

Western Electric

ELECTRICAL
SUPPLY
Y E A R
B O O K

1924

Western Electric Company
Offices in All Principal Cities

Western Electric

PRICES

Prices found in this catalogue are revised to agree with the latest lists at the time of issue. It is understood that they are subject to change without notice and are, therefore, not offered by us as a quotation. It is contemplated that all prices are for shipment from our warehouse unless otherwise specified, except such goods as are shipped regularly direct from factories, in which cases prices are for factory delivery unless otherwise specifically agreed upon.

ORDERS

When possible, we have placed opposite each article a list number. When ordering material, kindly order by the list number and give a description of the article required.

You are requested to specify the routing over which you prefer shipments to be made. In the absence of specific instructions, we shall use our best judgment in selecting the route, but we are not responsible for extra drayage expenses at destination.

TERMS

Our terms are 30 days net from date of invoice. Cash discount for payment within ten days from date of invoice may be deducted at the rates set forth in the manufacturers' schedules of cash discounts, or such cash discounts may be deducted for payment with order.

Payments may be made by check, bank draft, postal or express money order, drawn to the order of or endorsed to the order of the Western Electric Company, Incorporated.

Payments in currency through the mails even if registered are not recommended and are at sender's risk. We are not responsible for loss or miscarriage of the mails.

Receipts are not issued for remittances unless requested. Our endorsement on remittance is acknowledgment of the receipt of the funds.

We solicit new accounts on a credit basis, and in order to give prompt service, request that where you are not rated by the Commercial Agencies, references or other information of a credit character be forwarded with the order. These will be immediately acted upon, and the results held in strict confidence for our sole use and, when reasonably satisfactory, shipment will follow with all possible dispatch.

To avoid the delay incidental to communicating with references, etc., it would be mutually convenient, when immediate shipment is desired, to instruct us to ship C. O. D. by express, or parcel post (insured if so instructed) or by freight subject to sight draft through a local bank against bill of lading.

We shall advise the terms on future orders promptly after communications from references are received.

RETURNED GOODS

To save transportation charges, and to facilitate the handling of goods upon receipt, you are requested not to return goods without having obtained shipping instructions from us.

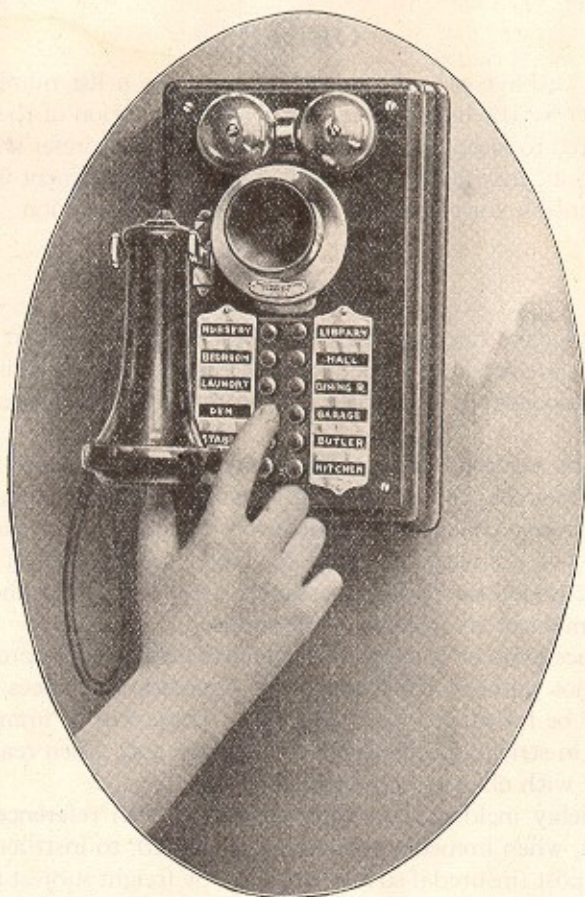
SHIPMENTS

As experienced packers are employed, and as reasonable care is used in packing, we cannot be held responsible for breakage in packages which are delivered in "good order" by the carrier.

Shipments of glassware are made at your risk.

Goods ordered to be shipped by parcel post will be sent only at the purchaser's risk of loss or damage.

WESTERN ELECTRIC INTER-PHONES AND ACCESSORIES



Introductory

Fast and reliable telephonic communication is today such a well recognized essential that Inter-phones are considered a necessity in the modern business and home life. Schools, industries, offices, public institutions and the modern home require them, and they are considered a part of the building equipment by leading Architects in planning and designing new buildings. The user is the only operator required—pushing one button makes the desired connection.

Western Electric Inter-phones can be relied upon to give perfect satisfaction. Our valuable and extensive experience in the telephone field for over half a century enables us to offer equipment which has proved its efficiency and reliability under most severe operating conditions.

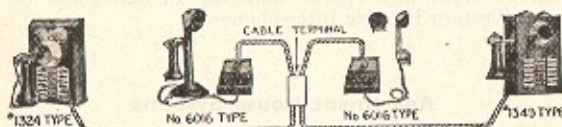
Inter-phones described on the following pages are scientifically designed and carefully constructed in various styles and types to meet the service requirements in the home and office. The sets are regularly finished in dull black enamel with nickel trimmings. This finish is pleasing in appearance and will harmonize with any surroundings.

Western Electric Inter-phones
Picture Index of Inter-phone Systems

These diagrams are intended to show the Ringing Service provided for the various Inter-phone systems and should not be confused with the wiring diagrams, which are shown in a separate bulletin, "Installing and Maintaining Western Electric Inter-phones."

System No. 1

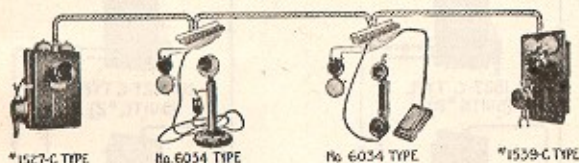
Selective Ringing—Selective Talking Service
For 3 up to 24 Stations



1. Any station can ring selectively any other station.
 2. More than one conversation can take place simultaneously.
 3. Apparatus, operation and appearance, the highest grade obtainable.
- (For systems Nos. 7, 8, 9 and 10 see Apartment House Inter-phones.)

System No. 11

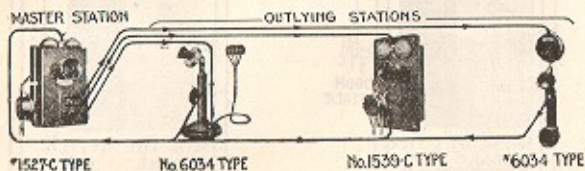
Selective Ringing—Common Talking Service
For 3 up to 8 Stations



1. Any station can ring selectively any other station.
2. Only one conversation can be carried on at a time.
3. Apparatus pleasing in appearance and moderate in cost.

System No. 12

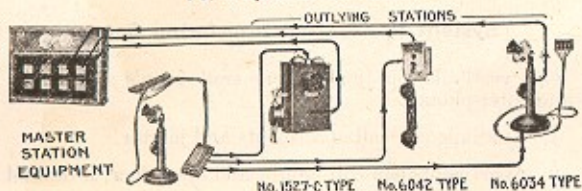
Master and Outlying Stations—Common Talking Service
For 3 up to 8 Stations



1. The "master station" can call any one of the "outlying stations," selectively and the outlying stations can call the master station (but not each other).
2. Wall, desk or hand set Inter-phones may be used interchangeably in this system for both the master and outlying stations.
3. Only one conversation can be carried on at a time.

System No. 12A

Master Annunciator and Outlying Stations
Common Talking Service
For 3 up to 20 Stations



1. Adapted for schools where the principal must call the teachers individually and teachers must call the principal but not each other.
2. Same as System No. 12 except master station is equipped with an annunciator for identifying calls from the outlying stations.
3. The master station annunciator is of the Electrical Reset type.
4. Only one conversation can be carried on at a time.

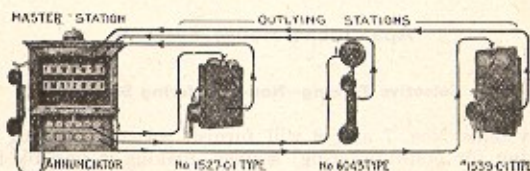
Western Electric Inter-phones
Picture Index of Inter-phone Systems

Continued

These diagrams are intended to show the ringing service provided for the various Inter-phone systems and should not be confused with the wiring diagrams, which are shown in a separate bulletin, "Installing and Maintaining Western Electric Inter-phones."

System No. 12B

Master Annunciator and Outlying Stations
Common Talking Service
For 3 up to 24 Stations

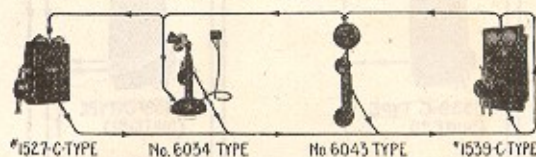


Formerly Known as Systems No. 16 B&C

1. The "outlying stations" can ring the "master annunciator" station but not each other.
2. Master annunciator station may or may not have push buttons for calling any one of the outlying stations.
3. This system is also designed for replacing existing ordinary annunciator and push button systems (where the wiring is suitable).
4. Only one conversation can be carried on at a time.

System No. 15C

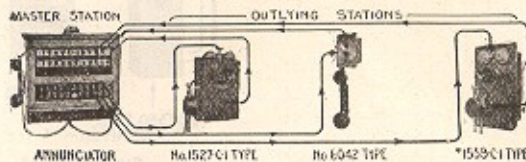
Code Ringing—Common Talking Service
For 2 up to 6 Stations



1. A simple private line system (requires only 3 line wires between stations).
2. When a button is pressed at any station the bells of all other stations will ring simultaneously.
3. The various stations are called by signalling each one with a different code.
4. Only one conversation can be carried on at a time.

System No. 18

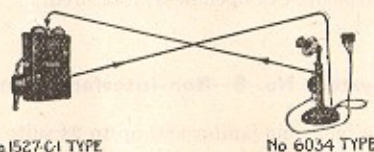
Master Annunciator with Connecting Cords
For 10 up to 70 Stations



1. From the "master station annunciator" any one of the "outlying stations" can be called selectively, or the master station can be called from the outlying stations.
2. Communication can be established between any two outlying stations by means of connecting cords at the master station annunciator.

System No. 14

Private Line
For 2 Stations Only



1. For connecting two points separated by a mile or less.
2. Only two line wires are required for connecting between the two stations.
3. Either station can ring and converse with the other.

Western Electric Inter-phones

Picture Index of Inter-phone Systems

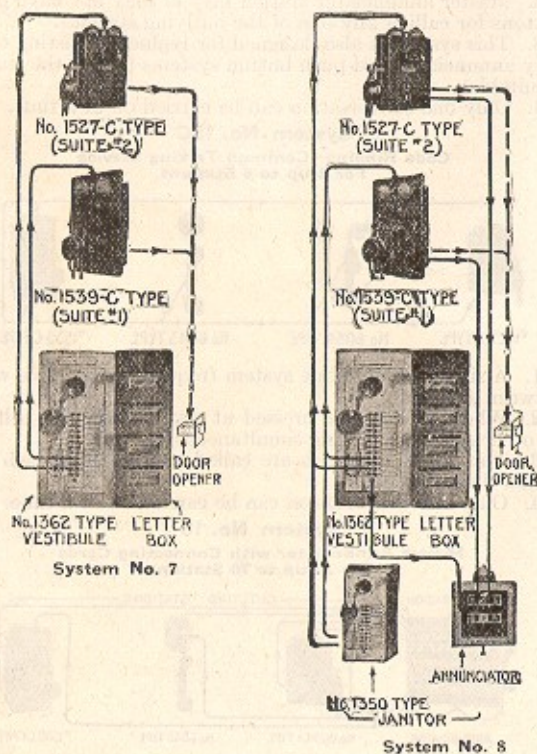
Continued

These diagrams are intended to show the ringing service only, and should not be confused with the wiring diagrams, which are shown in a separate bulletin, "Installing and Maintaining Western Electric Inter-phones."

Apartment House Systems

Selective Talking—Non-interfering Service

Systems Nos. 7 and 8 will furnish selective ringing and talking (or non-interfering) service, making it possible for a number of conversations to take place simultaneously.



System No. 7—Non-interfering Service

One vestibule and up to 24 suite Inter-phones.

1. Vestibule can call apartments.
2. Apartments can open door, if desired.

System No. 8—Non-interfering Service

One vestibule, one janitor and up to 24 suite Inter-phones

1. Vestibule can call apartments and janitor.
2. Apartments can call janitor and open door, if desired.
3. Janitor can call apartments.

Western Electric Inter-phones

Picture Index of Inter-phone Systems

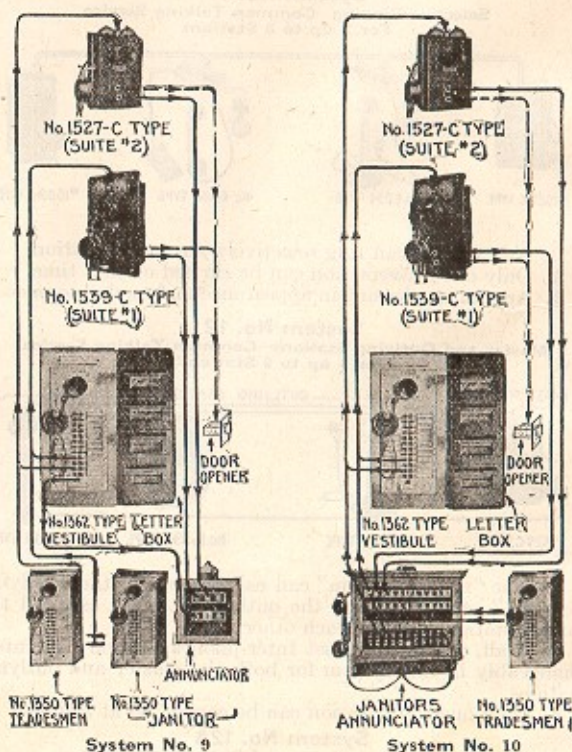
Continued

These diagrams are intended to show the ringing service only, and should not be confused with the wiring diagrams, which are shown in a separate bulletin, "Installing and Maintaining Western Electric Inter-phones."

Apartment House Systems

Selective Talking—Non-interfering Service

Systems Nos. 9 and 10 will furnish selective ringing and talking (non-interfering) service, making it possible for a number of conversations to take place simultaneously.



System No. 9—Non-interfering Service

One vestibule, one janitor, one tradesmen's and up to 24 suite Inter-phones.

1. Vestibule can call apartments and janitor.
2. Apartments can call janitor and open door, if desired.
3. Janitor and tradesmen can call apartments.

System No. 10—Non-interfering Service

One janitor's switchboard, two or more vestibule and tradesmen's Inter-phones and any number of suite Inter-phones up to 70. A maximum of 24 suite Inter-phones can be connected to each vestibule set.

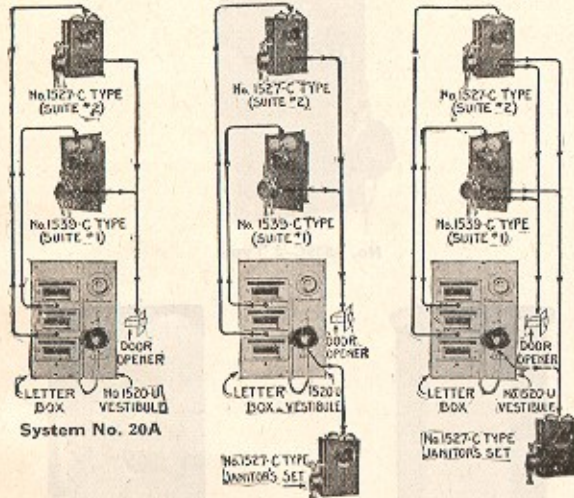
Western Electric Inter-phones
Picture Index of Inter-phone Systems
 Continued

These diagrams are intended to show the ringing service only, and should not be confused with the wiring diagrams, which are shown in a separate bulletin.

System No. 20

Selective Ringing—Common Talking Service

There are six combinations of the No. 20 System suitable for systems consisting of one vestibule and up to 24 suite inter-phones.



System No. 20A

System No. 20C

System No. 20D

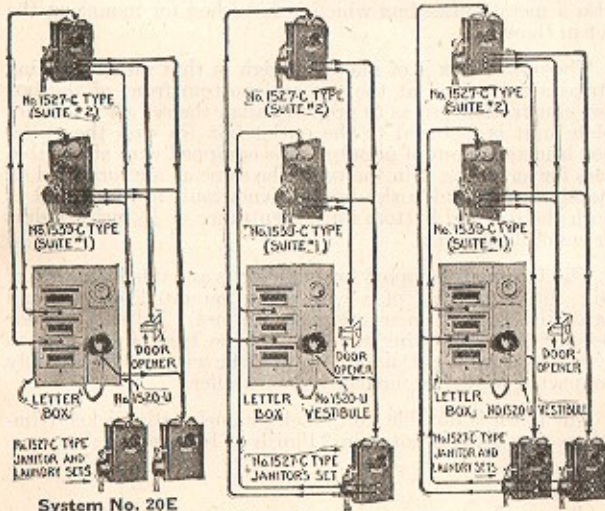
1. Vestibule can call apartments.
2. Apartments can open door.

System No. 20C

1. Vestibule can call apartments and janitor.
2. Apartments can open door.

System No. 20D

1. Vestibule can call apartments and janitor.
2. Apartments can open door and call janitor.



System No. 20E

System No. 20G

System No. 20H

1. Vestibule can call apartments and janitor.
2. Apartments can open door and call janitor and laundry.

System No. 20G

1. Vestibule can call apartments and janitor.
2. Apartments can open door and call janitor.
3. Janitor can call apartments.

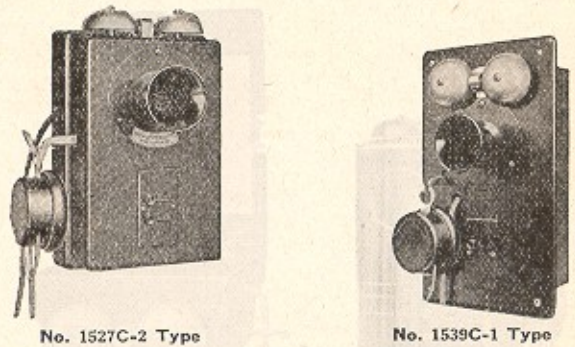
System No. 20H

1. Vestibule can call apartments and janitor.
2. Apartments can open door and call janitor and laundry.
3. Janitor and laundry can call apartments.

Western Electric Inter-phones

Description of Metal Wall Inter-phones
Nos. 1527C and 1539C Types

Selective Ringing—Common Talking Service



General

The Nos. 1527C and 1539C Inter-phones represent the highest development yet attained toward the standardization of design and construction of Common Talking Type Inter-phones.

This result is due to the exceptional engineering skill employed in producing a universal Inter-phone that is simple, yet pleasing in design; compact, yet with every part accessible for instant inspection; rugged, yet light in weight and efficient in operation.

Construction and Flexibility

The principal features of these Inter-phones are:

Surface and flush type Inter-phones so wired as to be adaptable for use in any of our "Common Talking" Inter-phone systems.

An interchangeable push button arrangement provides for readily furnishing Inter-phones from stock in capacities of 1, 2, 3, 4, 6 and 8 buttons as required.

Circuit labels in each Inter-phone together with an envelope containing strap wires and a diagram of connections give clear, concise instructions for universally connecting the completely equipped sets for any of our Common Talking Systems.

The push button arrangement provides for the future growth of an Inter-phone system by simply ordering push button units of the required capacities without having to remove or dismantle the sets from the system. (This assumes that cable including spare wires is originally installed.)

Finish of Inter-phones

The metal parts of the Nos. 1527C and 1539C Inter-phones with the exception of the transmitter and bells are treated with the Parker Rustproof Process. This consists of treating the parts in a hot chemical bath, which changes the surface of the metal to a non-rusting basic phosphate.

The protecting surface provided by the Parker Process does not add an additional coating of some other non-oxidizing material, but it is practically a part of the metal itself and prevents rust from spreading if it should start by the exposure of the bare metal at any spot.

Durable black enamel baked on (over the Parkerized surfaces) provides a tough elastic, non-chipping finish, two coats of the enamel being applied on surfaces exposed to view.

Of Interest to Contractors

The universal and flexible feature of these new metal wall Inter-phones is of special importance since it now enables contractors and dealers to carry complete stocks of Inter-phones for adoption to any of our Common Talking Systems with but a small amount of investment.

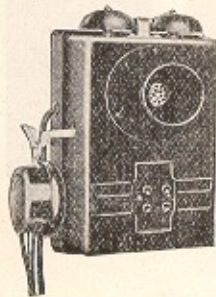
Western Electric Inter-phones

Description of Metal Wall Inter-phones

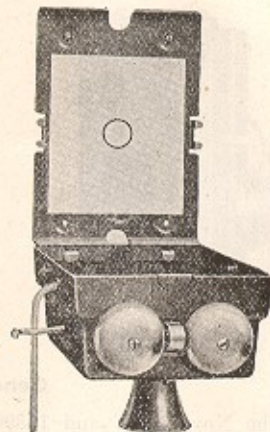
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No. 1527C Type Wall Inter-phones

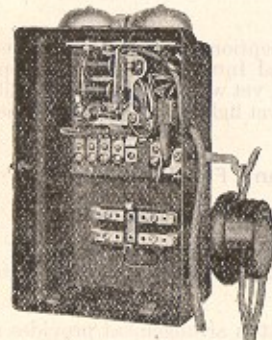
Surface Mounting



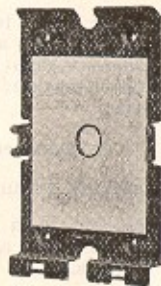
No. 1527-4 Type



Open View



Interior of Housing



Backboard

The No. 1527C Type Inter-telephone has a surface mounting metal housing which contains all of the talking and signalling apparatus, also a metal backboard, which is furnished for mounting the set to the wall.

The housing of the set is of rugged construction, being formed out of sheet steel and is equipped with hinge hooks which match up with slots in the base of the metal backboard. This arrangement permits fastening the backboard in place on the wall and then mounting the housing unit to it.

The hinge arrangement of this set enables the installer to swing down the housing unit from the backboard (see illustration) for making connections to the terminals; also to permit interior inspection of the set at any time after its installation.

The metal backboard is designed to permit the entrance of wires or cabling from either the top, bottom or center of the set; also, a metal guide ring is located near the cable entrance at the base of the backboard so that the connecting wires may be looped through this ring to hold them in place and provide a proper bending point when the housing is swung forward.

The finish is durable dull black enamel with nickel trimmings (see general notes on "Finish of Inter-phones").

Code No.	No. of Buttons	For Systems	DIMENS. HOUSING, INCHES		
			Height	Width	Depth
1527C-0	0	7, 20 and 21	7½	5	2⅝
1527C-1	1	{ 7, 8, 9, 10, 12, 14, 15, 18, 20, and 21 }	7½	5	2⅝
1527C-2	2	8, 9, 10, 20 and 21	7½	5	2⅝
1527C-3	3	11, 12, 20 " 21	7½	5	2⅝
1527C-4	4	11, 12, 20 " 21	7½	5	2⅝
1527C-6	6	11, 12, 20 " 21	7½	5	2⅝
1527C-8	8	11, 12, 20 " 21	7½	5	2⅝

Western Electric Inter-phones

Description of Metal Wall Inter-phones

Continued

No. 1539C Type Wall Inter-phones

Flush Mounting



No. 1539C-2 Type



Outlet Box



Back of Face Plate

The No. 1539C type Inter-telephone has a flush steel face plate on which is mounted all of the talking and signalling apparatus, also a metal outlet box which is furnished for mounting the set in the wall.

The outlet box is of unique design in that metal aligning strips are fastened at the top and bottom front of the box (see illustration), so as to properly align the set after the face plate unit is fastened to the outlet box (in case the outlet box is installed out of plumb). It is equipped with adjustable ears for mounting it in the wall, the same as are furnished on standard sectional outlet boxes. Knockouts are provided at both the top and bottom for the entrance of ½ inch conduit or connecting wires.

The face plate support for installer is an added feature of this set, consisting of a wire hook mounted on a small card with printed instructions for its use. This hook is for temporarily supporting the Inter-telephone face plate, of flush type sets, during installation, so that the wires may be readily connected to the terminals by the installer.

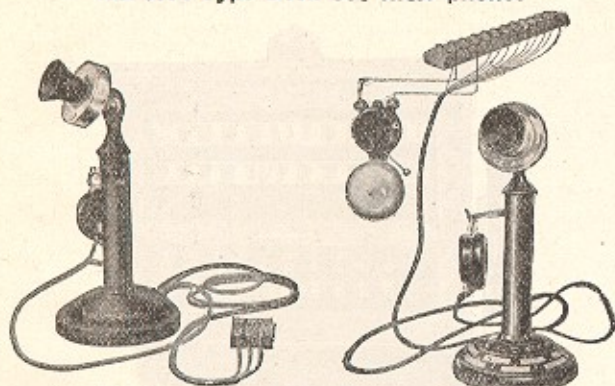
The finish is durable dull black enamel with nickel trimmings (see general notes on "Finish of Inter-phones").

Code No.	No. of Buttons	For Systems	DIMENSIONS, INCHES				
			FACE PLATE Height	FACE PLATE Width	OUTLET BOX Height	OUTLET BOX Width	OUTLET BOX Depth
1539C-0	0	7 and 20	9	5⅝	7½	4	2⅝
1539C-1	1	{ 7, 8, 9, 10, 12, 14, 15, 18, 20 }	9	5⅝	7½	4	2⅝
1539C-2	2	8, 9, 10 and 20	9	5⅝	7½	4	2⅝
1539C-3	3	11, 12, and 20	9	5⅝	7½	4	2⅝
1539C-4	4	11 and 12	9	5⅝	7½	4	2⅝
1539C-6	6	11 " 12	9	5⅝	7½	4	2⅝
1539C-8	8	11 " 12	9	5⅝	7½	4	2⅝

Western Electric Inter-phones

Description of Inter-phones

Selective Ringing—Common Talking Service
No. 6034 Type Desk Set Inter-phones



No. 6034-BE

No. 6034-P

A compact type of desk Inter-phone embodying all of the necessary talking and signalling equipment and retaining in design the same general appearance of the standard type of desk telephone.

The stands are equipped with watch-case receivers and finished in dull black enamel with nickel trimmings, presenting a neat and attractive appearance.

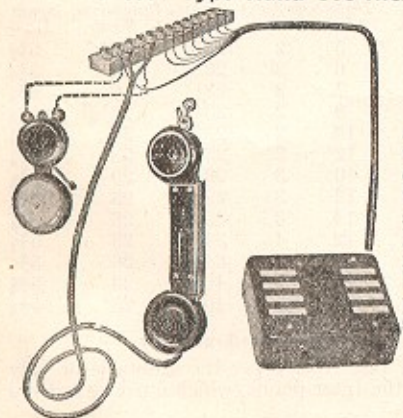
The desk stands of the Nos. 6034AP and BE Inter-phones are each equipped with a push button and buzzer. The push button is mounted in a convenient position in the stem of the stand for signalling purposes and the buzzer is mounted in the base of the stand for receiver calls.

The four and eight button types of Inter-phones have the push buttons mounted in the base of the desk stands (including blank name plates) for signalling the various stations in a system, also a separate bell is furnished for receiving the calls.

Code No.	No. of Buttons	INCLUDES					For System
		DESK STAND Code No.	Cord Ft.	Bell	Connecting Block		
6034AP	1	1020BG	6	*	2 No. 11A	12	
6034BE	1	1420BG	6	*	12A	14 & 15C	
6034M	4	1020AS	6	11B	8E	11, 12	
6034P	8	1020AT	6	11B	8F	11, 12	

NOTE.—*Buzzer in base of desk stand.

No. 6034 Type Hand Set Inter-phones



These Inter-phones are for the same service as the four and eight button desk types as described above except that a hand set and a separate push button block are furnished in place of the desk stand.

Code No.	No. of Buttons	INCLUDES					For System
		HAND SET Code No.	Cord Ft.	PUSH BUTTON BLOCK Code No.	Cord Ft.	Bell	
6034AZ	4	1003K	6	104AC	6	11B	8E 11, 12
6034BB	8	1003K	6	108AC	6	11B	8F 11, 12

This represents one of the most convenient types of talking equipment. The transmitter and receiver are a part of the hand set, which can be held and operated with one hand, leaving the other free. A bar marked "Press to talk" mounted in the hand set handle is held down by the natural position of the hand while talking. When not in use, the hand set can be hung on the hook or laid down in any position. The hand set is finished in dull black.

Western Electric Inter-Phones

Description of Inter-phones—Continued

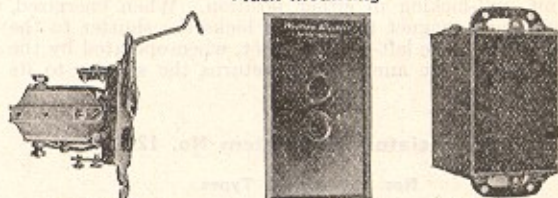
Selective Ringing—Common Talking Service
Nos. 6042 and 6043 Types—Hand Set Inter-phones Apparatus Unit (or Box). In connection with most "one button" hand sets it is necessary to use Apparatus Units containing terminals and other accessories. Two types can be furnished.

Surface Mounting



No. 383 Type

Flush Mounting



No. 382 Type Apparatus Unit

No. 12007 Face Plate

Type AA Switch Box

Flush mounting apparatus Boxes (No. 382 type) are intended to be set in the wall and are equipped with a brush brass finished face plate. These boxes consist of three parts—a Gem A Union sectional switchbox, an apparatus unit and a face plate. The face plate is 4½ x 2¾ inches, the wall box 2 x 3 x 3 inches deep.

An important point to be observed is that wall box and face plate are the same as those used in electric light wiring for push button switches. This feature is of special importance to the contractor, since it allows him to draw on his own stock of Union sectional switchboxes and face plates. For this reason we are prepared to furnish sets either complete, including wall box and face plate, or minus these parts.

How Hand Sets Are Connected to Apparatus Units

With the surface apparatus unit the hand set cord is permanently attached to the hand set and apparatus unit.

With the flush apparatus box the hand set cord is permanently attached to the box. Except the Numbers 6042E and K (systems 12A and 12B). These cords are equipped with plugs. The plug can be inserted or removed from the receptacle located in the center of the face plate.

This feature makes it possible to discontinue telephone service at any point by simply removing the plug and the hand set.



No. of Buttons	No. 6042 Type Hand Set			No. 6042 Flush Types			No. 6043 Type Hand Set	
	Code No.	Hand Set Code No.	Cord Ft.	Code No.	Apparatus (Flush Type) Code No.	Face Plate No.	For Systems	
1	6042E	**1003G	3	382E	None	None	12 & 12A	
	or 6042K	**1003G	3	382EB	Gem A	12007		
1	6042D	1003K	3	382J	None	None	12B	
	or 6042M	1003K	3	382JB	Gem A	12007		
1	6042AE	1003AA	3	382JB	None	None	14 & 15C	
	or 6042AF	1003AB	3	382J	Gem A	12007		
1	6042G	1003C	3	382J	None	None	18	
	or 6042L	1003C	3	382JB	Gem A	12007		

*Notes. Switch boxes 2 x 3 x 3 inches deep (standard).

**Hand set cord equipped with plug.

No. 6043 Surface Types

No. of Buttons	Code No.	Hand Set	Cord Ft.	Apparatus Box (Surface Type)	For Systems
1	6043E	1003J	3	383J	12 & 12A
1	6043D	1003E	3	383J	12B
1	6043P	1003AB	3	383J	14 & 15C
1	6043G	1003P	3	383J	18

Western Electric Inter-phones

Description of Annunciators

Selective Ringing—Common Talking Service

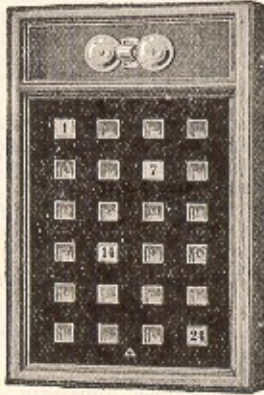
The finish of the annunciators used for our various Inter-phone systems is light golden oak and the cabinets are neat and attractive in design. Special finishes can be furnished on order at a slight additional expense.

The drops used in all hand reset annunciators are gravity type and made of decarbonized steel and brass, constructed to withstand the most severe service. The drops are shallow in design to permit neatness and compactness in the annunciator, also they remain locked against all vibration, falling only when current passes through the magnet.

The drops used in the electrical reset annunciators are the Semaphore gravity type. Two lock drops are combined in one unit, self-locking in either position. When energized, the right-hand magnet throws and locks the shutter to the left-hand side. The left-hand magnet, when operated by the reset button of the annunciator, returns the shutter to its original position.

Annunciators for System No. 12A

Nos. 401 and 407 Types



No. 401 Type Annunciator

An electrical reset type annunciator for use in connection with our No. 12A system master station and may also be used for other purposes where a standard type of electrical reset annunciator is desired.

The drops (as described above) are mounted on the back-board and are regularly furnished with the reset for the total number of drops.

The finish of the wood case (No. 401 type) is golden oak. The finish of the metal case (No. 407 type) is dull black. Other finishes are "special."

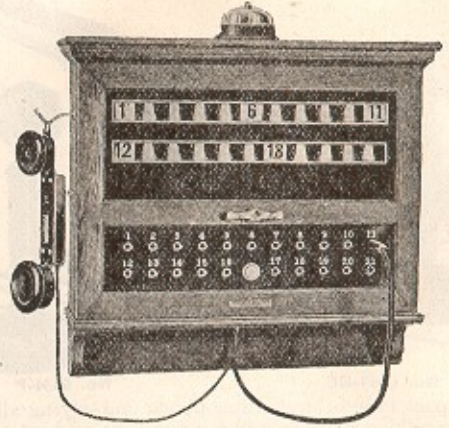
No. of Drops	ARRANGEMENT		DIMENSIONS		
	Across	Down	High	Wide	Deep
4	2	2	9 ⁵ / ₈	7 ¹ / ₄	2 ¹ / ₂
6	3	2	9 ⁵ / ₈	9 ¹ / ₂	2 ¹ / ₂
8	4	2	9 ⁵ / ₈	11 ³ / ₄	2 ¹ / ₂
10	4	3	11 ⁵ / ₈	11 ³ / ₄	2 ¹ / ₂
12	4	3	11 ⁵ / ₈	11 ³ / ₄	2 ¹ / ₂
15	5	3	11 ⁵ / ₈	14 ¹ / ₂	2 ¹ / ₂
16	6	3	11 ⁵ / ₈	16 ¹ / ₄	2 ¹ / ₂
18	6	3	11 ⁵ / ₈	16 ¹ / ₄	2 ¹ / ₂
20	5	4	13 ⁵ / ₈	14	2 ¹ / ₂
22	6	4	13 ⁵ / ₈	16 ¹ / ₄	2 ¹ / ₂
24	6	4	13 ⁵ / ₈	16 ¹ / ₄	2 ¹ / ₂

NOTE.—Intermediate or larger sizes in sets of two drops can be furnished.

Western Electric Inter-phones

Annunciators for Systems Nos. 10 and 18

Selective Ringing—Common Talking Service



Master Station Annunciator Nos. 1028 and 1051

A hand reset type wooden case annunciator with golden oak finish, presenting a neat and attractive appearance. Other finishes can be furnished on order at a slight additional expense. The annunciators are equipped with a number of drops and jacks, a push button for ringing, a hand or desk set Inter-phone (which must be ordered separately) and a cord and plug for calling and answering calls.

The drops and jacks will be numbered from one up, unless otherwise specified. The number of vestibule drops for System No. 10 must be specified on order. The combined resistance of bell and drops in series is 10 ohms resulting in lengthening the life of the battery and lowering the maintenance cost.

The Nos. 1028 to 1039 series are for use in System No. 18. For details of operation, see listing of that system.

The Nos. 1040 to 1051 series are for use in System No. 10. For details of operation, see listing of that system.

No. of Drops	System No. 18 List No.	System No. 10 List No.	ARRANGEMENT OF DROPS AND JACKS		OUTSIDE DIMENSIONS, INCHES		EXCESS DEPTH
			Across	Down	Height	Width	
10	1028	1040	5	2	23 ¹ / ₄	12 ¹ / ₂	5 ³ / ₄
12	1029	.....	6	2	23 ¹ / ₄	14	5 ³ / ₄
14	.....	1041	7	2	23 ¹ / ₄	16	5 ³ / ₄
18	1030	1042	9	2	23 ¹ / ₄	18 ¹ / ₂	5 ³ / ₄
20	1031	1043	10	2	23 ¹ / ₄	20	5 ³ / ₄
24	1032	1044	12	2	23 ¹ / ₄	23	5 ³ / ₄
30	1033	1045	10	3	29 ¹ / ₂	20	5 ³ / ₄
36	1034	1046	12	3	29 ¹ / ₂	23	5 ³ / ₄
42	1035	1047	14	3	29 ¹ / ₂	26	5 ³ / ₄
48	1036	1048	12	4	34 ¹ / ₂	23	5 ³ / ₄
56	1037	1049	14	4	34 ¹ / ₂	26	5 ³ / ₄
60	1038	1050	12	5	40 ³ / ₄	23	5 ³ / ₄
70	1039	1051	14	5	40 ³ / ₄	23	5 ³ / ₄

NOTE—Larger sizes can be furnished on order.

Each of the above List Nos. cover the annunciator only and does not include the Inter-phone, which must be ordered separately as follows:

Desk or Hand Set Inter-phones For Systems Nos. 10 and 18 Annunciators

No. 1003K, hand set, black finish, 3 foot cord.
No. 1320BF, desk stand, black finish, 3 foot cord.

Hooks

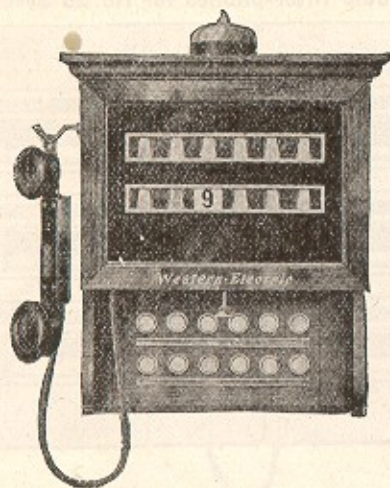
A No. 141A hook can be furnished for hanging the hand set to the side of the annunciator.

Connecting Cords

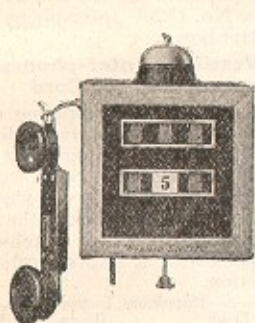
One or two pairs of connecting cords can be furnished when specified on order. These cords are for use only in System No. 18 as described under listing of System No. 18.

Western Electric Inter-phones

Annunciators for Systems Nos. 8, 9, and 12B



No. 36005 Master Station Two-way Service



No. 360011 Master Station One-way Service



Janitor's Annunciator Nos. 361332-361339

Hand reset type wooden case annunciators with golden oak finish. Other finishes can be furnished on order at a slight additional expense.

The Nos. 360000 to 360008 series are for use in System No. 12B two-way ringing service.

The Nos. 360009 to 360017 series are for use in System No. 12B one-way ringing service.

The Nos. 361332 to 361339 series are for use in apartment house Systems Nos. 8 and 9.

No. of Drops	Used For		Systems Nos. 8 and 9 List No.	Drop Arrangement (Horizontal Rows)
	SYSTEM No. 12B Two-way Service List No.	One-way Service List No.		
2	360000	360009	.....	1
4	360001	360010	361332	1
6	360002	360011	361333	2
8	360003	360012	361334	2
10	360004	360013	361335	2
12	360005	360014	361336	2
15	360006	360015	361337	3
18	.....	.....	361338	3
20	360007	360016	.....	2
24	360008	360017	.....	2
25	.....	.....	361339	5

NOTE.—Larger sizes can be furnished on order.

Each of the above List Nos. (360000 to 360017) cover the annunciators only and do not include the hand set which must be ordered separately, as follows:

Hand Set Inter-phones For System No. 12B Annunciators

No. 1003D, hand set, black finish, 3 foot cord.
No. 141A, hook furnished on order for hanging hand set.

Western Electric Inter-phones

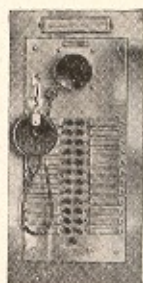
Description of Apartment House Inter-phones Selective Talking—Non-interfering Service Vestibule Inter-phones for Systems Nos. 7, 8, 9, and 10



No. 1362 Vestibule Inter-phone with Letter Boxes

The vestibule equipment for Systems Nos. 7, 8, 9 and 10 consists of the No. 1362 type Inter-phone and any number of letter boxes.

No. 1362 Type Vestibule Inter-phones With Armored Receiver Cord



No. 1362 Type Inter-phone

The No. 1362 type vestibule Inter-phone has a metal case with brush brass finish, arranged for flush mounting. This Inter-phone is provided with the same type of push button keys as the No. 1 System Selective Ringing—Selective Talking System and permits the Vestibule and Suites as well as the Janitor and Suite Inter-phones to carry on conversations at the same time without interference with each other.

The Inter-phones are furnished in 7, 13, 17, 21 and 25 button keys, each button representing one apartment, except the last or odd button which represents the janitor. The function of each of these keys, when operated is to establish connections between the Vestibule and the called Station. When a push button is pressed all the way down the bell on the corresponding station is rung. When the pressure is released, the key assumes an intermediate position, thereby breaking the ringing contact and connecting the called line for conversation. The key is automatically held in this intermediate position by a locking plate until the operation of another button releases the key and restores it to its normal position. Talking current is cut off when the receiver is replaced on the switchhook. The lower or odd button (for calling the janitor) is non-locking in the operating position. This provides a means for releasing the other buttons in the set should some one maliciously operate all of them at one time. The Vestibule Inter-phone is provided with a watch-case receiver and flush type transmitter. The receiver is equipped with a flexible armored cord for its protection.

Brush Brass Finished Face Plate and Metal Outlet Box

Code No.	No. of Buttons	FACE PLATE		DIMENSIONS, INCHES		
		Height	Width	Height	Width	Depth
1362C-7	7	11 $\frac{3}{8}$	7 $\frac{5}{8}$	8 $\frac{3}{4}$	5 $\frac{1}{4}$	3 $\frac{1}{2}$
1362C-13	13	11 $\frac{3}{8}$	7 $\frac{5}{8}$	8 $\frac{3}{4}$	5 $\frac{1}{4}$	3 $\frac{1}{2}$
1362C-17	17	16 $\frac{1}{8}$	7 $\frac{5}{8}$	12 $\frac{7}{8}$	5 $\frac{1}{4}$	3 $\frac{1}{2}$
1362C-21	21	16 $\frac{1}{8}$	7 $\frac{5}{8}$	12 $\frac{7}{8}$	5 $\frac{1}{4}$	3 $\frac{1}{2}$
1362C-25	25	16 $\frac{1}{8}$	7 $\frac{5}{8}$	12 $\frac{7}{8}$	5 $\frac{1}{4}$	3 $\frac{1}{2}$

The armored receiver cord complete with receiver is coded as "No. 524W receiver."

Vestibule Letter Boxes

List No.	Mail Compartments	No. of Buttons	DIMENSIONS, INCHES		
			FACE PLATE Height	FACE PLATE Width	Depth (In Wall)
12013	2	7, 13	11 $\frac{3}{8}$	5 $\frac{1}{8}$	4 $\frac{3}{8}$
116937	4	17, 21, 25	16 $\frac{1}{8}$	5 $\frac{1}{8}$	4 $\frac{3}{8}$

The No. 1527C (surface) and No. 1539C (flush) type suite Inter-phones for Systems Nos. 7, 8, 9 and 10 are described elsewhere.

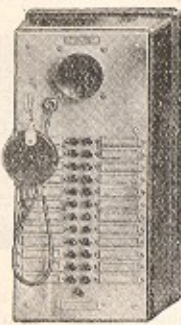
NOTE.—The proper method of mounting the Inter-phone and letter boxes in the vestibule wall is shown in bulletin "Installing and Maintaining Western Electric Inter-phones."



No. 12013 Letter Box

Western Electric Inter-phones

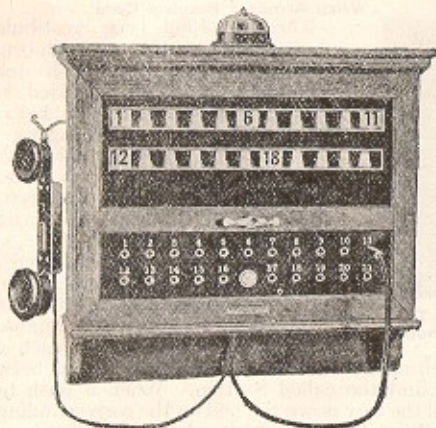
Description of Apartment House Telephones—Cont.
Selective Talking—Non-interfering Service
Janitors' and Tradesmen's Inter-phones



No. 1350C-25 Type Inter-phone



Janitor's Annunciator Nos. 361332-361339



Janitor's Annunciator

No. 1350 Inter-phones—Surface Type

The No. 1350 type janitor's and tradesmen's wall Inter-phone has a surface mounting metal case with black finish. No bell is provided in this set as it is used with an annunciator (Nos. 361332 to 361339 type) when calls are to be received at this station. These Inter-phones are made in 7, 13 and 25 button sizes, the construction and operation being the same as outlined under Vestibule Inter-phones. The lower or odd button in each Inter-phone is non-locking in operation and provides connection with the vestibule Inter-phone.

No. of Buttons	Code No.	SYSTEM No.		DIMENSIONS—INCHES		
		For Janitor	For Tradesmen	Height	Width	Depth
7	1350C-7	8 and 9	9 and 10	14 $\frac{5}{8}$	7 $\frac{1}{8}$	3
13	1350C-13	8 " 9	9 " 10	14 $\frac{5}{8}$	7 $\frac{1}{8}$	3
25	1350C-25	8 " 9	9 " 10	14 $\frac{5}{8}$	7 $\frac{1}{8}$	3

JANITOR'S ANNUNCIATORS.—Annunciators for systems 8, 9 and 10 are described elsewhere.

Coil and Condenser Box

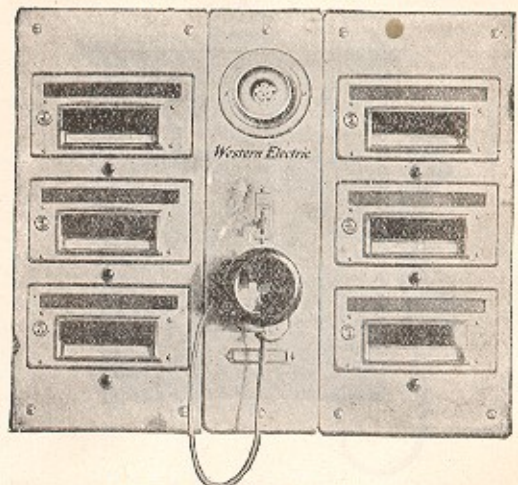
The coil and condenser box is required for each vestibule, janitor's (either wall Inter-phone or annunciator) or tradesmen's station. This apparatus is necessary in order that separate conversations may be carried on simultaneously between the vestibule, janitor and tradesman's Inter-phone and three apartments, without having the conversations interfere with each other. The condenser provides a path for the high frequency talking currents, which cannot pass through the high impedance retardation coil.

Wooden case furnished in golden oak.

Code No.	Containing	System No.
295BC	1 Coil and 1 Condenser	7
295AS	2 Coils " 2 Condensers	8
295BD	3 " " 3 " " " " "	9 and 10

Western Electric Inter-phones

Description of Apartment House Inter-phones
Common Talking Service
Vestibule Inter-phones for No. 20 Systems



Vestibule Equipment for Six Apartments

The vestibule equipment for the No. 20 system consists of the No. 1520U Inter-phone and any number of letter boxes.

No. 1520U Vestibule Inter-phones with Armored Receiver Cord

The No. 1520U vestibule Inter-phone consists of a flush mounting brush brass finish face plate with a push button for signaling the janitor. The metal transmitter mouthpiece is embossed and cannot be broken or removed. The transmitter mounts on the back of the face plate. The receiver used is of the watch-case type and is equipped with a flexible armored cord for its protection.

Code No.	Finish	DIMENSIONS—INCHES	
		Height	Width
1520U	**Brush brass	12 $\frac{3}{4}$	3 $\frac{1}{2}$

The armored receiver cord complete with the receiver is coded as "No. 524W Receiver."



Vestibule Letter Boxes

Consist of a brush brass finish face plate equipped with either two or three three-mail compartments. A push button for signaling the suite to which the compartment is assigned is mounted below the plate glass window of each mail compartment.

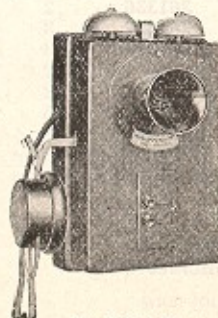
No.	Mail Compartments	To Mount With	*DIMENSIONS—INCHES		
			Face Plate Height	Width	Depth In Wall
3-PL-1	2	1520U	12 $\frac{3}{8}$	5 $\frac{1}{8}$	4 $\frac{3}{4}$
3P	3	1520U	12 $\frac{3}{8}$	5 $\frac{1}{8}$	4 $\frac{3}{4}$



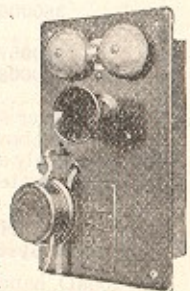
*The proper method of mounting the vestibule Inter-phones and outlet boxes in the wall is shown in bulletin, "Installing and Maintaining Western Electric Inter-phones."

Suite, Janitor and Laundry Inter-phones

The No. 1527C (surface) and No. 1539C (flush) suite, janitor and laundry Inter-phones for System No. 20 are described elsewhere in detail.



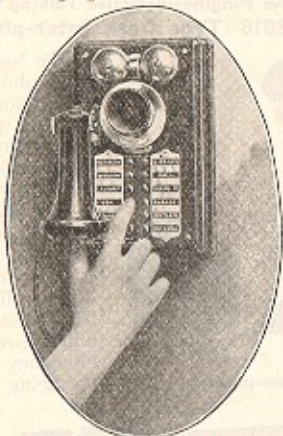
No. 1527C-2



No. 1539C-3

**Black finish can be furnished special on order.

Western Electric Inter-phones Description of System No. 1 Selective Ringing—Selective Talking Service



Inter-phones for the No. 1 System

Represent the highest standards of design, engineering and refined manufacture. Four types of Inter-phones are provided, namely, Surface Wall, Flush Wall, Desk and Hand Sets, and they may be used interchangeably in the same system. These sets all incorporate the same important refinements, as listed hereinafter.

Transmitter and Receiver

The same type and high grade of construction as those used for public telephone exchange service. Due to their character, the transmission is pleasingly uniform and clear throughout the system with a minimum of battery consumption. These transmitters and receivers are familiar to telephone users throughout the world.

Vibrating Bells and Buzzers

Wound to 10 ohms with enameled insulated wire, and have the following advantages (over the low resistance bells which are to be found on the market).

- The current required to ring on long and short lines is more nearly equalized.
- The trouble experienced with armature adjustment is decreased.
- On account of the high resistance less ringing current is used and the life of the battery is lengthened, lowering the maintenance cost.
- The enameled insulation on the windings being moistureproof, assures against current leakage, or short-circuiting due to moisture or poor insulation.
- Avoids use of an excessive number of dry cells to ring the bells of distant stations and prevents harmful sparking at bells near the batteries (as would be the case with two or three ohm bells).

Terminal Block

Located in the base of the set; is made of hard maple which has been boiled in beeswax to make it impervious to moisture. After this treatment, it is given a coat of insulating varnish. On the terminal blocks are mounted terminal connections having a solder terminal and a screw terminal. To the solder terminal is connected the local wiring of the set, while the screw terminal provides an easy method of connecting to the Inter-phone cable, no soldering being required to make a permanent cable connection. All terminals are plainly marked on the terminal block in order to easily identify the local cabling and inter-phone wiring.

Local Wiring

Local wiring from the push button keys, transmitter, bell, retardation coil and switchhook to the terminal block is made by means of a neatly formed cable. Each wire is colored differently in order to easily trace the wiring or identify it in any part of the set. The wires in the local cable form are thoroughly treated to keep out moisture and then laced with linen cord to keep them in shape. The wiring to the apparatus and terminals is soldered to insure a permanent and reliable connection. The cable is so formed and enough slack left in it to allow the face plate to be opened and closed for inspection, without straining, bending or in any way interfering with the wiring. To further support the form and hold it in position, leather straps are fastened to the terminal base and ringing key frame.

Western Electric Inter-phones Description of System No. 1—Continued Selective Ringing—Selective Talking Service

Interior Apparatus

Interior Apparatus such as the transmitter mounting, switchhook, vibrating bell, bell adjusting mounting, and retardation coil are (in the metal sets) also mounted on a treated maple block and fastened to the face plate. This method insulates the apparatus and affords uniform alignment. All terminals are marked in order to easily connect and trace cord and wire connections.

Retardation Coil

A retardation coil of 100 ohms resistance is contained in each Inter-phone. It furnishes talking current from one talking battery for all conversations, provides against "cross-talk" and reduces the drain from the battery to a minimum.

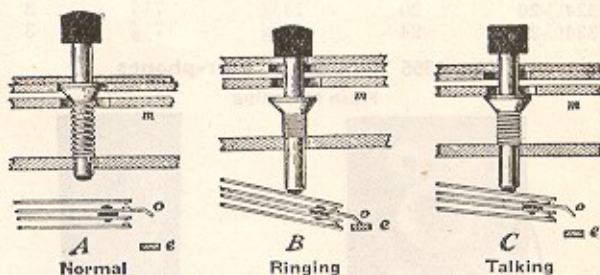
Housing

The housings of the metal wall sets and desk set key boxes are made of heavy sheet steel, formed and pressed into shape. The housing is then treated with a special copper plating process. This method is used to protect the metal from moisture so that rust cannot attack its surface. After the surface is copper plated it is finished with two coats of black japan which is baked on. The japan finish being baked on clings to the metal preventing cracking or peeling as is liable to happen when an air drying finish is applied.

It is standard Western Electric practice to treat the surfaces of all steel parts with either copper plating or an equally effective process, before applying the exterior finish, to protect the steel against rusting.

Push Button Keys

The push button keys and their operating mechanism, are mounted in a rigid metal frame. In designing this key two operations are arranged for (1) for ringing, and (2) for talking.



Each key consists of a hard rubber push button mounted on a metal plunger, which passes through a hole in a movable locking plate ("m"), (which is under the spring tension). When the button is completely depressed ("B") the spring ("o") makes contact with the ringing battery supply at ("e"), causing the ringing current to flow to the station to which this particular key is connected, and ringing the bell at that station. When the pressure is released, the plunger returns to an intermediate position ("C") breaking the ringing contact and placing the Inter-phone on the line of the station called ready for conversation. While the conversation is taking place, the plunger is automatically held in the talking position by the locking plate ("m") and held there until the plate is actuated by depressing another button. The pressing of another button causes the locking plate ("m") to release the key so that it assumes its normal position as shown in "A." Talking current for the Inter-phone is cut off as soon as the receiver is placed back on the switchhook.

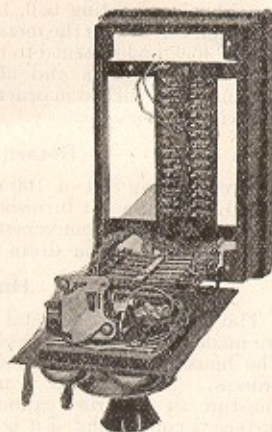


Western Electric Inter-phones
Description of System No. 1—Continued
Selective Ringing—Selective Talking Service

No. 1324 Type Wall Inter-phones
Surface Mounting



No. 1324 Type



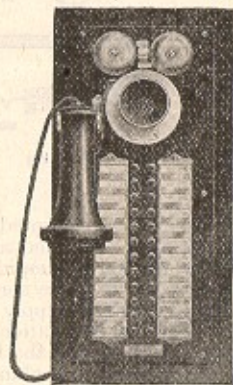
Open View

The No. 1324 type Inter-phone is an all metal set having a hinged face plate, movable transmitter and hand receiver. Finished black with nickel trimmings. The face being hinged, makes it possible to easily inspect all connections and apparatus, without disturbing the installation.

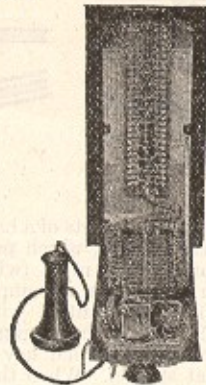
This Inter-phone is furnished in 6, 12, 16, 20 and 24 button sizes.

Code No.	No. of Buttons	DIMENSIONS, INCHES		
		Height	Housing Width	Depth
1324C-6	6	10	6 $\frac{3}{8}$	3 $\frac{1}{8}$
1324C-12	12	10	6 $\frac{3}{8}$	3 $\frac{1}{8}$
1324C-16	16	14 $\frac{5}{8}$	7 $\frac{1}{8}$	3
1324C-20	20	14 $\frac{5}{8}$	7 $\frac{1}{8}$	3
1324C-24	24	14 $\frac{5}{8}$	7 $\frac{1}{8}$	3

No. 1355 Type Wall Inter-phones
Flush Mounting



No. 1355 Type



Open View

The No. 1355 type Inter-phone is a flush mounting set having a steel face plate on which is mounted all of the talking and signalling apparatus and a sheet steel outlet box arranged for $\frac{3}{4}$ -inch conduit. The outlet box can be separated from the set and built into the wall during the construction of the building. The face plate is hinged at the bottom, making all terminals easily accessible for installation or inspection. The set is compact but not crowded, and designed to meet the most exacting requirements. Furnished in 16, 20 and 24 button sizes.

Dull black finish with nickel trimmings.

Code No.	No. of Buttons	DIMENSIONS, INCHES		
		Height	Housing Width	Depth
1355C-16	16	14 $\frac{1}{2}$	6 $\frac{3}{8}$	...
1355C-20	20	14 $\frac{1}{2}$	6 $\frac{3}{8}$	...
1355C-24	24	14 $\frac{1}{2}$	6 $\frac{3}{8}$	...

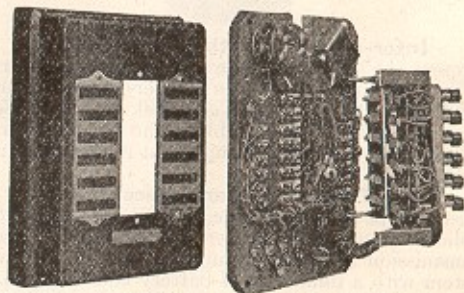
Western Electric Inter-phones
Description of System No. 1—Continued
Selective Ringing—Selective Talking Service
No. 6016 Type Desk Inter-phones



Desk Inter-phone

The No. 6016 type desk Inter-phone consists of a desk stand and a metal key box which employ the same operating mechanism as described under "Push button keys."

The desk stand is finished in dull black. It is the same type of Western Electric desk stand that is generally used for public telephones, millions of which are in service, its efficiency and dependability being well known.



Construction of Key Box

The key box is finished in dull black with nickel trimmings and is provided with four rubber feet to keep the metal housing from scratching the table or desk. The connecting cord between the key box and the desk stand is six feet long. Cable entrances are provided at the bottom and ends of the box. Furnished in 6, 12, 16, 20 and 24 button sizes.

Code No.	No. of Buttons	Desk Stand	Crd., Ft.	Key Box	INCLUDES DIMENSIONS, INCHES		
					Width	Length	Depth
6016D-6	6	1120BE	6	328C-6	5	7 $\frac{1}{2}$	2 $\frac{5}{8}$
6016D-12	12	1120BE	6	328C-12	5	7 $\frac{1}{2}$	2 $\frac{5}{8}$
6016D-16	16	1120BE	6	328C-16	5 $\frac{3}{4}$	10 $\frac{3}{4}$	2 $\frac{5}{8}$
6016D-20	20	1120BE	6	328C-20	5 $\frac{3}{4}$	10 $\frac{3}{4}$	2 $\frac{5}{8}$
6016D-24	24	1120BE	6	328C-24	5 $\frac{3}{4}$	10 $\frac{3}{4}$	2 $\frac{5}{8}$

No. 6016 Type Hand Set Inter-phones

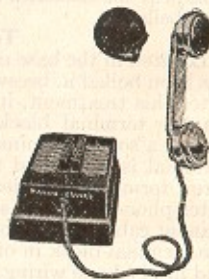
The No. 6016 type hand set Inter-phone is the same as the No. 6016 desk set type, except that it employs a Western Electric No. 1001 type hand set and hanger instead of a desk stand.

The hand set is nickel plated, of pleasing appearance and extremely sturdy construction. This same type of hand set has been in use for years by telephone linemen and outside repairmen, which attests to its ability to withstand severe service and rough usage.

The hand set hanger is made of cast metal and finished in black. Furnished for supporting the hand set when not in use.

The key box is of the same type described above for use with the No. 6016 desk type Inter-phone.

Code No.	No. of Buttons	Hand Set	Crd., Ft.	Hanger	Key Box	INCLUDES DIMENSIONS, INCHES		
						Width	Length	Depth
6016H-6	6	1001J	6	1B	328C-6	5	7 $\frac{1}{2}$	2 $\frac{5}{8}$
6016H-12	12	1001J	6	1B	328C-12	5	7 $\frac{1}{2}$	2 $\frac{5}{8}$
6016H-16	16	1001J	6	1B	328C-16	5 $\frac{3}{4}$	10 $\frac{3}{4}$	2 $\frac{5}{8}$
6016H-20	20	1001J	6	1B	328C-20	5 $\frac{3}{4}$	10 $\frac{3}{4}$	2 $\frac{5}{8}$
6016H-24	24	1001J	6	1B	328C-24	5 $\frac{3}{4}$	10 $\frac{3}{4}$	2 $\frac{5}{8}$



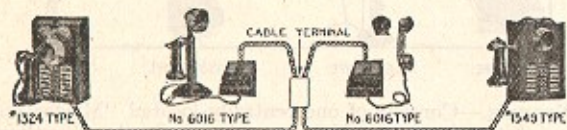
Western Electric Inter-phone Systems

Western Electric Inter-phone Systems

System No. 1

System No. 1—Continued
Selective Ringing—Selective Talking

Selective Ringing—Selective Talking



System No. 1—Showing 4 Stations in One System

SERVICE.—For use in business organizations, industries, stores, institutions, large residences, etc., where frequently, more than one conversation will take place at the same time, where instantaneous connections without loss of time are necessary and where the highest grade of transmission is required.

OPERATION.—Each station can (by merely pressing a button) selectively ring and talk with any other station without disturbing the rest of the stations in the system and as many separate conversations can be carried on simultaneously as there are pairs of Inter-phones. For example, in a system consisting of six Inter-phones, three separate conversations can be carried on at the same time.

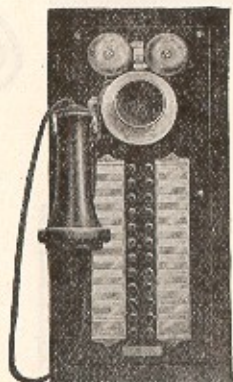
For each station in the system, one push button key is required in each Inter-phone. For detail description of these keys and method of operation, refer to the general description outlined previously.

CAPACITY.—The Inter-phones are available in standard sizes of 6, 12, 16, 20 and 24 buttons.

TYPES OF INTER-PHONES.—Wall, desk or hand set Inter-phones may be used interchangeably in this system. The Inter-phones listed below are described in detail elsewhere.



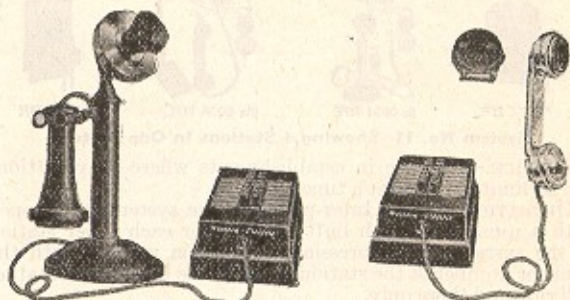
No. 1324-C Type Metal Wall Inter-phone



No. 1355-C Type Metal Wall Inter-phone

No. of Buttons	WALL TYPE INTER-PHONES		Desk Set Inter-phones	Hand Set Inter-phones
	Surface Metal	Flush Metal		
6	1324C-6		6016M	6016MH
12	1324C-12		6016K	6016KH
16	1324C-16	*1355C-16	6016N	6016NH
20	1324C-20	*1355C-20	6016P	6016PH
24	1324C-24	*1355C-24	6016L	6016LH

*NOTE.—Dimensions of outlet boxes for these Inter-phones are outlined on pages where these Inter-phones are listed separately.



No. 6016 Type Desk Inter-phone

No. 6016 Type Hand Set Inter-phone

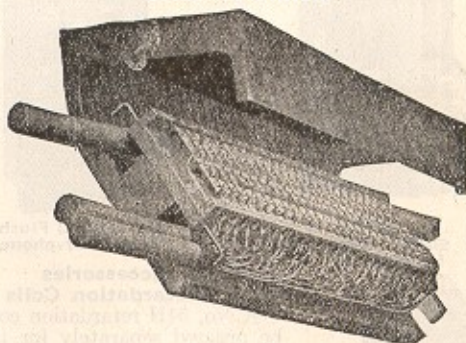
Accessories
Cable

For connections between the various stations, cable specially designed for Inter-phones can be supplied. A system requires a sufficient amount of cable for connection to each station, the cable being run by the shortest or most convenient route between the various station locations. This cable includes the necessary number of wire conductors (two pairs for battery leads and one pair for each station in the system) and is furnished in three different types to suit various locations and conditions:

Type	6 Stations	12 Stations	16 Stations	20 Stations	24 Stations
Fireproof braid . . .	No.134B	No.141B	No.157B	No.158B	No.136B
Green cotton braid.	No.155B	No.156B			
Lead covered	No.134B	No.141B	No.157B	No.158B	No.136B

These cables are listed in detail elsewhere.

Cable Terminals



No. 19B—Cable Terminal with Cable Connections

A cable terminal should be used wherever a junction is to be made between cables. For example: Where an outside lead-covered cable is connected to an interior cable, or wherever a branch is taken off from the main cable. In cases where the cable can be run direct to the Inter-phone, no cable terminal is necessary. The number of cable terminals required should be determined by the installer.

For 6 and 12 button systems use the No. 19A cable terminals. For 16, 20 and 24 button systems use the No. 19B cable terminals.

Cable terminals are described in more detail elsewhere.

Batteries

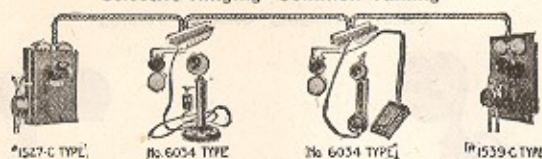
Not more than twelve Blue Bell dry cells will be necessary for operating the system. (Five cells for the talking circuit; four to seven cells for the ringing circuit, depending upon length of line.)

The cells can be placed in the basement or any other accessible place.

Detailed information for installing, including wiring diagrams, battery requirements, cable connections, etc., are included in our bulletin, "Installing and Maintaining Western Electric Inter-phones," which will be furnished upon request.

Western Electric Inter-phone Systems

System No. 11
Selective Ringing—Common Talking



System No. 11—Showing 4 Stations in One System

SERVICE.—For use in establishments where conversations can be limited to one at a time.

OPERATION.—Each Inter-phone in the system is equipped with a number of push buttons (one for each other station in the system). By depressing the button marked with the name or number of the station wanted, the bell at that station will ring and there only.

Any station in the system can selectively ring any other station. Only one conversation can be carried on at a time.

CAPACITY.—The wall type Inter-phones can be furnished in capacities of 2, 3, 4, 6 and 8 buttons, accommodating 3, 4, 5, 7 and 9 stations respectively in a system.

The desk and hand set Inter-phones are furnished in capacities of 4 and 8 buttons, accommodating 5 and 9 stations respectively in a system.

TYPES OF INTER-PHONES.—Wall, desk or hand type Inter-phones may be used interchangeably in the same system. The Inter-phones as coded below are described in detail elsewhere.

No. of Buttons	WALL TYPE INTER-PHONES Surface	FLUSH INTER-PHONES	Desk Set Inter-phones	Hand Set Inter-phones
2	1527C-2	*1539C-2	.....	.....
3	1527C-3	*1539C-3	.....	.....
4	1527C-4	*1539C-4	6034M	6034AZ
6	1527C-6	*1539C-6	.....	.....
8	1527C-8	*1539C-8	6034P	6034BB

*NOTE.—For dimensions of outlet boxes, refer to another page.



No. 1527C-1 Surface Type Inter-phone



No. 1539C-3 Flush Type Inter-phone

Accessories
Retardation Coils

A No. 51H retardation coil must be ordered separately for installation near the battery of each system.

Cables

For connection between the various stations, cable especially designed for Inter-phones can be furnished. This cable includes 3 common wires and one individual wire for each station.

Description	Cable Nos.		
	With Fire-proof Braid	With Green Cotton Braid	With Lead Covering
For 3 and 4 Button Systems	161	142	161
" 6 " 8 " "	162	.....	162

NOTE.—Cables are described in detail elsewhere.

Connecting Blocks

Where a junction is to be made between cables, or wherever a branch is taken off the main cable, a connecting block should be used. In cases where the cable can be run direct to the Inter-phone, the connecting block is not required.

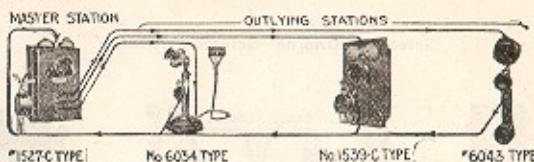
Batteries

Five Blue Bell dry cells are required for the operation of this system, when the distance between the two stations farthest apart is 750 feet or less, and Inter-phone cable, listed above, is used. On lines of greater length it is recommended that instead of increasing the number of battery cells to more than five, larger wire be used.

Western Electric Inter-phone Systems

System No. 12

Master Station—Common Talking



SERVICE.—Consists of one centrally located "Master Station" Inter-phone to which are connected other "outlying station" Inter-phones. The system provides for communication from a central point to different stations and vice versa.

OPERATION.—The Master Station Inter-phone is equipped with a number of push buttons; one for each outlying station in the system. By depressing the button marked with the name or number of the outlying station wanted, the bell at that station will ring and there only.

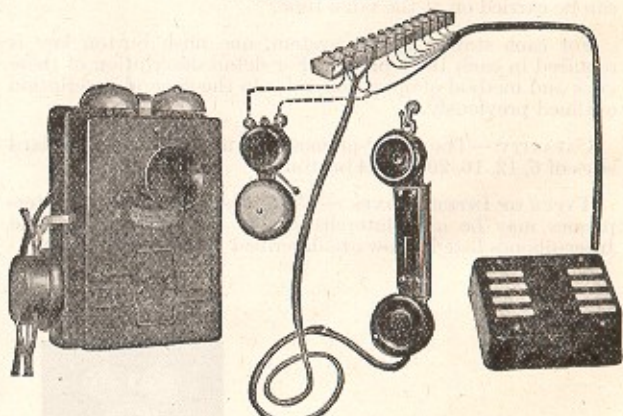
The outlying stations are equipped with only one button which will ring the master station when depressed.

Only one conversation can be carried on at a time.

CAPACITY.—One Master Station and from two to eight outlying stations.

TYPES OF INTER-PHONES.—Wall, desk and hand set Inter-phones may be used in this system for either the master or outlying stations. The Inter-phones listed below were described in detail previously.

Master Stations

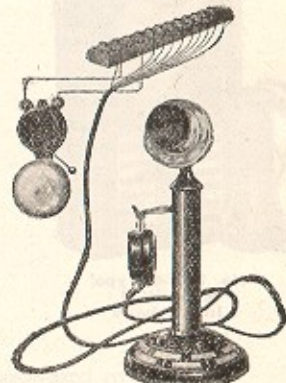


No. 1527C-4 Wall

No. 6034 Hand



No. 1539C-3 Wall

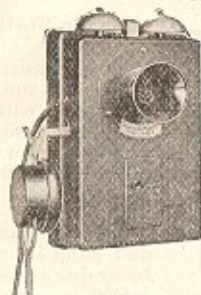


No. 6034 Desk

No. of Buttons	METAL WALL TYPE Surface	FLUSH INTER-PHONES	Desk Set Inter-phones	Hand Set Inter-phones
2	1527C-2	*1539C-2	.....	.....
3	1527C-3	*1539C-3	.....	.....
4	1527C-4	*1539C-4	6034M	6034AZ
6	1527C-6	*1539C-6	.....	.....
8	1527C-8	*1539C-8	6034P	6034BB

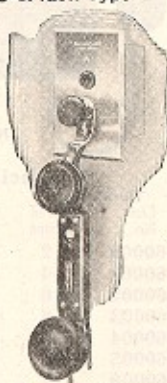
*NOTE.—For dimensions of outlet boxes refer to separate listing of these Inter-phones.

Western Electric Inter-phone Systems
System No. 12—Continued
Master Station—Common Talking
Outlying Stations



No. 1527C-1 Surface Type

No. 1539C-1 Flush Type



No. 6043E Hand Set

No. 6034 Desk Type

No. 6042K Hand Set

No. of Buttons	Metal Wall Type Inter-phones Surface	Flush	Desk Set Inter-phones	Hand Set Inter-phones
1	1527C-1	*1539C-1	6034AP	*6042K
..	.....	.....	.....	**6042E
..	.....	.....	.....	6043E

NOTE.—*For dimensions of outlet boxes refer to separate listing of these Inter-phones.

**No. 6042E is same as No. 6042K, but without face plate and wall box. For details see listing elsewhere.

Accessories
Retardation Coils

A No. 51H retardation coil must be ordered separately with each master station Inter-phone and installed near the battery of the system.

Wiring

For connections between the outlying stations and the master station either cable or insulated wires can be used, depending largely upon the layout of the system. Three common wires are required throughout the system, and in addition, one individual wire from the master to each outlying station. Where there is a long run of a large number of wires, it will be found economical to use cable, and at all distributing and junction points, to install connecting blocks. From these connecting blocks separate wires can be run to the Inter-phones. The sizes of cable and the number of connecting blocks required should be determined in accordance with the installation instructions. Cables and connecting blocks are described elsewhere.

Batteries

Five Blue Bell dry cells are required for the operation of this system when the distance between the master station and most distant outlying station is 750 feet or less and No. 22 B. & S. gauge wire (as in the case of Western Electric cable) is used.

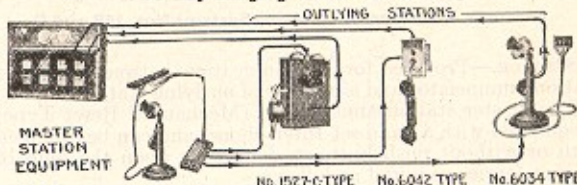
On lines of greater length it is recommended that instead of increasing the number of battery cells to more than five, larger wire be used. This should be determined in accordance with the installation instructions.

The Blue Bell dry cells can be placed in the basement or any other accessible place.

NOTE.—Detailed information covering wiring diagrams, connection of wires and cables, connecting blocks, etc., can be found in our booklet, "Installing and Maintaining Western Electric Inter-phones," which will be furnished upon request.

Western Electric Inter-phone Systems
System No. 12A

Master Annunciator System
Two-way Ringing—Common Talking



SERVICE.—Especially adapted for schools where the principal may call the teachers individually and the teachers can call the principal.

Similar to the No. 12 System except that the master station includes an annunciator for identifying the calls from the outlying stations.

Only one conversation can be carried on at a time.

OPERATION.—The master station Inter-phone includes a push button block having as many buttons as there are outlying stations, also one extra button for electrically resetting the annunciator drops. To call an outlying station, the push button marked with the name or number of the party wanted is depressed. This rings the bell at the station selected and there only.

Each outlying station Inter-phone is equipped with a push button which signals the master station when depressed. This call will also be registered at the master station by the operation of the annunciator drop corresponding to station calling.

CAPACITY.—One master station and 3 up to 20 or more outlying stations.

Types of Inter-phones

Master Stations

To consist of the following:

1. A desk set Inter-phone with a 5½-foot flexible conductor cord.
2. A push button block with or without weighted base and having a flexible conductor cord of any length desired.
3. A connecting block.
4. A surface type annunciator.

Each item must be ordered separately and in accordance with the following code numbers and capacities; larger capacities can be furnished.

No. of Outlying Stations	No. of Buttons	**PUSH BUTTON BLOCK	Desk Stand	Connecting Block	ANNUNCIATOR
..	..	Wood Base	Code No.	Code No.	Wood No. of Metal Drops Type
3	4	†104AC	***1320BF	6G	401 4 407
7	8	†108AC	***1320BF	6G	401 8 407
11	12	7921	79010	***1320BF	6B 401 12 407
15	16	7930	79020	***1320BF	6B 401 15 407
19	20	793	7902	***1320BF	6F 401 16 407

*One button of the push button block is required for resetting the annunciator drops.

**Cord for push button block must be ordered separately, in the length desired (6 feet of cord being the average length).

***Equipped with long hand receiver.

†Metal push button block.

Outlying Stations

Wall, Desk or Hand Set Inter-phones may be used. The Inter-phones are the same as specified for the Outlying Stations of System No. 12.

Accessories

Retardation Coils

A No. 51H retardation coil must be ordered separately for installation near the battery of each system.

Wiring

Two common wires are required throughout the system and in addition two individual wires from the master to each outlying station. Cable or insulated wires may be used. Where there is a long run of a large number of wires, it will be found economical to use cable and at all distributing and junction points, to install connecting blocks. From these connecting blocks separate wires can be run to the Inter-phones.

Batteries

The batteries for this system are same as for System No. 12.



Western Electric Inter-phone Systems

Master Annunciator System No. 12B

One-way or Two-way Ringing—Common Talking

Formerly Known as Inter-phone Systems Nos. 16B and C

SERVICE.—Provides for communication between a master station annunciator and a number of outlying stations.

The master station annunciator (Mechanical Reset Type) is equipped with a hand set Inter-phone, and can be obtained with or without push buttons, depending upon the kind of ringing service required as follows:

Two-way Ringing

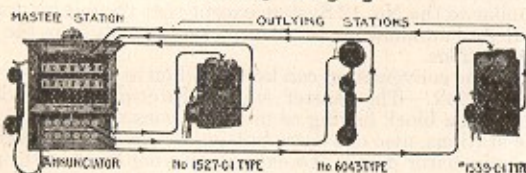


Fig. 1

Annunciator equipped with push buttons, one for each outlying station) enabling the outlying stations to ring the master station and the master station to ring the outlying stations individually.

One-way Ringing

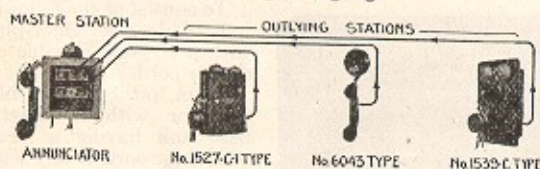


Fig. 2

(Annunciator without push buttons) enabling the outlying stations to ring the master station but the master station cannot ring the outlying stations.

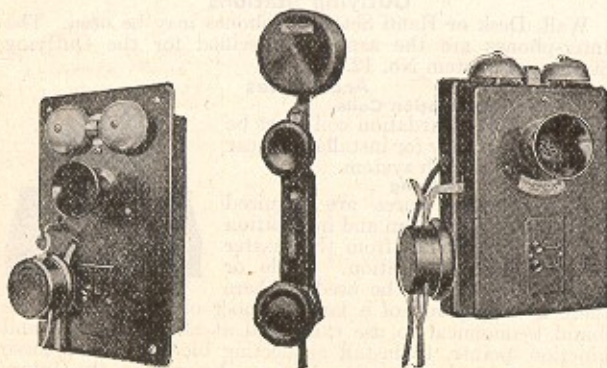
Operation

Each outlying station is equipped with a push button which signals the master station when depressed. The call will also be registered at the master station by the operation of the annunciator drop corresponding to the station calling.

Only one conversation can be carried on at a time.

Capacity

One master station and any number of outlying stations up to 24 or more.

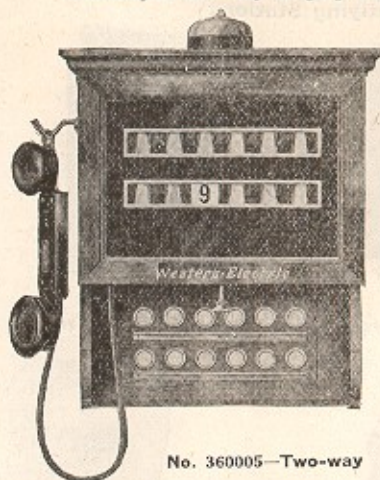
No. 1539 C-1
Wall Inter-phoneNo. 6043
Hand Set Inter-phoneNo. 1527 C-1
Wall Inter-phoneWestern Electric Inter-phone Systems
Master Annunciator System No. 12B—Continued
Two-way or One-way Ringing—Common Talking

Master Station

This consists of a black finished hand set with a three-foot cord and an annunciator with hook for holding the hand set.

The annunciator and hand set must be ordered separately.

Finish of annunciator is golden oak. Light or dark oak finish can be furnished without additional charge.



No. 360005—Two-way

Annunciators

Two-way		One-way	
List No.	No. of Drops	List No.	No. of Drops
360000	2	360009	2
360001	4	360010	4
360002	6	360011	6
360003	8	360012	8
360004	10	360013	10
360005	12	360014	12
360006	15	360015	15
360007	20	360016	20
360008	24	360017	24

NOTE.—For dimensions of annunciators see listing of separate annunciators.

One drop for each outlying station.

Two-way station is also equipped with push buttons corresponding to the number of drops.

Hand Sets

A No. 1003D hand set must be ordered separately with each annunciator. This set is equipped with a three-foot cord, and can be hung on the hook on the side of the annunciator.

Outlying Stations

Wall or hand set Inter-phones may be used. The Inter-phones listed below are described in detail where listed separately.

No. of Buttons	WALL TYPE INTER-PHONE		HAND SET INTER-PHONE
	Surface	Flush	
1	1527C-1	*1539C-1	6043D *6042M **6042 D

Note.—*For dimensions of outlet boxes and description of sets see another page.

**No. 6042D is the same as No. 6042M, but without face plate and wall box.

Wiring

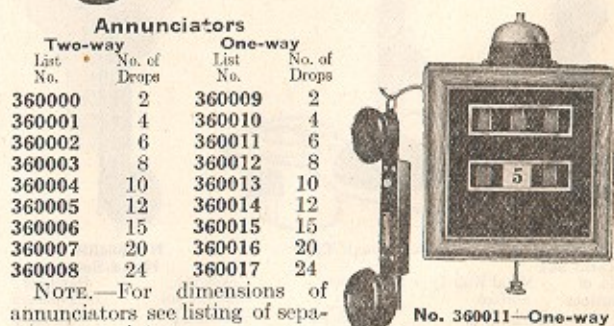
For one-way ringing service (annunciator without push buttons) one wire, common to all stations in the system and in addition, one individual wire from the master station to each outlying station.

For two-way ringing service (annunciator equipped with push buttons) one-wire, common to all stations in the system also two individual wires from the master station to each outlying station.

Batteries

Only one battery is required for the operation of the system. This should consist of three or four Blue Bell dry cells, where the distance between the master station and the farthest outlying station is 250 feet or less and No. 22 B. & S. gauge copper wire is used. On lines of greater length it is recommended that instead of increasing the number of dry cells to more than four, larger wires be used as follows:

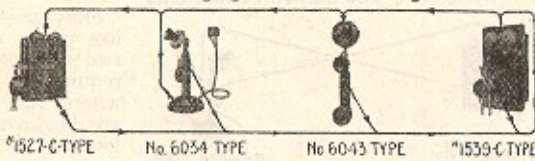
250 to 400 ft. use 20 B. & S. gauge copper wire
400 to 600 ft. use 18 B. & S. gauge copper wire
600 to 1000 ft. use 16 B. & S. gauge copper wire



No. 360011—One-way

Western Electric Inter-phone Systems

System No. 15-C
Code Ringing—Common Talking



Showing 4 Stations in One System

SERVICE.—A simple and inexpensive system for small residences, warehouses, stores or mercantile establishments, where only a few stations are required and the number of calls between the stations are not frequent.

Requires only three line wires throughout the system for two or more stations.

Only one conversation can be carried on at a time.

OPERATION.—Each station is equipped with one push button which, when depressed rings the bells at all the other stations.

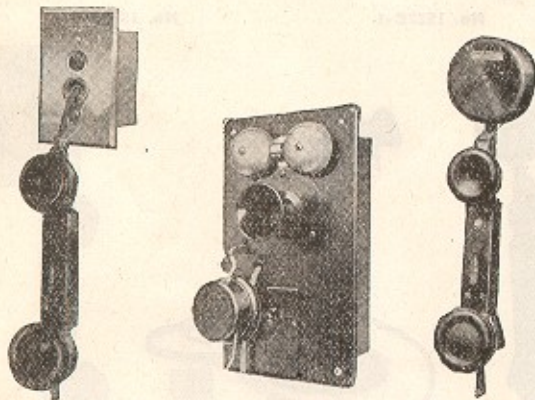
The various stations are called by signalling each one with a different code ring; for instance: Two rings for Station No. 2, three rings for Station No. 3, etc.

If more than six stations are in service, signalling code mistakes are likely to occur, due to the possibility of misunderstood signals. System No. 11 is recommended where the initial installation comprises more than four or six stations.

NOTE.—In case only two stations are required (wall or hand set Inter-phones), complete equipment ready for installation can be obtained by referring to Inter-phone outfits.

CAPACITY.—Two to six stations may be operated in this system. More stations can be added but at the expense of ease and certainty in signalling.

TYPES OF INTER-PHONES.—Wall, desk or hand set Inter-phones may be used in the system. The Inter-phones coded below are described in detail elsewhere.



No. of Buttons	METAL WALL TYPE INTER-PHONES		Desk Set Inter-phones	HAND SET INTER-PHONES	
	Surface	Flush		Flush	Surface
1	1527C-1	*1539C-1	6034BE	*6042AE	6043P
				**6042AF	

NOTE.—*For dimension of outlet boxes refer to separate listings elsewhere.

**No. 6042AF is same as 6042AE, but without face plate and wall box, see separate listing of Hand Sets.

Accessories
Retardation Coil

A No. 51H retardation coil must be ordered separately and installed near the battery of the system.

Wiring

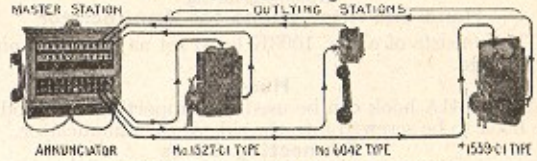
Three wires are required for connecting the Inter-phones for two or more stations.

Batteries

Five Blue Bell dry cells are required for the operation when the length of the line is 750 feet or less, and not more than four stations are to be used, connected by Nos. 20 or 22 B. & S. gauge copper wire. If more than four Inter-phones are required or if the line is longer than 750 feet, larger wires should be used in accordance with the installation instructions. The Blue Bell dry cells can be placed in the basement or any other accessible place.

Western Electric Inter-phone Systems

Master Annunciator System No. 18
Non-Interfering



Showing Master and 3 Outlying Stations

SERVICE.—For use in hotels, clubs, schools, hospitals, etc., to provide for communication between a central or master station and a larger number of outlying stations, as follows:

1. The Master Station can selectively ring and talk with any of the outlying stations and the outlying stations can call the Master Station.

2. Communication can be arranged between any two outlying stations through the medium of one or two connecting cords at the Master Station.

No connection can be made between this system and a public telephone system.

OPERATION.—The Master Station Annunciator consists of a number of drops and jacks (one for each outlying station in the system), a push button for ringing, a hand set Inter-phone and a cord and plug for calling and answering.

1. To call an outlying station, the Master Station operator inserts the plug into the jack corresponding to the station wanted and depresses the ringing button of the annunciator. The operator converses with the outlying station by pressing the talking lever of the Hand Set Inter-phone.

2. Each outlying station Inter-phone is equipped with a push button for ringing the Master Station and at the same time operating one of the annunciator drops, thereby registering the call. The Master Station operator answers by inserting the answering plug into the jack corresponding to the drop operated and pressing the talking lever of the hand set.

3. If one outlying station wishes to converse with another outlying station, a connection can be established by means of a pair of connecting cords (equipped as part of the annunciator when so specified), each cord terminating in separate plugs. This connection is effected as follows:

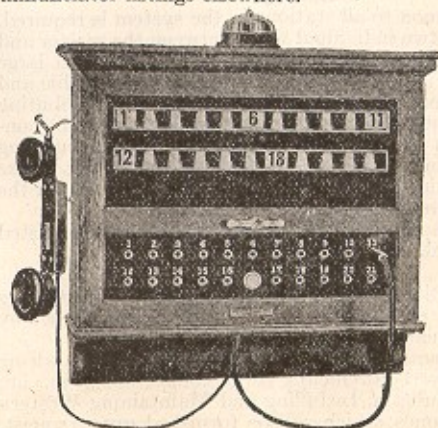
The Master Station operator withdraws the answering plug from the jack of the station calling, inserting in its place one of the connecting cord plugs, and proceeds to call the station wanted as explained above, in item 1. Having secured an answer from the station wanted, the operator again withdraws the answering plug and inserts in its place the other plug end of the connecting cord. This completes the connection between the two outlying stations.

No annunciator supervisory features are provided to indicate the termination of a conversation between outlying stations, it being assumed that such connections are required only on special occasions. Where a large number of connections are required between outlying stations, our No. 1801 lamp signal, Private Exchange Switchboard, is recommended.

CAPACITY.—One master station and 10 to 70 or more outlying stations.

Master Station Annunciators

Wood case with standard oak finish. Other special finishes can be furnished. Drops and jacks will be numbered from one up, unless otherwise specified. For further description see annunciator listings elsewhere.



List No.	No. of Drops
1028	10
1029	12
1030	18
1031	20
1032	24
1033	30
1034	36
1035	42
1036	48
1037	56
1038	60
1039	70

Number covers annunciator only; hand set Inter- phone not included.

Western Electric Inter-phone Systems

Master Annunciator System No. 18—Continued

Hand Set Inter-phone for Annunciator
Non-interfering

This consists of a No. 1003K hand set as described on another page.

Hook

A No. 141A hook can be used for supporting the hand set, the hook to be screwed into the side of the annunciator.

Connecting Cords

If Inter-communication between outlying stations is desired, one or two pairs of connecting cords may be ordered as described under Operation (Item 3).

Outlying Stations



No. 1527C-1



No. 1539C-1

No. 6043 Type
Hand SetNo. 6042 Type
Hand Set

Wall or hand set Inter-phones may be used. The Inter-phones as coded below are described in detail elsewhere.

No. of Buttons	METAL WALL INTER-PHONES		HAND SET INTER-PHONES	
	Surface	Flush	Flush	Surface
1	1527C-1	1539C-1	*6042L	6043G
			**6042G	

NOTE.—*For dimensions of outlet boxes refer to another page.

**No. 6042G is same as No. 6042L, but without face plate and wall box.

Wiring

One wire, common to all stations in the system is required, and, in addition, two individual wires between the master and each outlying station. Where there is a long run of a large number of wires, it will be found economical to use cable and install cable terminals or connecting blocks at all distributing and junction points. From there, the installation can be continued by means of separate wires to the various outlying stations. The size of cable and number of connecting blocks should be determined by the installer in accordance with the installation requirements.

Cables, cable terminals and connecting blocks are listed elsewhere in detail.

Batteries

Five or more Blue Bell dry cells are required for operating the system. The cells can be placed in the basement or any other accessible place.

Detailed information for installing, including wiring diagrams, battery requirements, cable connections, etc., are included in our bulletin, Installing and Maintaining Western Electric Inter-phones, which will be furnished upon request.

Western Electric Inter-phone Systems

System No. 14
Two Station Private Line

No. 1527C-1 TYPE

No. 6034 TYPE

SERVICE.—For use where only two stations are required and where the sets are distantly located from each other.

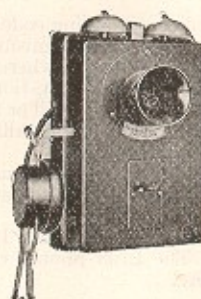
Only two wires are used for connecting the Inter-phones; dry cells being required at each station.

NOTE.—Refer also to other pages for description of Inter-phones outfits composed of two wall or hand set Inter-phones and the necessary installing material complete.

OPERATION.—Either station can ring the other by simply depressing the push button of the set.

TYPES OF INTER-PHONES.—Wall, desk or hand set Inter-phones may be used interchangeably.

The Inter-phones listed below are described in detail where listed separately.



No. 1527C-1



No. 1539C-1

No. 6043 Type
Hand SetNo. 6034 Type
Desk SetNo. 6042 Type
Hand Set

No. of Buttons	WALL TYPE INTER-PHONES (METAL)		Desk Set Inter-phones	HAND SET INTER-PHONES	
	Surface	Flush		Surface	Flush
1	1527C-1	*1539C-1	6034BE	6043P	*6042AE
					**6042AF

NOTE.—*For dimension of outlet box refer to another page.
**No. 6042AF is same as No. 6042AE but without face plate and wall box.

Wiring and Battery Requirements

A battery of three Blue Bell dry cells is required at each station to furnish current for talking and ringing if the length of line is less than 750 feet. If the length of the line is increased, additional dry cells are required at each station to insure satisfactory ringing. The following list indicates the additional dry cells required at each station:

Length of Line Between Stations	ADDITIONAL NUMBER OF CELLS FOR EACH STATION B. & S. GAUGE COPPER WIRE			
	No. 12	No. 14	No. 16	No. 18
750 to 1000 ft.	1	1	1	2
1000 " 1500 "	1	1	1	3
1500 " 3000 "	1	2	3	..
3000 " 4000 "	2	3	..	..
4000 " 5000 "	2	..	..	..
5000 " 6000 "	3	..	..	..

**Western Electric Apartment House
Inter-phones**
Systems 7, 8, 9 and 10
Selective Ringing—Selective Talking
Non-interfering Service



No. 1362 Vestibule Inter-Phone
With Letter Boxes

SERVICE.—Apartment house Inter-phones are designed to provide service between the vestibule apartments, janitor and tradesmen. The systems are planned throughout with the utmost care to give the most reliable service.

Systems Nos. 7, 8, 9 and 10 cover the practical service requirements of most apartment houses. One system may be expanded into another at any time by the use of additional apparatus.

These systems are designed for selective ringing and talking or non-interfering service, making it possible for the master station, such as the vestibule, the tradesmen and the janitor to communicate with different apartments simultaneously without interference with each other.

OPERATION.—The vestibule, janitor's and tradesmen's Inter-phones are equipped with push button keys (one for each apartment station). By depressing the button marked with the name or number of the apartment desired, the bell at that station will ring and there only.

The apartment Inter-phones can be provided with one or two push buttons for ringing the janitor's station or operating an electric door opener.

Separate conversation may take place simultaneously between the vestibule, janitor or tradesmen and different apartments.

TYPES OF INTER-PHONES.—Wall type Inter-phones are specified throughout for the various systems.

TYPES OF SYSTEMS.—See descriptions on following pages.

Accessories for Systems Nos. 7, 8, 9 and 10.

Coil and Condenser Box

One retardation coil and one condenser are required for each vestibule, janitor's (either wall Inter-telephone or master annunciator) or tradesmen's station. See for description of coil and condenser boxes elsewhere.

Cable

For connecting the various stations, either cable or insulated wires can be used, depending largely upon the layout of the building. Where there is a long run of a large number of wires (for instance, between the janitor, vestibule, and tradesmen Inter-phones or for the vertical riser from floor to floor) it will be found economical to use cable, and to install cable terminals or connecting blocks at all of the distributing and junction points.

For connecting the Inter-phones of the various apartments to these distributing points, insulated wires (No. 22 B. & S. gauge) can be used. The number of wires are outlined in the description of each system on the following pages. This data should be used when selecting the cable.

Cable Terminals

Cable terminals and connecting blocks are described in detail elsewhere.

Batteries

Not more than 12 Blue Bell dry cells will be necessary for operating any of the above systems (5 cells for the talking circuits and 4 to 7 cells for the ringing circuits, depending upon the length of the line). The cells can be placed in the basement or any other accessible place.

NOTE.—This battery data is based on the use of standard Inter-telephone cable or No. 22 B. & S. gauge wire.

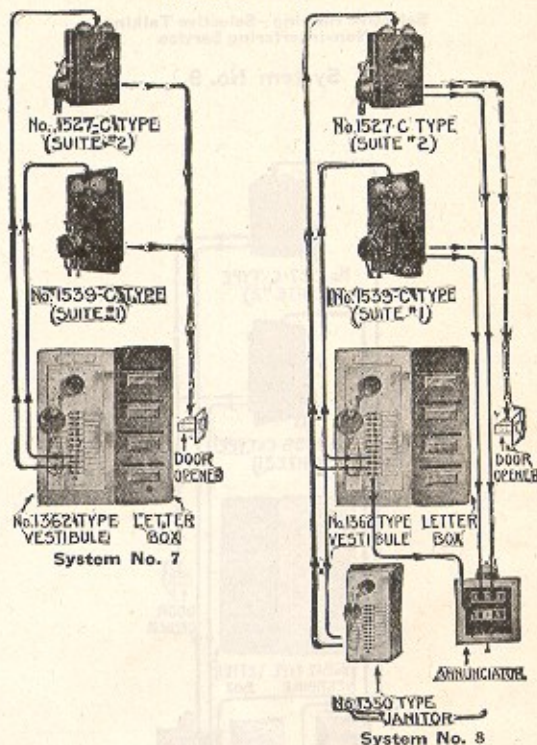
Door Opener

If a door opener is included in the system, additional dry cells will be required. Generally two or three cells have been found sufficient for this purpose.

Any standard type of door opener may be used.

NOTE.—Detailed information for installing wiring diagrams, battery requirements, cable connections, etc., are included in our booklet, "Installing and Maintaining Western Electric Inter-phones," which will be furnished upon request.

**Western Electric Apartment House
Inter-phones**
Systems 7, 8, 9 and 10—Continued
Non-interfering Service



System No. 7

SERVICE.—Vestibule can call apartments. Apartments can open door, if desired.

CAPACITY.—One vestibule and any number of suite Inter-phones up to 24.

Inter-telephone Apparatus Required for System No. 7

- Vestibule**
1 No. 1362 type Inter-telephone and letter boxes as required.
- Apartments**
1527C-0 Surface type Inter-phones or
1527C-1 Surface type Inter-phones, 1 button (for door) or
1539C-0 Flush type Inter-telephone or
1539C-1 Flush type Inter-telephone, 1 button (for door).

- Miscellaneous**
1 No. 295BC coil and condenser box.

- Wiring and Battery Requirements**
*2 wires common to entire system.
1 wire for each suite Inter-telephone.
Battery to furnish operating current.
1 door opener and miscellaneous installing material.

System No. 8

SERVICE.—Vestibule can call apartments and janitor. Apartments can call janitor and open door, if desired. Janitor can call apartments.

CAPACITY.—One vestibule, one janitor and any number of suite Inter-phones up to 24.

Inter-telephone Apparatus Required for System No. 8

- Vestibule**
1 No. 1362 type Inter-telephone and letter boxes as required.
- Apartments**
1527C-1 Surface wall Inter-telephone, 1 button (for janitor) or
1527C-2 With 2 buttons (for janitor and door).
1539C-1 Flush wall Inter-telephone, 1 button (for janitor) or
1539C-2 With 2 buttons (for janitor and door).

- Janitor**
1 No. 1350 Type Inter-telephone, 1 janitor's annunciator and
1 No. 295AS Coil and condenser box.

- Wiring and Battery Requirements**
*2 wires common to entire system.
2 wires for each suite Inter-telephone.
4 wires for connecting vestibule to janitor and coil and condenser box. Battery to furnish operating current.
1 door opener and miscellaneous installing material.

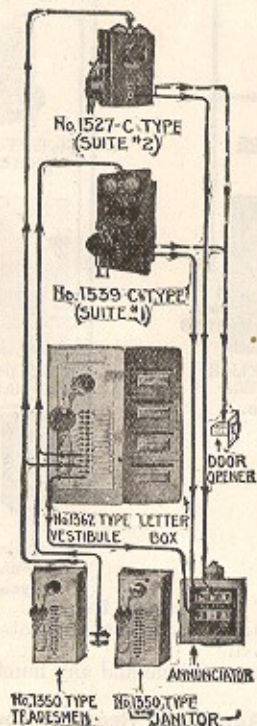
NOTE.—*1 common wire to be omitted when door opener is not required.

Western Electric Apartment House Inter-phones

Systems 7, 8, 9 and 10—Continued

Selective Ringing—Selective Talking
Non-interfering Service

System No. 9



System No. 9

SERVICE.—Vestibule can call apartments and janitor. Apartments can call janitor and open door, if desired. Janitor and tradesmen can call apartments.

CAPACITY. One vestibule, one janitor, one tradesman and any number of suite Inter-phones up to 24.

Inter-phone Apparatus Required for System No. 9

Vestibule

1 No. 1362 Type Inter-phone and letter boxes as required.

Apartments

1527C-1 Surface wall Inter-phone, 1 button (for janitor) or
1527C-2 Surface wall Inter-phone, 2 buttons for janitor and door or
1539C-1 Flush wall Inter-phone, 1 button for janitor or
1539C-2 Flush wall Inter-phone, 2 buttons, for janitor and door.

Tradesmen

1 No. 1350 Type Inter-phone.

Janitor

1 No. 1350 Type Inter-phone, 1 janitor's annunciator and
1 No. 295BD coil and condenser box.

Wiring and Battery Requirements

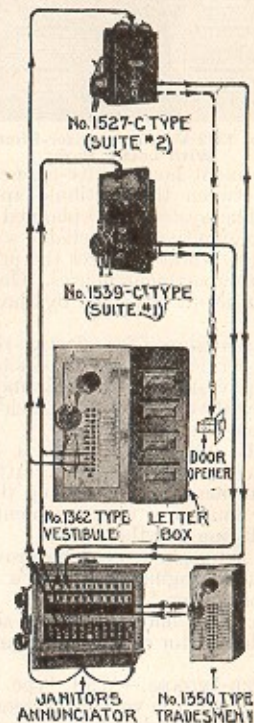
*2 wires common to entire system.
2 wires for each suite Inter-phone.
4 wires for connecting vestibule to janitor, tradesmen's set and coil and condenser box.
Battery to furnish operating current.
1 door opener and miscellaneous installing material.

Western Electric Apartment House Inter-phones

Systems 7, 8, 9 and 10—Continued

Selective Ringing—Selective Talking
Non-interfering Service

System No. 10



System No. 10

SERVICE.—Provides the same service as outlined under System No. 9, but on a larger scale, intended for use where several vestibules in the same or adjoining apartment houses are to be served by one janitor. The janitor's equipment consists of a master annunciator.

CAPACITY.—One janitor's switchboard, two or more vestibule and tradesmen's Inter-phones and any number of suite Inter-phones up to 70.

Inter-phone Apparatus Required for System No. 10

Vestibule

2 or more No. 1362 type Vestibule Inter-phones and letter boxes as required.

Apartments

1527C-1 Surface wall Inter-phone, 1 button for janitor or
1527C-2 Surface wall Inter-phone, 2 buttons, for janitor and door or
1539C-1 Flush wall Inter-phone, 1 button for janitor or
1539C-2 Flush wall Inter-phone, 2 buttons, for janitor and door.

Tradesmen

2 or more No. 1350 type Inter-phones.

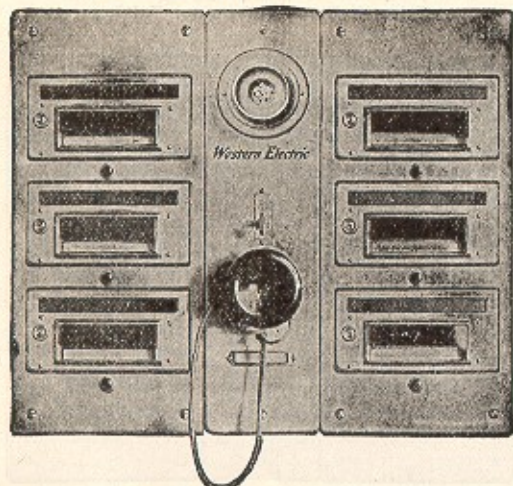
Janitor

1 annunciator switchboard and
**1 or more No. 295 type coil and condenser boxes

Wiring and Battery Requirements

*2 wires common to entire system.
2 wires for each suite Inter-phone.
5 wires for connecting each vestibule to janitor, tradesmen's sets and coil and condenser box.
Battery to furnish operating current.
1 door opener and miscellaneous installing material.
NOTE.—**One retardation coil and one condenser are required for the janitor's annunciator and each vestibule and tradesmen's Inter-phone.
*One common wire can be omitted if door opener is not required.

Western Electric Apartment House Inter-phones—System No. 20
Selective Ringing—Common Talking



Vestibule Equipment for Six Apartments



No. 1520 Type Vestibule Inter-Phone

SERVICE.—The No. 20 Inter-Phone Systems are designed to provide an inexpensive and reliable means of communication between vestibule, apartments, janitor's quarters, laundry and tradesmen's entrance. This system differs from Systems Nos. 7, 8, 9 and 10 (as described on the preceding pages) in that only one conversation can be carried on at a time, as all sets are connected to one talking circuit.

There are six combinations of the No. 20 System, differing from each other in the number of locations in the apartments which are to be connected for inter-communicating service. The operation of each of these combinations, however, is the same.

OPERATION.—The vestibule Inter-Phone is equipped with a push button for calling the janitor. Each letter box is provided with two or three compartments and below each compartment a push-button is mounted. To call an apartment, the push-button having the name of the apartment wanted is depressed; this rings the bell at the apartment selected and there only.

The apartment Inter-phones can be provided with push-buttons for operating the door opener, calling the janitor, laundry or any other station in accordance with the combination selected.

The janitor's, laundry and tradesmen's Inter-phones can be arranged either for receiving calls from the other stations without being able to signal back, or for receiving calls and for signalling back to any one of the apartments.

Only one conversation can be carried on at a time.

TYPES OF INTER-PHONES.—Wall type Inter-phones are specified throughout for the No. 20 Systems.

TYPES OF SYSTEMS.—(See descriptions on following pages.)

Accessories for No. 20 Systems

The cabling, terminals, door opener (if required) for these systems are the same as outlined for Systems 7, 8, 9 and 10.

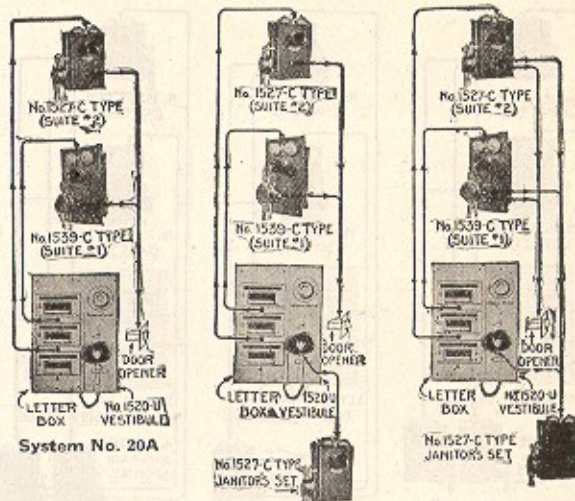
Battery Requirements

For the operation of each system a battery of not more than five Blue Bell dry cells is required. These can be placed in the basement or any other accessible place.



No. 3 Letter Box

Western Electric Apartment House Inter-phones
System No. 20—Continued
Selective Ringing—Common Talking



System No. 20A

System No. 20C

System No. 20D

SERVICE.—Vestibule can call apartments; apartments can open door.

Vestibule

1 No. 1520U Inter-Phone and 1 or more No. 3 type letter boxes.

Apartments

- Code No. 1527C-0 Surface Wall Inter-Phone, or
- 1527C-1 Surface Wall Inter-Phone (button for door), or
- 1539C-0 Flush Wall Inter-Phone, or
- 1539C-1 Flush Wall Inter-Phone (button for door).

Wiring and Batteries

*3 wires common to all Inter-phones. 1 wire for each apartment Inter-Phone, batteries to furnish operating current, 1 door opener and miscellaneous installing material.

System No. 20C

SERVICE.—Vestibule can call apartments and janitor; apartments can open door.

Apartments

- Code No. 1527C-0 Surface Wall Inter-Phone, or
- 1527C-1 Surface Wall Inter-Phone, 1 button (for door opener or
- 1539C-0 Flush Wall Inter-Phone, or
- 1539C-1 Flush Wall Inter-Phone, 1 button (for door opener)

Janitor

1 No. 1527C-0 Surface Wall Inter-Phone.

Wiring and Batteries

*3 wires common to all Inter-phones, 1 wire for each apartment Inter-Phone, 2 extra wires for connecting battery with vestibule and janitor's Inter-Phone.

System No. 20D

SERVICE.—Vestibule can call apartments and janitor; apartments can open door and call janitor. Inter-Phone apparatus.

Vestibule

1 No. 1520U Inter-Phone and 1 or more No. 3 type letter boxes.

Apartments

- Code No. 1527C-1 Surface Wall Inter-Phone, 1 button (for janitor), or
- 1527C-2 Surface Wall Inter-Phone, 2 buttons (for janitor and door), or
- 1539C-1 Flush Wall Inter-Phone, 1 button (for janitor), or
- 1539C-2 Flush Wall Inter-Phone, 2 buttons (for janitor and door).

Janitor or Laundry

1 No. 1527C-0 Surface Wall Inter-Phone.

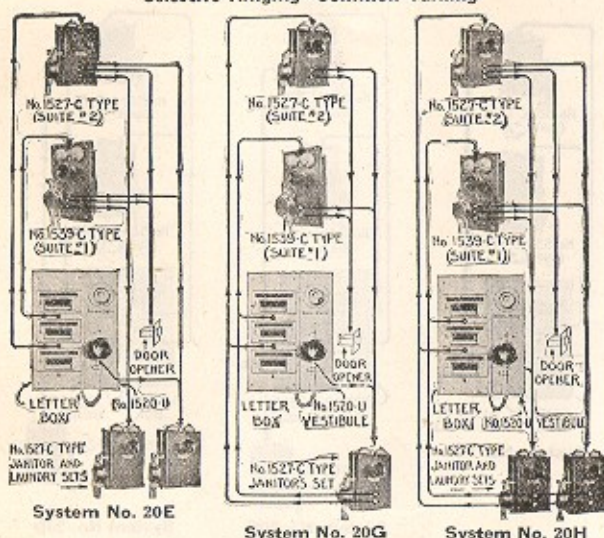
Wiring and Batteries

*4 wires common to all Inter-phones. 1 wire for each apartment Inter-Phone, batteries to furnish operating current, 1 door opener and miscellaneous installing material.

*One wire may be omitted if door opener is not used.

Western Electric Apartment House Inter-phones

System No. 20—Continued
Selective Ringing—Common Talking



System No. 20E
SERVICE.—Vestibule can call apartments and janitor; apartments can open door and call janitor and laundry.

Vestibule
1 No. 1520U Inter-Phone and 1 or more No. 3 type letter boxes.

Code No.	Apartment
1527C-2	Surface Wall Inter-Phone, 2 buttons.
1527C-3	Surface Wall Inter-Phone, 3 buttons.
1539C-2	Flush Wall Inter-Phone, 2 buttons.
1539C-3	Flush Wall Inter-Phone, 3 buttons.

Janitor and Laundry
2 No. 1527C-0 Surface Wall Inter-Phones.

Wiring and Batteries
*Five wires common to all Inter-phones. A wire for each apartment Inter-Phone, batteries to furnish operating current, one door opener and miscellaneous installing material.

System No. 20G

System No. 20G
SERVICE.—Vestibule can call apartments and janitor; apartments can open door and call janitor, and janitor can call apartments.

Vestibule
1 No. 1520U Inter-Phone and 1 or more No. 3 type letter boxes.

Code No.	Apartment
1527C-1	Surface Wall Inter-Phone, 1 button.
1527C-2	Surface Wall Inter-Phone, 2 buttons.
1539C-1	Flush Wall Inter-Phone, 1 button.
1539C-2	Flush Wall Inter-Phone, 2 buttons.

Janitor and Laundry
1 Nos. 1527C-2 to 1527C-8 surface wall Inter-Phones (depending upon number of push buttons required).

NOTE.—For more than 8 buttons, add push button block.

Wiring and Batteries
*Four wires common to all Inter-phones. One wire for each apartment Inter-Phone, batteries to furnish operating current, one door opener and miscellaneous installing material.

System No. 20H

System No. 20H
SERVICE.—Vestibule can call apartments and janitor; apartments can open door and call janitor and laundry; janitor and laundry can call apartments.

Vestibule
1 No. 1520U Inter-Phone and 1 or more No. 3 letter boxes.

Code No.	Apartment
1527C-2	Surface Wall Inter-Phone, 2 buttons.
1527C-3	Surface Wall Inter-Phone, 3 buttons.
1539C-2	Flush Wall Inter-Phone, 2 buttons.
1539C-3	Flush Wall Inter-Phone, 3 buttons.

Janitor and Laundry
1 Nos. 1527C-2 to 1527C-8 Surface wall Inter-Phones (depending upon number of push buttons required).

NOTE.—For more than 8 buttons, add push button block.

Wiring and Batteries
*Five wires common to all Inter-phones. One wire for each apartment Inter-Phone, batteries to furnish operating current, one door opener and miscellaneous installing material.

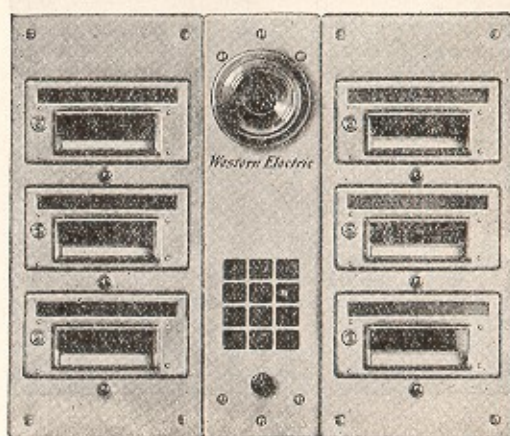
*One wire may be omitted if door opener is not used.

Western Electric Inter-Phone Systems

Apartment House Service

System No. 21

Selective Ringing—Common Talking



No. 1524A Inter-Phone with Two 3 Nest Letter Boxes

General Information

The No. 21 Inter-Phone Systems are designed to provide communication between vestibule, apartments, janitor's quarters, laundry and tradesmen's entrance.

This system has the same service requirements as system No. 20, except that the vestibule equipment consists of a loud-speaking, cordless type Inter-Phone which eliminates all projecting parts and provides against theft of receivers and cords. In addition to these features, the telephone set proper has a locking-in arrangement which further protects against theft of the complete unit.

There are six combinations of the No. 21 system, differing from each other in the number of locations in the apartments which are to be connected for inter-communicating service. The operation of each of these combinations, however, is the same.

The vestibule Inter-Phone is equipped with a push-button for talking and listening. Each letter box is provided with two or three compartments, and below each compartment a push-button is mounted. One of the letter box compartments and its associated push-button must be used for signalling the janitor.

To call one of the apartments from the vestibule, the letter box push-button (under the name of the party wanted) is depressed, which rings the bell of that apartment. The vestibule party next depresses the button at the bottom of the telephone set, and keeps it depressed while awaiting reply, and while conversing with the apartment party.

The apartment Inter-Phones can be provided with push-buttons for operating the door opener, calling the janitor, laundry, or any other station in accordance with the combination selected.

The janitor's, laundry, and tradesmen's Inter-Phones can be arranged either for receiving calls from the other stations without being able to signal back, or for receiving calls and for signalling back to any one of the apartments.

Only one conversation can be carried on at a time.

Wall type Inter-Phones are specified throughout for the No. 21 systems.

Accessories for No. 21 Systems

The cabling, terminals, and door opener, if required, for these systems are the same as outlined for systems 7, 8, 9 and 10.

Battery Requirements

For the operation of each system three sets of dry batteries are required, each set to consist of three dry cells. The batteries can be placed in the basement, or any other accessible place.

Detailed information covering wiring diagrams, connections of wires and cables, connecting blocks, etc., can be found in our booklet, "Installing and Maintaining Western Electric Inter-Phones," which will be furnished upon request.

Western Electric Inter-phone Systems

Apartment House Service—Continued

System No. 21A

Selective Ringing—Common Talking

Vestibule can call apartments; apartments can open door.

Vestibule

No. 1524A or B interphone and one or more No. 3 type letter boxes.†

Apartments

- | Code No. | Description |
|-------------------|-------------------|
| 1527C-0 | Surface Wall Type |
| *1527C-1 | " " " |
| 1539C-0 | Flush Wall Type |
| *1539C-1 | " " " |
| *Button for door. | |

Wiring and Batteries

‡Three wires common to all inter-phones; one wire for each apartment inter-phone; batteries to furnish operating current; one door opener and installing material.

System No. 21C

Vestibule can call apartments and janitor; apartments can open door.

Vestibule

No. 1524A or B inter-phone and one or more No. 3 type letter boxes.†

Apartments

- | Code No. | Description |
|----------|---------------------------|
| 1527C-0 | Surface Wall Inter-phone. |
| 1527C-1 | " " One Button for Door. |
| 1539C-0 | Flush Wall Inter-phone. |
| 1539C-1 | " " One Button for Door. |

Janitor

No. 1527G-0 Surface Wall Inter-phone.

Wiring and Batteries

‡Three wires common to all inter-phones; one wire for each apartment inter-phone; batteries to furnish operating current; one door opener and installing material.

System No. 21D

Vestibule can call apartments and janitor; apartments can open door and call janitor.

Vestibule

No. 1524A or B inter-phone, and one or more No. 3 type letter boxes.†

Apartments

- | Code No. | Description |
|-----------|--------------------------|
| *1527C-1 | Surface Wall Inter-phone |
| **1527C-2 | " " " |
| *1539C-1 | Flush Wall Inter-phone |
| **1539C-2 | " " " |

- *One button for janitor.
- **Two buttons for janitor and door.

Janitor or Laundry

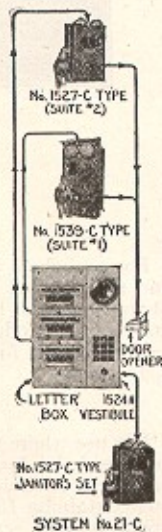
No. 1527C-0 Surface Wall Inter-phone.

Wiring and Batteries

‡Four wires common to all inter-phones; one wire for each apartment; batteries to furnish operating current; one door opener, installing material.

‡One wire may be omitted if door opener is not used.

‡One nest of letter boxes to be provided for janitor for signaling purposes.



Western Electric Inter-phone Systems

Apartment House Service—Continued

System No. 21E

Selective Ringing—Common Talking

Vestibule can call apartments and janitor; apartments can open door and call janitor and laundry.

Vestibule

No. 1524A or B inter-phone and one or more No. 3 type letter boxes.†

Apartments

- | Code No. | Description |
|--|-------------------|
| *1527C-2 | Surface Wall Type |
| **1527C-3 | " " " |
| *1539C-2 | Flush Wall Type |
| **1539C-3 | " " " |
| *Two buttons, janitor and laundry. | |
| **Three buttons, janitor, laundry, door. | |

Janitor and Laundry

Two No. 1529C-0 Surface Wall Inter-phones.

Wiring and Batteries

‡Five wires common to all inter-phones, one wire for each apartment inter-phone, batteries to furnish operating current, one door opener, and miscellaneous installing material.

System No. 21G

Vestibule can call apartments and janitor; apartments can call janitor and open door, and janitor can call apartments.

Vestibule

*One No. 1524A or B inter-phone and one or more No. 3 type letter boxes.†

Apartments

- | Code No. | Description |
|-----------|-------------------|
| *1527C-1 | Surface Wall Type |
| **1527C-2 | " " " |
| *1539C-1 | Flush Wall Type |
| **1539C-2 | " " " |

- *One button for janitor.
- **Two buttons for janitor and door.

Janitor and Laundry

One Nos. 1527C-2 to 1527C-8 Surface Wall Inter-phones, depending upon number of push buttons required.

NOTE.—For more than 8 buttons add push button block.

Wiring and Batteries

‡Four wires common to all inter-phones, one wire for each apartment inter-phone, batteries to furnish operating current, and one door opener.

System No. 21H

Vestibule can call apartments and janitor; apartments can open door and call janitor and laundry; janitor and laundry can call apartments.

Vestibule

One No. 1524A or B inter-phone and one or more No. 3 type letter boxes.†

Apartments

- | Code No. | Description |
|----------|---|
| 1527C-2 | Surface Wall Type, 2 Buttons for Janitor and Laundry. |
| 1527C-3 | Surface Wall Type, 3 Buttons for Janitor, Laundry and Door. |
| 1539C-2 | Flush Wall Type, 2 Buttons for Janitor and Laundry. |
| 1539C-3 | Flush Wall Type, 3 Buttons for Janitor, Laundry and Door. |

Janitor and Laundry

One Nos. 1527C-2 to 1527C-8 Surface Wall Inter-phones, depending upon number of push buttons required.

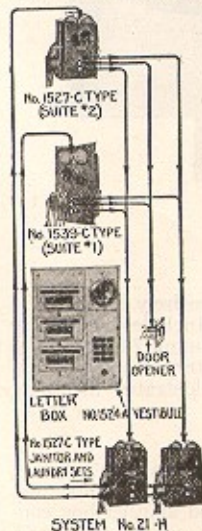
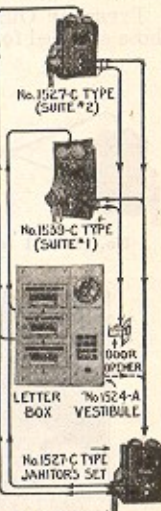
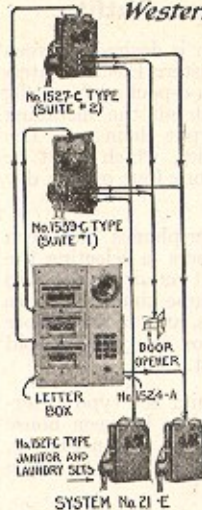
NOTE.—For more than 8 buttons, add push button block.

Wiring and Batteries

‡Five wires common to all inter-phones, one wire for each apartment inter-phone batteries.

‡One wire may be omitted if door opener is not used.

‡One nest of letter boxes to be provided for signalling purposes.



Western Electric Inter-phone Outfits

GENERAL.—Where intercommunication is desired between two points in the home or in business, Western Electric Inter-phones can be furnished in "a-pair-in-a-package" outfit; that is, two Inter-phones complete with all the installing materials and instructions necessary to put them up. The outfits do not, however, include batteries, which must be ordered separately. For average conditions four or five dry cells will be sufficient.

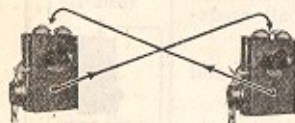
This standard package idea for Inter-phones has been devised as a means of assisting purchasers in selecting the proper equipment for their needs without requiring them to make a study of the subject. At the same time it assures them of getting uniformly good materials, and in the proper amounts. The outfits are packed in a box ready to be sold over the counter or mailed by parcel post.

SERVICE.—Consists of two wall or hand set type Inter-phones suitable for a private telephone line between house and barn or garage, or for a line that is wholly within a house, also for use in offices or shops between two buildings or in one building.

OPERATION.—Either station can ring and talk to the other.

TYPES OF OUTFITS.—The Inter-phones are the same as those specified for the Nos. 14 and 15C Inter-phone systems.

Outfit No. 30



No. 1527C-1 Inter-phones

Includes two surface wall No. 1527C-1 Inter-phones and 1 No. 51H retardation coil in one box but no installing or wiring material.



No. 30 Outfit

Outfit No. 30A

For use where the wiring is to be run entirely under cover and not exposed to moisture or weather. Includes one No. 30 outfit in one box, and another box containing 75 feet of insulated 3 conductor copper wire, two battery connectors, insulated nails for fastening wires, and illustrated installing instructions.

Outfit No. 30B

For use where the wiring is to be run in the open between or outside of buildings, and exposed to weather and moisture. Includes one No. 30 outfit in one box, and another box containing 150 feet of outside 3-conductor copper wire, two brackets with screws, hooks and knobs to attach wires to building, two porcelain tubes to insulate wires when entering building, two battery connectors, 25 insulated nails for fastening wires inside building, and illustrated installing instructions.

Western Electric Inter-phone Outfits

Outfit No. 31



No. 6043P Inter-phones

Includes two hand set type No. 6043P Inter-phones and No. 51H retardation coil in one box but no installing or wiring material.



No. 31 Outfit

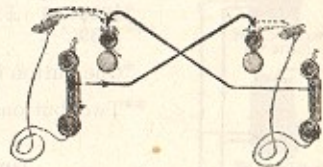
Outfit No. 31A

For use where the wiring is to be run entirely under cover and not exposed to moisture or weather. Includes one No. 31 outfit in one box, and another box containing 75 feet of insulated 3 conductor copper wire, two battery connectors, insulated nails for fastening wires, and illustrated installing instructions.

Outfit No. 31B

For use where the wiring is to be run in the open between or outside of buildings, and thus exposed to weather and moisture. Includes one No. 31 outfit in one box, and another box containing 150 feet outside 3 conductor copper wire, two brackets with screws, hooks and knobs to attach wires to buildings, two porcelain tubes to insulate wires when entering building, two battery connectors, 25 insulated nails for fastening wires inside building, and illustrated installing instructions.

Outfit No. 17



This consists of two No. 1003 type hand set Inter-phones with all the material required to install a simple intercommunicating system between two points not over 80 feet apart, and where the wire will be wholly indoors and not exposed to weather conditions or moisture.

When installed in accordance with the directions furnished with each outfit, either station can call or talk to the other. Although intended primarily for business use, the No. 17 outfit can be used equally well in the home.

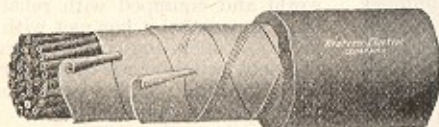
This outfit includes two hand set Inter-phones, two connecting blocks with mounting screws, 80 feet of insulated twisted pair copper wire, 60 insulated nails for fastening wire, two hooks for holding hand sets, two bells, two battery connectors, and illustrated installing instructions.

Western Electric Inter-phone Accessories

Inter-phone Cable



For Interior Use



For Outside Use

The conductors are provided with single silk and single cotton insulation, which is colored in such a way that each pair and each single wire can be identified. The cable is then impregnated with a wax compound and is covered with servings of paper and a heavy braiding, which is given a heavy coat of fireproofing paint.

The impregnation with wax prevents the insulation from fraying when the cables are installed. It also serves to protect the formed ends against moisture.

Three general types of cable are provided. Each type has its particular use, and care should be taken to order the proper cable for any desired purpose. These types are as follows:

1. Interior Cable with outside braiding treated with gray fireproofing paint. Use only in dry places.
2. Interior cable with green glazed cotton outside braiding. Use only in dry places where exposed to view.
3. Outside cable, lead covered. Always use this cable outside, and inside in every case where there is apt to be moisture even in a small degree. In conduit installations lead covered cable should be used.

Lead-covered cables are not listed with separate Code Nos. Any fireproofed type of cable may be ordered with a lead sheath.

All cables are provided with a standard color scheme, so that each pair can be distinguished from any other. The pairs are properly twisted to prevent inductive disturbances. Each cable contains two spare pairs of No. 22 gauge conductors.

Code No.	Conductors, B. & S. Gauge		Covering	Approx. Outside Diam., In.
	No. 22	No. 18		
185B	4 singles	.....	Fireproofed braid	1/4
161B	8 "	.....	"	5/16
161B (Lead)	8 "	.....	Lead sheath	5/16
142B	8 "	.....	Green cotton braid	5/16
162B	12 "	.....	Fireproofed braid	3/8
162B (Lead)	12 "	.....	Lead sheath	3/8
164B	6 "	2 pair	Fireproofed braid	13/32
164B (Lead)	6 "	2 "	Lead sheath	13/32
134B	6 pair	2 "	Fireproofed braid	13/32
134B (Lead)	6 "	2 "	Lead sheath	13/32
155B	6 "	2 "	Green cotton braid	13/32
141B	12 "	2 "	Fireproofed braid	1/2
141B (Lead)	12 "	2 "	Lead sheath	1/2
156B	12 "	2 "	Green cotton braid	1/2
157B	16 "	2 "	Fireproofed braid	13/16
157B (Lead)	16 "	2 "	Lead sheath	13/16
158B	20 "	2 "	Fireproofed braid	7/8
158B (Lead)	20 "	2 "	Lead sheath	7/8
136B	24 "	2 "	Fireproofed braid	15/16
136B (Lead)	24 "	2 "	Lead sheath	15/16
140B	31 "	2 "	Fireproofed braid	1 1/8
140B (Lead)	31 "	2 "	Lead sheath	1 1/8

No. 19 Type Cable Terminals

The No. 19 type cable terminal is admirably suited for interior distributing work. It was designed after a great deal of study, and is thought to be the best of its kind on the market. Made of hard wood, numbered and shellacked, and equipped with a japanned sheet metal cover.

Code No.	Capacity in Pairs	Length In.	Width In.	Depth In.
19A	14	8	5 7/8	2 1/2
19B	26	14	5 7/8	2 1/2

Western Electric Inter-phone Accessories

No. 6 Type Connecting Blocks



Consists of brass studs embedded in a hard composition base. Studs fitted with two nuts (one a split check nut) and two washers.

Code No.	Capacity in Pairs	Length In.	Width In.	Code No.	Capacity in Pairs	Length In.	Width In.
6G	6	4 7/8	1 7/8	6C	16	12 3/8	1 7/8
6B	11	8 5/8	1 7/8	6D	21	16 1/8	1 7/8
6F	13	10 1/8	1 7/8	6E	26	19 7/8	1 7/8

Nos. 11 and 12 Types Connecting Blocks

These consist of a composition base in which the screw terminals are embedded. Each terminal consists of two screw bushings electrically connected by means of a metal strip, and provided with screws and washers.



Code No.	No. of Terminals	Size In.
11A	2	1 1/4 x 1 3/2
11B	Same as No. 11A	except equipped with a cover.
12A	3	1 1/2 x 1 3/2
12B	Same as No. 12A	except equipped with a cover.

No. 1B Hand Set Hanger

A black finish hanger for holding No. 1001 type hand set.



No. 141A Hand Set Hook

A hook to be screwed into wall for holding No. 1003 type hand set.



Wood Push Button Blocks

For use with Inter-phone Systems Nos. 12A, 20G and 20H, also in private installations and for call bell service.

Stock finish of this type is dark golden oak with nickel trimmings. The directory plate is backed with a strip of transparent celluloid to protect the directory list.

No. of Buttons	Wood Base Code No.	Weighted Base Code No.
4	7900	7980
6	790	798
8	7910	7990
12	7921	79010
16	7930	79020
20	793	7902

Green mercerized cord per foot per button and attaching cord per button, are furnished at extra charge.



Metal Push Button Blocks

A black finished metal box, bushed for the entrance of connecting cord or wires. A base plate is provided having two punched holes for mounting, if desired. Felt pads are attached to the bottom of the plate.

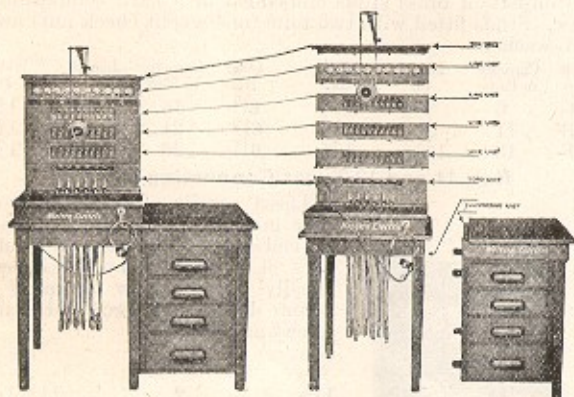
The push button groups and escutcheons, also the finish of these boxes are the same as specified for Unit Wall Inter-phones on the preceding pages. The box is 3 3/4 x 4 1/4 x 1 3/8 inches in size.



Without Cords			
Code No.	No. of Buttons	Code No.	No. of Buttons
101A	1	104A	4
102A	2	106A	6
103A	3	108A	8
With 6 Foot Cords			
104AC	4	108AC	8

Western Electric Magneto Non-multiple Switchboards

No. 1800 Sectional Unit Type



Method of Assembling No. 1800 Switchboard to 35 Line Capacity

The unit or sectional type construction for the small switchboard was introduced by the Western Electric Company a number of years ago, and since that time has been supplying the demand of discriminating buyers for a small switchboard that would meet their traffic requirements and eliminate the necessity of buying an "oversize switchboard."

The capacity of the No. 1800 Unit Type Switchboard is from 10 to 50 lines. While 50 lines has been set as an arbitrary maximum it is safe to assume that with a normally low calling rate as many as 70 or 80 lines can be handled conveniently. While the No. 1800 Unit Type Switchboard is small in size (Floor space required only 2 feet x 2½ feet), this does not mean that this board receives less consideration or care in manufacture than a larger switchboard, for the same quality of material, skilled workmanship and rigid inspection are applied to all of the Western Electric products regardless of size. Red oak lumber, which has been kiln-dried, thoroughly seasoned and given a dark rubbed finish, is used in the construction of the units. The inside of the units have been specially treated to preserve wood and prevent warping or cracking.

To meet various requirements, there are different types of base or supporting units, cord units, line units and top units. To assemble a switchboard of 10 lines capacity for example it is only necessary to select units as follows:

1 Supporting Unit	1 Line Unit
1 Cord Unit	1 Top Unit

These units are easily assembled into a complete switchboard which presents a neat, compact and serviceable appearance and can be arranged to meet any service condition. Line units can be added at any time.

All of the apparatus and terminals associated with the operator's cord and telephone circuits are mounted in the cord unit.

The circuits used are very simple. A diagram of each circuit is pasted to the inside of the rear doors for convenient reference. The back of each unit is hinged and, when open, all of the wiring and equipment are easily accessible.

This switchboard is specially recommended for small, rapidly growing telephone exchanges where the ultimate capacity cannot be definitely determined.

No. 1240-D Western Electric Magneto Switchboards

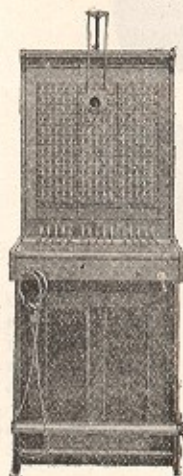
Non-multiple—Automatically Restored Line Signals

Capacity, 165 Lines 15 Cord Circuits

This standard efficient magneto switchboard has been giving universal satisfaction in all parts of the United States and foreign countries. Designed by the largest corps of telephone engineers in the world and equipped with reliable, efficient apparatus, it has met with the approval of operating companies requiring magneto switchboards that insure a long life of service, coupled with economical operating and maintenance.

Where more than 165 lines are required several sections may be lined up with good results. This has been done in numerous cases and the desired capacity obtained without any complications. All of the apparatus used in this switchboard has been proven reliable and efficient in operation, by many years of service, it being economical to maintain and exempt from repairs to an exceptional degree.

The operation of the No. 1240-D switchboard is simple and easily performed for the line jacks are so grouped



Front View

as to be within easy reach of the operator, reducing that work to a minimum.

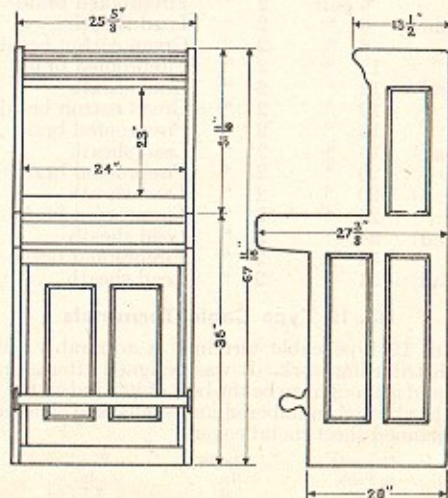
The lumber used in the construction of the cabinet is red oak, thoroughly seasoned and kiln dried to prevent warping or cracking.

The exterior of the cabinet is given a dull golden oak finish which is very serviceable. As an added precaution against warping, cracking or decay the interior surfaces are coated with shellac.

The steel framework which supports the face equipment is copper plated as a protection against corrosion or rust, also insuring a positive ground connection for the apparatus.

An apparatus and terminal board is mounted in the rear of the switchboard on which are mounted the repeating coils, night alarm bell, and large screw terminals where all power wiring such as power ringing, transmitter battery, night alarm battery, monitor taps, etc., are terminated.

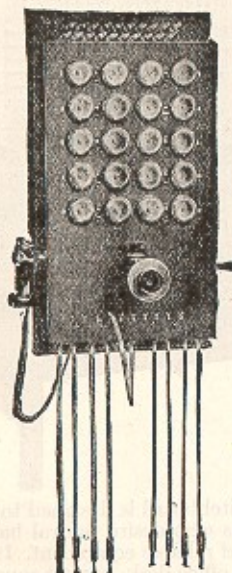
The No. 1240-D non-multiple magneto switchboard is furnished with either single or double supervision cord circuits. Single supervision boards may, if desired, be equipped with five cord circuits having toroidal repeating coils and switching keys. Double supervision boards may be equipped with either the condenser type non-hang-up cord circuits, or the condenser repeating coil type non-hang-up, non-ring-through cord circuits. The present switchboard, if arranged for single supervision, may be changed to a double supervision board simply by installing the necessary additional apparatus.



Dimensions

No. 1012 Western Electric Magneto Wall Switchboards

Ringer Type



This switchboard is intended for use in exchanges having 10 lines or less, and where the number of calls does not warrant having a regular telephone operator in attendance.

It has been installed by numerous rural companies who desire a switching station established in the country in which case it is installed in a farmer's home and the calls are answered by members of the family.

Being equipped with ringers, constant attendance at the switchboard is not necessary as the bells can be heard at some distance from the board.

In addition to this ringer, indicators are supplied with each ringer which gives a visible signal showing which bell has been ringing.

The cabinet is well constructed of thoroughly seasoned, quarter sawed oak, which is given a durable light finish. The front is hinged and the apparatus and wiring is within easy reach for inspection or maintenance.

Equipment

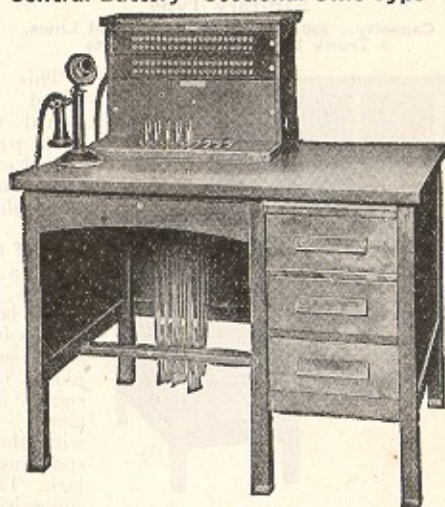
Each line is provided with a jack and a 1000 ohm ringer, although 1600 or 2500 ohm ringers can be furnished if required. Four-cord circuits, with a listening-in jack bridged across the tip and ring, and a listening cord are provided for handling the calls, no supervisory or ring off signals being provided. A powerful five-bar hand generator is furnished for ringing purposes. The operator's telephone set consists of the regular long distance transmitter and receiver.

Operation

Subscribers are called by ringing with the hand generator over the listening cord with which the operator answers calls and listens in for supervisory purposes. Connections are made with the other cords, without the use of keys.

No. 1801 Western Electric Private Exchange Switchboards

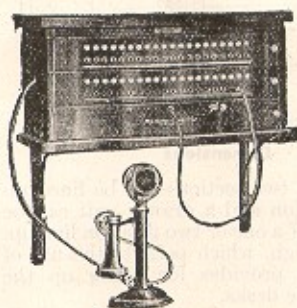
Central Battery—Sectional Unit Type



Systems B, C or D

The No. 1801 sectional unit type switchboard (like the No. 1800) was originated by the Western Electric Co., and introduced to the telephone trade to supply the demand for a small flexible and economical switchboard. Adaptable to many conditions, this switchboard has been installed by small telephone companies, as private branch exchanges, for hotels, factories, public schools and institutions or any place where telephone service was required and the ultimate capacity could not be definitely determined.

Being of the unit type, with construction somewhat similar to the sectional book case, and so arranged that additional units may be readily added when required, this switchboard is adaptable to many line and traffic conditions which are met on the small exchange. The rear of the units is permanently closed. The front panels of all units are held in place with thumb screw locks and are hinged to permit access to the wiring, terminals and apparatus. All connections are made under screw terminals.



System A

listed under heading: Central Battery Telephones.

SYSTEM A.—This system provides for communication between the switchboard and stations only. There are no facilities for inter-communication between stations or for connections to a central office.

SYSTEM B.—This system embodies all of the features of System "A" and in addition has facilities for inter-communication between stations.

SYSTEM C.—This system embodies all of the features of system "B" and in addition two plug ended trunks are provided which may be equipped for connections to either magneto or central battery central offices.

NOTE.—Direct current is used for ringing the telephone bells in Systems A, B, and C.

SYSTEM D.—This system has all of the features of system "C" except that it employs the regular two wire line circuit, and alternating current is used for ringing purposes.

The telephone sets used with this system are the regular central battery sets used with central office systems.

Write our nearest house for particulars. State which system is best suited for your requirements.

The No. 1801 has lamps for the line and supervisory signals. Birch lumber, with a mahogany finish, or quarter sawed red oak which has been kiln dried and thoroughly seasoned to prevent warping and cracking is used in the construction of the units.

Four systems—"A," "B," "C" and "D" have been devised to handle the various classes of service required in this type of switchboard. Telephones which can be used with the systems are

No. 1962 Western Electric Private Branch Exchange Switchboards

Sanitary Type

Capacity: 200 Central Battery Local Lines,
8 Trunk Lines, 12 Cord Circuits



This switchboard is designed for use as a private branch exchange connecting with a public telephone system. It is of the central battery type, making use of lamp line signals and lamp supervisory signals. The line signal is associated directly with the corresponding line jack. The lamp supervision is

positive as the signal is closely associated with the corresponding cord. This arrangement provides for rapid and reliable operation.

This type of board is furnished with either plug or jack-ended trunks. The plug-ended trunks provide for reducing the number of connecting cords and are an efficient means of providing inter-connections with a city exchange system. The jack-ended trunks afford high-class connections and are somewhat less expensive than plug-ended trunks. They also require the furnishing of a somewhat greater number of connecting cord circuits. These trunks may be supplied for connection to either a magneto or a central battery office. When plug-ended trunks are furnished, holding jack circuits are also supplied to enable an operator to hold the exchange trunks when all four lines happen to be busy.

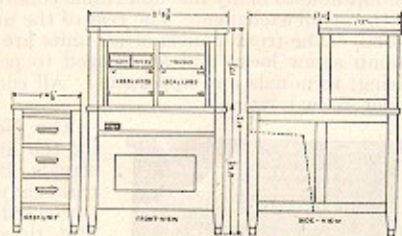


DIAGRAM SHOWING DIMENSIONS OF NO. 1962 SWITCHBOARD.

Dimensions

This type of switchboard is furnished only in a single position section, but two sections can be lined up together to appear as one section and a drawer unit can be supplied at either or both ends of a one or two position line-up. The key-shelf is $30\frac{1}{2}$ inches high, which permits the use of an ordinary office chair, also provides for lining up the switchboard with standard office desks.

The standard wood work is birch with mahogany finish, or quarter sawed oak, light finish.

Built along the lines of modern office furniture it will harmonize with the surroundings in any modern office.

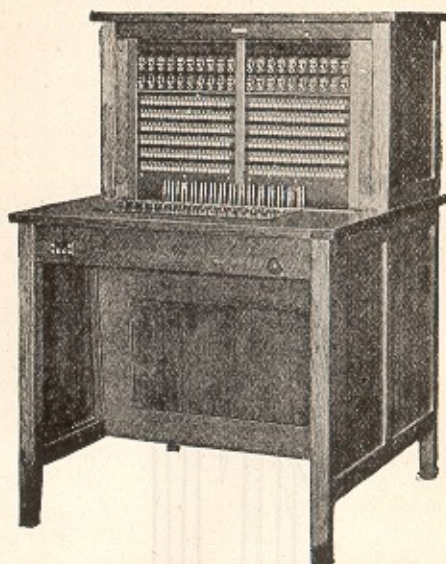
The No. 1962 switchboard being universally wired is adaptable to the varied requirements of private branch exchange service. It is designed to handle all practical service conditions which have arisen since the advent of the private branch exchange idea.

In addition to including all of the popular features adapted to private branch exchange service the No. 1962 switchboard is of the "Sanitary Desk Type" of construction which represents the Western Electric Company's most recent development and departure from old manufacturing methods. This switchboard is evidence of the continuous efforts being exerted by the Western Electric engineers toward the development of modern switchboards which will meet the exacting demands of discriminating buyers, and still retain the simplicity of operation, quality of material, skilled workmanship and low maintenance cost, which have been characteristic of Western Electric products in the past.

No. 1948 Western Electric Central Battery Non-multiple Switchboards

Sanitary Type

Capacity: 240 Central Battery Lines, 40 Toll
or Rural Lines, 20 Transfer Trunks



The No. 1948 Switchboard is designed to provide the small telephone companies who desire central battery service with modern, efficient and reliable equipment. It is built along the lines of the modern office desk, having square lines generally, square legs (metal capped at bottom) and a clearance underneath for cleaning purposes, hence the term "Sanitary Type" and is the Western Electric Company's latest departure from old methods of small switchboard manufacture. Meeting the demands of exacting buyers as it does is evidence of the confidence enjoyed by this company in the development of a much needed small central battery switchboard which is easy to operate, economical to maintain and constructed of the same materials which enter into the construction of the larger boards upon which the Western Electric Company's reputation for quality products is built and maintained.

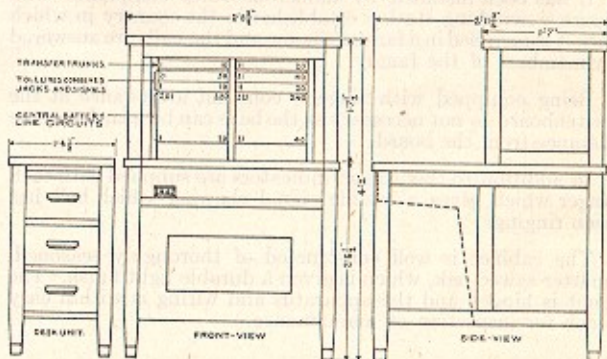


DIAGRAM SHOWING DIMENSIONS OF NO. 1948 SWITCHBOARD.

Dimensions

Cord circuits are arranged with lamp supervisory signals, giving positive supervision. Any or all cord circuits can be arranged to operate as straight central battery or full universal.

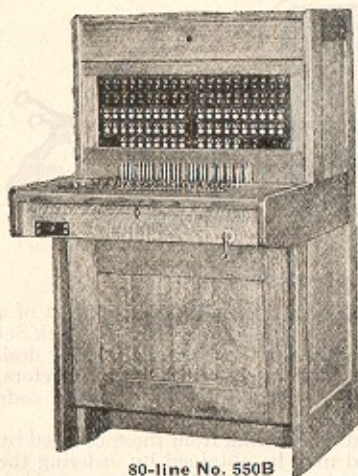
In the universal circuits, toroidal type repeating coils will be furnished if specified. When these are furnished, cutout key may be used so that if two magneto lines are connected, the repeating coil may be either cut in or out of circuit. When a magneto and central battery line are connected, the repeating coil equipment will serve to minimize noise.

Various ringing combinations are available. To provide for any of these, universal wiring is installed.

Suspended type transmitters are usually furnished, but chest type transmitters will be supplied, if ordered.

Write our nearest house for particulars.

No. 550 Type Western Electric Private Branch Exchange Non-multiple Switchboards



80-line No. 550B

The No. 550B switchboard in both the 30 and 80-line capacities makes an ideal installation in any city or town where the present equipment of the main central office is of the manual central battery type.

It has end panels permitting the lining up of two boards.

Red oak lumber with a rich dark finish or birch with mahogany finish is used for all exposed wood-work parts.

If there is a possibility of a change from manual to machine switching telephone equipment the

purchase of the No. 550C switchboard, which has trunks arranged for connection to machine switching offices, including the necessary dialing features, is recommended.

Types and Capacity

	550B(30)	550B(80)	550C(30)	550C(80)
Station lines total.	30	80	30	80
†Station lines.				
wired for relays.	10	20	10	20
Trunk lines.	10	15	10	15
*Cord circuits.	10	15	10	15

*The cord circuits in the No. 550B board can be equipped for either single or double supervision while those in the No. 550C board are arranged for double supervision only.

†Certain lines are wired for relays to be used on lines where the telephone is located considerable distance (800ft.) from the switchboard. Relays are not provided unless specified.

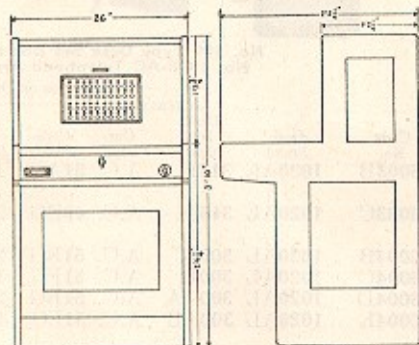
The equipment, such as relays, resistances, retard coils, etc., associated with the trunk, line, cord, night alarm, dialing, auxiliary and operator's telephone circuits, is mounted on a swinging relay gate which is constructed of a single piece of cold drawn galvanized steel bent in the proper shape and mounted on a heavy steel bracket securely fastened to the switchboard.

The line circuits are simple and terminate on screw terminals located on a hinged connecting rack which can be opened for inspection. Jack ended trunk circuits are used in all No. 550 boards. The cord circuits embody all of the features required for the successful operation of the private branch exchange. Connections between stations and from stations to trunks are easily established.

Individual line jacks and associated lamp sockets are used in all boards on trunk and line circuits.

The jacks and lamp sockets are individually mounted as in the line circuits.

The dial may or may not be used as desired it being easily installed when needed. It is connected to the local cable by means of a flexible cord and the dial itself held in place by a spring clip which is screwed to the keyshelf. When the dial is not equipped the hole for the cord is suitably covered with an apparatus blank.

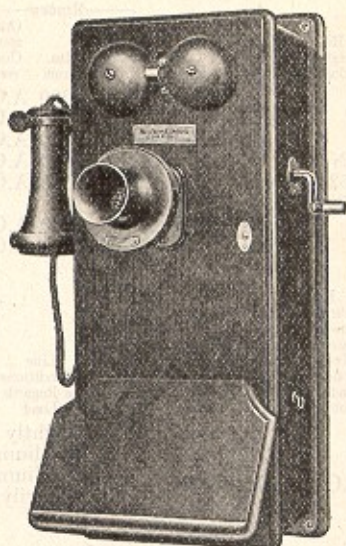


DIMENSIONS OF NO. 550 PRIVATE BRANCH EXCHANGE SWITCHBOARD.

Dimensions

Western Electric Magneto Telephones

**No. 1317 Type
General Description**



2-Cell, Closed View

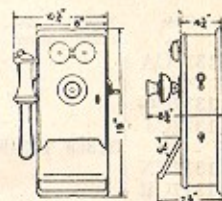
The No. 1317 type telephone represents the highest development attained in magneto telephone design and construction. It has been standard with the Western Electric Company for more than a decade, and its high efficiency, reliability and long life have been thoroughly proven by the hundreds of thousands in service.

2 and 3 Cell Types

No. 1317 telephones are made in two styles, namely, the "2 cell" and the "3 cell." The talking circuits of these two types are identical, i.e., they employ the same transmitters, receivers and induction coils. The battery compartment of the "3 cell" type is suf-

ficiently large to take three standard dry cells, whereas only two dry cells can be placed in the "2 cell" type. The larger cabinet of the "3 cell" type also permits the mounting of the No. 48 type (5 bar) generator, while the "2 cell" type employs the No. 50 type (large 3 bar) generator.

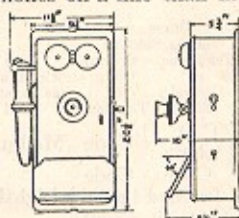
The No. 50 type (large 3 bar) generator, while intended primarily for use on medium loaded lines, is exceptionally powerful, and is capable of giving satisfactory service on about 90 per cent of the lines now in use. For example this generator will ring thirty 2500 ohms ringers connected to a No. 12BB iron metallic telephone line 15 miles in length (provided, of course, that the line is properly installed and in good condition).



2-Cell Dimensions

It will operate more telephones on a line than many four or five bar generators.

WOODWORK AND FINISH.—The cabinet is made of quarter sawed oak and given three coats of high-grade varnish rubbed down by hand. Unexposed surfaces of the telephone are also given a protective finish so as to prevent warping.



3-Cell Dimensions

WIRING.—All terminals including those for the transmitter, receiver, cord, line wires, etc., are plainly marked so that

there can be no possible mistake when making connections. The various cords, such as those of the transmitter and receiver and the flexible leads running to the condenser are all furnished with cord tips.

A complete and explanatory circuit label is pasted on the inside of the door of each telephone in addition to which a booklet is furnished giving complete instructions for installation and maintenance.

METAL FINISH.—The transmitter bracket, gongs, switch hook, generator, crank and lock escutcheon are given an extremely durable and pleasing black finish.

ADJUSTMENT.—These telephones are carefully adjusted in the factory, and should, therefore, be satisfactory for service as received by the customer unless unusual service conditions should be encountered, in which case only the ringer will require readjustment. The adjustment of the ringer is a very simple matter and instructions furnished in the booklet are so clear that no difficulty will be encountered.

Western Electric Magneto Telephones
No. 1317 Type—Continued

No. 1317 Three-cell Type

Code No.	Transmitter	Receiver	Receiver Cord	Transmitter Cord	Condenser	Code No.	Res. Ohms	Operating Current	
1317AH	323BW ***	143AW	521 {30 ins.	One No. 547 and No. 548	None	38AG	1000	A.C.	
1317N						38FG	1600	A.C.	
1317R						21W38FG	1600	A.C.	
1317P						None	38BG	2500	A.C.
1317S						21W	38BG	2500	A.C.
1317AU						None	55AG	1000	A.C.
1317BA	548	38FG	1600	A.C.					

Code No.	GENERATOR Code No.	Current	KIND OF RINGING CURRENT Generator in Telephone Sends Out	Ringer in Telephone Operates On	CLASS OF SIGNAL SERVICE Telephone to Central Office	Central Telephone	Line Conditions as Regards Load
1317AH	22A	A.C.	A.C.	A.C.	Code	Code	Lightly
1317N	48A						Medium
1317R	48A						Medium
1317P	48A	A.C. and P.C.	P.C.	A.C.	Dealer Checking **	Code	Lightly
1317S	48A						Lightly
1317AU	22D	A.C.	A.C.	A.C.	C.O. selective*	Code	Medium
1317BA	48A						Medium

No. 1317C Two-cell Type

Code No.	Transmitter	Receiver	Receiver Cord	Transmitter Cord	Condenser	Code No.	Res. Ohms	Operating Current	
1317CA	323BW	143AW	521 {30 ins.	One No. 547 and No. 548	None	53FG	1600	A.C.	
1317CG						53AG	1000	A.C.	
1317CJ						54BG	2500	A.C.	
1317CN						53FG	1600	A.C.	
1317CR						21W	53FG	1600	A.C.
1317CP						None	53BG	2500	A.C.
1317CS	21W	53BG	2500	A.C.					

Code No.	GENERATOR Code No.	Current	KIND OF RINGING CURRENT Generator in Telephone Sends Out	Ringer in Telephone Operates On	CLASS OF SIGNAL SERVICE Telephone to Central Office	Central Telephone	Line Conditions as Regards Load
1317CA	50F	A.C.	A.C.	A.C.	C.O. selective	Code	Medium
1317CG	50F	A.C.	A.C.	A.C.	Can Signal 4 party	Code	Lightly
1317CJ	22BE	A.C.	A.C.	A.C.	C.O. only selective	Code	Lightly
1317CN	50F	A.C.	A.C.	A.C.	Code	Code	Medium
1317CR	50F	A.C.	A.C.	A.C.	"	"	"
1317CP	50F	A.C.	A.C.	A.C.	"	"	"
1317CS	50F	A.C.	A.C.	A.C.	"	"	"

In addition to the above-mentioned apparatus all of these telephones are equipped with the following apparatus:

No. 13 Induction Coil.

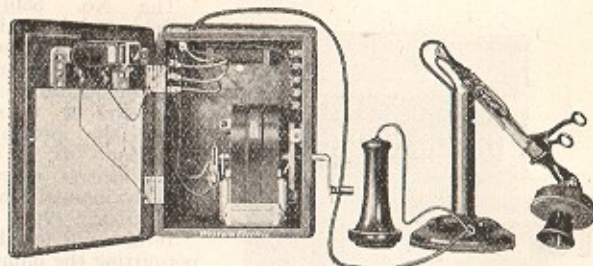
No. 8A Transmitter bracket.

No. 143Y Switchhook.

*Equipped with No. 1006A push button. Telephone user can signal central office secretly or not as desired and can signal other parties on same line by code ringing. (See pages describing "Magneto Telephones—Definition of Terms.")

Center checking service. Telephone user can only signal the central office operator. *The No. 323W will be furnished until the stock is exhausted.

Western Electric Magneto Telephones
Nos. 6003 and 6004 Desk Types

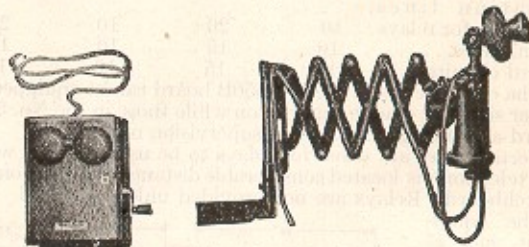


Interior View of No. 6004D

The Nos. 6003 and 6004 type desk telephones consist of a No. 1020AL Desk Stand and a No. 300 or 315 type Desk Set Box. These telephones comprise the combinations of desk stands and desk set boxes that are most used, and therefore, for convenience in ordering, are covered by a single code number.

Combinations of apparatus differing from those covered by these code numbers listed may be obtained by ordering the separate items that will make up the desk telephone desired. The following items of apparatus are the electrical equivalent of the No. 1020AL Desk Stand and may therefore be used in connection with any of the desk set boxes listed below.

- No. 1020CC Telephone Arm
- No. 1048AA " " " "
- No. 1048AB " " " "
- No. 1048AC Telephone Arm
- No. 1001C and H hand sets
- No. 1002AC hand set



No. 300 Type Desk Set Box and No. 1048-AC Telephone Arm

Code No.	Desk Stand	CONTENTS OF DESK SET BOX		Resistances (Ohms)	Current	Basis Feature
		GENERATOR Desk Set Box	RINGER			
6003B	1020AL	315H	A.C.	51AG	1000 A.C.	None
6003C	1020AL	315J	A.C.	49BG	2500 P.C.	{Spring and Screws
6004B	1020AL	300K	A.C.	51BG	2500 A.C.	None
6004C	1020AL	300L	A.C.	51FG	1600 A.C.	None
6004D	1020AL	300AA	A.C.	51BG	2500 A.C.	None
6004E	1020AL	300AB	A.C.	51FG	1600 A.C.	None

Code No.	Ringer Gong	Condenser	Ind. Coil	Telephone in Telephone Signals by Send-Signaling Out With	Ringer in Telephone Signals by This Telephone	Method of Signalling Employed by User of This Telephone	Method of Signalling Employed by Signal-ling of This Telephone	Line Condition as Regards Load
6003B	29A	None	13	A.C.	A.C.	{Code Code Ringing Ringing	{Code Code Ringing Ringing	Lightly Loaded
6003C	29A	"	13	A.C.	P.C.	{Can Only Signal Central	{Four Party Selective	Lightly Loaded
6004B	29A	"	13	A.C.	A.C.	{Code Code Ringing Ringing	{Code Code Ringing Ringing	Heavily Loaded
6004C	29A	"	13	A.C.	A.C.	{Code Code Ringing Ringing	{Code Code Ringing Ringing	Medium Loaded
6004D	29A	"	13	A.C.	A.C.	{Code Code Ringing Ringing	{Code Code Ringing Ringing	Medium Loaded
6004E	29A	"	13	A.C.	A.C.	{Code Code Ringing Ringing	{Code Code Ringing Ringing	Medium Loaded

NOTE.—In the case of the Nos. 300AA, 301AB, 315H, and 315J Desk Set Boxes provision is made for inserting a one microfarad condenser (see No. 21W condenser) in series with the receiver. However, condensers are not furnished unless so ordered.

Western Electric Central Battery Telephones

Western Electric Central Battery Telephones

Nos. 1533 and 6054 Types

No. 6054 Desk Type

Telephones representing the highest and most modern development in central battery telephone design are found in the Nos. 1533 and 6054 types.

In addition to the superior features represented by the individual pieces of apparatus and circuits, these telephones embody a number of features that are particularly worthy of note, namely:

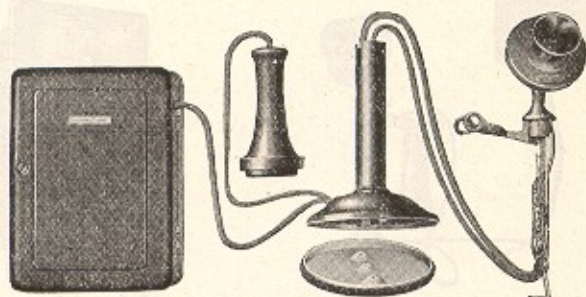
Ringer and gongs are enclosed within the case thereby preventing tampering, reducing maintenance and greatly improving the appearance.

Case is made of heavy sheet steel, copper plated and finished with two coats of extremely durable black enamel (baked on) especially developed for this particular purpose.

The case is constructed so that every part of the interior is easily accessible when the cover is opened.

The base is flanged thereby giving greater rigidity and preventing base from cutting into plastered surfaces.

Unit type of construction and universal terminal block employed. This permits of the telephone being readily converted from one class of service to another. This also permits of a desk set box being converted into a wall telephone or vice versa by a substitution of covers.



No. 6054 Desk Telephone—No. 1020AL Desk Stand Partially Dismantled

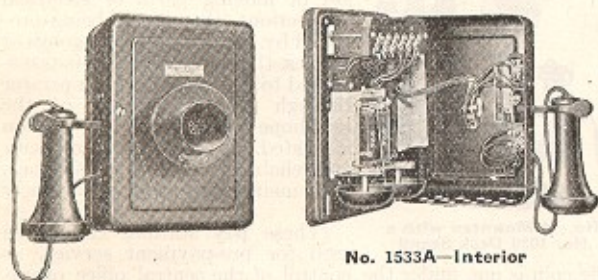
The No. 6054 desk type telephones consist of a No. 1020 type desk stand and a desk set box. These telephones comprise the combinations of desk stand and desk set boxes that are most used and, therefore, for convenience in ordering are covered by a single code number.

Combinations of apparatus differing from those covered by the No. 6054 series of code numbers may be obtained by ordering a desk stand and a desk set box as separate items, also a telephone arm or a hand set may be used in place of the desk stand if desired.

For example, any of the desk set boxes that will function with the No. 1020AL desk stand will also function with the following:

1020CC	Telephone arm	1001C, and H	Hand sets (See Hand Set Hangers)
1048AA	Telephone arm		
1048AB	Telephone arm		
1048AC	Telephone arm	1002AC	Hand set

No. 1533 Type Telephones



No. 1533A—Interior

No. 1533A		Ringers			
Telephone Code No.	Transmitter	Receivers	Code No.	Res. (Ohms)	Condenser
1533A	323BW	143AW	8AG	*1400	21AP
1533K	323BW	171W	8AG	*1400	21F
1533Y	.....	.....	8AG	*1400	21AP
1533AR	323BW	143AW	42AG	.....	21AP

1533E	323BW	143AW	41SG	.....	21AP
1533F			33 1/4 cycles		
1533G			41TG		
1533H			50 cycles		
			41UG		
			66 2/3 cycles		
			41RG		
			16 2/3 cycles		

Telephone Code No.	Relay	Induction Coil	Talking Circuit	Kind of Ringing	Ringling Current
1533A	..	46	Standard	Single Party 2 Party Selective	A.C.
1533K	..	None	{ Series Central Battery Central Battery		
1533Y	..	13	{ Signalling Local Battery Talking	4 Part Semi-Selective	A.C.
1533AR	85J	46	Standard	4 Party Selective	P.C.
1533E	Standard	{ Harmonic 4 & 8 Party Selective	H'rm'nic
1533F					
1533G					
1533H					

All of these telephones are equipped with the No. 7A transmitter bracket, Nos. 547 and 548 six-inch transmitter cords and a 30-inch No. 521 receiver cord.

*NOTE.—The No. 8AG ringers were formerly wound to 1000 ohms instead of 1400 ohms. The 1000 and 1400 ohms ringers have the same impedance and may be used interchangeably in service.

See separate listing for "Central Battery Telephones for Use with No. 1801 Switchboards," and for protectors.

The No. 323BW transmitters have a black finish.

Telephone Code No.	Desk Stand	Desk Set Box Code No.	CONTENTS OF DESK SET BOX		
			Code No.	Res. (Ohms)	Condenser
6054A	1020AL	534A	8AG	*1400	21AP
6054AR	1020AL	534AR	42AG	{ 1000 and 3000	21AP
6054E	1020AL	534E	41SG	.....	21F
6054F		534F	33 1/4 cycles		
6054G		534G	41TG		
6054H		534H	50 cycles		
6054K		534K	66 2/3 cycles		
	1020AH	534K	41RG		
	Desk Set Box (CONTINUOUS)		16 2/3 cycles		
			8AG	*1400	21F

Code No.	Relay	Induction Coil	Talking Circuit	Kind of Ringing	Ringling Current
6054A	..	46	Std. C.B.	{ Single party and 2 party selective	A.C.
6054AR	85J	46	Std. C.B.	4 party selective	P.C. (Pulsating current)
6054E	..	..	Std. C.B.	{ Harmonic 4 party se- lective or 8 party semi-selective	Harmonic
6054F					
6054G					
6054H					
6054K	.....	None	{ Series Central Battery	{ Single party and 2 party selective	A.C.

NOTE.—See listings of No. 534 type desk set boxes, No. 1020 desk stands and protectors.

*The No. 8AG ringers were formerly wound to 1000 ohms instead of 1400 ohms. The 1000 ohm and 1400 ohm ringers have the same impedance and may be used interchangeably in service.

Western Electric Central Battery Telephones

For Use with No. 1801 Switchboard



No. 6000AE



No. 1539A

Systems A and B

The telephones for No. 1801 Switchboard Systems A and B are of the series talking circuit type and equipped with 140 ohm vibrating bells which operate on direct current.

No.	Case and Finish	Mounting	Receiver
1527A	Metal, Black	Surface Wall	Watch Case Type
1539A	Metal, Black	Flush Wall	Watch Case Type
1533N	Metal, Black	Surface Wall	Hand Receiver
6034AU	No. 1020BJ Stand	Desk	Watch Case Type

NOTE.—Information on hand set type telephones and desk telephones equipped with hand receivers will be furnished on application.

System C

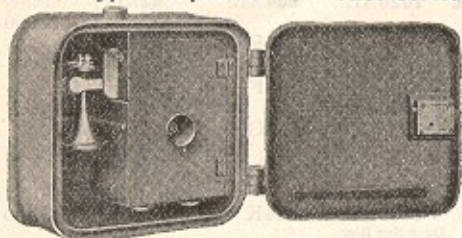
The telephones for No. 1801 Switchboard System C may be of the same types as used for Systems A and B, but in case the system is connected to an outside exchange, telephones equipped with standard central battery induction coil talking circuit should be used in order to obtain satisfactory transmission, as follows:

Code No.	Case and Finish	Mounting
1533M	Metal, Black	Surface Wall
6000AE	No. 1120CN Stand	No. 295AU Box

System D

Any standard central battery telephone with ringers operated by alternating current either induction coil or series types can be used with System D. The No. 1533A wall type and No. 6054A desk type telephones may be selected for this system.

No. 1320 Type Telephones For Police Service



No. 1320A Outer Door Open

The No. 1320 type is a metal case weatherproof telephone for central battery service. It was designed primarily for the Police Patrol Service but will be found very satisfactory for general central battery service where a weatherproof telephone is required.

The apparatus is mounted on a metal frame which is removable as a unit from the case. An inner door protects the apparatus from the weather when the outer door is open. The overall dimensions are 6 $\frac{3}{8}$ inches deep by 13 $\frac{3}{8}$ inches high by 12 $\frac{1}{4}$ inches wide.

A loud ringing extension bell may be connected in multiple with the ringer of this telephone thereby providing means of signaling a patrolman from a distance (see extension bells).

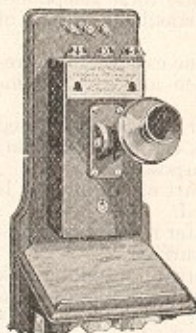
A tapped hole is provided in each end of the case for receiving conduit. Four holes are drilled in the back of the case for receiving mounting screws or mounting clamps. The lock on the outer door is designed so that the key cannot be removed until the door is closed.

Outer door is not marked. Standard finish, gray paint.

Special No. 1320A telephones may be obtained with outer doors marked (raised characters cast on door) in accordance with customer's requirements; color of finish, as specified.

Gray Telephone Pay Stations

Non-electrical—For Local or Central Battery Service



No. 7 Mounted on a
Central Battery Telephone



No. 11 Mounted on a
No. 1317 Wall Telephone



No. 14 Mounted with a
No. 1020 Desk Stand

The operation of these pay stations is accomplished without the aid of moving parts or electrical connections, the signals being produced by the coins striking gongs or chimes, the sound of which is transmitted to the central office operator through the transmitter of the telephone at which the pay station is located. In view of the simplicity and reliability of these pay stations, their maintenance cost is extremely low.

(These pay stations cannot be used for pre-payment service, as the coin is not under the control of the central office operator, as in the Western Electric No. 7 and No. 50 type Coin Collectors.)

No. 7

This will be drilled to take standard transmitter arms.

Gray Code No.	Type of Telephone Used On	Coins Arranged For	Approx. Size In.
7	Wall	Nickels, Dimes and Quarters	9x4 $\frac{1}{2}$ x3

No. 8A

This pay station will not be provided with a mounting bracket unless specifically so ordered.

8A	Wall	Nickels	7x3 $\frac{3}{8}$ x3 $\frac{3}{8}$
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Bracket for No. 8A Pay Station.

In ordering this bracket, specify the make and code number of the telephone on which the pay station is to be used in order that the proper form of bracket may be furnished.

No. 11

A mounting plate is included with this pay station for mounting it at the side of a telephone, as shown in cut.

11	Wall	Nickels, Dimes and Quarters	9x4 $\frac{1}{2}$ x3
----	------	-----------------------------	----------------------

No. 13A

This equipped with two clamps of such size as to fit the stem of a standard desk telephone. In ordering, specify the type and make of desk telephone with which it is intended for use.

13A	Desk	Nickels	9 $\frac{1}{2}$ x3 $\frac{1}{2}$ x3 $\frac{1}{4}$
-----	------	---------	---

No. 14

Fittings will be furnished with this pay station to permit of attachment to standard types of desk telephones. In ordering, specify the type and make of desk telephone with which it is intended for use.

14	Desk	Nickels, Dimes and Quarters	11x4 $\frac{1}{2}$ x3 $\frac{1}{2}$
----	------	-----------------------------	-------------------------------------

No. 20

This pay station will be equipped with fittings to permit of its being attached to a standard type of desk telephone. Fittings are arranged so that the unit thus formed may be fastened to a counter or telephone booth shelf. In ordering, specify the type and make of desk telephone with which it is intended for use.

20	Desk	Nickels, Dimes and Quarters	10 $\frac{3}{4}$ x4 $\frac{1}{4}$ x3 $\frac{1}{4}$
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The above code numbers cover pay station boxes only.

Western Electric Magneto Mine Telephones

Western Electric Magneto Mine Telephones

Continued

No. 1336 Type



General

A reliable telephone system in a mine will enable the superintendent to communicate instantly with all the important parts of the plant. The saving in time and money which it effects by reliably transmitting routine orders or when there is a temporary suspension of power, a shutdown of some part of the plant, an accident or an emergency

affecting both life and property, justifies many times over the investment required.

Mine Laws

That the Legislatures of many of the States have made the installation of mine telephones and signals a requirement for mine operation, is in itself sufficient endorsement of their usefulness. Those farsighted operators who so quickly and wisely responded to these demands are realizing the benefits of the increased operating efficiency that they effect in their mines along with the insurance against loss of life which was the primary object of the legislative acts.

Mine Telephone Systems

In the Superintendent's office, engine house and other dry and protected parts of the Plant, which should have communication with each other and the mine, the use of standard wall and desk type magneto telephones is recommended.

In cases where all the telephones of the system are connected to a single line (party line) the telephone used should be designed for use on heavily loaded lines—for example:

No. 1336J telephones for service below ground and in exposed locations above ground.

No. 1317S telephones (wall type) (5 bar generator) for service above ground in unexposed locations, or

No. 6004B telephones (desk types).

In cases where the size of the plant warrants it, the preferable arrangement is to employ a number of lines and a switchboard instead of a party line. These lines may each have a number of telephones connected to them but the most satisfactory arrangement is to have the most important telephones of the system (for example, the engine room telephone and the Superintendent's telephone) connected to individual lines.

In cases where a switchboard is employed, the telephones used below ground should be of the No. 1336 type but the lines above ground, if lightly loaded, may be equipped with telephones having 3 bar generators. For example:

No. 1317AH Telephones (wall type), or

No. 6003B Telephones (desk type).

No. 1336 Type Telephones

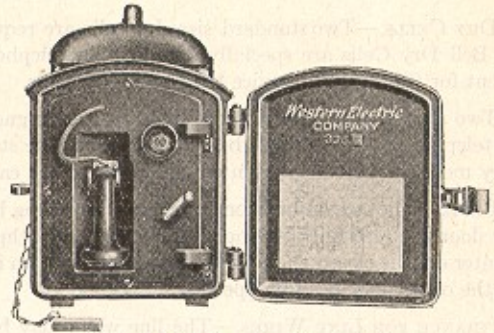
Briefly, these are metal case magneto telephones having all apparatus and parts treated to resist the action of moisture. They are primarily designed for use on heavily loaded lines where code ringing is employed and, while they are intended chiefly for mine service they are also recommended for outdoor use as in railway service, etc.

Moisture-Proofing

Experience has shown that moisture will condense on the inside surfaces of mine telephones regardless of whether or not they are of so called "Air Tight" construction. In view of this, the practice of employing gaskets, stuffing boxes, etc. was abandoned a number of years ago in favor of the design illustrated by the No. 1336 type. In this design small openings are provided which permit air to circulate through the telephone without exposing it to the chance of trouble due to the entrance of foreign material. An opening is also provided so that water may drain off instead of remaining in the telephone.

Protectors

The telephones installed above ground should be equipped with protectors consisting of open space cut outs (for example the No. 60AP protector) to prevent damage to the telephone by lightning. In case there is a chance of contact between the telephone line and a power circuit protectors consisting of open space cut outs and fuses (for example the No. 58AP protector) should be used.



No. 1336 with Outer Door Open

Code No.	Transmitter	Receiver	Receiver Cord	Condenser	RINGER	
					Code No.	Resistance
1336A	312W	144AW	384	None	None	2500
1336E				None	45BG	
1336J				10½ in.	21W	45BG	2500
1336K				21W	{ (Spl.) 45BG	1600

Code No.	Ringer Operating On	GENERATOR Code No.	Current	Signalling Service	For Line Load
1336A	A. C.	48C	A. C.	Code Ringing	Heavily Loaded
1336E					
1336J	A. C.	48C	A. C.	Code Ringing	Medium Loaded
1336K					

In addition to the apparatus listed above the No. 1336 type telephones are equipped with a No. 143J switchhook and a No. 31 induction coil.

Special No. 1336 type telephones equipped with a heavy brass padlock with two keys are obtainable. The padlock is attached to the chain in place of the latch pin. Orders for these telephones must state that padlocks are desired.

The No. 1336A telephone is not equipped with a ringer as it is intended for use where an extension bell is preferred to the regular telephone ringer, also for service where all the calls will be outgoing.

The No. 1336E differs from the No. 1336A in that it is equipped with a ringer and an iron hood for protecting the gongs.

The No. 1336J differs from the No. 1336E only in that a condenser is provided to permit the ringers of this telephone as well as others on the same line, being rung even though its receiver may have been left off the switchhook.

To add a condenser to a No. 1336 type telephone that was not originally so equipped the following apparatus and parts should be ordered:

No. 21W Condenser. One Condenser Strap P-43065. Two Round Head Machine Screws P-110187.

RINGING.—The No. 1336A telephones are intended for standard bridging service on heavily loaded lines, i.e., the generators and ringers are of such design that forty or more telephones can be operated successfully as far as the ability to ring one another and converse is concerned. It is, however, understood that as many telephones as these on a line would be undesirable.

RINGERS AND EXTENSION BELLS.—The ringers used in these telephones may be readily adjusted if necessary with a screwdriver. The gongs emit a loud distinct ring, which can be heard a long distance, particularly so underground. However it is often desired to provide loud ringing extension bells in connection with mine telephones and for this purpose the No. 392 and No. 342 type extension bells are recommended as they are designed to withstand the severe conditions encountered in mine service.

Western Electric Magneto Mine Telephones

Continued

DRY CELLS.—Two standard size dry cells are required for each telephone to furnish current for talking. Western Electric Blue Bell Dry Cells are specially designed for telephone service and are recommended because they last longer and are more efficient for this class of service than other dry cells.

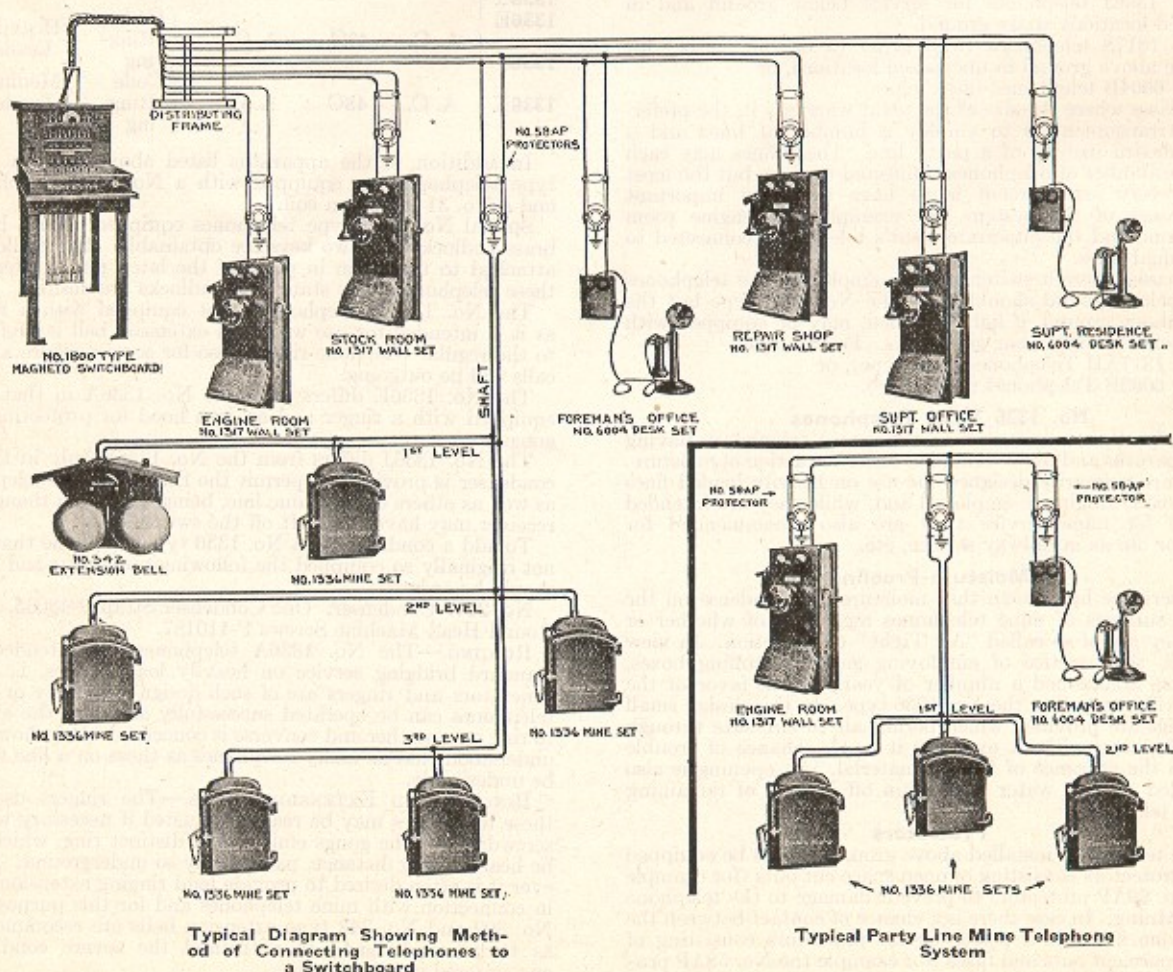
Two special Blue Bell Dry Cell cartons, impregnated with moisture-proofing compound, are furnished with each No. 1336 type telephone. These are to be substituted for the standard cartons furnished on the dry cells. These cartons resist the action of any moisture that may form on the inside of the case and prevent current leakage and rapid deterioration.

CASE.—The box, outer door, inner door and gong hood are of cast iron heavily coated with a rust resisting finish. When the outer door is closed only the metal transmitter mouthpiece, receiver, receiver cord and the generator handle are exposed. When the outer door is closed these parts are protected from mechanical injury. When using this telephone it is, of course, evident that only the outer door need be opened.

ENTRANCE FOR LINE WIRES.—The line wires may be brought in either at the top or the bottom of the case. A short length of pipe is screwed into the top of the case and is covered with a pipe cap. This cap prevents water running into the set by following the line wires. In case the line wire is to be run to the telephone in pipe (conduit) no difficulty will be encountered in joining the conduit to the telephone as the wire entrance hole at the bottom as well as the top of the case is tapped.

MOUNTING.—Wrought iron mounting bars are secured to the back of the case. The upper end of these have "pear" shaped holes, and with this arrangement the telephone can be readily mounted by one man and without any danger of damaging it. This is accomplished by driving two lag screws into the mounting surface until their heads project about $\frac{1}{2}$ inch. The telephone may then be hung upon these mounting screws (the heads of the lag screws will pass through the large end of the "pear" shaped holes) after which the lower mounting screws may be driven into place through the holes in the lower end of the mounting bars. Wrought iron mounting bars are employed as they are less subject to breakage than if lugs were cast on the case.

Typical Western Electric Mine Telephone Systems

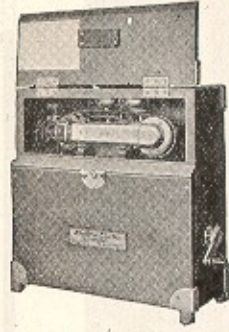


Western Electric Portable Magneto Telephones

Western Electric Street Railway Telephones Magneto and Battery Types



No. 1330E Closed



No. 1330E Open

Nos. 1330 and 1331 Types

These are complete magneto telephones mounted in substantial wooden cases. They are primarily for use in railway service and are designed to withstand the jarring and rough handling incident to train service. In addition to railway service these telephones are suitable for any service where an extremely substantial type of portable telephone is required. While these telephones are not waterproof they are designed to withstand ordinary weather conditions.

The Nos. 1330F and 1331F telephones are equipped with a six-foot waterproof cord and No. 146 plug for connecting them to a telephone line through a No. 186 pole jack.

The Nos. 1330E and 1331E telephones are intended primarily for use where connection to the line will be made with a line pole.

No. 1375 Type

The No. 1375B is especially adapted for use in cases where the telephone user must carry the telephone considerable distances. While it is primarily intended for use on moderately loaded lines, the design of the generator is such that it may be satisfactorily operated on heavily loaded lines.

The generator, induction, coil buzzer and terminal block are mounted on an aluminum frame and secured in the case by means of machine screws.

The case is made of high grade leather and is designed to withstand considerable rough handling.

Code No.	Hand Set	Plug	Cord for Plug	Ringer or Buzzer Code No.	Resistance (Ohms)
1330E	1001C	None	None	32B ringer (A.C.)	2500
1330F		No. 146	No. 509 6 ft.	3B Buzzer (A.C.)	
1331E		None	None	D-21141 Buzzer (A.C.)	2150
1331F		No. 146	No. 509 6 ft.		
1375B	1001H				

Code No.	Generator Code No.	Current	Ind. Coil	Condenser	Battery Used*	Approx. Wt. Lbs.
1330E	48A	A.C.	29	21F	2 Blue Bell Dry Cells*	28
1330F	(5 Bar)					
1331E	22A	A.C.	29	21F	2 No. 790 Eveready batteries*	17
1331F	(3 Bar)					
1375B	29E	A.C.	D-17624	None	One No. 703 Eveready Batteries*	10½

Code No.	Overall Dimensions In.	Line Conditions as Regards Load	Signalling
1330E	12½x13½x5¼	For heavily loaded lines	Telephone signals and is signalled by code ringing
1330F			
1331E	11½x10½x4¾	For lightly loaded lines	Telephone signals and is signalled by code ringing
1331F			
1375B	9¾x7¼x4¼	Medium and heavily loaded	

*Batteries are not included in the price of the telephone and are furnished only when specified in the order.

No. 1004—Hand Set—High Frequency Current Signalling

The No. 1004A hand set described under "Hand Sets" is a complete telephone weighing only 2 lbs. 10 oz. arranged to signal and be signalled by high frequency current.



No. 1278 type telephones employ weatherproof iron boxes and are provided with "insulated" circuits. They are intended principally for exterior use by street railway companies operating telephone lines on which there is a chance of crosses with low voltage power circuits. This type telephone is arranged so that its circuit is cut off from the line except when its door is opened. When the telephone is in use a repeating coil is interposed between the line and the telephone circuit proper, so as to protect the user, as far as possible, from the chance of injury should the line become crossed with a low voltage circuit. When the door is opened, a line switch is released which connects one winding of the repeating coil across the line and connects two fuses and two open space cut-outs into this circuit. The telephone circuit proper is connected to the second winding of the repeating coil and has no direct contact with the line circuit. The fact that a repeating coil is interposed between the line circuit and the telephone circuit reduces the efficiency of the telephone to some extent and, therefore, the use of these telephones is not recommended on heavily loaded lines, except where the protective feature is essential. See No. 1336 type telephones. In case a car is held up awaiting orders from the dispatcher the door of the telephone is left open so as to permit of the telephone being signalled. (It is impossible for the telephone to be signalled when its door is closed.) As the talking circuit is only closed when the push button in the hand set is depressed, the battery in the telephone is not wasted under the above condition. The apparatus of this telephone is mounted on an iron shelf, which may be removed as a unit from the telephone for inspection. The connection between the apparatus on the shelf and the line and ground terminals is made through the medium of clips which register with contacts mounted on a terminal block secured to the back of the case. The case and door are of cast iron and have a galvanized finish. Both the top and bottom ends of the case are tapped for receiving ½ inch conduit.

The F, G and J telephones are equipped with a lock which is arranged so that the key cannot be removed until the door of the telephone is closed. The No. 1278H is equipped with a hasp, staple and pin similar to that used on No. 1336 type telephones, but padlock is not included.

For Magneto Service

Code No.	Hand Set	Resistance (Ohms)	Generator	Repeating Coil	Lock	Class of Signal Service	For Line Load
1278 I	1001H	51AG 1000	†48C	13	5B	†Code Medium	
1278 G				29			
1278 H				29			

For Local Battery Talking and Central Battery Signalling

1278 J	1001H	51AG 1000	None	13 25E	5B	†Code Medium	
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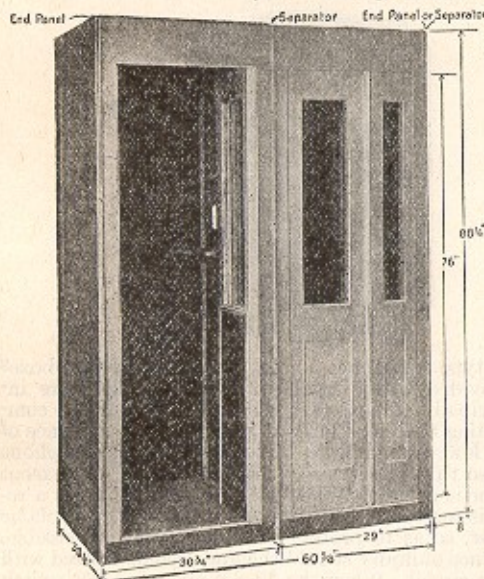
Designed for medium line load. In addition to the apparatus listed above these telephones are each equipped with: A special door switch. A special protector.

- 2 D. & W. No. 5001 Type C fuses—500 volt 1 ampere.
- 2 No. 2 protector blocks.
- 2 No. 1 protector blocks.
- 2 No. 3 protector micas.

Dry cells must be ordered as a separate item.

*Equipped with hasp, staple and pin the same as No. 1336 type telephones. †Generators have special mounting brackets.

Western Electric Telephone Booths No. 1 Type Folding Door



The No. 1 type booths are designed for installation in groups, being built in units with unfinished sides. They are placed with separators between adjacent units and assembled with panels at either end of the group of compartments. The backs of the units are finished as indicated in

the code listings. The hardwood back can be equipped with an upper panel of glass upon request, at an extra charge.

The folding door construction makes these booths particularly desirable for use in narrow hallways or passages as the door opens and closes in a space only three inches beyond the front surface of the booth. This door will remain as placed in any position. The sides, ceiling and the lower panel of the door on the inside are lined with sheet metal. The floor and front baseboard are covered with linoleum and the threshold is protected with a safety tread.

The ceiling of the booth is $4\frac{1}{2}$ inches below the roof and the intervening space may be used as a wiring chamber and to house an electric light relay or door switch equipment when these features are required.

These booths are strong and substantial in construction.

The special folding door design not only economizes space but protects the user.

Code No.	Description
1A	Booth Light Mahogany Booth, Unit, Hardwood Back
1B	" Light Mahogany Booth Unit with Softwood "
1C	" Oak Booth Unit with Hardwood Back
1D	" Oak " " Softwood "
1E	" Dark Mahogany Booth Unit with Hardwood Back
1F	" " " Softwood "

Orders for No. 1 type booths should specify the following:

No. 1 (A, B, C, D, E or F) Booths; end panels (state Code No. of booth); separators (state Code No. of booth); seats, locks, electric light switch equipment.

Dimensions

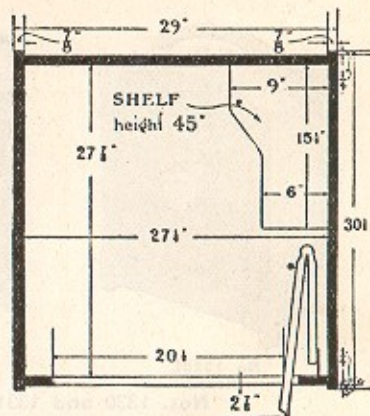
No. of Units	Over All, Ft.	Width, In.	No. of Units	Over All, Ft.	Width, In.
1	2	6 $\frac{3}{4}$	6	15	0 $\frac{1}{8}$
2	5	0 $\frac{5}{8}$	7	17	6
3	7	6 $\frac{1}{2}$	8	19	11 $\frac{7}{8}$
4	10	0 $\frac{3}{8}$	9	22	5 $\frac{3}{4}$
5	12	6 $\frac{1}{4}$	10	24	11 $\frac{5}{8}$

NOTE.—Over all width includes end panels and separators.

Booth Switches

Code No.	Description
1A	This switch is used for disconnecting a telephone, located in a booth or pole box, from the line when the booth or pole box is locked. It operates when a hasp is placed over the staple and held in place by a padlock. It guards the telephone set against injury from lightning discharges. The approximate dimensions of the switch case are: width, $3\frac{1}{2}$ inches, depth, 1 inch and length, $4\frac{1}{2}$ inches.

Western Electric Telephone Booths No. 2 Type Folding Door



Half Closed Booth

Over All Height, 89 $\frac{1}{4}$ Inches

The No. 2 type booth is built as a single unit and presents a neat and pleasing appearance from all points of view. Several of these booths may be placed next to each other to form a group, such booths being ordered without glass panels in the sides, that is, they would have glass panels in the door only.

The following points should be noted in considering the advantages of this form of booth construction.

1. **ECONOMY OF SPACE.**—The movement of the Folding Door takes but three (3) inches of space beyond the front of the booth, making it possible to use this type of booth in narrow passageways.

2. **VENTILATION.**—The design of the Folding Door is such that the door is open at all times when the booth is not in use. This is the only practical plan for booth ventilation.

3. **PROTECTION FROM INJURY.**—The point where the two leaves of the Folding Door meet is of such design as to prevent any chance of injuring the fingers or hand.

4. **DOOR OPERATION.**—One of the distinctive advantages of the Folding Door is that it can be both closed and opened by pulling on the handle. This feature is possible only with this type of door.

5. **MAINTENANCE.**—The Folding Door does not require the use of tracks in the floor, consequently eliminating the main cause of trouble formerly experienced with the booth equipped with sliding doors.

6. **ABSENCE OF LATCHES OR CATCHES.**—The design of the Folding Door is such that it will remain open or closed without the use of latches or catches.

7. **NON-INTERFERENCE WITH DOORS OF ADJACENT BOOTHS.**—The Folding Door folds within the booth; consequently, there is no interference with adjacent doors.

Code No.	Material	Finish	Description
2A	Plain Oak	Medium Oak	{ 2 Glasses in Door, 2 in Left Side, 1 in Right Side.
2B	Birch	Dark Mahogany	{ 2 Glasses in Door, 2 in Left Side, 1 in Right Side.
2C	"	Light Mahogany	{ 2 Glasses in Door, 2 in Left Side, 1 in Right Side.
2G	Plain Oak	Medium Oak	2 Glass Panels in Door Only
2H	Birch	Dark Mahogany	2 " " " " " "
2J	"	Light Mahogany	2 " " " " " "

Seat, lock and electric light switch equipment, for any No. 2 type booth.

Equipment

INTERIOR.—Sides, back and ceiling lined with sheet metal.

FLOOR.—Hardwood flooring.

THRESHOLD.—Protected with safety tread.

DOOR.—Always hinged on right-hand side (facing booth).

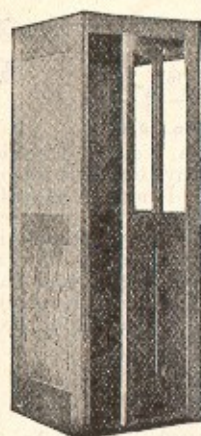
SHELF.—Furnished with each booth. Shelf is intended only as an elbow rest.

WIRING.—Space between ceiling and roof ($27\frac{1}{4}$ inches wide, $27\frac{1}{4}$ inches deep, $4\frac{1}{4}$ inches high) is provided as a wiring chamber, and as a housing for electric light relay or door switch equipment. A wiring slot is provided back of inside corner moulding. Ceiling of booth is bored for electric light fixture, and to receive a door switch designed to operate an electric light by movement of the door.

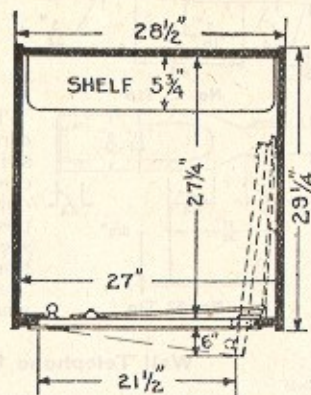
SEAT.—Made of oak or birch.

LOCK.—Designed especially for Folding Door booths. Furnished only when specified.

**Western Electric Telephone Booths
No. 3 Churchill Type Receding Door**



Booth Half Closed



Dimensions
Over All Height, 83 1/2 Inches

The Churchill No. 3 type receding (or sliding) door telephone booth is built as a single unit and is especially characteristic in its design. It is made throughout of genuine kiln dried selected plain white oak or birch equipped with a reinforced back panel for mounting a wall telephone or coin collector set. It also has a writing-shelf. This receding door booth construction makes these booths especially desirable for use in narrow hallways or passages as the door only extends a maximum of six inches beyond the front surface of the booth when open. The No. 3 type has no grooves in the floor where dirt can accumulate and interfere with the operation of the door and it is provided with mechanical devices to permit the door being opened and closed in a smooth and easy manner. When the door is in closed position, it is only necessary to push on the right-hand side of the door. This feature from a user's standpoint is important.

Several of these booths may be placed adjoining each other to form a group or battery, such booths being ordered without glass panels in sides.

OUTSIDE DIMENSIONS.—(Booth assembled). 83 1/2 inches high, 28 1/2 inches wide and 29 1/4 inches deep.

INSIDE DIMENSIONS.—80 1/2 inches high, 27 inches wide and 27 1/4 inches deep.

DOOR OPENING.—77 1/2 inches high, 23 inches wide.

DOOR EQUIPMENT.—The door is equipped with patented steel, nickel-plated hardware consisting of:

1 swivel roller guide and track on top of door, 1 sliding guide on bottom of door which operates on outside edge of tread, 2 roller hinges on back edge of door which operate on tracks fastened to side of cabinet, 1 handle for inside of door, 1 lead aluminum tread at front edge of bottom.

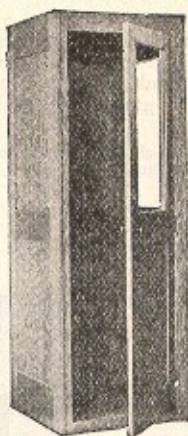
FINISH.—The booth is thoroughly finished inside and out in following manner:

The sides and front are stained, filled, then given one coat of shellac and a final coat of flat varnish, producing a smooth satin finish. The back and top are stained, filled and given one coat of varnish. The floor is thoroughly oiled.

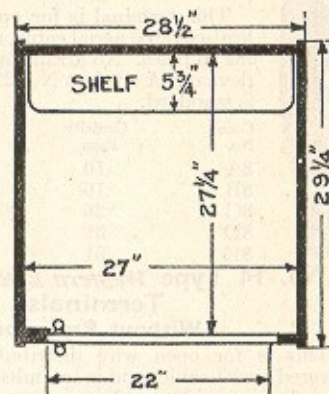
SHIPPING.—The booths are shipped "knocked down" in a substantial crate, ready for assembly, upon receipt at destination. Orders for this type of booth should specify the following code and descriptive information (state "Churchill Type").

Code No.	Material	Finish	Description
3A	Plain Oak	Medium Oak	1/2 Glass Panel in Door, 1 Glass in Right Side.
3B	Birch	Dark Mahogany	1 Glass Panel in Door, 1 Glass in Right Side.
3C	"	Light Mahogany	1 Glass Panel in Door, 1 Glass in Right Side.
3D	Plain Oak	Medium Oak	1 Glass in Door, 1 in Right Side, 1 in Left Side.
3E	Birch	Dark Mahogany	1 Glass in Door, 1 in Right Side, 1 in Left Side.
3F	"	Light Mahogany	1 Glass in Door, 1 in Right Side, 1 in Left Side.
3G	Plain Oak	Medium Oak	1 Glass Panel in Door Only.
3H	Birch	Dark Mahogany	1 " " " " " "
3J	"	Light Mahogany	1 " " " " " "

**Western Electric Telephone Booths
No. 4 Churchill Type Swinging Door**



Booth Half Closed



Dimensions
Over All Height, 83 1/2 Inches

BOOTH CONSTRUCTION.—The No. 4 type telephone booth is made throughout of genuine kiln dried plain white oak (with medium oak finish) or birch (with a light or dark mahogany finish). All sides are framed and paneled 3-ply. The door is equipped with a glass upper panel. The right or left sides of the booth are interchangeable and can also be equipped with glass upper panel if desired.

This booth is equipped with a reinforced back for mounting either a wall telephone or coin collector set. A writing-shelf 5 3/4 inches wide is also supplied which affords means for mounting a desk telephone.

OUTSIDE DIMENSIONS.—(Booth assembled). 83 1/2 inches high, 28 1/2 inches wide and 29 1/4 inches deep.

INSIDE DIMENSIONS.—80 1/2 inches high, 27 inches wide and 27 1/4 inches deep.

DOOR OPENING.—77 inches high and 23 inches wide.

DOOR EQUIPMENT.—The door is attached to the door-frame with three substantial hinges, finished in black japan and the mortise lock with knob on each side is finished in japan.

A lead aluminum door tread is supplied on this booth.

FINISH.—The booth is thoroughly finished inside and out in the following manner:

The sides and front are stained, filled, then given one coat of first coat shellac and finished in flat varnish producing a smooth satin finish. The back and top are stained, filled, and given one coat of varnish.

The floor is thoroughly oiled.

SHIPPING.—The booth is shipped "knocked down" in a substantial crate, ready for assembly upon receipt at destination. A card giving full instructions for the assembly of the booth is packed with each unit.

ORDERS for this type of booth should specify the following Code and Descriptive information (state "Churchill Type").

Code No.	Material	Finish	Description
4A	Plain Oak	Medium Oak	1 Glass Panel in Door, 1 Glass in Right Side.
4B	Birch	Dark Mahogany	1 Glass Panel in Door, 1 Glass in Right Side.
4C	"	Light Mahogany	1 Glass Panel in Door, 1 Glass in Right Side.
4D	Plain Oak	Medium Oak	1 Glass in Door, 1 in Right Side, 1 in Left Side.
4E	Birch	Dark Mahogany	1 Glass in Door, 1 in Right Side, 1 in Left Side.
4F	"	Light Mahogany	1 Glass in Door, 1 in Right Side, 1 in Left Side.
4G	Plain Oak	Medium Oak	1 Glass in Door Only.
4H	Birch	Dark Mahogany	1 " " " " " "
4J	"	Light Mahogany	1 " " " " " "

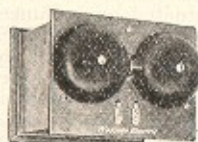
Western Electric A. C. Extension Bells

Intended for auxiliary use in connection with wall, desk or telephone arm telephones. They consist of a ringer on a suitable mounting and two line terminals or binding posts. For magneto bridging non-selective service only.

No. 127 Type

Ringer mounted in an oak box. Approximate dimensions, width 6½ inches; height 4¾ inches; depth 4½ inches.

Code No.	Ringer No.	Resistance Ohms
127E	38AG	1000
127F	38BG	2500
127G	38FG	1600



No. 392 Type

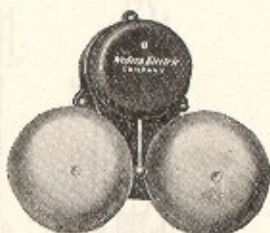
Moisture-proofed loud ringing bells having a black finish metal cover and base with galvanized finish gongs.

When the extension bell is to be used on a central battery line a 2 M.F. condenser must be connected in series with the ringer coils.

Base is arranged for mounting a No. 21D condenser. Condenser is not furnished, however, unless so ordered.

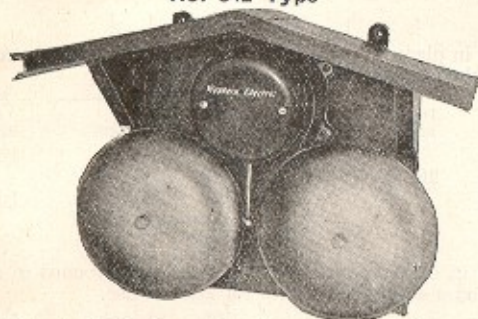
The connecting leads to the ringer coils are so arranged that the condenser can be easily connected in series with the ringer without disturbing the line wires when desired.

Code No.	Resistance Ohms	Diameter Gongs, In.
392A	1000	6
392B	2500	6
392E	1600	6
392G	1000	8
392H	2500	8



Biasing attachment for selective ringing can be added.

No. 342 Type



Loud ringing bells for use in mines and other places where a bell protected from weather is desired. Consists of a No. 392 type bell mounted on a No. 149A backboard having a sloping roof which protects the bell.

Code No.	Bell Used	Resistance Ohms	Diam. Gongs, In.	Code No.	Bell Used	Resistance Ohms	Diameter Gongs, In.
342G	392G	1000	8	342J	392A	1000	6
342H	392H	2500	8	342K	392B	2500	6

Western Electric Tubular Fuses
Fiber Shell Type



No. 7T



No. 7A

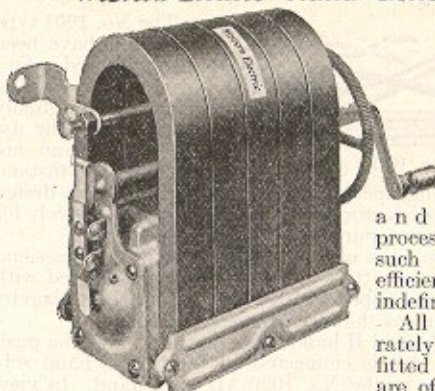


No. 11C

These fuses are carefully made from especially selected materials. The use of lead fuse wire prevents the possibility of overheating the shell. These fuses will carry their rated currents indefinitely without injury and will act reliably on one and one-half times their rated current values. Fuses of the same code number and rated capacity will give consistent performance as to rated and operating current values.

Code No.	Rated Capacity Amperes	Used with
7A	1 to 8 as Specified	Nos. 6L, 7T, 1074A and 1078 Protectors
7T	7	B Cable Terminals.
11C	7	Nos. 58AP and 1079AP Protectors

Western Electric Hand Generators



No. 48A

Western Electric hand generators are correct in both mechanical and electrical design and the materials used and manufacturing processes employed are such that their high efficiency is retained indefinitely.

All parts are accurately machined and fitted and the bearings are of such size that no trouble due to the armature scraping on the pole pieces will be encountered even after years of service. The gears are accurately cut.

All metal parts are given a protective finish and the armature winding is moistureproofed. The magnets are made from steel which was developed especially for this purpose.

No. 22 Type Generators

The No. 22 type generator is used on lightly loaded magneto lines and may be obtained for alternating or pulsating current.

These generators have three magnets except the No. 22E, which has only two.

No. 29 Type Generators

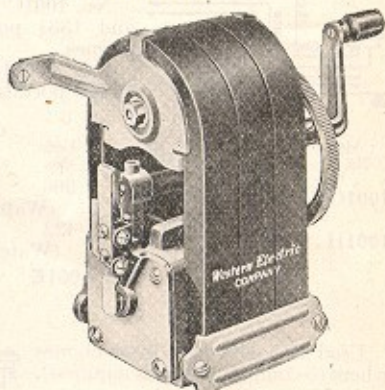
The No. 29 type generators are used where light weight is essential as in linemen's test sets, and portable telephones.

No. 48 Type Generators

The No. 48 is our most powerful hand generator and is used in telephone for heavily loaded line service.

No. 50 Type Generators

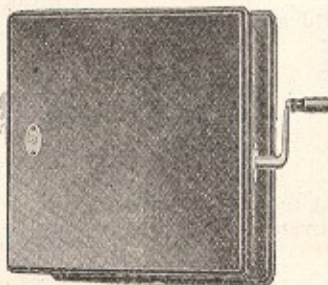
The No. 50 type generator was designed for use on moderately loaded lines and while it only has three magnets, it is considerably more powerful than a good many five-bar generators on the market, and will be found satisfactory for use on all but the very heaviest loaded lines. On a line of 12000 ohms, the No. 50 generator will operate six 2500 ohms Western Electric ringers and will operate thirty-five 2500 ohms Western Electric ringers on a line of about 1000 ohms.



No. 50A

The No. 50 generator is approximately 75% as powerful as the No. 48 type.

Western Electric Hand Generator Boxes

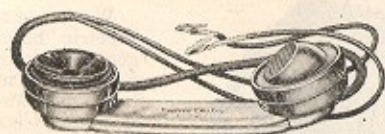


A hand generator box consists of a generator mounted in an oak cabinet having a hinged cover.

The leads from the generator are connected to terminals mounted close to the inside edge of the box.

Code No.	Generator	Current	Dimensions of Box, Inches		
			Width	Depth	Length
299F	48A	A. C.	8	6	9
299G	48B	A. C. and P. C.	8	6	9
303A	22A	A. C.	6½	4½	8½

No. 1001 Type Western Electric Hand Sets



No. 1001A

The No. 1001 type hand sets have been manufactured for over fifteen years. They were originally intended for the use of linemen and are designed to withstand

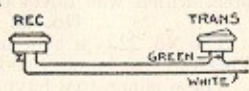
the rough handling, incidental to such service. This design proved to be so satisfactory that it is now used extensively for a number of different purposes, as described below.

The handles are made of brass tubing with drawn brass end pieces and the transmitters and receivers are provided with drawn brass cases equipped with screw clamping rings, thereby making an instrument that is extremely rugged.

The No. 1001-C, and H hand sets are provided with a push button switch which is connected so that these hand sets function the same as the No. 1020-AL desk stand. In view of this, they may be used in connection with our regular magneto and central battery desk set boxes in place of a desk stand, in cases where the service conditions are such that a hand set is required. These hand sets have a nickel-plate finish.

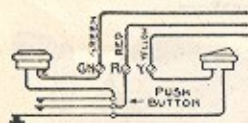
No. 1001A

Used by linemen as a test set on central battery lines. The cord is equipped with spring connection clips.



Code No.	Transmitter	Receiver	Cords		Push Button Spring Combination
			Code No.	Length	
1001A	244W	131W	243	8 in.	None
			2-574	3 ft.	
			(Waterproof)		

Nos. 1001C and 1001H



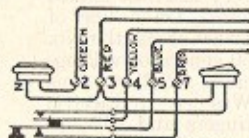
No. 1001C is used with Nos. 1330 and 1331 portable magneto telephones.

No. 1001H is used with No. 1375B portable magneto telephone.

Code No.	Transmitter	Receiver	Cords		Push Button Spring Combination
			Code No.	Length	
1001C	285W	131W	366	6 ft.	2 Make
			(Waterproof)		
1001H	244W	131W	422	5 ft. 2in.	2 Make
			(Waterproof)		

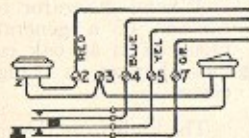
No. 1001E

Used with desk type Inter-phones where (5-conductor cord is required).

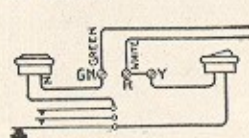


Code No.	Transmitter	Receiver	Cords		Push Button Spring Combination
			Code No.	Length	
1001E	244W	131W	398	6 ft.	1 Make and 1 Break

Nos. 1001J and 1001K



No. 1001J



No. 1001K

No. 1001J is used with desk type Inter-phones.

No. 1001K is used with private line telephone systems.

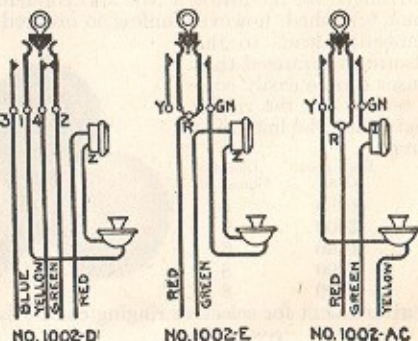
Code No.	Transmitter	Receiver	Cords		Push Button Spring Combination
			Code No.	Length	
1001J	244W	131W	502	6 ft.	1 Make and 1 Break
1001K	285W	131W	384	4 ft. 6 in.		2 Make
			(Waterproof)		

No. 1002 Type Western Electric Hand Sets



No. 1002AC

The transmitter and receiver of the No. 1002 type hand sets are mounted on a nickel plated tubular brass frame, equipped with a hard rubber handle. A switch mounted within the frame is actuated by a plunger which terminates in a ring by which the hand set is suspended, when not in use. When the hand set is removed from the hook, the switch is automatically closed. These hand sets function the same as certain desk stands, and, therefore, may be used in place of desk stands, if required. A hook (No. 141A switch-hook) is furnished with each hand set.



No. 1002D

Used in place of desk stands and telephone arms in connection with Interphones. Also for general use.

Code No.	Transmitter	Receiver	Cords		Switch Combination
			Code No.	Length	
1002D	267W	141W	336	14 ins.	1 make and 1 break
			402	8½ ins.	
			429	4 ft. 6 ins.	
			(4 conductors)		

No. 1002E

Used in connection with a janitor's switchboard in apartment house equipment. Also for general use.

Code No.	Transmitter	Receiver	Cords		Switch Combination
			Code No.	Length	
1002E	267W	141W	402	8½ ins.	1 make contact
			336	14 ins.	
			430	4 ft. 6 ins.	
			(2 conductors)		

No. 1002AC

Used in place of local battery bridging or central battery desk stands. Functions same as No. 1020AL desk stand. Also No. 1801 swbd.

Code No.	Transmitter	Receiver	Cords		Switch Combination
			Code No.	Length	
1002AC	267W	141W	318	4 ft.	2 make
			414	4¼ ins.	
			415	9½ ins.	
			(3 conductors)		

No. 1003 Type Hand Sets

NOTE.—The No. 1003 type hand sets are listed under Interphones.

Western Electric Hand Set Hangers

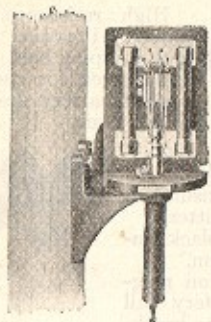
No. 1B mounts on a vertical surface for holding a No. 1001 type hand set when not in use. The hand set is suspended by its receiver, which fits into a recess in the hanger. Cast brass; black finish. Overall dimensions, 3½ inches wide, 2½ inches deep and 3¾ inches high.

No. 1C is the same as the No. 1B, except that it is equipped with rubber studs and a spring, so arranged as to prevent the hand set from swaying. Used principally on steamships.



No. 1B

No. 186 Western Electric Weatherproof Telephone Jacks



Weatherproof jack designed for mounting poles; affords a means of connecting a portable telephone to the line. Contains protective apparatus.

Lock will be furnished if specified in order.

Western Electric Telephone Protectors

No. 58AP

Designed for protection against lightning and crosses with electric circuits.

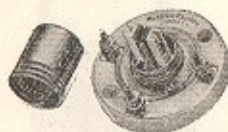
Consists of 2 No. 11C-7 ampere fuses, 2 each Nos. 26 and 27 protectors and Nos. 16, 29 and 48 mountings.

No. 58B

Designed for protection against lightning and crosses with electric circuits.

Consists of 2 No. 11C-7 ampere fuses, 2 each Nos. 10 and 20 blocks and No. 16, 29 and 48 mountings.

No. 60AP



Designed for protection against lightning.

Consists of 2 each Nos. 26 and 27 blocks and mounting No. 49.

NOTE.—The No. 58AP is recommended in all cases except where the entire telephone system is entirely removed from all other electric lines. In these cases the No. 60AP can be used.

Western Electric Telephone Protector Blocks

Nos. 1 and 2



No. 1

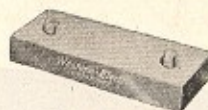


No. 2

Code No.	Description	Used With	
		Protector Blocks, No.	Protectors, Nos.
1	Plain Carbon Block with Fuse Metal.	2	12AP, 58AP, 60AP.
2	Grooved Carbon Block without Fuse Metal	1	12AP, 58AP, and 60AP.

Western Electric Telephone Protector Blocks

Nos. 19 and 20



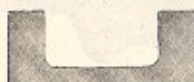
No. 19



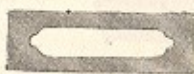
No. 20

Code No.	Description	Used With		Protectors, Nos.
		Protector Blocks, No.	Protector Micas, No.	
19	Plain Copper Block With Two Pins	20	10	58B, 60B
20	Grooved Copper Block With Two Bushings.	19	10	58B, 60B

Protector Micas



No. 3



No. 10

Code No.	Protector Blocks, Nos.	Used With	
		Protectors Nos.	Protectors Nos.
3	1 and 2	12A, 58A and 60A	
10	19, 20 and 21	58B and 60B	

Western Electric Telephone Protector Blocks

Nos. 26 and 27



No. 26



No. 27

Provide better telephone service through fewer interruptions of operation. They are used together without a separator (protector mica) and form an open space cutout which will afford the highest grade of protection against high potentials due to lightning.

The No. 26 protector block is a solid piece of hard non-dusting carbon. The face of the block is especially ground to present a smooth surface. The No. 26 protector block is mounted on the ground side of the protector mounting.

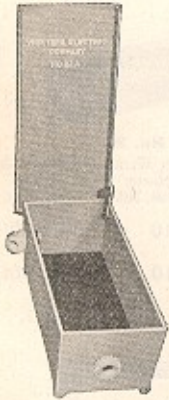
The No. 27 protector block consists of a porcelain frame with a countersunk hard carbon plug which is fastened in place with low temperature fusing cement. The surface of the frame which bears against the No. 26 block, when assembled in a mounting, is finished by grinding. The air gap between the carbon insert in the No. 27 block and the face of the No. 26 block is held to close limits by this grinding process and the consistent operation of the cutouts at the proper voltage is thereby insured.

Ordinary lightning discharges will cause an arc across the air gap between the carbon blocks but will not heat them sufficiently to melt the cement used for holding the carbon plug in place. A cross with an electric light or power line, however, will cause a discharge or repeated discharges, of such duration that the heating of the carbon insert of the No. 27 blocks will melt the cement holding it in place and allow the mounting spring to push it into direct contact with the No. 26 block, thus permanently grounding the line.

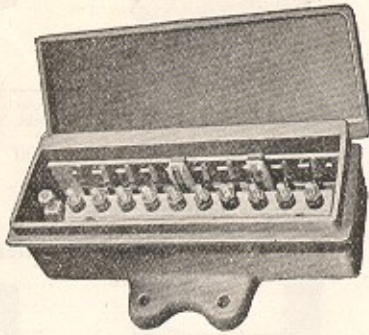
Code No.	Description	Used with Protectors, Nos.
26	Carbon block	12AP, 58AP, 60AP, 76AP, 1268A and 1269A
27	Porcelain Frame With Carbon Insert.	12AP, 58AP, 60AP, 76AP, 1268A and 1269A

The new blocks are interchangeable with the old combinations of No. 1 protector block, No. 2 protector blocks and No. 3 protector mica in all subscribers' set protector mountings and are therefore available for improving protective equipment already in service, during the normal replacements. All orders for replacements of Nos. 1 and 2 blocks and No. 3 micas in subscribers' telephone station protectors should specify the Nos. 26 and 27 protector blocks; no separator (protector mica) is needed with the new design of block.

Western Electric Telephone Protector Mountings



No. 82A



No. 83A

No. 82A

This protector mounting consists of a cast iron galvanized case approximately 11 1/2 x 4 3/4 x 4 3/8 inches over all with hinged cover and a wooden backboard. It is used for mounting the No. 58 protector at telephone stations located out of doors.

No. 83A

Designed to protect drop wires between the overhead lines and the subscribers, telephone set from lightning. This protector mounting consists of an iron box approximately 8 3/4 x 3 1/2 x 2 1/2 inches deep with a hinged cover having a No. 84A protector mounted within it. Arranged to mount 10 pairs of No. 26 and 30 protector blocks on No. 19 and 20 blocks with No. 11 mica. This protector mounting provides for the protection of 5 pairs of wires. The box mounts directly underneath the crossarms on the poles. Two mounting lugs are provided for this purpose.

Western Electric Hand Receivers



***No. 143AW**

Concealed binding post hand receiver, composition case. Used with telephone sets, desk stands, telephone arms, etc.

***No. 144AW**

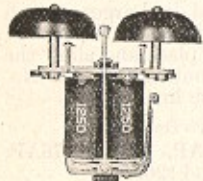
With hard rubber case.
*Cord not included; ordered separately.

Western Electric Head Receivers

No. 528BW

Standard bipolar head receiver, hard rubber case with improved wire type headband.

Used with operator's telephone set and all switchboards.



No. 53 Type

Western Electric Ringers

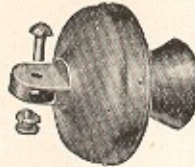
Have gong posts suitable for either 1/2 or 3/8-inch woodwork; spacers can be furnished to adapt the No. 53 type to 3/4 inch woodwork and the Nos. 38 or 51 types to either 3/8 or 1/2-inch woodwork. Black finish gongs are furnished as standard, but nickel finish gongs can be supplied if desired.

Used with central battery (magneto) telephones.

Code No.	Approx. Resistance Ohms	Gongs		Mounts in Woodwork In.
		Code No.	Diam. In.	
38AG	1000	26A	3	3/8
38BG	2500	26A	3	3/8
38FG	1600	26A	3	3/8
53AG	1000	29A	2 1/2	5/8
53BG	2500	29A	2 1/2	5/8
53FG	1600	29A	2 1/2	5/8

Western Electric Transmitters

No. 323BW



High resistance, insulated transmitter. Provided with mounting lug and clamping bolt. Black case.

Designed for use on magneto and central battery desk stands and telephone arms.

No. 353BW

High resistance, insulated, bracket type transmitter.

Black case with black finished bracket and arm.

Designed for use on magneto and central battery wall telephones, requiring a bracket type transmitter.



Western Electric Testing Sets

Type 90500



No. 90530

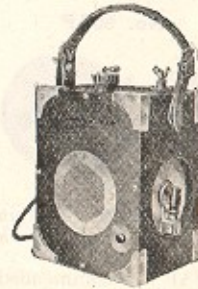
Each set consists of a hand generator and a ringer, wired in series, and inclosed in a wooden case.

Code No.	Resistance	Will Ring Through, Ohms
90530	10000	{ 1 No. 22K Generator
		{ 1 " 19B Ringer
90510	35000	{ 1 " 22K Generator
		{ 1 Special No. 19 Ringer
90511	50000	{ 1 No. 22N Generator
		{ 1 " 19A Ringer
90512	100000	{ 1 " 22N Generator
		{ 1 " 19B Ringer

Size of case is 5 3/4 x 6 3/8 x 5 1/4 inches.

It is finished in birch.

No. 1017 Type Western Electric Testing Sets



No. 1017B

No. 1017 Type

A wooden box telephone test set equipped with a regular local battery talking circuit consisting of a No. 266W transmitter, No. 13 induction coil, No. 145W receiver and a special three-cell dry battery unit.

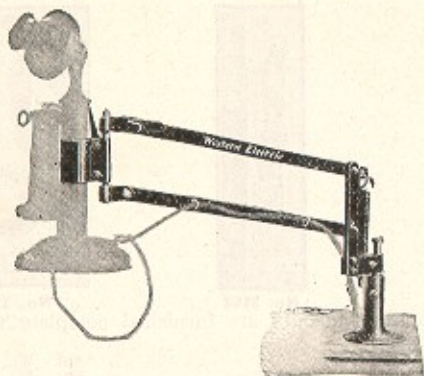
Note.—The No. 1017C test set differs from the No. 1017B only in that it is equipped with a specially designed high efficiency generator. The No. 1017B will, under ordinary conditions, be found entirely satisfactory, but in case a more powerful set is required to meet unusual conditions, the No. 1017C set has been developed.

No. 1017B. For lightly loaded lines—it will ring 15 2500 ohm bells over a 15 mile No. 12BB iron metallic line.

Code No.	Wt. Including Battery Pounds	Size of Case, Inches	Finish
1017B	8	4 3/4 x 6 3/8 x 7 3/4	{ Birch Mahogany
No. 1017C. For moderately loaded lines—it will ring 33 2500 ohm bells over a 15 mile No. 12BB iron metallic line.			
1017C	8	4 3/4 x 6 3/8 x 7 3/4	{ Birch Mahogany

Western Electric Telephone Brackets

EZ Type



Equipped with No. 83 Mounting and B Clamp

Brackets

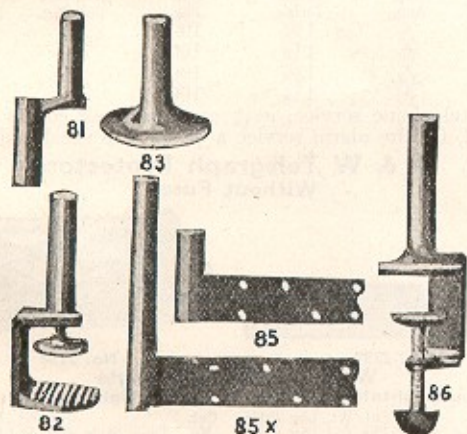
The EZ Telephone Bracket permits of a deskstand being instantly adjusted to a height convenient to the user. In addition to this the arm is pivoted on its mounting and may therefore be rotated in a horizontal plane. (24-inch radius.)

An EZ Telephone Bracket consists of: 1 arm, 1 mounting as specified in the order and 1 clamp as specified in order.

In placing orders for this apparatus be sure and specify the mounting and clamp that is wanted.

EZ Type Telephone Bracket equipped with Nos. 81-83-85-85X or 88 mounting and any style clamp are standard complete equipment. EZ Type Telephone Bracket equipped with Nos. 82 or 86 mounting are furnished at extra charge.

Mountings



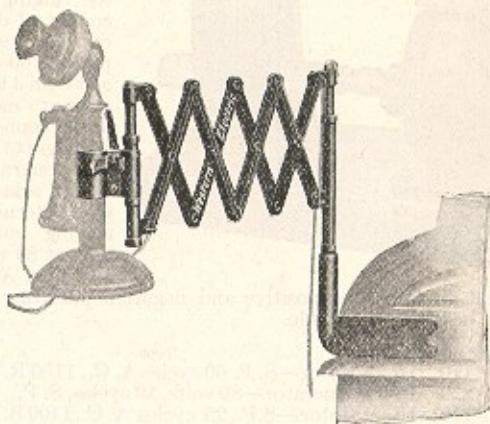
Code No.	Use
81	*Used on Wall or Side of Flat Top Desks
83	" " Top of Flat Desk
85	" " Either Side of Flat or Roll Top Desk.
85X	" " " " " " " " " " " "
86	*Clamps on Edge of Flat Top Desk.
94	Used on Wall or Partition.

Clamps

Code Letter	Use
A	*Fits Desk Telephones With Convex Shaped Stem
B	" " " " Cylindrical Stem Such as No. 1020 Type Desk Stands
C	*Fits Desk Telephones with Tapering Stem

*Not stocked. Furnished on order.

Western Electric Telephone Brackets
S Type



Equipped with No. 1 Mounting and No. 20 Clamp

Brackets

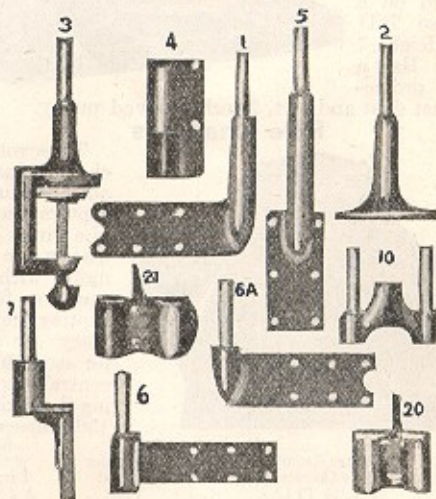
This bracket is of the "folding gate" type, and is arranged so as to revolve on its base. Furnished in 24 and 36-inch lengths. The desk stand swivels on the front rod. The bracket will be furnished with any of the mountings described below and with either of the clamps listed.

When ordering specify the letter of the clamp and mounting that is wanted in addition to the code number of the telephone bracket.

Complete equipment consists of bracket, one mounting, one receiver hook, one telephone clamp, one set of eyelets for holding cord, but does not include desk stand.

Code No.	Length of Bracket Extended, Inches	Approximate Shpg. Wt., Lbs.
S-8	24	5
S-14	36	6 1/2

Mountings



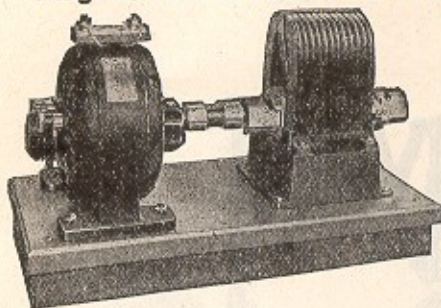
Code No.	Use
1	For use on side of flat or roll top desk.
2	" " " " top of flat top desk.
3	*Clamps on edge of flat top desk.
4	For use on wall or partition.
5	" " " " side of flat top desk.
6	" " " " " " roll top desk.
6A	" " " " " " flat or roll top desk.
7	" " " " " " top desk.
10	*Attachment fits any mounting and holds two brackets.

Clamps

Code No.	Use
20	{ Fits Telephones with a Cylindrical Stem Such as the No. 1020 Type.
21	Fits Telephones with Convex Shaped Stems.

*Not stocked. Furnished on order only.

Magneto Motor Generator Ringing Sets



Motor generator ringing sets consist of direct current or single phase 60-cycle alternating current motors direct connected to magneto ringing generators. These sets furnish alternating ringing current only at 80 volts, 19 cycles. An attachment for obtaining positive and negative pulsating current is, however, available.

List No.	Volts Output	Motor Watts	Type
310087	110	15	Motor—S. P. 60 cycles A. C., 1150 R.P.M.
310088	220	15	Generator—80 volts, 19 cycles, S. P.
310093	110	15	Motor—S.P., 25 cycles A. C., 1400 R.P.M.
310094	220	15	Generator—110 volts, 23 cycles, S. P.
310081	115	15	Motor—D.C., 1150 R.P.M.
310082	230	15	Generator—80 volts, 19 cycles, S.P.

310110 †12 15 Magneto Generator—80 Volts, 19 Cycles S.P., 1150 R.P.M. Belt Tightening Sub-base and 2 1/2 x 1 1/2 Inches Play Pulley.

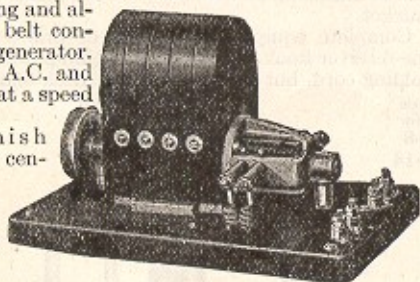
*This higher voltage is advisable on account of the higher frequency produced by the necessary excess speed of the 25-cycle over the 60-cycle. †Twelve bars.

No. 16A Magneto Ringing Generators

A 5-bar, pulsating and alternating current, belt connected power generator. Delivers 106 volts A.C. and 72 volts pulsating at a speed of 1000 R.P.M.

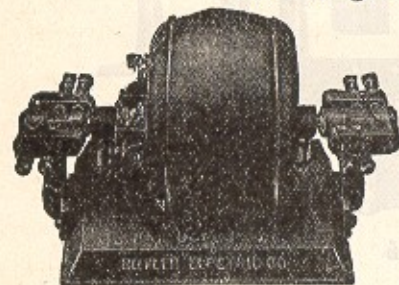
Used to furnish power ringing for central offices.

Mounted on a wood base 7x11 inches. Height, 7 inches. Has a cover for protection against dust and dirt. 2-inch grooved pulley.



Pole Changers

These rotary pole changers are in reality rotating interrupters, consisting of a direct or alternating current motor with a commutator for interrupting the current. They are suitable for use in telephone central offices, serving a maximum of 1500 subscribers.



Code No.	Voltage Required to Operate	Power Consumption Watts	Special Transformer Required	Kind of Current Furnished
A-24	24 D.C.	8	Yes	A.C. only
A-36	36 D.C.	8	Yes	A.C. "
A-110 D.C.	110 D.C.	8	No*	A.C. "
A-220 D.C.	220 D.C.	8	Yes	A.C. "
A-110 A.C.	110 A.C.	8	Yes	A.C. "
A-220 A.C.	220 A.C.	8	Yes	A.C. "
S-24	24 D.C.	8	Yes	A.C. and pos. and neg. puls.
S-36	36 D.C.	8	Yes	
S-110 D.C.	110 D.C.	8	No*	
S-220 D.C.	220 D.C.	8	Yes	
S-110 A.C.	110 A.C.	8	Yes	
S-220 A.C.	220 A.C.	8	Yes	

*Transformer required if one side of lighting circuit is grounded.

Ringing current for A.C. 110 and A. C.220 must be taken from exchange batteries. Orders should read: No. ... rotary pole changer to operate from ... volts ... cycles, with special transformer for ... volts D.C.

D & W Telephone and Fire Alarm Protectors

Schedule FC—Class 3

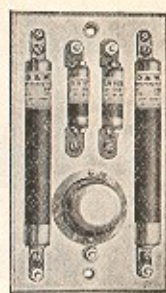
For Subscribers' Premises



No. 3100



No. 3102



No. 3104

Combination cut-outs are furnished complete with fuse and sneak coil.

Cat. No.	Description	Std. Pkg.	Wt., Lbs. Std.	Price Each
3100	Single Pole Cut-out with Fuse . . .	50	42	\$.50
3102	" Comb. Cut-out with Fuse, Sneak Coil and Lightning Arrester	50	54	1.10
3104	Double-pole Comb. Cutout, with Two Fuses, Two Sneak Coils and Lightning Arrester	50	101	1.75
3105	Double-pole Comb. Cutout, with Two Fuses and Lightning Arrester	50	100	1.50

D & W Telephone and Fire Alarm Fuses

For Use with D & W Nos. 3100, 3102, 3104, and 3105 Telephone and Fire Alarm Protectors

Type A Fuses—Screw Clamp Contact—2000 Volts

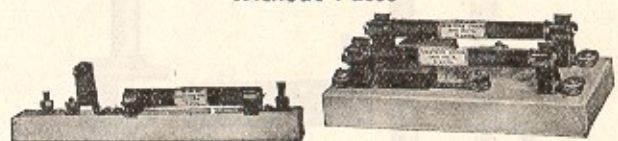
Cat. No.	Cap. Amp.	Centers Inches	Std. Pkg.	Wt., Lbs. Std.	Price Each
3001	1	5 3/8	100	1 1/2	\$.20
3002	2	5 3/8	100	1 1/2	.20
3003	3	5 3/8	100	1 1/2	.20
3004	4	5 3/8	100	1 1/2	.20

Sneak Coils for Combination Cut-outs Cat. Nos. 3102 and 3104

Cat. No.	Cap. Amp.	Length Inches	Std. Pkg.	Wt., Lbs. Std.	Price Each
3210	1/5	1 7/8	100	1 1/2	\$.18
3310	1/5	1 7/8	100	1 1/2	.18
3410	1/5	1 7/8	100	1 1/2	.18
3510	1/5	1 7/8	100	1 1/2	.18

For telephone service, a 1/5 ampere sneak coil is recommended, for fire alarm service a 1/5 ampere sneak coil.

D & W Telegraph Protectors Without Fuses



No. 2757

No. 2753

Without Lightning Arrester				With Lightning Arrester			
Cat. No.	Type	Std. Pkg.	Wt., Lbs. Price Each	Cat. No.	Type	Std. Pkg.	Wt., Lbs. Price Each
2750	S. P.	50	24 \$.30	2752	S. P.	50	25 \$.60
2751	D. P.	50	48 .50	2753	D. P.	50	50 1.00

Postal Cut-outs

2754	A	S. P.	50	43 \$.40	2756	A	S. P.	50	52 \$.75
2755	C	S. P.	50	43 .40	2757	C	S. P.	50	52 .75

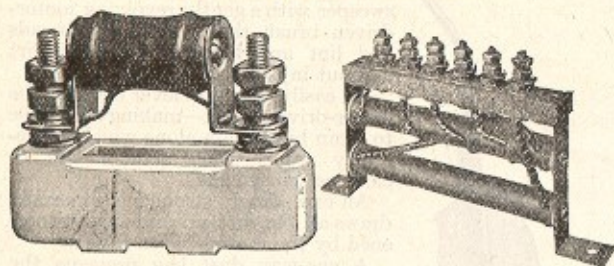
Telegraph Fuses

Cat. No.	Cap. Amp.	For Cut-outs	Length Inches	Centers Inches	Std. Pkg.	Wt., Lbs. Price Each
2760	0-5	Western Union	4 3/8	...	100	3 \$.20
2761	0-10	Postal Type C	4 3/8	...	100	7 .20
2762	0-10	" A	5 3/8	...	100	7 .20

In ordering D & W telegraph fuses, specify catalogue number and ampere capacities.

Cat. No. 2760 telegraph fuse can be furnished in any of the following ampere capacities: 2 amp.—.3, .4, .5, .8, .9, 1 amp.—1.5, 2, 3, 4, 5. Cat. Nos. 2761 and 2762 telegraph fuses can be furnished in 2 amp.—.25, .3, .4, .5, .75, .8, 1 amp.—1, 5, 2, 3, 5, 6, 10.

Type RSA Ward-Leonard Vitrohm Track Circuit Resistors



Fixed resistor units are necessary and are always used in signal battery circuits to protect the battery from a too-high discharge rate. There is a leakage from the rails through the ballast to ground. This leakage must be corrected. If the leakage is constant a Type RSA fixed vitrohm resistor is used. If the leakage varies, a Type RSA adjustable vitrohm resistor is used. The minimum resistance required is .1 ohm, and the maximum ohms required is 1 ohm.



Fixed resistors of .1 or .2 or .3, etc., up to 1 ohm are used.

Adjustable resistors, by means of short circuiting clips, give 1 ohm divisions from .1 ohm to 1 ohm. A vitrohm (vitreous enameled) resistor is the only type that withstands the dampness of

battery receptacles. A vitrohm unit does not age nor change and lightning does not appear to effect it.

These resistors are equipped with standard RSA terminals. The fixed resistors mount in standard RSA-1056 porcelain blocks. The unit is 1½ inches long by ¾ inch in diameter. The adjustable unit is approximately 7 inches long by 3 inches high by 1 inch wide.

Prices upon application.

No. 1002C Western Electric Telephone Head Sets



The Western Electric No. 1002-C Head Set meets the highest standards of construction and of electrical efficiency. The two telephone receivers although equipped with strong, nickel-plated brass cases are exceedingly light. This is due to the fact that careful proportioning of the parts has permitted the production of a small, yet highly efficient instrument. The cores are made of high grade silicon steel and the permanent magnet of tungsten steel. Because of the small cross section

of the cores, it has been possible to wind the receivers with a large number of turns giving an alternating current impedance of approximately 20,000 ohms at voice frequency, with a direct current resistance of only approximately 2200 ohms for the two receivers in series.

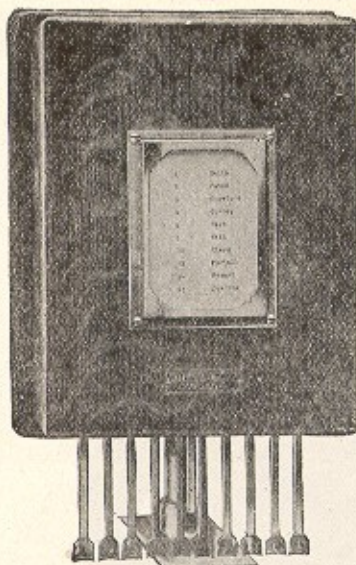
The headband is made to fit comfortably. The head pieces are formed of non-corrosive phosphor-bronze wire covered with a heavy textile webbing. Sliding and revolving yokes permit adjusting the receiver to the head.

The cord is covered with a black mercerized cotton braid and is equipped at the head set end with tips that are entirely concealed within the receivers. At the other end the cord has pin tips that fit practically any type of binding post. The cord connects the two receivers in series.

SPARE PARTS AND ACCESSORIES.—Replacement parts for the No. 1002C head set are listed below:

Replacement Parts	Type No. 1002C
Complete Receiver Unit	509W
Ear Cap	P-99768
Diaphragm	P-98387
Headband	No. 1B
Cord	No. 763

Western Electric Severance Code Signalling System



Severance Call Box

The Call Box is made in three sizes which are arranged for individual signals for 10, 20 or 30 persons respectively. The box is built of oak and supplied in natural finish unless otherwise specified.

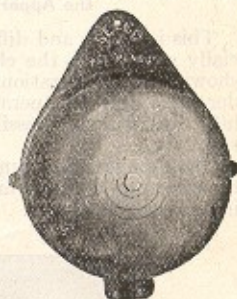
A battery of 4 dry cells may be used to operate the Call Box mechanism.

SEVERANCE CALL BOX.—10, 20, or 30 Call Station as required.

TYPES OF SIGNAL BELLS.—Specify the number of bells required and whether they are to be equipped with 6, 8, 10 or 12 inch gongs. State whether D. C. or A. C. and voltage.

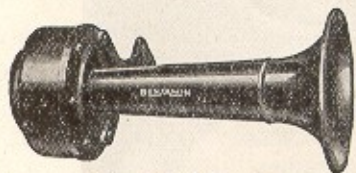
A code signalling system performs a useful and inexpensive supplementary service for quickly locating men whose duties require their presence in various parts of an office building or factory.

A Call Box is placed at the telephone switchboard or central point and the electric signals (bells or signal horns) which it controls are located in the rooms, offices and corridors of the building or factory. Each person to be called is assigned a code number corresponding to a lever on the Call Box. When a lever is lifted, the code signal for the person being called is sounded in all parts of the building.



D. C. or A. C. Bell Signal Horns.—

The No. 8355A Benjamin Signal Horn should be installed where the lighting or power circuit to which it is to be connected is of 100 to 125 volts, 25 or 60 cycles, A.C. This horn is for interior



No. 8355A—Signal

use only. Specify voltage and cycles when ordering.

The No. 8152H Benjamin Signal Horn is weatherproof and designed for use out of doors; otherwise same as No. 8355A.

The No. 8326A Benjamin Signal Horn should be ordered if the current supply is 100 to 125 volts, direct current. This type of signal horn is for interior use only.

The No. 8326H Benjamin Signal Horn is for use where the current supply is 100 to 125 volts, direct current; this signal horn is weatherproof.

TRANSFORMERS.—When dry cells are not to be used as a power source for Call Box operation, one of the following transformers should be ordered. Each transformer is 3 x 4½ x 6 inches and weighs 7½ pounds.

Type	Code	Primary Voltage	Secondary Voltage	Capacity Watts
Type "B" Jefferson Heavy Duty Transformer, 60 Cycle		110	6-14-20	75
Type "B" Jefferson Heavy Duty Transformer, 25 Cycle		110	6-14-20	75

RELAYS.—One "Severance Relay" is necessary for making and breaking the power circuit of every twenty gongs or horns or combination of both.



Transformer