

BELL SYSTEM PRACTICES
Station Installation and Maintenance

SECTION C31.101
Issue 3, July, 1953
AT&T Co Standard

SUBSCRIBER SETS
DESCRIPTION

1. GENERAL

1.01 This section gives general information relative to the anti-sidetone common battery or L.B.T., C.B.S. subscriber sets. The principal parts and equivalent subscriber sets are listed.

1.02 This section is reissued to include the 531 and 592-type subscriber sets and to delete information regarding sidetone set apparatus; therefore, information herein, referred to as "subscriber sets", except 531, 534, 584 and 592 types, which are extension and loud ringer sets, shall be considered as "anti-sidetone" apparatus.

1.03 For information on the use of sets described herein, see sections in Division C60 entitled "Station Sets by Class of Service".

2. DESCRIPTION

(A) Wall Type Sets

2.01 The 433, 633, and 653-type sets are wall sets having a metal housing. The base of the case is flanged to prevent marring of walls when used without a backboard. The 433-type set has exposed gongs, whereas the 633 and 653 types have enclosed gongs. These sets have a separate receiver and transmitter and in addition to a ringer, they contain an induction coil and in some cases an additional condenser. The 433 and 633 types are for manual service and the 653 type may be arranged for either manual or dial service. A writing shelf can be provided with these sets by using a No. 146A backboard.

2.02 Wall sets equipped with hand sets have been made available through conversion of existing 653-type sets. A modified switchhook is provided in converted sets so as to support a hand set instead of a receiver.

(B) Bell Boxes

2.03 The 434, 634 (except 634BD) and 684-type sets are bell boxes for use with hand telephone sets, desk stands, etc. These sets contain a ringer, induction coil and in some cases more than one condenser. The 434-type set has exposed gongs whereas the 634 and 684 types have enclosed gongs. The 684-type set has a metal base with a moulded plastic cover and is smaller than the other bell boxes mentioned above which have metal bases and covers.

2.04 The 495 BP and CT sets differ from other type sets only in the respect that they have wood cases with exposed gongs for use where subscribers have impaired hearing.

(C) Extension Ringers—Loud Ringing Bells

2.05 The 531-type subscriber set, is an extension ringer set for interior use. The set has the same general appearance as the 684-type bell box but is considerably smaller. The base is metal and the cover is made of a black thermoplastic material. The 531A-type set contains a ringer, condenser and a terminal strip with five screw terminals and the 531C-type set contains a vacuum tube, relay, varistor and two terminal strips. The 171A backboard is designed for use with these sets.

2.06 The 592-type subscriber set is a loud ringing bell designed for either outside or inside use. The set consists of a ringer mounted on a metal base. The mechanism and clapper rod are protected by a cover casting which extends between the gongs. The exposed gongs are mounted on two resonators which serve as supports for the gongs as well as gong tone. In addition to a ringer, the 592A set contains a condenser and the 592C set a vacuum tube. The 592B set is designed for use on magneto lines. As there is no protective cover on the set, the 169A backboard is intended for housing the set where protection from the weather is necessary.

Note: The use of these sets is subject to the limitations specified in Section C63.251 for non-polarized ringing lines and in Section C63.252 for polarized ringing lines.

(D) Battery Feed Filter

2.07 The 634BD subscriber set is used as a battery supply filter with local battery talking, common battery signaling station sets as specified in Section C63.289. It contains an induction coil and condensers and in appearance is the same as the 634-type bell box.

(E) Standard L.B.T., C.B.S. Sets

2.08 Standard subscriber sets for local battery talking, common battery signaling anti-sidetone station connections are designed to prevent current from the central office from passing through the receiver or a varistor which may be connected in parallel with the receiver. These sets, coded 634YD, 653YD, 634YDT, and 653YDT (or superseded 634BB and 653BB) are required at local battery talking stations where HA1 receiver units and similar receivers or head receivers with varistors are employed. A 101A or equivalent induction coil, employing only the "R-L1" winding and used as a retardation coil, and a 2 mf condenser are provided in these sets in addition to the regular induction coil and network provided in other local battery talking sets.

3. APPARATUS

(A) General

3.01 The tables on Pages 4, 5 and 6 list the principal parts of the various types of subscriber sets referred to herein. The sets listed in the table on Page 5 are equivalent sets principally in respect to circuit arrangement.

3.02 The condensers, dials, induction coils, etc., shown in the tables cover the latest type of apparatus used in the subscriber sets listed. Sets made available by conversions of other types of repaired sets may, of course, contain equivalent dials, condensers, coils, etc. In this connection later type condensers which are tested for breakdown at 300 volts (condensers stamped "L" in one end) may be provided for talking condensers only.

(B) Extension Ringer Terminal

3.03 To facilitate wiring an extension ringer in place of the normal ringer in the set or wiring to a ringer cutoff key, etc., the following "E" terminals are available for installation in sets where such a terminal or other spare terminal is not provided:

Subscriber Set	Terminal Piece Part
634 and 653 types except 634BB and 653BB	P-218870
*684 types, 634BB and 653BB	P-290055

* In 684-type sets with 146C induction coil, use terminal P-231008 and mounting screw P-143186.

PRINCIPAL PARTS OF SUBSCRIBER SETS

Subscriber Set Code		Ringer	Gongs (Note 1)	Condensers	Induction Coils	Vacuum Tube	Relay	†Appa- ratus Blank	†Type Dial	Switch- hook	Cords ←
Standard	Equivalent										
495BP	—	8A	38A	194A	101A	—	—	—	—	—	—
495CT	—	8A	38A	194A	101A	426A	—	—	—	—	↑
634AT	434AT, 634AR, 634FR	68A	29C	194A	101A	426A	—	—	—	—	↑
**634BD	—	—	—	147A(2)	46	—	—	—	—	—	—
634CR	—	72G	29C	194A, 149B	101A	—	85N	—	—	—	—
634YD	634Y, 634BB	B1AL	41A, 41B	147A, 149B, 149D	101A, 104A	—	—	—	—	—	—
634YDT	634YR, 634YT	68A	29C	147A, 149B	101A, 104A	426A	—	—	—	—	↑
653A	*433B, *633A	68A	29C	194A	101A	—	—	50B	6A	140AK	T1C
653AT	*433BT, *633AR, *633AT, 653AR, 653FR	68A	29C	194A	101A	426A	—	50B	6A	140AK	T1C
653BA	*633BA	B1AL	41A, 41B	194B	101A	—	—	50B	6A	140AK	T1C
653BC	—	68AA	29C	194A	101A	—	—	50B	6A	140AL	T1C
653CR	*633CR	72G	29C	194A, 149B	101A	—	85N	50B	6A	140AL	T1C
653YD	*633Y, 653Y, 653BB	B1AL	41A, 41B	147A, 149B, 149D	101A, 104A	—	—	50B	6A	140S	T1C
653YDT	*633YT, 653YR, 653YT	68A	29C	147A, 149B	101A, 104A	426A	—	50B	6A	140S	T1C
684A	434A, 634A	78A	36A, 37A	194A	101A	—	—	—	—	—	—
684C	434R, 634C	—	—	147A	101A	—	—	—	—	—	—
684BA	634BA	B1AL	41A, 41B	195A	101A	—	—	—	—	—	—
684BC	634BC	78AA	36A, 37A	194A	101A	—	—	—	—	—	↑

* Sets for use at manual stations only.

** Requires an 18 or 19-type resistance.

†Furnished only when specified.

Note 1: Two 31C, two 32C or 33C gongs will be furnished instead of 29C gongs when specified. Two 36B, two 36D or one 39A gong will be furnished instead of one 36A and one 37A gong when specified.
Two 40C, or one 40D and one 40E gong will be furnished instead of one 41A and one 41B gong when specified.

EQUIVALENT SETS AND PARTS

Subscriber Set Code	Ringer (Note 2)	Gongs (Note 1)	Condensers	Induction Coil	Vacuum Tube	Relay	Cords	Switch- hook	↑
*433B	6A	25A	194A	101A	—	—	T1A	140AK	↑
*433BT	6A	25A	147A	101A	426A	—	T1A	140AK	↑
434A	6A	25A	194A	101A	—	—	—	—	↑
434R	—	—	147A	101A	—	—	—	—	↑
434AT	6A	25A	147A	101A	426A	—	—	—	↑
*633A	68A	29C	194A	101A	—	—	T1A	140AK	↑
*633Y	68J	29C	149B(2)	104A	—	—	T1A	140S	↑
*633AR	68A	29C	194B	101A	—	85N	T1A	140AK	↑
*633AT	68A	29C	194A	101A	426A	—	T1A	140AK	↑
*633BA	68J	29C	194B	101A	—	—	T1A	140AK	↑
*633CR	72G	29C	194A, 149B	101A	—	85N	T1A	140AL	↑
*633YT	68A	29C	149B	104A	426A	—	T1A	140S	↑
634A	68A	29C	194A	101A	—	—	—	—	↑
634C	—	—	147A	101A	—	—	—	—	↑
634Y	B1AL	41A, 41B	149B(2)	104A	—	—	—	—	↑
634AR	72A	29C	194B	101A	—	85N	—	—	↑
634BA	68J	29C	194B	101A	—	—	—	—	↑
634BB†	68J	29C	149A, 149B(2)	62	—	—	—	—	↑
634BC	68AA	29C	194A	101A	—	—	—	—	↑
634FR	68P	29C	194B	101A	—	85P	—	—	↑
634YR	68P	29C	149B(2)	104A	—	85P	—	—	↑
634YT	68A	29C	149B	104A	426A	—	—	—	↑
**653Y	B1AL	41A, 41B	149B(2)	104A	—	—	T1C	140S	↑
**653AR	72A	29C	194B	101A	—	85N	T1C	140AK	↑
**653BB†	B1AL	41A, 41B	149A, 149B(2)	62	—	—	T1C	140AL	↑
**653FR	68P	29C	194B	101A	—	85P	T1C	140AK	↑
**653YR	68P	29C	149B(2)	104A	—	85P	T1C	140S	↑
**653YT	68A	29C	149B	104A	426A	—	T1C	140S	↑

* Sets for use at manual stations only.

** Either a 50B apparatus blank or a 6A or equivalent type dial will be furnished when specified.

†Set also contains a 54S retard coil and a 63H resistance.

Note 1: Two 31C, two 32C or 33C gongs will be furnished instead of 29C gongs when specified.

Two 40C or one 40D and one 40E gong will be furnished instead of one 41A and one 41B gong when specified.

Two 101A gong attachments will be furnished with 41-type gongs when specified.

Note 2: B1AL ringer may be furnished in place of 68J ringer.

PRINCIPAL PARTS OF EXTENSION RINGER SUBSCRIBER SETS

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Subscriber Set Code	Ringers	Gongs (Note 1)	Condensers	Vacuum Tube (Note 2)	Relay
Standard					
†531A	B1AL	41A, 41B	198B	—	—
**531C	—	—	—	426A	UA112
592A	††B1A	26B	198B	—	—
592B	††B1A	26B	—	—	—
592C	††B1A	26B	—	359A	—

OTHER EXTENSION RINGER SETS AND PARTS

(Mfr. Disc.)

534DE	68J	29C	*1149B	—	—
534DF	68A	29C	*1149A	—	—
534DT	68A	29C	—	426A	—
584DE	B1AL	41A, 41B	198B	—	—
584DF	78A	36A, 37A	†1149A	—	—

† Supersedes the 584DE Subscriber Set.

†† Similar to the B1A-type ringer but with modifications to suit the 592-type structure.

* Furnished only when specified. Condensers are equipped with lead and cord tips.

** Has 20A varistor.

Note 1: Two 42A gongs will be furnished instead of 26B gongs when specified.

Two 31C, 32C or 33C gongs will be furnished instead of 29C gongs when specified.

Two 36B, 36D or one 39A gong will be furnished instead of 36A and 37A gongs when specified.

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BELL SYSTEM PRACTICES
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ADDENDUM C31.101
Issue 1, May, 1954
AT&T Co Standard

SUBSCRIBER SETS
DESCRIPTION

1. GENERAL

1.01 This addendum supplements Section C31.101, Issue 3. It is issued to add information on B-type ringers used as replacements for numbered types; to add information on the use of key telephone units for battery supply filters on local battery talking, common battery signaling stations; and to make other changes of a minor nature.

1.04 Add the following paragraph: For ordering information on subscriber sets shown in the tables in this section, refer to the supply catalog, since some of the sets are rated "Manufacture Discontinued."

2. DESCRIPTION

2.07 Add after the last sentence: A 27A key telephone unit, used with a 2A or 12A key telephone unit, replaces the 634BD subscriber set for use as a battery supply filter with local battery talking, common battery signaling stations. Connections information is contained in Section C63.289, "L.B.T., C.B.S. Antisidetone Stations, Balancing Network and Battery Supply Filter—Connections."

3. APPARATUS

In the table entitled "Principal Parts of Extension Ringer Subscriber Sets" delete the reference to "Note 2" under **Vacuum Tube**.

Add the following table:

Replacements for Numbered-Type Ringers	
Numbered Types	B-Type Replacements
6L, 6JA	B1D
66JA	B1E
38B, 45B	B1F
8A	B3B
8A	*B3C
78AB	B4A
52A	B5A
68L	B1AL

* For use with tube sets.