

**B.S.P.M. 461**

755A PBX

PBX SYSTEMS

**1. GENERAL**

Scope

1.01 This specification, together with the supplementary specifications and drawings listed herein, covers the equipment design requirements for the manufacture and installation of the 755A private branch exchange. This PBX has been designed to replace the 750A PBX.

1.02 This specification is reissued:

- (a) To furnish new equipment codes for relay units arranged for machine wrapped wiring and equipped with common covers.
- (b) J58819A, F, G, H, J, K, and L are rated "Mfr. Disc." replaced by J58819N, T, U, W, Y, AA, and AB.
- (c) J58819B, C, and D are rated "A&M Only" replaced for new PBXs by J58819P, R, and S, respectively.
- (d) To change the color of the casing to beige-gray.

Capacity

1.03 The capacity of the 755A PBX is:

Station lines	20
Central office trunks	4
Link circuits	3

Operating Ranges

1.04 Station conductor loop	285 ohms
Trunk conductor loop	625 ohms*

\*Or more depending on type of central office

Description

1.05 The 755A PBX is a small dial equipment developed to replace the 750A PBX. It provides secret intercommunication service and outside trunk service without an attendant. Local calls are dialed and central office trunk connections are made by operating keys at the stations. The PBX has a capacity of 20 lines and four trunks and has been designed for both residential and business service. Three local intercommunicating paths are provided in addition to the four-trunk paths so that, in all, seven talking connections may be set up simultaneously.

1.06 The equipment is arranged on a low floor-supported relay rack which is enclosed and provided with removable casings, front and rear to afford access to apparatus and wiring. The associated power equipment, including the storage batteries is housed in

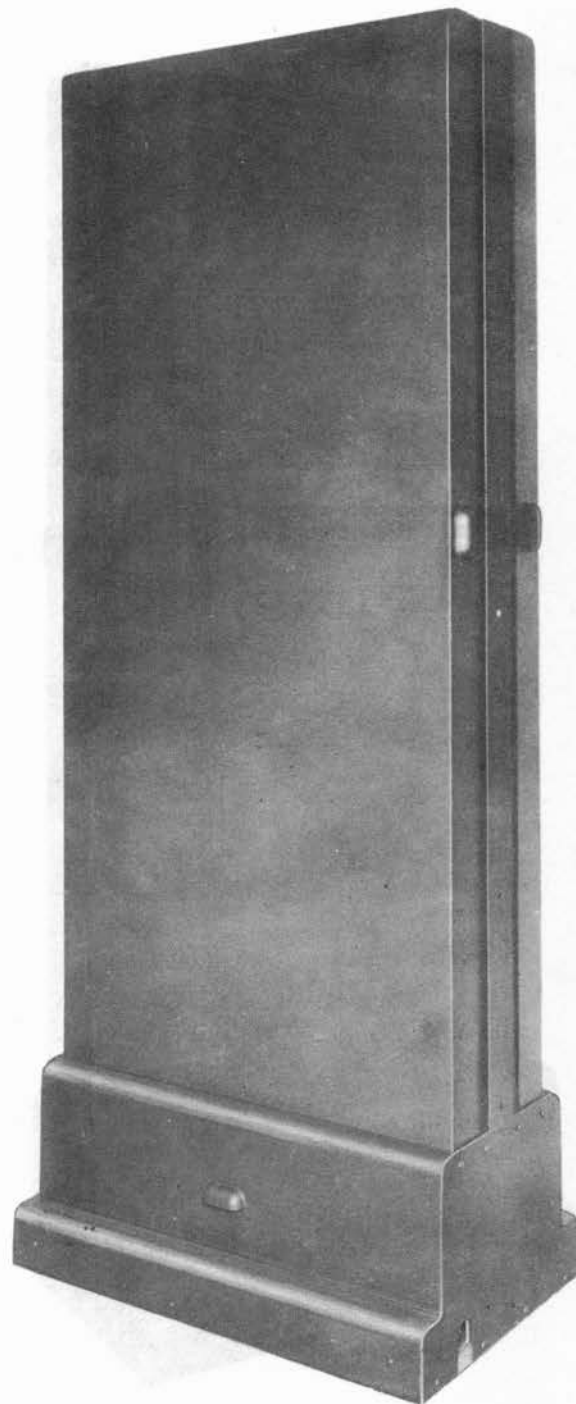


Fig. 1 - 755A PBX in Casing

a separate compartment in the base of the rack. Arrangements are also made so that cross connections between the station leads and the relay equipment associated with the line may be made within the PBX.

1.07 To provide flexibility in equipping lines, trunks, and links as required, the apparatus associated with these circuits

is arranged on a unit basis. Complete PBXs are stocked in certain equipment sizes, but in those cases where a stock size does not meet specific requirements, it may be modified as required by the addition of one or more equipment units. The units are assembled, wired, and tested in the factory so that they may be readily added.

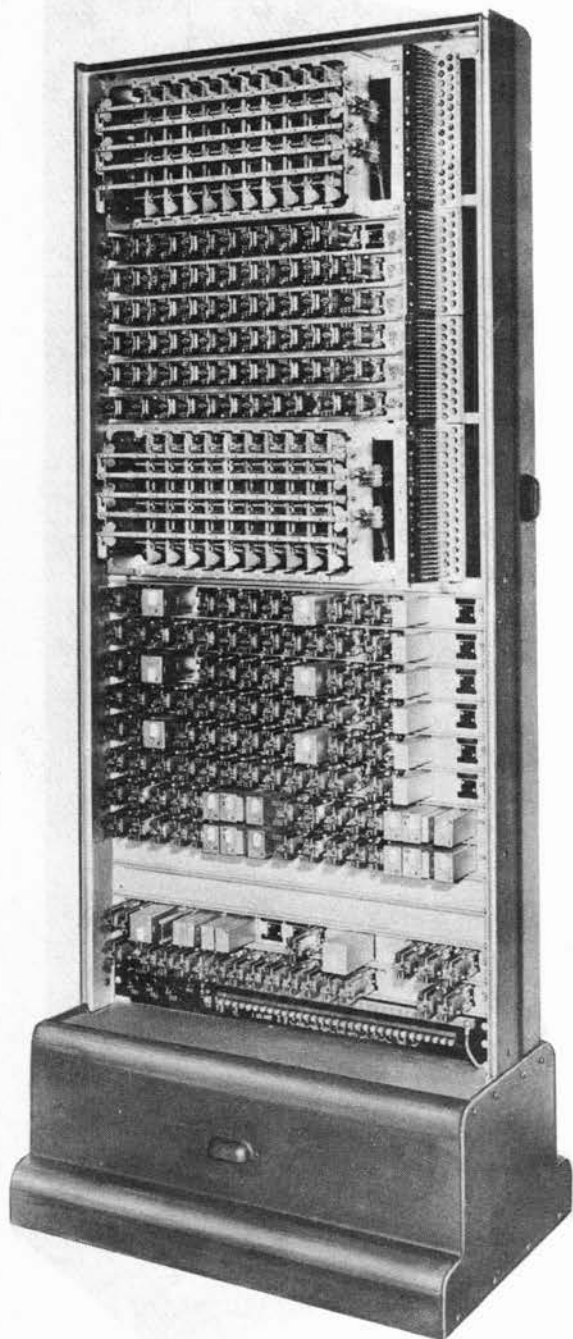


Fig. 2 - 755A PBX - Upper Front Casing Removed

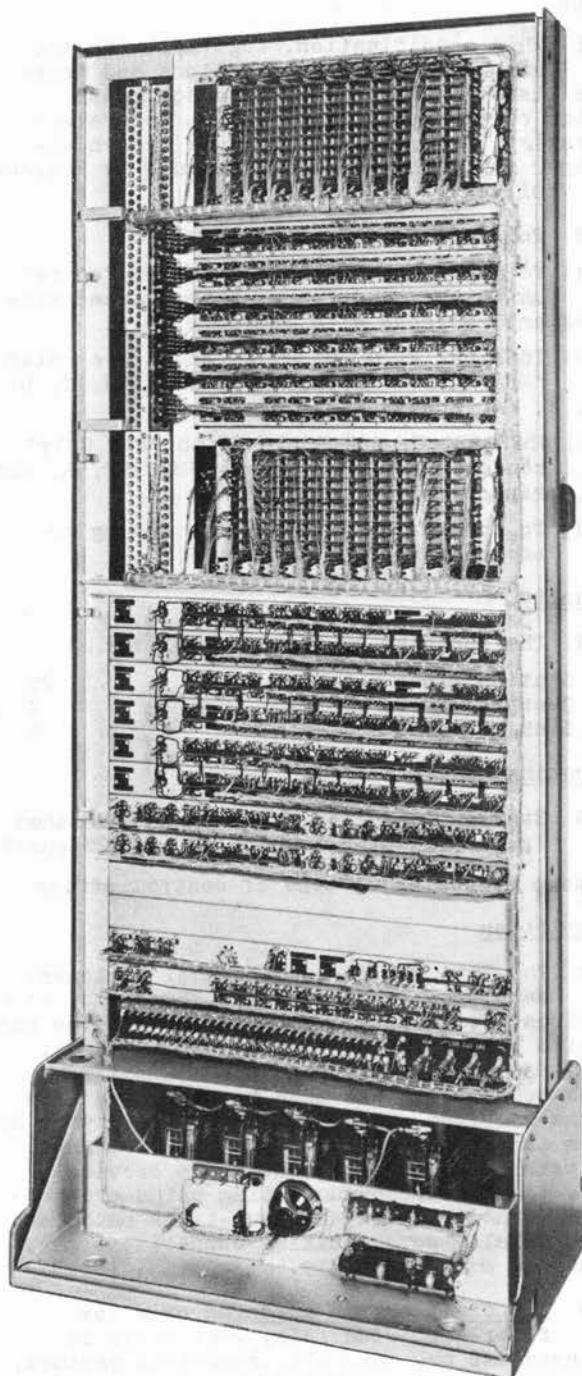


Fig. 3 - 755A PBX - Rear Casings Removed



1.08 On local calls, the operation of the dial causes the crossbar switch to connect the calling to the called line through one of the three link circuits. On outgoing central office calls the operation of a trunk key at the station causes the switch to connect the calling line direct to the selected trunk circuit. On an incoming trunk call, an audible signal (and a visual signal if desired) indicates which trunk is in use. The call is picked up at any key station by the operation of the corresponding trunk key at that station. If the incoming call is for a person at another station, the trunk may be held while the wanted person is dialed. After answering, the second party is advised as to which trunk the call is on so that he may connect it by operating the corresponding trunk key at his station.

1.09 Key Stations: Stations may or may not be afforded central office service. Those requiring central office service are referred to as key stations and are equipped with six keys, either as a part of the station set or in a separate key unit adjacent to it. Four of the keys are associated with the trunks, one is for holding, and the last for local connections. Nine wires are required to connect the key station to the switching equipment when all four trunks are equipped. One less wire is required for each trunk not equipped.

1.10 Keyless Stations: Stations to be afforded only local service are referred to as keyless stations and are equipped with standard 2-wire dial telephones. For stations located some distance from the switching equipment, the 2-wire circuits will often be preferable.

1.11 Three types of central office service for key stations are available:

- (a) Lockout, to prevent the station from being connected to a busy trunk.
- (b) Nonlockout, to afford the station access to the central office trunk even though it may be busy.
- (c) Restricted, to afford no outgoing trunk service but to permit answering incoming calls and picking up transferred calls.

1.12 Optional Central Office Service for Keyless Station Through Control Station:

So that a keyless station may be connected to the central office, a control key is available to be located at a particular key station and that station may, at the request of the keyless station especially arranged for it, connect the keyless station to a central office trunk. One control key may serve two keyless stations and facilities are provided for arranging two keyless stations for this service on an optional basis.

1.13 Conference Service: Provision is made so that any 3-key or keyless stations may be interconnected for conference purposes.

Conference service is also possible on a trunk connection for key stations which are arranged for nonlockout service.

1.14 Local Line Pickup: Key stations may be arranged to pick up local calls directed to another station by means of a key.

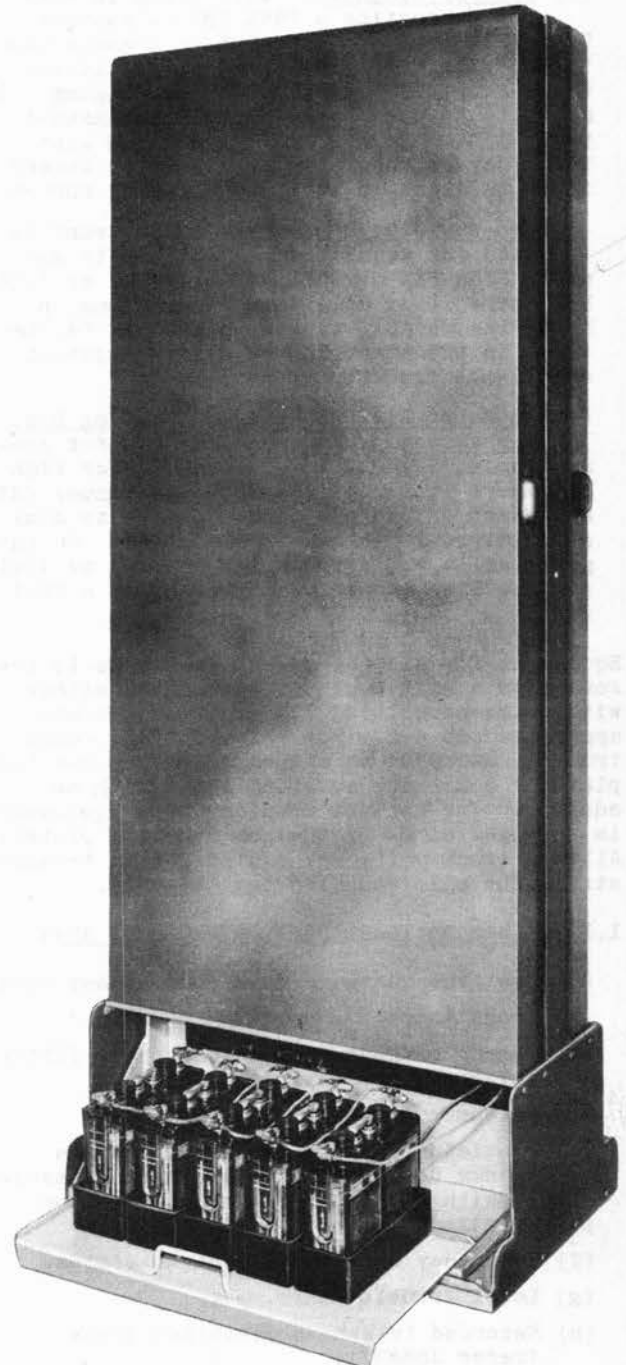


Fig. 4 - 755A PBX Showing Batteries in Position for Maintenance

1.15 Line Lamps: Provision is also made for line lamps on an optional basis. The line lamp feature combined with the line pick-up feature facilitates the use of the PBX for secretarial service.

1.16 Tie Trunks: Three types of tie trunks are available for connecting a 755A PBX to other manual or dial PBXs as follows:

(a) Two-way Ringdown: This trunk is used for connecting a 755A PBX to another 755A PBX or to a manual PBX or magneto central office over local or toll facilities which are arranged for 20-cycle ringing. It may also be used on a code ringing manual party line. If desired, associated line lamps may be furnished either to be locked in or to flash in step with ringing current.

(b) Two-way Dial Repeating: This trunk is used for connecting a 755A PBX to another 755A PBX or 701A, 711A, 740E, or 702A PBX where it is desired that stations in both PBXs be able to complete calls to stations in the other PBX by dialing without assistance from an attendant.

(c) Outgoing Dial Selected - Incoming Dial Repeating: This trunk is used for connecting a 755A PBX to a manual PBX or 740A PBX where it is desired that the manual PBX attendant or 740A stations be able to dial calls directly to any 755A station. On outgoing calls, this trunk is selected by dialing the line number of the trunk at a 755A station.

Equipment for all the above tie trunks is arranged on a unit basis to be mounted either within the associated PBX or in a separate apparatus cabinet. For PBX mountings, each trunk is arranged on either a 26-inch mounting plate or a 23-inch mounting plate with an adapter. For cabinet mounting, the equipment is arranged on 2- by 23-inch mounting plates. All the trunk units are equipped with terminal strips for all leads leaving the unit.

#### 1.17 Other Optional Service Features Are:

- (a) Two line hunting groups, two lines each.
- (b) Trunk lamps.
- (c) Common ringers for trunks, three different group combinations.
- (d) Extension key stations.
- (e) Provision to pick up central office trunks for stations not otherwise associated with the PBX, for example, wiring plan stations.
- (f) Emergency service to central office.
- (g) Local trouble alarm.
- (h) Recorded telephone dictation trunk (refer J58827).

1.18 Battery and Ringing Supply: The PBX operates over a voltage range of 18 to 25 volts provided by a small local battery or

a building battery. The individual local battery may be charged either over cable pairs from central office or by means of a local Rectox charger. Continuous ringing supply is usually obtained from the central office. Where not available, a local ringing machine may be provided. The dial and busy tones as well as interrupter ringing are furnished by means of relays in the common timing, tone, and ringing circuit.

#### Operating Features

1.19 The 755A PBX, by means of the crossbar switch, the associated relays, and the dials and keys at the stations, permits the connection of any station to any other station over any one of three links and to any one of four central office trunks.

1.20 Each line occupies one vertical of a crossbar switch where it is afforded access to all the links and trunks which occupy the horizontals. On each vertical there are ten sets of relay-like springs with the stationary contacts multiplied vertically and connected to the T, R, etc., of a particular line. Each set of moving contacts is multiplied horizontally through both switches and connected to the T, R, etc., of the trunks and links. In this way any line may be connected to any horizontal by the closure of a particular set of contacts which is called a cross-point.

1.21 A local call is carried on through a double-ended link, one end associated with the calling station and the other with the called station so that each link occupies two horizontal levels. Each trunk requires only one level for connecting to any line whether calling or called.

1.22 To connect a line to a particular link or trunk, all sets of springs on the associated horizontal are momentarily marked by the operation of a selecting magnet. This inserts a finger between the armature and each set of springs on that level. The holding magnet associated with the line vertical is then operated to close that particular line through to the marked link or trunk after which the selecting magnet releases. All of the selecting fingers except the one associated with the chosen line return to normal with the release of the selecting magnet. This one finger is trapped upon the operation of the holding magnet and is the means of closing the contact springs at the selected crosspoint.

1.23 Each key station is provided with six keys: a local key L, four trunk keys 1, 2, 3, and 4, and a hold key H so arranged that the operation of any key furnishes a ground to actuate a particular relay in the switching equipment and thus to prepare the circuits for the desired function. The completion of typical calls is illustrated in Figs. 8 and 9.

C-5128  
2600

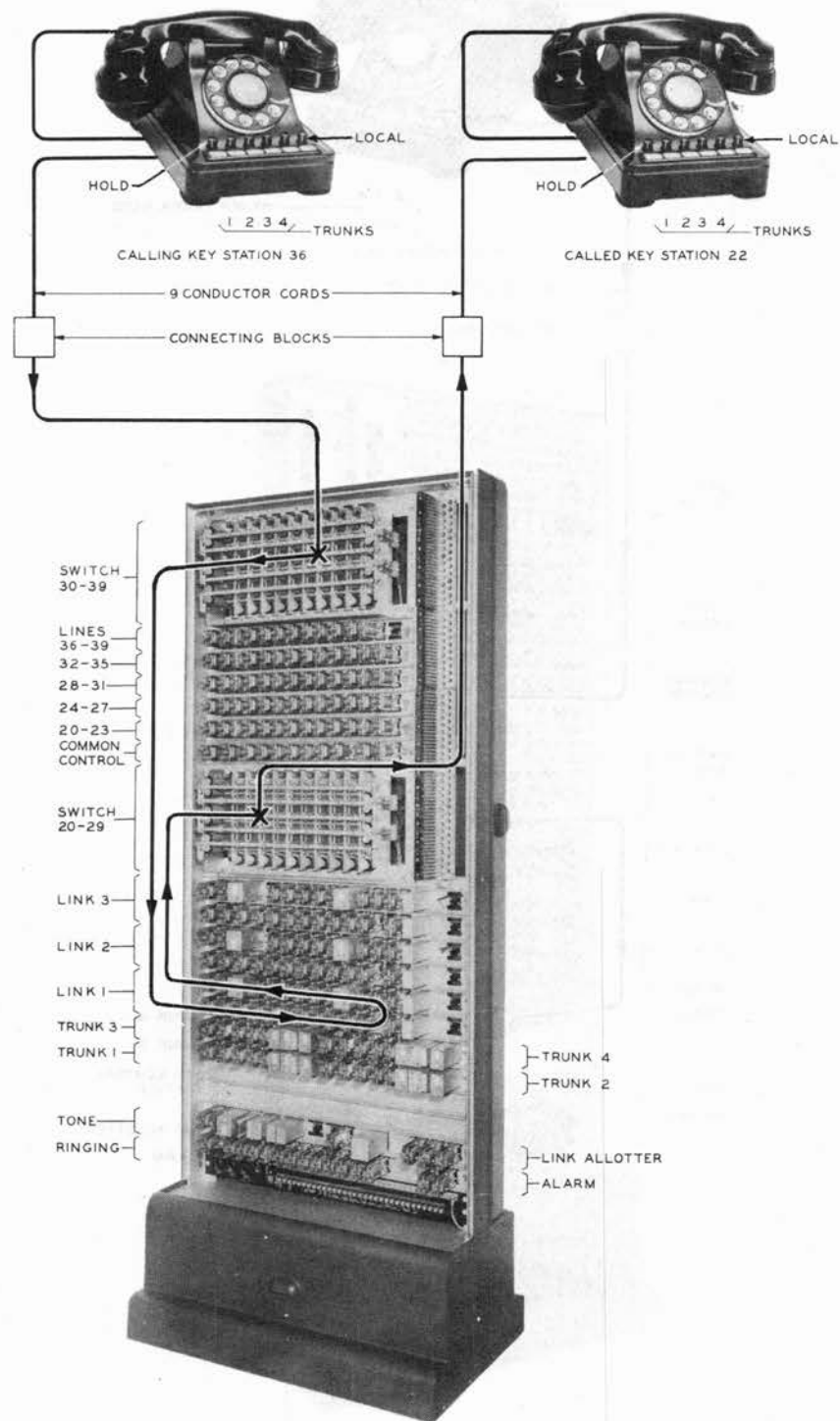


Fig. 5 - Local Station Calling Local Station



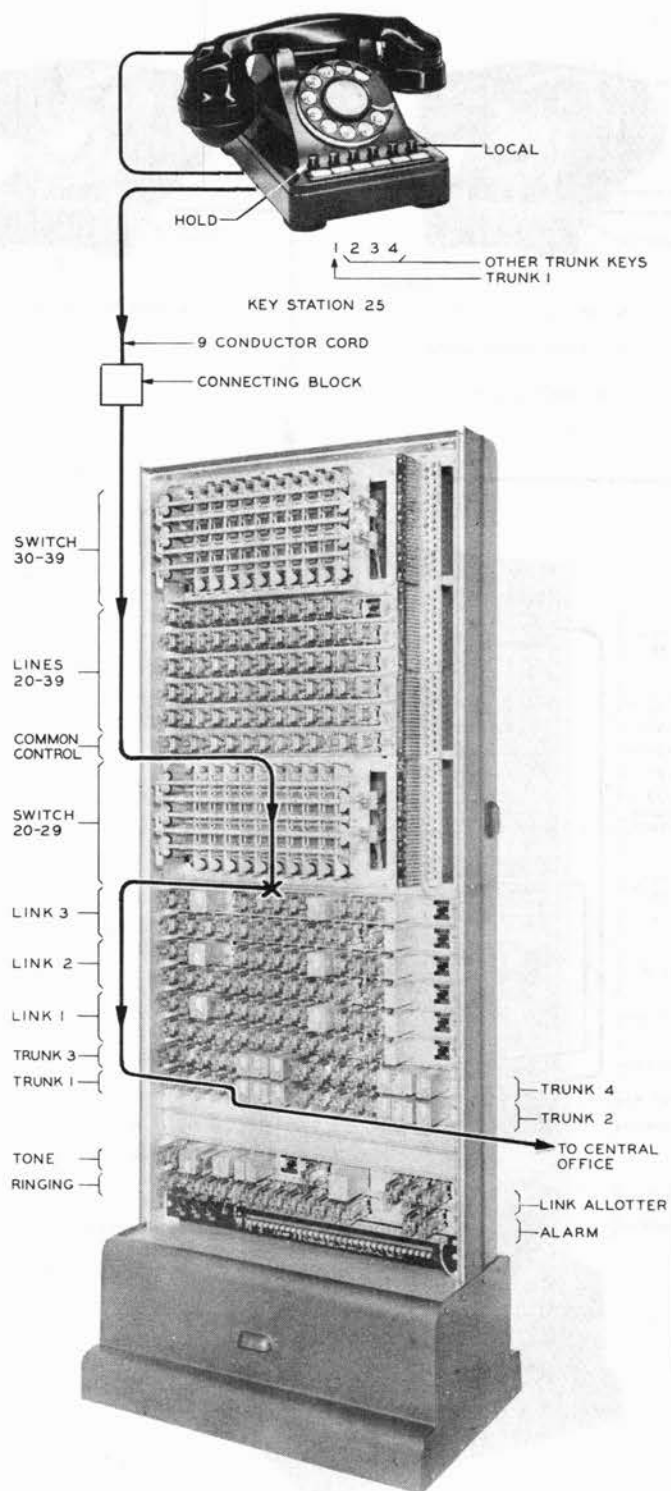


Fig. 6 - Key Station Calling Central Office

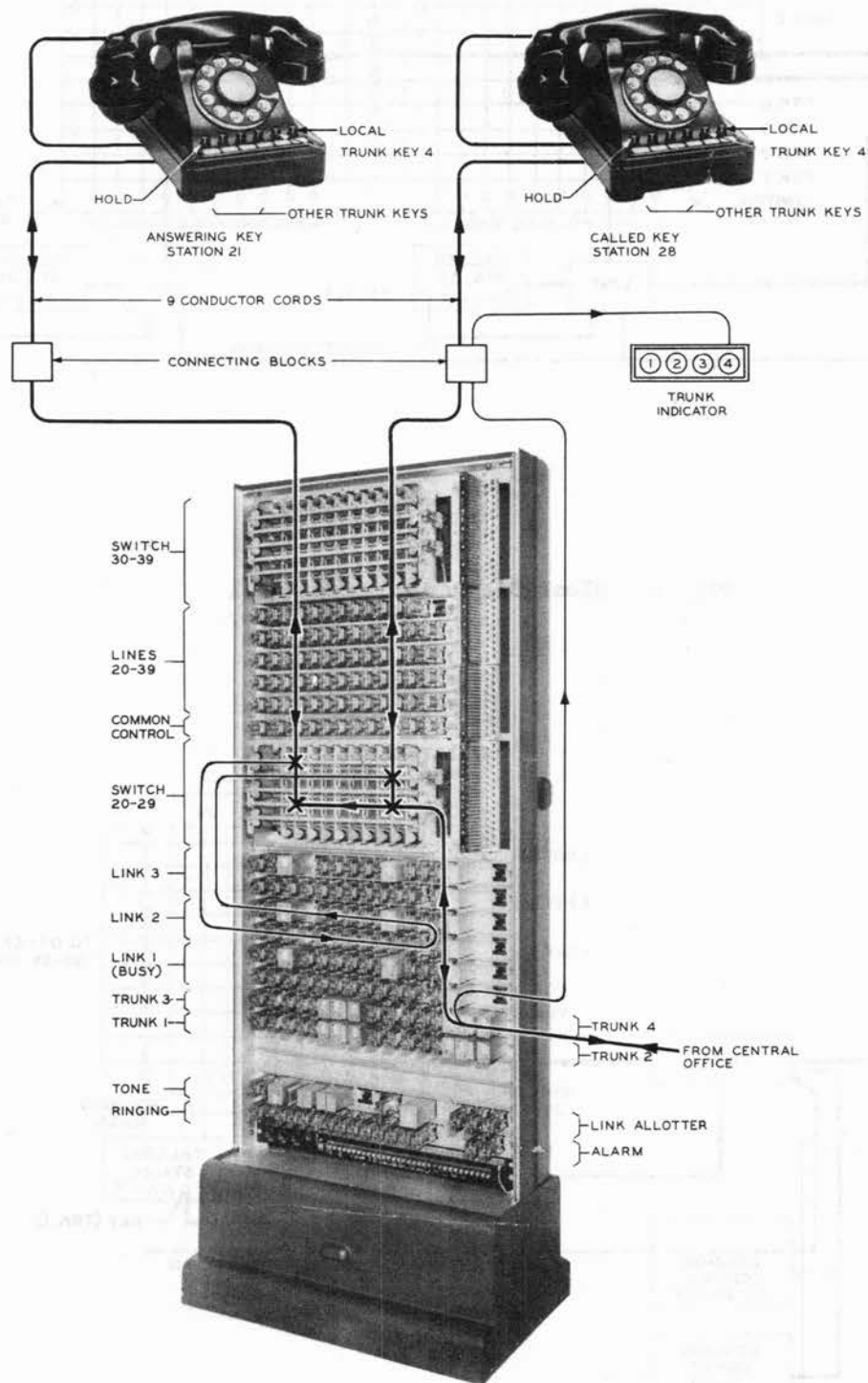


Fig. 7 - Central Office Calling Key Station

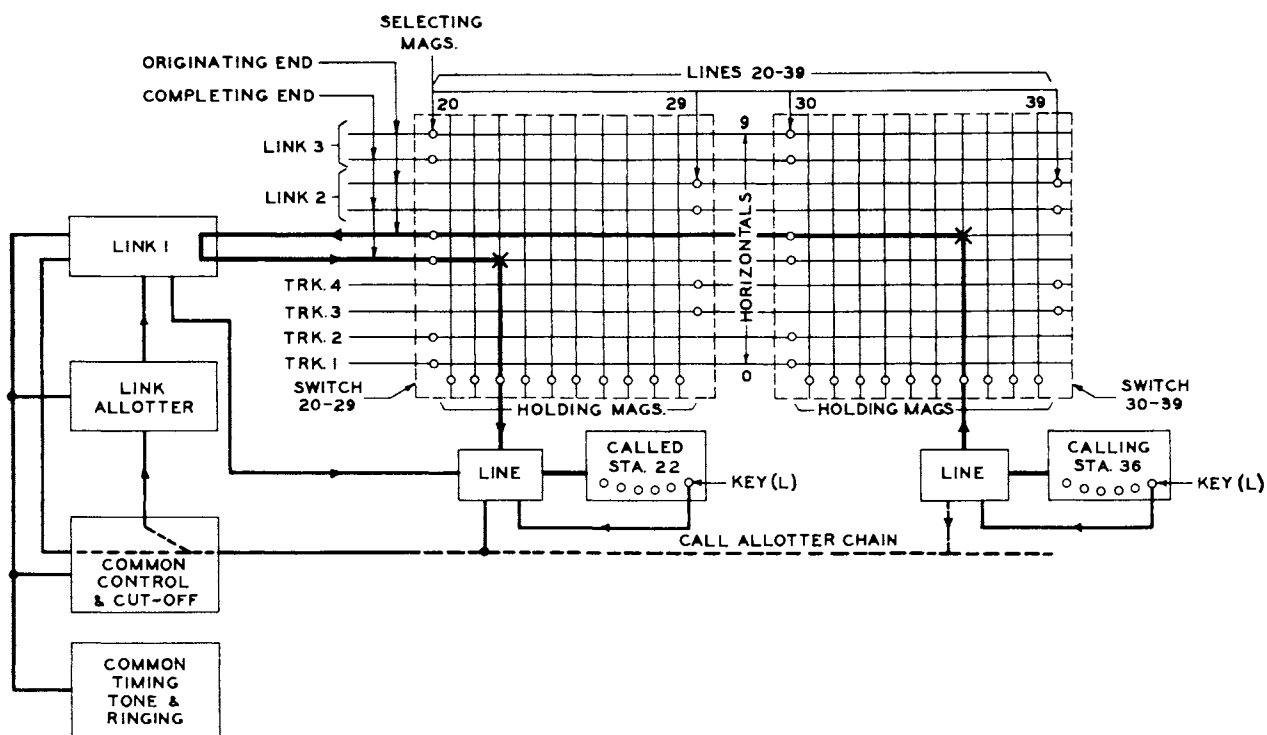


Fig. 8 - Block Diagram of Local Call

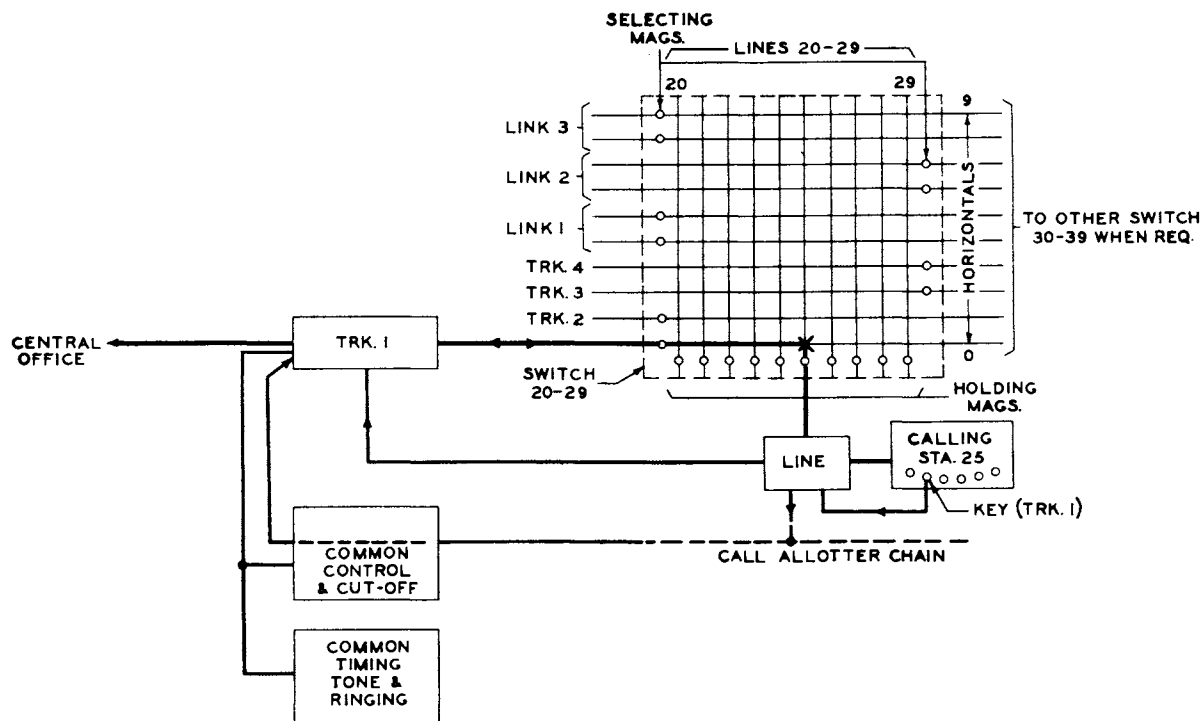


Fig. 9 - Block Diagram of Central Office Call



1.24 Station-to-Station Call: Amplifying the general picture shown in Fig. 5, the progress of a local station-to-station call is illustrated in Fig. 8.

1.25 Progress of Typical Station-to-Station Call - Line 36 Calling Line 22:

- (a) Calling line depresses L key, lifts receiver and, through call allotter chain, in its turn seizes the common control which, through the link allotter, chooses the first idle link (assume link 1).
- (b) Control causes link to operate the selecting magnets associated with its originating end (level 5) and prepares for any line to be connected to this level.
- (c) Control causes holding magnet associated with the calling line to operate and connect line 36 to level 5 at crosspoint. Control releases selecting magnets and returns to normal awaiting next call.
- (d) Link returns dial tone and dial pulses from calling station and sets up certain combinations of registering relays in link corresponding to called line 22.
- (e) Link tests called line and if idle, through common control, operates the selecting magnets associated with its completing end (level 4) and prepares for any line to be connected to this level.
- (f) Called line holding magnet operates and connects line 22 to level 4 at crosspoint. Control releases selecting magnets and returns to normal awaiting next call.
- (g) Link applies ringing and when called line answers supplies talking battery.
- (h) Talking path is direct from calling line 36 through link to called line 22.
- (i) Where a keyless station is involved, the operation is the same except that no L key is used.

1.26 Central Office Call: Amplifying the general picture shown in Fig. 6, the progress of a central office call is illustrated in Fig. 9.

1.27 Progress of Typical Central Office Call - Line 25 Connecting to Trunk 1

(a) Outward:

- (1) Person at the calling station depresses idle trunk key (assume key 1) and line circuit through call allotter chain causes trunk to operate associated selecting magnets, and prepares for any line to be connected to level 0 (trunk 1) of switch.
- (2) Control causes holding magnet associated with calling link to operate and connect line 25 to level 0 at crosspoint. Station is thus connected through crossbar switch and trunk to central office.

- (3) Control releases selecting magnets and returns to normal awaiting next call.
- (4) If the trunk is busy and calling station is arranged for lockout service, the person at the station receives busy tone. With nonlockout service he would be connected to trunk even though busy, and might request that original user disconnect from the trunk. With restricted service, the calling station is denied access to the trunk and busy tone is returned.

(b) Inward:

- (1) On an inward call the operation is identical with above except that a trunk lamp or bell indicates on which trunk the incoming call awaits so that corresponding key may be depressed at station. Stations, even though restricted on outward trunk service, can still answer inward calls.

1.28 Trunk Signals: An incoming trunk call is accompanied by an audible signal. This audible signal may be common to all trunks or may be individual to any trunk. When the audible signal is individual, ringers or buzzers with distinctive tones are used to distinguish calls on different trunks. The audible signal follows ringing current as applied at the central office. Where the common audible signal is used, supplementary visual signals (trunk lamp indicators), located near the answering station, are also required. These lamps flash by means of a local relay interrupter circuit to indicate incoming calls and light steadily to indicate busy trunks. The lamps may be housed in either a surface-mounted 4-lamp indicator or a flush-mounted 3-lamp indicator. Colored lamp caps are furnished to distinguish the different trunks. With the use of illuminated key button telephone sets, the lamp indicators may be dispensed with and the visual signals incorporated in the new key button telephone sets. Where it is desired, separate lamp indicators may be used as noted on the circuit or in conjunction with the illuminated key button telephone sets. Sufficient punchings are reserved on the PBX terminal strips for as many as four appearances for each trunk. A designation strip, which is marked to associate the keys with their corresponding lamps, is furnished with the keys. No additional relays or wiring inside the PBX is required for the trunk lamp feature.

1.29 Trunk Transfer: An incoming trunk call may be answered at any key station by depressing the key 1, 2, 3, or 4 associated with that particular calling trunk and lifting the receiver. Frequently one person is assigned the duty of answering these calls. If the call is to be transferred, first the hold key H and then the local key L is depressed and the desired station dialed. Upon answering, the party to whom the call is to be

transferred, if at a key station, is informed which trunk is calling and is thereupon connected to the trunk by depressing the correct trunk key at his telephone. The first party may then replace his receiver and free his line.

### 1.30 Optional Trunk Service for Keyless

Station: A keyless station, when so arranged, may originate a trunk call through a particular key station known as the control station. In this case the keyless station dials the control station and requests the person there to establish a trunk connection. The calling keyless station awaits the trunk connection with the receiver removed. After the control station has been connected to the trunk, a nonlocking transfer key provided for the purpose at the control station is operated which transfers the trunk to the keyless station, and the trunk is held as long as the receiver at the keyless station is off the hook. The person at the control station by hanging up his receiver releases his connection and frees his line for use on other calls. An incoming trunk call to the control station may be transferred to the keyless station by the same means.

1.31 Conference Service: Either a key or keyless station may originate a conference connection with two other stations. This is done by first dialing one of the desired conferees and informing him of the proposed conference. The receiver at this called station is then replaced and the third station is dialed from the originating station without reoperating the switchhook at that station. While the third station is being rung, ringing is also applied to the second station. After the receiver has been removed at the third station, ringing is tripped at both called stations and the receiver is then removed at the second station to complete the connection.

1.32 If the third station is busy at the time, busy tone is received at the originating station. At the second station, ringing is applied when the first digit is dialed for the third station whether or not the third station is busy, but no further ringing is heard if the third station is busy. When ringing ceases, then the person at the second station removes the receiver and is informed by the originator of the call that the third station is not available at that time.

1.33 Optional Line Lamps: An additional relay is required for each line to be provided with line lamps. Drillings are available for these relays on the call allotter unit, the link unit, and the tone, charge, and link allotter unit. Miscellaneous punchings have been reserved on one of the terminal strips for the leads to the line lamps for three lines and as many as four lamp appearances may be provided for each line so arranged. All associated wiring is provided at the time the relay is equipped. Indicators with either one, two, or three lamps with different colored lamp caps are available.

1.34 Optional Local Line Pickup: Any key station may be arranged to pick up local calls directed to another particular station. This may be done by operating either a spare trunk key in the station set or a separate nonlocking key. In the latter case the L key in the station set is also operated to hold the call after the nonlocking key has released. When a spare trunk key is used, two additional relays are required. Otherwise only one is needed. Wiring to these relays is provided at the time the relays are added. Usually the spare drillings at the ends of the common control units are sufficient to mount these relays as well as the optional line lamp relays.

1.35 Other Optional Features: In addition to the optional features included in the above description, others are offered as follows:

(a) Line Hunting: Lines 26 and 27 on switch 20-29 and lines 36 and 37 on switch 30-39 may be grouped for line hunting by replacing one surface-wired lead per link unit for each group.

(b) Common Trunk Ringer Groups: By strapping at a terminal strip certain trunks may be grouped on a common ringer. This is used where different groups of trunks are associated with different key stations with one or more trunks common to all stations. Punchings are provided for as many as three different groups. The trunk ringers may have as many as four appearances although, in addition to the line ringers, not more than a total of 14 ringers including the one associated with the alarm circuit, are to be operated from the PBX ringing supply.

(c) Extension Stations: If desired, two or more key or keyless stations may be connected to the same line. No special provision other than the station equipment and wiring is required.

(d) Trunk Service for a Disassociated Station: Where there are stations other than the 20 directly associated with the switching equipment, such as wiring plan stations, provision may be made to permit such stations to be connected to the PBX trunks. This requires the addition of a relay in each trunk involved. The operation of a key connects the station directly across the trunk even though it may be busy. Each of the four trunk circuits is provided with a spare drilling for this relay. The associated wiring is provided at the time the relay is added.

(e) Emergency Central Office Connection: In the case of local battery failure, all stations would be normally inoperative. In this case the operation of an emergency key bridges any predetermined station directly across one of the central office trunks and thus a central office connection may be established by lifting the receiver just as at a standard subscriber telephone without the use of the PBX equipment. For rural areas, provision is made for the use

of a small local manually operated magneto for signaling the central office.

(f) Trouble Alarm: For use in the case of a blown fuse, a fuse alarm bell or buzzer and a cutoff key are mounted external to the switching equipment casing. The operation of the key will silence the local alarm and, if so arranged, will cause an alarm signal to be maintained at the central office.

#### Equipment Features

1.36 The fundamental equipment considerations governing the design of the 755A dial PBX were to provide the desired flexibility in connection with the number of circuits to be equipped and at the same time to facilitate short interval installation with a minimum of time on the customers' premises.

1.37 Frame Arrangement: The frame is basically a single-sided relay rack arranged to mount 26-inch mounting plates. In size it is approximately 1 foot 6 inches by 2 feet 5 inches by 6 feet 0 inch high and it is provided with a wooden base to afford a means of insulating it from the floor. The lower part of the frame is arranged to house the power plant including the storage batteries and associated charge and discharge apparatus. The fuse panel is located just above the battery compartment. Above this are mounted the relay units associated with the common tone, ringing, alarm, and link allotter circuits as well as the trunk and link units. Above this are mounted the two crossbar switches with the line relay units and the associated common control and cutoff unit between them.

1.38 Casing Design: The frame is fitted front and rear with light weight sheet-steel casings designed to be lifted off the frame rather than hinged to it. Four separate covers are provided, two for the front and rear of the battery compartment and two for the front and rear of the upper or switching equipment compartment. The upper casings are provided with locks. The casings have simple lines and are finished in beige-gray wrinkle and should present an acceptable appearance in most surroundings.

1.39 Equipment Arrangement: The equipment arranged on a unit basis to facilitate equipping varying numbers of line, link, and trunk circuits as required for particular installations. The basic equipment which is used for any size of installation includes:

- (a) The frame and casing.
- (b) One 10 by 10 6-point crossbar switch, sufficient for the first ten lines.
- (c) All common circuits.
- (d) The main local cable.
- (e) The power plant, less batteries.

1.40 The basic frame unit is stocked equipped with certain quantities of line, link, and trunk units to satisfy a large percentage of installations without additions. Where the number of lines equipped is more than ten, a second switch is included in the stock item. Where one of the stocked sizes is not suitable for any particular installation, one or two of the separate units may be added as required.

1.41 The line units are designed on a 4-circuit basis and are stocked with either two or four circuits equipped. The trunk units are designed on a 2-circuit basis and are stocked with either one or two circuits equipped. The links are designed on a single circuit unit basis.

1.42 Cabling and Wiring: The basic frame equipment includes all the wiring for interconnecting the relay units, the crossbar switches, terminal strips, etc., for the full capacity of the PBX with the exception of the horizontal trunk and link multiple between the two crossbar switches. This multiple wiring is made up as a separate small cable provided only when the second switch is required. The optional features, except those requiring additional apparatus, are provided for, where practicable, by strapping at terminal strips.

1.43 The wiring between the apparatus on each relay unit is done on a surface wiring basis. In this way the units may be wired and tested individually before they are mounted on the frame. The frame cable is connected directly to the relay terminals on all but tie trunk units. The relay terminals to which the frame cable leads are connected are left with the hole free to facilitate this work. In this manner the expense of providing terminal strips and double soldering each lead leaving the unit is avoided. The apparatus required for optional features for which the wiring is not included as the equipment is stocked, is wired at the time the feature is incorporated.

1.44 As an easy means of wiring for the various classes of trunk service, a terminal strip is furnished with each line unit on which all class-of-service leads from the line, relays, and from the trunk circuits are terminated. The terminal strips are then strapped, as required, to provide the desired class-of-trunk service on each line. The equipment is stocked to provide all trunks with lockout service on all lines.

1.45 As the equipment is stocked, the station line equipment is wired for key station operation. Modifications to convert for keyless station operation consist of simple strapping changes except where a control key is required when additional wiring to the key is necessary.

1.46 Where a house terminal box is available the station line pairs as well as the trunk pairs and the battery and ringing current supply leads from the central office may be brought from the house box into the switch-



board by means of lead covered or other suitable cable. Where no house box is available, the cable may be run direct to the PBX. In the former case where the cross connecting between the station pairs and the station relay equipment is done outside the PBX, the incoming cable is terminated on the same terminal strips as the local cable in the PBX. When cross connecting is to be done within the PBX, the incoming line pairs are terminated on 100-type terminal strips mounted in the PBX between the two terminal strips connected to the frame cable and cross-connecting jumpers run through jumper rings provided for the purpose. The 100-type terminal strips are not furnished with the equipment as stocked and should be order as required.

**1.47 Power Equipment:** The power equipment consists of five small 2-cell storage units with associated charge and discharge equipment. The batteries, including their rubber trays, are set on a sliding shelf in the separate battery compartment in the base of the frame. The shelf with the batteries may be pulled forward to afford full access to the individual cells. The battery may be charged either over cable pairs from the central office or by means of a local charger located outside the PBX and operated from commercial alternating current. The storage batteries and associated trays are not a part of the stocked equipment and are ordered as separate items.

**1.48 Radio Interference:** Generally, no extra apparatus to prevent radio interference is required, but spare mounting plate space has been located between the trunk units and the common tone and ringing units with the idea in mind that in those cases where such apparatus is required in conjunction with these circuits, it may be located in this spare space so that the associated wiring will be short. If radio interference filters should be required on the individual station line pairs, space for this equipment will be provided outside the PBX.

**1.49 Station Equipment:** The following is a list of station equipment recommended for various services:

- (a) Key stations using hand telephone sets with keys and ringer in base.  
566FB telephone set  
Two 44A connecting blocks
- (b) Key station using hand set at side of desk and separate keys and ringer.  
213-type hand telephone set  
6021 J3 key  
684BS subscriber set (Bell)  
44A connecting block
- (c) Key station using wall set and separate keys.  
554B or 354C telephone set  
6021 J3 key  
158A backboard (optional)  
44A connecting block

- (d) Keyless station.  
Usual standard 2-wire station equipment
- (e) Trunk ringer - common or individual.  
531A-3 subscriber set
- (f) Trunk buzzer - common or individual.  
4C Buzzer
- (g) Bulls-eye-type lamp indicators.  
20B indicator - surface-mounted - Four Lamps  
16A Indicator - Flush-mounted - Three Lamps
- (h) Beehive-type lamp indicators.  
15D, One-lamp indicator  
17C, two-lamp indicator  
18B, three-lamp indicator
- (i) Local fuse alarm and cutoff key.  
531A-3 subset or 4C buzzer  
6017C key
- (j) Control key.  
6017R key
- (k) Line pickup using separate key rather than spare trunk key.  
6017C key or equivalent
- (l) Emergency transfer key for manual or dial central office or 2-way ringdown to magneto central office with trunk circuit located in central office.  
6017G key or equivalent
- (m) Emergency transfer key and battery talking supply for 2-way ringdown to magneto central office with trunk circuit located at PBX.  
6017 key per D-98792  
299F subscriber set (hand generator)  
Two 439A condensers (2 MF)  
U350 relay  
Dry battery KS-6571 or KS-6572
- (n) Ringing key for ringdown tie trunks.  
6017C key or equivalent

#### Subdivisions of Equipment

- J58819B (A&M Only) - 755A PBX - Station Line Unit
- J58819C (A&M Only) - 755A PBX - Trunk Unit
- J58819D (A&M Only) - 755A PBX - Link Unit
- J58819E (AT&TCo Std) - 755A PBX - Crossbar Switch for Lines 30-39 With Multiple Cable
- J58819M (AT&TCo Std) - 755A PBX - Resistance Unit for Illuminated Key Button Telephone Sets
- J58819N (AT&TCo Std) - 755A PBX - Common Frame Equipment
- J58819P (AT&TCo Std) - 755A PBX - Station Line Unit
- J58819R (AT&TCo Std) - 755A PBX - Trunk Unit
- J58819S (AT&TCo Std) - 755A PBX - Link Unit
- J58819T (AT&TCo Std) - Tie Trunk Unit - 2-way Dial Repeating - Arranged for Mounting Inside PBX

J58819U (AT&TCo Std) - Tie Trunk Unit - 2-way  
Dial Repeating - Arranged for Mounting  
in Apparatus Cabinet  
J58819W (AT&TCo Std) - Tie Trunk Unit - Out-  
going Dial Selected - Incoming Dial  
Repeating - For Mounting Inside PBX or  
in Apparatus Cabinet  
J58819Y (AT&TCo Std) - Tie Trunk Unit - 2-way  
Ringdown - For Mounting Inside PBX or  
in Apparatus Cabinet  
J58819AA (AT&TCo Std) - Tie Trunk Unit - 2-way  
Ringdown - With Lamp Signals - For  
Mounting Inside PBX  
J58819AB (AT&TCo Std) - Tie Trunk Unit - 2-way  
Ringdown - With Lamp Signals - For  
Mounting in Apparatus Cabinet

## 2. SUPPLEMENTARY INFORMATION

AA128.006 - List of General Equipment Require-  
ments Sections  
J58827 (AA355.018) - Recorded Telephone Dicta-  
tion Trunk  
J86205 (AA362.001) - Copper Oxide Battery  
Charger  
J99219 (AA381.315) - Steel Equipment Cabinets  
B556.015 - Installation Practices - 755A  
Dial PBX  
E-1895 - Order Blank for 755A PBX  
KS-5523 - Local Ringing Machine and Control  
KS-5381 Equipment  
KS-5538 - Local Storage Batteries  
Floor Plan Data - Section 6.2, Sheet 19 -  
755A Dial PBX

## 3. DRAWINGS

### Key Sheet

SD-66490-01 - 755A PBX

### Circuits

SD-66503-01 - Central Office Trunk  
SD-66504-01 - Line, Line Switch, and Call  
Allotter  
SD-66506-01 - Tone, Ringing, Alarm, and Com-  
mon Timing Circuit  
SD-66507-01 - Station Circuit  
SD-66600-01 - Tie Trunk - Outgoing Dial Se-  
lected, Incoming Dial Repeating  
SD-66601-01 - Tie Trunk - 2-way Dial Repeating  
SD-66605-01 - Tie Trunk - 2-way Ringdown With-  
out Lamps  
SD-66606-01 - Tie Trunk - 2-way Ringdown With  
Lamps  
SD-66611-01 - Link and Link Allotter  
SD-66713-01 - AC Lamp Relay Circuit  
SD-80588-01 - Charge and Discharge Circuit  
SD-80750-01 - Ringing Circuit - KS-5523  
Ringing Machine

### Framework, Equipment, and Cabling

ED-65470-01 - Framework Assembly  
ED-65471-01 - Casing Assembly  
ED-65482-01 - Equipment Units  
ED-65483-01 - Fuse Panel Assembly  
ED-65484-01 - Frame Equipment  
ED-65485-01 - Cabling

ED-69143-01 - 1A Key Telephone System - Key  
Telephone Units - Assembly,  
Equipment, and Cabling - In  
11- and 18-plate Metal Cabinets  
P-187544 - Drawing Index Record

## 4. BUILDING REQUIREMENTS

4.01 Height - approximately 6 feet 0 inch.  
Floor space - approximately 1 foot  
6 inches by 2 feet 5 inches. Weight - approxi-  
mately 450 pounds.

## 5. EQUIPMENT

J58819B (A&M Only) - 755A PBX - Station  
Line Unit

Equipment - ED-65482-01, Fig. 1

List 1 - Assembly, wiring, and equipment for  
a 4-circuit station line unit.

	See Wire Equip Note		
Line Ckt, SD-66504-01:			
Fig. 2	4	4	
Call Allotter Ckt, Fig. 4	4	4	B

List 2 - Assembly, wiring, and equipment for  
a 4-circuit station line unit wired  
and equipped for only two circuits.

	See Wire Equip Notes		
Line Ckt, SD-66504-01:			
Fig. 2	2	2	A
Call Allotter Ckt, Fig. 4	2	2	A,B, 6.06

List 3 - Equipment per SD-66504-01, Figs. 2  
and 4 required in addition to list 2  
for one station and call allotter  
circuit. (See note A.)

### Notes

- A. When relay equipment for one or more lines  
is to be added to the unit covered in  
list 2, the unit wiring for the additional  
equipment is added at that time. The  
mounting plate is perforated for four  
circuits.
- B. When one of the circuits on this unit is  
the last equipped circuit in the PBX, the  
call allotter relay L1 is wired per  
SD-66504-01, Fig. 5.

J58819C (A&M Only) - 755A PBX - Trunk Unit

Equipment - ED-65482-01, Fig. 4

List 1 - Assembly, wiring, and equipment for a  
2-circuit trunk unit per SD-66503-01,  
Fig. 1. (See note A.)

List 2 - Assembly, wiring, and equipment for a  
2-circuit trunk unit, wired and  
equipped for only one circuit per  
SD-66503-01, Fig. 1. (See note B.)

List 3 - Equipment per SD-66503-01, Fig. 1 required in addition to list 2 for one trunk circuit. (See note B.)

#### Notes

- A. One spare relay space perforated for a B-type relay is provided for each trunk circuit on the trunk unit. This position is used for the L relay shown on SD-66503-01, Fig. 5 when provision is made for trunk service for stations which are not otherwise associated with the PBX. [See 1.35(d).]
- B. When the relay equipment for the second trunk is to be added to list 2, the unit wiring for the additional equipment is added at that time. The mounting plate is perforated for two circuits.

#### J58819D (A&M Only) - 755A PBX - Link Unit

Equipment - ED-65482-01, Fig. 3

List 1 - Framework, assembly, wiring, and equipment for a single circuit link unit.

	Wire	Equip	See Notes
Framework, ED-25081-01, Fig. 1		1	
Link Ckt, SD-66611-01, Fig. 1, With "T," "W," & "Y" Wiring	1	1	A,B
Call Allotter Ckt, SD-66504-01, Fig. 3A, 3B, or 3C		1	

#### Notes

- A. The link unit is wired to provide no line hunting groups. The wiring change for this feature is made at the relays.
- B. One spare relay space is provided on each link unit for mounting the TL relay shown on SD-66611-01, Fig. 3 for use in connection with dial selected or dial repeating tie trunks.

#### J58819E (AT&TCo Std) - 755A PBX - Crossbar Switch for Lines 30-39 With Multiple Cable

Equipment - ED-65484-01

Local Cable - ED-65485-01, Fig. 2

List 1 - Assembly and wiring for one crossbar switch complete with strapping and supplementary multiple cable per SD-66504-01, Fig. 1. (See note A.)

#### Note

- A. The supplementary multiple cable is connected to the switch horizontals at vertical 1. The switch is designated to be associated with lines 30-39.

#### J58819M (AT&TCo Std) - 755A PBX - Resistance Unit for Illuminated Key Button Telephone Sets (See Note A)

Equipment - ED-65482-01, Fig. 7

List 1 - Assembly, wiring, and equipment for one 100-circuit resistance unit, fifty 19-type resistances per SD-66503-01, Fig. 6, and/or SD-66504-01, Fig. 16. (See notes B, C, and D.)

#### Notes

- A. This unit is equipped to provide resistance elements for 100 10-volt lamps. Where the number of lamps exceed 100, additional resistances may be provided by specifying 22C key telephone units, as required. The key telephone units shall be mounted external to the PBX in 105A apparatus boxes or in wall-type cabinets with mounting bars per P-452247 and P-452248. For method of mounting the latter, consult key telephone unit drawing ED-69143-01.
- B. The middle terminals of all the 19PG resistances shall be strapped common by the shop.
- C. The installer shall cut the strap between the middle terminals of the 19PG resistances to group the resistances in accordance with job requirements. It is preferable that there be five groups of ten resistances each to provide for four trunks to 20 stations plus station lines. The incoming house cable leads to the resistances shall be run between the resistance terminals along the surface of the mounting plate.
- D. Where traffic conditions and a large number of 10-volt lamps would exclusively drain the PBX battery, some of the trunk lamps may be operated on ac from 393A transformers. See information drawing SD-66713-01.
- E. Where the incoming leads enter the PBX at the top, the fanning ring at the end of the resistance mounting plate unit shall be reversed by the installer so that the open end faces downward.

#### J58819N (AT&TCo Std) - 755A PBX - Common Frame Equipment

Equipment - ED-65484-01

Local Cable - ED-65485-01

List 1 - Framework, assembly, wiring, and common equipment for the 755A dial PBX including the crossbar switch for the first ten lines but with no line, link, or trunk units or storage batteries, casing with beige-gray wrinkle finish.



	Wire	Equip	See Notes
Framework, ED-65470-01	1		
Casing, ED-65471-01	1		K
Fuse Panel, ED-65483-01	1		
Ring Ckt, SD-66506-01:			
Fig. 1	1	1	A
Tone Ckt, Fig. 2	1	1	A
Alarm Ckt, Fig. 3, Less			A,
Key A & Subset A	1	1	6.03
Link Allotter Ckt,			
SD-66611-01, Fig. 2	1	1	A,E
Common Control & Cutoff			A,
Ckt, SD-66504-01, Fig 6	1	1	6.06
Power Charge & Discharge			
Ckt, SD-80588-01:			
Fig. 1	1	1	G
Fig. 3	1		J
Line Switch Ckt, SD-66504-01:			
Fig. 1	20	10	
Line Ckt, Fig. 2	20	0	B,F
Call Allotter Ckt,			
Fig. 4	19	0	C
Fig. 5	1	0	C
Figs. 3A, 3B, & 3C	1	0	D
Select Magnet Contact			
Protection Ckt, Fig. 17	5	5	
Line Ckt, SD-66611-01,			
Fig. 1	3	0	B
Trk Ckt, SD-66503-01,			
Fig. 1	4	0	B,I

List 2 - Assembly, wiring, and equipment required in addition to list 1 to provide for four station lines, two trunks, and two links.

	Wire	Equip
Line Unit, J58819P, L1	1	1
Trk Unit, J58819R, L1	1	1
Link Unit, J58819S, L1	2	2

List 3 - Assembly, wiring, and equipment required in addition to list 1 to provide for eight station lines, two trunks, and two links.

	Wire	Equip
Line Unit, J58819P, L1	2	2
Trk Unit, J58819R, L1	1	1
Link Unit, J58819S, L1	2	2

List 4 - Assembly, wiring, and equipment required in addition to list 1 to provide for 12 station lines, two trunks, and three links.

	Wire	Equip
Line Unit, J58819P, L1	3	3
Trk Unit, J58819R, L1	1	1
Link Unit, J58819S, L1	3	3
Crossbar Switch, J58819E, L1	1	1

List 5 - Assembly, wiring, and equipment required in addition to list 1 to provide for 16 station lines, four trunks, and three links.

	Wire	Equip
Line Unit, J58819P, L1	4	4
Trk Unit, J58819R, L1	2	2
Link Unit, J58819S, L1	3	3
Crossbar Switch, J58819E, L1	1	1

List 6 - Assembly, wiring, and equipment required in addition to list 1 to provide for 20 station lines, four trunks, and three links.

	Wire	Equip
Line Unit, J58819P, L1	5	5
Trk Unit, J58819R, L1	2	2
Link Unit, J58819S, L1	3	3
Crossbar Switch, J58819E, L1	1	1

List 7 - Assembly, wiring, and equipment required in addition to list 1 to provide for 12 station lines, four trunks, and three links.

	Wire	Equip
Line Unit, J58819P, L1	3	3
Trk Unit, J58819R, L1	2	2
Link Unit, J58819S, L1	3	3
Crossbar Switch, J58819E, L1	1	1

#### Notes

- The apparatus associated with the common circuits including the control and cut-off, tone, ringing, and alarm circuits is arranged on a unit basis with each unit surface-wired. The wiring between these units and the associated line, link, and trunk units, as well as the crossbar switch, power apparatus, and terminal strips is included in the frame local cable.
- All wiring for the line, link, and trunk circuits excepting that which is included on the relay units J58819P, J58819R, and J58819S is included in the frame local cable. The frame cable is connected to these units when they are mounted in the PBX.
- The call allotter chain relay L1, one per line, as shown on SD-66504-01, Figs. 4 and 5 is mounted and wired as a part of the line unit J58819P. The final line circuit equipped is wired in accordance with Fig. 5.
- The call allotter chain relay LK1, LK2, or LK3, one per link, as shown on SD-66504-01, Figs. 3A, 3B, and 3C are mounted and wired as a part of the link unit J58819S.
- All three relays in the link allotter circuits are equipped even though all three links may not be required. When the third link is not equipped, straps are furnished across terminals 1T-2T and 1B-3B of the CH3 relay.

F. All line circuits are wired initially for key station operation. All modifications in wiring for keyless station operation or for any other special feature are made in accordance with SD-66504-01, Figs. 8 to 14.

G. The batteries with four short connectors shall be ordered separately. The connectors between the fuse panel and the battery are included as a part of the frame equipment.

H. Only one crossbar switch is furnished with J58819N. When more than ten lines are to be equipped, a second switch and associated multiple cable per J58819E is required.

I. All lines are strapped to provide lockout service on all trunks. Modifications for other classes of service may be made at the CS terminal strips.

J. Drilling for the GF fuse block is provided and the lead in the bay cable shall be looped at this point. The GF fuse mounting and fuse shall be furnished locally when exposed battery feeders are used.

K. When this PBX is for nonassociate use, the Bell System nameplate is to be replaced by a Western Electric Company nameplate.

#### J58819P (AT&TCo Std) - 755A PBX - Station Line Unit

Equipment - ED-65482-01, Fig. 9

List 1 - Assembly, wiring, and equipment for a 4-circuit station line unit.

	Wire	Equip	See Note
Line Ckt, SD-66504-01: Fig. 2	4	4	
Call Allotter Ckt, Fig. 4	4	4	B

List 2 - Assembly, wiring, and equipment for a 4-circuit station line unit wired and equipped for only two circuits.

	Wire	Equip	See Notes
Line Ckt, SD-66504-01: Fig. 2	2	2	A
Call Allotter Ckt, Fig. 4	2	2	A,B, 6.06

List 3 - Equipment per SD-66504-01, Figs. 2 and 4 required in addition to list 2 for one station and call allotter circuit. (See note A.)

#### Notes

A. When relay equipment for one or more lines is to be added to the unit covered in list 2, the unit wiring for the additional equipment is added at that time. The mounting plate is perforated for four circuits.

B. When one of the circuits on this unit is the last equipped circuit in the PBX, the call allotter relay L1 is wired per SD-66504-01, Fig. 5.

#### J58819R (AT&TCo Std) - 755A PBX - Trunk Unit

Equipment - ED-65482-01, Fig. 12

List 1 - Assembly, wiring, and equipment for a 2-circuit trunk unit per SD-66503-01, Fig. 1. (See note A.)

List 2 - Assembly, wiring, and equipment for a 2-circuit trunk unit, wired and equipped for only one circuit per SD-66503-01, Fig. 1. (See note B.)

List 3 - Equipment per SD-66503-01, Fig. 1 required in addition to list 2 for one trunk circuit. (See note B.)

List 4 - Assembly, wiring, and equipment per SD-66503-01, Fig. 5 required in addition to list 1 or 2 for each trunk circuit which is to be arranged for trunk service for stations which are not otherwise associated with the PBX. [See 1.35(d).]

#### Notes

A. One spare relay space perforated for a B-type relay is provided for each trunk circuit on the trunk unit. This position is used for the L relay shown on SD-66503-01, Fig. 5 when provision is made for trunk service for stations which are not otherwise associated with the PBX. [See 1.35(d).]

B. When the relay equipment for the second trunk is to be added to list 2, the unit wiring for the additional equipment is added at that time. The mounting plate is perforated for two circuits.

#### J58819S (AT&TCo Std) - 755A PBX - Link Unit

Equipment - ED-65482-01, Fig. 11

List 1 - Framework, assembly, wiring, and equipment for a single circuit link unit.

	Wire	Equip	See Notes
Framework, ED-25081-01, Fig. 1		1	
Link Ckt, SD-66611-01, Fig. 1, With "T," "W," & "Y" Wiring	1	1	A,B
Call Allotter Ckt, SD-66504-01, Fig. 3A, 3B, or 3C		1	

#### Notes

A. The link unit is wired to provide no line hunting groups. The wiring change for this feature is made at the relays.

B. One spare relay space is provided on each link unit for mounting the TL relay shown on SD-66611-01, Fig. 3 for use in connection with dial selected or dial repeated tie trunks.

J58819T (AT&TCo Std) - Tie Trunk Unit - 2-way  
Dial Repeating - Arranged For Mounting  
Inside PBX

Equipment - J58819T-( )

List 1 - Framework, assembly, wiring, and equipment for one tie trunk unit of one circuit per SD-66601-01, Fig. 1 arranged on one 26-inch mounting plate for mounting inside PBX.  
(No. Mtg Plts 1 - No. Ckts 1)

J58819U (AT&TCo Std) - Tie Trunk Unit - 2-way  
Dial Repeating - Arranged for Mounting  
in Apparatus Cabinet

Equipment - J58819U-( )

List 1 - Framework, assembly, wiring, and equipment for one tie trunk unit of one circuit per SD-66601-01, Fig. 1.  
(No. of Mtg Plts 2 - No. of Ckts 1)

J58819W (AT&TCo Std) - Tie Trunk Unit - Out-  
going Dial Selected - Incoming Dial  
Repeating - For Mounting Inside PBX or  
in Apparatus Cabinet

Equipment - J58819W-( )

List 1 - Framework, assembly, wiring, and equipment for one unit of one circuit per SD-66600-01, Fig. 1 arranged for mounting inside PBX or in apparatus cabinet. (See note A.)  
(No. of Mtg Plts 1 - No. of Ckts 1)

Note

A. Mounting adapter shall be removed and discarded along with P-408833 collar and P-473703 screws when unit is mounted in apparatus cabinet.

J58819Y (AT&TCo Std) - Tie Trunk Unit - 2-way  
Ringdown - For Mounting Inside PBX or  
in Apparatus Cabinet

Equipment - J58819Y-( )

List 1 - Framework, assembly, wiring, and equipment for a single circuit tie trunk unit not arranged for line lamps. For mounting inside PBX or in apparatus cabinet per SD-66605-01, Figs. 1 and B, less optional apparatus, and universally wired for Figs. A, B, and C. (See notes A, B, C, and D.)  
(No. of Mtg Plts 1 - No. of Ckts 1)

List 2 - Equipment per SD-66605-01, Fig. 1, "Z" apparatus only, required in addition to list 1 to complete the unit for use where trunk impedance is 1100 ohms or less.

List 3 - Equipment per SD-66605-01, Fig. 1, "Y" apparatus only, required in addition to list 1 to complete the unit for use where trunk impedance is 1100 ohms or less and where better transmission is required than is provided in list 2.

List 4 - Equipment per SD-66605-01, Fig. 1, "X" apparatus only, required in addition to list 1 to complete this unit for use where the trunk impedance is greater than 1100 ohms.

List 5 - Equipment per SD-66605-01, Fig. 1, "W" apparatus only, required in addition to list 1 to complete this unit for use where the trunk impedance is greater than 1100 ohms and where better transmission is required than is provided in list 4.

Notes

- A. When tie trunk is not to be arranged for service to keyless stations, wiring per SD-66605-01, Fig. A shall be provided by the installer by strapping at the unit terminal strip.
- B. When tie trunk is to be arranged for lock-out service and for service to keyless stations, wiring per SD-66605-01, Fig. B shall be provided by the installer by strapping at the unit terminal strip.
- C. When tie trunk is to be arranged for service to keyless stations but without station lockout, wiring per SD-66605-01, Fig. C shall be provided by the installer by strapping at the unit terminal strip.
- D. When unit is mounted in an apparatus cabinet, mounting adapter and P-473703 and P-408833 shall be discarded.

J58819AA (AT&TCo Std) - Tie Trunk Unit - 2-way  
Ringdown - With Lamp Signals - For  
Mounting Inside PBX

Equipment - J58819AA-( )

List 1 - Framework, assembly, wiring, and equipment for a single circuit tie trunk unit arranged for line lamps for mounting inside the PBX per SD-66606-01, Figs. 1 and B, less optional apparatus, and universally wired for Figs. A and B.  
(See lists 2, 3, 4, and 5.)  
(See notes A and B.)  
(No. of Mtg Plts 1 - No. Ckts 1)



List 2 - Equipment per SD-66606-01, Fig. 1, "S" apparatus only, required in addition to list 1 to complete the unit for use where the trunk impedance is 1100 ohms or less.

List 3 - Equipment per SD-66606-01, Fig. 1, "R" apparatus only, required in addition to list 1 to complete the unit for use where the trunk impedance is 1100 ohms or less and where better transmission is required than is provided by list 2.

List 4 - Equipment per SD-66606-01, Fig. 1, "Q" apparatus only, required in addition to list 1 to complete the unit for use where the trunk impedance is greater than 1100 ohms.

List 5 - Equipment per SD-66606-01, Fig. 1, "P" apparatus only, required in addition to list 1 to complete the unit for use where the trunk impedance is greater than 1100 ohms and where better transmission is required than is provided by list 4.

#### Notes

A. When trunk is not arranged for locked in lamps, wiring per SD-66606-01, Fig. A shall be provided by the installer by strapping at the unit terminal strips.

B. When trunk is arranged for locked in lamps, wiring per SD-66606-01, Fig. B shall be provided by the installer by strapping at the unit terminal strips.

#### J58819AB (AT&TCo Std) - Tie Trunk Unit - 2-way Ringdown - With Lamp Signals - For Mounting in Apparatus Cabinet

Equipment - J58819AB-( )

List 1 - Framework, assembly, wiring, and equipment for a single circuit tie trunk unit arranged for line lamps, for mounting in apparatus cabinet, per SD-66606-01, Figs. 1 and B, less optional apparatus and universally wired for Figs. A and B.  
(See lists 2, 3, 4, and 5.)  
(See notes A and B.)  
(No. of Mtg Plts 2 - No. of Ckts 1)

List 2 - Equipment per SD-66606-01, Fig. 1, "S" apparatus only, required in addition to list 1 to complete the unit for use where the trunk impedance is 1100 ohms or less.

List 3 - Equipment per SD-66606-01, Fig. 1, "R" apparatus only, required in addition to list 1 to complete the unit for use where the trunk impedance is 1100 ohms or less and where better transmission is required than is provided by list 2.

List 4 - Equipment per SD-66606-01, Fig. 1, "Q" apparatus only, required in addition to list 1 to complete the unit for use where the trunk impedance is greater than 1100 ohms.

List 5 - Equipment per SD-66606-01, Fig. 1, "P" apparatus only, required in addition to list 1 to complete the unit for use where the trunk impedance is greater than 1100 ohms and better transmission is provided by list 4.

#### Notes

A. When trunk is not arranged for locked in lamps, wiring per SD-66606-01, Fig. A shall be provided by the installer by strapping at the unit terminal strips.

B. When trunk is arranged for locked in lamps, wiring per SD-66606-01, Fig. B shall be provided by the installer by strapping at the unit terminal strips.

#### 6. GENERAL NOTES

6.01 The frame is equipped with a wooden insulating base which is provided with holes so that, if desired, the PBX may be secured to the floor by means of lag screws or expansion bolts.

6.02 When facilities for cross connecting the lines within the PBX are desired the required terminal strips are provided locally.

6.03 The alarm bell and cutoff key associated with the trouble alarm circuit shown on SD-66606-01, Fig. 3 are ordered separately and mounted by the installer in some suitable location outside the PBX.

6.04 Where the battery is charged from central office, a maximum of 10-cable pairs will be terminated on ten GRD and ten BAT. terminals on the incoming terminal strip. Where the battery is charged from a rectifier, the single pair of charging leads will be connected to GRD terminal 1 and BAT. terminal 1. The ten GRD terminals and the ten Bat terminals are strapped together in the shop. Wiring is provided in the local cable and terminals are on the incoming terminal strip for a pair to connect to a local ringing machine when ringing current is not supplied from the central office. For the cases where a local ringing machine may be needed, a small static ringing generator per KS-5523, List 1 may be used. For this type of PBX this generator is usually operated on a start-stop basis and start-stop relay equipment is available in KS-5381, List 7. Both items are mounted on either a wall or table as directed by the telephone company. The cords, caps, and receptacles used for connecting this equipment to the local power supply are furnished locally as required.

6.05 The PBX battery may be charged, if desired, by means of a 1/2-ampere rectifier, J86205B, instead of from a central office or building battery. The rectifier will be located by the installer somewhere convenient to the PBX but outside the casing.

6.06 A spare relay space perforated for 1-3/4-inch U-type relay is provided at the end of the call allotter unit. A spare relay space perforated for 1-3/4-inch U-type relay is provided on the upper plate of the link unit. Two spare relay spaces perforated for 1-1/2-inch U-type relays are provided on the lower plate of the link unit. Three spare relay spaces perforated for 1-1/2-inch U-type relays are provided on the tone, charging, and link allotter unit. These spaces are available for special feature relays, such as line lamp and pickup relays shown on SD-66504-01, Figs. 12, 13, and 14.

6.07 The storage batteries are not furnished as a part of the coded frame equipment. Five 2-cell storage batteries, including trays and interbattery connectors may be ordered per KS-5538, List 6. These are mounted on a sliding shelf in the lower compartment of the PBX which may be pulled out for easy battery maintenance. The batteries are charged before shipment and may be shipped filled with electrolyte or dry with the electrolyte in a separate container at the option of the customer.

6.08 No circuit labels are provided with this equipment; instead, a set of associated wiring and schematic drawings, along with their CD sheets, are furnished with each PBX. These drawings are enclosed in two envelopes which, in turn, are placed in the compartments in the front casing provided for this purpose. A label per P-187544 for recording the numbers and issues of the drawings in a particular envelope is secured to the outside of the envelopes. A duplicate of this label is secured to the framework of the PBX as a record in the event of loss of the envelopes.

6.09 Each of the associated tie trunks is available in two different types of units; one on 26-inch mounting plates or 23-inch mounting plate with adapter for mounting in spare space within the PBX and the other on 23-inch mounting plates for mounting in a supplementary apparatus cabinet per ED-95021-01, Groups 1 and 3. Terminal strips are provided for all leads incoming to the unit. Where terminal strip capacity on other

units in the PBX is not adequate to terminate the cable from the tie trunk, connections to the associated apparatus in the PBX may be made by means of long strippers on the interconnecting cable superimposed upon the PBX local cable.

6.10 In each PBX equipped with one or more dial selected or dial repeating tie trunks, each link must be wired and equipped for the TL relay as shown on SD-66611-01, Fig. 1, "V" wiring and Fig. 3. Both of these trunks may be seized at the local station by dialing the line circuit number associated with the tie trunk. Each of these trunks equipped, therefore, reduces by one the station line capacity of the PBX.

6.11 The ringdown tie trunk is selected at the key station in the same manner as a central office trunk, that is, by depressing a trunk key. Each ringdown tie trunk accessible from that station, therefore, reduces by one the number of keys available for central office trunks.

6.12 Cable may be brought into the PBX in three different manners:

- (a) Through the top at the right side.
- (b) At floor level from either side.
- (c) Through the floor at either side.

When brought through the floor, the required hole in the wooden base is cut to suit the requirements of the particular installation. All unused cable holes should be covered with dust shields provided for the purpose.

#### List of "A&M Only" and "Mfr. Disc." Equipment

6.13 The following equipment has been replaced as indicated:

<u>Equipment</u>	<u>Rating</u>	<u>Covered in Issue</u>	<u>Replacing Equipment</u>
J58819A	Mfr.Disc.	2	J58819N
J58819B	A&M Only	3	J58819P
J58819C	A&M Only	3	J58819R
J58819D	A&M Only	3	J58819S
J58819F	Mfr.Disc.	2	J58819T
J58819G	Mfr.Disc.	2	J58819U
J58819H	Mfr.Disc.	2	J58819W
J58819J	Mfr.Disc.	2	J58819W
J58819K	Mfr.Disc.	2	J58819Y, J58819AA
J58819L	Mfr.Disc.	2	J58819Y, J58819AB

Bell Telephone Laboratories, Inc.

Dept 2313

