

# STATION SETS — COMMON BATTERY

## ELEVATOR TELEPHONE SETS

### TYPES 322 (MD) AND 522

**1. GENERAL**

1.01 This practice covers the identification, installation, connections and maintenance of 322- and 522-type telephone sets. The 322-type set is manufacture discontinued (MD); the 522-type telephone sets are supplied instead.

1.02 *Reason for Reissue.* This practice is reissued to provide information on the use of the PO 97M770 apparatus blank.

**2. IDENTIFICATION**

**322-Type Telephone Sets (MD)**

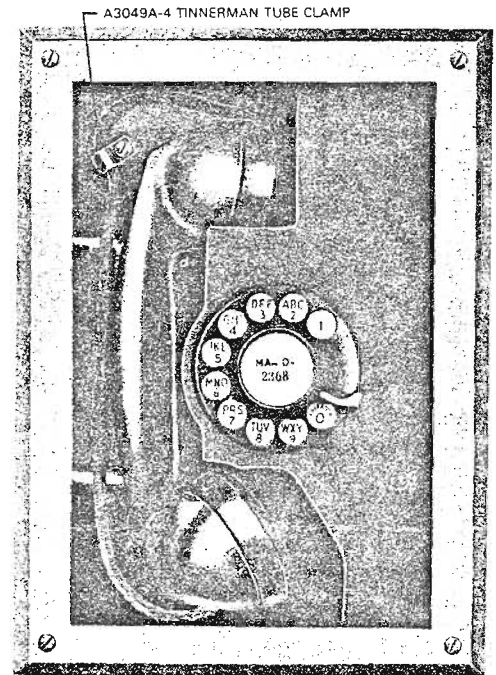
2.01 The 322A (manual) and the 322C (dial) telephone sets are flush mounted, wall type sets intended for use in elevators but may be used in corridors and building entrances.

2.02 The appearance of the 322-type telephone set when used with an outlet box and frame is shown in Fig. 1.

2.03 The 4E buzzer and capacitor (1 mf) provide a low impedance ringing bridge, and can be used on individual lines and PBX stations only if there are no additional ringing bridges on the same line.

2.04 The 4E buzzer is used in place of a ringer to conserve space. It cannot be biased to avoid tapping while dialing or during switchhook operation.

2.05 The use of the low impedance buzzer in 322-type telephone set as PBX stations do not generally permit through dialing on night connections. However, should the night connection feature be required, or an extension station or an extension ringer be provided, disconnect the buzzer and provide a high impedance ringing bridge by the use of a 687A subscriber set, or the equivalent, at a nearby location (in cab if an elevator installation). Local ordinances may, in some cases, prohibit connecting elevator telephones as PBX stations.



**Fig. 1 — 322-Type Telephone Set (MD)**

2.06 Use the 322-type telephone set in transmission zone 2 only.

2.07 The 522-type telephone sets (Fig. 2) are flush mounted wall type sets intended for use in elevators but may be used in corridors and building entrances.

2.08 The 522-type sets manufactured before December 1969 used a unique switchhook principle. This consists of a dry reed switch enclosed in thermo-setting plastic. With the handset in place on the cradle, the normally closed switchhook contacts were kept open by the permanent magnet imbedded in the handle of the handset. Due to manufacturing problems this switch has been replaced by a conventional strike plate and spring assemble P891565.

3352+  
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 C.S. Supv. - I&R  
 (MB) St. Stephen

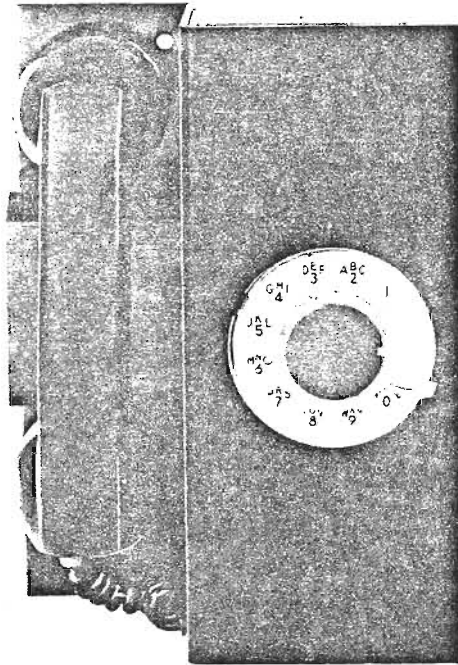


Fig. 2 — 522-Type Telephone Set (Front View)

2.09 The 522-type sets have the transmission characteristics common to 500 series sets and are suitable for use in transmission zones 2 and 5.

2.10 The D1BQ1A, a high impedance ringer, is used in 522-type telephone sets and is subject to the normal ringing bridge limitations shown in Div. 500. The high impedance permits 522-type telephone sets to be used on night connections.

2.11 The 522- and 322-type telephone sets are not provided with the automatic number identification (ANI) wiring option. Therefore these sets may not be used as a tip party where ANI is a service feature.

### 3. INSTALLATION

3.01 The elevator cable conductors should be provided, installed and maintained by the customer. These conductors may be found in either a separate trailer cable or as spare conductors in the elevator signaling and control cables.

3.02 Terminals or connecting blocks provided as a connecting point between station wiring and customer provided conductors should be installed in a cabinet. The cabinet must be for telephone use exclusively, or be of the approved type with a

partition between telephone and power sections of the cabinet. The cabinet should be located outside the elevator shaft.

#### WARNINGS:

1. *Telephone employees are not authorized to enter elevator shafts without specific instructions from their supervisor, who should remain on the job throughout the time the work is in progress.*
2. *The supervisor should arrange with the building superintendent or other authorized person to have the elevator taken out of service.*
3. *An authorized attendant should be on duty throughout the time work is in progress with definite instructions not to move the elevator except at the discretion of the supervisor.*

3.03 Outlet boxes and frames common to 322 and 522-type elevator sets, must be ordered separately and may be furnished by the customer or telephone company.

3.04 Outlet boxes furnished by the customer or telephone company are installed by the customer.

3.05 The standard outlet box D-95334 should be mounted in a recess 184 mm wide, 260 mm high, and 76 mm deep as illustrated. (Fig. 3).

3.06 When a 322- or 522-type telephone set is mounted in a door equipped box, the minimum inside dimensions should be 184 mm wide, 260 mm high, and 89 mm deep.

3.07 When the outlet box is furnished by the customer, the mounting holes should be drilled and tapped for 8-32 machine screws in the same locations as those in the D-95334 type outlet box, prior to being installed in its permanent location.

3.08 When outlet boxes are placed by the customer, his attention should be called to the necessity of checking the clearance obtainable, especially regarding the projection of the outlet box into the elevator shaft.

3.09 The outlet box is not required where the recess in the wall of the building meets the minimum size, and the back surface is of wood 19 mm thick so that the telephone set may be attached to it with three No. 8, 1 in RH blue wood screws.

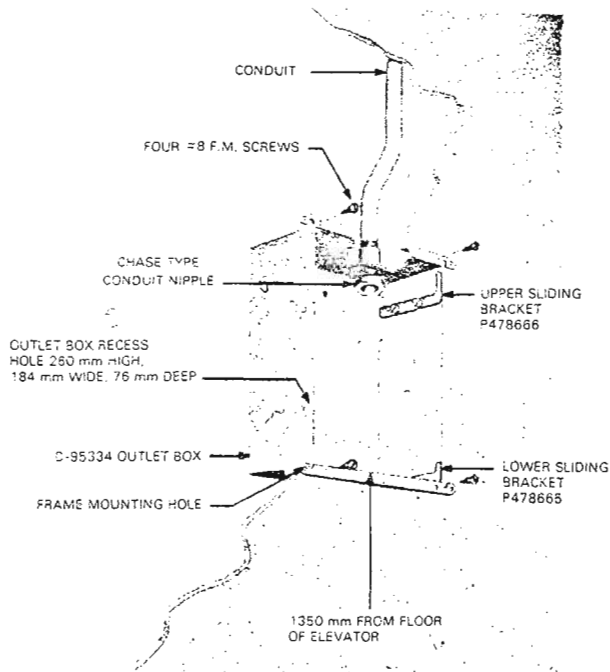


Fig. 3 — Mounting of Outlet Box

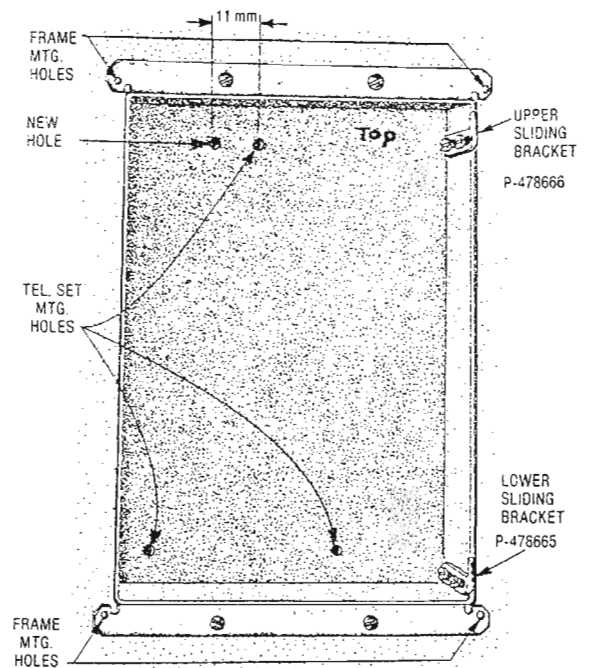


Fig. 4 — D-95334 Outlet Box

- 3.10 The inside minimum dimensions should be 175 mm wide, 250 mm high, 73 mm deep.
- 3.11 A standard metal frame or wood molding should be used to cover edges of recess.
- 3.12 The D-95334 type outlet box without frame is shown in Fig. 4.
- 3.13 Two sliding brackets and four Filister head machine screws are furnished with 322- and 522-type telephone sets. The brackets are to be attached to the outlet box at locations indicated in Fig. 4.
- 3.14 The right angle projection on the upper bracket P-478666 is slightly longer than that on the lower bracket P-478665.
- 3.15 The two hinges on the frame of the telephone set mount on the projections of the two brackets, and allow the set to swing out of the outlet box for connections or maintenance reasons.
- 3.16 An additional mounting hole is drilled, as shown in Fig. 4, when mounted 522-type sets in outlet boxes manufactured before July, 1966.
- 3.17 Boxes manufactured after January 1970 do have knockouts for 1/2 in and 3/4 in conduit. In addition, the word TOP is stamped in the upper right corner (Fig. 4).

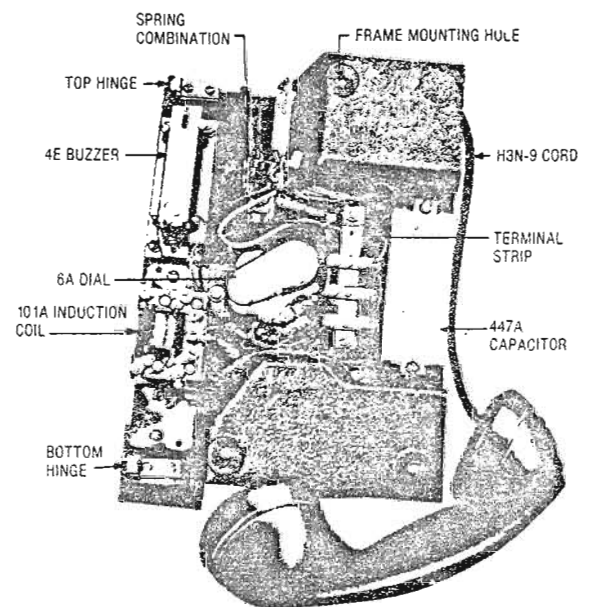


Fig. 5 — 322C Telephone Set (MD)

- 3.18 A rear view of the 322C telephone set is shown in Fig. 5 while Fig. 6 shows the rear view of a 522-type set.

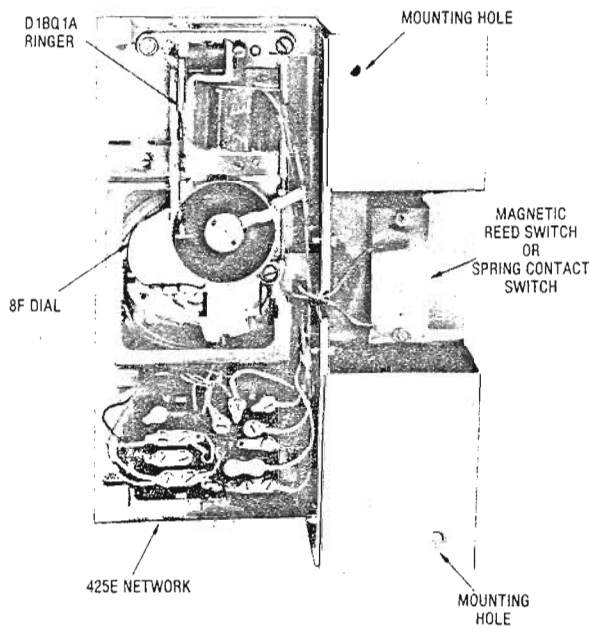


Fig. 6 — 522QA Telephone Set (Rear View)

- 3.19 An 82A apparatus blank should be used in place of the 6A dial when it is desired to convert a 322C telephone set from dial to manual (322A).
- 3.20 To provide manual service when using a 522QA telephone set, an apparatus blank PO 97M770 should be used in place of the 8F dial.
- 3.21 The 61L filter should be used on 322-type set if radio suppression apparatus is required, connected as shown in Fig. 7.
- 3.22 Table A lists material items required for replacement purposes.
- 3.23 G-type handset mountings may be used in elevators with standard subscriber sets. Non-flush wall sets such as the 352- or 554-type telephone set may also be used.
- 3.24 When a 687A subscriber set or equivalent is used with a 322-type telephone set to provide a high impedance ringing bridge, it should be located where it can be maintained from inside the elevator.

3.25 The customer generally provides a recessed compartment for the subscriber set if he objects to having it protrude into the cab.

3.26 To conceal the subscriber set, the outlet box, frame, and grill should be provided and installed by the customer.

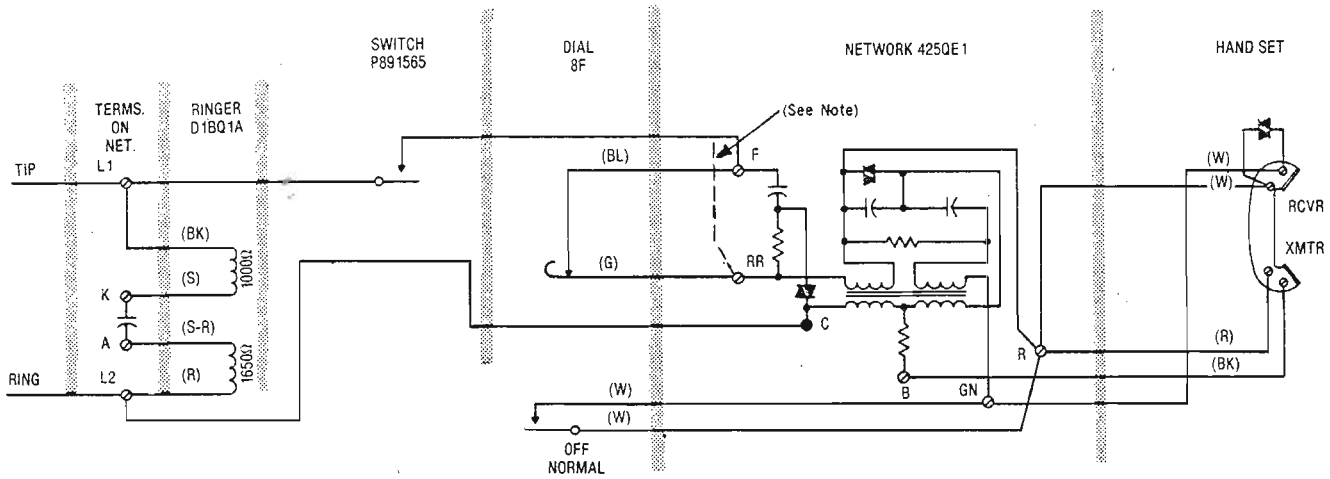
#### 4. CONNECTIONS

- 4.01 For wiring and connections of 322- and 522-type telephone sets, refer to Fig. 7 and 8.
- 4.02 The cable conductors used for telephone service connect directly to the terminals in the set.
- 4.03 When connections are completed, place telephone set in the outlet box and attach to the back of the outlet box with three 3/8 in by 8-32 BH machine screws that are supplied with the set.
- 4.04 The frame attaches to the outlet box with four 9/32 in by 6-32 OH brass machine screws that are furnished with the frame, one in each of the four corners.

#### 5. MAINTENANCE

- 5.01 Elevator sets can generally be maintained from within the elevator cab, and the telephone line from points outside the elevator shaft.
- 5.02 Trouble in the elevator cables between the set and point of connection with station wiring, outside the elevator shaft should be reported for correction to the superintendent or other responsible persons in charge of elevator maintenance.
- 5.03 When maintenance work is required in the back of a 322-type or 522-type telephone set, remove the free fasteners which attach the set to the back of the outlet box, and support the set on the sliding brackets shown in Fig. 4. Where 9A fuse blocks equipped with 55A fuses were used on existing installations replace with connecting block.
- 5.04 Dry-reed switches should be replaced by the new strike plate and spring assembly, P891565 using the original mounting screws. Make sure the strike plate sits flush with the housing.





*Note:* For manual operation replace 8F dial with P.O. 97M770 apparatus blank.

Fig. 8 — 522-Type Telephone Set Connections — (Individual or PBX Service)