

INTER-TEL[®]

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GX

OWNER'S

GUIDE

Part No. 690.8006
Issue 3



GX

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GUIDE

Issue 3, November 1987

Part No. 690.8006

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NOTICE

This *GX Owner's Guide* is released by INTER-TEL, INCORPORATED, as a guide for owners and sales personnel. It provides the information necessary to understand and operate the GX System.

The contents of this manual reflect current INTER-TEL standards and software versions 827.3027, 827.3028, 827.3029, and 827.3030, which are subject to revision or change without notice. Software packages released after the publication of this manual will be documented in an addendum.

If additional information is required, please contact your service representative.

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FCC Regulations

Important:

1. Customers connecting this equipment to the telephone network shall, before such connection is made, give notice to the telephone company of the particular line(s) to which such connection is to be made, and shall provide the telephone company with the following information:
 - Complies with Part 68, FCC Rules
 - FCC Registration Number: BE287V-69771-MF-E (for MF-rated systems) or BE287V-71752-KF-E (for KF-rated systems)
 - Ringer Equivalence Number, 0.9A
 - Type of jack to be ordered from the telephone company, RJ21X

The telephone company should also be given notice upon final disconnection of this equipment from the particular line(s).

It is also the responsibility of the customer to provide the telephone company with registration numbers of any other devices which are configured for connection to the telephone network.

2. It is prohibited to make connections to party lines.
3. Under certain circumstances the telephone company may temporarily discontinue service and make changes in facilities and services which may affect the operation of this equipment; however, the customer shall be given adequate notice in writing to allow the customer an opportunity to maintain uninterrupted service.
4. Users should not make adjustments or repairs or attempt to service this equipment. In the event that a problem originates, contact the local authorized factory service representative.

In the event of trouble with the telephone line(s), this equipment must be disconnected from the telephone line(s). If trouble ceases, the equipment must be repaired by an authorized factory service representative. If the trouble continues to occur with the equipment disconnected, the telephone company should be notified that they have a problem. If this is the case, repairs or adjustments made by the telephone company will be made at their expense.

FCC Regulations

Notice

THIS SYSTEM INCLUDES HEARING AID-COMPATIBLE HANDSETS THAT ARE IN COMPLIANCE WITH SECTION 68.316 OF THE FCC RULES.

Important:

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class A computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna.
- Relocate the KSU with respect to the receiver.
- Check that the KSU and receiver are not on the same circuit; the KSU must be powered from an isolated, dedicated, AC outlet.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet, prepared by the Federal Communications Commission, helpful:

"How to Identify and Resolve Radio-TV Interference Problems"

This booklet (Stock No. 004-000-00398-5) is available for approximately \$5.00 from the U.S. Government Printing Office, Washington, D.C. 20402.

If radio frequency interference (RFI) problems persist, notify service personnel.

UL Regulations

BEFORE INSTALLATION, CHECK YOUR LOCAL ELECTRICAL CODES FOR INSTALLATION OF TELEPHONE AND ELECTRONIC EQUIPMENT.

The following safety information is reprinted from the Underwriter's Laboratory specification governing telephone equipment.

Important Safety Instructions

When using your telephone equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and injury to persons, including the following:

1. Read and understand all instructions.
2. Follow all warnings and instructions marked on the product.
3. Unplug this product from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not use this product near water (for example, in a wet basement).
5. Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
6. Slots and openings in the cabinet and the back or bottom are provided for ventilation, to protect it from overheating; these openings must not be blocked or covered. The openings should never be blocked. This product should never be placed near or over a heat register. This product should not be placed in a built-in installation unless proper ventilation is provided.
7. This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power to your business, consult your dealer or local power company.
8. This product is equipped with a three-wire grounding type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding type plug.

UL Regulations

9. Do not allow anything to rest on the power cord. Do not locate this product where the cord will be abused by persons walking on it.
10. Do not use an extension cord for the product's AC power cord. The AC outlet for the product should not be used for any other electrical equipment.
11. Never push objects of any kind into the product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electric shock. Never spill liquid of any kind on the product.
12. To reduce the risk of electric shock, do not disassemble this appliance, but contact a qualified serviceman when some service or repair work is required. Opening or removing covers may expose you to dangerous voltages or other risks. Incorrect reassembly can cause electric shock when the appliance is subsequently used.
13. Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - A. When the power supply cord or plug is damaged or frayed.
 - B. If liquid has been spilled into the product.
 - C. If the product has been exposed to rain or water.
 - D. If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions because improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.
 - E. If the product has been dropped or the cabinet has been damaged.
 - F. If the product exhibits a distinct change in performance.

Save These Instructions

GX Hardware And Software Features

Introduction

The GX System is a unique electronic key telephone system designed to meet the needs of growing businesses. Modular design makes the system easy to install and service, and flexible programming allows over 100 user-friendly features to be customized.

This manual describes the system hardware and features and it provides detailed instructions on their use. Refer to the user guide shipped with each station instrument for simplified instructions on using GX Keypad, Single-Line Instrument (SLI), or Direct Station Selection/Busy Lamp Field (DSS/BLF) Unit features.

Key Service Unit (KSU)

The KSU controls and operates the system. It consists of a cabinet that contains the system power supply, a 27-slot cardfile assembly, and the circuit boards. Major KSU features include the following:

- Circuitry and connectors for up to 32 Central Office (C.O.) lines and 120 stations. There can be up to 120 keysets or 112 single-line sets, or any combination of station instruments in eight-station increments.
- Two RS232C ports for connecting a programming terminal or an output device for the Station Message Detail Recording (SMDR) or Station Message Detail Accounting (SMDA) features.
- A music-on-hold jack for connecting an external music source (radio, tape player, etc.).
- An external paging jack for connecting an amplifier and external paging speakers to allow paging to large areas, such as warehouses and loading docks.
- A PFT jack for connecting the optional equipment for the optional power failure transfer (PFT) feature.
- A reset switch to manually reset the system for troubleshooting.
- A database back-up battery that can support the database during a power failure or brownout.
- Easily accessible voltage test points for checking the system operating voltages and database battery back-up charge.

Optional Equipment

The following optional equipment can be purchased and installed with the system. Complete specifications and installation instructions are provided in the *GX Installation and Field Maintenance Manual*.

Optional System Equipment

Electrical devices: Lights, alarm systems, or other electrical devices can be connected to the system and turned on or off when the primary attendant places the system in night mode.

External music source: An external music source (radio, tape player, etc.) can be connected to the system to provide music-on-hold and background music.

External paging speaker equipment: An amplifier and speakers can be connected to the system to provide external paging to warehouses, loading docks, etc.

Off-premises stations: SLIs or industry-standard single-line DTMF sets can be connected to the system from a remote location. The connection is made through a telephone company OPX line or a customer-provided line.

Playback devices: A playback device (answering machine) can be used in place of a single-line station instrument to help process calls. The device answers a call, plays a message, then disconnects from the call (or transfers it to a hunt group). Playback devices can also be used as automated attendant stations.

Power failure transfer (PFT) equipment: A PFT relay card and a card-mounting case can be installed to connect one or more single-line sets to predetermined outside lines during a power or processor board failure.

Signal devices: Up to three signal devices (bells, klaxons, etc.) can be connected to the system to signal incoming calls on predetermined outside lines.

SMDR or SMDA output device: An output device can be connected to the system to record the data generated by the SMDR and SMDA features. The device can be a printer, magnetic tape, floppy disk, etc.

Surge/spike protector: A voltage surge/spike protector or an AC line conditioner should be installed to suppress AC spikes and transient voltage surges.

Optional Equipment

System back-up batteries: Customer-provided batteries can be connected to the system to prevent loss of service in the event of a power failure or brownout.

Talkback speakers: Up to five talkback speakers can be connected to the system to receive handsfree intercom calls, background music, and internal zone pages.

Voice Mail System: The Inter-Tel Voice Mail System (ITVM) is a single-channel tape recording device that allows multiple users to store, send, and retrieve audio messages using their station sets or an external DTMF telephone.

Optional Station Equipment

External desk speakers: An external desk speaker can be connected to a keyset to allow handsfree conversations on outside calls.

Handset amplifiers: Users may wish to have a handset amplifier connected to their GX Keyset or Single-Line Instrument (SLI) when the station is located in a noisy area or when the user is hard of hearing. Hearing aid-compatible (HAC) handsets are standard on GX Keysets and SLIs.

Headsets: A four-conductor modular headset can be connected to a keyset by unplugging the handset from its jack and plugging in the headset.

Loud ringing adapter (LRA): An LRA can be installed on a keyset to activate an external signalling device (light, klaxon, etc.) to signal incoming calls.

System Features

Major system features include the following:

- Four Software Packages
- Feature Codes and Keys
- Music-On-Hold
- Call Privacy
- Flexible Attendant Arrangements
- Automated Attendant
- Tenant Groups
- Hunt Groups
- House Phones

Four Software Packages

The GX System software is available in four software "packages." MF-rated systems are permitted one-key access to multiple outgoing lines. However, since KF rating requires that only one line be accessed per key, only one pool line, one auto line, and one line in each line group can be programmed.

MF-rated, extended-software package has all of the features described in this Owner's Guide.

MF-rated, basic-software package has all features except least-cost routing (LCR) and station message detail accounting (SMDA).

KF-rated, extended-software package has all of the features described in the owner's guide except LCR.

KF-rated, basic-software package does not have LCR or SMDA.

System Features

Feature Codes And Keys

Users can access outside lines, process calls, and use special features by dialing a one- to three-digit feature code. Keysets have nine fixed-function and nine user-programmable feature keys that allow one-key access to feature codes; SLIs have a FLASH key for performing hookflashes and four user-programmable feature keys.

Not all feature codes can be accessed by every station user; some are restricted for keyset users only, and some are used only by the primary attendant or a designated keyset user. Procedures for operating the station instruments are provided in separate sections in this guide. In the procedures, the feature key and the feature code are specified. Feature code lists appear at the end of each section.

Music-On-Hold

An optional external music source (radio, tape player, etc.) can be connected to the system to provide music for calls on hold and calls waiting. The music assures a waiting party that the call is connected and makes the wait as pleasant as possible.

Music can also be heard through the keyset speakers and the primary attendant can enable music to be heard through the talkback speakers. Music is interrupted for calls, pages, keyset programming, and ringing.

Call Privacy

Call privacy restricts speech channel access to one station at a time. This prevents other keyset users from accessing intercom channels or C.O. lines already in use. Access to and control of a line or an intercom channel can be passed to another station using the conference or transfer features.

System Features

Flexible Attendant Arrangements

One or more attendants provide the following services for the stations they serve:

- Accessed by dialing "0".
- Central operators for incoming calls (if programmed for ring in).
- Message centers.
- Recall stations for unanswered calls.
- Cancel do-not-disturb and/or call forwarding for the stations.
- Clear displayed system alarms.
- Transfer calls to the modem.

One attendant can be designated as the primary attendant who, in addition to having the capabilities listed above, provides the following services:

- Place the system in night mode.
- Set the system time of day, date, and day of week.
- Program the system speed-dial numbers and names (unless this ability has been assigned to another keyset in the database).
- Turn on or off background music for the talkback speakers.
- Modify the allowed-answer and ring-in lists for night mode.
- Receive unsupervised C.O. recalls.

There are three possible attendant arrangements: no attendants, one attendant, and multiple attendants.

- **No-attendant operation:** The system can function without an attendant, but attendant features, including night mode, attendant recall, dial-zero access, remote feature cancelling, message center, and modem transfer cannot be used. A display keyset station must be programmed as the system alarm station to receive system alarm messages, receive unsupervised C.O. recalls, and control background music on the talkback speakers. The C.O. lines are programmed to ring in at any or all stations.

System Features

- **One-attendant operation:** In systems with one attendant (generally designated as the primary attendant), the attendant provides all of the services listed on the previous page. All lines (except private lines) are usually programmed to ring in at this station.
- **Multiple-attendant operation:** Separate attendants can be assigned to serve different groups of stations. One of the attendants can be designated as the primary attendant to provide the primary attendant services. C.O. lines are usually programmed to ring in at any or all attendant stations. With this arrangement, you can choose to have all attendants or only the primary attendant receive system alarm messages.

Attendant keysets must be LCD equipped to display the system alarm and recall source. DSS/BLF stations can be used with keysets to provide one-key access to the stations served and to function as a busy lamp field. DSS/BLF station consist of one or two (tandem) units, each with a capacity of 60 stations.

Automated Attendant

The automated attendant is a programmable feature that can be used to provide some of the services normally handled by an attendant. It allows an outside party to dial into the system and automatically access (or be transferred to) an automated attendant station, which is generally a playback device with a prerecorded message. After hearing the message, the caller is disconnected from the automated attendant and hears intercom dial tone. The caller may then directly dial a station intercom number or hunt group pilot number. Automated attendant stations are designated in database programming and can be assigned direct ring in for specific C.O. lines.

There are a number of different uses for this feature. For example, direct ring-in calls to a busy attendant could be forwarded to an automated attendant (using one of the forwarding features). Another option is to have calls ring in directly to an automated attendant station when the system is in day and/or night mode. Or, a group of automated attendant stations could be assigned to one hunt group. In this situation, a call would ring in or be transferred to the hunt group pilot number where it would circulate until an available automated attendant station answered the call.

System Features

Another possibility is to assign an automated attendant station as an announcement or overflow station in an existing hunt group. Unlike standard announcement or overflow stations, the caller hears intercom dial tone after being disconnected, rather than being returned to the hunt group, and can dial the desired intercom number.

Playback devices are generally used at the automated attendant station(s). When an outside call rings in or is transferred to an automated attendant station, the playback device plays a message (giving dialing instructions) and then disconnects from the call. The caller hears intercom dial tone. If using a DTMF telephone, the caller can dial a station intercom number or hunt group pilot number to access the desired station or hunt group, or dial "0" for the automated attendant's attendant. (NOTE: If the automated attendant does not have an assigned attendant, the primary attendant or system alarm station will be called.) If an invalid number is dialed or the DTMF decoders are busy, the caller is immediately transferred to the automated attendant's attendant. If using a rotary telephone or unsure of the intercom number, the caller can wait on the line for the automated attendant's attendant to be called.

If desired, a user-operated station can also be designated as an automated attendant station. In this situation, when a direct ring-in or transferred outside call is received, the station user answers the call, gives the necessary dialing information, and hangs up. The caller hears intercom dial tone and has the same options as described in the preceding paragraph. Instead of disconnecting from the call, the automated attendant station user can choose to transfer it, place it on hold, or use other call processing features. Simply hanging up on the call does not terminate it from the system.

Intercom calls to an automated attendant station are handled the same as normal intercom calls. After hearing the message, the caller is disconnected and hears intercom dial tone.

When a station receives a call that has been routed through the automated attendant, the call rings as a direct ring-in call (even if the called station is in do-not-disturb). If unanswered, the call recalls the called party's attendant after the appropriate transfer timer expires. If the attendant does not answer the call, it is disconnected after the abandoned recall timer expires. The outside caller hears music until the call is answered or disconnected, even if the called station is busy. If the called station is forwarded, the call follows the programmed forward.

System Features

Tenant Groups

Stations can be divided into tenant groups and departments. The system can have up to five tenant groups, and each group can have up to 10 departments. Each station must be assigned to one (and only one) tenant group and one department. When the system is initialized, all stations are assigned to tenant group 1, department 1.

Tenant service allows the customized distribution of C.O. lines among multiple users sharing a common Key Service Unit (KSU). Assigning stations to a tenant group controls which C.O. lines are accessed by the line keys on the keysets within the group. C.O. lines are assigned to line keys on a tenant-by-tenant basis. (Pool lines are the same for all tenant groups.)

Communication between tenant groups can be allowed or denied in database programming. If cross-tenant conversations are denied, a station can only call other stations within its tenant group, and calls cannot be transferred or forwarded between tenant groups.

Hunt Groups

The hunt group feature permits calls to be placed to a group of stations and to be automatically transferred to an available station within the group. Fifteen hunt groups can be programmed in the database (hunt groups 1 and 2 can have up to 60 stations and groups 3-15 can have up to 20 stations). Stations in these groups are accessed by dialing a special intercom number called a pilot number (initialized to 231-245).

When an intercom or outside call is transferred or rings in to the pilot number, it circulates through the hunt group until it is answered. The order in which the hunt group stations receive the call is determined by a list stored in the database. A station can appear in the list more than once or in multiple hunt groups, if desired. Incoming calls to a hunt group can be programmed to circulate through the list in linear or distributed order, as described below.

- **Linear:** Incoming calls always start circulating by ringing at the first station on the list that is stored in the database. If that station is busy, or if there is no answer, the call goes to the next station on the list.

System Features

- **Distributed:** To even out the call load, distributed order shifts the starting point of each call. When a station user answers a call, the next station on the list receives the next incoming call. If a station is busy, or if there is no answer, the call goes to the next station on the list.

Two special stations can be programmed to help calls circulate through the hunt group more efficiently: an overflow station and an announcement station. Either station can be equipped with a station instrument that operates as a regular station, or with a playback device that will answer the call, play a recorded message, disconnect, and automatically return the call to the hunt group.

- **Overflow stations:** When an outside call is transferred to a hunt group, it circulates through the stations until it is answered or the overflow timer expires. If unanswered when the timer expires, the call is sent to an overflow station. The overflow station can be another hunt group, a station, or a playback device. If it is a playback device, the programmer can determine the number of times the call will be allowed to circulate through the hunt group and return to the overflow station. (After the determined number of returns, the call becomes a recall.) If the overflow station is a hunt group or a station, the call can only circulate through the hunt group once unless the overflow station user transfers it back using the call transfer feature.
- **Announcement stations:** When a call rings in directly to a hunt group (bypassing the attendant), it circulates until it is answered or the announcement timer expires. When the timer expires, the call is sent to an announcement station. This can be a playback device that answers the call, plays a message, and then disconnects from the call to transfer it back to the hunt group. Or, it can be a station where a user answers the call and, if desired, can return it to the hunt group by using the call transfer feature. Each direct ring-in call will transfer to the announcement station only once.

System Features

The recall path that an unanswered hunt group call follows is determined by the configuration of the hunt group, as shown below. Note that intercom calls will not recall.

Recalls for direct ring-in outside calls:

- If the system sends an unanswered call to an announcement station with a playback device, the message plays. Then the playback device disconnects from the call and automatically transfers it back to the hunt group. If the call remains unanswered, it then transfers to the overflow station (if programmed) and rings until answered. Or, if there is no overflow station, it recalls the primary attendant or system alarm station.
- With a non-playback announcement station, the call remains at the announcement station until it is answered or the caller hangs up. After the announcement station user answers, the call may be transferred back to the hunt group (if desired) using the call transfer feature. Once transferred, if the call remains unanswered until the overflow timer expires, it then transfers to the overflow station or, if there is no overflow station, it recalls the announcement station.
- Without an announcement station, a direct ring-in call circulates through the hunt group until answered or the caller hangs up; it is not sent to the overflow station.

Recalls for transferred outside calls:

- If the system sends an unanswered call to a playback device overflow station, a message is played. Then the playback device disconnects from the call and automatically transfers it back to the hunt group (this can be repeated several times). If the call remains unanswered after returning to the overflow station for the last time, the call recalls the hunt group until the overflow timer expires and then recalls the transferring station. (NOTE: If the transfer came from the announcement station, the call will recall the attendant.)
- With a non-playback overflow station, the call remains at the overflow station until the recall timer expires and then recalls the transferring station. (NOTE: If the transfer came from the announcement station, the call will recall the attendant.)
- Without an overflow station, the call circulates until the hunt group overflow timer expires, then returns to the transferring station.

System Features

If all stations are busy, an intercom or outside call will camp on and cause the system to send camp-on tones and display messages to all stations in the hunt group. If an outside call is ringing in, all of the hunt group stations show ring flash on the line key. As soon as the station is available, the camp-on tone and message end, and the available station receives intercom or C.O. ringing (the line key stops flashing at all other stations). (The camped-on call will follow the recall route described on the previous page.)

If a pool line rings in or is transferred to a busy hunt group, all stations in the group receive a call waiting message and a camp-on tone. The POOL key does not flash until a station user in the hunt group hangs up. Then, it only lights at that station. If the user presses the POOL key before hanging up, a pool line is seized and the user hears outside dial tone; the waiting call remains camped on.

Hunt group stations can temporarily halt hunt group calls three ways: entering the hunt group remove feature code, placing the station in do-not-disturb, or placing the station in call forward mode. If all stations in the hunt group are busy, in do-not-disturb, or have hunt group remove enabled, a line key will flash to indicate an incoming call. Announcement stations and overflow stations cannot block hunt group calls using the do-not-disturb or hunt group remove features.

Hunt group stations not in the same tenant group as an intercom caller do not receive the incoming intercom call if cross-tenant traffic is denied.

Stations within the hunt group can receive direct ring-in, intercom, forwarded, or transferred calls to their individual intercom numbers without affecting other stations in the hunt group. Hunt group stations cannot have secretarial intercept stations.

Each hunt group can have a supervisor station that can monitor the outside calls of anyone in the hunt group. This feature can be useful in training or in evaluating the performance of hunt group members. The supervisor can hear both parties, but cannot be heard by either one. Refer to page 2-48 in the Keyset Section for more details.

System Features

House Phones

This feature provides users with the ability to place a pre-designated intercom or outside call simply by lifting the handset (or pressing the SPKR key) on a designated house phone. There are several applications for this feature, such as:

- **Courtesy paging phone:** Visitors hear pages instructing them to pick up the house phone (such as the "white paging phone" used in airport terminals). When they lift the handset, they are connected to a station user who can then give them a message or connect them to a call.
- **Emergency phone:** The house phone can be programmed to automatically place a call to an emergency number (such as 911). This could save time in an emergency.
- **Service phone:** Customers can use the house phone(s) to place orders or receive special services from the lobby. For example, the house phone would automatically dial the intercom number of a service representative (or hunt group number of the service department).
- **Intercom network:** House phones could be placed in specific locations throughout a building (such as examination rooms in a doctor's office) and could be programmed to access a specific station or group of stations (such as a nurses' station).

Any station may be designated as a house phone in database programming. The number dialed by the house phone is determined by the station's speed-dial programming. The number programmed in station speed-dial location 1 is automatically dialed during day mode, and the number in location 2 is dialed during night mode.

C.O. Line Features

C.O. line features include the following:

- Dual-Tone Multi-Frequency (DTMF) or Dial-Pulse Signalling
- Outgoing-Access, Allowed-Answer, and Ring-In Assignments
- Day and Night Modes
- C.O. Line Restriction and Station Toll Restriction
- Line Groups, Pool Lines, and Auto Lines
- Least-Cost Routing (LCR)
- Direct Inward System Access (DISA)

Dual-Tone Multi-Frequency (DTMF) Or Dial-Pulse Signalling

C.O. lines can be designated for DTMF or dial-pulse signalling. Keysets generate a digital code that is decoded by the system to be sent as either a DTMF or dial-pulse signal, depending on the line designation. Keysets can use either type of line; however, single-line sets can only use DTMF lines for placing outgoing calls.

Outgoing-Access, Allowed-Answer, And Ring-In Assignments

Each C.O. line has programmed lists that determine which stations have outgoing-access, allowed-answer, and ring-in assignments.

- **Outgoing-access assignment** permits the station user to place calls using the line.
- **Allowed-answer assignment** permits the user to answer incoming calls on the line. The keyset does not ring, but the line key flashes to indicate an incoming call.
- **Ring-in assignment** permits the station user to receive direct ring-in calls on the line. The keyset rings and the line key flashes. Allowed-answer assignment is automatically given to a station with ring-in assignment.

When keyset stations have at least one of these three assignments, the associated line keys show the status of their lines. Stations that do not appear on any of the C.O. line lists cannot place or directly receive outside calls; they are limited to intercom calls, conferences, transferred calls, and calls on system hold. A private line can be established by programming outgoing-access,

C.O. Line Features

ring-in, and allowed-answer assignments for the designated line to one station.

Up to three external signalling devices can be connected to the system. They can be assigned ring in for C.O. lines.

Day And Night Modes

Day mode and night mode have separate lists in the database for allowed-answer and ring-in assignments. While the system is in day mode, calls ring in to stations on the day lists. When the primary attendant places the system in night mode, the system uses the night lists for allowed-answer and ring-in assignments. Night mode also activates the night transfer relay that controls electrical devices (lights, alarm system, etc.) connected to it.

There is no attendant recall during night mode. A call will recall the station that transferred it or put it on hold until the recall and abandoned recall timers expire; then the system will disconnect the call.

The database night mode lists for allowed-answer and ring-in assignments can be reprogrammed from the primary attendant's keyset for any of the C.O. lines or stations. Refer to the DSS/BLF Unit User Guide and Attendant Features section for instructions.

C.O. Line Features

C.O. Line Restriction And Station Toll Restriction

C.O. lines and stations can be toll restricted using several methods. Lines can be "subject to toll restriction" or "unrestricted." They can also be identified to allow equal access dialing and/or to absorb digits. Stations can be toll restricted using a combination of eight station class of service (SCOS) restrictions and/or they can be restricted from accessing specific lines. Each of the C.O. line and station restrictions is described separately in the following paragraphs.

Line Restriction

A C.O. line is designated as "subject to toll restriction" or "unrestricted" in database programming. When a station user selects a line that is designated as subject to toll restriction, the system checks the database for that station's SCOS. When an unrestricted C.O. line is chosen, the station's SCOS is not checked and dialing is not required to hold the line.

Lines are commonly programmed as unrestricted to allow station users to have access to reduced-cost long distance carriers, or to use ringdown lines, dictaphones, voice mail systems, and other auxiliary equipment.

Equal Access

With equal access, the customer must choose a primary long distance carrier. This is the carrier that will automatically be accessed when the customer dials "1" before a telephone number. Customers may also select a secondary carrier or use several secondary carriers. These secondary carriers are accessed by dialing the equal access prefix (10) and a three-digit code assigned to the desired carrier (XXX) before dialing the telephone number. When using a secondary carrier, the telephone number is dialed as usual after the equal access code -- including the toll field (1, 0, or 01) and the area code, if needed.

A restricted C.O. line that does not have equal access designation prevents the system from providing accurate toll restriction and call cost information when "10XXX" is dialed on that line. When programmed for equal access, the system ignores the "10XXX" and checks the remaining digits for toll restriction. Equal access designation is programmed on a line-by-line basis. All lines are designated for equal access when the system is initialized. To limit access to specific secondary carriers, the stations can be restricted to using LCR only.

C.O. Line Features

Absorbed Digits

Restricted lines can be programmed to "absorb" or ignore the first digit(s) dialed so that only the remaining digits are checked for toll restriction and call cost purposes. There are two applications for this feature: PBX installations and installations in areas where part of the local office code is absorbed.

When the system is installed behind a PBX, users must dial special PBX codes to access the C.O. lines. Without absorbed digits, the lines must be unrestricted and the PBX performs the toll restriction and call cost functions. However, with absorbed digits, the system ignores the line access codes and checks the remaining digits for toll restriction and calculates call cost. When redialing or using call forward, the system automatically inserts a short pause after the PBX access code. (The PBX access code is entered as part of the call forward number.) When speed dialing, the user must enter the PBX access code and a pause before the telephone number.

In some rural areas, specific digits (dialed as all or part of the telephone number) are absorbed by the central office thus reducing the number of digits required to dial local calls. If the system is not programmed to recognize the absorbed digits, two problems may arise. One problem is that a telephone number of fewer than seven digits that is dialed at a toll-restricted station is not recognized as a valid telephone number and the call is dropped. The other problem is that toll restriction can be defeated by dialing the absorbed digits before dialing a toll number. However, when programmed to recognize absorbed digits, the system checks the remaining digits for toll restriction and processes numbers with less than seven digits as local calls (except 411 calls which are considered seven-digit toll calls).

C.O. Line Features

Line Exemption from LCR Only

A line may be designated as "exempt" from LCR only. This allows users with SCOS 6 (LCR Only) to directly access specified C.O. lines by pressing the appropriate line keys (or the POOL or AUTO key, if assigned) or by entering the appropriate line access feature code. This feature is required if C.O. lines are connected to auxiliary equipment, such as voice mail, dictation, or ring-down equipment. When the lines are designated as exempt from LCR only, stations with SCOS 6 and allowed access can use the special facilities.

Designating a line as exempt from LCR only also allows LCR-only stations to use the call forward to the public network feature. To do this, the line(s) must be assigned to a line group so that station users can enter a line group access code when programming the call forward number. For call forwarding and line group access purposes, all lines in the line group must be exempt from LCR only; if not, an attempt to access the line(s) results in reorder tones.

Station Class of Service (SCOS)

SCOS is programmed on a station-by-station basis. A station can be completely unrestricted (SCOS 0) or can have any combination of the following restrictions.

SCOS 1 — Operator restriction: Calls that begin with a "0" are restricted. This also restricts operator-assisted and international calls.

SCOS 2 — Toll access restriction: This restricts calls that begin with "1" unless the number is included in the allowed long distance number list and the station has SCOS 8.

SCOS 3 — International call restriction: Calls that begin with "01" are not permitted.

C.O. Line Features

SCOS 4 — Eight-digit call restriction: Calls are not permitted if they are over seven digits in length, unless they are in the allowed long distance number list and the station has SCOS 8.

SCOS 5 — Area/office code restriction: This restriction is divided into three user groups to allow three sets of area/office code restriction tables. This is useful for reducing restrictions for some of the station users while increasing restrictions for others. Each station is assigned to a user group in database programming.

Within each user group, area codes can be designated as restricted, allowed, or extended. Restricting an area code prevents users from placing calls to that area code. Allowing an area code also allows all office codes within that area code. Designating an area code as extended allows the programmer to determine which office codes (up to 800) are allowed or restricted within that area code. For each user group, up to 160 area codes can be marked as allowed or restricted in the database list, and up to four area codes may be marked as extended.

SCOS 6 — LCR only: Calls can only be placed using the least-cost routing (LCR) feature if this restriction is assigned. The user will hear reorder tones when attempting to place a call using any other method. A restricted user can still access individual lines if they were transferred, were placed on hold, or are recalling or ringing.

SCOS 7 — Alternate carrier number restriction: Calls cannot be placed to any of the numbers in the alternate carrier number list if the station is given this restriction. There can be up to 20 alternate carrier numbers with up to 10 digits each. The numbers do not include a toll field. An X in the number allows any digit 0-9.

SCOS 8 — Allowed long distance number: Stations with this SCOS are allowed to dial the numbers in the allowed long distance number list. There can be up to 20 numbers with up to 10 digits each. calls placed to these numbers are not subject to any of the other toll restrictions listed above. An X in the number allows any digit 0-9. A plus (+) in the number allows any number that begins with the designated sequence. The numbers do not include the toll field.

C.O. Line Features

Line Groups, Pool Lines, And Auto Lines

NOTE: On KF-rated systems, line groups can contain only one C.O. line each, there is only one pool line, and there is only one auto line. The AUTO key or the automatic line selection feature may be used to answer incoming calls, but it will only access the auto line for outgoing calls.

Line Groups

For easy access to available C.O. lines, the system can include line groups. Line group feature codes are used to select a line in one of the programmed line groups — eight groups of up to 24 lines each. For example, all local lines can be in one group, while another group contains WATS lines that are used for long distance calling. Lines can be included in more than one line group. Pool lines cannot be assigned to line groups.

Pool Lines

Pool lines are incoming/outgoing lines (up to eight) that are accessed by entering the pool line select feature code or by pressing the keyset POOL key.

Auto Lines

Auto lines are incoming and/or outgoing lines (up to 24) that can be answered by pressing a LINE key or the AUTO key, or by entering the automatic line answer feature code (350). Or, the user may press the flashing line or POOL key or the AUTO key to pick up a direct ring-in call. For calls ringing or holding at the station, a user may press the AUTO key. When more than one call is ringing or holding, the priority list shown below determines which call is picked up first.

- Ringing outside calls (ring ins, recalls, callbacks, or transfers) are answered first, in the order they were received.
- Then calls on individual hold are answered (not calls on system hold). Non-pool lines are answered before pool lines, otherwise calls are picked up in the order they were placed on hold.
- If no calls are ringing or holding, an available outgoing auto line is selected.

C.O. Line Features

Least-Cost Routing (LCR)

NOTE: The LCR feature is only available on MF-rated, extended software systems.

Least-cost routing (LCR) is a money-saving feature that allows the system to select the least-expensive line for placing toll calls. It can be used for placing outgoing calls or transferring calls to outside telephone numbers. Stations can be programmed to use LCR only for placing outgoing calls. LCR cannot be used for dialing international calls that begin with "01" or for call forwarding to outside telephone numbers. When the LCR feature is selected, the user dials the number as usual (including the area code, if needed). The system then does the following:

An LCR class of service is assigned to all stations, even those with LCR only (SCOS 6). Each station is assigned the class of service "unlimited" or a number from "0" to "6". The 0-6 designations indicate the number of facility groups through which the station can advance. Stations with designation "0" will not advance past the first facility group in each route group, stations with "1" may advance once (to the next programmed facility group), and so on. Stations with "unlimited" designation may advance through all programmed facility groups.

- **Checks the area code and/or office code:** The database contains up to 12 separate lists of area and office codes called route groups. The system checks the route groups in numerical order (1-12) and selects the first route group that contains the area and/or office code that was dialed.
- **Checks the time of day:** Each route group has three time blocks that serve to select the most-economical line: day (8:00 AM - 4:59 PM), evening (5:00 PM - 10:59 PM), and night (11:00 PM - 7:59 AM and weekends).
- **Selects a group of lines:** Each time block contains up to eight programmed groups of up to 32 lines each, called facility groups. The facility groups are programmed so that the least expensive lines are checked and, if available, are selected first. The number of facility groups check is determined by the LCR class of service.

C.O. Line Features

- **Adds or deletes digits according to the facility group chosen:** Each facility group has a programmed set of up to eight dial rules that tell the system what to dial. For example, if the selected facility group requires that the number contain "1", but no area code, the dial rules include the "1" and drop the area code.
- **Checks for toll restrictions:** Once the number has all of the necessary digits added or deleted, the system checks SCOS and line restrictions for the station to determine whether the call is allowed. If the call is allowed, the system continues to the next step. If not allowed, the system returns to the third step to select another facility group. If the station is restricted from all of the facility groups in the route group, reorder tones are sent by the system and the call is dropped before it is dialed.
- **Dials the modified telephone number:** If the number is allowed, the system seizes the selected line, waits for dial tone, and dials. The user hears a single progress tone, dial tone, and the dialing sequence while the call is being placed.

Direct Inward System Access (DISA)

DISA is a programmable feature that allows an outside party to dial into the system from an external DTMF telephone and then access one of the following: intercom numbers for placing calls to stations; pilot numbers for placing calls to hunt groups; line groups, pool lines, or auto lines for placing outgoing calls; or the modem for remote system programming. (Toll restriction is not checked on DISA calls when an outgoing line is accessed.) DISA users cannot access LCR, individual C.O. lines, talkback speakers, or paging.

Any of the C.O. lines can be programmed to receive incoming DISA calls in day and/or night mode. When not in use for DISA, the line can be used internally for placing outgoing calls.

DISA lines can be assigned four-digit security codes that limit access either to the C.O. lines and modem or to the entire system. The installer can program separate codes for each DISA line that will be used during day and/or night modes.

C.O. Line Features

To use DISA:

NOTE: If you hear repeating reorder tones during this procedure, you made a mistake. If you do not hear intercom dial tone, hang up and start over. If you hear intercom dial tone, try dialing another intercom number.

(1) From a DTMF telephone, dial the telephone number of the DISA line.

- *If you hear a progress tone*, a security code is required. Enter the DISA day or night security code.

(2) When you hear intercom dial tone, do one of the following:

- **For placing an outgoing call:** Dial one of the following line access codes:

9 (Pool Line Select)

89 (Auto Line Select)

81-88 (Line Group Select)

- **For remote system programming:** Dial one of the following modem access codes:

260 (for 300 baud)

270 (for 1200 baud)

- **For accessing a station:** Dial the intercom number (use 100 if calling the attendant, do not use 0). You hear repeating double tones until answered.

- **For accessing a hunt group:** Dial the pilot number (231-245). You hear repeating double tones until answered.

(3) *If you hear a single progress tone*, enter the DISA day or night security code. You hear outside dial tone or modem tone and can place your call or activate the modem.

Call Cost Accounting

The call cost accounting feature estimates the cost of each outgoing or incoming call, displays it on keysets, and prints it in the SMDR/SMDA reports. The cost estimate is based on the telephone number dialed, the elapsed time of the call, the day of the week, and the time of day. A table in the database supplies the daytime rates for toll calls and local calls, including evening and weekend rate changes.

NOTE: The call cost accounting feature is intended to provide a **cost estimate** that is applied to the various classes of calls. Due to the wide variation in charges among network carriers, the system's call cost calculation cannot be used as a prediction of actual charges. This feature can only be used to estimate call cost as a management tool.

Station Message Detail Accounting (SMDA)

Station message detail accounting (SMDA) provides management and accounting records that estimate the telephone company's charges and can be used to analyze system traffic and employee productivity.

This data is recorded on a customer-provided printer, magnetic tape, or floppy disk that is connected to the KSU. If the SMDR feature is used, the same device can be used to record the data for SMDA and SMDR. SMDR information is buffered (at least 10 calls) while the SMDA report prints.

Each of the SMDA reports (there are 16 different ones available) divides incoming and outgoing calls and can be automatically generated daily, weekly, or monthly. They also can be generated on demand through the programming terminal. Reports can include the information described in the following paragraphs.

Station Message Detail Accounting (SMDA)

Account Code Reports

Call information can be printed for up to 200 account codes. Each time a standard, forced, or optional account code is used, the system opens a "record" for that code. Every time a call is placed that uses that code, the call data is added to the record for that account code. If more than 199 codes are used, the last record (number 200) is used as the overflow record. That is, if 205 different codes are used, call data for the last six will be combined in record 200. For each account code, information includes the total number of calls handled, the total and average duration of calls, and the total and average cost of calls.

Summary Reports

Call information can be selected for the system units listed below. Information includes the total number of calls handled, number of incoming and outgoing calls, total and average duration of incoming and outgoing calls, total and average cost of incoming and outgoing calls, and number of users.

System: SMDA prints call information for the entire system. System reports also include number of transfers and recalls, average answer time, number of unanswered calls, average ring time (unanswered), and number of equipped lines, incoming lines, outgoing lines, and in/out lines.

Tenant groups: Call information is printed separately for each tenant group.

Tenants and departments: Call information for each tenant group is divided into departments.

Station Message Detail Accounting (SMDA)

Detailed Reports

These reports can show call information for the top 1-120 users, listed by system, tenant group, or tenant/department. Separate reports are also available by tenant/department, individual stations, or C.O. lines. The following call information can be requested:

System, tenant, or tenant/department by call cost: Total and average cost of calls for users in the selected group of stations. Station circuit numbers, intercom numbers, and user names are also included.

System, tenant, or tenant/department by call duration: Total and average duration of calls for the selected group of stations. Station circuit numbers, intercom numbers, and user names are also included.

System, tenant, or tenant/department by number of calls: Total number of calls for the selected group of stations. Station circuit numbers, intercom numbers, and user names are also included.

Tenant/department listed by station number: Number of calls, incoming and outgoing call duration, incoming and outgoing call cost, and number of users are listed in numerical order for each department in each tenant group. Reports also include station circuit numbers, intercom numbers, and user names.

Listed by selected station: Number of calls, incoming and outgoing call duration, incoming and outgoing call cost, and number of users are listed in numerical order for selected stations. Reports include station circuit numbers, intercom numbers, and user names.

Listed by selected C.O. line: C.O. line circuit number, line identification, and line type are shown for selected lines. The report also includes number of incoming and outgoing calls, averages answer time, number of unanswered calls, and average ring time for unanswered calls as well as total and average duration and cost of incoming and outgoing calls.

Station Message Detail Accounting (SMDA)

When programming the output, the installer can choose to clear the SMDA information after each report or let it remain in the memory to be accumulated and included in all later reports. This gives the customer the option of having limited or comprehensive SMDA reports.

The SMDA output reports are printed in the formats shown in the following figures. All reports are 80 characters wide. The number of days included in each report is set during programming.

SMDA Account Code Report Format

DETAILED ACCOUNT CODE REPORT 00:20 FRI-28-MAR-1986
Data Collection Period Began 00:21 THU-27-MAR-1986

Inter-Tel/GX

Report by Account Code
Reports Listed by Account Number

1. Account Code 1000

Total Number of Calls Handled	726
Number of Incoming Calls	723
Number of Outgoing Calls	3
Total Duration of Calls Handled	48:55:55
Duration of Incoming Calls	48:53:53
Ave. Duration of Incoming Calls	0:04:03
Duration of Outgoing Calls	0:02:02
Ave. Duration of Outgoing Calls	0:00:00
Total Cost of Calls Handled	\$0.20
Cost of Incoming Calls	\$0.00
Ave. Cost of Incoming Calls	\$0.00
Cost of Outgoing Calls	\$0.20
Ave. Cost of Outgoing Calls	\$0.06

Station Message Detail Accounting (SMDA)

SMDA Summary Report Format

STATION MESSAGE DETAIL ACCOUNTING 00:00 THU-27-MAR-1986
Data Collection Period Began 00:20 WED-26-MAR-1986

Inter-Tel/GX

System Summary Report

Total Number of Calls	1,330
Number of Incoming Calls	843
Number of Outgoing Calls	478
Number of Transfers/Recalls	863
Average Answer Time	0:00:16
Number of Unanswered Calls	16
Average Ring Time -- Unanswered	0:00:43
Total Duration of Calls	72:28:56
Duration of Incoming Calls	48:39:38
Ave. Duration of Incoming Calls	0:03:27
Duration of Outgoing Calls	23:49:18
Ave. Duration of Outgoing Calls	0:02:56
Total Cost of Calls	\$499.49
Cost of Incoming Calls	\$0.00
Ave. Cost of Incoming Calls	\$0.00
Cost of Outgoing Calls	\$499.00
Ave. Cost of Outgoing Calls	\$0.92
Number of Users	117
Number of Equipped CO Lines	24
Number of Incoming-Only CO Lines	12
Number of Outgoing-Only CO Lines	5
Number of Incoming/Outgoing CO Lines	7

Station Message Detail Accounting (SMDA)

SMDA Summary Report Format (Cont'd)

Summary Report for Tenant

Tenant 1: "INTER-TEL, INC. "

Total Number of Calls Handled	782
Number of Incoming Calls	777
Number of Outgoing Calls	5
Total Duration of Calls Handled	4:01:22
Duration of Incoming Calls	4:00:20
Ave. Duration of Incoming Calls	0:00:18
Duration of Outgoing Calls	0:01:02
Ave. Duration of Outgoing Calls	0:00:12
Total Cost of Calls Handled	\$1.15
Cost of Incoming Calls	\$0.00
Ave. Cost of Incoming Calls	\$0.00
Cost of Outgoing Calls	\$1.15
Ave. Cost of Outgoing Calls	\$0.23
Number of Users	2

Station Message Detail Accounting (SMDA)

SMDA Summary Report Format (Cont'd)

Summary Report for Tenant/Department

Tenant 1: "INTER-TEL, INC. "

 Department 1: "EXECUTIVES "

Total Number of Calls Handled	155
Number of Incoming Calls	88
Number of Outgoing Calls	67
Total Duration of Calls Handled	6:33:22
Duration of Incoming Calls	3:41:42
Ave. Duration of Incoming Calls	0:02:31
Duration of Outgoing Calls	2:51:40
Ave. Duration of Outgoing Calls	0:02:33
Total Cost of Calls Handled	\$64.23
Cost of Incoming Calls	\$0.00
Ave. Cost of Incoming Calls	\$0.00
Cost of Outgoing Calls	\$64.23
Ave. Cost of Outgoing Calls	\$0.95
Number of Users	15

 Department 2: "ACCOUNTING "...

Station Message Detail Accounting (SMDA)

SMDA Detailed Report Format

STATION MESSAGE DETAIL ACCOUNTING 00:00 FRI-28-MAR-1986
Data Collection Period Began 00:20 THU-27-MAR-1986

Inter-Tel/GX

Detailed System Report
or, Detailed Report for Tenant
or, Detailed Report for Tenant/Department

Sorted by Total Cost

1. Station Circuit 1.1 E100 NORMA
Total Cost of Calls Handled \$1.10
Cost of Incoming Calls \$0.00
Ave. Cost of Incoming Calls \$0.00
Cost of Outgoing Calls \$1.10
Ave. Cost of Outgoing Calls \$0.27

or, Sorted by Total Duration

1. Station Circuit 1.1 E100 NORMA
Total Duration of Calls Handled 2:07:42
Duration of Incoming Calls 2:06:43
Ave. Duration of Incoming Calls 0:00:18
Duration of Outgoing Calls 0:00:59
Ave. Duration of Outgoing Calls 0:00:14

or, Sorted by Number of Calls

1. Station Circuit 1.1 E100 NORMA
Total Number of Calls Handled 421
Number of Incoming Calls 417
Number of Outgoing Calls 4

Station Message Detail Accounting (SMDA)

SMDA Detailed Report Format (Cont'd)

Detailed Report for Tenant/Department
Listed by Station Number

Tenant 1: "INTER-TEL, INC. "
Department 1: "EXECUTIVES "
1. Station Circuit 1.1 E100 NORMA

Total Number of Calls Handled	421
Number of Incoming Calls	417
Number of Outgoing Calls	4
Total Duration of Calls Handled	7:12:32
Duration of Incoming Calls	7:03:32
Ave. Duration of Incoming Calls	1:04
Duration of Outgoing Calls	9:00
Ave. Duration of Outgoing Calls	2:25
Total Cost of Calls Handled	\$1.53
Cost of Incoming Calls	\$0.00
Ave. Cost of Incoming Calls	\$0.00
Cost of Outgoing Calls	\$1.53
Ave. Cost of Outgoing Calls	\$0.38

Station Message Detail Accounting (SMDA)

SMDA Detailed Report Format (Cont'd)

Detailed Report for Selected Stations
Stations Listed By Circuit Number

1. Station Circuit 11.8 E100 NORMA

Total Number of Calls Handled	421
Number of Incoming Calls	417
Number of Outgoing Calls	4
Total Duration of Calls Handled	2:07:42
Duration of Incoming Calls	2:06:43
Ave. Duration of Incoming Calls	0:00:18
Duration of Outgoing Calls	0:00:59
Ave. Duration of Outgoing Calls	0:00:14
Total Cost of Calls Handled	\$1.10
Cost of Incoming Calls	\$0.00
Ave. Cost of Incoming Calls	\$0.00
Cost of Outgoing Calls	\$1.10
Ave. Cost of Outgoing Calls	\$0.27

Station Message Detail Accounting (SMDA)

SMDA Detailed Report Format (Cont'd)

Detailed Report for Selected CO Lines
CO Lines Listed by Circuit Number

1. CO Circuit 1.1 LOCAL 1
Line Type -- incoming only
Total Number of Calls 137
Number of Incoming Calls 137
Number of Outgoing Calls 0
Average Answer Time 0:00:12
Number of Unanswered Calls 5
Average Ring Time -- Unanswered 0:01:14

Total Duration of Calls 6:15:24
Duration of Incoming Calls 6:15:24
Ave. Duration of Incoming Calls 0:02:44
Duration of Outgoing Calls 0:00:00
Ave. Duration of Outgoing Calls 0:00:00

Total Cost of Calls \$0.00
Cost of Incoming Calls \$0.00
Ave. Cost of Incoming Calls \$0.00
Cost of Outgoing Calls \$0.00
Ave. Cost of Outgoing Calls \$0.00

Station Message Detail Recording (SMDR)

Station message detail recording (SMDR) is a system feature that provides a detailed record of outgoing calls and can include incoming calls. An outgoing call lasting longer than the valid call timer is recorded; however, if the call was transferred or placed on hold, the valid call timer is not checked and the call is recorded. The valid call timer does not affect incoming calls, they are recorded from the time they are answered.

Station call data is recorded on a customer-provided printer, magnetic tape, or floppy disk that is connected to the KSU. If the SMDA feature is used, the same device can be used to record the data for SMDA and SMDR. SMDR information is buffered (at least 10 calls) while the SMDA report prints.

Selectable SMDR options include any combination of the following:

- Incoming calls
- Outgoing non-toll local calls (including "free" calls on unrestricted lines and internal PBX calls)
- Outgoing toll calls (7-digit, 10-digit, operator-assisted, or international calls)
- DISA calls
- Conference calls
- System ring-in messages (show how long calls ring before being answered)

The SMDR output report is printed in either wide or narrow format, as shown on the following pages. The wide format report requires an 80-character output device, and the narrow format requires a 64-character output device. A page heading that includes the day of the week, date, month, year, and column headings is generated at midnight when the clock cycles from 2359 to 0000 hours (international time).

Station Message Detail Recording (SMDR)

The programmer can determine whether absorbed digits and toll field digits appear in the SMDR printout. As an example, assume the following number was dialed: 89 (PBX code) - 10XXX-1 (toll fields) - 602 (area code) - 961-9000 (seven-digit number). The PBX absorbed digits can be suppressed so that only 10XXX-1-602-961-9000 appears. Or, all but the first digit in the toll fields can be suppressed to print 89-11-602-961-9000. Both fields can be suppressed to print 11-602-961-9000.

In addition, the programmer can determine which station(s) will be included in the report. Any or all equipped stations can be included.

Station Message Detail Recording (SMDR)

SMDR Report Wide Format

TYP	EXT	USRNAME	LN	DIALED DIGITS	START	ELPST	COST	ACCT CODE
IN	110	SMITH	10	16028934690	12:34	16:58	3.50	12345678

TYP Call type abbreviations for: incoming calls (IN); outgoing local calls (LOC); outgoing "free" calls (000); 7-digit outgoing toll calls (T7); 10-digit outgoing toll calls (T10); operator-assisted, international calls (TOI); DISA calls (DSA); DISA calls to the modem (MDM); conference calls (CNE); and ring ins (blank field).

EXT The intercom number (XXX) of the last station to handle the call. For a CO-to-CO call, this field shows the second line involved (LXX). For a ring-in, this field shows the intercom number of the station that answered, or *** if the call was unanswered.

USRNAME User's name, if programmed.

LN The C.O. line number used (XX). This is the default C.O. line number given to the line (i.e., C.O. line 1.1 is line 1), regardless of line key programming.

DIALED DIGITS The first 32 digits of the telephone number dialed, including hyphens between the toll field, area code, office code, etc. RING appears for a ring-in.

START Time the call was placed (or answered) is shown in 24-hour international time (00:00 - 23:59) rounded up to the nearest minute.

ELPST Call length from the beginning of the call until disconnect. Elapsed time is rounded up to the nearest minute to show hours and minutes. For ring-ins, S=XXX appears in this field to show the ring time in seconds.

COST Approximate cost of the call (XXX.XX), based on the data base information, rounded to the nearest cent.

ACCT CODE A standard, forced, or optional account code (with 4-8 digits), if used. An optional account code overrides installer-programmed standard or forced account codes.

Station Message Detail Recording (SMDR)

SMDR Report Narrow Format

STN	NUMBER DIALED	DUR	TIME	LN	ACCOUNT
111	16029619000	010	0900	L10	1234578

STN The intercom number (XXX) of the last station to handle the call. Two lines are printed for a CO-to-CO call, each showing a line number in this field. For a ring-ins, this field shows the intercom number of the station that answered, or *** if the call was unanswered.

NUMBER DIALED The first 24 digits of the telephone number dialed. The absorbed digits or all but the first digit of the toll field may be suppressed. RING appears for a ring-in.

DUR Call length from the end of the valid call timer until disconnect. Elapsed time is shown in minutes, rounded up to the nearest minute, for up to 255 minutes (anything over 255 appears as ***). For a ring-in, the field shows XX:XX, which indicates the number of minutes and seconds that passed before the call was answered.

TIME Time the call was placed or answered. Time is shown in 24-hour international time (0000-2359) rounded up to the nearest minute.

LN The number of the C.O. line used. This is the default C.O. line number given to the line (i.e., C.O. line 1.1 is line 1), regardless of line key programming.

ACCOUNT A standard, forced, or optional account code (with 4-8 digits), if used. An optional account code overrides installer-programmed standard or forced account codes.

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GX
Keyset
User Guide

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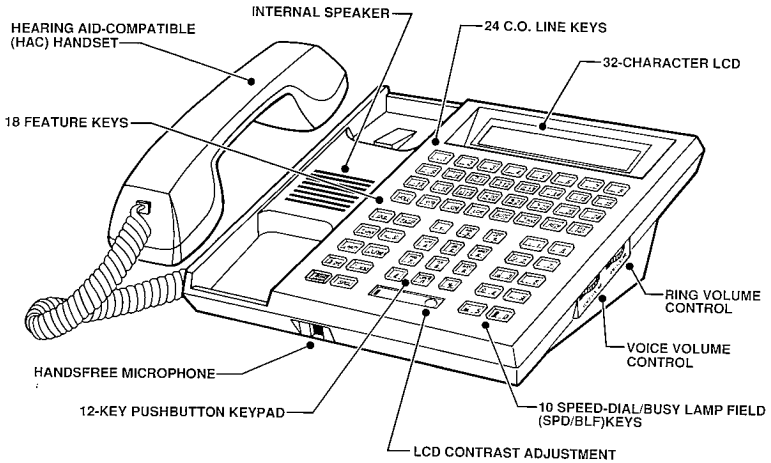
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Introducing The GX Keyset



Initial Feature Keys

HOLD*	Individual Hold	PAGE*	Page
XFR*	Transfer/Reverse Transfer	SPKR	Speaker
CNF	Conference Call	IC	Intercom
LCR*	Least-Cost Routing	MUTE	Microphone Mute
AUTO*	Auto Line Select/Answer	FWD	Call Forward
POOL	Pool Line Select	DND	Do-Not-Disturb
REDL*	Last Number Redial	MSG	Message
SYS SPD*	System Speed Dial	BGND MUSIC*	Background Music
QUE*	Busy Callback (Queue)	SPCL	Special

*User-Programmable Feature Keys

Introducing The GX Keyset

Keysets are available as standard or display models. The only physical difference is that the Display Keyset has a liquid crystal display (LCD). Procedures for operating the keyset are included in this section. Keyset features include the following:

- If you have a display screen on your keyset, it has two 16-character lines. When the keyset is not in use, the LCD shows the date and time. Other displays include: numbers dialed, do-not-disturb messages, call sources, call cost and elapsed time of calls, and more. In the procedures, applicable displayed messages are shown in [brackets]. If you have a standard keyset, it can be converted to a display keyset. The brightness of the display is controlled by a potentiometer located under the telephone number plate on the face of the keyset.
- Incoming intercom calls activate your keyset's built-in speaker and microphone, which allows you to answer handsfree. The speaker also allows you to dial while on hook, monitor calls, receive pages, and listen to background music. Your keyset can be equipped with an optional external desk speaker for handsfree conversations on outside calls.
- You can adjust the volume of your keyset's ringing alert tones (RING VOLUME) and the loudness of voices, signals, and music heard through the keyset speaker (VOICE VOLUME) by adjusting the dials on the right side of the keyset. You can also adjust the pitch of the ring signals by setting DIP switches located on the bottom of the keyset.
- Features are accessed by pressing a feature key or entering a feature code. The procedures in this section identify the correct key to press or the correct code to enter. For programmable keys, both the key and its corresponding code are given. Some features require you to first press the SPCL key in order to signal the system to accept the code.
- Several procedures show more than one method for using the feature. To show this flexibility, some lines begin with EITHER and OR; you can choose to either perform one step or the other. When a line begins with IF, perform the step if it applies.
- Many of the features "time out" if you wait too long before performing the next step. When this happens, you must start over. In the procedures, you will see references that a timer "expired," it means that the allowed time was used up.

Introducing The GX Keyset

- Programmable system options may affect your use of the C.O. lines. Your keyset can be programmed for the following:
 - Allowed-answer assignment allows you to answer a call that is ringing into the system. You do not hear ringing at your station, but the LINE key flashes to indicate a ringing call.
 - Ring-in assignment allows calls to directly ring in to your station (possibly bypassing the attendant).
 - Outgoing-access assignment allows you to access a line for outgoing calls.
 - Station toll restrictions may prevent you from placing long distance calls or may restrict you to using LCR only.
- Your GX Keyset has 18 keys for easy use of the many features. You can customize the nine programmable keys with any of the features listed at the end of this section. The non-programmable feature keys (except SPCL) have status lights to show their activity.
- There are 10 SPD/BLF keys to the right of the keypad. They are used for storing and speed dialing up to 10 frequently-used intercom numbers and 10 outside telephone numbers. These keys also serve as a busy lamp field for the 10 intercom numbers, showing the status of each station. Any time a procedure says "dial an intercom number," you can press a SPD/BLF key instead.
- The flash rates of the status lights in the line keys, SPD/BLF keys, and eight feature keys indicate the status of the stations, lines, and features. The flash rates are described below in interruptions per minute (IPM); the meanings of these flash rates for each key are described on the next page.

STEADY	— Lamp on, no flash.
SLOW FLASH	— Single flash at 30 IPM.
MEDIUM FLASH	— Single flash at 120 IPM.
FAST FLASH	— Single flash at 240 IPM
FLUTTER	— Flashes at 60 IPM with a 960 IPM flutter.

Introducing The GX Keyset

Lamp Indications

	Steady 0 IPM	Slow 30 IPM	Medium 120 IPM	Fast 240 IPM	Flutter 60/960 IPM
POOL	All pool lines are busy	Pool line in use at your station	Pool line recalling from hold or transfer	Ring-in, call waiting, or busy line callback	Pool line is on hold
IC				Intercom call is cam-ped on	Intercom call is on hold
SPKR	Speaker is on or ready for use				
CNF		Conference is in progress	Conference recalling station		Initiator left conf. in progress; or conf. party is on conference wait hold
MUTE	Microphone is muted				
FWD	Calls are being forwarded				
MSG			Message waiting		
DND	Your station is in do-not-disturb				
SPD/BLF	Station is busy	Station is in do-not-disturb			Continuous = station out of service
CO LINE	Line in use at another station	Line in use at your station	Line is recalling from hold or transfer	Ring-in, call waiting, or busy line callback	Line is on hold

Introducing The GX Keypad

Ring Signals

The following signals are heard through the handset or speaker:

Signal	Action
Intercom dial tone	Handset lifted or SPKR or IC key pressed
Double tones (called station receives same signal)	Intercom call — repeats for private call or call to non-handsfree station; one double tone for handsfree call
Intercom busy signal — slow repeating tones (until camp on)	The station or line you tried to access is busy
Four fast tones and a pause (repeating)	Called station is in do-not-disturb
Reorder tones — fast tones (may be four or repeating)	Number or feature code was not accepted, dialing timer expired, or number dialed was not allowed by toll restriction
Single progress tone	Feature procedure completed or something needs to be entered
Camp-on tone — single tone every few seconds	Another station has camped on to your station


The signals heard through the ringer are:

Type of Call	Signal
Outside call	Single long tone every 6 seconds
Intercom call	Two short tones and a pause (repeats for private calls)
Queue callback	Three short tones and a long pause (repeating)
Recall from hold or transfer	Four short tones and a long pause (repeating)
Reminder message	Eight short tones


Headset Connection And Operation

Two types of four-conductor, modular headsets can be attached to the keysets: headsets that have dynamic microphones, or headsets with carbon microphones that have an external AC power source. The headset is activated when you receive a handsfree intercom call or press the SPKR key. The speaker cannot be used when a headset is enabled.

To Connect A Headset:

- (1) Disconnect the headset by unplugging the coiled headset cord from the base of the keyset. Leave the headset in the cradle.
- (2) Insert headset plug into the vacant headset jack.
- (3) Press  and dial 315 (Headset Enable).

To Disconnect The Headset:

- (1) Reattach the headset.
- (2) While on hook, press  and dial 316 (Headset Disable).

Automatic Call Access

This feature allows you to determine the way in which incoming calls are answered. The four variations are as follows:

- You can answer ringing intercom calls by simply lifting the handset, but outside calls must be answered by pressing a LINE key, the AUTO key, or the POOL key. (This option is selected when the system is first installed.)
- You hear intercom dial tone when the handset is lifted and must press a LINE key (or the AUTO or POOL key) or the IC key to access an incoming call.
- You can answer ringing outside calls by lifting the handset, but ringing intercom calls must be answered by pressing the IC key.
- You can answer any ringing call by lifting the handset. If no call is ringing, you hear intercom dial tone when the handset is lifted. (This is the way single-line sets work.)

NOTE: In any of the above variations, you may still receive handsfree intercom calls (if enabled).

To Change Outside Call Access:

- (1) While on hook, press .
- (2) Select one of the options listed below. You hear a progress tone.
 - *If you wish to automatically answer ringing outside calls by lifting the handset, dial 360 (Automatic Line Access).*
 - *If you wish to access outside calls by pressing the LINE, AUTO, or POOL key, dial 361 (Cancel Automatic Line Access).*

To Change Intercom Call Access:

- (1) While on hook, press .
- (2) Select one of the options listed below. You hear a progress tone.
 - *If you wish to automatically answer ringing intercom calls by lifting the handset, dial 362 (Automatic Intercom Access).*
 - *If you wish to access ringing intercom calls by pressing the IC key, dial 363 (Cancel Automatic Intercom Access).*

Intercom Calls

Incoming calls automatically activate the speaker in your keyset unless the caller placed a private intercom call or your keyset is programmed to always receive private intercom calls. You can speak handsfree or lift the handset for privacy.




An intercom caller who reaches your busy station can camp on, request a callback (queue), or leave a message.

Intercom numbers are assigned to every station. An intercom number can be given to a transfer-to-park location (an un-equipped station from which calls can be reverse transferred). Attendants are called by dialing their intercom number or zero.

Pilot numbers are intercom numbers that are used to place and transfer calls to a hunt group of stations. When the pilot number receives a call, the system hunts for an available station.

To Receive An Intercom Call:




You will receive one of the following call indicators:

- *If you hear a double tone and a call announcement and your SPKR key is lit* [displays INTERCOM CALL FROM XXX], respond handsfree (OR lift the handset for privacy).
- *If you hear repeating double tones* [displays INTERCOM CALL FROM XXX], lift the handset (OR press  to speak handsfree).
- *If your IC key is fluttering*, you have an intercom call holding. Lift the handset and press  (OR while on hook, press  to speak handsfree).

Intercom Calls

To Place An Intercom Call:

NOTE: When placing a call, begin dialing before the timers expire or the system will drop the connection and send repeating reorder tones.

- (1) Lift the handset (OR press  or  to dial while on hook).
- (2) *If you want the call to ring until answered when calling a handsfree keyset (private call), press .*
- (3) Dial an intercom number. This can be the attendant ("0"), a station intercom number, a talkback speaker intercom number, or a hunt group pilot number. [Number displays.] The MUTE key lights if you are dialing on hook.
 - *If calling a handsfree keyset station, speak after you hear a double tone.*
 - *If you are calling a single-line station, a hunt group, or a keyset with handsfree disabled, or if you placed a private intercom call, you hear repeating double tones until the call is answered.*
 - *When calling a talkback speaker, it does not ring. You are immediately connected and can speak.*
 - *If you hear four fast tones and a pause, the station is in do-not-disturb. You may leave a message (if calling a keyset) or request a callback.*
 - *If the station is busy, you may camp on, request a callback, or leave a message.*
 - *If there is no answer when calling a keyset, you may leave a message.*
 - *If you dialed an invalid number, you hear repeating reorder tones.*
- (4) *If dialing on hook, lift the handset to speak when the called party answers. The MUTE key goes off.*

Intercom Calls

If The Called Station Is Busy, Camp On:

Do not hang up. You camp on and hear music, and the busy station hears a tone to indicate a call waiting. When the station is available, a private call is automatically placed (you hear repeating double tones until answered).

If Busy Or In Do-Not-Disturb, Request A Callback (Queue):

NOTE: You can request a callback even if you camped on. Only request one callback from a busy station or a line at a time.

- (1) Press **QUE** (OR press **SPCL** and dial 6) and hang up.
- (2) Lift the handset when you hear three tones. [Displays XXX IS NOW AVAILABLE.] A private call is automatically placed to the queued station.

***If you do not answer a callback before the timer expires, it will be cancelled. If your station is busy when called back, your queue will be placed at the end of the queue list.*

- (3) To cancel a queue request, while on hook, press **QUE** (OR press **SPCL** and dial 376).


If Calling A Keypad And Busy, No Answer, Or In Do-Not-Disturb, Leave A Message:

- (1) Press **MSG**.
- (2) **EITHER**, Hang up if you want the called party to call you. (You may press **LINE** or **IC** to disconnect.) The called station's MSG key is flashing.

OR, To have the party call his or her message center to pick up your message, do not hang up. After a moment, a private call is placed to the called party's message center. Leave your message and hang up. The called station's MSG key is flashing.


Intercom Calls

To Cancel A Message You Left:

- (1) Lift the handset and dial the intercom number of the station with the message.
- (2) Press  and dial 366 (Message Cancel). You hear intercom dial tone.
- (3) Hang up.


To Pick Up Messages:

If your MSG key is flashing [displays MESSAGE RECEIVED FROM XXX]:

- (1) Lift the handset and press . An intercom call is placed with either your message center or the person who left the message, depending on how the message was placed.
- (2) *If the MSG key continues to flash*, there is another message. [The next message displays.] Repeat step 1.


To Cancel Messages Without Answering:

If your MSG key is flashing:

- (1) While on hook, press . The displayed message is cancelled.
- (2) *If the MSG key continues to flash*, there is another message. [The next message displays]. Either respond to the message OR cancel it.

To View Messages Received On A Display Keypad:

If your MSG key is flashing [displays MESSAGE RECEIVED FROM XXX]:

While on hook, press  repeatedly to view waiting messages. You may cancel or respond to each message while it is displayed.


Outside Calls



NOTE: On KF-rated systems, line groups contain only one line each, and there is only one pool line and one outgoing auto line. The AUTO key may be used to answer incoming calls, but it will only access the auto line for outgoing calls.

To Answer Outside Calls:

(1) When you receive one of the call indicators listed below, lift the handset. The possible outside call indicators are:

- **An intercom call** announcing an outside call and/or repeating long tones and a LINE key is flashing fast. [Displays LINE XX TRANSFER FROM XXX or CALL RINGING IN ON LINE XX.]
- **A fast-flashing LINE key** (you may hear repeating long tones at another station or over an external ringer). Your keyset is programmed with allowed-answer assignment for that line.
- **A fluttering LINE key.** An outside call was transferred to hold at your station.

(2) **EITHER**, Press fast-flashing or fluttering . The LINE key flashes slowly.






OR, Press  (or press  and dial 350).

Outside Calls


To Place An Outside Call:

NOTE: When placing a call, begin dialing before the timers expire or the system will drop the connection.

(1) While on or off hook, select an outgoing line (for which you have outgoing access) using **one** of the following methods (the selected LINE key flashes slowly) and, if on hook, the MUTE key lights:

- Press unlit  (1-24) for direct access.
- Press  (or press  and dial 89) to select the highest-numbered available auto line.
- Press . The system selects one of the pool lines.
- Dial a Select Line Group feature code (81-88). This selects a line in the chosen group. (Press  before dialing the code if on hook.)
- Use the least-cost routing procedure. (Refer to page 2-18.)

(2) You will hear one of the following signals:

- **Outside dial tone:** Go to step 3. LINE key flashes slowly.
- **Progress tone:** Enter a forced account code. [ACCT# displays.] You hear another progress tone and outside dial tone when accepted. LINE key flashes slowly. Go to step 3.
- **Repeating reorder tones:** You are restricted from the line chosen. Select another line. Or you are restricted to using LCR only. Try again using the LCR procedure.
- **Busy signals:** The line is busy. You may camp on or request a callback. *If on hook*, press  to disconnect.


Continued...

Outside Calls

- (3) Dial the telephone number when you hear outside dial tone. You can manually dial, redial, or speed dial the number. [Displays number dialed; the elapsed time and call cost display after the timer expires.]

***If you hear repeating reorder tones, you dialed a restricted telephone number.*

- (4) *If on hook:*

EITHER, Monitor the call handsfree (e.g., when listening to a recorded message). The other party cannot hear you. Press  if you wish to disconnect.



OR, Lift the handset when the party answers. The SPKR and MUTE keys go off. *If using an external speakerphone, you may speak handsfree.*

If The Line Is Busy, Camp On:




- (1) When you hear busy signals, do not hang up. You automatically camp on and hear music until the line is available.
- (2) When you hear a progress tone and the outside dial tone, dial the telephone number. The LINE key flashes slowly.

If The Line Is Busy, Request A Callback (Queue):

NOTE: You can request a callback even if you camped on. Only request one callback from a busy station or a line at a time.

- (1) Press  (OR press  and dial 6) and hang up.
- (2) Lift the handset when you hear three tones. [Displays LINE XX IS NOW AVAILABLE.]

***If you do not answer a callback before the timer expires, it will be cancelled. If your station is busy when called back, your queue will be placed at the end of the queue list.*

- (3) Press fast-flashing . The LINE key flashes slowly.
- (4) Dial the telephone number.
- (5) **To cancel a queue:** While on hook, press  (OR press  and dial 376).

Outside Calls

To Place A Call Using Least-Cost Routing:

NOTE: Least-cost routing is only available on MF-rated, extended software systems. If your station is programmed for LCR only, you will access only the first facility group in the selected route group.

(1) While on or off hook, press (OR press and dial 80). You hear a progress tone. The SPKR key lights if you are on hook.

- *If required*, enter a forced account code. [Displays ACCT#.] You hear another progress tone when accepted.

(2) Dial the telephone number. Include a "1" and the area code, if necessary. If you make a mistake, press to backspace. (If desired, press or after dialing to immediately proceed; otherwise, there is a slight delay.)

NOTE: When dialing 911 or 1911, always press or after dialing so that the call is processed as quickly as possible.

You hear one of the following signals:

- A progress tone followed by dial tone and digits being dialed while your call is being placed. The selected LINE key flashes slowly.
- A progress tone followed by busy signals, then music if the lines are busy. Do one of the following:

EITHER, Continue to wait. When a line is accessed, you hear dial tone and digits being dialed. The selected LINE key flashes slowly.

OR, Request a callback (queue) by pressing (OR pressing and dialing 6) and hanging up. When you hear three tones, and see the LINE XX IS NOW AVAILABLE display, lift the handset and press the fast-flashing . The number is automatically dialed and the LINE key flashes slowly.

- Repeating reorder tones if you are restricted from the selected line or you dialed a restricted number. Try to place the call again.

Continued...

Outside Calls


(3) *If on hook:*

EITHER, Monitor the call handsfree (e.g., when listening to a recorded message). The other party cannot hear you. Press SPKR if you wish to disconnect.

OR, Lift the handset when the party answers. The SPKR and MUTE keys go off. *If using an external speakerphone*, you may speak handsfree.



To Monitor An Outside Call While On Hook:

While on a call, if the other party needs to leave the phone for a moment or puts you on hold, you can monitor the call handsfree and listen for the other party to return.

- (1) While on hold, press  and hang up. You can hear the other party, but you cannot be heard. The SPKR and MUTE keys are lit.
- (2) To continue the conversation after the party returns, lift the handset. Both keys go off.

To Enter An Optional Account Code While On An Outside Call:

Optional account codes may be entered at any time during an outside call to identify calls with customers for billing purposes. Optional account codes must have the same number of digits as the programmed standard and forced account codes.

- (1) During an outside call, press  and dial 390 (Optional Account Code). [ACCT# displays.]
- (2) Enter the account code using the keypad. [Number displays.] You hear a progress tone when the code is accepted. The outside party does not hear the dialing.
 - *If the account code is stored in a SPD/BLF outside telephone number location*, press the associated .





****If you hear reorder tones**, you entered an account code that had fewer than the programmed number of digits. You must repeat the procedure to re-enter the account code.

Placing Calls On Hold

The first procedure places a call on **individual** hold, the second places it on **system** hold. Individual hold places the call on hold at one station. It can then be directly picked up at that station or it can be picked up at another station using the reverse transfer (call pick-up) feature. A call on system hold can be picked up directly at any keyset station that has allowed answer, ring in, or outgoing access for that line.



NOTE: The system can be programmed so that a keyset user can place a call on hold by pressing another LINE key or the IC key, instead of the HOLD key.

To Place An Intercom Or Outside Call On Hold:

- (1) While on a call, press  (OR press  and dial 336). You hear intercom dial tone and the IC or LINE key flutters.
- (2) Hang up OR place another call.
- (3) **To return to the party on hold**, lift the handset and press fluttering  (for an intercom call) OR press fluttering  (for an outside call).

To Place An Outside Call On System Hold:

NOTE: Pool lines and intercom calls cannot be placed on system hold. If attempted, you hear reorder tones.



- (1) While on a call, press  and dial 335 (System Hold). You hear intercom dial tone and the LINE key flutters on all keysets that have access to the line (allowed-answer, ring-in, or outgoing-access assignment).
- (2) Hang up OR place another call.
- (3) **To access a call on system hold**, from any keyset with access to the line, lift the handset and press fluttering .

Placing Calls On Hold







To Answer A Call Recalling From Hold Or Transfer:

If an outside call is transferred to your station or is on hold there until the transfer or hold timer expires, it rings at your station until the recall timer expires. If still unanswered, it recalls your attendant. If the attendant does not answer the recall before the abandoned recall timer expires, the call is disconnected by the system. Transferred intercom calls never recall; intercom calls on hold recall the station, not the attendant.

When the call recalls your station you will hear four tones. Do one of the following:

- **For an outside call:** When you see a medium-flashing LINE key [displays HOLD RECALL FROM LINE XX or LINE XX RECALL FROM XXX], lift the handset and press medium-flashing  or  to connect to the outside call.
- **For an intercom call:** [Displays HOLD RECALL FROM XXX]. Lift the handset. You are connected to the intercom call.



To Split Between Calls On Hold:

- (1) While two or more calls are on hold, access the first call by pressing fluttering  or .
- (2) To put the call back on hold, press  (OR press  and dial 336). You hear intercom dial tone and the LINE or IC key flutters again.
- (3) To access the next call, press another fluttering  or .

Placing Calls On Hold







To Mute Your Keypad Microphone:

Instead of placing a call on hold while consulting with someone, mute your microphone so the party does not hear you. No recall timer is activated, as it is with the hold feature. Do not use other features; the call is still connected.

- (1) While on a call, press . The MUTE key is lit. *If off hook, do not hang up.*
- (2) To return to the party, press  again. The MUTE key goes off. (If you do not perform this step before ending the call, the MUTE key goes off when you hang up.)

NOTE: If you are handsfree on an intercom call and are put on hold, your MUTE key lights when the other party reconnects. Lift the handset to be heard.

Call Waiting

- (1) While on a call, if you hear a single camp-on tone every few seconds and see a LINE or IC key flashing fast, you have a call waiting. [Displays INTERCOM CALL FROM XXX or XXX TRANSFER FROM XXX or CALL RINGING IN ON LINE XX each time you hear the tone]. Do **one** of the following:
 - End the current call and hang up. The waiting call rings until answered. Answer as usual.
 - Place the current call on hold by pressing  (OR pressing  and dialing 336). The IC or LINE key flutters. To connect to the waiting caller, press flashing  or .
- (2) To return to the call on hold, after disconnecting or putting the second call on hold, press fluttering  or .

Call Transfer

To Transfer A Call To An Intercom Number:

(1) To transfer an outside call, press (OR press and dial 345, Transfer C.O. Call). You hear intercom dial tone.

To transfer an intercom call, press and dial 346 (Transfer Intercom Call). You hear intercom dial tone.

(2) Dial the intercom number. This can be the attendant ("0"), a station number, a hunt group pilot number, or a transfer-to-park number.

(3) One of the following conditions will apply:

- *If you dialed a transfer-to-park number, hang up to complete the transfer, or transfer the call to hold as described in step 4. Then page the called party and announce the call. (The party must use reverse transfer to pick up the call. If the call is not answered before the timer expires, the call recalls your station.)*
- *If you dialed a hunt group pilot number, hang up.*
- *If the call is answered and accepted, go to step 4.*
- *If there is no answer OR if the station is busy:*

EITHER, Return to the calling party. If it is an outside call, press fluttering ; OR if it is an intercom call, press twice (OR press once and dial 346 twice).

OR, Try another station. Press (OR press and dial 345). Then dial another intercom number.

OR, Go to step 4 to complete the transfer. If there was no answer, page the called party and announce the call. If the station is busy, the call camps on.

- *If the call is answered but refused, return to the caller OR try another station as described above.*

Continued...

Call Transfer

- (4) **EITHER**, Hang up to complete the transfer (OR press another or). The call rings until answered. If the station is busy, the called party hears call waiting signals.

OR, Press (OR press and dial 336). You may hang up or use another feature. The call is transferred to hold. It will not ring or will not send call waiting signals while holding (until the recall timer expires).

To Transfer A Call To An Outside Telephone Number:

- (1) To transfer an outside call, press (OR press and dial 345, Transfer C.O. Call). You hear intercom dial tone.

To transfer an intercom call, press and dial 346 (Transfer Intercom Call). You hear intercom dial tone.

- (2) Select an outgoing line.

- *If you hear busy signals:*

EITHER, Camp on and wait for the line.

OR, Select another line.

OR, Return to the party. If it is an outside call, press fluttering ; if it is an intercom call, press twice (OR press once and dial 345 twice).

- (3) Dial telephone number.
- (4) Wait for an answer and announce the call. Then hang up to complete the transfer (OR press another or .


****If transferring an outside call**, both parties are connected until the timer expires; then they both recall the attendant. The attendant can re-establish the call, if desired (as described in the ATTENDANT section).




Continued...

Call Transfer

- If the number is busy *OR* there is no answer, return to the party as described in step 2.
- If you hear repeating reorder tones, you dialed a restricted telephone number. Return to the caller as described in step 2.


If you hear four tones and a pause immediately after hanging up, the system circuits are busy and the transfer did not go through [displays LINE XX RECALL FROM XXX]. Do the following:

- (1) Lift the handset and press medium-flashing  to connect with the party waiting to receive the transfer.
- (2) **EITHER**, Hang up to try the transfer again.

OR, To disconnect from that party, press  (OR press  and dial 345). Press flashing or fluttering  to connect with the party waiting to be transferred.

To Transfer A Call To Hold:

Here is another method to transfer an intercom or outside call to hold. A call transferred to hold does not ring or send call waiting signals while holding (until the hold timer expires). This avoids the ringing or call waiting signals heard when a call is directly transferred.

- (1) While on a call, press  and dial 347 (Transfer to Hold).
- (2) Dial the intercom number.
- (3) If desired, wait for an answer and announce the call.
- (4) Hang up to complete the transfer.

Reverse Transfer and Group Call Pick-Up




Reverse Transfer (Call Pick-Up)

You can pick up a call that is ringing in, recalling, or holding at another station or the transfer-to-park location. If more than one call is ringing or holding at a station, the calls are accessed in the following order: (1) direct ring in, (2) outside call transferred or camped on, (3) outside call recalling, (4) outside call on individual hold, (5) intercom call ringing, and (6) intercom call on hold. If more than one call of the same type is at the station, the calls are picked up in the order they were received.



Group Call Pick-Up

You can pick up a call that is ringing in to a hunt group or one of its stations. Calls are accessed in the following order: (1) direct ring-in calls, (2) outside call transferred or camped on, (3) outside call recalling, and (4) intercom call ringing. If more than one call of the same type is at the hunt group or station, the calls are picked up in the order they were received.

To Reverse Transfer A Call Using The XFR Key:

- (1) Lift the handset and dial the intercom number of the station where the call is ringing or holding.
- (2) Press .
- (3) Press flashing or fluttering  or  (unless the system is programmed to automatically connect reverse transferred calls).




To Reverse Transfer A Call If You Do Not Have An XFR Key Or To Pick Up A Hunt Group Call:

- (1) Lift the handset and dial 4 (Reverse Transfer). You hear a progress tone.
- (2) Dial the intercom number or hunt group pilot number.
- (3) Press flashing or fluttering  or  (unless the system is programmed to automatically connect reverse transferred calls).

Conference Calls

To Place A Conference Call:

You can place a three-party conference with two other stations, one station and one outside number, or two outside numbers.





- (1) While on the first call, press . The party is on hold while waiting and the CNF key flutters. LINE key is lit.
 - *If you hear busy signals*, the system circuits are busy:
 - EITHER**, Return to the first party by pressing .
 - OR**, Wait off hook until you hear intercom dial tone. (You camp on and hear music.)
- (2) Place an intercom or outside call to the other party to be included in the conference (or access a call on hold) and place it on conference wait hold as described in step 1.
 - *If the party is not available* (no answer, busy, refuses the call), return to the first party as described in step 1.
- (3) When all the desired parties are on conference wait hold, press . All three parties are connected. [Displays CONFERENCE WITH XXX XXX.] The CNF key flashes slowly; LINE key(s) are lit.

Conference Calls



To End The Conference:

Simply hang up. (If one of the other parties is a station, the call will remain connected as a regular call.)



To Place The Two Parties On Hold:

- (1) During a conference call, press  (OR press  and dial 336). The parties hear music while waiting. The conference is disconnected and the LINE and/or IC key flutter. The CNF key goes off.
- (2) To return to the parties one at a time, press fluttering  or .
- (3) To reconnect the conference, refer to TO PLACE A CONFERENCE CALL.

To Exit The Conference And Leave The Two Parties Connected:

- (1) During the conference call, press  and hang up. The CNF key flutters and the LINE key(s) remain lit.
- (2) To return to the conference, lift the handset and press  again. The CNF key flashes slowly.

If you are out of the conference while two outside parties are connected, they recall your station if the timer expires. You hear four tones and the CNF key flashes at the medium rate [displays CONFERENCE HOLD RECALL]:

- (1) Press . All three parties are connected. [Displays CONFERENCE WITH LINE XX LINE XX.]
- (2) **EITHER**, Hang up to end the conference for all parties.
OR, Press  and hang up to exit the conference and leave the two parties connected again.

System Speed Dialing

Up to 100, 32-digit system speed-dial numbers (identified by location codes) are programmed by the attendant or from a designated keyset (as described in the ATTENDANT section). These numbers can be used for dialing from any station.

To keep system speed-dial numbers confidential, a range of speed-dial locations 10-99 can be programmed as non-display numbers by the installer. Non-display numbers can be used by any station user, but can only be displayed on the programming station's keyset. (At keysets, non-display numbers cannot be redialed or stored in station speed-dial locations.)

To Dial System Speed-Dial Numbers:

- (1) Lift the handset and select an outgoing line.
- (2) Press **SYS SPD** (OR press **SPCL** and dial 381).
- (3) Dial the location code (00-99) for the desired number. The number is dialed. [Number displays unless it is a non-display number.]

***If you hear reorder tones, you are restricted from dialing the selected number.*

To View System Speed-Dial Numbers (On A Display Keyset):




- (1) While on hook, press **SYS SPD** (OR press **SPCL** and dial 381). [REVIEW SYSTEM SPEED DIAL.]
- (2) Dial the desired location code (00-99). [Number displays unless it is designated as a non-display number.]
***If you selected a non-display number, you hear reorder tones and the display returns to date and time.*
- (3) Wait 5 seconds for the date and time to display OR lift and replace the handset. Then repeat the procedure for each number to be viewed.

Station Speed Dialing

To Program Station Speed-Dial Numbers:

One intercom number (up to four digits) and one outside telephone number (up to 16 digits) can be stored under each of the 10 SPD/BLF keys. The keys become a busy lamp field that shows the status of the stations accessed (lit = busy; slow flash = do-not-disturb).

NOTE: If you make a mistake while performing the following procedure, lift and replace the handset, then start over. Or, use the MUTE key to backspace and make corrections.


- (1) While on hook, press  to be programmed. [Displays PROGRAM STATION SPEED DIAL # X.]
- (2) Dial the intercom number (up to four digits) OR telephone number (up to 16 digits) to be stored. (You may use the REDL key or dial a system speed-dial number.) [Number displays.]
 - *If the system is installed behind a PBX, speed-dial numbers can contain the PBX access code if the code is followed by a pause. To enter pauses in outside telephone numbers, press SPCL once for a short pause [S], twice for a medium pause [M], and three times for a long pause [L]. To enter hookflashes in outside telephone numbers (if enabled), press SPCL once for a hookflash [F], twice for a short pause [S], and three times for a medium pause [M]. (A pause and/or hookflash counts as one of the 16 digits.)*
- (3) **EITHER**, Press  if an intercom number was stored.
OR, Press any  if a telephone number was stored.
You hear a progress tone when the number is accepted. [Displays both numbers saved under the SPD/BLF key.]
- (4) Wait 5 seconds for the date and time to display OR lift and replace the handset. Then repeat steps 1 through 3 for each number to be stored.

To Erase A Station Speed-Dial Number:


Repeat steps 1 and 3 above (skip step 2) to erase the number. [Displays NO OUTSIDE # or NO INTERCOM #.]

Station Speed Dialing

To View The Currently Stored Numbers (On A Display Keypad):

- (1) While on hook, press desired  twice. [Stored number displays.]
- (2) You may then press other SPD/BLF keys once to view their numbers. (If the date/time displays, the program has timed out; you must repeat step 1.)

To Dial A Station Speed-Dial Number:

- (1) Lift the handset.
- (2) If placing an outside call, select an outgoing line.
- (3) Press  for the desired number. The number is dialed and displays.

Redialing

Your keyset can remember one telephone number (of up to 32 digits) to be redialed later using the REDL key (or the redial feature code [380] if you do not have a programmed REDL key). This number can be stored in one of two ways. (Non-display system speed-dial numbers cannot be redialed.)

- Initially, the keyset is programmed to automatically remember the last number dialed. The last number manually dialed or speed dialed is stored and changes each time you dial another outside number. When you press the REDL key, this number is dialed for you.
- You can reprogram the keyset to save only the number you tell it to. The saved number can be redialed at any time, using the REDL key. Dialing other numbers does not change it. It only changes when you use the procedure TO SAVE THE LAST TELEPHONE NUMBER DIALED.

NOTE: There are three feature codes that affect the redial feature. The redial feature code (380) performs the redial function and is programmed under the REDL key. The program redial mode feature codes (320 and 321) determine the function of the REDL key (last number dialed or last number saved).

To Redial A Number:

To redial the last number dialed or the last number saved:

- (1) Lift the handset and select an outgoing line.
- (2) Press (OR press and dial 380). The number is dialed. [Number displays.]

NOTE: If the system is installed behind a PBX, the redial feature remembers the PBX access code and automatically inserts a pause after the code when it is redialed.

To Change The Function Of The REDL Key:

- (1) While on hook, press .
- (2) **EITHER**, Dial 320 (Last Number Dialed). This is the default setting.

OR, Dial 321 (Last Number Saved).

Redialing

To Save The Last Outside Telephone Number Dialed:

If your REDL key is set with Last Number Saved (321), use this procedure to save the last number dialed, when desired.

- (1) Hang up to disconnect from the outside call.
- (2) While on hook, press **REDL**. (Use the TO REDIAL A NUMBER procedure, as described on the previous page, to redial the number.)

Intercom (System) And C.O. Directory

The system provides an intercom directory that enables display keyset users to "look up" intercom extension numbers and user names. It also provides a C.O. directory that shows system speed-dial numbers and associated names.

Once the desired intercom number/name or system speed-dial number/name has been selected, you may automatically dial the number, store the number in a station speed-dial location, select a different number/name, terminate the directory routine, or switch to the other directory. A directory search can be performed when a call is waiting to join a conference or be transferred, if necessary.

To Perform An Intercom Directory Search:






If on a call, you can press **HOLD**, **CNF**, or **XFR** before performing the first step.

- (1) While on or off hook, press **SPCL** and dial 307 (Intercom Directory). The MSG key lights (and the SPKR key lights if on hook). [Displays INTERCOM NAME: on the top line.] The cursor is located on the bottom line.



Continued...



Intercom (System) And C.O. Directory

(2) **EITHER**, Enter up to seven alpha and/or numeric characters for the intercom number or user name. If searching for a name, the whole name does not have to be entered. You may switch between alphanumeric and numeric mode by pressing the MSG key (lit = alphanumeric, unlit = numeric).

- **In numeric mode** (MSG key unlit): Press the keypad keys to enter a valid intercom number. Press  once to leave a space, or press  to backspace.
- **In alphanumeric mode** (MSG key lit): Press the keypad keys to enter the desired characters. (Refer to the following chart.) The number of times a key is pressed determines which character is entered. For example, 77776444844 would enter SMITH. When adjoining characters are located under the same key, press the FWD key once to advance to the next character. For example, 5666  66337777 would enter JONES. (Note that letters correspond to the letters printed on the keypad keys.) Press  once to advance or twice to leave a space. Press  to backspace.



Key	Number of times key is pressed				
	1	2	3	4	5
1	.	-	,	&	1
2	A	B	C	>	2
3	D	E	F	/	3
4	G	H	I	"	4
5	J	K	L		5
6	M	N	O		6
7	P	Q	R	S	7
8	T	U	V	;	8
9	W	X	Y	Z	9
0	'	%	=	?	0

OR, Press  to scroll forward alphabetically through the directory or press  to scroll backward. *If this method is used, skip step 3 and proceed to step 4.*

(3) Press either  or  to signal the system to begin the search. [The closest match will be displayed on your keyset.] (If you entered an invalid intercom number, you will hear reorder tones. Repeat step 2.)



Continued...

Intercom (System) And C.O. Directory

- (4) If desired, store the selected intercom number in a station speed-dial location by pressing desired . You hear confirmation tone when the number is accepted.
- (5) **EITHER**, Automatically dial the intercom number selected by pressing . Speak handsfree or lift the handset when the call is answered. (If an intercom call is camped on to your keyset and the IC key is lit, pressing the IC key accesses the waiting call and terminates the directory feature.)

OR, Search for a different intercom number by repeating steps 2 and 3.

OR, Terminate the directory routine by hanging up or, if on hook, pressing SPKR. If a call is holding, return to the caller. If a call is waiting to be transferred or to join a conference, complete the transfer or conference procedure.

OR, Switch to the C.O. directory by pressing non-flashing  or . (C.O. directory instructions are given below.)

NOTE: If a call is ringing in or holding on the selected line, pressing the flashing LINE, AUTO, or POOL key will answer the call and terminate the directory function.

Intercom (System) And C.O. Directory

To Perform A C.O. Directory Search:

- (1) While on or off hook, press SPCL and dial 308 (C.O. Directory). The MSG key lights (and the SPKR key lights, if on hook). [Displays OUTSIDE NAME: on the top line.] The cursor is located on the bottom line.
- (2) **EITHER**, Enter alphanumeric characters (up to 16) for the speed-dial name. You do not have to enter the whole name. Press the keypad keys to enter the desired characters. (Refer to the following chart.) The number of times a key is pressed determines which character is entered. For example, 77776444844 would enter SMITH. When adjoining characters are located under the same key, press the FWD key once to advance to the next character. For example, 5666 FWD 66337777 would enter JONES. (Note that letters correspond to the letters printed on the keypad keys.) Press FWD once to advance or twice to leave a space. Press MUTE to backspace.

Key	Number of times key is pressed				
	1	2	3	4	5
1	.	-	,	&	1
2	^	B	C	>	2
3	D	E	F	/	3
4	G	H	I	"	4
5	J	K	L		5
6	M	N	O		6
7	P	O	R	S	7
8	T	U	V	:	8
9	W	X	Y	Z	9
0	'	%	=	?	0

OR, Press # to scroll forward alphabetically through the directory or press * to scroll backward. If this method is used, skip step 3 and proceed to step 4.

Continued...

Intercom (System) And C.O. Directory

\ Press either **#** or ***** to signal the system to begin searching. [The closest match will be displayed on your keyset. If you selected a non-display number, NON DISPLAY # will appear on the top line and the name (if assigned) will appear on the bottom line; the number is not displayed.]

(4) If desired, store the selected system speed-dial number in a station speed-dial location by pressing the desired SPD/BLF key. You hear a confirmation tone when the number is accepted. NOTE: If the system speed-dial number is longer than 16 digits, only the first 16 digits will be stored in the station speed-dial location. Non-display numbers cannot be stored in station speed-dial locations.

(5) **EITHER**, Automatically dial the speed-dial number selected by pressing **LINE** or **LCR**, **AUTO**, or **POOL**. Lift the handset when the call is answered, if on hook. (If a call is ringing in or holding on the selected line, pressing the flashing **LINE**, **AUTO**, or **POOL** key will answer the call and terminate the directory function.)

OR, Search for a different system speed-dial number by repeating steps 2 and 3.

OR, Terminate the directory routine by hanging up or, if on hook, pressing **SPKR**.


OR, Switch to the intercom directory by pressing **IC**. (Intercom directory instructions are given on the page 2-42.) NOTE: If an intercom call is camped on and the IC key is flashing fast, pressing IC accesses the waiting call and terminates the directory feature.


Call Forwarding


You can forward incoming intercom and outside calls (including direct ring-in calls) to an intercom number or an outside telephone number. If more than one station has ring-in for a line, calls on it will not forward to outside telephone numbers. Recalls and queue callbacks will not forward.


You cannot forward calls to a station in do-not-disturb, a pilot number, or a restricted telephone number. If you are in a hunt group and your calls are forwarded, you will not receive calls through the pilot number. Call forwarding overrides secretarial intercept — a programmable feature which automatically forwards a station's calls if the station is busy or there is no answer.

To Forward Calls:

- (1) **To immediately forward all calls:** While on hook, press . The SPKR key is lit. [Displays PROGRAM FORWARD.]

To forward calls only when you do not answer: While on hook, press  and dial 356 (Call Forward No Answer). Calls are forwarded if they are not answered before the timer expires.

To forward calls only when your keyset is busy: While on hook, press  and dial 357 (Call Forward If Busy). Calls are immediately forwarded when your station is busy.

To forward calls when there is no answer or your keyset is busy: While on hook, press  and dial 358 (Call Forward If No Answer or Busy). Calls forward immediately if your station is busy or after the timer expires if you do not answer.

- (2) **EITHER**, Dial the intercom number of the station to receive your calls (OR dial "0" for the attendant).

***If you hear repeating reorder tones, you dialed an invalid intercom number. [Displays FORWARD TO INVALID NUMBER.]*

OR, Dial a C.O. line access code (9, 81-89), the PBX access code (if using a PBX line), and the desired outside telephone number. (The system automatically pauses after PBX codes when a call is forwarded.)

Continued...

Call Forwarding

***If you hear repeating reorder tones, you dialed a restricted number or dialed an incorrect access code. [Displays FORWARD TO RESTRICTED LINE.]*

- (3) Press **SPKR**. You hear a progress tone; the FWD key is lit and the SPKR key goes off. [Displays FWD (condition) TO XXX.]
- (4) Notify the person who will be receiving your calls.

***If you hear repeating reorder tones, you are forwarding to a station that has calls forwarded to your station. [Displays SYSTEM DETECTED FORWARD LOOP.]*

To Cancel Any Call Forward Request:

While on hook, press **FWD** and press **SPKR**. You hear a progress tone and the keys go off. [Displays CANCEL ANY CALL FORWARD.]

Paging

The paging feature allows announcements to be made through the keyset internal speakers and optional talkback speakers. An optional feature provides paging to three external areas, such as warehouses or loading docks. Pages are not heard at keysets that are in do-not-disturb, have page remove enabled, or are in use.

- (1) Lift the handset and press **PAGE** (OR dial 7).
- (2) Dial the zone number:
 - 1-6 = Internal zones (keysets and talkback speakers)
 - 7-9 = External zones (external speakers)
 - 0 = All external zones
- (3) After the progress tone, make your announcement before the timer expires.
- (4) Hang up.

Page Remove/Replace

You can remove your keyset from the paging network or replace it in the network at any time.

- (1) While on or off hook, press and dial 332 (Page Remove) or 333 (Page Replace).
- (2) Hang up if off hook.

Do-Not-Disturb

When you do not want to receive intercom calls, pages, or transferred calls, place your station in do-not-disturb. You will continue to receive direct ring-in calls, queue callbacks, and recalls, and you can place calls or use other keyset features. Another user calling your station hears four fast tones and a pause; a display keyset caller also sees the selected do-not-disturb message and a customized message, if programmed. The caller can request a callback (queue) or leave a message.

To Enable Do-Not-Disturb:


- (1) While on hook, press . The DND key lights.
- (2) **EITHER**, Select message 01 (Do-Not-Disturb) by pressing . (This terminates the programming sequence.)

OR, Enter the number of the desired message (listed below). Display keyset users may scroll through the messages by pressing to go forward or to go backward.











Message 01 - DO-NOT-DISTURB	Message 11 - OUT OF OFFICE
Message 02 - IN MEETING UNTIL	Message 12 - OUT UNTIL
Message 03 - IN MEETING	Message 13 - WITH A CLIENT
Message 04 - ON VACATION 'TIL	Message 14 - WITH A GUEST
Message 05 - ON VACATION	Message 15 - WITH A PATIENT
Message 06 - CALL ME AT	Message 16 - UNAVAILABLE
Message 07 - AT THE DOCTOR	Message 17 - IN CONFERENCE
Message 08 - ON A TRIP	Message 18 - AWAY FROM DESK
Message 09 - ON BREAK	Message 19 - GONE HOME
Message 10 - OUT OF TOWN 'TIL	Message 20 - OUT TO LUNCH

Continued...






Do-Not-Disturb


(3) **EITHER**, Press  to terminate programming.

OR, Customize the second line of the message using any combination of the following:

- **Enter a numeric message:** Using the keypad, enter the desired numbers (0-9). Press  for a hyphen (-) and  for a colon (:). Press  once to insert a space; press  to backspace.
- **Enter an alphanumeric message:** Press , then enter the desired message using the keypad (refer to the following chart). The number of times a key is pressed determines the character that is entered; for example, FRIDAY = 33377744432999. When adjoining characters are located under the same key, press  once to advance to the next character; for example, 6  666  6632999 = MONDAY. Press  twice to insert a space; press  to backspace.

Key	Number of times key is pressed				
	1	2	3	4	5
1	@	+	&	<	1
2	A	B	C	>	2
3	D	E	F	/	3
4	G	H	I	"	4
5	J	K	L		5
6	M	N	O		6
7	P	Q	R	S	7
8	T	U	V	;	8
9	W	X	Y	Z	9
0	.	%	=	?	0
*	*	!	((:
#	#	,	.)	-

NOTE You may store messages in station speed-dial C.O. locations or redial memory and use these features when entering a message. (When programming a message in speed dial memory, press  instead of  to insert spaces, and store the number by pressing any .) To enter the number or message while programming a do-not-disturb message, you can press a  or . Speed-dialed numbers can be chained together when entering messages that require more than 16 digits.

(4) Press  to terminate programming. DND key lights. [Displays selected message. Date and time appear on the second line if not customized.]

To Cancel Do-Not-Disturb:

While on hook, press . The light goes off.

Reminder Messages

Reminder messages are set like an alarm clock to signal your station at a specified time. Select from 20 messages and set the time up to 24 hours in advance. At the selected time, you hear eight short tones and the display shows the chosen message. If you are on a call, the display shows the message for 10 seconds and then returns the previous data. After you have completed the call, the reminder message reappears. If you are programming, the programming sequence is interrupted and you must start over. The system can store up to 120 reminder messages at one time; if more are tried, users hear reorder tones. You cannot view the selected reminder messages.

To Request Reminder Messages:

NOTE: You may lift and replace the handset if you wish to stop the following process without selecting a message.

- (1) While on hook, press and dial 305. [Displays PROGRAM REMINDER MESSAGE.]
- (2) **EITHER**, Enter a two-digit message number (01-20). [Message displays.] Messages are:
 1. Meeting
 2. Staff Meeting
 3. Sales Meeting
 4. Cancel Meeting
 5. Appointment
 6. Place Call
 7. Call Client
 8. Call Customer
 9. Call Home
 10. Call Corporate
 11. Call Engineering
 12. Call Marketing
 13. Call Accounting
 14. Cancel DND
 15. Cancel Call FWD
 16. Take Medication
 17. Make Reservation
 18. Review Schedule
 19. Lunch
 20. Reminder


OR, View messages by pressing to scroll forward **OR** by pressing to scroll backward.

- (3) While the desired message is displayed, enter the time you wish to receive the message in hours and minutes. For example, 900 = 9:00. Then press for AM **OR** press for PM. You hear a progress tone when the message is accepted.


****If you hear reorder tones, you entered an invalid time. The programming stops. [Displays ERROR! INVALID TIME ENTERED.]**

Reminder Messages

To Clear A Displayed Reminder Message:

When your keyset is idle, remain on hook and clear the message by pressing 


To Cancel All Reminder Message Requests:

While on hook, press  and dial 306 (Cancel Reminder Messages) to cancel all messages you have programmed.


Programming For Private Intercom Calls

To Always Place Private Intercom Calls From Your Keypad (Ring Intercom Always):

Any station that you call will hear repeating double tones and must lift the handset or press the SPKR or IC key to speak.


While on hook, press  and dial 367 (Ring Intercom Always).

To Cancel Ring Intercom Always:


While on hook, press  and dial 368 (Cancel Ring Intercom Always).

To Always Receive Private Intercom Calls:

When your station is called, you will hear repeating double tones and must lift the handset or press the SPKR key to speak.

While on hook, press  and dial 310 (Handsfree Disable).


To Restore The Handsfree Feature:

While on hook, press  and dial 311 (Handsfree Enable).


User-Programmable Feature Keys

Nine of the feature keys are programmable. In the default configuration, they are HOLD (336), XFR (345), LCR (80), AUTO (89), REDL (380), SYS SPD (381), QUE (6), PAGE (7), and BGND MUSIC (313). You may reprogram them to access any feature code except call splitting (337).

To Return The Keys To Default Entries:


While on hook, press  and dial 325 (Feature Key Programming Default Entries).

To Display The Current Key Entry (On A Display Keypad):

- (1) While on hook, press  and dial 326. [Shows DISPLAY FEATURE KEY PROGRAMMING.]
- (2) Press the feature key(s) to be displayed. [Displays the feature currently assigned to the key.]


To Program Feature Keys:

For each key:

- (1) While on hook, press  and dial 327. [Displays NOW PROGRAMMING FEATURE KEY.]
- (2) Press the feature key to be programmed. [Displays the feature currently assigned to the key.]
- (3) Dial the feature code to be stored under that key. A list of the keyset feature codes is at the end of this section.
 - *If you hear a progress tone*, the programming is completed. [Displays the selected feature.]
 - *If you hear reorder tones*, an invalid code was dialed. [Displays ERROR! FEATURE CODE INVALID.]
- (4) Wait 5 seconds for the date and time to display OR lift and replace the handset.


Cancel Miscellaneous Operations

You can cancel call forward, do-not-disturb, handsfree disable, a queue request, background music, hunt group remove, and page remove all at once.

While on hook, press  and dial 395 (Cancel Misc. Operations).


Date, Time, Intercom Number, And User Name Display

On display keyset, the date and time are displayed when the keyset is idle. However, during a call, call cost and elapsed time are displayed. Use the following procedure to display the date, time, intercom number, and user name while on a call or to view the intercom number and user name when the keyset is idle.

During a call, press  and dial 300 (Display Date and Time). The date and time appear for 5 seconds; then the call cost data and elapsed time of call return.


Hookflash Behind A PBX

If the system is installed behind a PBX, you may be required to hookflash to access system features.

If you have accessed an outside line, press  and dial 330 (Hookflash).


Hunt Group Remove/Replace

You can temporarily remove your keyset from the hunt group. When the hunt group remove feature is enabled, you will not hear ringing or receive camp-on messages for hunt group calls. The LINE key will flash only if all other stations in the hunt group are unavailable (busy, in do-not-disturb, with calls forwarded, or with hunt group remove enabled). Announcement and overflow stations cannot block hunt group calls.

- (1) While on or off hook, press  and dial 322 (Hunt Group Remove) or 323 (Hunt Group Replace).
- (2) Hang up if off hook.

Background Music

Background music is heard through the keyset's internal speaker. It is interrupted for pages, calls, keyset programming, and ringing.


While on or off hook, press  (OR press SPCL and dial 313) to turn the music on or off. Hang up if off hook.

Call Monitoring


This feature allows hunt group supervisors to monitor the outside calls of anyone in their associated hunt group. It can be useful in training or in evaluating the performance of hunt group members. The supervisor can hear both parties, but cannot be heard by either one. If the call is terminated, transferred, or placed on hold, the monitor function is terminated.

In the associated hunt group, the supervisor may monitor any active CO-to-intercom call (both hunting and non-hunting), including incoming, outgoing, and DISA-to-intercom calls. Calls that do not involve hunt group members cannot be monitored. Also, if privacy release is enabled system-wide and a keyset user joins an ongoing CO-to-intercom call (by lifting the handset and pressing the busy line key), the call monitoring function is terminated.

To Monitor A Hunt Group Call (Designated Supervisor Only):



- (1) **EITHER**, While on hook, press  and dial 396. You hear a confirmation tone and the SPKR key lights.


OR, While off hook, dial 396. You hear a confirmation tone.

- (2) Dial the intercom number (or press ) of the station to be monitored. You are automatically connected to the call. [Displays EXT XXX (or the user name if assigned) LINE XX (or the line name if assigned) and the monitored station's call cost information.] The MUTE key lights.

***If you hear reorder tones followed by dial tone, the busy station is being monitored by another supervisor or is not on an outside call. You may dial another intercom number.*

***If you hear repeating reorder tones, the intercom number dialed is not part of the hunt group or the selected station is idle. Return to step 1.*

- (3) **EITHER**, Monitor another hunt group member's call by pressing , dialing 396, and dialing the intercom number (or pressing the  key).

OR, Terminate the monitor feature by hanging up or pressing  (if on hook).

GX Keypad Feature Codes

Outside Line Access Codes:

Pool Line Select	9
Select Line Group 1-8	81-88
Automatic Line Select	89
Least Cost Routing	80

Intercom Numbers:

Stations	100-219
Talkback Speakers	221-225
Hunt Groups	231-245
Attendant	0

General Station Feature Codes:

Automatic Intercom Access	360
Cancel Automatic Intercom Access	361
Automatic Line Access	362
Cancel Automatic Line Access	363
Background Music On/Off	313
Busy Station/Line Callback Queue Request	6
Cancel Queue Request	376
Call Forward If No Answer	356
Call Forward If Busy	357
Call Forward If No Answer Or Busy	358
Call Monitor	396
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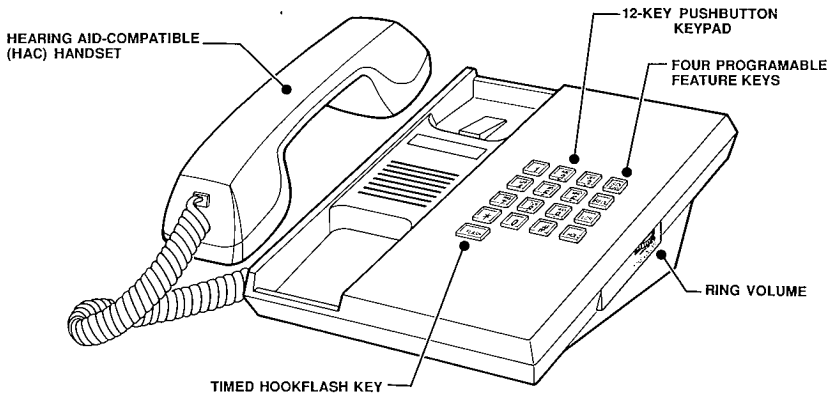
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Introducing The GX Single-Line Instrument



Initial Feature Keys

STN SPD	Station Speed Dial
REDL	Last Number Redial
LCR	Least-Cost Routing
HOLD	Individual Hold
FLASH	Hookflash

Introducing The GX Single-Line Instrument

- The Single-Line Instrument (SLI) has five keys for easy access to frequently-used features. You can customize the four programmable keys with any of the features listed at the end of this section.
- Before entering some feature codes or pressing feature keys, you must "hookflash." The SLI has a FLASH key for this purpose. When you press , you will hear intercom dial tone.
- Industry-standard single-line DTMF sets can also be connected to the system. Single-line set users access features the same way as SLI users with one exception: when a hookflash is necessary, single-line set users must quickly press and release the hookswitch; SLI users press the FLASH key.
- Programmable system options can affect your use of the C.O. lines. Your station can be programmed for any of the following:
 - Allowed-answer assignment allows you to answer a call that is ringing into the system. Your station will not ring for direct ring-in calls, but you may hear ringing over the signal devices or at another station.
 - Ring-in assignment allows calls to directly ring in to your station (possibly bypassing the attendant).
 - Outgoing-access assignment allows you to select a line to place an outgoing call.
 - Station toll restrictions may prevent you from placing long distance calls or may restrict you to using LCR only.
- Several procedures show more than one method for using the feature. To show this flexibility, some lines begin with EITHER and OR; you can choose to either perform one step or the other. When a line begins with if, perform the step if it applies.
- Many of the features "time out" if you wait too long before performing the next step. When this happens, you must start over. In the procedures, you will see references that a timer "expired," it means that the allowed time was used up.

Introducing The GX Single-Line Instrument

Ring Signals

The following signals are heard through the handset:

Signal	Action
Intercom dial tone	Handset lifted
Double tones (called station receives same signal)	Intercom call — repeats for private call or call to non-hand-free station; one double tone for handsfree call
Intercom busy signal — slow repeating tones (until camp on)	The station or line you tried to access is busy
Four fast tones and a pause (repeating)	Called station is in do-not-disturb
Reorder tone — fast tones (may be four tones or repeating)	Number or feature code was not accepted, dialing timer expired, or number dialed was not allowed by toll restriction
Single progress tone	Feature procedure completed or something needs to be entered

The signals heard through the ringer are:

Type of Call	Signal
Outside call	Single long tone every 6 seconds
Intercom call	Two short tones and a pause
Queue callback	Three short tones and a long pause (repeating)
Recall from hold or transfer	Four short tones and a long pause (repeating)
Camp on tone	Single tone every few seconds


Intercom Calls

Intercom numbers are assigned to every station. An unused intercom number can be assigned to a transfer-to-park location (an unequipped station from which calls can be reverse transferred). Attendants are called by dialing their intercom number or zero.

Pilot numbers (231-245) are intercom numbers that are used to place and transfer calls to a hunt group of stations. When the pilot number receives a call, the system hunts for an available station within the associated hunt group.

To Receive An Intercom Call:

You will receive one of the following call indicators:


- *If you hear repeating double tones*, another station user is calling your station. Lift the handset. The call is connected.
- *If you hear a page announcing that you have an intercom call transferred to hold*, lift the handset and press  (OR dial 336). The call is connected.

To Place An Intercom Call:

NOTE: When placing a call, begin dialing before the timers expire or the system will drop the connection and send repeating reorder tones.

(1) Lift the handset.

- *If you hear a busy signal*, all single-line decoders are busy. Do not hang up. Wait (camp on) until you hear dial tone.

(2) *If you want the call to ring until answered when calling a handsfree keyset (private call)*, press .

Continued...

Intercom Calls

(3) Dial an intercom number. This can be the attendant ("0"), a station number, a talkback speaker number, or a hunt group pilot number.

- *If calling a handsfree keyset station, speak after you hear a double tone.*
- *If you are calling a single-line station, a hunt group, or a keyset with handsfree disabled, or if you placed a private intercom call, you hear repeating double tones until the call is answered.*
- *When calling a talkback speaker, it does not ring. You are immediately connected and can speak.*
- *If you hear four fast tones and a pause, the station is in do-not-disturb. You may leave a message (if calling a keyset) or request a callback.*
- *If the station is busy, you may camp on, request a callback, or leave a message.*
- *If there is no answer when calling a keyset, you may leave a message.*
- *If you dialed an invalid number, you hear repeating reorder tones.*


If The Called Station Is Busy, Camp On:

Do not hang up. You camp on and hear music, and the busy station hears a tone to indicate a call waiting. When the station is available, a private call is automatically placed (you hear repeating double tones until answered).

Intercom Calls

If Busy Or In Do-Not-Disturb, Request A Callback (Queue):

NOTE: You can request a callback even if you camped on. Only request one callback from a busy station or a line at a time.


- (1) Press  (hookflash).
- (2) Dial 6 (Queue) and hang up.
- (3) Lift the handset when you hear three tones. A private call is automatically placed to the queued station.

***If you do not answer a callback before the timer expires, it will be cancelled. If your station is busy when called back, your queue will be placed at the end of the queue list.*

- (4) **To cancel a queue request**, lift the handset, dial 376 (Cancel Queue Request), and hang up.


If Busy, No Answer, Or In Do-Not-Disturb, Leave A Message:

If you are calling a keyset station:

- (1) Press  (hookflash) and dial 365 (Leave Message).
- (2) **EITHER**, Hang up if you want the called party to call you. The called station's MSG key is flashing.

OR, To have the party call his or her message center to pick up your message, do not hang up. After a moment, a private call is placed to the called party's message center. Leave your message and hang up. The called station's MSG key is flashing.

To Cancel A Message You Left:


- (1) Lift the handset and dial the intercom number of the station with the message.
- (2) Press  (hookflash) and dial 366 (Message Cancel). You hear intercom dial tone.
- (3) Hang up.

Outside Calls

NOTE: On KF-rated systems, line groups contain only one line each, and there is only one pool line and one outgoing auto line.

To Answer Outside Calls:

You will receive one of the following call indicators:

- **Repeating long tones:** You are automatically connected when you lift the handset.
- **Ringing at another station or over an external ringer:** If you have allowed-answer, lift the handset and dial 350 (Automatic Line Answer). You are connected to the lowest numbered ringing line for which you have allowed-answer.
- **A page announcing an outside call that was transferred to hold:** Lift the handset and press  (OR dial 336). You are connected.

To Place An Outside Call:

NOTE: When placing a call, begin dialing before the timers expire or the system will drop the connection.

- (1) Lift the handset and select an outgoing line using one of the following methods:
 - Dial 89 (Automatic Line Select). The system selects the highest-numbered available auto line.
 - Dial 9 (Pool). One of the pool lines is selected.
 - Dial a Select Line Group feature code (81-88). This selects a line in the chosen group.
 - Use the least-cost routing procedure as described on the next page.

Continued...

Outside Calls

(2) You will hear one of the following signals:




- **Outside dial tone:** Go to step 3.
- **Progress tone:** Enter a forced account code. You hear another progress tone and outside dial tone when accepted. Go to step 3.
- **Repeating reorder tones:** You are restricted from the line chosen; select another line. Or, you are restricted to using LCR only; try again using the LCR procedure.
- **Busy signals:** The line is busy. You may camp on or request a callback.



(3) Dial the telephone number when you hear outside dial tone. You can manually dial, redial, or speed dial the number.

***If you hear repeating reorder tones, you dialed a restricted telephone number.*

To Place A Call Using Least-Cost Routing:

NOTE: Least-cost routing is only available on MF-rated, extended software systems. If your station is programmed for LCR only, you will access only the first facility group in the selected route group.

- (1) Lift the handset and press  (OR dial 80). You hear a progress tone.
 - *If required*, enter a forced account code. You hear another progress tone when accepted.
- (2) Dial the telephone number. Include a "1" and the area code, if necessary. (If desired, press  or  after dialing to immediately proceed; otherwise, there is a slight delay.)


NOTE: When dialing 911 or 1911 emergency numbers, always press  or  after dialing so that the call is processed as quickly as possible.

Outside Calls

One of the following occurs:

- You hear a progress tone followed by dial tone and digits being dialed when your call is being placed.
- You hear a progress tone followed by busy signals, then music if the lines are busy. Do one of the following:

EITHER, Continue to wait off hook. When a line is accessed, you hear dial tone and digits being dialed.

OR, Request a callback by pressing  (hookflash), dialing 6 (Queue), and hanging up. When you hear three tones, lift the handset. The number is automatically dialed.


- You hear repeating reorder tones if you are restricted from the selected line or you dialed a restricted number. Try to place the call again.

If The Line Is Busy, Camp On:

- (1) When you hear busy signals, do not hang up. You camp on and hear music until the line is available.
- (2) When you hear a progress tone and the outside dial tone, dial the telephone number.

If The Line Is Busy, Request A Callback (Queue):

NOTE: You can request a callback even if you camped on. Only request one callback from a busy station or a line at a time.

- (1) Press , dial 6 (Queue), and hang up.
- (2) Lift the handset when you hear three tones.

***If you do not answer a callback before the timer expires, it will be cancelled. If your station is busy when called back, your queue will be placed at the end of the queue list.*


***If you hear repeating reorder tones, the single-line decoders are busy. Your queued line is dropped.*

- (3) Dial the telephone number.
- (4) To cancel a queue request, lift the handset, dial 376 (Cancel Queue Request), and hang up.

Outside Calls

To Enter An Optional Account Code While On An Outside Call:

Optional account codes may be entered at any time during an outside call to identify calls with customers for billing purposes. Optional account codes must have the same number of digits as the programmed standard and forced account codes.

- (1) During an outside call, press  (hookflash) and dial 390 (Optional Account Code). The outside party is placed on consultation hold during the process.
- (2) Enter the account code, using the keypad (the outside party will not hear dialing). You hear a progress tone and are reconnected with the party when the code is accepted.

***If you hear reorder tones, you entered an account code that had fewer than the programmed number of digits. You must repeat the procedure to re-enter the account code.*

Placing Calls On Hold

To Place An Intercom Or Outside Call On Hold:

- (1) While on a call, press **FLASH** (hookflash) and press **HOLD** (OR dial 336). You hear intercom dial tone.
- (2) Hang up OR place another call.
- (3) **To return to the party on hold**, lift the handset and press **HOLD** (OR dial 336).

To Place An Intercom Or Outside Call On Consultation Hold:

- (1) While on a call, press **FLASH** (hookflash) to place the party on hold. You hear two short tones followed by dial tone.
- (2) Call another station OR enter a feature code.
 - *If you attempt to access an outgoing line, you hear reorder tones.*
 - *If you hang up while the call is on consultation hold, the call will immediately recall your station.*
 - *If you hang up after dialing an intercom number, the call will transfer to that station.*
- (3) **To return to the party on hold**, press **FLASH** (hookflash).




To Split Between Calls On Hold:

Call splitting allows you to place two or more calls on hold and then easily go back and forth between them.

- (1) While on a call, place it on hold by pressing **FLASH** (hookflash) and pressing **HOLD** (OR dialing 336).
- (2) Answer the other calls and put them on hold (as described in step 1). When you are on the last call and want to go back to the calls on hold, press **FLASH** (hookflash) and dial 337 (Call Splitting). That call is placed on hold and you are connected to the first call put on hold.

Continued...

Placing Calls On Hold





- (3) Press  (hookflash) every time you wish to connect to the next holding call (after pressing  each time, wait at least 2 seconds before pressing it again). The current call returns to the end of the holding list.
- (4) Hang up to disconnect the current call and cancel call splitting. Now you can place or receive calls. To return to the remaining calls on hold, lift the handset and press  (OR dial 336).

To Answer A Call Recalling From Hold Or Transfer:

If a call is transferred to your station or is on hold there until the transfer or hold timer expires, it rings at your station until the recall timer expires. If still unanswered, it recalls your attendant. If the attendant does not answer the recall before the abandoned recall timer expires, the call is disconnected by the system. Transferred intercom calls never recall; intercom calls on hold recall the station, not the attendant.



When you hear four tones, lift the handset. You are connected to the recalling call.


Call Waiting

- (1) While on a call, if you hear a single camp-on tone every few seconds, you have a call waiting. Do **one** of the following:
 - End the current call and hang up. The waiting call rings in. Answer as usual.
 - Place the current call on hold by pressing  (hookflash) and pressing  (OR dialing 336). You are connected with the waiting caller.
- (2) To return to the call on hold, after disconnecting or putting the second call on hold, press  and press  (OR dial 336).

Call Transfer

To Transfer A Call To An Intercom Number:



- (1) While on a call to be transferred, press  (hookflash).
- (2) Dial the intercom number. This can be the attendant ("0"), a station number, a hunt group pilot number, or a transfer-to-park number.
 - *If you dialed a transfer-to-park number, hang up to complete the transfer. Then page the called party and announce the call. (The party must use reverse transfer to pick up the call. If the call is not answered before the timer expires, the call recalls your station.)*
 - *If you dialed a hunt group pilot number, hang up.*
 - *If the call is answered and accepted, hang up to complete the transfer.*
 - *If the call is answered but refused, return to the party by pressing  (hookflash).*
 - *If there is no answer OR the station is busy:*

EITHER, Return to the party by pressing  (hookflash).



OR, Hang up to complete the transfer. If there was no answer, page the called party and announce the call. If the station is busy, the call camps on.

Call Transfer

To Transfer A Call To An Outside Telephone Number:

- (1) While on a call to be transferred, press  (hookflash) and dial 345 (Transfer C.O. Call) or 346 (Transfer Intercom Call).
- (2) Select an outgoing line.
 - *If you hear busy signals:*
 - EITHER**, Return to the party by pressing  (hookflash).
 - OR**, Camp on and wait for the line.
 - OR**, Hang up; then lift the handset and select another line.
- (3) Dial the telephone number.
- (4) Wait for an answer and announce the call. Then hang up to complete the transfer.

***If transferring an outside call, both parties are connected until the timer expires; then they recall the attendant. The attendant can re-establish the call, if desired (as described in the ATTENDANT section).*


- *If the number is busy OR there is no answer, return to the party by pressing  (hookflash).*
- *If you hear repeating reorder tones, you dialed a restricted telephone number. Return to the caller by pressing  (hookflash).*

Continued...

Call Transfer


If you hear four tones and a pause immediately after hanging up, the system circuits are busy and the transfer did not go through. Do the following:

- (1) Lift the handset to connect with the party waiting to receive the transfer.
- (2) **EITHER**, Hang up to try the transfer again.

OR, To disconnect from that party, press  (hookflash). You are connected with the party waiting to be transferred.

To Transfer A Call To Hold:

A transferred call rings until answered; if the station is busy, the called party hears call waiting signals. A call transferred to hold does not ring or send call waiting signals while holding (until the hold timer expires).

- (1) While on a call, press  (hookflash) and dial 347 (Transfer to Hold).
- (2) Dial the intercom number.
- (3) *If desired*, wait for an answer and announce the call.
- (4) Hang up to complete the transfer.

Reverse Transfer And Group Call Pick-Up

Reverse Transfer (Call Pick-Up)

You can pick up a call that is ringing in, recalling, or holding at another station or the transfer-to-park location. If more than one call is ringing or holding at a station, the calls are accessed in the following order: (1) direct ring in, (2) outside call transferred or camped on, (3) outside call recalling, (4) outside call on individual hold, (5) intercom call ringing, and (6) intercom call on hold. If more than one call of the same type is at the station, the calls are picked up in the order they were received.

Group Call Pick-Up

You can pick up a call that is ringing in to a hunt group or one of its stations. Calls are accessed in the following order: (1) direct ring-in calls, (2) outside call transferred or camped on, (3) outside call recalling, and (4) intercom call ringing. If more than one call of the same type is at the hunt group or station, the calls are picked up in the order they were received.






To Reverse Transfer A Call Or Pick Up A Hunt Group Call:

- (1) Lift the handset and dial 4 (Reverse Transfer). You hear a progress tone.
- (2) Dial the pilot number or intercom number where the call is ringing or holding. You are connected.

Conference Calls

To Place A Conference Call:

You can place a three-party conference with two stations, one station and one outside number, or two outside numbers.








- (1) While on the first call, press  (hookflash) and dial 5 (Conference). The party is on hold.
 - *If you hear busy signals*, the system circuits are busy:
 - EITHER**, Return to the first party by pressing  (hookflash) and pressing  (or dialing 336).
 - OR**, Wait off-hook until you hear intercom dial tone. (You camp on and hear music.)
- (2) Place an intercom or outside call to the second party (or access a call on hold).
 - *If the party is not available* (no answer, busy, refuses the call), hang up to disconnect. Then lift the handset, press  (hookflash), and dial 5 to return to the first party.
- (3) Press  (hookflash) and dial 5. All three parties are connected.

To End The Conference:

Simply hang up. (If one of the other parties is a station, the call will remain connected as a regular call.)


Conference Calls

To Place The Two Parties On Hold:

- (1) During a conference call, press  (hookflash). The parties hear music while waiting and the conference is disconnected.
- (2) **To return to the parties one at a time:**
 - Press  (hookflash) and press  (OR dial 336) to talk to the first party.
 - **To place that call back on hold**, press  (hookflash) and press  (OR dialing 336).
 - **To access the other caller**, press  and press  again.
- (3) **To reconnect the conference**, refer to TO PLACE A CONFERENCE CALL.

System Speed Dialing

Up to 100, 32-digit system speed-dial numbers (identified by location codes) are programmed by the attendant or from a designated keyset (as described in the ATTENDANT section). These numbers can be used for dialing from any station.

- (1) Lift the handset and select an outgoing line.
- (2) Press  (hookflash) and dial 381 (System Speed-Dial).
- (3) Dial the location code (00-99) for the desired number. The number is dialed.

***If you hear reorder tones, you are restricted from dialing the selected number.*




Station Speed Dialing

To Program Station Speed-Dial Numbers:

You can store up to 10, 16-digit outside telephone numbers for speed dialing at your station. They are identified by one-digit location codes (0-9).

NOTE: If you make a mistake while performing the following procedure, hang up and start over.

- (1) Lift the handset and dial 383 (Program Station Speed-Dial).
- (2) Dial the location code (0-9).
- (3) Dial the telephone number to be stored (up to 16 digits). *If the system is installed behind a PBX*, speed-dial numbers can contain the PBX access code if it is followed by a pause.



To enter pauses, press  (hookflash) once for a short pause, twice for a medium pause, and three times for a long pause. To enter hookflashes, (if enabled) press  (hookflash) once for a hookflash, twice for a short pause, and three times for a medium pause. **NOTE:** After pressing  once, wait 2 seconds before pressing it again. A hookflash or pause counts as one of the 16 digits.

- (4) Hang up. Repeat this procedure for each number to be stored.

To Erase A Station Speed-Dial Number:

Repeat steps 1, 2, and 4 above to erase the number.

To Dial A Station Speed-Dial Number:

- (1) Lift the handset and select an outgoing line.
- (2) Press  (hookflash) and press  (OR dial 382).
- (3) Dial the location code (0-9). The number is dialed.

Redialing

You can redial the last telephone number manually dialed or speed dialed as long as the number had 32 digits or less.

- (1) Lift the handset and select an outgoing line.
- (2) Press **FLASH** (hookflash) and press **REDI** (OR dial 380). The number is dialed.

NOTE: If the system is installed behind a PBX, the redial feature remembers the PBX access code and automatically inserts a pause after the code when it is redialed.

Call Forwarding

You can forward incoming intercom and outside calls (including direct ring-in calls) to an intercom number or an outside telephone number. If more than one station has ring-in for a line, calls on it will not forward to outside telephone numbers. Recalls and queue callbacks will not forward. You cannot forward calls to a station in do-not-disturb, a pilot number, or a restricted telephone number. If you are in a hunt group and your calls are forwarded, you will not receive calls through the pilot number. Call forwarding overrides secretarial intercept — a programmable feature which automatically forwards a station's calls if the station is busy or there is no answer.

To Forward Calls:

- (1) Lift the handset and dial one of the following feature codes:
 - 355 (Call Forward All Calls): All incoming calls are immediately forwarded.
 - 356 (Call Forward If No Answer): All incoming calls are forwarded if they are not answered before the timer expires.
 - 357 (Call Forward If Busy): When your station is busy, all incoming calls are immediately forwarded.
 - 358 (Call Forward If No Answer or Busy): All incoming calls forward immediately if your station is busy or after the timer expires if you do not answer.

Continued...

Call Forwarding

- (2) **EITHER**, Dial the intercom number of the station to receive your calls (OR dial "0" for the attendant).

***If you hear repeating reorder tones, you dialed an invalid intercom number.*

OR, Dial a C.O. line access code (9, 81-89), the PBX access code (if using a PBX line), and the desired outside telephone number. (The system automatically pauses after PBX codes when a call is forwarded.)

***If you hear repeating reorder tones, you dialed a restricted number or dialed an incorrect access code.*

- (3) Hang up.
(4) Notify the person who will be receiving your calls.

To Cancel Any Call Forward Request:

- (1) Lift the handset and dial 359 (Cancel Any Call Forward).
(2) Hang up.

Paging

The paging feature allows announcements to be made through the keypad internal speakers and through the talkback speakers. An optional feature provides paging to three external areas, such as warehouses or loading docks. Pages are not heard at keysets that are in do-not-disturb, have page remove enabled, or are in use.

- (1) Lift the handset and dial 7 (Page).
(2) Dial the zone number:
 1-6 = Internal zones (keypads and talkback speakers)
 7-9 = External zones
 0 = All external zones
(3) After the progress tone, make your announcement before the timer expires.
(4) Hang up.

Do-Not-Disturb

When you do not want to receive intercom calls or transferred calls, place your station in do-not-disturb. You will continue to receive direct ring-in calls, queue callbacks, and recalls, and you can place calls or use other features. Another user calling your station hears four fast tones and a pause; a display keyset caller also sees the selected do-not-disturb message and a customized message, if programmed. The caller can request a callback (queue) or leave a message.

To Enable Do-Not-Disturb:

- (1) Lift the handset and dial 370 (Do-Not-Disturb).
- (2) **EITHER**, Select message 01 (Do-Not-Disturb) by hanging up. (This terminates the programming sequence.)

OR, Enter the number of the desired message (01-20).

Message 01 - DO-NOT-DISTURB	Message 11 - OUT OF OFFICE
Message 02 - IN MEETING UNTIL	Message 12 - OUT UNTIL
Message 03 - IN MEETING	Message 13 - WITH A CLIENT
Message 04 - ON VACATION *TIL	Message 14 - WITH A GUEST
Message 05 - ON VACATION	Message 15 - WITH A PATIENT
Message 06 - CALL ME AT	Message 16 - UNAVAILABLE
Message 07 - AT THE DOCTOR	Message 17 - IN CONFERENCE
Message 08 - ON A TRIP	Message 18 - AWAY FROM DESK
Message 09 - ON BREAK	Message 19 - GONE HOME
Message 10 - OUT OF TOWN *TIL	Message 20 - OUT TO LUNCH

- (3) **EITHER**, Hang up to terminate programming.

OR, Customize the second line of the message by entering the desired numbers using the keypad. Press **#** for hyphen (-) and ***** for colon (:).

- (4) Hang up to terminate programming.

To Cancel Do-Not-Disturb:

- (1) Lift the handset and dial 371 (Cancel Do-Not-Disturb).
- (2) Hang up.

User-Programmable Feature Keys

Four of the feature keys are programmable. In the default configuration, they are STN SPD (382), REDL (380), LCR (80), and I-HOLD (336). You may reprogram them to access any feature code.

To Return The Keys To Default Entries:

- (1) Lift the handset and dial 325 (Feature Key Default).
- (2) Hang up.

To Program Feature Keys:

For each key:

- (1) Lift the handset and dial 327 (Feature Key Programming).
- (2) Press the feature key to be programmed.
- (3) Dial the feature code to be stored under that key. A list of the single-line feature codes is at the end of this section. (If you hear reorder tones, an invalid code was dialed.) You hear dial tone when programming is complete.
- (4) Hang up.

Programming For Private Intercom Calls

To Always Place Private Intercom Calls From Your Station (Ring Intercom Always):

Any station that you call will hear repeating double tones and must lift the handset or press the SPKR or IC key to speak.

- (1) Lift the handset and dial 367 (Ring Intercom Always).
- (2) Hang up.

To Cancel Ring Intercom Always:

- (1) Lift the handset and dial 368 (Cancel Ring Intercom Always).
- (2) Hang up.


Cancel Miscellaneous Operations

Cancel call forward, do-not-disturb, a queue request, and hunt group remove all at once.

- (1) Lift the handset and dial 395 (Cancel Misc. Operations).
- (2) Hang up.

Hookflash Behind A PBX

If the system is installed behind a PBX, you may be required to hookflash to access system features. The FLASH key does not generate a hookflash over outside lines, you must use this procedure.

If you have accessed an outside line, press  (hookflash) and dial 330 (Hookflash).

Hunt Group Remove/Replace

You can temporarily remove your single-line set from the hunt group. When the hunt group remove feature is enabled, you will not hear ringing or receive camp-on tones for hunt group calls. Announcement and overflow stations cannot block hunt group calls.

- (1) Lift the handset and dial 322 (Hunt Group Remove) or 323 (Hunt Group Replace).
- (2) Hang up.

GX Single-Line Instrument Feature Codes

Outside Line Access Codes:

Pool Line Select	9
Select Line Group 1-8	81-88
Automatic Line Select	89
Least-Cost Routing	80

Intercom NUMbers

Stations	100-219
Talkback Speakers	221-225
Hunt Groups	231-245
Attendant	0

General Station Feature Codes:


Automatic Line Answer	350
Busy Station/Line Callback Queue Request	6
Cancel Queue Request	376
Call Forward All Calls	355
Call Forward If No Answer	356
Call Forward If Busy	357
Call Forward If No Answer Or Busy	358
Call Forward Cancel Any Call Forward	359
Call Splitting	337
Cancel Misc. Operations	395
Conference	5
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Cancel Do-Not-Disturb	371
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Hookflash	330
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Hunt Group Replace	323
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Program Station Speed Dial	383
System Speed Dial	381
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Transfer Intercom Call	346
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**GX
DSS/BLF Unit
User Guide
And
Attendant
Features**

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Introducing The GX DSS/BLF Unit And Attendant Features

- This section describes the procedures for using your GX DSS/BLF Unit. Be sure to use this section along with the GX Keypad User Guide section.
- The DSS/BLF Unit is a Direct Station Selection (DSS) Unit and a Busy Lamp Field (BLF), which is used along with a GX Display Keypad. Direct station selection provides one-key access to each of the stations, the hunt groups, the modems, or the talkback speakers. Each unit has 60 buttons that are labelled to identify each station (or other sources). They are indicated in the procedures as . The icon is a small square with a vertical line on the left side and the letters 'DSS' to its right.
- The lamps in the DSS/BLF keys create a busy lamp field, which displays the current status of keypad and single-line set stations.
 - If the DSS/BLF key is not lit, the station is idle.
 - If the DSS/BLF key is lit steadily, the station is busy.
 - If the DSS/BLF key is flashing, the station is in do-not-disturb.
 - If the DSS/BLF key is flashing rapidly, the station was left off hook and has been locked out by the system.
- The display screen at the top of your keypad is useful for call processing. It shows you numbers dialed, messages, time and date, sources of incoming or recalling calls, and more. In the procedures, displayed messages are shown in [brackets].


Using The DSS/BLF Unit


To Place An Intercom Call Using A DSS/BLF:

- (1) Lift the handset (OR press  if using a headset or placing a call while on hook).
- (2) *If you want the call to ring until answered (private call) when calling a handsfree keyset, press .*
- (3) Press the unit . (If the DSS/BLF key is lit, the station is busy and you may camp on or request a callback.)
 - *If calling a handsfree keyset, speak after you hear the double tone.*
 - *If calling a hunt group, single-line set, keyset with the handsfree feature disabled, or if placing a private call, you hear repeating double tones until answered.*

To Transfer A Call:

NOTE: When it says to hang up, you can press a LINE key or the AUTO, POOL, or IC key to disconnect and answer another call.

- (1) **While on an outside call**, press the desired  (or press XFR and dial the station's intercom number, a pilot number, or the transfer-to-park location). The caller is put on hold.


While on an intercom call, press  and enter 346 (Transfer Intercom Number). Then press the desired DSS or dial the desired number.


- (2) **EITHER**, Hang up to complete the transfer. If the station is busy, the call will camp on.
 - *If you called a transfer-to-park location, page the called party and announce the call. The party must use reverse transfer to pick up the call. If the call is not answered before the timer expires, the call recalls your station.*



Continued...



Using The DSS/BLF Unit

OR, Wait for an answer and announce the call. Then do one of the following:

- *If the call is accepted*, hang up to complete the transfer. The call rings at the station.
- *If the called party or the caller wants the call placed on hold*, press  and hang up to transfer the call to hold. The call will not ring at the station until the hold timer expires. Page the called party and announce the call if necessary.
- *If the station user answers and refuses the call OR if there is no answer:*


EITHER, Transfer the call to another station by pressing another .


OR, Return to the caller by pressing the fluttering  (for outside calls) or by pressing  twice (for intercom calls). Announce that the party is not available. Offer to take a message or to page the party.

- *If the caller wants to leave a message and the called party has a keyset*, take the message and end the call. Press the called party's , press , and hang up. The station user's MSG key is flashing. When their MSG key is pressed, you will be called automatically.

To Transfer An Outside Call To The Modem:

If a service representative needs to be transferred to the modem for remote programming, only the attendant can transfer the call.

- (1) Ask if a 300- or 1200-baud rate is needed.
- (2) *If the modem is programmed under DSS/BLF keys*, press the  for the proper baud rate.





If there is not a DSS/BLF key for the modem, press  and dial intercom number 260 for 300 baud OR dial 270 for 1200 baud.

- (3) When you hear intercom dial tone, hang up.

Using The DSS/BLF Unit

To Reverse Transfer (Pick Up) A Call:

You can pick up a call that is ringing in, recalling, or holding at another station or the transfer-to-park location. If more than one call is ringing or holding at a station, the calls are accessed in the following order: (1) direct ring-in call, (2) outside call transferred or camped on, (3) outside call recalling, (4) outside call on individual hold, (5) intercom call ringing, and (6) intercom call on hold. If more than one call of the same type is at the station, the calls are picked up in the order they were received.


- (1) Lift the handset and press the lit  of the station where the call is ringing or holding.
- (2) Press .
- (3) Press the flashing or fluttering  or  (unless the system is programmed to automatically connect reverse transferred calls).


Attendant Recall

To Answer A Hold Or Transfer Recall:

If a call is placed on hold or transferred, the system timers limit the amount of time the call remains unattended. After that time, the call recalls the station that placed it on hold or transferred it. If the recall is not answered, the call is sent to the attendant's station. If the attendant is busy, the call camps on. If the call is not answered by the attendant before the abandoned recall timer expires, the system disconnects the call.

When the call recalls, you hear four tones, the display shows HOLD RECALL FROM XXX or LINE RECALL FROM XXX, and the LINE or IC key is flashing.

EITHER, Answer a recalling outside call by lifting the handset and pressing the flashing . You are connected.



OR, Answer a recalling intercom call by lifting the handset and pressing the flashing . You are connected.

To Answer An Unsupervised C.O. Recall:

If an outside call is transferred or forwarded to an outside telephone number, the call is limited by a timer. When it expires, the outside parties recall the attendant's station.

This serves two purposes. If you need to control the use of the lines, you can choose to disconnect or reconnect the callers. If the parties have already hung up when you receive the recall, the lines are still open and must be disconnected.

When the call recalls, you hear four tones, the display shows UNSUPERVISED CO RECALL, and the CNF key is medium flashing.

- (1) Lift the handset and press . You will access both lines. The CNF key flashes slowly. [Displays CONFERENCE WITH LINE XX LINE XX.]
- (2) Check to see if the callers are still using the lines.
 - *If they are still talking*, reconnect their call by pressing . CNF key flutters.
 - *If no one is there or if the call should be disconnected*, hang up. All lines are dropped.

System Speed Dialing



The attendant (or the designated speed-dial programming station) can program up to 100, 32-digit system speed-dial numbers. The numbers are identified by location codes 00-99 and can be used for dialing from any station. If desired, an identifying name (up to 16 characters) can also be stored with each speed-dial number.

To keep system speed-dial numbers confidential, a range of speed-dial locations can be programmed as non-display numbers by the installer. Non-display numbers can be used by any station user, but can only be displayed on the programming station's keyset.

The system speed-dial numbers can contain up to 32 digits that dialing a series of numbers. For example, the number can contain an SCC local number, a pause, the access code, and the telephone number. PBX access codes, followed by a pause, may be included in speed-dial numbers. Each hookflash and single, double, or triple pause is considered one digit.



To Program System Speed-Dial Numbers:

NOTE: If you make a mistake while performing the following procedures, use the MUTE key to backspace or lift and replace the handset (the name and number in memory remains unchanged). Then start over.

- (1) While on hook, press  (or press  and dial 020 — Program System Speed-Dial). [Displays PROGRAM SYSTEM SPEED DIAL.]
- (2) Dial the speed-dial location code (00-99). The MSG key is lit. [Displays the name and number or, if one does not exist, NO OUTSIDE #.] The cursor is located on the bottom line. If you do not continue to the next step, the display times out; you must start over.





Continued...

System Speed Dialing

- (3) **EITHER**, Enter or change the name for the speed dial number using your keypad (up to 16 characters). Refer to the chart below. The number of times a key is pressed determines which character is entered. For example, 77776444844 would enter "SMITH". When adjoining characters are located under the same key, press  once to advance to the next character. For example, 5666  66337777 would enter "JONES". Refer to the chart below to program speed-dial names. (Note that letters correspond to the letters printed on the keypad keys.)

Key	Number of times key is pressed				
	1	2	3	4	5
1	.	-	.	&	1
2	A	B	C	>	2
3	D	E	F	/	3
4	G	H	I	"	4
5	J	K	L		5
6	M	N	O		6
7	P	Q	R	S	7
8	T	U	V	:	8
9	W	X	Y	Z	9
0	'	%	=	?	

OR, If the existing name is correct, or you do not wish to program a name, proceed to step 4.

- (4) Press  (it will go out and the cursor will move to the top line). Enter or change the telephone number (up to 32 digits) using the keypad. Use the MUTE key to back up and erase existing numbers. [Displays the number as it is entered.] **To include pauses in the number**, press  once for a short pause (S), twice for a medium pause (M), and three times for a long pause (L). **If hookflash programming is enabled**, press  once for a hookflash (F), twice for a short pause (S), and three times for a medium pause (M). You may not exceed 32 digits (each pause and/or hookflash counts as one digit).
- (5) Press any  to save the number. You hear a single progress tone when accepted. [Displays PROGRAM SYSTEM SPEED DIAL.]

Continued...

System Speed Dialing

- (6) **EITHER**, Repeat steps 2 through 5 for each number to be entered or changed.

OR, Wait for the display to return to the date and time, or lift and replace the handset.

To Erase System Speed-Dial Numbers:

- (1) While on hook, press **[SYS SPD]** (or press **[SPCL]** and dial 020 — Program System Speed-Dial). [Displays PROGRAM SYSTEM SPEED DIAL.]
- (2) Dial the speed-dial location code (00-99). The MSG key is lit. [Displays the name and number.]
- (3) You may erase the name only, the number only, or both:
- *If you wish to erase the name*, press **[MUTE]** repeatedly until the name is erased.
 - *If you wish to erase the number*, press **[MSG]**, then press **[MUTE]** repeatedly until the number is erased.
- (4) Press any **[LINE]**. You hear a single progress tone when accepted. [Displays PROGRAM SYSTEM SPEED DIAL.]
- (5) **EITHER**, Repeat steps 2 through 5 for each number to be erased.

OR, Wait for the display to time out, or lift and replace the handset.

System Speed Dialing

To View System Speed-Dial Numbers:

- (1) While on hook, press **SYS SPD** (or press **SPCL** and dial 381 — System Speed-Dial). [Displays PROGRAM SYSTEM SPEED DIAL.]
- (2) Dial the desired location code (00-99). [Displays the programmed name and number.]
- (3) Wait for the timer to expire or lift and replace the handset. Then repeat the procedure for each number to be viewed.

Placing The System In Night Mode

The primary attendant can place the system in night mode. This changes the allowed-answer and ring-in assignments to the night list. There is no attendant recall during night mode.

To Place The System In Night Mode:

While on hook, press **SPCL** and dial 010 (Night Ring On/Off). You hear a progress tone. [Displays SYSTEM IS NOW IN NIGHT RING.]

To Cancel Night Mode:

Repeat the procedure shown above. [Displays date and time.]

Programming Stations For Night Ring


The primary attendant can change the database ring-in and allowed-answer night lists. A line can be assigned to ring in or to be answered at any station. This procedure must be performed while the system is in the day mode.

NOTES: If you make a mistake while performing the following procedure, lift and replace the handset and start over. An error in pressing keys will stop the programming and display NIGHT RING MODE UNCHANGED; you must start over.

- (1) While on-hook, press and dial 011 (Program Stations for Night Ring). [Displays PROGRAM NIGHT RING FOR EXT #.] You hear a progress tone.
- (2) Dial intercom number of the station to be programmed; do not use the DSS/BLF key. [Displays ENTER (A)NSWER OR (R)ING-IN.] You hear another progress tone.
- (3) **EITHER**, Press "R" (the digit 7 key) to program lines to ring in to the station.
OR, Press "A" (the digit 2 key) to program lines that will not ring but can be answered at the station.
- (4) When the display shows NOW PROGRAMMING XXX, designate the line(s) by pressing appropriate key(s) and/or . (To erase all line designations, skip this step.)
- (5) Press . [Displays NIGHT RING SET FOR XXX.] You hear a progress tone. Repeat the procedure for each station to be programmed.

Talkback Speaker Background Music

The primary attendant (or system alarm station) can turn background music on or off for any or all talkback speakers.








- (1) While on-hook, press  and dial 018 (Talkback Speaker Music On/Off). You hear a progress tone.
- (2) **EITHER**, Dial "0" for all talkback speakers. Speakers that were on are now turned off, and all that were off are now turned on.

OR, Dial the number of the desired talkback speaker (1-5) to turn music on or off.

Set Time Of Day And Date

Occasionally, the system date and time need to be reset (for example, leap year or change to daylight-saving time). The primary attendant can use the keyset to change the date and time that appear on all display keysets and in the SMDR and SMDA printouts.

NOTE: If you make a mistake while performing the following procedure, lift and replace the handset and start over.

- (1) While on hook, press  and dial 021 (Set Time of Day). [Displays SET TIME OF DAY.]
- (2) Using the keypad, enter the time in hours and minutes. Then press  for AM or  for PM. For example, 900* = 9:00AM and 230# = 2:30PM. [Displays SET DATE MM-DD-YYYY.]
- (3) Use the keypad keys to enter the month, day, and year. (For example, 01011986 = 01-01-1986.) If you make a mistake, backspace by pressing . [Displays SET DAY OF WEEK SUN.]
- (4) Scroll through the day-of-week selection by pressing  to go forward or  to go backward. When the desired day is displayed, press  to terminate programming. You hear a progress tone.

Remote Station Feature Cancel

You may cancel call forward and/or do-not-disturb for any or all stations that have dial-zero access to your station.

- (1) While on hook, press and dial one of the following feature codes:
 - 012 (Cancel All Station Do-Not-Disturb Requests).
 - 013 (Cancel All Station Forward Requests).
 - 014 (Cancel All Station DND/FWD Requests).
 - 015 (Cancel Station Do-Not-Disturb Request).
 - 016 (Cancel Station Forward Request).
 - 017 (Cancel Station DND/FWD Request).
- (2) If you are clearing an individual station (using code 015, 016, or 017), dial the intercom number or press .

System Alarm Reporting

The system's alarm reporting feature detects equipment failures, determines the impact, and classifies the problem as a major or minor alarm. Minor alarms display on the primary attendant's keyset (or the system alarm station) and can be programmed to display on all attendants' keysets. Major alarms appear on all display keysets, and both major and minor alarms are printed in the SMDR printout.

To Respond To Minor Alarms:

Four minor alarms indicate problems that can be corrected without calling service personnel. All other minor alarms require immediate attention from service personnel.

- (1) When a minor alarm displays [WARNING!! SYSTEM ALARM #XX], write down the exact message and number, date, and time.
- (2) From any attendant station, clear the message by pressing and dialing 019 (Clear System Alarm).

Continued...

System Alarm Reporting

(3) If the alarm number is 01, 02, 03, or 04:

- #01 STATION OFF-HOOK: Check for a continuously fluttering DSS/BLF key (OR look at the SMDR printout) to determine which station is off-hook. Find the station and hang up the handset.
- #02, #03, #04 PRINTER PROBLEM: Check to see if the indicated printer ran out of ribbon or paper. If not, check for a loose cable or power cord.

If the alarm number is 10 or higher, the system has a hardware failure that may prevent reliable operation. Contact service personnel.

To Respond To Major Alarms:

If all display keysets show WARNING! MAJOR ALARM, it is due to a processor board failure. If power is also lost, there are no displays and the system is inoperable. In either case, the power failure must be corrected by a qualified technician. Contact service personnel.

ALARM 10 = TOO
MANY SMALL ALARMS
HAVE BUILT UP.

NEED TO SHUT DOWN
SYSTEM TO RESET,
IF #10 FLASHES
OFTEN.

GX Attendant Feature Codes

Special Attendant Codes

NOTE: Attendants can also use all of the Keypad Feature Codes shown at the end of the Keypad User Guide section.

Cancel All Station Do-Not-Disturb Requests	012
Cancel All Station Forward Requests	013
Cancel All Station Do-Not-Disturb/Forward Requests	014
Cancel Station Do-Not-Disturb Request	015
Cancel Station Forward Request	016
Cancel Station Do-Not-Disturb/Forward Request	017
Clear System Alarm	019
Night Ring On/Off	010*
Program Stations For Night Ring	011*
Set Time Of Day	021*
Talkback Speaker Music On/Off	018*

*For primary attendant or designated keypad only.

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