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SIGNAL CORPS GENERAL DEVELOPMENT LABORATORIES
FORT MONMOUTH, NEW JERSEY

INSTRUCTION PAMPHLET
FOR
TELEPHONE SET TP-4

RESTRICTED

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June 20, 1942

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INSTRUCTION PAMPHLET
for
TELEPHONE SET TP-4

SECTION I

DESCRIPTION

1. General.-- Telephone Set TP-4 is for use by the Coast Artillery in connection with AA Automatic Weapons.
2. Components.-- Telephone Set TP-4 consists of the following parts:

Quantity	Article
72	Battery BA-30; 18 in use, 54 spare
5	Chest Unit BE-74 (for throat microphone) 4 in use, 1 spare
5	Head and Chest Set HS-27-(); 4 in use, 1 spare
8	Headset HS-24; 6 in use, 2 spare
11	Jack Box JB-18; 8 in use, 3 spare
12	Microphone T-30-A; 8 in use, 4 spare
1	Reel DR-4
1	Reel Unit RL-31
1	Switchbox BE-73
6	Telephone EE-8-A; 5 in use, 1 spare
1/2 mile	Wire W-110-B

3. Description of Apparatus.-

- a. Switchbox BE-73.- Switchbox BE-73 is a completely portable, two-position, manually operated telephone switchbox for serving local battery lines.

Each switchbox contains the following:

2 Operator's positions

7 Local battery circuits (keys)

The Switchbox BE-73 cabinet, framework, mounting plate, and miscellaneous mechanical details were designed for the mounting and assembly of standard telephone apparatus to form a telephone switchbox suitable for military use.

- b. Telephone EE-8-A.-

For information on Telephone EE-8-A, refer to Technical Manual TM 11-333.

- c. Other parts.-

Jack JK-37, Binding Posts TM-152, and TM-146, Chest Unit BE-74, Head and Chest Sets HS-27-(), Headset HS-24, Jack Box JB-18, Microphone T-30-A, Reel DR-4, Reel Unit RL-31, and the Telephone EE-8-A are of Signal Corps design and are used in other equipment. The remaining apparatus consists of standardized commercial parts.

SECTION II

EMPLOYMENT

4. Initial Procedure.- Before an installation is made, the general layout of the equipment should be determined with due consideration given to the other components with which it is to be associated.

5. Installation.-

- a. Switchbox BE-73.- Install Switchbox BE-73 in the desired location. From binding posts of Switchbox BE-73, extend the lines of Wire W-110-B to necessary

Instruction Pamphlet for Telephone Set TP-4

positions of spotters and range officer. At each of the various positions, hook-up a Telephone EE-8-A. In connection with the Telephone EE-8-A, a Head and Chest Set HS-27-() is used, except in the case of the range officer who uses the handset which comes as a part of the Telephone EE-8-A. Connect to each Head and Chest Set HS-27-(), one Microphone T-30-A. Plug Headsets HS-24 in those jacks of Switchbox BE-73 designated as SPOTTING DIAL OPERATOR NO. 1 and SPOTTING DIAL OPERATOR NO. 2.

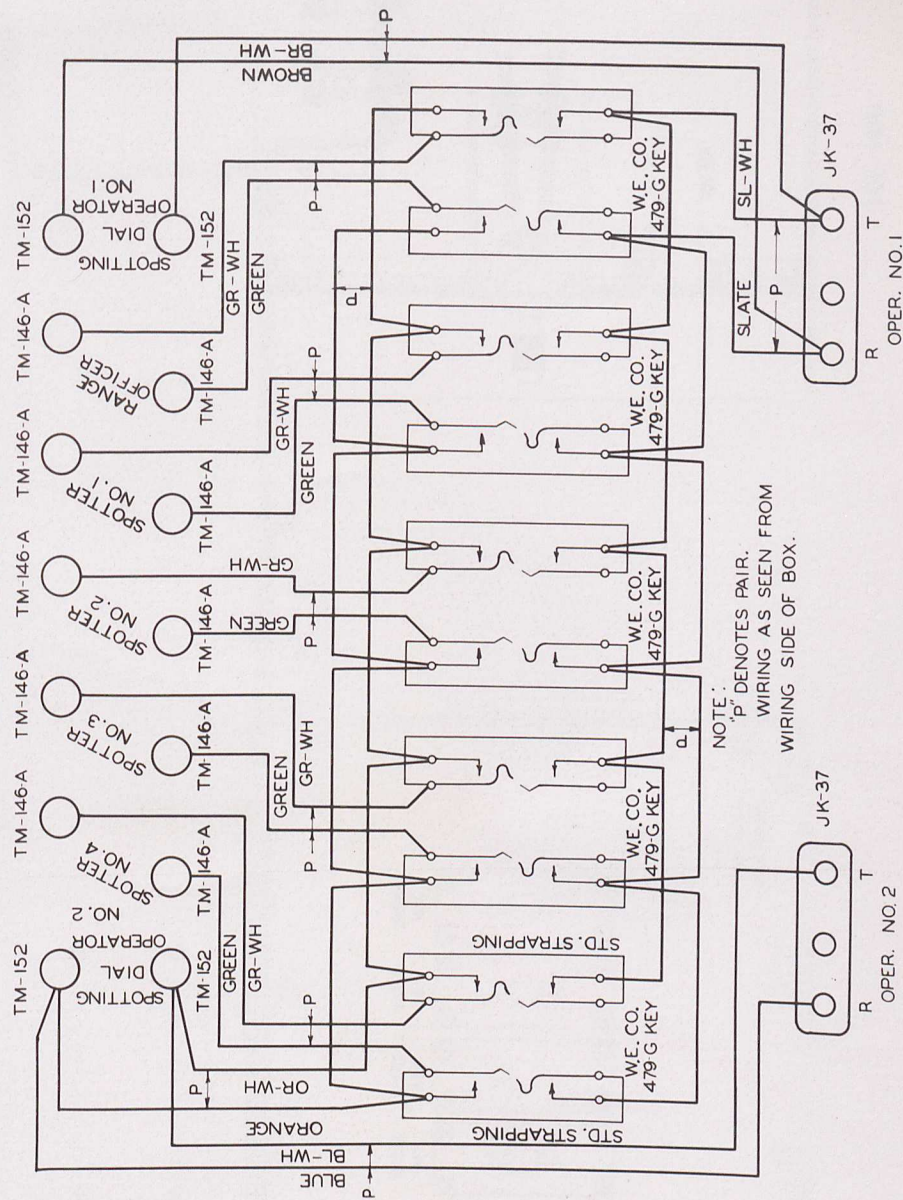
b. Auxiliary talking circuits.- All auxiliary talking circuits needed from other AA equipment to the control board may be had by connecting a Chest Unit BE-74 with a Microphone T-30-A, to a Jack Box JB-18. Install two Batteries BA-30 in the Chest Unit BE-74, and throw toggle switch to ON. This constitutes a transmitting circuit. To set up a receiving circuit, run a line with Wire W-110-B from the Jack Box JB-18 to another Jack Box JB-18 where a receiving circuit is needed. To complete the receiving circuit, plug a Headset HS-24 in Jack Box JB-18. These circuits are not in any way connected to the switchbox, but comprise a direct circuit between two points.

6. Switchbox Operation.- (See Drawings SCL-1211, SCL-1210.) In the center of the panel of Switchbox BE-73 there are five keys, designated: RANGE OFFICER, SPOTTER NO. 1, SPOTTER NO. 2, SPOTTER NO. 3 and SPOTTER NO. 4. As indicated by panel markings next to the RANGE OFFICER key, throwing any switch up connects the corresponding Spotter or the Range Officer to Spotting Dial Operator No. 1. Similarly, throwing any switch down, connects the corresponding Spotter or the Range Officer to Spotting Dial Operator No. 2.

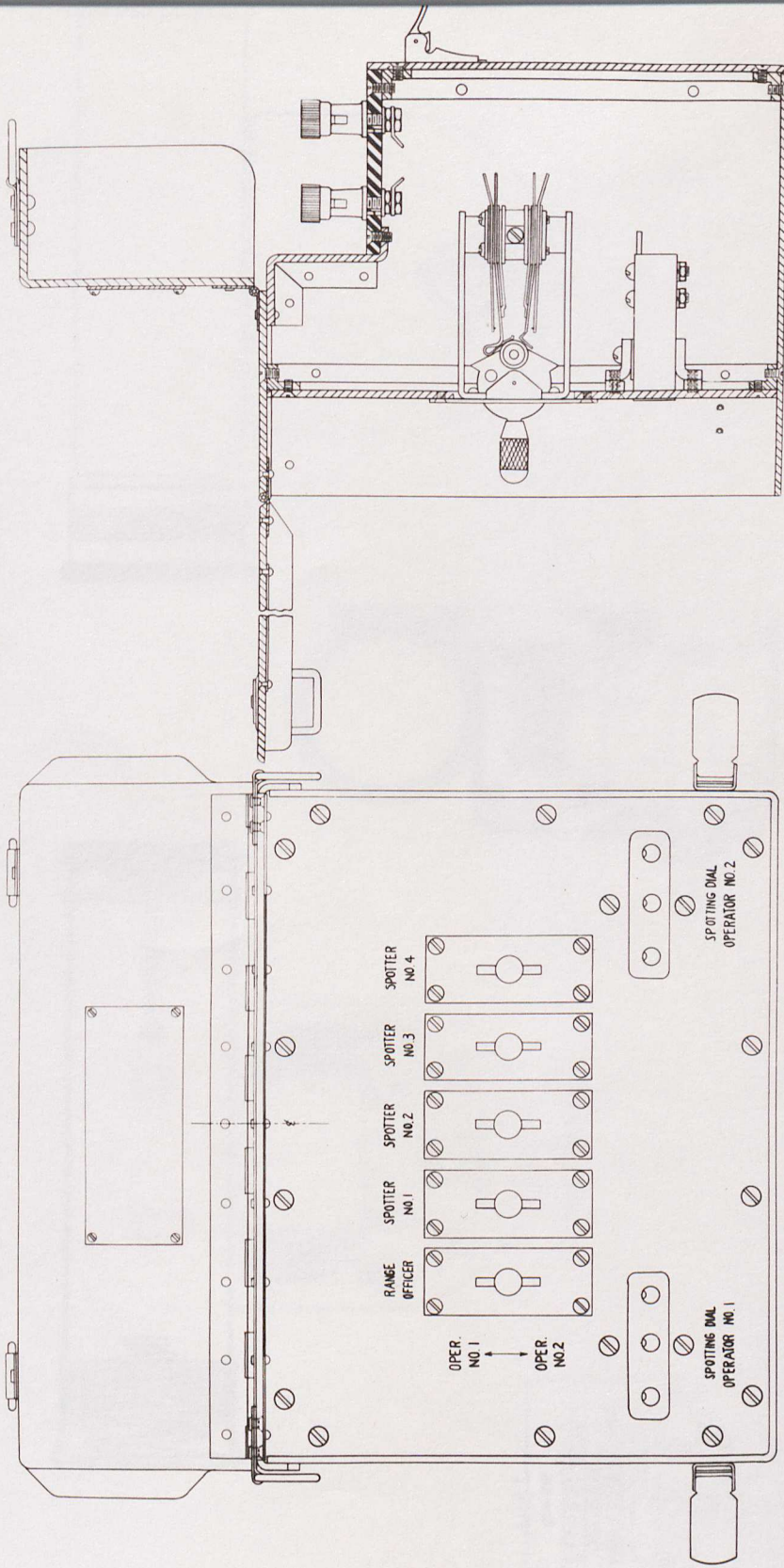
6 Incls.

- Incl. #1-Dwg. SCL-1211 (SC-D-4091-B)
- " #2-Dwg. SCL-1210 (SC-D-4092-B)
- " #3-Dwg. SCL-1209 (SC-D-4112-B)
- " #4-Dwg. SCL-1208 (SC-D-4116-C)
- " #5-Dwg. SCL-1207 (SC-D-4119-B)
- " #6-Dwg. SCL-1212 (SC-D-2610-E)

SWITCHBOX BE-73
CIRCUIT DIAGRAM

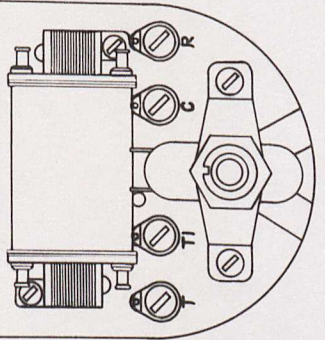
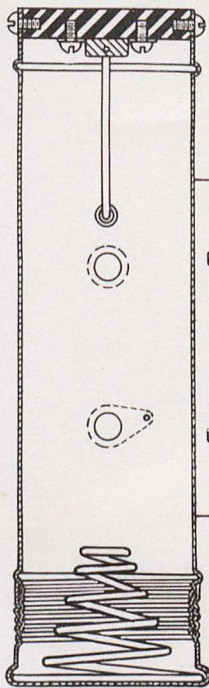
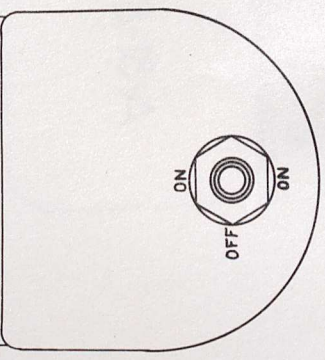
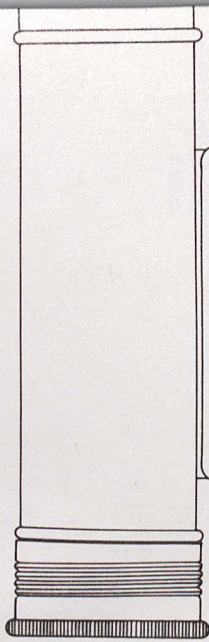


SWITCHBOX BE-73 SCL-1211
CIRCUIT LABEL

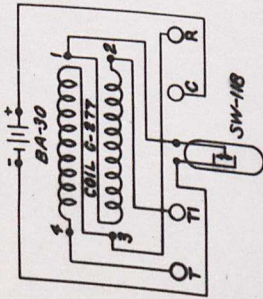
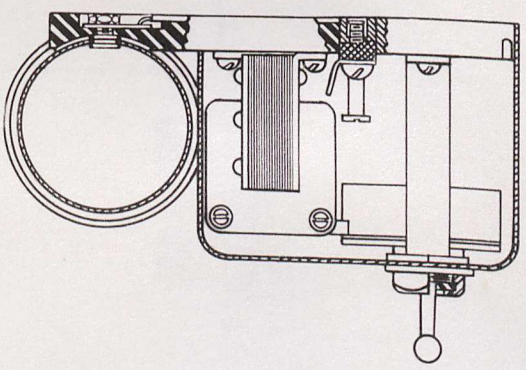


SCL-1210

SWITCHBOX BE-73
GENERAL ASSEMBLY



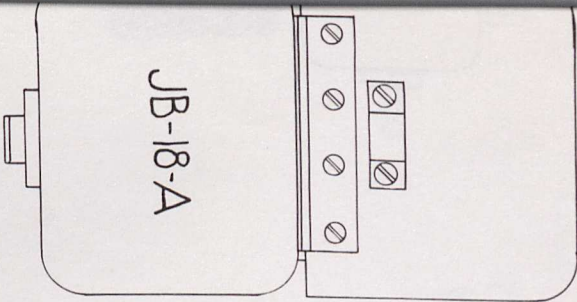
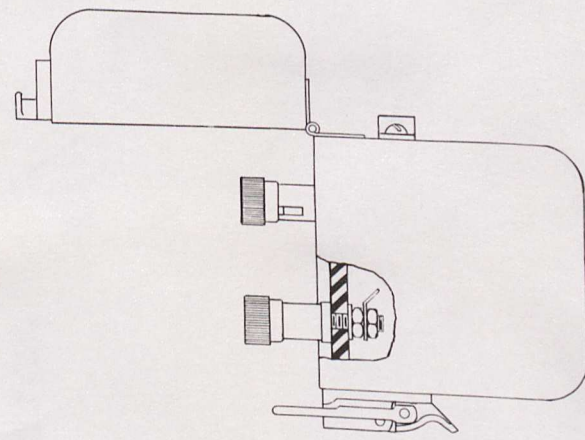
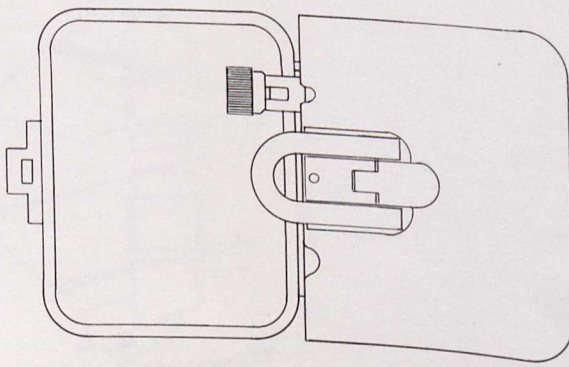
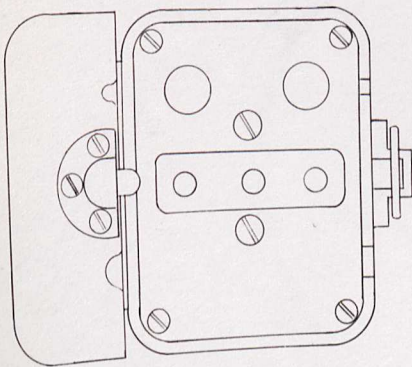
COVER REMOVED



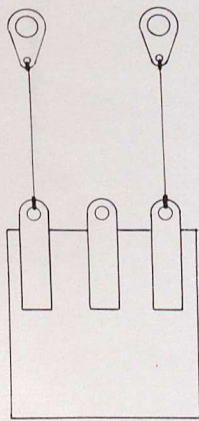
WIRING DIAGRAM

SCL-1208

CHEST UNIT BE-74
BLOCK ASSEMBLY & DETAILS



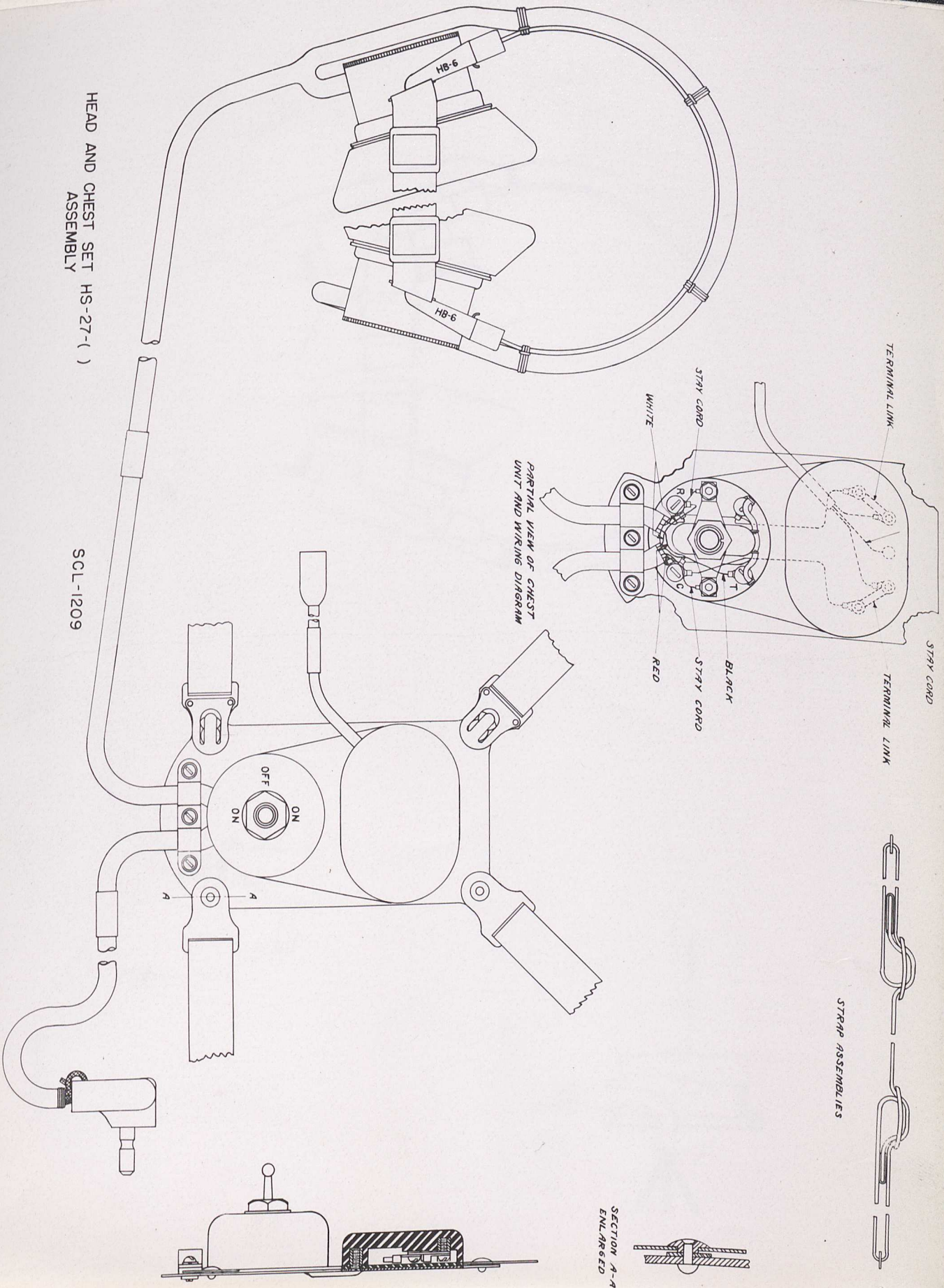
WIRING DIAGRAM

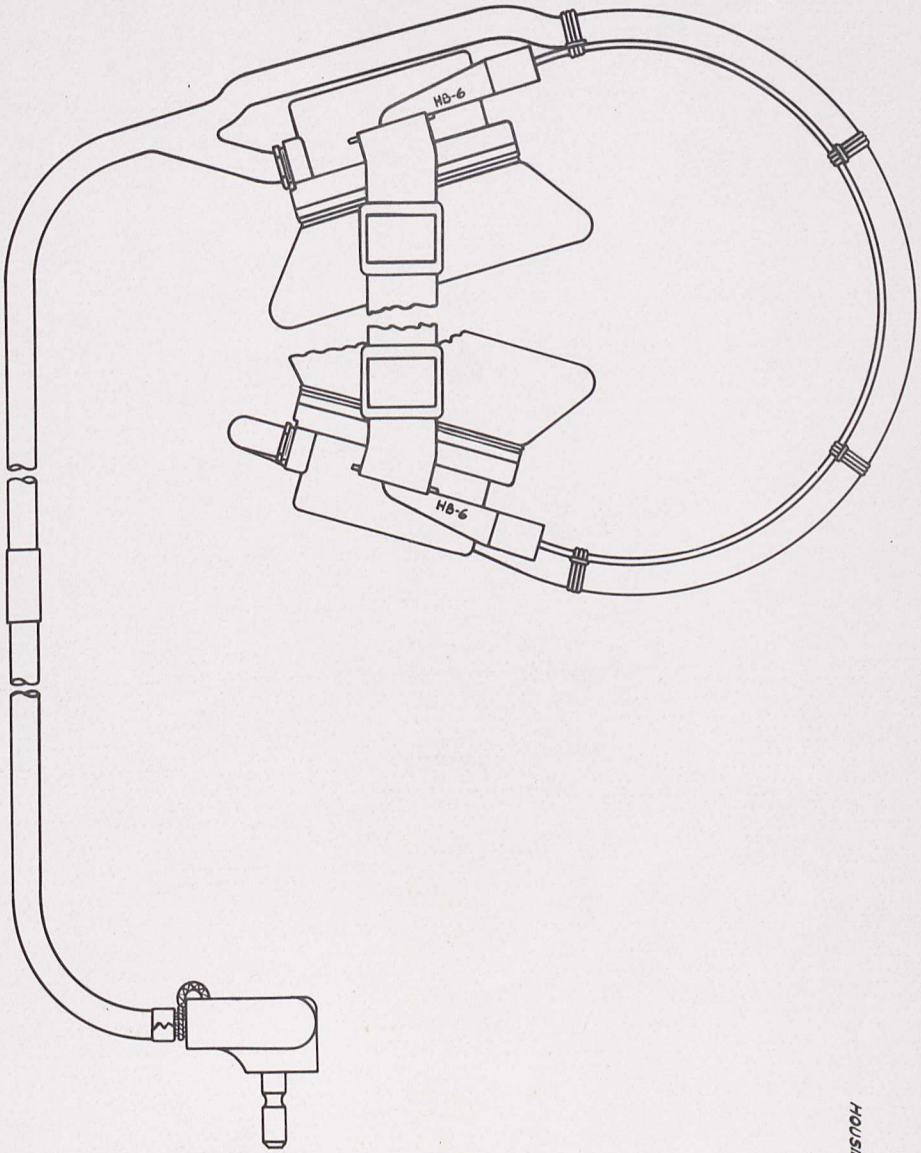


JACK BOX JB-18-A SCL-1212
ASSEMBLY

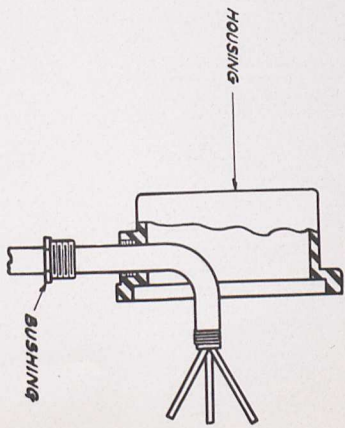
HEAD AND CHEST SET HS-27-()
ASSEMBLY

SCL-1209





HEAD SET HS-24
ASSEMBLY



PARTIAL SECTION THROUGH ①

SCL-1207