 COMPANY


"INTER-PHONE" is the trade name adopted by the Western Electric Company for what is commonly known as Intercommunicating Telephone Apparatus. On the following pages will be found much information of value. We have avoided, as far as possible, the use of general or descriptive information, and have endeavored to condense all data given. Wiring diagrams are also shown.

Three general types of Inter-phones-wall, desk, and hand-set types-are furnished. Under each system are listed the types adapted for the service described.

## INTER-PHONE SYSTEMS

The various systems for which Inter-phones are adapted are as follows:
HOUSE TELEPHONE SYSTEM. Multi-station, one or two-way service. Two to three line wires. System No. 16, listed on page 3 .
TWO STATIONS ONLY. Two line wires. Batteries at each station. System No. 14, listed on page 6 .

TWO TO SIX STATIONS. Code ringings-common talking. Three to four line wires. Batteries at one station only. System No. 15, listed on page 7.
THREE TO NINE STATIONS. Selective ringing. Common talking. Batteries at one station only. System No. 11, listed on page 11.
MASTER STATION and not more than twelve outlying stations. Batteries at master station only. System No. 12, listed on page 13.
NOT MORE THAN TWENTY-FOUR STATIONS. Selective ringing and talking between all stations. System No. 1 , listed on page 18.

A SYSTEM ALLOWING SECRET CONVERSATIONS between certain stations, being a modification of System No. 1. System No. 4, listed on page 23.
A MECHANICAL GENERAL ALARM OR CODE SIGNALING SYSTEM, providing a mechanical means of signaling by ringing a system of bells by code. Listed on page 36 .
APARTMENT-HOUSE SYSTEM, providing service between the vestibule and apartments. System No. 7, listed on page 24 .
APARTMENT-HOUSE SYSTEM, providing service between the (a) vestibule and apartments; (b) apartments and the janitor. System No. 8, listed on page 24.

APARTMENT-HOUSE SYSTEM, providing service between the (a) vestibule and apartments; (b) apartments and janitor; (c) apartments and tradesmen. System No. 9 , listed on page 24
APARTMENT-HOUSE SYSTEM, adapted to large buildings, and similar to System No. 9. System No. 10, listed on page 24.


No. 1003-A Hand Set


No. 1003-B Hand Set


No. 1003-B Hand Set, Cover Removed


Apparatus Unit


Face Plate
No. 12007


## FLUSH TYPE

(a) Hand Set
(b) Flush apparatus box made up of:

## NON-FLUSH TYPE

(a) Hand Set
(b) Non-flush apparatus box

1 flush plate (brush brass) No. 12007 W. E. Catalog
1 wall box No. 110985 W. E. Cata$\log$
1 Apparatus Unit
These two types cover the equipment in general, but there are special features, such as Hand Sets equipped with plugs, long extension cords for bed service, etc., discussed under the systems following.

The contractor's attention is called to the use of standard bores and face plates, as described below.

## The Hand Set

We manufacture two general types of hand sets for Inter-phone service, known as No. 1003-A and 1003-B.

Both of these hand sets are equipped with a grip push bar which is operated by grasping the handle firmly. The operation of this "grip" opens one contact and closes another performing the function of a switch hook. It is marked "Press to Talk."

The " B " hand set differs from the " A " in that it has, in addition to the "grip," above described, a white button for ringing or signaling the distant station. When operated, it opens one and closes one contact.

The No. 1003-A and No. 1003-B hand sets are uncorded. When corded as described on pages 34 and 35 , they are assigned designating code letters and are adapted to the various systems later described.

## Associate Apparatus

An Apparatus Box, in which are mounted the signaling buzzer and the connecting terminals for the wires, must be associated with the Hand Set in order to complete the Inter-phone. These apparatus boxes are furnished in two types, viz.: Flush and Non-flush.

Flush Apparatus Box: This consists of three parts: the Wall Box, the Apparatus Unit, and the Face Plate.
An important point to be observed is that the Wall Box and the Face Plate are the same as used in electric-light wiring for push-bullon switches. This feature is of special importance to the contractor, since it allows him to draw on his own stock for these parts. For this reason, we are prepared to furnish sets complete, including wall box and flush plate, or minus these parts, as desired.
Non-Flush Apparatus Box: This box is intended for use in buildings where it is not convenient to mount the flush type. Finished in dull black with nickel trimmings. Approximate size, $31^{\prime \prime}{ }^{\prime \prime}$ diameter by $1 \frac{5}{16}{ }^{\prime \prime}$ deep.
Complete Connection Diagram furnished with each Inter-phone
Inter-phones and Accessories

## INTER-PHONE SYSTEM NO. 16 <br> House Telephone System <br> MASTER AND OUTLYING STATIONS

The following equipment is especially adapted to residence work, as it provides the service generally desired in a large percentage of homes. It is also well suited for installation in hotels where an annunciator system is already in use (either one way or return call), as the same wiring can be used without making any changes

It embraces a multi-station system requiring only TWO wires ( 1 common and 1 individual) for oneway calling, and THREE wires ( 1 common and 2 individual) for two-way calling. This matter of wires is especially emphasized because IT ALLOWS OLD BELL AND ANNUNCIATOR WIRING to be used for telephone service.

The service provided by this system is between a Master Station in the kitchen, butler's pantry, or other convenient place and Outlying Stations in the various rooms, halls, etc.

The Outlying Stations can call the Master Station and be called by the Master Station (if desired). They, however, cannot call each other.

The Master Station can call the Outlying Stations selectively (if desired) and be called by them.
Calling both ways between the Master and Outlying Stations is called TWO-WAY SERVICE.
Calling only from the Outlying to the Master Station is called ONE-WAY SERVICE.
In new installations where ordinary bell or buzzer service is required at present, but where at some future date telephone service may be required, considerable advantage can be gained by installing No. 382-C apparatus units complete with wall boxes and face plates in place of push buttons, and a one-way service annunciator (the code number depending on the number of drops) as the master station. This will give a straight bell or buzzer installation which can be used for telephone service when desired

The only equipment required to change this bell or buzzer system to a one-way calling telephone system is a No. 1003-D Hand Set for the annunciator (a screw-driver being the only tool necessary to connect it), and a No. 1003-F Hand Set for each of the outlying stations. The cord on the No. 1003-F Hand Set is equipped with a plug and the No. 382-C Apparatus Unit contains a jack, so it is only necessary to insert the plug of the Hand Set into the jack of the apparatus unit to convert the system into a one-way signaling telephone system.

Special attention is called to the fact that hand sets equipped with extension cords are available, so that the hand set can be carried to the bed in case of illness. It will perhaps be desired to have at least one hand set with extension cord for use in emergencies. The extension cord is 8 feet long, which, together with the other cords, makes the total length of the hand-set cord 11 feet.

## MASTER STATION

Consists of an Annunciator and a No. 1003-D Hand Set. The code numbers and prices listed below cover the annunciator only. The No. 1003-D Hand Set should be ordered separate. See page 34 ior Hand Set prices.

The finish of the annunciator is golden oak; however, light or dart oak finish can be furnished without additional charge.

For TWO-WAY SERVICE the annunciator must have ringing buttons-one for each Outlying Station.

For ONE-WAY SERVICE the ringing buttons are not necessary.

Annunciator for Two-Way Service

| Annunciator for Two-Way |  |  |
| :---: | :---: | :---: |
| List No. | No. Drops | List Price* |
| 360000 | 2 | $\$ 17.45$ |
| 360001 | 4 | 19.00 |
| 360002 | 6 | 24.60 |
| 360003 | 8 | 31.25 |
| 36004 | 10 | 37.60 |
| 300005 | 12 | 45.20 |
| 30006 | 15 | 61.10 |
| 300007 | 20 | 61.25 |
| 360008 | 24 | 73.35 |


| Annunciator for One-Way Service |  |  |
| :---: | :---: | :---: |
| Wist No. | No. Drops | List Price* |
| 360009 | 2 | \$ 4.55 |
| 360010 | 4 | 7.60 |
| 360011 | 6 | 10.50 |
| 360012 | 8 | 13.95 |
| 360013 | 10 | 17.45 |
| 360014 | 12 | 20.95 |
| 360015 | 15 | 25.50 |
| 360016 | 20 | 34.00 |
| 360017 | 24 | 40.85 |

Note.-Master Stations can also be furnished in greater capacities than those listed. Price on any size furnished on request.

* Does not include Hand Set. See page 34 for prices.


No. 360005 Master Station Two-Way Service


No. 360011 Master Station One-Way Serrico

Complete Connection Diagram furnished with each Inter-phone


No. 6042-M and $R$


No. 6042-P and T

## Two-Way Service

Code No.

Description
List Price
1 No. 382-D Apparatus Unit, containing l- 3 -ohm buzzer, 1-jack, 1-push button; and 1 No. 1003-F Hand Set. . . . .

6042-M Same as No. 6042-D, but complete with 1 No. 12007 Brush Brass "H. \& H." Face Plate, size $41 / 2^{\prime \prime} \times 23 / 4^{\prime \prime}$; and
1 No. 110985 Wall Box, size $2^{\prime \prime} \times 3^{\prime \prime} \times 3^{\prime \prime}$ deep
$6042-\mathrm{N}$ Same as No. 6042-D, but equipped with an 11-ft. Sectional Extension Cord. In other words, a No. 1003-H Hand Set is furnished in place of the No. 1003-F*. . . . . . . . .

6042-P Same as No. 6042-N, but complete with
1 No. 12007 Brush Brass "H. \& H." Face Plate, size $41 / 2^{\prime \prime} \times 234^{\prime \prime}$; and
1 No. 110985 Wall Box, size $2^{\prime \prime} \times 3^{\prime \prime} \times 3^{\prime \prime}$ deep

## One-Way Service

Code No.
6042-C Consists of :

## Description

1 No. 382-C Apparatus Unit, containing 1-jack, 1-push button (no buzzer furnished); and 1 No. 1003-F Hand Set. . . . .

6042-R Same as No. 6042-C, but complete with
1 No. 12007 Brush Brass "H. \& H." Face Plate, size $41 / 2^{\prime \prime} \times 234^{\prime \prime}$; and
1 No. 110985 Wall Box, size $2^{\prime \prime} \times 3^{\prime \prime} \times 3^{\prime \prime}$ deep
$6042-\mathrm{S}$ Same as No. 6042-C, but equipped with an $11-\mathrm{ft}$. Sectional Extension Cord. In other words, a No. 1003-H Hand Set is furnished in place of the No. 1003-F*.

6042-T Same as No. 6042-S, but complete with
1 No. 12007 Brush Brass,
"H. \& H." Face Plate, size
$41 / 2^{\prime \prime} \times 234^{\prime \prime}$; and
1 No. 110985 Wall Box, size
$2^{\prime \prime} \times 3^{\prime \prime} \times 3^{\prime \prime}$ deep............ 10.55

* See pages 34 and 35 for Cording of Hand Sets.

Complete Connection Diagram furnished with each Inter-phone Inter-phones and Accessories

## INTER-PHONE SYSTEM NO. 16 (Continued)

## OUTLYING STATIONS-NON-FLUSH TYPE

Two-Way Service

## Code No.

Description
List Price
6043-D Consists of :
1 No. 383-D Apparatus Box containing $1-3$-ohm buzzer and line terminals;
1 No. 1003-E Hand Set
5043-H
Same as No. 6043-D, but equipped with a $11-\mathrm{ft}$. Sectional Extension Cord. In other words, a No. 1003-S Hand Set is furnished in place of the No. 1003-E*

One-Way Service
Code No.
6043-C Consists of:

## Description

1 No. 383-C Apparatus Box containing line terminals only (less buzzer); 1 No. 1003-E Hand Set. . ..
6043-J Same as No. 6043-C, but equipped with a 11-ft. Sectional Extension Cord. In other words, a No. $1003-\mathrm{S}$ Hand Set is furnished in place of the No. 1003-E*
.......


No. 6013-H and J
No. 6043-C and D List Price
$\$ 6.60$

Schematic
No's 6043-D.H,Cou
Note.-All Hand Sets used with System No. 16 have a ringing button, enabling the user to ring from the Hand Set, thus permitting the use of any length cord. As all flush boxes also have a ringing button, the use of the System for Straight Annunciator Service when Hand Sets are not furnished is possible. Hand Sets providing telephone service can be added at any time.

Battery Requirements
Lines from 200-300 feet require 4 Blue Bell dry cells.
CONNECTION DIAGRAMS AND SCHEMATIC
Two and One-Way Service


Complete Connection Diagram furnished with each Inter-phone


## INTER-PHONE SYSTEM NO. 15

## Code Ringing, Common Talking

A common talking, code-ringing systern arranged for two to six stations. Three wires are required when there are only two stations. When there are more than two stations, four wires are necessary. ONE STATION MUST HAVE A RETARDATION COIL. Also, where there are more than two stations, the retardation coil set should be located as near the center of the system as possible.

ONE SET OF BATTERIES ONLY IS REQUIRED, WHICH MUST BE CONNECTED TO THE SYSTEM THROUGH THE RETARDATION COIL OR BATTERY STATION.

WALL SETS

Code No.
1327-S

## Description

A compact, golden oak instrument, with nickel trimmings. Cabinet measures $53 / 4$ inches wide by $67 / 8$ inches long by $31 / 4$ inches deep. Includes 1 No. 179-W receiver, 1 No. 294-W transmitter, 1 No. 101398 bell, 1 No. 360-21/2-ft. receiver cord, 1 No. 51-C retardation coil. Must be used as the battery station.

Same as No. 1327-S except not equipped with retardation coil. Can be used for non-battery stations only
1339-L A flush mounting metal case instrument, face plate finished regularly in brush brass. Metal wall box is included. Equipped with 1 No. 180-W receiver, 1 No. 294-W transmitter, 1 No. 101400 bell, 1 No. 360-21/2-ft. receiver cord, 1 No. 51-C retardation coil. Must be used as the battery station. Size of face plate: $5 \frac{1}{16}$ inches wide by $8 \frac{1}{16}$ inches long. Size of wall box: $3 \frac{1}{16}$ inches wide by $65 / 8$ inches long by $23 / 8$ inches deep

List Price
Each
 6.00


No. 1327-S and T. Wall Sets tion coil. Can be used for non-battery stations only

## DESK SETS

6034-AS The most compact instrument of its kind on the market. The ringing button is in the stem, and the signal buzzer in the base of the stand. Includes two connecting blocks, 1 No. 51-E retardation coil, and 1 No. 1320 -BG black finish desk stand, equipped with 1 No. 179-W receiver, 1 No. 302-W transmitter, 1 No. 433-6-ft. desk stand cord, I No. $535-3-\mathrm{ft}$. receiver cord, and 2 No. 466-111/2-in. transmitter cords. Must be used as the battery station

6034-AR This instrument is exactly the same in appearance as the No. 6034-AS except that no retardation coil is furnished. Includes two connecting blocks and a No. 1220-BG black finish desk stand equipped with 1 No. 179-W receiver, 1 No. 302W transmitter, 1 No. 433-6-ft. desk stand cord, 1 No. 535-3-ft. receiver cord, and 2 No. 466-111/2-in. transmitter cords. Can be used for non-battery stations only.

$\qquad$


No. 1339-L and M
1339-M Same as No.

[^0]
$$
10.65
$$

No. 6034-AR. Desk Set



Schematic No 6054-AS
Complete Connection Diagram furnished with each Inter-phone
Inter-phones and Accessories

## Page 8 Mestern $\cdot E /$ er/fic <br> COMPANY



INTER-PHONE SYSTEM NO. 15 (Continued)

## HAND SETS

## Flush Type

## Code No.

## Description

## List Price

6042-A Consists of 1 No. 382-A apparatus unit, containing 1 push button, 1 - 15 -ohm buzzer, 1 No. 51-C retardation coil, line terminals and hook for hand set.
No. 1003-L hand set. Can be used for the battery station only.

No. 6042-A


No. 6042-H and J
6042-H Same as No. 6042-A, but complete with 1 No. 12007 brush brass H. \& H. face plate, size $41 / 2 \times 23 / 4$ in.; 1 No. 110985 wall box, size $2^{\prime \prime} \times 3^{\prime \prime} \times 3^{\prime \prime}$ deep. Can be used for the battery station only

6042-B Consists of 1 No. 382-B apparatus unit (same as No. 382-A, less retardation coil), and 1 No. 1003-K hand set. Can be used for non-battery stations only

6042-J Same as No. 6042-B, but complete with 1 No. 12007 brush brass face plate, size $41 / 2 \mathrm{in}$. x $23 / 4$ in.; 1 No. 110985 wall box, size $2^{\prime \prime} \times 3^{\prime \prime} \times 3^{\prime \prime}$ deep. Can be used for nonbattery stations only.

## Non-Flush Type

6043-A Consists of 1 No. 383-A apparatus box, containing 1-15-ohm buzzer, $1-100$-ohm retardation coil, line terminals, and hook for hand set.
1 No. $1003-\mathrm{M}$ hand set. Can be used for the battery station only

6043-B Consists of 1 No. 383-B apparatus box (same as the No. 383-A, less retardation coil). 1 No. 1003-N hand set. Can be used for non-battery stations only...............................................
No. 6043-A and B



Schematic Nos 6042-B8d


Schematic No. 6043 -A


Complete Connection Diagram furnished with each Inter-phone
Inter-phones and Accessories
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## Page 9 <br> Western-Electric COMPANY

## INTER-PHONE SYSTEM NO. 15 (Continued)

## Battery Requirements

The following number of Blue Bell dry cells connected in series will be required for the lengths of line and number of Inter-phone sets listed below.

| Number of Inter-phone Sets | 2 |  |  |  | 3 |  |  |  | 4 |  |  |  | 5 |  |  |  | 6 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. |
| B. \& S. Gauge Copper Wire. . | 16 | 18 | 20 | 22 | 16 | 18 | 20 | 22 | 16 | 18 | 20 | 22 | 16 | 18 | 20 | 22 | 16 | 18 | 20 | 22 |
| Length of Line 250 Ft \% | 3 | ${ }_{3}$ | 3 |  | 3 |  |  |  | 8 |  | 3 | 3 |  |  | 8 | 4 | 3 | 3 | 3 | 51 |
| "، "، ${ }^{\text {a }}$ " 600 " | 3 | 3 |  |  | 3 |  | 3 | 5 | 8 | 3 | 4 |  |  | 4 | 5 |  | 3 | 4 |  |  |
|  | 3 <br> 3 | 3 3 3 | 3 4 4 | $\frac{4}{5}$ | 3 3 3 | 3 | 4 |  | 3 4 4 |  |  |  | 3 | 5 |  |  | 4 |  |  |  |
| "، ، " 1250 ، | 3 | 3 |  |  | 3 |  |  |  | 4 |  |  |  | 5 |  |  |  |  |  |  |  |
| " " " 1500 " | 3 | 3 | 5 |  | 4 | 5 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Note.-Only one string of cells is required in any case.

## Connection Diagrams-Wall and Desk Sets



Note.-When two sets are installed, connect up as shown by full lines. If additional sets are installed, run a wire to all L4 terminals, as shown by dotted line. In wall sets, disconnect slate flexible connectors from L2 and connect to L4, and in desk type sets disconnect red cord conductor from L2 at the terminal block and connect to L4, in all sets except the retardation coil set; in the retardation coil set remove the strap wire between terminals 4 and 7 in the desk stand. Or if a wall set, cut strap wire between terminals L4 and L5. See above connection diagram of No. 1327-S wall sets.

Complete Connection Diagram furnished with each Inter-phone
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Inter-phones and Accessories

## Page 10 <br> Western-Elertric COMPANY

INTER-PHONE SYSTEM NO. 15 (Continued)
Connection Diagrams-Hand Sets TWO STATIONS ONLY-Flush Type


Non-Flush Type


## INTER-PHONE SYSTEM NO. 11 <br> Selective Ringing, Common Talking

Instruments are furnished in 4- and 8-button sizes, having capacities of 5- and 9 -stations respectively. Three common wires and one individual wire for each station are necessary. One station, located preferably near the center of the system, must have a retardation coil. One set of batteries is required, which must be connected to the system through this retardation coil station.

## WALL SETS

No. 1327 type. These are compact instruments, having golden oak cabinets with nickel trimmings $5 \frac{4}{4}$ inches wide by $6 \frac{1}{8}$ inches long by $31 / 4$ inches deep. Equipped with 1 No. 179-W receiver, 1 No. $394-\mathrm{W}$ transmitter, 1 No. $360-2 \frac{1}{2} \mathrm{ft}$. receiver cord, and I No. 101398 bell. In addition to the above equipment, the battery station instruments Nos. 1327-J and -L are equipped with 1 No. 51-C retardation coil.

|  | ity | Use | $\text { ist } \operatorname{Pr}$ |
| :---: | :---: | :---: | :---: |
| 1327 -J. | 4-buttons | Battery station only. | \$8.25 |
| 1327-K | 4-buttons | Non-battery stations onl | 7.90 |
| 1327-L | 8-buttons | Battery station only | 00 |
| 1327-M | 8 -buttons | Non-battery stations | 8.65 |

No. 1339 type. A flush mounting metal case instrument, face plate regularly finished in brush brass. Metal wall box is included.
Equipped with 1 No. 180-W receiver, 1 No. 294-W transmitter, 1 No. $360-2 \frac{1}{2}-\mathrm{ft}$. receiver cord, and 1 No. 101400 bell. In addition to the above equipment, the battery station instruments Nos. 1339-B and -D are equipped with 1 No. 51-C retardation coil.

Size of face plate:
4-button- $5 \frac{1}{16}$ in. wide by $8 \frac{1}{16}$ in. long
8 -button- $5 \frac{1}{16}$ in. wide by $9_{1}^{\frac{3}{0}} \mathrm{in}$. long
Size of wall box: 4 -button- 311 in. wide by $65 / 8$ in. long by $23 / 8$ in. deep 8 -button- $3 \frac{18}{18} \mathrm{in}$. wide by $73 / 4 \mathrm{in}$. long by $23 / 8 \mathrm{in}$. deep

Battery station. .....
Non-battery stations.
Battery station. .....

Non-battery stations.

## DESK SETS

No. 6034 type. These desk Inter-phones consist of 1 No. 8 type connecting block, 1 No. 11-B bell, and a standard black finish desk stand with ringing buttons in the base, equipped with 1 No. 179-W receiver, 1 No. $302-\mathrm{W}$ transmitter, 1 No. $535-3 \mathrm{ft}$. receiver cord, 1 No. $494-91 / 2$ in. transmitter cord, 1 No. $466-101 / 2$ in. transmitter cord, and 1 No. $495-6 \mathrm{ft}$. 2 conductor cord. In addition the No. 1020-AS 4-button stand is equipped with 1 No. 497-6 ft. 5 conductor corcl, and the No. 1020-AT 8 -button stand with 1 No. 496-6 ft. 9 conductor cord.

|  | Capacity | Desk Stand | Retard. Coil | Connecting Block | Use | List Price Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6034-R | 4-b | 1020-AS | 51-E | 8-E Battery station only . $\$ 11.90$ |  |  |
| -M | 4-b | 1020-AS |  |  |  |  |
| $6034-\mathrm{N}$ | 8-button | 1020-AT | 51-E | 8-F Bat | stati | 55 |
| $6034-\mathrm{P}$ | 8 -button | 1020-AT |  | $8-\mathrm{F}$ Non |  | 12 |



No. 6034-N Desk Set


Complete Connection Diagram furnished with each Inter-phone


## HAND SETS

These consist of 1 No. 1003-K hand set, with 1 No. 477-3 ft. cord, 1 No. 141-A switch hook, 1 No. 8 type connecting block, No. 11-B bell, either one 4 or 8 -button push button block with 1 - 6 - ft. connecting cord, and, in the case of the battery stations, with 1 No. 51-E retardation coil.

| No. 6034-BA |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Code No. | Capacity | Push Button Block | Connecting Cord 6 ft . | Retardation Coil | Use | List Price Each |
| 6034 -AY | 4-button | No. 111072 | No. 431 | No. 51-E | Battery station only . | \$10.20 |
| 6034-AZ | 4-button | No. 111072 | No. 431 |  | Non-battery station only | 9.50 |
| 6034-BA | 8-button | No. 111073 | No. 432 | No. 51-E | Battery station only | 11.75 |
| $6034-\mathrm{BB}$ | 8-button | No. 111073 | No. 432 |  | Non-battery station only. | 11.20 |

## Battery Requirements

Four to five Blue Bell dry cells are required when the wire distance between the two sets farthest apart is 750 feet or less, and the line wire composed of No. $22 \mathrm{~B} . \& \mathrm{~S}$. gauge copper conductors. On lines of greater length it is recommended that instead of increasing the number of battery cells to more than 5 , larger wire be used as follows:
$750-1000$ feet-No. 20 B. \& S. Sauge
1000-1500 feet-No. 18 B. \& S. gauge
$1500-2500$ feet-No. 16
B. \& S. gaugge

Connecting Diagrams and Schematics


1st Operation: Connect the cable conductors exactly the same at all stations.
2nd Operation: Then reverse the wires connected to terminals marked H and 1 at station $1 ; \mathrm{H}$ and 2 at station $2 ; H$ and 3 , at station 3, etc., up to the last station where no changes should be made.
Complete Connection Diagram furnished with each Inter-phone
Inter-phones and Accessories

## INTER-PHONE SYSTEM NO. 12

## Master and Outlying Stations

Intended for schools, mercantile establishments, etc., where it is desired to call and be called from a central point, or master station. The master station can call any of the outlying stations selectively, or the outlying stations can call the master station, but cannot call each other. Three common and one individual conductors are required between the master station and the outlying stations. Only one set of batteries is required, which must be located near the master station.

## MASTER WALL SETS

No. 1327 Type. These are compact instruments having golden oak cabinets with nickel trimmings, and measure $53 / 4$ inches wide by $67 / 8$ inches long by $31 / 4$ inches deep.
Equipment includes 1 No. 179-W receiver, 1 No. 294-W transmitter, 1 No. $360-21 / 2$ foot receiver cord, 1 No. 101398 bell and 1 No. $51-\mathrm{C}$ retardation coil.

> Code No.
> $1327-W$
> $1327-Y$

Capacity<br>4 buttons<br>8 buttons

List Price
Each
$\$ 8.25$
8.00

No. 1339 Type. A flush mounting metal case instrument with face plate regularly finished in brush brass. Metal wall box is included.
Size of face plate: 4 button, $5 \frac{1}{10}$ inches wide by $8 \frac{1}{16}$ inches long.
8 button, $5 \frac{1}{16}$ inches wide by $9 \frac{3}{16}$ inches long.
Size of wall box: 4 button, $34 \frac{1}{6}$ inches wide by $65 / 8$ inches.ilong by $23 / 8$ inches deep.
8 button, $31 \frac{1}{6}$ inches wide by $73 / 4$ inches long by $23 / 8$ inches deep.
Equipped with 1 No. 180-W receiver, 1 No. 294-W transmitter, 1 No $360-21 / 2$ foot receiver cord, 1 No. 101410 bell and 1 No. $51-\mathrm{C}$ retardation coil.
Code No.
1339-F
$1339-G$

## Capacity <br> 4 buttons <br> 8 buttons

List Price
Each
$\$ 11.70$
1339-G
14.70

No. 1324 Type. A non-flush metal set having a hinged front and adjustable transmitter. Black finish with nickel trimmings. Made only. in the 12 -button size. Size of cabinet 10 inches long by $63 / 8$ inches wide by $31 / 8$ inches deep.

Equipped with 1 No. 143-AW receiver, 1 No. 303-W transmitter, 1 No. 10-3 foot receiver cord, 1 No. 101398 bell, and 1 No. 5l-C retardation coil.
List Price
Each
$\$ 13.95$

No. 1325 Type. A flush mounting metal set having a hinged front, adjustable transmitter and separable wall box. Black finish with nickel trimmings. Made only in the 12 -button size.
Size of face plate: 10 inches long by $63 / 8$ inches wide. Size of wall box: $8 \frac{11}{16}$ inches long by 5 inches wide by $25 / 8$ inches deep.
Equipped with 1 No. 143-AW receiver, 1 No. 303-W transmitter, 1 No. 419-21/2 foot receiver cord, 1 No. 101398 bell, and 1 No. $51-C$ retardation coil.
Code No.
1324-J
Capacity
12 buttons


No. 1339-G. Master Wall Set


No. 1324-J. Master Wall Set


No. 1325-M. Master Wall Set

Code No.
1325-M

Capacity
List Price
Each
$\$ 13.95$
12 buttons

## Complete Connection Diagram f

## Westorn-Elertric COMPANY

## INTER-PHONE SYSTEM NO. 12 (Continued)



No. 6034-Type. Desk Set

MASTER DESK SETS


No. 6016-R. Desk Set
No. 6034 Type. These master desk instruments consist of 1 No. 8 type connecting block, 1 No. 11B bell, 1 No. $51-\mathrm{E}$ retardation coil and a standard black finish desk stand with ringing buttons in the base, equipped with 1 No. 179-W receiver, 1 No. 302-W transmitter, 1 No. $495-6$ foot two-conductor cord, 1 No. 360-3 foot receiver cord. In addition the stands are equipped with a 6 foot line cord, having 5 or 9 conductors respectively.

|  |  |  | Connecting | ${ }_{6}$ Foot | List Price |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Code No . | Capacity | Desk Stand | Block | Line Cord | Each |
| 6034-L | 4 buttons | 1020-AS | 8-E | 497-5 conductor | \$11.90 |
| 6034-S | 8 buttons | 1020-AT | 8-F | 496-9 conductor | 13.55 |




No. 6016-AA


Schematic

No. 6016 Type. This type consists of 1 No. 328-J-12button metal key box equipped with 1 No. 51-C retardation coil and 1 No. 360116 buzzer. 1 No. 1120-AH black finish desk stand equipped with 1 No. 143-AW receiver, 1 No. 302-W transmitter, 1 No. 406- 6 foot desk stand cord, and 1 No. 389-21/2 foot receiver cord. Made only in the 12 -button

| size. | Code No. | Capacity | List Price Each |
| :---: | :---: | :---: | :---: |
|  | $6016-\mathrm{R}$ | 12 Buttons | $\$ 16.50$ |

## MASTER HAND SETS

## Code Niv.

## Description

List Price
$6034-B C$ Four button. Consists of: 1 No. 1003-K Each
hand set, 1 No. 8-E connecting block, 1
No. 51-E retardation coil, 1 No. 111072 push button block, 1 No. 4316 -foot cord, 1 No. 11B vibrating bell, 1 No. 141-A switch hook.
$6034-\mathrm{BD}$ Eight button. Consists of: 1 No. 1003-K hand set, 1 No. 8-F connecting block, 1 No. 51-E retardation coil, 1 No. 111073 push button block, 1 'No. 432 6 -ft. cord, 1 No. 11B vibrating bell, 1 No. 141-A switch hook
6016-AA Twelve button. Consists of: 1 No. 328-J 12-button metal key box containing 1 No. 360116 buzzer, 1 No. 51-C retardation coil and terminals, 1 No. 1003-K hand set, and 1 No. 141-A switch hook.

Complete Connection Diagram furnished with each Intrr-phone

## INTER-PHONE SYSTEM NO. 12 (Continued)

## OUTLYING WALL SET STATIONS

Code No.
1327-U

A flush mounting metal case instrument, face plate regularly finished in brush brass. Metal wall box is included. Equipment consists of 1 No. 180-W receiver, I No. 294-W transmitter, 1 No. 360-21/2 foot receiver cord and 1 No. 101400 bell. Size of face plate $5 \frac{1}{10}$ inches wide by $8 \frac{1}{16}$ inches long. Size of wall box $3 \frac{1}{16}$ inches wide by $65 / 8$ inches long by $23 / 8$ inches deep.

## OUTLYING DESK SET STATIONS

Consists of a No. 318-J desk set box equipped with a No. 1001-A push button and 1 No. 101399 bell. 1 No. 1320-BF black finish desk stand equipped with 1 No. 143-AW receiver, 1 No. 302-W transmitter, 1 No. 406-6 foot desk stand cord, 1 No. 412-21/2 foot receiver cord.

6034-AP Consists of a No. 1020-BG black finish desk stand with ringing button in the stem, signal buzzer in the base and equipped with 1 No. 179-W receiver, 1 No. 302-W transmitter, 1 No. 433-6 foot desk stand cord, 1 No. 360-3 foot receiver cord, and two connecting blocks
$\$ 9.85$
List Price
Each.
List Price Each
$\$ 5.00$


No. 1339-H. Wall Set
10.65


No. 6015-L. Desk Set


No 6034-AP. Desk Set


Complete Connection Diagram fu

## Page 16 <br> Westorn Electric COMPANY

INTER-PHONE SYSTEM NO. 12 (Continued) OUTLYING HAND-SET STATIONS


No. 6042-E

Flush Type

| Code No. | Description | List Price Each |
| :---: | :---: | :---: |
| 6042-E | Consists of 1 No. 382-E apparatus unit, containing 1 |  |
|  | push button, 1- 15-ohm buzzer, jack and line |  |
|  | terminals, and 1 No.1003-G hand set (equipped with |  |
|  | 1 No. 142 plug) | \$9.30 |



No. 6042-E


No. 6043-E

6042-K Same as No. 6042-E, but complete with 1 No. 12007 H \& H face plate (brush brass), size $41 / 2^{\prime \prime} \times 23 / 4^{\prime \prime}$, and 1 No. 110985 wall box, size $2^{\prime \prime} \times 3^{\prime \prime} \times 3^{\prime \prime}$ deep

Noxe.-The No. 1003-G hand-set is equipped with a cord and plug, allowing it to be carried from room to room. This allows the number of hand-sets to be less than the number of apparatus boxes, should the service warrant this condition, and thus lessen the cost of the equipment.


## Non-Flush Type

Code No.
Description

## List Price

6043-E Consists of 1 No. 383-E apparatus box, containing 1 15-ohm buzzer and line terminals, and 1 No. 1003-J band-set
$\$ 8.45$

## Battery Requirements

Three to five Blue Bell dry cells are required on lines up to 750 feet composed of No. 22 B. \& S. gauge copper wire. 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 as follows:

| $750-1000$ | feet-No. 20 | B. \& S. gauge |
| :--- | :--- | :--- |
| $1000-1500$ feet-No. 18 | $"$ | $"$ |
| $1500-2500$ | feet-No. 16 | $"$ |

[^1]INTER-PHONE SYSTEM NO. 12 (Continued)

## Connection Diagrams and Schematic

WALL AND DESK SET STATIONS


- Sciematic: of System No.:12-


HAND SET STATIONS


## INTER-PHONE SYSTEM NO. 1

## General

For general use where a high grade of intercommunication is desired, System No. 1 is recommended. It permits of any station calling any other, and is absolutely non-interfering. That is to say, as many conversations can be carried on at one time as there are pairs of stations, without any conversation interfering with another. All Inter-phones listed under this system are suitable for either "full metallic" or "common return" wiring. We recommend "full metallic" because of its absolute freedom from cross-talk. There can be as many stations in the system as there are buttons on the Inter-phone sets. No extra button is required for ringing, because each button, when depressed to its extreme position, puts ringing current on the line.

Note.-For cabling of a typical Inter-phone system, see page 21.

## Wiring

The wiring consists, in full metallic circuits, of 2 No. $22 \mathrm{~B} . \& \mathrm{~S}$. gauge wires for each station, plus 4 No. 16 B. \& S. gauge battery wires for the system.

In common return circuits the wiring consists of 1 No. $22 \mathrm{~B} . \& \mathrm{~S}$. gauge wire for each station plus 3 No. 16 B. \& S. gauge battery wires for the system.

For example: A 12-station metallic circuit system requires 24 No. 22 B. \& S. gauge and 4 No. 16 B. \& S. gauge wires.

A 12-station common return system requires 12 No. 22 B. \& S. gauge and 3 No. 16 B. \& S. gauge wires.

We carry a full line of cable for system No. 1. For information see-page 38.

## WALL SETS

No. 1324 Type. An all metal set having a hinged face m movable $^{2}$ transmitter and hand receiver. Black finish with nickel trimmings. Furnished in 6 and 12-button capacities only.


No. 1325 Type. Wall Set

Equipped with 1 No. 143-AW receiver, 1 No. 311-W transmitter, 1 No. 101398 bell, 1 No. 10- 3 foot receiver cord and 1 No. 51-C retardation coil.

Size of case, $63 / 8$ inches wide by 10 inches long by $31 / 8$ inches deep.

|  |  | Cist Price |
| :--- | :---: | :---: |
| Code No. | Capacity | Each |
| $1324-\mathrm{A}$ | 12 buttons | $\$ 18.70$ |
| $1324-\mathrm{F}$ | 6 buttons | 16.45 |

No. 1325 Type. A flush mounting, all metal set, having hinged face, movable transmitter and hand receiver. Black finish with nickel trimmings. Wall box is metal, detachable and suitable for terminating conduit during construction of building. Made only in 6 and 12 -button capacities.

Equipped with 1 No. 143-AW receiver, 1 No. 311-W transmitter, 1 No. 101398 bell, 1 No. 10- 3 foot receiver cord and 1 No. 51-C retardation coil.

Size of face plate, $63 / 8$ inches wide by 10 inches long.
Size of wall box, 5 inches wide by $8 \frac{17}{10}$ inches long by $25 / 8$ inches deep.

|  |  | List Price |
| :--- | :---: | :---: |
| Code No. | Capacity | Each |
| $1325-A$ | 12 buttons | $\$ 18.70$ |
| $1325-\mathrm{F}$ | 6 buttons | 16.45 |

Complete Connection Diagram furnished with each Inter-phone Inter-phones and Accessories

## INTER-PHONE SYSTEM NO. 1 (Continued)



No. 1355 Type. Wall Set


Interior of No. 1355 Set

## WALL SETS

No. 1355 Type. A flush mounting, all meial set, having a hinged face, adjustable transmitter ${ }_{i}{ }^{\text {rand }}$, standard hand receiver. Black finish with nickel trimmings. Wall box is metal, detachable and suitable for terminating conduit during construction of building. Made in 16,20 , and 24 , button capacities.

Equipped with 1 No. 143-AW receiver, 1 No. 311-W transmitter, 1 No. 101398 bell, 1 No. 10- 3 foot receiver cord and 1 No. 51-C retardation coil.
Size of face plate, $67 / 8$ inches wide by $141 / 2$ inches long.
Size of wall box, $5 \frac{1}{4}$ inches wide by $127 / 8$ inches long by $3 \frac{1}{3}$ inches deep.
Code No.
$1355-\mathrm{A}$
$1355-\mathrm{E}$
$1355-\mathrm{F}$
Capacity
16 buttons
20 buttons
24 buttons
List Price
Each
$\$ 24.40$
26.25
28.15

No. 1349 Type. The case is golden oak with black and nickel trimmings. Transmitter is mounted flush. Furnished in 6, 12, 16,20 , and 24 line capacities.

Equipped with 1 No. 143-AW receiver, 1 No. 325-W transmitter, 1 No. 101398 bell, 1 No. 178-3 foot receiver cord and 1 No. 51-C retardation coil.


No. 1349 Type. Wall Set

Size of cabinet: 6 and 12-line capacity, $65 / 8$ inches wide by
$93 / 4$ inches long by 4 inches"deep.
Size of cabinet: 16,20 , and 24 -line size, $75 / 8$ inches wide by $131 / 4$ inches long by 4 inches deep.

| Code No. | Capacity | List Price |
| :--- | :---: | :---: |
| Each |  |  |
| $1349-\mathrm{A}$ | 6 buttons | $\$ 15.75$ |
| $1349-\mathrm{E}$ | 12 buttons | 18.00 |
| $1349-\mathrm{F}$ | 16 buttons | 21.40 |
| $1349-\mathrm{G}$ | 20 buttons | 23.25 |
| $1349-\mathrm{H}$ | 24 buttons | 25.15 |



Complete Connection Diagram furnished with each Inter-phone

## Page 20 <br> Western-Elestric COMPANY

INTER-PHONE SYSTEM NO. 1 (Continued)
DESK SETS

No. 6016 Type. Consists of a No. 328 type metal key box finished in black with nickel trimmings equipped with 1 No. 360116 buzzer and 1 No. 5l-C retardation coil; 1 No. 1120-BE black finish


No. 6016-K. Desk Set desk stand, equipped with 1 No. 329-W transmitter, 1 No. 143-AW receiver, 1 No. 231-6 foot desk-stand cord, and 1 No. 196-21/2 foot receiver cord. Cable can enter the key box from underneath or from either end. Made in 6, 12, 16, 20, and 24 -line capacities.

|  |  |  | List Price |
| :---: | :---: | :---: | :---: |
| Code No. | Capacity | Key Box | Each |
| $6016-\mathrm{K}$ | 12 buttons | $328-\mathrm{A}$ | $\$ 19.70$ |
| $6016-\mathrm{L}$ | 24 buttons | $328-\mathrm{E}$ | 27.40 |
| $6016-\mathrm{M}$ | $; 6$ buttons | $328-\mathrm{F}$ | 17.25 |
| $6016-\mathrm{N}$ | 16 buttons | $328-\mathrm{G}$ | 23.65 |
| $6016-\mathrm{P}$ | 20 buttons | $328-\mathrm{H}$ | 25.50 |

Size of Key Box
Size of key box: 6 and 12-button, 5 inches wide by $71 / 2$ inches long by $25 / 8$ inches deep. Size of key box: 16,20 , and 24 button, $51 / 4$ inches wide by $103 / 4$ inches long by $25 / 8$ inches deep.

## HAND SETS

If it is desired to use a hand set instead of the standard desk stand furnished with the above No. 6016 sets, either the No. 1001-J or 1002-D Hand Sets described on page 39 can be used.

In the majority of cases the No. 1001-J will be found praferable and is recommended.

no $328 . a$ Sub. Set diagram of Connections


Complete Connection Diagram furnished with each Inter-phone nter-phones and Accessories

(panu!̣uo) $\mathfrak{I}$ •ON WGLSAS GNOHd-YGLNI

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Western Elestric COMPANY

INTER-PHONE SYSTEM NO. 1 (Continued)


Complete Connection Diagram furnished with each Inter-phone
Inter-phones and Accessories

## Page 23 <br> Western-Elestric COMPANY

## INTER-PHONE SYSTEM NO. 4

## With Connections for Secret Service

System No. 4 is a modification of system No. 1, which allows of an absolutely secret line between any two stations. It involves the use of a retardation coil, No. $51-\mathrm{C}$ (see page 40), for each secret line installed. The capacity of each set having secret service is reduced one button for each secret line.


Connection for Secret Service between Two Inter-phone Stations

## Superintendent's Call

System No. 1 is often used in conjunction with loud-ringing bells, so that a general call can be sent out which will notify certain persons to come to the nearest Inter-phone station. A vacant button may be used at any station for this purpose, or if there are no unused buttons, an ordinary push button can be installed.


Connections for Superintendent's Call Equipment used in Conjunction with an Inter-phone System
Complete Connection Diagram furnished with each Inter-phone

## Page 24 <br> Western Elestric COMPANY

## APARTMENT HOUSE INTER-PHONES <br> Systems No. 7, 8, 9 and 10

## INTRODUCTORY

At the present time two different methods of communicating between the vestibule and suites of apartment houses are in use, the first being the speaking tube and the second the telephone. Between the two there is everything to be said in


No. 1362. Vestibule Inter-phone with Letter Boxes favor of the telephone. Speaking tubes are antiquated because they are unsanitary, unflexible, and un-economical in the long run. The speaking tube does not have one advantage over the telephone for apartment house intercommunication, and the time will come very shortly when speaking tubes will be only a remembrance to architects and builders of apartment houses.
General Information. The telephone systems described herein are designed for use in all apartment buildings in which branch exchange telephone switchboards cannot be installed for economic reasons. The systems throughout are planned with the utmost care so that the actual work of installing is reduced to a minimum, and the telephone sets are of neat and attractive design.
The following points are pertinent in their application to apartment house service:

1. The Apartment House Inter-phone System removes the necessity for a hall boy. It is always on the job night or day, and its up-keep is insignificant in comparison with the hall boy's wages.
2. The Apartment House Inter-phone System takes the place of speaking tubes. It does all that speaking tubes can possibly do and in addition is perfectly flexible so that it can be added to with no inconvenience, and is sanitary and economical in the long run. Its cost of installation as compared to the cost of installing a speaking tube system of similar comprehensiveness is much less and the appearance of the vestibule is better.
3. The circuits of Western Electric Apartment House Inter-phone Systems are especially adapted to this class of work, the talking current being fed separately through retardation coils at the janitor's, tradesmen's and vestibule Inter-phone sets. The retardation coils are bridged by condensers so that the transmission circuits are perfect. There will not be the least interference in conversations taking place simultaneously between each of the three master stations and three different apartments.
4. A door opener button, in addition to a janitor button, is provided on the Suite Wall Sets, and the circuits are so arranged that the regular telephone ringing battery can be used for operating the door opener, thus eliminating a set of batteries which would otherwise be required.
5. Only two individual wires are required to each apariment and one common wire throughout the system.
6. One Janitor's Equipment can be made to serve any number of vestibules and apartments up to a sum total of seventy, that is to say, if the same janitor serves several buildings, each having one or more vestibule entrances, or one building having several vestibule entrances, but one Janitor's Equipment is required for the whole system.
7. With each telephone set, a complete wiring diagram is furnished.
8. All telephone sets and all accessories necessary for the complete installation are provided with screw connections so that an entire system can be installed without the use of a soldering iron.

## APARTMENT HOUSE SYSTEMS

Apartment House Inter-phones are furnished in four different systems as follows:
System No. 7-Provides service between the vestibule and the apartments.
Systm 8 -Provides service betibule and the apartments.
System No. 8-Provides service between the vestibule and the janitor. apartments and the janitor. (vestibule and the apartments. vestibule and the japitor. apartments and the janitor. tradesmen and the apartments.
System No. 10-Provides the same service as system No. 9, but on a larger scale.
The systems are flexible, being adapted to expansion from one system into another without making any changes in the apparatus other than supplying additional equipment. Electric door openers can be supplied for any system to be operated by a push button on the suite sets.

Complete Connection Diagram furnished with each Inter-phone
Inter-phones and Accessories. 24

# APARTMENT HOUSE INTER-PHONES 

## Systems No. 7, 8, 9 and 10 (Continued)

## NON-FLUSH SUITE WALL SETS

Compact golden oak wall sets arranged with either one or two buttons, as desired. The two-button sets have the buttons marked "Jan." and "Door." The one-button sets are unmarked.

Equipped with 1 No. 179-W receiver, 1 No. 294-W transmitter, 1 No. 101319 bell and 1 No. $360-21 / 2$ foot receiver cord.

Size of cabinet, $53 / 4$ inches wide by $67 / 8$ inches long by $31 / 4$ inches deep.
Code No.

1327-N



No. 1327-N. Suite Sets

## FLUSH SUITE WALL SETS

Flush mounting metal sets finished regularly in brush brass. Metal wall box is a part of the set. Arranged with either one or two buttons.

Equipped with 1 No. $180-\mathrm{W}$ receiver, 1 No. 294-W transmitter, 1 No. 101400 bell, and 1 No. $360-21 / 2$ foot receiver cord.

Size of face $5 \frac{1}{10}$ inches wide by $8 \frac{1}{10}$ inches long. Size of wall box 3 HE inches wide by $65 / 8$ inches long by $23 / 8$ inches deep. See page 29 for method of mounting.

| Code No. | Capacity | List Price Each |
| :---: | :---: | :---: |
| 1339-A | 2 buttons (marked "Jan." and "Door") | \$9.75 |
| 1339-R | 1 button (unmarked) | 9.00 |

## SUITE DESK SET

## Code No.

## Description

List Price

6034-AW
Consists of a No. 1520-BG black finish desk stand with push button in the stem and buzzer in the base, equipped with 1 No. 179-W receiver, 1 No. 302-W transmitter, 1 No. 433- 6 foot desk stand cord, 1 No. 360-3 foot receiver cord and 2 connecting blocks. Only one push button is furnished and is unmarked


No. 1339-A. Suite Set . 00


No. 6034-AW. Suite Set


Schematic No. 6034-AW


Schematic. No. 1327-N \& 13J $3-A$

Complete Connection Diagram furnished with each Inter-phone

# APARTMENT-HOUSE INTER-PHONES 

## Systems No. 7, 8, 9 and 10 (Continued)

## SUITE HAND SETS



No. 6042-L


No. 6043-G

## No. 6043-C

The flush sets are either equipped with one or two ringing buttons. If equipped with one, this ringing button is in the apparatus unit and can be used for either calling the janitor or operating the electric door opener. A separately mounted push button can also be used with this set as described above. If equipped with two buttons, the one in the hand set is used for operating the door opener, and the one in the apparatus unit for calling the janitor.

It should be noted that the non-flush sets are provided with only one ringing button, which can be used for either calling the janitor or operating the electric door opener. When two ringing buttons are required with the non-flush set, a separate push button, such as our List No. 97675 (page 40), must be used.

## FLUSH TYPE <br> One Ringing Button

| Code No. | Description | List Price |
| :---: | :---: | :---: |
| 6042-G Consists of: | 1 No. 382-G Apparatus Unit, containing 1 |  |
|  | minals; 15 -ohmzer, 1 push button and line ter- |  |
|  | 1 No. 1003-C Hand Set. . . . . . . . . . . . . . . . . . | \$8.10 |

6042-L Same as No. 6042-G, but complete with
1 No. 110985 Wall Box, size $2^{\prime \prime} \times 3^{\prime \prime} \times 3^{\prime \prime}$ deep;
1 No. 12007 Brush Brass "H. \& H." Face Plate, size $41 / 2^{\prime \prime} \times 234^{\prime \prime}$.

## Two\Ringing Buttons

6042-U Same as No. 6042-G, but with
1 No. 1003-T Hand Set instead of the No.
1003-C Hand Set
6042-W Same as No. 6042-U, but complete with
1 No. 110985 Wall Box, size $2 " \times 3^{\prime \prime} \times 3$ " deep;
1 No. 12007 Brush Brass "H. \& H." Face
Plate, size $41 / 2^{\prime \prime} \times 234^{\prime \prime} \ldots . .$. ................. 9.30

6043-G Consists of: $\quad 1$ No. 383-G Apparatus Box, containing 1 15-ohm buzzer and line terminals; 1 No. 1003-P Hand Set


Connection Diagrams and Schematics


Complete Connection Diagram furnished with each Inter-phone
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Inter-phones and Accessories

## [Page 27 <br> Western-Elertric COMPANY

## APARTMENT ${ }^{\text {i }}$ HOUSE INTER-PHONES Systems No. 7, 8, 9 and 10 (Continued) VESTIBULE SET

No. 1362 Type. Flush mounting, brush brass finish vestibule set, equipped with 1 No. 180-W receiver, 1 No. 294-W transmitter, 1 No. $360-21 / 2$ foot receiver cord.
Furnished as listed below in $7,13,17,21$, and 25 -button sizes. (The odd'button is for janitor's line.) Intermediate sizes can be furnished on order at the price of the nearest larger size.

The 7 and 13-button vestibule sets are designed to mount alongside of a group of two-nest letter boxes (No. 12013, page 29).

The 17,21 and 25 -button sets are designed to mount alongside of a group of four-nest letter boxes (No. 116937, page 29).
Size of face plate:
7 and 13 -button sets, $75 / 8$ inches wide by $11 \frac{3}{16}$ inches long.
17,21 , and 25 -button sets, $75 / 8$ inches wide by $161 / 8$ inches long. Size of wall box:

7 and 13 -button sets, $51 / 4$ inches wide by $83 / 4$ inches long by $3 \frac{1}{3}$ inches deep.
17, 21 , and 25 -button sets, $51 / 4$ inches wide by $127 / 8$ inches long by 3 㗔 inches deep.
Code No.
1362-G
$1362-\mathrm{H}$
$1362-\mathrm{D}$
$1362-\mathrm{E}$
$1362-\mathrm{F}$
Capacity
7 buttons
13 buttons
17 buttons
21 buttons
25 buttons
List Price
Each
$\$ 24.50$
27.50
30.00
32.95
35.85

## JANITOR'S SET

No. 1350 Type. Golden oak cabinet with nickel and black trimmings.
Equipped with 1 No. 179-W receiver, 1 No. 294-W transmitter, 1 No. $360-21 / 2$ foot receiver cord and 1 No. 1-L resistance coil. No ringer is provided, as a bell is furnished with the annunciator which must be used with this set.

Furnished as listed below in 7, 13, and 25-button sizes only. (The odd button is for the vestibule line.)
Size of cabinet:
7 and 13 -button sets, $65 / 8$ inches wide by $93 / 4$ inches long by 4 inches deep. 25 -button set, $75 / 8$ inches wide by $131 / 4$ inches long by 4 inches deep.

| Code No. | Capacity |
| :--- | ---: |
| $1350-\mathrm{A}$ | 7 buttons |
| $1350-\mathrm{E}$ | 13 buttons |
| $1350-\mathrm{G}$ | $\mathbf{2 5}$ buttons |

List Prico
Each
$\$ 13.00$
15.25
19.75

## JANITOR'S ANNUNCIATOR

This annunciator is required to indicate to the janitor which line called. Furnished in oak as standard, but other finishes can be furnished on order at slight increase in price.

| Code No. | No. of <br> Drops | Arrangement of <br> Drops | List Price <br> Each |
| :---: | :---: | :---: | :---: |
| 361332 | 4 | 1 horizontal row | $\$ 4.20$ |
| 361333 | 6 | 2 horizontal rows | 5.55 |
| 361334 | 8 | 2 horizontal rows | 7.45 |
| 361335 | 10 | 2 horizontal rows | 8.75 |
| 361336 | 12 | 2 horizontal rows | 10.30 |
| 361337 | 15 | 3 horizontal rows | 12.70 |
| 361338 | 18 | 3 horizontal rows | 15.75 |
| 361339 | 25 | 5 horizontal rows | 21.00 |

Complete Connection Diagram furnished with each Inter-phone


No. 1362-Type. Vestibule Set


Inter-phones and Accessories

## APARTMENT: HOUSE INTER-PHONES <br> Systems No. 7, 8, 9 and 10 (Continued) vestibule set

No. 1362 Type. Flush mounting, brush brass finish vestibule set, equipped with 1 No. 180-W receiver, 1 No. 294-W transmitter, 1 No. $360-21 / 2$ foot receiver cord.
Furnished as listed below in $7,13,17,21$, and 25 -button sizes. (The odd'button is for janitor's line.) Intermediate sizes can be furnished on order at the price of the nearest larger size.

The 7 and 13 -button vestibule sets are designed to mount alongside of a group of two-nest letter boxes (No. 12013, page 29).

The 17, 21 and 25 -button sets are designed to mount alongside of a group of four-nest letter boxes (No. 116937, page 29).
Size of face plate:
7 and 13 -button sets, $75 / 8$ inches wide by $11 \frac{3}{16}$ inches long.
17,21 , and 25 -button sets, $7 \frac{1}{8}$ inches wide by $16 \frac{1}{8}$ inches long.
Size of wall box:
7 and 13-button sets, $51 / 4$ inches wide by $83 / 4$ inches long by $3 \frac{1}{32}$ inches deep.
17, 21 , and 25 -button sets, $51 / 4$ inches wide by $127 / 8$ inches long by $3 \frac{13}{32}$ inches deep.
Code No.
$1362-\mathrm{G}$
$1362-\mathrm{H}$
$1362-\mathrm{D}$
$1362-\mathrm{E}$
$1362-\mathrm{F}$
Capacity
7 buttons
13 buttons
17 buttons
21 buttons
25 buttons
List Price
Each
$\$ 24.50$
27.50
30.00
32.95
35.85


No. 1362-Type. Vestibule Set


Schemalic No's $1 J 62 \cdot$ DEEGsH

## JANITOR'S SET

No. 1350 Type. Golden oak cabinet with nickel and black trimmings. Equipped with 1 No. 179-W receiver, 1 No. 294-W transmitter, 1 No. $360-21 / 2$ foot receiver cord and 1 No. 1-L resistance coil. No ringer is provided, as a bell is furnished with the annunciator which must be used with this set.

Furnished as listed below in 7, 13, and 25-button sizes only. (The odd button is for the vestibule line.)
Size of cabinet:
7 and 13 -button sets, $65 / 8$ inches wide by $9 \frac{1}{2}$ inches long by 4 inches deep. 25 -button set, $75 / 8$ inches wide by $131 / 4$ inches long by 4 inches deep.

| Code No. | Capacity |
| :--- | ---: |
| $1350-\mathrm{A}$ | 7 buttons |
| $1350-\mathrm{E}$ | 13 buttons |
| $1350-\mathrm{G}$ | 25 buttons |

List Price
Each
$\$ 13.00$
15.25
19.75

## JANITOR'S ANNUNCIATOR

This annunciator is required to indicate to the janitor which line called. Furoished in oak as standard, but other finishes can be furnished on order at slight increase in price.

| Code No. | No. of <br> Drops |
| :---: | :---: |
| 361332 | 4 |
| 361333 | 6 |
| 361334 | 8 |
| 361335 | 10 |
| 361336 | 12 |
| 361337 | 15 |
| 3611338 | 18 |
| 361339 | 25 |

5 horizontal row

## APARTMENT HOUSE INTER-PHONES Systems No. 7, 8, 9 and 10 (Continued)

## JANITOR'S TELEPHONE SWITCHBOARD

In case one janitor must serve more than one vestibule, it is necessary to use this switchboard which combines the functions of the No. 1350 type set and the annunciator described on page 27. In other words, when there are several vestibule lines running to the janitor's equipment, this switchboard must be used. Number of vestibule drops must be specified.
Prices do not include Hand Set. See note.

| Code No. | No. of Drops | Arrangement of Drops | List Price Each |
| :---: | :---: | :---: | :---: |
| 1040 | 10 | 2 Horizontal Rows | $\$ 37.55$ |
| 1041 | 14 | 2 Horizontal Rows | 50.00 |
| 1042 | 18 | 2 Horizontal Rows | 57.00 |
| 1043 | 20 | 2 Horzontal Rows | 61.30 |
| 1044 | 24 | 2 Horizontal Rows | 73.35 |
| 1045 | 30 | 3 Horizontal Rows | 85.45 |
| 1046 | 36 | 3 Horizontal Rows | 102.50 |
| 1047 | 42 | 3 Horizontal Rows | 119.20 |
| 1048 | 48 | 4 Horizontal Rows | 136.30 |
| 1049 | 56 | 4 Horizontal Rows | 153.35 |
| 1050 | 60 | 5 Horizontal Rows | 164.20 |
| 1051 | 70 | 5 Horizontal Rows | 191.30 |

Note.-Hand Set No. 1002-E, page 39 or No. 1003-K, page 34, can be used with this annunciator and must be ordered separately.

## TRADESMEN'S SETS

Golden oak cabinet with nickel and black trimmings. No bell is provided, as the apartments will not want to call this station. Size of cabinet No. $1350-\mathrm{A}$ and E, $65 \%$ inches wide by $93 / 4$ inches long by 4 inches deep. Size of cabinet No. $1350-\mathrm{F}, 75 / 8$ inches wide by $13 \frac{1}{4}$ inches long by 4 inches deep. Furnished in 7, 13, and 24 button sizes.

List Price
Code No. Capacity

| Description | Each |
| :---: | :---: |
| See page 27. | \$13.00 |
| See page 27 | 15.25 |
| Equipment same as Nos. 1350-A |  |
| or E, except that the janitor's |  |
| button and No. 1-L resistance |  |
| coil are omitted | 19.00 |



Schematic Nos 1350 A $E_{B} G$.


Schematic No. $350-\mathrm{F}$


Complete Connection Diagram furnished with each Inter-phone
Inter-phones and Accessorles

## APARTMENT HOUSE INTER-PHONES Systems No. 7, 8, 9 and 10 (Continued)

 COIL AND CONDENSER BOXFurnished in golden oak only. One coil and condenser are required for each master station (vestibule, janitor, or tradesmen).


## LETTER BOXES

Two sizes of letter boxes can be furnished: No. 12013 (two nest) and No. 116937 (four nest).

The face plates of these boxes are finished in brush brass to match the vestibule set. They are suitable for mounting on either side of the vestibule set.

The 2 nest letter boxes are designed to mount alongside of the 7 and 13-button vestibule set.

The 4 nest letter boxes are designed to mount alongside the 17, 21 and 25 -button vestibule set.

For dimensions of letter boxes see pages 30 and 31.

## List No <br> 12013

116937
Capacity
2 nest
4 nest

## Battery Requirements

Two separate sets for Blue Bell dry cells are required: 1 set or talking and 1 set for ringing.

Use five Blue Bell dry cells for the talking battery in all cases.
For the ringing battery the following number of dry cells will be required when the distance from the battery to the farthest station does not exceed the lengths of line as listed below. This information is based on the use of standard inter-phone cable Nos. 164-150, page 38, or No. 19 B. \& S. gauge wire:
List Price
Each
$\$ 6.40$
12.80


No. 12013


No. 116937


Coil and Condenser Box

$$
100 \text { feet- } 3 \text { cells } \quad 300 \text { feet- } 5 \text { cells } \quad 500 \text { feof- } 6 \text { cells }
$$



Method of Mounting the No. 1339-A and $\mathbf{R}$ flush Suite Sets Complete Connection Diagram furnished with each Inter-phone

## Page 30 <br> Western Elestric <br> COMPANY

APARTMENT HOUSE INTER-PHONES
Systems No. 7, 8, 9 and 10 (Continued)
MOUNTING NO. $1362-D, E$ AND F SETS AND FOUR NEST LETTER BOXES


## APARTMENT HOUSE INTER-PHONES

Systems No. ${ }^{\circ}$ 7, 8, 9 and 10 (Continued)
MOUNTING NO. 1362 - G AND H SETS AND TWO NEST LETTER BOXES


FISM


TCI Library: www.telephonecollectors.info

## Page 32 <br> Westorn Electric COMPANY

CIRCUITS OF APARTMENT HOUSE INTER-PHONES Systems No. 7, 8, 9 and 10 (Continued)


System No. 7. Providing Service between Vestibule and Apartments


System No. 8. Providing Service between $\left\{\begin{array}{l}\text { Vestibule and Apartments } \\ \text { Vestibule and Janitor }\end{array}\right.$ Apartments and Janitor


- SYSTEM 9-
(Vestibule and Apartments $\left\{\begin{array}{l}\text { Vestibule and Janitor } \\ \text { Janitor and Apartments }\end{array}\right.$ Janitor and Apartments
Tradesmen and Apartments
Complete Connection Diagram furnished with each Inter-phone
Inter-phones and Accessories


HAND SETS
No. 1003 Type
See Page 35 for Cording and Circuit Information


Extension Cord


No. 488 Cord


CIRCUITS AND CORDING OF NO. 1003 TYPE HAND SETS


## Page 36 <br> Westorn Electric COMPANY

## MECHANICAL SIGNALING SYSTEMS

## General



No. 1-A. Signaling Set

APPLICATION. In every factory or manufacturing plant, it is often necessary to communicate immediately with the manager, superintendent or other executive who is not at his desk or within hearing range of his telephone bell at the moment.

In schools the principal, his assistant or the janitor are frequently wanted when they may be in any one of several places about the building.

In hospitals the house doctor or head nurse may be wanted in a hurry when they are on their rounds.

In prisons or asylums, the superintendent, warden, head keeper, or other official is apt to be suddenly wanted on an important matter.

To call the different telephones in the building or about the plant, one at a time, in order to locate the desired individual, or to send a messenger in case a telephone system is not a part of the equipment, frequently takes several minutes, but with a mechanical signaling system installed, the operator, clerk or other employee in the office or other central point reaches out and gives a turn to the key marked with the name of the individual wanted which instantly signals the person desired no matter where he may be.

DESCRIPTION. This signaling system consists of a number of bells or buzzers scattered about the plant and rung simultaneousy by a signaling set.

The signaling set consist of an oak cabinet in which is mounted a number of mechanical sending keys, each one designed (when started) to make and break an electric current supplied by a battery a different number of times and in different combinations, thus producing a predetermined set of code rings, such as three short, four short, one short, a pause and two short, etc.

By placing the bells in such locations that no matter where a person may be, he will always be within hearing distance of some one of them, and installing a signaling set equipped with as many keys as there are individuals in the organization who are frequently wanted on important matters, a call can be sent out for any one of them by turning the proper key. On hearing his call the person wanted steps to the nearest telephone and is in communication with the office in an incredibly short space of time.

Systems can be furnished with keys for sending out 4, 6 or 10 different

[Skeleton Type Rell signals, thus producing calling facilities for ten persons, which is usually all that average conditions require.

Mechanical signaling systems can be used alone or in the following combinations:

1. With Intercommunicating Telephone Systems. These signaling sets can be connected directly to Inter-phone system No. 1 without any_change in the wiring of the instruments, extra wire or special bells. In this case the regular bells on the instruments respond to the code signals simultaneously when any of the calling keys are set in motion.

In case, however, loud ringing bells are required, or bells in locations where telephones are not installed, it will be found more satisfactory to install this system independently of any other equipment as later described.
2. Independently. This system can be installed and operated entirely separate and apart from any other system, and requires only two wires for its operation. As many bells as desired can be connected and made to simultaneously sound any desired signal by turning the proper key.

When installed where a telephone system is not in use, with perhaps the exception of one located in the office or some other central point, the signals can be understood to mean that the called party is wanted at the office.

| Complete Connection Diagram furnished with each Inter-phone |  |  |
| :---: | :---: | :---: |
| Inter-phones and Accessories | 36 |  |

# Page 37 <br> <br> MECHANICAL SIGNALING SYSTEMS (Continued) 

 <br> <br> MECHANICAL SIGNALING SYSTEMS (Continued)}
3. With Private Exchange or Private Branch Exchange Telephone Systems. A mechanical signaling system, when installed in connection with telephone systems of this class, should be put in as a separate system without special regard for the location of the various telephone instruments, the object being rather to so locate the bells that they will be best heard from every nook and corner of the plant.

It will, of course, be found possible in some cases, where the telephone wires are carried in a cable, to use available spare wires, and the key cabinet can be mounted on or near the switcbboard if desired, where it will be convenient for the operator.

## Signaling Sets

The cabinets are made of golden oak, quarter-sawed. The face is metal finished in dull black with nickel trimmings. The sets are made only in 4 and 6 key sizes (each Ley providing a different signal), but they can be mounted side by side when 8 or 10 signals are required.

| Code | No. of <br> Nignals | Description | List Price, |  |
| :---: | :---: | :---: | :---: | :---: |
| Each |  |  |  |  |



No. 2-A. Signaling Set

Each of the above Code Signaling Sets may be ordered partially equipped. Deduct for each key omitted, list \$5.45.

## Coil, Condenser and Relay Boxes

With each Code Signaling Set a resistance coil and condenser box, No. $262-\mathrm{F}$, is required to prevent excessive sparking at the contacts. This box is_made of quarter-sawed oak to match the set.

A relay box is necessary under certain conditions, such as combining large and small bells or buzzers on the same line. This box contains a resistance coil and a condenser in addition to the relay. It is similar in appearance to the No. 262-F, and is known as the No. 262-G Relay Box.

## Code No.

Description

> List Price,

262-F Coil and
Condenser Box Used to prevent sparking at contacts............. $\$ 4.20$
262-G Relay Box Used to combine large and small bells.
7.50


No. 262-F.
Coil and Condenser Box

## Connection Diagrams

No Connection Diagrams are given for the reason that there are so many different signaling systems in which the Code Signaling Sets are applicable. We furnish, on application, detail information covering the use of these sets with Inter-phones and with large and small bells and buzzers in series and in multiple, If your requirements are stated, we will be very glad to work up a suitable signaling system and make you a quotation.

## Complete Connection Diagram furnished with each Inter-phone

## Page 38 <br> Western Elertric COMPANY

## INTER-PHONE ACCESSORIES



## Cable

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 fireproof 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.

Lead-covered cables are not listed with separate code numbers. Any fire-proofed type of cable may be ordered with a lead sheath.
: All cables are provided with a standard color scheme, so that each conductor can be distinguished from any other. The pairs are properly twisted to prevent inductive disturbances.

CABLES FOR SYSTEMS NO. 11 AND NO. 12

| Code No. | Conductors $\text { No. } 22 \text { B. \& S. }$ | Used with | Covering | Approx. Outside Dim. | $\begin{aligned} & \text { List Price } \\ & \text { Per } 100 \text { Feet } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 161 | 8 | 4 button system | Fire-proof Braid. | $\frac{3}{16}$ inch | \$5.25 |
| 161 (Lead) | 8 | 4 button system | Lead Sheath. | $\frac{5}{16}$ inch | 9.55 |
| 142 | 8 | 4 button system | Green Cotton Braid. | $\frac{5}{16}$ inch | 4.50 |
| 162 | 12 | 8 button system | Fire-proof Braid. | $\frac{1}{32}$ inch | 6.75 |
| 162 (Lead) | 12 | 8 button system | Lead Sheath. | 3/8 inch | 10.30 |
| 163 | 12 | 8 button system | Green Cotton Braid. | $\frac{25}{64}$ inch | 9.00 |

CABLES FOR SYSTEMS NOS. $1-4-7-8-9-10$


Complete Connection Diagram furnished with each Inter-phone
Inter-phones and Accessories

## INTER-PHONE ACCESSORIES

## 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 | Capacity |  |  | List Price <br> No. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| in Pairs | Length | Width | Depth | Each |  |
| 19-A | 14 | 8 in. | $51 / 8 \mathrm{in}$. | $21 / 2$ in. | $\$ 2.30$ |
| 19-B | 26 | 14 in. | $51 / 8 \mathrm{in}$. | $21 / 2$ in. | 3.00 |



## Connecting Blocks

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

| Code <br> No. | Capacity <br> in Pairs | Length | Width | List Price <br> Each |
| :---: | :---: | :---: | :---: | ---: |
| 6-A | 7 | $55 / 8$ in. | $17 / 8$ in. | 8.53 |
| 6-B | 11 | $85 / 8$ in. | $17 / 8$ in. | .71 |
| 6-C | 16 | $123 / 8$ in. | $17 / 8$ in. | .98 |
| 6-D | 21 | $161 / 8$ in. | $17 / 8$ in. | 1.35 |
| 6-E | 26 | $197 / 8$ in. | $17 / 8$ in. | 1.65 |

## Hand Sets

Code No.
Description
1001-J A nickel finish instrument for use in systems 1 and 4 in place of regular desk stand. Adapted for hard usage. Push button is located in the side, performing the function of a switch hook, and must be operated when talking. Can also be used in place of the desk stand in systems 11 and 12. Equipped with a 6 -foot cord. Approximate weight, $301 / 2$ oz. A No. 1-B Hanger should be used for supporting or holding the hand set when not in use. $\qquad$


No. 1002 Type. Hand Set

1002-D For use in systems 1 and 4 in place of regular desk stand. Will not stand abuse like No. 1001-J. Switch hook is located in the handle and operates automatically........
1002-E For use in system 10 in connection with janitor's switchboard. Can also be used in place of regular desk stand in systems 11 and 12 . 1003 See page 34 for description and price.

Hand Set Hanger
Code No.

1-B A nickel and black finish hanger for holding the No. 1001-J Hand Set..................... | Description |
| :---: |
| Each |
| $\$ 2.00$ |



# INTER-PHONE ACCESSORIES <br> Desk Stands (Continued) 

## Code No. Description

 Each1320-BF Standard black finish stand for use in place of 1002-E Hand Set with janitor's switchboard, system 10. Also used in systems 11 and 12.........

## Desk Stand Arms

An exceptionally strong collapsible arm for holding standard desk stands. Arm is provided with three different bases to adapt it to mount on flat or roll top desks, or on the wall. Can be used with any system if the proper desk stand is selected.

Length of arm closed, $81 / 4$ inches.
Length of arm extended, 23 inches.
The desk stand must be ordered separately.
No. 1320-BF. Desk Stand


No. 147-AC. Desk-Stand Arm


No. 360799 Push Button

Code No
147-AA
147-AB
147-AC

|  | List Price |
| :---: | :---: |
| Description | Each |
| Arm for roll top desk | \$5.25 |
| Arm for mounting on wall. | 5.25 |
| Arm for flat top desks and tables (like cut) | 5.25 |

## Superintendent's Call Bells

We find the well-known Faraday bell to be the best bell for superintendent's call and code signaling service. Only two styles and sizes are listed below, but we carry a full stock of all types, resistances and sizes, both vibrating and single stroke.

| List No. | Description | List Price Each |
| :---: | :---: | :---: |
| 360883 | 6-inch Vibrating open type, 2.1 ohms | \$4.88 |
| -360929 | 6 -inch Vibrating weatherproof type, 2.1 ohms | 8.50 |
| 361141 | 6 -inch Single Stroke open type, 2.1 ohms. | 8.50 |
| 361113 | 6 -inch Single Stroke weatherproof type, 2.1 ohms.. | 11.00 |
|  | Push Button | List Price |
| List No. | Description | Each |
| 360799 | Wood push button | . 10 |

## Retardation Coils

Code No



List Price
Each

51-C
Coil for use in connection with secret lines, system 4. Has two 50 -ohm windings, which are not connected together. Size over all, $11 / 8$ inches diameter by $11 / 8$ inches high.
$\$ .45$
51-E Coil for use in systems 11 and 12 . Same as No. 51-C, but mounted on a maple base baving screw terminals. Windings connected in series.. ......


Superintendent's Call Bell Open Type No. 360883


Superintendent's Call Bell [Closed Type No. 360929


No. 51-C. Retardation Coil

Complete Connection Diagram furnished with each Inter-phone Inter-phones and Accessories 40

## INTER-PHONE ACCESSORIES



No. 11-B. Extension Bell

## Extension Bell

Code No.

Description
This bell is wound to 10 ohms, and may be used as an extension bell for any Inter-phone system. It should also be used for any separate signaling circuit, such as a door-bell operating from the Inter-phone batteries. . . . . .

## Blue Bell Battery

## Description

This dry cell is specially made for telephone work, and for this purpose is the most satisfactory cell on the market. Size over all, $25 / 8$ inches by $63 / 4$ inches. Regular binding post cells or screw top cells furnished as ordered.
Less than 12 $\qquad$ 8.25

12 or more
Freight additional


No. 1-A. Battery Box

## Battery Boxes

Code No. Description
1-A Black japanned sheet metal box lined with an insulating material. Holds 3 Blue Bell dry cells. Size of box, $83 / 4$ inches long by $3 \frac{7}{32}$ inches wide by $73 / 8$ inches high.
2-A Similar to the No. 1-A. Holds 4 Blue Bell dry cells. Size of box, $12 \frac{18}{8}$ inches long by $3 \frac{7}{32}$ inches wide by $73 / 8$ inches high
2-B Similar to the No. 1-A. Holds 9 Blue Bell dry cells. Size of box, $14 \frac{3}{32}$ inches long by $5_{3}^{2 \frac{2}{2}}$ inches wide by $75 / 8$ inches high

## Waxed Cord

## List No.

94059 Twelve strand linen for sewing cables, per lb,
Bell-Ringing Transformer

## Description

Self-contained unit for use on 60 cycle alternating circuits at $100-125$ volts. May be used for ringing the bells on systems 1 and 4 . Not suitable for use in any other system. Delivers current at three voltages, 6,12 , and 18 .
Cannot be used for furnishing talking current.


Connections showing use of Bell-Ringing Transformer for ringing Inter-phone Bells and Door-Bells
Dotted lines show wiring for Door-Bell using same source of Ringing Current
Complete Connection Diagram furnished with each Inter-phone

## Page 42 <br> Western-Elertric COMPANY <br> INTER-PHONE ACCESSORIES (Continued)



Pipe Strap

PIPE STRAPS-TINNED
These are very useful in supporting Inter-phone cable, conduit, etc.

| List | Size |  | Std. <br> No. |
| :---: | :---: | :---: | :---: |
| Pkg. |  |  |  | | List Price |
| :---: |
| per 100 |



Iron Conduit


|  | 580916 | 5 |
| :--- | :--- | :--- |
| No. 580918 | 580917 | 6 |
| lake Insulat. |  |  |

Blake Insulated Staples messenger call, annunciator, and bell work.

## Blake Insulated Staples

Designed for use on all low voltage circuits of interior wiring, such as telephone, telegraph,

| List | Mir. |  | List Price <br> Nor <br> No. | No. |
| :---: | :---: | :---: | :---: | :---: | 000

## INSULATING TAPE

Furnished in $1 / 2 \mathrm{lb}$. rolls and in widths varying from $1 / 2^{\prime \prime}$ to $3^{\prime \prime}$. Black or white.

| Eist No. |  | List Price per lb . |
| :---: | :---: | :---: |
| 460000 | Western Electric "Victor," 3/4" wid | \$0.8 |

## Milonite Nails

"Milonite" Perfection Insulated Nails.
Diameter of head in four sizes. Length of aail to suit. Prevent short circuiting. Color matches wire or wall. Wire can be taken down without cutting or injuring insulation.

## IRON CONDUIT AND FITTINGS

We carry large stocks of both galvanized and enameled iron conduit and conduit fittings such as bushings, locknuts, etc. Consult our general supply catalog and write for market prices.



Interior Telephone Wire
List Price

| List No. | List Price <br> per 1000 <br> 580920 15 Nails (Plain Top) . . . . . . . |
| :--- | :--- |
| $\$ 1.20$ |  |

580920 15 Nails (Plain Top) . . . . . . . . . . . . . . $\$ 1.20$
58092118 Nails (Plain Top) .............. 1.20
58092220 Nails (Plain Top) . . . . . . . . . . . . . 1.95
58092322 Nails (Plain Top) . . . . . . . . . . . . 1.95

## TELEPHONE WIRES

We carry a wide variety of insulated wires for both interior and outdoor service, in single conductors, twisted pairs and triples.

Full information and prices on wire, to suit any condition, on request.

Complete Connection Diagram furnished with each Inter-phone

# PATTERSON BATTERY SETS <br> For Inter-phone Service 



Screw Top Cells: A Screw Top Dry Battery Cell, described on page 41, is used with these cabinets. The cells are screwed into receptacles, thereby automatically making all connections without the use of wires or binding posts.

Loose connections and resulting loss of power are impossible. It is as easy to replace any cell as it is to replace a burned-out incandescent lamp. Simply screm the cell into the receptacle.

When the circuit or line wires have been once connected to the battery-set terminals, they never have to be disconnected or re-connected, although any predetermined change of circuit connections may, of course, be made to take care of any specific conditions.

Individual cells may be tested with an ammeter or battery gauge without removing the cell from its holder, or a test of the complete bank of cells may be made at the cabinet terminals.

Automatic Bridge: In all series type battery sets later described, each cell receptacle is equipped with a spring bridge contact which automatically short-circuits the receptacle as soon as the cell is removed. This permits the removal of any cell or cells from the battery set without opening the circuit and temporarily putting the system out of commission; this also provides a quick test for a weak cell without the use of an ammeter or other testing apparatus.


## General Types

Patterson Battery Sets for Inter-phone service are made in four different styles or types, differing only in the method of mounting, although each style is arranged with different circuit combinations to suit the requirements of the particular system installed. These four general types are listed as follows:

## STRIP TYPE

Model "B": This is the simplest type, and is designed for use where the battery holder can be mounted on the ceiling, under-side of a shelf, or other similar location where the support is solid and permits of easy access all around to screw
 in or remove the battery cells. They are furnished with galvanized hinge-brackets for mounting on a side-wall, but for this purpose the side-wall type Model " BR " is recommended and is preferable.

## SIDE-WALL TYPE

Model "BR": This type is designed for mounting on the wall or other vertical surface, and consists of a metal-faced backboard on which is hinged a strip type holder equipped with knife switch blades which, when the holders are dropped into place, make contact with jaws rigidly mounted on the backboard. Stationary binding posts or terminals are also mounted on the backboard.

## Complete, Connection Diagram furnished with each Inter-phone

## Page 44 <br> Western-Elestric <br> COMPANY

## General Types (Continued)

NON-FLUSH STEEL BOX TYPE
Model "BB": This type consists of a strip type holder mounted in a pressed steel box, finished in black japan; the top and back are hinged to permit of ready inspection. The binding posts are permanently located on the backboard of the box, and the holders mounted on the top and equipped with knife switch blades which, when the box is closed, make contact with jaws mounted on the backboard in exactly the same manner as the side-wall type.


WALL CABINET SERIES TYPE
Model "BSC": This type is essentially a steel box equipped with side-wall type holders and having regular cabinet casings, either for flush or surface mounting, as desired, and with the door equipped with a cylinder lock instead of a padlock.

## MULTIPLE-SERVICE TYPES

Any of these models above described can be furnished in Multiple-Service type, that is, sets having two rows of holders connected in multiple. Where the service is severe these multiple sets provide a much more economical installation, and one that will give three times the length of service that a single series set will give. Information and prices on Multiple-Service sets furnished on request.

## For System No. 14

This system, by referring to the battery requirements and wiring diagram on page 6 , requires a "split circuit" battery set having two cells only for the talking circuit, and one, two, or three additional cells for the ringing circuit, depending on the length of line.

SERIES STRIP TYPE-MODEL "B" Split Circuit

| Model No. | No. Cells <br> Talking | No. Cells <br> Ringing | List Price Each <br> No Batteries |
| :---: | :---: | :---: | :---: |
| B-2-1 | 2 | 1 | $\$ 4.50$ |
| B-2-2 | 2 | 2 | 6.00 |
| B-2-3 | 2 | 3 | 7.50 |



| SERIES SIDE-WALL TYPE MODEL "BR" Split Circuit |  |  |  | SERIES NON-FLUSH STEEL BOX TYPE MODEL "BB" Split Circuit |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Model No. | No. Cells Talking | No. Cells Ringing | List Price Each No Batteries | Model No. | No. Cells Talking | No. Cells Ringing | List Price Each No Batteries |
| BR-2-1 | 2 | 1 | \$7.70 | BB-2-1 | 2 | 1 | \$ 9.60 |
| BR-2-2 | 2 | 2 | 9.40 | BB-2-2 | 2 | 2 | 11.70 |
| BR-2-3 | 2 | 3 | 11.00 | BB-2-3 | 2 | 3 | 13.80 |
| Complete Connection Diagram furnished with each Inter-phone <br> Accessories $44$ |  |  |  |  |  |  |  |

For System No. 14 (Continued)
SERIES WALL-CABINET TYPE-MODEL "BC"
Split Circuit

| Model No. | No. Cells Talking | No. Cells Ringing | - List Price, No Batteries |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Flush | Surface" | Flush | Surface |
|  |  |  | Steel "B" | Steel "B" | Oak | Oak |
| BSC-2-1 | 2 | 1 | \$17.76 | 814.80 | \$30.96 | \$25.80 |
| BSC-2-2 | 2 | 2 | 20.76 | 17.30 | 35.16 | 29.30 |
| BSC-2-3 | 2 | 3 | 23.88 | 19.90 | 39.60 | 33.00 |

## For Systems No. 16, 15, 11 and 12

By referring to the battery requiremenis and wiring diagrams of these systems it will be noted that only a straight-series battery is required to consist of from 3 to 6 cells, depending on the system and the length of line. The following sets, when ordered with the proper capacity, can be used in any of these systems.

|  | SERIES STRIP-TYPE--MODEL " B " |  |
| :---: | :---: | :---: |
| Model No. | No. Cells | List Price Each |
| B-3 | 3 | No Batteries |
| B-4 | 4 | $\$ 4.50$ |
| B-5 | 5 | 6.00 |
| B-6 | 6 | 7.50 |
|  |  | 9.00 |

SERIES SIDE-WALL TYPE-MODEL "BR"

| BR-3 | 3 | $\$ 6.10$ |
| :--- | :--- | ---: |
| BR-4 | 4 | 7.70 |
| BR-5 | 5 | 9.40 |
| BR-6 | 6 | 11.00 |


|  | SERIES SURFACE STEEL BOX TYPE--MODEL " BB" |  |
| :--- | :---: | ---: |
| BB-3 | 3 | $\$ 7.80$ |
| BB-4 | 4 | 9.60 |
| BB-5 | 4 | 11.70 |
| BB-6 | 6 | 13.80 |

SERIES WALL-CABINET TYPE-MODEL " BSC"
Model No.
BSC-3
BSC-4
BSC-5
BSC-6
No. Cells
3
4
4
5
3

| Flush | Surface | Flush | Surface |
| :---: | :---: | :---: | :---: |
| Steel "B" | Steel "B" | Oak | Oak |
| \$14.88 | \$12.40 | \$27.00 | \$22.50 |
| 17.76 | 14.80 | 30.96 | 25.80 |
| 20.76 | 17.30 | 35.16 | 29.30 |
| 23.88 | 19.90 | 39.60 | 33.00 |

## For Systems No. 1 and 4

These systems require a "split circuit" battery consisting of from 3 to 5 cells for talking and 4 to 7 cells for ringing, having the carbon side of both the talking and ringing sets connected or strapped together, as indicated under Battery Requirements, page 20, and Wiring Diagrams, page 21.

The following special "split circuit" battery sets, having the carbon terminals of both batteries connected together as part of the permanent wiring of the set, are recommended for the above systems.

## SERIES STRIP-TYPE-MODEL "BW" Split Circuit

|  | No. Cells <br> Model No. | Talking | No. Cells |
| :---: | :---: | :---: | :---: |
| BW-5-4 | 5 | 4 | List Price Each |
| NW Batter:es |  |  |  |

For Systems No. 1 and 4 (Continued)
SERIES SIDE-WALL TYPE-MODEL "BRW"
Split Circuit

| Model No. | No. Cells <br> Talking | No. Cells <br> Ringing | List Price Each |
| :---: | :---: | :---: | :---: |
| BRW-5-4 | 5 | 4 | No Batteries |
| BRW-5-5 | 5 | 5 | $\$ 17.40$ |
| BRW-5-7 | 5 | 7 | 18.88 |
|  |  | 22.32 |  |

SERIES BOX-TYPE-MODEL "BBW "
Split Circuit

| BBW $-5-4$ | 5 | 4 | $\$ 21.80$ |
| :--- | :--- | :--- | ---: |
| BBW-5-5 | 5 | 5 | 23.65 |
| BBW-5-7 | 5 | 7 | 27.95 |

SERIES WALL-CABINET TYPE-MODEL " BSCW "
Split Circuit

|  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | No. Cells | No. Cells | Surface | Cist Price Each, No Batteries | Flush | Surace, |

## For Systems No. 7, 8, 9 and 10

These systemsusually require in addition to a "split circuit" battery consisting of five cells for "talking" and 3 to 6 for "ringing," having the carbon side of both the "talking" and "ringing" sets connected or strapped together, an extra "split" of two cells having its carbon side strapped to the zinc side of the "ringing" battery. See wiring diagram, page 32.

Battery sets arranged with this special strapping for the above systems are listed below.
SERIES STRIP-TYPE-MODEL " BW "
Split Circuit

| Model_No. | No. Cells <br> Talking | No. Cells <br> Ringing | No. Cells <br> Door Opener | Total Cells <br> in Row | List Price <br> Each <br> No Bateries |
| :---: | :---: | :---: | :---: | :---: | :---: |
| BW-5-3-2 | 5 | 3 | 5 | 10 | $\$ 15.00$ |
| BW-5-4-2 | 5 | 4 | 6 | 11 | 16.50 |
| BW-5-5-2 | 5 | 5 | 7 | 12 | 18.00 |
| BW-5-6-2 | 5 | 6 | 8 | 13 | 19.50 |

SERIES SIDE-WALL TYPE-MODEL "BRW" Split Circuit

| BRW-5-3-2 | 5 | 3 | 5 | 10 | 20.60 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| BRW-5-4-2 | 5 | 4 | 6 | 11 | 22.32 |
| BRW-5-5-2 | 5 | 5 | 7 | 12 | 24.05 |
| BRW-5-6-2 | 5 | 6 | 8 | 13 | 25.76 |
| SERIES BOX-TYPE-MODEL "BBW" Split Circuit |  |  |  |  |  |
| BBW-5-3-2 | 5 | 3 | 5 | 10 | 25.80 |
| BBW-5-4-2 | 5 | 4 | 6 | 11 | 27.95 |
| BBW-5-5-2 | 5 | 5 | 7 | 12 | 30.10 |
| BBW-5-6-2 | 5 | 6 | 8 | 13 | 32.25 |

## SERIES WALL-CABINET TYPE-MODEL " BSCW "

Split Circuit


Complete Connection Diagram furnished with each Inter-phone
Inter-phones and Accessories
46

## INTER-PHONE OUTFITS

Western Electric Inter-phones (System No. 15 Wall and Hand Set types only), are put up in standard packages containing two instruments and a sufficient quantity of installing material, in the following combinations. Information as to the number of batteries required will be found on page 9 .

## WALL TYPE

Outfit No.
Description
14 Includes one No. 1327-S Inter-phone to be used at the battery station and one No. 1327-T Inter-phone for use at the other station, complete with transmitters, receivers, and cords, as described on page 7 , neatly packed in a strong and compact box ready for instant delivery.

14-A Includes a No. 14 outfit as above described, packed in one box, and in a smaller separate box, a Type "A" Interior wiring material outfit, containing 75 feet of three conductor, insulated and twisted copper wire, two battery connectors for connecting the dry cells together, and a sufficient quantity of insulated nails for putting up the wire. This outfit is for use where the wire is to be run entirely under cover, or in a perfectly dry location.

14-B Includes a No. 14 outfit as above described, packed in one box and in a separate box a Type "B" Outside wiring material outfit, containing 150 feet of three conductor, insulated and twisted outside copper wire, two galvanized iron brackets for attaching the wire to two buildings, complete with screws, hooks, and porcelain knobs, two porcelain tubes for further insulating the wire where it enters the buildings, two battery connectors, and 25 insulated nails for supporting or fastening the wire inside the buildings.

Net Price

$$
\$ 11.60
$$

13.00


No. 14 Outfit (Two Inter-phones only)


Interior Wiring Material Must be ordered with No. 14 to complete Outit No. 14-A

16.00

Complete instructions for installing are packed in each box.


## Page 48

## INTER-PHONE OUTFITS (Continued)



No. 15 Outfit (Two Inter-phones only)


Interior Wiring Material Must be ordered with No. 15 to complete Outfit No. 15-A


Outside Wiring Material Must be ordered with No. I5 to complete

## HAND SET TYPE

Hand Set Type Inter-phones (System No. 15) are put up in standard packages containing one No. 6043-A and one No. 6043-B Inter-phone, and a sufficient quantity of installing material in the following combinations:

## Outfit No.

Description
Net Price
15 Includes one No. 6043-A non-flush Hand Set Inter-phone to be used at the battery station, and one No. 6043-B ditto for use at the other station, complete with cords, as described on page 8 , neatly packed in a strong compact box ready for instant delivery

15-A Includes a No. 15 outfit as above described, packed in one box and in a smaller, separate box a Type "A" Interior wiring material outfit containing 75 feet of three conductor insulated and twisted copper wire, two battery connectors for connecting the dry cells together and a sufficient quantity of insulated nails for putting up the wire. This outfit is for use where the wire is to be run entirely under cover or in a perfectly dry location.

15-B Includes a No. 15 outfit as above described, packed in one box, and in a separate box a Type "B" Outside wiring material outfit containing 150 feet of three conductor insulated and twisted outside copper wire, two galvanized ron brackets for attaching the wire to two buildings, complete with screws, bolts, and porcelain knobs, two porcelain tubes for further insulating the wire where it enters the buildings, two battery connectors, and 25 insulated nails for supporting or fastening the wire inside the buildings.


Complete Connection Diagram furnished with each Inter-phone Inter-phoues and Accessories 48

$$
\begin{aligned}
& \text { I switahb und } \\
& 8 \text { mall peto } \\
& 2 \text { desk sets } \\
& \text { wro If - It } 12 \text { uppuctar } \\
& \text { - very yt } 19 \text { turibtaie }
\end{aligned}
$$

Are you still using one of these antiquated


No. 16 Inter-phone Outfit


By means of this outfit your present bell, buzzer or annunciator system can be transformed into a practical, working telephone line.


Use the same wires, the same bell or buzzer, and 4 new batteriesyour office boy can install it-


Price, $\$ 8.75$
-] Don't ask the stenographer to come to your desk for every little thing.

There are no doubt many times when a word of instruction could be spoken at a saving of time and expense.
-II Give your instructions to the office boy by telephone.

Save him unnecessary steps and thereby increase his efficiency.

- I] Ask your assistant to come to your desk and bring the papers on the matter you wish to discuss.

With the old buzzer system he would have to make two trips.

## -I] What are your conditions?

Stop to think a minute. Couldn't the efficiency of your organization or office force be increased by the installation of one or more of these outfits?

Wouldn't it be convenient to buzz and speak your instructions and receive the answer immediately without waiting for someone to come to your desk?

## Western Electric Inter-phone Outfits.

No. 16-A To be used in conjunction with circuits consisting of one bell or buzzer and one pusi utton.
Contains: 2 hand sets (one having a ringing button), each equipped with a transmitter, receiver and cords; 2 connecting blocks and screws, feet insulated twisted pair copper wire ext 20 insulated nails for fastening wire to wall and 20 insulated nails for fastening wire to wall or desk.

$$
\text { Price. .... ............ } \$ 8.75
$$

No. 16-B To be used in addition to a No. 16.A outfit in conjunction with existing bell, buzzer or annunciator systems having more than one push button or where it is desired to install hand sets büzzer or annunciator station.

Each outfit contains $\mid$ hand set with ringing button, I connecting block and screws, 12 feet of wire and 10 insulated nails. Order one of these outfits for each additional hand set desired. Price.
.$\$ 4.65$


YOU CAN USE YOUR PRESENT BELL OR BUZZER WIRES


[^0]:    

[^1]:    Schematic No.6043-E
    Complete Connection Diagram furnished with each Inter-phone
    Inter-phones and Accessories

