

BELL SYSTEM PRACTICES
Station Installation and Maintenance

SECTION C32.502
Issue 7, April, 1954
AT&T Co Standard

TELEPHONE SETS

**302, 303, 304, 305, 306, 307, 309, 329 AND
D-173487 TYPES**

DESCRIPTION AND USE

I. GENERAL

1.01 This section covers information pertaining to the 302, 303, 304, 305, 306, 307, 309, 329 and the D-173487-type telephone sets for indoor use.

1.02 This section is reissued to include data on the 329-type telephone sets and to make various changes, additions and corrections to bring practice up to date. Due to the nature of this revision, arrows indicating changes have been omitted.

1.03 The telephone sets in this section are antisidetone sets consisting of a handset and a telephone set mounting which, in addition to a dial or apparatus blank, houses a ringer, condensers, induction coil and, in certain cases, a vacuum tube. The only exception is the 329-type set, which does not have the ringer, condenser or induction coil in the housing. A cord for connecting the telephone set to the line is also included. The line is terminated at a connecting block or jack near the set.

1.04 This section covers mountings with both metal and thermomastic housings. The latter has a more permanent finish, but is more fragile than metal housings and should therefore be handled carefully.

1.05 In general, the sets are installed in accordance with instructions included in the sections in Division C30 covering the locating and mounting of hand telephone sets and the installation of connecting blocks.

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2. DESCRIPTION

2.01 The 302-type telephone set shown in Figs. 1 and 2 is used at common battery antisidetone stations on non-polarized ringing lines of the following classes of service:

- Individual Lines (Manual and Dial)
- Two-Party Selective Flat Rate (Manual and Dial)
- Two-Party Selective Message Rate (Manual and Ring Party Dial Only)
- Four-Party Semi-Selective (Manual and Dial)
- Divided Code Ringing (Manual and Dial)
- Non-Selective Party Lines (Manual and Dial)
- Regular PBX Stations (Manual and Dial)
- 755A and 750A PBX Keyless Stations

2.02 The 302-type set is equipped with a three-conductor mounting cord to permit its use on grounded ringing lines, and, as furnished, is connected for tip-party stations. For individual lines and regular PBX stations, the ringer and mounting cord connections are changed and the three-conductor cord is used as a two-conductor cord. The manual set is coded 302E and the dial sets are coded 302F, 302G and 302H. Earlier type sets equipped with two-conductor cords are coded 302A for the manual set and 302B, 302C, and 302D for the dial sets.

2.03 For multiparty rural lines, when it is desired to minimize interference with dialing and ringing and reduce transmission losses caused by the removal of a handset at a station while a conversation is taking place, a set having a three-position switch, similar to the exclusion key provided in the 401-type telephone set associated with one of the telephone set mounting plungers, may be used. The words "Lift plunger to dial or talk" appears at the top of the mounting of this set and the internal connections are slightly different from those of other 302-type sets. In this case the manual set is coded 302AA and the dial set 302AC. These sets are arranged so that when the handset is removed from the mounting, the customer may listen to determine whether the line is in use and then lift up the plunger to dial or call the operator.

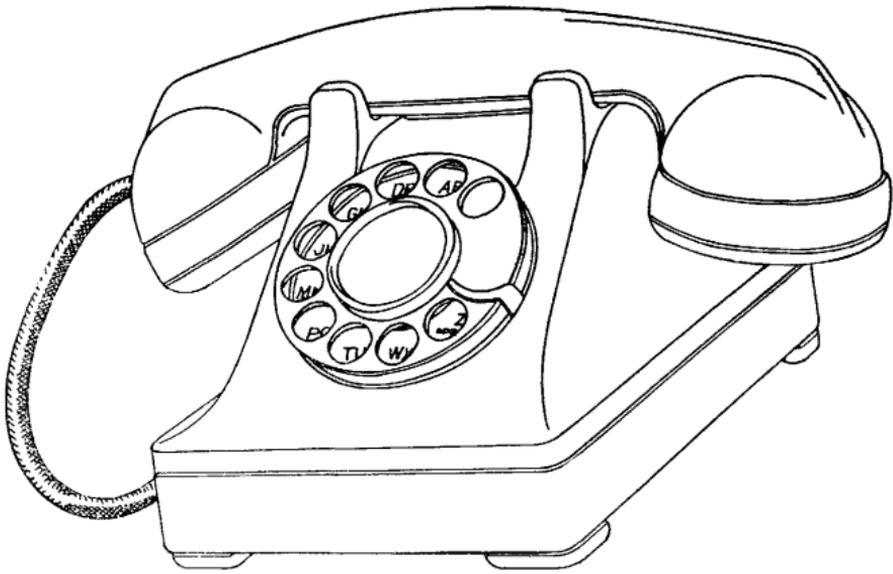


Fig. 1—Front View—302-type Telephone Set

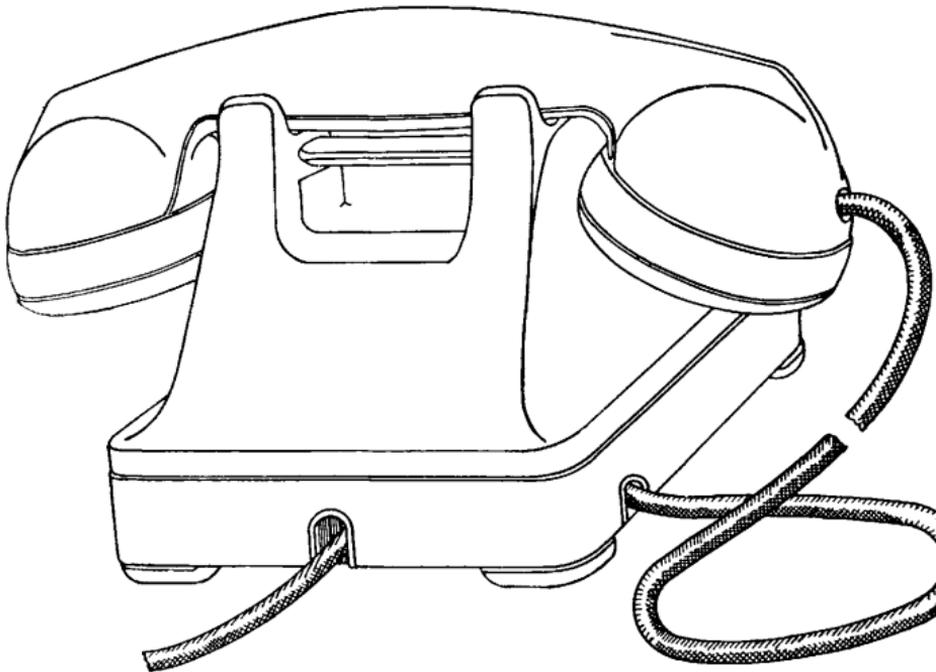


Fig. 2—Rear View—302-type Telephone Set

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2.04 The 303-type telephone set in external appearance is the same as the 302-type shown in Figs. 1 and 2, but is arranged for use at key stations of wiring plans on the 1A key telephone system where it is necessary to connect the ringing bridge and talking circuit to different lines. The set is equipped with a four-conductor mounting cord, two conductors of which are used for connecting the ringing circuit and the remaining two for connecting the talking circuit. The manual set is coded 303A and the dial sets 303B, 303C, and 303D.

2.05 The D-173487 telephone set (Modified Army TP-6) may be used on common battery individual lines, regular PBX stations and non-selective party lines. In appearance, this set is similar to the 302A (manual) telephone set, but is specially designed to make it moisture resistant, fungus resistant and to keep insects out of the set. If desired, the regular station dial may, of course, be added to the set locally.

2.06 The rubber jacketed cords of this set are equipped with sealing grommets which completely close the cord entry holes in the set. Before the set can be completely opened it is necessary to ease the sealing grommet in the two-conductor mounting cord out of the cord entrance hole in the housing as indicated in Fig. 3. If, for any reason, it is necessary to replace either cord, standard cords may be substituted and the mounting cord stay hook should be secured to the bracket to which the handset cord stay hook is attached. (See Fig. 3.)

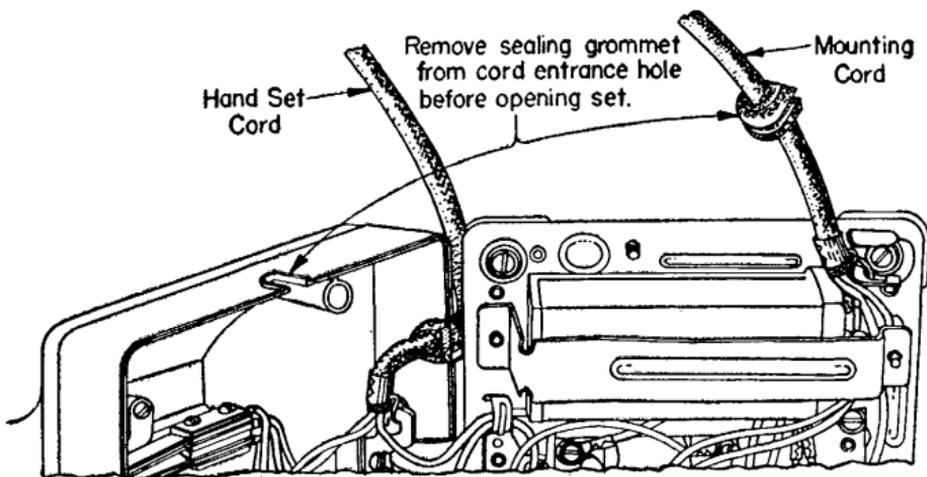


Fig. 3—D173487 Telephone Set

2.07 Inasmuch as this set was originally intended for use in damp tropical climates, installation of this set at indoor locations where moisture or humidity conditions are severe, such as along waterfronts or marshy lands, laundries, etc. might be advantageous.

2.08 If replacement of any apparatus part, such as the ringer, induction coil or condenser is required, standard apparatus parts should be substituted. If the condenser is replaced, a wood block spacer (obtained locally) 3-1/8 in. long, 1-1/8 in. wide and 1/2 in. thick shall be placed between the replacing 195-type condenser and the condenser strap. The wood spacer shall rest against the condenser strap at the foot of the condenser and shall not touch the head of the condenser (end at which condenser leads are brought out).

2.09 In addition to the sets which are completely equipped with fungus treated and moisture resistant apparatus, some telephone sets are equipped with one or more of these specially treated apparatus parts. These sets are treated as 302-type telephone sets.

2.10 The 304-type telephone set, the external appearance of which is the same as the 302-type shown in Figs. 1 and 2, is used in dial common battery central office areas on the tip-party stations of message rate, automatic ticketing and A.M.A. However, in addition to the dial sets, a manual set, coded 304A, and equipped with an apparatus blank is provided for use at tip-party stations where cut-over to dial message rate service is contemplated. The dial sets are coded 304B, 304C and 304D and all sets are equipped with a three-conductor mounting cord.

2.11 The 305-type telephone set is exactly like the 302-type described in 2.01 except that the mounting is equipped with a turnbutton-type key having an "OFF and ON" marking. This key is wired in series with the ringer in the base of the mounting and is used by the subscriber to turn the ringer on or off as he desires.

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2.12 When the 305-type telephone set is used on a central office line, at least one other ringer or loud ringing bell connected so as to always be operative on central office ringing current is required so that the subscriber can at all times be signaled from the central office. The 305-type set is particularly useful as an extension station in a bedroom.

2.13 As in the case of the 302-type set a three-conductor mounting cord is furnished to permit using the set on non-polarized grounded ringing lines. The set may also be used for individual lines and regular PBX stations by reconnecting the ringer accordingly and using the three-conductor cord as a two-conductor cord. The manual set is coded 305E and the dial sets are coded 305F, 305G and 305H.

2.14 Earlier sets with two-conductor cords are coded 305A for the manual set and 305B, 305C and 305D for the dial sets.

2.15 The 306-type telephone set is for use with common battery antisidetone four-party selective and eight-party semiselective services. It is similar to the 302-type except that it employs the B3A ringer, 195C condenser and in addition a 333A, 372A or 426A vacuum tube.

2.16 The manual set is coded 306A and the dial sets are coded 306B, 306C, and 306D.

2.17 The 307-type telephone set is a local battery talking, common battery signaling antisidetone combined-type set similar to the 302 set in appearance. It is for use on non-polarized ringing lines of the same classes of service listed in 2.01 for the 302 set.

2.18 The manual sets are coded 307A and 307E and the dial sets are coded 307B, 307C, 307D, 307F, 307G, 307H.

2.19 Where all five cord conductors are used, as on grounded ringing party lines, the 44A connecting block is employed. Where only four of the conductors are used, as on bridged ringing lines, the 42A connecting block may be employed.

2.20 The 307A, 307B, 307C and 307D sets employ an F1A handset and are used where an individual local battery supply is furnished for each set. Where a common source of transmitter battery supply is used for more than one set, the 307E, 307F, 307G and 307H sets employing an F2B handset are used and a 634BD battery supply set is used as a filter in the circuit to the common source of battery supply.

2.21 The 309-type telephone set is a local battery talking common battery antisidetone signaling set for use with four-party selective and eight-party semiselective services. It is similar to the 307-type except that it employs the B3A ringer, 195C condenser and in addition a 405A or 426A vacuum tube. The manual set is coded 309A and the dial set 309C.

2.22 The 329-type telephone set is a common battery set, similar in appearance to the 302 type. It is primarily intended for use in the 101 type and 102A key equipments.

2.23 The 329A telephone set is for use in manual systems and consists essentially of a black finished desk-type plastic housing with a metal base on which is mounted a ten-terminal connecting block. It is equipped with an F2B-3 handset, a D10D-9 cord and an 82A-3 apparatus blank.

2.24 The 329C telephone set is for use in dial systems and consists of the same component parts as the 329A, with only a dial and dial adapter replacing the apparatus blank. These telephone sets are arranged to mount a 7-type buzzer and a 152A condenser (used to suppress radio frequency induction from 7-type buzzers). The 329C telephone set is arranged to mount a 61P filter which is used to suppress dial induction in radio receiving sets. The buzzer, condenser and filter must be ordered separately.

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3. APPARATUS

COMBINATION OF APPARATUS					
Tel. Set Set Code	Tel. Set Mounting‡	App. Blank	Dial†	Hand Set*	Cord
**302A-3	H1-3	82A-3	—	F1A-3	D2D-9
**302B-3	H1-3	—	5HA-3	F1A-3	D2D-9
**302C-3	H1-3	—	5HB-3	F1A-3	D2D-9
**302D-3	H1-3	—	5HE-3	F1A-3	D2D-9
302E-3	H1-3	82A-3	—	F1A-3	D3AL-9
302F-3	H1-3	—	5HA-3	F1A-3	D3AL-9
302G-3	H1-3	—	5HB-3	F1A-3	D3AL-9
**302H-3	H1-3	—	5HE-3	F1A-3	D3AL-9
302AA-3	H13-3	82A-3	—	F1A-3	D3AL-9
302AC-3	H13-3	—	5HB-3	F1A-3	D3AL-9
D-173487 (See Note)					
**√303A-3	H1-3	82A-3	—	F1A-3	D4U-9
**√303B-3	H1-3	—	5HA-3	F1A-3	D4U-9
**√303C-3	H1-3	—	5HB-3	F1A-3	D4U-9
**√303D-3	H1-3	—	5HE-3	F1A-3	D4U-9
304A-3	H3-3	82A-3	—	F1A-3	D3AL-9
304B-3	H3-3	—	5HA-3	F1A-3	D3AL-9
304C-3	H3-3	—	5HB-3	F1A-3	D3AL-9
**304D-3	H3-3	—	5HE-3	F1A-3	D3AL-9
**305A-3	H4-3	82A-3	—	F1A-3	D2D-9
**305B-3	H4-3	—	5HA-3	F1A-3	D2D-9
**305C-3	H4-3	—	5HB-3	F1A-3	D2D-9
**305D-3	H4-3	—	5HE-3	F1A-3	D2D-9
305E-3	H4-3	82A-3	—	F1A-3	D3AL-9
305F-3	H4-3	—	5HA-3	F1A-3	D3AL-9
305G-3	H4-3	—	5HB-3	F1A-3	D3AL-9
**305H-3	H4-3	—	5HE-3	F1A-3	D3AL-9
306A-3	H5-3	82A-3	—	F1A-3	D3AL-9
306B-3	H5-3	—	5HA-3	F1A-3	D3AL-9
306C-3	H5-3	—	5HB-3	F1A-3	D3AL-9
**306D-3	H5-3	—	5HE-3	F1A-3	D3AL-9

COMBINATION OF APPARATUS (Continued)

Tel. Set Set Code	Tel. Set Mounting‡	App. Blank	Dial†	Hand Set*	Cord
307A-3	H7-3	82A-3	—	F1A-3	D5AA-9
307B-3	H7-3	—	5HA-3	F1A-3	D5AA-9
307C-3	H7-3	—	5HB-3	F1A-3	D5AA-9
**307D-3	H7-3	—	5HE-3	F1A-3	D5AA-9
307E-3	H7-3	82A-3	—	F2B-3	D5AA-9
307F-3	H7-3	—	5HA-3	F2B-3	D5AA-9
307G-3	H7-3	—	5HB-3	F2B-3	D5AA-9
**307H-3	H7-3	—	5HE-3	F2B-3	D5AA-9
309A-3	H12-3	82A-3	—	F1A-3	D5AA-9
309C-3	H12-3	—	5HB-3	F1A-3	D5AA-9
329A	P-339939	82A	—	F2B-3	D10D-9
329C	P-339939	—	5HB-3	F2B-3	D10D-9

* E1E-3 Hand Set may be used in place of the F1A-3, if zoning permits.

** May be available from local stock.

† 6-type dial may be used instead of 5-type listed. The 59A dial adapter is required with the dial on all sets listed above. Dial code numbers are shown on rear of dials. Where sets having proper dial number plates for the central office area involved are not available, the required 150-type number plate may be substituted locally.

√ H1-3 mounting modified to prevent crosstalk. Induction coil equipped with 39A shield.

‡ Telephone set mounting code numbers are stamped on inside rear edge of mountings.

Note: Telephone set and apparatus parts except cords are the same as 302A set but are moisture resistant and fungus resistant. Rubber jacketed cords are equipped with sealing grommets. If desired, dial together with dial adapter may be added locally.

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3.01 The cords listed above are the 5-1/2 ft. textile braid cords with rubber insulated conductors. In general, station cords now manufactured are neoprene-jacketed. If the cord furnished is of the textile braid type, it shall be used unless the surrounding conditions are such as to require replacement with a neoprene-jacketed cord. Cord code numbers are subject to frequent changes. Reference should therefore be made to the section "Station Cords All Types" (C36.101) for information on cords. When specified in the order, the above sets will be furnished with cords equipped with plugs for plug and jack installations.

3.02 The section "Colored Stations Sets" (C30.011) covers information pertaining to colored finished sets.

3.03 The telephone set mountings that form a part of the foregoing telephone sets include the following coded apparatus.

<u>Mounting</u>	<u>Ringer</u>	<u>Condenser</u>	<u>Ind. Coil</u>	<u>Retard. Coil</u>	<u>Key</u>	<u>Vacuum Tube</u>
H1-3	B1A	195A	101A	—	—	—
√H1-3	B1A	195B	101A	—	—	—
H3-3	B2A	195A	101B	—	—	—
H4-3	B1A	195A	101A	—	560A	—
H5-3	B3A	195C	101A	—	—	426A
H7-3	B1A	387A	104A	266A	—	—
H12-3	B3A	195A	104A	266A	—	426A
H13-3	B1A	195A	101A	—	—	—

√Mounting modified to prevent crosstalk. Induction coil equipped with 39A shield.

Note: H1-3, H3-3 and H5-3 mountings (302, 304 and 306-type dial sets) will be equipped with a 61P filter when specified in the order. The H13-3 mounting (302AA-3 and 302AC-3 sets) is always equipped with the filter. Where required for other dial sets the 61P filter may be added locally.