

# MONOPHONES

AND SUBSTATION ACCESSORIES

*by*

**AUTOMATIC  ELECTRIC**



TYPE 50



TYPE 44



TYPE 40



TYPE 47

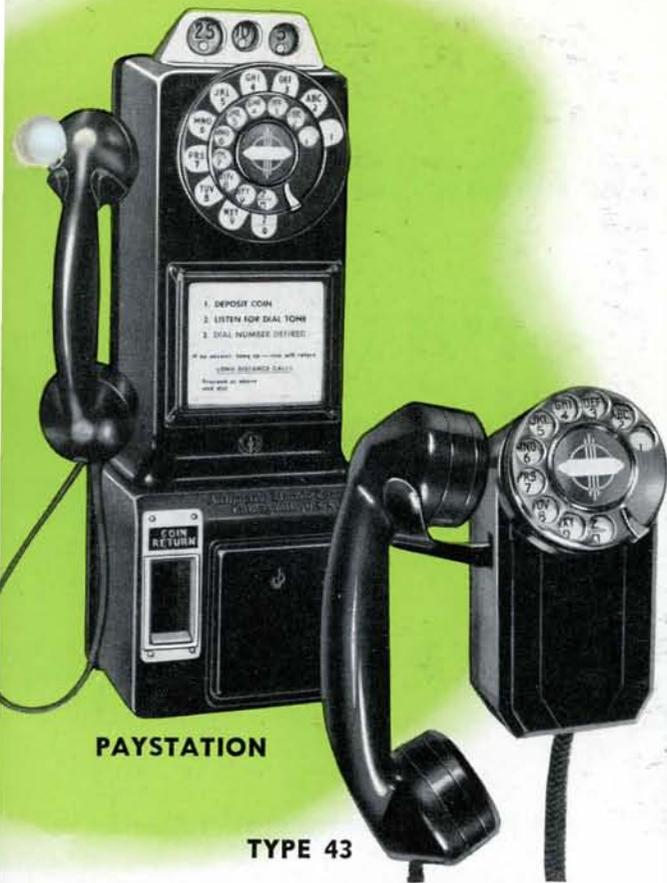
## *Automatic Electric* **MONOPHONES...**

Here is a series of modern telephones that you will be *proud* to install! The line is complete, and every one is a beauty—the finest instrument of its kind. You will be glad you chose Monophones.

These are instruments that will please your subscribers. With their simple, modern lines, the smooth-running Automatic Electric dial and perfectly balanced handset, they are sure of a hearty welcome in any home or office. And for the very smartest appearance, for those subscribers who appreciate the best, you can offer Monophones in striking colors—instru-

ments of which any subscriber would be proud!

*You* will like Monophones, too — their beauty is the kind that lasts. Their lines are free from the extremes that quickly become outmoded; thousands of Monophones installed years ago still look “as good as new.” Plastic housings are molded of materials especially selected for resistance to breakage, scratching and fading. Best of all, you may be sure that back of the “quality” appearance of Automatic Electric Monophones is technical superiority in every detail—sturdy construction that assures many years of service with



PAYSTATION

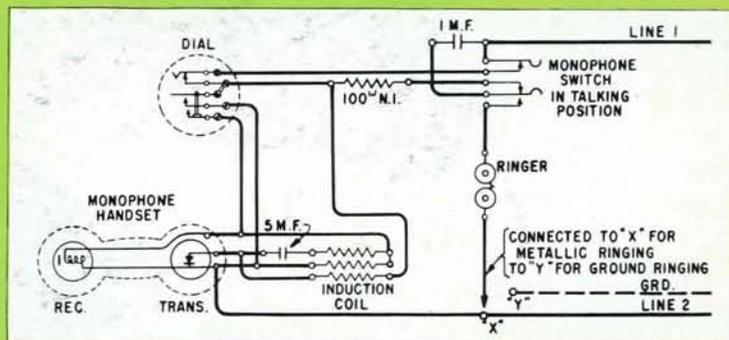
TYPE 43

## All Beauties!

a minimum of maintenance attention. You *economize* on maintenance when you *standardize* on Monophones.

All the most popular types of Monophones for central-battery service are shown in this catalog. In addition to these, Automatic Electric makes a complete line of Magneto Monophones of the same high quality, and many special instruments, including "Explosion-Resisting" Types, railroad, pipe-line, oil-field and forestry telephones, and telephones for marine service. These are described in other catalogs which we should be happy to send at your request.

## AND ALL BUILT AROUND THIS GREAT CIRCUIT



Heart of the Monophone, and basis of its extraordinary transmission quality, is the unique Automatic Electric high-efficiency anti-sidetone circuit shown here. With its specially designed three-winding induction coil, this circuit works three ways to improve transmission:

- 1—Its anti-sidetone action encourages telephone users to speak clearly—the first requirement for lifelike transmission.
- 2—It cuts down the amount of "outside" noises that interfere with clear reception.
- 3—It assures maximum transmission volume on rural circuits and on long-distance connections.

This "three-way" action puts Monophones "way ahead" with your subscribers. The clear and lifelike transmission it provides encourages the use of long-distance service—makes users exclaim, "Why, he seemed to be right beside me!" That's the kind of transmission that encourages toll business.

But Monophones' top transmission quality pays you in still another way. It permits use of cable for longer distances, and with lighter gauge conductors, while still meeting the most stringent requirements of toll transmission. Here is a definite economy in outside plant construction—made possible by the ultra-efficient transmission of Automatic Electric Monophones.

**AND THESE PROVED COMPONENTS →**

IN *ALL* AUTOMATIC ELECTRIC

THIS *HIGH-*

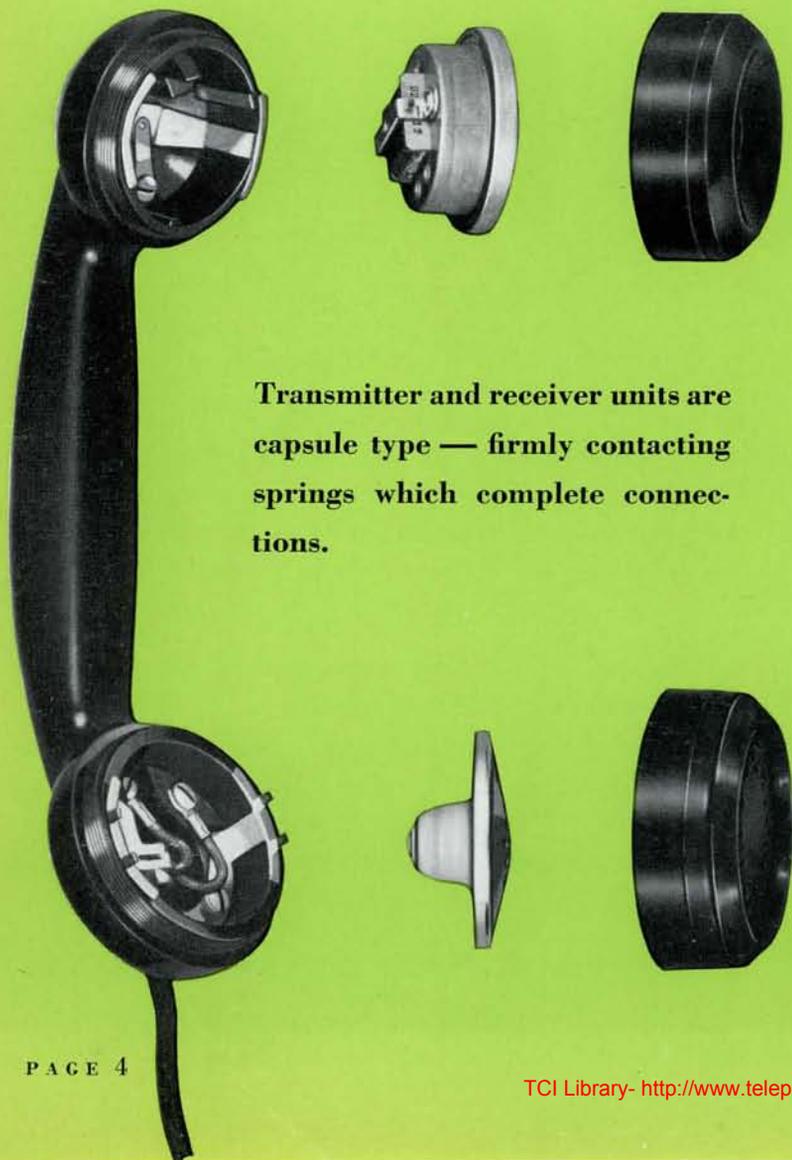
HANDSET PROVIDES

TRANSMISSION

Beauty and strength are combined in the Monophone handset through competent design and the unsparing use of high-grade plastics.



Transmitter and receiver units are capsule type — firmly contacting springs which complete connections.



A telephone instrument stands or falls on the quality of its transmission—and Automatic Electric Monophones match the most rigid transmission standards. The modern Monophone handset contributes a unique “all-positions” transmitter and a “damped diaphragm” receiver; these two units work together in the Monophone circuit to provide high transmission quality and volume over an exceptionally wide range of operating conditions.

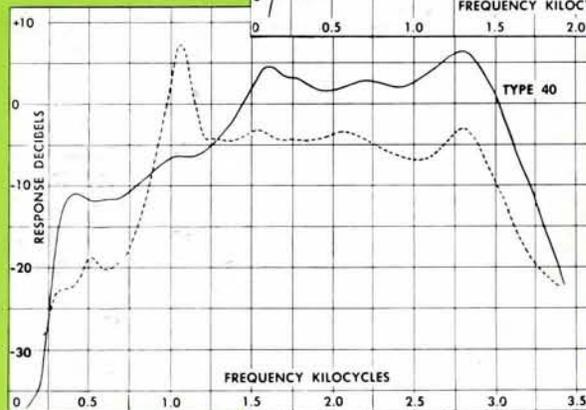
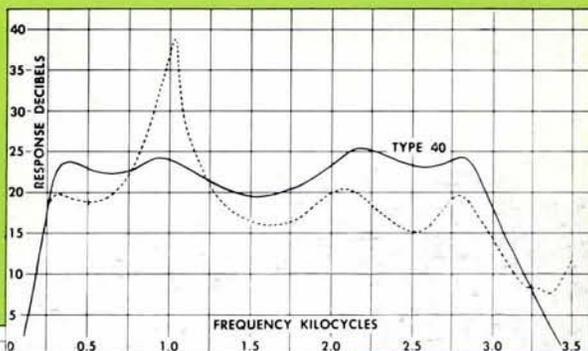
Held at any angle—used on lines of any length—the Monophone transmitter achieves amazingly uniform response, with proper balance in the transmission of vowel and consonant sounds, to give really lifelike transmission. And the Monophone receiver

# MONOPHONES

# FIDELITY

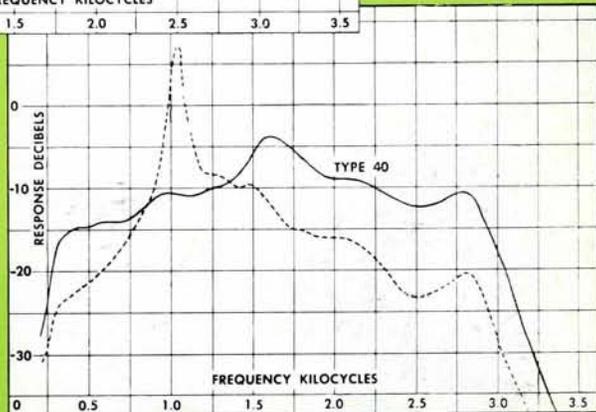
# TOP QUALITY

The solid curve shows the frequency-response characteristics of the Monophone damped-diaphragm receiver as compared with older types of receivers. Lifelike reception is assured, as none of the important voice frequencies are lost.



Frequency - response curves of Automatic Electric Monophones and other standard instruments on short loops and non-distorting trunk. The rise in overall response compensates for the distorting effects of non-loaded cable circuits.

Frequency - response curves of Automatic Electric Monophones and of other standard telephones on long loops and non-loaded trunk. Monophones' evenly maintained response means lifelike transmission over longest lines.



meets the challenge of this high transmission quality—responding with virtually uniform efficiency over the entire range of voice frequencies. In the combination of these two units, you find the finest handset for modern revenue-building service.

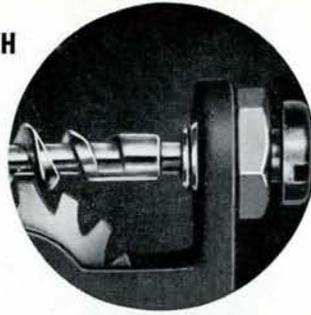
Transmitter and receiver units are of the “capsule” type, and simply drop into place in the handset, being held by the one-piece transmitter and receiver caps. Connections to these units are made through springs; connecting wires are molded into the plastic of the handset. A Monotype moistureproof cord 53” long, covered with black braid, is regularly supplied; or handset may be fitted with Extensicord (see page 23).

## HANDSETS FOR SPECIAL CONDITIONS

For use beyond the wide range of conditions which can be met by the standard Monophone handset, a number of “special” units are available, including: “Super-Volume” Transmitter, “Tropical” Cord, “Sound-Powered” Receiver, and various types of Pushbutton Switches. Combinations of these units can be arranged to meet requirements of extremely long lines, excessively noisy locations, or “hard-of-hearing” subscribers. For complete listing, descriptions, and applications, please see page 22.

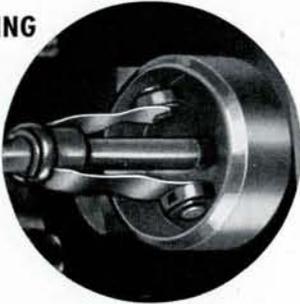
# IN ALL

## SMOOTH



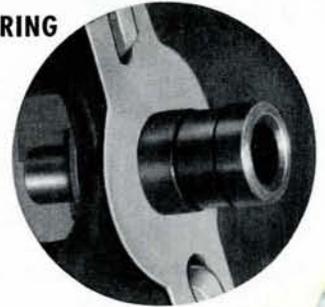
Governor worm is accurately cut — turns smoothly and quietly on ball-thrust bearing.

## NON-FORCING



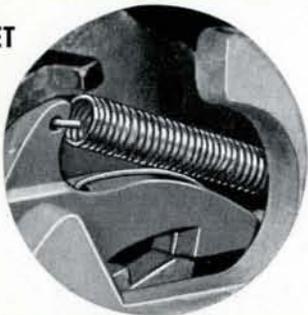
Fly-ball governor, with fiber friction shoes, provides positive speed control with negligible wear.

## NON-WEARING



Extra-long main bearing prevents "shimmy" and minimizes wear.

## QUIET



The famous "quieted" pawl makes this the world's quietest commercial dial.



## NON-STICKING



Special laminated worm gear is self-lubricating, non-sticking, long-wearing.

## ACCURATE



Positive pawl lock prevents dial over-running at end of operation.

## NON-JARRING



Flanged fingerplate reduces jarring "fly-wheel" effect and its bright chromium finish never wears off!

# **AUTOMATIC MONOPHONES— THE AUTOMATIC ELECTRIC**

# **DIAL**

In the Monophone, you'll find also the world-famed Automatic Electric Dial! For more than twenty years, this champion dial has proved its basic soundness of design and construction in the records of thousands of dials in actual service. No other dial ever made has performed so dependably, or cost so little to maintain. The Automatic Electric dial is the only dial backed by a record like this!

During those twenty years, we've improved our dial, of course. But we've never changed its basic design, because all records show that this is the world's most rugged, most dependable dial!

Here's a dial that will give your subscri-

ers the right number every time—and do it for years, with a minimum of maintenance attention! Naturally, this is the dial you want. You'll find it on the finest automatic telephones — Automatic Electric Monophones!

## **FOR TOLL DIALING**

Many telephone companies are now standardizing on a dial number plate having both numbers and letters. We are now supplying this plate as a standard item on all Monophones and dials, as shown in this catalog. If preferred, the "1" to "0" number plate will be supplied without extra charge—simply specify Cat. No. AK-30 Number Plate when ordering.

# THE TYPE 40 DESK MONOPHONE

Here's an instrument you will be proud to install—and your subscribers will be proud to have and to use. Its graceful lines in gleaming plastic add a style that's distinctive in any setting; yet it's a style that will retain its popularity for years without becoming obsolete. The perfectly balanced handset, whisper-quiet dial, and pleasant two-tone ringer give further evidence of quality. And to all this it adds the superb transmission quality provided by the Monophone anti-sidetone circuit and transmission components.

The case of the Type 40 Monophone is molded of high-grade, *tough* plastic, with finger grips molded into the sides for easy lifting. The heavy steel baseplate is fitted with a cushion ring of rubber—soft, yet tough. Upon this plate are mounted the ringer assembly, and the condenser unit which contains both transmission and ringing condensers in one damp-proof metal housing. To assure the purity of tone from its two-tone gongs, the ringer assembly is cushioned in rubber.

Deskstand and handset cords are of Monotype moisture-proof construction and are covered with durable black braid, which will keep its handsome appearance through a long life. Desk stand cord is equipped with neat, compact line-connecting block.

Straight-line ringers for individual, superimposed or code ringing are supplied, unless harmonic ringing is

specified. The condenser in the ringing circuit provides for either metallic or ground ringing, with no change except for the use of a three conductor desk stand cord and terminal block for ground ringing.

*For Central-Battery Manual Service*—the Type 40 Desk Monophone is supplied with molded plastic dial blank instead of dial, but with dial wiring complete—ready for conversion to automatic operation with a minimum of expense.

*For Magneto Service*—the Type 40 Desk Monophone can be supplied with wiring arranged for use specifically with the Magneto-Battery Box (see page 17.) With this instrument there is no “cost of obsolescence”—it is ready for conversion to central-battery service at any time by simply moving a single connection!

*Monophone Switch Latch*—To eliminate third-party interruptions and sudden loss of transmission volume during conversation—or to prevent wrong numbers due to mutilation of dialed digits—the Type 40 Monophone can be supplied with a switch latch. The subscriber can then determine if the line is busy by lifting the handset, connecting only the receiver into the line. If the line is clear, a touch of a lever permits the Monophone switch to complete its operation.

*Dimensions*—Height, 5¼ in.; width of base, 5½ in.; depth of base, 8¼ in. The handset is 9 in. long.

*Net Weight*—6 lbs.

*Shipping Weight*—13 lbs.

## Meet Individual Tastes . . . Offer Type 40 Monophones in Colors

Satisfy the modern desire for color in the home and office by offering your subscribers these Monophones in beautiful art shades. Color is *molded in*—cannot fade, chip or wear off. These instruments have metal fittings finished in polished chrome or satin gold plate, and are fitted with black Extensicord instead of Monotype handset cord. Regularly supplied for straight-line metallic ringing, and with “Letter-Num-

ber” dial plates. When ordering specify color and trim desired.

Standard colors available are: Mahogany, Walnut, Chinese Red, Old Ivory, Royal Blue, and Black. Type 40 Monophones are also available in Jade Green, Nile Green, Orchid or Maroon, and with other ringers or dial number plates.



## Catalog Listings — Type 40 Desk Monophones

- Cat. No. AA-50—Automatic—Metallic Ringing
- Cat. No. AA-51—Automatic—Ground Ringing
- Cat. No. AA-90—Automatic—Superimposed Ringing  
Equipped with cold cathode tube.
- Cat. No. AA-52—Manual, Blank for Dial—Metallic Ring.
- Cat. No. AA-53—Manual, Blank for Dial—Ground Ring.
- Cat. No. AA-92—Manual, Blank for Dial—  
Superimposed Ringing  
Equipped with cold cathode tube.

### With Switchlatch

- Cat. No. AA-79—Automatic—Metallic Ringing
- Cat. No. AA-80—Manual, Blank for Dial—Metallic Ring.
- Cat. No. AA-81—Automatic—Ground Ringing
- Cat. No. AA-82—Manual, Blank for Dial—Ground Ring.
- Cat. No. AA-91—Automatic—Superimposed Ringing  
Equipped with cold cathode tube.
- Cat. No. AA-93—Manual, Blank for Dial—  
Superimposed Ringing  
Equipped with cold cathode tube.
- Cat. No. AE-33—Magneto—1400-ohm Ringer
- Cat. No. AE-34—Magneto—2500-ohm Ringer

For Magneto Service with Magneto-Battery Box  
(See page 17)

- Cat. No. AE-29—Magneto, Blank for Dial—  
1400-ohm Ringer
- Cat. No. AE-30—Magneto, Blank for Dial—  
2500-ohm Ringer

*For harmonic ringing*, give catalog number of straight-line instrument at left, and state ringing frequency desired (see page 25).

*Extensicord*, the "stretchable" handset cord (see page 23), can be supplied instead of Monotype cord, if specified.

"1" to "0" Number Plate, Cat. No. AK-30, or other special number cards or plates, can be supplied. If desired, please give catalog numbers (see page 20).

*Special handsets* can be supplied for extremely long lines, for noisy locations, and for the hard-of-hearing. If desired, please give catalog numbers (see page 22).

# THE TYPE 50 WALL MONOPHONE

This handsome instrument has restored the wall telephone to its rightful popularity among telephone users. It combines the advantages of wall mounting with the convenience of the Monophone handset. Its design—specifically for wall service—provides beauty which is at home in any surroundings. It may be mounted at any height, convenient for use from either a sitting or a standing position, and, if desired, out of reach of small children.

To the telephone company, the Type 50 Wall Monophone offers ease of installation, accessibility of all parts—and the convenience and economy of stocking standard parts most of which are interchangeable with those of the Type 40 Desk Monophone.

The Type 50 Wall Monophone is enclosed in a lustrous, *tough*, plastic housing of distinctive design which harmonizes with the smooth-flowing lines of the Monophone handset. The unique method of cradling the handset provides maximum protection plus ready accessibility and ease of handling. All other components are mounted on the molded plastic baseplate, and are accessible by unscrewing the cradle switch plunger and loosening the two cover-retaining screws. The cover has sound openings at the sides and bottom, screened to exclude insects.

The ringer is mounted in live rubber, and is fitted with two-tone gongs which provide a signal of pleasing quality with exceptional power of penetration through surrounding noises. Ringers are provided for straight-line, individual, superimposed or code ringing, unless harmonic ringing is specified. A terminal

is provided for ground connection, and ground ringing is arranged by merely moving one ringer lead to this terminal at the time of installation.

Handset cord is of Monotype moistureproof construction, and is covered with durable black braid, which will keep its appearance through a long life.

*For Central-Battery Manual Service*—the Type 50 Wall Monophone is supplied with molded plastic dial blank instead of dial, but with dial wiring complete—ready for conversion to automatic operation, with a minimum of expense.

*For Magneto Service*—the Type 50 Wall Monophone can be supplied with wiring arranged for use specifically with the Magneto-Battery Box (see page 17). It is ready for conversion to central battery service at any time by simply moving a single connection—without a single penny of other expense.

*Monophone Switch Latch*—Supplied on special order on the Type 50 Monophone, the switch latch eliminates third-party interruptions and sudden loss of transmission volume during conversation, and prevents wrong numbers due to mutilation of dialed digits. With the switch latch on his Monophone, the subscriber can determine if the line is busy by lifting the handset, connecting only the receiver into the line. If the line is clear, a touch of a lever permits the Monophone switch to complete its operation.

*Dimensions*—Height, 9½ in.; width, 5¾ in.; depth, 5¼ in. The handset is 9 in. long.

*Net Weight*—6¼ lbs.      *Shipping Weight*—13 lbs.

## Meet Individual Tastes . . . With Type 50 Monophones in Colors

Where a truly “de luxe” instrument is desired, the Type 50 Monophone can be supplied with molded parts in colored plastic, and metal trim finished in polished chromium or satin gold plate. These instruments are fitted with black Extensicord instead of Monotype handset cord; with their distinctive appearance they provide a ready source of additional revenue. Regularly supplied for straight-line metallic

ringing, and with “letter-number” dial plates. When ordering, specify color and trim desired.

Standard colors available are: Mahogany, Walnut, Chinese Red, Old Ivory, Royal Blue and Black. Type 50 Monophones are also available in Jade Green, Nile Green, Orchid and Maroon, and with other ringers or dial number plates.



### Catalog Listings — Type 50 Wall Monophones

Cat. No. AA-60—Automatic—Metallic or Ground Ringing

Cat. No. AA-94—Automatic—Superimposed Ringing  
Equipped with cold cathode tube.

Cat. No. AA-61—Manual, Blank for Dial  
Metallic or Ground Ringing

Cat. No. AA-96—Manual, Blank for Dial  
Superimposed Ringing  
Equipped with cold cathode tube.

#### With Switchlatch

Cat. No. AA-83—Automatic, Metallic or Ground Ringing

Cat. No. AA-95—Automatic, Superimposed Ringing  
Equipped with cold cathode tube.

Cat. No. AA-84—Manual, Blank for Dial—  
Metallic or Ground Ringing

Cat. No. AA-97—Manual, Blank for Dial  
Superimposed Ringing  
Equipped with cold cathode tube.

Cat. No. AE-35—Magneto, Blank for Dial  
1400-ohm Ringer

Cat. No. AE-36—Magneto, Blank for Dial  
2500-ohm Ringer

For Magneto Service with Magneto Battery Box  
(see page 17)

Cat. No. AE-31—Magneto, Blank for Dial—  
1400-ohm Ringer

Cat. No. AE-32—Magneto, Blank for Dial—  
2500-ohm Ringer

*For harmonic ringing*, give catalog number of straight-line instrument at left, and state ringing frequency desired (see page 25).

*Extensicord*, the “stretchable” handset cord (see page 23) can be supplied instead of Monotype cord, if specified.

“1” to “0” Number Plate, Cat. No. AK-30 or other special number cards or plates can be supplied. If desired, please give catalog numbers (see page 20).

*Special handsets* can be supplied for extremely long lines, for noisy locations, and for the hard-of-hearing. If desired, please give catalog numbers (see page 22).



## CATALOG LISTINGS

Cat. No. AA-69—Automatic

Cat. No. AA-70—Manual, Blank for Dial

Cat. No. AO-68—Type 32 Compact Ringer Box  
Equipped with three-conductor Monotype cord, six feet long. Contains straight-line ringer, and terminal strip. Dimensions are: height, 7¼ in.; width, 5½ in.; depth, 2⅝ in. May be used for metallic or ground ringing. (If harmonic ringer is desired, please give above catalog number, and state frequency desired.) Illustrated below.

Cat. No. AO-78—Type 32 Compact Ringer Box—  
For Superimposed Ringing

Same as Cat. No. AO-68 above, but has cold cathode tube to provide for superimposed ringing.

Cat. No. AW-33—Angle Bracket for Type 43  
Monophone

For mounting Type 43 Monophone at right angles to the mounting surface. Bracket is of steel, black japanned, and mounts on Monophone with two screws (furnished).

Cat. No. AW-34—Black-Finished Brass  
Plug Button

For closing unused knockouts when Type 43 Monophone is moved.

"1" to "0" Number Plate, Cat. No. AK-30 or other special number cards or plates can be supplied. If desired, please give catalog numbers (see page 20).



Special handsets can be supplied for extremely long lines, noisy locations, and the hard-of-hearing. If desired, please give catalog numbers (see page 22).

## TYPE 43

# Compact

# MONOPHONE

The Type 43 Compact Monophone affords complete flexibility both as to use and method of mounting, and in its sturdy streamlined housing, it presents a really modern appearance in any setting.

The Type 43 Monophone utilizes the standard Monophone anti-sidetone circuit, without ringer. Used as an extension telephone it requires only two wires to its associated main-line instrument. It may also be employed as a complete subscriber's station in conjunction with the Type 32 Compact Ringer Boxes, listed at left, or the Telephone Chime shown on page 18.

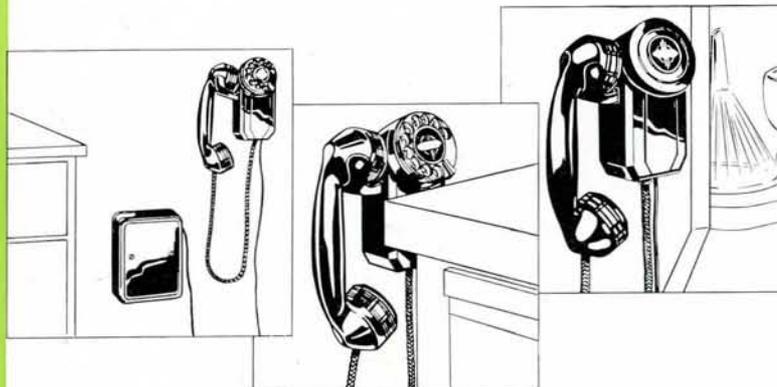
The Type 43 Monophone mounts readily on the corner of a desk or on a wall or column. With a special angle mounting bracket it may be adapted to unusual positional requirements. Knockout mounting holes are provided in both the baseplate housing and the cover.

The Automatic Electric dial is presented in position for most convenient use, no matter how the instrument may be mounted. Dial blanks are provided on manual models. The Monophone handset is regularly supplied with black Extensicord.

*Dimensions*—Height of wall case, 6⅝ in.; width, 3¼ in. Overall width, 6⅜ in. The handset is 9 in. long.

*Net Weight*—4¾ lbs.

*Shipping Weight*—6 lbs.





## CATALOG LISTINGS

Cat. No. AA-71—Automatic—Metallic or Ground Ringing.

Cat. No. AA-72—Manual, Blank for Dial—Metallic or Ground Ringing.

*For harmonic ringing*, give catalog number of straight-line instrument above, and state ringing frequency desired (see page 25).

*For superimposed ringing*, order the Tube and Terminal Box, Cat. No. AP-20, and the 3-Conductor Connecting Cord, Cat. No. AD-57, described on page 25.

*Extensicord*, the “stretchable” handset cord (see page 23) can be supplied instead of Monotype cord, if specified.

“1” to “0” *Number Plate*, Cat. No. AK-30 or other special number cards or plates, can be supplied. If desired, please give catalog numbers (see page 20).

*Special handsets* can be supplied for extremely long lines, noisy locations, and for the hard-of-hearing. If desired, please give catalog numbers (see page 22).

## TYPE 44 *Wall*

# MONOPHONE

This is the perfect instrument for factories, warehouses and other locations where a telephone is subject to rough use. It is basically a Type 50 Monophone in a heavy protective metal case; it employs the same anti-sidetone circuit and the same circuit components—a convenience and a saving for telephone companies who use Type 40 and Type 50 Monophones. It can be supplied either with dial, or with a dial blank. All dial wiring is included, in either event.

In the Type 44 Wall Monophone, the receiver and transmitter of the old style of wall telephone are replaced by the sturdy Monophone handset, which hangs from a husky cradle-hook at the side of the case, safely out of harm's way. Because it has no protruding transmitter, this instrument is ideal for “tight spots” where the telephone must hug the wall and not extend into aisles or narrow passages. Installed in such locations, it reduces maintenance costs due to instrument breakage.

Equipment within the case includes a ringer with two-toned gongs, mounted in rubber cushions to assure the purity of its tone. “Straight-line” ringer for individual or code ringing is regularly supplied. The two condensers used provide for either metallic or ground ringing with only a simple change in connections. Ample room in the case makes all equipment readily accessible: large, convenient terminals are provided for line connections. The cover is hinged and is locked by a non-losable screw, on the front of the instrument.

The Monophone high-fidelity handset is fitted with a Monotype cord, 53 inches long, covered with black braid. The metal wall case is first treated to resist corrosion, and then finished in glossy black japan to match the handset.

*Dimensions*—Height of wall case,  $9\frac{3}{4}$  in.; width of case,  $7\frac{1}{4}$  in.; depth, over all,  $5\frac{1}{2}$  in. Overall width, including handset,  $10\frac{1}{2}$  in.

*Net Weight*— $7\frac{1}{2}$  lbs.

*Shipping Weight*—11 lbs.



# AUTELCO-GRAY PAYSTATIONS

## THE 60 SERIES



### Type 62 Paystations—Prepay

These paystations provide central-battery prepay service with any automatic or manual central-office equipment which provides 110-volt coin-control facilities for operating the coin-control relay in the paystations. Coins are deposited before connection is made, and may be collected when, or after, connection is completed (or refunded if connection cannot be made).

Type 62 Paystation—Automatic  
Type 62 Paystation—Manual,  
Convertible to automatic

### Type 64 Paystations Postpay—(Convertible to prepay)

Have no coin-control relay and do not require control equipment at the central office. Operator must supervise deposit of coins—hence these paystations are not used in automatic exchanges unless local service is provided free. These paystations are designed to permit ready conversion to prepay operation.

Type 64 Paystation—Manual,  
Convertible to automatic

### Type 66 Paystations Semi-Postpay—(Reverse-Battery)

This paystation provides toll service as described for Type 64 but permits collection of charges for local

## CATALOG LISTINGS

paystation service without the aid of an operator. It can be used in any automatic exchange which provides for reversal of transmission battery when the called party answers (this is standard operation on all Automatic Electric dial systems). This paystation does not provide for ready conversion to prepay operation.

Type 66 Paystation—Automatic

### Type 68 Paystations Postpay—(Convertible to Semi-Postpay)

As described above for Type 64 paystations, except that Type 68 provides for conversion to Semi-Postpay Reverse-Battery operation—not to Prepay. They are inexpensive paystations for use in central-battery manual exchanges.

Type 68 Paystation—Manual,  
Convertible to automatic

*Extensicord*, the "stretchable" handset cord (see page 23), can be supplied instead of Monotype cord, if specified.

"1" to "0" Number Plate, Cat. No. AK-30 or other number cards or plates can be supplied. If desired, please give catalog numbers (see page 20). (Corresponding "extended" number plate is always supplied).



In the "60" Series of Autelco-Gray paystations, Automatic Electric offers the first *complete* paystation telephones—containing all the apparatus required for outgoing service. (If desired a ringer box can be provided for incoming calls.)

The telephone apparatus and circuit used in these new instruments is identical with that used in the newest types of Monophones shown herein. Thus, you are assured of top-quality transmission which is so important—particularly on toll connections.

The paystation mechanisms of Autelco-Gray paystations are also made by Automatic Electric, to the high standards which have been developed during a half-century of experience. Safeguards are provided against fraudulent operation, and all parts are built with exceptional ruggedness to discourage theft. Coin slots are regularly provided for U. S. nickels, dimes and quarters; other slots are available on special order. Simple directions for using each paystation are provided on an instruction card which is framed under a glass window.

The cash compartment of each paystation is fitted with a specially made lock which provides utmost protection through a unique combination of tumbler and flat-lever construction and a hardened steel front which resists drilling. Protection extends

even to the design of the keyhole, which safeguards the lock against the use of a drill or drift. Locks on cash compartments are all different, and two keys are supplied with each paystation. The coin receptacle is a steel drawer within the cash compartment; its capacity is approximately \$30.00.

To prevent tampering with the paystation mechanism, the housing is also locked; all of these locks are alike, and two keys are supplied with each shipment of paystations.

Paystations for use with automatic exchange equipment are equipped with Automatic Electric dials, with number plate and "extended" number plate. Manual paystations have the instruction card mounted over the dial opening, and can be converted to automatic operation at any time by moving the card and mounting plate, and adding the dial and extended number plate, and the dial wiring.

Only three wires are needed to the ringer; without ringer, paystation connects directly to the line.

*Dimensions*—Height, 18"; width, 9"; depth, 6".

*Net Weight*—25 lbs.

*Shipping Weight*—30 lbs. (approximately)

*Coin Slots* for nickels, dimes and quarters provided, unless otherwise specified.

## DON'T OVERLOOK . . .

the income-producing possibilities of modern paystations: many telephone companies have found them one of the most consistent sources of additional revenue. In addition to the "60" Series shown here, we offer a complete line of paystations for automatic, manual or magneto service—including "attachment" types, which are used with existing telephone instruments, thus keeping new investment to an absolute minimum.

The complete line of Autelco-Gray paystations is described and illustrated in our "Paystation Catalog," which we will be glad to send on request.



# THE TYPE 47 MONOPHONE

For Multiple Line Service



This new Type 47 Monophone offers greater flexibility than ever before possible in multiple-line service. Through expanded facilities it finds a wide range of application among *all* telephone users — opens a new and profitable market for you.

Here's the reason why . . . First, it offers an efficient means of trunk answering service. Those small firms who, because of size or space limitations, cannot justify a private branch exchange will welcome the convenience of the Type 47. Secondly, to the business executive or to the contact man dealing frequently with the public, it provides invaluable "double-track" service. Thirdly, the flexibility of the Type 47 makes it ideally suited to secretarial service.

Features like these are further enhanced by the superior transmission of the Type 47 Monophone, welcomed by subscriber and operating company alike. It has the same circuit that's popularized the Type 40 Monophone, the same handset, dial and number plate (in fact, this is basically a Type 40 with push-keys added to provide varied services.)

Here's what the Type 47 Monophone can do:

1—Permits answering and holding on three lines, which may be any combination of local lines and public exchange trunks. To prevent crosstalk, switching arrangements provide that only one line is actually in use at one time.

2—Can be wired for answering and holding on two lines with the third line used for push-button signaling and disconnection of an extension telephone.

3—The third line can be used for switching a standard ringer, an extension set, or a loud-ringing bell into and out of service as desired.

All of these services are made possible by the two pairs of "Answering" and "Holding" keys mounted just below and to the sides of the dial. The keys in each pair are mechanically linked so that the operation of the "Hold" key restores the "Answering" key to normal and vice versa. The two "Answering" keys are also mechanically linked; both may not be operated simultaneously. All keys are linked to the right-hand hookswitch plunger *only*, distinctively finished in black. When this plunger is depressed or when the handset is replaced, all keys return to their normal position. The left-hand plunger (chrome) is free for flashing the operator.

The third key, mounted above the dial, is a "push-pull" type with three positions. In the normal position it switches a third line or permits the use of an extension telephone. In the "up" position it places a holding bridge on the third line or disconnects the extension phone for complete secrecy; it restores automatically when the right-hand switch plunger is depressed. When pushed down this key works as a non-locking push-button, to operate an auxiliary signal.

The Type 47 Monophone uses a high-impedance ringer. The ringer housed within the instrument may be connected to any line. Ringers of different tones for the other lines must be ordered separately, (see the Type 32 Ringer Box illustrated on this page, and the Telephone Chime, page 18).

Cat. No. AA-86—Type 47 Monophone  
With Automatic Electric dial, and high-impedance ringer for use on one line. Supplied complete with connecting block.

Cat. No. AO-76—Type 32 Ringer Box—  
For Line No. 1  
Compact, molded plastic box, complete with

distinctively toned high-impedance ringer and wiring for the Type 47 Monophone. Measures 7¼" high, 5½" wide, and 2⅝" deep.

Cat. No. AO-80—Type 32 Ringer Box—  
For Line No. 2

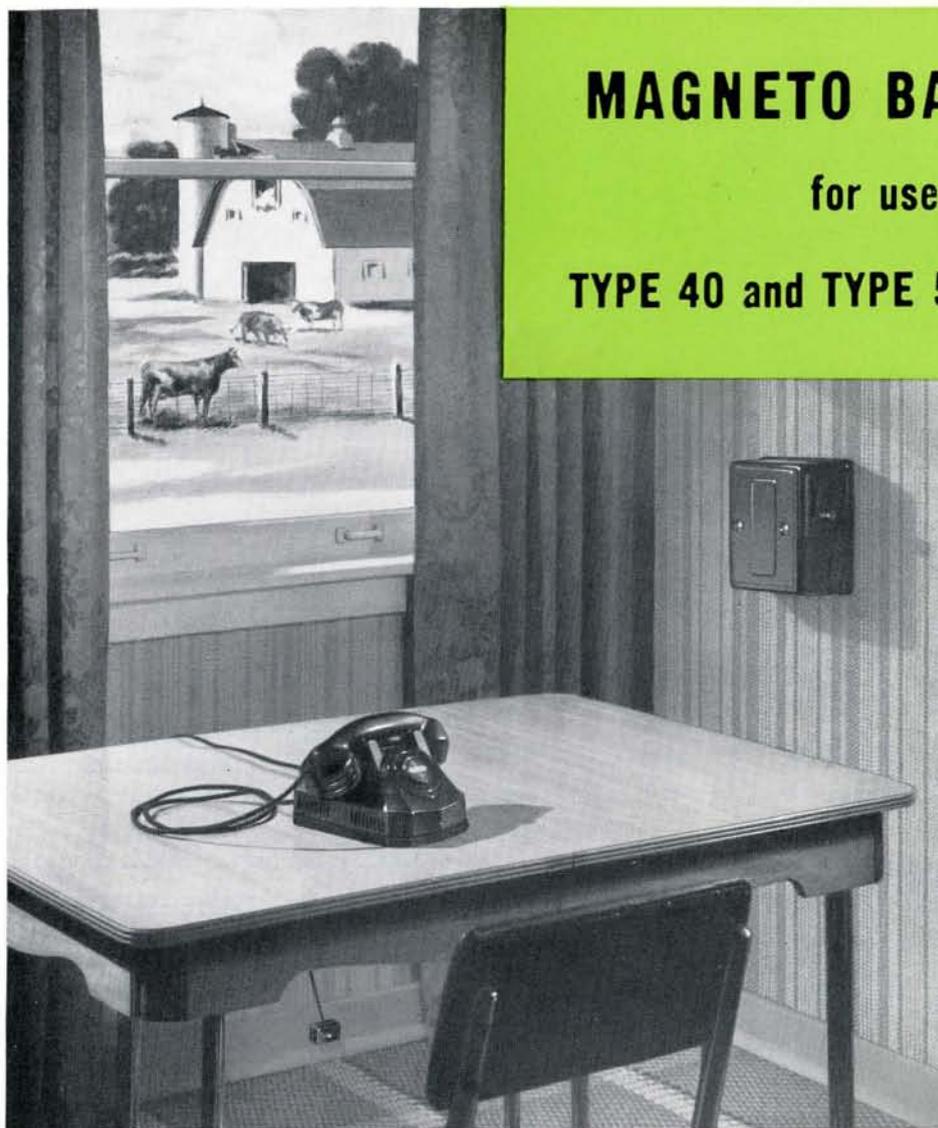
Same as above, but has ringer with slotted gongs which produce another distinctive signal.



# MAGNETO BATTERY BOX

for use with

**TYPE 40 and TYPE 50 MONOPHONES**



With the new Automatic Electric Magneto-Battery Box, operating companies can now provide magneto-line subscribers with the finest and most modern of telephone instruments, and at the same time prepare for economical conversion to automatic or manual central-battery operation.

The Magneto-Battery Box should be used with either Type 40 Desk Monophone, described on page 8, or Type 50 Wall-Mounting Monophone, described on page 10. It is designed *specifically* for use with these instruments which are available with circuits wired for magneto operation and can be converted to central-battery operation by changing a single connection—and to automatic operation by merely adding a dial. There are no new parts to order, and nothing

to become obsolete; when removed from one station, the Magneto-Battery Box can be transferred to another station, for magneto service.

Magneto-Battery Box components consist of battery-feed coil and compact magneto generator with "Alnico" magnets—a new and powerful type having all the output of a big 5-bar generator. Space is provided also for two No. 6 dry cells or for a 2-cell "unit" battery. The housing is of tough, good-looking black plastic with cover held securely in place by two non-losable nickel-finished screws.

Order either the Type 40 or the Type 50 Monophone and the Magneto-Battery Box as a unit. The Magneto-Battery Box is listed below; Type 40 Monophones, on page 9; Type 50 Monophones on page 11.

Cat. No. AO-74—Magneto-Battery Box  
(less batteries)

Cat. No. AO-75—Magneto-Battery Box  
Same as Cat. No. AO-74, but has insulated  
crank.

*Push-button* for code-ringing, semi-selective ringing or selective ringing of operator is available if desired. When ordering, specify purpose for which intended.



FOR ADDITIONAL REVENUE—INSTALL

# AUXILIARY SIGNALS . . .

Have your installers and commercial men keep their eyes open for opportunities to recommend these special-service items. They improve service for subscribers and, by encouraging quick response, they cut down holding time for you. Each of the signals shown here can be installed on the basis of a monthly charge which adds to your revenue and which within a relatively short time repays your investment.

## THE AUTELCO TELEPHONE CHIME

Designed for locations where the mellow musical tones of a chime are preferred to the ringing tones of a telephone bell. Use it with the Type 43 Compact Monophone, or with any other type of Monophone with the ringer disconnected if desired (or, Type 40, 50, or 44 Monophones can be supplied without ringers, for use with the Telephone Chime). Or use it to provide a distinctive signal on one of the lines associated with a Type 47 Monophone. Can also be used as a supplementary signal with any central-battery telephone.

The Telephone Chime strikes one low and one high tone—the first sounding at the beginning of the ringing cycle and the other at the end. Designed primarily for 20- or 33-cycle ringing current (straight-line ringing only). Installed by simply connecting it across the line terminals.

Strikingly modern in appearance, this new signal will grace any home or office.

*Dimensions*—8" high, 7½" wide, 3" deep

*Net Weight*—5 lbs.

Cat. No. S-3328—Telephone Chime

## NEW NEON SIGNAL LIGHT

The perfect telephone signal for many special uses—in hospitals, libraries, and schools where the conventional signal is too disturbing. Practical also in noisy

factories, shops, and warehouses where the ordinary ringer might not be heard. Exactly what's needed in crowded offices where it's hard to tell which telephone is ringing.

Truly a big improvement in visual call indicators, the neon lamp signal operates directly from the ringing current of the telephone (65 volts or more). Secondary sources of power are thereby eliminated—no battery, transformer or relay control are needed. And the tube has no filament to burn out—rated life is approximately 3000 hours. Signal has a bronze-lacquered metal base, 2¾ inches in diameter, and 1½ inches high, translucent glass dome, and is equipped with 6-foot cord.

Cat. No. AS-96—Neon Signal Light—Red Dome

Cat. No. AS-97—Neon Signal Light—White Dome

Cat. No. AS-98—Neon Signal Light—Green Dome

NEON SIGNAL LIGHT



TELEPHONE CHIME



## LOUD-RINGING BELLS

These bells, of the two-gong vibrating type, operate directly from straight-line ringing current, and may be simply bridged across the line. Supplied with condenser, for central-battery or magneto service, or without condenser, for magneto service only. They have 6" gongs, and powerful mechanism, to produce a loud, noise-piercing signal.

*Dimensions*—Width, 1'3"; height, 1'0".

### Cat. No. AS-51—Weatherproof Bell—C.B. or Mag.

Recommended for service in exposed locations. 1600-ohm ringer mechanism and 1 mf. condenser, enclosed in a case of cast aluminum alloy, with 3/4-inch conduit connections at top and bottom.

### Cat. No. AS-52—Splashproof Bell—1600-ohm C.B. or Mag.

Can be used outdoors, if protected from direct exposure to the weather. Case is cast iron, finished in black japan. 1600-ohm ringer mechanism, 1 mf. condenser.

### Cat. No. AS-62—Splashproof Bell—1600-ohm—Mag.

Like above, but has no condenser.

### Cat. No. AS-64—Splashproof Bell—1000-ohm—Mag.

Like AS-52, but 1000-ohm ringer, no condenser.

### Cat. No. AS-65—Splashproof Bell—2500-ohm C.B. or Mag.

Like AS-52, but 2500-ohm ringer, 0.7 mf. condenser.

### Cat. No. AS-66—Splashproof Bell—2500-ohm—Mag.

Like above, but has no condenser.

## LOUD-RINGING HARMONIC BELLS

Automatic Electric loud-ringing harmonic bells equipped with 6-inch gongs; ringer movement, and a condenser, are mounted in a cast aluminum box; box

and gongs are finished in black japan. Bells can be furnished with regular ringer coils and wiring for indoor use, or with impregnated coils and rubber-covered wiring for outdoor installation.

*Dimensions*—Height, 8<sup>3</sup>/<sub>4</sub> inches; width, 12<sup>3</sup>/<sub>4</sub> inches, overall depth, 4<sup>1</sup>/<sub>2</sub> inches.

Freq., Cycles	Impedance, Ohms	Condenser Capacitance	Catalog Numbers	
			Indoor	Outdoor
16.6	68,100	0.7 mf.	AO-42	AO-51
25	48,000	0.7 mf.	AO-44	AO-53
33.3	41,000	0.4 mf.	AO-46	AO-55
50	23,000	0.4 mf.	AO-48	AO-57
66.6	20,400	0.4 mf.	AO-50	AO-59
20	64,500	0.7 mf.	AO-43	AO-52
30	48,000	0.7 mf.	AO-45	AO-54
42	38,500	0.4 mf.	AO-47	AO-56
54	28,000	0.4 mf.	AO-49	AO-58
66	20,400	0.4 mf.	AO-50	AO-59

## CONTINUOUS TELEPHONE SIGNALING UNIT

Consists of an A.C. relay which operates on straight-line central-battery or magneto ringing current, and closes a local circuit to a signal which then operates continuously until the relay is released by pushing a button in the bottom of the case. Relay contacts will carry 5 amperes at 110 V., A.C., and the unit can be used with any type of signal. A 2 mf. condenser is included, for use on central-battery lines.

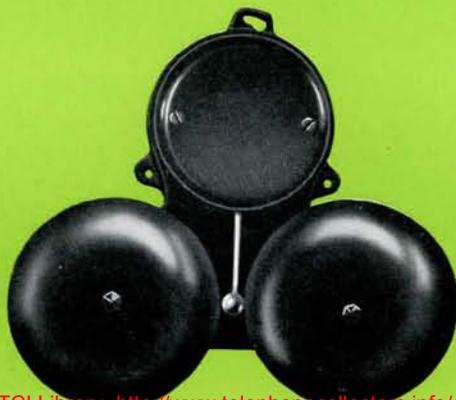
Cat. No. AP-18—In Case for Indoor Installation

Cat. No. AP-19—In Case for Outdoor Installation

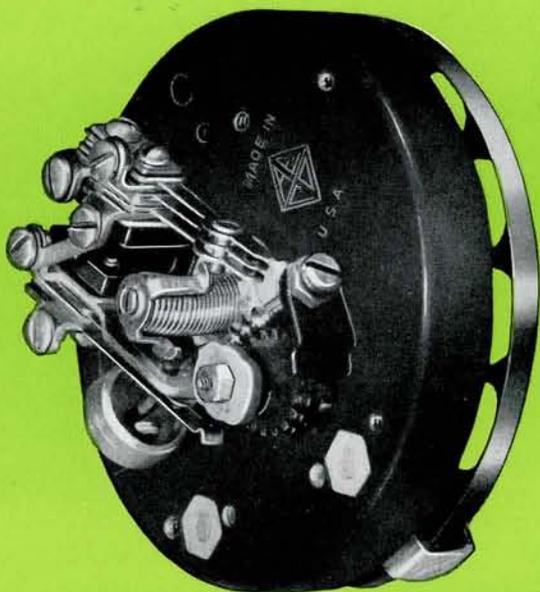
LOUD RINGING BELLS

SPLASHPROOF BELLS

LOUD RINGING HARMONIC BELLS



# THE AUTOMATIC ELECTRIC *DIAL*



## CATALOG LISTINGS

Cat. No. AK-41—Standard Dial—  
“Letter-Number” Plate

Cat. No. AK-11—Standard Dial—  
Like above, but with number plate AK-30, numbered “1” to “0”.

Cat. No. AK-22—“Splashproof” Dial  
For use in instruments exposed to excessive moisture (or dust). Has “1” to “0” number plate molded of black plastic with engraved numerals inlaid with white enamel.

Cat. No. AK-47—“Radio-Suppressor” Dial  
Used to prevent the “broadcasting” of dial impulses to a radio receiving set, which may otherwise occur when a sensitive receiver is located near an open-wire telephone line. Like dial AK-11 above (“1” to “0” number plate), but is equipped also with an 0.1 mf. condenser, and a 2-winding radio-frequency choke coil—all mounted in the dial base and wired to the springs.

*Other shunt-spring arrangements* are available—see facing page. If desired, specify catalog number of spring assembly.

*Other number cards or plates* can be supplied. If desired, please give catalog numbers—see facing page.

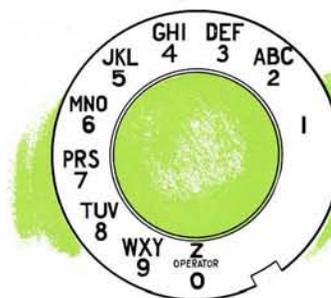
*Gold- or chromium-plated* finger plate and escutcheon ring are available if desired.

Once you operate an Automatic Electric Type 24 dial, you know why this dial is famous, throughout the world, for its dependability and its phenomenally long life. Telephone men call it “the silent dial”, because its unique features of design and construction (as shown on pages 6 and 7) make it the quietest running dial on the market. You’ll save maintenance—you’ll cut replacements by standardizing on Automatic Electric Type 24 dials.

Pulsing speed of Automatic Electric dials is accurately adjusted at the factory, and is normally maintained through a long service life, with little further adjustment. Adjustments, when required, are easily made, as the driving spring, the governor, and the impulse and shunt springs are all on the back of the dial—readily accessible without removing the dial from the telephone. Shunt springs remove the transmitter and receiver from the circuit during dial operation, to improve pulsing and prevent clicking in the receiver. A number of shunt spring arrangements are available, as shown, to fit various circuit conditions; dials listed at left are fitted with spring assembly Cat. No. AK-25, as used on all instruments listed in this catalog.

Number cards, finger plates and number plates are offered in various designs, as shown below, and can be changed if desired. A unique locking device, concealed under the card, prevents tampering with these parts.

## DIAL NUMBER PLATES



All of the automatic Monophones shown in this catalog are regularly equipped with plate AK-32 as illustrated.

Cat. No. AK-30—Numbered “1” to “0” in black

Cat. No. AK-31—“1” to “0”, and “Operator”

Cat. No. AK-32—Number Plate as illustrated above  
Black letters and red figures.

# DIAL PARTS



## DIAL BLANKS

Dial blanks for manual, convertible Monophones listed in this catalog are furnished complete with number card and celluloid cover, and with necessary mounting parts.

Cat. No. AK-55—For Types 40, 43 and 47 Monophones—Black Plastic

Cat. No. AK-20—For Type 44 Monophone—Black Metal

Cat. No. AK-57—For Type 50 Monophone—Black Plastic

Cat. No. AK-21—Number card for Dial Blank

Cat. No. AK-52—Celluloid cover for Dial Blank Number Card

(Note)—Paystations do not use dial blank; dial opening is covered by instruction card holder.

## DIAL NUMBER CARDS AND COVER



Cat. No. AK-36



Cat. No. AK-37



Cat. No. AK-38

Number card Cat. No. AK-35 is regularly supplied, as shown, on all automatic Monophones in this catalog, unless otherwise specified. All number cards are protected by a clear celluloid cover, die-cut to fit the escutcheon plate, which is regularly supplied. Number card Cat. No. AK-38 has luminous markings for use in poorly lighted locations.

Cat. No. AK-35—Regular—Space for telephone number only

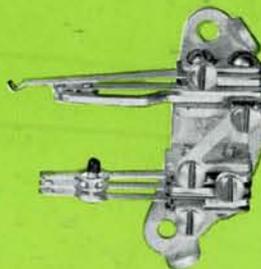
Cat. No. AK-36—Inscribed with "Long Distance"

Cat. No. AK-37—As shown above

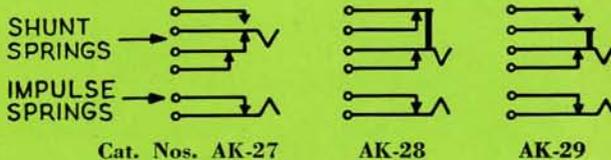
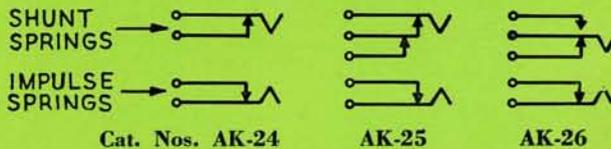
Cat. No. AK-38—Has luminous markings

Cat. No. AK-39—Celluloid cover for dial plate number card

## DIAL SPRING ASSEMBLIES

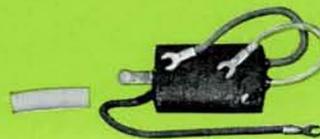


Each spring assembly consists of a pair of impulsing springs, and a set of shunt springs that place separate shunts across the transmitter and receiver during dialing. Both sets of springs are mounted on a bracket, as shown at left, ready to mount on dials having replaceable bracket. For mounting on later dials having bracket as part of baseplate, springs may readily be transferred from replacement bracket. Please specify Cat. No. on order.



Dial Spring Assemblies  
(Shunt springs shown in off-normal position)

## "RADIO-SUPPRESSORS" FOR DIALS



The "Radio Suppressor" can be connected to any dial and serve the same purpose as "Radio Suppressor Dial", Cat. No. AK-47 (see facing page). It is only 1 1/4 in. by 3/4 in. by 5/16 in. in size and mounts within the telephone housing. Three connecting cords and a screw terminal are provided for wiring to the dial circuit. Cat. No. AK-48—"Radio Suppressor" for Dials



# MONOPHONE HANDSETS

The "regular" Monophone handset used on instruments shown in this catalog contains the famous Automatic Electric "all-positions" transmitter and damped-diaphragm receiver units, perfectly balanced for maximum transmission quality and volume. These units are of the "capsule" type, and simply drop into place, making connection through contact springs. Connecting wires are molded directly into the tough plastic of the handset. A Mono-type moistureproof cord, 53 inches long, covered with black braid, is regularly supplied.

In addition to this "regular" handset, special handsets as listed and described below, are available to give your subscribers improved service by meeting their specific needs.

## CATALOG LISTINGS

**Cat. No. AF-48—Type 41 Monophone Handset—  
"Regular"**

As described above, and regularly used on all instruments shown in this catalog.

**Cat. No. AF-47—Type 41 Monophone Handset—  
"Super-Volume"**

Standard handset supplied with super-volume "all-positions" transmitter that combines with the special anti-sidetone induction coil in the Monophone, to provide extra transmission output necessary on exceptionally long lines.

**Cat. No. AF-51—Type 41 Monophone Handset—  
"Tropical"**

"Regular" handset but fitted with special rubber-insulated cord designed for service in locations subject to high humidity. Cord is covered with durable black braid.

**Cat. No. AF-64—Type 25 Monophone Handset—  
"Anti-Noise"**

For use in abnormally noisy locations such as shops, factories, etc. A special handset, shown above, using the regular capsule-type "all-positions" transmitter and damped-diaphragm receiver, but equipped with a pushbutton conveniently located in the handle. Pushbutton is depressed to cut out transmitter during listening period, eliminating unnecessary circuit noise.

**Cat. No. AF-69—Type 27B Monophone Handset  
for Noisy Locations**

For use in event of extreme noise conditions. Special

handset fitted with non-locking pushbutton. Uses the regular capsule-type transmitter and a "sound-powered" receiver providing increased volume. Pushbutton is depressed to shunt out transmitter while listening.

**Cat. No. AF-71—Type 27A Monophone Handset  
for the Hard-of-Hearing**

Black handset fitted with locking pushbutton that may be latched in the depressed position or momentarily held in position as desired. Supplied with regular capsule-type transmitter but with "sound-powered" receiver that boosts volume 12 db above normal when pushbutton is depressed.

## MODIFICATIONS

*Extensicord*—the cord that expands easily and contracts neatly, may be supplied in place of the standard cord, if specified (see facing page).

## COLORED HANDSETS

Monophone Handsets Cat. Nos. AF-47, AF-48 and AF-51 can be furnished in Mahogany, Walnut, Chinese Red, Old Ivory, Jade Green, Nile Green, Royal Blue, Orchid or Maroon—and also in Black—fitted with transmitter and receiver bands of metal finished in gold or chromium plate. These handsets are regularly supplied with Extensicord. Just give Catalog Number and specify color and trim desired.

## E-X-T-E-N-S-I-C-O-R-D Handset Cord

Here is a handset cord that actually s-t-r-e-t-c-h-e-s. Normally only thirty-two inches long, it lies closely to the telephone when not in use. When the handset is lifted for use, the Extensicord stretches to approximately twice its original length—without moving the instrument! It permits the user to stand, sit down or move about with exceptional freedom. When the handset is replaced, the cord returns to its normal form without kinking, twisting or knotting. It's supplied as standard equipment with the Type 43 Compact Monophone, and with all Colored Monophones. Extensicord convenience can be provided for any type or make of telephone covered by the catalog numbers below.

Net Weight—3 oz.

Shipping Weight—7 oz.

### CATALOG LISTINGS

Cat. No. AH-29—Cord for Type 41 Monophone Handset—Black

Has 3 conductors, each covered with black braid. Used on Monophone Types 40, 50, 43, 44, 47.



Cat. No. AH-21—Cord for Type 38 Monophone Handset—Black

Has 3 conductors covered with black braid. Use on earlier types of Monophones using the Type 38 handset.

Cat. No. AH-22—For W.E. No. E1B Handset—Brown Cord

Replaces W.E. Co's No. H3B.

Cat. No. AH-23—For Kellog No. F27 Handset—Brown Cord

Replaces Kellog's No. F673-G.

Cat. No. AH-31—For W.E. Co. No. F1 Handset—Brown Cord

Replaces W.E. Co's No. H309

Cat. No. AH-32—For Leich Handset—Brown Cord

Cat. No. AH-33—For S.-C. Handset—Brown Cord

## MONOTYPE TELEPHONE CORDS

Monotype cords bring you all of the features desirable in the "ideal" telephone cord . . . quality insulation . . . handsome appearance . . . long life. In Monotype construction, each conductor is not only *insulated*, but is thoroughly *saturated* with a highly effective moisture-resistant compound (so good that a Monotype cord will ordinarily not be harmed even if accidentally immersed in water for some time). Then, the cord is covered with two layers of tightly woven braid, giving Monotype cord the ruggedness to meet the most severe operating conditions, keeping replacements to a minimum.

### HANDSET CORDS

Net Weight—2 oz.

Shipping Weight—6 oz.

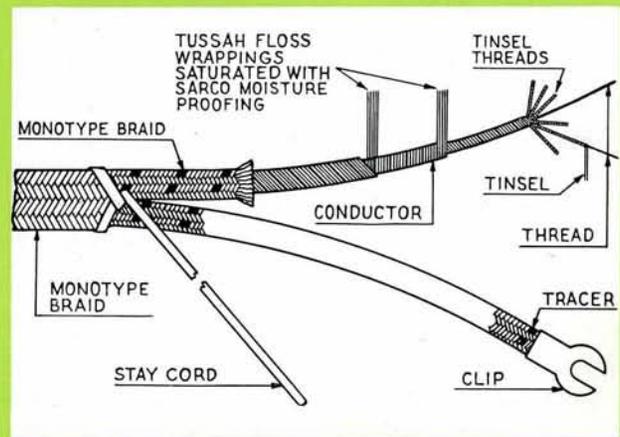
### CATALOG LISTINGS

Cat. No. AH-27—Cord for Type 41 Monophone Handset

Three conductors, 53 inches long over all, black braid.

Cat. No. AH-30—Cord for Type 38 Monophone Handset—Black

For older types of Monophones using the Type 38 handset. Can also be used on S-C Nos. 10 and 12 handsets, replacing S-C Nos. C-3-B and MC-3-B. Three conductors, 53 inches long over all, black braid.



### DESKSTAND CORDS

Net Weight—2 oz.

Shipping Weight—6 oz.

### CATALOG LISTINGS

Cat. No. AD-18—Cord for Type 40 Monophone

For metallic ringing. Two conductors, 72 inches long over all, black braid.

Cat. No. AD-57—Cord for Type 40 Monophone

For ground ringing. Three conductors, 72 inches long over all, black braid.

**TELEPHONE SWITCHING KEYS**

Used for connecting one telephone to two or more lines, connecting a number of telephones to one line, etc. Locking type lever key is assembled on a steel base and protected by a pressed steel cover, finished in black japan. Dimensions: length, 5 $\frac{3}{4}$ " (including key handle); width, 3 $\frac{3}{8}$ "; height, 1 $\frac{1}{2}$ ".

Cat. No. AY-10—Switching Key—2-conductor, 2-way

Cat. No. AY-11—Switching Key—2-conductor, 3-way

**TELEPHONE CONNECTING BLOCKS**

Cat. No. AV-19



Cat. No. AV-20

Telephone Connecting Blocks

These small, neat connecting blocks, for use with self-contained telephones, etc., are molded of black plastic, with a permanently handsome finish. Cover has openings for cords and line wires; there is also a knockout in the base for bringing in line wires from directly under the block. A spring clip is provided, to clip around the telephone cord and take all strain from the cord terminals. Terminal screws are connected in pairs by metal straps molded into the material, and are plainly marked with embossed designations, high-lighted with red enamel. Cover fastens with one "non-losable" screw, and two wood screws are provided for mounting the block.

Cat. No. AV-19—Type 11 (1-Pair) Connecting Block

For use with two-conductor cords. Length, 2 inches; width, 1 $\frac{1}{2}$  inches; height, 15/16 inch.

Cat. No. AV-20—Type 12 (2-Pair) Connecting Block

Provides a terminal for ground-ringing on central-battery lines, or two terminals for battery connections on local-battery telephones, in addition to the terminals for line wires. Length, 2-9/16 inches; width, 1 $\frac{1}{2}$  inches; height, 15/16 inch.

**Another Revenue Producer!****PORTABLE TELEPHONE PLUGS AND JACKS**

By offering portable telephones equipped with plugs, and wall jacks for installation at points where permanent telephones would not be desired, telephone companies can often secure increased revenues in clubs, hotels, large residences, etc. The Type 40 Monophone (see page 10), with its convenient finger grips, is perfectly adapted for this service.

Portable telephone jacks are designed to mount in a standard electric switch box (not furnished) and are provided complete with a flush plate, finished in brushed brass.

Cat. No. AZ-10—Portable Tel. Plug—2-cond.

Cat. No. AZ-11—Jack and Flush Plate—2-cond.

Cat. No. AZ-12—Portable Tel. Plug—4-cond.

Cat. No. AZ-13—Jack and Flush Plate—4-cond.

**DIAL AND MONOPHONE TOOLS**

Tool for Dial Escutcheon Lock  
Cat. No. AW-13

Cat. No. AW-13—Dial Escutcheon Lock Tool

Cat. No. AW-14—End Wrench for Dial

For governor nut and large impulse cam nut.

Cat. No. AW-15—Socket Wrench for Dial

For small impulse cam nut.

Cat. No. AW-16—Dial Pliers

For adjusting dial springs and governor.



Monophone Tool  
Cat. No. AW-17

Cat. No. AW-17—Monophone Tool

For removing Monophone switch spanner nut on Type 50 and other Monophones having similar Monophone switch. Also for removing receiver cap bushing on Type 38 Monophone handset.

## RINGER MOVEMENTS AND PARTS



For use on all Automatic Electric central-battery ringers, these highly efficient and long-lasting movements may be employed for replacement purposes or for converting from straight-line to harmonic ringing, from one harmonic frequency to another, or from harmonic to straight-line ringing.

Movement consists of an armature mounting with armature and clapper, and two ringer coils. For handling and shipping, the coils are assembled on an iron yoke which prevents damage in shipping; this yoke is easily removed for installation. Screw terminals are provided on the ringer coils so that connections may be made easily and quickly without soldering. Condenser capacitance, frequency, etc., are plainly marked on each movement.

Listed below are ringer movements recommended for use on lines having not more than five metallic-ringing or ten ground-ringing stations. (For lines with heavier loading, see "High-Impedance Ringers," below).

Cat. No.	Frequency	Impedance (at 1000 cycles)
AS-80	Straight-Line	43,300 ohms
AS-81	16.6-cycle	72,700 ohms
AS-83	25-cycle	48,000 ohms
AS-85	33.3-cycle	17,400 ohms
AS-87	50-cycle	14,800 ohms
AS-89	66.6-cycle	14,800 ohms
AS-82	20-cycle	64,100 ohms
AS-84	30-cycle	35,400 ohms
AS-86	42-cycle	17,400 ohms
AS-88	54-cycle	14,800 ohms
AS-89	66-cycle	14,800 ohms

## HIGH-IMPEDANCE RINGERS

High-impedance ringers, interchangeable with standard ringers, but using condensers of low capacitance, can be furnished to improve dialing conditions on lines where the load is especially heavy. Ringer boxes

and instruments using these ringers require separate talking and ringing condensers for metallic as well as for ground ringing.

If a high-impedance ringer is desired, state the type of telephone with which it is to be used. A ringing condenser of the proper capacitance is furnished with each ringer; if mounting parts (screws, washers, etc.) are desired, please specify.

Any telephone or ringer box shown in this catalog may be supplied with high-impedance ringer and associated ringing condenser. When ordering, state catalog number of the standard instrument and specify "With high-impedance ringer."

## COLD CATHODE TUBE

### For Superimposed Ringing



Convert your present Monophones to superimposed ringing with this cold cathode tube. For 4-party fully selective signaling, superimposed ringing has these advantages: (1) the same telephone can be used for party-line and straight-line ringing; (2) only single-frequency ringing machines are required. Type 40, 50, 43 and 44 Monophones can be converted quickly and easily with the equipment listed below.

**Cat. No. AP-20—Tube and Terminal Box—  
For Type 40 and 44 Monophones**

For converting ground ringing instruments. Complete with cold cathode tube and terminal strip that replaces present line-and-cord terminal block. Box as shown above, measures 2½" high, 3" wide, and 5⅛" long.

**Cat. No. AD-57—3-Conductor Connecting Cord—  
For Type 40 and 44 Monophones**

To convert metallic ringing instruments, use this cord in addition to Cat. No. AP-20 above.

**Cat. No. AW-36—Cold Cathode Tube—  
For Type 50 Monophones**

Tube is furnished with necessary mounting parts—mounts on baseplate next to ringer.

**Cat. No. AO-78—Type 32 Ringer Box—  
For Type 43 Monophones**

Ringer box contains straight-line ringer, terminal strip, and the cold cathode tube. Used with Type 43 Monophone, it provides for complete station service.

# ORDERING INFORMATION

## ORDERS

Orders for shipment within U. S. and possessions should be placed on Automatic Electric Sales Corporation, 1033 W. Van Buren Street, Chicago 7, Illinois. Orders for foreign shipment should be placed on International Automatic Electric Corporation, 1027 W. Van Buren Street, Chicago 7, Illinois, U.S.A.

When ordering, give quantity desired, catalog number and description as shown in catalog. If there is any doubt as to the exact instrument required for any purpose, please provide us with complete details regarding its application. Our Engineering Department will then be in a position to enter your order properly, and without unnecessary correspondence.

## SPECIAL APPARATUS

When ordering special apparatus, please give the catalog number of a similar standard item listed herein (this will enable our Engineering Department quickly and accurately to determine the general type of apparatus desired) and then specify in detail the variations desired from this standard assembly.

## SHIPMENTS

Shipments will be made in accordance with instructions received with order. Please specify method of shipping, and give preferred routing. In the absence of instructions, we will use our best judgment in routing shipments to give you the very best service.

## CLAIMS

We assume no responsibility for breakage or loss after receiving an "In Good Order" receipt from the transportation company, and all claims of this kind should be made direct to them without delay. We should be glad to cooperate in securing satisfactory adjustment of such claims. Mail shipments of considerable value are insured, at the customer's expense.

Claims for shortage should be made promptly, and should be accompanied by packer's ticket, which is placed in each case.

If it is desired to return goods for credit, exchange or repairs, please secure our consent and shipping instructions before shipping.

## PRICES

Price lists are issued from time to time, and the current list will be gladly sent upon request. Unpriced orders will be filled at prices prevailing at date of shipment. Small orders priced from obsolete price lists will be shipped at latest prices without re-quotations, unless revised quotations are requested before shipment. Large orders so priced will be quoted on, and your approval secured before shipment is made.

## TERMS

Accounts with companies with approved credit are payable net 30 days from date of invoice, except where quotations indicate otherwise.

New credit accounts are solicited. In order to facilitate prompt shipment, send references or other information of a credit character with your order, if you are not rated by the commercial agencies. If it is desired to avoid delay on your first order incidental to communicating with references, etc., instruct us to ship C.O.D. by express or parcel-post, or by freight, subject to sight draft through a local bank against the bill of lading.

## GUARANTEE

Apparatus manufactured by Automatic Electric Company is guaranteed to be free from mechanical and electrical defects, and any part or unit which proves defective within one year of purchase, under normal conditions, and when used as intended, will be replaced or repaired without charge, if returned to our general offices. Apparatus of other makes bears the standard guarantee of the manufacturer. Please secure our consent and shipping instructions before returning goods for replacement or repair.

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*Originators and Developers of the Strowger Step-by-Step "Director" for Register-Sender-Translator Operation . . . Machine Switching Automatic Dial Systems.  
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