

Samsung *i*DCS500
Business
Features Package

iDCS500 Business Features Package

This guide describes the features available on the iDCS500 keyphone system. It is subdivided into the following sections.

- System Features
- Station Features
- Display Features
- Sample Keypad Displays
- Sample Caller ID Displays
- Sample UCD Displays
- Sample SMDR Printout
- Sample UCD Report
- UCD Call Statistics
- UCD Agent Statistics
- Sample Traffic Report
- Traffic Report Overview
- Sample Alarm Report

System Features

AC15 Tie Lines
 Account Code Entry
 Forced - Verified
 Forced - Not Verified
 Voluntary
 Account Code Key (M Version)
 Account Code Key - One Touch (L Version)
 All Call Voice Page
 Attention Tone
 Authorization Codes
 Forced
 Voluntary
 Auto Attendant
 Automatic Hold
 Background Music
 Cadence-Integrated Voice Mail*
 Call Activity Display
 Call Costing
 Caller Identification (Caller ID)
 Calling Line Identification (CLI) for Incoming Calls
 Caller ID (CID) Features
 Name/Number Display
 Next Call
 Save CID Number
 Store CID Number
 Inquire Park/Hold
 CID Review List (M Version)
 CID Review List (L Version)
 Investigate
 Abandon Call List
 CID on SMDR
 Number to Name Translation
 Calling Line Identification (CLI) for Outgoing Calls
 Outgoing CID
 Restricting Outgoing CID

Call Forwarding
 All Calls
 Busy
 No Answer
 Busy/No Answer
 Forward DND
 Follow Me
 External
 To Voice Mail
 Preset Destination
 Call Forward Busy (CFB – Networking Enabled Only)
 Call Forward No Response (CFNR – Networking Enabled Only)
 Call Forward Unconditional (CFU – Networking Enabled Only)
 Call Hold
 Exclusive
 System
 Remote
 Call Park and Page
 Call Pickup
 Directed
 Groups
 Established (L Version)
 Call Waiting/Camp-On
 Centrex/PBX Use
 Chain Dialling
 Class of Service
 Common Bell Control
 Conference
 Add On (5 Party)
 Unsupervised
 Split (L Version)
 Computer Telephony Integration (CTI)
 TAPI 2.1
 Data Security
 Database Printout
 Direct In Lines
 Direct Dialling In (DDI)

| | |
|------------------------------------|---|
| Direct Inward System Access (DISA) | Prime Line Selection |
| Direct Trunk Selection | Private Lines |
| Directory Names | Programmable Line Privacy |
| Door Phones | Programmable Timers |
| Executive Barge-In (Override) | Recalls |
| With Warning Tone | Remote Programming – PC |
| Without Warning Tone | Ring Modes |
| Trunk Monitor or Service Observing | Time Based Routing Plans |
| Executive/Secretary Pooling | Automatic / Manual |
| External Music Interfaces | Holiday Schedule |
| External Page Interfaces | Temporary Override |
| Flash Key Operation | Ring Over Page |
| Flexible Numbering | Single Line Connections |
| Hot Desking | Speed Dial Numbers |
| Hot Line | Speed Dial by Directory |
| In Group/Out of Group | Station Hunt Groups |
| Incoming Call Distribution | Station Message Detail Recording (SMDR) |
| Incoming/Outgoing Service | SVMi-8 Integrated Voice Mail* |
| Individual Line Control | System Alarms |
| ISDN Service | System Maintenance Alarms |
| Primary Rate Interface (PRI) | System Directory |
| Basic Rate Interface (BRI) | Tenant Service |
| Least Cost Routing | Toll Restriction |
| Live System Programming | Toll Restriction Override |
| Meet Me Page and Answer | Tone or Pulse Dialling |
| Memory Protection | Traffic Reporting |
| Message Waiting Indications | Transfer |
| Microphone On/Off per Station | Trunk Groups |
| Music on Hold – Flexible | Uniform Call Distribution (UCD) |
| Music on Hold – Sources | UCD Groups |
| Networking | Call Statistics |
| Off Premises Extensions (OPX) | Agent Statistics |
| Operator Group | Group Supervisors |
| Overflow | Printed Reports |
| Operator | Universal Answer (Night Bell) |
| Station Group | Virtual Extensions |
| Override Code | Voice Mail – Inband Integration |
| Paging | Voice over IP |
| Park Orbits | Walking Class of Service |

*Requires optional hardware and/or software. Ask your dealer for details.

System Feature Descriptions

AC15 Tie Lines

Your office can be connected to another office with a tie line. Use it to make calls to stations in the other system. If programming allows, you can access lines in the other system to make outside calls. Tie line calls can be put on hold, transferred and conferenced in the same way as other outside calls. Users accessing the tie line from the other system can also get a line in your system and make outgoing calls. These calls can be controlled by assigning a dialling class to the tie line. Your local telephone company may use AC15 tie lines to provide DDI service. In this case, these tie lines can be programmed to follow the DDI translation table. Translated AC15 tie line calls have time-based routing capabilities.

Account Code Entry

Station users may enter an account code (maximum 12 digits) before hanging up from a call. This account code will appear in the SMDR printout for that call record. Keyset users may enter this code using an account code key without interrupting a conversation. Single line telephone (SLT) users must temporarily interrupt the call by hook-flashing and dialling the feature access code. Manually entered account codes can be up to 12 digits long. In some cases, users can be forced to enter an account code and this account code may or may not be verified as described below.

Forced (Verified)

When set for this option the user must enter an account code for all outgoing calls. The account code entered will be verified from a system list of 500 entries for M version software, and from a list of 999 entries for L version software. Forced (Verified) codes can contain the digits 0~9.

Forced (Not Verified)

When set for this option, the user must enter an account code for all outgoing calls, but the account code is not verified against the system list. Non-verified account codes can contain the digits 0~9 and #.

Voluntary

In this case, account codes are not required to make outgoing calls but may be used if desired. This is also the method used to assign an account code to incoming calls. These account codes can contain the digits 0~9 and #.

Account Code Key (M Version Software)

The account code (ACCT) key can be programmed on any keyset and will appear as a soft key on display keysets. This key allows the user to enter account codes without interrupting a call.

Account Code Key—One Touch (L Version Software)

The account code (ACC) key can be programmed on any keyset. This key can be programmed with an extender and operates in three different ways, depending on the extender, as follows.

Extender = 000 When programmed with an extender of 000 the ACC key will operate in the same manner as the ACCT key in the M version. That is to say, the user will be prompted to enter an account code when the key is pressed.

Extender = 001~999 When programmed with an extender ranging from 001 to 999 the key will, when pressed, automatically insert the account code entered for that number. This is known as One-Touch account codes. This option can be denied in system programming to prevent users from bypassing the security of system account codes.

No Extender When programmed without an extender the key will, when pressed, prompt the user to enter the number in the system account code table where the account code is stored.

All Call Voice Page

Users can page all internal and all external paging zones at the same time by dialling the All Page code. Keysets may be restricted from making or receiving pages in system programming. A maximum of 99 keysets can be programmed in each internal page zone to receive page announcements.

Attention Tone

To get your attention, a brief tone precedes all page announcements and internal voice calls. There are separate programmable duration timers for page and voice announce tones.

Authorisation Codes

Authorization codes give permission to make a call. A maximum of 250 four-digit authorisation codes can be either forced or voluntary for M version software, and 500 four- to 10-digit authorisation codes can be either forced or voluntary for L version software. When used, authorisation codes will automatically change the dialling station's class of service to the level assigned to the authorisation code. Authorisation codes may be programmed to print, or not print, on SMDR.

Forced

When a station is programmed for forced authorisation, the user must always enter this code before dialling is allowed. The dialled authorisation code is verified from the system list of 250 authorisation codes on an M system, or 500 on an L system.

Voluntary

Any station user can always enter an authorization code before they begin dialling. The dialled authorization code is verified from a system list of 250 authorization codes for M version software, or 500 for L version software.

Auto Attendant

The integrated digital Automated Attendant feature (AA) provides eight ports per card for simultaneous answering and call processing. A maximum of five cards can be installed in one system. Each 16 professionally recorded announcements inform callers of the progress of their calls. Examples are: "I'm sorry. There is no answer", "That station is busy", and "Invalid Number. Please try again". A maximum of four minutes of super capacitor-backed random access memory (RAM) provide up to 48 customer recordings for announcements or greetings. (This RAM will hold data for up to 100 hours without power supplied.) Twelve individual announcements (boxes), each with its own dialling options, allow you to build call routing branches as needed. Callers are routed through the branches by dialling extension numbers or single digits.



NOTE: Announcements recorded on one AA card cannot be played to callers on another AA card.

Automatic Hold

While a keyset user is engaged on an outside (C.O.) call, pressing another trunk key, route key or CALL key automatically places the call on hold when Automatic Hold is enabled. Pressing TRSF, CONFERENCE, PAGE or a DSS key always automatically places a C.O. call on hold. Internal calls can be automatically held only by pressing TRSF or CONFERENCE. Each keyset user can enable or disable Automatic Hold.

Background Music

Keyset users may choose to hear music through their keyset speakers when optional external sources are installed. Each user may adjust this level by the use of a volume control program at the selected keyset.

Cadence - Integrated Voice Mail

The iDCS500 can be equipped with Samsung's proprietary integrated Cadence Voice Mail and Auto Attendant card (CVM8A). It provides four or eight ports of voice processing (expandable from four to eight ports). Because it is built into the system it provides such features as one-touch Call Record, Answering Machine Emulation and Voice Mailbox Administration with interactive keyset displays. Ask your dealer for information on Cadence.

Call Activity Display

The iDCS500 will record and buffer all calling activity within the system. With a Call Activity Display (CAD) key, the system will display a "snapshot" of the following information:

- The maximum number of ports that have been used

- The maximum number of trunks that have been used
- The maximum number of stations that have been used
- The current number of ports in use
- The current number of trunks in use
- The current number of stations in use



NOTE: This feature is only available with a LAN module installed on the MCP card.

Call Costing

The iDCS 500 provides programmable call costing tables to calculate the cost of incoming and outgoing calls. Rates are calculated by the number dialed, and may include surcharges. Display keysets can be set to show the call duration timer or the call cost. The SMDR report will show either the call duration or the call cost depending on the station selection. The relevant portion of the cost for a call handled by multiple stations will be allocated to each station.

Caller Identification (Caller ID or CID)

The iDCS500 supports caller identification on ISDN circuits as a means of identifying an incoming caller. It is also possible for station users to identify themselves to external parties by sending CID information when making calls.



NOTE: CID is sometimes referred to as Calling Line Identification Presentation (CLIP).

1. Calling Line Identification (CLI) for Incoming Calls

With ISDN, calling party information is referred to as Calling Line Identification (CLI) and is supported on both BRI and PRI type circuits.

The iDCS500 supports 'Number only' delivery format provided by the telephone company. Names can be attached to telephone numbers of frequent callers via the CID translation table.

Caller Identification (CID) Features

The following features apply to all forms of caller identification. However, for simplicity, caller identification is referred to as CID.

Name/Number Display

Each LCD keyset user can decide to see either the name or number in the display first. Regardless of which is selected to be seen first, the NND key can be used to view the other.

Next Call

In the event that you have a call waiting or a camped-on call at your keyset, you can press the NEXT key to display the CID information associated with this next call in queue at your station. Either the CID name or number will show in the display depending on your selection.

Save CID Number

At any time during an incoming call that provides CID information, you may press the SAVE key. This saves the CID number in the Save Number feature. Pressing the SAVE number redial key will dial the CID number.

Store CID Number

At any time during an incoming call that provides CID information, you may press the STORE key. This saves the CID number as a speed dial number in your personal speed dial list.

Inquire Park/Hold

Having been informed that an incoming call is on hold or has been parked, you may view the CID information before you retrieve the call. This will influence how you choose to handle the call.

CID Review List (M Version)

This feature allows display keyset users to review CID information for calls sent to their stations. The review list is 10 to 50 calls on a first in, first out basis. The list includes calls that you answered and calls that rang your station but that you did not answer. When reviewing this list, you can press a key to dial the person back.

CID Review List (L Version)

The operation of this feature on an L version system is similar to the M version described above. However, there is an added option called CID REVW ALL in the Station On/Off MMC program. When set to ON, the feature will operate as described above. If set to OFF, only calls that are not answered (missed calls) at the station will be recorded in the review list.

Investigate

This feature allows selected stations with a special class of service to investigate any call in progress. If CID information is available for an incoming call, you can see to whom this station user is speaking. On outgoing calls, you can see who was called. After investigating, you may barge-in on the conversation, disconnect the call or hang up.

Abandoned Call List

There is a system-wide abandoned call list that stores CID information for calls that rang but were not answered. The list is accessed using the administrator's passcode. When reviewing this list, you are provided options to CLEAR the entry or DIAL the number. You can use the NND key to toggle between the CID name, number and the date and time the call came in. The abandoned call list will store up to 100 unanswered calls.

CID on SMDR

The Station Message Detail Recording (SMDR) report can be set to include CID name and CID number for incoming calls. This format expands the printout to 113 characters. Use a wide carriage printer or an 80 column printer set for condensed print.

Number to Name Translation

The system provides a translation table for 400 entries on M version software, and 1500 entries on L version software. When the CID number is received, the table is searched. When a match is found, the system will display the corresponding name.

2. Calling Line Identification (CLI) for Outgoing Calls**Outgoing CID**

A station user can choose to have an identifying number sent to called parties when a call is made. This number can be any valid number the user selects in programming options (the DDI number, for example). One of four numbers can be selected, depending on the outgoing trunk circuit.

Restricting Outgoing CID

Sending of CLI information can be turned off either permanently in MMC programming, or on a one-time basis using a programmed NOCLIP key at the station.

Call Forwarding

This feature allows the user to redirect (forward) incoming calls. The calls can be redirected to the attendant, a hunt group, voice mail, external number or another station user. If the destination station is in Do Not Disturb (DND), the calling party will receive DND/Reorder tone. Calls cannot be forwarded to a door phone.

All Calls

This type of forwarding is not affected by the condition of the station. All calls are immediately redirected to the designated destination. If desired, the destination station may redirect the call back to the forwarded station by using the transfer feature. The forwarded station user can continue to originate calls as usual. If no key is programmed as Forward All, the Transfer (or TRSF) key lights steady when a Forward All condition is set.

Busy

This feature forwards all calls only when the station set is busy. The station user can originate calls as usual.

No Answer

This feature forwards calls that are not answered within a preprogrammed time. The user can make and receive calls as usual. The timer is programmable on a per-station basis to allow for differences in individual work habits.

Busy/No Answer

This feature allows the station user to use both types of forwarding simultaneously, provided both destinations have already been entered in the usual manner.

Forward DND

This feature works with the Do Not Disturb feature. This allows calls directed to a station in Do Not Disturb or One-Time Do Not Disturb mode to forward calls immediately to another destination.

Follow Me

This feature allows the user to forward all calls from another station to the user's station or change the forward destination to the user's current location.

External

This feature forwards C.O. calls to an external number via a C.O. trunk if allowed by class of service. Internal calls may also be programmed to forward to an external number via a central office trunk. These calls will forward only after the programmable external call forward delay timer expires.

To Voice Mail

Each station may be programmed to allow or deny the ability to forward internal calls to voice mail. When denied, valuable message time in the voice mail system can be saved.

Preset Destination

If desired this feature provides for a permanent (preset) Forward No Answer destination for each extension. It can only be programmed by the system installer or system administrator. If a station does not have Forward No Answer set, the call will ring this preset destination if one is programmed.

Call Forward Busy (CFB) (Networking Enabled Only)

This is a different feature from the normal call Forward Busy and is only used when the forward destination is in a different node of the network. The operation of the feature is the same as the normal forward busy: when the forwarded station is busy, a calling station will be forwarded to the programmed destination.

Call Forward No Response (CFNR) (Networking Enabled Only)

This is a different feature from the normal call Forward No Answer and is only used when the forward destination is in a different node of the network. The operation of the feature is the same as the normal forward no answer: when the forwarded station does not answer after a programmed time, a calling station will be forwarded to the programmed destination.

Call Forward Unconditional (CFU) (Networking Enabled Only)

This is a different feature from the normal call Forward All and is only used when the forward destination is in a different node of the network. The operation of the feature is the same as the normal forward all: all calls to the forwarded station will be forwarded to the programmed destination.

Call Hold (Exclusive)

Outside calls can be placed on exclusive hold at any keyset by pressing the HOLD key twice during a call. Calls placed on exclusive hold can only be retrieved at the keyset that placed the call on hold. Internal calls are always placed on exclusive hold.

Call Hold (System)

Outside calls can be placed on system hold at any station. Users may dial the access code or press the HOLD key. Calls on system hold may be retrieved at any station.

Call Hold (Remote)

Outside calls can be placed on hold at a remote station. This feature allows calls to be answered at one station and placed on hold at another station. This allows time for the user to proceed to that station or allows the party that the call was intended for to have that call placed at their station. The call or trunk key will flash at the 'remote hold' station.



NOTE: You cannot use system hold or remote hold for internal calls.

Call Park and Page

Each C.O. line has its own park zone. This simple method eliminates confusion and ensures that a park zone is always available. Pressing the PAGE key parks the call automatically. There are no extra keys to press and there is no lost time looking for a free zone.

Call Pickup**Directed**

With directed call pickup, users can answer calls ringing at any station by dialling a code plus that station's extension number, or by pressing the feature key and then dialling the extension.

Groups

The group pickup feature allows users to answer any call ringing within any pickup group. There are 99 pickup groups available. A station cannot be in more than one pickup group. To use this feature, station users either dial the access code or press the assigned feature key followed by the pickup group number.

Established (L version software only)

This feature enables a keyset user to pick up an established call in progress at a single line telephone connected to a modem on a PC. An EP key with this extension number must be programmed on the keyset. Established Call Pickup (EP) is useful with PC dialling programs that dial out from a large list of telephone numbers. Let the computer dial for you, then press the EP key to speak with the called party.

Call Waiting/Camp-on

Busy stations are notified that a call is waiting (camped-on) when they receive a tone. The tone is repeated at a programmable interval. Keysets receive an off-hook ring signal through the speaker and single line stations receive a tone in the handset. The volume of the camp-on tone can be set by the station user. Camped-on calls follow Forward No Answer if a Forward No Answer destination has been set.

Optionally, any station can be programmed to automatically camp-on to a busy station instead of having to press the camp-on key or dial a camp-on code.

Centrex/PBX Use

CENTREX and PBX lines can be installed in lieu of central office trunks. CENTREX and PBX feature access codes, including the command for hook-flash (FLASH), can be stored under one-touch keys. Toll restriction programming can ignore PBX or CENTREX access codes so that toll calls can be controlled when using these services.

Chain Dialling

Keyset users may manually dial additional digits following a speed dial call or chain together as many speed dial numbers as are required.

Class of Service

The system allows a maximum of 30 station classes of service. Each class of service can be customised in memory to allow or deny access to features and to define a station's dialling class. Each station can be assigned different classes of service according to the ring plan table.

Common Bell Control

The MISC daughterboard provides relays that may be programmed to control a customer-provided common bell or common audible device. These contacts must be programmed as members of a station group and may provide steady or interrupted closure.

Conference

The system allows six simultaneous conferences of up to five parties each. If an SCM daughterboard is installed, the system allows a total of 24 simultaneous conferences of up to five parties each.

Add-On (5 Party)

Any combination of up to five parties (stations or outside lines) can be joined together in an add-on conference. Parties may be eliminated or added after a conference has been established.

Unsupervised

A station user may set up a conference with two or more outside lines and then exit the conference leaving the outside lines connected in an unsupervised (trunk to trunk) conference.

Split (L version software only)

A keyset user can “split” a conference into separate outside calls, then speak with each caller privately. Individual callers can then be conferenced again in any combination.



NOTE: This feature requires individual trunk keys and Auto-hold must be enabled.

Computer Telephony Integration (CTI)

Computer Telephone Integration (CTI) allows integration between the iDCS500 and a personal computer system (PC) or a local area network (LAN). CID service is required for TAPI inbound call applications that use the CID information to display computer records in conjunction with the presentation of the call to the station on the system.

TAPI 2.1

TAPI 2.1 is the method of integrating the iDCS 500 system and a PC. TAPI 2.1 is a LAN-based solution allowing PCs to communicate directly with the telephone system over the PCs' local area network. This establishes a logical connection rather than a physical connection between telephone and PC. It eliminates the cost and administrative overhead of connecting every PC to a desktop phone. It emphasizes third-party call control. (Example: calls can be tracked as they are transferred, making it more suited to large office applications). TAPI 2.1 can emulate first-party type call control for the telephone system, rather than from the telephone as TAPI 2.0 does. For example, to make a call the iDCS500, rather than the telephone, would dial the phone number, and the call would be then transferred to the telephone.

Data Security

Single line telephones used with modems and facsimile machines can be programmed so that they will not receive any system-generated tones that would disrupt data transmissions. In addition, these devices receive DCS C.O. ringing pattern instead of internal ring pattern. Devices connected to an SLI card receive a disconnect signal upon termination.

Database Printout

A copy of the customer database can be obtained by using PCMMC (the PC program for configuring the telephone system). This information can be directed to a printer or the PC screen and may be done either on-site or remotely. A complete database or specific data blocks may be obtained.

Direct in Lines

Outside lines may be programmed to bypass the operator(s) and ring directly at any station or group of stations.

Direct Dialling In (DDI)

Direct Dialling In (DDI) refers to digit steered inbound call handling. This service is provided over ISDN PRI and BRI circuits.

Direct Inward System Access (DISA)

Users can call in on specific DISA lines at any time, input a security code and receive system dial tone. Users can then place internal calls or, if permitted, calls using C.O. lines. The caller must have a tone dial phone and know his/her DISA security code. DISA lines can be used as both way lines or incoming only and may be active/inactive according to the ring plan table. The C.O. lines used for DISA must have disconnect supervision. The requirement to put in a DISA security code can be disabled if desired.

Direct Trunk Selection

Each station can be allowed access to or denied access from a trunk or trunk group by access code when LCR is activated. When restricted, the station user must use a trunk key or a route key.

Directory Names

Each station, station group and C.O. line may be assigned a directory name (maximum 11 characters). In addition, each personal speed dial number, system speed dial number and entry in the DDI translation table may be assigned a name (maximum 11 characters). These names are displayed during calls with these ports and in the case of station and speed dial names, can be used to originate calls. See the Dial by Name feature (in *Station Features*).

DISA Security

Telephone fraud and long-distance theft are a serious concern. The iDCS500 provides a strong DISA security system. If an incorrect DISA passcode is entered repeatedly (as is the case with “hackers”), the DISA system can be automatically disabled temporarily. Both the allowed number of incorrect passcode attempts and the time for which DISA is disabled are programmable. In addition, all failed attempts to access DISA print on SMDR (if provided) with a “DE” DISA error flag.

Distinctive Ringing

A user recognises the type of call received by the type of ring heard. Outside calls have a double ring repeated while internal calls have a single ring repeated.

In addition, any trunk or station can be programmed to ring a keyset with a predefined ring tone (selectable between 1 and 8), or to ring a single line telephone with a predefined cadence (selectable between 1 and 5). This provides for easy identification of special lines or extensions that ring your phone.

Door Lock Release (Programmable)

After answering a call from the door phone, users can dial a code to activate a contact closure. This can be used to operate a customer-provided electric door lock release mechanism. The contact closure timer is programmable in the range 100–2500 ms.

Door Phones

The door phone interface module (DPIM) provides for connection of a door phone to a DLI port. Pressing the key on the door phone produces a distinctive ring (three short rings repeated) at the assigned station or station group. If not answered within a programmable time, the system releases

the door phone and stops the ringing. Stations may call the door phone directly and monitor the surrounding areas. Door phones follow the system ring mode plan.

Executive Barge-in (Override)

The feature allows specially programmed stations with a Barge-In key to override the automatic privacy of another station or outside trunk. Programming allows barge-in with or without a warning tone. Stations may also be programmed as “secure” so that they cannot be barged-in on.

With Warning Tone

When the barge-in with tone option is set, the barging-in keyset has its microphone on and the barged-in on station receives an override display. A double burst of warning tone sounds and repeats every 10 seconds. This feature does not work from single line telephones.

Without Warning Tone

When the barge-in without tone option is set, the barging-in keyset has its microphone muted and the barged-in on station does not receive an override display. This feature does not work from single line telephones.

Trunk Monitor or Service Observing

This feature allows the user who barged-in to retain the trunk call after the barged-in on station has hung up.



Warning: Barge-in without tone may violate laws concerning the right to privacy. Samsung Telecoms UK is in no way responsible for the possible misuse of this feature.

Executive/Secretary Pooling

Each keyset may be defined as an executive (BOSS) or a secretary (SECR) keyset in system programming. Each ‘executive’ can have up to four ‘secretaries’, and each ‘secretary’ can have up to four ‘executives’, assigned to it. These arrangements are known as executive/secretary pools. There can be multiple pools in a system. When an executive is in DND mode, all calls to the executive ring the first secretary assigned to that executive; if that secretary is busy, the call hunts to the next available secretary assigned. If the secretary needs to communicate with the executive while the latter is in DND mode, pressing the corresponding executive key on the secretary’s keyset results in an Auto Answer internal call being made to the executive (providing the executive is free). The iDCS500 software has a system-wide option to allow the stations to ring rather than auto announce the executive secretary calls. A station can only be the executive of one secretary pool. In addition, a station cannot be in more than one pool.

External Music Interfaces

The MISC card provides two inputs for connecting to customer-provided external music sources. Each iDCS500 cabinet supports one MISC card for a total of three cards or six sources as a system maximum. These sources can be used to provide background music, or any of the varied Music-On-Hold (MOH) uses.

External Page Interfaces

The iDCS500 control card (MCP, SCP or LCP) with a MISC card installed provides one external page output and three zone control relays. Resources from added MISC cards can be combined to provide four external zones. Multiple relays may be assigned to each zone.

Flash Key Operation

While a user is on an outside line, pressing the FLASH key will flash the central office or PBX. This is used for custom calling features on C.O. lines or in conjunction with CENTREX/PBX operation. System programming allows individual flash times for C.O. and PBX lines. When C.O. or PBX flash is not required, setting the timers for two seconds releases the existing call and returns dial tone to make a new call.

Flexible Numbering

Default system programming allows stations to have 3- or 4-digit extension numbers beginning with the digit 2 or 3. Three-digit default extension numbers begin with 201 and 4-digit defaults begin with 2001. Station group numbers can be three or four digits beginning with the digit 5. Other numbering plans can be used.

Using digits other than 2, 3 or 5 will require the installer to change other feature access codes in the system default numbering plan. User guides will need to be modified as these are all written using the default numbering plan.

Hot Desking

Hot Desking gives users mobility by allowing them to locate to any selected station and, simply by dialling a code at the station, transfer all the features they normally require (a specified extension number, pickup groups, paging groups, call barring, voice mailbox, and so on) to the station. This feature is also referred to as Set Relocation (see "Station Features").

Hot Line

Stations can be programmed to automatically call a pre-defined station or station group whenever that station goes off-hook. A hot line delay timer of 0-250 seconds can be programmed to allow sufficient time to make a different call, if required.

In Group/Out of Group

Individuals assigned to a station hunt group may temporarily remove their telephones from the group by pressing the In/Out of Group key, provided that there is someone still in the group. There is a system-wide option to allow all members to log out of a station group. Stations out of a group will not receive calls to that group but will continue to receive calls to their individual extension numbers. When desired, the user can go back into the group by pressing the key again. Users who do not have this key may dial the access code and the group desired. A station user is allowed to be in several groups, provided a key and the extender for that group are assigned for each group on the user's keyset.

Incoming Call Distribution

Incoming calls can be assigned to ring a distributed station hunt group. This allows all members of the group to share the call load.

Incoming/Outgoing Service

Outside lines are available for incoming or outgoing service. Programming allows any outside line to be used for incoming calls only, outgoing calls only or both-way service.

Individual Line Control

Each station in the system can be individually programmed to allow or deny dialling out as well as allow or deny answering for each outside line.

ISDN Service

Primary Rate Interface (PRI)

The *DCS500* supports Primary Rate Interface (PRI) ISDN. Simultaneous data calls, calling party and calling line identification, high-speed call setup and disconnect are among the benefits of ISDN calling. The 30+D configuration of ISDN allows call information to be delivered via the data channel (the “D” of 30B+D) thus leaving the bearer channels (the “B” of 30B+D) available for single use or combined use to provide a wider bandwidth for data and video.

Basic Rate Interface (BRI)

The BRI card supports trunk or station level Basic Rate Interface services (BRI). Trunk or station BRI use is software programmable. BRI allows simultaneous data calls, called party and calling number identification, high-speed call setup and disconnect among other benefits of ISDN calling. The 2B+D configuration of ISDN allows call information to be delivered via the data channel (the “D” of 2B+D) thus leaving the bearer channels (the “B” of 2B+D) available for single use or combined use to provide a wider bandwidth for data and video.

Least Cost Routing

Least Cost Routing (LCR) is the ability to automatically select the most cost effective central office route for the outside number dialed by any station. The *DCS500* LCR program includes the following features:

- Option to use or not use LCR on a tenant basis
- Programmable LCR access code
- Digit analysis table: 1000 entries, each with 10 digits, for M version systems, and 2000 entries, each with 10 digits, for L version systems
- Routing by time of day and day of week (four time bands per day)
- Routing according to individual station class
- Modify digits table: 100 entries for M version systems, and 200 entries for L version systems
- Flexible trunk group advance timer
- Option to use or not use trunk group advance warning tones

Live System Programming

The system can be programmed from any display keyset or PC without interrupting normal system operation. There are three levels of programming: technician (or system), customer and station. The technician (system) level has access to all programs and can allow the customer access to system programs as needed. Technician and customer access are controlled by different security passcodes. Programming from a PC requires the PCMMC program.

Meet Me Page and Answer

After a user makes a Meet Me Page, the user may remain off-hook to allow the paged party to meet the user for a private conversation.

Memory Protection

In the event that system power is lost, all customer data contained in memory is retained by the use of a “super capacitor” for approximately 7 days. In addition, the PCMMC computer program may be used to produce a backup copy of the customer data. The Smart Media card may also be used to store the system database.

Message Waiting Indications

When calling a station and receiving a busy signal or no answer, the caller can leave an indication that a message is waiting. The message key will flash red at the messaged keyset. A single line telephone will receive a distinctive message waiting dial tone. Five message waiting indications can be left at a station at any one time.

Microphone On/Off Per Station

The microphone can be disabled at any keyset. When the microphone is disabled, the keyset cannot use the speakerphone, although on-hook dialling and group listening are still possible.

Music-On-Hold (MOH)—Flexible

The iDCS500 allows its music sources to be used in a very flexible manner.

Each keyset can have a designated music source for playing as Background Music (BGM) through the keyset speaker.

Each station can have a designated music source for playing to callers placed on exclusive hold at that station.

Each trunk can have a designated music source for playing to callers placed on hold. This setting is overridden by some of the other settings such as station Music-On-Hold (MOH), DDI MOH and UCD MOH.

Each UCD group can have a designated music source to be played while a caller is in queue.

On an L version system, each entry in the DDI translation table can have a designated music source to be played when a caller to that DDI number is placed on hold.

Music-On-Hold (MOH)—Sources

The iDCS500 provides for up to six different types of MOH source, including silence ("NONE"), as listed below:

None: No audio is played to the listener

Tone: A tone or "beep" is repeated at a programmable interval

Chime: A music chime source (Old Folks At Home) located on the MCP card is played to the listener.

External source: An external source connected to a MISC card, such as a digital announcer or radio, is played to the listener.

Digital Announcement on AA card: If the system is equipped with an AA card, the last port of this card can be flagged as an MOH source and used to repeatedly play a message recorded on the AA card to the listener.

Voicemail Sound File: If the iDCS 500 system has an optional Cadence card installed, up to 100 custom recorded sound files from the Voice Mail card can be used for MOH sources. For information on creating the sound files, see the *Samsung Cadence System Administration Manual*. (Be advised that each VM MOH source requires a dedicated Cadence port/channel.) If using an SVMi-8 Voice Mail system, refer to the *Samsung SVMi-8 Technical Manual*.

Networking

The iDCS500 networking feature allows up to four iDCS500 systems to be connected together with some important feature transparency. The physical connection between the systems is via a proprietary PRI connection and is based on the Q-SIG specification. The following features are supported between two networked systems.

Call Completion, Busy Station (CCBS) also known as Callback or Busy Station Callback. When a station (A) in one system calls a station (B) in another system across the network link, and station B is busy, station A can set a Callback to station B. When station B becomes idle, the system will ring station A; when station A answers, the system will ring station B.

Call Completion, No Response (CCNR) also known as Callback or No Answer Callback. When a station (A) in one system calls a station (B) in another system across the network link, and station (B) does not answer, station A can set a Callback to station B. When station B indicates that its user is present by becoming busy (e.g. when the user lifts the handset), and then becomes idle again, the system will ring station A; when station A answers, the system will ring station B.

Call Forward Busy (CFB). This is a different feature from the normal call Forward Busy and is only used when the forward destination is in a different node of the network. Operation of the feature is the same as the normal Forward Busy: when the forwarded station is busy, a calling station will be forwarded to the programmed destination.

Call Forward No Response (CFNR). This is a different feature from the normal call Forward No Answer and is only used when the forward destination is in a different node of the network. Operation of the feature is the same as the normal Forward No Answer: if the forwarded station does not answer after a programmed time, a calling station will be forwarded to the programmed destination.

Call Forward Unconditional (CFU). This is a different feature from the normal call Forward All and is only used when the forward destination is in a different node of the network. Operation of the feature is the same as the normal Forward All: all calls to the forwarded station will be forwarded to the programmed destination.

Forward External. This feature operates in the same manner as a non-networked system with the exception that, because calls across a network link are trunk calls, network calls do not follow the ICM EXT FWD ON/OFF option in MMC programming. It is therefore suggested that this option be set to ON in a networked switch to avoid confusion in operation between networked and non-networked calls.

Call Intrusion (Barge In). This feature operates in the same manner as in a non-networked switch.

Call Offer/Call Waiting (Camp On). This feature operates in the same manner as in a non-networked switch. When a called station is busy, the caller can press a Camp-On key and appear as a ringing call on the second call key. The Auto Camp-On feature will not work on calls across a network link if set to ON in MMC programming.

Call Transfer. Calls answered in one network node can be transferred to a station or station group in another network node.

Transfer Retrieve. Calls on Transfer Hold during a screened transfer can be retrieved by pressing the Call key for that call.

Transfer Recall. Calls transferred across a network link will recall to the transferring station after the originating system's transfer recall timer expires. After recalling, if not answered prior to the system's attendant recall timer expiring, the call will recall to the system's designated operator group. Attendant recalls will not recall to a 'Centralised Attendant' (see below).

DDI with Pass Through. Incoming DDI calls can be routed through one switch across a network link to be processed by the DDI table of the destination switch.

Do Not Disturb (DND). This feature operates in the same manner as in a non-networked switch. There is an option in MMC programming to determine the type of DND tone sent across the network link.

Caller ID (CID). CID in the forms that are currently available (PRI Name and Number and BRI Number) will be transported across the network link with the original call.

Centralised Attendant. This feature allows a user in any switch to dial “0” and ring at the designated Central Attendant group. Each system on the network requires its own designated attendant group for local usage and recalls.

Internal Calling/Uniform Dialling Plan. Station to station and station to group calls can be made across the network link without having to dial an access code for a call within the network. LCR can also be programmed to route calls across a network link to access local trunks in another networked system.

Centralised Voice Mail with Message Waiting Lights. This feature will operate only with Cadence and/or SVMi-8 voicemail systems. Users in one node can call forward (CFNR, CFB & CFU) to the voice mail group in a different switch and messages left in that switch will be indicated on the VMSG key in the originating switch. Messages can be returned to voice mail by pressing the VMSG key.

Off Premises Extensions (OPX)

A single line (tip and ring) extension from a 4SLI card only may be connected to telephone company-provided OPX circuits to remote locations.

Operator Group

The operator group can contain up to 32 stations to answer incoming calls. Calls to this group can be set for distributed, sequential or unconditional ringing. Operators can use the In/Out of Group feature to meet flexible operator requirements. Operator groups are selectable per ring plan.

Overflow

Operator

When calls ringing an operator group go unanswered, they can overflow to another destination after a programmed period of time. The operator group has its own timer. The overflow destination can be a station or station group.

Station Group

When calls ringing a station group go unanswered, they can overflow to another destination after a programmed period of time. Each station group has its own timer. The overflow destination can be a station or station group.

Override Code

This feature allows users to make emergency outside calls from a station that has a forced code, such as an Account Code or Authorisation Code, enabled but without requiring them to enter a forced code. The basis of this feature is an override code table containing eight entries of up to 14 digits each. The system will examine digits that are dialled from a station to see if they match any entry in the Emergency Number table. If the digits match the table, the system will process the call without requiring a forced code.

Paging

System software allows the use of four internal and four external paging zones. Stations can page any individual zone, all internal zones, all external zones or all zones simultaneously. Using system programming, each station may be allowed or denied the ability to make and/or receive page announcements to any zone or combination of zones.

Park Orbits

The system has 10 park orbits (0-9). These orbits can be used to park calls prior to paging and allows the call to be retrieved by dialling a park code plus the orbit number. Calls parked in this manner can also be retrieved by dialling the Park Pickup code plus the station or trunk number. This feature is in addition to Call Park and Page.

Prime Line Selection

Any station can be programmed to select a specific line, trunk group, telephone number, station or station group when the handset is lifted or the Speaker key is pressed (same as Hot Line feature).

Private Lines

For private line use, stations can be prevented from dialling and/or answering any line.

Programmable Line Privacy

Each outside line can be programmed to ignore the automatic line privacy. This allows up to four other parties to join your conversation by simply pressing the line key. This is similar to 1A2 key telephone operation.

Programmable Timers

There are over 50 programmable system timers to allow each installation to be customized to best fit the end user's application.

Recalls

Calls put on hold, transferred or camped-on to any station will recall to the originating station if not answered within a programmable time. A recall that goes unanswered for the duration of the attendant recall timer will recall to the system operator group. Hold, transfer, camp-on and attendant recalls have individual programmable timers. Calls recalling to keys with tri-coloured LEDs will flash amber.

Remote Programming - PC

Remote programming allows you to access the system database from a remote location for the purpose of making changes to the customer data. Customer-provided modems and a PC using an optional software package will be needed to implement this feature.

Ring Modes

Time-Based Routing Plans

Each C.O. line or DDI number can be programmed to ring at any station or station group. Each line can be assigned a ring destination based on six different ring plans according to time of day and day of the week.

Automatic / Manual

Ring destinations will automatically change according to time of day and day of week. At any time the system can be manually forced into a specific ring plan. It will remain in this plan until manually taken out.

Holiday Schedule

The system has a table of 60 dates that are used to define holidays. On a date designated as a holiday, the system will remain in a ring plan for that calendar day. This feature will override the ring plan timetable.

Temporary Override

The system can, at any time, be forced into a specific ring plan for a temporary period until the next scheduled ring plan automatically takes effect.

Ring Over Page

Any outside line can be programmed to ring over a customer-provided paging system. Outside lines, door phones and station groups may ring over page in the system ring plan mode.

Single Line Connections

Single line ports allow connection of a variety of single line telephones (SLTs) plus facsimile machines, answering machines, loud bells, computer modems, cordless phones and credit card machines. When connecting customer-provided equipment to these extensions, compatibility should be checked before purchase to ensure correct operation. Central office ring cadence can be selected for SLTs. This is helpful when optional devices cannot detect system internal ring cadence.

Speed Dial Numbers

A library of 1500 speed dial numbers may be allocated as needed for M version software, and 2500 speed dial numbers for L version software. The system list can have up to 500 numbers and each station can have up to 50 numbers. Speed dial numbers are assigned in blocks of 10. Each speed dial number may contain up to 24 digits.

Speed Dial by Directory

The system allows the user to look up a speed dial number, using the name allocated to it, and place the call. There are three speed dial selections: personal, system and station. This feature requires a display keyset.

Station Hunt Groups

System programming allows up to 30 station hunt groups on an M version system and 50 station hunt groups on an L version system. One of three ring patterns—sequential, distributed and unconditional—is available for each group. Each unconditional group may contain a maximum of 32 stations and each sequential and distributed group may contain a maximum of 48 stations. A station may be assigned to more than one group. Each station group has its own recall timer for calls transferred to that group.

Station Message Detail Recording (SMDR)

The system provides records of calls made, received and transferred. Connecting a customer-provided printer or call accounting system will allow collection of these records. Each call record provides the following details: station number, outside line number, start date, start time, duration of call, digits dialled (maximum 18), an account code if entered, CLI and name. The system may print a

header followed by 50 call records per page or send continuous records with no header for use with a call accounting machine. See the sample printouts at the end of this manual.

The SMDR format contains many options that allow it to be customized for a company's individual needs. Print options include incoming calls, outgoing calls, in and out of group status, change in DND status and authorisation codes.

SVMi-8—Integrated Voice Mail

The iDCS500 can be connected to Samsung's proprietary SVMi-8 integrated Voice Mail and Auto Attendant system. It provides four or eight ports of voice processing (expandable from four to eight ports). It provides such features as one-touch Call Record, Answering Machine Emulation and Voice Mailbox Administration with interactive keyset displays. Ask your dealer for information on SVMi-8.

System Alarms

A DISA alarm will warn the customer if the DISA security system has been triggered by too many incorrect password attempts. The alarm can ring any station or group of stations and show an appropriate display at the assigned station(s).

System Maintenance Alarms

The iDCS500 continuously performs internal system diagnostics. When either a major or minor fault is detected, the system can ring stations with an ALARM KEY assigned. The keyset display shows information that includes the description, location and date and time stamp for each alarm.

A log of 100 alarms is stored in a buffer and can be reviewed at a display keyset or sent to a printer (see 'Sample Alarm Report' section of this manual).



NOTE: System Maintenance Alarms are only available with a LAN module installed on the MCP card.

System Directory

Each station, station group and outside line can have a directory name up to 11 characters. This name will appear on keyset displays to provide additional information about lines and stations.

Tenant Service

There are several programs that allow the iDCS 500 to be installed in tenant applications. The program features allow the system installer to split the system between two tenants, each tenant being completely separate and having control over their own operator groups, page zones, speed dial numbers, night service (manual or automatic), DISA and customer-level programming. No internal calling between tenants is permitted.

Toll Restriction

There are 500 Allow / 500 Deny entries on L version software, and 250 Allow / 250 Deny entries on M version software (each entry of up to 11 digits). Each of these entries can apply to dialling classes B, C, D, E, F and G. Expensive calls, as well as specific area and office codes, can be allowed or denied on a per-class basis. Class A stations have no dialling restrictions and Class H stations cannot make outside calls.

Any outside line may be programmed to follow station toll restriction or follow the toll restriction class assigned to it. Each station and trunk can have a dialling class specified by the time plan.

Special Code Table

A Special Code Table of 10 entries (four digits each) allows use of telephone company features such as CID Blocking or Call Waiting Disable without interference to toll restriction or LCR. The Special Code table allows use of these custom calling features on a per-call basis.

Toll Restriction Override

Program options allow system speed dial numbers to follow or bypass a station's toll restriction class. In addition, users may make calls from a toll-restricted station by using the Walking Class of Service or Authorisation Code feature.

Tone or Pulse Dialling

Outside lines can be programmed for either tone or pulse dialling to meet local telephone company requirements.

Traffic Reporting

The system can store peg counts for various types of calls. These peg counts can be printed on-demand, daily, hourly, or for up to three separate programmable shifts. The report includes statistics for each trunk, trunk group, station, station groups and page announcements.



NOTE: Traffic Reporting is only available with a LAN module installed on the MCP card.

Transfer

System operation permits station users to transfer calls to other stations in the system. Transfers can be screened, unscreened or camped-on to a busy station.

Trunk Groups

Outside lines can be grouped for easy access by dialling a code or pressing a key. There are 11 trunk groups available for M version systems and 50 trunk groups for L version systems.

Uniform Call Distribution (UCD)

UCD is used whenever an organisation expects to have more ringing calls than people ("agents") to answer them. It prevents callers from receiving busy signals or lengthy delays before being answered. Callers reaching a busy station group are held in queue for an available agent. First and second announcements reassure the caller until an agent becomes free.* Programmable automatic logout removes a station from the group if a call is placed to an unattended station, thus preventing unanswered calls. A wrap-up timer prevents calls to a station for a programmable period to allow the agent to finish up work associated with a previous call.



*NOTE: Requires optional hardware. Ask your dealer for details.

UCD Groups

The UCD group option allows callers in queue at a UCD group to be temporarily diverted to an announcement device and then placed back in the queue. A wrap-up timer will allow agents to complete paperwork before receiving the next UCD call.

Call Statistics

UCD supervisor positions using a display keyset can monitor the number of calls in queue, the time that the oldest caller has been waiting, the total number of calls received for the current day and the average time a caller waits to be answered.

Agent Statistics

UCD supervisor positions using a display keyset can monitor the number of agents in a group and how many agents are currently logged in. Each station's status can be reviewed for the number of calls answered and the average call length for the current day.

Group Supervisors

Multiple supervisors can be assigned to each group or one station can be given supervisor status for multiple groups. The group supervisor (using a display keyset) can add and delete agents in real time to/from the group to handle the workload.

Printed Reports

Agent supervisors may run printed reports to a customer-provided printer, showing the data available on the supervisor displays.

Universal Answer (Night Bell)

Station users may dial the Universal Answer code or press the UA key to answer any outside lines programmed to ring the UA device. The UA device can be a station, group of stations, common bell or ring over page.

Virtual Extensions

The system has 14 (on M version systems) or 70 (on L version systems) virtual single line telephone (SLT) extensions. These can be used for a number of functions such as Hot Desking, Computer Telephony Integration (CTI) and pre-programmed call forwarding.

Voice Mail—In-band Integration

The system uses DTMF tones (in-band signalling) to communicate with any compatible voice mail system. Stations can call forward to a voice mail system. When answered, the system will send DTMF tones routing the caller directly to the called station user's mailbox. Keyset users can press a key to retrieve messages from the voice mail system. A Voice Mail Transfer key permits keyset users to easily transfer a caller directly to an individual voicemail box without navigating through menus.

Voice over IP (VoIP)

The iDCS500 ITM3 VoIP card supports up to 16 voice calls over an IP network connection using the industry standards based H.323 protocol. Eight channels are provided on the card and a further eight are provided on an optional daughterboard. The ITM3 card fits into any universal iDCS500 card slot. The iDCS500 supports a maximum of two ITM3 cards per cabinet.

VoIP is transported by the ITM3 card using the ITU standards based H.323 protocol. This standard addresses the means of transferring voice, data and images through IP (Internet Protocol) networks.

With VoIP, certain compression standards have also been adopted to represent each second of voice with an amount of bandwidth. The ITM3 uses G.711, G.729A or G.723 standards voice compression codecs. This allows for a selectable 64kbps, 8kbps or 6.3kbps bandwidth when preparing voice compression for IP transport. Compression is used to reduce the digitized voice into a smaller bandwidth that can be carried in smaller packets. The ITM3 H.323 gateway determines the compression method for each call setup. There is also a certain amount of frame/packet overhead in each compression

channel. 64k of bandwidth can nominally support 6-7 calls simultaneously. This can vary depending on efficiency features like Silence Suppression and multiframe counts. Unlike switched networks, VoIP connections consist of a sequence of numbered data packets. Since voice conversation is usually considered "real time" these packets need to be delivered in a consistent manner with minimal delay. This can be controlled via a Gatekeeper which tracks and monitors voice packets. Gatekeepers are part of the H.323 standard but are not required. The ITM3 is Gatekeeper compliant. In any Ethernet environment, packet transfers are subject to delays and/or loss. If these delays are greater than 200ms the voice quality will deteriorate. The Ethernet data traffic and network topology should be a consideration when applying the ITM3 VoIP feature. Network congestion affects call quality in any VoIP application.

Walking Class of Service (WCOS)

This feature allows users to make calls or use features from a station that is normally restricted. The feature is similar to the Authorisation Code feature. Both methods change the class of service to correspond with the station passcode or authorisation code that is dialled. After the call is completed, the station returns to its programmed class of service.

Station Features

| | |
|----------------------------------|------------------------------------|
| Add-On Module | Off-Hook Voice Announce (Standard) |
| Appointment Reminder | One-Time Do Not Disturb |
| Automatic Hold | One-Touch Dialling Keys |
| Automatic Privacy | On-Hook Dialling |
| Background Music | Privacy Release (L Version) |
| Busy Station Callback | Programmable Keys |
| Busy Station Indications (BLF) | Programmed Station Messages |
| Call Forwarding | Protection From Barge-In |
| Call Log | Pullout Directory Tray |
| Call Pickup | Pulse To Tone Switch Over |
| Direct Station Selection (DSS) | Redial |
| Do Not Disturb (Override) | Auto Retry |
| Do Not Disturb (Programmable) | Last Number |
| Door Lock Release | Manual Retry With LNR |
| Exclusive Hold | Memo Redial |
| Group Listening | Save Number |
| Headset Operation | Remote Hold |
| Hearing Aid Compatible | Ring Modes |
| Line Queuing With Callback | Ring Preference |
| Line Skipping | Set Relocation |
| Loud Ringing Interface | Speakerphone |
| Manual Signalling (L Version) | Station Lock |
| Message Waiting Light/Indication | Tri-Coloured Lights |
| Mute Microphone/Handset | Volume Settings |
| Off-Hook Ringing | Wall-Mountable Keysets |

Station Feature Descriptions

Add-On Module

14-Key AOM (iDCS Series Keysets)

The 14-key add-on module (AOM) adds to the capability of any iDCS series keyset. The 14 programmable keys with red LEDs can be used for feature keys, DSS/BLF keys or one-touch speed dial keys.

48-Key AOM (DCS Euro Keysets)

The 48-key AOM adds to the capability of any DCS Euro keyset. Up to four 48-key AOMs can be added to each keyset. The 48 programmable keys with red LEDs can be used for feature keys, DSS/BLF keys or one touch speed dial keys.

64-Key AOM (iDCS Series Keysets)

The 64-key AOM adds to the capability of any iDCS series keyset. Up to four 64-key AOMs can be added to each keyset. The 64 programmable keys with red LEDs can be used for feature keys, DSS/BLF keys or one touch speed dial keys. A maximum of four can be installed on a system running M version software, and a maximum of 32 can be installed on a system running L version software.

Appointment Reminder

Keysets with an alarm key can be used like an alarm clock. When programmed for a specific time, the keyset will sound a distinctive ring to remind the user of meetings or appointments. Alarms can be set for “today” only or for every day at the same time. Up to three alarms may be set at each keyset. Display keysets can also show a programmed message when the alarm rings.

Automatic Hold

Station users can enable or disable automatic hold at their keysets. While a user is engaged on an outside (C.O.) call, pressing another trunk key, route key or CALL key automatically puts the call on hold when this feature is enabled. Pressing TRANSFER (or TRSF), CONFERENCE, PAGE or a DSS key will always automatically place the call on hold. This type of automatic hold is not a user-selectable option.



NOTE: Internal calls cannot be automatically held.

Automatic Privacy

All conversations on outside lines and internal calls are automatically private. The privacy feature can be turned off on a per-line basis.

Background Music

Keyset users may choose to hear music through their keyset speakers when optional external sources are installed. Each user may adjust this level by the use of a volume control program at the selected keyset.

Busy Station Callback

When reaching a busy station, callers may request a callback by pressing one key or dialling a code. The system rings the caller back when that station becomes idle (a system-wide maximum of 100 callbacks are allowed at one time, including busy station and busy trunk).

Busy Station Indications (BLF)

DSS/BLF keys may be assigned to any keyset or add-on module. These keys will be off when the station is idle, light red when that station is in use and flash distinctively when that station is in DND mode.

Call Forwarding

Station users can forward internal and outside calls to other destinations using the following options (refer to *System Features* for full descriptions):

- immediately (Forward All)
- when busy (Forward Busy)
- if not answered in a programmable time (Forward No Answer)
- if either busy or not answered in a programmable time (Forward Busy/No Answer)
- when in Do Not Disturb (DND) mode (Forward DND)

These forward destinations can all be different. Once a destination has been programmed, it can be turned on and off with a programmable key. Forward All takes priority over Busy and No Answer conditions.

An additional option called Follow Me is available. This option allows a station user to set a Forward All condition from their normal station to a remote station while at the remote station. To display the Follow Me condition, the TRANSFER (or TRSF) key lights steady red at the station that is forwarded. The TRANSFER (or TRSF) key also lights if Forward All is set and no key is programmed for Forward All.

Keyset users can be given an external call forward key to forward their calls to an external phone number. Each outside line may be programmed to either follow or ignore station call forwarding. A per-station option controls whether internal calls forward to voicemail or not. Single line telephones must have the system administrator program this feature for them.

Call Log

A display keyset user can review a list of up to 50 numbers containing the most recent incoming calls to the keyset and external telephone numbers dialled from the keyset. The numbers can be viewed, stored and/or dialled using the associated soft keys.



NOTE: Call Logs are only available with a LAN module installed on the MCP card.

Call Pickup

With directed call pickup, a user can answer calls ringing at any station by dialling a code plus that extension number. The group pickup feature allows the user to answer any call ringing within a pickup group. Pickup keys may be customized with extenders to allow pickup from a specific station or pickup group. The system has 99 programmable pickup groups.

Direct Station Selection (DSS)

Programmable keys can be assigned as DSS keys and associated with extension numbers. Users press these keys to call or transfer calls to the assigned stations.

Do not Disturb (Override)

The DND Override feature allows a keyset with a DND Override key (DNDO) and the appropriate class of service to override the DND setting at a called keyset. This will allow a user to go into DND while waiting for an important call and have that call transferred to them via a screened transfer from a station (for example the user's secretary) with a DNDO key.

Do Not Disturb (Programmable)

The Do Not Disturb (DND) feature is used to stop all calls to a station. System programming can allow or deny use of the DND feature for each station. Parties calling a station in DND will receive reorder tone. When in DND mode, calls may be forwarded to another destination. (See *Call Forwarding*.) A keyset without a DND key can activate DND via the feature access code. The ANS/RLS key will flash rapidly when DND is set. There is a programmable option to allow a DDI number to override DND at its ring destination if that destination is a single extension.

Door Lock Release

Stations programmed to receive calls from a door phone can dial a code to activate a contact closure for control of a customer-provided electronic door lock.

Exclusive Hold

Pressing the HOLD key twice will hold a call exclusively at a station so no other station can pick up that call. Internal calls are automatically placed on exclusive hold.

Group Listening

This feature allows users to turn on the speaker while using the handset. It allows a group of people to listen to the distant party over the speaker without the microphone turned on.

Headset Operation

Every keyset can be programmed to allow the use of a headset. In the headset mode, the hook-switch is disabled and the ANS/RLS key is used to answer and release calls. Keyset users may turn headset use ON/OFF by keyset programming or more easily by pressing a programmed headset ON/OFF key. The headset key lights steady red when the keyset is in headset mode. The ANS/RLS key lights if headset mode is activated by keyset programming only.

Hearing Aid Compatible

All keysets are hearing aid compatible.

Line Queuing with Callback

If the called outside line is busy, the station user can press the CALLBACK key or dial the access code to place the station in a callback queue. The user will be called back when the line is available (a maximum of 100 callbacks are allowed system-wide at any one time, including busy station and busy trunk).

Line Skipping

When the user is talking on an outside line and the automatic hold feature is turned off, pressing an idle line key can skip to that line without causing the previous call to go on hold.

Loud Ringing Interface

The MISC daughterboard has one relay for control of a customer-provided loud ringing device. This relay can be programmed to operate with a specific station or station group.

Manual Signalling (L version software only)

Keysets can signal each other via a programmable key. This allows one station to alert another without establishing a voice conversation. Each press of the key results in 500 milliseconds of ring tone being set to the intended station. An individual manual signalling key must be programmed for each station to be signalled.

Message Waiting Light/Indication

When a message indication is left at a keyset, the MESSAGE key will slowly flash red. Single line telephones will receive a distinctive dial tone to notify them that a message is waiting. Message waiting indications can be left for any station or group of stations.

Mute Microphone/Handset

Any keyset user can mute the keyset's handset transmitter by pressing the MUTE key. In addition, keyset users can also mute the keyset microphone while the keyset is in speakerphone mode.

Off-Hook Ringing

When a keyset is in use, the system will provide an off-hook ring signal to indicate that another call is waiting. The ring signal is a single ring repeated. The interval is controlled by a system-wide timer. Single line telephones will receive a tone burst through the handset receiver instead of a ring.

Off-Hook Voice Announce (Standard)

Keysets may receive a voice announcement while on another call. The calling station must have an OHVA key. When transferring a call to a busy keyset, or while listening to busy signal, the station user can press the OHVA key to make an OHVA call to the busy keyset. If the called keyset is in the DND mode, it cannot receive OHVA calls.

One-Time Do Not Disturb

The Do Not Disturb (One Time) feature is used to stop all calls to a station when the user is on an outside line and does not want to be disturbed for the duration of the call. Upon completion of the call, DND is cancelled and the station is returned to normal service. This feature requires a programmed key.

One-Touch Dialling Keys

Frequently-used speed numbers can be assigned to one touch dialling keys for fast accurate dialling.

On-Hook Dialling

Any keyset user can originate calls without lifting the handset. When the called party answers, the user may speak into the microphone or lift the handset for more privacy.

Privacy Release (L version software only)

This feature will allow another station to join in on your conversation by temporarily releasing privacy on the C.O. line from your keyset. Requires a Privacy Release key to be programmed on your keyset. A maximum of three other people can join in. This uses one of the conference circuits in the system.

Programmable Keys

Keysets have a number of programmable keys. The number depends on the type of keyset (e.g. 24B, 12B, 24D, 18D, etc). Each key can be programmed for more than 25 different uses to personalise each phone. Examples of key assignments include individual outside line, individual station, group of lines, group of stations and one-touch speed dial keys. Using these keys eliminates the need to use dialling access codes.

The following feature keys have extenders that make them more specific: SPEED DIAL, SUPERVISOR, PAGE, DSS, DIRECTED PICKUP, GROUP PICKUP, DOOR PHONE, BOSS, PARK, PROGRAMMED MESSAGE, IN AND OUT OF GROUP, FORWARD and VOICE MAIL TRANSFER. The extender can be a station, a group or another identifying number.

Programmed Station Messages

A station user may select one of a number of messages to be displayed both at a calling party's keyset and on the station's display. M version software supports 20 messages and L version software supports 30. Ten messages are factory-programmed but may be reprogrammed. Some messages are programmed for users to enter special dates/times (see below). The remaining messages can be customised by the system administrator up to 16 characters maximum.

In L version software, messages 26–30 can be customized for special date/time text displays. Messages 26–27 have a 9-character default message with a 5-character, user customised date/time extender (RETURN AT ***** and RETURN ON *****). These messages are pre-programmed default messages and can be changed. For example, RETURN AT 1230p or RETURN ON JAN22. Messages 28–30 have a 9-character blank message with 5-character user customized date/time extender. New messages can be created

In M version software, messages 19 and 20 are similar to messages 26 and 27 in L version software.



NOTE: The calling party must have a display keyset to view these messages.

Protection from Barge-In

Each station can be programmed as secure or not secure. Secure stations cannot be barged-in on. A station that is not secure also cannot be barged-in on when talking to a secure station.

Pullout Directory Tray

A pullout directory tray is conveniently located beneath all keysets. It is used to record station directory names and speed dial numbers.

Pulse to Tone Switchover

When dialling a number on a dial pulse network, a station user can dial # and the system will begin to send DTMF.

Redial

There are three types of external redial available to station users. Each type can redial up to a maximum of 18 digits.

- **AUTO RETRY**—When an outside number is dialled and a busy signal is received, the auto retry feature can be used to reserve the outside line and automatically redial the number for a programmable number of attempts (available to keyset users only).
- **LAST NUMBER**—The most recently dialled number on a C.O. line is saved and may be redialled by pressing the redial key or dialling the LNR access code.
- **MANUAL RETRY with LNR**—When you make an outside call and receive a busy signal you can press the LNR key to redial the same number again. This operation can be manually repeated for a limited number of attempts as defined by system programming (available to keyset users only).
- **MEMO REDIAL (L version software only)**—When you are calling directory assistance you can store the number you are given using the dial pad and SAVE number feature. There is no need for a pencil and paper (available to keyset users only).
- **SAVE NUMBER**—Any number dialled on a C.O. line may be saved for redial at a later time.

Remote Hold

When you wish to place a call on hold at another station, press TRANSFER (or TRSF) and dial the station number (or press the appropriate DSS key). Press the HOLD key. This will place the call on system hold on an available CALL key or line key at the remote station.

Ring Modes

Each keyset user can select one of three distinct ways to receive internal calls. The phone can automatically answer on the speakerphone, voice announce through the speaker or receive ringing. When the ring mode is selected, keyset users can choose one of eight distinct ring tones. Forced Auto Answer is invoked by the calling station and is controlled by the calling station's class of service.

Ringing Preference

Lifting the handset or pressing the Speaker key automatically answers a call ringing at the keyset. Using this method, users are assured of answering the oldest call first. When ringing preference is turned off, the user must press the flashing key to answer. Users may answer ringing lines in any order by pressing the flashing key.

Set Relocation

This feature allows a user to relocate to a station other than their usual one and, by dialling a code and extension number at the station, transfer all the features and program settings (trunk ring, station group, station Class of Service, station speed dial, key assignments, call forward conditions, and so on) from their usual station to the new station. This may also be referred to as Hot Desking (see "System Features".)

Speakerphone

Most keysets have a built-in speakerphone. The speakerphone enables calls to be made and received without the use of the handset. The iDCS 28 key and 18 key models can have a Full Duplex Speakerphone Module added.

Station Lock

With a programmable personal station passcode, any keyset or single line telephone can be locked and unlocked to control use of each telephone. There are three options: 0=UNLOCKED, 1=LOCKED OUTGOING and 2=LOCKED ALL CALLS.

| | 0(UNLOCKED) | 1(LOCKED OUTGOING) | 2(LOCKED ALL CALLS) |
|------------------------|-------------|--------------------|---------------------|
| Make outside calls | YES | NO | NO |
| Receive outside calls | YES | YES | NO |
| Make internal calls | YES | YES | NO |
| Receive internal calls | YES | YES | NO |

Tri-Coloured Lights

Keysets are equipped for tri-coloured LED indications (green, red and amber). The number of tri-coloured LED keys available depends on the keyset type. On these keys, your calls always light green, other calls show red and recalls light amber.

Volume Settings

Each keyset user may separately adjust the volume of the ringer, speaker, handset receiver, background music, page announcement and off-hook ring tone.

Wall-Mountable Keysets

Each keyset and add-on module can be wall mounted by reversing the base wedge.

Display Features

| | |
|-------------------------------|-------------------------------|
| Account Code Display | Conference Information |
| Call Duration Timer | Date and Time Display |
| Call for Group Identification | Dial By Name |
| Call Log | Dialled Number |
| Call Processing Information | Enhanced Station Programming |
| Caller ID (CID) Information | Identification of Recalls |
| Name/Number Display | Identification of Transfers |
| Next Call | Message Waiting Caller Number |
| Save CID Number | Outside Line Identification |
| Store CID Number | Override Identification |
| Inquire Park/Hold | Programmed Message Display |
| CID Review List | Soft Keys |
| Investigate | Stopwatch Timer |
| Abandoned Call List | Text Messaging (L Version) |
| Calling Party Name | UCD Supervisor Displays |
| Calling Party Number | |

Display Feature Descriptions

Account Code Display

Account codes are conveniently displayed for easy confirmation. If entered incorrectly, users may press the ACCOUNT key again and reenter the account code.

Call Duration Timer

The system can automatically time outside calls and show the duration in minutes and seconds. Station users may manually time calls by pressing the TIMER key.

Call for Group Identification

When a call is made to a station group, the display shows [CALL FOR GROUP] and the user's group number. These calls can be answered with a different greeting than calls to the user's extension number.

Call Log

A display keyset user can review a list of up to 50 numbers containing the most recent incoming calls to the keyset and external telephone numbers dialled from the keyset. The numbers can be viewed, stored and/or dialled using the associated soft keys.

Call Processing Information

During everyday call handling, the keyset display will provide helpful information, e.g. [CALL FROM 203]. In some cases, the user is prompted to take action and in other cases receives directory information.

Caller ID (CID) Information

CID information is dependent on the use of display keysets. The following explains the displays that are used with CID.

Name/Number Display

A display keyset user can choose to see the CID name or CID number in the display first when a call is received. Regardless of which is selected to be seen first, the NND key can be used to view the other.

Next Call

In the event that there is a call waiting or a camped-on call at the user's keyset, the user can press the NEXT key to display the CID information associated with the next call in queue at the station. Either the CID name or number will show in the display depending on the NND selection (above).

Save CID Number

At any time during an incoming call that provides CID information, the user may press the SAVE key. This saves the CID number using the Save Number feature. Pressing the SAVE number redial key will dial the CID number.

Store CID Number

At any time during an incoming call that provides CID information, the user may press the STORE key. This saves the CID number as a speed dial number in the personal speed dial list.

Inquire Park/Hold

When a user is informed that an incoming call is on hold or has been parked, the user may view the CID information before retrieving the call. This will influence how the user chooses to handle the call.

CID Review List

This feature allows display keyset users to review CID information for calls sent to their stations. This list contains between 10 and 50 calls on a first in, first out basis. The list includes calls that were answered and calls that rang the user's station but that were not answered. When reviewing this list, the user can press a key to dial the person back.

Investigate

This feature allows a selected station with a special class of service to investigate any call in progress at another station. If CID information is available for an incoming call, the investigating station can see to whom the investigated station is speaking. On outgoing calls, the investigating station can see who was called. After investigating, the station may barge-in on the conversation, disconnect the call or hang up.

Abandoned Call List

The system has a system-wide abandoned call list that stores CID information for calls that rang but were not answered. The list will store up to 100 unanswered calls and is accessed using the operator's passcode. When reviewing this list, you are provided options to CLEAR the entry or DIAL the number. You can use the NND key to toggle between the CID name, CID number and the date and time the call came in.

Calling Party Name

For internal calls, LCD keysets show the calling party's name before answering. The names must be stored in the system directory list and can be up to 11 characters long.

Calling Party Number

When an internal call is received, all display stations show the calling party's extension number before the call is answered.

Conference Information

When a conference is set up, each extension and outside line number is displayed at the controlling station when it is added. When a station is added, its display shows [Conf with xxx], alerting the user that other parties are on the line.

Date and Time Display

In the idle condition, the current date and time are displayed. Display keysets can have a 12- or 24-hour clock in either the WESTERN or ORIENTAL display format, with day/month information shown in upper case or lower case letters.

Dial by Name

Each station and speed dial number can have an associated directory name. Any station or speed dial number can be selected by scrolling alphabetically through a directory list. There are three directories:

1. System speed dial list
2. Personal speed dial list
3. Station directory list

This online "phone book" allows display keyset users to look up and dial any speed dial number or station quickly.

Dialled Number

When an outside call is made, digits are displayed as the user dials them. If the display indicates that an incorrect number was dialled, the user can quickly hang up before billing begins.

Enhanced Station Programming

Personal programming options are easier to select and confirm with the help of the display.

Identification of Recalls

Hold recalls and transfer recalls can be distinguished from other ringing calls. Hold recalls indicate the recalling line or station number and the associated name. Transfer recalls indicate the recalling line or station and where it is coming from.

Identification of Transfers

The display will identify who transferred a call to the user.

Message Waiting Caller Number

If one or more message waiting indications have been left at a station, pressing the MESSAGE key displays the station number(s) of the person(s) who have messages for the user. Display keyset users can scroll up and down to view message indications.

Outside Line Identification

Each line can be identified with a name up to 11 characters. Incoming calls display this name before the call is answered. This feature is helpful when individual lines must be answered with different greetings.

Override Identification

If another station barges-in on a user's conversation, the display will alert the user with a [Barge from 2xx] display if the system is set for barge-in with tone.

Programmed Message Display

Preprogrammed station messages set by other stations are displayed at the calling station's keyset.

Soft Keys

Below the display, there are three soft keys and a SCROLL key. These keys allow the user to access features allowed by the station's class of service without requiring the keyset to have designated feature keys.

Stopwatch Timer

Display keyset users can use this feature to time meetings, calls and other functions. Users simply press once to start the timer and press again to stop the timer.

Text Messaging (L version software only)

This feature allows two display keyset users to respond to each other with preprogrammed messages. After receiving an Off Hook Voice Announcement or station Camp-On, you may respond with a text message while continuing to talk to your outside party. The other station can view this message and take the appropriate action or respond with another text message.

Up to 30 messages can be stored in the system memory and sent to another display keyset. Only display keysets that are allowed in system programming will receive the TMSG soft key in the display and can use this feature.

UCD Supervisor Displays

When UCD is used, multiple supervisors can view information about UCD group calls or agents.

Call Screen

This allows the supervisor to view how many calls are in queue, the longest wait time, how many calls have been received today, what the average time in queue is and how many calls were abandoned.

Agent Screen

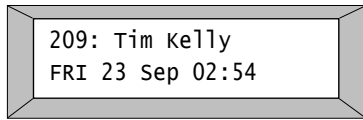
This allows the supervisor to monitor how many agents are logged in, check each agent's status (IN GROUP, OUT OF GROUP, or DND), and view each agent's total number of calls, average call length or average ring time.



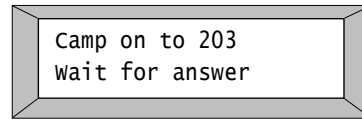
NOTE: Accessing this screen will also allow a Supervisor to change the status of each agent (IN GROUP, OUT OF GROUP, or DND).

Sample Keypad Displays

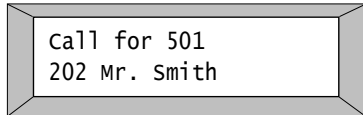
Display keysets have a large, easy-to-read, 32-character liquid crystal display. Helpful call processing information is provided so everyday call handling is quick and easy. Here are some examples of the displays you may see.



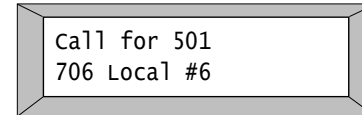
Idle display shows extension, name, day, date and time.



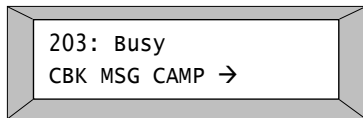
This station is camped-on to extension 203 and is waiting for 203 to answer.



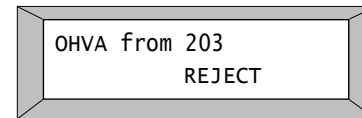
This station (e.g. in the sales department) is receiving a group call from Mr. Smith.



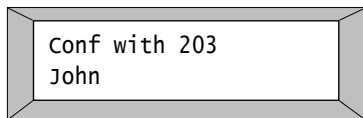
This display tells you this is a new incoming call to (e.g.) the sales department.



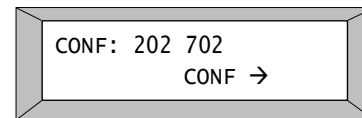
This station is calling station 203 which is currently busy.



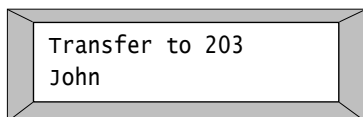
This station is receiving an off-hook voice announcement from station 203.



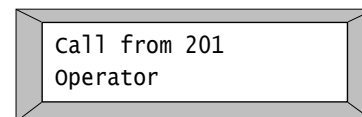
This station is on a conference call with John, extension 203. Assume other parties will hear your conversation.



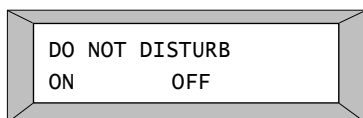
This station is on a conference call with extension 202 and trunk 702 and has the option to add two more parties.



This station is transferring a call to John at extension 203.

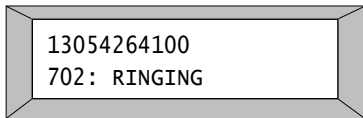


This station is receiving a call from extension 201.

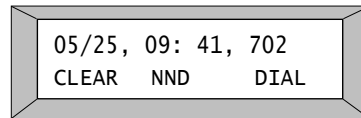


This station is setting the Do Not Disturb feature.

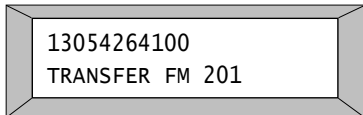
Sample Caller ID Displays



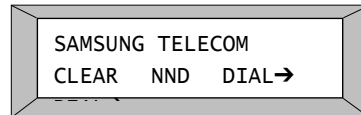
This display shows an incoming call from 1-305-426-4100 on Line 702 ringing directly at your station.



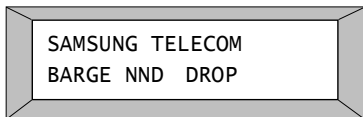
This display shows the information on the abandoned call list. This call came in on May 25 at 9:41 A.M on line 702. The user can CLEAR the entry. DIAL the caller back or examine further NND information.



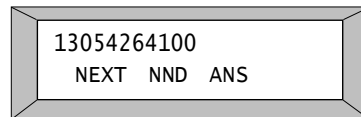
This display shows an incoming call from 1-305-426-4100 being transferred to you from station 201



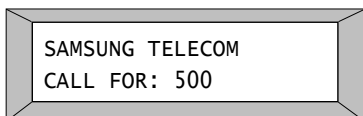
This display shows an entry in a station review list showing the three initial options. The arrow indicates other options available to you by pressing the SCROLL key.



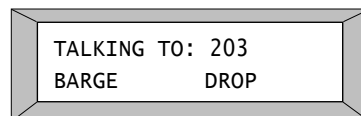
This display shows an investigation of a station that is talking to Samsung Telecom. Investigator can BARGE-in to the conversation, DROP the call from the system or examine further NND information.



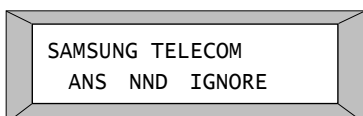
This display is seen while examining calls in queue at your keyset.



This display shows an incoming call from Samsung Telecom ringing at group 500.

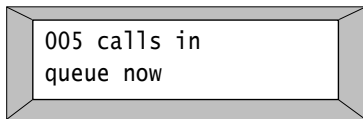


This display can be seen when investigating an internal call. The investigator can BARGE-in or DROP the connection.

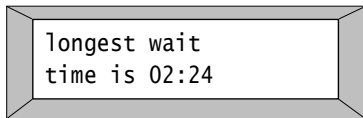


This display is seen while using the INQUIRE feature. It shows the three options available while you are checking on a held or parked call.

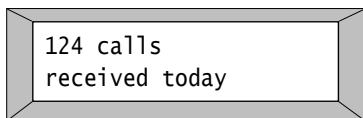
Sample UCD Displays



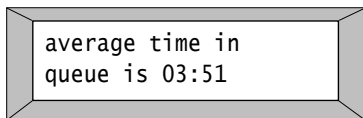
There are five calls currently waiting to be answered by the UCD group.



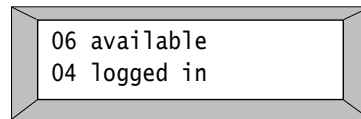
The longest call on hold (waiting to be answered) was for two minutes, 24 seconds. This data applies to all calls since the supervisor data was last cleared. It does not necessarily represent calls currently in queue.



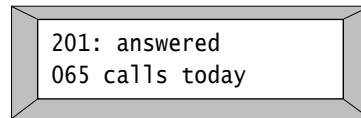
The UCD group has received 124 calls today.



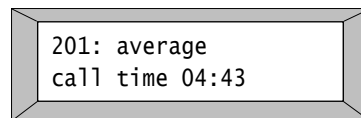
The average time on hold (waiting to be answered) is three minutes and 51 seconds.



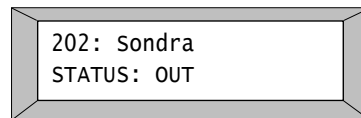
There are six members in the group. Four of the members are currently logged in.



The agent at station 201 has answered 65 calls today.



The average call length for station 201 is four minutes and 43 seconds.



Station 202 is currently out of the group. (The display can also show IN GROUP and DND.)

Sample SMDR Printout

| SMDR REPORT FOR [SAMSUNG TELECOMS] 03/24/02 11:21 | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|--|--|--|--|--|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 1 | 2 | 3 | | | | | |
| 1234567890 | | | | | | | | | | | | | | | | |

Sample UCD Report

UCD GROUP 529 : SALES

FROM: SUN 02 Feb 00:00
TO : SUN 02 Feb 02:54

CALL STATISTICS

=====

AVERAGE RING TIME(TIME TO ANSWER).....00:40
NUMBER OF TIMES ALL AGENTS BUSY.....00002
AVERAGE TIME IN QUEUE.....00:51
TOTAL CALLS RECEIVED.....00011
LONGEST QUEUE TIME(TODAY).....02:14
TOTAL CALLS ABANDONED.....00004

AGENT STATISTICS

=====

| MEMBER | AGENT | NAME | CALLS ANSWERED | AVERAGE CALL TIME | RING TIME |
|--------|-------|-------|-------------------|----------------------|--------------|
| 01 | 210 | JOHN | 0002 | 01:55 | 00:05 |
| 02 | 211 | SAM | 0001 | 02:18 | 00:06 |
| 03 | 208 | MIKE | 0003 | 01:22 | 00:04 |
| 04 | 207 | PETER | 0001 | 03:16 | 00:05 |

UCD GROUP 515 : SUPPORT

FROM: MON 03 Jan 08:30
TO : SUN 02 Jan 02:54

CALL STATISTICS

=====

AVERAGE RING TIME(TIME TO ANSWER).....00:07
NUMBER OF TIMES ALL AGENTS BUSY.....00005
AVERAGE TIME IN QUEUE.....01:06
TOTAL CALLS RECEIVED.....00023
LONGEST QUEUE TIME(TODAY).....01:02
TOTAL CALLS ABANDONED.....00001

AGENT STATISTICS

=====

| MEMBER | AGENT | NAME | CALLS ANSWERED | AVERAGE CALL TIME | RING TIME |
|--------|-------|------|-------------------|----------------------|--------------|
| 01 | 223 | FRED | 0012 | 02:33 | 00:08 |
| 02 | 213 | JANE | 0010 | 01:04 | 00:04 |

UCD Call Statistics

Calls in Queue Now

How many calls are currently in queue.

This statistic is a real time statistic and so will not print on a report.

Abandoned Calls

This shows the number of callers that reached the UCD group, but hung up before being answered. A high number probably means that there are not enough agents available and the wait time is too long.

Average Ring Time

This is calculated from the time an agent's phone begins to ring until the time an agent answers the call. This does not include calls to an agent's phone that does not answer or is logged out because of the Ring Next option.

Number of Times All Agents Busy

This is the number of times that a call is placed to a UCD group and all agents are busy or out of group. This check is made when the call is first placed to the group.

Example: There are five members in a group: three are Out of Group, one is busy and one is idle. A call is placed to the group. Because there is an idle station, the 'all agents busy' counter is not incremented.

If the idle station rings, does not answer and is logged out, although the condition of the group is now 'all agents busy', the check has been made and the 'agent busy' statistic does not increment.

Also, if a call comes in to a group with all agents busy and then one becomes idle, the busy counter will increment because the check has been made.

Average Time in Queue

This is calculated as an average of all the calls that were in queue.

Note that this is *only* an average of the calls that were in queue. The caller must have overflowed to the UCD recording to be considered in queue. (An AA card is required.)

A call is considered in queue until it is answered or until it goes to the final destination.

Total Calls Received

The total number of times that calls were sent to a group. This includes calls that were answered by the group, calls that went to a group with all agents busy or out of group, calls that are abandoned and calls that go to UCD final destination. This includes internal calls to the UCD group.

If this number is less than the total calls received by all the agents, it is possible that calls were transferred from one agent to another.

If this number is more than the total calls received by all the agents, it is possible that calls were unanswered by an agent and went to the final destination or callers hung up while in queue.

This statistic includes:

- a) Calls answered by agent.
- b) Calls that are not answered by an agent and go to the final destination.
- c) Calls that are sent to the UCD group but callers hang up before being answered.

Longest Queue Time Today

This shows the longest call in queue today. The queue time is calculated as follows:

- a) Queue time begins when a call is queuing.
- b) Queue time ends when
 - caller is answered by an agent
 - system gets disconnected from C.O. or
 - caller is transferred to the final destination

Longest Queue Time Now

This shows the longest call currently in queue. The queue time is calculated as follows:

- a) Queue time begins when a caller starts to hear the first UCD message.
- b) Queue time ends when
 - caller is answered by an agent
 - system gets disconnected from C.O. or
 - caller is transferred to the final destination

UCD Agent Statistics

Logged in

The number of stations programmed in the UCD group and the number of stations that are currently logged in.

This statistic is a real time statistic and so will not print on a report.

Status

This screen shows the agent's name, extension number and status. The status can be In Group, Out of Group or in DND.

This statistic is a real time statistic and so will not print on a report.

Calls Answered

The total number of calls answered by the agent. This does not include 'ring no answer' to an agent station.

If this total number is less than the calls received by the group, it is possible that calls were unanswered by an agent and went to the final destination or that callers hung up while in queue.

If this total number is more than the calls received by the group, it is possible that calls were transferred from one agent to another.

Average Call Time

This is an average of all the call durations for the agent.

Average Ring Time

This is an average of all the ring times for the agent. See *UCD Call Statistics*.

Sample Traffic Report

TRAFFIC REPORT FOR [SAMSUNG] Mar/21/1999 13:35
 ***** SYSTEM STATISTICS *****

BEGINNING: Mar/15/1999 00:42

ENDING: Mar/21/1999 13:32

| ACTIVITY | SYSTEM TOTAL |
|--|--------------|
| INCOMING TRUNK CALLS - ANSWERED..... | 3041 |
| INCOMING TRUNK CALLS - NOT ANSWERED..... | 26 |
| OUTGOING TRUNK CALLS | 2168 |
| A SELECTED TRUNK WAS BUSY..... | 44 |
| INTERNAL CALLS - COMPLETED | 7178 |
| INTERNAL CALLS - NOT ANSWERED | 1540 |
| TRUNK RECALLS TO STATION | 145 |
| TRUNK RECALLS TO OPERATOR GROUP | 32 |
| INTERNAL PAGE USED | 35 |
| EXTERNAL PAGE USED | 79 |
| ALL PAGE USED | 231 |

***** TRUNK GROUPS *****

| GROUP | OUTGOING | BUSY |
|-------|----------|------|
| 9 | 1245 | 18 |
| 800 | 521 | 3 |
| 801 | 20 | 3 |
| 802 | 0 | 0 |

***** INDIVIDUAL TRUNKS *****

| TRUNK | TRUNK-NAME | ATTA | ANSD | NOT-ANSD | OUTGOING | BUSY |
|-------|------------|------|------|----------|----------|------|
| 701 | LOCAL 1 | 0 | 737 | 0 | 19 | 12 |
| 702 | LOCAL 2 | 0 | 541 | 4 | 26 | 11 |
| 703 | LOCAL 3 | 0 | 290 | 1 | 37 | 21 |

***** STATION HUNT GROUPS *****

| GROUP | <----- OUTSIDE CALL -----> | | <-INTERNAL-> |
|-------|----------------------------|----------|--------------|
| | ANSD | NOT-ANSD | ANSD |
| 500 | 439 | 19 | 61 |
| 501 | 261 | 37 | 38 |
| 502 | 40 | 2 | 77 |
| 503 | 87 | 5 | 162 |
| 504 | 19 | 1 | 44 |

***** INDIVIDUAL STATIONS *****

| EXT | STATION-NAME | <----- OUTSIDE CALL -----> | | | | | <-INTERNAL--> | | | |
|-----|--------------|----------------------------|------|----------|---------|----------|---------------|--------|------|---------|
| | | ATTA | ANSD | NOT-ANSD | DIALLED | ICM-TRSF | TRK-TRK | PICKUP | ANSD | DIALLED |
| 201 | Operator | 9 | 360 | 11 | 15 | 341 | 0 | 0 | 39 | 72 |
| 202 | Barbara | 12 | 60 | 2 | 80 | 20 | 0 | 12 | 49 | 66 |
| 203 | Ivania | 4 | 25 | 1 | 36 | 3 | 0 | 18 | 86 | 29 |

Traffic Report Overview

```

A***** SYSTEM STATISTICS *****

1 BEGINNING: Mar/15/2001 08:00           ENDING: Mar/15/2001 17:30

2 ACTIVITY SYSTEM TOTAL

3 INCOMING TRUNK CALLS - ANSWERED.....0000
4 INCOMING TRUNK CALLS - NOT ANSWERED.....0000
5 OUTGOING TRUNK CALLS .....0000
6 A SELECTED TRUNK WAS BUSY.....0000

7 INTERNAL CALLS - COMPLETED.....0000
8 INTERNAL CALLS - NOT ANSWERED.....0000

9 TRUNK RECALLS TO STATION.....0000
10 TRUNK RECALLS TO OPERATOR GROUP.....0000

11 INTERNAL PAGE USED.....0000
12 EXTERNAL PAGE USED.....0000
13 ALL PAGE USED.....0000

```

1. BEGINNING & ENDING

This identifies when the statistics were collected. It includes dates and times.

2. ACTIVITY

Overall summary of traffic in the system for activities 3 to 13.

3. INCOMING TRUNK CALLS-ANSWERED

These are any incoming trunk calls to the system. These calls are pegged when answered by any device and /or station in the system, whether it is a new call or a recall.

4. INCOMING TRUNK CALLS-NOT ANSWERED

These are any incoming trunk calls that were not answered by any station or device in the system. These are the same calls that would be flagged as abandoned in SMDR.

5. OUTGOING TRUNK CALLS

These are all outgoing trunk calls that were originated by any station or through the DISA feature. Outgoing trunk calls are valid calls as defined by the SMDR START TIME in MMC programming.

6. A SELECTED TRUNK WAS BUSY

Pegged every time a trunk or trunk group was busy regardless of the manner in which it was selected (e.g. DTS key, LCR, "9", 7XX, TRK GROUP SELECT, SPD, External Call Forward, DISA).

7. INTERNAL CALLS COMPLETED

These are all internal calls that were completed to any station, station group or device.

8. INTERNAL CALLS NOT COMPLETED

These are all internal calls that were not answered and resulted in the calling party hanging up. A call to a station group that overflows to another station is considered not answered whether the overflow destination did or did not answer.

9. TRUNK RECALLS TO STATION

These are trunk calls that were placed on any kind of hold and recalled a station. These are also trunk calls that were transferred, were not answered, and recalled the transferring station. This includes members of the operator group that put calls on hold which then recall the operator's station.

10. TRUNK RECALLS TO OPERATOR GROUP

These are any trunk calls that recalled to the operator group.

11. INTERNAL PAGE USED

Peg count of every time internal page was accessed.

12. EXTERNAL PAGE USED

Peg count for every time external page was accessed.

13. ALL PAGE USED

Peg count of every time the All Page feature was accessed. This does not include internal or external page, 55+ * or PAGE *.

B*** TRUNK GROUPS *******

| 1 GROUP | 2 OUTGOING | 3 BUSY |
|---------|------------|--------|
| 9 | 0000 | 0000 |
| 800 | 0000 | 0000 |
| 801 | 0000 | 0000 |

1. GROUP

A listing of all trunk groups assigned in the system.

2. OUTGOING

This is the number of outgoing trunk calls made using each trunk group. Pegged every time a member of this trunk group was used to make a valid outgoing call. A valid outgoing call is defined by the SMDR START TIME programmed in MMC programming.

3. BUSY

This is the number of times each trunk group was busy when someone attempted to access it.

C***** INDIVIDUAL TRUNKS *****

| 1TRUNK | 2TRUNK-NAME | 3ATTA | 4ANSD | 5NOT-ANSD | 6OUTGOING | 7BUSY |
|--------|-------------|-------|-------|-----------|-----------|-------|
| 701 | | 0000 | 0000 | 0000 | 0000 | 0000 |
| 702 | | 0000 | 0000 | 0000 | 0000 | 0000 |
| 703 | | 0000 | 0000 | 0000 | 0000 | 0000 |
| 704 | | 0000 | 0000 | 0000 | 0000 | 0000 |
| 705 | | 0000 | 0000 | 0000 | 0000 | 0000 |
| 706 | | 0000 | 0000 | 0000 | 0000 | 0000 |
| 707 | | 0000 | 0000 | 0000 | 0000 | 0000 |
| 708 | | 0000 | 0000 | 0000 | 0000 | 0000 |
| 709 | | 0000 | 0000 | 0000 | 0000 | 0000 |
| 710 | | 0000 | 0000 | 0000 | 0000 | 0000 |

1. TRUNK

A listing of each trunk in the system.

2. TRUNK NAME

The names of each trunk as set in MMC programming.

3. ATTA

Average Time To Answer for trunks (in seconds): calculated from the time that ringing voltage is detected at the trunk interface until the trunk is answered by a station or device in the system. The ATTA is the sum of all answered times divided by the answered call count.

4. ANSD

This is the number of times this specific trunk was answered by any station or device whether it is a new call or a recall.

5. NOT-ANSD

This is the number of times this specific trunk rang the system but was not answered. These are the same calls that would be flagged as abandoned in SMDR.

6. OUTGOING

This is the number of times this trunk was used to make an outgoing call. A valid outgoing call is defined by the SMDR START TIME in MMC programming.

7. BUSY

This is the number of times this trunk was busy when accessed by a key or dial code.

D***** STATION HUNT GROUPS *****

| | <----- 1 OUTSIDE CALL -----> | | | 5 <-INTERNAL-> |
|--------|------------------------------|----------|------|----------------|
| 2GROUP | 3ANS | 4NOT-ANS | 6ANS | |
| 500 | 0000 | 0000 | 0000 | |
| 501 | 0000 | 0000 | 0000 | |
| 502 | 0000 | 0000 | 0000 | |
| 503 | 0000 | 0000 | 0000 | |
| 504 | 0000 | 0000 | 0000 | |

1. OUTSIDE CALLS

These statistics are for outside calls that reach these station groups regardless of how they arrive there.

2. GROUP

Listing of all station groups in the system.

3. ANSD

This column is a peg count of all answered trunk calls that rang to the specific group directory number regardless of how they arrived.

4. NOT-ANS

The number of times any trunk call directed to the specific group number was not answered by any member of the group.

5. INTERNAL

An internal call made from a station or device within the system to the specific group number.

6. ANSD

This is a count of how many times an internal call was answered by any group member of that specific group.

```

E***** INDIVIDUAL STATIONS *****
                                     1                      11
      <----- OUTSIDE CALL -----> <-INTERNAL->
  2      3      4      5      6      7      8      9      10     12     13
EXT STATION-NAME ATTA ANSD NOT-ANSD DIALLED ICM-TRSF TRK-TRK PICKUP ANSD
DIALLED
201          0000 0000    0000    0000    0000    0000    0000 0000 0000
202          0000 0000    0000    0000    0000    0000    0000 0000 0000
203          0000 0000    0000    0000    0000    0000    0000 0000 0000
204          0000 0000    0000    0000    0000    0000    0000 0000 0000
205          0000 0000    0000    0000    0000    0000    0000 0000 0000

```

1. OUTSIDE CALLS

These statistics are for outside calls that in any way reach individual stations or devices.

2. EXT

Listing of all extension numbers in the system. This also includes AA and VM ports.

3. STATION NAME

The name for each particular station as set in MMC programming.

4. ATTA

Average Time To Answer for stations is the time (in seconds) that ringing signal is applied to a station for trunk calls and recalls. The ATTA is the sum of all answered times divided by the answered call count. Uses the same calculation method as for individual trunk ATTA.

5. ANSD

This is a count of how many times an outside call was answered by the specific station. Outside calls recalling a station are not counted again when they are answered.

6. NOT-ANSD

This is a count of how many times a trunk call was directed to the station but was not answered by the station.

7. DIALLED

Peg count of how many times the station made a valid outside call. An outside call is defined by the SMDR START TIME in MMC programming.

8. ICM-TRSF

This is the number of times a trunk call was successfully transferred to another station. It includes both screened and unscreened transfers.

9. TRK-TRK

This is the number of times a trunk call was transferred to another trunk (tie line) This is called a trunk-to-trunk transfer. This field is pegged every time the station completes a trunk-to-trunk transfer.

10. PICKUP

This is a count of the outside calls that were picked up by the specific station. Picked-up calls are calls that were not ringing at your station but were answered by you. This peg count is separate from the number of answered calls in 5 above.

11.INTERNAL

Statistics for internal calls. An internal call made from a station or a station device within the system to another station.

12.ANSD

This is the number of times an internal call was answered by this specific station. Screened transfers count as an answered internal call.

13.DIALLED

The number of times the specific station dialled another station or station group. Screened transfers count as a dialled internal call.

Sample Alarm Report

ALARM REPORT FOR [iDCS 500 SAMPLE] MAR/24/1999 19:45

| MM/DD/YYYY | ERR.TIME | ERR.CODE | ERROR DISPLAY | POSITION |
|------------|----------|----------|-----------------|------------|
| 03/14/1999 | 16:45:00 | [MJC03] | CID DSP Fault | MAP OPT:1 |
| 03/14/1999 | 16:45:00 | [MJC03] | CID DSP Fault | MAP OPT:2 |
| 03/14/1999 | 16:45:00 | [MNF03] | IPC Error | C1-S01 |
| 03/14/1999 | 16:45:00 | [MNF03] | IPC Error | C1-S04 |
| 03/14/1999 | 16:45:00 | [MJC03] | CID DSP Fault | MAP OPT:1 |
| 03/14/1999 | 16:45:00 | [MNF03] | IPC Error | C1-S01 |
| 03/14/1999 | 16:45:00 | [MNF03] | IPC Error | C1-S04 |
| 03/14/1999 | 16:45:00 | [MJC03] | CID DSP Fault | MAP OPT:1 |
| 03/14/1999 | 16:45:00 | [MNF03] | IPC Error | C1-S01 |
| 03/14/1999 | 16:45:00 | [MNF03] | IPC Error | C1-S04 |
| 03/14/1999 | 16:46:00 | [MNF01] | Card Out | C1-S10 |
| 03/14/1999 | 16:46:00 | [MNF02] | Card In | C1-S10 |
| 03/14/1999 | 16:47:00 | [MJD01] | SYNC Failure | C2-S2 |
| 03/14/1999 | 16:47:00 | [MJD02] | SYNC Recvry | C2-S2 |
| 03/16/1999 | 16:47:00 | [MNF04] | Trunk Fault | C1-S08-P03 |
| 03/16/1999 | 16:48:00 | [MNF05] | Trunk Recvry | C1-S08-P01 |
| 03/16/1999 | 16:48:00 | [MNF05] | Trunk Recvry | C1-S08-P02 |
| 03/16/1999 | 16:48:00 | [MNF05] | Trunk Recvry | C1-S08-P03 |
| 03/18/1999 | 16:51:00 | [MNF01] | Card Out | C1-S02 |
| 03/18/1999 | 16:51:00 | [MNF02] | Card In | C1-S02 |
| 03/18/1999 | 17:04:00 | [MJC04] | Ring Gen Fault | CABINET:1 |
| 03/19/1999 | 17:22:00 | [MJC05] | Ring Gen Recvry | CABINET:1 |
| 03/19/1999 | 17:23:00 | [MNF01] | Card Out | C1-S06 |
| 03/20/1999 | 17:24:00 | [MJC01] | DTMF Fault | CCP OPT:1 |
| 03/20/1999 | 17:24:00 | [MJC01] | DTMF Fault | CCP OPT:2 |
| 03/20/1999 | 17:24:00 | [MJC01] | DTMF Fault | CCP OPT:3 |
| 03/20/1999 | 17:24:00 | [MJC01] | DTMF Fault | CCP OPT:4 |
| 03/20/1999 | 17:24:00 | [MNF03] | IPC Error | C1-S01 |
| 03/20/1999 | 17:24:00 | [MNF03] | IPC Error | C1-S04 |
| 03/24/1999 | 17:24:00 | [MJD19] | PRI Restart | C2-S6 |
| 03/24/1999 | 17:25:00 | [MNF16] | SU Alarm | CABINET:2 |

Samsung Keyphone System Comparison Table

| Description | DCS | Compact I | Compact II | 816 | 408 | 408i | iDCS500 (L) |
|--|--------|--------------|--------------------|-------|------|------|-------------|
| AA card port numbers | 3951-8 | 3951-6 | 381-6 ¹ | 381-4 | N/A | N/A | 3951-8 |
| AA Trans tables 1-2 (entries) | 100 | 100 | 100 | 50 | N/A | N/A | 100 |
| AA Trans tables 3-12 (entries) | 25 | 25 | 25 | 25 | N/A | N/A | 100 |
| Account codes | 500 | 250 | 200 | 200 | 100 | 100 | 999 |
| Authorisation codes | 250 | 100 | 100 | 30 | 10 | 10 | 500 |
| BGM port numbers | 3701-2 | 371-2 | 371-2 | 371-2 | 371 | 371 | 372-3 |
| CALL keys (max.) | 8 | 8 | 5 | 4 | 2 | 2 | 8 |
| Classes of Service (COS) | 30 | 30 | 30 | 10 | 4 | 4 | 30 |
| CLIP Translation Table entries | 250 | 250 | 200 | 200 | N/A | 100 | 1500 |
| Daughterboards (keyset) | KSU | Any DLI port | Motherboard | None | None | None | Any 8DLI |
| DDI entries | 200 | 200 | 200 | 50 | N/A | 20 | 999 |
| DECT ports | 48 | 24 | 24 | N/A | N/A | N/A | 192 |
| LCR Digit Table (max. entries) | 500 | 500 | 500 | 300 | 100 | 100 | 2000 |
| MOH port numbers | 3701-2 | 371-2 | 371-2 | 371-2 | 371 | 371 | 372-3 |
| Operator Groups (part of Station Group) | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Operator Group members (sequential / distributed ring) | 32 | 30 | 30 | 16 | 8 | 8 | 32 |
| Operator Group members (unconditional ring) | 32 | 30 | 10 | 16 | 8 | 8 | 32 |
| Page zones (no. of internal) | 4 | 4 | 4 | 4 | 2 | 2 | 5 |
| Page zones (no. of external) | 4 | 4 | 4 | 1 | 1 | 1 | 4 |
| Pickup Groups | 20 | 20 | 20 | 8 | 4 | 4 | 99 |
| So bus ports | 32 | 32 | 24 | 16 | None | 2 | 64 |

Samsung Keyphone System Comparison Table (cont'd)

| Description | DCS | Compact I | Compact II | 816 | 408 | 408i | iDCS500 (L) |
|--|-----------------|-----------------|----------------|----------------|-------|-------|-------------|
| Speed dials (total) | 1500 | 500 | 600 | 500 | 300 | 300 | 2500 |
| Speed dials (system)(max.) | 500 | 500 | 500 | 300 | 200 | 200 | 500 |
| Station Groups (number of) | 30 | 30 | 20 | 10 | 4 | 4 | 50 |
| Station Group members (sequential / distributed ring) | 48 | 30 | 30 | 16 | 8 | 8 | 48 |
| Station Group members (unconditional ring) | 32 | 30 | 10 | 16 | 8 | 8 | 32 |
| Station Group numbers | 500–529 | 500–529 | 500–519 | 500–509 | 50–53 | 50–53 | 500–549 |
| Trunk Groups (number of) | 11 | 11 | 11 | 4 | 2 | 2 | 50 |
| Trunk Group members | 80 | 10 | 40 | 10 | 4 | 4 | 99 |
| Trunk Group numbers | 9, 80–89 | 9, 80–89 | 9, 80–89 | 9, 80–82 | 9, 8 | 9, 8 | 9, 800–850 |
| UCD Groups | 10 ² | 10 ² | 5 ³ | 3 ⁴ | N/A | N/A | 20 |
| Voice dial card port numbers | 3551–2 | 3551–2 | 355–6 | N/A | N/A | N/A | 3551–2 |

Notes:

¹Misc 2 card=381–4, AA card=381–6, both cards installed=381–90

²UCD Group can be created from any Station Group 501–529 (CI) or last 10 Station Groups 520–529 (DCS)

³UCD Group can only be created from last 10 Station Groups 510–519

⁴UCD Group can only be created from last three Station Groups 507–509