

**FEATURE DOCUMENT**  
**EMERGENCY LINE SERVICES**  
**NO. 3 ELECTRONIC SWITCHING SYSTEM**

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**NOTICE**

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## *INTRODUCTION*

### 1. GENERAL INFORMATION

**1.01** All of the features described in this document are manual hardware features and no program is involved. The following features are covered in this document:

- **Group Alerting Service**—This feature provides means to alert a group of subscribers and to disseminate an alert message.
- **Emergency Manual Line Service**—This feature enables operators to provide manual switchboard service to critical customers when the No. 3 ESS is inoperative.
- **Public Emergency Reporting Service**—An emergency station with this feature can receive several calls and communicate with all the calling parties simultaneously. Facilities for sounding a siren are also provided.
- **Emergency Line Service**—This feature enables operators to complete emergency calls to lines with this feature even when the called line is busy.

**1.02** This is the initial issue of this document. When this document is reissued, the reasons for reissue will be found in this paragraph.

### 2. DEFINITION

#### **Group Alerting Service**

**2.01** The group alerting circuit provides means, independent of the switching network, to alert a group or several groups of subscribers for the purpose of disseminating an alert message. The group alerting circuit may be activated from up to three remote control points.

#### **Emergency Manual Line Service**

**2.02** The emergency manual line service feature provides temporary manual service to selected critical customers when a service affecting equipment failure exists in a No. 3 Electronic Switching System (ESS) office. When this feature is manually activated by the telephone company, critical lines

are transferred from their switched appearances to distant switchboards for manual service.

#### **Public Emergency Reporting Service**

**2.03** The public emergency reporting service circuit is used to terminate up to ten simultaneous calls to a public emergency line (fire department, etc) and ring the station or stations on this line. The answering station, after determining the emergency, operates a key which causes the circuit to sound a siren.

#### **Emergency Line Service**

**2.04** The emergency line circuit is used to allow operators to complete direct emergency calls (independent of the switching machine) to police, fire, or other emergency lines. It also allows operators to bridge across existing calls to these lines. Emergency line service is used when a No. 3 ESS customer or a customer in a distant office requests operator assistance to complete a call to an emergency line.

**2.05** The emergency line services described in this document are hardware features and are independent of any program action. They can be implemented in any No. 3 ESS office with any generic program.

## *DESCRIPTION*

### 3. USER OPERATION

#### **Group Alerting Service**

**3.01** The group alerting service is used for quick and simultaneous alerting of a group, or several groups, of subscribers for the purpose of disseminating an oral or recorded alert message. The service is used by volunteer fire departments, civil defense groups, etc. During nonalert periods, subscriber telephones are connected to normal service lines at the No. 3 ESS office.

**3.02** The group alerting circuit can be activated from any of the control stations. A maximum of three control stations can be provided. A control station may consist of only a modified telephone set connected to the control circuits at the No. 3 ESS office. No other service is connected to this set. Announcements are repeated orally during the alert period.

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**3.03** Using an expanded alert system, an oral announcement is made initially from a telephone at the control station, and then the announcement is automatically repeated from an announcement set during the alert period.

### Emergency Manual Line Service

**3.04** The emergency manual line service provides for manual completion of both originating and terminating calls for selected critical customers when the switching machine is inoperative. During normal office conditions, both originating and terminating services for these lines are provided in the normal manner by the No. 3 ESS. When emergency manual line service is in effect, both originating and terminating calls for lines arranged with this service are routed to a telephone company switchboard operator for completion.

### Public Emergency Reporting Service

**3.05** The public emergency reporting service is used to complete calls to public emergency lines such as fire departments, civil defense representatives, etc. Ten calls can be terminated to the public emergency line at the same time. This permits a community representative to discuss a public emergency with ten calling parties at the same time. The emergency station also provides means for the community representative to activate a public alarm.

### Emergency Line Service

**3.06** The emergency line service permits a No. 3 ESS subscriber, or a subscriber in a distant central office to complete an operator-assisted emergency call to a No. 3 ESS emergency line even if the emergency line is busy. The emergency line is a fire, police, hospital, etc, line.

## 4. SYSTEM OPERATION

**4.01** All of the emergency line services described in this document are hardware features and no program is involved. Refer to Part 9 for hardware ordering information.

### Group Alerting Service

**4.02** The group alerting service includes facilities, independent of the switching network, for simultaneously signaling a group or several groups

of subscribers for the purpose of disseminating an alert message. The subscribers may be local No. 3 ESS subscribers or subscribers of a distant central office.

**4.03** The alerting system is provided for use by such groups as volunteer firemen, civil defense groups, or others requiring quick and simultaneous dispatch of oral or recorded messages. Refer to Figures 1 and 2.

**4.04** During nonalert periods, subscriber telephones are connected to normal service lines at the No. 3 ESS central office.

**4.05** During alert periods, one-way voice transmission is provided from a control station or alternate control station to a selected group of telephone subscribers mutually connected to the group alerting system through one or more central offices. A local office sending circuit (SEND CKT) is provided when some groups to be alerted are located in a distant central office.

**4.06** A maximum of three control stations can be provided to permit activation of the group alerting circuit from up to three remote control points. An alert may be initiated at a control station by dialing a single digit from the control telephone. Group alerting hardware at the No. 3 ESS central office will select, connect, and ring the proper group of subscribers. Additional groups may be alerted by dialing additional digits corresponding to the selected groups. One digit may be reserved for an all-groups alert.

**4.07** Using the basic alert system, oral announcements are made during the alert period from a telephone at the control station.

**4.08** Using an expanded alert system, an oral announcement is made initially from a telephone at the control station and then, by operation of controls at the telephone set, the announcement is automatically repeated from an announcement set during the alert period. An alternate control line may be provided to ensure service if the regular line fails. All the control stations must be served by the same central office. A test and monitor line from the central office to each control station may be provided.

**4.09** Subscriber telephones receive a distinctive ringing signal which informs the subscriber

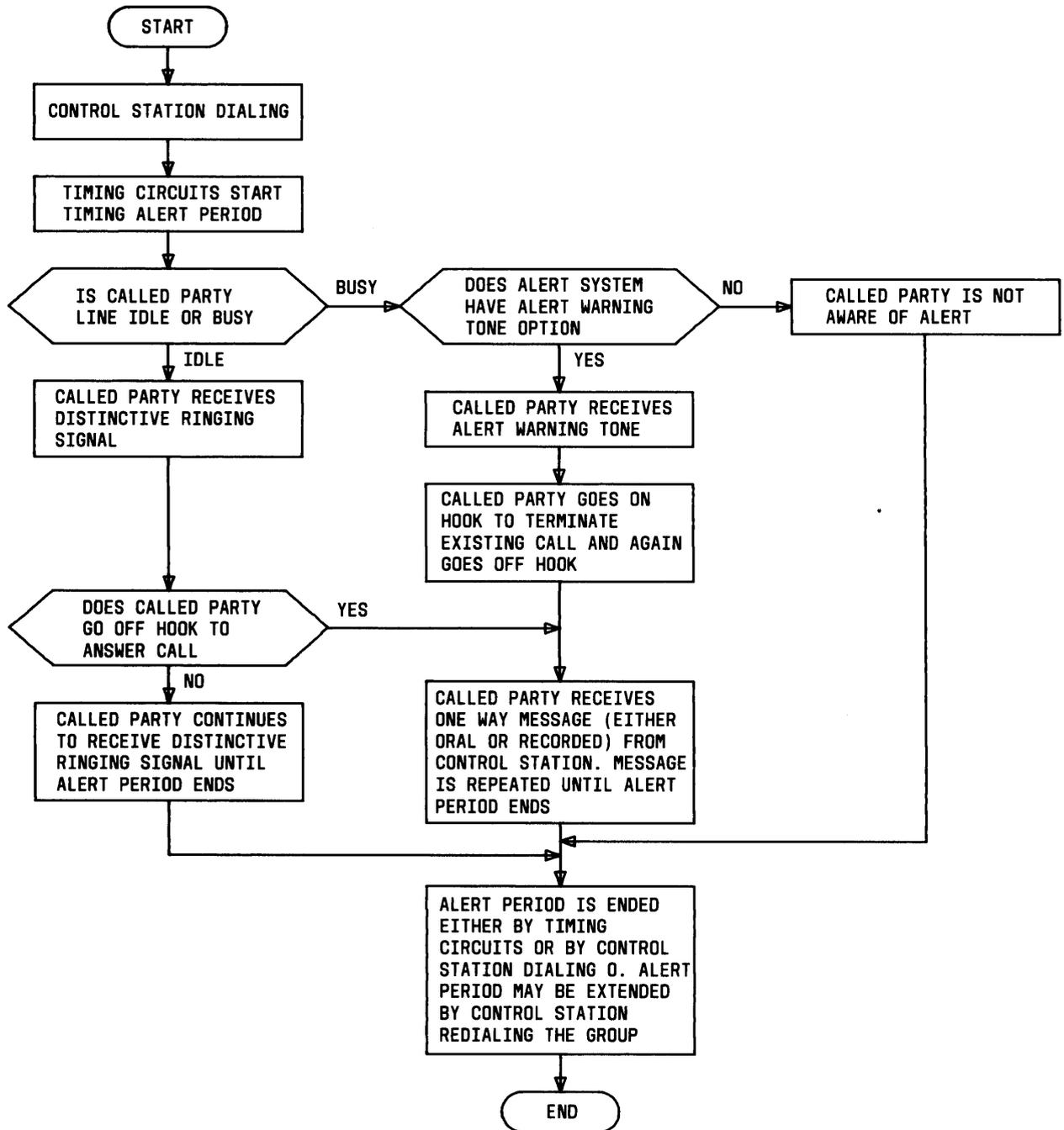


Fig. 1—Group Alerting Service—Feature Flow Diagram

that an alert condition exists. An alert warning tone may be provided optionally, which informs the subscriber on a busy line that an alert condition exists and that, by terminating the existing call and again raising the receiver, the subscriber receives the alert message (if done during the alert period).

**4.10** Alert announcements and connections are automatically terminated by timing circuits in 3, 5, or 8 minutes, as determined by wiring options, unless otherwise terminated or extended from a control station. An alert may be terminated before being automatically timed out by dialing the digit 0 from a control telephone. An alert may

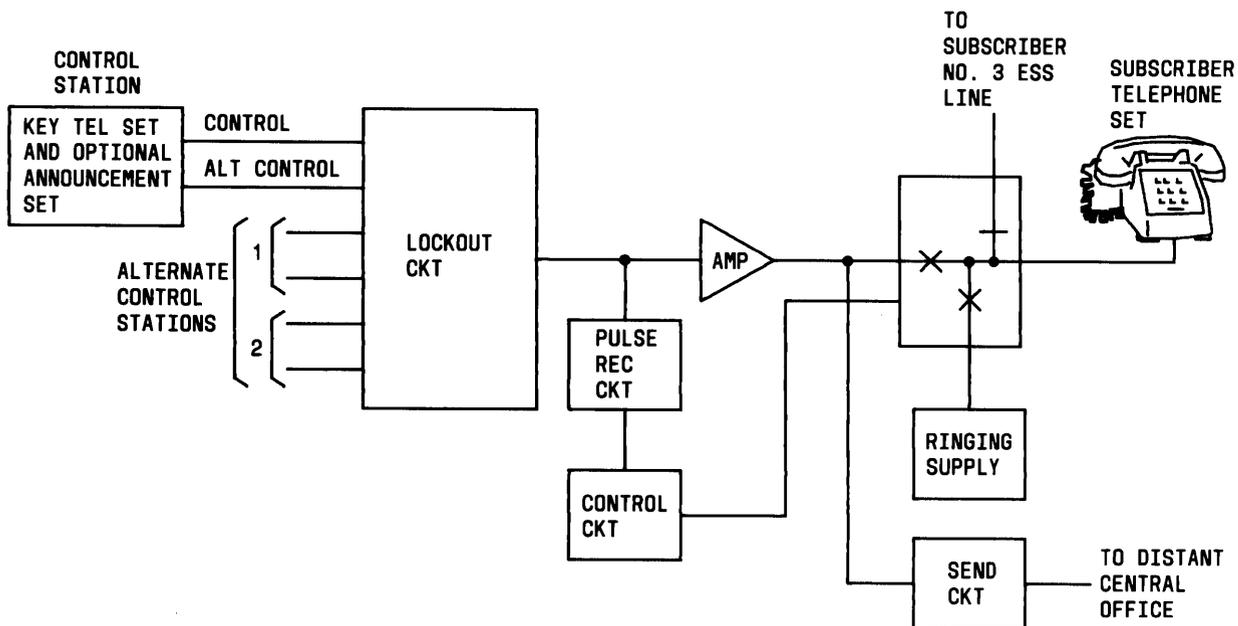


Fig. 2—Group Alerting Service—Block Diagram

be extended by redialing the previously dialed digit(s) from a control telephone before the alert is automatically timed out.

4.11 When an alert condition is initiated from one control telephone, any additional control telephones are locked out at the lockout circuit and receive a busy tone to indicate the lockout conditions.

#### Emergency Manual Line Service

4.12 During normal office conditions, both originating and terminating services for lines with the emergency manual line service feature are handled in the normal manner. Emergency manual line service is in effect only when manually originated by the telephone company.

4.13 The emergency manual line service feature is activated by manually operating the emergency line transfer (EMER LINE TRFR) key at the System Emergency Manual Control Panel. When emergency manual line service is in effect, all calls from a line arranged with the service are routed to a telephone company switchboard operator for completion. When an incoming call is routed through the operator, the operator obtains the necessary information, manually seizes the appropriate

trunk, and completes the call to the desired emergency manual line.

4.14 When the emergency manual line service feature is manually activated by the telephone company, this bypasses the switching network of the No. 3 ESS system and allows lines with emergency manual line service to be routed directly to designated switchboard operators for call completion. Refer to Figures 3 and 4. This feature is not software dependent and allows customers with emergency manual line service to make or receive calls even if the No. 3 ESS system is inoperative. After the emergency, when the No. 3 ESS is restored to normal operation, the telephone company manually deactivates emergency manual line service by releasing the EMER LINE TRFR key.

4.15 Emergency manual line service must not be deactivated until all in-progress calls through the switchboard are finished. If the emergency manual line circuit is deactivated before these in-progress calls finish, the calls are interrupted. During the period of time when the No. 3 ESS is operating and the emergency manual line service is still in effect, the No. 3 ESS may attempt to connect calls to lines or trunks that are actually open circuits, since these lines or trunks do not appear busy to No. 3 ESS.

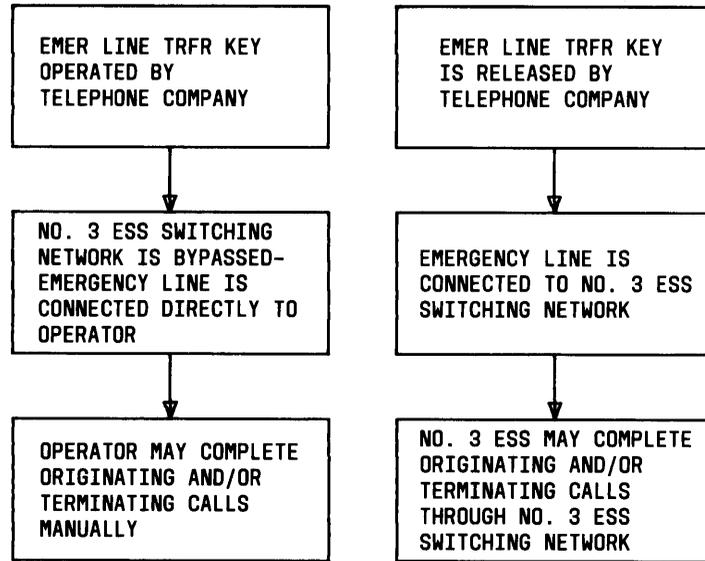


Fig. 3—Emergency Manual Line Service—Feature Flow Diagram

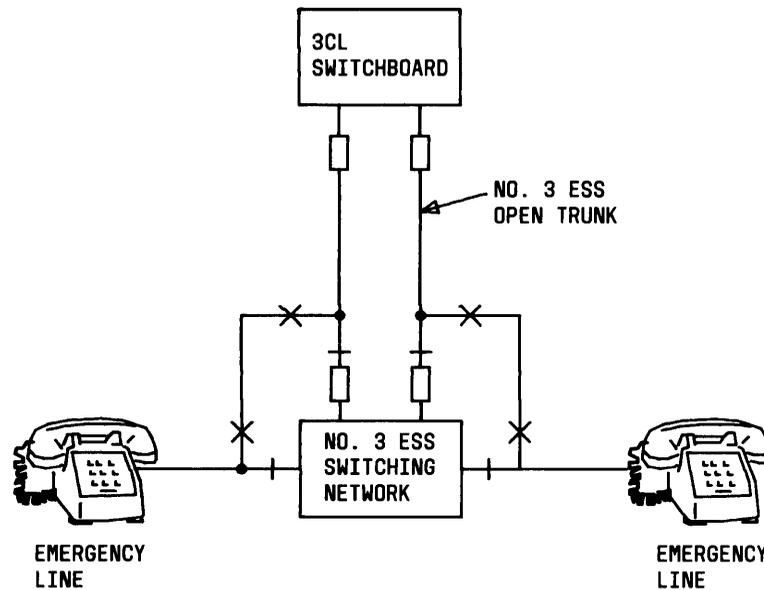


Fig. 4—Emergency Manual Line Service—Block Diagram

**Public Emergency Reporting Service**

4.16 The public emergency reporting feature is used for completing calls in No. 3 ESS to the public emergency line. It also provides means for the community representatives to actuate the public emergency alarm. For example, this feature

can be used for fire reporting and sounding of the fire alarm.

4.17 The public emergency reporting circuit can serve up to ten network appearances, permitting ten connections to this line at the same time.

**4.18** A call terminating to the emergency station causes ringing current (interrupted at 60 IPM) to be applied to the emergency station if the emergency station is idle. Refer to Figures 5 and 6. A line seizure is indicated to the public emergency reporting circuit by ground on the sleeve lead. Subsequent connections are then added to the talking circuit as they arrive, but the public emergency reporting hardware prevents ringing current from being applied to the established connection. As for the initial connection, a subsequent line seizure is indicated by ground on the sleeve lead. When the community representative is satisfied with the details of the reported emergency, the emergency station goes on-hook, the call connections are torn down, and ground is removed from all sleeve leads. The public alarm can be sounded by operating the key located at the emergency station. Sounding and automatic timing of the public alarm is all performed via autonomous hardware and not No. 3 ESS software.

**4.19** Two methods are available to sound the public alarm from the emergency station. The standard arrangement permits the alarms to sound as long as the key at the emergency station remains operated. An optional arrangement permits the alarms to sound automatically for a preset timed interval after the key at the emergency station has been operated and released. This permits the community representative to actuate the alarms and then leave the premises.

#### **Emergency Line Service**

**4.20** The emergency line service is used when a No. 3 ESS customer, or a customer from another office requests operator assistance to complete an emergency call to a No. 3 ESS emergency line. The emergency line is a fire, police, hospital, etc. line. The emergency line service is normally used by a traffic service position system (TSPS) operator, but it can be used by other types of operators if the operator's switchboard is connected to the emergency line service network.

**4.21** On a request to complete an emergency call, when the operator plugs in to the trunk to the emergency line circuit, this closes the interoffice loop, causing the operator's trunk to be bridged across the tip and ring leads of the emergency line. Refer to Figures 7 and 8.

#### **A. Idle Line**

**4.22** If the emergency called line is idle, it is automatically disconnected from the No. 3 ESS switching equipment and a busy condition is maintained on the line. The operator determines by monitoring that the emergency line is idle. The distant operator operates the ringing key causing the ringing supply to be connected to the emergency called line for signaling. When the emergency called line goes off-hook to answer the call, reverse battery is given to the distant office to give dark lamp supervision as an indication to the operator to cease ringing.

#### **B. Busy Line**

**4.23** If the emergency called line is busy when the distant operator plugs in, the distant operator can monitor the existing conversation. The emergency line circuit assures that inadvertent operation of the ringing key by the distant operator at this time does not supply ringing current or do any harm. If conditions warrant, the operator operates the cutoff key. This causes the existing call to be disconnected and applies a busy condition to the remote master scanner applique circuit in the No. 3 ESS office. Reverse battery is given to the distant operator; the operator releases the cutoff key, and the call connections are complete. The calling party is now connected to the emergency line.

#### **C. Disconnect**

**4.24** At the end of the call, the operator pulls out the cord which restores the emergency called line to normal and removes the busy condition from the No. 3 ESS remote master scanner applique.

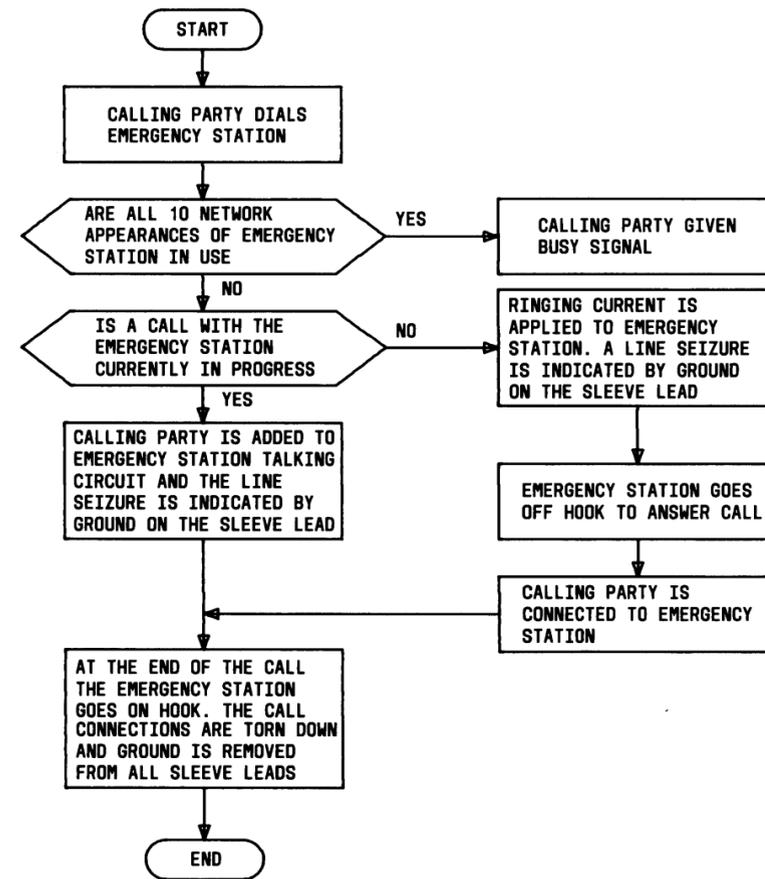
### **CHARACTERISTICS**

#### **5. FEATURE ASSIGNMENT**

##### **Group Alerting Service**

**5.01** The group alerting service is typically used by volunteer fire departments to alert volunteer firemen over regular message telephone lines.

CALLS TERMINATING TO EMERGENCY STATION



OPERATING THE PUBLIC EMERGENCY ALARM

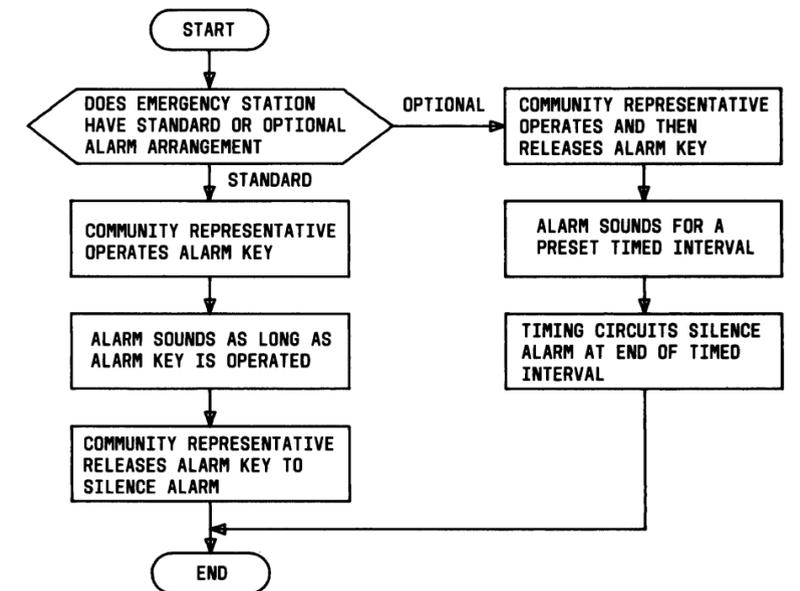


Fig. 5—Public Emergency Reporting Service—Feature Flow Diagram



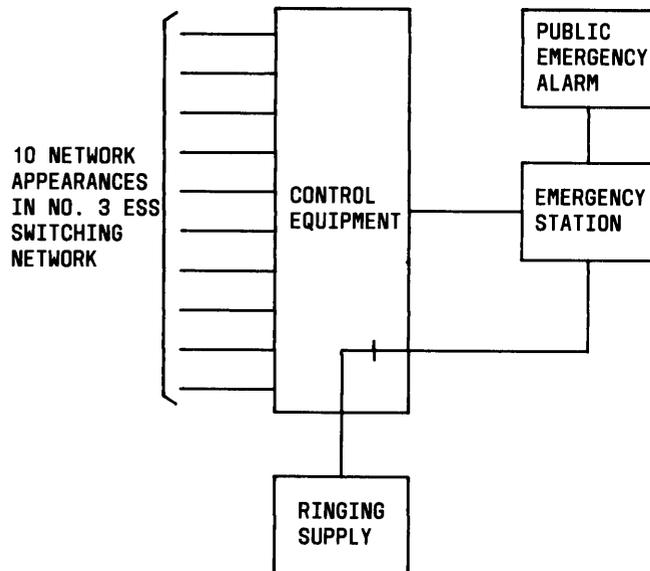


Fig. 6—Public Emergency Reporting Service—Block Diagram

#### Emergency Manual Line Service

5.02 The emergency manual line service is used to provide manual service to certain customers when a service affecting equipment failure exists in No. 3 ESS.

#### Public Emergency Reporting Service

5.03 The public emergency reporting service is typically used for fire reporting and sounding of the fire alarm.

#### Emergency Line Service

5.04 The emergency line service allows operators to complete direct emergency calls (independent of the switching machine) to police, fire, or other emergency lines. It also allows operators to bridge across existing calls to these lines.

### 6. LIMITATIONS

#### Group Alerting Service

6.01 Each group alerting circuit can alert a maximum of 25 customers.

#### Emergency Manual Line Service

6.02 The emergency manual line service is completely manual. The service must be manually activated or deactivated by the telephone company and, while in use, all calls are routed to a telephone company switchboard operator for completion.

#### Public Emergency Reporting Service

6.03 The public emergency reporting circuit can serve up to ten network appearances, permitting ten connections to this line at the same time.

6.04 The public emergency reporting circuit requires a sleeve lead.

#### Emergency Line Service

6.05 No warning devices are provided to warn the operator when the emergency line circuit is out of service. The operator at the distant end of the line should be notified before taking the emergency line circuit out of service for maintenance.

### 7. INTERACTIONS

7.01 Lines serving DATAPHONE® subscribers should be excluded from the group alerting system.

### 8. RESTRICTION CAPABILITY

8.01 All of the features described in this document are manual hardware features and there are no provisions to partially restrict the capabilities of the features.

### INCORPORATION INTO SYSTEM

### 9. COST FACTORS

9.01 Since all the emergency line features described in this document are manual hardware features, no memory elements are required.

#### Hardware Related

9.02 Table A shows hardware ordering information for the Emergency Line Service features described in this document.

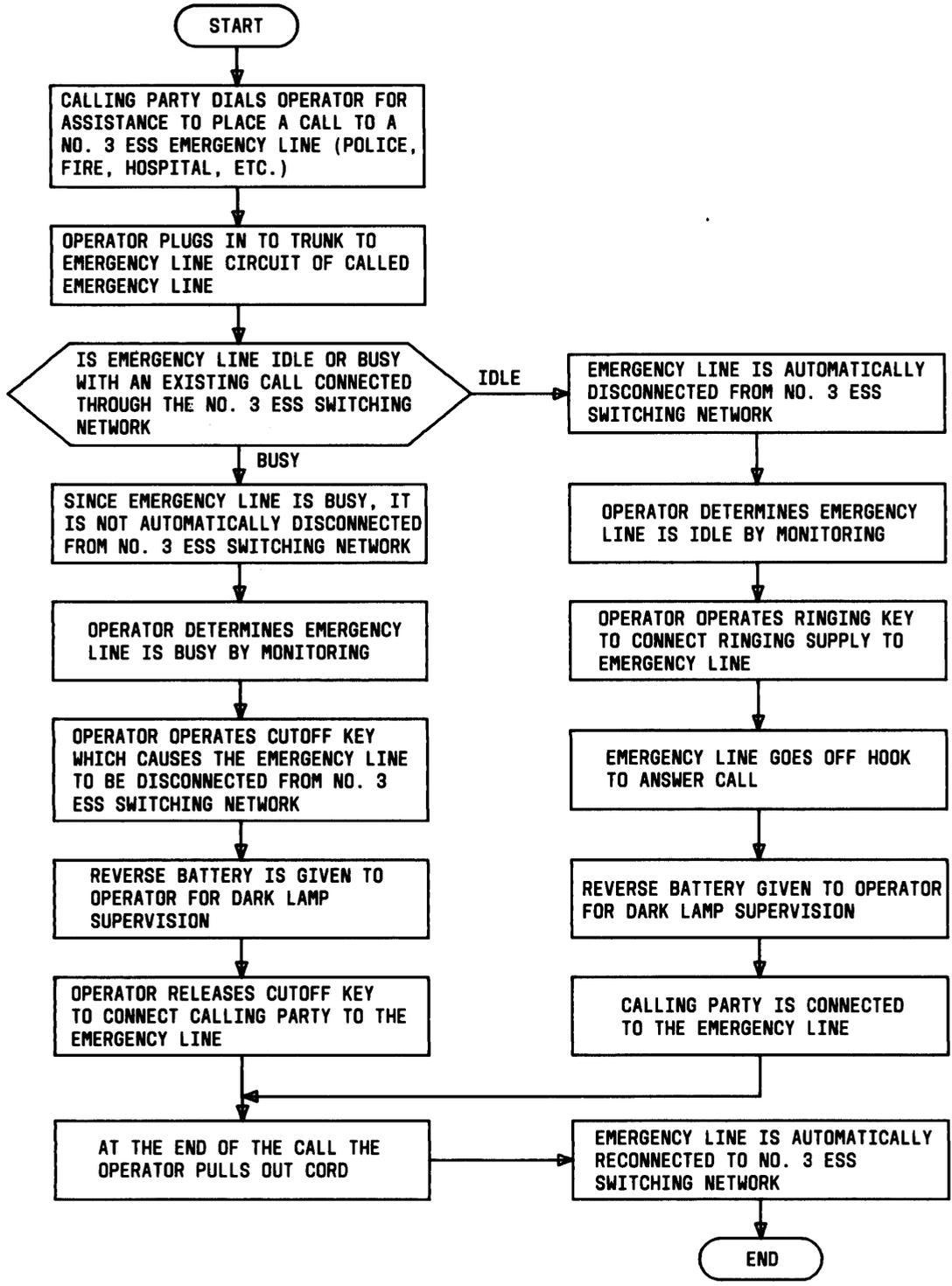


Fig. 7—Emergency Line Service—Feature Flow Diagram

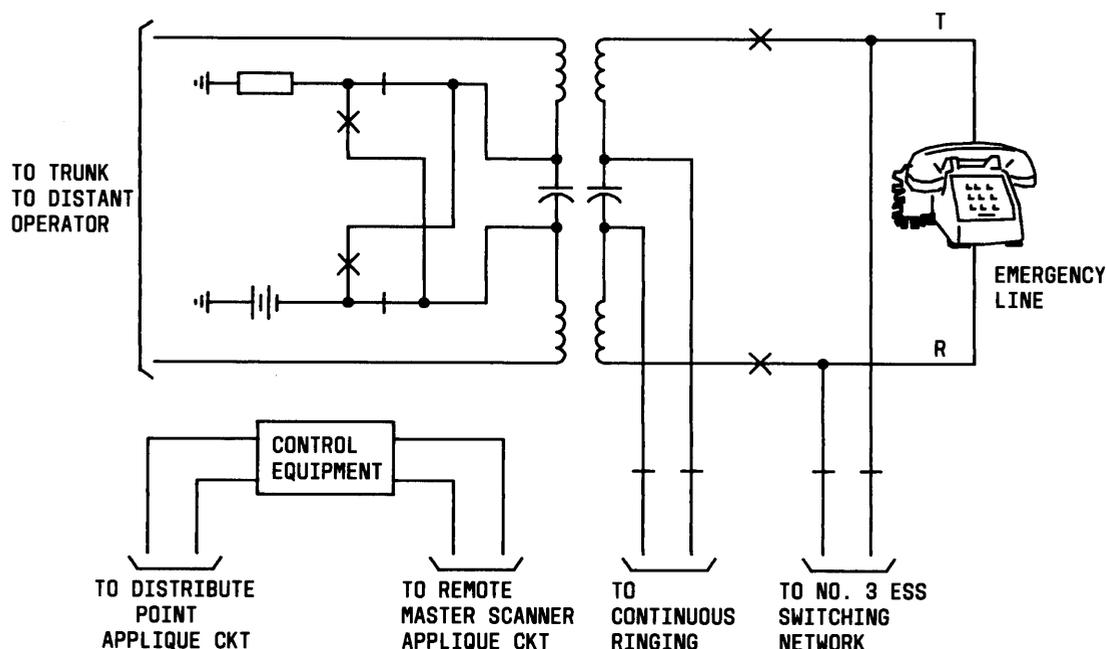


Fig. 8—Emergency Line Service—Block Diagram

## 10. DATA ASSIGNMENTS AND RECORDS

**10.01** An ODA run is required for new No. 3 ESS offices with Public Emergency Reporting Service or Emergency Line Service features in order to define distributor triplets required for these features. The Trunk Group Table (ESS 3201) and Supplementary Information Table (ESS 3107) forms are used for these assignments. Refer to TG-3 for details concerning entries in these forms.

**10.02** All ESS output records resulting from the ODA run must be retained as part of the office records.

**10.03** Distributor triplets may be changed via the RC:CKT input message. Refer to Input Message Manual IM-3H300 for details of this message.

## 11. HARDWARE RESTRICTIONS

**11.01** See Part 7.

## 12. INSTALLATION/ADDITION/DELETION

**12.01** Not applicable.

## 13. TESTING

**13.01** Test calls should be made on lines having these emergency line services in order to verify that the features are working properly.

## 14. OTHER PLANNING TOPICS

**14.01** Not applicable.

## ADMINISTRATION

## 15. MEASUREMENTS

**15.01** Not applicable.

## 16. CHARGING

**16.01** Not applicable.

## SUPPLEMENTARY INFORMATION

## 17. GLOSSARY

**17.01** This section defines terms used to describe the Emergency Line Service features.

TABLE A

## ORDERING INFORMATION FOR EMERGENCY LINE SERVICES HARDWARE

DESCRIPTION	ORDER CODE	SD NUMBER	J-SPEC NUMBER	NO. OF 2-INCH MTG PLT SPACES PER UNIT
GROUP ALERTING SERVICE — CONTROL CIRCUIT	NA	95883	J95421	1
GROUP ALERTING SERVICE — AUX OR MONITOR AND TEST LINE CKT	NA	95884	J95421	1
EMERGENCY MANUAL LINE CIRCUIT (E&M SUPERVISION)	76131 76132 76133 76134	1A156	J1A048AK1	3
EMERGENCY MANUAL LINE CIRCUIT (REVERSE BATTERY SUPERVISION)	76135 76136	1A156	J1A048AK1	3
PUBLIC EMERGENCY REPORTING SERVICE — OUTGOING AUX LINE CIRCUIT	NA	26164	J23056	2
PUBLIC EMERGENCY REPORTING SERVICE OR EMERGENCY LINE SERVICE — DISTRIBUTE POINT APPLIQUE CIRCUITS	80000	3H911-01	J3H001EF1	1
PUBLIC EMERGENCY REPORTING SERVICE OR EMERGENCY LINE SERVICE — REMOTE MASTER SCANNER APPLIQUE CIRCUITS	74300	1A210-01	J1A033	1
EMERGENCY LINE SERVICE — CIRCUIT TO DISTANT OR DSA SWITCHBOARD E&M LEAD SUPERVISION	NA	26128	J23056	2

EMER LINE TRFR—Emergency Line Transfer

IPM—Interruptions per minute.

**18. REFERENCES**

**A. Schematic Drawings and Circuit Descriptions**

- (1) SD & CD-1A156-01—Emergency Manual Line Circuit
- (2) SD & CD-26128-01—Emergency Line Circuit to Distant Toll or DSA Switchboard E&M Lead Supervision

(3) SD & CD-26164-01—Outgoing Auxiliary Line Circuit for Public Emergency Reporting Service

(4) SD & CD-95883-01—Control Circuit Group Alerting System

(5) SD & CD-95884-01—Auxiliary or Monitor and Test Line Circuit Alerting System

(6) SD & CD-96469-01—Emergency Line Circuit for Completion of Call to Police, Fire, and Ambulance Lines.

**B. Bell System Practices**

Section 310-530-100—Group Alerting System Description