

KELLOGG SWITCHBOARD & SUPPLY CO.

MANUFACTURERS OF COMPLETE TELEPHONE SYSTEMS AND RADIO APPARATUS

WAREHOUSES
COLUMBUS, OHIO
KANSAS CITY, MO
PORTLAND, OREGON
SAN FRANCISCO, CAL

1054 MISSION STREET

TELEPHONES HEMLOCK 830-831

GENERAL OFFICES AND FACTORY
1066 WEST ADAMS STREET
CHICAGO, ILL.

SAN FRANCISCO, CAL.

Nov. 25th, 1929

Radio Corporation of America
Bolinas, Calif.

Attention: Mr. J. S. Philbuik

Dear Sir:-

Complying with your request of Nov. 22nd, inclosed find pamphlet covering inter-communicating telephones on which we have had the pleasure of talking over with you.

The price on #92-W wall set is-----\$25.50 ea.

The price on #92-W-G grabaphone wall set is --\$32.00 ea.

I have not mentioned our #100 wall set, which is also an eleven station wall set that I have marked in this pamphlet. The price of this wall set is-----\$24.50-ea.

The above prices include complete telephones with one retardation coil, which is required for each telephone.

You also need one #163 mounting strip. This prevents cross talking with each ten stations, which is required. The price of one strip or equipment for ten stations is \$1.15 each.

The price on code 2513-B terminal strip, which is 13 pair is-----\$2.70 per strip. Roughly speaking, I would say for eight stations you need six strips. This cut shows #2515 Junction box, which is the same only 25 pair.

I believe this gives you information desired.

All the above prices are F.O.B. San Francisco, and are subject to change without notice.

At the present time immediate delivery can be made.

Of course it is understood that you will need miscellaneous items such as a few cable clamps, batteries and other incidentals.

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page 2

Trusting this explains same, and hoping to be favored with your valued order, we remain

Yours very truly,

KELLOGG SWBD. & SUPPLY CO.

BY



DISTRICT MANAGER
TELEPHONE DIVISION

HAA:TA

Kellogg

Intercommunicating Telephones

THE Kellogg selective ringing, selective talking intercommunicating system is a valuable adjunct to any business where not more than twenty to twenty-three telephones are required. It may also be used as an auxiliary telephone system to relieve the regular switchboard of a portion of its traffic, and to free out-going and incoming facilities from the burden of inter-office communication.

This system requires no operator, is simple to use and economical to maintain. It puts executives in swift and easy communication with each other and eliminates much wasted time and lost motion. It may be installed either with or without city trunk line connections.

The Kellogg intercommunicating system is furnished in two sizes, one with an ultimate capacity of 11 stations and the other with an ultimate of 23. The possibility of future requirements determines the ultimate capacity to be selected, but only the actual number of telephones required need be ordered for the initial installation.

Where more than 23 stations are likely to be installed, we recommend a small private branch switchboard, and we will be pleased to send our complete bulletin describing these systems on request.

Kellogg Switchboard and Supply Company

1020-1070 West Adams Street

Columbus, Ohio
163 N. Fourth St.

Chicago, Illinois

San Francisco, Calif.
1054 Mission St.

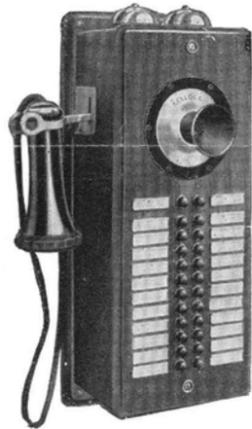
Kansas City, Missouri
308 W. 6th St. Traffic Way

Portland, Oregon
40-42 E. Seventh St.

Kellogg

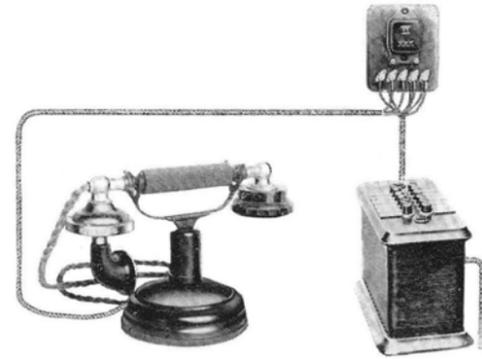
Selective Ringing Selective Talking

Intercommunicating Telephone System

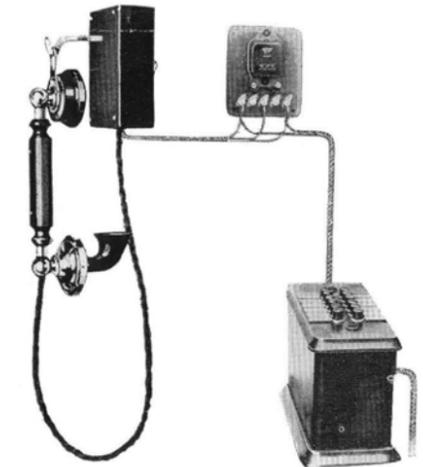
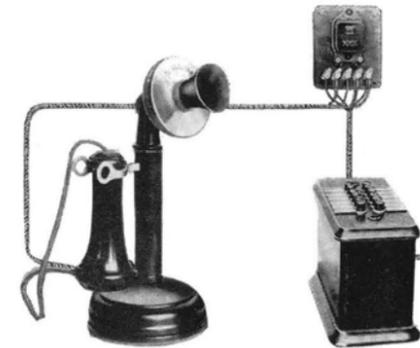


Twenty-three station wall telephone. The eleven station wall telephone is similar in appearance except equipped with less buttons.

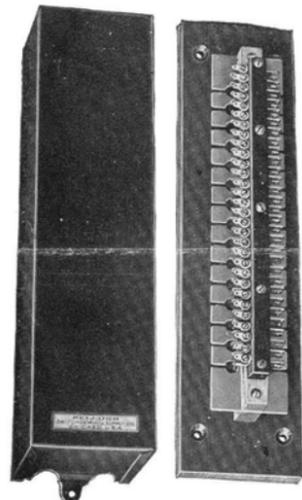
Eleven station grabaphone set. The twenty-three station grabaphone set is similar in appearance except larger key box.



Eleven station desk telephone. The twenty-three station desk telephone is similar in appearance except larger key box.



Eleven station wall grabaphone set. The twenty-three station wall grabaphone is similar in appearance except larger key box.



Code No. 2515 Junction box for joining cable leads.

IT is a known fact that where there are more than six or seven telephones in one intercommunicating system there is need to have facilities to carry on more than one conversation at the same time. With this selective talking selective ringing intercommunicating system as many conversations can be carried on at the same time as there are pairs of telephones.

In order to get the same reliable and efficient service from an intercommunicating system, as from the best city exchange the apparatus employed must be of the same standard of excellence.

The Kellogg Company has, in the design of this system, made constant effort to employ as much of its standard apparatus as possible. Where special parts are necessary they are of the same high grade.

Simplicity in design and construction, the outstanding feature of this system goes far toward reducing the maintenance cost. A separate ringing button is used which reduces the number of springs per station button, and simplifies the wiring. Accessibility to all parts makes it very easy to install and maintain. Freedom from the every-day troubles of intercommunicating telephones is the result of constant improvement in an endeavor to make the Kellogg Intercommunicating System the

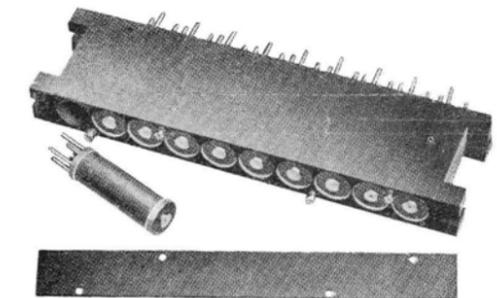
best of its kind and reduce the maintenance cost to a minimum.

All metal parts used are treated to prevent rust, those exposed are handsomely finished in black enamel or heavy nickelplate. The wood cabinets are made from well seasoned quarter sawed oak. The hand rubbed varnish finish is of such character that it will not show ordinary wear.

The ease in operating the Kellogg System makes an instant appeal to the user, which is certain to result in a more efficient working force.

Press the button of the station you desire, then push the ringing button. The connection is completed by lifting the receivers off their respective hooks and the called party pressing his home station button. Upon completion of the conversation both parties restore their receivers.

The various types of telephones shown, together with the necessary apparatus are carried in stock and prompt shipments are a certainty.



Code No. 14 retardation coils with Code No. 163 cross talk-proof mounting.

11 STATION INSTALLATION

Amt.	Code No.	Description
11		Telephones as selected which include apparatus as shown in photographs.
11	2313-B	13 pair Junction Boxes.
11	14-F	Retardation Coils.
2	163	Mounting strips to mount above coils.
— Ft.	144-L	16 pair lead covered cable.
— Ft.	71	5 wire twist from key box to bell box.

23 STATION INSTALLATION

Amt.	Code No.	Description
23		Telephones as selected which include apparatus as shown in photographs.
23	2525-B	25 pair Junction Boxes.
23	14-F	Retardation Coils.
3	163	Mounting strips to mount above coils.
— Ft.	147-L	25 pair lead covered cable.
— Ft.	71	5 wire twist from key box to bell box.

Kellogg

Auxiliary Equipment for Trunks to Main Switchboard Exchange



Code No. 5 Magneto Attendant Station.



Code No. F-2501 Generator Box.



Code No. 15-SA Extension Bell.



Code No. 2 Common Battery Attendant Station.

TRUNKING EQUIPMENT

With an intercommunicating system of seven or more telephones it is nearly always advisable to be able to make local and long distance calls through the main telephone exchange from any one of the telephones.

This can be very easily accomplished with our selective ringing, selective talking system by means of an attendant station.

To make a local or long distance telephone call simply press one of the trunk buttons and lift up the receiver which signals the operator at the main telephone exchange. Your call is then completed in the regular way.

All incoming calls are answered by the attendant station. When the extension bell rings at the attendants' station, the person at that station presses the trunk button and learns from the calling subscriber the name of the desired party. The called station is rung in the usual way and takes the call by pressing the proper trunk key. If the party cannot be obtained the attendant replies to that effect, hangs up the receiver and presses the disconnect push button in the attendant's station.

Following is listed the equipment needed in addition to that already listed under eleven and twenty-three station to afford trunk connection. This equipment can be placed at any one of the stations now installed. As each trunk requires a trunk key the eleven station equipment will allow for nine stations and two trunks, the twenty-three station for nineteen stations and four trunks.

ONE TRUNK TO MAGNETO EXCHANGE

Amt.	Code No.	Description
1	4	Attendant Station (1 trunk).
1	15-SA	Extension Bell.
1	F-2501	Generator Box. To signal main exchange on recalls.

ONE TRUNK TO COMMON BATTERY EXCHANGE

Amt.	Code No.	Description
1	1	Attendant Station (1 trunk).
1	15-SA	Extension Bell.

TWO TRUNKS TO MAGNETO EXCHANGE

Amt.	Code No.	Description
1	5	Attendant Station (2 Trunks).
2	15-SA	Extension Bells.
1	F-2501	Generator Box. To signal main exchange on recalls.

TWO TRUNKS TO COMMON BATTERY EXCHANGE

Amt.	Code No.	Description
1	2	Attendant Station (2 trunks).
2	15-SA	Extension Bells.

THREE AND FOUR TRUNKS TO MAGNETO EXCHANGE

Order 2 two trunk to Magneto exchange installations.

THREE OR FOUR TRUNKS TO COMMON BATTERY EXCHANGE

Order 2 two trunk to Common Battery Exchange installations.

Intercommunicating Telephones

Selective Ringing, Selective Talking Intercommunicating Telephones

Intercommunicating telephones offer a means of added revenue often overlooked by operating companies. There are business enterprises in nearly every community where telephone requirements would hardly justify the services of an operator, but where an intercommunicating system would prove a decided economy.

Such enterprises rarely realize the convenience or economy of such service until the matter has been properly presented. The operating company is in a position to study the requirements of the individual business and it is often an easy matter to sell the service.

The installation of intercommunicating systems introduces economies for the patron and furnishes the operating company with the additional revenue from the extensions. Such service usually results in an increased demand for trunk facilities and often in increased toll revenue.



Eleven Station Desk Grabphone

Twenty-three station same except larger capacity key box.

Trunk line service is obtained by pressing a trunk button and removing the receiver. This signals the central exchange operator who completes the call in the regular way. When the intercommunicating subscriber hangs up all apparatus is automatically restored to normal.

An extension bell is provided at the attendant's station for incoming calls, but these calls, however, may be answered from any telephone by pressing the proper trunk button and lifting the receiver. In a small office this is a valuable feature as it eliminates the necessity of going to the attendant's station to answer a trunk call in the absence of the regular attendant.

Kellogg intercommunicating systems are made in two capacities and a variety of instrument styles. The smaller size has a capacity of eleven stations without trunks. With trunks, the system has a capacity of nine local stations and two trunks or ten local and one trunk.



Eleven Station Desk Telephone

Twenty-three station same except larger capacity key box.

Kellogg intercommunicating systems furnish the highest grade of telephone service with a minimum of maintenance expense. They are provided with highly efficient transmission circuits, standard Kellogg transmitters, receivers and induction coils. Standard Kellogg construction is used throughout; both mechanical and circuit design have been simplified to the greatest possible extent.

Kellogg intercommunicating systems are selective ringing and selective talking. In other words, each station can call any one of the other stations by pressing the proper button until it locks and then touching the ringing key. As many connections may be made simultaneously as there are pairs of telephones.



Eleven Station Wall Telephone

Twenty-three station same except larger key box.

The larger capacity has provision for twenty-three stations without trunks or nineteen local and from one to four trunk lines.

INTERCOMMUNICATING TELEPHONES

A typical 11-station installation would require the following material. In case less than the ultimate capacity is required for present installation, the number of instruments and the number of battery feed coils, junction boxes, etc. may be reduced accordingly.

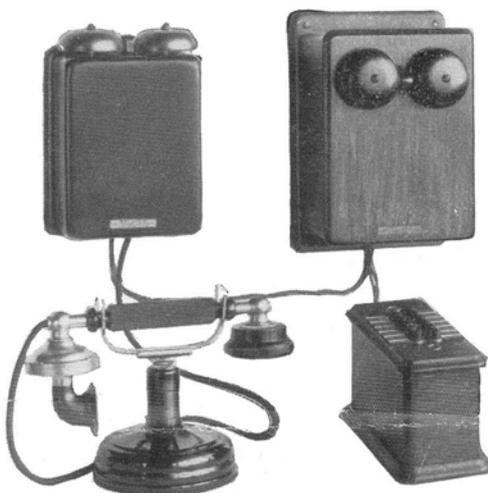
11-Station Installation Without Trunks

Amt.	Code No.	Description
11	{ 92-W 92-DG 92-D	Wall Telephone
		Desk Grabaphone
		Desk Telephone
11	14-F	Retardation Coils
2	163	Retardation Coil mounting strips
11	2513-B	13 Pair Junction Boxes
.. Ft.	144-L	16 pair, 2S1C, lead covered cable
.. Ft.	71	5-wire twist from key box to bell box

23-Station Installation Without Trunks

Amt.	Code No.	Description
23	{ 194-W 194-DG 194-D	Wall Telephone
		Desk Grabaphone
		Desk Telephone
23	14-F	Retardation Coils
3	163	Retardation coil mounting strips
23	2526-B	26 pair Junction Boxes
.. Ft.	147-L	26 pair, 2S1C, lead covered cable
.. Ft.	71	5-wire twist from key box to bell box

Trunks to Common Battery Exchange



The 11-station system is regularly arranged for 1 or 2 trunks, and the 23-station system has a capacity of from 1 to 4 trunks. For each trunk line to a common battery exchange, 1 No. 16 attendant station is required in addition to the equipment outlined above. The trunk circuits shall be carried in a separate cable to prevent cross talk. Use code No. 56-L seven pair lead covered cable for this purpose.

The No. 16 attendant station is so designed that the trunk line is automatically released when the local subscriber hangs up his receiver, making the trunk available for either incoming or outgoing calls.

The bell rings on incoming trunk calls and any one hearing the bell can answer a trunk call from any station by simply pressing the trunk button and lifting the receiver from the hook.

Trunks to Magneto Exchange



No. 5 Attendant Station

For trunks to magneto exchanges order one (1) No. 4 attendant station for one (1) trunk or one (1) No. 5 attendant station for two trunks. The trunk circuits shall be carried in a separate cable to prevent cross talk. Use code No. 56-L seven pair lead covered cable. The No. 4 attendant station is equipped for only one trunk but wired for two so that an additional trunk can be added by installing the necessary apparatus.

In addition to the attendant station, one (1) 15-SA extension bell is necessary for each trunk.

At the local magneto exchange the trunk line drop is connected in series with enough dry cells to cause it to operate when the local intercommunicating subscriber presses the trunk button. The number of cells necessary depends on the resistance of the trunk line and can be best determined by experiment. It should not, however, require more than 3 or 4 cells to operate satisfactorily.

The operation of the system on trunks to magneto exchanges is exactly the same as the common battery trunk operation, except on recalls.



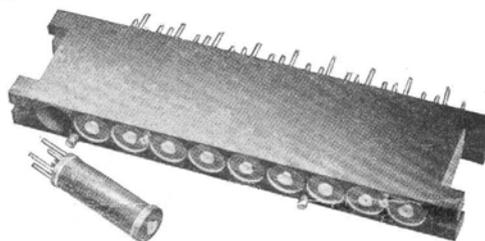
No. 2501 Generator Box

Inasmuch as the trunk line drop at the magneto office is cut out when the operator has a plug inserted in the trunk line jack, some means of signaling other than the trunk line push button is required to operate the clear out drop and signal the magneto operator. It is, therefore, the usual practice to install a generator box on each trunk line at the attendant station.

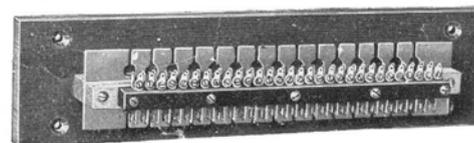
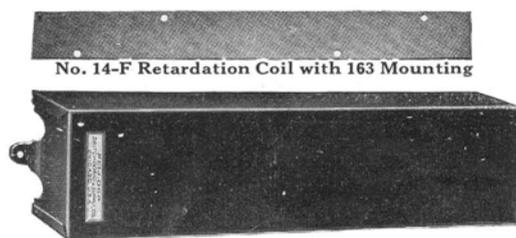
The local subscriber, wishing to make a recall, calls the attendant who signals the operator with the hand generator, the local subscriber goes in on a trunk and the operation is the same as described above.



No. 15-SA Extension Bell



No. 14-F Retardation Coil with 163 Mounting



Junction Box

INTERCOMMUNICATING TELEPHONES

Intercommunicating Systems Operating With Trunk Lines to Automatic Exchanges



Eleven Station Automatic Desk Telephone

Twenty-three station same except larger key box.

Intercommunicating systems operating in connection with automatic exchanges require a dial at each instrument as shown in the accompanying illustrations.

The operation of the local stations for straight incoming calls is exactly the same as that described for operation for local calls under systems using magneto and common battery trunks.

For outgoing trunk calls the subscriber presses the proper trunk button and then dials the desired number making the trunk call direct.

Incoming trunk calls ring the bell at the attendant station and any one within sound of the bell can answer the call from any station by merely pressing the trunk button and removing the receiver from the hook. The trunk is automatically released when the subscriber hangs up making it available for either incoming or outgoing calls.

The circuits used on these automatic instruments are exactly the same high grade booster circuits used in all Kellogg equipment.



Eleven Station Automatic Desk Grabophone

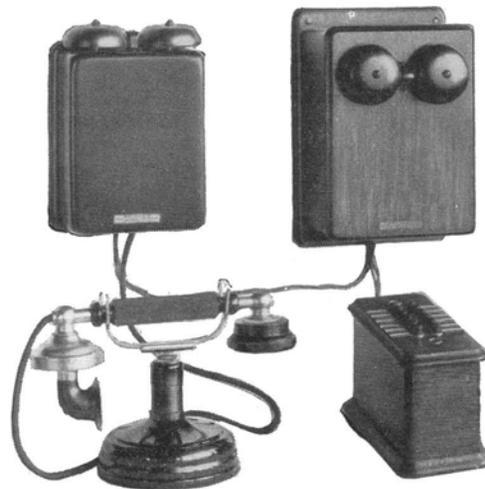
Twenty-three station same except larger key box.



Eleven Station Automatic Wall Telephone

Twenty-three station same except larger key box.

The list of instruments required for the installation of both the 9-station 2-trunk and the 19-station 4-trunk systems are given below.



9-Station Installation with 2 Trunks to Automatic Exchange

Amt.	Code No.	Description
11	92-AW	Wall Telephone
	92-ADG	Desk Grabaphone
	92-AD	Desk Telephone
2	17	Attendant Station
9	14-F	Retardation Coil
1	163	Retardation Coil mounting strip
11	2515-B	15 pair junction box
.. Ft.	144-L	16 pair, 2S1C, lead covered cable
.. Ft.	56-L	7 pair, lead covered cable
.. Ft.	71	5 wire twist from key box to bell box

19-Station Installation with 4 Trunks to Automatic Exchange

Amt.	Code No.	Description
23	194-AW	Wall Telephone
	194-ADG	Desk Grabaphone
	194-AD	Desk Telephone
4	17	Attendant Stations
19	14-F	Retardation Coils
2	163	Retardation coil mounting strips
23	2526-B	26 pair junction boxes
.. Ft.	147-L	26 pair, 2S1C, lead covered cable
.. Ft.	56-L	7 pair lead covered cable
.. Ft.	71	5 wire twist from key box to bell box.