

Common Talking Convenience Telephone Systems

No. 2-6 Telephone System

The No. 2-6 System meets the demand for efficient telephone service in places where the requirements are not great enough for the use of a P. B. X. Switchboard and too large for a single city trunk with one or two extension telephones.

These systems make ideal installations for small banks, architects' offices, small factories, clubs, large residences, and satellites to large P. B. X. Systems.

Description of Equipment

The Stromberg-Carlson 2-6 System is arranged for common talking, selective ringing. It provides capacity for six local connecting lines and two trunk lines to central from any telephone and is operated without the service of an operator.

Each telephone is equipped with eight non-locking push buttons for selectively ringing any local telephone and for answering, holding and transferring or originating central office calls.

Central Office calls can be originated, answered, held and transferred to any station of the system.

One station can be arranged for secret service on both Central Office trunks, or, two stations can be arranged with Secret Service on one trunk each. Standard No. 2-6 Systems as they leave the factory have station No. 1 arranged for secret service on Trunk 1. All other Central Office trunk conversations are common to all telephones.

The equipment is designed to operate from 22 volt current.

The relay switching and terminal equipment used is mounted in a surface mounting steel wall cabinet. Dimensions are approximately: Height $18\frac{7}{16}$ " , width $10\frac{3}{16}$ " and depth $6\frac{5}{16}$ ". The relays are arranged so that they may be easily inspected for adjustment or tests. The terminals are of the standard telephone type making use of soldered connections.

Capacity

The maximum capacity is 2 Central Office Trunks and 6 Local Stations. Secret service may be applied to both trunks. Any station may be arranged for code call. If desired, any station can be restricted to local inter-communication only.

Telephones

The telephones are standard type Handsets with 8 non-locking type push buttons conveniently mounted in the base of the telephone arranged in a circular manner or wall telephones similarly equipped.



No. 1195 Handset

Telephones (Cont.)



No. 1196 Wall Telephone

The No. 1158-B Desk Set Bell Box is recommended for the trunk signal device. These boxes may be mounted at any point convenient for hearing by the person designated to answer incoming calls. Extension bells of the standard tone, chime tone or loud ringing type may also be provided.

Operation

Local Calls—Inter-Communication

Local inter-communicating calls are made by removing the receiver, pushing the non-locking push button opposite the name or number of the person desired, thereby ringing the station call bell. All local conversations are common talking. When the called station answers, no push button operation is necessary.

Central Office Calls—Incoming

Incoming Central Office calls are signaled by a bell operated from the Central Office ringing equipment. To answer an incoming call remove the receiver of any telephone and operate the blue or green non-locking push button and the connection is completed. The incoming Central Office signalling bells should be of two different tones and are associated with the blue and green trunk push buttons. The tone of the signal bell signifies which trunk is to be answered.

Code Call

Any station can be arranged for originating code call signals by the installation of a non-locking cam type key. This key is mounted in a small key box adaptable for desk mounting. No additional wiring or equipment in the system is required for code call, a cord from the hand set bell box connects the cam type key. The station call bells are used when code call key is equipped. The station bell rings at the station originating a code call. This is done for code checking. This feature is optional.

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Common Talking Convenience Telephone Systems (Cont.)

Holding and Transferring Central Office Calls

In a telephone system of this kind, whereby any station can answer incoming Central Office calls, it is obvious that a call being answered by a certain station is not always for the party that does the answering, and in this case the Central Office call must be held by the answering station by operating the non-locking red hold button. This operation causes the station circuit to connect with the common talking circuit.

The answering station now operates the station ringing button of the party desired by the party on the Central Office trunk. When the desired party answers the station that called, instructions are given to cut in on trunk button blue or green as the case may be. When this is done, the called party is in connection with the party on the Central Office trunk. Should this party desire to transfer the Central Office call to some other station, the same procedure as above should be followed.

To discontinue the use of any station that is cut in on a Central Office trunk, that station's receiver is hung up. This releases the station trunk cut-in equipment. In event that a trunk held by a station is to be released operate the cut-in button and hang up the receiver.



If the call is for someone else, push the "Hold" button and the button under the name of the party called. The call is held until the called party completes his conversation and hangs up.

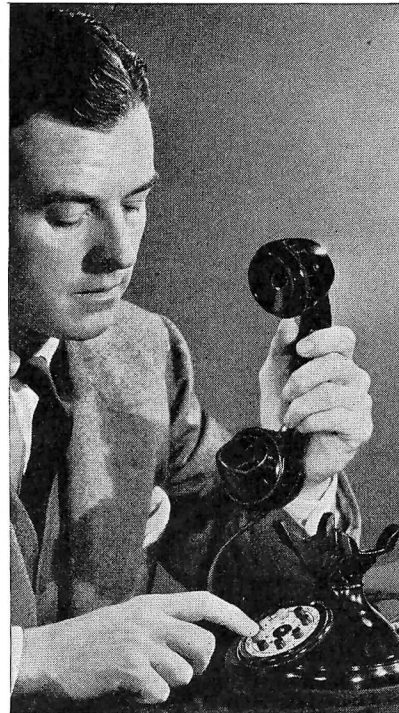
Central Office Calls—Outgoing

Outgoing calls to the Central Office are made by pressing either the blue or green trunk button which makes connections with the Central Office. To flash the Central Office operator, press the button associated with the trunk that has been selected and operate the switchhook.

Central Office Calls—Outgoing (Cont.)

The equipment is so arranged that if more than one trunk button is pressed at one time, only one trunk to the Central Office will be selected. This is accomplished by electrical interlocking arrangement of the trunk cut-in relays.

No inter-communicating equipment is used when making or receiving Central Office calls.



The party receiving a transferred outside call, pushes the proper trunk button, after removing the receiver and proceeds to answer the call as he would with any other telephone.

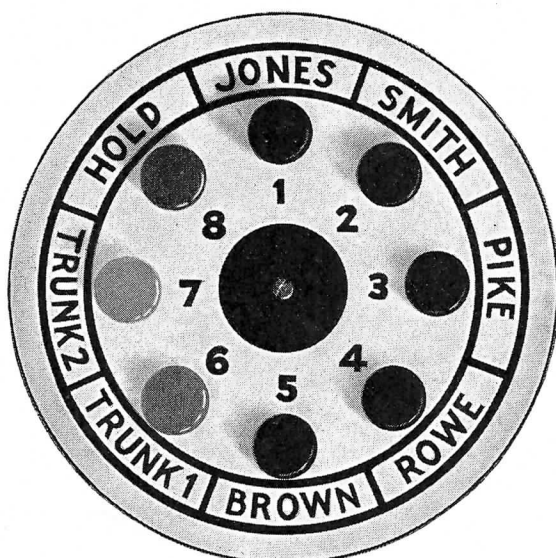
No. 1-7 Telephone System

The Stromberg-Carlson 1-7 Telephone System is a modification of the No. 2-6 to serve those places where only one trunk is required but where more inter-communicating service is needed. This system resembles the 2-6 System in appearance and operation, but uses only one trunk button and seven buttons for local and hold connections. It makes use of the No. 2-6 Relay Cabinet, to which is added one No. 252-MM Line Relay and one No. 19 Relay Casing. The local cable is wired for either a No. 2-6 or a No. 1-7 System. Number 1-7 Relay Cabinets are not carried in stock, therefore the purchaser is required to modify the No. 2-6 Cabinet for this service.

No. 3-5 Telephone System

This system operates similarly to the No. 2-6 System. It fits requirements where three central office trunks are necessary and where five local stations suffice. A No. 3-5 Relay Cabinet is available for this system.

Common Talking Convenience Telephone Systems (Cont.)



Close-up View of Push-Button arrangement used on Handset and Wall Telephones of the No. 2-6 Type Relay Telephone Systems.

BUTTONS 1-5—Operate signals at other stations on premises for inter-communicating calls.

BUTTONS 6-7—Connect the telephone with an outside line to make or receive a call.

BUTTON 8—Holds a call on an outside line while making or receiving a call on another line.

No. 7-6 Telephone System

The No. 7-6 Telephone System provides a specialized type of service; it is a satellite system working into a P. B. X. Switchboard. The eight buttons on each telephone have the following functions: one button which controls an individual private trunk from each local station to the P. B. X.; one button that controls a trunk which is common to all six stations also terminating at the P. B. X.; one hold button to hold either trunk; and five buttons controlling the individual six stations for inter-communication between themselves, wholly independent of the P. B. X. Switchboard. This arrangement requires a steel relay cabinet with dimensions approximately as follows: height $24\frac{1}{16}$ ", width $15\frac{3}{16}$ ", depth $6\frac{1}{4}$ ".

No. 2-M-6 Telephone Systems

These systems have the same general appearance and the same operating characteristics as the No. 2-6 System, but are designed to operate in connection with magneto central offices. The relay cabinet is somewhat larger than the one used in the Standard No. 2-6, having the following approximate dimensions: height $24\frac{1}{16}$ ", width $21\frac{3}{16}$ ", and depth $6\frac{5}{16}$ ".

When a subscriber wishes to call the magneto exchange, he removes his telephone from the hookswitch and presses one of the trunk buttons. This causes a momentary flow of direct current to operate the magneto signal at the magneto switchboard. The current is furnished from the eleven cells of storage battery ordinarily provided for the operation of the system.

No. 2-M-6 Telephone Systems (Cont.)

When the telephone is returned to the hookswitch, a disconnect signal is produced in a manner similar to that previously described. The uses of the hold, trunk and inter-communicating buttons are the same as in the No. 2-6 System.

Parts

Telephone Equipment Used in No. 2-6 Type Systems

Code No.	Type	No. of Buttons	Used With Code No.	Price Each
†2-6	Relay Cabinet	8	2-6, 1-7	\$137.50
7-6	Relay Cabinet	8	7-6	208.00
3-5	Relay Cabinet	8	3-5	181.50
2-M-6	Relay Cabinet	8	2-M-6	159.50
1195	Handset	8	2-6, 1-7, 7-6, 3-5	17.50
1196	Wall Telephone	8	2-6, 1-7, 7-6, 3-5	17.50
1158	Desk Set Box	—	Trunk (Signal)	*
1220-A	Chime Box	—	Trunk (Signal)	*
†89-A	Terminal Box	—	1195 Handset	5.90
SK-3350	Code Call Key Box	—	2-6, 1-7, 7-6, 3-5	11.00

*For prices see "Telephone" Section of Catalogue.

†No. 2-6 Relay Cabinet is used with the No. 1-7 System, however it is necessary to add 1 No. 252-MM Relay and one No. 19-L Relay Casing. Add to price \$4.90.

†No. 89-B Terminal Box replaces No. 1199 Desk Set Box. One is required for each No. 1195 Handset Telephone.

Cable

No. 102-B and No. 102-L Cables are recommended for No. 2-6 Type System installations. The 102-B braid covered cable should be used only in dry locations. The 102-L, which is lead covered, is generally recommended, not only to prevent trouble from moisture but also to guard against mechanical injury. See Construction Section of Catalogue for further details.

Power Equipment

These systems operate on 22 volt direct current which can be supplied in any of the following ways:

Dry Cells—Eighteen $1\frac{1}{2}$ volt cells in series.

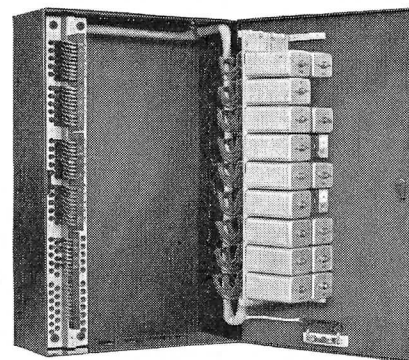
Battery Current—From the Central Office.

Storage Battery—11 cells of Exide type BTMH-2 with .5 ampere trickle charger.

Rectifier—No. 1027-R Raytheon, .5 amp. capacity.

Code Call Equipment

A small metal Key Box equipped with a cam type key and an eight conductor cord, 5'6" long, comprises the equipment necessary to install a code call service on a No. 2-6 System. With this arrangement it is possible to ring all local stations at one time and thus a system of code calling may be instituted to locate people who are in the habit of leaving their particular telephone location. Size of box $4\frac{1}{4}$ " x $3\frac{7}{8}$ " x $1\frac{1}{8}$ ".



Sheet Steel Cabinet arranged for wall mounting in basement or closet and containing all relays, fuses and terminals. This cabinet is supplied with all Stromberg-Carlson Convenience Telephone Systems. Illustration shows interior arrangement for 2-10 System.

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Common Talking Convenience Telephone Systems (Cont.)

Nos. 2-10, 1-11, and 3-9 Telephone Systems

These systems have the same general operating characteristics as the No. 2-6 System, except that they are arranged for secret service on all trunks, and may be used with dial exchange connections. They have a different number of trunks and local connecting circuits. In the case of the No. 2-10 System, there are two central office trunks and capacity for ten local stations; in the No. 1-11 there is one trunk and eleven local stations, while in the No. 3-9 there are three trunks and nine local stations. The dimensions of the relay cabinet are approximately: height 24", width 15" and depth 6".

With these systems a telephone with larger key or button capacity is necessary. The No. 1215 Handset Telephone equipped with sub-base for keys and buzzer is used with the No. 2-10 System or No. 1-11 System and the No. 1216 is used with the No. 3-9 System.

No. 2-M-10 Telephone Systems

These systems operate and have the same general use as the No. 2-M-6 type, with exception of the telephones which are of the No. 1215 type with increased capacity.



No. 1215 and No. 1216 Type Telephone

No. 1215 used with No. 2-10 System and No. 1-11 System

No. 1216 used with No. 3-9 System

Selective Talking Convenience Telephone Systems

No. 2-10 ST and No. 3-9 ST Telephone Systems

The No. 2-10 and No. 3-9 Systems operate from the subscriber's standpoint much the same as the No. 2-10 and the No. 3-9 Systems. The chief point of difference is that the No. 2-10 ST and No. 3-9 ST Systems provide selective talking, as well as selective ringing for local connections. Other refinements are also added to make these systems function with speed and accuracy.

Relay, condenser and coil equipment is mounted on steel framework approximately 30" high; 32½" wide; and 12" deep. As this type of equipment is usually mounted in basements or closets, the outside casing is made of plain sheet steel .050" with readily removable panels. Case dimensions are approximately 30¼" high; 32¼" wide; and 12⅞" deep.

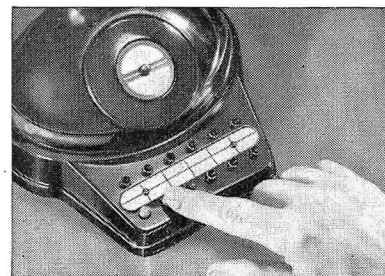
Operation

The following features and facilities are afforded:

Local Calls—Station to Station are made by removing the handset from the cradle and depressing the button designated as the party wanted. The called party's bell is rung selectively and as long as the button is held depressed. A tone ringing indication is heard if the called station is not busy. If the station is busy, no tone will be heard. When the called station answers, no push button operation is necessary. Simply removing the handset from the cradle completes the connection and the conversation takes place over a selected talking pair—not common talking. Other local telephones are barred from this line, so that a secret talking circuit is provided.

Local to Trunk Call—Outgoing. Removing the handset from the cradle and then depressing one of the trunk buttons is the first step to secure the P. B. X. or Central Office operator. When the trunk button is released after being depressed, a tone will be heard if the trunk is not busy. This indicates that the call has been completed. If no tone is heard the trunk is busy. It is then necessary to press another trunk button until a non-busy trunk is found. If the subscriber accidentally presses more than one button at once, the action will not tie up more than one trunk.

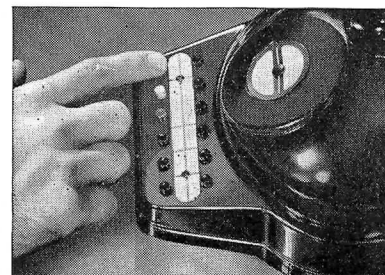
Trunk to Local—Incoming. When the incoming trunk signal is heard the party receiving the call depresses the trunk button corresponding with the tone associated with its particular signal. This connects the answering party with the party calling over the trunk line.



Trunk Button

Transfer of Trunk Call to another Local Station—

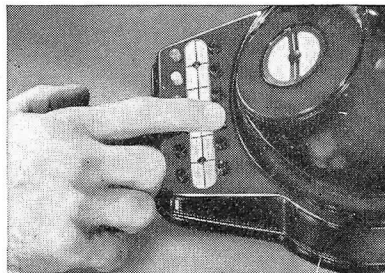
After answering a trunk call, it may become necessary to transfer it to another local party. This is accomplished by operating the (Red) hold button, which holds the line so that the connection will not be taken down at the P. B. X. or Central Office. Then the station desired is called in the usual manner and told it is wanted on (for example) trunk No. 1. In order for the desired party to cut in on Trunk No. 1, it will be necessary for him to depress the trunk button No. 1 twice. After the party originally answering the trunk has given the instructions to the party desired, the telephone is returned to the cradle in the usual manner. A trunk call may be transferred back and forth as many times as required if the hold button is operated in the prescribed manner. It is highly important to operate the hold button before replacing the handset.



Hold Button

Selective Talking Convenience Telephone Systems

Regaining Operator's Attention—On trunk calls to P. B. X. or Central Office operator, when the subscriber wishes to regain the operator's attention, it may be accomplished by holding the trunk button down and operating the hookswitch plunger in the telephone cradle. It is necessary to remember that the handset is removed from the cradle before the trunk button is released.



Called Party's Button

Secret Service—When used with dial Central Offices, all trunk wiring is arranged for secret service, so that an established trunk call cannot be mutilated by another station if it attempts to use the same trunk. A slight change in wiring, however, allows systems used with manually operated Central Offices to have certain stations arranged for secret service and others open to all stations. One station may also be arranged to take all incoming calls and to supervise such connections after they have been established.

The Nos. 1215 and 1216 Telephones are used in connection with these systems in a manner similar to the No. 2-10 and No. 3-9 Systems.

No. 2-M-10ST and No. 3-M-9ST Telephone Systems

These systems operate and have the same general functions as the No. 2-M-6 Systems except they provide selective talking as well as selective ringing features. They make use of the No. 1215 and No. 1216 Handset Telephones. Prices on relay cabinets quoted upon application.

Inter-Communicating Systems less Exchange Trunks

See Graybar Systems described on separate pages.

Parts Telephone Equipment used in No. 2-10, No. 1-11 No. 3-9, No. 2-10ST, No. 3-9ST, No. 2-M-10ST and No. 3-M-9ST Systems

Code No.	Type	No. of Buttons	Used With	Price Each
†2-10	Relay Cabinet	12	2-10, 1-11	\$231.00
3-9	Relay Cabinet	12	3-9	275.00
2-M-10	Relay Cabinet	12	2-M-10	258.50
2-10ST	Relay Cabinet	12	2-10ST	920.00
3-9ST	Relay Cabinet	12	3-9ST	880.00
1215	Handset Telephone	12	2-10, 2-10ST, 1-11, 2-M-10ST	29.00
1216	Handset Telephone	12	3-9, 3-9ST, 3-M-9ST	30.00
1158	Desk Set Box	—	Trunk (Signal)	*
1220-A	Chime Box	—	Trunk (Signal)	*
†89-A	Terminal Box	—	1215, 1216 Handset	4.25
SK-3550	Code Call Key Box	—	All 12 Button Systems	16.50

*For prices see Telephone Section of Catalogue.

†No. 2-10 Relay Cabinet is used with the No. 1-11 System, however it is necessary to add 1 No. 206-CMQ Relay and 1 No. 19-L Relay Casing. Add to price \$5.00.

†No. 89-A Terminal required with each No. 1215 or No. 1216 Telephone.

Cable

No. 103-B and No. 103-L cables are recommended for 12 Button Telephone Convenience System installations. The No. 103-B braid covered cable should be used only in dry locations, No. 103-L which is lead covered, is generally recommended, not only to prevent trouble from moisture but also to guard against mechanical injury. See Construction Section of Catalogue for further details.

Power Equipment

These systems operate on 22 volt direct current which can be supplied:

Dry Cells—Eighteen 1½ volt cells in series.

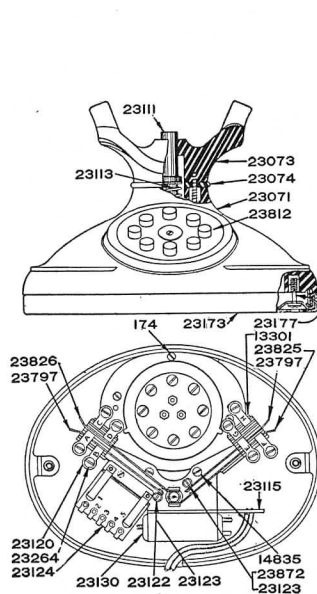
Battery Current—From the Central Office.

Storage Battery—11 Cells of CTMH-2 with .5 ampere trickle charger.

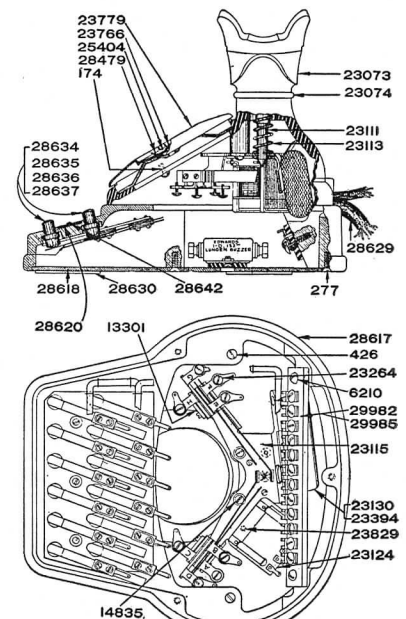
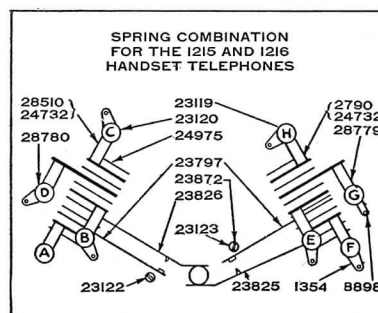
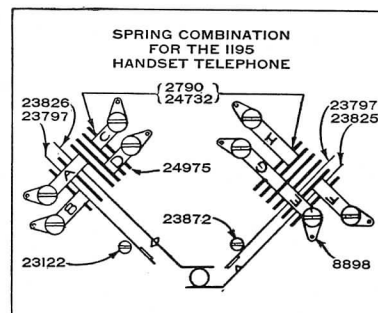
Rectifier—No. 1027-R Raytheon, .5 amp. capacity.

Code Call Equipment

A small metal Key Box equipped with a cam type key and a twelve conductor cord, 5'6" long, comprise the equipment necessary to install a code call service on No. 2-10 Type Systems. Key Box Size, 4¼" x 3⅞" x 1⅞".



Line Drawing Showing Piece Parts of the Stromberg-Carlson No. 1195 Handset Telephone



Line Drawing Showing Piece Parts of the Stromberg-Carlson No. 1215 Handset Telephone

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Multiple Line Key Turret

General

Business and professional offices which have a great number of incoming calls to handle, sometimes require special service equipment known as "Order Equipment." Where the business does not warrant the use of large "Order Switchboards," the Stromberg-Carlson Multiple Line Key Turret finds a wide application.

This type of equipment makes it possible for an incoming telephone call to be handled by more than one person or operator. Thus, in a department store, when customers call in over one of the telephone trunks to place an order or to secure information, the message can be handled promptly, as more than one operator can seize the call. In other cases, the system may be used to extend the trunks to a number of offices so that when one person is out, another may answer or it may be used to permit one person to answer all calls and signal the party desired by the push button signal system, at which time the party wanted takes over the call. All turret stations may also originate outgoing calls.

As many as nine key and lamp ended lines may be handled at a single turret position, and with these turrets multiplied, prompt response to incoming calls is assured. It retains the essential features for holding, signaling and busy supervision.



No. 1 Stromberg-Carlson Key Turret

Construction and Arrangement

The cabinet turret woodwork is standard walnut and is made up sectionally in units which are assembled to make up a complete turret. The base, P-24809 contains the terminal equipment, telephone and night alarm equipment, common talking key and indicator lamp. Above the base, the key sections, P-24808, are mounted. One to three sections may be so installed. Each key section contains three keys, three line lamps and three busy lamps, or an ultimate of nine circuits. To finish the turret a P-24807 Top covers the assembled equipment. In cases where signaling between turret operators is desired the P-26004 Top equipped with five push buttons is substituted for the P-24807.

The relay equipment for the system is housed in a sheet metal cabinet with black enamel finish, arranged for wall mounting. Relays, condensers, fuses and time release element are mounted accessibly on the door of the cabinet while the terminals are mounted in the stationary portion.

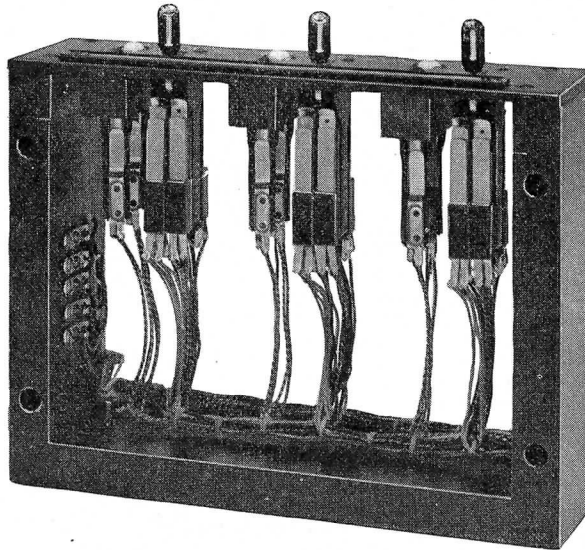
The terminal capacity is for six key turrets of three key sections each. This provides a total ultimate of nine trunk lines per turret. The circuits of the turrets are multiplied on the terminal strip.

The Standard No. 1 Relay Cabinet Assembly is wired for the ultimate but is carried in stock with three trunk lines equipped. Dimensions of relay cabinet are: height, $24\frac{7}{16}$ ", width, $15\frac{3}{16}$ ", depth, $6\frac{1}{16}$ ".

Telephone equipment for the operator may be provided in three types, breastplate type, handset or desk stand type.

Standard Equipments

All parts, bases, key sections and tops are carried in stock and shipped separately. The key sections and the bases are completely wired with local cable forms, permitting the customer to assemble and connect the turret assemblies to meet installation requirements.

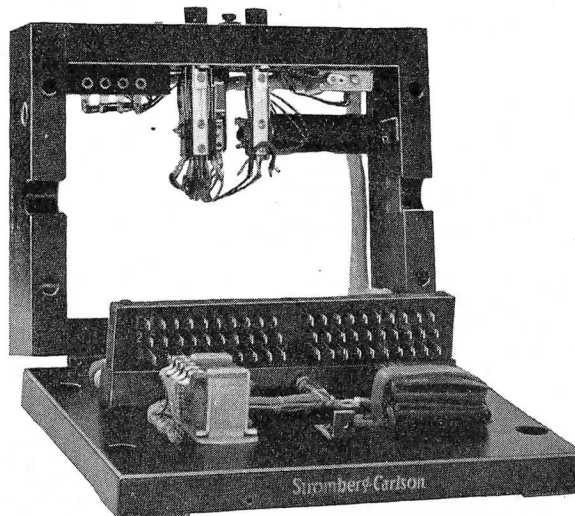


Key Section, P-24808, Multiple Line Key Turret

Standard Turret Equipments

Code No.	Description	Price	
1-A	3 Key Unit Assembly consists of:		
	1 P-24807 Top	@ \$ 2.45	\$ 2.45
	1 P-24808 Key Section	@ 20.35	20.35
	1 P-24809 Base	@ 27.00	27.00
		Total	\$49.80
1-B	6 Key Unit Assembly consists of:		
	1 P-24807 Top	@ \$ 2.45	\$ 2.45
	2 P-24808 Key Sections	@ 20.35	40.70
	1 P-24809 Base	@ 27.00	27.00
		Total	\$70.15
1-C	9 Key Unit Assembly consists of:		
	1 P-24807 Top	@ \$ 2.45	\$ 2.45
	3 P-24808 Key Sections	@ 20.35	61.05
	1 P-24809 Base	@ 27.00	27.00
		Total	\$90.50

Each turret, besides the above, requires one telephone equipment. See separate "Telephone Equipment" heading.



Base Section, P-24809, Multiple Line Key Turret

Multiple Line Key Turret (Cont.)

Turret Signaling Top

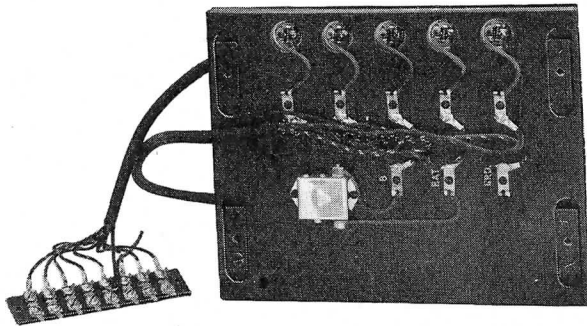
The P-26004 Top is used when it is desired to have common talking and selective ringing between turrets. The common talking key is furnished with all bases.

P-26004 Top provides 5 Push Buttons and 1 Miniature Buzzer.

When specified, a six-foot eight conductor cord and an eight-point terminal block is furnished. This provides a finished appearance to the wiring for the separate intercommunicating circuit and also provides suitable terminals for readily making the required connections.

Piece No.	Description	Price
26004	Top with 5 Push Buttons	\$ 9.00
26004	Top with Cord and Terminals	10.50

When P-24807 Top is replaced by P-26004 Top, add the letter "D" to the equipment code number. Thus 1-A Equipment becomes 1-AD Equipment.



Under Side of Push Button Top, P-26004

Noise Killer Equipment

When the P-26004 Push Button Top is used, it becomes necessary to provide noise eliminating equipment, which is common to all turrets. This equipment is mounted in one unit known as:

Piece No.	Description	Price
26060	Noise Killer Assembly	\$8.25

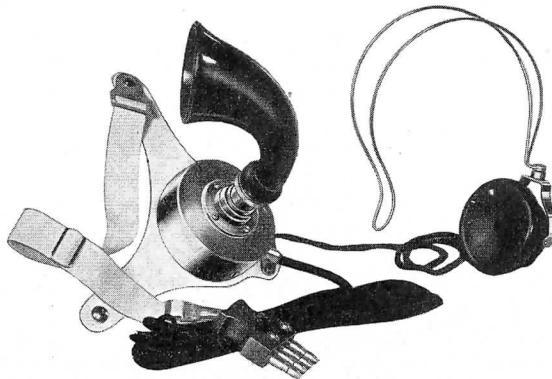
Telephone Equipment

Attendant's Station Telephones may be selected from the following types:

Code No.	Description	Price
1182	Desk Stand Telephone	*
1197-A	Handset Telephone (Cradel Type)	*
1234-M	Handset Telephone (Suspended Type)	*
4	Operator's Breast-plate telephone set	*

NOTE: No station bell is required with these instruments.

*See Telephone and Coded Parts Section of Catalogue for Prices.



No. 4 Operator's Set

Relay Cabinet Equipment

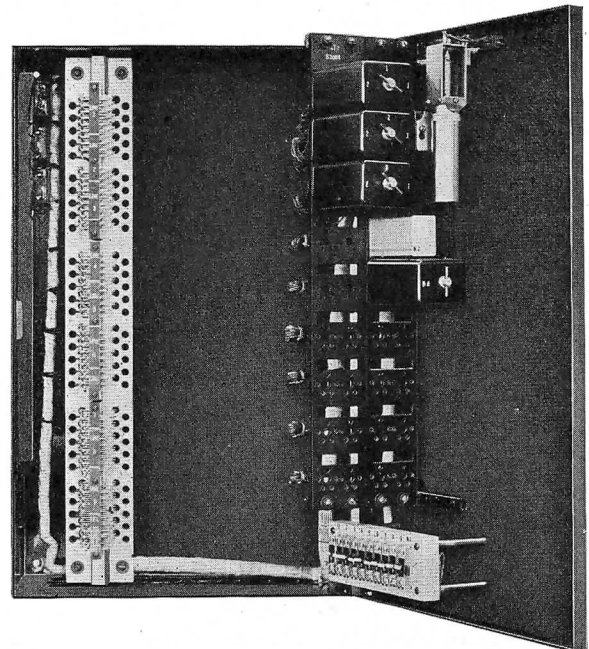
All No. 1 Relay Cabinet Assemblies are shipped 3 line equipped but wired completely with local cable form for the ultimate capacity of nine lines (includes wiring for intercepting service). All additional line equipment apparatus and intercept relay apparatus is shipped separately to be mounted and connected for installation requirements.

Each additional line equipment requires the following:

- 1 No. 257-ZWAYAY Relay
- 1 No. 253-BYCY Relay
- 1 No. 19-L Relay Casing
- 1 P-21796 Condenser, black finish
- 1 P-21621 Resistor

Intercepting service requires the following per line:

- 1 No. 212-AY Relay
- 1 No. 19-L Relay Casing (for each 2 relays)



No. 1 Relay Cabinet for Stromberg-Carlson Key Turret Equipment (Open)

Power Supply

This system is designed to operate off 22 volts D.C. and the current can be supplied in any one of the three following methods:

First: Battery Supply over cable pairs from the central office main battery or special battery at the central office.

Second: Storage Battery located on premises and charged from a dry plate rectifier or floated across cable pairs from the central office main battery.

Third: Recti-Filter Battery Supply Unit.

When figuring any of the above battery supply methods the maximum current drain to be used is approximately 4 amperes at 22 volts. This current figure takes care of an instantaneous load when the system is fully equipped.

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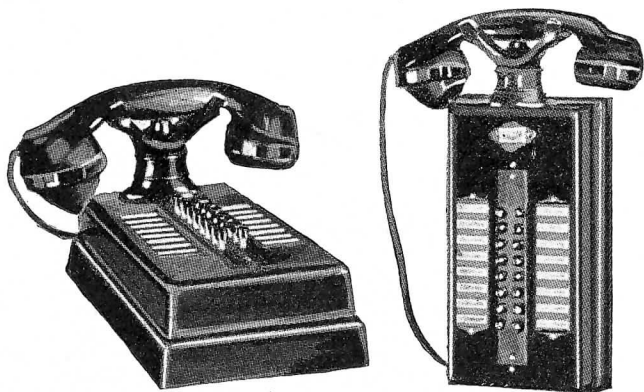
Graybar Inter-Communicating Systems Less Exchange Trunks

The Stromberg-Carlson Tel. Mfg. Co. is an appointed distributor for Graybar Inter-Phone Systems. These Systems have gained universal recognition for providing reliable telephone communication in installations requiring limited local service and not requiring outside or city connections. Offices, factories, stores, schools, apartments, and institutions find these Systems efficient and convenient.

No. 1-A System

This System features selective ringing and selective talking service and provides as many separate simultaneous conversations as there are pairs of telephones installed. The total number of stations which may be connected is 25.

No. 6140-C Telephone



No. 6140-C 16 Desk Telephone No. 6140-C 16 Wall Telephone

The No. 6140-C comes in two styles, desk and wall. When ordering, specify the style of instrument desired.

Code No.	No. of Buttons	Station Capacity	Description	Price
6140-C6	6	7	Sel. Ring, Sel. Talk	*
6140-C12	12	13	Sel. Ring, Sel. Talk	*
6140-C16	16	17	Sel. Ring, Sel. Talk	*
6140-C20	20	21	Sel. Ring, Sel. Talk	*
6140-C24	24	25	Sel. Ring, Sel. Talk	*

Accessories†

The No. 1-A System requires the following material for completing an installation:

- Cable**—With suitable conductors, (2 pairs No. 18 gauge for battery supply, and 1 pair No. 22 gauge, for each station in the system). Lead covered cable is recommended for all locations where moisture is present or where cable may be exposed to mechanical injury.
- Stranded flexible cable** is used where it is necessary to move the desk telephone about upon a desk. Conductors required depend upon number of buttons in the key box.
- Cable Terminals**—Cable Terminals should be provided wherever there is a junction between cables and usually at desk mountings.
- A Rectifier** is recommended in place of dry cells wherever reliable 110 volt AC is available.

*Prices will be provided upon application. Indicate System and Types of instruments in which you are interested.

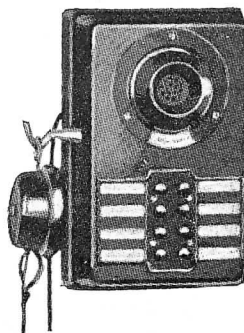
†Accessories are described in further detail following System descriptions.

No. 11 System

The No. 11 System provides selective ringing and common talking operation. This system is adaptable to establishments where conversations can be limited to one at a time. It is used extensively in residences, banks, warehouses and stores.

No. 2527 Telephone

The No. 2527-C is a wall type telephone suitable for surface wall mounting. The No. 2539-C is a flush type wall telephone which is combined with a metal outlet box and a set of outlet box hangers.

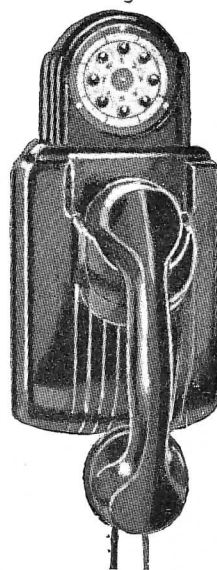


No. 2527-C 8 Wall Telephone

Code No.	Code No.	No. of Buttons	Station Capacity	Description	Price
2527-C 2	2539-C 2	2	3	Sel. Ring, Com. Talk	*
2527-C 3	2539-C 3	3	4	Sel. Ring, Com. Talk	*
2527-C 4	2539-C 4	4	5	Sel. Ring, Com. Talk	*
2527-C 6	2539-C 6	6	7	Sel. Ring, Com. Talk	*
2527-C 8	2539-C 8	8	9	Sel. Ring, Com. Talk	*

No. 6247-C Telephone

The No. 6247-C type telephone is a surface mounting wall type instrument. The housing is of molded phenol compound with the push button unit mounted at the top. The transmitter and receiver are made up in the form of a handset.



No. 6247-C 8 Wall Telephone

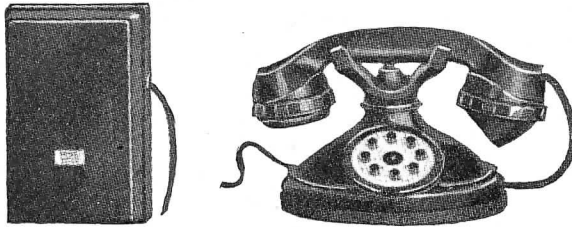
Code No.	No. of Buttons	Station Capacity	Description	Price
6247-C 4	4	5	Sel. Ring, Com. Talk	*
6247-C 8	8	9	Sel. Ring, Com. Talk	*

Graybar Inter-Communicating Systems Less Exchange Trunks

No. 11 System (Cont.)

No. 6245-C Telephone

The No. 6245-C type telephone consists of a Handset Telephone Desk Set with push buttons mounted in the base together with an apparatus box containing a bell and connecting block.

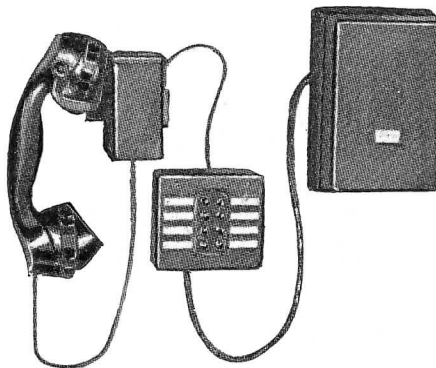


No. 6245-C 8 Handset Telephone

Code No.	No. of Buttons	Station Capacity	Description	Price
6245-C 4	4	5	Sel. Ring, Com. Talk	*
6245-C 8	8	9	Sel. Ring, Com. Talk	*

No. 6239-C Telephone

The No. 6239-C type telephone consists of a Handset, Hook Switch Box, Push Button Block and Apparatus Box. The Hook Switch Box upon which the Handset mounts is a unit which can be readily mounted at the side of a desk, on a wall or any vertical surface.



No. 6239-C 8 Handset Telephone

Code No.	No. of Buttons	Station Capacity	Description	Price
6239-C 4	4	5	Sel. Ring, Com. Talk	*
6239-C 8	8	9	Sel. Ring, Com. Talk	*

No. 6034 Telephone

The No. 6034 type telephone consists of a Handset having a metal handle and a "Press-To-Talk" Lever, a Push Button Block and an Apparatus Box. The Handset can be hung on a hook or pin driven into a wall.

Code No.	No. of Buttons	Station Capacity	Description	Price
6034-BG	4	5	Sel. Ring, Com. Talk	*
6034-BH	8	9	Sel. Ring, Com. Talk	*

Accessories†

The following material is necessary to complete the installation of a No. 11 System:

- 1 No. 51-H Retardation Coil**, to be installed near the battery of each system.
- Cable**—3 Common Wires, No. 18 Gauge, and one individual wire, No. 22 Gauge, for each station.
- Dry Cells**—5 cells required. If 110 volt A. C. current is available, a 6 volt rectifier may be employed.

System Number Twelve

Master Station—Common Talking

This system provides for communication from a central point, Master Station, to several outlying stations. The Master Station is equipped with push buttons, one for each outlying station. By operating these buttons each outlying station may be rung separately. The outlying stations are each equipped with one ringing button only, by which they are able to signal the Master Station. Only one conversation can be carried on at one time. The capacity of this system permits the operation of one Master Station and from two to sixteen outlying stations.

Instruments for No. 12 System

Master Stations—Any of the instruments described under System No. 11 may be used as Master Stations in System No. 12 up to the capacities indicated. The No. 2527-C type telephone may be furnished with 10 to 16 push buttons, to secure greater capacity.

Outlying Stations—The same type of instruments described in System No. 11, may be provided for Outlying Stations. These single button instruments are indicated by the following codes:

Code	Type	Code	Type
2527-C 1	Surface Wall	6245-C 1	Cradle
2539-C 1	Flush Wall	6239-C 1	Suspended
6247-C 1	Surface Hdst.	6042-K	Suspended‡
		6043-E	Suspended‡

‡These instruments have metal handsets. No. 6042-K suspends from a single gang outlet mounted flush in the wall. No. 6043-E suspends from a circular surface mounting box.

Accessories†

The following material is required for completing a No. 12 System:

- 1 No. 51-H Retardation Coil**, to be installed near the battery of each system.
- Wire**—Three common wires are required throughout the System, No. 18 or No. 19 gauge. In addition one individual wire between each outlying station and the Master Station, No. 22 Gauge. It will be found economical to use cable when there are long runs or a large number of wires.
- Cable Terminals**—Terminals are desirable at junction points and distribution centers.
- Dry Cells**—Five cells are required when the more distant outlying station is 750 feet or less distant from the Master Station.

*Prices will be provided upon application. Indicate System and Types of Instruments in which you are interested.

†Accessories are described in further detail following system descriptions.

B-12-12-42

Graybar Inter-Communicating Systems Less Exchange Trunks

System No. 14 and No. 14C

Two-Station Private Line

Two-Station Private Line Telephones are used extensively for communication between rooms in a residence, between offices, between shipping room and warehouse and to fill other similar requirements.

The No. 14 System requires two wires for connecting the two telephone instruments and one set of three or four dry cells at each telephone.

The No. 14C System requires three wires for connecting the two telephones and one set of five dry cells connected at one station only.

In either system one station can ring the other by simply depressing the button on the set. Wall or desk sets may be used interchangeably.

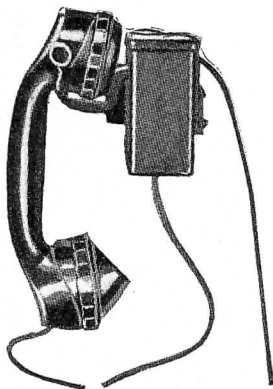


No. 2527-C 1 Wall Telephone

No. 6043-P
Suspended Wall Telephone

Two-Station Private Line Telephones

Code No.	No. of Buttons	Description	Price
2527-C 1	1	Surface Wall	*
2539-C 1	1	Flush Wall	*
6245-B 1	1	Handset Desk	*
6239-B 1	1	Suspended Wall	*
6043-P	1	Surface Wall Suspended	*
6042-AE	1	Flush Wall Suspended	*
6247-C 1	1	Wall Handset	*

No. 6239-B 1
Suspended Wall TelephoneNo. 6042-AE Suspended
Telephone

System No. 15

Code Ringing—Common Talking

In this system each station is equipped with one push button, which when depressed signals every other station. The various stations are called by signalling each one with a different code ring. Thus two rings signals station No. 2, three rings signals station No. 3, etc. The capacity of this system is two to six stations.

The No. 15 System may be used to advantage where telephone service is limited and where code ringing is not extensive enough to cause annoyance. Stockroom and associated warehouses, grouped green houses, guard stations and similar installations are well served by No. 15 Systems.

The instruments used have the same general appearance as those shown under System No. 14. They are indicated in the following table:

Code No.	No. of Buttons	Description	Price
2527-C 1	1	Surface Wall	*
2539-C 1	1	Flush Wall	*
6245-D 1	1	Handset Desk	*
6239-D 1	1	Suspended Wall	*
6043-CD	1	Surface Wall Suspended	*
6042-CD	1	Flush Wall Suspended	*
6247-C 1	1	Wall Handset	*

Accessories†

Installing Material as follows is required for the No. 15 System.

- (a) **1 No. 51-H Retardation Coil** to be installed near the battery of each system.
- (b) Four wires are required for connecting the Inter-Phones.
- (c) **Dry Cells**—No more than five (5) dry cells connected in series are used for this system.



No. 6245-B 1 Handset Desk Telephone

*Prices will be provided upon application. Indicate System and Types of instruments in which you are interested.

†Accessories are described in further detail following system descriptions.

Graybar Inter-Communicating System—Accessories

Commonly Used Accessories

Inter-Phone Cable

All conductors are tinned copper with single silk and single cotton insulation. The cable core is saturated with a wax compound. The overall covering is either painted cotton braid, indicated by the letter B, for dry inside installations or a pure lead sheath, indicated by the letters BS, for outside cable runs or wherever moisture is prevalent.

Cable Codes

Code No.	Conductors	No. 18	Covering	Approx. Diam.	Weight, Per C. Ft.	Price
161-B	7 Singles		Braid	$\frac{5}{16}$ "	3.5 lbs.	*
161-BS	7 Singles		Lead	$\frac{11}{32}$ "	23.0 lbs.	*
162-B	11 Singles		Braid	$\frac{11}{32}$ "	4.5 lbs.	*
162-BS	11 Singles		Lead	$\frac{3}{8}$ "	26.6 lbs.	*
164-B	6 Singles	2 Pairs	Braid	$\frac{3}{8}$ "	5.8 lbs.	*
164-BS	6 Singles	2 Pairs	Lead	$\frac{7}{8}$ "	26.6 lbs.	*
244-B	8 Pairs	2 Pairs	Braid	$\frac{3}{8}$ "	9.0 lbs.	*
244-BS	8 Pairs	2 Pairs	Lead	$\frac{13}{32}$ "	34.0 lbs.	*
246-B	14 Pairs	2 Pairs	Braid	$\frac{21}{32}$ "	15.0 lbs.	*
246-BS	14 Pairs	2 Pairs	Lead	$\frac{64}{64}$ "	40.0 lbs.	*
248-B	18 Pairs	2 Pairs	Braid	$\frac{29}{32}$ "	16.0 lbs.	*
248-BS	18 Pairs	2 Pairs	Lead	$\frac{31}{32}$ "	45.0 lbs.	*
249-B	22 Pairs	2 Pairs	Braid	$\frac{64}{64}$ "	19.0 lbs.	*
249-BS	22 Pairs	2 Pairs	Lead	$\frac{33}{32}$ "	49.0 lbs.	*
250-B	26 Pairs	2 Pairs	Braid	$\frac{33}{32}$ "	20.0 lbs.	*
250-BS	26 Pairs	2 Pairs	Lead	$\frac{64}{64}$ "	53.0 lbs.	*
251-B	33 Pairs	2 Pairs	Braid	$\frac{9}{16}$ "	25.0 lbs.	*
251-BS	33 Pairs	2 Pairs	Lead	$\frac{13}{32}$ "	61.0 lbs.	*

Standard Flexible Cable

Used principally with the No. 1A System, between cable terminal and Key-box, when it is necessary to move Key-box and Telephone about on the desk.

Code No.	418	430	438	446	454
Single Conductors	18	30	38	46	54

Dry Cells

Code No. Gray Label

See Construction Section of Catalogue for prices and descriptions of other primary cells.

See Accessories Section of Telephone Section for Storage Batteries.

Battery Boxes

Code No.	2	3	See Construction
Dry Cell Capacity	2	3	Section of Catalogue

Cable Terminals

Code No.	Number of Circuits	Terminals Per Circuit	Box Dimensions	Price
62	14	2	8 x 6 x $2\frac{1}{2}$ in.	See Coded
63	24	2	12 x 6 x $2\frac{1}{2}$ in.	Parts
89A	28	1	$8\frac{19}{32}$ x $6\frac{5}{32}$ x $3\frac{11}{32}$ in.	"
89B	21	1	$8\frac{19}{32}$ x $6\frac{5}{32}$ x $3\frac{11}{32}$ in.	"
19AC	15	2	8 x $5\frac{7}{8}$ x $2\frac{1}{2}$ in.	*
19BC	27	2	14 x $5\frac{7}{8}$ x $2\frac{1}{2}$ in.	*

Terminal Strips and Blocks

See Construction Section of the Catalogue which shows the many different types of strips and blocks as well as boxes available for connecting purposes.

*Prices furnished upon application.

Relays for Loud Ringing Bells or Lamp Signals

Type ABTX1 Relay provides a means by which loud powerful signals may be applied to Inter-Phone Stations when 110 direct or alternating current is available. The contacts of the relay are rated to carry 6 amperes, 110 volts A.C. or 1 ampere 115 volts D. C.

The ABTX1 Relay is installed in the circuit in place of the bell or buzzer in the set. The loud signal circuit is carried through the relay contacts which close when the station is rung.

Transformer

When it is so desired, the ringing current for Inter-Phone Systems may be supplied by using a bell ringing transformer. Type 231-101 transformer will operate on 110-120 volts, 50-133 cycles A.C. Six secondary voltages are available 4, 8, 12, 16, 20 and 24. Weight is 6 lbs. Size $4\frac{1}{16}$ " x $3\frac{5}{8}$ " x $3\frac{1}{16}$ ".

Loud Ringing Bells

The No. 17 Economy Bell, equipped with a 6" gong, may be wired directly in place of the signal in an Inter-Phone set. Specify gong size (6") and ringing voltage used. The bell is finished in black and weighs 2 lbs. 14 ozs.

When 110 volt A. C. is available the No. 551 Weatherproof Bell, used in connection with the ABTX1 Relay is recommended.

For other loud signal equipment see Construction Section of the Catalogue.

Retardation Coils

The No. 51-H Retardation Coil is recommended for use in the Talking Battery Circuit of the No. 11, No. 12 and No. 15 System.

Wire and Miscellaneous Equipment

Single, Twisted Pair and Twisted Triple Interior Telephone Wire is available for installation work, as well as Insulated Staples, Telephone Wiring Nails, Pipe Straps and Bridle Rings. Prices furnished upon request. Also see Construction Section of Catalogue.



No. 1



No. 3



No. 5



No. 6

Blake Insulated Staples

Inter-Phone Systems suitable for operation with annunciator panels and switchboards are available. Prices and descriptions will be furnished upon application.

Raytheon Rectifiers

These power filters are used extensively to replace dry cells in the operation of various Inter-Phone Systems. They not only supply a quiet source of talking battery, but also supply ringing current as indicated in the following table:

Code No.	D.C. Output Volts	Amps.	A.C. Freq.	A.C. Volts	Ringing Volts A.C.	Width	Cabinet Size in Depth	Height	Wt. Lbs.
1024	6	0.5	50/60	115	6-12-18-24	7	6 $\frac{1}{4}$	10 $\frac{1}{2}$	17
1026	12	0.5	50/60	115	6-12-18-24	7	6 $\frac{1}{4}$	10 $\frac{1}{2}$	19
1027	24	0.5	50/60	115	6-12-18-24	7	6 $\frac{1}{4}$	10 $\frac{1}{2}$	34
1044	24	1.0	60	115	6-12-18-24-75-100	14 $\frac{1}{2}$	7 $\frac{3}{8}$	14 $\frac{1}{8}$	84
1043	24	1.5	60	115	6-12-18-24-75-100	14 $\frac{1}{2}$	7 $\frac{3}{8}$	14 $\frac{1}{8}$	90
1040	24	3.0	60	115	6-12-18-24-75-100	14 $\frac{1}{2}$	9 $\frac{5}{8}$	14 $\frac{1}{8}$	90