ┌→ Clip, Cable, (D)
(Black-bodied clip)
- └┐ Clip, Cable, (E)
(Gray-bodied clip)