

BELL SYSTEM PRACTICES
Outside Plant Construction
and Maintenance

SECTION G86.065.1
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AT&T Co Standard

108A AND 109A TEST SETS

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1. GENERAL

1.01 This section replaces Issue 1. It describes the 108A and 109A Test Sets intended for identifying conductors in working or nonworking cables terminated on C50, C52 or 1177 Protector Mountings. It also describes the cords used in connecting the 108A set to cable conductors as well as the cords used to connect tone and the power supply to the set. The cords are furnished in a container designated as the 1A Cord Kit.

1.02 One hundred cable pairs can be identified with one setting of the cords (P40A, P20F and P20G) used to connect the 108A set to the cable conductors.

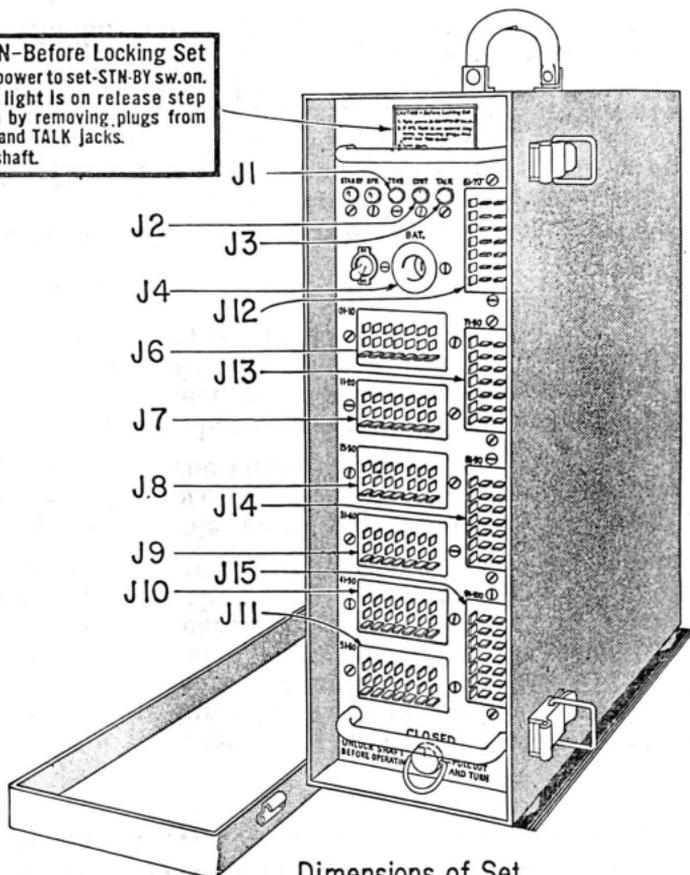
1.03 This section has been reissued to include the 2P30A Cord which has been made available for connecting central office tone to the 108A set as well as the KS-16362, List 1 Case for storing the cords of the 1A Cord Kit. ↙

2. 108A TEST SET

2.01 The 108A Test Set is illustrated in the following sketch. It consists of a step-by-step switch housed in an aluminum case. The faceplate is equipped with two pilot lamps, a power switch (toggle) and jacks for connecting the set to the cable conductors to be identified, as well as jacks for connecting tone, battery and the control pair to the set. The knob at the bottom of the faceplate is for locking the switch shaft to prevent damage during handling and transportation. The set is equipped with an alarm with which the cable splicer can summon the central office attendant.

108 A TEST SET

CAUTION—Before Locking Set
 1. Apply power to set—STN-BY sw. on.
 2. If OPR. light is on release step switch by removing plugs from CONT and TALK jacks.
 3. Lock shaft.



Dimensions of Set
 Height.....18 1/4 in.
 Width.....5 1/4 in.
 Depth.....13 13/16 in.

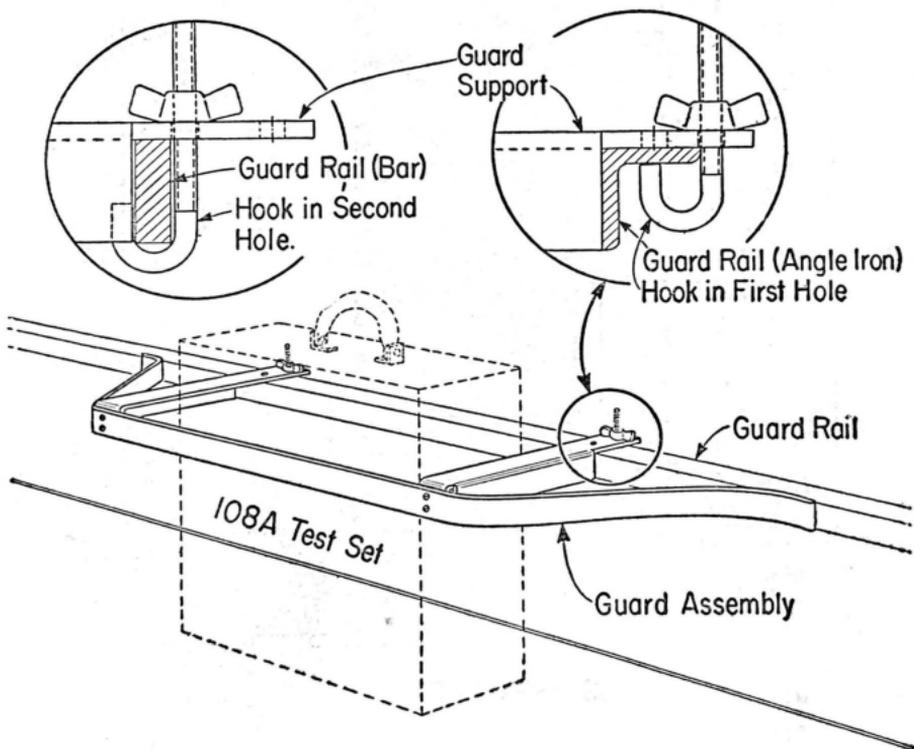
Note:—J Numbers pertain to Schematic only

2.02 The jacks marked 01-10, 11-20, 21-30, etc., are for connecting the set to the cable conductors. The jack marked BAT is for connecting the battery required to operate the step switch. 48-volt central office battery should be used but, if not available, a KS-6948 (45-volt) Dry Battery may be employed. The jack marked TONE is for connecting central office tone or tone from a 76-type set to the 108A set. The jack marked CONT (control) is for connecting the control pair in the cable to the set. The jack marked TALK is for connecting

a 1011-type handset having its cord terminated in a 310 Plug or the equivalent across the control pair.

2.03 The toggle switch is for turning power on or off. The lamp marked STAN BY (stand by) lights up when the switch is turned on. The lamp marked OPR (operate) lights up when the splicer turns the dial-release switch on the 109A set to the dialing position.

2.04 The 108A set is supplied with the guard assembly illustrated in the following sketch. The guard assembly is for protecting the 108A set from being accidentally struck by a main frame ladder. The method of attaching the assembly to the guard rail of a main frame is shown in the sketch.

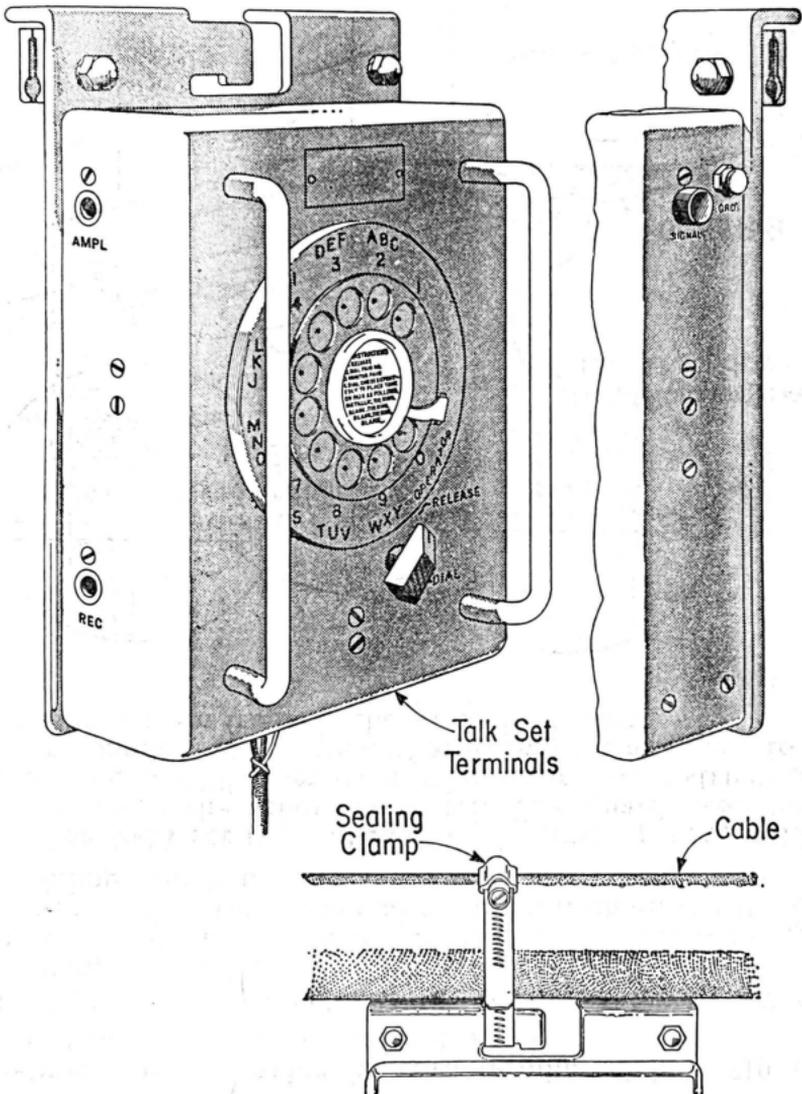


3. 109A TEST SET

3.01 The 109A Test Set is illustrated in the following sketch. It consists of a dialing unit for operating the 108A set from a splice. The dialing unit is housed in an aluminum case equipped with two one-bolt clamps. Provision has also been made for attaching a sealing clamp to the set. The one-bolt

clamps are for use in attaching the set to a suspension strand and the sealing clamp for attaching the set to a large diameter cable. The set is equipped with a permanently attached cord for connecting the set to the control pair in the cable. The ground terminal must be connected to the cable sheath. The signal key, when depressed, will operate the alarm in the 108A set to summon the attendant in the central office.

109A TEST SET



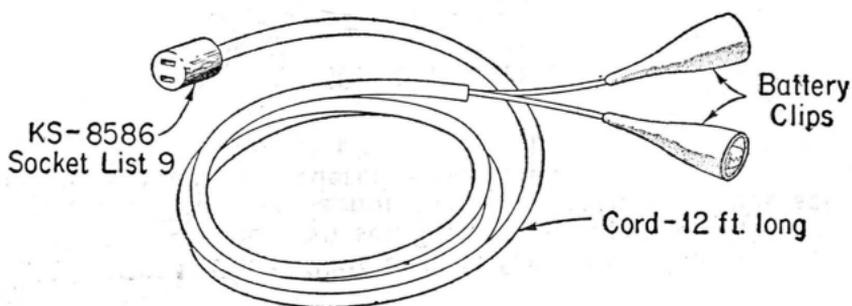
3.02 The jack marked REC (receiver) is for connecting a receiver to the set. The jack marked AMP (amplifier) is for connecting a 147- or 107-type amplifier to the set; a 3-foot P3E Cord is provided for this purpose. The set is equipped with two terminal lugs for connecting a talking set to the control pair.

4. 1A CORD KIT

4.01 The cords which comprise the 1A Cord Kit are illustrated in the following sketches.

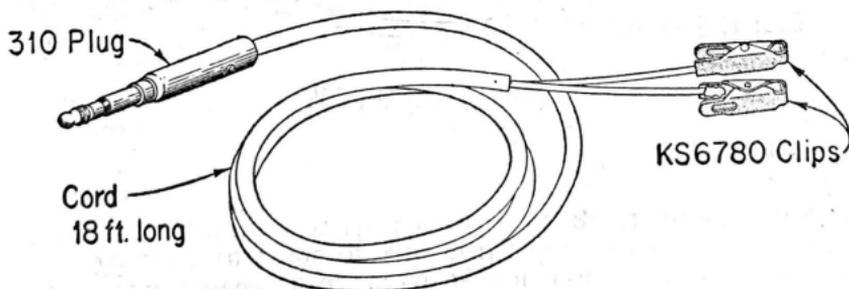
4.02 **M2EL Cord:** This cord is for connecting 48-volt central office battery or KS-6948 (45-volt) Dry Battery to the set. When a dry battery is used, the positive binding post of the battery must be connected to ground.

M2EL CORD (Battery)

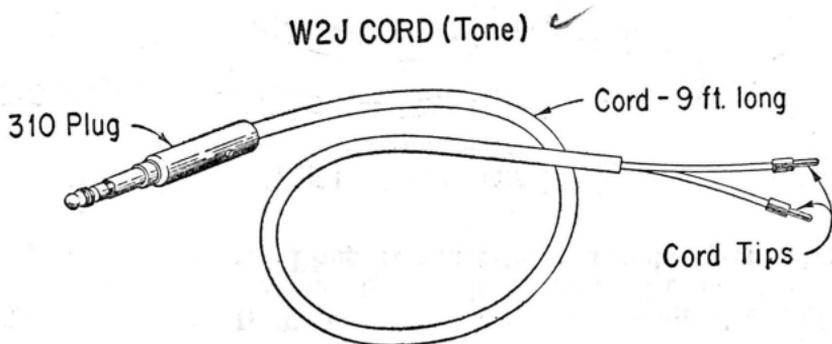


4.03 **W2EJ Cord:** This cord is for connecting the control pair in the cable to the 108A set. The cord is not equipped with the 310 Plug. It must be ordered separately.

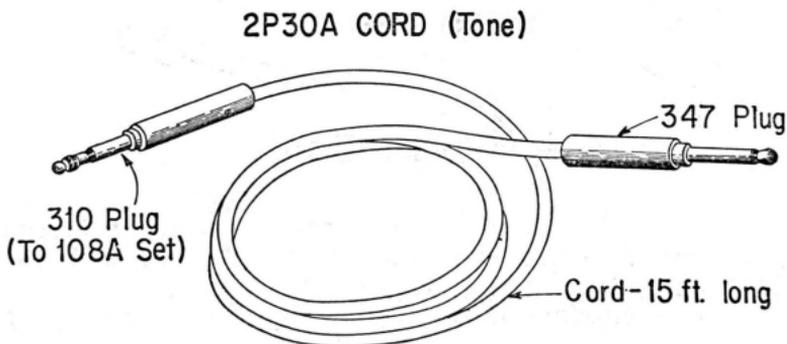
W2EJ CORD (Control)



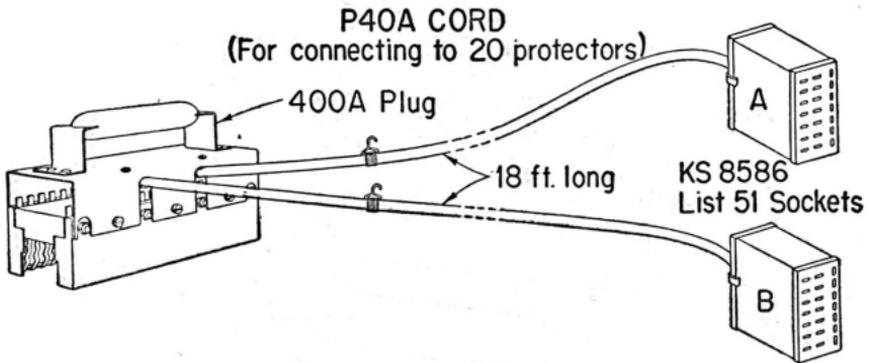
4.04 **W2J Cord:** This cord is for connecting tone from a 76-type test set or the equivalent to the 108A set. The cord is not equipped with the 310 Plug. It must be ordered separately.



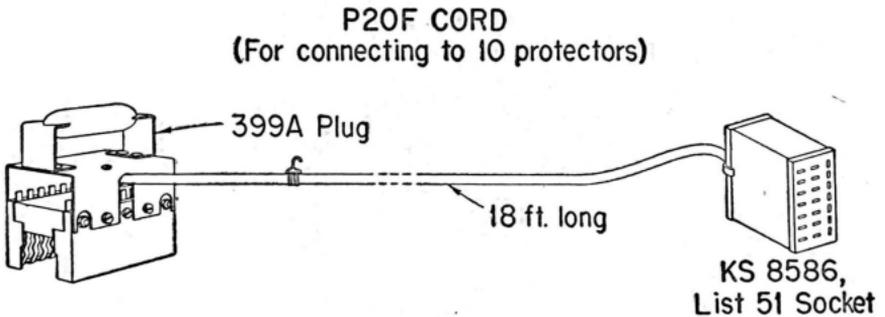
4.05 **2P30A Cord:** This cord is for connecting central office tone to the 108A set. The set is equipped with the plugs illustrated. The cord is not furnished with the 108A set and, therefore, must be ordered separately.



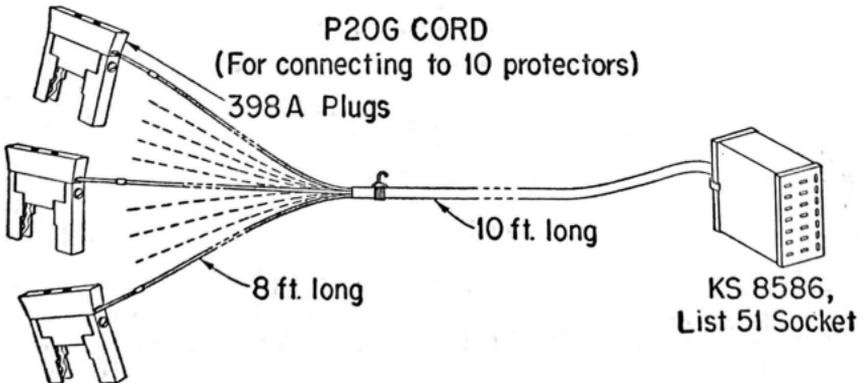
4.06 **P40A Cord:** There are five cords of this type in a kit. These cords are for connecting 100 cable pairs (20 consecutive pairs with each cord) terminated on C50, C52 or 1177 Protector Mountings to the 108A set. The 400A Plug should be placed over the protector springs with the cords to the right.



4.07 **P20F. Cord:** This cord is for connecting 10 consecutive cable pairs terminated on C50, C52 or 1177 Protector Mountings to the 108A set. The 399A Plug should be placed over the the protector springs with the cord to the right.

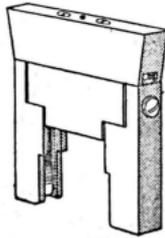


4.08 **P20G Cord:** This cord is for connecting 10 individual cable pairs terminated on C50, C52 or 1177 Protector Mountings to the 108A set. The 398A Plug should be placed over the protector springs with the cord to the right.

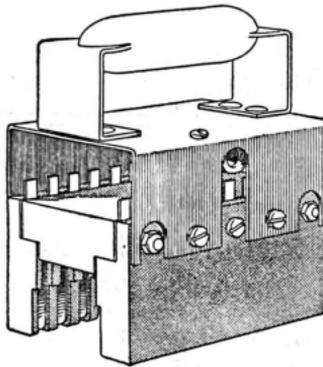


4.09 The 398A, 399A, and 400A Plugs of the P20G, P20F, and P40A Cords for making connection to C50, C52, or 1177 Protector Mountings are illustrated in the sketches below.

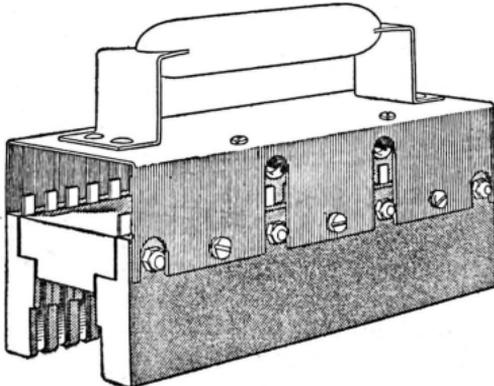
398 A PLUG



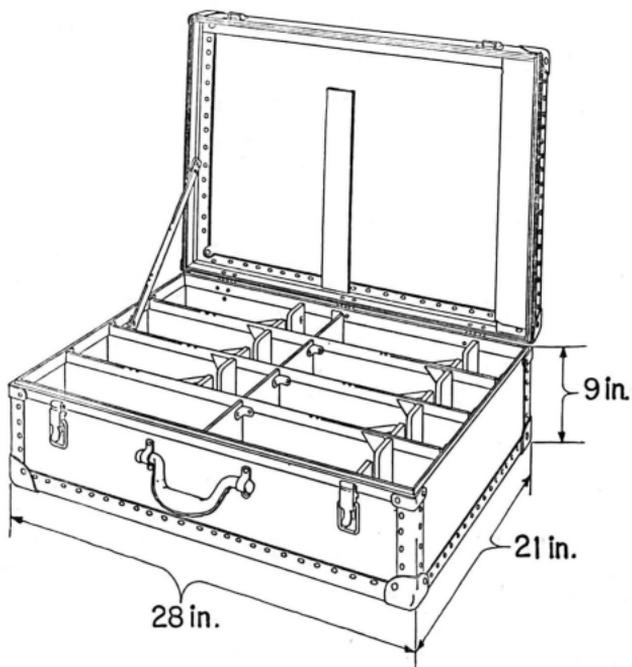
399 A PLUG



400 A PLUG



- 4.10 The cords of the 1A Cord Kit are supplied in the KS-16362, List 1 Case illustrated below.



5. MAINTENANCE

5.01 The 108A and 109A sets should not be repaired in the field. When maintenance is required, the sets should be returned in accordance with local routine.