



**Superkey Series Electronic Telephone Systems
Features and Services Description**



**Superkey Series
Electronic Hybrid Telephone System
SK-824 & SK-200
Features and Services Description**

Table Of Contents

Advisory Messages.....	5
Answer Supervision.....	6
Attendant Overflow.....	7
Auto Answer.....	9
Auto Call Park.....	10
Auto Hold.....	11
Automatic Line Search.....	12
Automatic Last Number Redial.....	13
Automatic Volume Increase.....	14
Automatic Wake Up.....	15
Background Music.....	18
Behind PABX Operation.....	19
Busy Remind Tone Interval.....	20
Busy Out CO Line.....	21
Call Duration Limit.....	22
Call Duration Timer.....	23
Call Forwarding.....	24
Call Park.....	26
Call Pickup.....	27
Call Split.....	29
Call Swap.....	30
Call Transfer.....	31
Calling Proof.....	33
Camp On.....	34
Chain Dialing.....	35
Class of Service.....	36
CO Break Disconnect Timer.....	37
CO Line Hunting.....	38
CO Line Programming.....	40
CO Line Ringing Types.....	42
Conference.....	43
Console.....	44
Console Assignment.....	45
Conversation Monitor.....	46
Date and Time Setting.....	47
Day Service.....	48
Dial By Name.....	50
Dial 87 Group.....	53
Dial 9 Group.....	54
Dial Pulse to DTMF Conversion.....	55

Dial Tone Detector.....	56
Direct In Line.....	57
Direct Inward System Access (DISA)	58
Direct Station Selection (DSS).....	62
DISA Queue Immediate Answer	64
DISA Single Digit Dialing	65
DISA Special Function Access.....	66
Distinctive Ringing	67
Do Not Disturb	68
Do Not Disturb Override	69
Door Phone Interface.....	70
Door Phone	71
Door Phone Controlled Switch	72
DSS Access to Other CO Lines	73
DSS Console.....	75
DTMF Signaling.....	76
Dual Port Capability.....	77
Environment Monitor	78
Executive Override (Barge-In).....	79
External Call Forwarding.....	80
External Music Source Interface	82
External Paging Interface.....	83
Fax Monitor	84
Feature Selection from Menu	85
Flash To CO Line.....	87
Flexible CO Line Ring Assignment	88
Flexible DSS Key Group Assignment	89
Flexible Key Group Assignment.....	91
Flexible Ringing Assignment.....	93
Forced Account Code	94
Group Assignment.....	95
Hands Free Answer back.....	96
Hold (Exclusive).....	97
Hold (System).....	98
Hot Line.....	100
Hunt Groups	101
Intercom.....	102
Intercom Dialing Restriction.....	103
Intercom Step Call.....	104
Last Number Redial	105
Line Group Assignment.....	106
Loop Keys.....	107
Loud Bell.....	108
Macro Keys.....	109
Manual Line	110
Message Waiting	111
Meter Pulses.....	113
Monitor	114
Music on Hold.....	115
Music Source Selection.....	116
Mute	117
Night Service.....	118
Numbering Plan	120
Off Hook Ringing	121
Off Hook Voice Announce	122
On Hook Dialing	123
Operator Code.....	124
Override	125
Paging.....	126

Paging, Meet Me	127
Passwords	128
Pause	129
Pick Up Groups	130
Port Specifications	131
Power Up Volume Adjust	133
Prime Line Select	134
Privacy Release	135
Relay Assignment.....	136
Reset Data	137
Ring On / Ring Off Timers.....	138
Ringing Line Immediate Connect	139
Room Monitor	140
Saved Number Redial	141
Sensors.....	143
Silent Monitor	145
Single Digit Dialing	146
Single Line Telephone Support.....	147
Speed Dial (Personal)	149
Speed Dial (System)	151
Speed Dial (Unrestricted).....	153
Station Lock	154
Station Message Detail Recording.....	156
Station Number Digit Length	158
Station Security Code	159
System Programming Access.....	160
System Reminder.....	161
Tenant Service	163
Time of Day Display	164
Timed Reminder - Station	165
Toll Control	166
Transfer Recall Timeout.....	167
Traveling Class of Service	168
Trunk Queue (Trunk Callback)	169
Uniform Call Distribution	170
Unsupervised Conference	172
Voice Mail Interface	173
Voice Service Unit.....	176
Appendix A- DISA Detailed Description	177
DISA Overview	177
DISA Call Flow Charts.....	182
DISA With No Voice Service Unit - Chart 1	183
DISA With No Voice Service Unit - Chart 2	184
DISA With No Voice Service Unit - Chart 3	185
DISA With a Voice Service Unit Chart 1	186
DISA With a Voice Service Unit - Chart 2	187
DISA With a Voice Service Unit - Chart 3Chart 3Chart 3.....	188
Appendix B - Toll Control Detailed Description	189
Index To Programming Forms	193

Advisory Messages

Description

Up to ten system advisory messages can be used on the system. Nine messages are pre-programmed into the system and one is blank. All messages may be modified so default messages may be changed if desired. The nine pre-programmed messages may be edited on an individual telephone to include numeric information as to the status of the telephone set user, such as the time or date when the user will return.

The nine pre-programmed messages are as follows:

- | | | |
|-----------------|-------------------|---------------------|
| 0. On Vacation | 3. In a Meeting | 6. Call Stn |
| 1. Will Be Back | 4. Call | 7. Gone for the Day |
| 2. At Lunch | 5. Do Not Disturb | 8. Out of Town |

Message #9 will appear as a blank message to anyone who accesses the message. It is possible for many users to utilize message 9 as a custom message and each station can display its own individual message.

Conditions

Messages can be placed on any telephone set and may be read by any display telephone set.

Individual message entry is performed using the letters that appear on the telephone keypad as follows:

Key 1 = Q - Z - (Blank Space) - 1	Key 2 = A - B - C - 2
Key 3 = D - E - F - 3	Key 4 = G - H - I - 4
Key 5 = J - K - L - 5	Key 6 = M - N - O - 6
Key 7 = P - R - S - 7	Key 8 = T - U - V - 8
Key 9 = W - X - Y - 9	Key 0 = (Period) : & 0
Key # = () \$ #	Key * = (Dash) / ! *
Redial = Backspace	MSG = Forward

Programming

None

Operation

Superkey electronic telephone set:

To select and set a message

1. Press [PGM].
2. Press [MSG]. (This function may also be accessed from the features menu. For more information, see Feature Selection from Menu, page 85 of this document).
3. Display will show:

Select Message Enter Message #__

4. Press [VOL ↑] or enter the message number required. Display will show message number 0 in list (if [VOL ↑] is pressed) or will display the entered message.
5. To see next higher numbered message, press [VOL ↑] to see next lower numbered message, press [VOL ↓].
6. When desired message is found, station user can enter additional information via the keypad if desired.
7. When the entry is satisfactory, press [SAVE]. The set will provide confirmation tone that the message has been selected. Press [SPK]. The display will now show the active message. Any display stations that call will receive the active message.

To remove a message

1. Press [PGM]
2. Press [MSG]
3. Press [SPK]

Answer Supervision

Description

The Superkey electronic telephone system is equipped to provide answer supervision in applications where it is provided by the telephone company as a polarity reversal. When active, answer supervision provides accurate timing information for the preparation of SMDR records within the system.

Conditions

Answer Supervision will operate only if it is being provided by the local telephone company.

Programming

Form 12-01 (Recording Start Time) should be set to [0] in order to allow the system to accurately expect answer supervision, if available. If answer supervision is not provided by the local telephone company, this parameter should be set to a time that is representative for a call to be placed. For more information, please see Station Message Detail Recording, page 156 of this document.

Form 12-08 (Detect Polarity Reversal) must be set to [0], enable, in order to recognize answer supervision by polarity reversal.

Operation

Operation of Answer Supervision is automatic.

Attendant Overflow

Description

The Superkey electronic telephone system allows you to designate one station as a main answering position or attendant console for incoming CO calls. If that station is busy, the system can select another station that may act as a backup answering position. The system allows up to 15 backup positions behind each attendant, for a possible total of 16 answering positions. There are two variations of Attendant Overflow.

Linear Ringing will search through the list of possible backup answering positions and will ring the first available station. Free stations will be searched in the order programmed on Form 42 (or 43 if Night Service).

Circular Ringing works like Linear Ringing except that it always begins its search immediately after the last station that was rung.

Hunting will ring the first available station. If that station does not answer within the time parameter specified on the system, the system will "add on" the next available station. This timer will repeat until the call is answered, abandoned or until every programmed available station is ringing.

Automated Attendant functions may also be used as a means of Attendant Overflow. For more information, please see Appendix A - DISA Detailed Explanation in this manual.

Conditions

The CO line must be programmed for Linear ringing if the Linear Overflow method of operation is preferred. The CO line must be programmed for Hunt if the timed "add on" method of operation is desired.

Ringing Type is programmed on Form 46-LINE-07 for Day Service and Form 46-LINE-08 for Night Service. Stations will be selected in the order that they are programmed on the incoming ringing assignment forms (Form 42-[CO]-[station] and Form 43-[CO]-[station]).

Programming

Day Ringing Assignment, Form 42-[CO]-[station] must be programmed for each CO line in the system. Up to sixteen stations may be programmed for each line on the **SK-824**. The SK-200 can be programmed for up to 40 stations. Lines programmed for Linear Overflow or Hunt will search this form in the order that stations are programmed. The system will ring the first available station in this group. This form controls ringing assignments during day service only.

Night Ringing Assignment, Form 43-[CO]-[station] is as listed above for Form 42, but determines the stations that will ring when the system is in Night Service.

Hunt Time Assignment, Form 01-08-01 sets the interval for adding stations to the ringing sequence in a no answer condition if Hunt is selected. Every time a station begins ringing, this timer will begin. If it expires without the call having been answered, the next available station in the group defined on Form 42-[CO]-[station] or Form 43-[CO]-[station], whichever is applicable, will be added to the ringing sequence. Valid settings for this option are:

Hunt Time Assignment, Form 01-08-01		0=Disabled	1=2 seconds
2=4 seconds	3=6 seconds	4=8 seconds	5=15 seconds
6=30 seconds	7=60 seconds	8=120 seconds	9=254 seconds

Note: If Form 01-08-01 is set at 0 (disabled), CO line hunting will only occur on busy stations. The first free station will be rung and the call will not add stations to the ringing sequence in a no-answer condition.

CO Line Assignment Day Ringing Method, Form 46-[CO]-07 determines whether hunting or linear operation will occur during day service. The options for Form 46-[CO]-07 are:

CO Line Day Ringing Method, Form 46-[CO]-07		0=Common Audible
1=LINEAR	2=Circular	3=HUNT

CO Line Assignment Night Ringing Method, Form 46-[CO]-08 determines whether hunting or linear operation will occur during night service. The options for 46-[CO]-08 are:

CO Line Night Ringing Method, Form 46-[CO]-08		0=Common Audible
1=Linear	2=Circular	3=Hunt

Operation

Linear:

On an incoming call the first available station according to Form 42 or Form 43 will be rung.

Circular:

On an incoming call the first available station according to Form 42 or 43 and after the last location rung will be rung. If the last entry in Form 42 or Form 43 is reached, the system will "wrap around" and begin searching at the beginning of Form 42 or Form 43.

Hunt:

1. On an incoming call, the first available station (according to Form 42-[CO]-[station] or Form 43-[CO]-[station]) will be rung.
2. If there is no answer within the time period determined by Form 01-08-01, the system will check the applicable form (Form 42 or Form 43) and add the next programmed station to the ringing sequence. This step will repeat until the call is answered, abandoned or all available stations on the applicable form (Form 42 or Form 43) are ringing.

Auto Answer

Description

Auto Answer allows a speaker phone equipped station to answer all intercom calls automatically. After Auto Answer is activated on a station, all intercom calls will be placed on the speaker phone as soon as the calling party dials the Auto Answer extension. The speaker phone equipped station can carry on a conversation without touching the telephone. When the originating caller hangs up, the Auto Answer set will revert to an idle state. Auto Answer applies only to intercom calls. Outside callers must always be answered by the station.

Conditions

Auto Answer can only work on a Superkey electronic telephone set equipped with speaker phone.

Auto Answer capability is active whether the system is programmed for Voice Signalling or Ring Signalling.

For security purposes, CO calls will ring and must be answered manually.

Programming

Form 27-Station-03 controls individual stations' utilization of Auto Answer. There are 6 possible settings.

Form 27-STN-03 Auto Answer Flag	0= Auto Answer Manual	1=Auto Answer On/MIC Light Lit
2=Auto Answer On/MIC Light Off	4= Auto Answer Manual/Speakerphone MIC On	
5=Auto Answer On/MIC Light Lit Speakerphone MIC On	6=Auto Answer On/MIC Light Off Speakerphone MIC On	

Operation

Operation is as described under programming, above.

Auto Call Park

Description

Auto Call Park allows any user of a Superkey electronic telephone set equipped with LCD display (SK-EKT/D) to place a call directly into a call park orbit without the need to search for the first available orbit position. Unlike conventional call park, this method will search for the first available parking orbit.

Conditions

Its use is limited only to LCD electronic telephone sets. Only LCD sets have the ability to display the information necessary to retrieve the parked call.

Auto Call Park cannot be accessed from a non-display telephone set.

Programming

The LCD set must be equipped with a Call Park button. This is programmed on Form 22 for an available key. For more information on programming a call park button, please see Flexible Key Group Assignment, page 91 of this document.

Operation

1. An LCD set is on a call.
2. The LCD set presses the Call [Park] Button.
3. The call is placed on Hold.
4. The upper half of the display will remain the same as before the parked call was placed in park orbit. The lower half of the LCD display will show:

To Orbit # X

where X orbit number where the call is placed.

To retrieve a call from park, see instructions listed in Call Park, page 26 of this document.

Auto Hold

Description

Auto Hold allows a station user to automatically place a caller on hold while performing another function. Its most common use is in transferring a call. Any use of a programmed DSS station key while on a conversation will automatically place the caller on hold.

Conditions

This feature is only available from Superkey electronic telephone sets.

Note: System function is the same as if the station user pressed the [HOLD] key prior to pressing a DSS key.

Programming

None

Operation

1. Station user is involved in a conversation.
2. Station user presses any programmed DSS key.
3. Conversing party is automatically placed on hold.

Automatic Line Search

Description

Automatic Line Search, Form 01-03-02 permits Speed Dial, Last Number Redial and Saved Number Redial to search for an available CO line. If this function is enabled, Speed Dial Numbers need not have a CO line number specified for an outgoing call. If an outgoing line is specified and that line is busy, the Superkey electronic telephone system will search the originating station's Dial 9 Group for an available outgoing line and seize it to place the call.

If Last Number Redial or Saved Number Redial is used, the system will attempt to access the CO line on which the call was originally placed. If Auto Line Search is enabled and the original line is busy, the system will search for another line in the outgoing group.

If Automatic Line Search is disabled, Speed Dial, Last Number Redial and Saved Number Redial will only access the line originally designated. If it is busy, the function will be disallowed.

Conditions

If System Speed Dial does not specify a CO line, it will access the individual user's Dial 9 Group. This parameter has no effect on such System Speed Dial calls.

Programming

Form 01-03-02, Automatic Line Search must be enabled to allow line searching. Valid parameters are listed below:

Automatic Line Search, Form 01-03-02	
0=Auto Search Enabled	1=Auto Search Disabled

Operation

Operation is automatic.

Automatic Last Number Redial

Description

Automatic Last Number Redial permits a station user to periodically redial the last number dialed. It utilizes the Last Number that was dialed from the telephone, like Last Number Redial, but it will repeatedly attempt to dial the number, like Saved Number Redial. Once invoked, it will automatically call the Last Number Dialed a pre-determined number of times. See also, Saved Number Redial, page 141 of this document.

Conditions

Automatic Last Number Redial is not available to Single Line Telephone sets.

A station must have a [SPD] dial key and a [Redial] key in order to access this function.

This function will not work on telephones with Form 27-STN-03 programmed with parameters 4, 5 or 6.

Programming

Form 01-02-03, Auto Redial Wait for Answer Time determines the amount of time the telephone will remain off hook, waiting for an answer. Please note that if the called telephone number answers during this time period, the call will still be abandoned if no action is taken by the station user. The valid parameters for this options are listed below:

Note: The timer starts upon line seizure, before digits are outpulsed. If Pulse signalling is used, 01-02-03 must contain a value that allows for the slower pulse dialing. For example, if pulse dialing requires 7 seconds and Wait for Answer is set for 10 seconds, less than 3 seconds will remain for the call to ring and be answered. In all likelihood the call will never be completed.

Auto Redial Wait for Answer Timer Form 01-02-03			
			1=10 seconds
2=20 seconds	3=30 seconds	4=40 seconds	5=50 seconds
6=60 seconds	7=70 seconds	8=80 seconds	9=90 seconds

Form 01-05-07, Auto Redial Attempts controls the amount of times that Saved Number Redial will Auto dial a Saved Number before abandoning any further attempts. Valid settings are listed below:

Auto Redial Attempts Form 01-05-07			
		0=No Attempts	1=10 Attempts
2=20 Attempts	3=30 Attempts	4=40 Attempts	5=50 Attempts
6=60 Attempts	7=70 Attempts	8=80 Attempts	9=90 Attempts

Form 01-05-08, Auto Redial On Hook Timer programs the idle interval between call attempts. The valid options for this parameter are listed below:

Auto Dial On Hook Timer Form 01-05-08			
		0=10 seconds	1=20 seconds
2=30 seconds	3=40 seconds	4=50 seconds	5=60 seconds
6=70 seconds	7=80 seconds	8=90 seconds	9=100 seconds

Operation

1. Make an outgoing telephone call.
2. Hang Up.
3. Press [SPD]. Press [Redial]
4. The telephone system will automatically seize an outgoing CO line and redial the number that was dialed in step 1 above.

The Auto Redial portion of the function is canceled if any station user action is taken. Pressing the [MIC] button or lifting the handset while a call is in progress will cancel the off hook timer and the call will remain in place. Pressing the [SPK] button while the call is in progress will abort the Auto Redial function. Placing another call during the On Hook timer (while the telephone is idle) will not abort the Auto Redial function. It will resume after you have returned the telephone to idle.

Automatic Volume Increase

Description

Automatic Volume Increase is an option that is available through Class of Service programming. It is independently assigned per station.

Automatic Volume Increase will cause the volume of a ringing station to increase as the call continues to ring. The ringing volume will increase approximately every two ring cycles.

Conditions

This options applies only to Superkey electronic telephone sets.

Programming

Form 26-[station]-03, activates or deactivates this option. Valid settings are:

Automatic Volume Increase, Form 26-[station]-03	0=Disable	1=Enable
--	-----------	----------

Selection of Automatic Volume Increase is also programmable from from each electronic telephone set.

1. Press [PGM].
2. Press 6.
3. Press 4. LCD sets will display Volume Up Gradually ->
4. Press [PGM]. Automatic Volume Increase will be active on the set.

To remove this option, the same procedure as above should be followed, except that the LCD will display ->**CANCEL** on step 3.

Operation

Operation is automatic.

Automatic Wake Up

Description

Superkey electronic telephone systems are equipped with the ability to provide Automatic Wake Up Call service to stations within the system. Using Automatic Wake up service, a station can be made to ring at a pre-programmed time. When the station answers, the system will either connect them to the background music source, or to the Voice Service Unit channel dedicated to Wake Up service.

Conditions

Only one wake up call can be programmed on a telephone at a time.

Wake up calls are removed from the system when the station answers.

A Superkey electronic telephone set without LCD display must have a [REMIND] button programmed in order to program a Wake Up call.

LCD equipped Superkey electronic telephone sets may also access this feature via the Feature Selection from Menu capability. See Feature Selection from Menu, page 85 of this document.

Programming

Form 01-05-01, Automatic Wake Up Call Signalling determines the audio used on Automatic Wake Up Calls. Valid selections are:

Automatic Wake Up Signaling, (01-05-01)	0=VSU Channel	1=Background Music
--	---------------	--------------------

Voice Service Unit Assignment, Form 14 must have one of its eight possible channels programmed as type 14, Automatic Wake up service in order to provide a recorded wake up message. See also, Voice Service Unit on page 176 of this document.

Operation

To set a Wake Up call from a Superkey station:

1. Press [PGM].
2. Press [REMIND]. (This function may also be accessed from the features menu. For more information, see Feature Selection from Menu, page 85 of this document).
3. Enter the wake up time in 24 hour format (00:00 - 23:59).
4. Enter the duration as 99 (indicates a self cancelling alarm).
5. Press [SAVE].
6. Press [SPK] to exit.

To set a Wake Up call from a Superkey station defined as a console on Form 04, (see Console Assignment, page 45 of this document):

1. Press [REMIND].
2. Display will show:

SYS REMINDER * OR DIAL STN#

3. Enter the station number.
4. The Display will show:

XXXX hh:mm dd CHANGE? 1=Y 2=N

Where:

XXXX=the station number entered.

hh=hour mm=minutes dd=duration/type

If no wake up is presently set, the final two digits of the time and duration section will show 00. The time may show a previously programmed wake up or reminder time.

If a wake up is presently set, the time of the wake up will be shown and the duration will be displayed as 99. If duration is set at anything other than 99, a repeating Timed Reminder is active on the set.

5. Enter [1] to enter or change the wake up time or [2] will exit the Wake Up Program and return the set to idle operation.

6. The display will show:

ENTER TIME __:__ ENTER TYPE __

7. Enter the wake up TIME in 24 hour format (00:00 - 23:59).
8. Enter the TYPE as 99 (indicates a self cancelling alarm).
9. Press [SAVE].
10. Display will show:

Reminder Set !! XXXX hh:mm 99

11. The entry confirms the wake up call was accepted.
Press [SPK].

To cancel a Wake Up call from a Superkey station:

1. Press [PGM].
2. Press [REMIND].(This function may also be accessed from the features menu. For more information, see Feature Selection from Menu, page 85 of this document).
3. Enter 00 00 00
4. Press [SAVE].
5. Press [SPK] to exit.

To cancel a Wake Up call from a Superkey station defined as a console on Form 04, (see Console Assignment, page 45 of this document):

1. Press [REMIND].
2. Display will show:

SYS REMINDER * OR DIAL STN#

3. Enter the station number.
4. The Display will show:

XXXX hh:mm dd CHANGE? 1=Y 2=N

Where:

XXXX=the station number entered.

hh=hour mm=minutes dd=duration/type

5. Enter [1] to enter or change the wake up time or [2] will exit the Wake Up Program and return the set to idle operation.

6. The display will show:

ENTER TIME __:__ ENTER TYPE __

7. Enter 00 00 00
8. Press [SAVE].
9. Display will show:

Reminder Set !! XXXX 00:00 00

This information will confirm cancellation of the wake up call.

10. Press [SPK].

Note: LCD equipped stations may activate or cancel the Wake Up features listed above (for console and individual user) through the use of Feature Selection from Menu. See page 85 of this document.

To program a Wake-Up call from a single line station:

1. Lift Handset.
2. Dial [7],[0],[0],[1].
3. Dial the Time that you wish the wake up call to notify you (24 hour format 00:00-23:59). Must be four digits.
4. Enter [9],[9], to indicate a Wake-Up call.
5. Hang up. The wake-up call is set.

To cancel a Wake-Up call before it rings from a single line station:

1. Lift Handset.
2. Dial [7],[0],[0],[1].
3. Dial [0],[0],[0],[0],[0],[0].
4. Hang up. The wake-up call is canceled

Automatic Wake Up calls will automatically cancel when the call is answered. The method listed above is only required when you wish to cancel the call before it is activated.

At the Programmed Wake Up Call time, the station will ring. Upon answer, the station will be connected to either the Voice Service Unit channel programmed or to the system background music source.

If a Wake Up call is not answered, the system will ring the telephone for a period of one minute. If the call is not answered after one minute of ringing, the system will re-ring the station in three minutes. This will continue until the call is answered. If an operator station is programmed with a Wake Up key, an unanswered Wake Up at any station will cause the Wake Up key to flash. If the Wake Up button is pressed while it is flashing, the display will show the following:

XX NAME No Wake Up hh:mm

The operator can press [SPK] or lift the handset to immediately recall the station. If the operator lifts the handset or presses [SPK], the Wake Up is automatically canceled.

Background Music

Description

Background Music allows Superkey electronic telephone set users to listen to either the internal music synthesizer or an external music source (External #2) over the built in speaker. This music source may be shared with the Music-On-Hold Source or it may be programmed and connected independently.

Conditions

The telephone set must be a Superkey electronic telephone.

Background music will be deactivated when the speaker phone is accessed or when the station goes off hook or an incoming call rings the station.

If background music is activated, it will return to operation when the telephone becomes idle again.

Programming

SK-824 Form 01-08-08, Music Source Selection is used to select the music source.

The choices allow the use of the internal system music synthesizer or External Music Source #2.

01-08-08	Background Music Source	Music On Hold Source
0	Internal Source	Internal Source
1	External Source #2	Internal Source
2	Internal Source	External Source #1
3	External Source #2	External Source #1
4	Internal Source	External Source #2
5	External Source #2	External Source #2

SK-200 Selection of Music On Hold Sources and Background Music Sources is via jumpers on the SK-CPU/2 card in cabinet #1 of the SK-200. Please see the SK-200 Installation and Maintenance Manual for more information.

Operation

While the telephone is in an idle state, press the [#] key on the keypad. Background music (if present on the system) will be heard. The [SPK] key will illuminate.

To remove background music from a telephone set, press [#]. The [SPK] key will extinguish and Background Music will cease.

Behind PABX Operation

Description

Superkey electronic telephone systems can operate as "Behind PABX" or Centrex Operation. In this mode, the system makes allowances for connection to other than a normal Central Office Line. The primary differences have to do with the operation of Station Message Detail Recording (SMDR) and Toll Control. See Station Message Detail Recording, page 156 of this document and Toll Control, page 166 of this document.

Conditions

Lines programmed as PABX lines will be treated differently for purposes of Toll Control. If, when on a line programmed as PABX, the digit programmed in Form 01-03-04 is not dialed as the first digit, an inside PABX call is assumed and no Toll Restriction is applied.

Programming

PABX (Centrex) Outgoing Code, Form 01-03-04 must be programmed to correspond to the access code used to access a CO line on the PABX., i.e., if [9] is used to access a CO line on the PABX, [9] should be programmed as the PABX (Centrex) Outgoing Code on Form 01-03-04. The valid parameters are listed below:

PABX Outgoing Code, (Form 01-03-04)						0=0	1=1
2=2	3=3	4=4	5=5	6=6	7=7	8=8	9=9

CO Line Type, Form 46-[CO]-01 must be set for PABX operation for the system to recognize operation behind PABX. Valid parameters are:

CO Line Type, (Form 46-[CO]-01)	0=CO Line	1=PABX Line

Note: It is not necessary to program lines as PABX for them to operate behind PABX systems. Behind PABX operation is a convenience that provides the ability to continue to effectively track Toll Control without the need to assess the impact of a PABX access code.

Should an installation occur where there is no need for Toll Control, it may be easier for installation personnel to ignore the behind PABX programming of the system.

Operation

Behind PABX Operation is fully automatic.

Busy Remind Tone Interval

Description

Busy Remind Tone Interval determines the timing interval for muted ring signals when a call is camped-on to a busy station. See also Camp-On, page 34 of this document.

Conditions

None.

Programming

Busy Remind Tone Interval is programmed on Form 01-01-05. Valid parameters for busy remind tone are listed below:

Busy Remind Tone Interval (Form 01-01-05)		0=Disabled	1=2 seconds
2=4 seconds	3=6 seconds	4=8 seconds	5=15 seconds
6=30 seconds	7=60 seconds	8=120 seconds	9=254 seconds

Operation

See Camp-On, page 34 of this document.

Busy Out CO Line

Description

Form 41-[CO] allows a system administrator or service personnel to remove a CO line from service. This allows service personnel or system administrator to take a non-functioning line out of operation with the least possible disruption of service. Normally the CO line when busied out will illuminate the LED on any line key appearances, but the ability also exists to remove the line without illuminating the LED. Also, it is possible to busy out a CO line for outgoing calls, but keep them available for incoming calls.

Conditions

Anyone wishing to busy out a line must have access to system programming.

Programming

A station must have access to system programming in order to Busy Out or Return a CO line to service.

1. Press [PGM]. Press [2].
2. Enter Password (if programmed).
3. Press [SAVE].
4. Enter [4][1]. (Access form 41, BUSY OUT CO LINE).
5. Enter the CO line that you wish to affect (Two digits, 01 - 08).
6. Press [SAVE].
7. Enter the appropriate code. Codes and results are listed below:

0=Normal Operation	1=Busy Out Outgoing - No LED
2=Busy Out Both way - No LED	3=Busy Out Both way - LED lit (red).

8. Press [SAVE]. Press DSS Key #5.

Operation

When a CO line is busied out, any attempts to access the line will result in a busy tone, as if the line was in use. LCD telephone sets will see "Restricted" in the telephone display when access is attempted.

Call Duration Limit

Description

This feature allows The Superkey electronic telephone system to limit the length of telephone calls. This feature is programmable on a per station basis. A station with Call Duration Limit programmed will hear a warning tone 10 seconds prior to duration expiration. The action taken by the system will be determined by the type of duration limit action that has been programmed.

Conditions

1. The call duration timer is programmable on a per station basis and is programmable in one minute increments from 1 minute to 9 minutes [1-9] (Form 24-[station]-03). It may also be disabled so that there is no time limit on call by entering [0] in Form 24-[station]-03.
2. The timer is invoked per station.

Programming

Form 01-04-03, Call Duration Limit Type determines the type of limiting notification given.

A setting of 0 or 5 provides a continuous busy tone to the limited station at the timeout period. A communications path still remains between the internal station and the outside CO line. The CO line does not hear the tone.

A setting of 1 or 6 (Form 01-04-03) provides a 1 second warning tone at each duration limit interval. The call is left intact at all times.

A setting of 2 or 7 (Form 01-04-03) provides a 1 second warning tone 10 seconds prior to duration limit timeout. At 5 seconds before timeout, continuous busy tone is provided to the internal station. The CO line does not hear tone. At timeout, the call is disconnected.

Settings of 0, 1 and 2 apply only to outgoing calls. Settings of 5, 6 and 7 apply to incoming and outgoing calls.

Form 24-[station]-03, Call Limit Duration determines the allowed timeout period. If set to 0, Call Duration Limit is disabled. If set to 1-9, call duration limit is from 1 to 9 minutes, corresponding to the entry setting.

Operation

If a station is subject to the Call Duration Limit, when the allotted time (as per Form 24-[station]-03) has expired, the action taken will be determined by the value set in Form 01-04-03 (Call Duration Limit Type).

Call Duration Timer

Description

Call duration timer is an automatic function that is available to all telephone set users equipped with Superkey LCD electronic telephone sets. All outgoing calls are automatically timed as soon as the trunk is accessed for an outgoing call. The telephone set will display the actual time since connection. The timer continues to operate even if the call is held or transferred. In the case of a transfer, the destination party's telephone set will show the total call time, not the time since transfer.

Conditions

None

Programming

None

Operation

Automatic

Call Forwarding

Description

This feature allows a station user to have all calls which are directed to his station forwarded to a selected station number within the Superkey electronic telephone system.

Conditions

There are four types of call forwarding:

1. Call Forwarding "All Calls" (ALWAYS).
2. Call Forwarding "BUSY."
3. Call Forwarding "NO ANSWER."
4. Call Forwarding "BUSY/NO ANSWER."

Programming

System Programming:

Form 01-01-08, Call Forward No Answer Timer determines the time the system will allow before forwarding an unanswered call. This location will accept an entry from 0 to 9. The settings and the corresponding timers are listed below:

Call Forward No Answer Time (01-01-08)		0=10 seconds	1=20 seconds
2=30 seconds	3=40 seconds	4=50 seconds	5=60 seconds
6=70 seconds	7=80 seconds	8=90 seconds	9=100 seconds

See Also, Flexible Key Group Assignment, page 91 of this document.

For Superkey electronic telephone sets:

1. Press [PGM]
2. Press [CFWD] (if programmed on set) or [1] if there is no CFWD button on the set. (This function may also be accessed from the features menu. For more information, see Feature Selection from Menu, page 85 of this document).
3. If telephone set is equipped with LCD display, display will show:

FWD 1=ALL 2=BUSY 3=NO/A 4=BSY/NOA

4. Station User dials 1-4 depending on type of forwarding desired. If equipped with LCD display, it will show:

ENTER EXTENSION OR PRESS DSS _____

5. Press the DSS key of the forwarding destination or dial the station number of the forwarding destination (Forward to ____).
6. If CFWD button is programmed, CFWD button will light and blink.
7. Display will show:

YYYY -> XXXX Tue. Aug.06 01:06

YYYY= Your Extension Number

XXXX=Forwarding Destination

Lower portion of display will show current date and time.

This indicates that call forwarding is programmed and active on the telephone. If the telephone is programmed with a [CFWD] key, the key will flash at 60 impulses per minute.

To cancel call forwarding from a Superkey electronic telephone set:

1. Press [PGM]
2. Press [1]. (This function may also be accessed from the features menu. For more information, see Feature Selection from Menu, page 85 of this document).
3. Display will show:

FWD 1=ALL	2=BUSY
3=NO/A	4=BSY/NOA

4. Enter the type of call forwarding that is active.
5. Display will show:

ENTER EXTENSION OR PRESS DSS _____

6. Enter your station number (the station cancelling the forwarding). Call Forwarding is now cancelled.

If telephone set is equipped with CFWD button:

Press [CFWD]. [CFWD] light will extinguish.

Note: A station with a [CFWD] button programmed does not need to program call forwarding for each activation. The [CFWD] button will invoke the last forwarding programmed into a telephone set. Once Call Forwarding is programmed on a set, it may be activated and de-activated by pressing the [CFWD] button. It only becomes necessary to re-program when the type of forwarding or the forwarding destination is to be changed.

Note: Call Forwarding may also be programmed through access via the Feature Selection Menu. For information on the Feature Selection Menu, see Feature Selection from Menu, page 85 of this document.

To set Call Forwarding on Single Line Telephones:

1. Lift the handset.
2. Press [7],[0],[1],[1] for All Calls
OR
Press [7],[0],[1],[2] for Busy
OR
Press [7],[0],[1],[3] for No Answer
OR
Press [7],[0],[1],[4] for Busy/No Answer.
3. Dial the forwarding destination station. You will hear a confirmation tone.
4. Hang up.

To cancel Call Forwarding from a Single Line Telephone Set

1. Lift the handset.
2. Press [7],[0],[1],[1]
3. Dial your own station number.
4. Hang Up.

Operation

Calls will be forwarded under the conditions selected above.

Call Park

Description

Call Park allows station users to "mark" calls for easy retrieval. Retrieval is usually by other stations as a result of a page. It's primary uses are in conjunction with single line telephones that have to place more than one call on hold at a time and environments where paging is used extensively to route calls. Call Park places an outside caller on Hold into a specific numeric assignment. The call can then be picked up by any other station by dialing the same numeric location code.

See also Auto Call Park, page 10 of this document.

Conditions

Parking applies only to outside calls.

Programming

None.

Operation

To Place a Call in a Call Park Orbit:

From a Superkey electronic telephone set:

1. Place the outside caller on Hold.
2. Dial 85, plus the park location (0-9) where you wish to store the call. If the selected location is in use, you will hear busy tone. If the telephone is equipped with LCD display, the display will show:

Park Orbit Busy Try Again!

Otherwise the call will be stored in the park orbit requested.

From a single line telephone:

1. Place the outside caller on Hold by pressing the Hook switch †.
2. Dial, 85 plus the park location (0-9) where you wish to store the call. If the selected location is in use, you will hear busy tone. You may immediately dial another park number (0-9) to store the call. When the system has accepted the call into an orbit location, you will hear continuous dial tone.

To retrieve a call from a park location:

1. Lift handset or press SPKR.
 2. Dial 85, plus the location where the call is parked.
 3. You will be connected to the caller. If you attempt to retrieve a call from a location where no call is stored, you will hear busy tone.
- † In some systems Call Hold may require the digit 7 to be dialed after a hook switch flash. This is dependant upon system programming. If in doubt, consult your system manager.

Call Pickup

Description

Call Pickup allows a station user to answer a call ringing (or voice announce) at another station. The system allows these assignments to be set up independently for day service and night service.

Conditions

There are five different types of pickup that can be accomplished. They are:

1. CO Line
2. Station Group
3. Stations
4. Department (Your own group)
5. DSS Pushbutton Pickup

Note: DSS Pickup cannot retrieve calls from telephones that are in Call Forwarding mode.

Programming

Control of individual trunks is through Form 46-[CO]-05. Settings are as follows:

Setting	Day Service	Night Service
0	Disabled	Disabled
1	Disabled	Enabled
2	Enabled	Disabled
3	Enabled	Enabled

Form 28-[station]-01, Station Group Assignment determines the group that can be picked up by the station group option.

See Also, Flexible Key Group Assignment, page 91 of this document.

Operation

From Superkey electronic telephone sets:

1. Lift Handset or press [SPK] key.
2. Press [PICKUP] key or [*] key on keypad.
3. If the telephone is equipped with LCD, the display will show:

1=LN 2=GP 3-STN 4=DEPT.

4. User presses:
 - [1] Line number for desired CO line
 - [2] to select a ringing group
 - [3] to select a specific station.
 - [4] to answer a ringing set within your own group.
 - [*] to retrieve the oldest call, regardless of its type.

If [1] is selected, enter the CO line number to be picked up (1-8 on **SK-824**, 01-40 on **SK-200**).

If [2] is selected, enter the group number to pick up.

If [3] is selected, enter the station number to pick up.

If [4] is selected, station user will be connected to the first ringing telephone within that station's own group.

If [*] is selected, the call that has been ringing the longest in the system will be answered, regardless of its status as an outside call, an intercom call, or a hold recall.

DSS Pushbutton Pickup:

1. Lift Handset.
 2. Press the flashing DSS button of a ringing station.
 3. You will be connected to the caller.
- Note:** DSS Pickup cannot retrieve calls from telephones that are in Call Forwarding mode.

Call Split

Description

Call Split is a feature that allows a Superkey electronic telephone set user to "split" a conference into two separate conversations. This feature is advantageous when it becomes necessary to converse privately with one of the parties in the conference.

Conditions

A conference must be established containing yourself and two other parties. Conferencing must be enabled on your station.

Programming

It is necessary to program a DSS key as a [SPLIT/SWAP] key. This is available on Form 22, Flexible Key Group Assignment. For programming information regarding Form 22, please see page 91 of this document.

Form 26-STN-04 Conference, determines if a station has the ability to conference. A setting of 0 (enable) is default. To disable conferencing, set Form 26-STN-04 to 1 (disable).

Operation

While in a conference:

1. Press [SPLIT/SWAP].

Note: After the conference is split, it is possible to alternate between parties by pressing [SPD], [#] instead of [SPLIT/SWAP].

2. The first call established will be placed on HOLD. You will be connected to the most recently established call.
3. Press [SPLIT/SWAP]. The second caller will be placed on HOLD and you will be connected to the first call.
4. You may repeat these steps as necessary.

At any time, you may press the [CONF] key to re-establish the original conference.

You may also remove a party from a conference by using the SPLIT/SWAP key.

You may hang up on the party you are connected to while using the SPLIT/SWAP function. The other party (or remaining conferees if you are in a conference larger than 3 parties) will still be accessible.

Call Swap

Description

Call swap provides a quick and convenient method of alternating between two simultaneous telephone calls. While the same effect can be achieved through the use of the Hold button and CO line selection buttons, Call Swap provides direct, foolproof alternating capability. For users who will access this capability very frequently, a SPLIT/SWAP key may be programmed on the telephone to duplicate the function.

Conditions

None.

Programming

In order for a station to utilize Call Swap, Form 25-[station]-03 must be programmed to enable Call Swap function. The valid parameters are:

Call Swap, (Form 25-[station]-03)	0=Enable	1=Disable
--	----------	-----------

Operation

For Superkey electronic telephone sets equipped with SPLIT/SWAP key:

1. With first call in progress, press [HOLD].
2. Place second call.
3. Press [SPLIT/SWAP].
4. Second call is held. You are returned to the first call.
5. Press [SPLIT/SWAP].
6. First call is held. You are returned to the second call.

From a Superkey electronic telephone set not equipped with SPLIT/SWAP key:

1. With first call in progress, press [HOLD].
2. Place second call.
3. Press [SPD], [#].
4. Second call is held. You are returned to the first call.
5. Press [SPD],[#].
6. First call is held. You are returned to the second call.

Steps 3 through 6 may be repeated as necessary.

Call Transfer

Description

Call Transfer is used to transfer a CO call or an intercom call from one station to another. When a CO call is transferred, the outside caller will hear music on hold (if equipped) during a screened transfer. If the call is transferred via unscreened transfer, the caller may hear either music on hold or ringback tone, depending on system programming.

Conditions

There are two types of transfer:

1. Screened Transfer.
2. Unscreened Transfer.

Programming

Form 01-02-04, Single Line Telephone Release Time (default setting 5=800 milliseconds) defines the maximum hook flash interval that is allowable for the system to recognize as a FLASH command. Any hook flash (open loop) condition that exceeds this time parameter is considered as a disconnect. A hook flash that does not exceed this time but exceeds the time parameter defined in Form 01-02-06 is considered a FLASH. The possible settings are listed in the table below (ms=milliseconds):

Single Line Telephone Release Time (0-9)		0=40 ms	1=80 ms
2=120 ms.	3=140 ms	4=600 ms	5=800 ms
6=1000 ms	7=1200 ms	8=1400 ms	9=1600 ms

Form 01-02-06, Single Line Telephone Hold Signal (default setting 1=100 ms) determines the minimum open loop (hook flash) condition that the system will recognize as a FLASH. Any hook flash that does not exceed this minimum timer will be ignored by the Superkey electronic telephone system. Any hook flash that exceeds this time will be determined to be a FLASH if it does not exceed the timer set on Form 01-02-04 or will be determined to be a disconnect if its length exceeds the timer set on Form 01-02-04. The table of valid entries is listed below (ms=milliseconds):

Single Line Telephone Hold Signal (0-9)		0=80 ms	1=100 ms
2=200	3=300	4=400	5=500
6=600	7=700	8=800	9=900

Form 01-06-07, Affirmative Single Line Telephone Hook switch Flash Capability (default setting 0=FLASH) determines the actual procedure required in order to place a call on hold. The settings and resulting actions required are listed in the table below:

01-06-07	Action required to hold a call.
0	Flash
1	Flash, [7]
3	Flash, Alert Tone heard, [7]

Form 01-11-03, Ringback Tone/Music On Hold Select determines what an outside caller will hear when a call is transferred via unscreened transfer. Valid settings are:

Form 01-11-03, Ringback Tone/Music On Hold Select	
0=Transferred Calls Hear Ringback	1=Transferred Calls hear Music On Hold

Operation

From Superkey electronic telephone sets:

Screened Transfer:

1. Press [DSS] key.
- 1a. If there is no DSS key for the station, place the call on [HOLD] and dial the desired station number.
2. When the called station answers, announce the call and press [TSF].

Unscreened Transfer:

1. Press [DSS] key.
- 1a. If there is no DSS key for the station, place the call on [HOLD] and dial the desired station number.
2. Press [TSF] and then hang up.

Optional Operation: Stations equipped with LCD may utilize the dial by name feature for the purpose of call transfer.

From Single Line Telephone Sets:

Screened Transfer:

1. Flash (press) hook switch to place existing call on hold.
2. Dial station number of transfer destination.
3. When transfer destination answers, announce call and hang up.

Unscreened Transfer:

1. Flash (press) hook switch to place existing call on hold.
2. Dial station number of transfer destination.
3. Hang up.

Note: Actual procedures for placing a call on hold are defined by Form 01-06-07. The options are listed under the Programming section of this description above and may modify the procedures listed to transfer a call. It may be necessary to dial [7] after pressing the hook flash in order to place a caller on hold prior to transfer. Please consult system programming to determine if it is applicable for your system. .

Calling Proof

Description

Calling Proof Capability is available to prevent circumvention of toll control by single line telephones (Form 01-07-02) and certain Superkey electronic telephone sets (Form 01-07-05). These options are for use mainly in situations where local dial tone is not immediately given by the telephone company. In situations where dial tone is slow upon CO line seizure, it is possible that DTMF equipped single line telephones may dial a valid digit before the central office has returned dial tone. The system will disregard any digits dialed before dial tone is recognized and begin digit monitoring only after dial tone has been recognized.

For Superkey electronic telephone sets, DTMF signaling is not done at the keyset. All DTMF generated is created by the DTMF generator within the common control cabinet. However, the proliferation of add-on after-market dialers that utilize acoustic coupling to dial stored digits has made this option a necessity for electronic sets as well. The operation for electronic sets is exactly the opposite of that for single line telephones, since a DTMF receiver is not normally attached for Superkey sets. The possibility exists that a call could be placed via an external DTMF dialer that is in violation of the station's toll classification. If Form 01-07-05 is enabled, the system will utilize DTMF receivers on the system just as if it were a single line telephone. If enabled, any DTMF digit detected from the telephone handset will cause the telephone set to be disconnected from the CO line.

Conditions

Conditions are as described above.

Programming

Single Line Telephone Calling Proof Capability, Form 01-07-02 controls Calling proof capability and its application to single line telephones. Valid settings are:

SLT Calling Proof, (Form 01-07-02)	0=Disabled	1=Enabled
---	------------	-----------

Superkey Calling Proof Capability, Form 01-07-05 controls the calling proof option for Superkey electronic telephone sets. Valid settings are:

Superkey Calling Proof (Form 01-07-05)	0=Disabled (External Dialer Allowed)	1=Enabled (No External Dialer)
---	---	-----------------------------------

Operation

Operation is automatic. If calling proof is enabled and illegal digits are detected, the call will be terminated immediately.

Camp On

Description

Camp On allows a station to transfer a call to a busy station. The busy station will receive the Transferred call when it hangs up from the previous call.

Conditions

1. When a call is Camped-on to a busy station, it is placed into EXCLUSIVE HOLD mode for that station.
2. The Camped-on station will hear a short tone to provide notification that a call is Camped-on to that station.
3. If a call is not answered within the time programmed for Form 01-06-01, Transfer Recall Time (Busy), the transferred call will recall the station that originated the transfer. The parameters allow a range of options from 5 seconds to 70 seconds or the recall function can be disabled.

Programming

Form 01-06-01, Transfer Recall Time (Busy) controls the time that a call will remain camped on to a busy station. Default setting is 4=30 seconds. The range of settings are listed below:

Transfer Recall Timer (Busy)		0=5 seconds	1=10 seconds
2=15 seconds	3=20 seconds	4=30 seconds	5=40 seconds
6=50 seconds	7=60 seconds	8=70 seconds	9=No Recall

Form 01-01-05, Busy Remind Tone Interval determines how often the reminder tone will be heard while a call is camped on to a station. Valid settings for this option are:

Busy Remind Tone Interval (Form 01-01-05)		0=disabled	1=2 seconds
2=4 seconds	3=6 seconds	4=8 seconds	5=15 seconds
6=30 seconds	7=60 seconds	8=120 seconds	9=254 seconds

Single Line Telephone (SLT) Camp On Tone, Form 01-08-03 determines whether a single line telephone user will receive an audible reminder of a camped on call. If this option is enabled, the SLT user will hear a periodic beep in the handset receiver of the telephone set to indicate that a call is camped-on. The valid settings for this option are:

Single Line Telephone Camp On Tone, (Form 01-08-03)	
0=Camp On Tone Enabled	1=Camp On Tone Disabled

Operation

From Superkey electronic telephone sets:

1. Place outside caller on Hold
2. If equipped with DSS, press [DSS] key or dial station number. Busy tone will be heard.
3. Press [TSF] key.
4. Hang up. Outside caller is placed on exclusive hold for busy station.

From Single Line Telephone Sets:

1. Press Hook switch to place outside caller on Hold.
2. Dial station number where call is to be transferred. Busy tone will be heard.
3. Hang up. Outside caller is placed on exclusive hold for busy station.

Chain Dialing

Description

Chain Dialing permits a station to sequentially dial more than one speed dial number. Chain dialing can be any combination of manually dialed digits and speed dial numbers.

Conditions

1. Digits may be manually dialed before, after or between speed dial numbers.
2. Total digits dialed including speed dial cannot exceed 56 digits.
3. On Pulse dialing CO lines, if DTMF conversion has been selected in a speed dial digit string, all digits, including additional speed dial entries dialed after DTMF conversion will be DTMF.
4. Chain Dialing is not available to single line telephone sets.

Programming

None

Operation

1. Press [SPD]. Enter speed dial entry number (i.e. 00-09 or 100-999) or press programmed DSS key.
2. Manually dial digits.
3. Press [SPD]. Enter speed dial entry number (i.e. 00-09 or 100-999) or press programmed DSS key.

The steps listed above can be performed in any order. Any step(s) may be repeated or deleted as necessary, as long as the total digits dialed does not exceed 56.

Note: If manually dialed digits are entered first, a CO line must be selected prior to dialing.

SK-824 has a maximum of 500 (100-599) system speed dial numbers.

SK-200 has a maximum of 900 (100-999) system speed dial numbers.

Class of Service

Description

Station Class Of Service determines the characteristics of a telephone set. Each station within the Superkey system has its own unique Class Of Service indicators. Class of Service Information is stored on Forms 24, 25, 26, 27 and 28. Information on most options in Class Of Service programming is listed throughout this Features and Services Description.

Conditions

None.

Programming

See various Class Of Service Options listed throughout this Features and Services Description, the Superkey Programming Forms and Superkey Programming Manual.

Operation

Not Applicable.

CO Break Disconnect Timer

Description

CO Break Disconnect Timer allows the system to drop calls on hold that have been abandoned as well as calls in process by the Voice Service Unit. It will also drop CO lines where outside parties abandon any external Auto Attendant or Voice Mail System that has been classified as Voice Mail port by system database programming.

Conditions

CO Break Disconnect Timer should only be activated on systems where the telephone lines are actually receiving disconnect supervision or “open loop” conditions from the telephone company when calls are disconnected.

CO Break Disconnect Timer will not disconnect normal stations when an outside caller hangs up.

Programming

Form 01-09-03 Controls the activation and sensitivity of the timer. For most US Electronic Central Offices, a setting of 4 or 5 should be adequate. If abandoned calls are not promptly disconnected, this timer should be increased. If calls are getting cut off for no apparent reason, this timer should be reduced or disabled. Valid settings are:

CO Break Disconnect Timer Form 01-09-03		0=Disabled	1=80 milliseconds
2=160 milliseconds	3=240 milliseconds	4=320 milliseconds	5=400 milliseconds
6=480 milliseconds	7=560 milliseconds	8=640 milliseconds	9=720 milliseconds

Operation

When enabled, a call on hold that is abandoned by the outside caller should cause the Superkey to disconnect the outside line. Abandoned unsupervised conference, DISA calls, and Voice Mail calls will also be disconnected when a disconnect supervision is received from the telephone company Central office.

Note: Many telephone company Central offices do not provide immediate disconnect supervision when calls are abandoned. In many cases this may take as long as 10-20 seconds after the outside caller has hung up. Not all telephone company Central Offices supply disconnect supervision.

CO Line Hunting

Description

CO Line Hunting provides the ability to route calls to a main answering position and provide an overflow capability so that backup answering stations can be automatically added as necessary. In a busy condition, an incoming CO line programmed for hunting will ring the first available station. If that station does not answer, the system will add stations to the ringing sequence, one at a time until the call is either answered, abandoned or until all stations (up to 16) in the ringing assignment are added to the ringing sequence.

See also, Flexible Ringing Assignment, page 93 in this document.

Conditions

The CO line must be programmed for hunting to be operative.

Stations will be added to the ringing sequence in the order that they are programmed on the incoming ringing assignment forms (Form 42-[CO]-[station] and Form 43-[CO]-[station]).

Programming

Day Ringing Assignment, Form 42-[CO]-[station] must be programmed for each CO line in the system. Up to sixteen stations may be programmed for each line. Lines programmed to hunt will search this form in the order that stations are programmed. The system will ring the first available station in this group. If that station does not answer the call within the time period specified on Form 01-08-01, the system will add the next available station (in the order programmed on Form 42-[CO]-[station]) to the ringing sequence. This action will repeat until all available stations are in the ringing sequence, the call is answered or the call is abandoned. This form controls ringing assignments during day service only.

Night Ringing Assignment, Form 43-[CO]-[station] must be programmed for each CO line in the system if night service is to be used within the system. Up to sixteen stations may be programmed for each line. Lines programmed to hunt will search this form in the order that stations are programmed. The system will ring the first available station in this group. If that station does not answer the call within the time period specified on Form 01-08-01, the system will add the next available station (in the order programmed on Form 43-[CO]-[station]) to the ringing sequence. This action will repeat until all available stations are in the ringing sequence, the call is answered or the call is abandoned. This form controls ringing assignments during night service only.

Hunt Time Assignment, Form 01-08-01 sets the interval for adding stations to the ringing sequence in a no answer condition. Every time a station begins ringing, this timer will begin. If it expires without the call having been answered, the next available station in the group defined on Form 42-[CO]-[station] or Form 43-[CO]-[station], whichever is applicable, will be added to the ringing sequence. Valid settings for this option are:

Hunt Time Assignment, (Form 01-08-01)		0=Disabled	1=2 seconds
2=4 seconds	3=6 seconds	4=8 seconds	5=15 seconds
6=30 seconds	7=60 seconds	8=120 seconds	9=254 seconds

Note: If Form 01-08-01 is set at 0 (disabled), CO line hunting will only occur on busy stations. The first free station will be rung and the call will not add stations to the ringing sequence in a no-answer condition.

CO Line Assignment Day Ringing Method, Form 46-[CO]-07 determines whether hunting will occur during day service. The options for 46-[CO]-07 are:

CO Line Day Ringing Method, (Form 46-[CO]-07)		0=Common Audible
1=Linear	2=Circular	3=HUNT

CO Line Assignment Night Ringing Method, Form 46-[CO]-08 determines whether hunting will occur during night service. The options for 46-[CO]-08 are:

CO Line Night Ringing Method, (Form 46-[CO]-08)		0=Common Audible
1=Linear	2=Circular	3=HUNT

Note: For a description of Common, Linear, Circular, and Hunt, see CO Line Ringing Types, page 42 of this document.

Operation

1. On an incoming call, the first available station (according to Form 42-[CO]-[station] or Form 43-[CO]-[station]) will be rung.
2. If there is no answer within the time period determined by Form 01-08-01, the system will check the applicable form (Form 42 or Form 43) and add the next programmed station to the ringing sequence. This step will repeat until the call is answered, abandoned or all available stations on the applicable form (Form 42 or Form 43) are ringing.

CO Line Programming

Description

Central Office Line Programming provides the ability to effectively interface between the station users and the outside telephone lines. Most programming of the Central Office lines is done on Form 46 of the Superkey electronic telephone system. Each CO line has an identical portion of Form 46 so that all parameters may be tailored to the individual line.

Conditions

There are a maximum of eight (8) CO lines on the Superkey **SK-824** system.

There are a maximum of forty (40) CO lines on the Superkey SK-200 system.

Programming

Line Specifications are determined on Form 46. Each CO line has the same group of parameters available.

Form 46-[CO]-01, Line Type tells the system whether the outside line is connected to a Central Office or if it is connected to a PABX system or CENTREX. Valid settings are:

Line Type, (46-[CO]-01)	0=Central Office	1=PABX
--------------------------------	------------------	--------

This option works in conjunction with Toll control through Form 02-03-04. If this option is set to 1 (PABX), a call that does not begin with the code programmed on Form 02-03-04 (PABX [CENTREX] Outgoing Access Code) will be considered a PABX internal call and will not be subject to toll control. For more information on Form 02-03-04, please see Toll Control, page 166 of this document.

Form 46-[CO]-02, Dialing Type determines the outpulse method used for placing calls. The options are for either pulse or DTMF dialing. Valid settings are:

Dialing Type, (46-[CO]-02)	0=Pulse	1=DTMF
-----------------------------------	---------	--------

Note: On systems where DTMF single line telephones are connected and the Central office is capable of detecting DTMF digits, Dialing type must always be set to DTMF. The use of pulse dialing on a line with DTMF sensitivity in conjunction with DTMF single line telephones will provide unreliable dialing, since the central office will detect both the DTMF digits dialed directly by the station and the pulses dialed by the Superkey electronic telephone system.

Form 46-[CO]-03, External Call Forwarding controls the destination that will be used for external call forwarding for the line listed in the [CO] section of 46-[CO]-03. The available options are:

External Call Forwarding, (46-[CO]-03)		0=No Call Forwarding
1=Forward to Speed Dial 101	2=FWD to SPD Dial 102	3=FWD to SPD Dial 103
4=FWD to SPD Dial 104	5=FWD to SPD Dial 105	6=FWD to SPD Dial 106
7=FWD to SPD Dial 107	8=FWD to SPD Dial 108	

Note: Form 46-[CO]-03 has no effect unless Form 46-[CO]-04 is programmed with External Call Forwarding during either day or night service (or both).

Form 01-01-04 Delayed DISA Access Timer affects the operation of CO lines that are configured for either DISA operation **OR** External Call Forwarding. The system will not commence operation of External Call Forwarding until 01-01-04 expires. Valid settings for 01-01-04 are as follows:

01-01-04 - Delayed DISA Access Time		0=1 second	1=3 seconds
2=5 seconds	3=7 seconds	4=9 seconds	5=16 seconds
6=31 seconds	7=61 seconds	8=121 seconds	9=255 seconds

Form 46-[CO]-04 Determines whether the CO line will be considered as a normal line, a DISA line, or if the line should be Externally Call Forwarded. This also takes into account the ability to change the line's status

between Day Service and Night Service. For more information on Day Service and Night Service, see pages 48 and 118 of this document. Valid settings for this option are:

Line Status - DISA / External Call Forward / Normal, (46-[CO]-04)		
Value	Day Service Status	Night Service Status
0	Normal	Normal
1	Normal	DISA
2	DISA	Normal
3	DISA	DISA
4	Normal	External Call Forward
5	External Call Forward	Normal
6	External Call Forward	External Call Forward
7	DISA	External Call Forward
8	External Call Forward	DISA

Form 46-[CO]-05, Pickup Status, determines whether stations that do not ring have the capability to answer incoming calls on this line. The options include the capability for the status to be changed depending on Day or Night Service operation. Disabled means that non-ringing stations may not answer a call. Enabled means the non-ringing stations may answer the call. Valid settings are:

Line Pickup Status - Day / Night, (46-[CO]-05)		
Value	Day Service	Night Service
0	Disable	Disable
1	Disable	Enable
2	Enable	Disable
3	Enable	Enable

Form 46-[CO]-06, Loud Bell Assignment determines if the CO line will activate a loud bell relay upon incoming calls and if so, which of two relays will be activated. Valid options are:

Loud Bell Assignment, (46-[CO]-06)	
0=Relay #1	0=No Loud Bell Operation
1=Relay #2	2=Relay #2

Note: In order for this option to be operational, Form 08, Relay Assignment must have the relay assigned on Form (46-[CO]-06) programmed as type 04 (CO Line Loud Bell). For more information on Relay Assignment, please see page 136 of this document.

Form 46-[CO]-07, Inward Line Ringing Type - Day Service and Form 46-[CO]-08, Inward Line Ringing Type - Night Service determine the type of ringing to be used on incoming telephone calls. The valid Options are:

Day Service (46-[CO]-07) - Inward Line Ringing Type -Night Service (46-[CO]-08)	
0=Common Audible	1=Linear
2=Circular	3=Hunt

Note: For a complete explanation of the different types of ringing, see CO Line Ringing Types on page 42 of this document.

Operation

None.

CO Line Ringing Types

Description

The Superkey electronic telephone system has the ability to define the type of notification used for incoming telephone calls.

The system supports Loud Bells. For more information on Loud Bells, please see CO Line Programming, page 40 and Relay Assignment, page 136 of this document. CO Line Ringing Types are supported on per line basis, so the system can be tailored to the user's individual needs.

Common Audible Ringing causes all idle telephone sets programmed on Form 42-[CO]-[station] (Ringing Assignment - Day Service) or Form 43-[CO]-[station] (Ringing Assignment - Night Service) to ring when an incoming call is present.

Linear Ringing will always attempt to ring the first station (only) programmed on Form 42 or Form 43. If that station is unavailable, the system will attempt to ring the second station programmed. The system will search for and ring the first free station it locates. All searching is done in the order programmed on Form 42 if in Day Service or Form 43 if in Night Service.

Circular Ringing works like Linear Ringing except that it always begins its search immediately after the last station that was rung.

Hunting. See CO Line Hunting on page 38 of this document.

Conditions

None.

Programming

Form 46-[CO]-07, Inward Line Ringing Type - Day Service and Form 46-[CO]-08, Inward Line Ringing Type - Night Service determine the type of ringing to be used on incoming telephone calls. The valid Options are:

Day Service (46-[CO]-07) - Inward Line Ringing Type -Night Service (46-[CO]-08)	
0=Common Audible	1=Linear
2=Circular	3=Hunt

Operation

Operation begins on detection of an incoming call. Operation is automatic.

Conference

Description

Conference allows a station user to converse with two or more other parties at the same time. Up to a total of five parties may be involved in any conference. This can consist of any combination of internal stations and external lines.

See also, Unsupervised Conference, page 172 of this document.

Conditions

A station can set up a conference if it is enabled in its Class of Service.

Privacy Release can also be used to allow additional internal parties to join the conference.

Programming

Form 26-STN-04 Conference must be set to 0 (Enable) if Conferencing is to be allowed. By default, all stations have this enabled. To disable, set 26-STN-04 to a value of 1 (disable).

Operation

From Superkey multi line telephone sets:

1. During a conversation, press [HOLD].
2. Dial a station number
OR
Access an outside line and dial an external telephone number.
3. Wait for answer.
4. Press CONF.
5. Conference is established.

Note: Steps 1 through 4 may be repeated until a total of five parties (including yourself) are included in the conference.

Console

Description

Consoles are regular stations within the Superkey system that have been designated by system programming as locations for recalls and dial 0 calls. In some installations, consoles may be the only stations designated for access to system programming. Consoles are the only stations allowed to perform programming of System Speed Dial numbers.

Conditions

A station must be programmed as a console on Form 04-[group]-[station], Console Assignment, see Console Assignment, page 45 of this document.

Programming

See Console Assignment, page 45 of this document.

Operation

Operation is automatic.

Console Assignment

Description

Console Assignment allows selected stations to be designated as consoles (operators). A station that has been assigned as a console will be accessible by dialing [0] or [9] (depending on System Programming, see Form 01-06-05, Operator Code). Up to four stations may be designated as consoles in any console group assignment. Up to eight console groups may be assigned within the Superkey electronic telephone system.

Conditions

Calls to an operator [0] will always search the console assignment in linear order. The first free station in the console assignment group will be rung. The system will search for a free station in the order that stations are programmed on the console assignment form.

Programming

Console Assignment is programmed on Form 04-[group]-[station]. Up to four stations may be programmed for each group. The first station programmed in the group is considered the prime console. Up to eight groups may be programmed in the system.

Station Group Assignment, Form 28-[station]-01 determines which console group a station will access when [0] is dialed. A station with 28-[station]-01 programmed as [1] will access group 1. If 28-[station]-01 is programmed as [2], a station will access group 2 when the operator is dialed, etc.

Operator Code, Form 01-06-05 determines the number dialed to reach the system operator. If 01-06-05 is set to 0, stations will dial 0 for the operator and 9 for outside line access. If 01-06-05 is programmed as 1, stations will dial 9 for the operator and 0 for outside line access.

Operation

A station user dials [0] (or [9], depending on the setting of Form 01-06-05, Operator Code). The system will search the corresponding console group and ring the first free console.

Conversation Monitor

Description

Conversation Monitor allows a station to listen to the conversation of another station. Conversation monitor works in a manner similar to Override, except that there is no indication given to the station being monitored.

Conditions

The station invoking the monitor must have a monitor class that is greater than the station to be monitored. If the call is between two internal stations, the station invoking the monitor must have a monitor class that is greater than both stations in the conversation.

The monitor path is a one way audio path. To enter a monitored conversation and have two way audio, press the [MIC] button. After that point, each press of the [MIC] button will toggle the microphone on and off.

Programming

Form 24-STN-02, (Monitor Level) of the station to monitor must be set at a level (from 1-9) that is higher than the station(s) that it is to monitor.

Form 24-STN-02, (Monitor Level) of the station to be monitored must be set at a level that is lower (0-8) than any stations that are allowed to monitor.

A station that has Form 24-STN-02 set to [0] (Default) will be incapable of monitoring any other station.

Operation

1. Dial the station number to be monitored. You will hear busy tone.
2. Dial [#] or press [MONITOR] (if equipped).
3. If allowed, you will be placed in the monitor mode
4. You will remain in the monitor mode until you hang up or until the station that you are monitoring hangs up.

Date and Time Setting

Description

For the purposes of Station Message Detail Recording and for Superkey electronic telephone sets equipped with Liquid Crystal Displays, Time of Day, Day of Week, Date, Month, and Year are stored by the system. A built in lithium battery provides battery backup for this information as well as system database backup. In the event of a power failure, the lithium cell will keep all information and continue to operate the real time clock for a minimum of 1200 hours.

Conditions

None.

Programming

Initial programming of time, day and date information may be programmed on Form 10. The format of this entry is as follows:

MM DD YY

hh mm d

MM=Month (01-12)

hh=hour (00-23)

DD=Day of Month (01-31)

mm=minutes (00-59)

YY=Year (00-99)

d=day of week

Note: Day of week schedule: 1=Monday 2=Tuesday 3=Wednesday 4=Thursday
5=Friday 6=Saturday 7=Sunday

The operator console also has the option of programming the same information without the requirement to enter system programming. The procedure follows:

1. Operator idle. Press [PGM].
2. Press [HOLD].
3. Press [SAVE].
4. Enter information in format listed above.
5. Press [SAVE].
6. Lift and replace the telephone handset.

Operation

None.

Day Service

Description

Superkey electronic telephone systems provide two distinct modes of operation. The two modes are Day Service and Night Service. Each service provides separate operating characteristics.

Conditions

Items under control of Day and Night Service are:

1. Flexible CO Incoming Line Assignment and Flexible Ringing Assignment.
2. Toll Restriction Plan
3. DISA
4. External Call Forwarding

Day/Night Service switching can be manual or automatic.

If Day/Night Service is automatic, the Day Service/Night Service intervals are programmable.

A System in automatic switching mode can be changed to manual mode for special circumstances and then returned to automatic operation when desired.

Information regarding the actual day of the week and time of day is kept by the system real time clock located on the CCUA mother board. Initial setting of the real time clock is done on Form 10 and includes day of week, date, month, year as well as hour and minutes. The system real time clock is provided with a battery backup and will keep the clock accurate for a minimum of 48 hours in the event of a power failure.

Programming

Flexible CO Line Ring Assignment, Form 42-[CO line]-[stations] and Form 43 - [CO line]-[station] (see page 88 of this document).

Toll Plan, (see page 166 of this document).

DISA (see page 58 of this document).

External Call Forward (see page 80 of this document).

Form 15-[DAY], Define Day Time Schedule. This form defines the day service interval for each day of the week. The night interval is any time not included in the day service interval. There is a separate definition for each [DAY] of the week. The [DAY] field of the programming information is a two digit code that defines each day of the week according to the table below:

Form 15- [DAY] Definitions		15-00=Sunday
15-01=Monday	15-02=Tuesday	15-03=Wednesday
15-04=Thursday	15-05=Friday	15-06=Saturday

Each section of Form 15-[DAY] should be programmed with the following information:

hh mm HH MM where: hh mm = Day Service Start Time by hour and minute. HH MM=Day Service End Time by hour and minute.

All time must be entered in 2400 (military) format.

Hours from Midnight to 11:59 AM must be entered as 00 00 to 11 59.

Hours from Noon to 1159 PM must be entered as 12 00 to 23 59.

Night Service will be in operation during any time period not defined between a Day service end time and the next day's Day Service Start Time.

Stations with control of Night Service should have a pushbutton programmed for Day/Night Service indication and switching.

Operation

Automatic Switching - No operation required. Any operator with a programmed Day/Night Service pushbutton can temporarily override the system status by pressing the [DAY/NIGHT] pushbutton. Pressing the pushbutton will temporarily toggle to the alternating mode. The system will return to the automatic mode and the same service at the next clock update (next minute change on the system clock).

EXAMPLE: If a system is in Night Service and a user manually changes the system over to Day Service, the system will remain in Day Service until the next clock update (next clock minute).

Manual Switching - Any station(s) with a programmed Day/Night Service pushbutton can toggle between Day Service and Night Service by pressing the [DAY/NIGHT] pushbutton. System status is indicated by the pushbutton being dark during Day Service and a fast wink during Night Service.

Note: When the system is manually cycled between services by the Day/Night pushbutton, other stations that also have the pushbutton may not immediately see the status change. Depending on system configuration, the change in status display at a Day/Night button may not occur until the next clock update message (minute change). This is normal operation.

System Operator may manually switch from Day Service to Night Service. The steps necessary to accomplish this are as follows:

1. With the telephone idle, press [PGM], [TSF].
 - A. If the system is in Automatic switching mode, the display will show the programmed time for the day. Change the system to manual mode by dialing [*]. Display will show "DAY STATUS" or "NIGHT STATUS" in the upper portion of the display and "-> Manual" in the lower portion of the display.
 - B. If the system is in Manual switching mode, the display will show the present status as DAY STATUS or NIGHT STATUS.
2. Press [TSF]. The system will change to the alternate mode. If the system originally indicated that it was in DAY STATUS, it will change to NIGHT STATUS. The STATUS will alternate every time the [TSF] button is pressed.
3. To exit to normal telephone operation, press [PGM] or [SPK].

To change from manual switching to automatic switching or from automatic switching to manual switching:

1. With the telephone idle, press [PGM], [TSF]. The telephone will display either DAY STATUS or NIGHT STATUS if the system is in manual mode. If the system is in Automatic mode, the display will show the current Day Service schedule.
2. Pressing [*] will alternate between the Automatic and Manual mode. The lower portion of the LCD display will show the currently selected mode.
3. To exit to normal telephone operation, press [PGM] or [SPK]

Dial By Name

Description

Superkey electronic telephones equipped with LCD display may have the ability to dial internal stations, personal speed dial and system speed dial numbers by name. In this situation, the numeric keypad will also allow alphabet characters to be entered from the set.

Conditions

Dial by name is only available to Superkey electronic telephone sets equipped with LCD displays and programmed with a [DIR] Directory key, see Flexible Key Group Assignment, page 91 of this document.

Dial by name is available for system speed dial, personal speed dial and internal (intercom) calling.

SK-200 users may elect to utilize Dial By Name for System Speed Dialing only.

Programming

Form 01-09-01, Dial by name must be enabled on the system in order to activate the Dial by name function. Valid settings for 01-09-01 are listed below:

Form 01-09-01 Dial By Name	0=Enable	1=Disable
-----------------------------------	----------	-----------

If Dial by name is enabled, the parameters listed for Form 01-04-06 are listed below. If Dial by name is not programmed, this table is not valid. For more information regarding System Speed Dial, please see Speed Dial (System), page 151 of this document.

Speed Dial Distribution Form 01-04-06		
Setting	Number of System Speed Dial	Number of Personal Speed Dial
0	100 Locations (100-199)	240 Locations
1	200 Locations (100-299)	140 Locations
2	300 Locations (100-399)	40 Locations

Programming names for intercom stations:

Programming of names associated with internal stations is on Form 29, Port Assignments of the system programming forms. Select the STN number that you wish to program, press [CHAnG]e (DSS line key #3).

During name entry, the numeric keypad keys will operate as alphabetical character keys. Each key will enter the letters that appear on the key caps. The following table illustrates the entries that each key can make.

Key 1 =	Q - Z - (Blank Space) - 1	Key 2 =	A - B - C - 2
Key 3 =	D - E - F - 3	Key 4 =	G - H - I - 4
Key 5 =	J - K - L - 5	Key 6 =	M - N - O - 6
Key 7 =	P - R - S - 7	Key 8 =	T - U - V - 8
Key 9 =	W - X - Y - 9	Key 0 =	. : & 0
Key * =	- / ! *	Key #-	() \$ #
Redial =	Backspace	MSG =	Forward

Each character is indicated in order. For instance, pressing 2 will display A. Pressing it again will display B. Pressing it a third time will display C. Pressing it for the fourth time will display 2. The character that is being programmed will be underscored. Movement from character to character (left to right) is through the use of the [Redial] and [MSG] keys.

When the name is acceptable, press [SAVE] to store the name in system memory.

Programming a System Speed Dial Number and a Name To Be Associated:

Form 06, System Speed Dial Assignment allows programming of speed dial entries and the names to be associated with them. Each entry has a location for both the number to be stored and the name to be stored. In order to program a number for the system speed dial location:

1. Enter Programming Form 06.
2. Dial the speed dial (bin) location where the number is to be stored.
3. Enter the number to be stored. Press [SAVE]. The system will advance to the next speed dial (bin) location.

To program a name for the location just programmed:

1. Press [VOL ↓]. Press [CHG], (DSS key #3) twice, until the letter [N] appears in the far right location on the upper line of the LCD display.
2. You may then enter the name that you wish to store against the location by using the keys as listed above.
3. When the entry is satisfactory, press [SAVE].

Note: System speed dial entries and names may also be programmed from the system console. The programming procedures are listed under the operation section, below.

Operation

Programming a name to be associated with a System Speed Dial Number (System Console Only):

1. Press [PGM]. Press [SPD].
(This function may also be accessed from the features menu. For more information, see Feature Selection from Menu, page 85 of this document).
LCD display will show:

SYS SPEED *
 STN SPEED #
2. Press [*].
3. Enter the Speed Dial location to be programmed (three digits). Press [SAVE].
4. Enter the number to be stored. Press [SAVE]. Press [VOL ↓].
5. Press [CHG] (DSS Key #3) twice. LCD display will show [N] in upper right corner of display.
6. Enter the name desired by utilizing the keys listed under programming, above.
7. When the name has been entered satisfactorily, press [SAVE].
8. Press DSS key #5 to exit programming of System Speed Dial.

Programming a name to be associated with a Personal Speed Dial Number:

1. Press [PGM]. Press [SPD].
(This function may also be accessed from the features menu. For more information, see Feature Selection from Menu, page 85 of this document).
Operator Stations will display:

SYS SPEED *
 STN SPEED #

All other stations will show the display in step 2, below.
2. Press [#] (Only from Operator stations. All other stations proceed to step 3) .
LCD will display:

DIAL SPEED #0-9
 OR PRESS DSS

-
3. Enter the Speed Dial location to be programmed or press DSS key 1-10.

LCD will display:

SELECT LINE
PRESS 9 NO SELECT

4. If a specific line is to always be used, press the DSS button associated with the line. If the first available line in your Dial 9 group is to be used, enter [9].

5. Enter the telephone number to be stored in the personal speed dial location. Press [SAVE].

6. LCD will display:

STORE WITH NAME?
1=YES 2=NO

7. Press [1] to store with a name. LCD will display:

ENTER NAME

8. Enter the name using the keypad as described above in the programming section of this description.

9. When the entry is satisfactory, press [SAVE]. The telephone will return to idle.

To Dial By Name:

1. Press [DIR] key. LCD will display:

*/#=SYS/PER. SPD
1=Intercom

2. Press * If you want to access the System Speed Dial Directory
Press # if you want to access your Personal Speed Dial Directory
Press 1 if you want to access the Intercom Directory.

LCD will display:

ENTER LETTER

3. Use the numeric keypad as listed above in the Programming section to enter the first letter of the name that you wish to access. When you have entered the first letter, press [Vol ↑]. The display will show you the first name that matches the display. When you find the name you want, press [SPK] or lift the Handset. The call will be dialed.

4. If no entries in the directory match your selection, the LCD will display:

NO ENTRIES
TRY AGAIN

You will return to the display listed in step 2 above if you press any keypad button. If you do not wish to re-enter another name, you may press [SPK] to return to an idle telephone condition.

Users may have a key programmed that bypasses the Personal and Intercom directories. If this key is programmed, the steps above will be changed to:

1. Press [DIR] key. LCD will display:

ENTER LETTER

Proceed from this to step 3 above.

Dial 87 Group

Description

A station may elect to access a member of an alternate group of CO lines by dialing 87 rather than the selection of a line pushbutton or the dial 9 group. The Superkey electronic telephone system supports up to eight groups of separately assigned outside lines. This allows departments to access lines reserved for their use. See also, Dial 9 Group, page 54 of this document.

Conditions

1. For features such as Last Number Redial, and Saved Number Redial, the Superkey electronic telephone system will select from the Dial 87 CO Line group if the call originated through the use of the 87 access code.

Programming

Form 01-12-01, Outbound CO Hunt Type determines the selection method for CO lines. A setting of 0 will provide linear hunting (always begins at the first line programmed in the group). A setting of 1 will provide circular hunting (begins searching at the next CO line in the group). This provides a more even distribution of outbound calls over a group of CO lines.

Form 45-[group]-[CO Line], Alternate CO Line Group Assignment assigns specific CO lines to individual CO Line groups. Up to eight CO line groups may be programmed on a Superkey electronic telephone system. Each group may contain up to eight CO lines on the **SK-824**. The **SK-200** may contain up to 40 CO lines in a group.

Note: CO lines may appear in any and/or all CO line groups.

Form 27-[station]-01. Alternate CO line group assigns one of the eight CO line groups programmed on Form 45 to an individual station.

Operation

1. Lift handset or press [SPK] button (Optional).
2. Dial 87. Station will be connected to the first CO line in the Dial 87 group to which it is assigned. If all lines in a group are in use, the station user will hear busy tone.

Dial 9 Group

Description

A station may elect to access a member of a group of CO lines by dialing 9 (or [0], depending on Form 01-06-05, Operator Access Code) rather than the selection of a specific line pushbutton. The Superkey electronic telephone system supports up to eight groups of separately assignable outside lines. This allows departments to access lines reserved for their use.

Conditions

For features such as Last Number Redial, and Saved Number Redial, the Superkey electronic telephone system will select from the Dial 9 CO Line group if the line originally used for the call is busy.

Programming

Form 01-04-02, Dial 9 CO Line Group Access must be enabled in order for this to be available on the system. The valid options for this are 0=No Dial 9 capability, 1=Dial 9 capability is enabled.

Note: The status of Form 01-04-02 controls only the ability to dial 9 (or [0], see Form 01-06-05, listed below). CO line groups (Form 44-[group]-[CO]) should still be programmed in order to provide DSS key access for outgoing calls, Saved Number Redial, Speed Dial and Last Number Redial see also DSS Access to Other CO Lines on page 73 of this document.

Form 01-06-05, Operator Code determines whether the access code for outside trunk groups is 9 or 0. Valid settings are 0=[(9=Line Group access) (0=System Operator)] and 1=[(0=Line Group access) (9=System Operator)].

SK-200 Form 01-12-01, Outbound CO Hunt Type determines the selection method for CO lines. A setting of 0 will provide linear hunting (always begins at the first line programmed in the group). A setting of 1 will provide circular hunting (begins searching at the next CO line in the group). This provides a more even distribution of outbound calls over a group of CO lines.

Form 44-[group]-[CO Line], CO Line Group Assignment assigns specific CO lines to individual CO Line groups. Up to eight CO line groups may be programmed on a Superkey electronic telephone system. Each group may contain up to eight CO lines on the **SK-824**. Each group in the **SK-200** may contain up to 40 CO lines. Lines will be accessed in the order in which they are programmed into the group (Linear search).

Note: CO lines may appear in any and/or all CO line groups.

Form 28-[station]-04. Dial 9 CO line group assigns one of the eight CO line groups programmed on Form 44 to an individual station.

Operation

1. Lift handset or press [SPK] button (optional for Superkey electronic telephone sets).
2. Dial 9. Station will be connected to the first CO line in the Dial 9 group to which it is assigned. If all lines in a group are in use, the station user will hear busy tone.

Dial Pulse to DTMF Conversion

Description

In some installations where the serving Central Office is Dial Pulse, it may be necessary to provide end-to-end DTMF signaling after the initial pulse dialing instructions are sent to the Central office. This may occur due to the need to access external voice mail, banking services, or other services requiring DTMF signaling.

In those instances it is not desirable to send both Dial pulse and DTMF tones over the circuit. Dial Pulse to DTMF conversion simply deactivates the conversion process, so that dial pulse conversion is removed from the CO line.

Conversion will only work on CO lines that are defined as Pulse dialing in the Line Specifications, Form 46. Once pulse dialing has been disabled, it cannot be re-enabled for the duration of the telephone call.

Conditions

Conversion of dialing signals to DTMF can occur during manual dialing and it may also be programmed as a part of a speed dialing string.

This feature does not apply to Central Office lines programmed on Form 46-[CO]-02 for default output of DTMF.

Programming

1. Superkey electronic telephone systems allow control of the Make/Break Ratio through Form 01-03-01 and is selectable as either 0=33/67 or 1=40/60.
2. The default dialing mode (DTMF or pulse) is programmable on a per trunk basis through Form 46-[CO]-02 and is selectable as either 0=Pulse or 1=DTMF.
3. The DTMF tone duration time is programmable for the Superkey electronic telephone system on Form 01-01-07. Acceptable entries are listed in the table below:

DTMF Generation Time (01-01-07)		0=50 milliseconds	1=66 milliseconds
2=83 milliseconds	3=100 milliseconds	4=115 milliseconds	5=132 milliseconds
6=149 milliseconds	7=165 milliseconds	8=180 milliseconds	9=195 milliseconds

4. In installations requiring the use of Pulse to DTMF conversion, telephone sets requiring the feature must have a DSS key programmed for [TONE] (function 35) or [MSG] (function 15). Function 15 [MSG] is programmed on each Superkey electronic telephone set in the system default database.

Operation

For manual dialing:

1. Access a CO line.
2. Dial normally.
3. At the point where DTMF is required, press [MSG] or [TONE].
4. All digits dialed after step 3 will be DTMF.

For speed dialing:

1. Program the speed dial number normally.
2. At the point where DTMF is required, press [MSG] or [TONE].
3. Continue dialing digits to be stored.
See also, Speed Dialing. Page 151.

Dial Tone Detector

Description

Dial Tone Detection on the Superkey system is programmable to meet most installation requirements. Under most conditions, dial tone detection is desirable to provide system supervision of speed call, last number redial and saved number redial. With the dial tone detector enabled, the system will normally wait for Central Office Dial tone before outpulsing digits. In some cases, where dial tone is either not provided, or not at consistent volume level or frequency levels, the dial tone detector may cause unnecessary delays in dialing. In those situations, it may be desirable to disable the dial tone detector and utilize the time controlled pause character for speed dial entries.

Conditions

None.

Programming

Dial Tone Detector is programmed on Form 01-05-06. The valid settings for Dial Tone Detector are:

Dial Tone Detector, (Form 01-05-06)	0=Enabled	1=Disabled
--	-----------	------------

Operation

Operation is automatic.

Note: If your local telephone company is using a new technology Digital Central office, you may safely disable the dial tone detector. The dial tone detector is primarily used in areas served by older "Stepper" or electro-mechanical "crossbar" central offices, where dial tone may be subject to delay, due to lack of telephone company resources.

Direct In Line

Description

Direct In Lines are CO lines that ring at a station other than the designated system operator. Depending on system programming, direct in lines may or may not appear on one or more telephones within the system.

Conditions

Direct In Lines may be designated during day service, night service, or during both periods.

Programming

Incoming Ringing:

Form 42-[CO line], Day Ringing Assignment provides the capability to program up to 16 stations to ring for each incoming CO line. This form controls ringing during the day service interval of operation. For a direct in line, only the individual station that is to ring should be programmed.

Form 43-[CO line], Night Ringing Assignment provides the capability to program up to 16 stations to ring for each incoming CO line. This form controls ringing during the night service interval of operation. For a direct in line, only the individual station that is to ring should be programmed.

Form 46-[CO line]-07 Determines the type of ringing pattern to use on each trunk during day service. For direct in lines, this parameter should be set to [0], Common Audible.

Form 46-[CO line]-08 Determines the type of ringing pattern to use on each trunk during night service. For direct in lines, this parameter should be set to [0], Common Audible.

It may be required in some cases to have a DSS appearance of the CO line on one station only. If this is the case, the station where the line is to appear should have its own Flexible Key Group Assignment (Form 22) created. There are eight available Key Group Assignments within the **SK-824** system. The CO line should not appear in any other assigned Key Group Assignment. The key group should be assigned to the station on Form 28 (Station Specifications).

Direct Inward System Access (DISA)

Description

DISA provides outside callers with the ability to directly dial extensions within the telephone system or access specialized telephone lines and make outgoing calls without attendant intervention. Maintenance personnel may use the DISA feature to make program changes from a remote location such as their service center. DISA callers may access speed dial, "dial 9" CO line groups, individual CO lines, system operator and may also invoke the monitor feature for specific stations or either of the two door phones. There are a number of timers associated with DISA to provide the most effective service for calling parties.

DISA calls to internal stations are programmable for full supervision during every phase of the call. If an inbound DISA caller fails to dial any digits, insufficient digits or invalid digits, the caller will be routed to an Attendant Operator. Once the digits are verified to be a valid station number, the call proceeds to the station. At this point, there is an option to forward the call to the operator if the station is busy, does not answer, if the station is either busy or doesn't answer, or to not forward to the operator at all. This function is controlled by Form 27-STN-04 (DISA Recall Capability), as described below. If the dialed station is programmed to recall to the operator, the software will activate both a counter and timer as defined in Form 01-08-06 (DISA Transfer Timer). If no recall to the operator is set, the call will queue for the period of time as defined for this timer, and will cycle through the counter as depicted in the DISA flow chart in Appendix A of this document.

Conditions

In order to use DISA, the outside party must be calling from a DTMF telephone.

DISA must be active on the Superkey Electronic Telephone System.

When using DISA to access another outside, call duration is limited to six (6) minutes. Warning tone will notify user of timeout ten seconds prior to system disconnect. User can press a numeric (0-9) DTMF digit to extend the timer in six minute increments or do nothing and allow system disconnect. DISA calls made to internal stations are not limited in duration.

Dialing [*] at any point in the DISA call causes immediate disconnect.

DISA and External Call Forwarding on a CO line are mutually exclusive.

If DISA callers fail to enter any digits, they will be transferred to the operator after 15 seconds.

If a DISA caller dials insufficient digits the call will be transferred to the operator 7 seconds after the last entered digit.

Programming

Form 46-[CO]-04, CO Line Specifications. DISA must be enabled during the time period to be utilized.

DISA may be enabled during day service only, night service only, both day and night service, or DISA may be disabled at all times. The table below shows the valid settings and the resulting status for the CO line:

46-[CO]-04	Day Status	Night Status
0	Disabled	Disabled
1	Disabled	DISA Enabled
2	DISA Enabled	Disabled
3	DISA Enabled	DISA Enabled
4	Disable	ECF Enabled
5	ECF Enabled	Disabled
6	ECF Enabled	ECF Enabled
7	DISA Enabled	ECF Enabled
8	ECF Enabled	DISA Enabled

Form 01-01-04, Delay DISA Access determines how long the incoming CO line will ring before it is answered by DISA. The parameters are listed below:

Delayed DISA Access Form 01-01-04		0=1 second	1=3 seconds
2=5 seconds	3=7 seconds	4=9 seconds	5=16 seconds
6=31 seconds	7=61 seconds	8=121 seconds	9=255 seconds

DISA Recall No Digits Dialed, Form 01-07-04 determines the recall path, if any for a DISA call when an incoming caller does not dial digits. If No Recall is selected on Form 01-07-04, the call will be disconnected when the No Digits Dialed Timer (Form 01-08-07) expires. The valid options are:

DISA Recall No Digits Dialed, (Form 01-07-04)	
0=Disconnect Call	1=Recall Operator

DISA Transfer Group , Form 01-08-04 determines the routing for a DISA call that reaches a non-answering station. With this option, the DISA call can be sent to the console assignment group of either the CO line or the console assignment of the unanswered station. Valid settings are:

DISA Transfer Group Form 01-08-04	
0=Recall to Console Group of the Unanswered Station	
1=Recall to Console Group of the CO line group	

DISA Transfer Timer, Form 01-08-06, in conjunction with the counters as shown on the DISA flow chart, determines the length of time that the system software will attempt to ring the station user. Valid settings for this option are as follows:

DISA Transfer Time (No Answer) (Form 01-08-06)		0=8 seconds	1=16 seconds
2=24 seconds	3=32 seconds	4=40 seconds	5=48 seconds
6=56 seconds	7=64 seconds	8=72 seconds	9=80 seconds

DISA Transfer Time (No Digits Dialed), Form 01-08-07 determines how long the system will wait for digits to be dialed after a recording has been played. In systems without a Voice Service unit, this determines the total time the system will wait for digits to be dialed before it is referred to Form 01-07-04 for further action. Valid settings are:

DISA Transfer Time (No Digits Dialed) (Form 01-08-07)		0=Immediate Transfer	1=1second
2=2 seconds	3=3 seconds	4=4 seconds	5=5 seconds
6=6 seconds	7=7 seconds	8=8 seconds	9=9 seconds

Form 01-11-04, DISA Queue Immediate Answer provides control to determine if the caller will be queued until the VSU is available (used for most automated attendant applications) or if the caller will be answered as soon as the DISA delay answer time expires (used for most applications where a VSU is not installed). If queuing is not selected and a VSU is present, if the DISA delay timer expires and the VSU is not available, the outside caller will be connected to system dial tone. Valid settings are:

DISA Queue Immediate Answer, Form 01-11-04	
0=Immediate Answer (User will hear dial tone if VSU is not available or absent).	
1=Queue call until VSU is available	

DISA Transfer Count (Console Busy/No Answer) Form 01-11-06 determines the number of times that the system will cause the caller to cycle through the Voice Service Unit messaging cycle as depicted in Appendix A of this document. Valid settings for this option are:

DISA Transfer Check (01-11-06)		0=2 times	1=3 times
2=4 times	3=5 times	4=6 times	5=7 times
6=8 times	7=9 times	8=10 times	9=infinite times

DISA Recall on No Answer/Busy (Form 27-Station-04) determines the disposition of a DISA call when the called station is either Busy or does not answer. Valid settings for this options are:

DISA Recall-No Answer/Busy (27-ST-04)		0=No Recall
1= Recall on No Answer	2=Recall on Busy	3=Recall No Answer/Busy
5= Recall on No Answer and discontinue ringing the called station		
6=Recall on busy and discontinue Busy Remind (Camp On) Tone		
7=Recall on No Answer/Busy and discontinue notification as per 5 and 6 above.		

Operation

Using DISA to reach an operator or internal station:

1. Outside user calls DISA telephone line.
2. Superkey electronic telephone system answers and provides Superkey intercom dial tone.
3. Outside user dials 0 for operator or internal station number.
4. Internal station number is rung if available or returns BUSY tone to outside caller.
5. If internal station answers, call proceeds normally.
6. If internal station is BUSY, outside caller can dial [#] to receive new intercom dial tone or [*] to disconnect from the system.

Using DISA to dial Speed call number:

1. Outside user calls DISA telephone line.
2. Superkey electronic telephone system answers and provides Superkey intercom dial tone.
3. Outside user dials [#]+ [SPEED DIAL CODE]+[DISA PASSWORD].
4. If the DISA Password entered by the outside user is correct, the system will access the outside line or line group and dial the speed dial number stored in the speed dial location entered. The call is then dialed out.
5. If a busy condition or no answer is encountered, the DISA user can dial [#] to receive new CO dial tone or [*] to disconnect from the system.

Using DISA to access a dial 9 CO line group:

1. Outside user calls DISA telephone line.
2. Superkey electronic telephone system answers and provides Superkey intercom dial tone.
3. Outside user dials 9 + DISA password. If correct, the system will connect outside caller to CO line and allow outside user to dial out.
4. If a busy condition or no answer is encountered, the DISA user can dial [#] to receive new CO dial tone or [*] to disconnect from the system.

Using DISA to access a specific outside line:

1. Outside user calls DISA telephone line.
2. Superkey electronic telephone system answers and provides Superkey intercom dial tone.
3. Outside user dials 80X (1-8) + DISA password. If correct, the system will connect outside caller to CO line and allow outside user to dial out.
4. If a busy condition or no answer is encountered, the DISA user can dial [#] to receive new CO dial tone or [*] to disconnect from the system.

Using DISA for remote programming:

1. Outside user calls DISA telephone line.
2. Superkey electronic telephone system answers and provides Superkey intercom dial tone.
3. Outside user dials #0 + Program password. If correct, the system will connect modem tone to the caller, indicating the system is prepared for a program session.

Using DISA for remote station monitoring:

1. Outside user calls DISA telephone line.
2. Superkey electronic telephone system answers and provides Superkey intercom dial tone.
3. Outside user dials 87 + Monitor password +station number. If correct, the system will connect the DISA caller to the called station provided the called station is equipped with a speakerphone. The monitored station has no indication that it is being monitored. NOTE that this connection is a two way talk path.

Using DISA for remote Door Phone monitoring:

1. Outside user calls DISA telephone line.
2. Superkey electronic telephone system answers and provides Superkey intercom dial tone.
3. Outside user dials 88 for door phone 1 or 89 for door phone 2 + Monitor password. If correct, the system will connect the DISA caller to the called door phone. NOTE that this connection is a two way talk path.

See also CO Line programming on page 40 of this document.

See also Passwords on page 128 of this document. DISA Password. Default is 3472 (DISA on keypad).

Monitor password is 02-04.

See also DISA Special Function Access, page 66 of this document.

See also Appendix A - DISA Detailed Description in this document.

Direct Station Selection (DSS)

Description

Superkey electronic telephone systems and the multi line telephones are based on fully programmable keys. In most applications, some or all of the field of push buttons will be utilized as direct station selection buttons. Due to the fully programmable nature of Superkey electronic telephones, otherwise unused push buttons on the telephone sets may also be used as DSS keys.

Direct Station Selection (DSS) permits telephone sets to directly call selected stations by a single keystroke. In addition, a visual indicator is provided as to the status of selected telephone stations through the illumination of the push buttons to indicate off hook or do-not-disturb conditions.

Pressing a DSS key replaces the need to manually dial a station number in the system.

Conditions

1. DSS and busy indication are only provided to Superkey electronic telephone sets with buttons programmed as DSS keys.
2. An off hook station or a station in Do Not Disturb is indicated by illumination of the corresponding pushbutton.
3. If a station is transferring a call, pressing a DSS button automatically places the initial call on hold.

Programming

Form 22-[group]-[key] allows programming of each of the DSS keys on a Superkey electronic telephone set. The system supports up to eight groups of keys. Any group of keys may be assigned to any number of telephone sets.

Each key may be programmed as a CO line, a Direct Station Selection key, or a special function key. The valid settings are listed below:

Entry	Description	Entry	Description
CO:XX	CO Lines 01-08	FN:23	Paging All Internal
XXXX	Any valid Station Number	FN:24	Paging All External
FN:00	Non-Operational	FN:25	Paging Zone 1
FN:01	Account Code	FN:26	Paging Zone 2
FN:02	Answer Paging	FN:27	Paging Zone 3
FN:03	Auto Answer/MIC	FN:28	Paging Zone 4
FN:04	Call Forward	FN:29	Paging Zone 5
FN:05	Call Park	FN:30	Paging Zone 6
FN:06	Check Out	FN:31	Paging Zone 7
FN:07	Check In	FN:32	Paging Zone 8
FN:08	Conference	FN:33	Pickup
FN:09	Day/Night Service	FN:34	Program
FN:10	Directory	FN:35	Pulse/Tone
FN:11	DND & Conference	FN:36	Redial
FN:12	Flash	FN:37	Reminder
FN:13	HOLD	FN:38	Save
FN:14	Lock/Unlock	FN:39	Speaker On/Off
FN:15	MSG Wait & Pulse/Tone	FN:40	Speed Dial
FN:16	Mic & Auto Answer	FN:41	Split/Swap
FN:17	Monitor	FN:42	Transfer
FN:18	O.H.V.A.	FN:43	Volume Up
FN:19	Open Door/Door Status 1	FN:44	Volume Down
FN:20	Open Door/Door Status 2	FN:45	Privacy Release
FN:21	Paging	FN:46	Headset Operation
FN:22	Paging All	FN:47	System Speed Dial Directory

Note: The following keys FN:59 through FN:66 apply only to the SK-200.

FN:59	Loop Key Trunk Group 1	FN:63	Loop Key Trunk Group 5
FN:60	Loop Key Trunk Group 2	FN:64	Loop Key Trunk Group 6
FN:61	Loop Key Trunk Group 3	FN:65	Loop Key Trunk Group 7
FN:62	Loop Key Trunk Group 4	FN:66	Loop Key Trunk Group 8

A station is given membership in one of the eight groups on Form 28-[station]-02. Valid entries are any programmed key group number (1-8).

Operation

Direct Station Selection:

Press the programmed pushbutton assigned to a station. The station rings or returns busy, depending on its status.

Operation of keys other than station DSS keys, see Direct CO Line Select and Feature Function Keys.

DISA Queue Immediate Answer

Description

DISA can be implemented for a variety of reasons within a system. In some applications it will be used with a Voice Service Unit (VSU) as an automated attendant for outside callers. In others, it may be used as a "back door" for employees of a company to allow them to dial into the system and get to their desired location without operator intervention. Depending on the particular application, DISA Queue Immediate Answer will provide proper control over the call.

In applications where the system is being used as an automated attendant, it is desirable to not answer an outside call until there is a recording available to play for the outside caller. For applications where callers are not dependant upon the Voice Service Unit for dialing instructions, it is desirable to answer the call as soon as possible. DISA Queue Immediate Answer provides control of the answering protocol of the system to suit the customer's individual needs.

Conditions

DISA must be operative on the system.

Programming

See also Direct Inward System Access, page 58 of this document.

See also Voice Service Unit, page 176 of this document.

Form 01-11-04, DISA Queue Immediate Answer provides control to determine if the caller will be queued until the VSU is available (used for most automated attendant applications) or if the caller will be answered as soon as the DISA delay answer time expires (used for most applications where a VSU is not installed). If queuing is not selected and a VSU is present, if the DISA delay timer expires and the VSU is not available, the outside caller will be connected to system dial tone. Valid settings are:

DISA Queue Immediate Answer, Form 01-11-04
0=Immediate Answer (User will hear dial tone if VSU is not available or absent).
1=Queue call until VSU is available

Operation

Operation is Automatic.

DISA Single Digit Dialing

Description

DISA Single Digit Dialing is an option that allows incoming callers to dial single digits to reach selected stations within the system or selected hunt groups. This reduces the need for complicated dialing instructions when a Voice Service Unit is used. Single Digit dialing allows selection of 5 individual stations that may be dialed by entering the digits [1] through [5]. Users who are familiar with the system may bypass the single digit dialing mode and dial other stations by dialing [6] + the station number of the station they wish to call. For more information, also see Single Digit Dialing, page 146 of this document.

The SK-200 provides the capability to utilize more than one single digit dialing group within the system. Individual SDD groups may be assigned to a CO trunk group through the use of more than one Voice Service Unit. For more information on this subject, please see Appendix A - DISA Detailed Explanation in this document. See also Direct Inward System Access, page 58 of this document.

Conditions

DISA Single Digit Dialing must be programmed on the system.

Programming

The CO line must be programmed for DISA operation. For more information on programming DISA, see Direct Inward System Access (DISA) on page 58 of this document.

SK-824

Form 01-11-08 determines if DISA Single Digit Dialing is enabled on the system and if enabled, which Single Digit Dialing Table will be used when a DISA call is active. Valid settings for the **SK-824** are listed in the following table:

Single Digit Dialing (DISA) Form 01-11-08		0=Disabled	1=Group 1
2=Group 2	3=Group 3	4=Group 4	5=Group 5
6=Group 6	7=Group 7	8=Group 8	

SK-200

Form 01-11-08 determines if DISA Single Digit Dialing is enabled on the system. If it is enabled, the Single Digit Group to which a CO trunk group is assigned is controlled by Form 14-VSU-09.

Form 07 Assigns the stations that will be called under Single Digit Dialing. There are eight groups within the system. The one(s) used for DISA are assigned on Form 01-11-08 as defined above. For more information on Form 07 and Single Digit Dialing, see page 146 of this document.

Operation

When an incoming DISA call is answered by the system the VSU greeting message (if equipped) will be played. If the DISA line is programmed for Single Digit Dialing, the system will route the incoming caller when the first digit is entered by the caller. For more information on call flow, please see Appendix A of this document for flow charts that depict call flow under DISA.

DISA Special Function Access

Description

DISA (Direct Inward System Access) Special functions provide control over the special dialing characteristics normally reserved for DISA use. Available options control the special dialing capabilities of the DTMF digits [8], [9], [*], and [#]. These digits are normally used for specific DISA purposes within the Superkey system. It may be required to utilize these digits in conjunction with other peripheral equipment. In such conditions, the special operation of the digits may cause conflict with other peripheral equipment. This allows the special functions to be selectively disabled in system programming.

Conditions

DISA must be operative on the system. For more information on DISA, see page 58 of this document.

Programming

Form 01-11-05 provides the means to control the use of special digits. Available settings are:

0=Allow users to access DISA special functions by pressing [8],[9],[*],[#].

This is the normal setting as described on page 58, Direct Inward System Access in this document and is the default setting.

1=Allow users to access DISA special functions by pressing [*],[#].

Disallow users to access DISA special functions by pressing [8],[9].

(This setting allows DISA callers the ability to access new dial tone [#] and to allow immediate disconnect of DISA calling [*]). Outside CO access is prohibited on this setting, other than CO access through the use of Speed Calling [#]+[Toll Password]+ Speed Call Entry)

2=Allow users to access the DISA special functions by pressing [8],[9].

Disallow users to access the DISA special functions by pressing [*],[#].

(This setting allows access to outside CO lines, but does not recognize [*] and [#] as special characters. This setting may be beneficial if callers to the system access voice mail via DISA, where [*] or [#] may be control codes for voice mail equipment. A setting of 0 or 1 will cause a disconnect from the DISA circuit when the [*] digit is dialed).

3=Disallow users to access the DISA special functions by pressing [8],[9],[*],[#].

(This setting will only allow DISA callers to utilize inward dialing capabilities to access stations within the system. This provides an extra measure of security to prevent possible toll fraud. The digits [8], [9], [*] and [#] will act only within the internal dialing plan of the system and will not provide users with the ability to access any outside lines. They will also have no supervisory control of their own call, other than DISA to station dialing).

Operation

Operation is dependent upon the programming listed above.

Distinctive Ringing

Description

Through the use of separate, identifiable ringing patterns, station users can determine the type of call ringing at their telephone set. Separate ringing cadences are provided for Intercom calls, CO Line Incoming calls and HOLD recall.

Conditions

The ringing cadence is determined by the type of call.

Programming

None

Operation

None

Do Not Disturb

Description

Do Not Disturb makes a telephone unavailable for intercom calls and incoming CO telephone calls.

Conditions

1. In order to utilize Do Not Disturb, a Superkey electronic set must have the [DND] pushbutton programmed on the telephone set **OR** have the ability to activate advisory messages.
2. A station with Do Not disturb invoked will appear on all busy lamp indications as if it is off hook.
3. While a station user is in Do Not Disturb, the [DND] button on the telephone set will flash. (Superkey electronic telephone sets).
4. Any intercom call to a Do Not Disturb station will receive a different cadence from a normal busy cadence. This is in order to advise the calling station that the called station is not actually busy, but has Do Not Disturb invoked. Superkey electronic telephone sets equipped with LCD display will also receive a message on the LCD indicating that the called station is in Do Not Disturb mode.
5. If a station is programmed as a ringing station for Door Phones, the station will not ring when the door phone button is activated.

Programming

Do Not Disturb must be programmed to appear as a function pushbutton on the telephone or the Superkey electronic set must have the capability to activate system advisory messages. See Flexible Key Group Assignment, page 91 of this document.

Operation

From a Superkey electronic telephone set:

1. Press [DND] to invoke Do Not Disturb. The [DND] pushbutton will light.
2. Press [DND] to remove Do Not Disturb. The [DND] pushbutton will extinguish.

If a Superkey electronic telephone set has access to advisory messages, Do Not Disturb may be activated by selecting message 5, "Do Not Disturb." It may be cancelled by de-activating message 5. See Advisory Messages, page 5 of this document for information.

From a single line telephone:

To activate:

1. Lift Handset.
2. Dial [7],[0],[5],[1] to activate Do Not Disturb.
3. Hang up telephone.

To cancel:

1. Lift Handset.
2. Dial [7],[0],[5],[2] to cancel Do Not Disturb.
3. Hang up Telephone.

Do Not Disturb Override

Description

This feature allows a station to ring a telephone set that is in the Do Not Disturb mode.

Conditions

The station performing the override must have the capability programmed in its Class Of Service.

Programming

Form 24-[station]-01, Override Level. This parameter determines the override capabilities of a station. A Station with an assigned number can override a station with an equal or lower override level number.

Operation

1. A user calls a station with Do Not Disturb invoked. The user hears Do Not Disturb tone cadence (special busy).
2. The user dials [0].
3. If the system is programmed for Voice announce intercom, the station in Do Not Disturb will hear a short tone and then the user will be able to make a voice announcement. If the system is programmed for handset to handset intercom, the station in Do Not Disturb will ring.

Note: This feature is controlled by the same parameters as Barge-In.

Door Phone Interface

Description

The door phone interface allows connection of a door phone unit to the Superkey electronic telephone system. Each Superkey Key Service Unit is supplied with two (2) door phone interfaces as standard equipment.

Conditions

Requires connection to door phone(s) to become operable.

Programming

Form 03-[Door phone #]-[station(s)], Door Ring Assignment must be programmed to select the stations that will ring when the door phone pushbutton is pressed. Each door phone can have up to eight stations assigned to ring when the door phone pushbutton is pressed.

The length of the ringing signal for Door Phone notification is programmable. Form 01-11-07 provides control of the length of time. Default is 10 seconds. Valid settings are:

Door Phone Ring Time - Form (01-11-07)		0=5 seconds	1=10 seconds
2=15 seconds	3=20 seconds	3=25 seconds	5=30 seconds
6=35 seconds	7=40 seconds	8=45 seconds	9=50 seconds

If it is necessary to control a latch release or other switching device in conjunction with a door phone, Form 08-[Relay#], Relay Assignment must be set to 02 to be associated with door phone #1 or 03 to be associated with door phone #2.

It may also be desirable in some applications to program a dedicated button to control the operation of door phones and latching relays. Form 22 provides this ability. See also Direct Station Selection, page 62 of this document and DSS Console, page 75 of this document.

SK-200 The SK-200 provides the capability to program the stations that are allowed to activate a door strike release. This option is controlled by the setting on Form 27-[STN]-06. A setting of 0 will disallow the ability to activate a door strike relay. A setting of 1 will allow a station to activate a door strike relay. If door strike relays are required on SK-200, Item SK-RELAY is required and provides 3 relay contacts. One SK-RELAY can be configured per system cabinet.

Operation

See Door Phone, Page 71 of this document.

Door Phone

Description

Optional device that connects to Superkey electronic telephone system. Provides the ability to call pre-programmed stations. The door phone functions as a doorbell and intercom. Allows station users to carry on a conversation with anyone located near the door phone. Common uses include installations on shipping docks and security doors.

Conditions

Two (2) door phones are supported and may be installed per Superkey electronic telephone system. Up to eight (8) stations can be programmed to ring in response to each door phone button. All telephones in the system can call door phones.

Programming

Form 03-01-[station(s)], Door Ring Assignment assigns stations to ring (up to eight stations) when door phone #1 button is pressed.

Form 03-02-[stations(s)], Door Ring Assignment assigns stations to ring (up to eight stations) when door phone #2 button is pressed.

SK-200 The SK-200 provides the capability to program the stations that are allowed to activate a door strike release. This option is controlled by the setting on Form 27-[STN]-06. A setting of 0 will disallow the ability to activate a door strike relay. A setting of 1 will allow a station to activate a door strike relay. If door strike relays are required on SK-200, Item SK-RELAY is required and provides 3 relay contacts. One SK-RELAY can be configured per system cabinet.

Operation

To place a call from a door phone.

1. Press door phone button. Pre-programmed stations ring.
2. Ringing stations may answer the door phone by going off hook. Non ringing stations must answer the door phone by dialing 88 for door phone #1 or 89 for door phone #2.
3. Door phone acts as speaker phone for duration of call. Door phone is under control of answering station.

To call door phone from any station.

1. Station user goes off hook or activates speaker phone (if equipped).
2. Station user dials 88 to reach door phone #1 or 89 to reach door phone #2.

See also, Door Phone Controlled Switch, page 72 of this document.

Door Phone Controlled Switch

Description

If required, the Superkey electronic telephone system can be configured to provide control of a door latching device in conjunction with door phones. During conversation with a door phone, a user can dial 0 to activate the door relay. Applications include limited access (secure) doors.

Conditions

Station user must be in conversation with the associated door phone.

Door phone controlled switch must be programmed and associated with a door phone.

Programming

Form 08-[relay] must be programmed to associate a relay with the door phone to be activated. See also, Relay Assignment, page 136 of this document.

Operation

While in conversation with a door phone, press [0]. The associated door phone relay will activate for two seconds. If programmed with a door phone DSS button, a Superkey electronic telephone set can press the door phone button instead of [0].

Superkey electronic sets may have a DSS key programmed as a door phone monitor. If programmed, you may press the door phone button while in conversation with the door phone to activate the door phone relay.

SK-200 The SK-200 provides the capability to program the stations that are allowed to activate a door strike release. This option is controlled by the setting on Form 27-[STN]-06. A setting of 0 will disallow the ability to activate a door strike relay. A setting of 1 will allow a station to activate a door strike relay. If door strike relays are required on SK-200, Item SK-RELAY is required and provides 3 relay contacts. One SK-RELAY can be configured per system cabinet.

Note: Programmed Door Phone DSS buttons do not provide direct calling capability to the Doorphone. They are used only for activation of the door relay and to show that the door phone is in conversation.

DSS Access to Other CO Lines

Description

DSS Access to other lines determines if stations will have the ability to access CO lines that are not specifically assigned to a station through the dial 9 CO line group or the Dial 87 group. This applies only to outgoing access. If this option is enabled, a station may access a CO line that is not assigned to the station's dial 9 CO line group or dial 87 CO line group by pressing the CO line pushbutton on the telephone set.

Incoming access is not controlled by this option.

Conditions

If enabled, a station may access any CO line in the station's dial 9 CO line group by pressing the line key associated with the line. It may also access any line that appears on a line key on the station that is not in the CO line group.

If disabled, a station may access any CO line in the station's dial 9 CO line group by pressing the line key associated with the line. The station may not access a line that appears on the telephone set that is not in the station's dial 9 CO line group.

Programming

DSS Access to other CO lines, Form 01-08-02 controls whether a station may access CO lines positions that are not a member of the station's dial 9 CO line Group for outgoing calls. Valid settings are:

DSS Access to Other CO Lines, (Form 01-08-02)	
0=Access Disabled	1=Access Enabled

Direct Access to other lines can be assigned on a per-station basis. Form 26-STN-08 determines if a station can access other CO trunks besides it's own Dial 9 group. On the SK-824 this is called Dialing Option. The SK-200 calls it Loop Key Assignment. Valid settings are:

Dialing Option (Form 26-STN-08)	
0=Access Disabled	1=Access Enabled

CO Line Group Assignment, Form 44-[group]-[CO] is used to associate individual CO lines with a CO line group. There are eight available groups in the system. Each CO line can be a member of multiple groups. See also, Line Group Assignment, page 106 of this document.

Station Dial 9 CO Line Group, Form 28 -[station]-04 determines which CO Line group is assigned to an individual station. The entry in this field is one of the valid programmed groups from Form 44 -[group]-[CO]. A station will have access to every CO line programmed in the corresponding group from Form 44. See also, Line Group Assignment, page 106 of this document.

Form 01-04-02 , Dial 9 CO Line Group Access must be enabled in order for stations to be able to dial [9] to directly access the line group programmed on Form 28 -[station]-04. If this option is not enabled, stations will be able to access CO lines within their own dial 9 group by direct pushbutton (DSS) access or by direct CO line access code. The status of this option does not affect the operation of DSS Access to other CO lines, Form 01-08-02 .

Operation

If enabled, a station will have outgoing access to any CO lines that appear on that telephone set. A station user will be able to access any appearing line by pressing the line key (DSS) for that line.

SK-824 If enabled, a station will be able to access outgoing lines by dialing 80+ the line number (from 1 to 8). The station will be connected to the CO line if it is enabled, whether it is in that station's dial 9 group or not.

SK-200 If enabled, a station will be able to access outgoing lines by dialing 8+ the two digit line number (from 01 to 40). The station will be connected to the CO line if it is enabled, whether it is in that station's dial 9 group or not.

If disabled, a station user will have outgoing access only to those CO lines that are contained in the station user's dial 9 CO line group.

DSS Console

Description

The Direct Station Selection (DSS) console is an optional adjunct for a system station that provides a selection of buttons to show status of stations and outside lines. The DSS can also be programmed to support special function keys on the system for features that are unique to the system attendant.

The system attendant will be able to utilize the DSS console in the same manner as the DSS keys that are part of the Superkey electronic telephone set. The DSS does not have to be assigned to a station programmed as a system operator.

Conditions

The station associated with the DSS must be a Superkey electronic telephone set.

SK-824 There is only one DSS console allowed per system.

SK-200 Eight DSS consoles may be installed on a SK-200.

Programming

Form 23 -GP-[key#], Flexible DSS Key Assignment. assigns specific functions for use by the DSS console. The sixty keys may be programmed in combinations of CO lines, stations, or special function keys.

SK-824 There is only one Group on Form 23 of the SK-824.

SK-200 There are eight DSS console Groups available on the SK-200.

Form 29 , Port Specifications is used to assign a DSS console port to a selected extension. Any station in the system may be associated with the DSS console if it is a Superkey electronic telephone set. The system port to which a DSS is connected will show on Form 29-[port]-02 the number 5, which indicates that it is a DSS console. In order to activate the DSS console port, Form 29-[port]-01 must be set to the same station number as the station with which the DSS will be associated.

As an example, if the DSS is to be used with station 11 and the DSS is connected to port 12, Form 29 -12-01 should be entered as 11.

Operation

BLF Operation

The system attendant will be able to glance at the keys to immediately determine the status of any telephone in the system. A lighted BLF/DSS key will indicate a station is in use or Do Not Disturb.

Incoming Call Transfer:

Screened transfer with voice announce:

1. System Attendant answers incoming line.
2. Attendant presses [DSS] button of destination station
3. Attendant announces incoming call.
4. Attendant presses [TSF] key to release call to destination station.

Screened transfer with handset intercom mode.

1. System Attendant answers incoming line.
2. Attendant presses [DSS] button of destination station
3. Attendant waits for destination station to answer.
4. Attendant announces incoming call.
5. Attendant presses [TSF]Transfer key to release call to destination station.

Unscreened transfer:

1. System Attendant answers incoming line.
2. Attendant presses [DSS] button of destination station
3. Attendant presses [TSF] key to release call to destination station.

DTMF Signaling

Description

DTMF (Dual Tone Multi-Frequency) dialing, is the default method of dialing digits. DTMF dialing has the advantage of placing calls more rapidly and more accurately than dial pulse (DP) signaling. Superkey electronic telephone systems are equipped to allow selection of the dialing type to be used for each individual CO or PABX line. In applications where some CO lines are dial pulse and others are DTMF, the system can be programmed to dial the correct type on each line.

In locations where Dial Pulse is the only method of dialing accepted by the CO lines, the Superkey electronic telephone system can dial digits using dial pulse and then change to DTMF signaling for subsequent digits. This is advantageous in any situation where the local CO lines require pulse signaling, but end-to-end signaling is required after the called party answers. Examples of this are remote voice mail, Interactive voice message services, automated banking systems, and alternative long distance carriers. See also Dial Pulse to DTMF conversion, page 55 of this document.

Conditions

DTMF is automatically generated when any Superkey electronic telephone set accesses a CO line that is defined as DTMF signaling on Form 46 -[CO]-02.

DTMF can be generated when a Superkey electronic telephone set is on a line defined as pulse dialing when the [Pulse to Tone] key has been pressed.

Single Line Telephones equipped for DTMF dialing will dial normally on CO lines defined on Form 46 [CO]-02 as DTMF.

Single Line Telephones equipped with Pulse dials will cause the system to perform pulse to tone conversion on CO lines defined as DTMF on Form 46 -[CO]-02.

Note: Single Line Telephones equipped for DTMF dialing that access CO lines programmed on Form 46 -[CO]-02 as Pulse lines will outpulse DTMF on the CO line. Pulse conversion provided by the Superkey electronic telephone system will also be outpulsed on the CO line. It is important that CO lines able to accept DTMF dialing be programmed as DTMF equipped. CO lines with DTMF sensitivity that are programmed for pulse dialing will provide unreliable dialing if used with DTMF single line telephones.

Programming

Form 46 -[CO]-02 must be programmed as [1] for each CO line able to accept DTMF signaling, in order to provide DTMF signaling as the default method of dialing.

Form 01-01-07, DTMF Generation Time must be programmed to provide DTMF tone duration equal to or greater than the minimum time required by the local telephone company Central Office. Valid settings for Form 01-01-07 are listed below:

DTMF Generation Time, Form 01-01-07		0=50 milliseconds	1=66 milliseconds
2=83 milliseconds	3=100 milliseconds	4=115 milliseconds	5=132 milliseconds
6=149 milliseconds	7=165 milliseconds	8=180 milliseconds	9=195 milliseconds

Operation

On CO lines defined as DTMF (Form 46 -[CO]-02), operation is automatic.

On CO lines defined as Pulse (Form 46 -[CO]-02), conversion to DTMF signaling is activated by pressing the Pulse to Tone key from Superkey electronic telephone sets..

See also Dial Pulse to DTMF Conversion on page 55 of this document.
See also Speed Dial on page 151 of this document.

Dual Port Capability

Description

SK-824 On station cards equipped with "hybrid" circuits, both proprietary Superkey electronic telephone sets and single line telephones may be simultaneously connected and co-exist on the same circuit and share the same station extension number. This is advantageous in a location where multiple telephone instruments are necessary, but more than one station extension is not required.

SK-200 The SK-200 provides the capability to assign a single extension number to both a single line telephone circuit and an electronic telephone circuit. The operation is as listed below.

Conditions

In the case of incoming calls, both stations will ring.

Either telephone set can answer the call.

Calls placed on Hold by one station can be picked up by the other station.

Hold recalls will ring both stations.

Only one telephone set can control a call at any given time.

Single Line telephones may go off hook while a Superkey electronic telephone set is in conversation. It will be able to converse with the parties on the line, but it will not be able to take control of the call. If the Superkey electronic telephone set hangs up, the call will be disconnected from both the Superkey set and the single line telephone.

Programming

SK-824 only. Form 26 -[station]-02 notifies the system that the circuit is to be used as a Dual port installation. Valid options are:

Dual Port Capability, (Form 26 -[station]-02)	0=Dual Port Disabled	1=Dual Port Enabled
--	----------------------	---------------------

SK-200 only. The single line telephone circuit that is to be the dual port extension must have its extension number set the same as the co-existing electronic telephone set. This is programmed on Form 29 -CSN-01.

SK-200 only. The single line telephone circuit that is to be the dual port extension must have its type set to a 3 (Single Line Telephone configured as a dual port device) on Form 29 -CSN-02.

Operation

Both telephones operate normally, but only one can control a conversation at any time.

Environment Monitor

Description

Environment Monitor allows a Superkey electronic telephone to monitor the ambient room audio of another Superkey electronic telephone equipped with a speaker phone.

Conditions

In order to invoke an Environment Monitor, the station requesting the monitor must have a higher monitor classification than the station to be monitored.

It is suggested that this function be invoked on stations that are equipped with speaker phone capability.

It is not recommended that Environment Monitor be used on single line telephones.

A telephone set to be used as an Environment Monitor must be idle.

Programming

A station that is to perform monitoring must have Form 24-STN-02 set at a level (1-9) that is higher than the station it is to monitor.

Any station to be monitored must have Form 24-STN-02 set a level (0-8) that is lower than the station that will invoke the monitor.

If a station is expected to use monitor extensively, such as service observation locations, the station should have a [MONITOR] key programmed. See Flexible Key Group Assignment, page 91 of this document.

Operation

1. Dial [7],[7],[4] or press [MONITOR]. Dial the station number to be monitored.
2. If the station is idle, you will be connected to the station. The monitored station's Microphone will be activated.
3. If the station goes off hook for any reason, the monitor will be terminated

Note: Environmental monitor is a one way audio path. However, you may convert the monitor into a hands free call by pressing your [MIC] key. You may then speak with the monitored location using the monitored location's speaker phone function.

Executive Override (Barge-In)

Description

This feature allows a station user to intrude into the conversation of another station and/or CO line.

Conditions

In order for a station to override a station in conversation with a CO line, it must have the same or higher override capability.

To override an intercom call, the overriding station must have an override level that is equal to or greater than BOTH stations in the conversation.

Programming

Form 24 -[station]-01, Override Level. This parameter determines the override capabilities of a station. A Station with an assigned number can override a station with the same or lower override level number.

Operation

1. A station user dials a busy extension (or presses [DSS] key) or CO line key.
2. Busy tone is returned.
3. To override, press [0].
4. If the override level of the station initiating the barge-in is the same or higher than both the station being overridden and the other conversing station, the barge-in is allowed (if both parties are internal).
5. An intrusion tone is sounded to notify the conversing parties of a pending override. If equipped the overridden party will show an indication that it is being overridden.
6. The overriding party is allowed into the conversation.

External Call Forwarding

Description

External Call Forwarding (ECF) allows an incoming CO line to be re-directed to another location through the use of another CO line. When a CO line senses incoming ringing, it answers the call and accesses another CO line. It then chooses a pre-programmed system speed dial number, dials the call and connects the two CO lines together.

Conditions

Externally Forwarded calls are subject to a call duration limit of 6 minutes. This limit may be extended by dialing any numeric DTMF digit when the expiration tone is heard (approximately 10 seconds before disconnect). This will extend the allowed duration by an additional 6 minutes.

A CO line must be available in order for an external call forward to occur.

The digit [*] can be dialed to immediately disconnect the call.

Programming

If a Voice Service Unit is present in the system, you may choose to program a message that will be played while a call is being externally forwarded. This informs the outside caller that the call is being re-routed. If the message is desired, Form 14 must have one channel programmed as a call forwarding message. For more information on this, see Voice Service Unit, page 176 of this document.

Form 46 -[CO]-03, External Call Forward Destination. In order for External Call Forwarding to operate, a speed dial number must be selected for ECF to utilize in the process of forwarding. Valid settings for this option are listed below:

ECF Destination Form 46 -[CO]-03	
0=No External Forwarding Applies	
1=ECF using Speed Dial 101	2=ECF using Speed Dial 102
3=ECF using Speed Dial 103	4=ECF using Speed Dial 104
5=ECF using Speed Dial 105	6=ECF using Speed Dial 106
7=ECF using Speed Dial 107	8=ECF using Speed Dial 108

Form 46 -[CO]-04, CO Line Specifications. ECF must be enabled during the time period to be utilized. ECF may be enabled during day service only, night service only, both day and night service, or ECF may be disabled at all times. The table below shows the valid settings and the resulting status for the CO line:

46-[CO]-04	Day Status	Night Status
0	Disabled	Disabled
1	Disabled	DISA Enabled
2	DISA Enabled	Disabled
3	DISA Enabled	DISA Enabled
4	Disable	ECF Enabled
5	ECF Enabled	Disabled
6	ECF Enabled	ECF Enabled
7	DISA Enabled	ECF Enabled
8	ECF Enabled	DISA Enabled

Form 01-01-04 Delayed DISA Answer Timer affects the operation of CO lines that are configured for either DISA operation **OR** External Call Forwarding. The system will not commence operation of External Call Forwarding until 01-01-04 expires. Valid settings for 01-01-04 are as follows:

01-01-04 - Delayed DISA Answer Time		0=1 second	1=3 seconds
2=5 seconds	3=7 seconds	4=9 seconds	5=16 seconds
6=31 seconds	7=61 seconds	8=121 seconds	9=255 seconds

Operation

Operation is automatic.

External Music Source Interface

Description

The external music source interface allows installation and maintenance personnel to connect audio devices to the telephone system for the purposes of providing music-on-hold and/or background music on electronic multi-line telephone sets. There are two independent music sources that can be used simultaneously on the Superkey electronic telephone system. The system allows selection of one source for Background Music and either source may be selected for Music-On-Hold.

Conditions

Music source(s) must have some form of volume control to adjust the level of the signal to the Superkey electronic telephone system. Input source voltage cannot exceed 1 Volt.

Programming

SK-824 Selection of input music sources is found on form 01-08-08. The options are:

01-08-08	Background Music Source	Music On Hold Source
00	Internal Source	Internal Source
01	External Source #2	Internal Source
02	Internal Source	External Source #1
03	External Source #2	External Source #1
04	Internal Source	External Source #2
05	External Source #2	External Source #2

SK-200 No programming is required. Selection of Music On Hold and Background Music is via jumper connectors on the SK-CPU/2 printed circuit board. Please see the SK-200 Installation and Maintenance Manual for more information.

Operation

None

External Paging Interface

Description

The External Paging Interface provides a method of connecting the Superkey electronic telephone system to a Public Address system. Access is gained to the paging interface via the use of a dial up code or by pressing a programmed external page button on telephone sets programmed with an external page button.

Conditions

The system supports one external paging output per system. Paging output is via two wire interface. Electrical specifications 600Ω impedance output.

Programming

More than one zone of external paging may be provided if available relays on the CO line circuit board are utilized for switching purposes along with externally provided equipment. There is one relay per CO line card. If it is required that these relays be utilized for paging purposes, Form 08-[relay#] must be assigned one of the valid external paging functions. Valid paging functions for relays are listed in the table below:

SK-824 Relay Assignment (08-[relay#])	10=All Zones	11=Zone 1	12=Zone 2
---	--------------	-----------	-----------

SK-200 Relay Assignment (08-[cabinet]-[relay#])	10=All Zones	11=Zone 1	12=Zone 2
---	--------------	-----------	-----------

One Relay box can be installed per cabinet on the SK-200.

Note: The functions listed above are not the only functions available for relay programming. Only those pertinent to External paging are shown.

Operation

See Paging, Page 126 of this document.

Fax Monitor

Description

FAX Monitor provides the ability for a FAX machine to share a telephone line with the Superkey electronic telephone system. When the FAX machine is idle, the telephone line may be used by any stations that normally have access. When the FAX machine is on a call, the telephone system will not allow access by other stations to the shared line. Any key telephones with a line appearance of a FAX monitor will show the line as busy via LED display, when the FAX machine is on a call.

Conditions

SK-200 FAX monitor is **NOT AVAILABLE** for the SK-200.

Two (2) FAX monitors per system are allowed. One FAX monitor circuit resides on each CO line card. The actual number of FAX monitors will be determined by the number of CO line cards installed in the system.

The FAX monitor line must be the fourth position on a CO line card. Line four (04) and Line eight (08) are the two lines equipped for FAX monitor capability.

A FAX monitor in use by a FAX machine cannot be accessed by a Superkey electronic telephone set.

If a FAX machine is to answer all incoming calls on the FAX Monitor line, that line can be configured to provide no incoming ringing on the Superkey electronic telephone system.

Programming

None.

Note: FAX monitor has no effect on incoming ringing assignments in Form 42 or Form 43. FAX Monitor Lines programmed to ring stations on these forms will not affect the operation of FAX monitor. If no ringing is desired on a FAX Monitor Line, Form 42 and Form 43 should be programmed so that no stations are assigned to ring.

Operation

Incoming call (System ringing programmed):

1. Incoming call rings into system.
2. Call will ring at FAX machine and Superkey electronic telephone system. First device (telephone or FAX machine) to answer the call will be connected to the outside line. Line busy indication will be given to all other stations in the system.
3. While a telephone station is using the CO line programmed as FAX monitor, the FAX machine will be unable to make outgoing calls.

Incoming call (System ringing disabled):

1. Incoming call rings into system.
2. Call will ring at FAX machine and will show incoming visual indication on Superkey electronic telephone sets.
3. Superkey electronic telephone set may answer call prior to answer by FAX machine. If Superkey set does not answer the call, FAX machine will answer the call.
4. When FAX machine answers the call, the line will indicate busy condition at all other telephone sets.
5. Line will be unavailable to any station until the FAX machine hangs up.

Outgoing call:

1. If the FAX machine attempts to place a FAX call while line is idle, the FAX machine will gain access to the outside line.
2. A busy visual indication will be given to all Superkey electronic telephone sets when the FAX machine is on line.
3. Line will be unavailable to all telephones in Superkey electronic telephone system while FAX machine is on line.
4. If a FAX monitor line is in use by a telephone set, the line will not be available to the FAX machine.

Feature Selection from Menu

Description

LCD equipped Superkey electronic telephone sets may utilize certain features without a requirement for dedicated keys to be programmed. Within each Superkey system is a menu structure that allows an LCD station to program features as they are displayed on the features menu.

Conditions

This function applies only to LCD equipped sets.

Programming

None.

Operation

1. Press [PGM].
2. Press [0].
3. The features available in this menu are displayed on the LCD display. Each available feature is displayed for 2.5 seconds.

The display goes blank for approximately 500 milliseconds and the next feature is displayed for 2.5 seconds. This sequence repeats until all accessible features have been displayed.

4. At any time during the display, the [*] key may be pressed to scroll backward through the feature list. The [#] key may be pressed to scroll forward through the feature list. When the desired feature is displayed, a station user may press [0] to select the feature.
5. When [0] is pressed, programming or operation of the feature is as described within this document for the selected feature.

6. The list of available features in the menu:

Valid Codes	Feature Description	Reference
[PGM] [FWD]/[1]	Call Forwarding	Call Forwarding, page 24.
[PGM] [4]	Forced Account Code	Forced Account Code, page 94.
[PGM] [Vol]/[6]	Adjust Volume	
[PGM] [8] [K21-28]	Function Key (Macro Keys)	
[PGM] [9]	Station (Un)lock	Station Lock, page 154.
[PGM] [#]	Temporary Unlock	Station Lock, page 154.
[PGM] [MW/PT]	Set/Del Message (Advisory Messages)	Advisory Messages, page 5.
[PGM] [Reminder]	User Reminder	Timed Reminder - Station, page 165
[PGM] [SPD]	Speed Dialing	Speed Dial (Personal), page 149. Speed Dial (System), page 151.
[PGM] [ACCT]	Release Toll†	Password, page 128.
[7] [7] [1]	Prime Line Select‡	Prime Line Select, page 134.
[Reminder] [STN]	Set Wake Up Call	Automatic Wake Up, page 15.
[Reminder] [*]	System Reminder	System Reminder, page 161.
[PGM] [Dayserv]	Night Trf Mode	Night Service, page 118.
[PGM] [HOLD]	Set Date/Time	Date and Time Setting, page 47.

† Release Toll is not accessible from this menu. It is only available by pressing [PGM] [ACCT] and entering the system master toll pass code.

‡ Prime Line Select is not available from this menu. It may be activated and deactivated by pressing [7][7][1] from the idle telephone mode. It is listed in the menu only for reference.

Flash To CO Line

Description

Flash allows a Superkey electronic telephone set user or a Single Line Telephone user to temporarily disconnect (open loop) from a CO line. Depending on the programmable duration of the disconnect period, the timer can provide new outside dial tone on conventional CO lines or special functions on systems connected behind PBX systems or connected to special telephone company circuits (i.e. Centrex).

Conditions

1. Flash time is programmable from 60 milliseconds to 1600 milliseconds (1.6 seconds).
2. Flash functioning can be stored as part of a speed dial number.
3. Depending on your type of CO line, you will either receive Centrex (or PABX) dial tone or new call dial tone from your telephone company central office.

Programming

Form 01-02-05 , Flash Timer must be set to the proper time to be compatible with the Central Office or PABX to which it is connected. Valid settings are listed in the table below:

Flash Timer 01-02-05 (0-9)		0=80 milliseconds	1=120 milliseconds
2=160 milliseconds	3=440 milliseconds	4=640 milliseconds	5=840 milliseconds
6=1040 milliseconds	7=1240 milliseconds	8=1440 milliseconds	9=1640 milliseconds

Operation

Superkey Electronic Telephone Set:

While on a call, press programmed [TSF] key. New dial tone will be returned.

Single Line Telephone:

1. While on a call, press the hookswitch. Release the hookswitch.
2. Interrupted dial tone will be heard. Dial 800. The CO line will be flashed and you will be returned to the CO line.

Flexible CO Line Ring Assignment

Description

The Superkey electronic telephone system allows each incoming trunk to provide flexible ringing at up to sixteen individual telephone sets. This flexibility allows departmental lines to ring directly to the department required. Calls to a general number can alert the attendant and possibly other programmed stations. Calls to a separately published number can be directed to ring only in one department, if required. Stations in other departments or locations need not be alerted to incoming calls not requiring their attention.

Conditions

Flexible CO Line Ring Assignment provides separate ringing assignments to be made for Day Service and for Night Service.

Ringing assignments can be set up to ring in a CIRCULAR, LINEAR, COMMON AUDIBLE or HUNT.

Programming

Form 42 -[CO line], Day Ringing Assignment provides the capability to program up to 16 stations to ring for each incoming CO line. This form controls ringing during the day service interval of operation.

Form 43-[CO line], Night Ringing Assignment provides the capability to program up to 16 stations to ring for each incoming CO line. This form controls ringing during the night service interval of operation.

Form 46-[CO line]-07 Determines the type of ringing pattern to use on each trunk during day service. The valid options are listed in the table below:

Day Service CO Line Ring Type Assignment Form 46-[CO line]-07			
0=Common Audible	1=Linear	2=Circular	3=Hunt

Form 46-[CO line]-08 Determines the type of ringing pattern to use on each trunk during night service. The valid options are listed in the table below:

Night Service CO Line Ring Type Assignment Form 46-[CO line]-08			
0=Common Audible	1=Linear	2=Circular	3=Hunt

Operation

None

Flexible DSS Key Group Assignment

Description

Flexible DSS Key Group Assignment, Form 23 -[Group]-[key] on the Superkey electronic telephone System provides the ability to program the 60 keys available on a Superkey DSS console to suit the individual user.

Like Flexible Key Group Assignment, listed on page 91 of this document, any CO line position, station position or function key can be programmed on any pushbutton.

Conditions

SK-824 Only one DSS console may be installed on a Superkey **SK-824** system. There is one group on the **SK-824**.

SK-200 Eight DSS consoles may be installed on a Superkey **SK-200** system. There are eight groups on the **SK-200**.

Programming

Flexible DSS key Group Assignment, Form 23-[Group]-[key] has one available entry for each key on the console. The valid parameters are listed below:

Entry	Description	Entry	Description
CO:XX	CO Lines 01-08	FN:23	Paging All Internal
XXXX	Any valid Station Number	FN:24	Paging All External
FN:00	Non-Operational	FN:25	Paging Zone 1
FN:01	Account Code	FN:26	Paging Zone 2
FN:02	Answer Paging	FN:27	Paging Zone 3
FN:03	Auto Answer/MIC	FN:28	Paging Zone 4
FN:04	Call Forward	FN:29	Paging Zone 5
FN:05	Call Park	FN:30	Paging Zone 6
FN:06	Check Out	FN:31	Paging Zone 7
FN:07	Check In	FN:32	Paging Zone 8
FN:08	Conference	FN:33	Pickup
FN:09	Day/Night Service	FN:34	Program
FN:10	Directory	FN:35	Pulse/Tone
FN:11	DND & Conference	FN:36	Redial
FN:12	Flash	FN:37	Reminder
FN:13	HOLD	FN:38	Save
FN:14	Lock/Unlock	FN:39	Speaker On/Off
FN:15	Message Waiting	FN:40	Speed Dial
FN:16	MIC & Auto Answer	FN:41	Split/Swap
FN:17	Monitor	FN:42	Transfer
FN:18	O.H.V.A.	FN:43	Volume Up
FN:19	Open Door/Door Status 1	FN:44	Volume Down
FN:20	Open Door/Door Status 2	FN:45	Privacy Release
FN:21	Paging	FN:46	Headset Operation
FN:22	Paging All	FN:47	System Speed Directory

Note: Functions 59-66 are outlined elsewhere in this documentation. These functions **ARE NOT AVAILABLE** on the DSS of the SK-824 or the SK-200. They are also **NOT AVAILABLE** on the SK-824.

Operation

The push buttons of a DSS console work in conjunction with an associated telephone. The keys work in the same manner as do the DSS keys on a Superkey electronic telephone set. Press a DSS key. The programmed function will occur.

Flexible Key Group Assignment

Description

Flexible Key Group Assignments allow the definition of up to eight different key layouts on Superkey electronic telephone sets. Due to the fact that all function keys (other than the numeric keypad) are programmable on the telephone sets, each related group of telephones (up to eight groups) has its own unique key layouts.

Conditions

Flexible Key Groups are only applicable to Superkey electronic telephone sets. Single line telephones are not subject to Flexible Key Group Assignment.

Programming

Flexible Key Group Assignment, Form 22-[group]-[key] provides the ability to place access to CO lines, intercom stations, speed dial numbers, and selected system functions according to a pattern. Up to eight patterns may be defined for use in the system. For all CO lines and intercom stations, the associated LED will show the status of the station or CO line. Please refer to the programming forms for detailed descriptions on programming of Flexible Key Assignments.

Each key may be programmed as a CO line, a Direct Station Selection key, or a special function key. The valid settings are listed below:

Entry	Description	Entry	Description
CO:XX	CO Lines 01-08	FN:22	Paging All
XXXX	Any valid Station Number	FN:23	Paging All Internal
FN:00	Non-Operational	FN:24	Paging All External
FN:01	Account Code	FN:25	Paging Zone 1
FN:02	Answer Paging	FN:26	Paging Zone 2
FN:03	Auto Answer/MIC	FN:27	Paging Zone 3
FN:04	Call Forward	FN:28	Paging Zone 4
FN:05	Call Park	FN:29	Paging Zone 5
FN:06	Check Out	FN:30	Paging Zone 6
FN:07	Check In	FN:31	Paging Zone 7
FN:08	Conference	FN:32	Paging Zone 8
FN:09	Day/Night Service	FN:33	Pickup
FN:10	Directory	FN:34	Program
FN:11	DND & Conference	FN:35	Pulse/Tone
FN:12	Flash	FN:36	Redial
FN:13	HOLD	FN:37	Reminder
FN:14	Lock/Unlock	FN:38	Save
FN:15	Message Waiting	FN:39	Speaker On/Off
FN:16	MIC & Auto Answer	FN:40	Speed Dial
FN:17	Monitor	FN:41	Split/Swap
FN:18	O.H.V.A.	FN:42	Transfer
FN:19	Open Door/Door Status 1	FN:43	Volume Up
FN:20	Open Door/Door Status 2	FN:44	Volume Down
FN:21	Paging	FN:45	Privacy Release

Entry	Description	Entry	Description
FN:46	Headset Operation	FN:47	System Speed Directory

SK-200 On the SK-200, the following keys are also available. Please note that these keys may only be assigned on the first eight keys of any Flexible Key Group. These keys cannot be assigned to any DSS consoles and cannot be programmed on Form 23 .

Entry	Description	Entry	Description
FN:59	Loop Key Trunk Group 1	FN:63	Loop Key Trunk Group 5
FN:60	Loop Key Trunk Group 2	FN:64	Loop Key Trunk Group 6
FN:61	Loop Key Trunk Group 3	FN:65	Loop Key Trunk Group 7
FN:62	Loop Key Trunk Group 4	FN:66	Loop Key Trunk Group 8

Operation

Press the selected DSS key. The programmed action will occur.

Flexible Ringing Assignment

Description

Flexible Ring Assignment allows assignment of the ringing pattern used on incoming calls. There are four variants of the ringing pattern.

- | | | |
|----|----------------|---|
| 1. | COMMON AUDIBLE | Rings all stations in an assigned group. |
| 2. | LINEAR. | Will ring the first available station in an assigned group. |
| 3. | CIRCULAR | Rings the next available station in an assigned group. |
| 4. | HUNT | Timed add-on ringing. |

COMMON AUDIBLE causes all telephone sets programmed on Form 42 (if the system is in Day Service) or Form 43 (if the system is in Night Service) to ring whenever a call is presented to the CO line.

LINEAR ringing causes the first programmed idle answering position to ring. This provides the capability to have a main attendant with a hierarchy of backup answering stations.

CIRCULAR Ringing Assignment is used to provide a "round robin" method of call assignment. Using Circular ringing causes calls to look for the next available station as programmed on Form 42 or Form 43 from the last station rung.

HUNT causes calls to be added from station to station on a timed basis. If the first station to be rung is busy or does not answer, the system will add on the next station in the programmed group when the Hunt timer expires. This procedure will continue until the call is answered, or the call is abandoned. The Hunt Timer can be found in Form 01-08-01 .

Conditions

Ring type can be individually programmed per trunk and has separate capabilities for Day Service and Night Service. See Flexible CO Line Ring Assignment, Page 88 of this document.

Programming

See Flexible CO Line Ring Assignment, Page 42 of this document.

Operation

None.

Forced Account Code

Description

The use of forced account codes allows a station user to temporarily bypass the toll restrictions that are normally in effect on a telephone station. If a Forced Account Code is assigned to a station during system programming, it becomes the only code capable of bypassing that station's default toll restriction.

Conditions

1. **SK-824** There are up to 31 Forced Account Codes and 48 Traveling Class Of Service Codes allowed on the Superkey **SK-824** Electronic telephone system.
2. **SK-200** There are up to 99 Forced Account Codes and Traveling Class Of Service Codes allowed on the Superkey **SK-200** Electronic telephone system.
3. Codes are created during system programming.
4. When the Forced Account Code is dialed, the status of the originating station is upgraded to "Unrestricted" for the duration of the call.
5. Any call made using a forced account code will have the corresponding entry number (1-31) associated with the resulting call and printed on the SMDR record if SMDR is enabled. The actual forced account code will NOT be printed.
6. As soon as the line is disconnected, the telephone set will revert to its normal toll class.
7. A station with an assigned Forced Account Code cannot be used with a Traveling Class Of Service Code. For more information on Traveling Class Of Service see page 168 of this document.

Programming

Forced Account Codes/Traveling Class Of Service Codes are programmed on Form 13 -[code#], Forced Account Code. The forced account can be up to eight digits in length.

Form 24 -[station]-08, Station Class Of Service allows the station to be "dedicated" to one of the first 31 forced account codes. If this parameter is set to a valid programmed code number (01-31) from Form 13 -[code#], the actual digit string programmed for that code number will be the only one that is capable of releasing toll restriction on that station. If Form 24-[station]-08 is programmed as 00, any valid code programmed on Form 13-[code#] will release toll restriction.

Operation

From a Superkey electronic telephone set:

1. Press [PGM], [4].
2. Enter Forced Account Code.
3. If the code entered is valid for that set, the station will be connected to the first free line in the Dial 9 group for that station. If Dial 9 grouping is not active on the system, the station user can press a CO key for access to a CO line.

Note: Forced Account Codes/Traveling Class Of Service Codes may also be accessed from the Features Menu. See Feature Selection from Menu, page 85 of this document.

Group Assignment

Description

Group Assignment is a Class Of Service Option that assigns a station to a specific group number for the purposes of identification of Zone Paging, Pick Up Group and Single Digit Dialing Group.

Conditions

None.

Programming

Form 28 -[station]-01, Group Assignment determines the group to which a station will belong. Valid parameters for this setting are groups 1 through 8. An entry from 1 to 8 are the only acceptable entries.

Operation

Paging - See Paging, page 126 of this document.

Pick Up Group - See Pick Up Groups, page 130 of this document.

Single Digit Dialing - See Single Digit Dialing, page 146 of this document.

Hands Free Answer back

Description

Hands free answer back allows a station user to reply to an intercom call without touching the telephone.

Conditions

1. The station must be a Superkey electronic telephone equipped with speaker phone capabilities.
2. The telephone set must have a [MIC] button programmed.
3. The telephone set must be in the Auto Answer mode.

Programming

To activate:

Press [MIC]. The [MIC] pushbutton will illuminate. The set is now in Auto Answer.

To deactivate:

Press the [MIC]. The [MIC] pushbutton will extinguish. The set is no longer in Auto Answer.

Hands free answer back is unaffected by the status of Form 01-03-03, Intercom Call Signalling.

Form 27 -STN-03 (Auto Answer Flag) provides the ability to enable Auto Answer on stations so that the user isn't required to manually enable Auto Answer. There are several options available on a per station basis. They are:

0=Normal Mode - Requires station user to manually activate Auto Answer for Handsfree Answerback.

1=Auto Answer (Intercom) is on and the LED of MIC is on (for intercom only.) This is in place to remind the end user that his microphone is always on for HFAB.

2=Auto Answer (Intercom) is on and the LED of MIC is off (for intercom only.) Provides the same operation as a setting of 1, but the LED does not illuminate until your station is called. This will also invoke the speakerphone function (with active microphone) when you place an intercom call using either DSS signaling or dial pad signaling.

This is probably the preferred method for most installations.

4=Auto Answer (Intercom) is off and the LED of MIC is off for intercom calls and on for CO lines. This provides an active microphone at all times when the telephone is in use.

Key confirmation tone is unreliable in this mode.

5=Auto Answer (Intercom) is on and the Speakerphone MIC light is on. Speakerphone MIC will come on whenever dialing or answering a CO line.

Key confirmation tone is unreliable in this mode.

6= Auto Answer (Intercom) is on and the Speakerphone MIC light is off. Speakerphone MIC will come on whenever dialing or answering a CO line.

Key confirmation tone is unreliable in this mode.

Operation

Intercom tone burst is heard. The hands free mode is operational.

Note: Saved Number Redial and Automatic Last Number Redial will not operate when 27-STN-03 is set at the values 4, 5, or 6.

Hold (Exclusive)

Description

Exclusive Hold allows a station equipped with a Superkey electronic telephone set to temporarily disconnect from a call without the call being terminated. The difference between Exclusive Hold and System Hold (see page 98 of this document) is that exclusive hold associates the held call with the station that placed the call on hold. When on exclusive hold, the held caller will hear silence, music from the internal system music synthesizer or audio from an external device (such as a radio). A call on exclusive hold cannot be readily retrieved by any other station. On all Superkey electronic telephone stations, a call on exclusive hold will appear to other stations as a busy line (steady illuminated red pushbutton).

Conditions

Exclusive Hold is available only from a Superkey electronic telephone set. It cannot be applied from a single line telephone.

Calls on Exclusive Hold may not be retrieved by a single line telephone.

Exclusive Hold can only be applied to outside CO line calls. It does not apply to intercom calls.

Calls placed on Exclusive Hold for a period exceeding the time limits set on Form 01-01-02, Exclusive Hold Recall Timer will re-ring the station where the call was placed on exclusive hold. If the station is busy or does not answer the recall within the time period defined on Form 01-01-03, Hold Recall Timeout, the call will then also ring the console.

Programming

Form 01-01-02, Exclusive Hold Recall Time determines how long a caller may be left on Exclusive Hold. A call that is held for a time exceeding the Exclusive Hold Recall Time will recall to the station that placed the call on hold. Valid timing parameters are listed in the table below:

Exclusive Hold Recall Time 01-01-02		0=30 seconds	1=60 seconds
2=90 seconds	3=120 seconds	4=150 seconds	5=180 seconds
6=210 seconds	7=240 seconds	8=253 seconds	9=No Recall

Form 01-01-03, Hold Recall Timeout assigns the acceptable time limit for a held call to recall at the holding station only. When this timer is exceeded, the held call will also ring the console. The acceptable values are the same as those listed above for Form 01-01-02.

Form 01-12-01 Exclusive Hold Enable allows Exclusive Hold to be enabled or disabled on a system-wide basis. A setting of 0 (Default)=Enables Exclusive Hold for the system. A setting of 1=Disables Exclusive Hold for the system.

Note: The console that is rung when the Hold Recall Timeout expires will be selected from the assigned group (Form 04, Console Assignment) determined by the group assignment of the station on Form 28-[station]-01.

Operation

To place a call on Exclusive Hold:

A Superkey electronic telephone set places a call on Hold by pressing [HOLD],[HOLD]. The call is now on exclusive hold.

To retrieve a call on Exclusive Hold:

From the set that held the call:

Press the Flashing CO Line Key. The held party is reconnected to the station.

From another set:

1. Press the Red CO line key. Busy tone will be returned by the telephone set.
2. Press [HOLD]. The call is now connected to the station.

Hold (System)

Description

System Hold permits any station user to temporarily disconnect from a call without the call being terminated. Depending on system programming, the held caller will hear silence, Music from the internal system music synthesizer or audio from an external device (such as a radio). The difference between Exclusive Hold (see page 97 of this document) and System Hold is that a call placed on system hold can be retrieved by any station within the system. On Superkey electronic telephone stations, a held call will be indicated by a green flashing line pushbutton.

Conditions

Calls placed on System Hold for a period exceeding the time limits set on Form 01-01-01, Hold Recall Timer will re-ring the station where the call was placed on hold. If the station is busy or does not answer the recall within the time period defined on Form 01-01-03, Hold Recall Timeout, the call will then also ring the console.

Programming

Form 01-01-01, System Hold Recall Time determines how long a caller may be left on System Hold. A call that is held for a time exceeding the System Hold Recall Time will recall to the station that placed the call on hold. Valid timing parameters are listed in the table below:

System Hold Recall Time 01-01-01		0=30 seconds	1=60 seconds
2=90 seconds	3=120 seconds	4=150 seconds	5=180 seconds
6=210 seconds	7=240 seconds	8=253 seconds	9=No Recall

Form 01-01-03, Hold Recall Timeout assigns the acceptable time limit for a held call to recall at the holding station only. When this timer is exceeded, the held call will also ring the console. The acceptable values are the same as those listed above for Form 01-01-01 .

Note: The console that is rung when the Hold Recall Timer expires will be selected from the assigned group (Form 04, Console Assignment) determined by the group assignment of the station on Form 28-[station]-01.

Form 01-02-04, Single Line Telephone Release Time (default setting 5=800 milliseconds) defines the maximum hook flash interval that is allowable for the system to recognize as a FLASH command. The FLASH capability is required for a single line telephone to place a call on System Hold. Any hook flash (open loop) condition that exceeds this time parameter is considered as a disconnect. A hook flash that does not exceed this time but exceeds the time parameter defined in Form 01-02-06 is considered a FLASH. The possible settings are listed in the table below (ms=milliseconds):

Single Line Telephone Release Time (0-9)		0=40 ms	1=80 ms
2=120 ms.	3=400 ms	4=600 ms	5=800 ms
6=1000 ms	7=1200 ms	8=1400 ms	9=1600 ms

Form 01-02-06, Single Line Telephone Hold Signal (default setting 1=100 ms) determines the minimum open loop (hook flash) condition that the system will recognize as a FLASH. Any hook flash that does not exceed this minimum timer will be ignored by the Superkey electronic telephone system. Any hook flash that exceeds this time will be determined to be a FLASH if it does not exceed the timer set on Form 01-02-04 or will be determined to be a disconnect if its length exceeds the timer set on Form 01-02-04. The table of valid entries is listed below (ms=milliseconds):

Single Line Telephone Hold Signal (0-9)		0=80 ms	1=100 ms
2=200	3=300	4=400	5=500
6=600	7=700	8=800	9=900

Form 01-06-07, Affirmative Single Line Telephone Hook switch Flash Capability (default setting 0=FLASH) determines the actual procedure required in order for a Single Line Telephone to place a call on hold. The settings and resulting actions required are listed in the table below:

01-06-07	Action required to hold a call.
0	Flash
1	Flash, [7]
3	Flash, Alert Tone heard, [7]

Form 25-[station]-02, Station Hold Capability determines whether a station will have the ability to place a call on Hold. Valid settings for this parameter are:

Station Hold, (Form 25 -[station]-02)	0=Enabled	1=Disabled

Operation

Hold:

From Superkey electronic telephone set:

System Hold. Press [HOLD] pushbutton. Call is on system hold.

From single line telephone:

Press hook switch (or action defined on Form 01-06-07). Call is on system hold.

Retrieve from Hold:

From Superkey electronic telephone set:

If caller is on CO line appearing at the set. Press flashing line key.

If caller is on CO line not appearing at the set. Dial 8 + two digit line number (01-08).

If caller is an intercom call appearing on DSS keys. Press DSS key.

If caller is an intercom call not appearing on DSS keys. Dial extension number.

From a single line telephone set:

If caller is on CO line held by the single line set. Press hook switch [FLASH].

If caller is on CO line held by other station. Dial 8 + two digit line number (01-08).

If caller is an intercom call held at the single line set. Press hook switch [FLASH].

If caller is an intercom call held by another telephone, dial extension number of held call.

Hot Line

Description

Hot line provides the capability to route a station to any location, internal (via the intercom) or external (via speed dial) as soon as the station goes off hook.

Conditions

Hot line single line stations cannot initiate dialing to any location. They are immediately routed to the pre-determined location. On Superkey electronic telephone sets, the telephone may place other calls if the [SPKR] button is pressed first. If the handset is lifted on a Superkey electronic telephone set, it will be routed to the pre-determined location.

Hot line stations can receive calls normally.

Programming

Form 21 -[station], Hot Line Assignment determines the routing for a station when it goes off hook. Valid settings for 21-[station] are, internal station extension numbers and external speed call numbers.

When programming Hot Line, to change from internal intercom to external speed dial, press the [MIC] key. This pushbutton will toggle between internal dialing and external speed dial. The current status will be shown on the programming LCD display.

Operation

1. A station goes off hook.
2. The system will ring the associated internal station (if internal hot line).

OR

The system will select a CO line and outpulse the stored speed dial number (external speed dial).

Hunt Groups

Description

Hunt Groups allow the grouping of telephones into similar functions, such as departmental units, where it may be desirable to route a call to an available member of a group rather than looking for an individual station. Examples such as sales groups, order groups, accounts payable, etc., will provide a single access code (extension number) for easy access from either the Automated Attendant portion of a Voice Service Unit or for quick processing of operator answered telephone calls.

You can select different Hunt Groups for a CO line for Day Service and Night Service (**SK-200 only**).

Selection can be based on Linear Hunting or Circular Hunting.

Linear Hunting will always begin at the top of the Hunt Group form and route the call to the first available station in the group.

Circular Hunting will look for the first available station immediately after the position where the last call was routed.

Conditions

SK-200 There are 30 available Hunt Groups on the SK-200.

Up to 16 stations may be programmed in a Hunt Group on the SK-200.

SK-824 There are 2 available Hunt Groups on the SK-824

Up to 4 stations may be programmed in a Hunt Group on the SK-824.

Hunt Group pilot numbers can be programmed into Single Digit Dialing locations on Form 07 .
Hunting can be Linear or Circular.

Programming

Form 47 -Group provides the ability to assign a pilot number to each Hunt Group. Each pilot number must be unique. The pilot number cannot be the same as an extension in the system. Each pilot number must conform to the system dialing plan, i.e., a system configured for two digit extension numbering must have a pilot number that is two digits in length and between the numbers 10 and 69. If a three digit numbering plan is used, the pilot number must be three digits in length. If a four digit numbering plan is used, the pilot number must be four digits in length.

Form 47 -Group also assigns the type of hunting that will be observed on the group. A setting of 1 will result in straight hunting. A setting of 2 will result in circular hunting.

Form 48 provides capability for Day Hunt Groups.

SK-200 Each Hunt Group can contain up to 16 stations.

SK-824 Each Hunt Group can contain up to 4 stations.

Form 49 provides Night Hunt Groups. The parameters are otherwise the same as Form 48. With this option, you can change the applicable stations without changing your recorded messages on applicable voice service units. **SK-824 Does not have Night Hunt Groups. Form 49 is reserved on SK-824.**

Operation

Any station or DISA caller that dials the pilot number of a Hunt Group will be routed to the first available station within the Hunt Group. The station that is rung will depend on the type of hunting specified on Form 47 .

Calls placed to Hunt Groups appear to the caller as if an individual extension number has been dialed.

Intercom

Description

Intercom permits internal station to station calling. The Superkey electronic telephone system can be programmed to provide a default option for Voice announce calling or ringing at the called station. This can be toggled between modes (Voice - Ringing) by dialing [3] after the desired extension has been selected either by dialing the extension number or pressing the [DSS] key.

Note: Calls placed to a single line telephone cannot toggle between Voice and tone ringing on intercom calls.

Conditions

Intercom calls can be placed on Hold and transferred.

The Superkey electronic telephone system may be programmed to provide Voice Signaling or Ring Signaling as the default method of intercom contact for Superkey electronic telephone sets. Single line telephone sets are always notified via ring signaling.

If the system is programmed for Voice Signaling, the audio path is one way, into the station receiving the call, unless the party activates the microphone on the telephone set or the set is in the hands free answer back mode (see Hands Free Answer Back, page 96 of this document).

Form 26-STN-05 allows for blocking of intercom calls between stations of different groups.

Programming

Form 01-03-03, Intercom Call Signaling Type determines whether Superkey electronic telephone sets will be signaled by ringing or by voice announce. The method selected becomes the preferred method of intercom operation. The alternate method of signaling may be selected by dialing [3] after the extension number. Valid settings for this option are listed below:

Intercom Call Signaling Type 01-03-03	
0=Voice Signaling	1=Ring Signaling

Form 26-STN-05 Provides the ability to restrict intercom dialing between stations of different groups. If 26-STN-05 is set to 1 (Enable) a station cannot dial any station whose station group is different.

Form 28-STN-01 determines your station group. There are eight station groups per system.

Operation

Lift handset or press [SPK]. Dial extension number or Press [DSS] key. Depending on system programming, the called station will ring or tone burst (Superkey electronic telephone sets only) will indicate Voice Announce.

Station user can toggle between voice and ringing mode by dialing [3]. For example if the system is programmed for voice signaling intercom, dialing the station number + [3] will cause the called station to ring, rather than to commence voice announce. If the system is programmed for tone signaling (ringing), dialing the station number + [3] will cause the called station to enter the voice announce mode instead of the ringing mode.

Note: Voice mail ports that call a station will always cause Superkey Electronic sets to ring.

Intercom Dialing Restriction

Description

Intercom Dialing (room to room) restriction is designed to prevent telephones from dialing another station extension. The major use for this option is for lodging applications, where single line telephones are used. This feature does not affect the operation of DSS keys nor does it affect single digit dialing.

Conditions

DSS Keys and single digit dialing are not affected.

Programming

Form 26-[station]-01 controls the operation of this function for each individual station. The valid options are:

Intercom Dialing Restriction (Form 26-[station]-01)	0=Not Restricted	1=Restricted
--	------------------	--------------

Operation

When enabled, a station is unable to dial any other station. Calls can still be placed to the operator [0], via DSS and single digit dialing or to other stations via DSS keys, if programmed.

Intercom Step Call

Description

Intercom Step Call on the Superkey electronic telephone system allows a station user to step from a busy station to the next station in the same station group. This is accomplished by dialing [4] while hearing a busy signal.

Conditions

The system will search by consecutive system equipment number (ports 11 through 38 on the SK-824 and ports 101 through 498 on the SK-200) for stations assigned to the same group as the original called station.

Programming

Intercom Step Call, Form 01-07-01 must be programmed to enable this option. Valid settings for Form 01-07-01 are listed below:

Intercom Step Call, (Form 01-07-01)	0=Disabled	1=Enabled
--	------------	-----------

Stations to be assigned in a Step Call Group must be programmed on Station Specifications, Form 28-[station]-01 to a group. There are eight groups available in the system.

Operation

1. Station user dials an extension.
2. Extension is busy.
3. Caller dials [4]. System steps to the next station in the group.
4. If next station is free, it will ring. If it is busy, step 3 can be repeated.

Last Number Redial

Description

This feature allows a station user to press one pushbutton to redial the last number dialed from the telephone.

Conditions

The system will automatically attempt to access the same line that was used for the last dialing attempt. If that line is in use, the system will attempt to access another line in the station's dial 9 group.

If a different line is desired by the station user, the user can manually access an idle line pushbutton and then press the [REDIAL] pushbutton.

Programming

None.

Operation

1. Press [REDIAL].
- 1a. If you are using a single line telephone or a Superkey electronic set without a [REDIAL] key, you may dial [7], [4].
2. The last number dialed from the telephone will be re-dialed. The system will attempt to access the same line previously used. If that line is busy, the system will attempt to access another line in the station's dial 9 group.

A station user may select a specific line for the Redial by pressing the pushbutton of the desired idle line prior to pressing the [REDIAL] pushbutton.

Note: Last Number Redial dials a number only once. Also available is Automatic Last Number Redial, which allows you to repeatedly dial the Last Number. See Automatic Last Number Redial, page 13 of this document.

Line Group Assignment

Description

Line Group Assignments, Form 44 -[group]-[line] groups the CO lines for use by stations. Up to eight groups may be programmed into the Superkey electronic telephone system. Each group may have up to eight CO lines (SK-824) or forty (SK-200) CO lines in it. A CO line may appear in more than one CO line group.

Line groups are set up in order that different departments or tenants may have access to different CO lines. Groups set up on Form 44 are subject to assignment to individual stations through Form 28-[station]-04, Dial 9 Group.

Conditions

While Dial 9 grouping may be imposed on the system, it is possible that dialing 9 will have no effect on system operation. Control of dial 9 function is provided by Form 01-04-02, Dial 9 activation, which determines if pooled line access (dial 9) will occur and Form 01-06-05, Operator Code, which determines whether the outgoing line pooled access code will be [9] or [0].

If Form 26-STN-08 is programmed as 0 (Disabled), a station will only have outgoing access to the CO lines that are programmed into its (Dial 9) Line Group Assignment, Form 44-[group].

Outbound CO lines will always be searched for access in the order in which they are programmed on the applicable group of Form 44 -[group].

Programming

Form 44 -[group]-[line] is programmed, where :

[group]=a CO line group from 01 to 08.

[line]= a CO line number from 01 to 08. Up to eight lines can be programmed in each [group].

Form 28-[station]-04 is programmed where:

[station]=the extension number of the station being programmed (and)

The data entered at this location is a number from 1 to 8 and corresponds to one of the eight [group] entries on Form 44.

SK-824 A CO line Group may contain up to eight CO lines.

SK-200 A CO line Group may contain up to forty CO lines.

Operation

If Form 01-04-02, Dial 9 Activation is enabled and a CO line group has been programmed and assigned for use by a station:

1. Station goes off hook (this is optional for Superkey electronic telephone sets).
2. Station dials [9] (or [0] depending on status of Form 01-06-05).
3. Station is connected to an available outside CO Line.

Loop Keys

Description

SK-200 only

Loop keys allow a station user to answer incoming calls on a group of CO lines and to place calls on a member of a group of CO lines without the need to have a CO line appearance. For example, a system may have 30 local CO lines. For most users it is not necessary to have a button appearance of each and every one of the 30 lines. All that is required is that they have the ability to answer calls and place calls. Through the implementation of Loop Keys, a station user can have the ability to access an available line (incoming or outgoing) through the use of a Loop key.

Conditions

Loop keys are not applicable to Single Line Telephones.

Loop keys can be assigned only to the first 8 keys on a Superkey Electronic Telephone.

Loop keys cannot be assigned to a DSS console.

Loop keys are not available on the SK-824.

Programming

Loop keys are available for each of the 8 CO line groups that can be assigned on Form 44 .

Form 22 - Flexible Key Group Assignment provides the capability to program Loop keys on any of the first 8 keys of any Key Group. Loop Keys are assigned as functions. Valid settings are:

Entry	Description	Entry	Description
FN:59	Loop Key Trunk Group 1	FN:60	Loop Key Trunk Group 2
FN:61	Loop Key Trunk Group 3	FN:62	Loop Key Trunk Group 4
FN:63	Loop Key Trunk Group 5	FN:64	Loop Key Trunk Group 6
FN:65	Loop Key Trunk Group 7	FN:66	Loop Key Trunk Group 8

Form 26-STN-08 determines if a station may have access to additional CO lines through the use of loop keys (other than his own loop key or dial 9 group). If disabled (0), the station user will have access only to his own dial 9 group. If enabled, (1) the station user will have access to other loop keys and CO lines outside of his own dial 9 group.

Operation

A loop key is a "virtual" line appearance. Any CO line that is programmed into a specific CO Group (Form 44) may appear on a loop key.

Example:

CO lines 1 through 20 are programmed into CO Group 1 (Form 44 -01).

Station 11 is programmed with FN:59, Loop Key Trunk Group 1 on button 1 of the station.

Station 11 is programmed to ring on incoming calls for CO lines 1-20.

1. Line 1 rings into the system. The first line key will flash to indicate an incoming call.
2. Station 11 answers the call. The LED will light continuously (green).

All operations from Station 11 will result in the same indications as if the line was a normal CO line appearance and not a loop key. Any other stations with Loop Key 1 appearance will return to idle (dark). If the call is transferred to another station, the loop key on Station 11 will return to an idle state.

Loud Bell

Description

SK-824 The Superkey SK-824 electronic telephone system provides up to two relays for various control functions. Two of these functions are Station Loud Bell and CO Line Loud Bell.

SK-200 The Superkey SK-200 electronic telephone system provides up to three relays per cabinet, to a maximum of four cabinets. Relays in the first three cabinets may be used for either Station Loud Bell or CO Line Loud Bell.

CO Line Loud Bell allows one or more CO lines to be directed to provide an interrupted relay closure when a CO line detects an incoming call. The relay closure may be used to provide signalling to an external tone ringer or it may be wired with external equipment so as to switch an AC or DC voltage to provide power to an external ringing device. See also Relay Assignment, page 136 of this document and CO Line Programming, page 40 of this document.

Station Loud Bell allows one or more stations to be directed to provide an interrupted relay closure when the system causes the station(s) to ring. The relay closure may be used to provide signalling to an external tone ringer or it may be wired with external equipment so as to switch an AC or DC voltage to provide power to an external ringing device. See also Relay Assignment, page 136 of this document.

Conditions

SK-824 One relay is provided per CO line card. Up to two relays (CO line cards) may be installed in the system.

SK-200 One relay box may be added per cabinet, to a maximum of four cabinets. Each relay box contains three control relays.

Programming

Form 08, Relay Assignment provides the capability to program the relays for use as Station Loud Bells, CO Line Loud Bells, or other functions within the system. For more information, please see Relay Assignment, page 136 of this document.

Form 24-[station]-04 is programmed with the selected relay if that relay is to be used in conjunction with a Loud Bell for the station.

CO Line Loud Bell, Form 46-[CO]-06 provides the ability to assign individual trunks directly to CO Line Loud Bell relays. On this form, the options exist to assign the CO line to either one of the possible CO Night Bell Relays. See CO Line Programming, page 40 of this document.

Operation

Once programmed, operation is automatic.

Note: While CO Loud Bell and Station Loud Bell are mutually exclusive items on the relay assignment form, if a Station Loud Bell is programmed and the programmed station is one of the stations assigned in a CO Ringing Assignment Form (Form 42 - Day Service, Form 43 - Night Service), the bell will be activated any time that the programmed station rings, whether ringing is caused by an intercom call or an incoming CO call.

Macro Keys

Description

Macro Keys allow individual station users to "customize" the operation of their Superkey electronic telephone sets. A station may have up to eight macro keys available on the telephone, dependant upon system programming. A macro key may be programmed with up to five consecutive keystrokes and may include most special function keys.

Conditions

Macro keys must be assigned to a station through system programming.

Macro keys are available only to Superkey electronic telephone sets.

Programming

Form 31 - Macro Assignment. One of the 24 macro key memory assignments must be programmed for a station in order for the station to store and operate a macro. Each station in the system may have an assignment made to it. During programming of Form 31, the installation personnel may select either keys 21 through 24, keys 25 through 28, or in some situations, may select keys 21 through 28 for use as macro keys. If the same memory location is assigned to more than one station, all similarly programmed stations will share access to programming and operation of the shared macros.

If a station does not require macro operation, it can be disabled for each station on Form 31 by entering 00 in the macro entry section.

Operation

To program a macro:

1. Press [PROG],[8].
2. Press the key location where you wish to store a macro.
3. Press the series of keys that you want to store (up to five keystrokes).
4. When you have the macro entered properly, press the key location again.
5. The macro is stored.

To play a macro:

Press the programmed macro key. The programmed macro will be played.

Note: Macro functions will not dial digits on a CO line. However, personal and/or system speed dial numbers may be activated via macro key operation which will dial DTMF on CO lines.

Manual Line

Description

Manual Line allows a station to go off hook and immediately ring a pre-determined location. This location is normally the system operator, but through the use of Console Assignment, Form 04 and Station Group, Form 28-[station]-01, the location can actually be any station within the system.

Stations other than system operator and external locations (via CO lines) may be selected by using the Hot Line function. For more information on HOT LINE, see page 100 of this document.

Conditions

Single Line telephones equipped as manual lines are not capable of dialing. EKT sets programmed as Manual Lines may place calls if allowed by directly pressing a CO line button or dialing via the hot dial pad function.

Programming

The station to be used as a manual line must have Form 25-[station]-04, Manual line enabled. Valid settings for this form are:

Manual Line, (Form 25-[station]-04)	0=Disable	1=Enable
--	-----------	----------

Form 04 - Console Assignment is used to determine the stations that are to be considered consoles.

Form 28-[station]-01 determines what group the manual line telephone will select when it goes off hook.

Operation

Any station programmed as a Manual Line will cause its pre-determined operator to ring whenever the station goes off hook.

Message Waiting

Description

Message waiting allows station users to leave notification that an attempt at contact has been made. On Superkey electronic telephone stations, the [MSG] pushbutton will flash to indicate a message is waiting on the telephone set. On Superkey electronic telephone stations equipped with LCD displays, the notified party can read the name of the user(s) that has left the message(s) on the telephone.

Single Line Telephones can be programmed to periodically ring (approximately every 5 minutes) when a message is left. If the called station answers during the ringing cycle (ringing cycle is approximately 1 minute), it will either call the station that left the message or be routed to the Voice Service Unit, to inform the called party of the message waiting. The VSU will not store a message, it will only indicate to the station user that there is a message waiting. This is dependent upon system programming, Form 01-04-08.

Single Line Telephones also will hear interrupted dial tone whenever the handset is lifted and a message is waiting. This consists of 250 milliseconds of dial tone and 250 milliseconds of silence, repeated over and over. If not desired this option can be eliminated through programming of Form 01-03-07 (SLT Dial Tone Options).

Conditions

A maximum of five messages can be stored on a station.

Programming

Form 01-03-07, Single Line Telephone Dial Tone Options determines if the caller will hear interrupted dial tone when a message is waiting. Valid settings are:

0=Normal Dial Tone (uninterrupted) is presented to a SLT when no special conditions exist.

Interrupted dial tone is presented when the station has a call on hold or when Do-Not Disturb or Call Forwarding All Calls is active on the telephone.

Message waiting dial tone is presented if there is a message waiting set on the telephone.

1=This presents the opposite to 0 above. Interrupted dial tone when idle; continuous when you have a caller on hold or DND or Call Forwarding All Calls is active. Message waiting dial tone is presented if there is a message waiting on the telephone.

2=Similar to 0 above, except message waiting dial tone is never activated.

3=Similar to 1 above, except message waiting dial tone is never activated.

Single Line Telephone Message waiting type, Form 01-04-08 determines the method used to notify a single line telephone user of the type of message waiting notification to be used. The two types offer the options of ringing directly back to that station that left the message (see description, above) or to route a station to a Voice Service Unit channel that has been recorded to indicate that a message has been left. Direct ringing to a station is more commonly used in general business environments, while the Voice Service Unit message is used primarily in lodging applications, where a centralized message center exists. Valid parameters for this are:

SLT MSG Waiting Type, (Form 01-04-08)	1=Ring Originator	2=VSU Notification
---------------------------------------	-------------------	--------------------

Form 27 -[station]-02, Message Waiting Level, determines the hierarchy of stations. A station may only activate message waiting on a station of the same or lower message waiting hierarchy. The valid settings are 0-9, where 0 indicates a station that is unable to leave a message. Level 9 provides the capability to leave a message to any station within the system.

Operation

From a Superkey electronic telephone set:

Place an intercom call. The target station is busy or does not answer.

1. Press [MSG] button.
2. Hang Up.

Note: If the station that sets the message is using the hands free mode, the telephone will automatically hang up as soon as the [MSG] button is pressed.

3. If the called station is a Superkey electronic telephone set, the [MSG] key will flash. If the Superkey set is equipped with LCD, the display will show that a message is waiting.
4. If the called station is a single line telephone, the telephone will ring periodically (approximately every 5 minutes). If the single line user answers during the ringing cycle, he will be routed either to the VSU or to the call originator (depending on system programming on form 01-04-08).

To answer a message waiting from a Superkey electronic telephone set:

1. Press the flashing [MSG] button. (if equipped with LCD, the display will show the originating party).
2. Lift the handset or press [SPK] to call the station that left the message or press [#] to cancel the message.

From a single line telephone set:

1. Place an intercom call. The target station is busy.
2. Press [6].
3. Hang Up.
4. If the called station is a Superkey electronic telephone set, the [MSG] key will flash. If the Superkey set is equipped with LCD, the display will show that a message is waiting.

Note: If the called station is a single line telephone, the telephone will ring periodically (approximately every 5 minutes). If the single line user answers during the ringing cycle, he will be routed either to the VSU or to the call originator (depending on system programming on form 01-04-08).

A single line telephone can also check messages by dialing 76 whenever the user hears message waiting dial tone. The originator of the message will be rung.

From a Voice Mail port:

To set a message waiting, dial 7071 + the extension number.
To cancel a message waiting, dial 7072 + the extension number.

Meter Pulses

Description

In areas where meter pulses are sent from the telephone company Central Office, the Superkey electronic telephone system can be programmed to recognize meter pulses and report these as a part of the telephone call record on SMDR.

Conditions

Meter Pulses must be provided by the telephone company central office in order to use any meter pulse related options.

Programming

Meter Pulses Detection Capability, Form 01-05-02 determines whether the system will detect and report meter pulses. Valid settings are:

Meter Pulses Detection Capability, (Form 01-05-02)	
0=Meter Pulses Detected	1=Meter Pulses Not Detected

Meter Pulses Detection Delay Time, Form 01-07-07 provides the ability to continue monitoring for meter pulses after a station has hung up from a call. In some situations, additional metering pulses are sent at the end of a telephone connection for call costing purposes. The valid setting for these options are:

Meter Pulses Detection Delay Time, (Form 01-07-07)			
0=No Delay	1=680 milliseconds	2=1 second	3=2 seconds
4=3 seconds	5=4 seconds	6=5 seconds	7=6 seconds
8=7 seconds	9=8 seconds		

Operation

Operation is automatic.

Monitor

Description

Monitor allows certain stations the ability to intrude into the conversation of other stations. Monitor capability is a hierarchical feature. Stations are assigned a Monitor Level from 0 to 9. Within that hierarchy, a station may monitor another station of lower monitor status. Monitor differs from override in that there is no intrusion tone given to a monitored party.

See also Override, page 125 of this document.

Conditions

The station being monitored must have a monitor level that is less than the station invoking the monitor. In the case of a monitor of an internal conversation, the monitor level of both parties in the conversation must be lower than the level of the monitoring station.

A station with a monitor level of 0 cannot monitor any other stations.

Programming

Form 24-[station]-02, Monitor Level determines the hierarchy within the system. Valid settings for this option are from 0 to 9. A station with a monitor level of 0 cannot monitor any other stations.

Operation

1. A station user dials a busy extension (or presses a DSS key).
2. The user will hear a busy signal.
3. The station user dials [#].
4. The monitoring station enters the conversation in a listen only state. The monitor will remain in place until one of the parties hangs up.

Note: If a station with a lower Monitor level attempts to monitor a station with an equal or higher monitor level, the station will be returned a busy signal by the system. The monitor will not be allowed.

Music on Hold

Description

Music On Hold provides the capability to provide an audio source for callers on Hold. Music On Hold provides a reassurance to callers that they have not been disconnected. Superkey electronic telephone systems provide connections to allow an external audio source to be connected or an internal music synthesizer to provide a "music box" effect.

Conditions

Music source can be internal (music synthesizer or quiet termination) or one of two external sources (separate audio device). If no source is connected to the Superkey electronic telephone system while the system is programmed for one of the external music sources, held callers will hear nothing (silence).

Programming

SK-824 Music source must be selected on Form 01-08-08. The options are:

Music Source, (Form 01-08-08)		
	Background Music Source	Music On Hold Source
0	Internal Source	Internal Source
1	External Source #2	Internal Source
2	Internal Source	External Source #1
3	External Source #2	External Source #1
4	Internal Source	External Source #2
5	External Source #2	External Source #2

Outside callers placed on Hold will receive quiet termination (silence) if Internal Source is selected for Music-On Hold and jumper J1 on the CCUA mother board is set for Music Off.

If J1 on CCUA mother board is set for Music On and Internal Source is selected for Music-On-Hold, the system's music synthesizer circuit will provide music source.

SK-200 Music on Hold Selection is via jumpers on the SK-CPU/2 Printed Circuit Board. Form 01-08-08 is not used on the SK-200. Please see the SK-200 Installation and Maintenance Manual for more information.

Operation

Held calls are automatically presented with the programmed music on hold source.

Music Source Selection

Description

Music Source selection allows the ability to provide up to two independent audio sources for the system. Background music has the option of being connected to either an internal melody synthesizer or external music source #2 on the system. It can be selected to play on any Superkey electronic telephone set speaker. It will also be heard on any system-wide alarms and individual timed reminders on Superkey sets. See also, Background Music on page 18 of this document. Music on Hold may be selected to utilize and internal melody synthesizer, music source #1 or music source #2. It will be heard by any stations or CO lines that are placed on hold. See also, Music On Hold on page 115 of this document.

Conditions

External equipment must be provided for any external sources to be used.

Programming

SK-824 The music source must be selected on Form 01-08-08. The options are:

Music Source, (Form 01-08-08)		
	Background Music Source	Music On Hold Source
0	Internal Source	Internal Source
1	External Source #2	Internal Source
2	Internal Source	External Source #1
3	External Source #2	External Source #1
4	Internal Source	External Source #2
5	External Source #2	External Source #2

Outside callers placed on Hold will receive quiet termination (silence) if Internal Source is selected for Music-On Hold and jumper J1 on the CCUA mother board is set for Music Off.

If J1 on CCUA mother board is set for Music On and Internal Source is selected for Music-On-Hold, the system's music synthesizer circuit will provide music source.

SK-200 For the SK-200 Music Sources are selected via jumpers on the SK-CPU/2. For more information, please see the SK-200 Installation and Maintenance Manual.

Operation

None. Operation is automatic.

Mute

Description

Mute provides the ability to temporarily turn off the Microphone on Speakerphones, the transmitter on the telephone handset and the microphone of a headset, if the telephone is equipped with a headset.

Conditions

None.

Programming

None

Operation

To mute the microphone on a Speakerphone:

Press the [MIC] button on the telephone. The LED on the [MIC] button will extinguish.

To restore the microphone on a Speakerphone:

Press the [MIC] button on the telephone. The LED on the [MIC] button will light.

To mute the handset transmitter or the headset microphone:

While in the handset mode or the headset mode, press the [MIC] button. The [MIC] button will light. The microphone is muted.

Restore the transmitter or the headset microphone:

While in the handset mode or the headset mode, press the [MIC] button. the [MIC] button will be extinguished. The microphone is operative.

Note: The illumination of the [MIC] button operates differently when in the speakerphone mode than when in the handset or headset mode.

Night Service

Description

Superkey electronic telephone systems provide two distinct modes of operation. The two modes are Day Service and Night Service. Each service provides separate operating characteristics.

Conditions

Items under control of Day and Night Service are:

1. Flexible CO Incoming Line Assignment and Flexible Ringing Assignment.
2. Toll Restriction Plan
3. DISA
4. External Call Forwarding
5. Hunt Groups (**SK-200**)

Night Service switching can be manual or automatic.

If Night Service is automatic, the Day Service/Night Service intervals are programmable.

A System in Automatic switching mode can be changed to manual mode for a special circumstances and then returned to Automatic operation when desired.

Information regarding the actual day of the week and time of day is kept by the system real time clock located on the CCUA mother board. Initial setting of the real time clock is done on Form 10 and includes day of week, date, month, year as well as hour and minutes. The system real time clock is provided with a battery backup and will keep the clock accurate for a minimum of 1200 hours in the event of a power failure.

Programming

Flexible CO Line Ring Assignment, Form 42-[CO line]-[stations] (see page 42 of this document).

Toll Plan, (see page 166 of this document).

DISA (see page 58 of this document).

External Call Forward (see page 80 of this document).

Hunt Group (see page 101 of this document)

Form 15-[DAY], Define Day Time Schedule. This form defines the day service interval for each day of the week. The night interval is any time not included in the day service interval. There is a separate definition for each [DAY] of the week. The [DAY] field of the programming information is a two digit code that defines each day of the week according to the table below:

Form 15- [DAY] Definitions		15-00 = Sunday
15-01 = Monday	15-02 = Tuesday	15-03 = Wednesday
15-04 = Thursday	15-05 = Friday	15-06 = Saturday

Each section of Form 15-[DAY] should be programmed with the following information:

hh mm HH MM where: hh mm = Day Service Start Time by hour and minute. HH MM=Day Service End Time by hour and minute.

All time must be entered in 2400 (military) format.

Hours from Midnight to 11:59 AM must be entered as 00 00 to 11 59.

Hours from Noon to 11:59 PM must be entered as 12 00 to 23 59.

Night Service will be in operation during any time period not defined between a Day service end time and the next day's Day Service Start Time.

Stations with control of Night Service should have a pushbutton programmed for Day/Night Service indication and switching.

Operation

Automatic Switching - None required. Any operator with a programmed Day/Night Service pushbutton can override the system status by pressing the [DAY/NIGHT] pushbutton. Pressing the pushbutton will toggle to the alternating mode. The system will revert to the automatic mode on the next clock update (next clock minute).

EXAMPLE: If a system is in Night Service and a user manually changes the system over to Day Service, the system will return to Night Service upon the passing of the next minute on clock displays.

Manual Switching - Any operator with a programmed Day/Night Service pushbutton can toggle between Day Service and Night Service by pressing the [DAY/NIGHT] pushbutton. System status is indicated by the pushbutton being dark during Day Service and a fast wink during Night Service.

System Operator may manually alternate between Day Service and Night Service. The steps necessary to accomplish this are as follows:

1. With the telephone idle, press [PGM], [Dayserv] (or [PGM], [TSF]).
 - A. If the system is in Automatic switching mode, the display will show the programmed time for the day. Change the system to manual mode by dialing [*]. Display will show "DAY STATUS" or "NIGHT STATUS" in the upper portion of the display and "-> Manual" in the lower portion of the display.
 - B. If the system is in Manual switching mode, the display will show the present status as DAY STATUS or NIGHT STATUS.
2. Press [Dayserv] or [TSF]. The system will change to the alternate mode. If the system originally indicated that it was in DAY STATUS, it will change to NIGHT STATUS. The STATUS will alternate every time the [Dayserv] or [TSF] button is pressed.
3. To exit to normal telephone operation, press [PGM] or [SPK].

Note: Any manual service change will not immediately update the status on all Superkey telephone sets. They will be updated at the next real time clock update.

To change from manual switching to automatic switching or from automatic switching to manual switching:

1. With the telephone idle, press [PGM],[Dayserv] or [TSF]. The telephone will display either DAY STATUS or NIGHT STATUS if the system is in manual mode. If the system is in Automatic mode, the display will show the current Day Service schedule.
2. Pressing [*] will alternate between the Automatic and Manual mode. The lower portion of the LCD display will show the currently selected mode.
3. To exit to normal telephone operation, press [PGM] or [SPK].

Note: Selection of Night Service Automatic or Manual switching may also be accessed via the Feature Menu. See Feature Selection from Menu, page 85 of this document.

Numbering Plan

Description

The Superkey electronic telephone system allows programming of stations using two digit station numbers, three digit station numbers, or four digit station numbers.

Note: The numbering plan described does not take into consideration the possibility of utilizing the Single Digit Dialing Option in the system. All stations must be assigned a station number of the digit length selected on Form 01-03-06. See also, Single Digit Dialing, page 146 of this document.

Conditions

If two digit numbering is selected, valid combinations for station numbering are 10-69.

If three digit numbering is selected, valid station numbers are 100-699.

If four digit numbering is selected, valid station numbers are 1000-6999

SK-824 System default database provides two digit station numbering.

Under default database: The first system station card is programmed 11-18

The second system station card is programmed 19-26.

The third system station card is programmed 27-34.

SK-200 System default database will depend upon the total number of station cards that are present in the system.

Programming

Form 01-03-06, Station Number Digit Length controls the digit length of stations. Valid settings for Form 01-03-06 are 2,3, or 4, which correspond to the actual digit length.

Form 29 allows reassignment of stations. Form 29-[port#]-01 (**SK-824**) or Form 29-[csv]-01 (**SK-200**) shows the assigned station for each port. The form is used when it is desirable to reprogram the station number to something other than the default assignment.

If Single Digit Dialing is selected within the system, it is necessary to dial [6] + the actual station number to reach any station that is not a part of the station's single digit dialing plan. However, DSS calling is not affected. For more information, see Single Digit Dialing, page 146 of this document.

Operation

None.

Off Hook Ringing

Description

Off hook ringing will notify a station user of another call at the telephone set. This is particularly important to attendant answering positions. The ringing during an off hook ringing cycle is muted and will not be the same ringing cadence as an incoming call on an idle telephone.

Conditions

Off hook ringing will be heard in the following conditions:

1. Another CO line has been CAMPed ON to a busy station.
2. A hold recall is recalling a busy station.

Muted ringing will be heard under any of the above conditions whenever the handset is lifted (EKT only).

Single Line telephone sets are notified by tone signaling through the handset while off hook if Form 01-08-03 is programmed to 0=Enable (Default). Tone signaling of off hook single line telephone sets will not be heard if Form 01-08-03 is programmed to 1=Disable.

Programming

1. CO line must be programmed as Incoming Common Audible. Form 46-[CO]-07 (Day Service) or 46-[CO]-08 (Night Service). (CO=CO Line number).
2. Off Hook Ringing Cycle time may be adjusted. (Form 01-01-05)
3. If single line telephones are to receive audible tone over the handset while busy, Form 01-08-03 should be programmed to 0=Enable (Default). If no tone is desired, Form 01-08-03 should be programmed to 1=Disable.

Operation

Operation is automatic.

Off Hook Voice Announce

Description

Off Hook Voice Announce (OHVA) is an optional connection to any Superkey electronic telephone station equipped with a speaker phone. Through the use of OHVA, a station can be in conversation on the telephone handset and receive and respond to a voice announcement on the speaker phone portion of the telephone. The handset voice path is independent of the speaker phone path during OHVA. OHVA can be invoked by any station within the system.

Conditions

The station to receive OHVA calls must be a Superkey electronic telephone station equipped with a speaker phone.

Only one station can be accessed at a time through the OHVA.

Personnel who will frequently invoke the OHVA feature should have the OHVA function programmed as a DSS key on their Superkey electronic telephone set.

SK-824 The station to receive OHVA calls must have the OHVA wiring from the CCUA mother board voice path connected to it.

SK-200 OHVA channels require use of port 8 on a SK-STI/802 station card. The 8th port can only be used for the 7 remaining station ports that share the card.

Programming

Form 29-[port]-02, Port Specifications must be programmed for each station that is to be connected to the OHVA circuit. This parameter (29-[port]-02) must be set to [7] for OHVA to be available for that station.

Form 22 allows the assignment of an OHVA DSS key on the telephone.

Operation

To place an OHVA call, dial the extension or press the corresponding [DSS] pushbutton.

When busy tone is returned, press [1] or press [OHVA] key.

If the called station is on a handset call, the calling party will hear a tone burst and be connected directly to the speaker phone of the called party.

If the called station is on a speaker phone call, the calling party will continue to hear busy tone.

On Hook Dialing

Description

On Hook Dialing permits all Superkey electronic telephone sets to dial an intercom or external call without lifting the handset. The station user can make a call with the handset on hook. There is no need for the station user to lift the handset until the call is answered.

Conditions

This feature can only be accessed by a Superkey electronic telephone set.

Programming

None

Operation

To place an intercom call while telephone is on hook:

Press [DSS] key

OR

Press [SPK] key. Dial station number.

To place a CO call while telephone is on hook:

Press [CO] key. Dial desired number.

OR

If Dial [9] is active, dial [9]. You will be connected to a CO line. Dial desired number.

Operator Code

Description

Superkey electronic telephone systems allow selection of the digit required to access the system operator. The capability exists to access the operator by dialing [0] or [9], depending on system programming. This setting will also toggle the main trunk group selection access code.

Conditions

If the system is programmed for operator access by dialing [0], main trunk group access will be via the access code [9].

If the system is programmed for operator access by dialing [9], main trunk group access will be via the access code [0].

The "operator" is the first available station in the console group to which a station is assigned.

Programming

Operator Code, Form 01-06-05 determines whether the operator will be accessible by dialing [0] or [9]. Valid settings are:

Operator Code, (Form 01-06-05)	0=[0] for Operator [9] for Trunk Group	1=[9] for Operator [0] for Trunk Group
---------------------------------------	---	---

See also, Console Assignment, page 45 of this document.

Operation

A station that goes off hook and dials the valid operator code as per Form 01-06-05 will be routed to the first available station in his assigned console group.

Override

Description

Override allows certain stations the ability to intrude into the conversation of other stations. Override capability is a hierarchical feature. Stations are assigned an Override Level from 0 to 9. Within that hierarchy, a station may override another station of equal or lesser override status. Upon intrusion, an audible tone will be heard by all parties in the overridden conversation, to notify them that the conversation is about to be overridden.

See also, Monitor, page 114 of this document.

Conditions

The station being overridden must have an override level that is equal to or less than the station invoking the override.

A station with an override level of 0 cannot override any other stations.

Programming

Form 24-[station]-01, Override Level determines the hierarchy within the system. Valid settings for this option are from 0 to 9. A station with an override level of 0 cannot override any other stations.

Operation

1. A station user dials a busy extension (or presses a DSS key).
2. The user will hear a busy signal.
3. The station user dials [0].
4. An override tone will be given to the party being overridden. If equipped with LCD, the caller will receive a visual indication that he is being overridden.
5. A three-way conference is created. This conference will remain in place until one of the parties hangs up.

Note: If a station with a lower Override level attempts to override a station with a higher override level, the station will be returned a busy signal by the system. The override will not be allowed.

Paging

Description

This feature allows station users to provide audible notification through the telephones and if equipped, an external paging system(s).

Conditions

The Superkey electronic telephone system supports five paging methods:

1. Internal Zone (1-8).
2. All Internal Zones.
3. External Zone (1-2).
4. All External Zones.
5. All Call.

A station in Do Not Disturb will not receive paging.

An attention tone will be heard prior to any page so that personnel are alerted to a forthcoming page.

Programming

Internal paging zones are assigned to individual stations as a function of Group Assignment, Form 28-[station]-01. Valid settings are 1 through 8 and correspond to system Pickup Groups. See also, Group Assignment, page 95 of this document.

Any stations to be exempt from receiving paging may be programmed on Form 24-[station]-06.

Programmable options for this function are:

Paging Exempt, (Form 24-[station]-06)	0=Receive Paging	1=Exempt From Page
--	------------------	--------------------

In order to control Access To Paging, Form 24-[station]-05 controls individual stations' access to system paging. Valid options for this setting are:

Access To Paging, (Form 24-[station]-05)	0=Access	1=No Access
---	----------	-------------

Operation

For all stations, paging can be accomplished by the following:

1. Lift the handset or press [SPK], dial [#] or press [PAGE] key if programmed.
2. Dial Paging Type:
 - A. For Internal Zone Paging Dial [2]+[1-8#] (Eight zones in system).
 - B. For All Internal Zones Dial [1].
 - C. For External Zone Page Dial [3] plus Zone (1-2).
 - D. All External Page Dial [9].
 - E. For All Internal Zones and External Dial [0].
3. Make paging announcement.
4. Hang up telephone.

Paging, Meet Me

Description

Meet Me Paging allows a paged party to reply to a paging announcement.

Conditions

Only one station can answer a page.

In order for a station to access meet me page, another station must be connected to a paging function.

Programming

None

Operation

Operation of Meet Me Paging is as follows:

1. Station accesses paging (any mode, see Paging, page 126 of this document) and remains off hook.
2. The station wishing to "meet" the paging party goes off hook (or presses [SPK]) and dials [#]+[*].
3. The originating station is removed from the page circuit and placed in conversation with the "meet" station. Conversation may now be carried on as if it were a normal intercom conversation.

Passwords

Description

The Superkey electronic telephone system provides password protection for system programming, DISA, a master Toll Override password and a DISA monitor password.

The programming password is blank in system default database.

DISA password is 3472 in system default database.

Toll Override Password is 8655 in system default database.

The DISA monitor password is blank in system default database.

If a password is entered in the system database, any future access to the system will require the entry of the password.

Conditions

None.

Programming

Form 02-01 is the System Programming password. By default it is set to dddddddd, which is the symbol for "Don't care." any changes in the entry should be programmed with "Don't care" characters trailing the password. It may be changed to any numeric combination up to eight digits in length.

Form 02-02 is the DISA Access password. By default it is set to 3472dddd. Any changes in the entry should be programmed with "Don't care" characters trailing the password. It may be changed to any numeric combination up to eight digits in length.

Form 02-03 is the Toll Override password. By default it is set to 8655dddd. Any changes in the entry should be programmed with "Don't care" characters trailing the password. It may be changed to any numeric combination up to eight digits in length.

Form 02-04 is the password for DISA access to either of the two door phones or to monitor a station via DISA. By default it is programmed to "ddddddd." In any situation, if DISA is activated on the system, this password should be programmed with some code. As with other passwords, it should have any un-programmed trailing digits programmed as "don't care" digits.

Note: "Don't Care" is programmed by pressing the [DND] key.

Operation

For entry into system programming, the following steps apply:

1. From a Superkey electronic telephone set, press [PGM].
2. Press [2].
3. Enter Password (if programmed).
4. Press [SAVE].

For DISA Operation, see Direct Inward System Access, page 58 of this document.

For Toll Override operation, the following steps apply:

Stations that have no CO access (Class 8) may not utilize the toll override password.

1. Access a CO line (either by dialing 9 or by pressing a line key).
2. Press [PGM][ACCT].
3. Enter Toll Password.
4. Press [SAVE].
5. If the password is accepted, you will be released from any system toll control requirements. If an incorrect password is entered, the system will superimpose busy tone on the CO line and disable the keypad from dialing on the CO line.

Pause

Description

Pause is used to tell the Superkey electronic telephone system to wait between digits while dialing, using speed call. The most common uses of pause are while waiting for CO dial tone and while waiting for a dial up service to answer.

Conditions

If a pause is required that is longer than the length of time programmed for an individual pause, multiple pause entries may be placed in a dialing string to provide a longer pause time.

Programming

Form 01-01-06, Pause Time Duration defines the length of time that dialing is suspended when a pause command is encountered in a dialing string. The valid settings for this parameter are:

Pause Time Duration, Form 01-01-06		0=400 milliseconds	1=600 milliseconds
2=800 milliseconds	3=1000 milliseconds	4=1200 milliseconds	5=1400 milliseconds
6=1600 milliseconds	7=1800 milliseconds	8=2000 milliseconds	9=2200 milliseconds

When programming a speed dial number (either station or system), the hold button will enter a pause command. LCD telephone sets will display the pause as [P] in the dialed number display.

Note: Each pause programmed in a dialing string counts as one digit in the overall length of the stored number.

Operation

Operation is automatic.

Pick Up Groups

Description

Pickup groups provide the ability to answer a call ringing at another telephone within your own group by dialing an access code.

Conditions

The station you wish to pick up must be in your group in order to answer using the pickup group code.

Programming

Form 28-[station]-01, Group Assignment must be programmed to the same number for every station that is to be in the same group. There are 8 groups available in the system. The assignment of groups is arbitrary, but all members that wish to be in the same group must share the same group number.

Operation

To pick up within your own group:

1. Lift Handset or Press [SPK] button (This step is optional).
2. Dial [*] or press [PICKUP], [4].
3. You are connected to the calling party.

You may also access the pickup function through the Feature Menu. See Feature Selection from Menu, page 85 of this document.

Port Specifications

Description

Port Specifications, Form 29 of system programming contains information for the system administrator to observe about system configuration and operation. It provides both a method for checking and in some minor instances, changing the information and configuration of the system.

Conditions

The information contained on this form is not exhaustive of the system resources. There are some instances where the information shown is in error. However, this is usually due to changes made to the system while the system is operational.

Programming

Form 29 has only three active parameters. All others are reserved for future use. The format for Form 29 is 29-[port#]-xx, where:

SK-824 [port#] is the target port being examined. Port numbering is for stations only and follows this format:

- Ports 11-18 = the eight station ports on station card 1
- Ports 21-28 = the eight station ports on station card 2
- Ports 31-38 = the eight station ports on station card 3

SK-200 [port#] is the target port being examined. Port numbering is for stations only and follows a three digit format, where:

- The first digit is the cabinet number (from 1 to 4).
- The second digit is a slot number (from 0 to 9).
- The third digit is the circuit number on the card (from 1-8).

The information provided for each port is:

29-[port#]-01 = Station Number. This Form will show the existing station extension number. It may be changed to any valid system station extension number (10-69, 100-699, 1000-6999). The length of the station extension number is determined by the setting in Form 01-03-06, Station Number Digit Length. For more information, see Station Number Digit Length, page 158 of this document.

Note: A port equipped with a Superkey DSS console must be programmed with the same station extension number as the station to which it is associated. For example, if the DSS is to be used in conjunction with station 14, the port that will operate the DSS must also be programmed as station extension number 14.

Form 29-[port#]-02 = Equipment Type. This parameter indicates the type of telephone set equipment that is detected by the Superkey electronic telephone system. The settings for this parameter are:

Equipment Type, (Form 29-[port#]-02)	0=No Equipment Detected
1=Superkey Telephone without LCD	2=Superkey Telephone with LCD
3= SK-824 Dual Port Connection SK-200 Single Line Configured as Dual Port Emulation	4=Single Line Telephone Set
5=DSS Console Set	6=Not Applicable to Superkey SK-824
7=Superkey Telephone Set with OHVA function connected.	8=Voice Mail Port

It is possible in some instances due to cable length and other factors, that the system may report erroneous information on the equipment type. In those instances, the correct type of equipment should be entered on this form.

29-[port#]-03 = DSS Key Group Assignment. This parameter is only of value if it is assigned to a port that is connected to a DSS Console. In that case, this parameter must be set to [1].

Operation

None.

Power Up Volume Adjust

Description

Superkey Electronic Telephone Sets provide default levels for all electronic sets for Ringing, Handset Volume, and Speaker Volume. The telephone sets also allow station users to program their own preferences to override the factory default settings. After a power failure or whenever a telephone set is disconnected from its cable, the telephone is restored to the factory default settings.

If Power Up Volume Adjust is enabled, the system will store and reinstate the user volume preferences instead of the power up default settings after a power failure or set disconnection and reconnection.

Conditions

None

Programming

Form 01-11-01, Power Up Volume Adjust is set to the customer's preference as to whether the system will re-instate default settings or user settings after a power failure or temporary station disconnection. This option is set at default to enable the power up adjustment to user specifications. This is the normal operation. Under normal circumstances there is no need to disable this option, but in some cases it may be desirable for service personnel to temporarily disable this option when performing initial tests on the system. Valid settings are:

Power Up Volume Adjustment Control Form 01-11-01	
0=Power Up Sequence Disabled Telephones will return to Factory Default settings	1=Power Up Sequence Enabled Telephones will return to User selected settings.

Operation

Operation is automatic. If power up sequence is enabled, each electronic set will perform a power up adjustment. This may cause temporary changes in volume for ringing telephone calls or new calls that are answered during the power up test. The telephones are fully operable and the condition will cease when the power up sequence is completed. LCD sets will display a power up sequence that may overwrite incoming call information. This will cease as soon as the power up sequence has complete.

Prime Line Select

Description

Prime Line Select connects a Superkey electronic telephone set directly to an outside CO line when the handset goes off hook.

When Prime Line Select is active, an idle station will be connected directly to the first CO line in its Dial 9 group when the handset is lifted. When Prime Line Select is inactive, lifting the handset will return intercom dial tone. In either case, pressing the [SPK] key will return intercom dial tone.

Conditions

Prime Line Select works only in conjunction with Superkey electronic telephone sets.

Dial 9 Activation (Form 01-04-02) must be enabled on the System.

One or more CO lines must be programmed in the Dial 9 group that is assigned to a station.

Programming

Form 01-04-02 (Dial 9 Activation) must be programmed as 1 (Enable) in order for the system to allow a dial 9 group to be accessed.

Form 28-STN-04 (Station Dial 9 group) must be programmed to the appropriate CO line group for the station. Valid settings are 1 through 8 and correspond to the eight groups that may be programmed on Form 44.

Form 44-Group (CO Line Groups) must be programmed to have CO lines in any group that is assigned through Form 28-STN (Station Dial 9 Group) as listed above.

Operation

To activate or de-activate:

While the telephone is idle, Dial [7][7][1].

Prime Line Select will be toggled off if it was previously on. It will be toggled on if it was previously off.

Note: When Prime Line Select is operational, you may access intercom dial tone by pressing the [SPK] button before lifting the handset.

Prime Line Select is not active when your telephone is ringing.

If the system is powered down or turned off for any reason, the Prime Line Select Information will not be reinstated upon system power up.

Privacy Release

Description

Privacy Release allows a station involved in a call to permit another station to enter the conversation. The same function can also be accomplished through the use of the conference function. The difference between conference (see Conference, page 43 of this document) and Privacy Release is that for Privacy Release, the station user involved in the call does not need to place the existing call on hold to bring in another station.

Conditions

When a Privacy Release is invoked from a station, the first person to dial the station that invoked the privacy release is connected into the telephone call. The telephone call then becomes private to the parties connected on the call.

Privacy Release can be invoked up to 7 times during a telephone call. Each time the [PRIVACY] pushbutton is pressed, the Privacy Release is invoked or the total number of additional stations that may access the Privacy Released conference is increased. Superkey electronic telephone sets equipped with LCD will show PriRIs X. The X indication shows the number of times the [PRIVACY] key was pressed and the total number of stations that may enter the conversation. For example, if a station involved in a call presses the [PRIVACY] key three times while on a call, up to three other stations may dial into the conversation. Any number of internal parties may join a conversation as long as one of the stations in the conversation permits it.

Single line telephone sets cannot initiate Privacy Release.

Single line telephone sets can enter a conversation where a Superkey electronic telephone Set has initiated the Privacy Release.

Programming

In order to provide Privacy Release, a [PRIVACY] key must be programmed on the station.

Operation

1. A station is on a call.
2. Press [PRIVACY].
3. Another station dials the extension number of the station that pressed [PRIVACY].
4. The additional station (from step 3) is added to the conversation.
5. Up to seven additional internal parties can be allowed into the conversation by repeating steps 2 through 4 above.

Relay Assignment

Description

SK-824 Relay Assignment provides the capability to utilize the relays present on the CO line cards of the Superkey SK-824 electronic telephone system. The SK-824 has a total capacity of 2 relays. Each CO line card is equipped with one (1) relay.

SK-200 has a total capacity of 12 relays. Each cabinet provides support for three relays. To utilize relays, the optional SK-RELAY/2 must be equipped for a cabinet.

The function of the relays is controlled on Form 08-[relay]. The possible assignments for the relays are listed in the Programming section of this page.

Conditions

SK-824 One relay is provided per CO line card. Two relays maximum can be equipped per system.

SK-200 One relay box (three relays) may be connected to each SK-200 cabinet, up to a total of four cabinets.

Each relay is a dry contact closure.

Programming

Relay Assignment, Form 08-[relay] assigns each relay to its function. The entries for Form 08-[relay] are two digit entries. Valid assignments are:

Relay Assignment, (Form 08-[relay])		00=No Operation
01=Music On Hold	02=Door 1 Relay	03=Door 2 Relay
04=Line Loud Bell	05=Station Loud Bell	06=System Reminder
10=All Zone Page	11=External Zone 1 Page	12=External Zone 2 Page

Operation

Music On Hold - Activates relay closure whenever a station or CO line is placed on Hold in the system.

Door 1 / 2 Relay - Provides a two second closure when the digit [0] is dialed while in conversation with a doorphone.

Line Loud Bell - Provides an interrupted relay closure when a CO line that is programmed to ring a loud bell receives an incoming call. See CO line programming, page 40 of this document.

Station Loud Bell - Provides an interrupted relay closure when a station is called that has been programmed to activate a relay on Form 24-[station]-04.

Note: A station that is programmed to ring on incoming CO line calls that is also programmed to use the Station Loud Bell will cause the Loud Bell to ring any time the telephone rings.

System Reminder - Provides a continuous relay closure for the duration of any timed system reminder. See also, System Reminder on page 161 of this document.

All Zone Page - Provides a continuous relay closure for the duration of an all zone page. See also, Paging, page 126 of this document.

External Zone 1 Page / External Zone 2 Page - Provides a continuous relay closure for the duration of an external zone 1 / 2 page. See also, Paging on page 126 of this document.

Reset Data

Description

Reset Data, Form 05 allows all system data to be erased. It may also be used to provide less than a total system data reset. The system data may be reset, but the system speed call can be left intact if desired.

It may also be desirable in some situations to reset the system for lodging applications where all stations are without the ability to place calls on hold and split calls. Administrative stations may then be programmed so that Hold can be used.

Conditions

A complete system reset should always be performed on a new system, prior to system programming.

Programming

Form 05 provides the ability to reset system data. This form should be used with care. It is capable of completely removing all system database information. There is no ability to restore a database within the system after it has been reset. Valid settings for Form 05 are:

System Data Reset, (Form 05)	1=Reset All Data except System Speed Call
2=Complete System Reset	3=Reset with Hold and Split Disabled

Note: If [3] is entered on Form 05, all system data will be reset and the system will return to default database except that Form 25-[station]-01 will be set to [1] (Hold feature restricted) and 25-[station]-03 will be set to [1] (Call Split Feature restricted).

Operation

Access to Form 05 is through normal system programming. See System Programming, page 160 of this document.

Ring On / Ring Off Timers

Description

The Ring On Timer, Form 01-02-07, determines the minimum amount of time that ringing voltage must be applied to a CO line for the Superkey electronic telephone system to identify a line as having an incoming call. Any ringing signal that does not meet or exceed the minimum time defined will be ignored. This is useful in applications where there is a significant amount of noise present on CO lines that could cause false ring signal.

The Ring Off Timer, Form 01-02-08, determines the maximum time that a CO line will ring without further ringing voltage from the Central Office.

The combination of these two timers provide the ability to "fine tune" the Superkey electronic telephone system to work with Central Offices of varying ringing cadences.

Conditions

None

Programming

Ring On Timer, Form 01-02-07, valid settings are listed below:

Ring On Timer, (Form 01-02-07)		0=120 milliseconds	1=160 milliseconds
2=240 milliseconds	3=360 milliseconds	4=440 milliseconds	5=560 milliseconds
6=640 milliseconds	7=760 milliseconds	8=840 milliseconds	9=960 milliseconds

Ring Off Timer, Form 01-02-08 parameters are listed below:

Ring Off Timer, (Form 01-02-08)		0=2 seconds	1=2 seconds
2=2 seconds	3=3 seconds	4=4 seconds	5=5 seconds
6=6 seconds	7=7 seconds	8=8 seconds	9=9 seconds

Operation

Operation is automatic.

Ring Line Immediate Connect

Description

This function allows a station user to pick up the handset and be connected directly to a ringing line. If more than one line is ringing on the telephone set, the telephone set will be connected to the oldest call ringing.

Conditions

The incoming line must be programmed for ringing in order to be directly connected to the station.

Programming

Line ringing assignment.

Operation

1. Station rings. Station user picks up handset.
2. Outside line is connected to station.
3. If telephone set is equipped with LCD, display will show name of CO line if programmed.

Room Monitor

Description

Room Monitor provides a method for any station to monitor a specific idle telephone location.

Conditions

The station to be monitored should be a Superkey electronic telephone equipped with speaker phone capability. Room monitor can be performed on a Single line telephone, but the audio quality will be much lower than from a Superkey electronic telephone set.

Programming

None Required.

Operation

From the telephone set that is to be monitored:

(If activating Room Monitor on a single line telephone, lift the handset, and then proceed).

Dial [7][7][0]. The LCD (if equipped) will display:

XX Room Monitor Mon May.03 12:59

XX= Station number. (The date is shown for illustration purposes only. The actual time and date will be posted on the LCD).

In order to remove a telephone from Room Monitor mode, lift the handset and replace it. Room monitor mode will be cancelled.

To monitor:

While a station is in Room Monitor Mode, any station within the system can monitor the ambient room sounds by dialing the station number that is in the monitor mode. The connection made is a two way connection to that station. It is not a silent monitor mode.

Any station that calls a station in the room monitor mode may terminate the monitor session by hanging up.

The station that is in Room Monitor mode will remain available for room monitor until it is removed from the Room Monitor mode.

Saved Number Redial

Description

Saved Number Redial permits a station user to store a number in memory for use at a later time. This function differs from Last Number Redial and Automatic Last Number Redial in the fact that it requires active user participation and that the stored number will remain available after other calls have been made.

This feature also allows a station user to repeatedly dial a number that is busy or does not answer. Once invoked, it will automatically call the Saved Number a pre-determined number of times.

Conditions

There are two methods of storing numbers for Saved Number Redial, Automatic and Manual.

Total stored digits cannot exceed 32.

Saved Number Redial is not available to single line telephone sets.

Programming

Form 01-02-03, Auto Redial Wait for Answer Time determines the amount of time that the telephone will remain off hook, waiting for an answer. It should be noted that should the called telephone number answer during this time period, the call will still be abandoned at the end of this time period if no action is taken by the station user. The valid parameters for this options are listed below:

Auto Redial Wait for Answer Timer Form 01-02-03			1=10 seconds
2=20 seconds	3=30 seconds	4=40 seconds	5=50 seconds
6=60 seconds	7=70 seconds	8=80 seconds	9=90 seconds

Form 01-05-07, Auto Redial Attempts controls the amount of times that Saved Number Redial will Auto dial a Saved Number before abandoning any further attempts. Valid settings are listed below:

Auto Redial Attempts Form 01-05-07		0=No Attempts	1=10 Attempts
2=20 Attempts	3=30 Attempts	4=40 Attempts	5=50 Attempts
6=60 Attempts	7=70 Attempts	8=80 Attempts	9=90 Attempts

Form 01-05-08, Auto Redial On Hook Timer programs the idle interval between call attempts. The valid options for this parameter are listed below:

Auto Redial On Hook Timer Form 01-05-08		0=10 seconds	1=20 seconds
2=30 seconds	3=40 seconds	4=50 seconds	5=60 seconds
6=70 seconds	7=80 seconds	8=90 seconds	9=100 seconds

Operation

Saving a Number:

Automatic:

1. Dial a telephone number.
2. Any time prior to disconnection of the call, press [SAVE].
3. The system will store the saved number until it is overwritten by either another Automatic Entry, or a Manual entry.

Manual:

1. While on an outside call, press [SAVE].
2. Dial a telephone number (No DTMF tones will be heard).
3. The number will be saved until it is overwritten by either another Automatic Entry, or a Manual entry.

Auto Saved Number Redial :

While telephone is on idle, press [SAVE] pushbutton. The Superkey Electronic Telephone system will access the line that was in use when the number was saved if it is available. If the line is not available, the

system will access another line in the user's dial 9 group. The digits will be outpulsed by the Superkey Electronic Telephone system.

The Auto Saved Number Redial portion of the function is canceled if any station user action is taken. Pressing the [MIC] button or lifting the handset while a call is in progress will cancel the off hook timer and the call will remain in place. Pressing the [SPK] button while the call is in progress will abort the Auto Redial function. Placing another call during the On Hook timer (while the telephone is idle) will abort the Auto Redial function.

Note: Pressing the [SAVE] pushbutton while on any outside line will automatically overwrite any number stored in the Saved Number Redial memory.

Sensors

Description

System Sensors provide the ability to notify station users of activation of sensor circuits within the system.

The SK-824 allows up to three possible sensors per system (one on each station card).

The SK-200 is equipped with 2 sensors per SK-IPC/2 card. This allows 2 sensors per cabinet up to a total of 8 sensors on a 4 cabinet system.

The two types of alarms generated by activation of a sensor circuit are Latching and Non-Latching.

Latching alarms will be activated when the sensor condition changes and will remain activated until reset by access code or approximately 10 minute time out. During this time, selected stations in the system will receive ringing notification of alarm activation.

Non-Latching alarms will be activated when the sensor condition changes. If the sensor condition returns to the idle condition, the alarm will be removed. The only method of removing a non-latching alarm is to correct the condition that caused the alarm.

Conditions

The Superkey SK-824 system supports one sensor per station card. A maximum of three sensors may be used on an SK-824.

The Superkey SK-200 supports two sensors per SK-IPC/2 card. A maximum of eight sensors may be used on an SK-200 (4 cabinet system).

Sensors may be programmed to accept either an open or closed loop condition to invoke an alarm.

Programming

Form 09-[SENSOR]-01 selects the particular use for each of the sensors in the system:

Form 09-[SENSOR]-01		
0=Sensor Disabled	1= Latching Operation	2= Non-Latching Operation

Form 09-[SENSOR]-02 determines the idle state for the sensor:

Form 09-[SENSOR]-02	
0=Normally Open	1=Normally Closed

Sensors may also be programmed with a name so that if more than one sensor is active in the system, the individual sensors in use may be quickly identified. This is done by pressing the CHanGe key (DSS key #3) while in Form 09-[SENSOR].

Ringin assignments for each of the three sensors are programmed on Form 17-[SENSOR]. Up to sixteen stations may be programmed to be notified when a sensor circuit is activated. As an alternative, you may enter "99" in the first station location for an assignment on Form 17. If "99" is entered, all stations in the system will be notified when the sensor circuit is activated.

Operation

Once installed, the activation of sensor circuits is controlled by the external equipment to which they are connected. Activation will cause selected telephones in the system to ring.

Latching Alarm - This alarm will ring all telephones for approximately 10 minutes, as soon as it is activated. The alarm may be silenced by dialing [7], [7], [7] from any telephone.

Non-Latching Alarm - This alarm is activated when the sensor changes from its programmed idle state. When it is activated, selected telephones in the system will ring. The alarm will stop when the sensor is returned to its normal idle state.

Silent Monitor

Description

Silent Monitor is a term used to identify the three different types of monitor that are available in the Superkey electronic telephone system. For information on the three types of silent monitors that are available.

Conditions

See Conversation Monitor, page 46 of this document.

See Environment Monitor, page 78 of this document.

See Room Monitor, page 140 of this document.

Programming

See Conversation Monitor, page 46 of this document.

See Environment Monitor, page 78 of this document.

See Room Monitor, page 140 of this document.

Operation

See Conversation Monitor, page 46 of this document.

See Environment Monitor, page 78 of this document.

See Room Monitor, page 140 of this document.

Single Digit Dialing

Description

Superkey electronic telephone systems have the capability to provide access to up to five stations by a single keystroke. Incoming DISA callers may also have access to this function. For more information on DISA Single Digit Dialing, please see page 65 of this document.

There are up to eight groups programmable on each Superkey system. With the group capability, single digit dialing can be set up for intra-department single digit access. Through the use of groups, any work group of up to five stations can be set up for single digit access.

Conditions

Only digits [1]-[5] are allowed for single digit access.

Eight single digit groups are available per system.

If Single Digit Dialing is enabled on the system, five stations only may be accessed by a single digit dialing. Should a station user wish to dial a station that is not included in his Single Digit Dialing Assignment, the station user must dial [6] + the actual station number of the desired station.

On a system with Single Digit Dialing enabled, all stations will be required to dial [6] + the actual station number to call other stations. However, DSS calling will not be affected.

For further information on system Numbering plans, see Numbering Plan, page 120 of this document.

Programming

Single Digit Dialing, Form 01-04-07 controls system activation of single digit dialing. Valid settings are:

Single Digit Dialing (01-04-07)	0=Disabled	1=Enabled
--	------------	-----------

Intercom Single Digit Assignment, Form 07-[group]-[station] is used to assign destination stations for each of the five available single digit positions in a group. Each location is assigned a station number, so that it can be reached by dialing the corresponding single digit. For example:

If the system is programmed:

- 07-01-01 = Station 21
- 07-01-02 = Station 22
- 07-01-03 = Station 17

A station that is assigned to group 01 will be able to call station 21 by lifting the handset (or pressing the [SPK] key) and dialing [1]. They will be able to dial station 22 by dialing [2]. They can call station 17 by dialing [3].

Station Specifications, Form 28-[station]-01 determines to which Intercom Single Digit Assignment Group (Form 07, above) an individual station belongs. The combination of this programming option and the Single Digit Assignment Groups allow the Superkey Electronic Telephone System to provide up to eight different single digit dialing patterns. See also, Group Assignment, page 95 of this document.

Operation

1. Lift the handset (or press the [SPK] key).
2. Dial a single access digit ([1]-[5]).
3. The station programmed in the single digit assignment is called. Normal intercom calling rules apply. A busy station will return busy tone, a station in DND will return DND busy tone, etc.

Single Line Telephone Support

Description

All Superkey Electronic Telephone Systems have the capability to operate in conjunction with non-proprietary, industry standard, single line telephone sets. Depending on the particular station card used in the system, single line telephones may be connected and used for intercom and external telephone calls.

Conditions

An SK-824 station circuit must support either single line telephone, or hybrid functions.

Single Line Telephone Support is provided on the SK-200 through the use of an SK-ST1/082 single line station card.

Programming

Basic single line operation is automatic. However, there are several parameters that are under system control that may be modified to suit individual applications.

Single Line Telephone Dial Tone Timeout, Form 01-02-01, determines the length of time that a single line telephone can receive dial tone before digits are dialed. If this timer expires, the station is returned busy tone and Superkey electronic telephone system resources are re-allocated for use by other stations. Valid settings for Form 01-02-01 are listed below:

SLT Dial Tone Timeout (01-02-01)		0=1 second	1=3 seconds
2=5 seconds	3=7 seconds	4=9 seconds	5=16 seconds
6=31 seconds	7=61 seconds	8=121 seconds	9=255 seconds

Single Line Telephone Inter-Digit Timeout, Form 01-02-02, determines the maximum allowable time between dialed digits on a call. This timer comes into effect after the first digit has been dialed. If the timer expires and no outside line access has occurred, the system will return busy tone and release Superkey system resources for use by other stations. If outside line access has occurred and the inter-digit timer expires, no further toll checking will occur. Valid settings for Form 01-02-02 are listed below:

SLT Inter-Digit Timeout (01-02-02)		0=1 second	1=3 seconds
2=5 seconds	3=7 seconds	4=9 seconds	5=16 seconds
6=31 seconds	7=61 seconds	8=121 seconds	9=255 seconds

Note: It is important to make certain that DTMF receivers are not removed from Single Line Telephone circuits while it is still possible to dial on CO lines. Failure to keep DTMF receivers on line while dialing is possible can result in toll fraud and abuse on your telephone lines. If you are in doubt of the proper timing parameters, contact an engineer from your local telephone company and determine your operating telephone company's timing parameters for First Digit Timer and Inter-digit Timer.

Single Line Telephone Release Time, Form 01-02-04, sets the timing parameter to indicate a disconnect by a single line telephone. Any open loop condition presented to the Superkey Electronic Telephone System by a single line telephone that exceeds the timing parameter in Form 01-02-04 is treated as a disconnect (hang up). The parameters are controlled by the settings listed below:

SLT Release Time, (01-02-04)		0=40 milliseconds	1=80 milliseconds
2=120 milliseconds	3=400 milliseconds	4=600 milliseconds	5=800 milliseconds
6=1000 milliseconds	7=1200 milliseconds	8=1400 milliseconds	9=1600 milliseconds

Single Line Telephone Hold Signal, Form 01-02-06, sets the timing parameter for a station hook switch "FLASH." This signal is used by single line telephone to place calls on hold so that the single line telephone can perform other functions. A hook switch flash that is less than the minimum setting programmed on Form 01-02-06 will be ignored. A hook switch flash that is equal to or greater than the setting, but less than the SLT Release time listed above will be considered by the Superkey Electronic Telephone System as a hook switch flash. The valid timing parameters are:

SLT Hold Signal, (01-02-06)		0=80 milliseconds	1=100 milliseconds
2=200 milliseconds	3=300 milliseconds	4=400 milliseconds	5=500 milliseconds
6=600 milliseconds	7=700 milliseconds	8=800 milliseconds	9=900 milliseconds

Single Line Hold Function, Form 01-06-07, determines the action required in order to place a call on hold by a single line telephone set. The valid options are as follows:

Setting	Action Required
0	Press Hook switch (Flash)
1	Press Hook switch (Flash), Dial [7]
3	Press Hook switch (Flash), Confirmation Tone, Dial [7]

Single Line Telephone Busy Remind Tone, (Form 01-08-03), determines whether single line telephones in the system will receive Camp-On tone for calls camped-on to a busy station and if hold recalls will cause a camp-on tone to be heard. This option does not affect the function of camp-on or hold recall. It only determines whether audible tones will be used to remind single line users that the call is waiting. Valid settings are:

SLT Busy Remind Tone, (Form 01-08-03)	
0=Enable	1=Disable

Single Line Telephone Programming Digit, Form 01-08-05 sets the first number used in the programming of features on single line telephones. The list of valid entries is below:

SLT Programming Digit Form, (01-08-05)		0=Disabled	1=x
2=2xx	3=3xx	4=4xx	5=5xx
6=6xx	7=7xx	8=7xx	9=7xx

Note: If Form 01-08-05 is set to 0 (Disabled), single line telephones will not have the ability to utilize any programmable features.

Operation

Operation of Single Line Telephones is detailed in the Single Line Telephone User's Guide.

Speed Dial (Personal)

Description

Personal Speed Dialing capabilities may be assigned to Superkey Electronic Telephone Sets and single line telephones. A Superkey Electronic Telephone set with personal speed dialing capabilities may have the ability to store speed dial numbers by either numeric, DSS or both methods. A single line telephone set may store speed dial numbers through the use of numeric speed dial. The two types are described below:

Numeric. A station with numeric storage capabilities can store 10 telephone numbers of up to 30 digits in length. These entries are unique to each station and are identified by the entry numbers 00 through 09.

DSS. A station with DSS storage capabilities can store 10 telephone numbers of up to 30 digits in length. As with the numeric entries, they are unique to each station. DSS speed dial numbers are associated with DSS key 1 through DSS key 10. Single Line Telephones cannot utilize DSS speed dialing entries.

If a station is assigned access to both types of personal speed dial, that station has access to a total of 20 personal speed dial locations. Both types of personal speed dial operate the same way. The only difference between the two is the method of activation.

Conditions

The total number of available personal speed dial numbers is determined through system programming. Please consult the Programming Forms Manual for the SK-824 or the SK-200 to determine the method for allocating and assigning personal speed dial locations.

Programming

The assignment of personal speed dial numbers is determined by Form 01-04-06. Please consult the Programming Forms Manual for the SK-824 or the SK-200 to determine the method for allocating and assigning personal speed dial locations.

Form 30-[station]-01, Numeric Speed Dial Assignment and Form 30[station]-02, DSS Speed Dial Assignment determine the speed dialing capabilities of each station. Speed dial assignment is performed in blocks of ten, numbered from 01 through system limits.

Note: While it is called personal speed dial, it is possible to assign the same personal block to more than one station. If this occurs, all stations sharing a block will have access to all programmed numbers within that block. Also, all stations sharing a block will have the capability to program speed dial entries within the block.

Programming Personal Speed Dial:

1. Press [PGM]. Press [SPD].
(This function may also be accessed from the features menu. For more information, see Feature Selection from Menu, page 85 of this document).

If the station is assigned as an operator the LCD display will show:

SYS SPEED * STN SPEED #

If the station is not assigned as an operator the LCD will display as shown in step 2 below. Step 2 will not be necessary on stations that are not programmed as operator stations.

2. Press [#].
LCD will display:

DIAL SPEED #0-9 OR PRESS DSS

3. Enter the Speed Dial location to be programmed or press DSS key 1-10.
LCD will display:

SELECT LINE PRESS 9 NO SELECT

-
4. If a specific line is to always be used, press the DSS button associated with the line. If the first available line in your Dial 9 group is to be used, enter [9].
 5. Enter the telephone number to be stored in the personal speed dial location. Press [SAVE].
 6. LCD will display:

STORE WITH NAME?
1=YES 2=NO

7. Press [1] to store with a name. LCD will display:

ENTER NAME

8. Enter the name using the keypad as described in the Dial By Name section 55 of this document
9. When the entry is satisfactory, press [SAVE]. The telephone will return to idle.

Note: Special characters may be programmed in speed dial locations:

[HOLD] = A temporary pause in dialing

(See Form 01-01-06, Pause Time Duration for the parameters).

[TSF] = A temporary loop disconnect.

(See Form 01-02-05, Keyphone Flash Time for the parameters).

[MSG] = Change signalling from pulse to DTMF

(Applicable only on CO lines programmed on Form 46-[CO]-02 as Pulse).

[MIC] =Allows selection of an individual CO line number. One press moves cursor to the CO line position. Another press returns you to speed dial programming.

[VOL↑] = Moves to the next personal speed dial number. (If both DSS and numeric entries are available, this key will cycle through all numeric and DSS keys. They are noted by the indication D or N in the upper portion of the LCD display next to the speed dial entry number).

[VOL↓] = Moves to the previous personal speed dial number. It operates similarly to the Volume Up key, listed above.

Flash, Pause, and Pulse to Tone conversion can be stored as part of a speed dial number. Each of these entries counts as a digit in the overall number of digits.

Operation

Note: The handset may be lifted if desired before the speed dial is started. It may be picked up at any time during the call. If the dialing telephone is a Superkey Electronic Telephone Set equipped with a speaker phone, the call can be completed using the speaker phone.

1. Press [SPD].
2. Dial numeric personal storage location (00-09) or press DSS key desired.
3. The system will turn on the speaker in the telephone set, access a CO line and dial the stored number.

Speed Dial (System)

Description

System Speed Dial allows frequently dialed numbers to be stored within the system for easy access by station users. System numbers may be accessed by all stations in the system. Toll restriction may apply to none, some or all system speed dial numbers.

The Superkey electronic telephone system also supports personal speed dialing capabilities. Please refer to SPEED DIAL (PERSONAL) on page 149 of this document for further information.

Conditions

Flash, Pause, and Pulse to Tone conversion can be stored as part of a speed call number. Each of these entries counts as a digit in the overall number of digits.

A specific CO line may be selected as a part of the number stored and does not count as a digit to be stored. If a station user prefers to access a member of the dial 9 group, there is no need to program a CO line pushbutton.

Programming

Form 01-04-06, Speed Dial Distribution determines the system distribution of speed dial. Please consult the Programming Forms Manual for the SK-824 or the SK-200 to determine the available parameters for this setting.

Each Superkey electronic telephone set may be given access to two types of personal speed dialing capabilities, Numeric and DSS. For an explanation of personal speed dial see SPEED DIAL (PERSONAL), page 149 of this document.

If Dial By Name, Form 01-09-01 is programmed on the system, the total number of available speed dial entries is reduced by half the number as listed on Form 01-04-06 .

System Speed Dial can be programmed in two ways. Form 06-nnn (nnn=Speed Dial entry) can be programmed while in system programming or through the method listed below. If speed dial is programmed while in system programming, the first two steps, below may be omitted. System Speed Dial must be programmed from an attendant position.

1. Press [PGM]
2. Dial [SPD]. (This function may also be accessed from the features menu. For more information, see Feature Selection from Menu, page 85 of this document).
3. Enter speed dial location (100-599 for system speed dial).
4. If a specific CO line is desired press [MIC] and enter the two digit CO line (01-08). If the dial 9 group is to be used, skip this step.
5. Dial the telephone number to be stored.
6. Press [SAVE].

Note: Special characters may be programmed in speed dial locations:

[HOLD]	= A temporary pause in dialing (See Form 01-01-06, Pause Time Duration for the parameters).
[SPK]	= A temporary loop disconnect. (See Form 01-02-05, Keyphone Flash Time for the parameters).
[MIC]	= Change signalling from pulse to DTMF (Applicable only on CO lines programmed on Form 35-[CO]-02 as Pulse).
[REDIAL]	= Moves programming cursor to the left, useful when correcting mistakes.
[MSG]	= Moves programming cursor to the right.

Note: Superkey electronic telephone systems may be programmed to allow some system speed dial numbers to be exempt from toll control. See SPEED DIAL UNRESTRICTED, page 153 of this document.

Operation

Note: It is not necessary to lift the handset on Superkey electronic telephone sets before dialing, but a station user may lift the handset before, during or after the steps below have been completed.

To dial a system speed call number:

1. Press [SPD].
2. Dial the three digit code of the number desired (100-999 or as programmed on Form 01-04-06).

Speed Dial (Unrestricted)

Description

Some applications may have need for the ability to have a block of numbers that are exempt from normal system toll restriction. In applications where the need exists, the Superkey electronic telephone system provides the ability to exempt any multiple of 10 system speed dial numbers from normal system toll checking. When a group of numbers is made exempt, any station in the system can dial them, regardless of the toll class of the station.

Conditions

Speed Dial is available only to Superkey electronic telephone sets.

Programming

Form 01-05-03, Speed Dial Unrestricted (Hundreds group) works in conjunction with Form 01-05-04, Speed Dial Unrestricted (Tens group) to determine the cutoff point below which toll checking does not occur. The valid parameters are listed below for Form 01-05-03 and Form 01-05-04.

Speed Dial Unrestrict (100s) Form 01-05-03		0=DISABLED	1=100
2=200	3=300	4=400	5=500
6=600 (SK-200)	7=700(SK-200)	8=800(SK-200)	9=900(SK-200)

Speed Dial Unrestrict (10s) Form 01-05-04		0=00	1=10
2=20	3=30	4=40	5=50
6=60	7=70	8=80	9=90

For example: If 50 toll exempt speed dial numbers are needed.
 Form 01-05-03 = 1 and Form 01-05-04 = 5
 All speed dial numbers from 100 to 150 will be exempt from toll checking.

Speed Dial entries are programmed by the system operator as described in SPEED DIAL (SYSTEM) on page 151 of this document.

Operation

Operation is defined by system parameters.

Station Lock

Description

Station Lock is available to all Superkey electronic telephone sets. This function allows a station user to lock the telephone so that outgoing calls cannot be made. This provides a level of security to the individual station user when the telephone is unsecured and the possibility exists for telephone abuse. Station lock can be invoked from the individual station or by the system operator. When locked, a station is considered Toll Class 9, which is restricted from dialing anything on outside lines by system default.

Once locked, a station can only be unlocked by the last security code used to lock it or by the system operator. If the system was locked by the operator and no security code was ever entered into the system, the operator is the only one that can unlock the station or it can be unlocked through system programming on Form 24-[station]-07..

Station lock can be invoked during system programming through an entry on Form 24-[station]-07, Station Lock/Unlock by Security Code. If this is a newly installed system, in order to unlock the station, system programming must be changed or the system operator may unlock the telephone.

Conditions

Locked stations will be allowed to dial telephone numbers stored in Form 69, by system default. In default programming, Form 69 is vacant.

Programming

Form 24-[station]-07 controls the initial Lock/Unlock status of the station. This form is a representation of the immediate status of the station. Upon initial programming if this form is set to [1] (Locked), the station can be unlocked only by reprogramming this form to [0] (Unlocked) or by unlocking the station from the operator's station.

If the station is operational, Form 24-[station]-07 will reflect the current status of the station.

Operation

To lock by system programming:

1. Enter system programming.
2. Access Form 24-[station]-07.
3. Enter [1] on Form 24-[station]-07.
4. Press [SAVE].
5. The station is now locked.

To unlock by system programming:

1. Enter system programming.
2. Access Form 24-[station]-07.
3. Enter [0] on Form 24-[station]-07.
4. Press [SAVE].
5. The station is now unlocked.

To lock station from operator console:

1. Press [CHECK OUT].
2. Dial station number to be locked.
3. Press [SAVE].
4. Press [PGM] or [SPK].
5. Station is now locked.

To unlock station from operator console:

1. Press [CHECK IN].
2. Dial station number to be unlocked.
3. Press [SAVE].
4. Press [PGM] or [SPK].
5. Station is now unlocked.

To lock from station:

1. Press [PGM].
2. Press [9].
3. Enter three digit security code.
4. Press [SAVE].
5. Press [SPK] or [PGM] key.
6. Station is now locked.

Note: Station Lock will accept any three digit code.

To unlock from station:

1. Press [PGM].
2. Press [9].
3. Enter three digit security code.
4. Press [SAVE].
5. Press [SPK] or [PGM] key.
6. Station is now unlocked.

Note: The security code entered to unlock must be the same as the code previously used to lock the station.

A station user may make a single call on a locked telephone by using the temporary unlock feature. This feature will cause the telephone to revert to a locked status as soon as the CO line is released.

To temporarily unlock a station:

1. Press [PGM].
2. Press [#].
3. Enter three digit security code.
4. If the security code is correct, the Speaker will activate and the station will be connected to an available CO line in the dial 9 group of the station.
5. Place the telephone call.
6. When the call is terminated the station will revert to locked status.

Note: This feature can be accessed via the Features Menu that is available at all LCD equipped Superkey electronic telephone sets. See Feature Select from Menu, page 85 of this document.

Station Message Detail Recording

Description

Station Message Detail Recording (SMDR) permits data about each telephone call to be sent to a printer or other device capable of interfacing with RS-232 data communications equipment.

Conditions

The information recorded for calls include:

1. Date of call.
2. Time of origination
3. Length of call.
4. Digits dialed (on outgoing calls)
5. Originating station (outgoing calls).
6. Destination station (incoming calls).
7. Account Code (if entered).
8. Line used.
9. Time To Answer (incoming calls)
10. Unanswered Calls
11. Stations disconnected due to invalid forced account codes.
12. Stations disconnected due to restriction (toll or station lock).
13. DISA calls.

As options, the system will report or ignore reporting of the following information:

1. Recording of incoming calls.
2. Recording of local calls.
3. Unanswered incoming calls.

Programming

SK-200 only Form 01-06-06 RS-232 Baud Rate - Allows control of the RS-232 data rate. This applies only if the SK-RS232 is installed on the SK-CPU/2. Valid settings are:

Form 01-06-06 RS232 Baud Rate	0=1200 Bps	1=2400 Bps
-------------------------------	------------	------------

Note: If the SK-RS232 is installed on an SK-IPC/2 card, the SK-RS232 will operate at 1200 bps.

SMDR Numbers Dialed Presenting Type, Form 01-07-06 may be used to allow some security to station users in protecting the numbers dialed. In some instances it may not be desirable to print out the entire telephone number dialed on a call. For accounting purposes, the entire telephone number is usually not required in order to accurately estimate a call's cost. Through the use of SMDR Numbers Dialed Presenting Type and other SMDR options listed below, dialed numbers can remain confidential while still allowing the system to provide usable calling records to management. The valid settings for Form 01-07-06 follow:

SMDR Numbers Dialed Presenting Type, (Form 01-07-06)		0=Print All Digits	1=Print only the first digit
2=Print the first two digits	3=Print the first three digits	4=Print the first four digits	5=Print the first five digits
6=Print the first six digits	7=Print the first seven digits	8=Print the first eight digits	9=Print the first nine digits

Form 12-01-[SMDR] contains parameters pertinent to Station Message Detail recording. There are seven control items on Form 12-01.

Form 12-01-[01] is Recording Start Time. This parameter determines the grace period before timing of an outgoing call actually begins. This timer begins as soon as the CO line is accessed and is put in place to allow for things such as a wait for dial tone, time to outpulse digits and time for the outside party to answer. The valid parameters are listed in the table below:

Recording Start Time Form 12-01-01		0=Immediate Start	1=5 seconds
2=10 seconds	3=15 seconds	4=20 seconds	5=25 seconds
6=30 seconds	7=35 seconds	8=40 seconds	9=45 seconds

Form 12-01-02, Record Incoming Call determines whether SMDR will record incoming calls. In some applications it may not be necessary to provide this information. The table of valid entries is listed below:

SMDR Record Incoming Call Form 12-01-02	0=Enable	1=Disable
--	----------	-----------

Form 12-01-03, Record Local calls allows local calls to be recorded or ignored. The determination of a local call is made based on the number of digits dialed and is controlled by Form 01-03-08, Maximum Digit length for local call. The valid settings for Form 12-01-03 are listed below:

SMDR Record Local Call Form 12-01-03	0=Enable	1=Disable
---	----------	-----------

Form 12-01-04, SMDR Record Incoming Call No Answer determines whether calls that are unanswered are recorded in the system. If enabled, the system will indicate an unanswered call with the words "no answer" after the indication "INCOMING." The valid system parameters are:

SMDR Record Incoming Call (No Answer) Form 12-01-04	0=Enable	1=Disable
--	----------	-----------

Form 12-01-05, Print Header determines whether the system will print a header, which provides information about what each column of the SMDR record means. If enabled, it will print between every *nn* call. "*nn*" equals the value entered on Form 12-01-06 below. The settings for 12-01-05 are:

SMDR Print Header Form 12-01-05	0=Enable	1=Disable
--	----------	-----------

Form 12-01-06, Number of Records Between Titles sets the number of call records that will print before the system prints another header (if enabled on Form 12-01-05 above). If Form 12-01-05 is set to 1 (disabled), this parameter will have no effect on the printout. Call records will be printed continuously. If Form 12-01-06 is set to 00 or 01, the system will print a title and one call record. If Form 12-01-06 is set to any number between 02 and 99, the system will print a title and the number of call records entered (02-99) on Form 12-01-06.

SK-200 only Form 12-01-07, determines which SK-RS232 will output SMDR data. Valid settings are:

Form 12-01-07 SMDR Port	0=SK-CPU/2	1=SK-IPC/2 (Cabinet #1)
2=SK-IPC/2 (Cabinet #2)	3=SK-IPC/2 (Cabinet #3)	4=SK-IPC/2 (Cabinet #4)

Operation

Operation is automatic.

SK-824 Requires the addition of an optional SK-RS232 Printed Circuit board to the CCUA mother board.

SK-200 Requires the addition of an optional SK-RS232 Printed Circuit board to the SK-CPU/2 Printed Circuit Board or to an SK-IPC/2 Printed Circuit board.

Station Number Digit Length

Description

Station Number Digit Length allows the system administrator to select the number of digits for extension numbering in the Superkey Electronic Telephone System. Valid options are two digit numbering, three digit numbering, or four digit numbering. See also, Numbering Plan, page 120 of this document.

Conditions

If two digit numbering is selected, valid combinations for station numbering are 10-69.

If three digit numbering is selected, valid station numbers are 100-699.

If four digit numbering is selected, valid station numbers are 1000-6999

SK-824 System default database provides two digit station numbering.

Under default database:

The first system station card is programmed 11-18

The second system station card is programmed 19-26.

The third system station card is programmed 27-34.

SK-200 System default database depends on the total system configuration. Depending on the total number of station cards in the system. If the total number of stations in the system is 48 or less, the SK-200 will default to a 2 digit numbering plan. If the total number of stations is greater than 48 the system will default to a three digit numbering plan.

Programming

Form 01-03-06, Station Number Digit Length controls the digit length of stations. Valid settings for Form 01-03-06 are 2,3, or 4, which correspond to the actual digit length.

Form 29 allows reassignment of stations. Form 29-[port#]-01 shows the assigned station for each port.

The form is used when it is desirable to reprogram the station number to something other than the default assignment.

Operation

None.

Station Security Code

Description

This feature allows a station user to restrict his telephone by dialing a security code. This makes the station unusable for outside dialing. Outside lines can still be accessed, but unless the number dialed appears as an exception on Form 69, the CO line will be disconnected as soon as three digits are dialed on the CO line.

Conditions

Security codes must be three digits in length.

Intercom calls can still be placed and received.

Incoming telephone calls can still be received.

Station Security Code does not apply to single line telephone sets.

Telephone numbers entered on Form 62, Common Permitted Codes are allowed from locked telephones.

Programming

None

Note: The status of a station can be controlled from Form 24-[station]-07, Lock/Unlock by Security Code. However, if a station is initially programmed to be locked and has never had a security code programmed, it can only be unlocked by a system operator or by changing the information in 24-[station]-07.

Operation

To Lock a station from the station:

1. Press [PGM].
2. Dial [9].
3. Dial Security Code
4. Press [SAVE]
5. Press [PGM] or [SPK]

To temporarily unlock a station from the station:

1. Press [PGM]
2. Dial [#]
3. Dial Security Code
4. Press [SAVE]
5. Press [PGM] or [SAVE].

To Unlock a station:

Repeat the steps listed above to lock a station.

Note: When locking a station, any three digit code may be used. When unlocking a station, the code must be the same as the code that was used when the station was previously locked.

Note: This feature can be accessed via the Features Menu that is available at all LCD equipped Superkey electronic telephone sets. See Feature Select from Menu, page 85 of this document.

System Programming Access

Description

The Superkey Electronic Telephone System provides the option to allow or disallow individual stations to have access to system database programming. This is controlled by Class Of Service Option programming. The security requirements of a particular installation will determine how this option is to be set.

Conditions

System programming may be subject to password protection. If a password is programmed on Form 02-01, it will be required in order to access system programming. Default value is no password.

Individual station access to system programming is controlled by Form 25-STN-06, Default Password (System Programming Access). Any station with this option set to 0 (Enable) will be allowed access to system programming.

Programming

Form 25-STN-06, Default Password (System Programming Access) controls which stations are allowed the ability to make changes to the system database. Stations may be allowed or disallowed on an individual basis. By default, all stations have access to system programming.

Default Password (System Programming Access) Form 25-STN-06	0=Enable	1=Disable
--	----------	-----------

Operation

From any Superkey electronic telephone set equipped with LCD display:

1. Press [PGM]. Press [2]. LCD will display:

PROGRAM SYSTEM: Password Please!

Note: You may also access system programming from the Features Menu. For more information, see Feature Select from Menu, page 85 of this document.

2. Enter Password if a password is programmed.
3. Press [SAVE]. If the password is correct the LCD will display:

PROGRAM MODE: __ (01-76)

- 3a. If you do not enter a form number within 5 seconds, the display will begin to scroll through all available forms and their names. Form numbers and names will usually be displayed in groups of two in numerical order. The numbers and names display will change approximately every four seconds. This is an informational display and has no effect on your entry into system programming.
4. Enter the two digit form number that you want to program. Press [SAVE].
5. The LCD display will prompt you for further information that you may need in order to program the requested form.

To Save Updated program information:

1. As soon as you have entered the information in a specific item or group of items, press [SAVE].
2. If you wish to continue in the form to the next programmable set of fields, you may do so.
- 2a. If you wish to move out of sequence within a specific form, you may use the [VOL ↑] or [VOL ↓] push buttons to move forward or backward through a multi-part form.
- 2b. You may move through individual items within an individual form by pressing [REDIAL] to move left in the form or [MSG] to move right in the form.
3. If you wish to access a different form and make changes to it, press [PGM]. Your display will change to the one shown in step 3 above.
4. To exit programming and return to normal telephone operation, press DSS key #5, to exit system programming. You may also exit system programming by lifting the handset and then hanging up.

System Reminder

Description

System Reminder is a means to periodically provide an audible indication of up to 10 repetitive events. The length of the reminder periods can be from 1 minute up to 98 minutes. When a system reminder occurs, the background music source will be heard from all stations that are not made exempt from system reminder signaling. The most common uses of the system reminder are for work start times, work breaks, lunch periods, and end of work day indication.

Conditions

System reminder will be heard on all idle stations that are not exempt from signaling. System reminder does not provide notification to single line telephones.

Programming

System Reminder, Form 11-[event] is used to set daily repetitive events. Up to 10 events may be programmed on the system. Each event requires the entry of the system reminder start time in 24 hour format and the duration of the system reminder, in minutes. A representative example would look like:

11-01
08 00 05

This example shows Reminder 01. It will begin at 8:00 AM and will be active for 05 minutes.

Station System Alarm Exemption, Form 25-[station]-01 determines whether a station will have the System Reminders broadcast over the speaker of the telephone. Valid settings are:

Reminders Exemption (Form 25-[station]-01)	0=Disabled (Will hear system reminders)	1=Enabled (Will not hear system reminders)
---	--	---

System Reminders may also be programmed from a system console.

1. Press [REMINDER],[*]

Note: Step 1 may be accessed without a [REMINDER] key by selection through the Features Menu. See Feature Select from Menu, page 85 of this document.

2. Enter the reminder number that you wish to program (0-9).
3. LCD (if equipped) will display:

RMD#X hh:mm dd CHANGE? 1=Y 2=N

Where X= reminder number
hh=reminder hour mm=reminder minute
dd=length of reminder in minutes

4. Press 1 to change or program the reminder.
5. LCD (if equipped) will display:

ENTER TIME __:__ ENTER TYPE __

6. Enter the time (24 hour format) and the duration (01-98) minutes.
7. Press [SAVE].
8. LCD (if equipped) will say:

Reminder Set !! RMD#X hh:mm dd

9. The display will reset with your next action.

Operation

Operation is automatic. Stations that are exempt from system reminders will not hear background music. Stations that are in use will not hear background music. Any station may terminate the reminder for the individual set by pressing the [SPK] key.

Note: This feature can be accessed via the Features Menu that is available at all LCD equipped Superkey Electronic Telephone Sets. See Feature Select from Menu, page 85 of this document.

Tenant Service

Description

The Superkey Electronic Telephone system allows two or more users (tenants) to share a single system.

Conditions

1. Each tenant can have dedicated lines for outgoing and incoming calls.
2. Each group can have its own dial 9 groups for outbound lines.
3. A maximum of eight internal paging groups are available.
4. Inter-tenant calling can be allowed or blocked on a station by station basis.

Programming

Form 01-08-02, Direct CO Access, determines if a station will have outgoing access to CO lines that are not in its Dial 9 Group. If 01-08-02 is set to 0 (Disable), stations will not be able to directly access CO lines that are not in that station's Dial 9 Group. If 01-08-02 is set to 1 (Enable), stations will be able to access lines outside of the CO group by pressing the DSS key associated with the line (if the CO line appears on the telephone) or by dialing 80 + line number (1-8) if the line does not appear on the telephone. This option applies to Superkey electronic telephone sets as well as single line telephone sets.

Note: This option only controls the ability to place an outgoing call. CO lines may be assigned to ring on stations that cannot access those lines for outgoing calls. Once answered, calls may be transferred throughout the system without regard for line grouping.

Form 26-[STN]-05, Inter-Group Blocking determines on a station by station basis if a station user may call a station in another group (tenant). If set to 0=Disable, a station will be able to dial any other station within the system. If set to 1=Enable, the station will only be able to call other stations within his own group.

Form 42-[CO line], Day Ringing Assignment provides the capability to program up to 16 stations to ring for each incoming CO line. This form controls ringing during the day service interval of operation. Each line can be programmed to ring only the stations necessary.

Form 43-[CO line], Night Ringing Assignment works the same as Day Ringing Assignment, but defines operation only during the night service interval.

Form 22-[group]-[key#], Flexible Key Group Assignment allows the design of up to eight individual layouts for Superkey electronic telephone sets. Through programming of this form, each of up to eight tenants can have their own individual key layout. DSS intercom keys can be tailored to display only other stations within a specific tenant group. CO line keys can be made to appear only on stations that have access to them.

Form 28-[station]-01, Group Assignment (Zone paging - Pick Up - Station - Single Digit Group) allows grouping of stations of one tenant into common paging, pickup, station groups, and if programmed, Single Digit dialing groups.

Form 28-[station]-02, Keyphone Flexible Key Group Assignment allows the key layouts that are built on Form 22-[group]-[key#] to be assigned to stations within the system. In this manner, as new extensions are added, they can be programmed into one of up to eight key layouts, supportive of up to eight tenants.

Operation

None

Time of Day Display

Description

Superkey electronic telephone sets equipped with LCD readout will display the time of day according to the system clock. The system may be programmed to display the time of day in either 12 hour format (12:00 - 11:59) or 24 hour format (00:00 - 23:59).

Conditions

None.

Programming

Form 10 controls the setting of day of the week, date, month, year and time of day. The format for setting this is mm dd yy HH MM D, where:

mm=month (01-12)

dd=day (01-31)

yy=year (00-99)

HH=hour (00-23)

MM=minute (00-59)

D=Day of week

D=Day Of Week	1=Monday	2=Tuesday	3=Wednesday
4=Thursday	5=Friday	6=Saturday	7=Sunday

Form 01-04-04, Clock Format determines whether LCD telephone displays will show time in 12 hour format or 24 hour format.

Clock Format, (Form 01-04-04)	0=12 Hour Format	1=24 Hour Format
--------------------------------------	------------------	------------------

Time and date can also be set by pressing [PGM],[HOLD],[SAVE] and entering the date, time and day of the week as shown by the display. When the information is accurately updated, press [SAVE]. Lift the handset and replace it and the display will update and return to idle.

Operation

Operation is automatic.

Timed Reminder - Station

Description

The station timed reminder allows a Superkey electronic telephone set user to program a timer that will notify the station user at a pre-determined time. When a timed reminder is programmed against a station, it can be used as a recurring daily reminder (the alarm will operate every day and will activate the background music function of the telephone set) or it can be programmed as a single event timed reminder or automatic wake up call (occurs only once). Upon maturation of a timed reminder or wake up call on a Superkey set, the monitor speaker will be activated and the selected background music source will be heard over the speaker. If a daily reminder is programmed, the duration of the speaker activation is also programmable from 1-98 minutes in length. It may be canceled by pressing the [SPK] button to turn it off. If programmed as a single event (timed reminder) the telephone will ring. If programmed as a wake up, the telephone will ring for one minute, or until answered.

Conditions

None

Programming

From non-display telephone set:

1. Station is on hook.
2. Press [PGM]. Press [REMINDER]. Press [1].
3. Enter two digits for hour (00-23).
4. Enter two digits for minutes (00-59).
5. Enter two digits for duration in minutes (00-99) .
6. Press [SAVE].

If the setting is valid, station user will hear confirmation tone.

If the setting is invalid, the station user will hear busy tone.

From a LCD display telephone set

1. Operation can be as described for non-display telephone set
OR
- 1a. Press [PGM]. Press [REMINDER].

Note: Step 1(a) may be accomplished through the use of the Features Menu. For more information, please see Feature Select from Menu, page 85 of this document.

2. If a reminder is pre-programmed for an extension, the display will show:

08:30 99 CHANGE? 1=Y 2=N

This display is showing that this station has a single event timed reminder (Wake Up Call) programmed for 8:30 AM.

- 2a. If there is no reminder programmed, the procedure is the same. The LCD display will show a time of 00:00 and a duration of 00.
3. If the station user dials 1 (*to change reminder time*) or there is no timed reminder programmed for a station, the display will show:

ENTER TIME __:__
ENTER TYPE ____

4. Station user can enter the time for the timed reminder (00:00 through 23:59) and the type or duration of the reminder (00 to cancel, 01-98 for a daily reminder for the desired number of minutes or 99 for a single duration timed reminder).

Operation

During execution of any timed reminder, the station receiving the reminder may press the [SPK] key or lift and replace the handset. The timed reminder will be quieted for the remainder of its duration.

Toll Control

Description

Toll Controls allow the assignment of dialing capabilities dependent upon specific CO lines as well as individual stations. This can be used to restrict dialing capabilities from some stations and to limit specific types of calls to certain special purpose telephone lines.

Conditions

1. There are a total of ten toll plans available in the Superkey electronic telephone system.
2. Each toll plan contains a toll class for each CO line.
3. Each station can be subjected to one of the available toll plans.
4. A station can have a Day Service toll plan and a Night Service toll plan.

A station may become exempt from toll control for an individual call by entering a Forced Account Code, a Traveling Class Of Service Code or the system Master Toll Password. See Forced Account Codes, page 94 of this document and Traveling Class Of Service, page 168 of this document.

A locked station is subject to Class 9 toll restriction, regardless of its normal toll assignment.

Certain System Speed Dial numbers may be made exempt from toll restriction. Exempt numbers will not be checked for toll violations. See Speed Dial (Unrestricted) on page 153 of this document.

Programming

See Appendix B, Toll Control for a detailed explanation of the operation of Toll Control within the Superkey system.

Transfer Recall Timeout

Description

Transfer Recall Timeout parameters determine how long a transferred call will remain at a busy or unanswered destination before it recalls to the station that originally transferred it. There are two parameters in the system governing the timers. One controls the recall timer for calls transferred to busy stations (Form 01-06-01) and one for unanswered calls (Form 01-06-02).

Conditions

None.

Programming

Transfer Recall Timeout (Busy), Form 01-06-01 determines the length of time that a call will remain camped on to a busy station before the call re-rings the station that transferred the call. Valid parameters for this option are listed below:

Recall Timeout (Busy), Form 01-06-01		0=30 seconds	1=60 seconds
2=90 seconds	3=120 seconds	4=150 seconds	5=180 seconds
6=210 seconds	7=240 seconds	8=253 seconds	9=Recall Disabled

Transfer Recall Timeout (No Answer), Form 01-06-02 determines the length of time that a call will exclusively ring an idle station. Valid parameters are listed below:

Recall Timeout (No Answer) Form 01-06-02		0=30 seconds	1=60 seconds
2=90 seconds	3=120 seconds	4=150 seconds	5=180 seconds
6=210 seconds	7=240 seconds	8=253 seconds	9=Recall Disabled

Operation

Any call that is either camped on (01-06-01) or unanswered (01-06-02) and exceeds the timers listed above will recall to the station that transferred the call. Prior to answer by the transferring station, the call is available to both the transferring station and the transferred station. In the case of the Recall Timeout (No Answer), the call will ring both stations. The first station to answer will silence the other station.

Traveling Class of Service

Description

Traveling Class of Service allows a station user to temporarily bypass the toll restrictions that are in effect on a telephone station. When a Traveling Class Of Service Code is programmed into the system, it is capable of overriding the toll restriction on any telephone set that does not have an associated Forced Account Code. For more information on Forced Account Codes, see page 94 of this document.

Conditions

1. There are up to 48 Traveling Class Of Service Codes allowed on the Superkey SK-824 and up to 99 on the SK-200 Electronic Telephone system.
2. Codes are created during system programming.
3. When the Traveling Class Of Service Code is dialed, the status of the originating station is upgraded to "Unrestricted" for the duration of the call.
4. Any call made using a Traveling Class Of Service Code will have the entry number (not the actual code) associated with the resulting call and printed on the SMDR record if SMDR is enabled.
5. As soon as the call is finished, the telephone set will revert to normal.
6. A station with an assigned Forced Account Code cannot be used with a Traveling Class Of Service Code.

Programming

Traveling Class Of Service Codes/Forced Account Codes are programmed on Form 13-[code#], Forced Account Code. The Traveling Class Of Service Code can be up to eight digits in length.

Form 24-[station]-08, Station Class Of Service determines whether Traveling Class Of Service Codes will be legal on a station. If Form 24-[station]-08 is programmed as 00, any valid Traveling Class Of Service Code programmed on Form 13-[code#] will override toll restriction. If Form 24-[station]-08 is set to a valid programmed code number (01-31) from Form 13-[code#], the actual digit string programmed (Forced Account Code) for that code number will be the only one that is capable of releasing toll restriction on that station.

Operation

From a Superkey electronic telephone set:

1. Press [PGM], [4].

Note: Step 1 may be performed from the Features Menu. For more information, see Feature Select from Menu, page 85 of this document.

2. Enter Traveling Class Of Service Code.
3. If the telephone set is capable of accepting a Traveling Class Of Service Code and the code entered is valid, the station will be connected to the first free line in the Dial 9 group for that station. If Dial 9 grouping is not active on the system, the station user can press a CO key for access to a CO line.

Trunk Queue (Trunk Callback)

Description

Trunk Queue allows a user to mark a busy CO line for use when it becomes available. When the line becomes idle, the system will place it into the Exclusive Hold mode on the requesting station. A recall ring will be heard at the requesting station. Queuing can also be set up based on a dial 9 group. In a dial 9 queue, the first available CO line in the group will call back.

Conditions

1. If a station does not pick up the recalled line within approximately 20 seconds, the callback is canceled.
2. Up to eight stations can queue for a CO line.
3. When multiple stations are queued for a line, the oldest request will be honored first.

Programming

None

Operation

To queue for an individual CO line:

1. Press a busy CO line pushbutton. Station user will hear busy tone.
2. Press [MSG] pushbutton.
3. Hang up.

To queue for a dial 9 group:

1. Dial [9]. Station user will hear busy tone.
2. Press [MSG] pushbutton.
3. If queue is accepted, station user will hear dial tone.
4. Hang up.

When the line becomes idle, the system will place it into the Exclusive Hold mode on the requesting station. In a dial 9 queue, the first available CO line in the group will call back. A recall ring will be heard at the requesting station.

Uniform Call Distribution

Description

Uniform Call Distribution (UCD) allows distribution of calls to a group of up to four stations. Incoming calls are first routed to the stations in a circular manner. If no stations are available, the system will continue to wait for a predetermined time for an available station. If no station becomes available during the initial time, the call will be answered by a recorded greeting. The caller is then queued to the group. The system will continue to wait for a station to become free. During this time up to two messages will be played for the waiting caller. See also, Appendix A - DISA Detailed Explanation of this document.

Conditions

An optional Voice Service Unit (VSU) must be installed and programmed in order for UCD to be operational.

Programming

Form 42 CO (Day Ringing Assignment) must be programmed for each CO line that is to be UCD to include the stations that are to be in the UCD group if UCD is to be operational during Day Service.

Form 43 CO (Night Ringing Assignment) must be programmed to include the stations that are in the UCD group if UCD is to be operational during Night Service.

Form 46-CO-04 (DISA/External Call Forward Status) must be programmed to provide DISA function during Day Service if UCD is required during Day Service and/or DISA must be programmed for operation during Night Service if UCD is required during Night Service.

Form 46-CO-07 (Day Ringing Type) must be programmed as 2 (Circular) if UCD circular hunting is required during Day Service operation.

Form 46-CO-08 (Night Ringing Type) must be programmed as 2 (Circular) if UCD circular hunting is required during Night Service operation.

Form 01-01-04 determines the overall time that a call will be allowed to go unanswered before it is answered by the DISA Answer Greeting Message. This value can range from 2 seconds to 255 seconds.

Form 01-08-06, DISA No Answer Recall Timer is set to control the amount of time that transpires (assuming no stations are available) before the third message (message 6 as per Form 14, below) is played and that calling party is placed in a re-queue or abandon call condition. It can be set for values ranging from 15 seconds to 105 seconds.

Form 01-08-07 DISA Transfer To Console Time (No Digits Dialed) is set to control the time after the greeting message before the call is routed to the station group. This timer is used to allow the use of UCD lines for DISA purposes. If digits are dialed immediately after the greeting message, the call is no longer treated as a UCD call and it becomes a normal DISA call. This timer is also used after message 5 (as per Form 14, below) in order to allow stations to dial out of the UCD program to an alternative. It is also used after message 6 (as per Form 14, below) to provide the timer value before a call is disconnected from the UCD circuit.

Form 04-01 Console Group 1 must be programmed with the same stations as Form 42 or 43 above in order to continue to provide the same four stations as answering points for a UCD call.

Form 14 - Voice Service Unit must be programmed for the following:

One Channel of the VSU must be programmed for 1, DISA Answer Greeting in order to provide the initial message that will be played for incoming callers who are not answered by one of the agents in the specified answer time.

One channel of the VSU must be programmed for 5, "DISA Console Busy, Please hold" if a second "agent's busy, please hold" message is required.

One channel of the VSU must be programmed for 6, "DISA Timer has Expired" in order to provide a final option to hang up or dial additional digits in order to re-queue for the agent group or an offered alternate answer point. If no outside caller action is taken after this message within the time frame defined on Form 01-08-07 (DISA Transfer Timer - No Digits Dialed).

Operation

An Incoming call will be routed to the first/next available station (in a circular ringing pattern) as per programming on Form 42 or 43 (whichever is applicable). When the call is detected, the DISA Delayed Access Timer (Form 01-01-04) will begin.

If the call is not answered by the station or no station becomes available prior to the expiration of 01-01-04, the call will be answered by the Voice Service Unit will play programmed message 1 (as per Form 14) to the outside caller. During and after the message, the caller can dial an extension number to exit the UCD portion of the call.

As soon as message 1 is complete, Form 01-08-07 (DISA No Digits Dialed Transfer Timer) is started. If the timer expires without any digits dialed, the call will be presented to the Console Group programmed on Form 04-01. If no stations are available, the caller will hear message 5 as per Form 14.

As soon as the call has heard message 5, it will be placed in queue for an available station on Form 04-01. The timer in Form 01-08-06 (DISA No Answer Recall Timer) is started. If 01-08-06 expires and the call has still not been answered, the caller will hear message 6 (as per Form 14).

When message 6 has been completed, timer 01-08-07 (DISA No Digits Dialed Transfer Time) will again be started for the call. If it expires with no agents being made available and the caller has not re-queued or dialed and alternative station, the call will be disconnected.

Unsupervised Conference

Description

Unsupervised conference allows a station user to establish a conference with two CO lines. The station can then leave the conference and allow the two CO lines to continue in conversation.

See also Conference, page 43 of this document.

Conditions

1. All unsupervised conferences are limited to three minutes in length. Like DISA calls, a warning tone will sound ten seconds prior to disconnect. The conference time can be extended in three minute increments by either party pressing any numeric DTMF digit (0-9).
2. The internal party that originated the conference can enter and leave the conference at will if they have Barge-In Capability enabled. By default, Barge-In (Form 24-STN-01) is set to 0(=Disabled).
3. Unsupervised conferences may be immediately terminated by any of the external parties, by dialing [*]. All connected CO lines will be disconnected.

Programming

To enable re-entry into an unsupervised conference, the station that originated the conference must have Barge-In enabled at a level 1 or higher. By default, Barge-In capability is disabled (0) on Superkey systems.

Form 26-STN-04 Conference must be set to 0 (Enable) if Conferencing is to be allowed. By default, all stations have this enabled. To disable, set 26-STN-04 to a value of 1 (disable).

Operation

From Superkey multi line telephone sets:

1. During an outside call, press [HOLD].
2. Make a second call, wait for answer.
3. Press [CONF]. A three party conference is established.
4. Press [CONF]. The station user is released from the conference. It is now an unsupervised conference.

To enter an unsupervised conference:

1. Press a busy line key. You will hear busy tone.
2. Press [CONF].
3. Station enters existing conference.

Voice Mail Interface

Description

The Superkey electronic telephone system provides two very effective methods of providing interface to a variety of external vendor provided voice mail systems. Using the voice mail interface will allow you to obtain maximum integration.

Conditions

A single line station circuit is required for every voice mail port that is to be used in the system. Voice Mail equipment is vendor provided and is not an integral part of the telephone system.

Programming

Voice Mail Systems (VMS) should utilize the following Message Waiting Activation and Deactivation Access Codes:

7071 + Extension number of extension to activate message waiting.

7072 + Extension number of extension to deactivate message waiting.

These codes are preferable to codes Extension Number + 6 and Extension + 5 as has been previously used. These codes prove unreliable when stations are in call forwarding mode, as is often the case with VMS in operation.

Method #1 - Basic Integration

Basic integration works only with calls that are forwarded to voice mail through the use of call forwarding. With this method, calls that are forwarded to voice mail will hear the personal greeting of the station user who forwarded the call.

Form 01-12-05, Voice Mail Integration controls whether Method #1 or Method #2 are used for voice mail integration. Valid settings that will utilize Method #1 are settings of 0 and 2.

A setting of 0 will play any digits programmed on Form 01-10, followed by the extension number of the forwarding party. The DTMF string of digits will be audible to the outside caller.

A setting of 2 will provide the same function as 0, but DTMF digits will be muted to the caller and played only to the VMS. When the DTMF digits are completed, the caller will be connected to the VMS.

Form 01-10-01 through 01-10-08 determine any digits to be dialed to "condition" the voice mail system to receive the extension number of the party whose call is being forwarded to the voice mail unit. System programming of Form 01-10 provides the capability to program up to eight (8) conditioning digits prior to the extension number on any forwarded call. These digits can be any of the twelve digits that are normally present on a DTMF keypad (0-9, * and #) as well as the ability to program a pause. This information will allow forwarded calls to be routed directly to the VMS box of the person called.

Method #2 - 10 Digit Integration

Valid settings that will utilize Method #2 are settings of 1, 3, 5 and 7 on Form 01-12-05.

A setting of 1 provides full 10 digit integration on every call that rings at the VMS. When this setting is selected, outside callers will hear the 10 digit DTMF string whenever VMS answers a call.

A setting of 3 provides full 10 digit integration, but the outside caller does not hear the DTMF digits. When the digits have been played to the VMS, the outside caller is connected to the voice mail port.

A setting of 5 provides the same function as the setting of 1 above, except that the New Call To Trunk string is not played to the VMS. Callers will hear DTMF on all other calls.

A setting of 7 provides the same function as the setting of 3 above, except that the New Call To Trunk string is not played to the VMS. Callers do not hear DTMF on calls.

Method #2 provides auto log on capabilities for VMS systems that can recognize it.. The DTMF string 14-STA-STA is normally programmed as the auto login function on voice mail systems. When a station directly calls the voice mail, the VMS will recognize the caller and ask for login password.

Regardless of the Integration Method selected, Form 29-Port-02 must be programmed with a value of 8 (eight) to identify it as a Voice Mail System (VMS) port. Only stations that are programmed as VMS ports will receive the DTMF strings. VMS ports will not receive normal transfer (interrupted) dial tone after placing a call on hold. Some voice mail systems have difficulty detecting interrupted dial tone. For this reason, all VMS ports will receive continuous dial tone whenever they go off hook (unless answering a call).

Operation

Method #1 When a call is forwarded from a station to the VMS (by programming of Call Forwarding on the individual set), the system will wait for the VMS to answer. Upon answer, it will play any and all digits programmed on Form 01-10-01 through 01-10-08. Upon completion of the dialing sequence, the system will play the extension number of the extension that forwarded the call. By programming Form 01-10-01 through 01-10-08 to correspond to the requirements of the external voice mail equipment, forwarded calls can be routed directly to the VMS mail box of the party for whom the call was intended.

Depending on the voice mail system in use, the voice mail system may leave a callback message on a telephone that has a message. If this is done, the messages will be automatically cancelled when the station calls that VMS to retrieve the message.

Actual operation of the voice mail system for retrieval and disposition of messages is dependant upon the individual VMS product.

Method #2

If the 10 digit integration is selected, the following digits will be presented to the VMS.

Internal Calls

Condition	Digits
Call Forward All Calls	11-STB-STA
Call Forward Busy	12-STB-STA
Call Forward No Answer	13-STB-STA
Direct Call to Voice Mail Port	14-STA-STA

DISA and Calls Handled by the Voice Mail/Auto Attendant Trunk Calls

Call Forward All Calls	21-STB-TRK
Call Forward Busy	22-STB-TRK
Call Forward No Answer	23-STB-TRK

Direct Trunk Calls (Automated Attendant)

New Call to Trunk	24-TRK-TRK (Not played when 01-12-05 is set to 5 or 7).
Recall to Voice Mail	25-STB-TRK

STA=The station originating the call

STB=The forwarder (or target station)

TRK=The CO trunk number (0001 to 0040)

All cases use 10 digits. STA and STB will contain leading zeros in the case of 2 or 3 digit numbering.

Example #1:

1. Station 234 is Call Forwarded All Calls to the VMS.
2. Station 135 calls Station 234. Call forwards to VMS. VMS answers.
3. The resulting string to the voice mail will be 1102340135.

Example #2:

1. The system is programmed so that incoming calls ring directly to the Voice Mail/Auto Attendant ports.
2. A call rings in on line 2. VMS.
3. The resulting string to the voice mail will be 2400020002.

Note: If Form 01-12-05 is programmed as 5 or 7, there will be no digits played to VMS in Example #2.

Voice Service Unit

Description

The Voice Service Unit of the Superkey Electronic Telephone System provides the ability to record brief messages within the system for various notification situations that arise within the system. These messages should not be confused with answering machine type messages. The Voice Service Unit is designed for long term storage of specific messages that relate to call processing within the system.

The Voice Service Unit is heavily used when the internal Automated Attendant function is enabled on the Superkey system. For more information on the operation of Automated Attendant, please see Appendix A - DISA Detailed Explanation of this document.

Conditions

SK-824 An optional Voice Service Unit module must be installed in the system. SK-824 Voice Service Units install on the CCUA motherboard. One SK-VSU/8 Voice Service Unit may be installed on an SK-824. The Voice Service Unit on the SK-824 does not impact system size.

SK-200 The Voice Service Unit for the SK-200 installs in a peripheral card slot on any available cabinet. The SK-200 VSU (Model SK-VSU/2) provides four Voice Service Unit modules, each with 60 seconds of available recording time. A maximum of 10 SK-VSU/2 cards may be installed on a system, allowing a total of up to 40 Voice Service Unit modules per system.

Programming

SK-200 Form 01-06-01 determines if all VSU modules will be dedicated to parallel tasks or if they will be independently assigned. A setting of 0 will cause all VSU modules to serve all available CO trunks. A setting of 1 will allow individual VSU modules to be assigned to trunk groups on Form 14-VSU-09.

Form 14, locations 01 through 08 provide the ability to assign the Voice Service Unit to various functions. Assignments must be made in order. If a message is longer than approximately 8 seconds, it will "push" the other messages towards the end of the message length time. If the first message on the system is 12 seconds in length (assuming 60 seconds total time on the VSU), the total time remaining is 48 seconds. If the first five messages are each 12 seconds in length, there is no time remaining for the last three messages, so the programming for the last three messages is irrelevant.

The options that can be programmed on Form 14-01 through Form 14-08 are listed below:

VSU Channel Assignment, (Form 14-01 through 14-08)	00=Non-Operational
01=DISA: Answer Greeting	02=DISA: Dialed Extension is Busy
03=DISA: Dialed Extension Does Not Answer	04=DISA: Dialed Number is invalid
05=DISA: Console is Busy, Please Wait	06=DISA: Time duration has run out
07=DISA: Insufficient Digits Dialed	08=DISA: Night Answer Greeting
09=External Call Forward Reroute Message	10=UCD All Agents Busy
11=UCD All Agents Busy (second message)	12=UCD Call will be terminated
14=Wake Up Message	15=SLT Message

SK-824 Form 14-09 is not used with the Voice Service Units.

SK-200 Form 14-VSU-09 assigns a VSU module to a CO Trunk Group. Trunk groups are programmed on Form 44.

If a channel on Form 14 is set to 14 (Wake Up message), Form 01-05-01 (Wake Up Call Signaling) should be programmed as 0, to direct wake up calls to use the Voice Service Unit for wake up calls. If Form 01-05-01 is set to 1, calls will be connected to background music instead of the Voice Service Unit.

Operation

See Appendix A - DISA Detailed Explanation in this manual.

Appendix A- DISA Detailed Description

The following section describes the details of operation, programming and implementation of Direct Inward System Access (DISA) on the Superkey[®] SK-200 and SK-824. This appendix primarily concentrates on the implementation of DISA with Voice Service Units. DISA call flow is also explained at the end of this Appendix through the use of a flow chart.

DISA Overview

DISA and the Voice Service Unit provide an end user with the ability to have the telephone system answer calls, play a greeting to the caller and provide some choices to the incoming caller as to how calls should be routed. Its most common use is to provide Automated Attendant functions to reduce or eliminate the need for a person dedicated to the task of answering telephone calls. Through the use of DISA with the Voice Service unit, outside callers can directly dial individual stations, select one of up to five stations from a single digit dialing menu, or in the SK-200 route themselves to one of a number of people within a department.

Maintenance personnel may use the DISA feature to make program changes from a remote location such as their service center. DISA callers may be allowed access to speed dial, dial 9 CO line groups, individual CO lines, the system operator and they may also be allowed to invoke the monitor feature for specific stations or either of the two door phones.

While DISA can be implemented without the use of a Voice Service Unit, most DISA setups make use of the VSU to provide some level of Auto Attendant capabilities.

Voice Service UnitVoice Service UnitVoice Service Unit SK-824

The SK-824 can be equipped with a Voice Service Unit daughter-board (Model SK-VSU/8). This optional board provides 60 seconds of recording time, that can be dynamically divided into up to 8 different sections and messages. The SK-VSU/8 mounts on the CCUA motherboard of the SK-824. It is unique in that it does not require any system resources to operate. No station ports are used in the implementation of the SK-VSU/8, so there is no impact on the configuration of a system when setting up a VSU. One Voice Service Unit can be installed on an SK-824.

SK-200

The SK-200 Voice Service Unit (Model SK-VSU/2) provides the same function as the VSU for the SK-824. There are three major differences between the implementation of the Voice Service Unit on the SK-200 and the SK-824.

1. Each SK-VSU/2 provides the equivalent of 4 Voice Service Units on the SK-824. Where the SK-VSU/8 Voice Service Unit for the SK-824 provides one module, the SK-VSU/2 for the SK-200 provides four modules per card. This means four separate modules, each capable of providing up to 60 seconds of recorded messages.
2. The Voice Service Unit for the SK-200 utilizes a peripheral card slot. It does impact system capacity, so an SK-200 cabinet equipped with a SK-VSU/2 card will have nine available card slots for CO line cards and station cards.
3. Multiple SK-VSU/2 Voice Service Unit Cards can be installed on an SK-200, up to a maximum of 10 cards on a multiple cabinet SK-200 system.

Programming Options and ParametersProgramming Options and Parameters Programming Options and Parameters

On Superkey[®] systems, unlike most other systems on the market, a DISA call can be treated as a normal incoming telephone call until it is answered by the system. As such, most normal operating parameters for CO lines also apply. They will be described in detail within this section.

Form 01-01-04, Delay DISA Access is the first step in determining how long the incoming CO line will ring and act as a normal incoming call before it is answered by DISA and directed to Automated Attendant (if the system is equipped with VSU) or DISA dial tone (if the system is not equipped with a VSU). The parameters are listed below:

Delayed DISA Access Form 01-01-04		0=1 Second	1=3 seconds
2=5 seconds	3=7 seconds	4=9 seconds	5=16 seconds
6=31 seconds	7=61 seconds	8=121 seconds	9=255 seconds

This parameter is important for at least two reasons:

1. If all calls are to be answered exclusively by the Voice Service Unit, Delayed DISA Access should be set at 0. With this setting, as soon as a call is detected, DISA will answer the call and begin call processing.
2. If DISA is to be used as a "backup" method of answering calls, such as an Attendant Overflow, Form 01-01-04 should be set to a value that will allow adequate time for an available answering position to answer the call. This setting will be determined by the urgency that the customer wishes to place on incoming calls.

Form 01-06-03 VSU Service (SK-200 only) determines if multiple Voice Service units are to be combined into one group or if different Voice Service Unit modules may be assigned to different incoming CO groups. In some installations a customer may be operating two different businesses within one telephone system. In that case the message that the incoming caller will hear will be determined by the CO trunk where the call was received.

In other situations a customer may elect to utilize all of the Voice Service Units to answer as many calls of one type as possible. In that situation all Voice Service Units would carry the same messages, so as to handle as many calls as possible.

This option (01-06-03) only makes a single determination whether the VSU modules will all be pooled or if they may be assigned separately. If they are to be assigned separately, the programming of individual VSU assignments will be done on Form 14-VSU-09.

Valid settings for Form 01-06-03 are:

Form 01-06-03 VSU Service	0=All VSU modules serve all DISA enabled CO lines	1= Assign VSU modules to CO groups on Form 14-VSU-09
----------------------------------	---	--

Form 01-07-04, DISA No Digits Dialed Routing provides the capability to drop calls where no digits are dialed into a DISA call. Under most applications, this parameter will be programmed to overflow to an operator group. In instances where incoming digits are expected and no alternate call handling is to take place, this option provides a quick method for disconnecting callers who do not dial.

Form 01-07-04 DISA No Digits Dialed Routing	0=Recall to Operator	1=Drop Call
--	----------------------	-------------

Form 01-08-04, DISA Operator Recall Location on No Answer determines where a call will forward if an incoming caller dials an extension that does not answer. If all recalls are to be answered by a central operator (or group of operators) this parameter should be set to 0, which will cause the call to forward to the operator group number (Form 04) that corresponds to the same number as the CO group (Form 44). If this parameter is set to 1, the call will recall to the operator group (Form 04) that corresponds to the station group (Form 28-STN-01) number.

Form 01-08-06, DISA No Answer Recall Timer determines how long a DISA call will ring a station before it considers the call to be unanswered. This parameter can be set from a minimum of 8 seconds (a setting of 0) to a maximum of 80 seconds (a setting of 9).

Form 01-08-06 DISA No Answer Recall Timer (Seconds)						0=8	1=16
2=24	3=32	4=40	5=48	6=56	7=64	8=72	9=80

Form 01-08-07 DISA Transfer Time (No Digits Dialed) determines how long the system will wait before dealing with a caller who does not dial any digits. When this timer expires, the system will then check Form 01-07-04 to determine if the call should be routed to an operator or dropped. In systems that are equipped with a VSU, this timer applies after the initial greeting message has played. In systems without a VSU, this timer begins as soon as the call is answered by the system.

Form 01-09-04 VSU Detect Disconnect (SK-200 Only) allows calls routed through the VSU to be disconnected by the system when tones other than DTMF are [heard] by the system. The selection of disconnect tones can be set up to suit your local central office.

Form 01-09-04 VSU Detect Disconnect	0=Ignore Disconnect Tones
1=Disconnect on 60 Impulses Per Minute	2=Disconnect on 120 IPM
3=Disconnect on 60 IPM or 120 IPM	4=Disconnect on Dial Tone
5=Disconnect on 60 IPM or Dial Tone	6=Disconnect on 120 IPM or Dial Tone
7= Disconnect on 60 IPM, 120 IPM or Dial Tone	

Form 01-09-06 (SK-200 only) UCD All Agents Busy Recording Queue Timer (First Message).

Form 01-09-07 (SK-200 only) UCD All Agents Busy Recording Queue Timer (Second Message).

Form 01-09-08 (SK-200 only) UCD Overall Timeout (Call cut-off timer).

Form 01-11-04 DISA Queuing to VSU determines if incoming calls will be queued to the VSU if it is unavailable or if calls should be processed without queuing to VSU. This option should normally be set to 1 (Queue) if the Voice Service Unit(s) are being used as an automated attendant for the system. It should be set to 0 (do not queue) if there is no VSU in the system.

Form 01-11-04 DISA Queuing to VSU	0=Do Not Queue	1=Queue
--	----------------	---------

Form 01-11-05 DISA Special Digit Acceptance allows the customer to select the level of service that is appropriate for the individual installation. In most automated attendant applications it is not desirable to allow callers to have access to outside CO lines, speed dialing, or outside disconnect capabilities. In such situations 01-11-05 allows the installation personnel to selectively disable outside dialing capabilities and other special features. When a digit is treated as [special] it may be used for special system defined functions. When a digit is treated as [Digits only] it has only a normal DTMF function and no special DISA capabilities are recognized by the system.

Form 01-11-05 DISA Special Digits	0=All special digits valid
1=[*],[#] Special [8],[9] Digits only	2=[8],[9] Special - [*],[#] Digits only
3=No Special Digits	

Form 01-11-06 DISA Transfer Count determines the number of times that an incoming caller can passively remain in the DISA cycle. When this counter has been exceeded the caller will be routed to the VSU call disconnect timer and if no digits are dialed, the call will be disconnected.

Form 01-11-06 DISA Transfer Count					0=2	1=3	2=4	3=5
4=6	5=7	6=8	7=9	8=10	9=Infinite			

Form 01-11-08 (SK-200) DISA Single Digit Dialing determines if DISA callers are to have access to Single Digit Dialing. If this item is disabled (0), Single Digit Dialing will not be in operation for DISA callers. If enabled (1), Single Digit Dialing will be enabled for incoming DISA callers. The association of Individual Voice Service units with Single Digit Dialing groups is programmed on Form 14-VSU-09.

Form 01-11-08 (SK-200) DISA Single Digit Dialing (SDD)	
0= No Single Digit Dialing	1= SDD Enabled as per form 14-VSU-09

Form 01-11-08 (SK-824) DISA Single Digit Dialing determines if DISA callers are to have access to Single Digit Dialing. If this item is disabled (0), Single Digit Dialing will not be in operation for DISA callers. Other valid settings are listed below and refer to the groups programmed on Form 07 (Single Digit Dialing Group):

Form 01-11-08 - DISA Single Digit Dialing	
	0=No Single Digit Dialing
1=Single Digit Group 1	2=Single Digit Group 2
3=Single Digit Group 3	4=Single Digit Group 4
5=Single Digit Group 5	6=Single Digit Group 6
7=Single Digit Group 7	8=Single Digit Group 8

Form 14-VSU (SK-200) and Form 14 (SK-824) Provide for VSU Channel Assignment.

SK-200 provides for programming of up to 40 Voice Service Units (up to 10 SK-VSU/2 circuit cards). Form 14 is numbered 14-VSU-*nn* where VSU is the VSU number from 01 up to 40 and *nn* is the individual item number, from 01 through 09. Items 01 through 08 provide for channel assignment. Item 09 allows assignment of a Voice Service Unit to one of the eight available CO Groups (as programmed on Form 44). Item 09 is only applicable if Form 01-06-03 is programmed as 1. For more information on 01-06-03, see the programming information in Appendix A.

SK-824 provides programming capabilities for 1 Voice Service unit (a daughter-board, mounted on SK-CCUA motherboard). Form 14 is numbered 14-*nn*, where *nn* is the individual channel number on the VSU, from 01 through 08. Item 09 is visible during programming, but has no significance on the SK-824.

Valid entries for Items 01-08 are listed below:

SK-200 14-VSU-01 - 14-VSU-08=Channel Assignments	
SK-824 14-01 - 14-08=Channel Assignments	
00=Disabled	
01=DISA: Answer Greeting	02=DISA: Dialed Station Busy
03=DISA: Dialed Station Does Not Answer	04=DISA: Dialed Number is Invalid
05=DISA: Console Busy, Please Hold	06=DISA Timer has Expired
07=DISA:Insufficient Digits Dialed	14=Wake Up Message
08=DISA: Night Answer Greeting	09=External Call Forward Reroute
10=UCD All Agents Are Busy	11=UCD All Agents Still Busy
12=UCD Call will be terminated	15=SLT Message Waiting Advisory

Form 46-CO-04 DISA External Call Forward Status determines under what conditions DISA will be activated. DISA may be completely disabled, enabled only during Day Service, only during Night Service, or at all times. The valid settings are listed below.

Form 46-C0-04 DISA External Call Forward Status	0=Day Disable / Night Disable
1=Day Disable / Night DISA	2=Day DISA / Night Disable
3=Day DISA / Night DISA	4=Day Disable / Night ECF
5=Day ECF / Night Disable	6=Day ECF / Night ECF
7=Day DISA / Night ECF	8=Day ECF / Night DISA

To record and play voice promptsTo record and play voice promptsTo record and play voice prompts:

1. From the operators station, dial 86.
2. LCD display shows:

VOICE PORT (1) *:REC #:PLAY

3. The number in parenthesis indicates the voice channel number that is presently being programmed.
4. You must record your entire set of messages, one at a time. Press [*] to record. Press 1 to stop recording and step to the next message section.
5. Repeat step 4 until you have completed all messages you wish to record.
6. To listen to your recording(s), press [#]. The selected message will play. You may step from message to message by pressing [1].

DISA Call Flow Charts

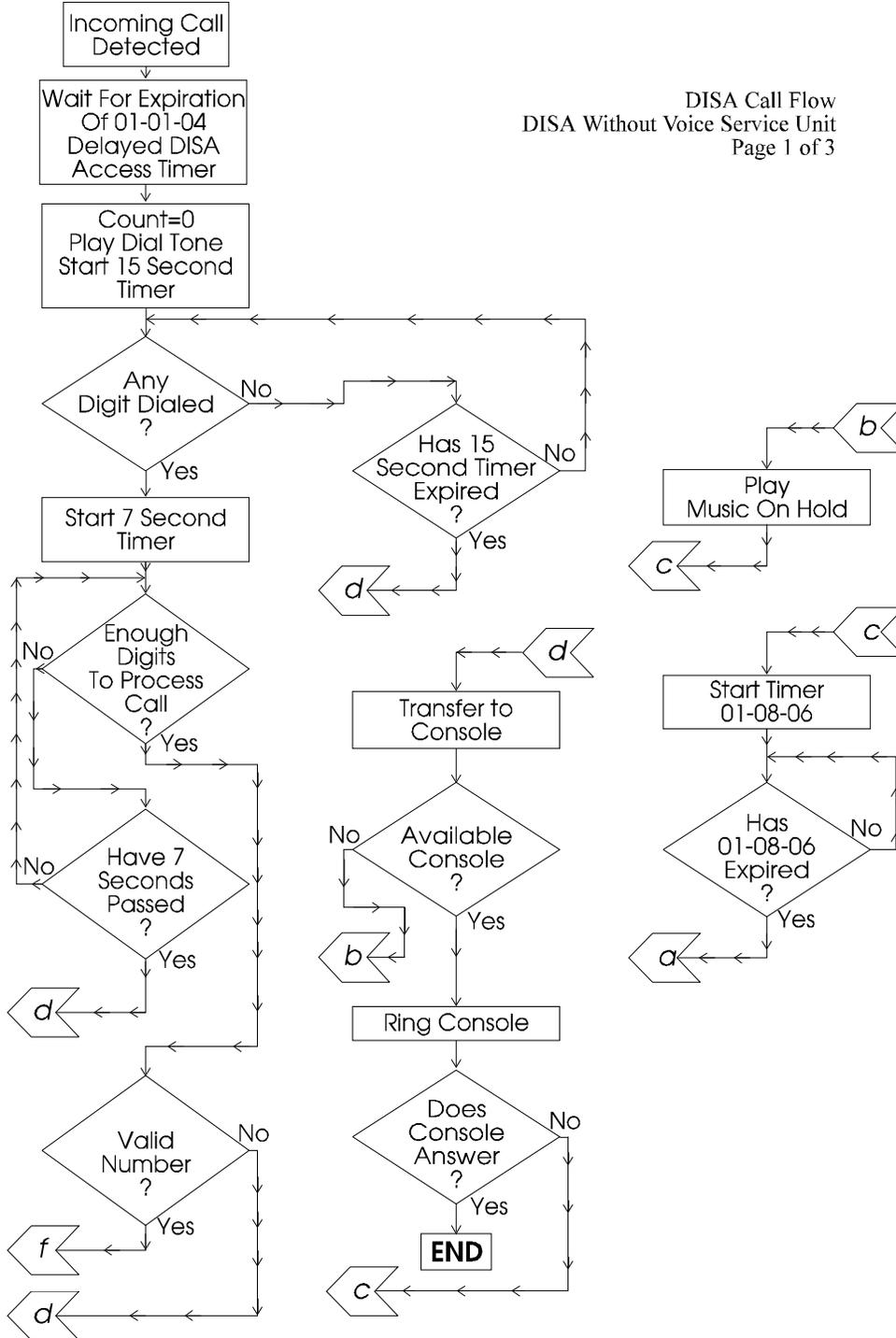
Each description consists of three pages of charts.

The first set of flow charts explain the operation of DISA when a Voice Service Unit is not programmed for use by DISA.

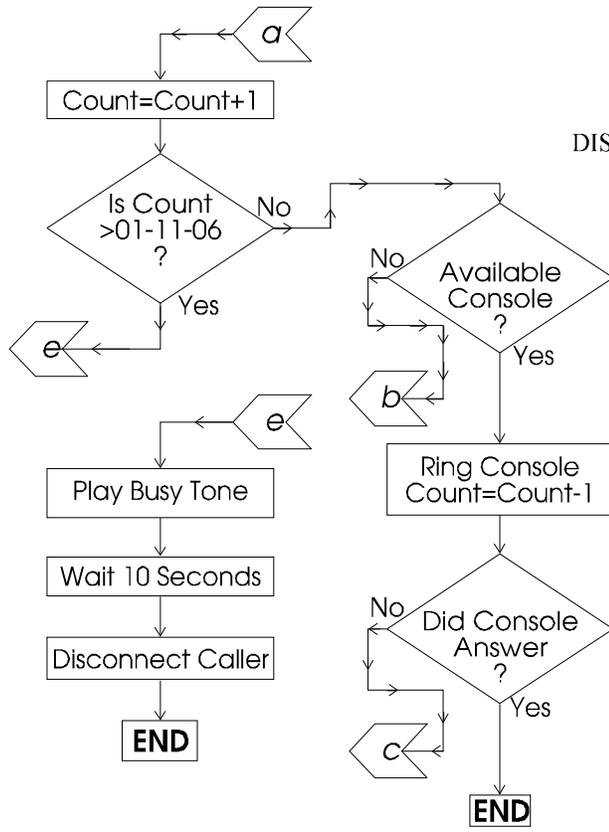
The second set of flow charts explain the operation of DISA when a Voice Service Unit is programmed for use by DISA.

DISA With No Voice Service Unit - Chart 1

DISA Call Flow
DISA Without Voice Service Unit
Page 1 of 3



DISA With No Voice Service Unit - Chart 2

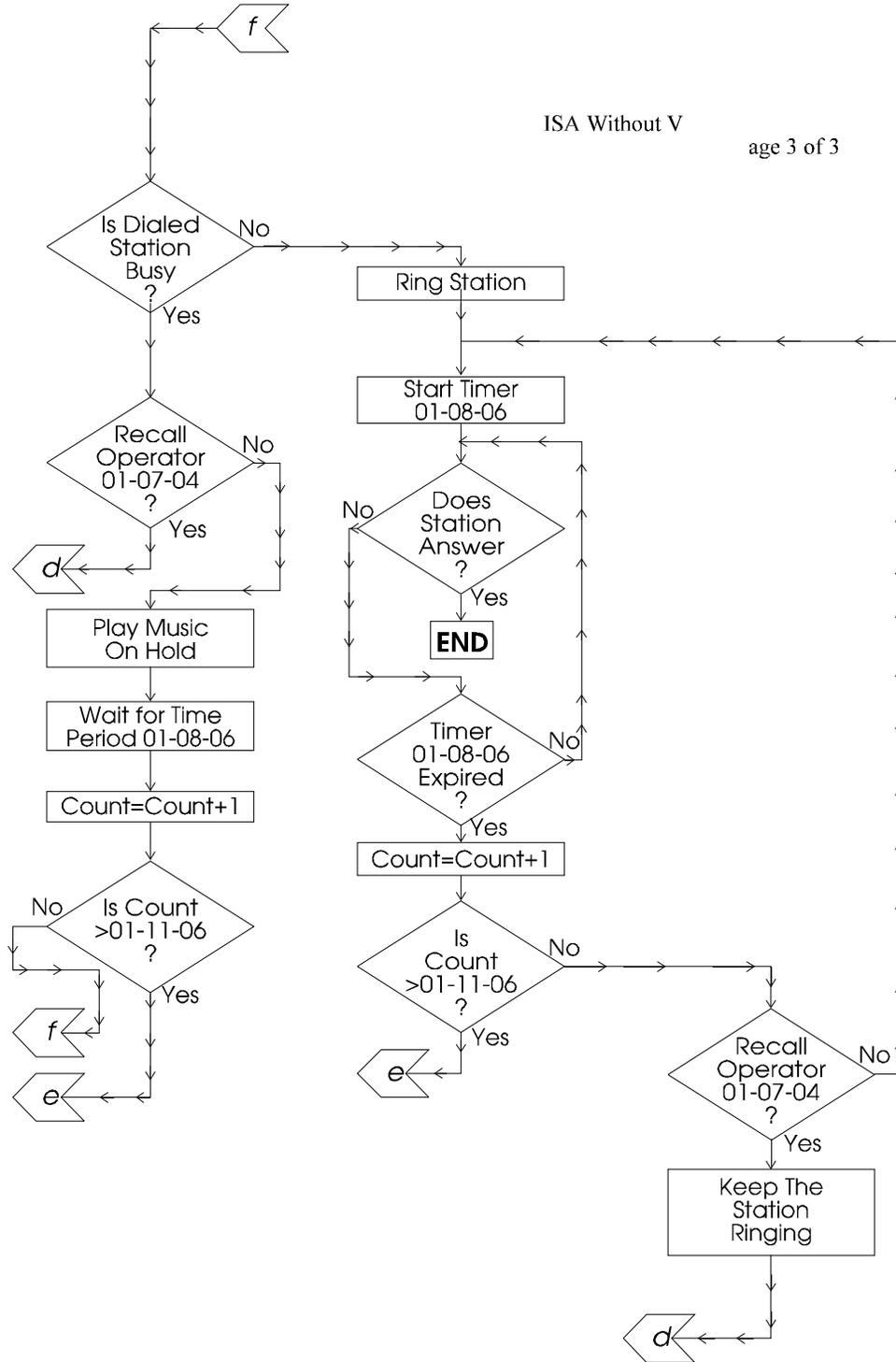


DISA Call Flow
DISA Without Voice Service Unit
Page 2 of 3

DISA With No Voice Service Unit - Chart 3

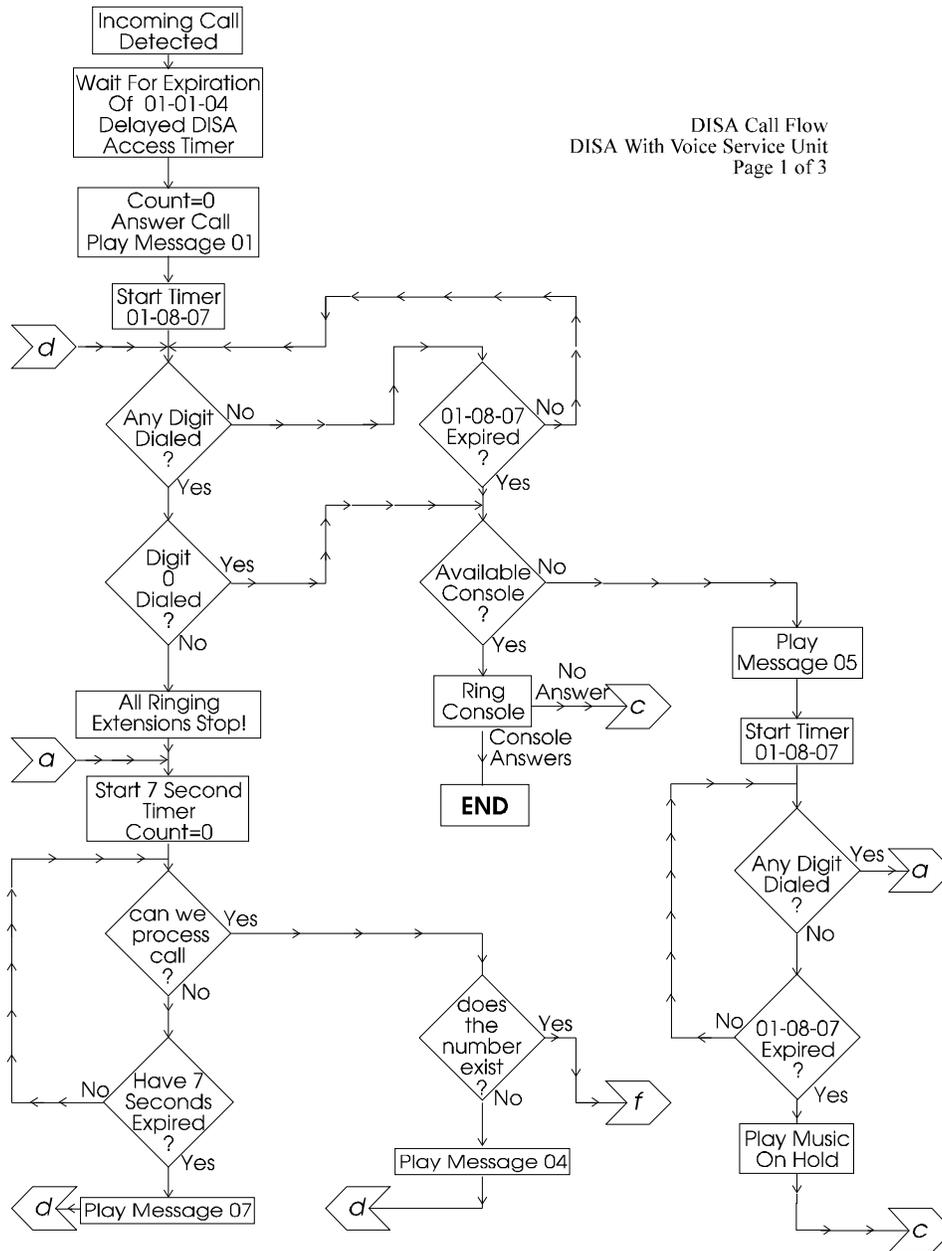
ISA Without V

age 3 of 3

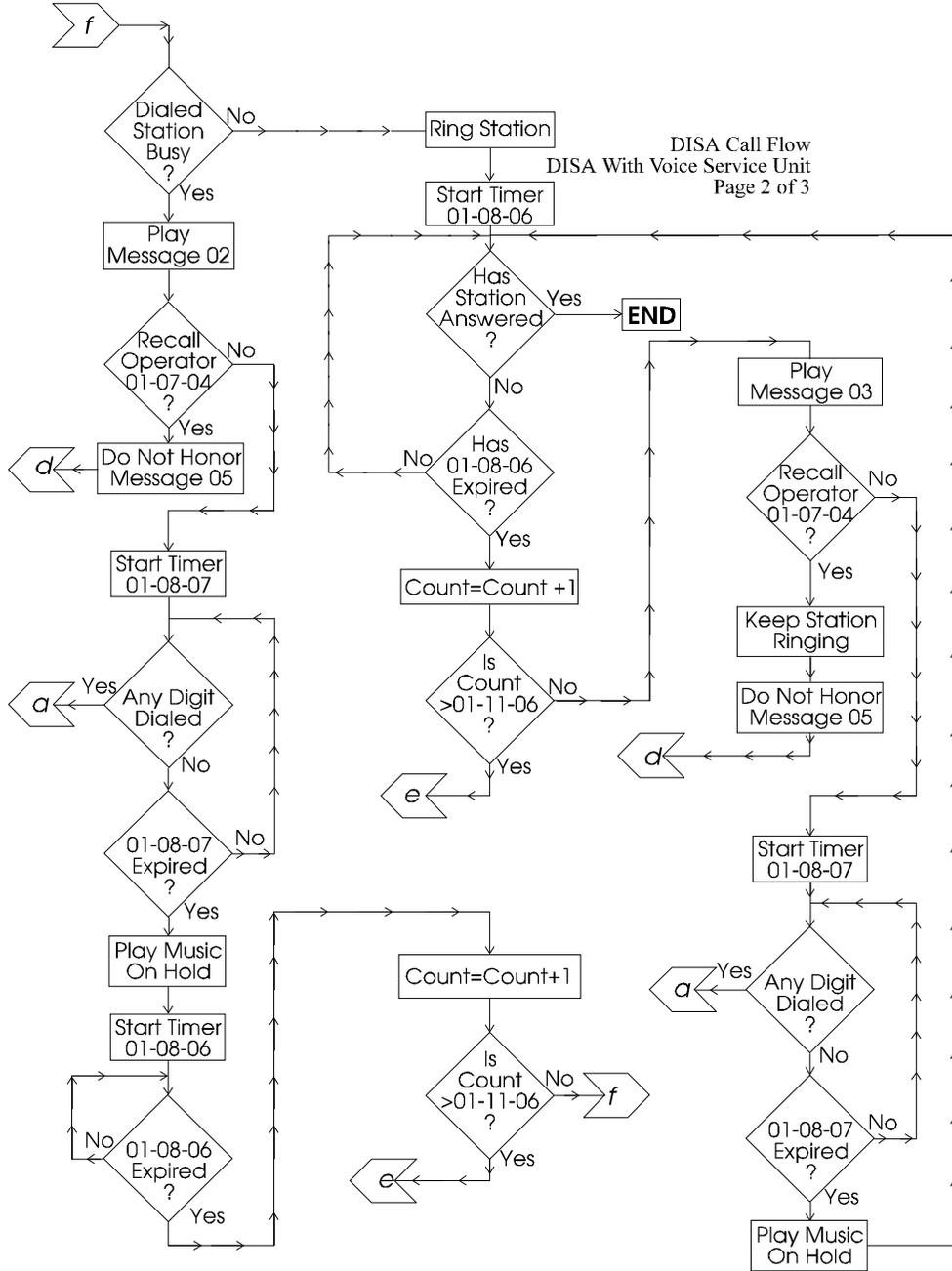


DISA With a Voice Service Unit Chart 1

DISA Call Flow
DISA With Voice Service Unit
Page 1 of 3

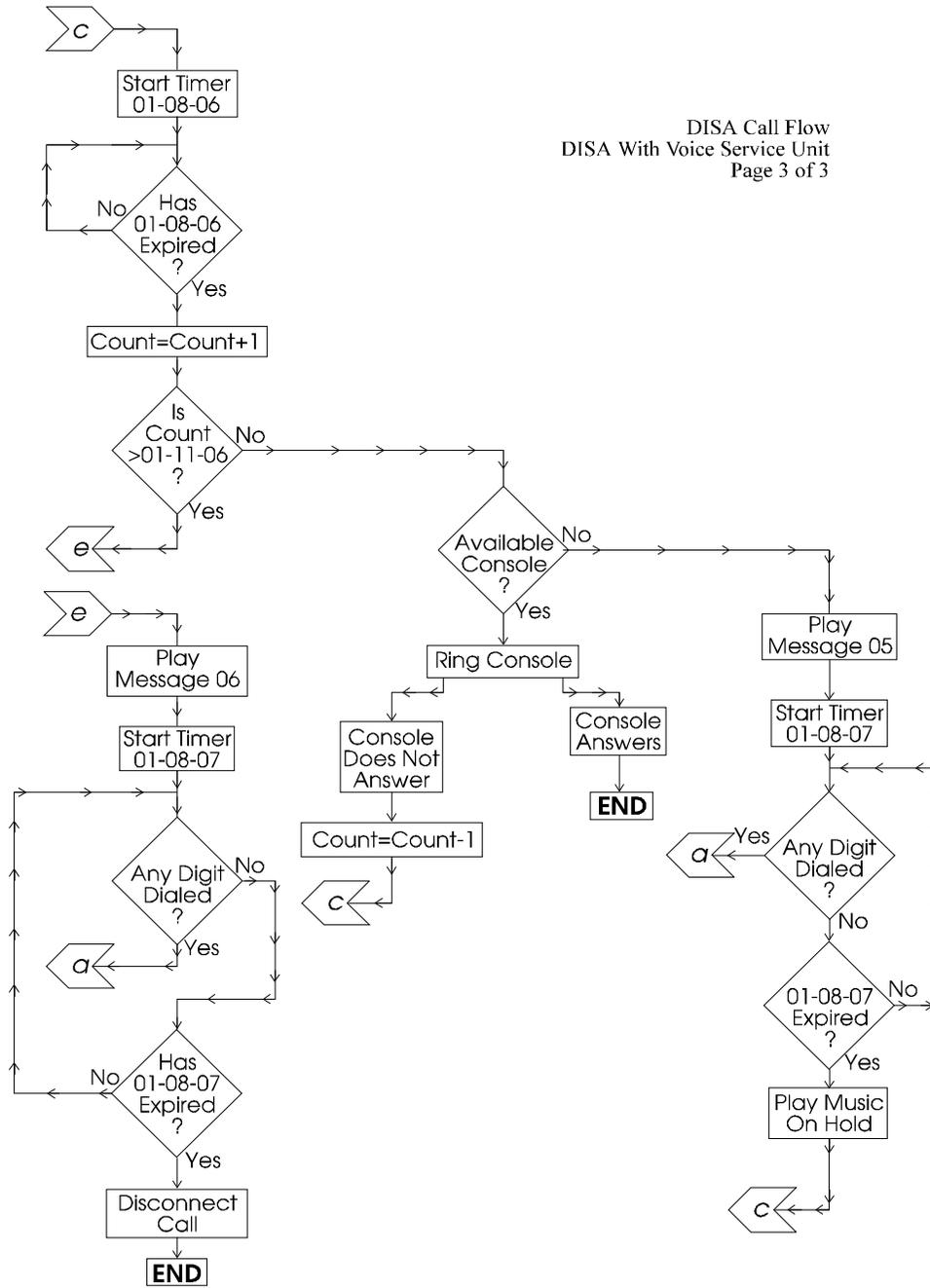


DISA With a Voice Service Unit - Chart 2



DISA With a Voice Service Unit - Chart 3

DISA Call Flow
 DISA With Voice Service Unit
 Page 3 of 3



Appendix B - Toll Control Detailed Description

The following section describes the details of operation, programming and implementation of Toll Control on the Superkey SK-200 and SK-824.

Toll Control OverviewToll Control OverviewToll Control Overview

Toll control provides the ability for installation personnel and the end user to selectively restrict the dialing capabilities of telephones within the system. There are 9 levels of restriction and one unlimited dialing level within the system. Each of the 9 levels of restriction is under user control and can be programmed to allow or disallow calls through a series of deny and exception tables that can be configured to up to 11 significant digits.

Unless otherwise specified, this description applies to both the SK-824 and the SK-200.

Centrex ConsiderationsCentrex ConsiderationsCentrex Considerations

If your system is not configured behind Centrex or behind a PABX, you may skip this section.

If the system is to be used behind Centrex or PABX operation, the system should be set up to recognize that calls within the Centrex/PABX system are not subject to toll control and that calls outside the system are subject to toll control.

There are two places within system programming that notify toll control that CO lines are behind Centrex. The first location is on **Form 46-CO-01**, where *CO* is the CO line number. On the SK-824 *CO* will be a number from 01 to 08. On the SK-200 *CO* will be between 01 and 40. If this item is set to a value of [0], the system assumes that it is a normal CO line and that all dialing on it will be subject to toll control.

If 46-*CO*-01 is set to a value of [1], the system assumes that the line is configured behind Centrex and will look for the Centrex Outgoing Code as programmed on **Form 01-03-04, Centrex Outgoing Code**. If the first digit dialed on the CO line matches the one programmed on 01-03-04, toll control checking will occur. However, the digit programmed in Form 01-03-04 will be discarded before toll checking occurs.

For example, if the digit [9] is programmed in Form 01-03-04, any call that begins with the digit [9] will be subject to normal toll control. The first digit subject to toll checking will be the next digit after the [9] is dialed. Should the first digit dialed be something other than [9], the system assumes that the call is an inside Centrex call and does not apply toll checking.

Form 01-03-04, Centrex Outgoing Code as listed above determines the code that will cause the system to recognize a call as an outside Centrex call. This parameter is only checked when Form 46-*CO*-01 is set to a value of 1.

Note: In some installations where the Superkey is installed behind a PABX, there may be multiple access codes that provide access to various types of CO lines. These installations are not as common as they once were, but there are still some installations where a user may have to dial an access code for a local call, a different access code for long distance calls and sometimes even a third or fourth code to access tie lines to another facility. In those applications, we recommend that the installation be configured so that all lines are configured as CO (Form 46-*CO*-01 set to [0]) and that toll control consider all digits that are dialed on the line.

Toll PlansToll PlansToll Plans

Form 28-Station-05, Toll Plan (Day Service) or 28-Station-06, Toll Plan (Night Service), where *Station* is the extension number of the station, is the first pointer that is checked when dialing begins on a CO line. The digit refers toll control to check the matching toll plan on **Form 70, Toll Plan Assignment**.

Example: If a station is programmed as [0] on Form 28-*Station*-05 or 28-*Station*-06, the station will be subject to Toll Plan 00 on Form 70. If a station is programmed as [2], it will be subject to Toll Plan 02 on Form 70.

Form 70, Toll Plan Assignment provides a toll plan routing map for each of the ten plans within the

system. It sets up the reference checking for each individual trunk within the system. In essence, it is the switchboard that connects a station and a trunk to a pair of deny and exception tables. As can be seen by consulting Form 70 in the System Programming Forms, there is an entry in each of the 10 plans for every CO line in the system. The SK-824 shows 8 entries and the SK-200 shows 40 entries.

Example: If a station is programmed as [0] on Form 28-Station-05 or 28-Station-06, it will be subject to plan 00 on Form 70.

If the station accesses Line 1, the system will check the entry in Form 70-00-01, where 00 is the plan number and 01 is the CO line number. The number that is found in that entry is used to select the toll restriction deny/exception tables that will be used to monitor the digits dialed.

Class/Setting	Subject to:
0	No Restriction - Toll checking will not apply
1	Restriction (Deny) Form 71 / Exception Form 61
2	Restriction (Deny) Form 72 / Exception Form 62
3	Restriction (Deny) Form 73 / Exception Form 63
4	Restriction (Deny) Form 74 / Exception Form 64
5	Restriction (Deny) Form 75 / Exception Form 65
6	Restriction (Deny) Form 76 / Exception Form 66
7	Restricted Unless Exception is found in Form 67
8	Restricted Unless Exception is found in Form 68
9	Restricted Unless Exception is found in Form 69

Note: Settings of [7], [8], or [9] are completely restricted. There is no need for a Deny Form for these values. However, in order to lessen the restrictions on some of these classes, each value has an associated exception Form. These are explained in greater detail later in this Appendix under the explanations for Forms 61 through 69 and 71 through 76.

Restriction (Deny) Forms 71-76

Restriction Forms are the first items checked to determine the dialing capabilities of a telephone. Each Form allows up to 20 entries.

The **SK-200** allows entries to be up to 12 digits in length.

The **SK-824** allows entries to be up to 8 digits in length.

There are two possible types of entry, **Unconditional** and **Conditional**.

Unconditional Entries

Unconditional Entries make absolute rules. If a caller dials the digits that are found in an unconditional entry, the call will be disallowed. Examples of unconditional entries are:

SK-824	SK-200
0	0
1900	1900
1976	1976
15551212	15551212

Any time a caller enters one of these numbers and is subject to the Restriction table in which these are programmed, the caller will be disconnected from the CO line. There are no exceptions to these rules.

Conditional Entries

Conditional Entries are entries that make a rule, but may have exceptions to the rule. The exceptions to the rule will be found in the corresponding Exception Form.

- Restriction Form 71 will search for exceptions in Form 61.
- Restriction Form 72 will search for exceptions in Form 62.
- Restriction Form 73 will search for exceptions in Form 63.
- Restriction Form 74 will search for exceptions in Form 64.
- Restriction Form 75 will search for exceptions in Form 65.
- Restriction Form 76 will search for exceptions in Form 66.

A conditional entry will end with don't care digits (d). Examples of conditional entries are:

SK-824	SK-200
10288ddd	10288ddddddd
1555ddd	1555ddddddd
976ddd	976ddddddd

In each entry the corresponding Exception Form will be checked to see if there are exceptions to the rule. If no exceptions are found, the caller will be disconnected.

If there are exceptions found, the digits will be matched to see if the number dialed matches an entry in the exception form. If they match, the call will be allowed. If they do not match, the call will be disconnected.

Exception Forms 61-69Exception Forms 61-69Exception Forms 61-69

Form 61 through 66 provide exceptions to their corresponding Restriction (Deny) Tables 71-76 as explained above. Form 67, Form 68 through Form 69 provide exceptions to total restriction and do not correspond to 7x Restriction Forms. Forms 67 through 69 provide the exceptions to toll classes 7 through 9, when these classes are entered into a plan on Form 70.

Regardless of the number, Forms 61 through 69 all perform the same function, to provide exceptions to the rules set elsewhere. Forms 61 through 66 will only be checked when their corresponding Restriction table has found a **Conditional Entry**.

Forms 61 through 69 each provide for up to 20 entries. The programming method is also similar and entire strings must be used when entering digits in Forms 61-69.

The **SK-200** allows entries to be up to 12 digits in length.

The **SK-824** allows entries to be up to 8 digits in length.

There are two types of entries that can be made in Form 61 through 69, **Fixed** and **Variable**.

Fixed EntriesFixed EntriesFixed Entries

Fixed Entries are entries that require a specific number of digits. Any digits dialed after this string has been allowed will cause the call to be in violation of the exception and be disconnected. Examples of fixed entries are:

SK-824	SK-200
	15551212
9761111	9761111

These entries will allow only the digits dialed. In any case, if additional digits are dialed, the calls will be disconnected.

Variable EntriesVariable EntriesVariable Entries

Variable Entries are the more commonly used entries in exception forms. These entries allow the programmer to stop toll checking at some point before the entire telephone number is dialed. They are also used where there may be more digits dialed than just a telephone number, such as when calling into a remote voice mail system, bank by phone service or other services that require additional Touch Tone entry after the telephone number.

Examples of variable entries are :

SK-824	SK-200
1555ddd	1555ddddddd
1203ddd	1203ddddddd
1319ddd	1319ddddddd

In each of these cases, a call beginning with 1+555 will be allowed and any digits beyond that will be accepted. Likewise, 1+203 and additional digits will be allowed, as well as 1+319 and more digits. Toll checking will cease under four conditions in the forms

1. When an Unconditional Entry is matched in a Restriction (Deny) Form. (Call is disallowed).
2. When a Conditional Entry in a Restriction Form is not matched by an Exception Entry. This can be either due to no match in the Exception Form or because the digit length exceeds what is allowed in the exception Form. (Call is disallowed).

3. When a conditional entry has been matched and an exception has been matched by a Variable Entry.
4. When the total digit length has been exceeded without the call being disallowed. This will occur after eight digits on the SK-824 and after eleven digits on the SK-200.

Other FactorsOther FactorsOther Factors

Special Note: The items listed below apply only to outbound access of CO lines. The handling of inbound calls and CO lines is a function of incoming ringing assignments and line appearances on key telephone sets. Please do not confuse the two separate functions.

Stations can be restricted from all CO Line Access through a combination of programming options.

Form 01-04-02, Dial 9 ActivationForm 01-04-02, Dial 9 ActivationForm 01-04-02, Dial 9 Activation may be disabled on systems where there is no desire to utilize dial 9 functions. When this option is disabled, a station cannot dial 9 to access his dial 9 line Group (from Form 44). However, a station may directly access any CO line that is in his dial 9 group.

SK-824 a station may directly access by dialing 80+ the line number (from 1 to 8).

SK-200 a station may directly access by dialing 8+ the line number (from 01 to 40).

Form 01-08-02, Direct CO AccessForm 01-08-02, Direct CO AccessForm 01-08-02, Direct CO Access can be enabled or disabled to allow or deny direct access to CO lines. When enabled, stations will be able to directly access any CO line in the system by the methods listed below:

SK-824 a station may directly access by dialing 80+ the line number (from 1 to 8).

SK-200 a station may directly access by dialing 8+ the line number (from 01 to 40).

If this option is disabled, stations will only have access to CO lines that are in their Dial 9 group (Form 44). This is true whether Dial 9 activation is enabled or not.

Form 28-Station-04, Dial 9 GroupForm 28-Station-04, Dial 9 GroupForm 28-Station-04, Dial 9 Group determines which dial 9 group is applicable to each station. There are eight groups in Superkey systems. A setting of 1 corresponds to the CO lines programmed in Form 44-01. A setting of 2 corresponds to the CO lines programmed in Form 44-02, etc., up to a setting of 8, which corresponds to Form 44-08.

This form will also assign an alternate Dial 87 Group the corresponds to the entry. Dial 87 groups are programmed on Form 45. There are eight groups available on the Superkey system.

Station LockStation LockStation Lock will cause a station to be subject to Toll Class 9. As noted in the section of this Appendix, a Toll Class of 9 is completely restricted with the exception of any items found in Form 69. For more information please see Station Lock on page 154 of the Features and Services Description.

Forced Account CodesForced Account CodesForced Account Codes will take a station from the programmed Toll Restriction Class to a Toll Class 0 for the duration of a single call. For more information please see page 94 of the Features and Services Description

Index To Programming Forms

F

Form 01-01-01	94
Form 01-01-02	93
Form 01-01-03	93, 94
Form 01-01-04	36, 55, 76, 166, 167, 173
Form 01-01-05	16, 30, 117
Form 01-01-06	125, 146, 147
Form 01-01-07	51, 72
Form 01-01-08	20
Form 01-02-01	143
Form 01-02-02	143
Form 01-02-03	9, 137
Form 01-02-04	27, 94, 143
Form 01-02-05	83, 146, 147
Form 01-02-06	27, 94, 144
Form 01-02-07	134
Form 01-02-08	134
Form 01-03-01	51
Form 01-03-02	8
Form 01-03-03	92, 98
Form 01-03-04	15, 185
Form 01-03-06	116, 127, 154
Form 01-03-07	107
Form 01-04-02	50, 69, 102, 130, 188
Form 01-04-03	18
Form 01-04-04	160
Form 01-04-06	46, 145, 147, 148
Form 01-04-07	142
Form 01-04-08	107
Form 01-05-01	11
Form 01-05-02	109
Form 01-05-03	149
Form 01-05-04	149
Form 01-05-06	52
Form 01-05-07	9, 137
Form 01-05-08	9, 137
Form 01-06-01	30, 163, 172
Form 01-06-02	163
Form 01-06-03	166, 174
Form 01-06-05	41, 50, 102, 120
Form 01-06-06	152
Form 01-06-07	27, 28, 95, 144
Form 01-07-01	100
Form 01-07-02	29
Form 01-07-04	55, 174
Form 01-07-05	29
Form 01-07-06	152
Form 01-07-07	109
Form 01-08-01	3, 4, 34, 35, 89
Form 01-08-02	69, 159, 188
Form 01-08-03	30, 117, 144
Form 01-08-04	55, 174
Form 01-08-05	144
Form 01-08-06	54, 55, 166, 167, 174

Form 01-08-07	55, 166, 167, 174
Form 01-08-08	14, 111, 112
Form 01-09-01	46, 147
Form 01-09-03	33
Form 01-09-04	175
Form 01-09-06	175
Form 01-09-07	175
Form 01-09-08	175
Form 01-10.....	169, 170
Form 01-11-01	129
Form 01-11-03	27
Form 01-11-04	55, 60, 175
Form 01-11-05	62, 175
Form 01-11-06	56, 175
Form 01-11-08	61, 175
Form 01-12-01	49, 50, 93
Form 01-12-05	169
Form 02-01.....	124, 156
Form 03	66, 67
Form 04	40, 41, 174
Form 04-01.....	166, 167
Form 05	133
Form 06	47, 147
Form 07	61, 97, 142
Form 08	37, 66, 68, 79, 104, 132
Form 09	139, 140
Form 10	43, 44, 114, 160
Form 11	157
Form 12-01.....	2, 152, 153
Form 12-08.....	2
Form 13	90, 164
Form 14	11, 61, 76, 166, 167, 172, 176
Form 15	114
Form 17	140
Form 21	96
Form 22	6, 25, 53, 58, 66, 87, 103, 118, 159
Form 23	71, 85, 88
Form 24	18, 42, 65, 74, 75, 90, 104, 110, 121, 122, 132, 150, 155, 164, 168
Form 25	26, 95, 106, 133, 156, 157
Form 26	10, 69, 73, 98, 99, 102, 159
Form 26-STN-04	25, 39, 168
Form 27	5, 9, 49, 54, 56, 66, 67, 68, 92, 107
Form 28	23, 41, 50, 53, 59, 69, 91, 93, 94, 98, 100, 102, 106, 122, 126, 130, 142, 159, 185, 188
Form 29	46, 71, 73, 116, 118, 127, 154, 170
Form 30	145
Form 31	105
Form 41	17
Form 42	3, 4, 34, 35, 38, 44, 53, 80, 84, 89, 104, 114, 159, 166, 167
Form 43	3, 4, 34, 35, 38, 44, 53, 80, 84, 89, 104, 159, 166
Form 44	50, 69, 102, 103, 130, 172, 174
Form 45	49
Form 46	3, 4, 15, 23, 34, 35, 36, 37, 38, 51, 53, 54, 72, 76, 84, 104, 117, 146, 166, 185
Form 47	97
Form 61	186
Form 62	186
Form 63	187
Form 64	187

Form 65	187
Form 66	187
Form 67	187
Form 68	187
Form 69	150, 155, 187
Form 70	185, 186
Form 71	186
Form 72	186
Form 73	187
Form 74	187
Form 75	187
Form 76	187