TC4001 Telecenter® IV
Operations Manual

RAULAND-BORG CORPORATION • 3450 West Oakton Street, Skokie, Illinois 60076-2951 • (708) 679-0900

Table of Contents

Introduction

This manual provides procedures for performing each function available in the TCIV in both interconnected and non-interconnected systems. It is intended for use as an operators guide and for training customers to use the various functions of the system.

Prior to training customer personnel, the trainer should be fully familiar with the system and able to competently perform **each function** thecustomerwill be required to use. It is suggested that the trainer prepare by practicing each function using the TCN Demo System and the system installed at the customer's organization. If the system is interconnected, refer to the Interconnect Layout Drawing.

To further ensure the customer's smooth transition to the new system, it is suggested that customized operational procedures be prepared as guides for key personnel (e.g., executives, incoming-call attendants, and typical staff stations).

Answering Calls

Summary: **There** are two type of calls which may he answered in the **TCIV** - calls to telephones and **calls** to speakers. For the most part, when a telephone rings - answer it. When a speaker beeps - talk to it. However, there are several other things to know about how calls to a station are handled.

Telephones   The type of ring indicates the source of the incoming call:

> **Single Ring:**   The call is from within the **TCIV** System.
> **Double Ring:**   **The** call is from outside the **TCIV** System.

When your telephone rings:

1.   Pick-up the handset and talk.

2.   When finished, hang-up for 2 - 4 seconds before attempting to place a call.

When a nearby telephone rings and no one is there to answer it:

1.   Dial the ringing station from a station with executive override capability.

2.   After receiving a short busy signal, dial *****; the call will transfer from the ringing phone and can then be treated like any other normal call.

3.   When finished, hang-up for 2 to 4 seconds before attempting to place a call.

When paged to pick-up an outside **call** on hold at a specific **line:**

1.   Go to an administrative station.

2.   Dial **#4** and the number of the line specified (e.g.: if **line** 3 is specified, dial **#43)**.

3.   When **finished**, hang-up for 2 - 4 seconds before attempting to place a call.

When the Night Answer Tone Sounds:

1.   Pick-up an Administrative telephone.

2.   Press **#30** and talk.

3.   When finished, hang-up for 2 - 4 seconds before attempting to place a call.

Speakers   When **a speaker beeps:**

1.   Ensure the Privacy Switch is off (if installed).

2.   Talk to be heard and listen to hear the caller (simultaneous two-way conversation is not allowed).

3.   If there is an associated phone, you may pick-up the handset and talk privately (the speaker will disconnect and stop beeping as the call automatically transfers to the phone).

4.   If the phone is used, hang-up when finished.

Placing Calls Within the TCIV System

Summary: There are two basic methods for placing calls within the TCIV system. The method required depends on the type of station being used to place the call and how the station is programmed. Generally, phones with key pads may be used to directly dial any TCIV station and phones without key pads automatically call an attendant when taken off-hook. A station may also have a Call-in Switch which can be used to automatically call the attendant.

Placing Calls or Call-ins with a Phone

Step 1. Pick-up the telephone, if dial tone is received in the handset, go to the next step; otherwise, place the telephone back on-hook within 4 seconds and wait for the attendant to respond (See Answering Calls).

Step 2. Dial the desired TCIV extension and respond to the audible signal which occurs in the handset as shown in the box below.

Step 3. When communication is established, transfers or conferences may be performed (refer to the apppropriate procedure).

Step 4. When the call is finished, hang-up the phone for 2 to 4 seconds before attempting to place another call.

Placing a Call-in with a Switch

Normal and Emergency Call-ins go to an attendant who has a display which shows the number of each station which has called-in in the order received. The attendant may answer call-ins in any order but Emergency call-ins must be answered first.

To Place a Call-in, depress the Call-in Switch. The call-in will be announced at the office by an audible beep and its number will be displayed until it is answered or cancelled.

If the switch locks in the depressed position, it must be released before the office call-in display can be cancelled; otherwise, the call-in will automatically cancel when the office answers.

You may be able to cancel your call-in by pressing and holding the call-in switch for 4 seconds or more and then releasing it (or by releasing the locked switch after 4 seconds)

Audible Signal Indications

Ringing:	Ringing is indicated by a buzz in the handset about every four seconds. Wait for an answer.
Room noise:	You have contacted a speaker which is not in the Privacy mode. Speak to talk -- Listen to hear.
Quiet Line:	You have contacted a speaker in the Privacy mode or the intercom channel is busy. Request a response ("This is . . . . please release the privacy switch") or wait a few moments for the line to clear and give access to the speaker.
4 quick beeps:	The station called is busy -- If the call is important, attempt to override the busy signal by pressing *; otherwise, hang-up and try again later.
1 Long Beep:	You dialed an invalid number: Hang-up and try again or use another extension.

Paging Functions

Summary: Paging functions may be performed only from authorized administrative phones. There are three types of voice paging and one of four tones can be transmitted. Because these functions can be disruptive if abused, be sure to follow these few guidelines:

Write and rehearse announcements before paging.

Adhere to any organizational rules regarding use of paging and tones.

Except for the numbers used when dialing, the procedure for placing each of the three types of page is essentially the same. Refer to the box below for an explanation of each type of page and tone and the dialing pattern required.

Step 1. Refer to the Paging Functions Table below and determine the type of page (All-Page, Zone-Page, Special Page, Tones) you wish to perform.

Step 2. Lift the handset and dial the required code.

Step 3. If you are paging, wait for a tone in the handset and then make the announcement.

Step 4. Hang-up when the announcement is completed.

Paging Functions

Ill-Page:	Dial #00 (if provided, use the EMER button on the Audio Contol Panel) to make an announcement over all speakers in the TCIV system.
Zone Page:	Dial #0(1-8) to make an announcement to any one of the *eight potential* speaker zone groups in the system. Each speaker may be in from 1 to 8 zones or no zone at all. (To page: Zone 1, dial #01, Zone 3, dial #03.)
Special Page:	Dial the 3- or 4-digit number of the group you wish to page.
Tones:	Dial #11 to generate a Pulsating Tone.
	Dial #12 to generate a Siren.
	Dial #13 to generate a Steady Tone or European Warble
	Dial #14 to generate Electronic Chimes.

Answering and Cancelling Call-ins

Summary: Some stations are equipped and programmed to place Normal and/or Emergency call-ins, Generally call-ins serve two purposes:

> Provide stations which cannot directly dial other stations a way of originating calls.

> Provide a means of getting assistance during an emergency.

The type of call-in produced depends on the equipment used at a station (telephone and/or call-in switch) and the way the station is programmed. A telephone call-in (usually a normal call-in) is placed by taking the telephone off-hook. Switch call-ins (normal or emergency) are placed by depressing a Call-in Switch.

Certain Administrative Phones are programmed to answer and cancel call-ins. These stations are equipped with either a display phone or are located near a wall-mounted display. There may be one or two display groups (LCD 1 and LCD 2) and each display in a group shows the same information. (For example, Display Group 1 may include three attendants monitoring all call-ins from a certain floor or building and Display Group 2 may be one attendant monitoring all other call-ins. Alternately, group 1 may monitor normal call-ins and group 2 may monitor only emergency call-ins).

Displays show the three- or four-digit numbers of stations which have placed call-ins and the last number dialed by any phone in the display group. When a call-in is placed, a characteristic beep sounds. Typically, Emergency beeps occur at a faster rate than Normal beeps.

In this system, call-ins are characterized by beeps as follows:

> Emergency: _____ beeps per second

> Normal: _____ beeps per second

Each display, is divided into two fields by a colon [:]. The field to the right of the colon shows the last number dialed from any administrative phone allowed to update the display. The field to the left of the colon shows the phone numbers of stations calling-in to the display group. The display fills from left to right with the oldest call-in always displayed on the far left side.

Normal call-ins are shown by number only and three Normal call-ins may be shown at once. When Emergency call-ins are placed, all Normal call-ins are cleared from the display and held in memory while EMER appears on the left of the display followed by the call-in station number. Two 3-digit Emergency call-ins may be displayed at once. If more call-ins are made than can be displayed, they are held in memory and displayed on a first-in, first-out basis.

EMER 109 201:100

Emergency call-ins placed from stations 109 and 201. The last number dialed by any administrative station associated with this display was 100. No more call-ins can be shown on this display.

109 201   :100

Normal call-ins placed from stations 109 and 201. The last number dialed by any administrative station associated with this display was 100. One more normal call-in could be shown on this display.

Answering Call-ins

Call-ins may always be answered by dialing the number of the station which placed the call-in or by using the star method, that is - dialing star **[*] . The** star method is normally used for **se**-quentially handling call-ins in the order received and the dialing method is for handling **call**-ins out of sequence. Whenever the number of the station is dialed, the phone must be **hung**-up before answering another call-in.

When the **[*]** method is used for handling a string of call-ins, each time the **[*]is** pressed, the system simultaneously disconnects the current call and answers the next call-in. This **system allows** the **[*]** method of answering call-ins to be used as follows:

> _____ Press **[*]** to answer a call-in and hang-up before using again.

> _____ Press **[*]** to answer a call-in and press **[*]** again to disconnect from one call-in and automatically answer another. This mode provides unlimited **[*]** answering but is not typically used.

> _____ Press **[*]** to answer a call-in and press **[*]** again to disconnect **from** one call-in and automatically answer another. **[*]** must be pressed within _____ seconds of answering a call-in or you must hangup before using it again.

> **Note:** Regardless of the **[*]** method used, pressing **[*]** will have no effect if the in-progress call-in was answered by dialing the station number.

Typical call-in answering scenario:

1. **Respond to the first call-in** by lifting the handset, dialing * [star] and providing whatever as-sistance is required and within the capability of your station.

2. **To respond to the next call-in in sequence:**

   Dial * [star] again.

   OR

   Hang-up for three (3) seconds, then dial * [star] again.

3. **To answer a call-in out of sequence,** hang-up for three **(3)** seconds and then dial the desired station number.

Cancelling All Call-ins (Normal and Emergency)

Lift the handset and dial #21

Previewing Call-ins

Step 1. Lift **the handset and dial #22** for a display of the next set of call-ins.

Step **2.** **Press** * [star] for a display of the next most recent set of call-ins.

Step 3. **Continually press** * [star] to go deeper into the call-in memory which can contain 60 **call**-ins. A blank display indicates there are no more call-ins to display.

Step **4.** **Hang-up or hook-flash when finished and dial-tone and full operational ability will return.**

Call an Outside Number Directly:

Summary: The TCIV may be configured in a number of ways to provide outside dialing capabilities. The system design will dictate the steps the user must take to successfully complete an outside direct-dial call. Basically, there are two types of system designs to be considered - a TCIV connected directly to the public telephone network and a **TCIV** connected to the public exchange through a PBX.

Step 1. **Pick up the telephone handset and obtain TCIV dial-tone.**

Step 2. **If there is a PBX** in the system, **dial** _____ **(PBX Access Digit)** to obtain PBX dial tone; *otherwise*, *go* to the next step.

> **If dial tone is received, go** to the next step; *otherwise*, respond to the signal received as shown in the box below.

Step 3. **Dial** _____ **(Outside Access Digit)** to obtain outside dial tone.

> **If dial tone is received, go** to the next step; *otherwise*, respond to the signal received as shown in the box below.

Step 4. **Dial the number desired as you normally would from your home phone.**

> **If ringing occurs in the handset, go to the next step; *otherwise*,** respond to the signal received as shown in the box below.

Step 5. **Wait** for an answer **or hang-up** for 2 - 4 seconds before attempting to place another call.

> **To transfer the call or create a conference call,** refer to the appropriate procedure in this manual.

Step 6. **When you have completed your call,** hang-up for 2 - 4 seconds before attempting to place another call.

Audible Signal Indications

Long Beep:	Hang-up and try again or use another phone. The number dialed was invalid or this call cannot be completed using this phone.
4 Beeps:	Hang-up and try again later, the line dialed is busy.
Busy Signal:	**Hangup and try again later, the number dialed is busy.**

Transferring and Conferencing Calls

Summary: Administrative Phones may be used to instruct the system to transfer a caller to a different station or create a three-way conference call. A conference call is established using the transfer procedure except all three parties remain on the line. A transfer or conference involves three stations:

>   **Dialer:** The TCIV Administrative Station which will transfer the Caller.

>   **Caller: The** station to be transferred. This may be another TCIV station or it may **be** an outside station. An outside station is any station which is not directly connected to the TCIV system.

>   **Target:** The station to which the Caller will be transferred or with which to establish a conference call. The Target may be a TCIV or an outside station.

Step 1.   **Dialer and Caller agree upon a transfer or conference Target.**

Step 2.   **Hook-flash the system** using whichever of the following methods is appropriate. This will simultaneously obtain dial tone and place the Caller on soft hold. If dial tone is not received, wait a couple of seconds and try again ∎ the system may be **busy. (Soft hold is confirmed** by a **series of interruptions in dial tone (stutter tone) in Version 102 and later software.)**

>   Depress the Tap Button, if installed.

or   If no Tap Button, depress the hook-switch for less than one second.
   (Warning: If there is a tap button, depressing the hook-switch is the same as hanging-up.)

NOTE: The hook-flash is used frequently and for different functions; however, whenever it is required, always perform it as described above.

Step 3.   Perform the following procedure (A, **B, C, or D)** which applies to your situation:

A.   **If an outside Caller is to be transferred to, or conferenced with, a TCIV station:**

1.   **Dial the Target number.**

2.   **When the Target answers, request permission to complete the** transfer or conference. The system will allow you to talk privately while the Caller remains on soft **hold.**

>   **If the Target refuses the transfer or conference, wait for 2 to 4 seconds after the Target hangs-up, then hook-flash to get the Caller back.**

>   **If the Target accepts the transfer, hang-up and the Caller will automatically be connected to the Target.**

>   **If the Target accepts the conference, repeat the hook-flash to get the Caller back from soft hold and onto the same line with you and the Target.**

If the Target fails to answer, repeat the hook-flash to stop the ringing and get the Caller back from soft hold for further call handling.

If the Target is busy, you will receive a short busy signal and then you will automatically be reconnected with the Caller for further call handling.

3.   If further call handling is required, transfer the Caller to the Attendant who can page the Target to pick-up the call and then conference with you **if required.**

4.   **Each station must hang-up for 2 - 4 seconds before attempting another call.**

B. **Both the Caller and Target are outside the TCIV system or a Centrex line must be used to accomplish a transfer:**

Is this feature available?   YES   NO

1. Press • to replace the TCN dial tone with dial tone from the remote system, then dial the target number.

2. When the target answers, request permission to complete the transkr or conference. The remote system will normally allow you to talk privately while the Caller remains on soft hold.

    If the Target refuses the transfer or conference, wait for 2 - 4 seconds after the Target hangs-up - then, hook-flash for dial tone and press • again to get the Caller back.

    If the Target accepts the transfer, hang-up and the Caller will automatically be connected to the Target.

    If the Target accepts the conference, repeat the hook-flash • dial tone - • sequence to get the Caller back from soft hold and onto the same line.

3. If the Target is busy or fails to answer, repeat the hook-5ash - dial tone - * sequence to get the Caller back from soft hold.

4. Each station must hang-up for 2 to 4 seconds before atttempting another call.

C. **A Caller in the TCIV system is to be transferred to, or conferenced with, a Target which is in the public telephone system. (e.g.: assist a Caller who is not authorized or not equipped to place outside calls):**

1. If a PBX must be used to place outside calls, do "a" and "b" below, otherwise, do "c":

    a. Dial _____ to replace TCIV dial tone with dial tone from the PBX (Note the PBX Access Digit or write N/A for not-applicable) .

    b. Dial _____ to replace PBX dial tone with dial tone from the public telephone system (Note the PBX Outside Access Code).

    c. Dial _____ to replace TCIV dial tone with dial tone from the public telephone system (note the Outside Access Digit).

2. Complete the Transfer or Conference using the following method which is appropriate:

    Transfer: If the Caller can dial and your station has "full access", hang-up, the Caller will be connected to the outside dial tone and can then dial the desired number.

    Transfer or Conference: If your station has any prefix restrictions and/or the Caller cannot dial, dial the Target number and then hang-up to transfer or hook-flash to conference. The Caller will be connected to the calling line and hear the ring or busy signal supplied by the telephone company.

3. Caller and Dialer must hang-up for 2 - 4 seconds before attempting another call in each of the following situations:

    a. When the call is completed.

    b. If the Target is busy or fails to answer.

    c. If the call cannot be completed for any other reason.

D. A Caller in the TCIV system is to be transferred to, or **conferenced** with, a Target which is an extension in an associated PBX or **Centrex** (e.g.: assist a Caller who is not authorized or not equipped to place this type of call).

Note: If possible, have the Caller hang-up; then, call the Target and transfer or conference it to the Caller using the procedure of Step 3. A.

1. Dial _____ to replace TCIV dial tone with dial tone from the PBX (note the PBX Access Digit).

2. Complete the Transfer or Conference using whichever of the following methods is appropriate:

Transfer: If the Caller can dial, hang-up: the Caller will be connected to the PBX dial tone and can then dial the desired number.

Transfer or Conference: If the Caller cannot dial, dial the Target number and then hang-up to transfer or, hook-flash to conference. The Caller will be connected to the calling line and hear the ring or busy signal supplied by the PBX.

3. Caller and Dialer must hang-up for 2 - 4 seconds before attempting another call in each of the following situations:

When the call is completed.

If the Target is busy or fails to answer.

If the call cannot be completed for any other reason.

Paging to Have a Call Picked-up

Summary: This function allows Key Phone Attendants and Call Control Console Operators to transfer outside calls within the TCIV system when they cannot reach the Target directly.

At Key Phone or Console:

step 1. Place an outside call on hold, noting the number of the key used (count from left to right).

Step 2. Use the appropriate paging function to direct the desired party to pick-up the held line (e.g.: "John Smith, pick-up line 3.").

Step 3. Wait for an appropriate period of time and then verify that the call has been picked-up using whichever of the following procedures is appropriate.

> On a Call Control Console, the hold will automatically clear when the Target picks-up the call.

> At a Key Phone, check the line manually. If the call has been picked-up, the line will be silent and hanging-up for 2 - 4 seconds will reenable the line. If the call has not been picked-up the caller will still be present.

At the Administrative Station:

Step 1. When you hear a page, note the line number on which the call is waiting.

step 2. Dial **#4n** using an administrative station.

> **n** is the line number if 1 - 9 and 0 if line 10 (e.g.: if the call is waiting on line 3, dial #43: if it is held on line 10, dial #40).

Step 3. When finished, hang-up for 2 - 4 seconds before attempting to place another call.

Built-in Night Answer (#30 and #31)

summary: The Built-in Night Answer function allows any administrative phone to be used to pick-up outside calls received on lines which are not private. This function **can** be wired to provide an audible alert signal, the Night Answer Tone, whenever an outside call is detected.

Some organizations may choose to use this function during the day as an alternative method of remote answering. When this is done the normal Night Answer Tone **may** not be used, requiring that calls be answered by someone within hearing range of a ringing attendant phone.

Private @IL) lines are not included in the built-in Night Answer function. This allows these stations to be reached directly after hours. If a private line is busy, the outside caller may call the main number.

Turning Night Answer On/Off

Step 1.   **Dial #3 1** using any phone with a display (built-in or wall-mounted).

Step 2.   Observe the display for one of the following messages:

NIGHT ANSWER OFF

NIGHT ANSWER ON

Step 3.   If you want to change the displayed status, press any key until the desired display appears.

Step 4.   Hang-up and the system will operate according to the last message displayed.

Using Night Answering

When the Night Answer Tone Sounds:

1.   **Pick-up an Administrative telephone.**

2.   **Press #30 and talk.**

3.   **When finished,** hang-up for 2 - 4 seconds before attempting to place a call.

Custom Night Set-up

Summary: This option reconfigures the system to the requirements of night-time operation and helps prevent abuse of telephones in unmonitored areas. The custom night set-up may change authorizations and abilities at certain stations.

Obtain information on the night-time system set-up from the system installer, including any of the following:

Changes in incoming call routing (e.g.: typically all outside lines are reconfigured as private lines with calls to the organization's main number routed to the operator's console or an answering machine and the remaining lines routed to various departments, such as: Music, Physical Education, Security, etc.).

Changes in outside calling authority for the system or specified stations (e.g.: there may be no toll calling ability at night or it may be allowed only from certain stations).

Changes in station types or calling authorizations (e.g.: some day-time administrative stations may be reconfigured as staff stations at night and some day-time staff stations (with key pads) may be reconfigured as administrative stations at night).

Changes in Call-in handling (e.g.: Call-ins may go to the Security Station at night).

Using Displays (#20 and #70)

Summary: Each time power is applied to the system or it is reset, the system processor automatically initializes the displays. If a phone with a display is connected after this or if a wall display loses power, it must be initialized manually. The contrast adjustment must be set on each display phone to provide viewing comfort. Displays can be used to obtain the software version number of the Telecenter's main program.

Display Initialization

If a display shows the following message, there has been no activity on its associated lines since the system was powered-up or reset.

```
┌─────────────────┐
│  Telecenter IV  │
└─────────────────┘
```

Use the station and verify the display shows current activity (i.e.: call-ins and last number dialed).

If the display is blank, 1/2 blank, or will not respond as expected, the following procedure may be performed at any time to restore the most recently displayed message.

Dial **#20** and verily that the display shows either of the following:

All current activity on the associated line(s).

Only a colon (:) if there is no activity on the associated line(s).

Adjusting Displays

Step 1.   Facing a display, find the contrast adjustment on the right side of the phone.

Step 2.   View the display from the position and angle you will most normally use.

Step 3.   Adjust the contrast to obtain the most comfortable display presentation.

System Software Version:

Elsewhere in this manual, reference is ma& to software version numbers. Certain operations are affected by the version of software installed. The display can be used to find what software version the system is operating under by doing the following:

Dial **#70** and note the number following the "V." in the display (e.g.: V.100 or V.102).

Ignore the other displayed information unless asked for the version checksum data. This is for troublehooting purposes only.

Changing Paging Zones

Summary: Each station in the TCIV system can be assigned to from 0 - 8 zones for paging. Regardless of its zone programming, all stations can be contacted using the all-page function. The zone page is used to contact a specific set of stations. Zone programming is normally done during initial system programming but can be changed at any time using an authorized Administrative Display phone.

The following example demonstrates how to change zone programming. This procedure should be tried on only one station and tested. If you do not receive the displays shown below, you are probably not at the correct display phone. If the change does not work, notify the distributor: a technician must move the programming jumper on the central processing unit printed circuit board before any programming changes can be made.

Display Meanings:
- P: Physical Number
- N: Architectural Number
- Z: Zone (e.g.: Z: 1_34___8 = Zone 1, 3, 4, and 8)
- ARCH?   Input architectural number (i.e.: the station number).

Action Meanings:
- #   Advance the display to the next architectural number entry in memory.
- *   Provide the display prompt (ARCH?) to allow selection of a new architectural number.

Present State:				Desired State:		
P:006	N:106	Z:_2		P:006	N:106	Z:_4
P:007	N:107	Z:_2		P:007	N:107	Z:___5
P:008	N:108	Z:_2		P:008	N:108	Z:1
P:056	N:156	Z:___4		P:056	N:156	Z:__34

Action	Comments	Display	
Lift Handset	Dial Tone		
#97	Enter Zone Change function	ARCH?	
106	Go to Architectural Number 106	106	Z:_2
2	Turn off Z:2	106	Z:
4	Turn on Z:4	106	Z:___4
#	Advance to next entry	107	Z:_2
2	Turn off Z:2	107	z:
5	Turn on Z:5	107	Z:___5
#	Advance to next entry	108	Z:_2
2	Turn off Z:2	108	Z:
1	Turn on Z:1	108	Z:1
*	Jump to new entry	ARCH?	
156	Go to Architectural Number 156	156	Z:___4
3	Turn on Z:3	156	Z:__34
Hang-up	End edit session		

In the above example, pressing # caused the display to advance sequentially through architectural numbers because they were associated with sequential physical numbers. This is not always the case. Remember to use the asterisk [*] whenever you wish to change the zone programming of a station which is not the next sequential entry.

Data Entry (#23)

Summary: Any administrative phone can be used to send short data messages to a central printer or computer. Typically, this function is used for creating attendance records.

Sending an Identity Message:

Step 1.   **Dial #23** from an administrative phone and wait for an acknowledgement beep.

Step 2.   **Hang-up** and your station number will be recorded at the central computer or printer (e.g.: if the call is made from station 123, the record would show "**<** 123").
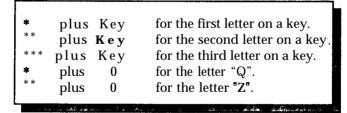
Sending a Data Message

Step 1.   Compose your data message according to the guidelines provided in the table below without exceeding 32 characters per line.

Step 2.   Dial **#23** from an administrative phone and wait for an acknowledgement beep.

Step 3.   Input the data message. Each time you press *****1**, the preceeding data line will be sent.

Step 4.   Hang-up and your station number and the data message will be recorded at the central computer or printer. (e.g.: if the call is made from station 123 and the data message is 1122333, the record would show "**<123** 1122333").

To Send Digits, Dial:

Any series of digits, **0 - 9**.

To Send Capital Letters, Dial:

*	plus	Key	for the first letter on a key.
**	plus	**Key**	for the second letter on a key.
***	plus	Key	for the third letter on a key.
*	plus	0	for the letter "Q".
**	plus	0	for the letter "Z".

To Format Data, Dial:

#			for a space.
# #			to back space and delete the preceeding character.
###			to delete the entire preceeding line.
*	plus	**1**	for a period.
**	plus	1	for an acknowledgement beep.

Glossary of Terms

The following is a short glossary of terms for the Operations Manual only. For a complete glossary, refer to the Drawings and Data Manual, KI-1587.

Hook-Flash   The hook-flash process consists of depressing the telephone hook-switch or tap-button for about one-half second (i.e.: press **firmly** and then release). If a tap button is present, it must be used **to produce** a hook-flash because depressing the hook-switch will cut-off (hang-up on) the call in progress.

The hook-flash can be used to:

> Place a caller on standby (soft-hold) while another number is dialed to perform a transfer or create a conference call.

> Regain contact with a caller who has been placed on standby (soft-hold).

Hook-Switch   **This is the** switch connected to the lever or buttons on which the phone is placed when it is hung-up. The action of the hook-switch depends on whether or not the phone has a **tap-**button installed.

> If a tap-button is installed, depressing the hook-switch is the same as hanging-up.

> If there is no tap-button, depressing the hook-switch for one-half second will produce a hook-flash. Depressing it for over threequarters of a second is the same as hanging-up.

Soft-hold   This is the standby state a caller is placed in when waiting to be transferred to another number or to be included in a conference call. When in soft-hold (standby), the caller can hear only a dead-line. Soft-hold is a technical term which indicates that the caller is placed on hold through software rather than hardware. Standby indicates the caller is waiting to talk to someone.

Stutter Tone   A series of interruptions in dial tone which occur when a station is placed on **soft-hold.** *Version* 102 and *later software.*

Tap Button   *This is* an additional button which may or may not be installed on a phone. If the tap-button is present, it must be used to produce a hook-flash. The hook-switch will not produce a **hook-**flash when a tap-button is installed. If the hook-switch is used, it will produce the same result as hanging-up.

Glossary of Audible Signals

Signals which occur in the telephone handset:

These signals can *only* be *beard with the phone off-book and held in a normal manner for telephone conversation.*

Buzzes   The number dialed is ringing. The buzzes occur approximately every five seconds.

Four Beeps   The number dialed is busy. Hang-up and try again later.

Interrupted Dial Tone This is the "stutter tone" which indicates a line has been placed on soft-hold. *Version* 102 *and later software.*

Long Beep   You have attempted a disallowed call. It is disallowed for one of the following reasons.

The number hasn't been progammed into the system.

The **prefix** or area code dialed is not authorized.

The function attempted is not authorized for the extension used.

Silence   There is no activity on the line: no tones, no voices, no noise. This state occurs in each of the following situations:

You are on standby (soft-hold) waiting to be transferred to another number or to be included in a conference call.

You have called a number and have been connected to a speaker which is in the privacy mode.

You dialed a speaker and have been placed in a queue because the intercom channel is busy.

Your phone was left off-hook beyond the busy signal or dial tone time **limit.** Hang-up for 2 · 4 seconds to clear the condition.

Single Beep   You have dialed a paging function and may now proceed with the page.

Room noise   You have contacted a speaker which is not set to privacy. The speaker is emitting a monitor beep every twenty seconds. If you speak, your voice will transmit over the speaker. You must be silent to hear communication coming **from** the room.

Version 102

Signals which come from the telephone:

These signals can be beard from anywhere in the room.

Double Ring Double telephone ring indicating that a call is coming from outside the system. This is a call from off-premise.

Quick Beeps An Emergency call-in has been placed from a staff station or an administrative station with a call-in switch. This will only occur on specific telephones with displays and from wall mounted displays. The number of the station which has placed the call-in will be shown in the display and will be preceded by the letters EMER (i.e.: EMER 208).

Single Ring Normal telephone ring indicating that a call is coming from within the system. This is a call from an on-premise administratvie station.

Slow Beeps A normal call-in has been placed from a staff station or an administrative station with a call-in switch. This beeping will only occur on specific telephones with displays and from wall mounted displays. The number of the station which has placed the call-in will be shown in the leftmost position of the display.

Signals which come from speakers:

These signals can be beard by anyone in the speaker's transmission range.

Beep This is a pre-announce beep indicating that someone is calling the speaker and/or is attempting to monitor audible activity in the room. The caller can hear any noise or conversation within the speaker's range unless the speaker is in the privacy mode. If the speaker is in the privacy mode, the caller will not be able to hear anything.

After the pre-announce beep, if the calling party does not speak (stays in listen mode) a monitor beep will occur every 20 seconds.

The monitor beeps will not occur if the speaker is in the private mode since the room cannot be listened to.

European Warble A tone generated for some purpose designated by the organization.

Electronic Chimes A tone generated for some purpose designated by the organization.

Night Answer Tone This may be any of the above tones and occurs only when the Night Answer function is turned on by dialing #3 1. When this tone sounds, an outside call may be picked-up by dialing #30 from any administrative phone.

Pulsating Tone A tone generated for some purpose designated by the organization.

Siren A tone generated for some purpose designated by the organization.

Steady Tone A tone generated for some purpose designated by the organization.

Questions and Answers about Answering Calls

What will happen if I hang-up for less than 2 - 4 seconds after completing a call?

Hanging-up for less than this period may be interpreted by the system as a hook-flash and the call will not be properly terminated. If the phone isn't hung-up for this period, the trunk you were connected to may be placed on soft-hold and be unavailable for other calls.

In software Version 100, you receive no indication that a trunk has been placed on soft-hold until you hang-up. At that time, the system will ring your phone and reconnect you with the original trunk when you answer. At this time, you should hang-up for 2 - 4 seconds to clear the condition.

In software Version 102 and later, the system **will** provide a "stutter tone" (three short interruptions of dial tone) whenever a hook-flash causes a trunk to be placed on soft-hold.) If this happens, hang-up and wait for your phone to ring. Answering the phone will reconnect the original trunk and hanging-up for 2 - 4 seconds will then clear the condition. If the call is not answered within 2 or **3** rings, the outside call will be dropped.

What if no one can answer a call?

If the call is to a speaker, the caller will hear room noises, ask for a response and, failing to get one, hang-up.

If the call is to a telephone, the phone will ring until answered or the caller hangs-up.

If an call from the outside is to a private (DIL) line, a couple of things can happen depending on why the line isn't answered and how it is programmed:

If the owner of the line is busy with a call within the TCIV:

The caller will hear the line ring but no indication can be given the owner of the line who is busy with another call. The ringing will continue until the owner of the private (DIL) line hangs-up, is rung and answers or, until the outside caller hangs-up.

or

The caller will automatically be transferred to the system attendant (this is a programmable option).

What is the purpose of the Privacy Switch?

The Privacy Switch prevents monitoring of rooms with speakers. When the switch is set to Private, the speaker will still provide the pre-announce beep when called but the caller cannot hear anything until privacy is turned off.

Version 102

Questions and Answers about Placing Calls within the TCIV System

What happens if I try to place another call without hanging-up for 2 to 4 seconds?

>Hanging-up for too short a period may be interpreted by the system as a hook-flash and cause a trunk to be incorrectly held and ma& unavailable for use.

How can I contact a busy station?

>If you are using an authorized administrative station and the call is Important, simply press * upon receiving a busy signal. This will allow you to break into the ongoing conversation. When this is done, all three parties can communicate in conference mode and any party can hang-up without effect on those remaining (this is a programmable option).

Does having a key pad mean I can directly dial another station?

>Not necessarily. You can only dial another station directly if the phone has a key pad and receives dial tone when taken off-hook. For example, a phone with a key pad may receive dial tone during the day and not at night. Therefore, calls can be dialed directly during the day but taking the phone off-hook at night will cause a call-in.

Questions and Answers about Using the Paging Functions

When should I use All-Page?

Use all-page when a direct call or zone page will not achieve the desired objective. For example, when an announcement must be heard by everyone in the organization or there is an important message for a particular individual whose whereabouts is unknown.

When should I use Zone Page?

Use zone page whenever you have an announcement which applies to a group of individuals in an identified zone. For example, zones may be established by floor, buidling, or department. Using zone page allows the announcement to go only to the individuals who need to hear the announcment without interrupting the rest of the organization.

When should I use Special Page?

The use of this function depends entirely on system configuration. It may be used for paging a particular group of stations or for operating some external system (security system video cameras or electronically actuated door locks). Programming controls access to this optional feature and it may require additional equipment.

When should I generate each type of tone?

The specific use of each tone is determined by the policies and procedures of the organization. Typically, they are used to notify personnel of emergency situations (flood, tornado, fire, etc.). They may also be used as attention markers prior to announcements or to provide unprogrammed time of day reminders.

Will my All-Page announcement interfere with timed (e.g.: class change) signals?

NO. It works the other way around. Clock activated signals are at a higher priority and will interrupt any type of paging announcement. When the signal occurs, it will be heard in your handset. When it ends, you will be returned to the paging channel and notified with a beep. Then you may resume your announcement.

Can an unauthorized page be stopped?

Yes, if it is not the highest priority page. Lower priority pages can be interrupted by higher priority pages and they cannot be continued until the overriding page hangs-up. Refer to the following three rules and the paging functions priority list to determine what will happen when any paging function is attempted while another is in progress.

Paging Functions Priorities

Priority	Function
1	Fire Alarm
2	Emergency Announcement (From Audio Control Panel
3	Time Zone (Class Change)
4	All-Page
5	Alarm or Chime Tones
6	Zone Announcement
7	2-way Speaker Intercom

If the second page attempt is identical to the one in progress, it will receive a busy signal (e.g.: two zone pages to the same zone, two all-pages, etc.)

If the second page attempt is of lower or equal priority to the one in progress, it will he placed in queue without receiving an acknowledgement "beep". (i.e.: two zone pages to different zones, two different chime tones, a zone page during an all-page, etc.)

If the second page attempt is of a higher priority than the one in progress, the first will be suspended until the second completes the page and restores the line by hanging-up. The first pager will hear the interrupting paging signal through the handset.

Questions and Answers about Answering and Cancelling Call-ins

What if an answered call-in returns to the display?

> If the telephone at the call-in station is left off-hook or the locking switch is not released, the call-in will not clear from the display when you hang-up or press star. The situation must be corrected by someone at the station. Call the station again and have someone there take care of the problem or send someone to the station to do so.

Why is my time limited for using the [*] method of answering call-ins?

> The [*] method of answering call-ins requires the dedicated use of a critical system component (a tone generator/receiver). The system waits for the programmed period of time in case the Single Button Dialing feature is needed to rapidly answer a series of call-ins. It is cancelled after this time to release the system hardware required for normal call processing.

When would I want to cancel all call-ins?

> Whenever there is a problem with unnecessary (accidental or intentional) pressing of call-in switches. Generally, you may want to do this if many call-ins occur simultaneously during times of excessive activity or without any apparent reason. This can be a problem in schools during class changes, especially if switches are located near exits.

Questions and Answers about Transferring and Conferencing Calls

If I attempt to transfer a call to a staff station and it is refused through the speaker, can I reconnect with the Caller without having the staff phone picked-up?

> **Hang-up and the trunk on soft-hold will ring you back. Answer immediately to reestablish communication.** *Version 102 and Cater only*