

AN X-RAY STORY
 OF THE **KELLOGG**
MASTERPHONES

For half a century...

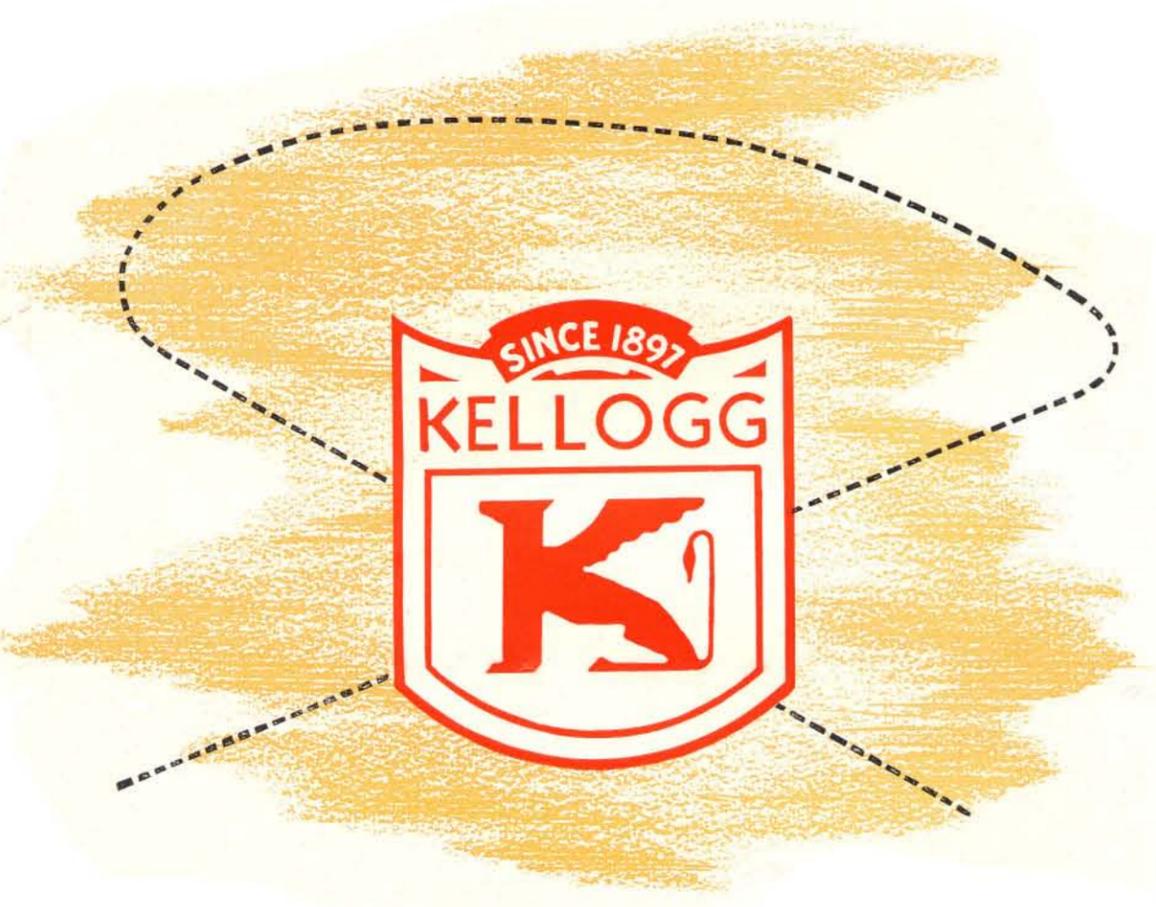
• Since 1897, the Kellogg Organization has sponsored the cause of Independent telephony — supplying practically all the various needs of the industry and constantly pioneering new developments for its advancement. It is Kellogg's policy and constant desire to co-operate closely with each and every telephone company so that any one, or all, may have the full advantage of Kellogg's extensive research laboratories, tremendous manufacturing facilities, and wealth of engineering skill and experience.

It is an accepted fact that with Kellogg interest and aid, the industry has developed and progressed through the years. That the Independent telephone organizations have been able to reduce operating costs, while building higher and higher standards of service, is also largely due to Kellogg's work in designing and producing improved equipment. Today, as in the past, Kellogg is continuing to keep faith with the industry by unceasing research and perfection of quality products to help reduce costs and improve telephone service.



JAMES H. KELLOGG
 3rd Generation of the Kellogg
 Family to serve as President,
 Kellogg Switchboard & Supply
 Company.





THE OUTSTANDING ACHIEVEMENT IN

Current

TELEPHONE HISTORY . . .



In 1897: Here was *the* telephone of its day . . . and the first of a long line of outstanding Kellogg telephones. While a far cry from the streamlined efficiency of current Kellogg instruments, it brought new highs in telephone standards to subscribers of the late "nineties."



In 1915: The first American-made handset, the Kellogg Grabaphone, was an immediate success. Thousands of these popular instruments were manufactured by Kellogg, to meet the demands of operating companies all over the country.



In 1935: Forerunner of the new Kellogg Masterphone, the #925-Series Masterphones featured the now famous Non-Positional Transmitter. This, plus standardization and interchangeability of components, made this instrument the choice of profit-minded telephone men everywhere.



NOW: The current Kellogg 1000 Series Masterphones mark a new era in telephony's progress. Incorporating every improvement developed over half a century of pioneering, these completely new instruments represent the ultimate in beauty, simplicity, efficiency . . . and reliability.

And now...

LET'S TAKE A LOOK

Inside THE KELLOGG

1000 SERIES *Masterphones*

SEE REVEALED BEFORE YOUR EYES

WHY installation, adjustment and servicing are so easy and simple that the only tool you need is a medium-sized screwdriver.

HOW a single base plate and two housings gives you either desk or wall telephones for all types of subscriber services.

WHERE all components are mounted for instant accessibility and quick-as-a-wink inspection.

When you have seen these and all the other improved design and operating features revealed in these pages, then you will see why you'll be time and money ahead for years to come by standardizing on the new Kellogg Masterphones.

WHAT "constant protection" means in the universal circuit permanently wired and nested in the interconnecting block.

AN EXTERIOR with styling as modern and graceful as its construction is sturdy and dependable.

No. D-1000 Desk Masterphone—with Dial for common battery service in Biased and Harmonic Ringers.



Quickly Adaptable to All types of Subscriber Services

● Shown above is a new Kellogg Desk-Set Masterphone with Dial—in a matter of seconds, this can be converted into any of the other wall or desk type telephones as illustrated below! The same base plate is used for all types. You stock only one type of base plate; two types of housings to provide at all times any required type of service . . . thereby reducing inventory to a new low.

Note also the smooth flowing lines of these housings, molded in one piece, of high-impact phenolic compound.



No. 1000 Desk Masterphone—for common battery manual service in Biased and Harmonic Ringers.



No. D-1100 Wall Masterphone—with Dial for common battery service in Biased and Harmonic Ringers.



No. 1100 Wall Masterphone—for common battery manual service in Biased and Harmonic Ringers.

MASTERPHONE

A Masterpiece of Simplicity and Efficiency . . .

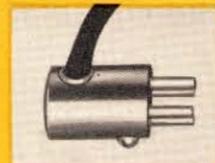
Streamlined and sturdy, the housing of the new Kellogg Masterphone contains the dial and plunger mechanism, compactly arranged with all parts easily accessible.



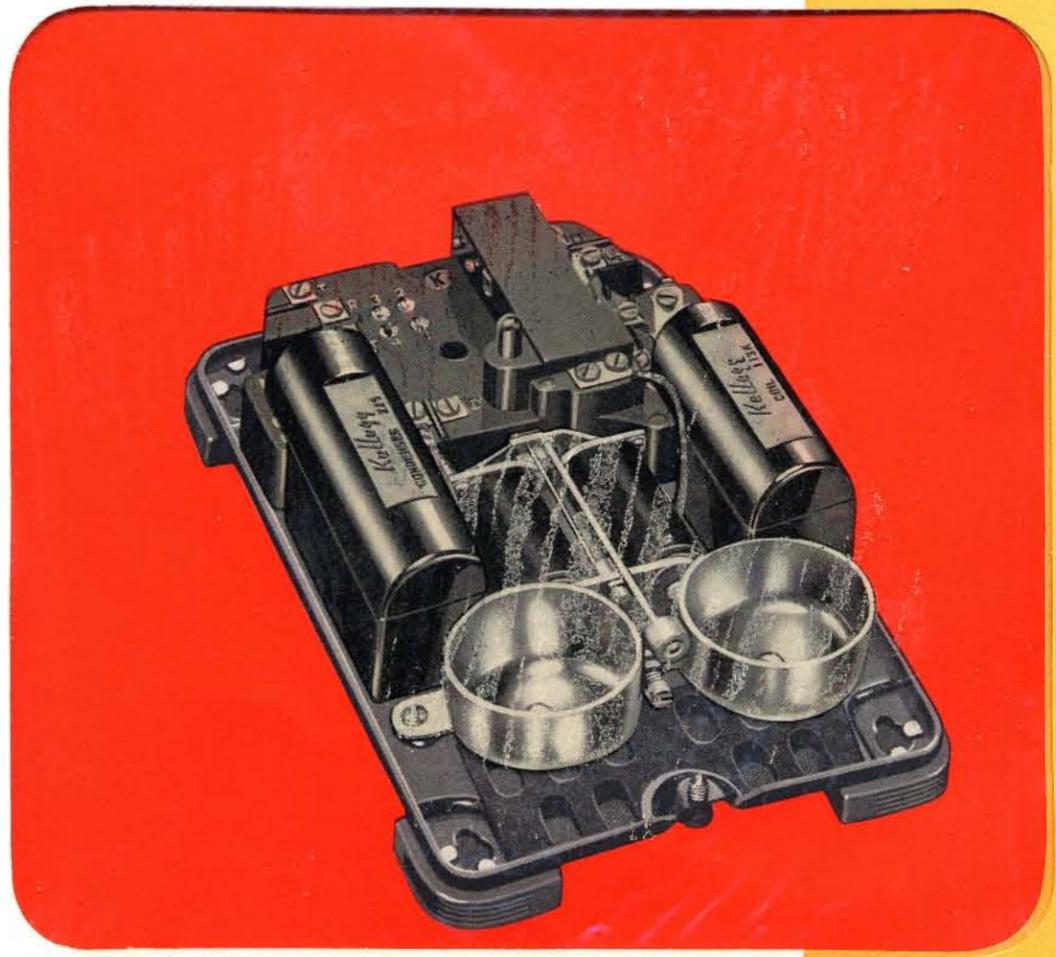
A Single Screw attaches the housing to the base plate—removal and replacement is fast and easy.



Plunger Bar—The one-piece, plunger bar is securely mounted in a unit-type support bracket.



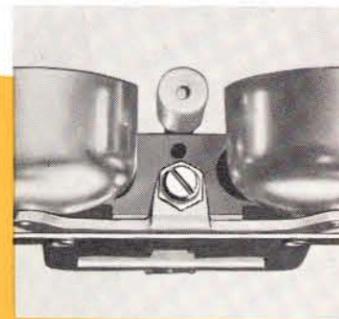
Dial Plug—The Dial is connected to the universal circuit by a cord and a 4-prong plug . . . no special wiring necessary.



Improved Ringer Design means Easy Servicing . . .

• Ringers of unit construction are mounted to the base with only two screws for fast servicing. The ringer is floated by means of a flexible strap which not only prevents distortion from throwing the ringer out of adjustment, but also eliminates objectionable operating noises.

Provision for adjustments of volume and tone; selection for the type of ringing desired are easily made in the field.



Ringer Adjustment Screw—a single micrometer screw, conveniently located between the gongs, makes adjustment for volume and tone control, simple and fast.



Ringing Circuit Selector—Shifting a slide-link switch adapts the new Masterphone to either Metallic or Divided Ringing.



Pleasant Ringing Tone—Large two-tone gongs provide an ample volume of pleasing, commanding tone quality. The sound output is satisfactory in either home or office.

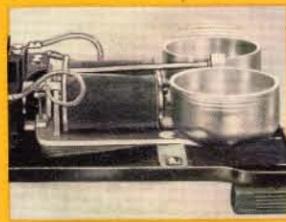
BIASED RINGERS
Three ringers in High, Medium and Low impedance for Common Battery or Magneto service.

HARMONIC RINGERS
A complete line in all frequencies for Harmonic Ringing.

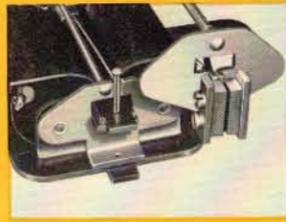
STRAIGHT LINE
Three ringers in High, Medium and Low impedance for Magneto service applications.



Easy Accessibility—two mounting screws are conveniently located and are easily removed with a medium-sized screw driver.



Ringer "Floats"—a new flexible metal mounting "floats" the ringer to improve tone quality, prevent mechanical distortion and keep ringer in adjustment.



Armature Assemblies—are so constructed that they will fit any one of the new ringers.

Universal Ringer Design

• A complete line of biased, harmonic and straight line ringers is available for all types of telephone service. All ringers are of the same design, adjustment and mounting. Except for the few components which adapt a ringer for a specific service, the major parts are identical. The electrical characteristics and mechanical movements of all ringers will produce maximum sensitivity to ringing voltages and the large two-tone gongs provide maximum sound output.

CONDENSER and INDUCTION COIL Universal Application . . . Utmost Simplicity . . .

• The advantages of the 1000 Series Masterphone are further emphasized in the unit construction and adaptability features of the Condenser and Induction Coil. Each individual unit is complete in itself . . . easily assembled or removed and readily adapted to various applications by means of convenient switching arrangements.



Plug-in connection—The Condenser and Induction Coil plug into pin jacks on the Interconnecting Block in the same manner as you plug in a radio tube.



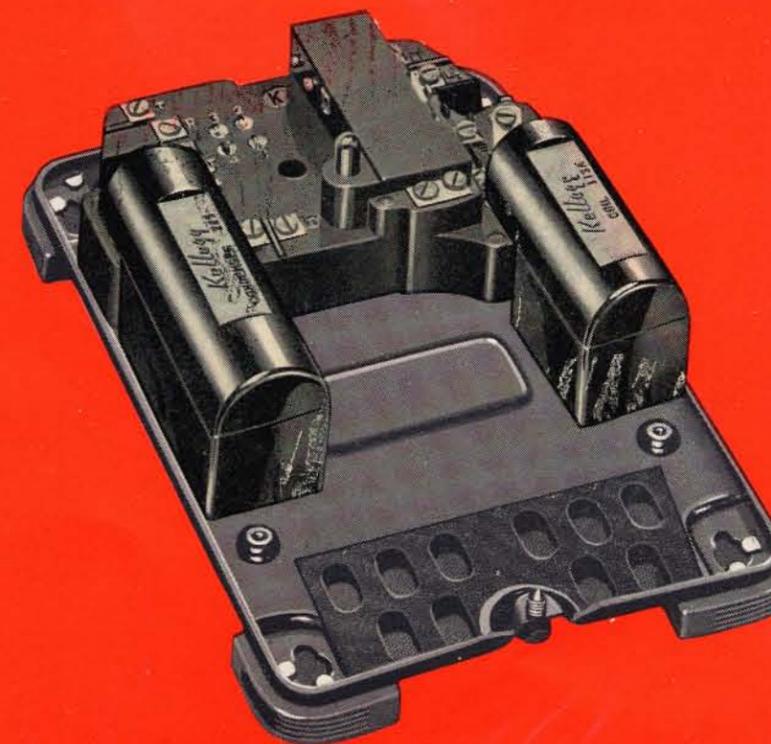
Sealed-in Units—The Condenser and Induction Coil are encased in individual moulded housings which are potted and sealed with moisture-proofing compound.



Condenser Control Switch—a slide-link on the interconnecting block provides either 0.5 MF or 1.0 MF of capacity as required in the ringing circuit.



Induction Coil Control—a 3-way link controls transmission, reception and side tone for long or medium loops and controls transmitter current supply for short loops.





INDUCTION COILS

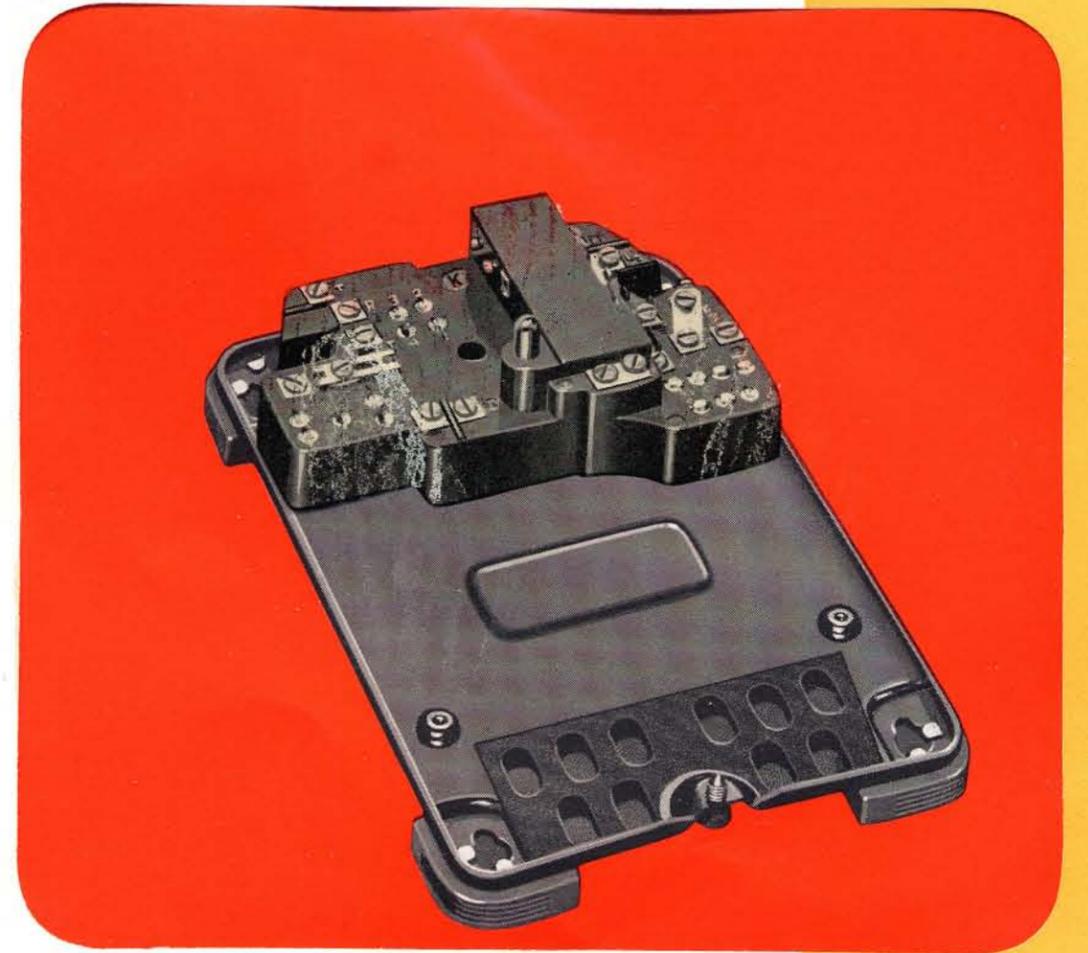
Common Battery A single induction coil is used for all common battery services. It's design provides for the best ratio between side-tone reduction, transmission, and reception regardless of the subscriber's loop used. The means of matching the induction coil to a particular loop is accomplished by the use of a three way switch which controls the ratio either for long or medium loops, and limits the transmitter current supply on short loops.

Local Battery Where required, a local battery induction coil replaces the common battery coil. This replacement automatically adapts the Kellogg Universal Triad Circuit to any desired local battery application, such as Magneto services, common battery signalling and local battery talking, etc.



UNIVERSAL CONDENSER A single condenser unit is used for all circuit applications. This condenser provides the necessary capacity for the talking circuits and by means of a switching unit on the inter-connecting block, provides either 0.5 or 1.0 MFds. of capacity as required by the ringer used.

You stock only one type of condenser for *all* telephones.

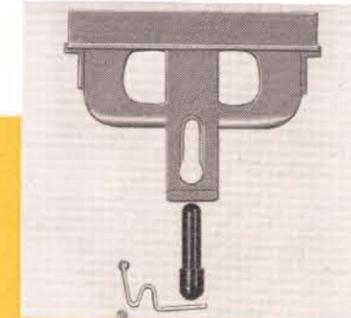


"Nerve-Center" of the New Masterphone . . .

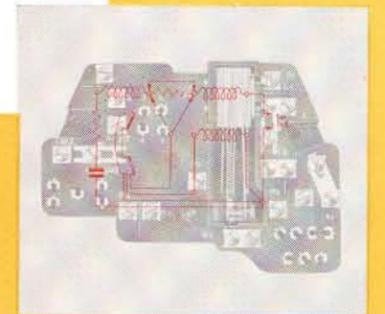
● Here is the new Kellogg Interconnecting Block—the most important innovation in current telephone history! Permanently nested in this one-piece phenolic molding is the entire universal circuit. No changes need ever be made in the permanent wiring for the various circuit applications. Circuit terminations and switching units are conveniently located on top of this block.



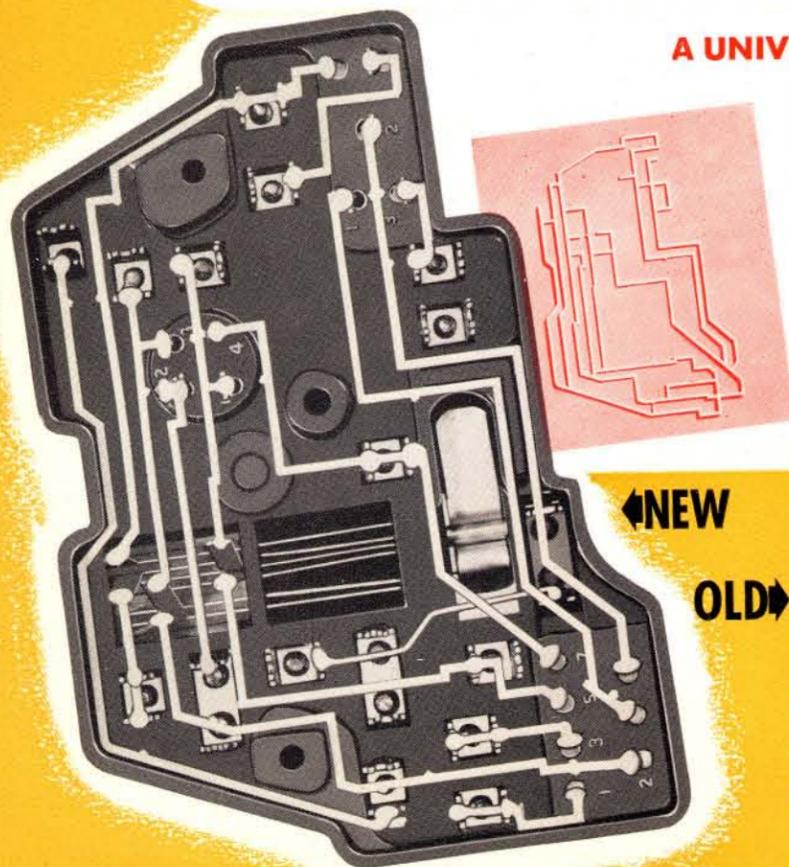
Switch Assembly—All moving parts of the switching mechanism, including the spring stack-up, are housed in a dust-proof compartment on the interconnecting block. The twin-contact, nickel-silver spring leaves, are directly connected with the permanent wiring of the Universal circuit.



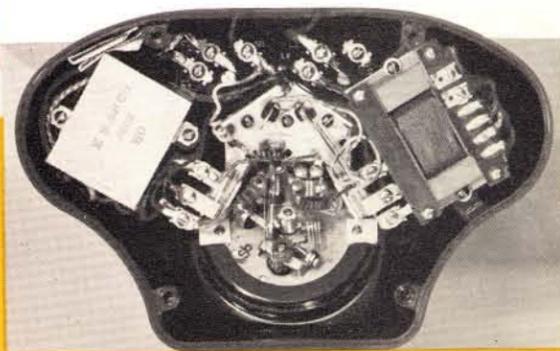
Plunger mechanism—the plunger bar, associated with the housing, actuates the switch leaves by means of mechanical linkages.



Triad-Circuit—The Kellogg Triad Circuit has been further improved to provide universal circuit applications and broader side-tone control features.



A UNIVERSAL CIRCUIT GRID Nested in the underside of the inter-connecting block for complete protection against moisture, dust and insects, is the universal circuit grid and its associated switching springs. A unit-stamped grid, this circuit is permanently hooked up—eliminating all need for color-coded wiring, physical changes or complicated servicing. Adaptation of the circuit to virtually all types of subscriber services is done by means of the convenient arrangements on the top side of the block.



Look at the difference between an Old circuit hook-up with its complicated wiring and color coding. Compare this with the New Kellogg unit-stamped grid which is permanent, simple and fool-proof. The part shown at left is the permanent wiring which is concealed within the interconnecting block and need never be changed.



MASTERPHONE Functionally Right— from the Bottom Up!

• The base plate is, like every other part of the new Masterphone, designed for functional efficiency and simplicity. Its durable black finish protects against corrosion, impact and scratching. A screen shields all sound openings. Deep drawn heavy gauge brass assures rigid construction, secure mounting of all parts to the base to prevent distortion.



Four Models, as shown, are made up from the single base plate and only two types of housings.



Reinforced contours—all mounting screws are recessed in protective wells. Formed edges and wells provide for extra strength and sturdiness.

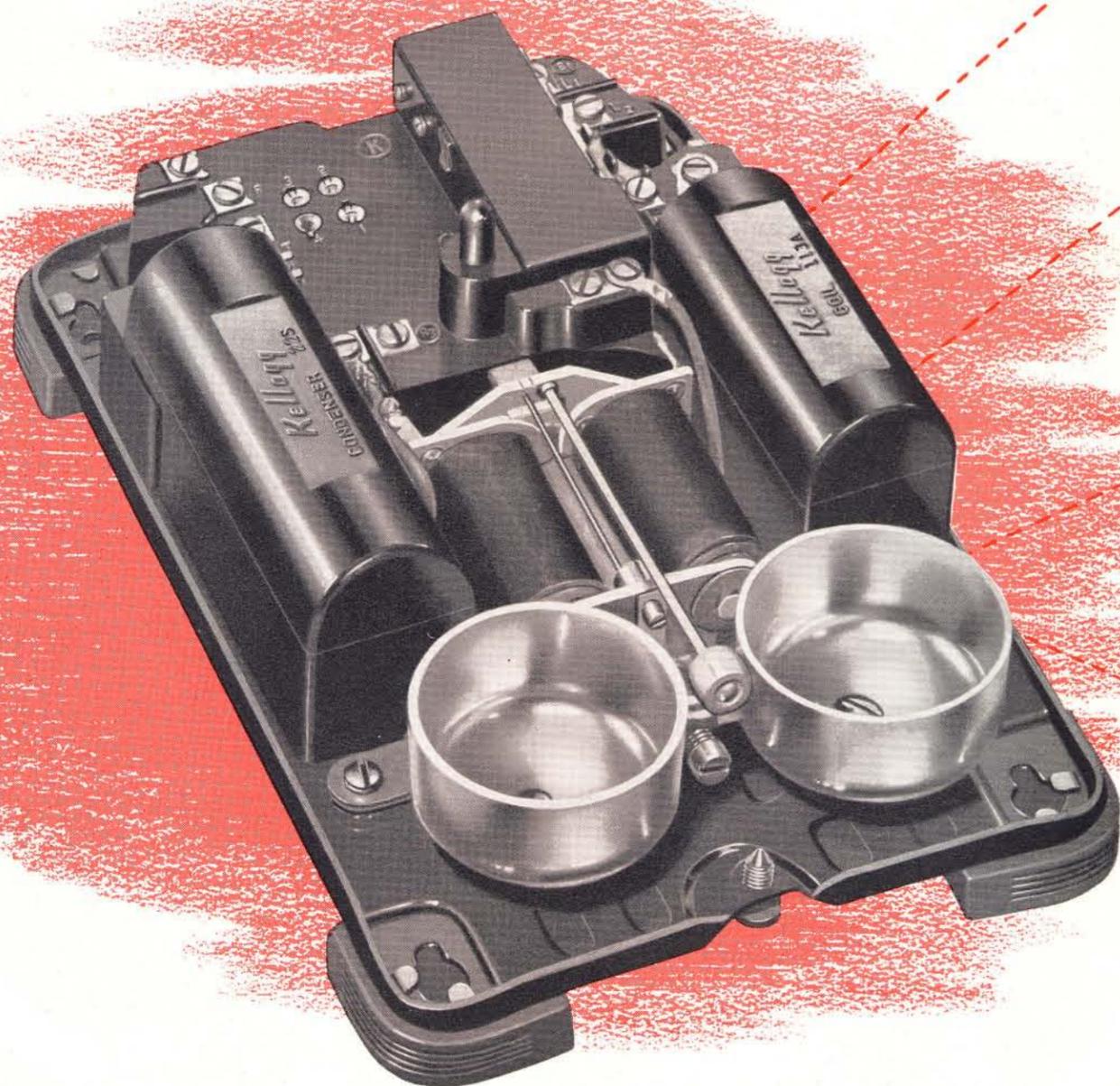


Easily Removable Feet—The rubber feet on the base plate are easily removed, exposing the mounting holes for attaching the instrument to the wall.

A Single BASE ASSEMBLY

Both Desk and Wall Masterphones use the same base assembly. All components are mounted on the base plate and, as you see below, are instantly accessible.

Housings, to provide any of the telephones shown on the following page, are interchangeable in a matter of seconds. A single screw and a catch attaches the desk housing; a catch and a spring latch attaches the wall housing.



FOR All MODELS



No. D-1000 DESK MASTERPHONE—
with Dial for common battery service in Biased and Harmonic Ringers.



No. 1000 DESK MASTERPHONE—
for common battery manual service in Biased and Harmonic Ringers.



No. D-1100 WALL MASTERPHONE—
with Dial for common battery service in Biased and Harmonic Ringers.



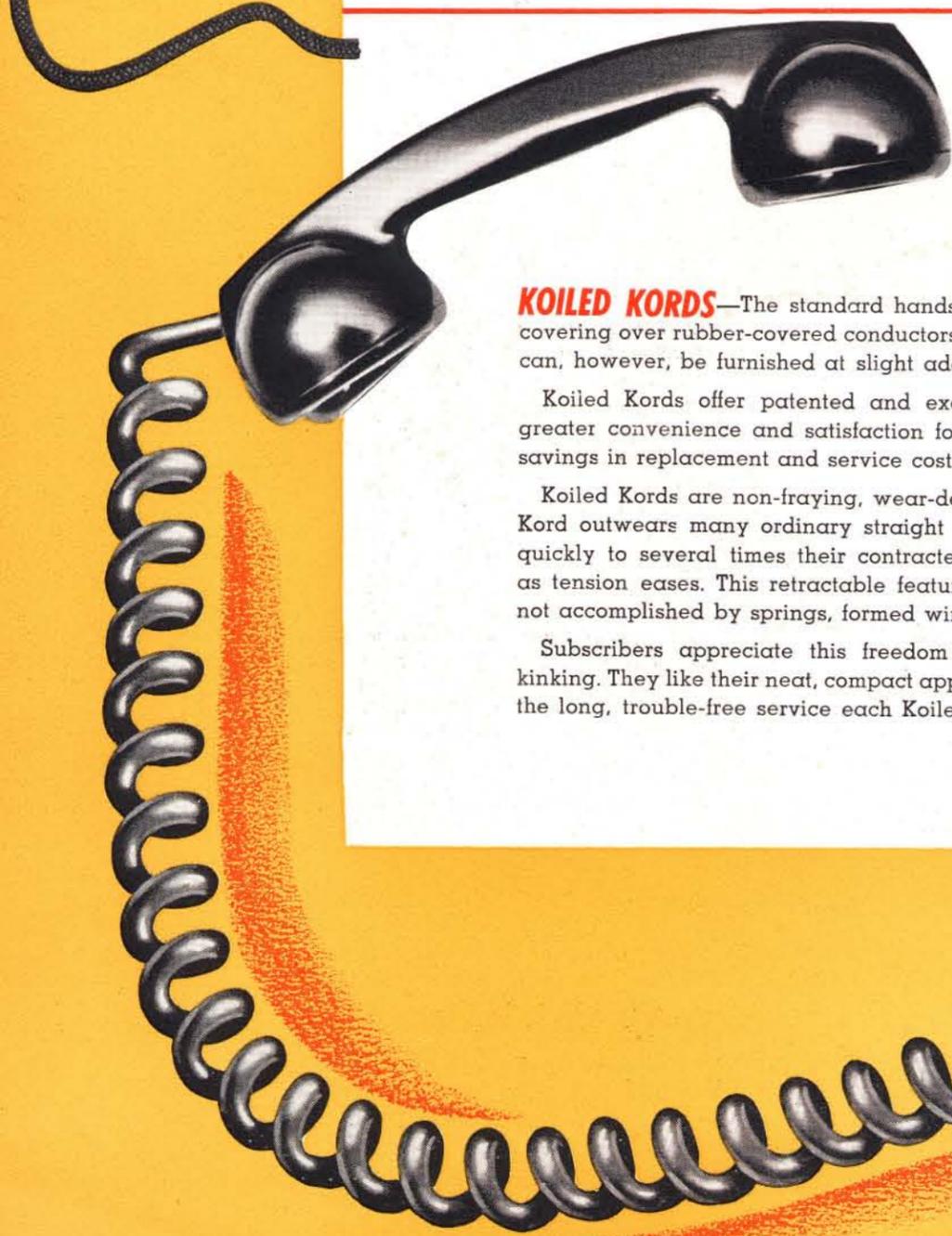
No. 1100 WALL MASTERPHONE—
for common battery manual service in Biased and Harmonic Ringers.



No. 1200 SERIES HAND GENERATOR BOX—
for use with Magneto telephones No. 1040 and 1050 Desk; 1140 and 1150 Wall.
For full information on How to Order these New Kellogg Masterphones, see pages 20 and 21.



HANDSET—Designed for increased efficiency, durability and beauty, is the Kellogg Masterphone Handset. All molded parts are of breakage-resistant phenolic compound with enduring glossy finish. The receiver and transmitter are positioned to provide the maximum transmission and reception. The contour of the handle has been modified to improve the appearance and add greater strength. Both the improved non-positional transmitter and the new receiver are of the capsule type and furnish high-fidelity voice reproduction.

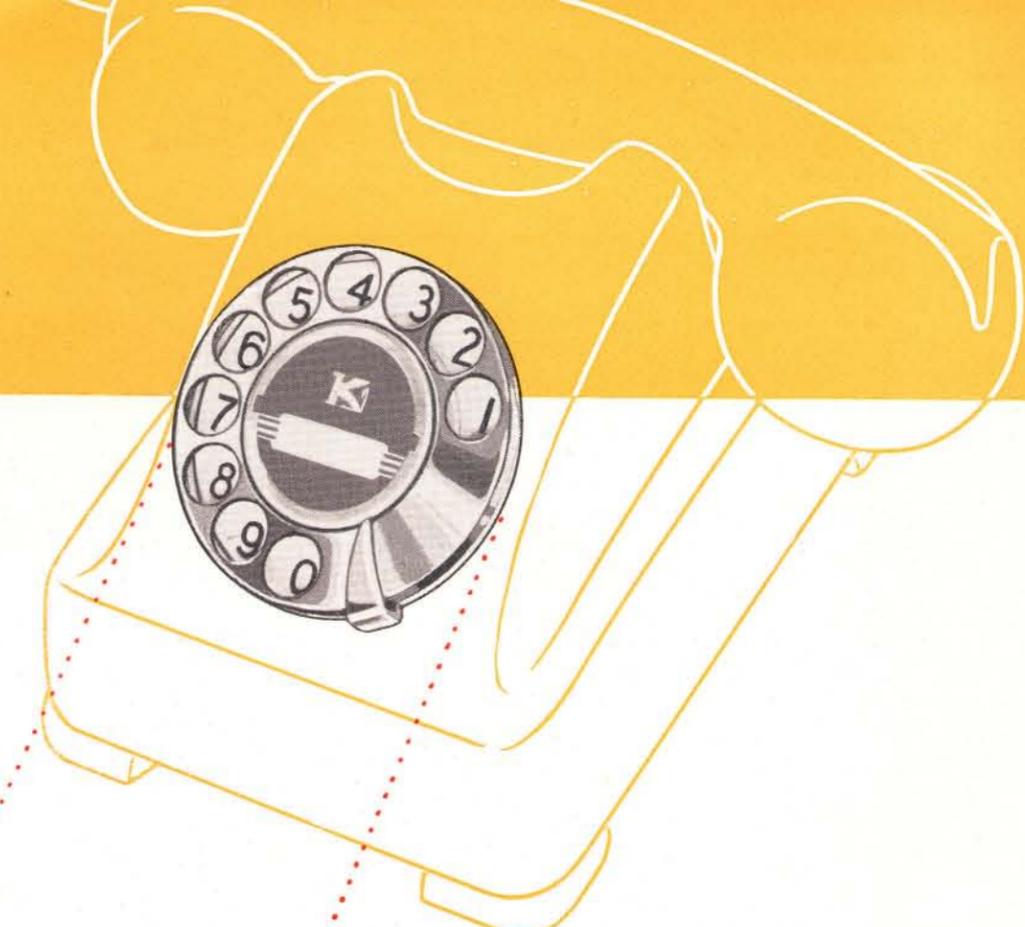


KOILED KORDS—The standard handset cord is straight black fabric covering over rubber-covered conductors. The new Kellogg Coiled Kords can, however, be furnished at slight additional charge.

Coiled Kords offer patented and exclusive advantages that mean greater convenience and satisfaction for your subscribers . . . greater savings in replacement and service costs for you.

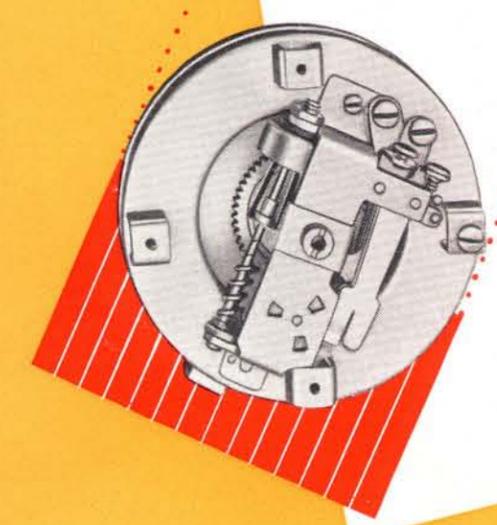
Coiled Kords are non-fraying, wear-defying, economical—one Coiled Kord outwears many ordinary straight cords. They stretch easily and quickly to several times their contracted length, and retract instantly as tension eases. This retractable feature is permanently molded in—not accomplished by springs, formed wires or other mechanical means.

Subscribers appreciate this freedom from tangling, dangling and kinking. They like their neat, compact appearance. And you'll appreciate the long, trouble-free service each Coiled Kord delivers.



NEW KELLOGG

DIAL



Precision-built and extremely simple in design, the new Kellogg Dial assures dependable, positive operation. Three shunt springs which place separate shunts around the transmitter and receiver during the dialing period plus a cushioned governor drum and a silent over-running clutch (instead of old style ratchet and pawl) assure silent operation. Kellogg's free-running bearing system permits effortless dialing while a special hardened ball thrust bearing provides longer operating life. Extremely compact design permits reduction of the overall size of the dial yet provides unusual accessibility.

The same dial mechanism is used for all service applications, since the circuit is such that no changes in dial wiring or pulsing springs are ever required. The calling dial is connected to the circuit simply by plugging into the interconnecting block, while the four-conductor dial cord is attached to the screw terminals on the back of the dial. A Standard dial plate numbered 1 to 0 or a Metropolitan plate with letters and numbers is furnished, as desired; both are of white vitreous enamel.

HOW TO ORDER THE NEW MASTERPHONES . . .

STYLE OF HOUSING		CLASS OF SERVICE In Unit Type Instruments
Desk	Wall	
1000	1100	Manual Common Battery Service
D-1000	D-1100	Dial Common Battery Service
1040	1140	Magneto Service (see Associated Hand Generator Boxes)
1050	1150	Magneto Service—Less Condenser (see Associated Hand Generator Boxes)
		No. 1203—3 Bar Hand Generator Box
		No. 1205—5 Bar Hand Generator Box
		No. 1206—6 Bar Hand Generator Box

NOTE

Indicate on your order the style of housing desired, the class of service and the type of ringer required. Example: 1000-BA or 1100-HA2.

If a dial (number 1 to 0 only) is desired, indicate with letter "D" per following example: D-1000-BB or D-1100-HB2. If the dial shall be furnished with both letters and numbers (Metropolitan Dial) indicate per following example: D-1000-HA3—10G Dial.

When ordering for Magneto Service, specify the instrument desired and the Hand Generator Box required per the following example: 1040-SB 1205 Generator Box.

Koiled Kords—The standard handset cord is a straight black fabric covering over rubber covered conductors. If you prefer a Koiled Kord, we will furnish at an additional charge. Indicate on your order by using the letter "K" per the following example: D-1100-HA4-K.

Select the Proper Biased or Harmonic Ringers Required for Common Battery Service, and Straight Line Ringers or Biased Ringers for Magneto Service from the Following Chart

BIASED RINGERS	HARMONIC RINGERS			STRAIGHT LINE RINGERS
BA—High Impedance	33 $\frac{1}{3}$ Cycle—HA1	30 Cycle—HB1	20 Cycle—HC1	SA—High Impedance
BB—Medium Impedance	50 Cycle—HA2	42 Cycle—HB2	60 Cycle—HC2	SB—Medium Impedance
BC—Low Impedance	66 $\frac{2}{3}$ Cycle—HA3	54 Cycle—HB3		SC—Low Impedance
	16 $\frac{2}{3}$ Cycle—HA4	66 Cycle—HB4		
	25 Cycle—HA5	16 Cycle—HB5		

NOTE

Proper Selection Of Ringers:—Harmonic Ringers should be selected by their frequency application. Biased and Straight Line Ringers should be selected for the *particular line applications*. BA ringers are recommended for all dial and heavily loaded manual lines, but should not be mixed with ringers with a resistance of less than 2500 ohms. BB ringers are recommended if present ringers on a line have a resistance of over 1500 ohms and under 3000 ohms. BC ringers are recommended if present ringers on a line have a resistance of 500 ohms to 1500 ohms. SA-SB-SC ringers for magneto applications are selected in the same manner as indicated for Biased Ringers.

The New Kellogg Masterphones Are Also Available Less the Ringer for Extension Service, and Less the Induction Coil, the Condenser, and the Ringer, in Stripped or Partially Stripped Instruments for Use with Existing Common Battery and Magneto Desk Set Boxes.

Refer to the Following Chart for the Desk or Wall Instrument Required to Meet Your Particular Requirements

TYPE OF INSTRUMENT		DESCRIPTION OF INSTRUMENTS AND HOW USED For Various Classes of Service
DESK	WALL	
1000-LR	1100-LR	Manual Common Battery Extension Service when ringer is not required in instrument
D-1000-LR	D-1100-LR	Same as above, but telephone is equipped with dial
1040-LR	1140-LR	Magneto Service (Four Conductor) for use with a hand generator box as an extension telephone where ringer and condenser are not required in instrument, or with existing desk set boxes equipped with generator and ringer only
1040C-LR	1140C-LR	Same as above, but telephone is equipped with a condenser
1060	1160	Magneto or Common Battery (Four Conductor) for use with Triad Circuit Magneto or Common Battery Desk Set Boxes equipped with induction coil, condenser and ringer
D-1060	D-1160	Same as above, but with dial for dial Common Battery Service
1062	1162	Magneto or Common Battery (Three Conductor) for use with Booster Circuit Magneto or Common Battery Desk Set Boxes where desk set boxes are equipped with induction coil, condenser and ringer.
D-1062	D-1162	Same as above, but with dial for dial Common Battery Service

NOTE

If Dial (numbers 1 to 0 only) is desired, order per Example: D-1000-LR. If dial with numbers and letters (Metropolitan Dial) is desired indicate as follows: D-1000-LR-10G Dial.

Koiled Kords—The standard handset cord is straight black fabric covering over rubber covered conductors. If you prefer Koiled Kords, these can be furnished at an additional charge. Indicate that you desire a Koiled Kord per the following example: 1040-LR-K or D-1160-K.

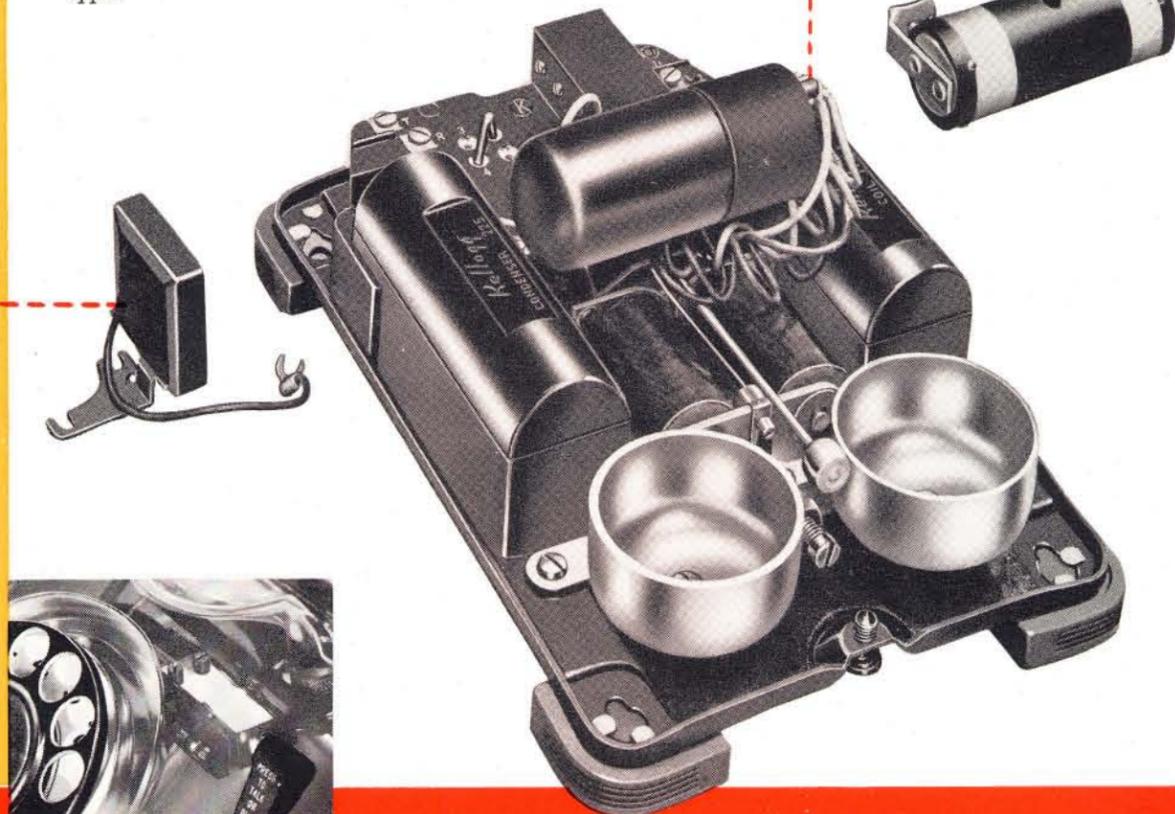
AUXILIARY APPARATUS FOR USE WITH THE MASTERPHONE

Retard Coils—The 64A Retard Coil can be used to adapt the Masterphone to local battery talking and common battery signalling on long lines. This feature provides equal transmission and reception on common battery lines which would otherwise require a magneto line. Where the line is too long for metallic common battery signalling, 64B Retard Coil should be used to provide Simplex common battery signalling.

Vincent Rare Gas Relay #RTC-2—This relay may be used in telephone circuits where it is desired to ring telephones to ground where line induction disturbances are of low enough voltage that a two element vacuum tube will furnish the desired ground isolation during the conversational period. The Vincent rare gas relay may be used on magneto or common battery lines, and can be used with Biased, Harmonic, or Straight Line Ringers where the tube itself is not to be used for selective ringing purposes.

Western Electric Vacuum Tube #333-A—In addition to securing isolating qualities on grounded ringing systems as indicated above, if it is desired that the vacuum tube have polarity selective qualities the Western Electric #333-A Tube should be used.

The most common use of the #333-A Vacuum Tube is with superimposed ringing currents where it is desired to furnish four party full selective or eight party semi-selective ringing with Biased ringers. We recommend the 2500 ohm (code BB) ringer for this application. If, however, it is desired to use a main station and an extension station with the same vacuum tube, both ringers must be of the 1000 ohm (code BC) biased type.



"PRESS-TO-TALK" SWITCH—An auxiliary switch is available for use on Kellogg Masterphones. This switch provides a special listening circuit which permits a subscriber to "listen in", yet prevents interference with dialing, ringing or conversation on party lines. This is a necessary feature for revertive calls on party lines and on Simplex signalling telephones. When the switch button is pressed, the listening circuit is automatically replaced by the standard telephone talking and listening circuits.

OTHER KELLOGG TELEPHONES

In addition to the 1000 Series Masterphones, Kellogg manufactures a complete line of other telephones for every type of service. Included among these are rugged, lightweight portable telephones . . . highly efficient outdoor telephones that are carefully constructed to assure complete protection against moisture . . . numerous other types of telephones for special applications. To industries requiring heavy duty equipment—to forestry service, state and national parks—Kellogg Telephones offer the ideal solution to their special communications problems.

All of these instruments provide the finest in transmission and reception. They are simple in design, dependable and trouble-free in operation and require virtually no maintenance. Ruggedly built with care and precision, Kellogg telephones insure satisfactory service for years and years. Wherever they are installed, they prove to be the finest instruments money can buy—substantially reduce operating and maintenance costs and help to increase profits.

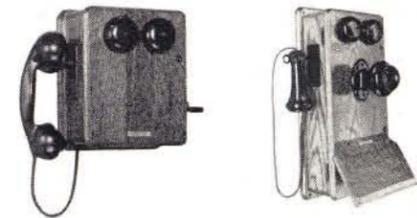
Common Battery Wall Masterphones



9817 Types—Handset style in black enamel finish steel housing, with Triad Anti-Side Tone Circuit, for Common battery dial, or manual service in biased or harmonic ringers. Specify if dial is desired.
Biased Ringers—9817-BA
Harmonic Ringers—9817-HA-HB-HC

817 Types—Individual Receiver and transmitter style in black enamel finish steel housing, with triad Anti-side tone circuit, for common battery dial, or manual service in biased or harmonic ringers. Specify if dial is desired.
Biased Ringers—F-817-BA
Harmonic Ringers—F-817-HA-HB-HC

MAGNETO WALL MASTERPHONES



5800 Types—Handset style in Oak cabinet, with triad anti-side tone circuit, for magneto service in straight line ringers.
3 Bar Generator, 1000 ohm ringer 5809-M
5 Bar Generator, 1600 ohm ringer 5812-M
5 Bar Generator, 1600 ohm ringer with condenser 5816-M
5 Bar Generator, 2500 ohm ringer 5859-M
5 Bar Generator, 2500 ohm ringer with condenser 5880-M

4800 Types—Individual receiver and transmitter style in Oak cabinet with writing shelf, with triad anti-side tone circuit, for magneto service in straight line ringers.
3 Bar Generator, 1000 ohm ringer 4809
5 Bar Generator, 1600 ohm ringer 4812
5 Bar Generator, 1600 ohm ringer with condenser 4816
5 Bar Generator, 2500 ohm ringer with condenser 4880

MAGNETO DESK SET BOXES



3500 Type—Oak cabinet type equipped with three or five bar generators and 1000 ohm, 1600 ohm, or 2500 ohm ringers. For use with side mounting type #9830.
#3528—1000 ohm ringer, 3 bar generator
#3561—1600 ohm ringer, 5 bar generator
#3562—2500 ohm ringer, 5 bar generator

COMMON BATTERY DESK SET BOXES



F-605 Type—Steel Desk Set Box, for use with two conductor telephones or as an extension bell. Equipped with ringer and condenser. May be used with side mounting type #9741 or #9720.

F-605-BA—Biased Ringer
F-605-HA1—Harmonic Ringer 33½ cycle
F-605-HA2—Harmonic Ringer 50 cycle
F-605-HA3—Harmonic Ringer 66½ cycle
F-605-HA4—Harmonic Ringer 16½ cycle
F-605-HB1—Harmonic Ringer 30 cycle
F-605-HB2—Harmonic Ringer 42 cycle
F-605-HB3—Harmonic Ringer 54 cycle
F-605-HB4—Harmonic Ringer 66 cycle
F-605-HC1—Harmonic Ringer 20 cycle
F-605-HC2—Harmonic Ringer 60 cycle
F-605-LR—Less Ringer
F-610 Type—Steel Desk Set Box, contains triad circuit for use with four conductor telephones. Equipped with ringer, induction coil, and condenser. May be used with side mounting type #9741 or #9735.
610-BA—Biased Ringer
610-HA—Harmonic ringers. Specify 1-2-3 or 4 parties
610-HB—Harmonic ringers. Specify 1-2-3 or 4 parties
610-HC—Harmonic ringers. Specify 1-2 parties
610-LR—Less Ringer

SIDE MOUNTING MASTERPHONES



9740 Type—Handset style dial extension instrument in black enamel steel housing, with triad anti-side tone circuit, and provided with common battery induction coil and condenser. Specify if dial is desired.
9741 Type—Same as the 9740 type, except less the induction coil and condenser. Specify if dial is desired. Use with triad anti-side tone circuit desk set box.

9735 Type—Same as the 9720 type, except less the induction coil and condenser, for common battery manual service. Use with triad anti-side tone circuit desk set box.

9830 Type—Handset type magneto extension instrument in black enamel steel housing, with local battery triad circuit induction coil.

9720 Type—Handset style manual extension instrument in black enamel steel housing, with triad anti-side tone circuit, and provided with common battery induction coil and condenser.