

BELL SYSTEM PRACTICES
Station Installation and Maintenance

SECTION C32.502
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AT&T Co Standard

TELEPHONE SETS

302, 303, 304, 305, 306, 307, 309, AND 329 TYPES

DESCRIPTION AND USE

1. GENERAL

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

1.02 This section is reissued to include information on the coding of telephone sets equipped with retractile handset cords, conversions of the 306-type set to the 302-type set, and to make various changes, additions, and corrections to bring the practice up to date. Due to extensive changes, marginal arrows 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, capacitor, induction coil, and in certain cases, an electron tube. The only exception is the 329-type set which does not have the ringer, capacitor, or induction coil in the housing. A cord for connecting the telephone set to the line at a connecting block or jack is also included.

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.

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)

2-party Selective Flat Rate (Manual and Dial)

2-party Selective Message Rate (Manual and Ring-Party Dial Only)

4-party Semiselective (Manual and Dial)

Divided-Code Ringing (Manual and Dial)

Nonselective 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 3-conductor mounting cord to permit its use on grounded ringing lines, and is furnished wired for tip-party stations. For individual lines and regular PBX stations, the ringer and mounting cord connections are changed and the 3-conductor cord is used as a 2-conductor cord. The manual set is coded 302E and the dial sets are coded 302F, 302G, and 302H.

2.03 The 302AA or 302AC sets are designed with a "Lift Plunger to Dial or Talk" for use on multiparty rural lines. This feature is to minimize interference with dialing and ringing, and also to prevent transmission losses caused by the removal of the handset at a station while a conversation is in progress. This is done with an additional set of switch-hook contacts that remain open until the **right-hand** switch-hook plunger is pulled up manually. This operation closes these contacts and closes through the transmitter and dialing circuit of the set. The words "Lift Plunger to Dial or Talk" are stamped on the housing under the plunger of the set.

2.04 The 303-type telephone set is the same in external appearance as the 302 type shown in Figs. 1 and 2, but it 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 4-conductor mounting cord, two 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.



Fig. 1—Telephone Set, 302 Type—Front View

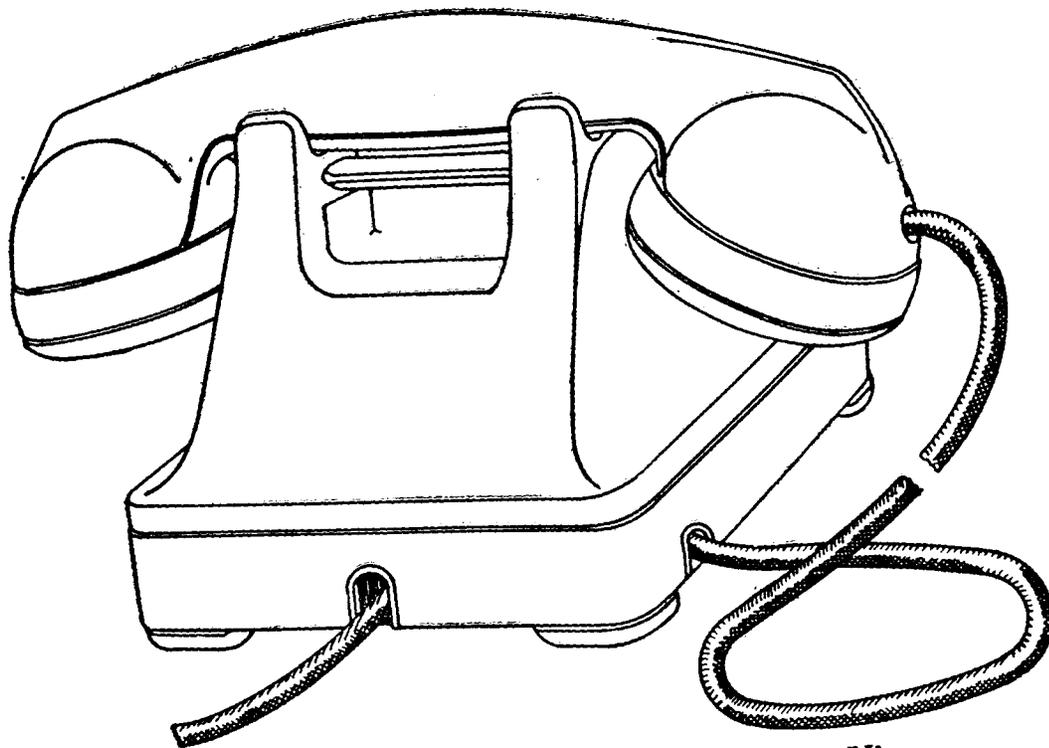


Fig. 2—Telephone Set, 302 Type—Rear View

2.05 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 station of message rate, automatic ticketing, and automatic message accounting. However, in addition to the dial sets, a manual 304A set equipped with an apparatus blank is provided for use at tip-party stations where cutover to dial message-rate service is contemplated. The dial sets are coded 304B, 304C, and 304D, and all sets are equipped with a 3-conductor mounting cord.

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

2.07 When the 305-type telephone set is used on a central office line, an additional ringer is generally required so that the customer can be signaled from the central office at all times. The 305-type set is particularly useful as an extension station in a bedroom.

2.08 As in the case of the 302-type set, a 3-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 3-conductor cord as a 2-conductor cord. The manual set is coded 305E and the dial sets are coded 305F, 305G, and 305H.

2.09 The 306-type telephone set is for use with common battery antisidetone 4-party selective, and 8-party semi-selective services. It is similar to the 302 type except that it employs the B3A ringer, 195C capacitor, and in addition, a 333A, 372A, or 426A electron tube.

2.10 When service is upgraded, the 306-type set may be converted to a 302-type set by replacing the electron tube with a KS-16023 capacitor. If the set employs a 333A or 372A electron tube, the same P-10C385 bracket assembly is used for mounting the capacitor. If the set employs a 426A electron tube, the P-348078 bracket assembly must be replaced by a P-10C385 bracket assembly for mounting the capacitor. The modified set will be equivalent to one low-impedance ringing bridge.

- 2.11 The manual set is coded 306A and the dial sets are coded 306B, 306C, and 306D.
- 2.12 The 307-type telephone set is a local battery talking, common battery signaling antisidetone combined-type set similar to the 302-type set in appearance. It is for use on nonpolarized ringing lines of the same classes of service listed in 2.01 for the 302-type set.
- 2.13 The manual sets are coded 307A and 307E and the dial sets are coded 307B, 307C, 307D, 307F, 307G, and 307H.
- 2.14 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.
- 2.15 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.
- 2.16 The 309-type telephone set is a local battery talking, common battery antisidetone signaling set for use with 4-party selective and 8-party semiselective services. It is similar to the 307 type except that it employs the B3A ringer, 195A capacitor, and in addition, a 405A or 426A electron tube. The manual set is coded 309A and the dial set 309C.
- 2.17 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 equipment.
- 2.18 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 10-terminal connecting block. It is equipped with an F2B-3 handset, a D10D-9 cord, and an 82A apparatus blank, and is arranged to mount a 7-type buzzer and a 152A capacitor (used to suppress radio-frequency induction from the 7-type buzzer). The buzzer and capacitor must be ordered separately.
- 2.19 The 329C telephone set is for use in dial systems and consists of the same component parts as the 329A set, except that a dial and dial adapter replaces the apparatus blank.

3. APPARATUS

COMBINATION OF APPARATUS

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

COMBINATION OF APPARATUS (Contd)

Tel Set Code	Tel Set * Mounting	App Blank	Dial**	Hand-set†	Cord
306A-3 306B-3 306C-3 ††306D-3	H5-3 H5-3 H5-3 H5-3	82A-3	5HA-3 5HB-3 5HE-3	F1A-3 F1A-3 F1A-3 F1A-3	D3AL-9 D3AL-9 D3AL-9 D3AL-9
307A-3 307B-3 307C-3 ††307D-3	H7-3 H7-3 H7-3 H7-3	82A-3	5HA-3 5HB-3 5HE-3	F1A-3 F1A-3 F1A-3 F1A-3	D5AA-9 D5AA-9 D5AA-9 D5AA-9
307E-3 307F-3 307G-3 ††307H-3	H7-3 H7-3 H7-3 H7-3	82A-3	5HA-3 5HB-3 5HE-3	F2B-3 F2B-3 F2B-3 F2B-3	D5AA-9 D5AA-9 D5AA-9 D5AA-9
309A-3 309C-3 329A 329C	H12-3 H12-3 P-339939 P-339939	82A-3 82A-3	5HB-3 5HB-3	F1A-3 F1A-3 F2B-3 F2B-3	D5AA-9 D5AA-9 D10D-9 D10D-9

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

**The 6-type dial may be used instead of the 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.

†E1E-3 handset may be used in place of the F1A-3 if zoning permits.

††May be available from local stock.

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

Notes:

1. 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 and dial adapter may be added locally.

2. The addition of the suffix R to the code number of the telephone set indicates that the set is equipped with a retractile handset cord. For example; a 302A-3 telephone set equipped with a retractile handset cord becomes a 302AR-3 telephone set.

3.01 The cords listed above are the 5-1/2-foot 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 be made to Section C36.101, Station Cords, All Types, 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 telephone set mountings that form a part of the foregoing telephone sets include the following coded apparatus:

Mounting	Ringer	Capacitor	Ind Coil	Inductor	Key	Electron Tube
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 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.

3.03 The 302E, F, and G; 304B and C; 305E, F, and G; and 306A, B, and C plastic telephone sets are available in full color in the colors shown in Table A. Painted sets of the types mentioned above may be obtainable in full color in the colors shown in Table B.

TABLE A
PLASTIC SETS

Color	Color Code	Trans-mitter Cap	Receiver Cap
Ivory	-4	P-349014	P-349015
Old Rose	-16	P-349659	P-349663
Dark Blue	-18	P-349660	P-349664
Gray-Green	-19	P-349661	P-349665
Pekin Red	-20	P-349662	P-349666

TABLE B
PAINTED SETS

Color	Color Code
Old Brass	-6
Statuary Bronze	-7
Oxidized Silver	-8
Dark Gold	-12

3.04 The 302E and G, 304A and C, 306A and C, and 307A and C telephone sets are available in two-tone colors. The table below gives the colors, codes, and piece-part numbers:

Color	Color Code	Housing	Hand-hole Cover
Ivory	-50A	P-15A084	P-15A092
Green	-51A	P-15A085	P-15A093
Gray	-52A	P-15A086	P-15A094
Red	-53A	P-15A087	P-15A095
Brown	-54A	P-15A088	P-15A096
Beige	-55A	P-15A089	P-15A097
Yellow	-56A	P-15A090	P-15A098
Blue	-57A	P-15A091	P-15A099

Note: The P-346014 plunger is used in all sets.

3.05 Neoprene-jacketed cords manufactured prior to 1951 have a tendency to stain light-colored surfaces and should not be used on colored telephone sets other than black.