

Service and Equipment Manual



NORTHWESTERN BELL
TELEPHONE COMPANY

Kinds of Service	Monthly Rates	Not in Place	In Place
1pty business	5.25	3.00	1.00
2 " "	4.25	"	"
1pty residence	3.00	2.00	1.00
2 " "	2.50	"	"
4 " "	2.25	"	"
Rural residence	2.25	"	"
" business	3.75	"	"
Semi-public tel.	"	3.00	"
Business extension	1.25	1.00	none
Extension bell	.25	"	"
Extension gong	.25	5.00	"

RESIDENCE EXTENSIONS WITH OR WITHOUT BELLS

Wall type 75¢ per month

Desk type 1.00 "

Handset " 1.25 "

Conn chg: In place, no chg; Not in place
\$1.00

SPECIAL RATE AREAS: MAHONING MITCHELL
NELSON NASSAU WEBB POOL KITZVILLE ALBANY
UTICA AND MORRIS LOCATIONS.

(Call Mgr's ofce for these rates as
they are slightly higher than in town)

Issued to

(Name)

(Dept.)

(Exchange)

Date issued.....19.....

In order that this manual can be kept up to date most conveniently and economically, it has been issued in loose leaf form. This will facilitate changes and additions which undoubtedly will be necessary from time to time.

The employee to whom this manual is issued will be responsible for its return upon request.

CONTENTS

	Page
Why We Are Selling.....	1
Local Telephone Service.....	4
Additional Exchange Lines.....	5
Directory Services	69
Extension Telephones.....	5
Foreign Exchange Service.....	5
Joint User Service.....	7
Main Stations.....	4
Message Rate Service.....	4
Private Branch Exchange Service.....	9
Public and Semi-public Service.....	8a
Regrading Activity	9a
Rural Service.....	8
Suspension of Service.....	7
Tie Line Service.....	6
Wiring Plans.....	8
Special Services	75
Full Period Talking Service.....	79
Private Line Service	6
Short Period Talking Service.....	80
Telegraph Service	79
Teletypewriter Service	75
Long Distance Telephone Service.....	10
Appointment and Messenger Calls.....	11
Collect Calls.....	13
Credit Plan.....	19
Key Town Plan.....	16
Long Distance Directories.....	15
Long Distance Service to Other Countries...	14
Person-to-Person Calls.....	11
Public and Private Toll Station Service....	21
Report Charges	12
Sequence Toll Call Service.....	18
Station-to-Station Calls	10
Timing of Long Distance Calls.....	11
Trans-Atlantic Calls.....	14
Equipment Section.....	22
Auxiliary Receivers	34
Auxiliary Signals.....	37
Bell Boxes.....	22
Booths	29
Buzzers	54a

CONTENTS Continued

Chest Type Transmitter.....	35
Coin Deposit Box.....	28
Deaf Set.....	33
Desk Telephones.....	22
Extension Bells.....	37
Extension Gongs.....	37
Hand Telephones.....	24
Hand Telephone, Hanging	25
Head Receivers.....	34
Industrial Horn.....	38
Inter-communicating Private Branch Exchange Equipment.....	63
Long Cords.....	38
Multiple Line Equipment.....	68a
Order Turrets.....	66
Outdoor, Telephone for Use.....	27
Portable Telephone.....	32
Private Branch Exchange.....	55
Public Telephone Tables.....	31
Push Buttons.....	54a
Transmitter Arm.....	36
Transmitter Cut-out.....	35
Visible Lamp Signal.....	38
Wall Telephones.....	26
Wiring Plans.....	39
Wiring Plan Keys.....	52
Rate Section	81

Why We Are Selling

The Bell System, of which our Company, the Northwestern Bell Telephone Company, is a part, has for its aim the furnishing of the most and the best telephone service at the least possible cost to the public consistent with the financial safety of the business.

Our sales activities tie in with this policy, because proper selling keeps us in touch with changing needs for telephone service on the part of those who use it. It keeps us informed of public requirements so that facilities can be devised to meet these needs.

Increases Value of Service

Proper selling makes the service more valuable for everyone by extending its usefulness through the increased number of persons who can be reached over "the voice highways" as more telephones are added. Selling also helps to adapt the various instrumentalities to each subscriber's needs so that his service will be not only reliable and adequate, but the most convenient and comfortable for him to use.

It is admitted that we have gone far in extending the use of telephone service. However, our responsibility in this respect has only partially been fulfilled. A great many homes and business places in our Company's territory do not yet have service. In addition to this, many have service which, while perfectly satisfactory when installed, due to changing conditions has become inadequate, or the equipment is not the kind required, or located properly to enable the customer to use it most conveniently.

Each of us in our everyday business and

social contacts has the opportunity to observe the telephone service requirements of our customers. We can seek out those who are not receiving service and be alert to suggest to both present subscribers and prospective customers the telephone facilities which will add to their convenience and comfort.

Manual to Assist in Serving

To assist in determining the class of service and the type of telephone equipment required in each case, this Service and Equipment Manual has been published. An attempt has been made to describe briefly, clearly and in non-technical language, the various classes of telephone service and the different types of equipment which our Company has available for the use of our customers. It is not a textbook or treatise on selling, but is intended to be a convenient and readily accessible source of information about telephone service and equipment.

Occasionally you may come across a condition in which you will require further assistance in making the proper suggestion to the subscriber or prospective customer as to how he may obtain the class of service that will be of the greatest convenience and usefulness to him. In such cases the Customer Contact Memorandum will assist you in turning such contacts into action. It is a splendid medium on which to report those things which you endeavor to do in helping our customers to obtain a more complete and convenient telephone service and in assisting our Company to learn of those conditions which will result in furnishing the subscriber or prospective customer with the kind of service that will be most satisfactory to him.

Opportunity Open to All

This opportunity to serve the public in a broader sense by assisting our customers to obtain the utmost convenience and comfort from the use of telephone service is open to each of us, regardless of the particular activity of the business in which we happen to be engaged, whether it be setting poles, operating a switchboard, installing equipment, engineering and designing plant, or handling the business relations with those we serve.

If we will remember to use the facilities that have been provided to enable us to take advantage of these opportunities to render a better service, it cannot fail to bring to our patrons and prospective subscribers a fuller realization that the responsibility for providing their telephone service is in capable hands and that we are eager to see that they receive the kind of telephone service they have a right to expect.

Local Telephone Service

Two classes of local telephone service are available to our customers. These are residence and business service. The kind of service furnished to each subscriber is determined by the nature of the use which is made of it.

Where the service is used for business or occupational purposes, or for the administration of the activities of such institutions as clubs, hospitals, schools, colleges, churches and charitable organizations, it is business service.

Where the use of the service is of a social or domestic nature and other use, if any, is merely incidental, it is residence service.

Main Stations

Where a subscriber of either business or residence service has a telephone connected directly to a central office, it is called a "main station." Schools, churches, apartments, clubs, associations, institutions, businesses of all kinds and every family dwelling, with the exception of the few that really can not afford telephone service, are prospects for a "main station."

Message Rate Service

Message rate service in those exchanges where it is offered provides telephone service to business subscribers whose outward local call requirements do not justify their use of flat rate service. It provides a specified number of outward local calls on an individual line each month at a minimum rate and additional outward local calls at so much a call.

Flat rate service and message rate service are not furnished on the same premises unless it is established that neither of the services will be used to supplement the other.

This service is especially well adapted to small business firms who have need for telephone service but whose outward local calling requirements are limited.

August, 1931

In certain exchanges message rate service is also offered to residence subscribers. It likewise provides a specified number of outward local calls each month at a minimum rate and additional outward local calls at so much a call.

Extension Telephones

Where a subscriber has another telephone connected to a main station this telephone is an extension telephone. Extension telephones modernize a place of business, assure privacy, conserve energy, avoid lost calls, prevent accidents where elderly or crippled people are involved, and are of inestimable value in cases of emergencies. They increase the convenience and comfort of telephone service very considerably at only a slight increase in cost to the subscriber.

Additional Exchange Lines

Any number of lines connecting the subscriber with the central office will be furnished to subscribers for satisfactorily handling their telephone needs. Where two or more of these lines are required, such as in large stores, taxicab companies, railroads, and the like, the subscriber's service often can be improved by installing a wiring plan, multiple line equipment, or a private branch exchange system.

Foreign Exchange Service

Foreign exchange service is local service furnished to a subscriber from a central office in an exchange other than that in which the subscriber is located.

There are a number of users of this service in cities having common trade territories. The larger stores, for example, in these cities, through the use of this service, may make it possible for their customers in either city to conveniently shop by telephone.

The following are examples of cities between which this service is used by some business subscribers:

Bismarck and Mandan.
Des Moines and Valley Junction.
Duluth and Superior.
Minneapolis and St. Paul.
Omaha and Council Bluffs.

Prospects for foreign exchange service should be referred to our Company's business office as this service is furnished only after a careful study of the prospect's service requirements has been made.

Private Line Service

Private line service is furnished to customers who desire exclusive and direct communication between designated points without the necessity of going through a central office. Two or more telephones may be connected to such a line. Private lines usually are furnished for intercommunication between the main office and branch offices and warehouses, stores, taxicab company stands, and at other locations.

Private line service is furnished only after a careful study of the customer's service needs. All inquiries or prospects for this service should be referred to our Company's business office.

Tie Line Service

This service is available for connecting, without going through a central office, private branch exchange switchboards located in the same or adjacent exchange areas. Tie lines often are used between railroad city offices and depots, between department stores and credit bureau offices, between banks, investment houses, and the like.

All inquiries or prospects for tie line service should be referred to our Company's business office.

August, 1931

Joint User Service

An arrangement is available whereby an individual or firm located on the same premises with a telephone subscriber, but whose telephone requirements do not warrant the cost attendant to main telephone service, may obtain joint use of the service already established. This joint use must be agreeable to the existing subscriber and the contract for the joint user service with our Company must be made by the existing subscriber. Under such an arrangement both subscribers have a listing in the directory and use jointly the equipment installed for the existing subscriber. Joint user service is not available in connection with party line service.

Prospects for joint user service should be referred to our Company's business office as the furnishing of this service is based on a careful study of the prospect's service requirements.

Suspension of Service

Upon request to the Telephone Company, in case of intended absence, subscribers to main station service (except rural and service station) may have their service including extensions and supplemental service suspended for one month or longer.

The advantages of temporarily suspended service to the subscriber are that all equipment is left in place and his telephone number and directory listing are held during the time the service is disconnected. Those who call his telephone during the suspension of service will be informed of this arrangement by the operator. This arrangement makes it possible to establish service promptly upon the customer's return without delay and without additional cost to him.

Wiring Plans

Wiring plans are available to make the subscriber's service more convenient or to assist in better meeting his communication requirements. They provide various service features such as where the subscriber wishes to temporarily disconnect his main or extension telephone bell, to establish intercommunication between telephones, where two or more lines are desired for use with the same telephone, where the subscriber wishes to hold a call on one line while he places or answers a call on another line, and certain combinations of these features. Buzzers are available for signalling purposes in connection with wiring plans where necessary. The various wiring plans available are described under "Telephone Equipment" in this manual.

Rural Telephone Service

Our rural service objective, in general, is to provide telephone service in rural areas that is satisfactory to meet both local and long distance requirements. These requirements include the needs of the rural patron as well as persons in adjacent towns or distant localities.

A specific objective is to provide a basic multi-party service with only as many on each line as can be adequately served. This number will vary with local conditions. Also, it is our objective to offer additional facilities and services to meet the special needs of individuals or groups; and to convert grounded lines to a metallic basis whenever and wherever this is the most practical method of serving our patrons satisfactorily.

Classes of Rural Service

There are two classes of rural service offered—business service and residence service—determined by the use which is made of it. If the use is of a social or domestic nature, with any other use being merely incidental, residence

August, 1931

service is offered. Where the major use is of a business or occupational nature, as in country stores, garages, community associations and the like, business service is provided.

Other Services Offered

Where multi-party line service does not satisfactorily meet the needs of a rural patron, town service can be provided for the regular town rate plus a mileage charge from the base rate area to his location.

Special districts can be designated to meet special needs, as for example in territory adjacent to a base rate area, certain groups may be offered special grades of service.

Supplemental Equipment

Supplemental equipment such as extension telephones, gongs and extension bells and wiring plans between barns, corrals, tenant houses and country residences are furnished at the same charges as within the base rate area of the exchange.

Public and Semi-Public Telephone Service

Two classes of service known as public and semi-public service are available for use of the public where needed. In furnishing either of these services a telephone equipped with a coin deposit box (illustrated and described under "Telephone Equipment" in this manual) is used.

Public Telephone Service

A telephone equipped with a coin deposit box should be installed at all locations where it is warranted. Such service usually is furnished in hotel lobbies, railway stations, cigar stores and similar locations. A message rate is charged for each outgoing local call. No listing is provided in the exchange telephone directory as incoming local exchange service is not contemplated.

Semi-Public Telephone Service

Where a shop, boarding house, or other business may not have sufficient need for flat rate business telephone service to justify paying its cost and there is some demand for the service by those who enter the place of business, a telephone equipped with a coin deposit box may be installed, for joint use by the occupant of the premises and the public. A charge of five cents is made for outgoing calls, but no deposit is required for incoming calls. The subscriber guarantees a minimum monthly revenue from the local calls placed from the telephone. If this revenue exceeds the guarantee, the subscriber is paid a commission on the amount in excess of the guarantee. Such subscribers are listed in the exchange telephone directory—also in classified directories where published.

Private Branch Exchange Telephone Service

Private branch exchange systems are available for use by wholesale houses, hotels, department stores, and other businesses, and large residences where it is necessary to have one or more telephones connected to the central office and to provide intercommunication between telephones on the premises.

There are various types of private branch exchange systems. The type required depends on the number of telephones and central office lines needed and the use that is to be made of the service.

The various switchboards required to furnish private branch exchange and intercommunication service are illustrated and described under "Telephone Equipment" in this manual.

Regrading Activity

Regrading is the changing of main station service to either a higher or lower level at the request of a customer or through sales effort on the part of an employee.

Ordinarily the proper grade of service to meet the customer's requirements is determined when the order is accepted. However, due to changing conditions and standards of living which affect these requirements for telephone service, the service which best met his needs formerly may not be the most convenient, comfortable, or economical for his use today.

Busy studies and party line complaints are the primary sources of prospects for regrades. Busy studies are made by the Traffic Department on all customers' lines, and those indicating a need for treatment are referred to the business office. Reports from customers concerning excessive use of party lines are generally made to the business office. These also are frequently received by telephone employees of all departments who either report them to the business office or handle them in person.

Strictly from a Company viewpoint it is desirable to have the highest proper grade of main station service in use by each customer. This does not necessarily mean that all residence service should be on an individual line basis for the requirements of many residence users can be satisfactorily met by party line service. Business telephone requirements usually demand individual line service.

Regrading is an essential part of our program to provide our customers with the proper type of telephone service to adequately meet their individual requirements. Generally speaking, it is not necessary to limit our activity in this respect because of lack of facilities or central office equipment; however, there may be some districts within certain exchanges where sufficient facilities of a proper grade are not available. Such conditions are recognized, and plans are made to provide the necessary requirements as soon as practicable considering the element of economy and other important factors which are always involved in such a program.

Adequate service facilities at each customer's premises effect a mutually satisfactory basis for conducting business between the public and our Company.

Long Distance Service

It is now possible to reach nearly everyone, almost anywhere, quickly, conveniently, and at low cost by long distance telephone. Various classes of long distance service are available to meet the varying needs of those who use it.

Station-to-Station Calls

A Station-to-Station call is one on which the calling party will talk with anyone at the distant telephone. When placing such a call, it is always desirable to give the out-of-town telephone number as this will enable the operators to complete the connection without the delay which is occasioned when an operator is obliged to look up the number of the called telephone. If the number of the called telephone can not be furnished, the name and address should be given.

The principal advantages of the station-to-station call to the customer are the speed with which it may usually be completed, and the relatively lower cost.

In general, station-to-station service should be used when there is definite knowledge that some one will be available at the called telephone who will receive the message.

Numerous studies made for various customers have invariably indicated that a greater use of station-to-station service could have been made with equally satisfactory results and at lower cost, had the calling person placed certain of the calls on this basis.

Evening rates apply on Station-to-Station calls from 7:00 P. M. to 8:30 P. M. during which time the charges are less than the day Station-to-Station rate. This reduction applies only when the day rate is 40 cents or more. The minimum reduced rate is 35 cents.

Night rates are in effect on Station-to-Station calls from 8:30 P. M. to 4:30 A. M. during which time the charges are still lower than the evening Station-to-Station rates. This reduction applies only when the day rate is 50 cents or more. The minimum reduced rate is 35 cents.

Determination of Time

The time of day or night at the calling telephone when the conversation starts determines whether day, evening or night rates apply on Station-to-Station calls. When the conversation starts in one rate period and is finished in another, the rate in effect at the start of the conversation applies.

Person-to-Person Calls

A person-to-person call is made when the calling person requests to talk to a specified person or persons. This service also applies when the calling person asks to talk to a certain extension of a private branch exchange.

Calls should be placed on a person-to-person basis when the calling party wishes to speak to a particular person or persons, and there exists a possibility that he or they may not be reached on the first attempt. This becomes a more important feature as the distance over which the calling person wishes to talk and the initial rate increase. Uncertainty as to the called person's whereabouts necessitates the use of person-to-person service.

Reduced evening and night rates do not apply on person-to-person calls.

Appointment and Messenger Calls

An appointment call is made when the calling person specifies a certain person and a specific time of day at which he desires to talk.

A messenger call applies when the calling person specifies a certain person who cannot

be reached by telephone, and the calling person authorizes the payment of messenger service to summon the called person to a telephone.

On appointment and messenger calls, reduced evening and night rates do not apply. On messenger calls the actual cost of the messenger service is also charged against the calling telephone.

Report Charges

A charge is made under certain conditions when through no fault of the telephone company a long distance call is not completed. Report charges apply under the following conditions:

A. Station-to-Station Calls

1. On a collect station-to-station call if the charges are not accepted at the called telephone, and the calling person is unwilling to pay for the call.

B. Person-to-Person Calls

1. When the calling person is given a report within an hour that the called person is not available, or refuses to talk, or refuses to pay the charges.

2. When the called person is reached within an hour but the calling person is not available, or refuses to talk, or an answer cannot be obtained from the calling telephone.

3. Only one report charge is assessed on any one call, and no report charge is assessed on a completed call.

C. Appointment and Messenger Calls

1. On an appointment call which is not completed after the appointment has been definitely arranged with the called telephone.

2. On a messenger call which is not completed after arrangements have been made to notify the called person to come to the telephone.

D. Other Conditions

1. No report charge is assessed on person-to-person calls when failure to complete the call is due to busy, don't answer, out of order, no telephone, telephone disconnected, or a similar condition at the called point.

2. If a call is not completed on the day on which it is filed and at the request, or with the consent of the calling person, it is carried over and completed on a subsequent day, no report charge is made.

3. The amount of the report charge, except for the shorter distances, is approximately 25 per cent of the day station-to-station rate. In no case is the charge more than \$1.00.

Collect Calls

A collect call is one charged to the called telephone.

Long Distance Service to Other Countries

Service to other countries is furnished with certain modifications of the standard classifications, as follows:

Calls to Canada

Service with most points in Canada is on a uniform basis with that in the United States. Some exceptions to the standard classifications apply only on service to certain small communities in some provinces.

Calls to Cuba

No reduced evening or night rates apply.

Calls to Mexico

No reduced evening or night rates apply. Collect calls are not authorized. Service is available only to certain places in Mexico.

Transatlantic Calls

No reduced evening or night rates apply. Collect calls are not permitted. The rates are the same for all classes of calls. Appointment calls are not accepted on the regular basis, although an effort will be made to complete them as near as possible to the specified time.

Service is available to practically all of the countries of Europe.

For determining the rates for transatlantic service, the United States is divided into five zones. A report charge is made under certain conditions.

Long Distance Directories

Out-of-town calls ordinarily can be completed more quickly when the operator is given the number of the telephone being called. For the convenience of our customers we have provided Long Distance Directories in which names and numbers frequently called may be listed for ready reference.

The usual practice is for the customer to furnish to the Company's business office the names and addresses of persons frequently called and for which telephone numbers are desired, and this information, together with the telephone numbers, will be assembled in a neatly prepared directory convenient for the customer to use.

Customers will find Long Distance Directories to be of real service and convenience to them, and every assistance possible will be rendered in developing directories which will best fit their need.

A reproduction of a specimen copy of the directory used for this purpose is shown below.



When numbers are changed, the operator will so inform the customer when calls are placed for such numbers. She will then also furnish the new number. If notations are made concerning these number changes, delays will likely be avoided on future calls.

Key Town Plan

The key town telephone sales plan has been developed as a means through which traveling representatives particularly, in any business, can reach their customers frequently, conveniently, and at low cost.

The key town plan provides for covering the trade territory by calling by telephone from selected points throughout the area to be covered.

By the key town plan, salesmen can "travel" farther and quicker, reach more people, make more sales, and reduce expenses. For instance, a sales representative goes to the key towns in his territory, whether he covers a few counties, several states, or the United States. From each key town he makes his contacts by telephone with the customers and the prospects that he has in the area, soliciting business, answering questions, adjusting complaints, and building good-will for his company. Expensive visits in person are made less often; yet by the telephone, more frequent and up-to-the-minute relations are maintained.







A primary key town is a centrally located point of commercial and industrial importance, usually selected because of reduced traveling costs, hotel accommodations, telephone accommodations and facilities, and economy in the cost of the calls. Secondary key towns are centers from which larger numbers of customers can be reached within the area covered by the primary area. Calling from secondary key towns permits more intensive coverage more economically.

Key town maps for the combined states of Minnesota, Iowa, Nebraska, North Dakota and South Dakota are available in two forms for the use of our customers. Copies contained in folders are designed for use of traveling representatives and the unbound copies for sales managers or office use.

Key town maps of the entire United States or for other sections of the United States can be promptly procured for customers who desire them.

The exhibit following shows a key town map for Minnesota:



-  PRIMARY CALLING POINTS
-  SECONDARY CALLING POINTS.
-  PRIMARY CALLING AREA.
-  SECONDARY CALLING AREA.
-  AVERAGE STATION-TO-STATION DAY RATE TO ALL BUSINESS FIRMS IN ALL TOWNS IN THE PRIMARY CALLING AREA.
-  AVERAGE STATION-TO-STATION DAY RATE TO ALL BUSINESS FIRMS IN ALL TOWNS IN THE SECONDARY CALLING AREA.
- C - CUSTOMER'S ROOM.
- D - DESK SPACE.
- P - PRIVATE ROOM.
- S - SPECIAL ARRANGEMENTS.

Sequence Toll Service

Sequence toll service is provided in order that the customer may file five or more calls at the same time and well in advance of the time he desires the calls completed. This is done by filing all calls with "Long Distance" verbally at one time, or by furnishing a list of calls which are to be completed at a specified time or at recurring intervals such as daily, weekly or monthly.

Sequence toll service can be arranged to suit the customer's requirements, such as:

1. Having one person talk on all calls on the list.
2. Enabling two or more persons to talk at the same time on different calls on the list;
3. Having only as many calls on the list completed as is necessary to dispose of a given quantity of goods.
4. Making any changes desired in the dates on which the calls are to be completed;
5. Providing for a definite order of completion of the calls listed, if desired; and
6. Specifying the use of either "station-to-station," or person-to-person" service or both.

Unless otherwise specified, calls listed will be completed in the most rapid manner possible, depending upon the availability of circuits, and other conditions.

To encourage uniform filing of sequence calls, a form is available for the use of our customers. This form provides a convenient means of listing the necessary details of the calls and every assistance possible is given customers in the preparation and development of sequence lists.

Below is a specimen copy of a Sequence Toll
Call List.

[illegible]

The Credit Plan

To make the rapidly growing use of the telephone in business more convenient, a plan has been developed for extending credit to traveling representatives of wholesale concerns, manufacturers, and the like who are using toll service in their selling and buying or other activities. The plan is as follows:

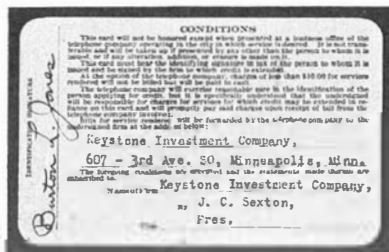
Upon request of a firm regularly contacting with its customers through traveling representatives and whose credit standing is satisfactory, any Bell telephone business office will arrange for the issuance of as many credit cards as may be desired to the applicant, for salesmen or other traveling representatives. At the time of the application the subscriber indicates in what territories the different cards probably will be presented. The identification cards are

issued for the calendar year, and credit is extended only on calls made from telephones at a Bell telephone company's business office or from such other telephones as may be arranged for by the business office. The cards are renewed annually as desired.

When credit is desired, the customer's representative presents his identification card at the business office, together with a list of the calls to be made.

This service has proved to be very convenient to many users and the plan should be recommended to any of our customers who have traveling representatives.

A reproduction of a Bell System Identification Card is shown below.



Public and Private Toll Station Service

Every effort is made to furnish long distance service to all communities. Employees should be alert to note locations where this service is not now available and report such locations on a Customer Contact Memo.

Public Toll Station Service

In towns not having exchange service a telephone is provided at a convenient location for use of the public in obtaining long distance service.

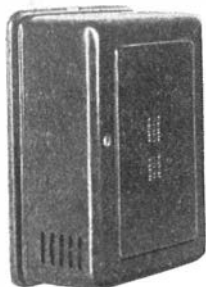
The occupant of the premises acts as agent for the telephone company in assisting the public in the use of this service.

Private Toll Station Service

In towns having only Public Toll Station Service it sometimes is desirable to place extensions from the public toll station, at certain other locations, to provide a more convenient service for one or more individuals. Such extensions are private toll stations and are controlled by a switch at the public toll station.

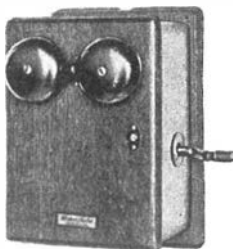
Private toll station service also may be furnished at other locations not directly associated with a public toll station, such as construction camps and places of a similar nature, where toll line facilities are available.

Desk Telephones



Metal bell box furnished with each desk telephone in manual common battery or dial service areas. Dimensions: Height $9 \frac{3}{16}$ inches; width $6 \frac{1}{4}$ inches; depth $3 \frac{1}{8}$ inches. (Also used with hand and wall telephones in manual common battery and dial central offices.)

Oak bell box furnished with each desk telephone in magneto service areas. Equipped with hand generator for ringing. Dimensions: Height $9 \frac{1}{2}$ inches; width 8 inches; depth $6 \frac{11}{32}$ inches. (Also used with hand telephones in magneto central offices.)



Special Finishes for Desk Telephones

Finishes regularly provided are black for the desk telephones and metal bell box, and oak for the bell box used with the desk telephones in magneto central offices.

Special finishes may be obtained if desired at an additional charge (see schedule of charges in this manual). When special finishes are ordered, it is necessary for the customer to furnish a sample of the color wanted. Additional time is required to provide special finishes.

It is not necessary to provide a special finish for the bell box in all cases where telephones with special finishes are furnished, as the bell box usually can be mounted beneath or to one side of the desk, table or counter. However, care should be taken in each instance, to arrange for the installation of the bell box at a location where the bell can be heard distinctly by those near the telephone.

Hand Telephones



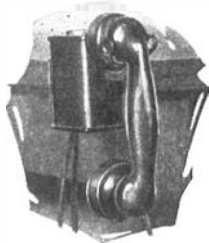
Hand telephones are furnished in black, unless the customer desires a different finish. Six standard colors are available:

Black
French Grey
Ivory

Old Brass
Oxidized Silver
Statuary Bronze

Special finishes, other than the six standard colors mentioned, also may be obtained. An additional charge is made for any color other than black (See schedule of charges in this manual). Additional time is required to furnish hand telephones in other than the black finish. When special finishes are ordered, it is necessary for the customer to furnish a sample of the color wanted.

Note—Bell boxes furnished with hand telephones are the same as those provided with desk telephones and are illustrated and described under "DESK TELEPHONES" in this manual.



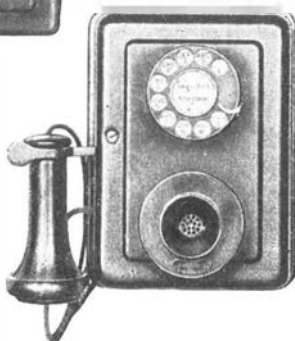
Hand telephones equipped for permanent mounting on end of desk, table or counter. Dimensions: Height $5\frac{1}{4}$ inches; width $4\frac{1}{4}$ inches; depth 2 inches. When equipped with dial add 4 inches to height.

Wall Telephones



Metal wall telephone for use in manual common battery service areas. Dimensions: Height $9\frac{3}{4}$ inches; width $9\frac{5}{16}$ inches (including switch-hook); depth $3\frac{1}{8}$ inches.

Metal wall telephone equipped with dial for use in dial service areas. Dimensions: Height $9\frac{3}{16}$ inches; width $9\frac{3}{16}$ inches (including switch-hook); depth $5\frac{5}{32}$ inches.



Wall telephone of oak for use in magneto service areas. Equipped for hand ringing. Contains writing shelf. Dimensions: Height $20\frac{1}{2}$ inches; width $12\frac{3}{4}$ inches; depth $8\frac{1}{2}$ inches.

Wall Telephones—Continued

The manual common battery and dial types of wall telephones are regularly furnished in black, and the magneto type is golden oak. Finishes other than those regularly provided may be obtained at an additional charge (See schedule of charges in this manual). Where a special finish is desired, it is necessary for the customer to furnish a sample of the color wanted. Additional time is required to furnish wall telephones with special finishes.



Telephone for Outdoor Use

This telephone is designed for outdoor use and is housed in a black metal weatherproof case. It may be mounted on a wall, pole, or other outdoor location. Used by police departments, street railway, bus and taxicab companies, and the like.

Dimensions: Height $13\frac{3}{4}$ inches; width $12\frac{7}{8}$ inches; depth $6\frac{1}{2}$ inches.

Telephone Equipped With Coin Deposit Box

Used in
Furnishing
Public and
Semi-Public
Service



Where public and semi-public telephone service is provided this black metal telephone equipped with a coin deposit box is installed. In dial service areas the telephone also must be equipped with a dial. This telephone may be mounted on a wall, counter or other flat surface. It contains three slots for depositing quarters, dimes and nickels. The small frame contains a card of instructions.

In the service areas where a coin must be deposited in order to obtain a connection, the coin is returned to the customer when necessary, through the slot in the lower left (in service areas where a coin is not deposited until the desired connection is established, the coin return feature is not operated).

Dimensions: Height 19 inches; width 9 inches; depth $8\frac{1}{2}$ inches (See section in this manual entitled "Local Telephone Service" for definition of public and semi-public telephone service).

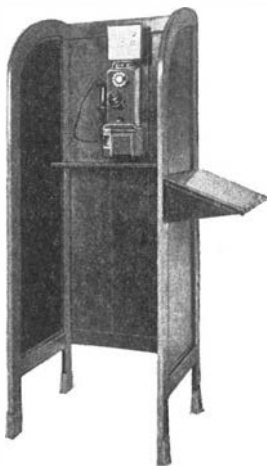
Public Telephone Booths

In furnishing public telephone service, booths may be provided to insure greater privacy and quiet. Two types of booths, open and folding door, are available. Telephone tables also are available where preferred to the open or folding door booths.

Open Type Booth

This metal booth which is regularly provided with a dark maroon finish, may be used singly as shown, or in groups. The height and depth of this booth are ample to afford a degree of privacy which, while not equal to that afforded by the folding door type of booth, is adequate to meet the general needs of the public in certain locations.

Open Type
Booth
Equipped
with
Directory
Shelf



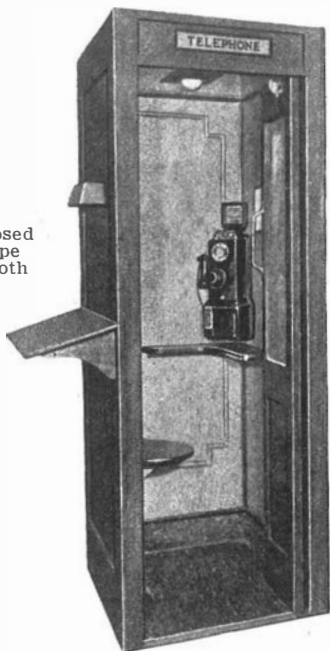
Floor space required is much less than necessary for a folding door booth and the open type, therefore, often is more desirable where space is limited. The sides and back extend to within 9 inches of the floor, which facilitates sweeping or mopping underneath. The booth is equipped with bronze feet which resist corrosion. The feet have lugs so that the booths may be fastened to the floor with screws.

Dimensions: (booth as shown) Height 68 inches; width 26 $\frac{3}{4}$ inches; depth 23 inches.

Closed Type Booth

This booth is used generally where greater privacy and quiet is desired than can be obtained with the open type booth. It may be used singly or in groups. The sides, ceiling and lower panels of the door are metal lined, finished in a forest drab color. The floor is constructed of heavy galvanized steel and covered with black and white "marble" rubber,

Closed
Type
Booth



which also extends up on both sides to form the base boards of the booth. The floor is substantially flush and the threshold is protected with a safety tread. The upper panels of the door have bevel glass windows and the door handle and hinges are of bronze. Lighting is provided through a neat ceiling fixture. A shelf is provided below the instrument for the

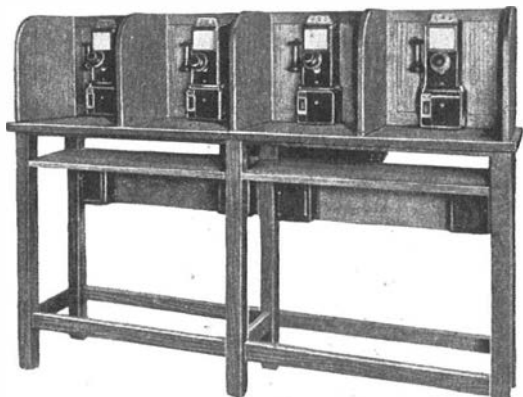
convenience of the user and if desired a seat may be furnished. The booth is constructed so that proper ventilation is provided when the doors are closed.

In addition to the booth a telephone sign for use above the door, a card frame, a lighting fixture for the left side of the booth, and an outside directory shelf, are available. The booth may be finished in either mahogany, oak or walnut.

Dimensions: Height, 83 5/32"; width, 25 9/16"; depth, 30".

Public Telephone Tables

Tables containing one or more compartments to hold telephones equipped with coin deposit boxes are available for use of our customers. These may be obtained in golden oak or birch mahogany finishes.

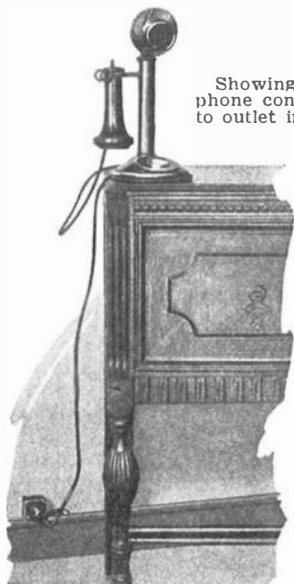


A telephone table with four compartments showing a public telephone mounted in each.

Dimensions: One compartment—Height 63 inches; width 21 inches; depth 16 inches. Add 20 inches to width for two compartments and 34 inches for three compartments if used in groups.

Note—The open and folding door type of public telephone booths, as well as the compartment tables, may be obtained in special finishes. An additional charge for such special finishes is made only when an unusual amount of labor and expense is necessitated in furnishing them.

Portable Telephone Equipment



Showing telephone connected to outlet in wall.

In addition to main station or private branch exchange station service, telephone outlets (or sockets) are provided so that portable telephones, with cords equipped with plugs, may be used to place and receive calls in any location where telephone service is needed only occasionally, such as in guest rooms, sick chambers, and the like.

These outlets may be provided so that they are either flush with or project $1\frac{3}{32}$ inches from the baseboard or other surface on which they are mounted. They increase the convenience of telephone service considerably at a very small additional cost.

Equipment for Use of Subscribers With Impaired Hearing



Showing
Equipment
Operated by
Subscriber
Using Deaf Set
to Control
Volume of
Sound

This equipment is available for use with regular telephone apparatus in all exchanges to help those who have difficulty in satisfactorily using the telephone because of impaired hearing. It should be recommended and installed only where a need for it is substantiated by a demonstration.

An ordinary desk or hand telephone is used together with an amplifier in a metal box. Other equipment includes a battery box and a key and multi-point switch mounted on a black finished wood box. The key provides a means for connecting or disconnecting the amplifier from the line and the switch is used to control the volume of the amplified speech.

Dimensions: Key—height $7 \frac{9}{16}$ inches; width $3 \frac{7}{8}$ inches; depth $2 \frac{3}{4}$ inches. Amplifier—height $9 \frac{1}{4}$ inches; width $6 \frac{3}{4}$ inches; depth $3 \frac{3}{8}$ inches. Battery box—height $11 \frac{15}{32}$ inches; width 1 ft. $3 \frac{1}{5}$ inches; depth $5 \frac{1}{2}$ inches.

Auxiliary Equipment

Receivers

Various types of receivers are available to increase the convenience of the service under certain conditions, such as where telegrams are dispatched and received more or less constantly or where editors of newspapers handle news dispatches over the telephone.



Auxiliary Receiver

The Auxiliary Receiver is intended for use as an adjunct to a regular receiver such as where a subscriber desires to cut down room noises. This is accomplished through simultaneous use by the same person of both receivers.



Single Head Receiver

The Single Head Receiver is intended for use where the subscriber desires to have both hands

free. It is especially helpful where the incoming message must be recorded, or where notes are made during a conversation.

Where a subscriber desires to use either a regular receiver or a single head receiver at will the single head receiver is furnished in connection with Wiring Plan No. 401 described hereinafter under Wiring Plans. The single head receiver is never furnished as an adjunct to the regular receiver.

Double Head Receiver

The double head receiver is furnished only in connection with Wiring Plan No. 400 described hereinafter under Wiring Plans.



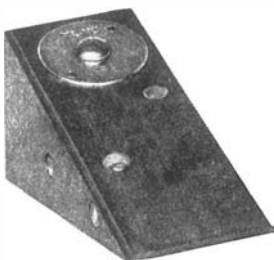
Chest Type Transmitter

The chest type transmitter is equipped with either the single or double head receiver, and generally used by private branch switchboard operators, or by those engaged in taking a large volume of orders or messages over the telephone.

Transmitter Cut-Outs

This equipment enables the subscriber to cut out the transmitter when desired, such as in connection with taking of orders or telegrams over the telephone. It also is effective in excluding excessive room noises which ordinarily would be picked up by the transmitter.

The foot-switch transmitter cut-out consists of a push button mounted in a triangular shaped oak block, the lower surface of which is placed on the floor.



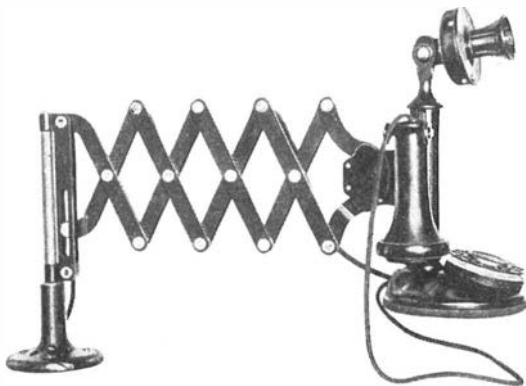
Foot-switch-cut-out



Button Cut-out

The button cut-out is mounted in the desk stand itself, opposite and slightly below the receiver hook.

Dimensions: Foot-switch Cut-out. Base $8 \frac{31}{32}$ inches by 3 inches; height above floor $3 \frac{43}{64}$ inches; weight 2 lbs.



Transmitter Arm

This equipment is for use where the subscriber desires an adjustable transmitter arm of the collapsible type on a flat or a roll top desk, or table or wall. Made of metal, finished black.

Dimensions: Maximum extension 24 inches; minimum extension $8 \frac{1}{4}$ inches.

Auxiliary Signals

Several types of auxiliary signalling devices are available for use to insure that incoming signals will be heard. Among those in most common use are extension bells, loud ringing gongs, lights and horns. Such signals are used to supplement the telephone bells and may be located adjacent to the telephone or at some distance from it.

Extension Bells

Extension bells are ordinary telephone bells for use in locations where it is difficult to hear the regular bell.

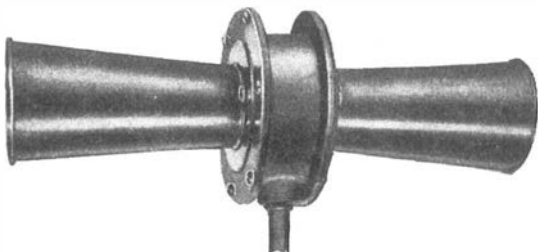


Loud Ringing Extension Gong.

Loud Ringing Extension Bells or Gongs

A moisture-proof loud ringing extension bell for use of subscribers who require an unusually loud auxiliary bell signal, such as in industrial plants, lumber yards, machine shops, etc. Black finish iron cover and two galvanized gongs.

Dimensions: Height $11\frac{7}{8}$ inches; width $13\frac{1}{6}$ inches; depth $4\frac{5}{32}$ inches; diameter of bells 6 inches.



Industrial Horn

An industrial horn is available for use in factories, and manufacturing establishments or other industrial plants where conditions make it impossible or difficult to hear the regular telephone bell. Horn is metal, finished in black. It requires a 110 volt electrical current, either alternating or direct, which is furnished by the subscriber.

Dimensions: Length, $18\frac{1}{4}$ "; width, $14\frac{9}{16}$ "; diameter of horns, $4\frac{1}{4}$ ".

Visible Lamp Signal

A visible lamp auxiliary signal is available for use principally by taxicab companies, police departments, hospitals, in railway stations and by other organizations having outdoor telephones where an audible signal is not desirable, but a signal must be provided so that incoming calls may be answered. Lamps are furnished by the subscriber and may be practically any size and color. The lamp lights as soon as the connection is made to the telephone with which it is associated. The lamp will remain lighted until the receiver is lifted on this telephone.

LONG CORDS

Desk telephones are regularly equipped with cords 5 feet 6 inches long. Cords that are 9 feet or 13 feet long may be obtained at a small additional charge.

Cords furnished with hand telephones between the instrument base and the instrument are three feet, 8 inches in length. Cords that are 9 feet long may be obtained at a small additional charge.

Wiring Plans

Wiring Plans are furnished only in connection with individual lines and private branch exchange service in dial or common battery manual service areas except that Plans 100, 101, 150, 400 and 401 also may be furnished in connection with all classes of service in any service area, and plans 203, 204 and 205 also may be furnished in connection with individual line or private branch exchange service in magneto service areas. Explanations of the wiring plan diagrams shown in this manual are as follows:

Continuous lines indicate lines in use from stations shown.

Broken lines indicate lines not in use or in certain cases being held.

Black telephones indicate stations in operation.

Outlined telephones indicate stations disconnected from the line or not in use.

Line stations or controlled intercommunicating stations are optional with certain wiring plans and are not shown in the diagrams which follow.

Note—Wherever practicable buzzer or signalling equipment already installed on the subscriber's premises, may be used in connection with any of the wiring plans with which signalling equipment is required. Where buzzer equipment is not in place the telephone company can provide it.

Wiring Plan No. 100

For use where the subscriber desires to disconnect from the line one or more telephones other than the main telephone.

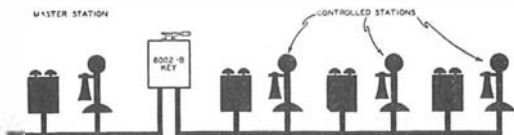
Under this plan one main telephone and one or more telephones controlled from the main telephone are used in connection with one

Wiring Plan No. 100—Continued

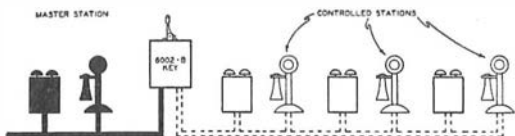
central office or private branch exchange line. A number 6002-B key described under "Wiring Plan Equipment" in this manual, is associated with the main telephone.

Minimum—One master station and one controlled station.

Maximum—One master station and four controlled stations—total stations not to exceed five.



With the key in the position shown the line may be used either from the master station or anyone of the controlled stations.



With the key in the position shown the controlled stations are cut off, and the line may be used only from the master station.

Wiring Plan No. 101

For use where the subscriber desires to use the main telephone to place and receive calls normally handled at other telephones connected to the same central office or private branch exchange line.

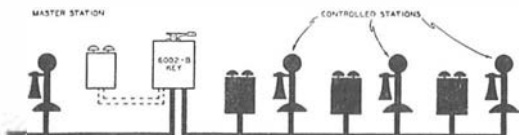
This plan provides for one main telephone and one or more telephones controlled from the main telephone used in connection with one central office or private branch exchange line. A 6002-B key, described under "Wiring

Wiring Plan No. 101—Continued

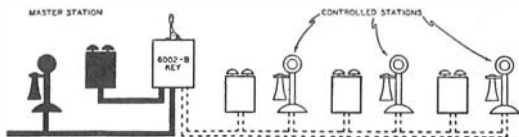
Plan Equipment" in this manual, is associated with the main telephone.

Minimum—One master station and one controlled station.

Maximum—One master station and three controlled stations—total stations not to exceed five.



With the key in the position shown all stations are connected to the line but the master station bell is cut off.



With the key in the position shown the controlled stations are cut off and the master station bell is connected.

Wiring Plan No. 102

For use where the subscriber desires to disconnect all telephones other than the main telephone from the central office or the private branch exchange line and to intercommunicate between the main telephone and other telephones, or to intercommunicate between telephones other than the main telephone.

Under this plan one main telephone and one or more telephones controlled from the main telephone are used in connection with one central office or private branch exchange line. Keys Number 6012-A and 6002-B, described under "Wiring Plan Equipment" in this manual

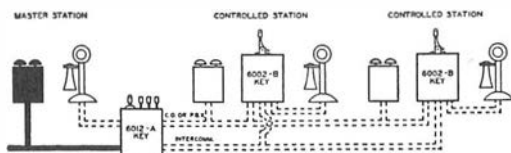
Wiring Plan No. 102—Continued

are used in this wiring plan, a 6012-A key being associated with the main telephone and a 6002-B key with each controlled telephone. Buzzers are required.

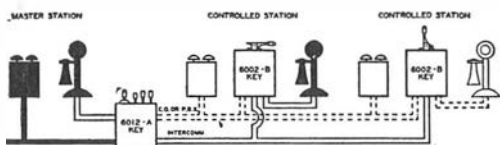
The control equipment associated with this plan is enclosed in a black finished wooden box 10x8½x5⅜ inches and may be mounted on a vertical surface such as a wall or the side or end of a desk or table.

Minimum—One master station and one controlled station.

Maximum—One master station and four controlled stations—total stations not to exceed five.

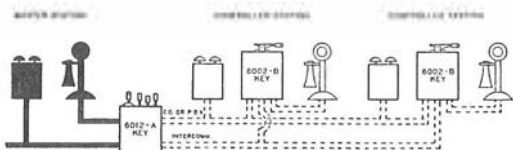


With the keys in the position shown only the master station bell is connected to the line.

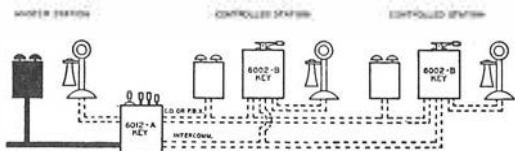


Depressing the first (black) button connects the master station with the intercommunicating line. With the 6002-B key "normal" the controlled station is connected to the intercommunicating line. With 6002-B "thrown" the controlled station may be connected to the Central Office or P. B. X. Line.

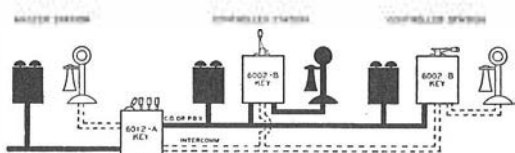
Wiring Plan No. 102—Continued



Depressing the second (black) button connects the master station with the Central Office or P. B. X. line. Controlled stations are cut off from the Central Office or P. B. X. line but connected to the intercommunicating line with their keys in the position shown.



Depressing and releasing the third (red) button holds the Central Office or P. B. X. line.

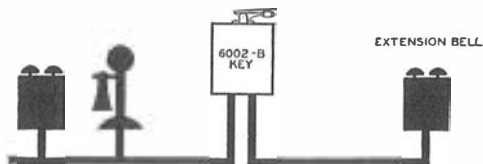


With the 6012-A key "thrown" the controlled stations may use the Central Office or P. B. X. line.

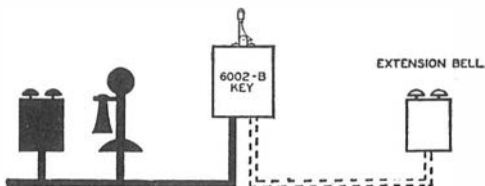
Wiring Plan No. 150

For use where the subscriber desires an extension bell which he may disconnect from the line.

A Number 6002-B key described under "Wiring Plan Equipment" in this manual is used.



With the key in the position shown the extension bell will ring.



With the key in the position shown the extension bell will not ring.

The key may be located near the telephone with which it is associated or at the extension bell.

Wiring Plan No. 200

For use where the subscriber desires equipment which will enable him to receive and hold calls at one or two telephones connected to two central office or private branch exchange lines.

A Number 6009-A key, described under "Wiring Plan Equipment" in this manual is used.

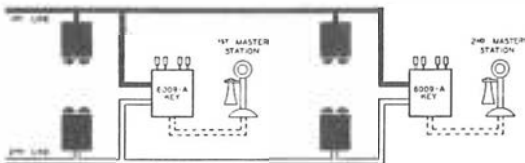
The control equipment associated with this wiring plan is enclosed in a black finished wooden box $12\frac{1}{2} \times 8\frac{1}{2} \times 6\frac{5}{8}$ inches which may be

Wiring Plan No. 200—Continued

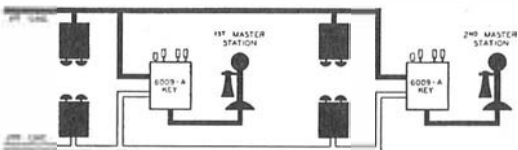
mounted on a vertical surface such as a wall or side or end of a desk or table.

Minimum—One bell on each line with one master station.

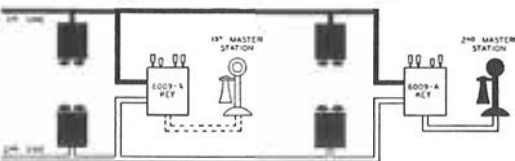
Maximum—Two master stations—total stations not to exceed two.



Normal—Calls may be answered on either line from both master stations.



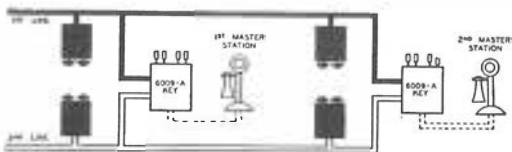
Depressing the first (black) button connects either master station with the first line.



First master station—Depressing and releasing second (red) button holds the first line.

Second master station — Depressing third (black) button connects master station with the second line.

Wiring Plan No. 200—Continued



Depressing and releasing fourth (red) button holds the second line.

Wiring Plan No. 201

For use where the subscriber desires to have one telephone equipped to receive and hold calls over either of two central office or private branch exchange lines and to permit intercommunication with other telephones where calls over these lines also can be received, but not held.

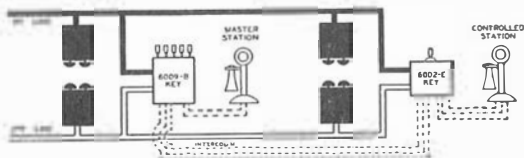
Keys Number 6009-B and 6002-E, both of which are described under "Wiring Plan Equipment" in this manual are used, a 6009-B key being associated with the main telephone and a 6002-E key being associated with each controlled telephone. The control equipment associated with this plan is enclosed in a black finished wooden box $12\frac{1}{2} \times 8\frac{1}{2} \times 6\frac{5}{8}$ inches, which may be mounted on a vertical surface such as a wall or the side or end of a desk or table.

A second type of controlled telephone without a bell and restricted to intercommunicating service also is available under this plan. Push buttons and buzzers provide the signalling equipment necessary.

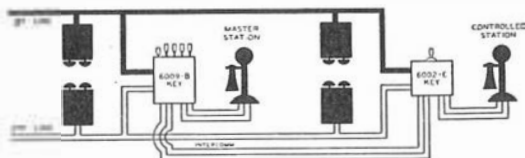
Minimum—One master station and one controlled station.

Maximum—One master station and four controlled stations—total stations not to exceed six.

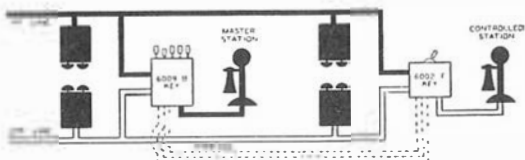
Wiring Plan No. 201—Continued



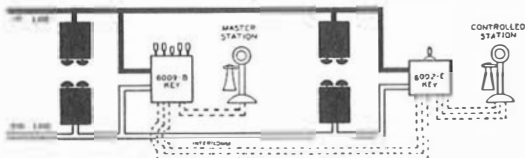
Normal—Calls may be answered on either line from both master stations.



With the first (black) button depressed on the 6009-B key and with the lever upright on the 6002-E key the stations are connected to the intercommunicating line.

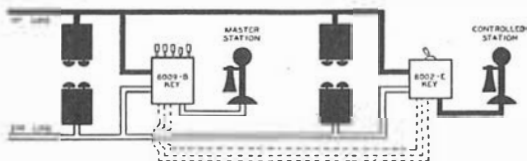


With the second (black) button depressed on the 6009-B key the master station is connected to the first line. With the lever thrown to the right on the 6002-E key the controlled station is connected to the second line.

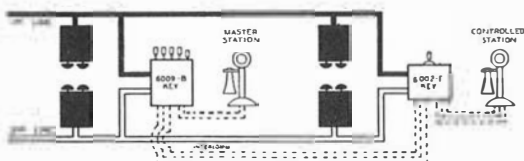


With the third (red) button depressed and released on the 6009-B key the master station is holding the first line.

Wiring Plan No. 201—Continued



With the fourth (black) button depressed on the 6009-B key the master station is connected to the second line. With the lever thrown to the left on the 6002-E key the controlled station is connected to the first line.



With the fifth (red) button depressed and released on the 6009-B key the master station is holding the second line.

Wiring Plan No. 202

For use where the subscriber desires to have several telephones equipped to receive and hold calls over either of two central office or private branch exchange lines and to permit intercommunication between these telephones.

A Number 6009-B key, described under "Wiring Plan Equipment" in this manual is used. Buzzers are required.

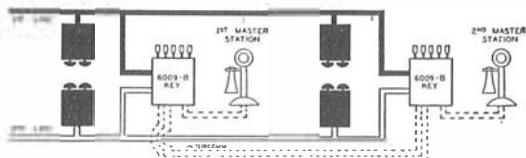
The control equipment associated with this plan is enclosed in a black finished box $12\frac{1}{2} \times 8\frac{1}{2} \times 6\frac{5}{8}$ inches, which may be mounted on a vertical surface such as a wall or the side or end of a desk or table.

Controlled telephones without bells and restricted to intercommunication service also are available under this plan.

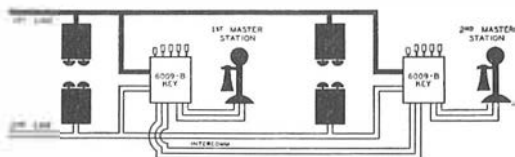
Wiring Plan No. 202—Continued

Minimum—One master station and one bell per line.

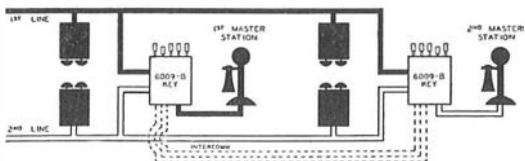
Maximum—Five master stations or two master stations and four controlled stations—total stations not to exceed six.



Normal—Calls on either line may be answered from any master station.

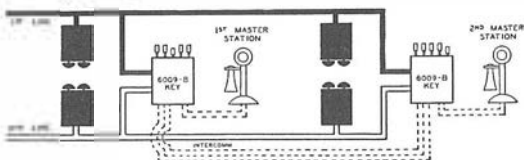


Depressing the first (black) button connects the associated master station with the intercommunicating line.



Depressing the second (black) button connects the associated master station with the first line. Depressing the fourth (black) button connects the associated master station with the second line.

Wiring Plan No. 202—Continued



Depressing and releasing the third (red) button holds the first line for the associated master station. Depressing and releasing the fifth (red) button holds the second line for the associated master station.

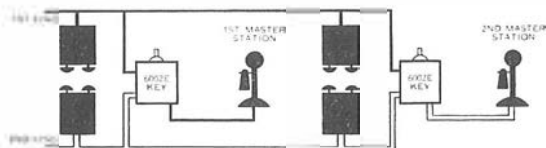
Wiring Plan No. 203

For use where the subscriber desires to have one or more main telephones connected to two central office or private branch exchange lines so that calls over either of these lines may be received at any one of these telephones.

Key Number 6002-E, described under "Wiring Plan Equipment" in this manual is used.

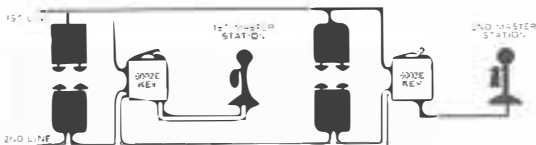
Minimum—Two master stations or one master station and one line station on each line with a bell on each line.

Maximum—Five master stations or two master stations and four line stations—total stations not to exceed six.



With the keys in the positions shown the first line is connected to the first master station and the second line is connected to the second master station.

Wiring Plan No. 203—Continued



With the keys in the positions shown the first line is connected to the second master station and the second line is connected to the first master station.

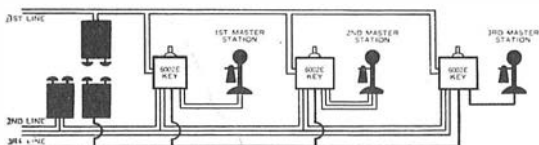
Wiring Plan No. 204

For use where the subscriber desires to have one or more telephones connected to three central office or private branch exchange lines so that calls over these lines may be received at any one of these telephones.

Key Number 6002-E, described under "Wiring Plan Equipment" in this manual is used.

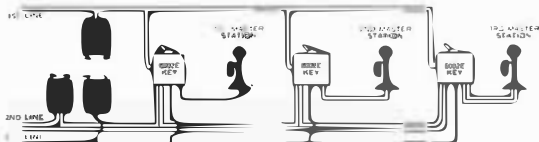
Minimum—Three master stations or one line station on each line and one master station.

Maximum—Five master stations or three master and three line stations—total stations not to exceed six.

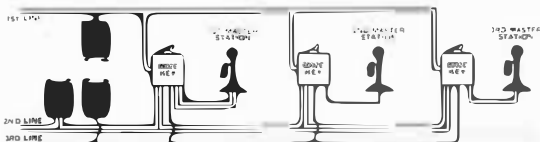


With keys in the position shown the first line is connected to the first master station, the second line is connected to the second master station and the third line is connected to the third master station.

Wiring Plan No. 204—Continued



With keys in the positions shown the first line is connected to the second master station, the second line is connected to the third master station and the third line is connected to the first master station.



With keys in the positions shown the first line is connected to the third master station, the second line is connected to first master station and the third line is connected to second master station.

Wiring Plan No. 205

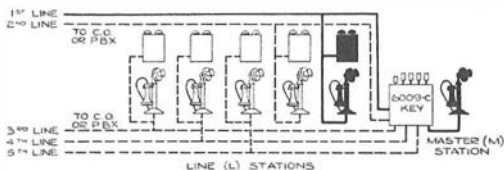
For use where the subscriber desires to have one or more telephones connected to four or five central office or private branch exchange lines so that calls over these lines may be received at any one of these telephones. In operation the plan is similar to Plan 204.

Key Number 6009-C described under "Wiring Plan Equipment" in this manual is used.

Minimum—When four central office or private branch exchange station lines are involved, one master station and three line stations.

When five central office or private branch exchange station lines are involved, one master station and four line stations.

Maximum—Five stations connected either permanently or by key operation to any line—total stations not to exceed six.



Depressing the first (red) button connects the master station with the first line. Depressing the second (black) button connects the master station to the second line, etc.

August, 1931

51-C

Wiring Plan No. 210

For use where the subscriber desires to have several telephones equipped to receive and hold calls over any of three central office or private branch exchange lines and to intercommunicate with other telephones connected under the plan.

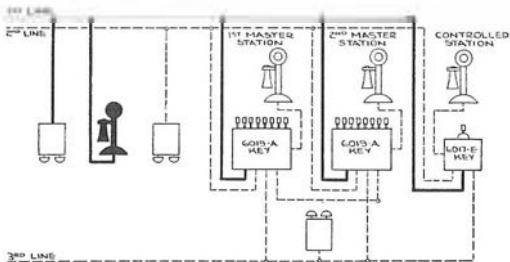
A No. 6019-A key, described under "Wiring Plan Equipment" in this manual is used. Buzzers are required.

The control equipment associated with this plan is enclosed in a black finished box $12\frac{1}{2} \times 8\frac{1}{2} \times 6\frac{5}{8}$ inches, which may be mounted on a vertical surface such as a wall or the end of a desk or table.

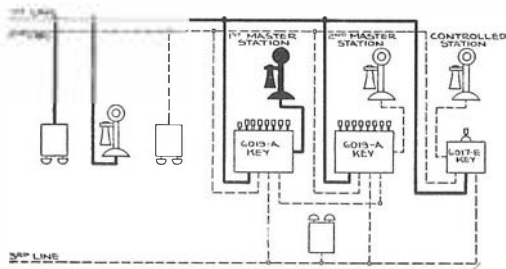
Controlled telephones without bells and restricted to intercommunication service also are available under this plan.

Minimum—One master station and one bell per line.

Maximum—Five stations connected either permanently or by key operation to any line and not more than four bells per line—total stations not to exceed six.

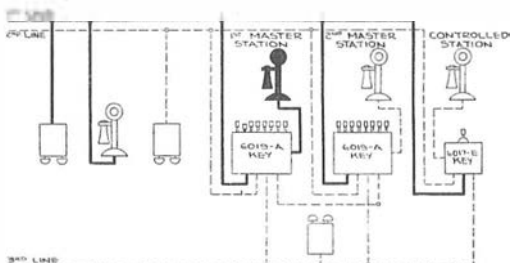


Normal—Master station not connected to any line.

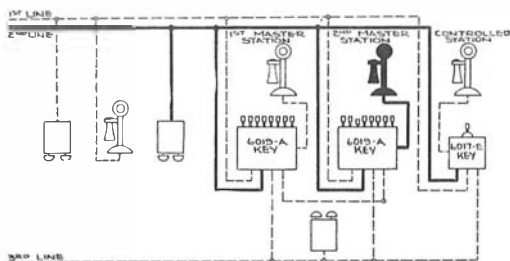


Wiring Plan No. 210—Continued

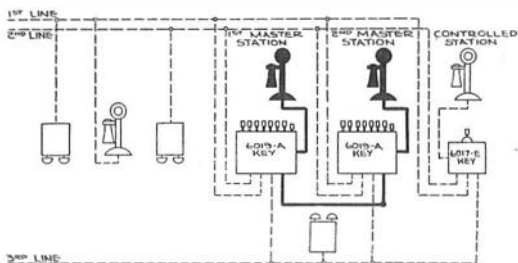
Depressing first (black) button connects master station to first line.



Depressing and releasing second (red) button holds first line.



Depressing third (black) button connects master station to second line.



Depressing the eighth button connects master station to intercommunicating circuit.

Wiring Plan No. 211

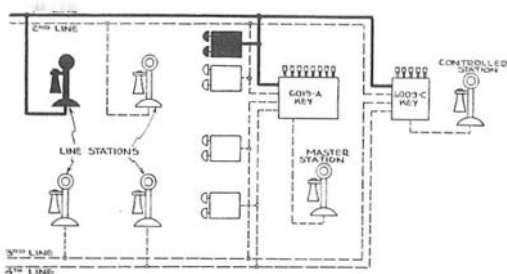
For use where the subscriber desires to have several telephones equipped to receive and hold calls over any of four central office or private branch exchange lines.

A No. 6019-A key described under "Wiring Plan Equipment" in this manual is used. Buzzers are required.

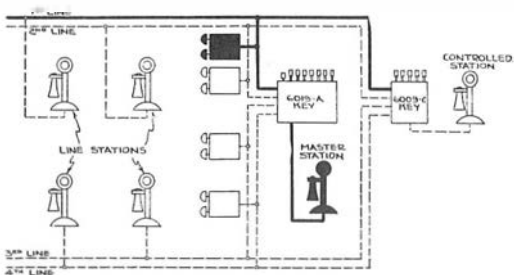
The control equipment associated with this plan is enclosed in a black finished box $12\frac{1}{2} \times 8\frac{1}{2} \times 6\frac{5}{8}$ inches, which may be mounted on a vertical surface such as a wall or the end of a desk or table.

Minimum—One master station and one bell per line.

Maximum—Five stations connected either permanently or by key operation to any line and not more than four bells per line—total stations not to exceed six.

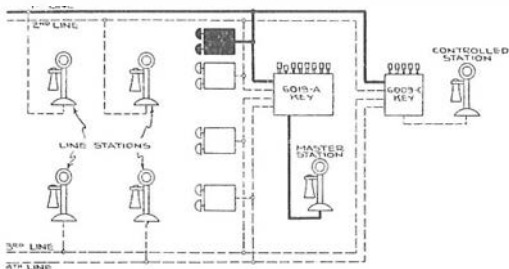


Normal—Master station not connected to any line.

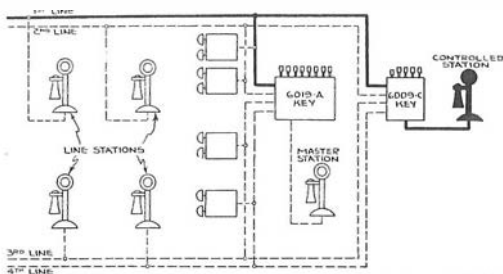


Depressing the first (black) button connects the master station with the first line.

Wiring Plan No. 211—Continued



Depressing and releasing the second (red) button holds the first line.



Depressing the first (red) button of the 6009-C key connects the first line to the controlled station.

Wiring Plan No. 300

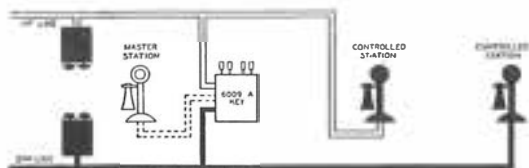
For use where the subscriber desires to have either one or two telephones each permanently connected to different lines, and another telephone equipped so that calls over either of these two lines may be received and held at this third telephone.

This plan is known as the secretarial plan as it permits a secretary to pick up and hold calls and transfer them to a telephone permanently connected to the line over which the call is received.

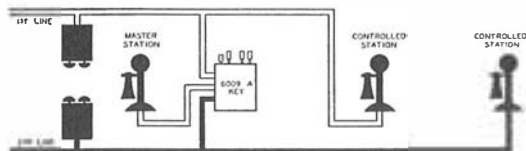
Key Number 6009-A, described under "Wiring Plan Equipment" in this manual is used. Buzzers may be required for signalling where the telephones are located in different rooms.

Minimum—One master station and one controlled station.

Maximum—One master station and two controlled stations—total stations not to exceed three.

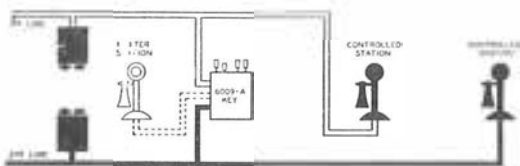


Normal—Master station not connected to either line.

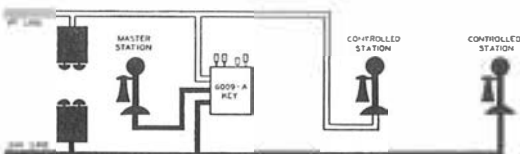


Depressing the first (black) button connects the master station with the first line.

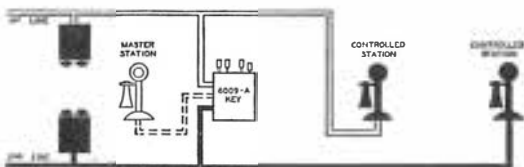
Wiring Plan No. 300—Continued



Depressing and releasing the second (red) button holds the first line.



Depressing the third (black) button connects the master station with the second line.



Depressing and releasing the fourth (red) button holds the second line.

Wiring Plan No. 400

For use where the subscriber desires facilities to enable a second person to listen in (generally for the purpose of recording the conversation).

August, 1931

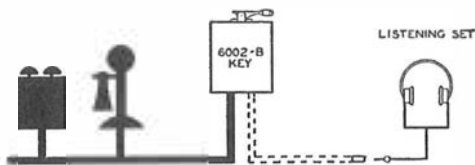
51-I

Wiring Plan No. 400—Continued

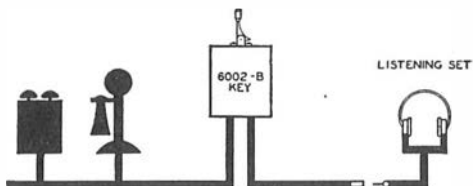
This plan is known as the listening plan. It may be associated with any station on any plan.

Key number 6002-B, described under "Wiring Plan Equipment" in this manual is used, also a single or double head band receiver is generally used.

The control equipment is contained in a black finished wooden box $8 \times 6\frac{1}{4} \times 3\frac{1}{2}$ inches, which may be mounted on a vertical surface such as a wall or the end of a desk or table.



With the key in the position shown the listening set is not connected.

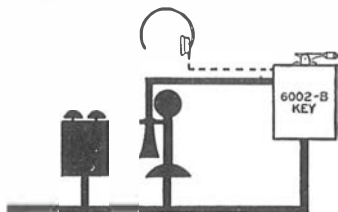


With the key in the position shown the listening set is connected.

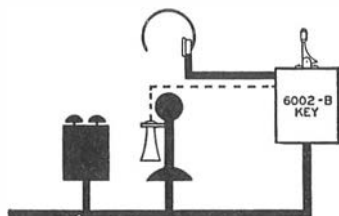
Wiring Plan No. 401

This plan enables the subscriber to connect either the regular receiver or a single head receiver (but not both simultaneously) to, and to disconnect such receiver from, a central office or private branch line. Key number 6002-B, described under "Wiring Plan Equipment" in this manual is used.

This wiring plan may be associated with any station on any plan.

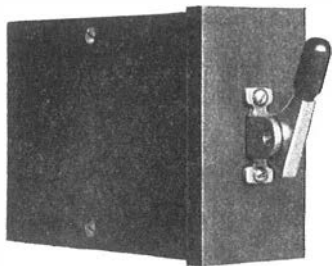


With the key in the position shown the hand receiver is connected and the head receiver is cut off.

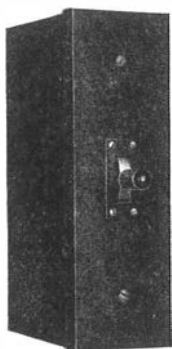


With the key in the position shown the head receiver is connected and the hand receiver is cut off.

Wiring Plan Equipment



6002-B Key



6002-E Key

Two arrangements of a lever type key, Number 6002-B and Number 6002-E, are available for use in connection with wiring plans described in this manual under "Wiring Plans." The keys are nickel finish with black handles and are mounted in a wooden box finished in black. These keys are designed to be mounted at the side or end of a desk or table or other flat surface.

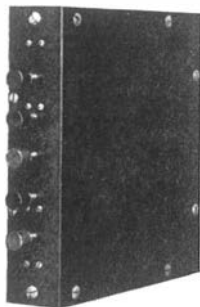
The Number 6002-B key is used in connection with wiring plans 100, 101, 102, 150 and 400. The Number 6002-E key is used in connection with wiring plans 201, 203, and 204.

Dimensions: 6002-B key (two-position lever, making and breaking two sets of contacts); height including lever $5\frac{17}{32}$ inches; width $3\frac{7}{16}$ inches; depth 2 inches.

August, 1931



6009-A Key



6009-B Key

Three arrangements of a push button key—the 6009-A, the 6009-B and 6009-C are available for use with wiring plans described in this manual under “Wiring Plans.” They are mounted in small boxes with black finish and are designed to be mounted on a wall or the side or end of a desk or table or other flat surface.

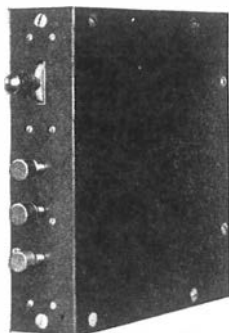
The 6009-A key is used with Wiring Plans 200 and 300. The 6009-B key is used with Wiring Plans 201 and 202. The 6009-C key is used with Wiring Plan 205.

Dimensions: Key 6009-A (4 push buttons—two red and two black); height not including push buttons $5\frac{17}{32}$ inches; width $5\frac{7}{8}$ inches; depth $1\frac{5}{16}$ inches.

Key 6009-B (5 push buttons—two red and three black); height not including push buttons $5\frac{17}{32}$ inches; width $5\frac{7}{8}$ inches; depth $1\frac{5}{16}$ inches.

Key 6009-C (5 push buttons—one red and four black) height not including push buttons $5\frac{17}{32}$ inches, width $5\frac{7}{8}$ inches, depth $1\frac{5}{16}$ inches.

(In appearance this key is similar to the 6009-B key except that it has only one red button.)



6012-A Key

This is a combination lever and push button type key in a wood box with black finish and designed to mount on a wall or the side or end of a desk or table or other flat surface. It is used with wiring plan 102. The key lever handle and two of the push buttons are black—one push button is red.

Dimensions: Height not including key lever $5 \frac{17}{32}$ inches; height including key lever $6 \frac{33}{64}$ inches; width $5 \frac{7}{8}$ inches; depth $1 \frac{17}{16}$ inches.

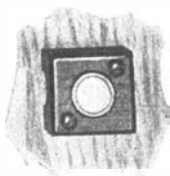
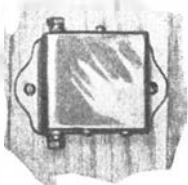


6019-A Key

This is a push button type key in a small box with black finish designed to be mounted on a wall or the side or end of a desk or table or other flat surface. It is used with Wiring Plans 210 and 211.

Dimensions: (8 push buttons—4 red and 4 black). Height, not including push buttons, $5 \frac{17}{32}$ inches; length, $7 \frac{7}{16}$ inches; depth, $1 \frac{7}{16}$ inches.

Wiring Plan Equipment—Continued



Buzzer (left) enclosed in a nickel casing for use with wiring plans requiring buzzer signaling.

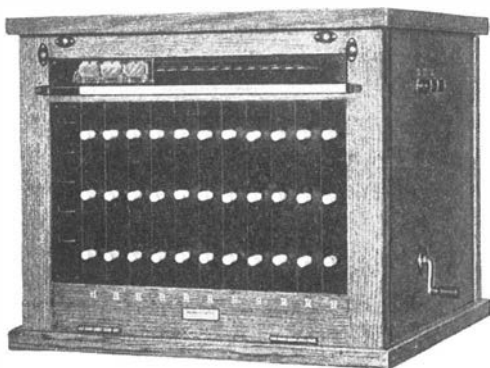
Dimensions: Height $1\frac{5}{8}$ inches; width $1\frac{1}{4}$ inches; depth $\frac{5}{16}$ inches.

One or two pearl push buttons (right) in wood mounting with black finish. For use with wiring plans requiring buzzer signalling.

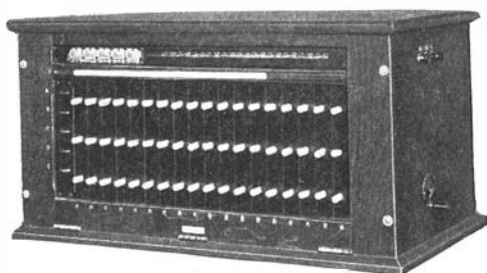
Dimensions: Height $1\frac{3}{8}$ inches; width (1 button $1\frac{1}{2}$ inches) (2 button $2\frac{3}{4}$ inches); depth $1\frac{3}{16}$ inches.

Private Branch Exchange Equipment

Cordless Private Branch Exchange Switchboards



506-A Switchboard



506-B Switchboard

Cordless Private Branch Exchange Switchboards—Continued

Cordless switchboards in two capacities are available. They are small units operated through keys and require an attendant. In most cases, however, the operation of the switchboard does not require the full time of an attendant. The equipment may be placed on a desk or table. A desk telephone or a hand telephone is provided for the use of the attendant. A dial is provided in dial service areas.

Care should be taken not to recommend the cordless switchboards where equipment of greater capacity is required, or where the capacity of the cordless switchboard would soon be outgrown.

In dial service areas, where desired, telephones connected to one of these switchboards may be equipped with dials so that the calling person can dial the number he wants after a connection with a central office line has been established by the attendant. When the switchboard is unattended a connection direct to the central office may be set up for one or more telephones connected to the switchboard.

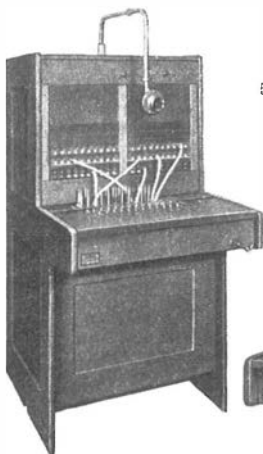
Cabinets are light oak, or mahogany finished in walnut. Special finishes may be obtained if desired.

Dimensions: Number 506-A switchboard (capacity 3 central office lines, 7 telephones); height $14\frac{1}{2}$ inches; length $16\frac{3}{4}$ inches; depth $15\frac{3}{8}$ inches.

Number 506-B switchboard (capacity 5 central office lines, 12 telephones); height $14\frac{1}{8}$ inches; length 27 inches; depth $15\frac{1}{2}$ inches.

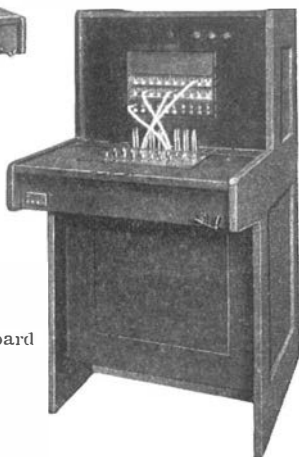
These boards may be mounted either on a desk or a small table adjoining it which is furnished by the subscriber.

Non-Multiple Private Branch Exchange Switchboards



551-A Switchboard

551-B Switchboard



Two types of non-multiple cord switchboards are available in five capacities for use where the service requirements cannot be met satisfactorily with an inter-communicating or cordless private branch exchange system. A dial is provided in dial service areas. The type of transmitter and receiver best suited to the subscriber's needs should be furnished.

In dial service areas, where desired, telephones connected to either of these switchboards may be equipped with dials so that the calling person can dial the number he wants after a

Non-Multiple Private Branch Exchange Switchboards—Continued

connection with a central office line has been established by the attendant. When the switchboard is unattended a connection direct to the central office may be set up for one or more telephones connected to the switchboard.

The cabinets are of compact design. The finish ordinarily provided is light oak or mahogany finished in walnut. Special finishes may be obtained. Two or more sections may be used together where operating requirements make it desirable. If more than two sections are required a special study should be made before the equipment is installed.

Dimensions: Number 550-C switchboard (capacity 10 central office lines, 30 telephones); height 3 ft. 9 $\frac{3}{4}$ inches; height of key shelf from floor 2 ft. 6 in.; width 2 ft. 2 in.; depth 1 ft. 2 $\frac{1}{4}$ inches (including key shelf 2 ft. 5 $\frac{1}{4}$ in.); total floor space required 2 ft. 2 in. by 7 ft. 6 in.

Number 550-C switchboard (capacity 15 central office lines, 80 telephones) height 4 ft. 3 $\frac{3}{4}$ inches; height of key shelf from floor 2 ft. 6 in.; width 2 ft. 3 $\frac{3}{8}$ inches; depth 1 ft. 4 $\frac{1}{4}$ inches (including key shelf 2 ft. 7 $\frac{1}{4}$ in.); total floor space required 2 ft. 3 $\frac{5}{8}$ inches by 7 ft. 6 inches.

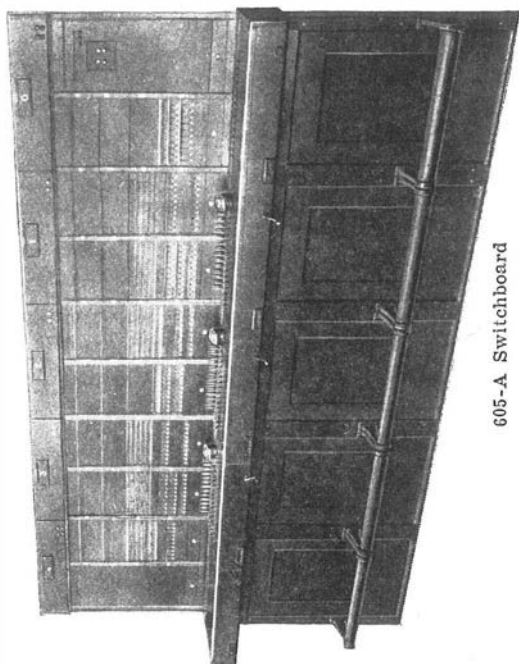
Number 550-C switchboard (capacity 15 central office lines, 320 telephones); height 4 ft. 39/16 inches; height of key shelf from floor 2 ft. 6 in.; width 2 ft. 4 $\frac{1}{4}$ in.; depth 1 ft. 87/16 in. (including key shelf 2 ft. 11 $\frac{7}{8}$ in.); total floor space required 2 ft. 4 $\frac{1}{2}$ in. by 8 ft.

Number 551-A switchboard (capacity 10 central office lines, 40 telephones); face of front panel and key shelf is finished in black phenol fiber; height 3 ft. 10 in.; height of key shelf from floor 2 ft. 6 in.; width 2 ft. $\frac{1}{2}$ in.; depth 1 ft. 2 $\frac{3}{8}$ in. (including key shelf 2 ft. 5 $\frac{1}{4}$ in.); total floor space required 2 ft. $\frac{1}{2}$ in. by 7 ft. 6 in.

Number 551-B switchboard (capacity 15 central office lines, 80 or 320 telephones); face of front panel and key shelf is finished in black phenol fiber; height 4 ft. 33/16 in.; height of key shelf from floor 2 ft. 6 in.; width 2 ft. 2 $\frac{7}{8}$ in.; depth 1 ft. 77/16 in. (including key shelf 2 ft. 10 13/16 in.); total floor space required 2 ft. 2 $\frac{7}{8}$ in. by 7 ft. 10 in.

Note—550-B 30, 80, and 320 line capacity switchboards which are similar to the 550-C 30, 80, and 320 line switchboards will be furnished when stock conditions warrant.

Multiple Private Branch Exchange Switchboard



605-A Switchboard

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Multiple Private Branch Exchange Switchboard

This type of private branch exchange switchboard is available for use where greater capacity is desired than can be obtained through the use of the non-multiple switchboards.

Dials are provided for use in dial service areas.

Installations of this type of equipment are always based on a study of the subscriber's actual service requirements.

Cabinet is light oak or mahogany finished in walnut.

Dimensions: Number 605-A switchboard (capacities vary up to 1520 telephones and 240 central office lines); height 6 ft. 2 in.; depth 3 ft. including key shelf; width 11 ft. 8 inches including distributing frame, head section, three operating positions and foot section. Each additional section of switchboard is 2 ft. wide.

Combined Manual and Dial Private Branch Switchboard

This private branch exchange switchboard is available for use where it is advisable to furnish combined manual and dial service.

This equipment is of particular advantage for the larger businesses where the percentage of inter-communicating and outgoing calls is large. Incoming calls and special service calls are handled by operators at a manual board. Inter-communicating and outgoing calls in general are completed through the dial equipment without the services of an operator. The need for this type of equipment must be determined by a thorough study of the subscriber's actual service requirements.

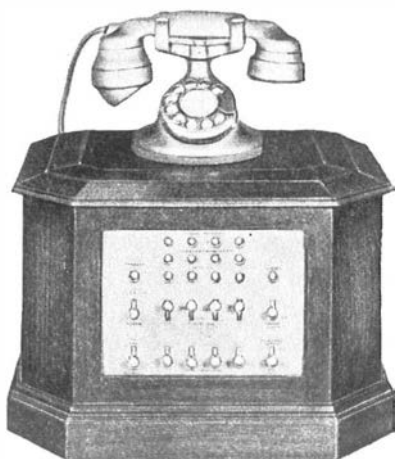
Dimensions: Number 701-A switchboard—Combined manual and dial service (capacity from 90 to 2000 telephones); the manual service for this type of switchboard consists of sections of the 605 manual type of private branch exchange switchboard. Self-contained units are provided for housing dial equipment.

Note—A switchboard, Number 711-A, is available where dial private branch exchange service without manual equipment is required. The capacities of this switchboard are the same as the Number 701-A switchboard.

740 Dial Private Branch Exchange Switchboards



740-A Switchboard



740-C Switchboard

740 Dial Private Branch Exchange Switchboards—Continued

Three types of dial private branch exchange switchboards are available for use in large residences, on private estates or in smaller business houses requiring a capacity of from thirty-eight to eighty-eight telephonerlines. These are the Number 740-A, 740-B, and 740-C switchboards. They are equipped for operation in either common battery manual, or dial central offices.

Each telephone may by dialing be connected with any other telephone or with a central office line connected to the system.

All incoming calls must be handled by an attendant who completes the connection by dialing the desired telephone number. The attendant also may complete connections to the central office.

Dimensions: Number 740-A switchboard (capacity 88 telephones); size of attendant's cabinet, height 1 ft.; width 1 ft. 3 11/16 inches; depth 1 ft. 9/16 inches; finish walnut or mahogany.

Number 740-B switchboard (capacity 38 telephones); size of attendant's cabinet (same as the 740-A switchboard).

Number 740-C switchboard (capacity 38 telephones); the cabinet is finished in antique walnut with the panel in old brass or statuary bronze; size of attendant's cabinet, height 10 3/16 inches; width 1 ft. 2 5/8 inches; depth 10 3/8 inches.

750-A Dial Private Branch Exchange

The 750-A Private Branch Exchange, whose switching equipment is designed to operate in common battery areas only, is an efficient intercommunicating dial telephone system so arranged as to give business, professional and institutional organizations a quick and convenient service, both inside and outside the organization, without the necessity of providing a switchboard operator. It is also especially well adapted for use in the larger type of residence.

Capacity

The 750-A P.B.X. has a capacity of 15 stations and 3 central office lines. The switching equipment is available in two sizes, viz: 15 stations and 3 central office lines or 8 stations and 2 central office lines. In the larger size there may be 3 and in the smaller size 2 simultaneous intercommunicating calls in addition to central office calls.

Station Apparatus

Stations are dial equipped and intercommunicating calls are made by dialing. The use of certain push button keys is required on all central office calls and any or all stations may be equipped with these keys. Incoming calls may be answered and transferred at such key equipped stations which are called "Key Stations." The key equipment consists of 3 buttons connecting the stations to the central office lines, one hold button, and one local button which is used when making intercommunicating calls.

Stations not equipped with keys are intended for use where it may be desirable to provide only intercommunicating service.



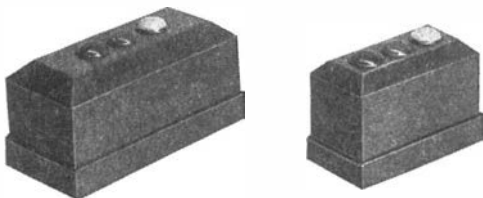
This is a hand set type of telephone having an applique base which contains the necessary keys.

750-A Dial Private Branch Exchange Continued

It is available in black or any of the other standard colors, or in any color on special order. Where desk or wall telephones are used the keys are mounted separately and are similar in appearance to the 5 button keys used with wiring plans.

Signalling Equipment

Each station is provided with a subscriber set, the ringer of which is used to indicate an incoming intercommunicating call. The signals used in connection with incoming central office calls consist either of ringers or a combination of ringers and lamps. The ringers are individual to the different central office lines and have bells differently toned for each central office line and different from the bells in the station ringers. The central office line lamp indicators, which are placed so they can be readily seen from the stations which they serve, identify an incoming central office call by the color of a lighted lamp and have a common ringer for an audible signal.



This shows the central office line lamp indicator. Its dimensions are $3 \frac{5}{16}$ inches in length 2 inches in height, and $1 \frac{15}{16}$ inches in width. The lamp caps are colored to correspond with the colors on the central office buttons in the station key sets. The housing may be obtained in black or in any of the five standard colors or in any other finish desired, on special order.

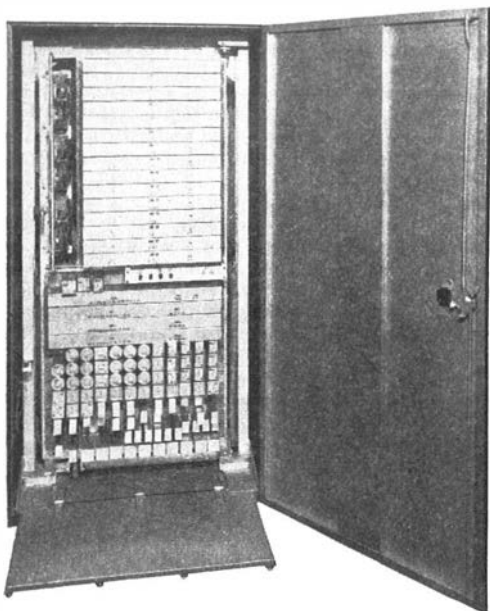
Signaling Limitations

There may be a maximum of two individual ringers per central office line. There may also be in addition to or instead of these individual ringers a maximum of four lamp indicators.

Extension and Jacks

Extension telephones cannot be employed on any key station line. A maximum of two extension stations may be provided on any keyless station line. Jack and plug equipment is not available for key station lines, but may be used on a keyless station line.

750-A Dial Private Branch Exchange Continued



Switching and Power Equipment

This shows the switching equipment and power plant. The cabinet is an olive green finish. Its dimensions are 2' 7" wide, 1' 10" deep and 5' in height. A location convenient of access and not subject to dampness must be arranged for this cabinet.

750-A Dial Private Branch Exchange

Continued

Operating of System

Intercommunicating calls are made from any key station by depressing the "L" button and dialing the number of the desired station. Machine ringing is employed and the calling party receives an audible ringing signal. The busy tone is received if the call station is in use. Calls may be made from a keyless station by removing the receiver and dialing desired station.

Outgoing central office calls are made from any key station by depressing one of the central office buttons and then placing calls in the same manner as from a main station. If the central office line selected is in use a busy tone is received when the central office button is depressed.

Incoming central office calls are answered at any key station by depressing the proper central office button corresponding to the signal received. If the incoming call is for another station, that station is reached by means of an intercommunicating call and is told to take the call on the particular central office line involved. This is accomplished by depressing the "H" button and "L" button and dialing the desired station.

Special Features

Certain special features can be provided in connection with the 750-A P.B.X. such as restricting a key station from making central office calls or denying access to one or more of the central office lines if desired.

The equipment is regularly arranged so that on both intercommunicating calls and on calls to or from a central office line, other stations are locked out from the established connection.

Intercommunicating Equipment

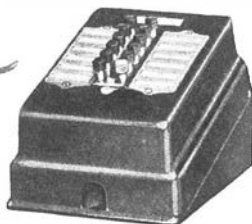
Equipment which enables both business and residence subscribers to obtain intercommunicating service not requiring the services of a switchboard operator is available. This equipment includes a black metal box containing push buttons. A push button is associated with each telephone connected to the system.

Outgoing calls may be originated and incoming calls answered by depressing the button connected to the line which is being used and calls may be transferred from one telephone to another or connections established between any two telephones connected to the system by depressing the proper buttons.

There are two arrangements of intercommunicating systems, the Number 1 is commonly used in residences and the Number 2 by business concerns. These two intercommunicating systems are similar, varying only slightly in the method of operation.

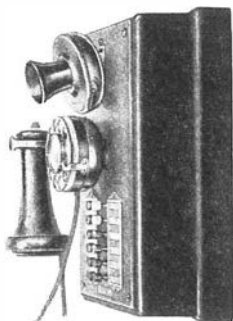


Number 1 Residence Intercommunicating System
—Desk Type.



Number 1 Residence System—Continued

This is an intercommunicating system with which either wall, desk, or hand telephones may be used. The equipment comes in two capacities, 12 and 24 button. The 12-button system may be equipped for either eight telephones and two central office lines, or ten telephones and one central office line (one button being re-



Number 1 Residence Intercommunicating System—Wall Type.

quired to hold calls on the central office line). The capacity of the 24-button system is 20 telephones and two central office lines (two buttons being required to hold calls on the central office lines).

Calls may be transferred to any telephone connected to the system by depressing the holding button associated with the central office line and operating the button connected to the telephone wanted. Intercommunication with any telephone connected to the system may be obtained by operating the button connected with the telephone wanted.

Number 2 Business System

This is an intercommunicating system available in capacities of 10 and 20 buttons. The capacity of the 10-button system is seven telephones, two central office lines and one ringing key; and the 20-button system is 17 telephones, 2 central office lines and one ringing key.

Number 2 Business Intercommunicating System.



Calls may be transferred to any telephone connected to the system by depressing the holding button associated with the central office line, depressing the button associated with the telephone desired, and then depressing the ringing button. Intercommunicating between any of the telephones connected to this system may be obtained by depressing the button associated with the telephone wanted and then depressing the ringing button.

Dimensions: No. 1 Residence System Desk Type, (12-button capacity) width $7\frac{1}{2}$ inches; length $12\frac{1}{4}$ inches; depth $4\frac{1}{2}$ inches.

No. 1 Residence System—Wall Type—width $7\frac{9}{32}$ inches; height $12\frac{3}{16}$ inches; set projects from wall $6\frac{9}{16}$ inches.

No. 2 Business System (10-button capacity) width 5 inches; length $7\frac{1}{2}$ inches; depth $3\frac{1}{8}$ inches.

Note—Intercommunicating systems of more than 12 buttons are seldom used, because where a greater capacity is required a more flexible system, such as a private branch exchange is more efficient and desirable.

Order Turrets

The order turrets illustrated are especially appropriate for use where the nature of the subscriber's business makes it desirable to handle a large percentage of his incoming and outgoing calls at a centralized point such as in newspaper offices, taxicab companies, large grocery stores, credit bureaus, department stores and investment houses.

An order turret is mounted on a suitable desk, table or counter which is provided by the subscriber. There are two types:



Number 1 Order Turret

The Number 1 order turret is a non-multiple type cabinet arranged to be connected to a private branch exchange line. In addition, a supplementary outward line may be connected to the P. B. X. switchboard for completing connections from the turret to other stations of the P. B. X. to obtain information from such stations while holding a call on the two-way line. The supplementary outward line may be connected directly to a central office instead of a Private Branch Exchange and may be common to two or more turrets. The standard finish of the equipment is black. It may be used with either an operator's set or a desk or hand type of telephone.

The No. 2 Order Turret

The Number 2 order turret is equipped so as to be connected:

1. To a central office line.
2. To a private branch exchange line.
3. To a central office line in multiple with an associated private branch exchange switch-board.

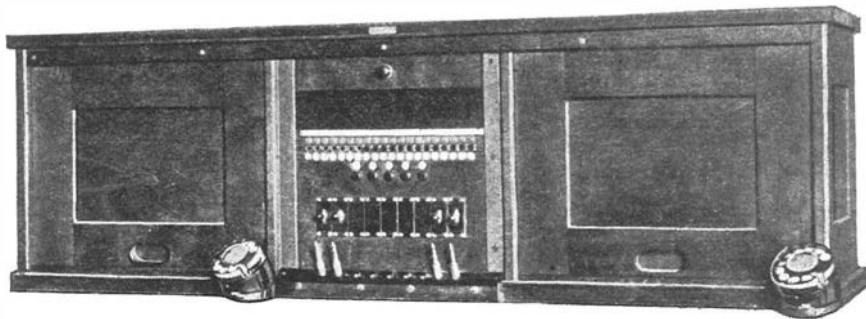
The turret provides four operating positions (two on each side). Each turret is equipped for the termination of either ten private branch exchange lines, or ten central office lines. The ultimate capacity, however, is forty private branch exchange lines, or forty central office lines if four order turrets are provided. One side of the order turret is also arranged to provide, where desired, five telephones to facilitate the handling of orders. Two cords and plugs with associated keys are used by each attendant for establishing and holding connections. Operator's sets are furnished each attendant.

Dimensions: Number 1 order turret—wood cabinet, black finish; height 9 inches; width 8 inches; depth 8 inches.

Number 2 order turret—wood cabinet, finished either in oak or birch mahogany; height 15 inches; width 48 inches; depth 13 inches.

The table upon which the turret is mounted should be at least 60 inches in length, 45 inches in width and 30 inches in height. This allows for a writing space of 16 inches.

Note—Special equipment for order tables sometimes is installed for subscribers whose requirements are such that the standard order tables will not satisfactorily serve them. In these cases, such special equipment will be installed only if a study reveals it to be practicable and in the interests of the subscriber's service. The turrets described are designed to meet satisfactorily, practically every order service requirement.



Number 2 Order Turret

Multiple Line Equipment

Multiple Line Equipment, also known as No. 100 key equipment is furnished only in connection with individual lines, private branch exchange lines and common battery private lines in dial or common battery manual service areas. It is designed for a variety of uses such as where any one of a group of employees doing work of the same character may satisfactorily dispose of a call directed to that group or where it is desired that one employee or secretary answer calls for persons who are absent. In some cases the equipment may also be used for order receiving purposes where the number of lines is comparatively small and the operating features provided are satisfactory.

The Multiple Line Equipment is mounted on a desk or table which is provided by the customer.

The key box is made in three and six line capacities and each capacity is made in two styles, single and double sided.

Where more than six lines are involved, a number of units of either the three or six line capacities may be combined as necessary. The number of multiple appearances of the key boxes is limited to six.



3-Line Single
Sided Keybox



6-Line Double
Sided Keybox

Each station associated with a key box may originate, receive or hold calls over any of the lines connected to the key box. Intercommunication between stations, however, is not provided.

August, 1931

68-B

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Directory Services

The primary purpose of the telephone directory is to render an efficient telephone number service. Every directory has an alphabetical section devoted to this purpose. In order that the directory may best serve its purpose, the listings in the alphabetical section are confined to the proper names, addresses and telephone numbers of persons or firms receiving telephone service. In addition, the larger exchanges also have a classified section in which are listed business subscribers under general headings broadly descriptive of the nature of their business, service, or product. The classified section is so arranged that it will serve subscribers with either telephone number service or buyer's guide service. It is important in this connection, that subscribers think of the classified section, as a valuable reference medium for telephone number service and a guide to "Where to Buy It."

Additional Listings

Each subscriber is entitled to one listing in the alphabetical section. The service needs of a subscriber may necessitate additional listings, since adequate and proper listings in the directory are essential to good service. These additional listings are provided at a nominal charge and may be desired in connection with residence service for:

Members of the subscribers' immediate family.

Permanent guests or tenants who maintain their residence in a family hotel, apartment house, transient hotel or club, where service for them is provided through the private branch exchange telephone system of the place occupied.

Permanent guests or tenants of a board-

ing or rooming house where semi-public telephone service is provided.

Members of a group who maintain their permanent residence under group management as in the case of bachelor quarters or in college fraternity or sorority houses.

Persons leasing or sub-leasing premises of subscribers who are temporarily absent.

Additional business listings in the alphabetical section may be used where it is desired to:

List the names of members of a firm or the officers of a corporation, or to list the names of employees or other representatives; or to

List the names of persons, firms, corporations or institutions which may be owned, controlled, or represented by the customer contracting for telephone service.

Listings formed by using the trade name of a commodity or service, where such listings are designed to give publicity to or to render an advertising service for the commodity or service, are not acceptable in the alphabetical section.

Alternate Listings

Listings which refer calling persons to other telephone numbers in case no answer is received at the first telephone called, are known as alternate listings and may be had for a small charge by patrons desiring this service. Examples of such listings follow:

Jones-Davis Agcy ins 236McKnight bldg. **GE** neva-4685

Note:—After business hours call

Davis Edw A 2303 Pleasant av. . . . **KE** nwood-4607

Davis Walter E r

Wilkins & Goodrich Interlachen pk. **WA** lnut-5616

Carlson Lawrence phys & surg r

4232 Emerson av N. **HY** land-5866

If no answer call Physicians Exch. **DI** nsmore-1677

Night Listings

Another form of alternate listing is available at an extra charge, when it is desired to refer calling persons to other numbers at any time

when no one is available to answer the telephone used during regular business hours. For example:

★Chicago Rock Island & Pacific RR
All Offices 8th av S & 4th.....MA in-7353
City Ticket Office 109 S 5.....MA in-7353
Note:—Between 5:30 P M and 8 A M Sundays
and Holidays call the following
Pass Dept & Ticket Office
3rd av S & Wash.MA in-0211
Frgt & Pass Traffic Office
200 Met Life bldg.MA in-1964
Local Frgt Sta & Asst Supt
8th av S & 4th.MA in-1959

Classified Listings

Hide Companies

Andersch Bros 415 SE Main.....DI nsmore-0800
Bergman & Co 1007 Poshay Tower..GE neva-1759
Berman Bros 227 N 1.....MA in-6084
Friend Chas & Co 424 Met Bk bldg.GE neva-2729
Mack May & Co 900 S 3.....MA in-6018

Hoisting Apparatus Companies

Hydraulic Hoist Co 996 E Henn..DI nsmore-8700
Shepard Elect Crane & Hoist Co
1957 Univ av StPaul.See StPaul

Homes

Augustana Mission Colony
1405-10th av S.GE neva-2056
Catholic Orphan Asylum
10th av & 46th.CO lfax-1239
Childrens Gospel Mission
1407 Wash av S.AT lantlc-4043

These are illustrations of ordinary listings in the classified section. In this section, each business subscriber is entitled to one such listing, without charge, under the heading broadly descriptive of his business, service, or product. Additional listings may be had as desired at a small monthly charge for each such listing.

Oxygen Companies

AIR REDUCTION SALES CO

327-25th av SE. GL adstone-1877

COMMERCIAL GAS CO

2633 SE 4. DI nsmore-6400

This illustrates a bold face listing in the classified section. Business subscribers may have as many of these listings as desired. There is a small monthly charge for each such listing.

Informational Listings

Foundry Supply Business

FROST-NAUS CO THE

Complete Supplies For
Foundry, Pattern Shop
and
Electro-Plating Shop

1406 NE Quincy.....DI nsmore-4488

This illustrates an informational listing. It consists of a space one inch in depth, enclosed by a hairline rule, immediately following the subscriber's name, (set in bold-face type in the classified listing column). Its primary purpose is to serve as a business card.

Trade Mark Heading

Seth Thomas Clocks

Famous Timekeepers
Since 1813.

For every room—
The right clock.



"WHERE TO BUY IT"

ALLEN & BERG CO INC 16 S 3..GE neva-1109
Cohen M L & Co 239 Nic av.....AT lantic-1890
Erickson C M 303 Cedar av.....GE neva-1215
Fosberg H 735 E Lake.....SO uth-4870
Fosberg H 1528 E Lake.....DR exel-0078
Gustafson Emil 2201 Central av..GL adstone-2354
WHITE & McNAUGHT 902 Nic av..MA in-0348

This illustrates a Trade Mark Heading. It consists of the brand or trade-name of a com-

modity or service, listed in proper alphabetical sequence among the main headings in the classified section. It is followed by a few lines of descriptive matter and a small cut of the trade-mark. Below this is shown the caption "Where to Buy It," followed by a list of dealers or distributors. The trade-mark may be sold locally or nationally in any directory in the Bell System. When sold nationally, it is used by national advertisers as a direct tie-in with their national advertising, that is, by referring the reader to his local telephone directory for a list of dealers.

Note: Where it is desired to use Trade Mark Headings in directories not having a classified section the heading is placed immediately following the last page of alphabetical listings.

Directory Advertising Display Space

In addition to the various forms of advertising which can be obtained in the classified listing columns, advertising display space also is available. Advertising space in the telephone directory offers the advertiser an opportunity to invest in a medium which meets the three principal requirements of a good advertising medium—quality of circulation, quantity of circulation and persistency of use. Telephone employees should feel obligated to help an advertiser handle his representation in our directories in such a way that he will receive the greatest possible returns from his investment. It should be remembered, however, that in selling display space its position or location is not guaranteed.

The following classified display spaces are sold in the directory sizes as indicated:

2 col. classified
Directory.

$\frac{1}{8}$ page
 $\frac{1}{4}$ page
 $\frac{1}{2}$ page (vertical)
 $\frac{1}{2}$ page (square)

3 col. classified
Directory.

$\frac{1}{12}$ page
 $\frac{1}{6}$ page
 $\frac{1}{3}$ page (vertical)
 $\frac{1}{3}$ page (square)
 $\frac{2}{3}$ page

Display Advertising in Alphabetical Directories

In the smaller telephone directories which do not have a classified section the following display spaces may be sold:

Lower 1/3 outside front cover.

Entire inside front, inside back, and outside back covers. (These spaces also may be sold in $\frac{1}{8}$, $\frac{1}{4}$ or $\frac{1}{2}$.)

One inch marginal strip, top and bottom, on subscribers' listing pages with the exception of the first listing page for an exchange, in which case only the bottom space is sold.

Such other display space as becomes available in making up the directory for publication. Small directories are always made up in multiples of four pages. If it is found that the pages on which subscribers' listings appear, together with the introductory pages can be included in seven pages, an eighth page is necessary from a manufacturing standpoint, and this page would therefore be available to be sold for display advertising, either as a whole, or in $\frac{1}{8}$, $\frac{1}{4}$, or $\frac{1}{2}$ page sizes.

Special Services

A Special Service sometimes is necessary to meet the needs of certain customers and these services are referred to as "special" because they have been developed to meet other than the ordinary requirements of our patrons. This service can be furnished between two or more points, such as between the main office and branch offices and warehouses, or between the offices of two or more customers.

These Special Services include:

Telephone Typewriter Service.

Telegraph Service.

Short Period Talking Service.

Full Period Talking Service.

Prospects for Special Services should be referred to the business office as these services are furnished only after a careful study has been made of the customers' requirements.

Telephone Typewriter Service

The telephone typewriter is an electrical mechanism into which is built the keyboard, carriage and certain other fundamental parts of an ordinary typewriter. This mechanism, when connected to one or more similar units by means of a telegraph circuit, controls them so that any message produced on the first machine is instantly reproduced on the others.

Since the machines have a keyboard similar to a typewriter they may be operated by any typist with comparatively little training or practice.

The service combines the speed of the telephone, the flexibility of conversation, the ac-

curacy of the typewriter and the authority and permanence of the printed word. It adequately meets the needs of bond houses, department stores, service companies, manufacturers and other business where a printed record of the message is desired. Police Departments and other law enforcement bodies also find it very satisfactory in carrying on their work.

Normally 40 words per minute can be handled on a telephone typewriter. When desired, and if suitable line facilities are available, the speed can be increased to 60 words per minute.

Telephone typewriter equipment can be arranged to provide:

One-Way Service

This arrangement requires one telephone typewriter equipped to send as well as receive and one or more receiving-only machines.

Two-Way Service

This service requires two or more machines equipped to send as well as receive.

Duplex Service

This service provides for the sending and receiving of messages simultaneously.

Two Kinds of Telephone Typewriters

There are two kinds of telephone typewriters, the tape type and the page type. Page type machines are equipped either for keyboard sending or automatic sending as desired. The automatic feature increases the efficiency of the machine. The page type prints the message in letter fashion on individual sheets eight and one-half inches wide, or on a continuous roll of paper of the same width. The tape type prints the message on a continuous tape three-eighths of an inch wide. For filing

purposes the tape may be pasted on a letter size sheet.

Wherever a customer desires to use special forms with page type service, a positive drive equipment is available which enables the operator to reproduce several copies of the message simultaneously much the same as carbon copies are prepared on an ordinary typewriter.

Switchboard Sometimes Required

Where a customer's requirements are such that several telephone typewriters are located within a city, a telephone typewriter switchboard is often necessary. Thru the use of the switchboard it is possible to send to one or more telephone typewriters as desired, and to connect any two telephone typewriters in the system for direct communication.



The No. 12 page telephone typewriter arranged for either keyboard sending and receiving or receiving only is finished in black enamel. When mounted on a table provided

for the purpose, the overall height is 39 inches. It requires a floor space 22 inches by 27 inches.



The No. 13 page automatic sending and receiving telephone typewriter is finished in black enamel. It is mounted on a table provided for the purpose and requires a floor space 40 inches by 27 inches. The overall height is 42 inches.



The No. 14 tape telephone typewriter arranged for either keyboard sending and receiving or receiving only is finished in black enamel. When mounted on a table which can be provided for the purpose, the overall height is 42 inches. The table requires a floor space of 19½ inches by 22 inches.

Telegraph Service

Telegraph service provides a connection between two or more points for the use of the customer either twelve or twenty-four hours per day. The telegraph instruments are furnished by us and the customer provides the telegraph operator.

Telegraph equipment can be arranged to furnish either of the two following services, depending on the requirements of the customer.

Single Service

Under this class of telegraph service, messages may be transmitted only in one direction at a time.

Duplex Service

This arrangement permits simultaneous transmission of messages in opposite directions.

Telegraph service can be used to advantage by bond and brokerage houses, press associations, and other businesses.

This service is to some extent being supplanted by telephone typewriter service which more efficiently meets the requirements of many customers.

Full Period Talking Service

Full period talking service provides a long distance connection between two or more points for the exclusive use of the customer, either continuously or from 8:00 A. M. to 6:00 P. M., or 6:00 P. M. to 8:00 A. M.

The service can be used to advantage by power companies, bond and brokerage houses, press associations and other businesses.

Short Period Talking Service

Short period talking service provides a long distance connection between two or more points established daily or on stipulated days per week at specified times (less than a full day or night) for the exclusive use of the customer. The minimum day service, offered between 8:00 A. M. and 6:00 P. M., is a 10 minute period while the minimum night service offered is for 30 minutes. However, the customer may select any number of periods per day. The service is not furnished between 10:00 A. M. and 12 noon.

This service can be used to advantage by bond and brokerage houses, press associations and many other businesses.

Northwestern Bell
Telephone Company

Supplement "A" to
Rate Section of
Service and Equipment Manual
November 15, 1931

RATE INFORMATION

(File following page 80 of Service and
Equipment Manual)

1. When service is established at a location where a hand type instrument is in place and the customer requests that a wall or desk type instrument be provided in lieu of the hand set, the desk or wall type instrument shall be considered as "in place" and the "in place" Service Connection charge applied.
2. In order that change charges will not be billed by the Revenue Accountant in cases where a hand set is replaced by a desk or wall type instrument, the change shall be considered as having been made for plant reasons and recorded in the appropriate spaces on the Service Order as such by inserting the letter "P" in the "Reason" space.

NOTE: This does not apply to other changes.

Issued by:

General Plant Manager

Minnesota Area

Rate Information

(To be filled in by Local Manager—If possible rates should be typed.)

Service or Equipment	Abbrev.	Serv. Con. Charge			Remarks
		Mo. Rates	In Place	Not In Place	
Business Flat Rate					
One-Party	B1F	_____*	_____	_____	*A discount of _____ is allowed if the bill is paid in full within the Discount Period.
Two-Party	B2F	_____*	_____	_____	
Four-Party	B4F	_____*	_____	_____	
Extension	BXF	_____	XX	_____	
Business Message Rate					
One-Party	B1M	_____*	_____	_____	Includes _____ local Outward Messages per month per main station. Additional outward local messages each _____. *A discount of _____ is allowed if the bill is paid in full within the discount period.
Extension	BXM	_____	XX	_____	
Deaf Set	Deaf Set	_____	XX	XX	
Directory Listings					
Addl. Alphabetical	ALST	_____	XX	XX	
Addl. Classified	XL	_____	XX	XX	

August, 1931

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Service or Equipment	Abbrev.	Serv. Con. Charge			Remarks
		Mo. Rates	In Place	Not In Place	
Extension Bell	XB	XX	XX	XX	Installation Charge
Extension Gong Inside	NG	—\$ 70†	XX	XX	(#) Under five months.
Outside	NG	—\$ —†	XX	XX	(†) Over five months.
Hand Telephones (Black)					
Cradle Type	II		XX	XX	Change Charge
Hanging Type	HH		XX	XX	Change Charge
Hand Telephones (Color)					
French Gray			XX	XX	Inst. Chg. Chg. Chg. Other finishes will be furnished upon request at cost.
Ivory			XX	XX	
Old Brass			XX	XX	
Oxidized Silver			XX	XX	
Statuary Bronze			XX	XX	
Industrial Horns	IND. HORN		XX	XX	
Jack and Plug (Plug attached to portable instrument)	Jack	XX	XX	XX	Installation Charge 4 — Plus PBX or Ext. station rate.

August, 1931

Service or Equipment	Abbrev.	Mo. Rates	Serv. Con. Charge		Remarks
			In Place	Not In Place	
Joint User Business					
Flat Rate	JUBF	—	XX	XX	
Message Rate	JUBM	—	XX	XX	
Joint User Residence					
Flat Rate	JURF	—	XX	XX	
Long Cords					
For desk stands					
Between sub-set and instrument base:					
9 ft.	CD	XX	XX	XX	Installation Charge \$ —
13 ft.	CD	XX	XX	XX	Installation Charge \$ —
For Handsets					
Between instrument base and instrument					
9 ft.	CD	XX	XX	XX	Installation Charge \$ —
Multiple Line Equipment					
3 line single sided	3 L SSK	—	XX	XX	
3 line double sided	3 L DSK	—	XX	XX	Stations in excess of one per line,
6 line single sided	6 L SSK	—	XX	XX	regular extension station or PBX.
6 line double sided	6 L DSK	—	XX	XX	station rate.
Line Equip't (relays)	L EQPT	—	XX	XX	

August, 1931

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Service or Equipment	Abbrev.	Mo. Rates	Serv. Con. Charge		Remarks
			In Place	Not In Place	
PBX Systems					
(Inquiries relative to service and rates should be referred to Business Office.)					
Push Button & Buzzer	PB&Z	_____	XX	XX	Includes 100 ft. of circuit.
Addl. Push Button	PB	_____	XX	XX	Includes 50 ft. of circuit.
Addl. Buzzer	Z	_____	XX	XX	Includes 50 ft. of circuit.
					Each add'l 50 ft. Inst. Chg. \$ _____
Receivers					
Auxiliary Watch Case	AUX Rec.	<u>1</u> _____	XX	XX	In lieu of Hand Receiver, Single Head furnished at no charge.
Head Band Single	Hd. Rec.	<u>1</u> _____	XX	XX	
Head Band Double	Dbl. Hd. Rec.	<u>1</u> _____	XX	XX	
Residence Flat Rate					
One-Party	R1F	<u>3</u> * <u>1.00</u>	_____	_____	*A discount of <u>2</u> is allowed if the bill is paid in full within the discount period.
Two-Party	R2F	<u>4</u> * _____	_____	_____	
Four-Party	R4F	<u>12</u> * _____	_____	_____	
Rural Extension	RUR	<u>1</u> * _____	_____	_____	
Desk without Bell	RXFD	<u>1</u> _____	XX	<u>1</u> _____	
Desk with Bell	RXBFD	<u>7</u> _____	XX	_____	
Wall with Bell	RXBFD	<u>12</u> _____	XX	_____	

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August, 1931

Service or Equipment	Abbrev.	Mo. Rates	Serv. Con. Charge		Remarks
			In Place	Not In Place	
Semi-Public Telephones	SP	<u>300</u>	<u>—</u>	<u>300</u>	
Suspended Service	SUSP SERV	<u>75</u>	XX	XX	Mileage charges carry full rate during period of suspended service. Advance payment for estimated period of suspension ordinarily required. Minimum suspension period one month.
Transmitter Cut-Out Switch	Foot Sw.	<u>50</u>	XX	XX	
Foot type Hand type	Hand Sw.	<u>—</u>	XX	XX	

August, 1931

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Wiring Plans:

No. of Plan	RATES			Controlled Station
	1st Master Station		Add'l Master Station	
100				
101				
102				
150				
200				
201				
205				
210				
211				

August, 1931

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