


how
to
get
the
most
from
your

KELLOGG CORDLESS private branch exchange SWITCHBOARD

compliments of your local telephone company

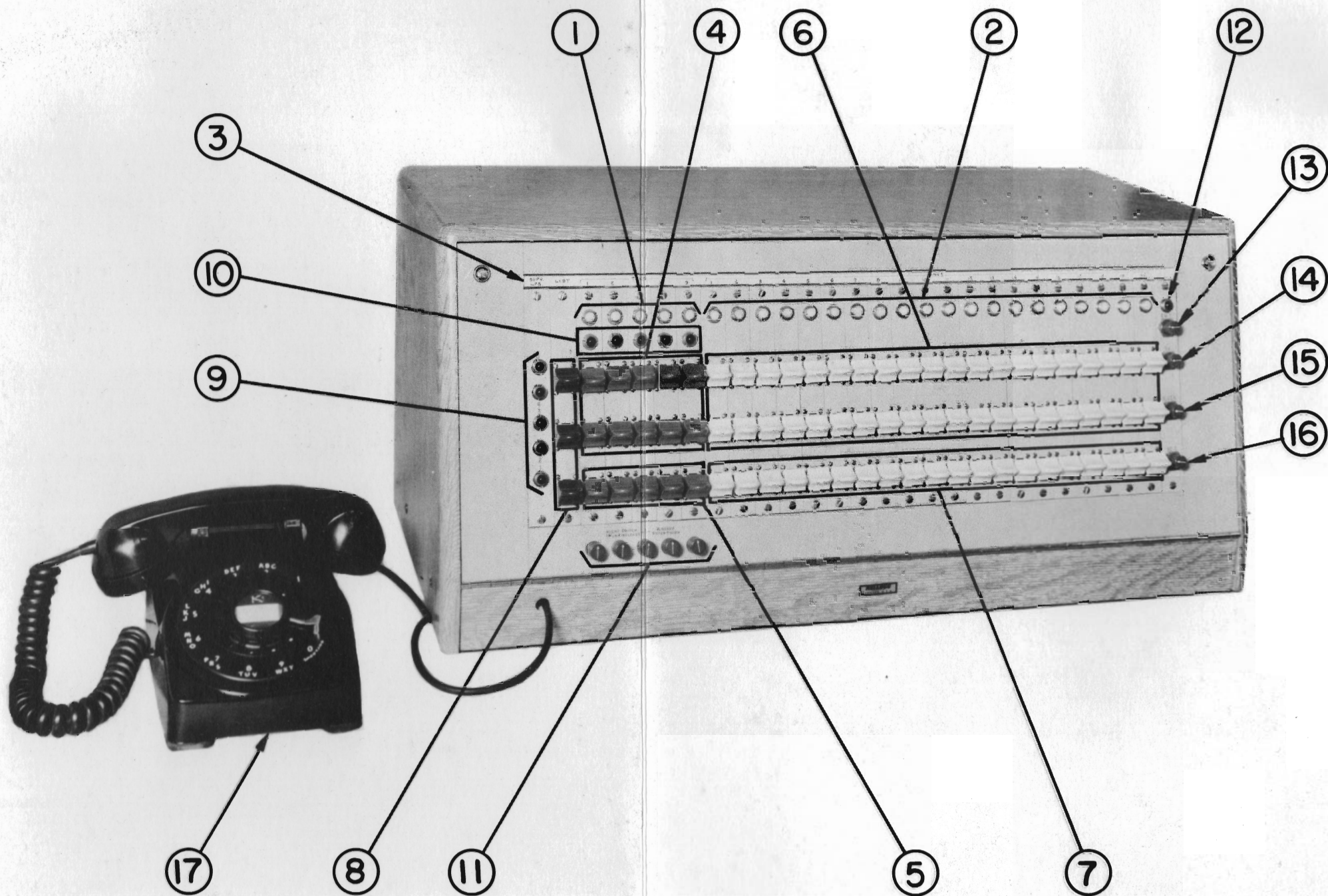




Features of Kellogg Cordless PBX

- ★ Individual trunk answering key for the attendant which establishes a hold before connecting key is operated when the trunk answering key is released.
- ★ Trunk fully equipped for common battery or dial main exchange trunks with blocked supervision or through supervision by a turn key which is set at the option of the attendant.
- ★ Arranged for through night service and through incoming ringing from any trunk to any lines tied in through the connecting keys.
- ★ Arranged for attendant dialing by use of connecting key.
- ★ Arranged for emergency talking on any line when all connecting circuits are in use.
- ★ Provides for automatic cut-off of night alarm when attendant answers a call.





HOW TO OPERATE THE KELLOGG CORDLESS PRIVATE BRANCH EXCHANGE SWITCHBOARD

TO ANSWER A CALL—When a white lamp lights, operate key below lighted lamp in a direction in which no other key in same horizontal row is operated (except bottom key downward). Operate green attendant's key (at left of board) in same row and in same direction and speak.

TO CONNECT AN EXTENSION—Operate the called white extension key in the same horizontal row and same direction as the key used to answer. Ring extension by operating downward the bottom key in same vertical row.

TO CONNECT TO A TRUNK

Extension to dial or pass call.—Leave white extension key operated. Restore green attendant's key. Select an idle trunk key (red keys at left of board) and operate in same row and direction as extension key.

Attendant to dial—Restore white extension key. Select an idle trunk as above. Operate red trunk key in same row and direction as green attendant's key. Dial number and reoperate white extension key.

Attendant to pass call to operator—Same as for attendant dialing except that it is not necessary to restore and reoperate calling extension key.

DESCRIPTION OF KELLOGG CORDLESS SWITCHBOARD

1. **TRUNK LINE LAMPS:** White lamps above red keys to the left of switchboard which will light when an associated trunk has been selected for an incoming call.
2. **EXTENSION LINE LAMPS:** White lamps to right of trunk line lamps which light when the handset of an associated extension telephone is lifted.
3. **DESIGNATION STRIP:** Indicates the number of each trunk line and the number of each extension.
4. **TRUNK CONNECTING KEYS:** Red keys which, when operated *up* or *down*, connect a trunk to an extension telephone or to the attendant's telephone.
- 5a. **TRUNK CONNECTING KEYS:** Red keys which, when operated *up*, connect a trunk to an extension telephone or to the attendant's telephone.
- 5b. **TRUNK ANSWERING KEYS:** The same keys as 5a, above, which, when operated *down*, are used to answer incoming calls. After operation they will automatically hold the connection until the desired extension answers.
6. **EXTENSION CONNECTING KEYS:** White keys which, when operated *up* or *down*, connect an extension telephone to a trunk or to another extension.
- 7a. White keys which, when operated *up*, connect an extension telephone to a trunk or to another extension.
- 7b. **EXTENSION RINGING KEYS:** The same keys as 7a above, which, when operated *down*, are used to ring the associated extension.
8. **ATTENDANT'S LISTENING KEYS:** Green keys at the left, when operated *up* or *down*, connects the attendant's telephone to an extension when an extension key is operated in the same row and direction.
9. **EXTENSION SUPERVISORY LAMPS:** Green lamps located to the left of the switchboard. A steady burning lamp indicates the end of a conversation. A flashing lamp (recall signal) indicates that the assistance of the attendant is needed on an existing call.
10. **TRUNK SUPERVISORY LAMPS:** Red lamps located below the trunk line lamps, one for each trunk. A trunk supervisory

lamp will burn steadily as a *hold signal* when a trunk connection is held awaiting completion, as a *disconnect signal* when an extension user hangs up on a trunk call, or will flash as a *recall signal* when the local extension user operates the cradle switch of his telephone.

- 11a. NIGHT SWITCH-TRUNK RELEASE KEYS:** Row of red turn keys located below trunk keys. These keys are operated with the “arrow to left” for night service. Also, if unable to establish a connection between an incoming trunk call and a local extension, momentarily turn the night switch turn key to the left and return to “arrow up” position to release the trunk.
- 11b. THROUGH SUPERVISION-BLOCKED SUPERVISION KEY:** (See page 12) The same turn key as in 11a above, which, when in the normal position with arrow pointing up, gives “through supervision” of the trunk. Turn key in “arrow to right” position gives “blocked supervision.”
- 12. EMERGENCY TALK (EMT) SIGNAL:** Red lamp which lights when the EMT turn key is operated to the **EMERGENCY TALK** position.
- 13. EMERGENCY TALK (EMT) KEY:** The EMT key is operated by turning to the “arrow up” position when all circuits are in use. This establishes an extra talking circuit between the attendant and a calling extension over the ringing circuit by pushing down the associated ringing key.
- 14. NIGHT ALARM (NA) KEY:** All lamps are so connected that a buzzer will sound if any of these lamps light if the night alarm turn key is in the “arrow to left” position. The buzzer is cut off when the NA key is turned to the “arrow up” position.
- 15. HAND GENERATOR KEY:** Ringing current is normally supplied by a power generator with the key in the “arrow to left” position. If the ringing power fails, necessitating the use of a hand generator, turn the key to the “arrow up” position.
- 16. BATTERY-CENTRAL OFFICE KEY:** Normally turned to the “arrow to left” position, this key connects the local battery to the switchboard. When the switchboard is not attended turn the key to the “arrow up” position which disconnects the battery.
- 17. SWITCHBOARD ATTENDANT'S TELEPHONE:** May be equipped with or without a dial depending on whether the switchboard is connected to a dial or a manual central office.

lamp will burn steadily as a *hold signal* when a trunk connection is held awaiting completion, as a *disconnect signal* when an extension user hangs up on a trunk call, or will flash as a *recall signal* when the local extension user operates the cradle switch of his telephone.

- 11a. **NIGHT SWITCH-TRUNK RELEASE KEYS:** Row of red turn keys located below trunk keys. These keys are operated with the "arrow to left" for night service. Also, if unable to establish a connection between an incoming trunk call and a local extension, momentarily turn the night switch turn key to the left and return to "arrow up" position to release the trunk.
- 11b. **THROUGH SUPERVISION-BLOCKED SUPERVISION KEY:** (See page 12) The same turn key as in 11a above, which, when in the normal position with arrow pointing up, gives "through supervision" of the trunk. Turn key in "arrow to right" position gives "blocked supervision."
12. **EMERGENCY TALK (EMT) SIGNAL:** Red lamp which lights when the EMT turn key is operated to the **EMERGENCY TALK** position.
13. **EMERGENCY TALK (EMT) KEY:** The EMT key is operated by turning to the "arrow up" position when all circuits are in use. This establishes an extra talking circuit between the attendant and a calling extension over the ringing circuit by pushing down the associated ringing key.
14. **NIGHT ALARM (NA) KEY:** All lamps are so connected that a buzzer will sound if any of these lamps light if the night alarm turn key is in the "arrow to left" position. The buzzer is cut off when the NA key is turned to the "arrow up" position.
15. **HAND GENERATOR KEY:** Ringing current is normally supplied by a power generator with the key in the "arrow to left" position. If the ringing power fails, necessitating the use of a hand generator, turn the key to the "arrow up" position.
16. **BATTERY-CENTRAL OFFICE KEY:** Normally turned to the "arrow to left" position, this key connects the local battery to the switchboard. When the switchboard is not attended turn the key to the "arrow up" position which disconnects the battery.
17. **SWITCHBOARD ATTENDANT'S TELEPHONE:** May be equipped with or without a dial depending on whether the switchboard is connected to a dial or a manual central office.

CONTENTS

	Page
DESCRIPTION OF KELLOGG CORDLESS SWITCHBOARD.....	
TO PRIVATE SWITCHBOARD ATTENDANTS.....	3
Voice and Manners.....	3
Prompt Answering	3
Reports on Delayed Calls.....	3
Recall Signals	4
Acknowledgement	4
Be Accurate	4
Disconnect Promptly	4
Attention to Signals.....	4
IMPORTANT POINTS TO KEEP IN MIND.....	5
Emergency Calls	5
Consult the Directory.....	5
Maintain List of Telephone Numbers.....	5
Equipment Out of Order.....	5
Service Difficulties	6
Business Matters	6
Night Service	6
Secrecy of Communications	6
METHOD OF ESTABLISHING CONNECTIONS.....	6
CALLS FROM EXTENSIONS.....	7
Answering Calls From Extensions.....	7
Acknowledging the Order.....	7
Establishing the Connection	7
Interoffice Calls	7
Outgoing Calls	8
Outgoing Calls Placed by Extension User.....	8
Outgoing Calls Placed by PBX Attendant.....	8
INCOMING CALLS	9
Answering Incoming Calls	9
Acknowledging the Order.....	9
Establishing the Connection	9
HOLDING CONNECTIONS.....	10

CONTENTS (Contd)

	Page
SUPERVISING AND DISCONNECTING	11
Flashes	11
Request to Transfer a Call	11
Disconnects	12
Through and Blocked Supervision	13
NIGHT CONNECTIONS	14
Establishing Connection for Night Service	14
Releasing Night Service Connections	14
OUT OF TOWN CALLS	15
Description of Services	15
Station-to-Station Calls	15
Person-to-Person Calls	15
Collect Call Service	16
Sequence Service	16
Conference Service	16
HANDLING OUT OF TOWN CALLS	16
Routing Calls to the Proper Operator	16
Placing Out of Town Calls	16
Passing Orders to the Operator	17
List of Frequently Called Numbers	18
DELAYED CALLS	18
TELEPHONE HABITS FOR EXTENSION USERS	19

TO PRIVATE SWITCHBOARD ATTENDANTS*

The good public relations built up by prompt, friendly and efficient techniques in handling calls are extremely valuable to your company and to the telephone company.

You, as the private switchboard attendant, are the most important cog in keeping this good will — you are the “voice” of your company.

This booklet has been prepared to aid you in gaining the greatest benefit from your cordless switchboard. After it has been read, we suggest that it be kept handy for ready reference. It is full of suggestions which will help you perform your work efficiently with a minimum of effort. A good private switchboard attendant fulfills an essential service in a pleasant, cheerful manner. You will enjoy the personal satisfaction derived from knowing you are doing your job well.

The following general operating notes, which summarize the basic elements of good switchboard practice, will help you attain these ends.

VOICE AND MANNERS

It is businesslike and courteous to speak in a pleasing voice with an attentive, friendly manner. Speak distinctly, close to the transmitter, in a natural and pleasant tone of voice.

PROMPT ANSWERING

Prompt answering is courteous and establishes you as an efficient switchboard attendant. Always use the trunk answering key to answer an incoming trunk call and an attendant's listening key to answer a call from an extension. Answer promptly as it satisfies the calling party and releases your attention for other calls.

REPORTS ON DELAYED CALLS

A call which is delayed because the line is busy or slow to answer, or because a called person must be paged, should be reported to the calling party every 30 or 40 seconds.

*In the telephone industry an “attendant” is one who operates a private branch exchange.

RECALL SIGNALS (FLASHES)

A recall signal should be answered immediately. It tells you that the caller needs your assistance.

ACKNOWLEDGMENT

Unless a report can be given immediately, every request should be acknowledged with "Yes Sir," "Thank you," or some other indication that the request is understood. If an order seems hazy, question it, and acknowledge courteously when it is clear.

BE ACCURATE

Strive for accuracy as it is the basis of good telephone service, eliminating wrong numbers, cut-offs, double connections and incorrect reports.

DISCONNECT PROMPTLY

Disconnecting promptly will release trunks and extensions for new calls. This speeds up your service, which will make your customers happy, and lightens your work, which will make you happy.

ATTENTION TO SIGNALS

When several signals await handling at your switchboard, it is more important to give attention to some signals than to others. The same type signals should be handled in the order of their appearance. Between signals of different types, however, some require attention before others and the following preferences apply:

FIRST — FLASHES

A flashing or recall signal indicates that your assistance is needed and should be answered before any other type.

SECOND — DELAYED CALL REPORTS

Reports on delayed calls should be given periodically (about every 40 seconds) to callers waiting for connection to busy extensions.

THIRD — INCOMING TRUNK SIGNALS

Give a prompt answer to people who are trying to reach your firm.

FOURTH — EXTENSION LINE SIGNALS

Next in order of importance are answers to extension line signals.

FIFTH — DISCONNECT SIGNALS

When a disconnect signal appears, restore keys to normal promptly but don't let it interfere with other more important signals. These connections should be released while doing other work, such as ringing.

IMPORTANT POINTS TO KEEP IN MIND

EMERGENCY CALLS

To report a fire, or call the police or an ambulance, call or dial the central office operator and say, "I want to report a fire," or "I want to call the police," or "I want an ambulance."

If you must leave your switchboard before the desired emergency agency answers, give the operator the address where help is needed and any other details necessary to the correct understanding of the emergency.

Keep a list of emergency numbers and call or dial them yourself for speedier service. If the called line is busy, however, call or dial the operator giving her the information.

CONSULT THE DIRECTORY

Use the Telephone directory for numbers that you do not know, unless you are certain that it is a recent number, added since the directory was published. Call Information only for numbers not listed in the directory, giving the Information Operator the name and address and, if appropriate, the business of the desired person.

MAINTAIN LISTS OF TELEPHONE NUMBERS

Maintain a list of home telephone numbers of your company officials or other employees who may be reached in connection with important calls or emergencies. It is a good plan to keep a list of extension numbers arranged by location, and of alternate persons who may speak for others on important matters.

EQUIPMENT OUT OF ORDER

If your switchboard or extension equipment is out of order, the "Repair Service" of the Telephone Company should be notified

promptly. Be sure before reporting, that the trouble is not due to a receiver being off the hook. When a trunk is out of order, give the trunk telephone number—if an extension is out of order, give the extension number.

SERVICE DIFFICULTIES

Report service irregularities on individual calls to the “Operator,” or to the “Chief Operator” if they are recurring difficulties.

BUSINESS MATTERS

When additional service is desired or it is necessary to discuss bills or other business matters, consult the “Business Office.”

NIGHT SERVICE

If your switchboard is unattended, whether night connections are established or not, the battery (BCO) and the buzzer (NA) turn keys should be operated to the “**OFF**” Position (with the arrow pointing up.)

SECRECY OF COMMUNICATION

It is in violation of the Federal laws for any unauthorized person to interfere with telephone calls or other messages and to divulge or publish any information regarding the usage of the service or the nature of conversations.

METHOD OF ESTABLISHING CONNECTIONS

The switchboard allows five simultaneous connections to be established between local extensions or between trunks and extensions by means of the trunk and extension keys. The three horizontal rows of connecting keys control these connections, the answering of incoming calls and the ringing of local extensions in the following manner;

BOTTOM ROW — Push down for answering (trunk keys only).
Push down for ringing (extension keys only).
Push up for connecting in Row 1.

MIDDLE ROW — Push down for connecting in Row 2.
Push up for connecting in Row 3.

TOP ROW — Push down for connecting in Row 4.
Push up for connecting in Row 5.

Any extension or trunk can be connected to any of the five connecting rows by operating an associated extension or trunk key upward or downward in the same row as the connection desired. In the bottom horizontal row of keys only one connection is possible, made by operating the keys upward. In each of the middle and top horizontal rows of keys two connections are possible, one by operating the connecting keys upward and the other by operating the keys downward.

CALLS FROM EXTENSIONS

ANSWERING CALLS FROM EXTENSIONS

When an extension user lifts the handset of his telephone, an extension line lamp will light on the switchboard. Answer by following the procedure below:

1. Remove the handset from your switchboard telephone.
2. At the same time operate your listening key to an idle horizontal row.
3. Operate a connecting key under the operated extension lamp in the same horizontal row, extinguishing the line lamp.
4. Answer by saying, for example, "Yes, Mr. Brown?" or "Your call, please?"

ACKNOWLEDGING THE ORDER

If you understand the order, acknowledge it by saying, "Yes, Sir," or "Thank you," or, if in doubt, repeat the order. If you do not understand the order, question the calling party or ask to have it repeated. If you understand the order after it is repeated, acknowledge with "Thank you." If the extension user asks for an outside telephone number, he probably doesn't know that he should place local calls himself. Say, "I'll give you an outside line," as you connect him to a central office trunk.

ESTABLISHING THE CONNECTION

Interoffice (Extension-to-Extension) Calls—If the call is for another extension, operate the connecting key below the called extension designation in the same horizontal row as the keys used to answer the call. Ring the called extension by pushing the bottom key down in the same vertical row as the called extension.

Ring steadily for about two seconds and then pause for about ten seconds. Continue to ring at intervals of about ten seconds until the extension user answers or until a reasonable time has elapsed and you wish to report that the called extension does not answer.

When the called extension answers, **FIRST**, restore your listening key and **SECOND**, replace your handset on the cradle of the switchboard telephone. Following this sequence will avoid causing any noise on the connection when your handset is replaced.

If the called station is busy, give the report to the calling party and, if no further instructions are received, restore the keys and hang up your handset.

Outgoing (Extension-to-Central Office) Calls — There are two ways to handle outgoing calls. For faster service all outgoing calls should be placed directly by the extension users. However, if you are instructed to place Long Distance calls, or calls for certain extension users, such as company officials, you may place such calls from your switchboard. Of course, if your switchboard is served by a dial central office, any calls from extensions not equipped with dial telephones must be dialed at the switchboard.

Outgoing Calls Placed by Extension User—Restore your listening key and operate the connecting key of the highest numbered idle trunk to the same row as the keys used to answer the call, then replace the handset of your telephone. Remember that your listening key must be restored before the extension user starts to dial, as hanging up your telephone will interfere with his dialing.

The calling extension user will receive dial tone as soon as the trunk key is operated and he may then dial the number desired.

If your switchboard is served from a manual central office, the extension user will give the call to the operator who will complete the connection.

Outgoing Calls Placed by PBX Attendant—Acknowledge the call and, noting the calling extension, restore the extension connecting key. Leave your listening key operated and operate the connecting key of the highest numbered idle trunk in the same horizontal row as your listening key. If the switchboard is served by a dial central office, listen for dial tone and then dial the desired number. Your listening key must remain operated until the

dial returns to normal after the last digit of the number has been dialed. After dialing, reoperate the extension connecting key and restore your listening key.

If your switchboard is served by a manual central office, place the call with the central office operator and remain on the connection until she has acknowledged the call. Reoperate the extension connecting key before restoring your listening key.

INCOMING CALLS

ANSWERING INCOMING CALLS

Answer with your firm name or the name that your firm is known by to the public or your telephone number. An answering phrase should be chosen that will not be confused with that of some other firm—it is best to consult your employer about this.

When a trunk line lamp lights up, indicating an incoming call, lift the handset of your switchboard telephone and push down the associated trunk answering key (bottom key in the same vertical row). Operating the trunk answering key extinguishes the trunk line lamp and connects your telephone into the circuit.

ACKNOWLEDGING THE ORDER

Obtain the required information necessary to complete the call. If you understand the order, acknowledge it by saying, “Yes, sir,” “Thank you” or if you prefer, repeat the order. If you do not understand the order, question the calling party or ask to have it repeated. If you understand the order after it is repeated, acknowledge with “Thank you.” If the called person is not available or the extension is busy, this should be reported immediately.

ESTABLISHING THE CONNECTION

1. Selecting an idle horizontal row, operate the associated trunk connecting key and the proper extension connecting key.
2. Ring the called extension by pushing down the bottom key in the same vertical row as the operated extension key. Ring two seconds and pause ten seconds—repeat this sequence until the extension user answers or until it is evident that no answer is forthcoming.

3. When the called extension answers, restore the trunk answering key and hang up your handset.
4. If your attention is required on a second call before the called extension has answered, restore the trunk answering key used in the first call before operating a key associated with the second call. The associated trunk supervisory lamp will light when the trunk answering key is restored indicating that an automatic hold is on the call and that the connection has not been completed. The automatic hold will be released and the supervisory lamp will be extinguished when the called extension answers, establishing the connection.

HOLDING CONNECTIONS

When it is pushed down, the bottom key of each vertical row of trunk keys is the trunk answering key. When operated momentarily, an automatic hold circuit is established. The trunk supervisory lamp will light steadily showing that the call is being held. This circuit is used to hold a trunk connection when neither an extension user or the attendant is on the line. The holding key is used under the following conditions:

1. If the attendant must leave the line on an incoming call because the called extension is busy or slow to answer.
2. If the attendant is trying to locate the called person on an incoming call.
3. If, on an outgoing call, the attendant must leave the line while waiting for the called number to answer because the calling extension user has hung up.

The automatic hold circuit also enables you to talk to an extension user before connecting the trunk to the extension or to hold an incoming call until the extension user is able to talk. When the extension user is connected to the trunk by operating the extension connecting key, the hold will automatically drop out and the trunk supervisory lamp will be extinguished.

When conversation is completed on this call, after the local extension user hangs up, a through disconnect will be given to the main exchange.

The trunk supervisory lamp will light as a disconnect, which will be extinguished when the keys are restored to normal.

If an incoming call is not completed, it will be necessary to momentarily operate the trunk release turn key (arrow pointed to left) and restore (arrow up) to give a disconnect signal to the main exchange and extinguish the trunk supervisory lamps.

SUPERVISING and DISCONNECTING

FLASHES

When an extension user operates the cradle switch of his telephone up and down, the trunk supervisory lamp will flash on an outgoing or incoming trunk connection, or, in the case of a local connection between extensions served by your switchboard, the extension supervisory lamp will flash, provided that the handset of the other extension is off its cradle. When a trunk supervisory lamp flashes, remove your handset from its cradle and operate the trunk answering key of the trunk on which the flashing signal appears. If the flashing signal is one of the extension supervisory lamps, operate the attendant's listening key in the same row that the signal appears. Answer by saying, for example, "Office," or some other expression approved by your employer.

If you are served by a dial central office, the local extension user may momentarily hang up on an outgoing trunk call in order to release the central office switching equipment in case a wrong number was reached or an error was made in dialing. This will cause a single flash of the trunk supervisory lamp. When such a flash is received, pay no attention to it unless it flashes again.

REQUEST TO TRANSFER A CALL

If you are requested to transfer an incoming call to another extension proceed as follows:

1. Acknowledge the request and **leave the trunk answering key operated and your handset off the cradle to prevent a cut-off.**
2. Restore the extension key of the extension requesting the transfer.
3. Operate the extension key of the desired extension to the

same horizontal row as that to which the trunk key used on the connection is operated and ring the desired extension.

4. Proceed as on a new incoming call.

NOTE: An outgoing call cannot be transferred directly by an extension user as an incoming call can. The extension user who wishes to transfer an outgoing call to another extension must call you from another extension and give you the details of the transfer.

If the local extension user should attempt to signal you on an outgoing trunk call to a telephone within your own local service area, the signaling may release the central office connection. If, when you go in on the connection, you hear dial tone (or the central office operator challenging on the line in case of a manual office) restore the trunk key. Explain to the extension user that his signaling has resulted in a cut-off and proceed as directed.

DISCONNECTS

Upon completion of a conversation between two local extensions served by your switchboard, the extension supervisory lamp in the same horizontal row will burn steadily when both calling and called persons hang up. When this disconnect signal is received, restore the extension keys promptly. Restoring the keys will extinguish the supervisory lamp.

On an outgoing or incoming trunk connection, the trunk supervisory lamp above the trunk used on the connection will burn steadily upon the completion of conversation when the local extension user hangs up. Restore the trunk key and the trunk supervisory lamp will be extinguished, but the extension supervisory lamp in the same horizontal row will light. The lamp will go out when the extension key is restored. Do not mistake lighted trunk supervisory lamp signals on slow answers and held connections for disconnect signals. If you are in doubt, push the associated answering key down and challenge on the line with, "Are you waiting?" before disconnecting.

A prompt disconnect is especially desirable on outgoing or incoming trunk calls as it prevents the possible interception of incoming calls by the local extension connected to the trunk. On such calls the trunk is available for an incoming call as soon as the extension user hangs up his receiver and, if the trunk is se-

lected, the extension telephone will ring unless the trunk and extension keys are restored to normal.

A lighted line lamp on a trunk connection on which you have not yet disconnected and on which the trunk supervisory (disconnect) lamp is burning, will indicate that a new incoming call is coming in. When this occurs, restore the trunk key which will extinguish the trunk disconnect signal, then restore the extension key in the same row as the extension supervisory lamp. After this, push the trunk answering key down and answer as on an incoming trunk call. If the extension user also answers, take care of the new call, then answer the extension user on another connecting circuit and explain the situation. If a call that is being held on a a trunk connection should be abandoned, it will be necessary for you to momentarily operate the associated trunk night switch (arrow to left) and restore to normal in order to release the automatic hold to clear the trunk and to extinguish the trunk supervisory lamp. Before releasing the automatic hold, you should go in on the trunk by pushing down the trunk answering key and challenging on the line with "Are you waiting?"

THROUGH AND BLOCKED SUPERVISION

The Kellogg Type 3001 and 3002 Cordless PBX switchboard trunk circuits are equipped for either through or blocked supervision, set at the attendant's option by a turn key. These turn keys, one for each trunk, are located below each vertical row of trunk keys. The key is turned with the "arrow to right" for **blocked supervision** and with the "arrow up" for **through supervision**.

Through Supervision means that trunk supervision is controlled by the central office which will disconnect as soon as the PBX extension "hangs up." This method has the advantage that it reduces the cost on timed calls (such as long distance), and speeds up call handling generally.

Blocked Supervision means that when the extension connected to a trunk has "hung up," trunk supervision is controlled by the PBX attendant who can then hold the trunk connection until she restores her connecting key. This method has the advantage that an outside call may be transferred from one extension to another without cutting off the trunk connection.

The instructions in this manual are based upon the use of **through supervision** as it is preferred by most users of cordless PBX switchboards. In many instances, however, blocked supervision is used. The new attendant will learn from her instructor which method to follow.

NIGHT CONNECTIONS

Before leaving the switchboard be sure to establish connections for any night service required. It is best to connect the trunk number under which the PBX is listed in the directory to an extension which will ordinarily be answered at night by someone in a position to give out general information regarding the firm. A list should be kept at the switchboard of extensions using night service so that trunk connections will be set up in a uniform manner. It must be remembered that only those extensions equipped with dial telephones may obtain night service in a dial area.

ESTABLISHING CONNECTIONS FOR NIGHT SERVICE

Use the following procedure when setting up the switchboard for night service.

1. Operate the battery (designated BCO) and the night alarm (designated NA) turn keys to the **"OFF"** position (arrow pointing up).
2. Connect each extension to be used for night service to its assigned trunk.
3. Operate each of the turn keys associated with the trunks to be used for night service to the **NIGHT SWITCH** position (arrow left).

RELEASING NIGHT SERVICE CONNECTIONS

When releasing night connections, to restore the switchboard, proceed as follows:

1. Restore the battery (BCO) and night alarm (NA) turn keys to the normal position (arrow to left).
2. Restore any trunk **NIGHT SWITCH** keys to their normal position (arrow pointing up).

3. After observing supervisory signals, restore those trunk and extension keys where disconnect signals appear.

Care should be taken not to interfere with connections where conversations are taking place. The supervisory lamps on these paths will be dark. Restore these after the conversation ends. This will be indicated by a disconnect signal.

OUT OF TOWN CALLS

DESCRIPTION OF SERVICES

There are two classes of out-of-town calls, station-to-station and person-to-person.

Except on calls to near-by points, Day Rates or Night and Sunday Rates apply to each class of call, depending upon the time of day at the calling point when connection is established. Night and Sunday rates are lower than Day Rates.

Day Rates: Between 4:30 a.m. and 6 p.m., except Sundays and certain holidays specified in the telephone directory.

Night and Sunday Rates: Between 6 p.m. and 4:30 a.m. all day Sundays, and certain holidays specified in the telephone directory.

STATION-TO-STATION CALLS

A station-to-station call is one where the calling party asks only for the called station and does not specify that he wishes a particular person or private branch exchange extension at the called station. A station-to-station call becomes chargeable, therefore, the moment anyone at the called station answers.

PERSON-TO-PERSON CALLS

A person-to-person call is one where the calling party specifies that he wishes to reach only a particular person by name or title, or a private branch exchange extension. These calls are chargeable only from the time the desired person or extension answers, and the rates are higher than station-to-station rates.

Person-to-person service is usually more satisfactory to the calling party when conversation is desired with a particular individual and there may be some doubt whether he will be available. If an answer is received from the called station, but the desired individ-

ual or extension is not reached, no charge is made unless the calling and called places are in the same state, in which case a report charge applies if the call is not subsequently completed.

COLLECT CALL SERVICE

Charges may be reversed on either station-to-station or person-to-person calls at the request of the calling person and with the approval of the called person or station. Collect calls take the same rate as paid calls, except on station-to-station calls to near-by points.

SEQUENCE SERVICE

Sequence service enables a caller to place, at one time, several out-of-town calls in which he wishes to talk. Sequence calls may be placed by telephone, or if many calls are involved, a detailed list may be sent to the Telephone Company Toll Office in advance.

CONFERENCE SERVICE

Conference service permits simultaneous connection between three or more persons in the same or in different cities, so that they may talk with each other at the same time. You may find that your firm may use this service advantageously. All you have to do to secure a conference connection is to ask Long Distance for the "Conference Operator," who will take the details of the call.

HANDLING OUT OF TOWN CALLS

ROUTING CALLS TO THE PROPER OPERATOR

Station-to-Station calls to near-by points, which you cannot dial direct, should be given to the local operator, and all other out-of-town calls, including all person-to-person and collect calls, should be given to the Long Distance operator. For exact directions consult your telephone directory.

PLACING OUT-OF-TOWN CALLS

On out-of-town calls, ask the extension user to hold the line, and connect him to the proper operator so that he can give his call to her directly. The operator will then attempt to complete the call while the extension user is at the telephone.

If you are to keep a record of out-of-town calls, ask the extension user to give you the details for your record. If this is not practicable, you may remain on the connection and record the details as they are given to the operator by the extension user. If you are required to place out-of-town calls for extension users, obtain the necessary details, ask the extension user to hold the line, and, in his hearing, pass the details accurately to the proper operator. If the extension user then disconnects before the completion of his call, better service will result if you remain on the connection to receive reports and to ring back the calling extension when the call is ready. The time used to ring back the calling extension is chargeable on a station-to-station call, which is one reason why the extension user should remain on the line while his call is being placed. On a station-to-station call it is well to announce the name of your city to the person answering to speed connection to the desired individual, or to an alternate if the called person is not immediately available.

The fastest and best possible out-of-town service will be obtained if each extension user gives his calls to the Long Distance operator directly and then holds the line. By holding the line he will be able to give the operator any additional information needed, he will receive reports directly, he can name an alternate if the called party is not available, and he will be ready to talk when the called party answers, saving time and money.

PASSING ORDERS TO THE OPERATOR

The placing of out-of-town calls can be speeded up if the details of the call are given to the operator in the proper sequence. The sequence should be:

1. The called place and state.
2. Special instructions, if any, such as "Collect" or "Time and Charge."
3. The called number, and on person-to-person calls, the name of the desired person.
4. Give your number only when the operator asks for it.

The called place and state may be omitted if the central office name identifies the place, as may be the case for near-by points.

If you request "time and charge" on an outgoing Long Distance call, disconnect promptly upon appearance of the disconnect sig-

nal. The Long Distance operator will call you when she is ready to quote the charge. However, if you request "time and charge" on a call to a near-by point handled by the local operator, or on an incoming collect call, immediately operate the talking key upon appearance of the disconnect signal and stay on the line until the charge is quoted.

Give your number only when the operator asks for it. (Give the number listed in the telephone directory for your firm, not the number of the trunk on which the call is placed.) This enables the operator to make an immediate attempt to reach the called station, and then obtain your number while waiting for an answer.

LIST OF FREQUENTLY CALLED NUMBERS

It will soon become apparent to you that, when out-of-town calls are placed by number, faster service will result. It will be extremely helpful, therefore, if you keep a list of out-of-town numbers which are frequently called. It is also a good idea if your extension users would also keep their own lists. This faster service saves your time and releases your trunk lines sooner for other calls.

DELAYED CALLS

REPORTS OF DELAY AND SUBSEQUENT ATTEMPTS

When out-of-town calls (with the possible exception of calls to near-by points) cannot be completed on the operator's first attempt and are not canceled, the operator will make subsequent attempts according to a schedule designed to give fast service without annoyance to the calling or called persons.

In reporting delay on a call the operator may state the time at which she will try the call again so that the calling party will be at his desk, or, if he wishes, may suggest a more convenient time. Should further reports not be required until the called station or person answers, the operator should be so informed.

If the extension user has placed the call, he should identify himself to the operator by name or extension number when she first reports delay. This makes it easy for the operator to reach him when the call is ready.

Similarly, if you place out-of-town calls, the operator will give subsequent reports to you, and your record of the call will identify the calling person. Pass on to the extension user all reports you receive, and request the extension user to notify you where he can be reached if he leaves his office or extension while his call is still active.

If the calling person leaves the office or becomes occupied so that he will not be available for a considerable time, reach the operator and ask her to hold the call until a specified time, or until you ask for another report.

This prevents the called station or person from being bothered unnecessarily. In this connection, avoid canceling a call which may be required the same day or on the following day, as the operator will hold the call until you wish the attempt made. In requesting a report on a delayed call, be careful not to give the operator the impression that you are placing a new call. When the operator reports, "Ready on your call to (called place)," and the calling extension user is available, acknowledge and reach him as soon as possible. When he answers, say that you are ready on his call to (called place) and restore your listening key as soon as conversation starts.

TELEPHONE HABITS FOR EXTENSION USERS

When you answer your telephone or make an outside call, you are the representative of your company. Courtesy and tact on your part will help you make friends for your company and yourself. Here are a few suggestions:

1. Answer your phone promptly—at the first ring, if possible. A customer shouldn't be kept waiting. This will also lighten the burden of the switchboard attendant, eliminating excessive ringing and delayed answer reports and reducing the time that trunks are tied up.
2. Identify yourself when you answer with your name or your department or both.
3. Develop a pleasant telephone manner—your customer will be glad he is doing business with you. Use his name during the conversation. If you must leave the line to get informa-

tion, ask his permission as he may wish you to call him back rather than wait.

4. When the conversation is ended hang up gently—it is better if the customer hangs up first.
5. If you must be away from your telephone, tell the person who answers your telephone where you will be or when you will be back. You don't want to miss important calls. You may inform the switchboard attendant on what extension you may be found. After returning to your office, inform the attendant so that she can give you calls which have been received while you were away.
6. If an incoming call must be transferred because you do not have the information or it can be handled better by another department or individual, explain this to the caller and ask if he wishes to have his call transferred. If he agrees, signal the switchboard attendant by moving the receiver hook up and down s-l-o-w-l-y until she answers. Be sure that you give her enough information so that the transfer can be completed without forcing the customer to repeat.
7. If you wish to have an outgoing call transferred, you must remember that if you try to signal the PBX attendant by operating the cradle switch of your telephone you will cut off the call. The best way to handle this is to go to a nearby extension, explain the details of the transfer to the PBX attendant, and let her handle the transfer.
8. When you answer calls for others, identify whose telephone it is and who is answering by saying for example, "Mr. Smith's telephone, Miss Jones." Explain where Mr. Smith has gone and ask the calling party, "May I tell him who is calling?" If the caller wishes to leave a message, write down the name, the full telephone number and the time that he called. Find out also whether he wants Mr. Smith to call him back or not.

Manufactured By:



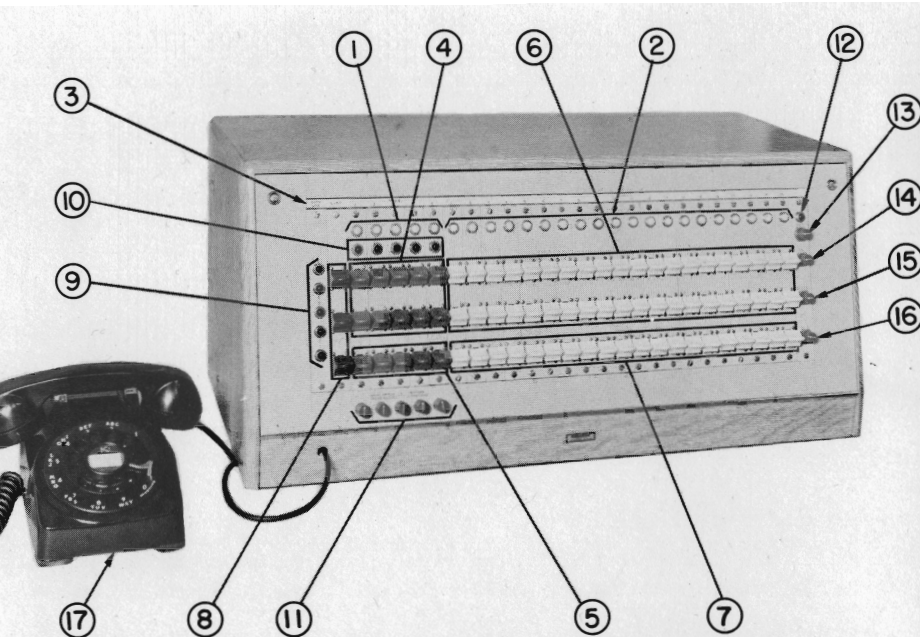
KELLOGG SWITCHBOARD AND SUPPLY COMPANY

A Division of International Telephone and Telegraph Corporation

6650 S. CICERO

CHICAGO 38, ILLINOIS





HOW TO OPERATE THE KELLOGG CORDLESS PRIVATE BRANCH EXCHANGE SWITCHBOARD

ANSWER A CALL—When a white lamp lights, operate key below lighted lamp in a direction in which no other key in same horizontal row is operated (except bottom key downward). Operate green attendant's key (at left of board) in same row and in same direction and speak.

CONNECT AN EXTENSION—Operate the called white extension key in the same horizontal row and same direction as the key used to answer. Ring extension by operating downward the bottom key in same vertical row.

CONNECT TO A TRUNK

Extension to dial or pass call.—Leave white extension key operated. Restore green attendant's key. Select an idle trunk key (red keys at left of board) and operate in same row and direction as extension key.

Attendant to dial—Restore white extension key. Select an idle trunk as above. Operate red trunk key in same row and direction as green attendant's key. Dial number and reoperate white extension key.

Attendant to pass call to operator—Same as for attendant dialing except that it is not necessary to restore and reoperate calling extension key.

DESCRIPTION OF KELLOGG CORDLESS SWITCHBOARD

1. **TRUNK LINE LAMPS:** White lamps above red keys to the left of switchboard which will light when an associated trunk has been selected for an incoming call.
2. **EXTENSION LINE LAMPS:** White lamps to right of trunk line lamps which light when the handset of an associated extension telephone is lifted.
3. **DESIGNATION STRIP:** Indicates the number of each trunk line and the number of each extension.
4. **TRUNK CONNECTING KEYS:** Red keys which, when operated *up* or *down*, connect a trunk to an extension telephone or to the attendant's telephone.
- 5a. **TRUNK CONNECTING KEYS:** Red keys which, when operated *up*, connect a trunk to an extension telephone or to the attendant's telephone.
- 5b. **TRUNK ANSWERING KEYS:** The same keys as 5a, above, which, when operated *down*, are used to answer incoming calls. After operation they will automatically hold the connection until the desired extension answers.
6. **EXTENSION CONNECTING KEYS:** White keys which, when operated *up* or *down*, connect an extension telephone to a trunk or to another extension.
- 7a. White keys which, when operated *up*, connect an extension telephone to a trunk or to another extension.
- 7b. **EXTENSION RINGING KEYS:** The same keys as 7a above, which, when operated *down*, are used to ring the associated extension.
8. **ATTENDANT'S LISTENING KEYS:** Green keys at the left, when operated *up* or *down*, connects the attendant's telephone to an extension when an extension key is operated in the same row and direction.
9. **EXTENSION SUPERVISORY LAMPS:** Green lamps located to the left of the switchboard. A steady burning lamp indicates the end of a conversation. A flashing lamp (recall signal) indicates that the assistance of the attendant is needed on an existing call.
10. **TRUNK SUPERVISORY LAMPS:** Red lamps located below the trunk line lamps, one for each trunk. A trunk supervisory

lamp will burn steadily as a *hold signal* when a trunk connection is held awaiting completion, as a *disconnect signal* when an extension user hangs up on a trunk call, or will flash as a *recall signal* when the local extension user operates the cradle switch of his telephone.

- 11a. **NIGHT SWITCH-TRUNK RELEASE KEYS:** Row of red turn keys located below trunk keys. These keys are operated with the "arrow to left" for night service. Also, if unable to establish a connection between an incoming trunk call and a local extension, momentarily turn the night switch turn key to the left and return to "arrow up" position to release the trunk.
- 11b. **THROUGH SUPERVISION-BLOCKED SUPERVISION KEY:** (See page 12) The same turn key as in 11a above, which, when in the normal position with arrow pointing up, gives "through supervision" of the trunk. Turn key in "arrow to right" position gives "blocked supervision."
12. **EMERGENCY TALK (EMT) SIGNAL:** Red lamp which lights when the EMT turn key is operated to the **EMERGENCY TALK** position.
13. **EMERGENCY TALK (EMT) KEY:** The EMT key is operated by turning to the "arrow up" position when all circuits are in use. This establishes an extra talking circuit between the attendant and a calling extension over the ringing circuit by pushing down the associated ringing key.
14. **NIGHT ALARM (NA) KEY:** All lamps are so connected that a buzzer will sound if any of these lamps light if the night alarm turn key is in the "arrow to left" position. The buzzer is cut off when the NA key is turned to the "arrow up" position.
15. **HAND GENERATOR KEY:** Ringing current is normally supplied by a power generator with the key in the "arrow to left" position. If the ringing power fails, necessitating the use of a hand generator, turn the key to the "arrow up" position.
16. **BATTERY-CENTRAL OFFICE KEY:** Normally turned to the "arrow to left" position, this key connects the local battery to the switchboard. When the switchboard is not attended turn the key to the "arrow up" position which disconnects the battery.
17. **SWITCHBOARD ATTENDANT'S TELEPHONE:** May be equipped with or without a dial depending on whether the switchboard is connected to a dial or a manual central office.

YES:-
FOR A.C. NIGHT ALARM OPERATION,
REMOVE "Y" WIRES FROM BATTERY AND
GROUND BARS & CONNECT TO POWER
GEN. PUNCHING 1 & 2. REMOVE "Z" WIRE
FROM BUZZER BINDING POST "D" AND
CONNECT TO BINDING POST "A"

#2. DOTTED WIRE SHOWN AT CONNECTING
KEY 2 TO BE LEFT LONG ENOUGH TO
REACH CONNECTING KEY 4 WHEN ONLY
3-CONNECTING CIRCUITS ARE EQUIPPED.

#3. KEY NORMAL, THRU SUPERVISION.
KEY OPERATED, BLOCKED SUPERVISION.



TERM. END OF RELAYS,
2 AND 6.

REL. NO.	CODE NO.	COIL RES.	MECHANICAL REQUIREMENTS	DIRECT CURRENT FLOW IN AMPERES.								REMARKS.
				TERM	HOLD	AFTER 300K	OPER	NON- OPER	REL'SE	OPER	NON- OPER	
1	2005-S-04	800"	15-G .015				.017			.014		24 VOLTS
2	2005-S-Y 2000"		"				.013			.0085		48 "
3	A-2093-C-EA 775"		"				.0075			.006		24 VOLTS
4	D-2029-S-AK 100"		"				.028			.016		24 VOLTS RESP. 003
5	2037-S-V 500"		.020				.016	.006		.014	.007	24 VOLTS
6	2081-S-V 500"		20-G "				.027			.018		24 VOLTS
7	2081-S-W 1000"		"				.027			.018		24 VOLTS
8	2001-T-C 1000"		"	SERIES			.018			.014		24 VOLTS
9	26-D 500"		"				.018			.014		24 VOLTS
10	26-H 1000"		.015				.016			.012		24 VOLTS
11	C.O. D-2001-S-AJ 50"	15-G	"				.013			.008		24 VOLTS
12	N.A. 2102-S-HG 3.5"		.010				.013			.008		24 VOLTS
13	2102-S-HG 1.5"		.010				.013			.008		24 VOLTS
14	F-2033-S-EA 7.47"	15-G	.015				1.585	.845		.835		24 VOLTS RESP. 006
15	F-2043-S-EQ 1.5"		"				.079			.062		24 VOLTS
16	A-2037-S-U 390"		"				.008	.003		.007	.0035	24 VOLTS USE ON NEW WORK.

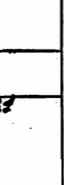
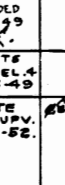
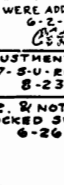
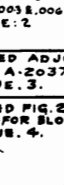
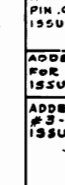
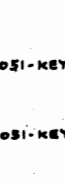
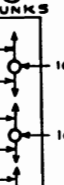
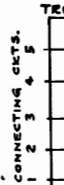
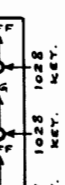
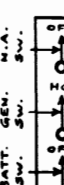
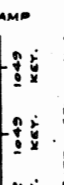
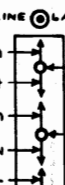
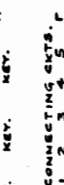
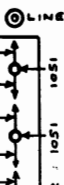
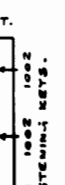
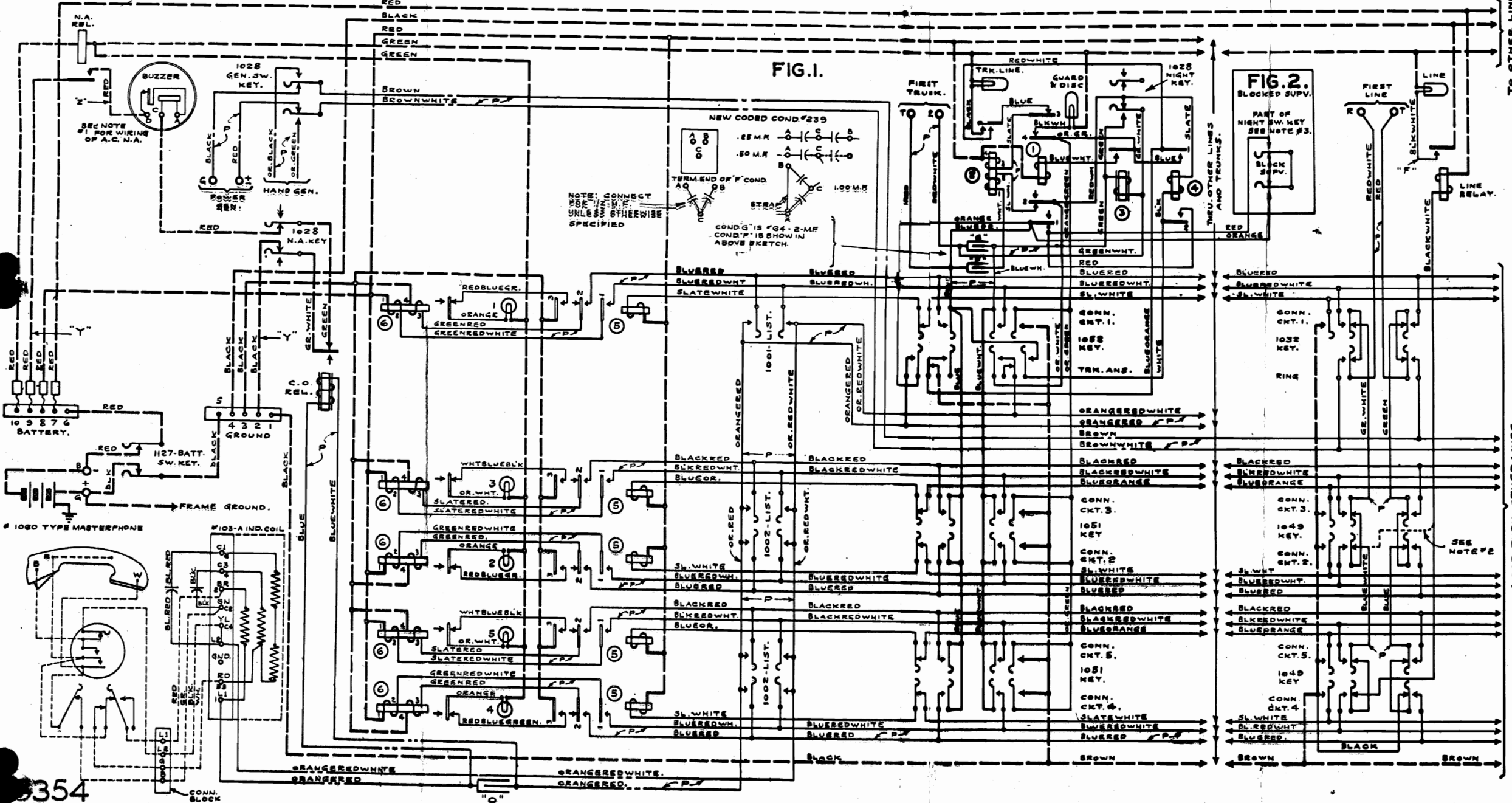


FIG.1.

FIG.2.



CHANGES	APPD.
ISSUE.1. IN REL. LIST REL'S 3 & 4 RES. PIN .003 & .006 WERE ADDED ISSUE.2. 6-2-49	
ADDED ADJUSTMENTS FOR A-2037-S-U REL.4 ISSUE.3. 8-23-49	
ADDED FIG.2. & NOTE #3 FOR BLOCKED SUPV. ISSUE.4. 6-26-52.	
APPD. CHKD. ENGR. C.E.L. DRWG. R.B.X.	
DATE	6-30-47

CORDLESS P.B.X. CIRCUIT
TRUNKS TO AUTO. MAIN EXCHANGE.

45354

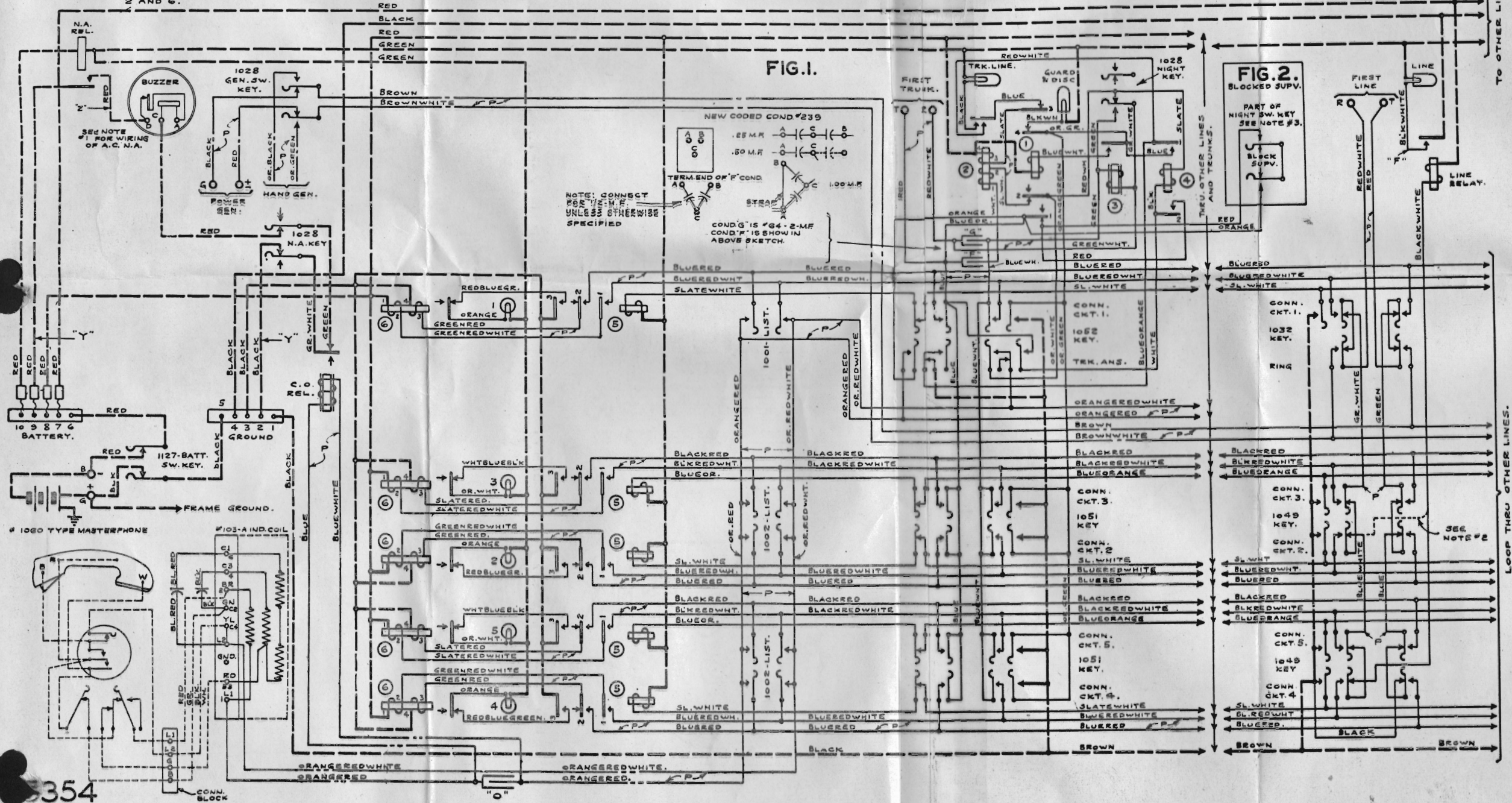
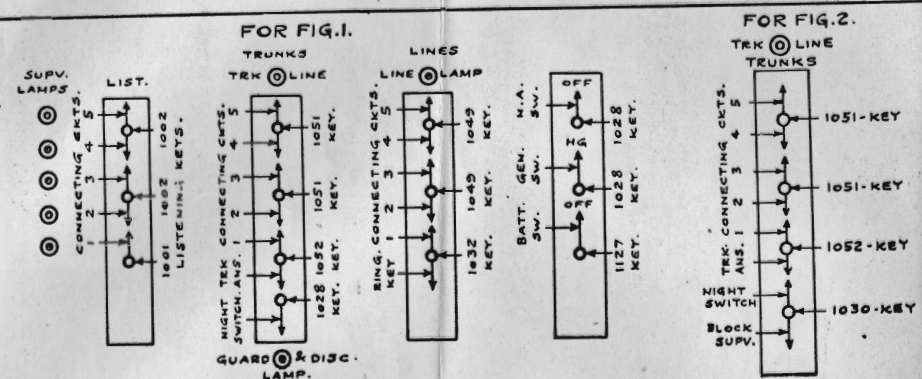
KELLOGG SWITCHBOARD & SUPPLY CO.
CHICAGO, U.S.A.

TESTS:-
 1. FOR A.C. NIGHT ALARM OPERATION, REMOVE "Y" WIRES FROM BATTERY AND GROUND BARS & CONNECT TO POWER GEN. PUNCHINGS ± X & G. REMOVE "Z" WIRE FROM BUZZER BINDING POST "D" AND CONNECT TO BINDING POST "A".
 2. DOTTED WIRE SHOWN AT CONNECTING KEY 2-TO BE LEFT LONG ENOUGH TO REACH CONNECTING KEY 4-WHEN ONLY 3-CONNECTING CIRCUITS ARE EQUIPPED.
 3. KEY NORMAL, THRU SUPERVISION. KEY OPERATED, BLOCKED SUPERVISION.



TERM. END OF RELAYS, 2 AND 6.

REL. NO.	CODE NO.	COIL RES.	MECHANICAL REQUIREMENTS	DIRECT CURRENT FLOW IN AMPERES								REMARKS.			
				TEST				READJUST							
				SPRING TENSION	ARM TRAVEL	TERM	HOLD	AFTER 30AK	OPER	NON-OPER	REL'SE	OPER	NON-OPER	REL'SE	
1	2005-S-DG	800"	15-G .015						.017			.014			24 VOLTS
2	2005-S-Y	2000"	" "						.013			.0085			48 "
1	A-2093-C-EA	735"	" "			1 & 2			.0075			.006			240R 48VLT
3	D-2029-S-AK	100"	" "					.008	.028			.016			240R 48VLT RESPIN 003
4	2037-S-V	500"	" .020						.016	.006		.014	.007		240R 48VLT
5	2081-S-V	"	20-G "						.027			.018			24 VOLTS
5	2081-S-W	1000"	" "						.027			.014			48 "
6	2001-T-C	1000"	" SERIES						.018		.0025	.012		.003	240R 18-VOLTS
LINE	26-D	500"	" "						.016		.002	.014		.003	24 VOLTS
"	26-K	1000"	" .015						.013		.0028	.010		.003	48 "
C.O.	D-2001-S-AJ	50"	15-G "					.013	.024			.022			240R 48VLT RESPIN 006
N.A.	2102-S-HG	3.5"	" .010					1.500	.037		.0015	.022		.002	240R 18 "
"	2102-S-EG	1.5"	" .010						"		"	.039		.002	240R 18 "
"	F-2033-S-EG	1.47"	15-G .015					1.500	.045			.036			240R 18-VOLTS
"	F-2043-S-EG	1.5"	" "					"	.079			.062			240R 18-VOLTS
4	A-2037-S-U	390"	" "						.008	.003		.007	.0035		240R 18-VOLTS USE ON NEW WORK.



CHANGES	APPD.
ISSUE 1	
IN REL. LIST REL'S 3 & 4 CO RES PIN. 003 & 006 WERE ADDED	
ISSUE 2	
ADDED ADJUSTMENTS FOR A-2037-S-U REL. 4	
ISSUE 3	
ADDED FIG. 2. & NOTE #3 FOR BLOCKED SUPV.	
ISSUE 4	

APPD.
 CHKD.
 ENGR. C.A.L.
 DRWG. P.B.X.

DATE 6-30-47

CORDLESS P.B.X. CIRCUIT
 TRUNKS TO AUTO. MAIN EXCHANGE.

45354

KELLOGG SWITCHBOARD & SUPPLY CO.
 CHICAGO, U.S.A.