

Programming Manual

Model: DG504

We extend a warm welcome to you on becoming a part of the Copper Connections family.

Our service support Engineers shall be working hard through our channel partners to ensure your satisfaction with the product and after sales services. We welcome your feedback / query at service@copperconnections.com

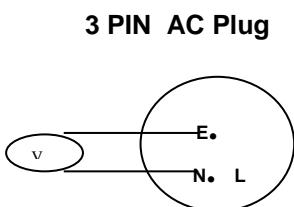
Installation Check Points

Cabling

- All cables of the EPABX should be at least 6" away from the electrical cables.
- They should be at least 12" away from the area of high frequencies like tube light chokes, Electric Motors, etc. If it is not possible to avoid, then use shielded cables and earth the shield.

Earthing

Earth connected to the EPABX should not have more than 5 volts on it.



3 PIN AC Plug

GOOD EARTHING

Voltmeter reading between N & E must be more than 100mV and less than 5V

BAD EARTHING

If voltmeter reading between N & E is more than 5V, do not run the Copper Connections System on it.

Location

The location at which the System is placed should be ventilated. It should be ensured that no liquid spills over the System especially near the ventilation slots.

Note: The Company's warranty voids if the above points are not followed.

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Note:

- Copper Connections Pvt. Ltd reserves the right to alter equipment specifications and descriptions contained herein and make no commitment to update or keep current the information herein.
- All information herein is subject to change at any time without notice. No part of this publication shall be deemed to be part of any contract or commitment whatsoever.
- Product specifications and features are subject to changes without prior notice due to our constant endeavour to improve the product.

Abbreviations Used

Junction Line / PNT	- Telephone Lines provided by the Department of Telecommunication
SLT	- Single Line Telephone (Normal Telephone Set)
KTS	- Key Telephone Set
DSS	- Direct Station Selection (Every KTS has DSS keys
Flash	- Pressing 'FLASH' key on SLT or depressing Hook switch for fraction of a second

Programming through Computer

This PBX CPU has 2 Serial Ports.

The Upper Serial Port is for Programming purpose. Access to the Program Interface is restricted to trained and qualified programmers. Uncertified personnel can unknowingly cause serious damage to the PBX.

The Lower Port is a CTI port for Interfacing with PC based HMS/PMS Softwares or for connecting to a PC for Call details on Hyper Terminal.

For Programming, connect the upper serial port to a Computer.

Cable connections between Computer and PBX

Only three wires are required for the connection between the data terminal and the RS232 port. These 3 wires are used for connecting the Transmit (Tx) data, Receive (Rx) data and the Signal ground between the Computer and the PBX.

The serial asynchronous RS232 interfaces of some PCs are equipped with a DB25 connector, while others are equipped with a DB9 connector. The following table gives the connections to be made for both these types of connectors with the RS232 port of the PBX.

DB9 connector		DB25 connector	
Computer	PBX	Computer	PBX
Pin no. 2	Pin no.3	Pin no. 2	Pin no. 2
Pin no.3	Pin no.2	Pin no. 3	Pin no. 3
Pin no.5	Pin no.5	Pin no. 7	Pin no. 5

Before connecting the serial port of the computer to the RS232 port of the PBX, switch off the PBX & then connect the cable.

Load Hyper Terminal on the PC.

Set the Parameters in Hyper Terminal as below:

Baud Rate = 19,200 for both the ports

Line Delay = 1,000 ms

Character Delay = 14 ms

Parity - none

Data word length - 8 bits

Stop bits - 1 bit

Format - Asynchronous data, standard ASCII character set

On activating the Hyper Terminal, enter Login (Password). Refer Heading "Password" for selecting the password to be used.

At any moment, if no command is sent for 4 minutes, it will log out.

'Ctrl L' can be used for entering the last command again.

Format for programming commands is:

Function Command type Port/Ext/Trk number Feature

However, certain commands do not require all the fields to be entered.

Functions: Following are the functions

Function	Description
login	- Logs in to the programming mode.
logout	- Logs out of the programming mode.
help	- Displays the help menu
set	- Instructs the system to set a parameter
delete	- Deletes a parameter from the database
reset	- Resets a parameter already set in the system
display	- Displays any feature setting of the system
show	- Displays any feature setting of the system
copy	- Copies a feature or parameter from one port to another port.
add	- Instructs the system to make an addition to the existing parameter
Repeat	- Repeats a command
on	- Turns 'ON' a feature
off	- Turns 'OFF' a feature
date	- Sets the date for the system
time	- Sets the time for the system.

Command Type

The next word after the programming function specifies the type of command that is to be entered. This word must be one of the following words.

acd	- For setting acd related features
card	- For adding or deleting a card
code	- For filling the STD & ISD code table
cos	- For defining the class of service
cotm	- For setting the auto Day / Night change over timings for the system
debug	- This command is used for debugging
ext	- For programming any extension parameter
nplx	- For programming flexible numbering
keys	- For setting the definition of the KTS, DSS & ABCD keys
line	- For programming any extension parameter (same as ext command)
name	- For entering the name of an extension
npl	- For programming the flexible numbering (same as nplx command)
password	- For programming the passwords
pnt	- For programming any JUNCTION parameter
port	- For programming any port in the system.
rsrd	- For defining the restricted digits.
sys	- For programming any system parameter
trk	- For programming any Junction parameter (same as pnt command)

Port/Ext/Trk number

In this field, enter the port number or extension number or the Junction number for which the programming has to be done. The port number of the system starts from 000; the extension number starts from 2000 and the Junction number starts from 700.

If the command type is sys, then there is no need to enter this field.

Feature

This field specifies the feature that is to be modified. This field can be broadly divided into three categories namely Junction features, Extension features and System features. The Junction features contain the list of commands that are used for

modifying the features related to the Junction line. The extension features contain the list of commands that are used for modifying the features related to both analog extensions and digital extensions. The system features contain the list of commands that are used for modifying the system parameters. All the commands are explained in detail in the following sections.

Repeat Command

To do the same type of programming for a set of extensions or Junctions, the repeat command helps in repeating the same command with auto increment of parameters. The repeat command is:

repeat <rcnt> <para1> <para2> <para3> <command>

where, *rcnt* = Number of times the command has to be repeated

para1, para2, para3 = The parameters in the command which has to be auto incremented for each step and *command* is the required command which is to be repeated.

Example: If it is required to change the flexible number of extension 2000 to 2007 as 4000 to 4007, the command is:

repeat 8 3 4 set nplx 2000 4000

In this command, the repeat count is set as 8 (i.e) the set nplx command will be repeated for 8 times. The para 1 and para 2 are set as 3 & 4 (i.e) in the set nplx command, parameter 3 and 4 have to be incremented by one for each step. This means that in the above command, parameter 3, which is 2000, and parameter 4 which is 4000 will be incremented by one for each step.

Programming with TXT file through Hyper Terminal

It is advised to make a txt file of all the program entered in the PBX so that whenever PBX has to be reprogrammed, simply upload the txt file through Hyper Terminal as explained below:

To program the PBX through a txt file, follow the menu as mentioned below:

- Select "Transfer" from the Bar Menu
- Select "send text file"
- Select the desired txt file to be uploaded
- Click on "open"

Following is a txt file Sample:

xyz789
set ppt 700 dtmf
set ext 2000 cos 1

It must be noted that the first line of the file must be the Login password. After this each program must be entered on separate lines. The file must be saved in plain text format.

System Status View through "show" or "display" command

All the parameters of the system can be viewed on the Program Interface terminal. The show or display command is used for viewing the system parameters. The various display commands are listed below:

show acd <acd no.>	- displays the acd settings for the acd number entered
show card	- displays a list of cards, which are present in the system. If a card is not present in a slot, it will be displayed as 'NONE'. If a card has been registered by the system and it is removed while it is running, it will be displayed as 'A', otherwise 'P' will be displayed. This command will display the status of all the slots in the system.
show code	- displays the STD or ISD code table.
show code <xxxxx>	- displays the current entry in the code table for the code xxxxx.
show cos <cos. no.>	- displays the current settings for the entered COS number
show cotm	- displays the system Day / Night change over timing.
show ext <extn.number>	- displays the status and feature settings of the extension number entered.
show flex flist	- displays all flexible port numbers.
show nplx <rack no.>	- displays the flexible number table for the rack/Box number entered. The rack / Box numbers are from 0 to 3.
show nplx 4	- displays the flexible number table for the feature codes.
show nplx flist	- displays the ports for each feature code in the system.
show keys dtmf <dpt. no.>	- displays the key settings of DTMF telephones in the dept. no. entered
show keys kts <dpt. no.>	- displays the key settings of KTS telephones in the dept. no. entered
show keys dss <type no.>	- displays the key settings of DSS for the type entered
show name	- displays the names of all the extensions in the system.
show name extn. No.	- displays the name of a particular extension in the system.
show rsrd	- displays the restricted digits
show sys	- display all the system parameters. It will show the various timing settings of the system, the features which are enabled or disabled in the system, the current date & time of the system, the night code etc.
show sys acts	- displays the virtual account codes of the system
show sys device	- displays a list of various devices in the system and their port numbers
show sys fault	- displays the fault report of the system
show sys libs	- displays the library numbers

show sys network - displays the various network parameters which are set in the system
 show trk <Junction number> - displays the status and feature settings of the Junction number entered.
 show toll <row no.> - displays the current setting in the cost table for the row number entered.

Error Messages

BAD COMMAND LINE	- syntax error in command
BAD COMMAND PARAM	- error in arguments for the command
LINE NO. DOES NOT EXIST	- error in line number entered
JUNCTION NOT FOUND	- error in the Junction number entered
BAD OPTION	- irrelevant feature option
FLEXIBLE NUMBER DOES NOT EXIST	- invalid flexible number
ERROR IN RANGE	- invalid range
ERROR IN DATE	- error in date
ERROR IN TIME	- error in time
AUTHORISATION FAIL	- error in login level
COMMAND FAIL	- command rejected by the system
SYS PARAM OVERFLOW	- too many parameters
INVALID CARD NO.	- invalid card number
INVALID PORT NO.	- invalid port number
BAD DIP SWITCH SETTING	- wrong DIP switch setting on the CPU card
UNKNOWN ERROR	- unknown error

Help Menu

Help menu can be viewed by typing 'Help'. The help menu gives the list of commands that are available on the Program Interface and the format for each command. It is also possible to view the help menu for a particular program function by typing help followed by the function as below:

Displays all extension related commands

 Help ext

Display all PNT related commands

 Help pnt

Display all set / reset related commands

 Help set

Display all system related commands

 Help sys

Display all cos related commands

 Help cos

DIP SWITCH DETAILS

It has 8 DIP switches

SWITCH NO	OFF	ON
1	Always keep in this position	Do not keep in this position
2	Always keep in this position	Do not keep in this position
3	Always keep in this position	Do not keep in this position
4	Always keep in this position	Do not keep in this position
5	Hotel Version	Office Version
6	Do not keep in this position	Always keep in this position
7	Do not keep in this position	Always keep in this position
8	Cannot do Programming but cards Reloading can be done.	Can do Programming but not Reloading of cards.

Keep Switch 6, 7 and 8 in 'OFF' position while initializing the system. Thereafter keep Switch 6, 7 and 8 IN 'ON' position.

For alteration in cards location or addition of cards, keep Switch 6,7 and 8 'OFF'. Switch 'ON' the system and reset the CPU. After CPU has registered the new cards location and all cards start functioning, put Switch 8 in 'ON' position for doing various programming.

Default: The PBX is supplied with all DIP switches in OFF position.

Passwords

The PBX has following type of Passwords:

Programming Passwords

These Passwords are for programming from Computer through Hyper terminal.

They are of 3 Levels:

User Level : For viewing already entered programs. No Programming can be done with this Password.

Default = COPPER

Master Level: Most of the Programming can be done with this Password barring some important ones.

Default = abc123

Supervisor Level: All Programming can be done with this Password

Default = xyz789

Note: When the login is in a lower level, one can login into higher level only after logging out of the current level.

: The passwords for each level can be changed after logging in to the required level. Following are the commands to change Passwords:

```
set password user old password new password new password  
set password master old password new password new password  
set password supervisor old password new password new password
```

: The Passwords are case sensitive.

Extension Passwords

Every Extension has its own personal password which is 777 in default for every extension.

It is used for certain extension specific features like Dynamic Lock, etc.

To change Extension password:

Dial 865+777

Dial 2 NNN NNN (Where 'NNN' is the 3 digit new password)

Hear Confirmation tone

Keep the handset

Resetting Extension Password:

If an Extension user forgets its Extension Password after changing it then the same can be reset to default Password through the following command:

```
set ext <extn. no.> resetpass
```

KTS Programming Password

It is for programming certain features of a KTS. Features of that particular KTS get programmed from where the Programming is being done.

Default KTS Programming Password = 1234

Procedure: Press [PROG] key followed by the KTS Programming Password.

Changing KTS Programming Password

81 NNNN NNNN 1

where, NNNN = New Password, entered twice.

Note: Once password is forgotten there is no way to retrieve it or change it.

The password can be set back to its default setting only by disconnecting the power supply to the RAM chip of the system.

Programming from Operator KTS

Some programming like Auto Attendant message recording, etc. can only be done from Operator KTS.

Some programming can be done from Computer only.

Some Programming is possible from Computer as well as Operator KTS.

Features like Dynamic Lock, DND, etc. activation / deactivation can only be done from the Extension itself.

To enter programming mode from KTS, following is the command:

Press [PROG] key + 1234 (KTS Programming Password)

After entering each program, system gives a confirmation tone and the display show 'PASS' If the program entered is incorrect, 'ERROR' is displayed.

To program more than one command without exiting Programming mode, press [HOLD] key and then enter the next program.

The list of programs that are possible through the operator KTS are given below.

Programming code

Description

11X

DID Recording

12X

Print Commands

18X

Day / Night changeover

27X

Check in / Check out

28X

Reset Extension Password

30X

Alarm Setting for Extension

42X

Day / night mode of Extensions & Junctions

43X

Set System Time

44X

Junction service group

61X

Set System Date

65X	Add Budget amount for extensions
81X	Change programming password
93X	Fill libraries

A detailed description of all the above listed programs are given below:

Resetting Extension Password

This command is used when an extension user forgets his Extension Password.

This command sets the extension password to default value 777. The command is: Programming Password)

Press [PROG] key + 1234 (KTS

Dial 28 EX 1

Password for Extension Ex will reset to 777.

Where, Ex = 2000, 2001,...etc.

Default: For all extension is 777.

Junction Dialing Rights for Extension

This command will set the Day and the Night outward dialing modes of extensions. The outward dialing mode for extensions will change in Day mode and Night mode as set through the following command:

Press [PROG] key + 1234 (KTS Programming Password)

Dial 42 Ex D N

Where, Ex = 2000, 2001...etc

D = Dialing right for the day mode

N = Dialing right for the night mode.

D & N = 0 - Only extension to extension calls

1 - Local calls allowed but restricted digits not allowed

2 - Local calls except Level ONE numbers (external numbers starting with digit 1)

3 - Local calls

4 - Local and STD calls

5 - Local, STD and ISD calls

Default: All extensions have only local call rights.

Junction Ring Assignment

The incoming calls through each Junction line can be defined to land wherever required in any combination as follows, for both the Day and the Night mode. The command is:

Press [PROG] key + 1234 (KTS Programming Password)

Dial 42 + Trk + D N

Where, Trk = Junction numbers from 700 onwards

D = Landing type in day mode

N = Landing type in night mode.

D and N = 0 - For Round Robin.

1 - For Simultaneous ringing.

2 - For Delayed ringing.

3 - For Ringing at Operator Console.

4 - For One Termination of JUNCTION line.

5 - DID with VRR welcome message.

Round Robin:

Ringing one after the other at defined extensions. Only one extension will ring at a time.

Simultaneous Ring:

Incoming JUNCTION call lands simultaneously at defined extensions. The call gets connected to the extension, which lifts the handset first.

DELAYED RINGING:

Ringing one after the other while the previous extension keeps ringing.

OPERATOR CONSOLE:

Incoming JUNCTION line lands at the operator KTS only.

ONE TERMINATION:

Incoming JUNCTION call rings only at one defined extension.

DID (Requires a DID card):

In this mode, the incoming call is directly attended to by the system, where the caller is greeted by a VRR message.

He is then directed to reach any extension by dialing the internal number in tone mode if Decadic DID card is not installed.

Default: Incoming calls through all Junction lines land at the Operator Console.

Junction Ring Group Assignment

This command is for defining Extensions Group that will ring in day / night mode in the predefined ringing patterns (Round robin, delayed ringing, simultaneously). The command is:

Press [PROG] key + 1234 (KTS Programming Password)

Dial 44 + Trk + D N

Where, Trk = Junction numbers from 700 onwards

D = Ringing service group for the day mode

N = Ringing service group for the night mode.

D & N = 0 to 9. Refer the heading "Junction Ring Service Group" for defining these Groups.

Important: If a Junction line is programmed in round robin, delayed ringing, simultaneously

ringing then the use of this command is mandatory.

Set System Time

This command is used for setting the system time. The command is:

Press [PROG] key + 1234 (KTS Programming Password)

Dial 43 HH MM SS

Where, HH = 00 - 23 hours.

MM = 00 - 59 minutes.

SS = 00 - 59 seconds.

Set System Date

Following command is used for setting the system date:

Press [PROG] key + 1234 (KTS Programming Password)

Dial 61 DD MM YY W

Where, DD = Day of month 01 to 31.

MM = Month of year 01 to 12.

YY = Year 00 to 99.

W = Day of Week (0 for Sunday, 1 for Monday & so on)

Memory Dialing Numbers Entry

This command is used for filling the library numbers. Any combination of numbers can be stored in the library like an extension number or a Junction access code or an external number or a feature activation code. The command for filling the library numbers is:

Press [PROG] key + 1234 (KTS Programming Password)

Dial 93 Lib No. <Junction Number> <Telephone Number> HOLD

Where, Lib No = Library numbers from 010 to 399.

Junction Number = 700 onwards

After entering the required numbers, press the [HOLD] key.

ALARM setting for Extensions

This command is used for setting alarm for an extension from the KTS/SLT Operator. Two alarms can be set for each extension. When the alarm matures, the extension will start ringing. On lifting the handset, music will be heard. If the extension is not lifted on the maturity of an alarm for a predefined time, the alarm port defined for the system will get a ring.

The general format for setting the alarm for an extension is:

Press [PROG] key + 1234 (KTS Programming Password)

30 Ex 1 N HH MM DD

The general format for canceling the alarm for an extension is:

Press [PROG] key + 1234 (KTS Programming Password)

30 Ex 0 N (To reset both the alarm 'N' should be '0')

where, 'N' is the alarm number and it can have values 1 and 2; HH is the hour, MM is the minutes, DD is the day of the alarm. If the alarm is required for the same day, DD must be entered as 32.

Example: To set first alarm at 10:00 for extension 2300 for the same day, the command is:

Press [PROG] key + 1234 (KTS Programming Password)

30 2300 1 1 10 00 32

Default: No alarms are set.

Check-In:

Press [PROG] key + 1234 (KTS Programming Password)

27 Rm 1 A RRRR

(Only With Hotel Version)

A guest room extension can access the Junction only if that room extension is checked-in.

where Rm, is the room number.

A = 1, if Advance to be entered otherwise it should be zero.

RRRR, is the amount in rupees if A=1.

To Check-In a Room

• Enter supervisory mode.

• Enter 27.

• Enter the required room number. If a valid room number is entered, the display will show an arrow.

• Press 1 for Check-In process.

• If advance to be entered than press 1 again otherwise press 0

• Now you can enter the advance amount taken from the guest.

Now a guest can directly make a call depending on his class of service. All the calls made from the room will be stored in the memory. System will record the current date and time as the check in date and time of the room.

NOTE: Name of the guest can be entered by the hyperterminal only.

Rs. 9999 can be entered as advance.

Check-Out:

27 Rm 0

(Only With Hotel Version)

When a guest wants to Chk-out, operator will have to Chk-out that room to get the details of outgoing calls that were made by the guest from the room. This feature will work only if a printer is connected to the system and is in 'ON LINE' condition.

where Rm, is the room number.

To Chk-Out a guest

- Enter supervisory mode.
- Enter 27.
- Enter the required room number. If a valid room number is entered, the display will show an arrow.
- Press 0 for Check-In process.
- If the console is programmed to calculate the various bills (like food, laundry etc.), enter the data as explained below.
- After entering all the bill amount, the bill will be printed automatically, and the room loses the direct dialing facility. The current time and date will be recorded as the check out date and time of the room and it will be printed in the bill.

Entering of the bills

This feature is used for entering the various bills such as food, laundry etc. The maximum amount that can be entered is 4 digits for 'Rupees'.

When a room is being checked out, after entering the correct room number, the display will show the following messages in sequence:

"ST..."
"Rent".
"Food".
"Laundry".
"Misc".
"Tax".

Enter each bill as explained above. After entering the Tax amount, the printer will start printing. The telephone bill of the room will be calculated automatically and the amount will be included in the grand total. The Hotel name, the name of the guest, Check in and Check out date and time will be printed along with the bill amounts, in the printout. The bill will also have the details of Junction calls made from the room such as, the time at which the call was made, the number dialed, the duration of the call and the amount charged for the call. The bill will be printed with advance taken from the guest and balance left to be paid.

Note: If any wrong entry is made while filling the bill amount, press [rls] key to cancel all entries:

SET/RESET Bills Field: 51 C D E F G H

This command sets the field for entering and printing of the following details along with the telephone billing.

where	C	=	Serial number : Make it 0 to Disable and 1 to Enable
	D	=	Room rent : Make it 0 to Disable and 1 to Enable
	E	=	Food bill : Make it 0 to Disable and 1 to Enable
	F	=	Laundry bill : Make it 0 to Disable and 1 to Enable
	G	=	Miscellaneous : Make it 0 to Disable and 1 to Enable
	H	=	Tax : Make it 0 to Disable and 1 to Enable

Default: All fields are disabled.

Programming from KTS

Selected Programming can be done from KTS for its own extension only.

Procedure:

Press [PROG] + KTS Programming Password (1234 in default).

ACD Timers

Various timers are available for ACD. The timers are given below:

Delay Timer

This is the delay time after which the call will be picked up by the ACD. Until this delay time, the caller will get only the ring back tone.

Overflow timer

This is the maximum duration for which a call will wait in the ACD queue. After this time, the overflow message will be played (if enabled) and the call will be diverted to the overflow destination.

Next timer

This is the maximum duration for which a call will wait for answer after it has landed at an ACD agent. After this time, the call will jump to the next agent in the ACD group.

Wrap timer

This is the delay time between the completion of one call by an ACD agent and the landing of the next call to the same agent.

Following are the commands, which are related to ACD.

ACD Agent Login/Logout

This command is used for logging out or logging in an agent from an ACD group. After logging out an agent from an ACD group, the calls in ACD will not be landing on this extension. The command for logging out an agent from an ACD group is:

```
set ext <extn. no.> logout
```

Command for logging in an agent into an ACD group in which it is predefined is:

```
reset ext <extn. no.> logout
```

Adding or Deleting Cards

On initialisation of the CPU by setting the appropriate DIP switches on the CPU card, all the cards, which are present in the system, will be registered. Later on, after the CPU has started running, for adding any new card to the system, insert the card in the required slot and give the following command:

```
add card <slot no.> <card type>
```

The slot numbers start from 00 onwards (corresponding to the first slot) to 63 (corresponding to the last slot). The valid names of card types are given below:

ALC	-	Analog Line Card	(STB N)
ATC	-	Analog Junction Card	(TKB)
ATD	-	Analog Junction & Digital line Card	(TKB H)
BWT	-	Bothway / Twoway Junction Card	
CNF	-	8 Party Conference Card	
DISA8	-	DID Card	
DISA	-	2 Port DID Card	
DLC	-	Digital Line Card	(STB K)
DTM	-	DTMF Dialler Card	
EMD	-	4 port E&M & 4 port DID card	
ENM	-	E&M card	
ISN	-	ISDN BRI card	
MFC	-	MFC card	
MTC	-	Magneto Junction card	

CEPT (E1) & Tone card cannot be added by this command.

Example: To add a new Analog Line card (ALC) in the second slot, the command is:

```
add card 01 alc
```

All the cards, which are present in the system, can be viewed by the following command:

```
show cards
```

This command will show the cards present in all the slots of the system.

An existing card in the system can be removed by the following command:

```
delete card slot no.
```

Alarm

Every extension can set an Alarm for itself.

SLT / KTS Extension can set its own alarm and not for others.

KTS / SLT Operator extension can set Alarms for any extension.

Alarms can also be set for any extension through Computer.

Following is the command for setting alarm for any extension from Computer.

Two alarms can be set for each extension. When the alarm matures, the extension will start ringing. On lifting the handset, music will be heard. If the extension is not lifted on the maturity of an alarm for a predefined time, the alarm port defined for the system will get a ring. The general format for setting the alarm for an extension is:

```
set / reset ext <extn.no.> alarm <n> <hh> <mm> <dd>
```

where, n = 1 or 2 Alarm number

hh = hour

mm = minutes

dd = day of the alarm. If the alarm is required for the same day, dd = 32.

Example: To set an alarm

at 10:00 for extension 2300 for the same day, the command is:

```
set ext 2300 alarm 1 10 00 32
```

Note: For setting Alarm for own extension or for other extensions from KTS / SLT Operator,
refer KTS Operating Manual and SLT Operating Manual.

Alarm Fail Reporting Extension

This command is used for defining the alarm port for the system. Only a KTS extension can be set as an alarm port. If an extension has set an alarm and at the maturity of the alarm, the extension is not lifted for a predefined amount of time, the alarm will be diverted to the alarm port as a reminder alarm. The display of the alarm port KTS will show the extension number for which the alarm has failed and the alarm time. The command is:

```
set / reset ext <extn. no.> alrmport
```

Default: The default main operator of the system is also set as the alrmport.

Auto Attendant

This command is used for defining the DID port for the system. It will be applicable only if DID landing through the DID card is programmed for any of the Junction lines in the system. When the DID card fails to connect the incoming Junction line to any extension in the system, the Junction line will be connected to the answer port. The command is:

set / ext <extn. no.> disposit

Default: The default main operator of the system is also the DID port of the system.

To set an answering port for the DID lines. The answering ports are used for testing the DID lines from a remote location. The command is:

set / ext <extn. no.> ansport

Default: The default system operator is the answer port

Message Recording

DID message for Auto Attendant can only be recorded from Operator KTS.

To enter programming mode from KTS, following is the command:

Press [PROG] key + 1234 (KTS Programming Password) + 42 + Junction Number (701) + 55

The KTS display should show "Pass"

Press "Hold" Key

Enter the message code according to the table given below to record the message.

After entering each program, system gives a confirmation tone and the display show 'PASS' If the program entered is incorrect, 'ERROR' is displayed.

The commands for programming the various DID messages are given below.

Only one of the message can be programmed with one command. To record other messages, repeat the above commands:

Message code	Office Version	
Level 1 113	Operator Message	Max. 9 sec. message
Level 2 114	Night message	Max. 9 sec. message
Level 3 115	Successful storing of numeric message	Max 5 sec. message
Level 4 116	Welcome message	Max. 9 sec. message
Level 5 117	Extension busy message	Max. 9 sec. message
Level 6 118	Invalid number message	Max. 9 sec. message
Level 7 119	No answer message	Max. 9 sec. message

Message code	Office Version	
Level 1 113	wake up alarm	10 Sec.
Level 2 114	Guest intimation message	10 Sec.
Level 3 116	Welcome Message	10 Sec.

A sample of the messages in the various levels are given below:

Level 1 - (Operator MSG) - Please hold on, your call is being transferred to the operator or you can leave your telephone number by pressing # followed by your telephone no and press # again.

Level 2 - (Night Message) - The office hours are over. Please call at 9.30 tomorrow morning.

Level 3 - (Successful storing of telephone number) - Your telephone number is successfully stored. Thank you for calling.

Level 4 - (Welcome Message) - Welcome to Copper Connections. Dial 214 for Mr. ABC, 204 for Mr. XYZ or wait for Assistance. **Note:** After completing this message leave some silent Time & dial 9 just before the end of 9 secs.

Level 5 - (Busy Message) - The dialled extension number is busy. Dial another extension number or wait for assistance.

Level 6 - (Invalid Message) - The dialled extension number is invalid. Dial another extension number or wait for assistance.

Level 7 - (No Answer Message) - The dialled extension number is not responding. Dial another extension number or wait for assistance.

To repeat the messages for other Junction lines, messages are not be recorded again. Simply enter the following program:

Press [PROG] key + 1234 (KTS Programming Password) + 42 + Junction Number (702) + 55

The KTS display should show "Pass"

NOTE:

: By default, the Operator ACD is set as DID answer port.

: One DID card can handle only 2 Junctions simultaneously. In case of single DID card, if third DID call lands, it will wait for 10 seconds for DID & if still DID is not free then call will be diverted to the DID answer port. Additional DID card can be added depending on the requirement. With DG 120 CPU & 504 CPU, up to 4 DID cards can be installed, so voice message can be played on eight trunks simultaneously.

: While recording "Welcome Message" give 2 secs silence and then start recording. If this is not done then the message may cut while answering 2 calls simultaneously, in Hotel version.

Auto Attendant - Allotment of Department Number

This command is used for allotting a department number for an extension. The valid department numbers are from 0 to 9. These department numbers are applicable when the department mode of transfer is enabled in DID card. The Department numbers are also applicable for defining the key definitions of the KTS instruments and the 4x4 matrix analogue telephone instruments. An extension can be in only one department. The command is:

```
set / ext <extn. no.> deptt <dept. no.>
```

Where, dept. no. = department number assigned for the extension.

Example: To allot extension number 2300 to department 1, the command is:

```
set ext 2300 DEPTT1
```

Default: All Extensions are in Department number 0.

To disable the feature:

```
RESET COS <COSNO> DEPTT
```

DID Single Digit Code for Departments

This command is used for enabling the department transfer mode in the DID card. A maximum of 10 departments can be defined in the system. On enabling the department transfer mode, the external caller can reach any department by Dialing the single digit department number. The command for enabling this feature is:

```
set sys dptxfr
```

Command for disabling this feature is:

```
reset sys dptxfr
```

Default: Department transfer mode is disabled

Auto Attendant - Message in place of Tones

This command is used for enabling the analog message in the DID card. This feature can be used for replacing the various tones in the system by voice messages. However, this feature requires more than one DID card to be installed in the system. The command is:

```
set / reset sys analogmsg
```

Default: Analog messages are disabled.

Auto Attendant - Dial Tone in place of Message

This command is applicable only for DID Junction lines. It is used for enabling or disabling the system dial tone on incoming DID lines. The command for enabling dial tones in incoming DID lines is:

```
set sys dialtone
```

Command for removing dial tone from the incoming DID lines is:

```
reset sys dialtone
```

Default: No dial tone on incoming DID lines.

Auto Attendant - Night Message – Play & Drop Calls

This command is used for enabling the night VRR message in the DID card. On enabling the night VRR, in the night mode, the DID card will play the night VRR message & drop the incoming JUNCTION line after playing the message. The command for enabling this feature is:

```
set sys nightvrr
```

Command for disabling this feature is:

```
reset sys nightvrr
```

Default: Night VRR is disabled.

Auto Redial

This command sets the number of auto redial attempts. The system will redial until the external phone rings or up to the number of attempts, defined by this command. The valid number of attempts allowed is from 1 to 9.

Example: To set the number of auto redial attempts as 5, the command is:

```
set sys rdlcount 5
```

Default: 5 attempts

Note: This feature is offered only in special conditions.

Interval between 2 Trials

This command sets the time interval between two successive auto redial attempts. The valid time intervals are from 20 seconds to 90 seconds and their corresponding codes are from 2 to 9. Example: To set the auto redial time interval as 50 seconds, the command is

```
set sys rdftime 5
```

Default: 30 seconds

Auto Redial – ISD Numbers

This command is used for enabling or disabling auto redial of ISD numbers on a Junction line. On enabling this feature for a Junction line, only ISD numbers will be attempted on this Junction line when the system does auto redial. The command is:

set / reset pnt <trunk no.> isdrdl

Default: Auto redial of ISD numbers are enabled on all Junction lines.

Auto Redial of STD Numbers

This command is used for enabling or disabling auto redial of STD numbers on a JUNCTION line. On enabling this feature for Junction line, only STD numbers will be attempted on this Junction line when the system does auto redial. The command is:

set / reset pnt <trunk no.> stdrdl

Default: Auto redial of STD numbers is enabled on all Junction lines

Auto Redial – Local Numbers

This command is used for enabling or disabling auto redial of local numbers on a JUNCTION line. On enabling this feature for Junction line, only local numbers will be attempted on this Junction line when the system does auto redial. The command is:

set / reset pnt <trunk no.> localrdl

Default: Auto redial of local numbers are enabled on all Junction lines

Boss Secretary Feature

This command is used for setting an extension as 'BOSS' extension. For each 'BOSS' extension, a secretary extension has to be defined. The secretary extension is also defined using this command. After defining a 'BOSS' & a secretary extension, all the calls for the 'BOSS' extension will be automatically diverted to the secretary extension. However, the secretary extension will be able to call the 'BOSS' extension. The 'BOSS' extension is also free to make any internal or external calls. The command is:

set / reset ext <boss. extn. no.> boss <sec. extn. no.>
where, boss extn. no. = extension number that has to be defined as the boss
sec. extn. no.= extension number, which has to be defined as the
secretary for the boss.

Example: To set extension 2300 as the BOSS extension & extension 2400 as the secretary extension, the command is:

set ext 2300 boss 2400

Default: No extension is set as BOSS.

Note: A BOSS can have only one secretary whereas a secretary can have multiple bosses.

Back Ground Music

This command is used for activating or deactivating the back ground music in an extension. It must be noted that the background music can also be activated from the extension by Dialing the specific code (82 to activate and 82 RLS to deactivate) for background music activation. The command is:

set / reset ext <extn. no.> bmusic

Default: Background music is deactivated for all the extensions.

Changing the Back Ground Music

This command is used for selecting the source for the background music. The background music source can be either the Tone card or the background music port in the DID card. The command for setting DID card as the background music source is:

set sys music

Command to set the tone card as the background music source is:

reset sys music

Default: Tone card is the source for background music.

Barge-In Disallow

This command is used for activating the Barge-In Disallow feature for an extension. However, the extension using the Barge-In Disallow feature must have the Barge-In Disallow rights. On activating this feature, no extension can barge-in on this extension. The command is:

set / reset ext <extn. no.> privacy

Default: This feature is not activated for all the extensions.

Call Forward – All Conditions

This command is used for activating the Call Forward feature for an extension. On activating this feature, all calls for that extension will be forwarded to another extension. The command is:

```
set / reset ext <extn. no.> aforw <forw. extn. no.>
where extn. no. = original extension number
forw. extn. no. = extension number where the calls are to be forwarded.
```

Example: Command for call forwarding all the calls of extension 2300 to extension 2200, the command is:

```
set ext 2300 aforw 2200
```

Command for removing this feature from this extension is:

```
reset ext 2300 aforw 2200
```

Default: Call forward is not activated for any extensions

Call Forward – When Busy

This command is used for activating the call forward busy feature for an extension. On activating this feature for an extension, all calls for this extension will be forwarded to another extension, if this extension is busy. The format for this command is:

```
set / reset ext <extn. no.> bforw <forw. extn. no.>
where, extn. no. = original extension number
forw. extn. no. = extension number to which the calls are forwarded.
```

Example: The command for forwarding the calls of extension 2300 when it is busy, to extension 2200 is:

```
set ext 2300 bforw 2200
```

Command for removing this feature from this extension is:

```
reset ext 2300 bforw 2200
```

Default: Call forward busy is not activated for any extensions

Call Forward – When Not Answered

This command is used for activating the 'Call Forward-No Answer' feature for an extension. On activating this feature for an extension, all calls for this extension will be forwarded to another extension, only if this extension is not answering for a fixed amount of time. The command for enabling and disabling this feature is:

```
set / reset ext <extn. no.> nforw <ext no>
```

Default: Call forward no answer is not activated for any extensions

Calls in Queue – Warning Tone

This command is used for enabling or disabling the beep tone, which is heard when a call is queued on to an extension. In case of a KTS extension, this command also enables or disables the reminder ring on the KTS when a call is queued on to it. The format for this command is:

```
set / reset ext <extn. no.> beep
```

Default: Beep tone is enabled for all the extensions.

Call Budgeting – Extension Wise

This command is used for enabling the budgeting feature in the system. The command for enabling this feature in the system is:

```
set sys budget
```

Command for disabling this feature in the system is:

```
reset sys budget
```

Default: Budgeting is disabled.

Following command is used for enabling or disabling budgeting for an extension. On enabling this feature for an extension, the outgoing call facility will be allowed for this extension only for the budgeted amount. On exceeding the budget amount, the extension will lose the outward Dialing facility. The budget amount can be added only by the main operator through system programming. The command is:

```
set / reset ext <extn. no.> budget
```

Default: Budgeting is disabled for all extensions

Call Budget Entry from KTS

Every extension can be allocated a budgeted amount where the extension user can only make calls upto the amount fixed.

Once the budgeted amount is availed by the extension user, the extension automatically loses the outward Dialing facility. In case the budget amount has to be increased, again this can be done with the same command by adding the additional amount. The command for adding a budget amount for an extension is:

65 EX MMMM

Where, EX = Extension number

MMMM = Amount budgeted for the extension or the additional amount
to be fed in.

Note: This command is effective only if the budgeting is enabled.

Call Billing Cost Table & Code Table

Cost calculation of out going calls is done through 2 tables named as "Cost Table" & "Code Table".

"Cost Table" carries the pulse rate and its cost where as "Code Table" carries the starting codes of Telephone Numbers and their reference with "Cost Table".

Cost Table

The cost table has 25 rows and 16 columns.

The default values of the cost table are shown in the figure below:

rowno:	column no:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	ZONE	600	700	800	1100	1800	1900	2000	2200	2300	2400	2400	800	1000	0	0	
2	LOCAL	1000	1800	1800	800	1600	1800	1800	1800	1800	1800	1800	0	1800	200	0	
3	STD	10	70	50	25	25	5	70	70	80	25	25	0	50	125	0	
4	ISD	14	14	14	12	12	12	1	14	14	12	12	0	4	125	0	
5	CELL	1000	1800	800	1800	1800	1800	1800	1800	1800	1800	1800	0	1800	200	0	
6	SD1	10	30	30	25	25	25	3	3	3	30	25	0	30	125	0	
7	SD2	10	10	10	10	10	10	10	10	10	10	10	0	10	125	0	
8	SD3	14	12	12	12	14	12	1	1	1	12	12	0	14	125	0	
9	SD4	18	18	18	18	15	15	15	15	15	15	15	0	18	125	0	
10	STD1	80	70	50	25	25	25	5	70	70	80	25	1	50	125	0	
11	STD2	120	100	70	35	35	35	7	10	10	10	10	0	35	1	70	
12	STD3	160	140	100	50	50	50	10	10	10	10	10	0	50	1	100	
13	STD4	400	300	200	140	140	140	20	30	30	40	40	0	40	1	200	
14	G1	1000	1800	800	1800	1800	1800	1800	1800	1800	1800	1800	0	1800	125	0	
15	G2	900	900	900	900	900	900	900	900	900	900	900	0	900	125	0	
16	BLANK	00	70	50	25	25	25	5	70	70	80	25	25	0	50	125	0
17	BLANK	00	70	50	25	25	25	5	70	70	80	25	25	0	50	125	0
18	BLANK	00	70	50	25	25	25	5	70	70	80	25	25	0	50	125	0
19	BLANK	00	70	50	25	25	25	5	70	70	80	25	25	0	50	125	0
20	BLANK	00	70	50	25	25	25	5	70	70	80	25	25	0	50	125	0
21	BLANK	00	70	50	25	25	25	5	70	70	80	25	25	0	50	125	0
22	BLANK	00	70	50	25	25	25	5	70	70	80	25	25	0	50	125	0
23	BLANK	00	70	50	25	25	25	5	70	70	80	25	25	0	50	125	0
24	BLANK	00	70	50	25	25	25	5	70	70	80	25	25	0	50	125	0
25	BLANK	00	70	50	25	25	25	5	70	70	80	25	25	0	50	125	0

Column 10 - 23:00 to 24:00

Column 11 - 24:00 to 24:00 Not Used – Can be used for making additional Time Zones, if required.

Column 12 - 24:00 to 24:00 Not Used – Can be used for making additional Time Zones, if required.

Column 13 - 08:00 Start Time of Holiday (Applicable if Holiday Rates are Enabled)
Column 14 - 19:00 End Time of Holiday (Applicable if Holiday Rates are Enabled)

2nd row: It is used for entering the default Local Call Rates.

Column 1 to 12 carries Pulse Time for Local Calls in Seconds.

Value=1800 represents 180 secs.

Column 13 is used for Enabling/Disabling Holiday Rates of Local Calls.

0 means Disabled and 1 stands for Enabled.

Column 14 is for Holiday Pulse Time of Local Calls.

Column 15 is for Holiday Pulse Cost. Value=200 means Rs.2/- for one Pulse.

Column 16 is for Service Charge for One Local Call.

3rd row: It is used for entering the default STD Call Rates.

Column 1 to 12 carries Pulse Time for STD Calls in Seconds.

Value = 80 represents 8 secs & 25 represents 2.5 Secs.

Column 13 is used for Enabling/Disabling Holiday Rates of STD calls.

0 means Disabled and 1 stands for Enabled.

Column 14 is for Holiday Pulse Time of STD Calls.

Column 15 is for Holiday Pulse Cost. Value=126 means Rs1.26 for one Pulse.

Column 16 is for Service Charge for One STD Call.

4th row: It is used for entering the default ISD Call Rates.

Column 1 to 12 carries Pulse Time for ISD Calls in Seconds.

Value = 14 represents 1.4 sec

Column 13 is used for Enabling/Disabling Holiday Rates of ISD calls.

0 means Disabled and 1 stands for Enabled.

Column 14 is for Holiday Pulse Time of ISD Calls.

Column 15 is for Holiday Pulse Cost. Value=126 means Rs1.26 for one Pulse.

Column 16 is for Service Charge for One ISD Call.

5th row: It is used for entering the default Cell Phone Call Rates.

Column 1 to 12 carries Pulse Time for Cell Phone Calls in Seconds.

Column 13 is used for Enabling/Disabling Holiday Rates of Cell Phone calls.

0 means Disabled and 1 stands for Enabled.

Column 14 is for Holiday Pulse Time of Cell Phone Calls.

Column 15 is for Holiday Pulse Cost. Value=200 means Rs2/- for one Pulse.

Column 16 is for Service Charge for One Cell Phone Call.

Note: The Above Rates on Row no 2 to 5 are the default rates.

If rates have to be changed for Numbers starting with some defined digits (max 5 digits & max 200 Codes) then use Rows 6 to 25. The Codes have to be entered in "Code Table" as explained below.

6th Row to 25th Row:

If rates have to be changed for Numbers starting with some defined digits (max 5 digits & max 200 Codes) then these Rows are used. The Codes are then entered in "Code Table" as explained below under the heading "Code Table".

In default "Code Table" carries certain codes attached to "Cost Table" rows 6 to 25 such that it matches the current DOT rates structure.

Row number 6 to 9 are filled with prevailing ISD Pulse rates.

Row number 10 to 13 are filled with prevailing STD Pulse rates.

Row number 14 & 15 are filled with Inter-dialing rates i.e., Local Pulse Rates.

Changing the value in Cost Table

Any entry in the COST TABLE can be altered including the various time zones.

The command for altering the values in the cost table is ,

```
set toll <rr> <cc> <value>
where, rr = Row number 00 to 24
      cc = Column number 00 to 14.
```

Example: To change the value of first row first column to 630, the command is:

```
set toll 00 00 630
```

Note:

- In Default, Mobile numbers starting from 90 to 99 are being considered in Local Calls of 60 secs pulse.

Code Table

If Pulse Rates of some Telephone Numbers are different than the default Rates entered in "Cost Table" then "Code Table" is to be used.

Starting digits (max 5 digits & upto 200 Codes) of Telephone numbers are entered in Code Table and attached to a Row of Cost Table.

The command for entering the various codes in the code table is:

```
set code <code> <row no.>
```

Where, <code> = Starting Digits of the Telephone Number (it has to be 6 digits. If required is less than 6 then fill the rest of the spaces with 0)

<row no.> = Row Number of Cost Table

Examples

- To enter the code 011 with charge calculation as per the entries made in row 10 of Cost Table, the command is:

```
set code 01100 10
```

- Local numbers can also be entered in the Code Table. A maximum of 4 digits can be entered for any local number entry in the Code Table. If Local Numbers starting with 95 are to be charged as per the Row 10 of Cost Table then the command would be:

```
set code 09500 10 (For Local Number)
```

- For entering 009 with the charge calculation as per the entries made in row 9, the command is:

```
set code 00900 09
```

Note:

- While entering the codes in the Code Table, it is not possible to enter the values 02 to 05 for any code as these entries are reserved for default charge calculation.
- If no matches are found in the Code Table for any code, then the default entries in the rows 2 to 5 in the Cost Table will be used.
- The maximum number of codes that can be entered in the Code Table is 200.

To view all entries made in the code table use the following command:

```
show code
```

To view all entry of a code use the following command:

```
show code <code no.>
```

Example: To view the pulse rate of the STD code 011, enter

```
show code 01100
```

To alter any entry of the code table overwrite the code with the new row number.

To erase Individual entry in the Code Table using the command:

```
delete code <code no> <row number>
```

Deleting the code table will not affect the other system parameters.

Call Billing Details – Erasing Extension Wise

This command is used for erasing the billing details of an extension. On using this command, only the particular extension's billing details will be erased. The command is:

```
set ext <extn. no.> easmdr
```

Example: To erase the billing details of extension 2300, the command is:

```
set sys print 0
```

```
set ext 2300 easmdr
```

Call Billing details – Erasing Extension wise one Record at a time

This command is used for erasing the billing details of a particular Junction line. On using this command, only the particular Junctions billing details will be erased. The command is:

```
Set sys print 0
```

```
set pnt <trunk no.> easmdr
```

Call Details Recording of Local or STD/ISD or All

This command sets the SMDR recording level of the system. The system provides 2 recording levels. The codes for these recording levels are given below:

3 - Local / STD / ISD calls

4 - STD / ISD calls

All the outgoing calls below the set recording level will not be recorded in the system memory.

Example: To set the recording level of the system as STD & above, the command is:

```
set sys reclevel 4
```

Default: All types of outgoing calls will be recorded

Call Billing through 16 KHZ Metering

This feature allows the system to detect metering pulse signal (12 KHZ or 16 KHZ) to start counting signal for the telephone call charge sent from DOT. The command for enabling this feature is:

Set sys onesix

Command for disabling this feature is:

Reset sys onesix

Default: This feature is disabled.

Note : For 16 KHZ use controller TKB16.Bin + some hardware is changed + soft file with DTM.

Call Billing Metering Start Time

This command defines the time (after Lifting Handset & Dialing 0) at which Metering should start for outgoing Junction calls. This time will be applicable for time based metering of Junction calls. The valid metering time is from 10 seconds to 90 seconds. The number entered in the time field is in multiples of 10 seconds. Example: To set the metering time as 30 seconds, the command is:

set sys metertime 3

Default: 20 seconds

Call Sharing – STD/ISD Calls

This command is used for enabling or disabling the call sharing feature. Call sharing is applicable only for outgoing STD & ISD calls. It is not applicable for local calls. The command for enabling this feature is:

set sys sharing

Command for disabling this feature is:

reset sys sharing

Default: Call Sharing is disabled

Calls Starting digits to be considered in Local/STD/ISD

This command is for allowing telephone numbers starting with any 5 digits, to local/STD/ISD dialing Extensions. It is used for cities where some STD numbers are allowed in local dialing.

Up to 5 sets of Starting Numbers can be defined. Each set can have up to 5 digits.

The command is

SET ALWD N CCCCC

Where, N = Set Number (1 to 5)

CCCCC = 5 digit starting telephone number

(insert * at end if code is less than 5 digit)

Then corresponding response will be in following format.

Allowed Code N is CCCCC

To show all allowed codes, command is

SHOW ALWD

Allowed codes will be shown in the following format

Allowed Code's are Code1 Code2 Code3 Code4 Code5

Check-in

This command is used only in hotels where it is required to check in a guest into a room. On Checking in a room, the room will get outward Dialing facility as per the Class of service defined for the extension. The room loses its outward Dialing rights once it is checked out. The command is:

set / reset ext <extn. no.> checkin

Example: The command to check in extension 2100 is:

set ext 2100 checkin

Command for checking out the extension 2100 is:

```
reset ext 2100 checkin
```

Note: To operate this feature from KTS refer "Programming from Operator KTS"

- : When extension is in checked out mode, it can communicate only with operator + service extensions

Default: In the Hotel mode, all the room extensions are checked in.

Class of Service – of Extension

Various features defined under the heading "Class of Service – of Features" can be given only to desired Extensions by setting Class of Service of Extension + Class of Service of Features.

Class of Service can range from 0 to 63.

Each extension can have two class of services:

Primary class of service – pcos

Secondary class of service – scos

If the COS of the Extension is = COS of the Feature, then that feature is available to the Extension.

COS of feature can be multiple i.e., it can be set as 0, 1, 2, And more.

COS of Extension is only one Primary COS and one Secondary COS.

Command for defining the class of service of an extension is:

```
set ext <ext. no.> cos <pcos> <scos>
```

where, pcos = 0 to 63, primary class of service.

scos = 0 to 63, secondary class of service.

Default: Primary class of service for all KTS = 0

Primary class of service all SLT = 1

Primary class of service for all Junction lines = 2

Secondary class of service for all KTS, SLT & Junction lines = 63

COS of Features = 0 and 1 in some cases and nil i.e., disabled in some cases.

Class of Service – of Features

Various features described below can be given to desired Extensions by setting Class of Service of Extension + Class of Service of Features.

Class of Service can range from 0 to 63.

If the COS of the Extension is = COS of the Feature then that feature is available to that Extension.

COS of feature can be multiple i.e., it can be set as 0, 1, 2, And more.

COS of Extension is only one Primary COS and one Secondary COS.

The various features that can be controlled through this COS are listed below and are then explained:

0 Dialing for Junction Access

Auto redial

Alarm

Auto Call Back – On Self

Auto Call Back – On Others

Back Ground Music

Barge-in

Barge-In Disallow

Call Forward - All

Call Forward – When Busy

Call Forward – When Not Answered

Call Pick Up

CLI Enable/Disable on SLT

Conference – 3 Party

Conference – 8 Party

Delayed Hotline

Do Not Disturb

Do Not Disturb Override

ECF

Follow Me

Global Memory Dialing

Group Pick Up

Hotline

Internal Message

Junction Access Route Code 0
Junction Access Route Code 1
Junction Access Route Code 2
Junction Access Route Code 3
Junction Access Route Code 4
Junction Access Route Code 5
Junction Access Route Code 6
Junction Access Route Code 7
Junction Access Route Code 8
Junction Access Route Code 9

KTS Remote Activation

KTS Monitoring

Paging

Switching between Primary COS & Secondary COS

Transit Exchange – Depending on the Code received

Transit Exchange – W/O Code

Virtual Account Code

Following is the explanation for setting COS of the above listed features:

0 Dialing for Junction Access

On disallowing this feature, an extension having this class of service cannot access a Junction line by Dialing 0 although he has outward Dialing rights. The command is:

set / reset cos <cos no.> pstn

Auto Call Back – On Self

This command is used for allowing or disallowing the Auto Call Back to be possible on self. On disallowing, an extension having this class of service cannot be called back by any other extensions. The command is:

set / reset cos <cos no.> camp

Auto Call Back – On Others

This command is used for enabling or disabling Auto Call Back on other Extensions. On disabling this feature, an extension having this class of service cannot use Auto Call Back on any other extension. The command is:

set / reset cos <cos no.> cback

Auto redial

This command is used for allowing or disallowing the auto redial feature. The command is:

set / reset cos <cos no.> adial

Alarm

This command is used for enabling or disabling the alarm feature. The command is:

set / reset cos <cos no.> alarm

Back Ground Music

This command is used for enabling or disabling the background music feature. The command is:

set / reset cos <cos no.> bmusic

Barge-in

This command is used for allowing or disallowing the barge-in feature to be activated. The command is:

set / reset cos <cos no.> listen

Barge-In Disallow

To disallow others to Barge-In, this command is used for enabling or disabling the privacy rights. The command is:

set / reset cos <cos no.> privacy

Call Forward - All

This command is used for enabling or disabling the call forward feature for the defined class of service. The command is:

set / reset cos <cos no.> aforw

Call Forward – When Busy

This command is used for enabling or disabling the call forward busy feature. The command is:

set / reset cos <cos no.> bforw

Call Forward – When Not Answered

This command is used for enabling or disabling the ‘Call Forward-No Answer’ feature. The command is:

set / reset cos <cos no.> nforw

CLI Enable/Disable on SLT

This command is used for enabling CLI (Calling Line Identification) feature on SLT extensions. After enabling this class of service ,SLT extension will have the facility of calling line identification on its extension. The command is:

set / reset cos <cos no.> clid

Conference – 3 Party

This command is used for allowing or disallowing three party conference. The command is:

set / reset cos <cos no.> conf3

Note: 3 Party Conferencing works only if DID Card is installed in the system.

Conference – 8 Party

This command is used for allowing or disallowing eight party conference. The command is:

set / reset cos <cos no.> conf8

Note: 8 Party Conferencing works only if Conference Card is installed in the system.

Call Pick Up

This command is used for allowing or disallowing the call pickup feature. The command is:

```
set / reset cos <cos no.> cpick
```

On disabling this feature, an extension having this class of service cannot pickup any ringing extension or Junction line in the system.

Delayed Hotline

This command is used for allowing or disallowing the delayed hotline to be set by the extension user. The command is:

```
set / reset cos <cos no.> dhotln
```

Do Not Disturb (DND)

This command is used for enabling or disabling the 'Do not Disturb' feature. The command is:

```
set / reset cos <cos no.> dnd
```

If, cos no= 0, DND feature is operative from KTS because the Primary COS of KTS is 0 in default.

If, 1 is also entered then it is operative from SLT as well because the Primary COS of SLT is 1 in default.

Do Not Disturb Override

This command is used for allowing or disallowing the 'Do not Disturb' override feature. On allowing this feature, an extension having this class of service can override an extension which is set in do not disturb. The command is:

```
set / reset cos <cos no.> dndo
```

ECF

This command is used for allowing or disallowing the Junction to Junction transfer by using the [TRSF] key on the KTS. The command is:

```
set / reset cos <cos no.> tk_xfer
```

Follow Me

This command is used for enabling or disabling the follow me feature. The command is:

```
set / reset cos <cos no.> follow
```

Global Memory Dialing

This command is used for allowing or disallowing the Dialing of numbers defined in the libraries. The command is:

```
set / reset cos <cos no.> libs
```

Group Pick Up

This command is used for allowing or disallowing the group pickup feature. The command is:

```
set / reset cos <cos no.> DGick
```

On disabling this feature, an extension having this class of service cannot pickup any ringing extension within the same group.

Hotline

This command is used for allowing or disallowing the hotline to be set by the extension user. The command is:

```
set / reset cos <cos no.> hotline
```

Internal Message

This command is used for allowing or disallowing the internal message leaving feature. On disallowing this feature, an extension having this class of service cannot leave internal message to any other extension in the system. The command is:

```
set / reset cos <cos no.> msgs
```

Junction Access Route Code 0

This command is used for allowing or disallowing access to network route 0. The command is:

```
set / reset cos <cos no.> net0
```

Junction Access Route Code 1

This command is used for allowing or disallowing access to network route 1. The command is:

```
set / reset cos <cos no.> net1
```

Junction Access Route Code 2

This command is used for allowing or disallowing access to network route 2. The command is:

```
set / reset cos <cos no.> net2
```

Junction Access Route Code 3

This command is used for allowing or disallowing access to network route 3. The command is:

```
set / reset cos <cos no.> net3
```

Junction Access Route Code 4

This command is used for allowing or disallowing access to network route 4. The command is:

```
set / reset cos <cos no.> net4
```

Junction Access Route Code 5

This command is used for allowing or disallowing access to network route 5. The command is:

```
set / reset cos <cos no.> net5
```

Junction Access Route Code 6

This command is used for allowing or disallowing access to network route 6. The command is:

```
set / reset cos <cos no.> net6
```

Junction Access Route Code 7

This command is used for allowing or disallowing access to network route 7. The command is:

```
set / reset cos <cos no.> net7
```

Junction Access Route Code 8

This command is used for allowing or disallowing access to network route 8. The command is:

set / reset cos <cos no.> net8

Junction Access Route Code 9

This command is used for allowing or disallowing access to network route 9. The command is:

set / reset cos <cos no.> net9

KTS Remote Activation

This command is used for allowing or disallowing the remote activation feature. On disallowing this feature, an extension having this class of service cannot remotely activate a KTS extension. The command is:

set / reset cos <cos no.> remote

KTS Monitoring

To listen to the sound near a KTS (through the MIC of the KTS), this feature is used.

Following command is used for enabling or disabling the silent monitor feature.

The command is:

set / reset cos <cos no.> silent

Paging

This command is used for enabling or disabling the paging rights. The command is:

set / reset cos <cos no.> paging

There are 2 Paging Ports on DG 504 Tone Card. They can be accessed by dialing 800 and 801.

Switching between Primary COS & Secondary COS

This command is used for allowing the switching between primary (pcos) and secondary (scos) class of service. The command is:

set / reset cos <cos no.> cosc

On disabling this feature, an extension having this class of service will not be able to switch between the primary and secondary class of service.

Transit Exchange – Depending on the Code received

This command is used when this PBX is configured as a transit exchange. This command enables a Junction line to seize another Junction line, depending on the code receive.

The command is:

set / reset cos <cos no.> tk_accs

Transit Exchange – W/O Code

This command is used when this PBX is configured as a transit exchange. It is used for allowing a Junction line to be seized by any other Junction line in the system.

The command is:

set / reset cos <cos no.> tk_alld

Virtual Account Code

This command is used for defining whether outgoing calls using the virtual account codes are allowed for this class of service or not. The command is:

set / reset cos <cos no.> acts

Note: cos no. = 0 to 63

CLI Enable/Disable on Junction

This command is used for enabling the analog junction line cli in the system. After enabling this feature in the system, all the extensions will have caller line identification facility.

The command is:

set/reset sys anacli

Default: It is disabled.

Note: To enable/disable CLI on SLT refer “Class of Service – of Features” – subheading
“CLI Enable/Disable on SLT”

CLI on Extensions – Adding a Digit

This command is used for adding a prefix for the numbers sent on outgoing CLI. To activate CLI facility in some of the instruments the calling extension should have atleast 5 digit extension number. If the extension number is less than 5 digits then you need to add prefix to the extension number by the following command:

set sys prefix <digits>

where, digit = 1 – 9 (0 cannot be used here)

Default: No prefix is set

CLI on PRI / TWT Lines

Filtering of the Digits sent out by the PBX to Service provider

This command is used for generating CLI of the Calling Extension in case of PRI/E1/TWT lines being installed in DG 504 PBX.

There are total 8 digits that can be configured.

In case of PRI lines, maximum 4 digits Extension CLI can be sent. The first 5 or 6 digits are sent by the PRI service provider.

In case of TWT with MFC, all 8 digits are workable i.e. maximum 8 digit Extension number CLI can be sent.

The command is:

```
set sys clifilt XXXX      (in case of PRI)  
set sys clifilt XXXXXXXXX (in case of TWT)
```

Here, X = D, R or P. Where, D= The digit not to be filtered.

R= Digit to be filtered/restricted.

P= 0 to 9 prefix digit to be added.

They are to be used on the starting X position.

Note: In case the numbering plan given by the service provider is of 2 digits and the PBX is also working in 2 digit Extension numbering then there is no need of using didfilt or clifilt commands. The same is true, if both are 3 digits or 4 digits.

: In default the programming is set sys clifilt DDDDDDDDD

: If we mark any location as Prefix then Extension CLI digit gets shifted to the right side.

Example: If extension number is 2015 and we need to add 5 before 1 then command will be:

DD5DD

To restrict a digit at any location of the Extension number:

```
set sys clifilt RDD  
or  
set sys clifilt DRD
```

Example: The Pilot number given is 406255 and extension numbers used are of 3 digits from 510 to 580.

where as the service provider needs 2 digit numbering from 10 to 80 then programming will be:

set sys clifilt RDD

To add a prefix before the extension number CLI:

set sys clifilt PDD

Example: The Pilot number given is 40625 and extension numbers used are of 2 digits from 10 to 80.

where as the service provider needs 3 digit numbering from 510 to 580 then programming will be:

set sys clifilt 5DD

Filtering of the Digits received by the PBX from the Service provider

This command is used to subtracting or adding any digits in the DNI (Dialed Number Information i.e., Telephone Number actually dialed by the calling party).

There are total 8 digits that can be configured.

In case of PRI lines, maximum 4 digits Extension numbers can be configured. The first 5 or 6 digits are sent by the PRI service provider.

In case of TWT with MFC, all 8 digits are workable i.e. maximum 8 digit Extension number CLI can be sent.

The command is:

```
set sys didfilt XXXX      (in case of PRI)  
set sys didfilt XXXXXXXXX (in case of TWT)
```

Here, X = D, R or P. Where, D= The digit not to be filtered.

R= Digit to be filtered/restricted.

P= 0 to 9 prefix digit to be added.

They are to be used on the starting X position.

Note: In case the numbering plan given by the service provider is of 2 digits and the PBX is also working in 2 digit Extension numbering then there is no need of using didfilt or clifilt commands. The same is true, if both are 3 digits or 4 digits.

: In default the programming is set sys didfilt DDDDDDDDD

: If we mark any location as Prefix then DID CLI digit gets shifted to the right side.

Example: If extension number coming in DID is 2015 and we need to add 5 before 1 then command will be:

DD5DD

To restrict a digit at any location of the Extension number:

```
set sys didfilt RDD
```

```

        or
set sys didfilt DRD
Example: The Pilot number given is 40625 and extension numbers used are
of 2 digits from 10 to 80.
where as the service provider sends 3 digit numbering from 510 to
580 then programming will be:
    set sys didfilt RDD

```

To add a prefix before the extension number CLI:

```
    set sys didfilt PDD
```

```

Example: The Pilot number given is 40625 and extension numbers used are of
3 digits from 510 to 580.
where as the service provider sends 2 digit numbering from 10 to 80
then programming will be:
    set sys didfilt 5DD

```

CLI Filters for TWT

This command is used for adding a filter for the numbers sent on outgoing CLI. It is used for filtering the CLI sent on both way Junctions. The command is:

```
    set sys coutfilt <digits>
```

Default: No filter is set

Codes Changeability of certain features

This command is used for changing the activation codes of certain features. The codes which can be changed and their functions are given below:

1	-	Remote Ring of KTS
2	-	Remote Lift of KTS
5	-	Force drop a line
6	-	Barge-in
7	-	Serial call
8	-	Call back

The command for changing these codes is:

```
    set sys dcmd <new list of codes>
```

Example: If it is required to change the code for barge-in as 4 and that of Auto call back as 6, the command is:

```
    set sys dcmd 1 2 5 4 7 6
```

It is also possible to remove a code by entering r in the corresponding location of the command.

Example: If it requires removing the code for barge-in and Auto call back, the command is:

```
    set sys dcmd 1 2 5 r 7 r
```

The codes which are set for the above features can be viewed by using the show sys command.

Computer Interface Handshaking – Required/Not Required

This command specifies whether a handshaking signal is required from the computer for sending call details through the second RS232 port on the CPU card. On setting this command, the system will not wait for a handshaking signal from the computer. The command for enabling this feature is:

```
    set sys hostrdy
```

Default: Handshaking is enabled

Conference – 3 Party

Converting KTS “EMG” key to “CONF” key

This command is for converting the EMG key on the KTS as CONF key. On enabling this feature, if any KTS activates the emergency call on an extension by pressing the EMG key, it will result in a 3 party conference. The command for enabling this feature is:

```
    set sys emgcnf
```

Command for removing this feature is:

```
    reset sys emgcnf
```

Note: 3 Party Conferencing works only if DID Card is installed in the system.

: Also enable "Junction Access Right to Hold one & Pick up another"

Default: This feature is not activated.

2 Junctions Conferencing Enable

This command is used for enabling or disabling Junction to Junction transfer. The command for enabling this feature is:

set sys trunkxfr

Command for disabling this feature is:

reset sys trunkxfr

Default: Junction to Junction transfer is disabled.

Date & Time of the System

The system date and time can be changed only if the login level is that of supervisor level. The date and time can also be changed from the operator KTS.

The command for setting the time for the system is:

time <hh> <mm> <ss>

where, hh = hours in 24 hours format.

mm = minutes

ss = seconds

The following table presents the 12-hour to 24-hour conversions for entering the time unit.

AM Hours		PM Hours	
Time	Enter	Time	Enter
Midnight	00	Noon	12
1	01	1	13
2	02	2	14
3	03	3	15
4	04	4	16
5	05	5	17
6	06	6	18
7	07	7	19
8	08	8	20
9	09	9	21
10	10	10	22
11	11	11	23

Minutes are entered as 2 digits (00 to 59).

The command for setting the date of the system is:

date <dd> <mm> <yy> <w>

where, dd = date

mm = month

yy = year

w = 0 to 6 to be selected from the table below:

Weekday	Value of w
Sunday	0
Monday	1
Tuesday	2
Wednesday	3
Thursday	4
Friday	5
Saturday	6

Day / Night Mode - Manual

The PBX can be shifted from Day mode to Night mode or vice versa through the following command from any KTS. Through the following command:

Press [PROG] key + 1234 (KTS Programming Password)

18X

Where, X = 1 for Day Mode

= 0 for Night Mode

Alternately, it can be changed through the following command from any extension:

84 CC X

Where, CC = Night Code (99 in default)

X = 1 for day mode and 0 for night mode.

Day / Night Mode - Auto

This command is used for defining Auto Day/ Night Mode time

Format of this command is:

Set cotm <D> <HH> <MM> <HH> <MM>

Where, <D> = 0 –6

0 for Sunday

6 for Saturday

<HH> = start & end hours of office hours

<MM> = start & end minute of office hours

Note: The Sunday Day / Night Mode will work only if Sunday is removed from the Week

OFF through the following command:

set sys week off 7

For display Auto Day / Night time schedule the format of command is:

Show cotm

Default: System works in Auto Day / Night Mode

Week Off Day

This command is used for defining the weekly off day. On the weekly off day, the system remains in the night mode for the whole day. The weekdays are numbered from 0, corresponding to Sunday to 6, corresponding to Saturday.

Example: To set Friday as the weekly off day, the command is:

set sys weekoff 5

If there is no need to set any weekly off day, the command is:

set sys weekoff 7

Default: Sunday is the weekly off day for the system

Day / Night Mode Changing Code - Change

Following command is used for changing "Night code" of the PBX.

set sys nightcode CC

Where, CC = the new Night Code.

Example: To set the night code of the system as 88, the command is:

set sys nightcode 88

Default: The system night code is 99.

DID-Decadic – Number Filters

This command is applicable only for DID lines. It is used for filtering the numbers which are coming through the DID lines. The parameters which are to be entered in this command are the total digits expected from the DID lines and the number of digits to filter out. The command is:

set sys twtSEND <s> <e>

where, s = number of digits to filter out

e = total number of digits expected from the DID line.

Example: If the total number of digits coming through the DID line is 7 and if it is required to filter the first 4 digits, the command is:

set sys twtSEND 4 7

Default: The number of digits expected from the DID lines are 3 and no filter is set.

DID-Decadic / TWT Junction Auto Clear

This command is applicable only for DID lines and for TWT lines. It is used for defining auto clear forward for the corresponding Junction line. The command is:

set / reset pnt <trunk no.> aclrf

DID-Decadic – Clear Back

This command is applicable only for DID Junction lines. It is used for setting either immediate clearback or delayed clearback on the DID lines. If delayed clear back is set for the system, then the system will send a clear back signal after one minute. The command for setting immediate clear back is:

set sys clrback

Command for setting delayed clear back is:

reset sys clrback

Default: Immediate clear back

DID Junction Line Type – Decadic / MFC

The register signalling in DID lines can be either decadic or MFC type. This command is used for defining the type of register signalling for a DISA/TWT line. The command for setting mfc Dialing for a DID line is:

set pnt <trunk no.> mfc

Command for setting decadic dialing for a DID Junction is:

reset pnt <trunk no.> mfc

Default: All DID lines as decadic type.

Following command is applicable only for DID Junction lines with MFC signalling. It is used for enabling or disabling the request for category of the incoming DID lines. The command for enabling this feature is:

set sys category

Command for disabling the category request is:

reset sys category

Default: Category request is disabled

Do Not Disturb

This command is used for activating the 'Do not Disturb' feature in an extension. On activating this feature, no extension can call this extension. However, the extension is free to make any outgoing call. The command is:

set / reset ext <extn. no.> dnd

Default: This feature is not activated for all the extensions.

DOSA

(Direct Outward Station Access)

Feature activation and its pass word entry

To set the DOSA password, the command is

set sys dosapswd <4 Digit Dosa Password>

If DOSA password is 0000 than it means DOSA feature is not allowed.

To activate DOSA feature simply assign DOSA password.

For DOSA feature, DID card is must and the PNT should be in DID mode.

This feature allows a junction caller landed in DID mode to pick another junction line to dial out on that Junction line.

Process:

- Caller on the Junction line hears welcome message
 - During welcome message "*" is to be dialed. Long beeps will appear as acceptance tone.
During these beeps 4 digit password is to be dialed.
 - Short beeps will appear for 10 secs. Dial Junction no or "0" to pick another Junction line,
during these beeps.
 - Now dial Telephone number
 - After every 50 seconds a beep sound will appear. Thereafter, every 2 secs there will be 5
beeps and then the call will disconnect unless "*" key is pressed. To extend the call one
can dial "*" key to extend the call by 60 secs.
 - To disconnect the complete DOSA operation at any time, press "##" key.
- Call can also be disconnected if the caller puts the handset down but in this case call will
disconnect after lapse of 60 seconds.
- In case of getting engaged tone/wrong number dialing, the caller can dial "#" to disconnect
the 2nd Junction line. Short beeps will appear for 10 secs. Dial Junction no or "0" to pick
the 2nd Junction line. Now dial the Tel no.

Programming through PC:

Set pnt <pnt no> mode 5 5

set sys dosapswd <4digit pass word>" (If DOSA password is 0000 than it means DOSA

feature is not allowed).

Programming through KTS:

prog + 1234 (supervisory PW) + 42 + PNT No + 55

prog + 1234 + 82 + 4 digit DOSA pass word

Programming from KTS

This feature allows a junction caller landed in DID mode to pick another junction line by dialing "*" key followed by a password. Then pick any junction line by dialing "0" or by dialing any specific junction number to make an outgoing call. After every 50 seconds a beep sound will appear. Thereafter, every 2 secs there will be 5 beeps and then the call will disconnect unless "*" key is pressed. To extend the call one can dial "*" key to extend the call by 60 secs. To disconnect at any time, press "#" key. Call can also be disconnected if the caller puts the handset down but in this case call will disconnect after lapse of 60 seconds.

To set the DOSA password, the command is

82 <4 Digit Dosa Password>

If DOSA password is 0000 than it means DOSA feature is not allowed.

To activate DOSA feature simply assign DOSA password.

DSS Unit Number Assignment

This command is used for setting a KTS Extension as a DSS extension.

DSS for Operator is also defined using this command.

DSS Extension has to be a KTS extension.

Each DSS has 120 keys.

The Keys Assignment of each DSS can be different.

The system can have upto 5 DSS numbered as below:

DSS number Assigned Number in the PBX

1	0 as well as 1
2	2
3	3
4	4
5	5

The command is:

set ext <DSS extn. no.> dss <KTS extn. no.> <type>
where, DSS extn. no. = KTS extension which has to be connected to DSS
type = 0 to 5 corresponding to DSS set number 0 to 4.

KTS extn. No = KTS extension number which will be using the DSS

Example: If a DSS is to be used with KTS number 2002 and to be installed on Extension 2003 and it is the 1st DSS connected to the PBX then the programming will be:
set ext 2003 dss 2002 1

Command for resetting a DSS extension is:

reset ext <port no.> dss 0

Here, port no. = physical port number of the DSS extension.

To reset KTS Extension 2002 as a normal KTS extension, the command is:

reset ext 2002 dss 0

Default: No DSS is defined.

DSS / KTS Keys Assignment

KTS Keys

Each KTS has a set of 16 one-touch keys, which are defined in default to access 16 Junction Lines.

The one-touch keys on the DSS can be programmed for an extension number, a Junction access code or a library number.

The function of the Keys can be changed.

The Keys of each KTS/DSS will work for the Extension of the same department only.

If Extensions are not divided into different Departments then every KTS and DSS shall be in Department number 0.

The command for programming the one touch keys on the KTS is:

set keys KTS <dept. no.> <KKK> <FFFF>

Where dept. no.= 0 to 9 (In default it is 0).

Refer "DID – Allotment of Department Number" if Departments have been created. The function of the DSS key and the DSS should fall in the same department.

KKK = Key number from 000 to 016 for the 16 Keys

Value 000 and 001 are both used for the first Key.

FFFF = Extension/Junction number or library number.

In case of Flexible numbering, enter the original number only and not the flexible number.

In case of Memory Dialing Number, the value of FFFF must be Bxxx where xxx is the Memory bank number (from 000 to 399).

DSS Keys

Each DSS unit has 120 Keys.

Each DSS can be programmed to work along with a KTS.

The system can have upto 5 DSS Units with different key definition for each DSS.

The one-touch keys on the DSS can be programmed for an extension number, a Junction access code or a library number.

The command for programming the one touch keys on the DSS is:

```
set keys DSS <dss type.> <KKK> <FFFF>
```

Where, *dss type* = 0 to 5 i.e. a system can have upto 5 DSS units.

But 0 and 1 are both used for the first DSS Unit.

KKK = 000 to 119 representing 120 Keys.

FFFF = Extension/Junction number or library number.

In case of Flexible numbering, enter the original number only and not the flexible number.

In case of Memory Dialing Number, the value of FFFF must be Bxxx where xxx is the Memory bank number (from 000 to 399).

In a DSS, it is possible to define a key for only displaying the status of an extension/Junction. The command for this is:

```
set keys DSS <dss type.> <KKK> <FFFF> disp
```

On giving this command, the key will only display the status of the defined extension or Junction line. This defined extension or Junction cannot be dialed by pressing this DSS key.

Note: The display only keys are possible only in DSS and not in KTS

All the keys defined for a DSS can be erased by the following command

```
set keys DSS <dss type> 579 <user extn no>
```

SLT DTMF telephones with 4x4 matrix keypad has 4 special keys marked as A, B, C & D. These keys can be programmed department wise. The keys can be programmed for an extension number, a Junction access code, or a library number.

The command for programming the A, B, C & D keys on the 4x4 telephone is:

```
set keys DTMF <dept. no.> <KKK> <FFFF>
```

where, *dept. no.* = 0 to 9

KKK = key number (starting from 000 to 015)

FFFF = extension / Junction number or library number.

For filling a library number, the value of FFFF must be Bxxx where xxx is the bank number (from 000 to 399).

E1 / TWT Junction Temporary Blocking

This command is applicable only for the E1 card and for the TWT card. It is used for temporarily blocking a Junction line connected to the E1 card or the TWT card. The command is:

```
set / reset pnt <trunk no.> busyout
```

Default: No Junctions are blocked

E1 / TWT Junction Modes

This command is applicable only for the E1 card and TWT card. It is used for defining the mode of operation of the Junction lines on the E1 card and TWT card. The command is:

```
set pnt <trunk no.> dialmode <mode>
```

where <mode> can have the following values:

0 - No Outgoing & Incoming

1 - Only Incoming

2 - Only Outgoing

3 - Both outgoing and Incoming

Example: To set Junction 700 as only Incoming Junction, the command is:

```
set pnt 700 dialmode 1
```

Default: All Junction lines on the E1 card and TWT card are in both way mode.

E&M Junction Type – Normal/EFGS

This command is applicable only for E&M cards. It is used for defining the E&M Junction as normal type or EFGS type. In the normal type of e&m, the seizure is by extending continuous ground whereas in the efgs type, the seizure and release is by a defined pattern of pulses. The command for setting an e&m line as efgs type is:

```
set pnt <trunk no.> e&m
```

Command for setting an e&m line as normal type is:

```
reset pnt <trunk no.> e&m
```

Default: All E&M lines as normal type.

ECF - External Call Forward

For ECF Feature DID card is must and the PNT should be in DID mode.

This feature is used for transferring the incoming calls on the Junction lines to another External Telephone number. All Junctions can be programmed for transfer to different Telephone numbers or same Telephone numbers.

First set set the PNT for ECF as below

```
set pnt <Pnt No.> ecf
```

To reset PNT for ECF the command is

```
reset pnt <Pnt No.>
```

Now enter the Telephone numbers in Memory bank (refer [glib](#))

To assign a Telephone number from the memory bank between 000 to 399, the command is:

```
set pnt <Pnt No.> <Mem. Bank No.>
```

To Program from KTS

Press [PROG] + KTS Programming Password (1234 in default)

Set the PNT for ECF as below

```
83 <Pnt No.> 9
```

To reset the PNT for ECF the command is

```
83 <Pnt No.> 8
```

Now enter the Telephone numbers in Memory bank.

To assign a Telephone number from the memory bank between 000 to 399, the command is:

```
83 <Pnt No.> <Mem. Bank No.>
```

Extension Names

Each extension user in the Copper Connections COX-504DG can have a name. This name will be displayed whenever this extension calls a KTS. The extension user's name can have a maximum of 15 characters (without any space). The command for setting the name is:

```
set name <ext number> <name>
```

Example: To set the name of extension 2000 as Rajesh, the command is:

```
set name 2000 Rajesh
```

The names of all the extension users can be viewed by the command

```
show name
```

The name of a particular extension can also be viewed by the command:

```
show name ext number
```

Extension Enable / Disable

This command is used for disabling or enabling an extension. On disabling an extension, no incoming or outgoing calls are possible from this extension. Also there will not be any dial tone in this extension. The command is:

```
set / reset ext <extn no.> active
```

Default: All extensions are enabled.

Extension Grouping

This command is used for allocating Junctions Group to an extension.

The command is:

```
set ext <extn. no.> pickupgrp <Junction Group No – 0 to 17.>
```

Default: All the extensions are assigned Junction group 0.

Extension to be defined as Room Extn / Service Extn / Office Extn

This command is used in the Hotel mode.

It is used for defining an extension as a
Room extension

or
Service extension
or
Office extension

"Office extensions" can call "office extensions" and "service extensions" but not "room extensions".

"Service extensions" can dial all.

"Room extensions" cannot call "room extensions". However, they can call "service extensions", "operator extension" and the "office extensions".

The command is:

set / reset ext <extn. no.> room/office

To disable Room Extensions (however, office extensions will remain in operation and all other extensions are service extensions):

RESET COS <COSNO> ROOM

COS = 0 for SLT Extensions and 1 for KTS Extensions

Default: All extensions are service extensions.

Note: If an extension is defined as a office, then it cannot call any room extension. However, it can dial any office and service extension number and the operator extension.

Extension Numbers in default – 3Digit / 4 Digit

This command is used for defining the number of digits in extension number. If '4' then the system extension will be from 2000 and if '3' then from 200. The command is:

Set sys extnlen 3

Default: extnlen = 4

FAX Extension

This command is used for setting an extension as a fax port. This program is applicable only with a DID card, which is required for auto fax detection. When a Fax tone is detected on an incoming line defined for DID landing, the call will be automatically diverted to the fax port. The command is:

set / ext <extn. no.> fax

Default: No extension is set as fax extension.

Fault Diagnosis

This command is used for loading the fault diagnostic features of the system. On enabling this feature, the system will check all the ports of the system and report the fault. For viewing the fault status, use "show sys fault" command. The command for loading the fault diagnosis of the system is:

set sys fault

The fault report can be viewed by using the command "show sys fault"

Features under Development

PCO EXT

This command is used for enabling the reversal on an extension where PCO is to be installed. This reversal will be available on call maturity of the Junction again the extension get reversal which has been set for reversal sensing. This requires PCO reversal (Relay) card. The command is:

Set ext < ext.no> PCOEXT <relay no>

Relay no should be between 1 and 16.

Default: There is no PCOEXT's in the system.

Show sys PCO

This command shows the no of PCOEXT and their relative relay

dlytmr (Not implemented)

This command is used for defining the delay time after which the call will be picked up by the ACD. The command is:

set acd <acd grp. no.> dlytmr <delay in secs.>

fixed (Not implemented)

This command is used for defining the ACD type as fixed ACD. The command is:

```
set acd <acd grp.no.> fixed
```

Example: To set the ACD group 9 as Fixed ACD, the command is:

```
set acd 9 fixed
```

loadID (Not implemented)

This command is used for enabling or disabling the logging in/out of an ACD agent in an ACD group. On enabling this feature, all the agents in the ACD group can login and logout by Dialing a specific code. The command for enabling this feature is:

```
set acd <acd grp. no.> loadid
```

overflow (Not implemented)

This command is used for defining the landing pattern for an incoming call, if the queue for the ACD group is overflowing. The overflow destination can be any extension in the system. The command is:

```
set acd <acd grp. no.> overflow <extn. no.>
```

source (Not implemented)

This command is used for selecting either the hold on music or ring back tone to be played for the incoming calls in the queue. The command for playing music for the queued calls is:

```
set acd <acd grp. no.> source
```

Command for playing ring back tone for the queued calls is:

```
reset acd <acd grp. no.> source
```

stat (Not implemented)

This command is used for defining the ACD type as statistical ACD. The command is:

```
set acd <acd grp. no.> stat
```

Example: To set the ACD group 9 as statistical ACD, the command is:

```
set acd 9 stat
```

Flash Time

This command is used for adjusting the flash timing of the system. The parameters to be entered in this command are the flash timing in multiples of 100 ms and the percentage error in multiples of 10.

Example: To set the flash timing of the system as 500 ms +/- 40%, the command is:

```
set sys flashtime 54
```

Flexible Numbering

In default the extension numbers are from 2000 to 2503 and the Junction numbers start from 700 onwards.

The Extension numbers as well as the Feature Codes can be changed to any digit (from 1 digit to 4 digits).

This can be done in two ways:

1. By changing the Extension Number
2. By changing the Slot Number + Port Number

Every Extension, Junction & Feature has a Slot No and a Port Number.

Extensions/Junctions have Slot Numbers from 0 to 63 (Each box has 16 Slots & max 4 Box

are connected in full configuration.

Each card has 8 Ports representing
the 8 Extensions/Junctions in a card)

Slot Numbers from 64 to 70 have been allocated to various features as listed below:

Feature Code	Description	Slot number	Port number
0	Junction access	64	0
890	ACD 0	64	1
891	ACD 1	64	2
892	ACD 2	64	3
893	ACD 3	64	4
894	ACD 4	64	5
895	ACD 5	64	6
896	ACD 6	64	7
897	ACD 7	65	0
898	ACD 8	65	1
9	Operator ACD	65	2
60	Network 0	65	3
61	Network 1	65	4
62	Network 2	65	5
63	Network 3	65	6
64	Network 4	65	7
65	Network 5	66	0
66	Network 6	66	1
67	Network 7	66	2
68	Network 8	66	3

69	Network 9	66	4
871	Autoredial	66	7
872	Call Parking	67	0
80	paging	67	1
81	fault booking	67	2
82	Background music	67	3
83	multi party conf.	67	4
84	Day / Night switching	67	5
85	ACD operator logout	67	6
860	form feed for printer	67	7
861	force drop a line	68	0
862	follow me activation	68	1
863	pick any parked line	68	2
864	pick any ringing line	68	3
865	supervisory access	68	4
866	forward own calls	68	5
867	access to action ports	68	6
868	room clean	68	7
869	cancel auto redial	69	0
873	PMS Report	69	1
870	pick first parked line	69	2
88	pick ringing junction	69	3
874	room service	69	4
875	self alarm	69	5
10	library nos. Dialing	69	6
11	library nos. Dialing	69	7
12	library nos. Dialing	70	0
13	library nos. Dialing	70	1
876	Unverified Virtual call	70	2
877	Verified Virtual call	70	3
878	Virtual library call	70	4
879	Silent Monitor	70	5
899	Change COS (pcos / scos)	70	6
199	Change Virtual code	70	7

1. By changing the Extension Number

The numbering plan of the system can be changed using the “NPLX” or “flex” command. The numbering of the extensions can range from a single digit to 4 digits. The flexible numbering of the extension can be set as follows:

```
set flex <original number> <flexible number>
```

Example: To set the flexible number of extension 2000 as 3000, the command is:

```
set flex 2000 3000
```

For setting the flexible number of extension 2001 as 9, the command is:

```
set flex 2001 9
```

A range of extension numbers can be changed with a single command, if they are in sequence.

Example: If it is required to change the extension numbers from 2000 to 2030 as 3000 to 3030, the command is:

```
set nplx 2000 2030 3000
```

This command will set the flexible number of 2000 as 3000, 2001 as 3001 and so on upto 2030.

The flexible numbering plan of the system can be viewed by using the “show” or “display” command. The command for viewing the flexible numbering scheme of the entire system is:

```
show nplx
```

```
or
```

```
show flex
```

This command will display the flexible numbering in the following format:

```
slot number, port number - flexible number
```

A sample of the display of flexible numbering scheme is given below :

00,0 - 9	00,1 - 2001	00,2 - 2002	00,3 - 2003	00,4 - 2004
00,5 - 2005	00,6 - 2006	00,7 - 2007	01,0 - 2008	01,1 - 2009
01,2 - 2010	01,3 - 2011	01,4 - 2012	01,5 - 2013	01,6 - 2014
01,7 - 2015	02,0 - 2016	02,1 - 2017	02,2 - 2018	02,3 - 2019
02,4 - 2020	02,5 - 2021	02,6 - 2022	02,7 - 2023	03,0 - 2024

It is also possible to view the flexible number of a particular rack. The command is:

```
show nplx <rack no.>
```

where, rack no = 0 to 4. (0 and 1 are for the first Box. Total 4 Boxes)

2. By changing the Slot Number + Port Number

The flexible numbering of the extension can also be set using the “set port” command.

The numbering scheme for the various feature codes can also be changed. For this The command is:

```
set port <SL> <X> <Y> dup
```

where, SL = Slot No. from 00 to 70

X = Port No. from 0 to 7

Y = Flexible feature code or access code

Through the above programming we can change the Junction line access code by "Y" and "Y" shall be Dialed on Junction by the PBX itself, (only if Junction line is programmed for network route i.e.

```
set pnt <pnt no.> brt <brt route no.>
      where, pnt no = Junction line 700, 701 ....., etc.
      brt route no. = 0 to 9.
```

The Junction line can however be accessed by Dialing direct Junction access code also i.e. 700,701, etc.
Numbering plan can also be changed through this programming.

Example: If the operator access code is to be changed from 9 to 5
 set port 65 2 5

After this command, the operator will be accessed by dialing 5

NOTE: "dup" is to be used where we need more than one access code.

: To allot Extension number starting from say 1, first allot some other Feature
Codes to 10, 11, 12, 13 & 199.

Note: If we have make an Extension number 66 then change the code of "Network 6" to say 6999:
Set port 66 1 6999

Hold & Transfer Enable/Disable

Call Hold & Transfer of Selected Extensions

This command is used for enabling or disabling the call transfer rights for an extension. On removing the call transfer rights for an extension, the extension will not be able to hold a line. The command is:

```
set / reset ext <extn. no.> transfer
```

Default: All extensions have call transfer rights.

Call Hold & Transfer of all the Extensions

This command is for enabling or disabling the call transfer rights for all the extensions in the system. The command for enabling call transfer rights for all extensions is:

```
set sys xfrlock
```

Command for removing transfer rights from all the extensions is:

```
reset sys xfrlock
```

Default: Transfer rights are open for all the extensions.

Hotline to Operator

This command is used for setting or resetting an extension as a gate phone. When an extension is set as a gate phone, it will be set as a hotline to the operator. When this phone is lifted, it will automatically ring at the operator. It must be noted that when the operator is shifted, the hotline for the gate phone will be automatically shifted to the new operator. The command is:

```
set / reset ext <extn. no.> gate
```

Default: No extension is set as a gate phone.

Hotline to Extension / Junction / External Number

This command is used for defining a hotline for an extension. The hotline can be with an extension, a Junction line, or an external number. On defining the hotline for an extension, on lifting the handset, the extension will connect to the defined hotline. The command is:

```
set / reset ext <extn. no.> hotline <digits>
      where, digits = hotline numbers. These numbers can be an extension
                  number, a Junction access code followed by an external
                  number.
```

Example: To set a hotline for extension 2100 with extension 2200, the command is:

```
set ext 2100 hotline 2200
```

Hotline - Delayed

This command is used for defining a delayed hotline for an extension. The delayed hotline can be with an extension, a Junction line, or an external number. On defining the delayed hotline for an extension, on lifting the handset, the extension will get system dial tone for 3 seconds after which it will be connected to the defined hotline. The command is:

```
set / reset ext <extn. no.> dhotln <digits>
      Where, digits = hotline numbers. These numbers can be an
                  extension number, a Junction access code, or a
                  Junction access code followed by an external
                  number.
```

Example: To set a delayed hotline for extension 2100 with extension 2200, the command is:
set ext 2100 dhotln 2200

Junction Access Route Code

This command is used for allocating a Junction line to a particular route.

The route numbers are from 0 to 9.

In the default condition, the route access codes are from 60 to 69 corresponding to the routes 0 to 9.

The command is:

set / reset pnt <trunk no.> bwtroute <route no.>

Note: In place of "bwtroute", we can use "brt" as well.

Example: To allocate both way Junction 700 in route number 1, the command is:

set pnt 700 brt 1

After this command, the Junction line 700 will be accessed by Dialing 61 and will not be accessible by dialing 0.

Default: No route is allocated.

Duplicating of Routes

If more than one route is made then this command is to be used. It allows accessibility of routes through the access codes 60 to 69.

The command is:

set sys duprt <routes>

Example: To allow access code 60, 61 and 62, the command is:

set sys duprt 0 1 2

To allow access code 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, the command is:

set sys duprt 0 1 2 3 4 5 6 7 8 9

Junction Call maturity on Reversal / Time Based

This command is used for enabling or disabling line reversal metering on a Junction line. If line reversal metering is not set, then the metering will be based on CPTD (Call Progress Tone Detector) and time based. The command is:

set / reset pnt <trunk no.> reversal

Default: All JUNCTION lines are metered according to CPTD or time base.

: CPTD feature is not offered presently.

Junction Dialing Rights in Day / Night Mode

This command is used for setting the outward Dialing rights for an extension in Day Mode and Night mode separately.

The modes and the corresponding facility are given below:

- 0 - no outward dialing
- 1 - restricted dialing
- 2 - local dialing except level 1 numbers
- 3 - local number dialing
- 4 - STD number dialing
- 5 - ISD number dialing

The modes for both the day mode and the night mode can be set using this command. Any combination of Dialing rights can be set for an extension. The command is:

set ext <extn. no.> mode <dmode> <nmode>
where, dmode = outward dialing right for the day mode
nmode = outward dialing right for the night mode.

Example: For extension 2300, to set STD dialing in day mode & no dialing in night mode, the command is:

set ext 2300 mode 4 0

Default: All extensions are having local dialing facility.

Junction Dialing- Local Numbers restriction Number wise

SET RSRD 00 00 00 00 00

00 = Required restricted number of 2 digits.

(Maximum 5)

The required restricted number should be of 2 digits.

Junction Enable/Disable

This command is used for enabling or disabling a Junction line. On disabling a Junction line, no incoming or outgoing calls are possible on this Junction line. The command is:

```
set / reset pnt <trunk no.> active
```

Default: All Junction lines are Enabled.

Junction Grouping

This command is used for defining the Junction access group. The valid access group numbers are from 0 to 17. A Junction line can be in more than one group. For removing a Junction line from any group, first take the Junction line to group 17 and then allot to a new group. Allotting a Junction to group 17 will remove this Junction line from all the other groups. So, initially when the groups are allotted, first take all the Junction lines to group 17 and then start defining the various groups. The command for allotting a Junction to an access group is:

```
set pnt <trunk no.> accessgrp <group no.>
```

Command for removing a Junction line from an access group is:

```
reset pnt <trunk no.> accessgrp <group no.>
```

Example: To allot Junction 700 in the access group 1, the command is:

```
set pnt 700 accessgrp 1
```

Default: All JUNCTION lines are in access group 0.

Note: These Groups can be assigned to Extensions. On Extension can be assigned only one Junction Group.

Refer "Extension Grouping"

Junction Incoming Calls Disconnect Duration

If the call cut feature is activated for an extension, then all the incoming Junction calls for this extension will get disconnected after the call duration exceeds the set call cut time.

Following command is used for enabling or disabling the call cut feature of incoming calls for an extension. On enabling this feature for an extension, all incoming calls for this extension will get disconnected if the duration of the call exceeds the call cut time. The command is:

```
set / reset ext <extn. no.> incut
```

Default: This feature is disabled for all extensions

Following is the command for setting duration of time. This time will be applicable for call duration warning tone and for call cut feature. The valid times are from 60 second to 900 second. The format for the command is:

```
Set sys cuttime < time in seconds>
```

Example: The command for setting the call cut time as 3 minutes is

```
Set sys cuttime 180
```

Default: 300 seconds

To enable this warning tone to be heard if the duration of the call exceeds the call cut time, use the following command:

```
set / reset ext <ext. no.> warntone
```

Default: This feature is disabled for all extensions

Junction Access directly but not by 0

This command is used for setting a Junction line as hotline type. On defining a Junction line as hotline type, this line cannot be accessed by Dialing 0. It can be accessed only by Dialing the Junction specific code. The command is:

```
set / reset pnt <trunk no.> hotline
```

Default: All Junction lines as normal lines.

Junction Landing in Auto Attendant Mode or ACD Mode (Junction Ring Assignment)

Auto Attendant Junction Landing

When PBX is used with DID card and in Auto Attendant mode, the Junction landing can be configured in any of the following three types of Automatic Call Distribution (ACD):

Fixed Type: In the Fixed type of ACD, the incoming call always lands at the first ACD agent. If the first ACD Extension is

busy,

then the call lands at the next agent.

Circular Type: In the Circular type of ACD, the first incoming call lands at the first ACD agent, the second call lands at the second ACD agent & so on.

Statistical Type: In the Statistical ACD, there will be an ACD manager, which monitors the status of all the ACD agents & transfers the incoming call to the agent, which is free for a longer time.

Notes: A maximum of 10 ACD groups are possible. Each ACD group can have a maximum of 50 agents. An Extension can logout and login to an ACD group by dialing a specific code from the extension of the ACD agent.

Programming Junction in DID Mode

set / reset pnt <trunk no.> mode <Day Mode> <Night Mode>
Mode Ring Landing
5 DID mode

Note: If one of the mode (Day or Night) is to be One Termination mode then the command would be:

set / reset pnt <trunk no.> mode <Day Mode> <Night Mode> <Ext No>

Here, Ext No = The Extension where One Termination ringing is required.

Programming for Fixed Type

set acd <acd grp. no.> fixed

Programming for Circular Type

set acd <acd grp. no.> circ

Example: To set the ACD group 9 as circular ACD, the command is:

set acd 9 circ

Programming for Statistical Type

set acd <acd grp. no.> stat

Assigning Extension to a ACD Group

add acd <acd grp.no.> member <ext no.>

where, acd grp. N0 = 0 to 9 corresponding to the ACD groups 0 to 9.

Example: To add extension 2000 in ACD group 1, the command is:

add acd 1 2000

Default: Operator extension is in ACD group 9

Extension No Answer Time

This command is used for defining the maximum duration a call waits for response from an ACD Extension before the call jumps to the next agent. The command is:

set acd <acd grp. no.> nexttmr <time in secs.>

Queue Size

This command is used for defining the size of the queue for an ACD group. The maximum queue size possible is 200. The command is:

set acd <acd grp. No.> qsize <max. qsize>

Example: To set the maximum queue size for ACD group 9 as 50, the command is:

set acd 9 qsize 50

Minimum Time Interval between 2 calls to an Extension

This command is used for defining the time interval between two calls landing on an ACD agent. The command is:

set acd <acd grp. no.> wraptmr <time in sec.>

Junction Landing without Auto Attendant Mode

(Junction Ring Assignment)

Junction lines can be configured to ring in various modes. The modes can be different in Day mode & Night mode.

One Termination / Operator Landing mode i.e., One Junction would land on one Extension only.

set / reset pnt <trunk no.> mode <Day Mode> <Night Mode> <Ext no>

Mode Ring Landing

3 - Operator Landing

4 - One termination ringing

Round Robin / Simultaneous ringing / Delayed Ringing Mode

Three steps are to be followed. First, the extensions are to be added to "Extension Landing Group". Second, each junction

line is to be assigned a “Extension Landing Group”. Third, the “ring landing mode” is assigned to the junction line. The following is the programming:

1. Extension Landing Group

```
set / reset ext <extn. no.> servgrp <grp. No.>
```

This command is used for defining the various “extension landing groups” to extension for incoming Junction lines. A maximum of 10 “extension landing groups” can be defined in the system. The numbers of the extension landing groups are from 0 to 9. In default it is 0. The extension landing groups will be used by the Junction lines when the landing mode of the Junction line is defined as round robin or simultaneous or delayed ringing. An extension can be in more than one service group.

Note: The Ringing sequence of Round Robin shall be the sequence in which the above command is entered for each extension.

: Operator Extension cannot be included in Round Robin Extension else it will ring only on Operator.

2. Assigning “Extension Landing Group” to Junction line:

```
set pnt <trunk no.> group <day grp.> <nigh grp.>
```

This command is used for setting “Extension Landing Group” to a Junction line in Day and Night Mode. A JUNCTION line can have different Extension Landing groups for day mode & for night mode. The valid group numbers are from 0 to 9.

Example: To set group 1 as day group & group 2 as night group for Junction 700, the command is:

```
set pnt 700 group 12
```

Default: Group 0 is allotted as the ringing group for all the Junction lines

3. Assigning the Ring Landing Mode to the Junction Line:

```
set / reset pnt <trunk no.> mode <day mode> <nigh mode>
```

Mode Ring Landing

- 0 - Round robin
- 1 - Simultaneous ringing
- 2 - Delayed Ringing
- 3 - Operator Landing
- 4 - One termination ringing

Example: For setting JUNCTION line 700 as round robin ringing in the day mode & as one termination at extension 2001 in the night mode, the command is:

```
set pnt 700 mode 0 4 2001
```

Default: All JUNCTION lines are in operator landing mode.

Note: Operator Extension cannot be included in Round Robin Extension else it will ring only on Operator.

: Except for “One Termination ringing” all other options would work only if “Junction Ring Group” is allotted.

: Different combination of Day and Night landing modes can be used.

Junction Line to be used as a Private Line

This command is used for defining a Junction line as a private line for an extension. On defining a Junction line as a private line for an extension, all the incoming calls on that Junction line will directly land in the defined extension. In addition, the Junction line will become a hotline for this extension. The command is:

```
set / reset pnt <trunk no.> private <extn. no.>
```

Default: No Junction lines are set as private line.

Junction Outgoing Calls Disconnect Duration

Following command is used for enabling or disabling the call cut feature of outgoing calls for an extension. On enabling this feature for an extension, all outgoing calls for this extension will get disconnected if the duration of the call exceeds the call cut time. The command is:

```
set / reset ext <extn. no.> outcut
```

Default: This feature is disabled for all extensions

Following is the command for defining the outgoing call cut time. This time will be applicable for call duration warning tone & for call cut feature. The valid times are from 60 second to 900 second. The format for the command is:

```
set sys cuttime <time in seconds..>
```

Example: The command for setting the call out cut time as 3 minutes is:

```
set sys cuttime 180
```

Default: 300 seconds.

Junction Right to Hold one & Pick another

This command is used for enabling or disabling the second Junction access right for an extension. On enabling this feature,

an extension will be able to pick up a second Junction while holding a Junction line. It must be noted that if a KTS extension wants to have a 3 party conference involving two Junction lines, then the extension must be given the second Junction pickup rights. The command is:

set / reset ext <extn. no.> sectrk

Note: 3 Party Conferencing works only if DID Card is installed in the system.

Default: No extension has second Junction pick up rights.

Junction Type - DTMF/Pulse

This command is used for setting a Junction line for tone Dialing or for pulse Dialing. The command for setting a Junction line for tone Dialing is:

set pnt <trunk no.> dtmf

Command for setting a Junction line in the pulse mode is:

reset pnt <trunk no.> dtmf

Default: All JUNCTION lines are set in pulse mode.

KTS Extension Auto Disconnect in Internal Conversation

This command is applicable only for KTS extensions. It is used for enabling or disabling the auto drop feature in a KTS. On enabling this feature for a KTS, for internal conversation the KTS will be disconnected automatically when the other party disconnects. The format for this command is:

set / reset ext <extn. no.> autodrop

Default: This feature is enabled for all the KTS extensions.

KTS Extension Auto ON

This command is applicable only for KTS extensions. It is used for enabling or disabling the auto lift feature in a KTS. On enabling this feature for an extension, when an internal call rings at the KTS, the speaker will get activated automatically after three rings. The format for this command is:

set / reset ext <extn. no.> autolift

Default: This feature is disabled for all the KTS extensions.

LCR (Least Cost Routing)

This feature allows the system to select the most economical Junction line for Dialing a desired telephone number. When an extension user dials '0' to access a free Junction line, instead of a Junction line dial tone the system gives an internal dummy dial tone. The system compares the digits of the Dialed telephone number with the starting Telephone Numbers (defined through programming described below) and selects the most economical route for Dialing.

PROGRAMMING PROCEDURE :

Description: lcr feature is first activated. Then we assign desired Junction Lines to Group Nos (0 to 9).

Thereafter Starting Digits of Telephone numbers for LCR, are assigned to the Group Nos (0 to 9).

Activate / Deactivate the LCR with the following command

Set / reset sys lcr

Make the PNT Group number with the following command

Set pnt <trunk no.> brt < g .>

Where, trunk no = Junction numbers 700,701.....,

g = Group no (0 to 9)

(Note: More than one Trunk No can be assigned the same Group no)

Filter the first digit dialed by extension

Set sys rtgrp <g> 1 1

Where g = brt Group number (0 to 9)

Define Starting Telephone number digits that are to be directed through defined Group nos. for using most economical line:

Set port <SL> <X> <Y> dup

Where, SL = Slot No. (Select from the Table below)

X = Port No. (Select from the Table below)

Y = Starting telephone number digits which are to be matched
for dialing through this Group no (up to maximum 8 digit)

Note: SL and X values for the 10 Group nos are:

Group No SL X

0	65	3
1	65	4
2	65	5
3	65	6
4	65	7
5	65	8
6	66	9
7	66	0
8	66	1
9	66	2

Example – If Telephone numbers starting with 98, 94, 094 are to be dialed through Junction line no 700, 701 then programming will be:

```
Set pnt 700 brt 0
Set pnt 701 brt 0
Set sys rtgrp 0 1 1 (So that minimum 1 digit is dialed before seizing the Junction Line and 1 digit is filtered. For more details refer rtgrp programming)
```

Set port 65 3 098 dup

Set port 65 3 094 dup

Set port 65 3 0094 dup

If 0 dialing facility is to be given to selected Extensions then use the following command:

Set port 64 0 797

This command will change the Junction access code from 0 to 797. The defined extensions can then dial 797 to access any free Junction line.

LCR Conditions:

4. If a Telephone number is not defined in LCR programming then in default Extensions cannot dial those Tel numbers except for following cases:

To allow non LCR Junction to all Extensions

Set sys lcrnr (LCNR)

To allow non LCR Junction Extension wise

Set ext <ext no> lcrngta (LCRNGTA)

If non LCR Junctions are allowed to all the Extensions then the command

"Set ext <ext no> lcrngta" has no use.

Above commands allows the system to dial Tel numbers that are not defined in LCR, to be Dialed through Junctions by Dialing direct Junction access codes (7XX). Also on Dialing Tel Numbers that are in LCR but the LCR Junctions are busy then the number shall be Dialed on the non LCR Junctions.

- LCR is governed by the Dialing Facility of the Extensions.

Locking of Features

(Hotlines, Call Forwarding, Listen in, Follow me, Do Not Disturb)

This command is used for locking certain features in the PBX. The features that can be locked and the corresponding codes are given below:

- 0 - hotlines
- 1 - call forwarding
- 2 - listen in
- 3 - follow me
- 6 - do not disturb
- 9 - all the above features

Example: To lock the Do Not disturb feature in the PBX, the command is:

set sys flock 6

Default: All the features are unlocked.

Memory Dialing

Upto 400 Telephone Numbers can be fed in to the PBX for Memory Dialing.

The Location numbers are from 1010 to 1399.

Out of these 400 some of them can be defined for use by Extensions irrespective of their COS.

To set Memory Codes to be available to Extensions irrespective of COS, following is the command:

set sys freelib <starting library no.>

Example: set sys freelib 250

If <starting library no.> = say 250 then Memory Codes from 250 to 1399 will be available to all the Extensions irrespective of their COS.

Clearing of all the Tel Numbers in Memory Bank

This command is used for clearing all the memory banks. The command is:

```
set sys clrbank
```

Memory Dialing Telephone Numbers entry

This command is used for entering the Telephone numbers in the library. The system library can store 400 numbers (000 to 399) and they can be used by all the extensions in the system. Any combination of numbers can be stored in the library like extension numbers, Junction access codes, external number or feature activation codes. The command is:

```
set sys glib < 0 + lib. No.> <parameters>
```

i.e.,

```
set sys glib < 000 to 0399> <parameters>
```

Example: set sys glib 0010 700TTTT.....

Here, Library no is 010 and dialing code from Ext / KTS is 1010

700 = Junction Line on which telephone number is to be dialed.

Make it 0 in case Telephone no is to be dialed on any free Junction Line

TTTT.... = Telephone number to be dialed

Mini Email

This PBX has got an in-built mini email system. There are six fixed messages, which can be activated for any extension. This command is used for activating any of these six messages for any extension. On activating the message for an extension, any KTS extension calling this extension will get the corresponding message on his display. However, the extension will continue to ring. The messages and their corresponding codes are given below:

Message	Code	Message	Parameter
1		Out for lunch	00 00
2		Back at HH:MM	HH:MM
3		Gone for day	00 00
4		Busy in meeting	00 00
5		Back on DD/MM	DD/MM
6		Call at EXT NO.	EXT NO

The command to activate or deactivate any of the above messages for an extension is:

```
set / reset ext <extn. no.> mail <message code> <parameter>
```

Example: To activate the "Out for lunch" message for extension 2300, the command is:

```
set ext 2300 mail 1 00 00
```

Command for erasing this message is:

```
reset ext 2300 mail 1 00 00
```

Example: To activate the "Gone for day" message for extension 2300, the command is ,

```
set ext 2300 mail 3 00 00
```

Command for erasing the message is:

```
reset ext 2300 mail 3 00 00
```

Example: To activate the "busy on meeting" message for extension 2300, the command is:

```
Set ext 2300 mail 4 00 00
```

Command for erasing the message is

```
Reset ext 2300 mail 4 00 00
```

Default: No messages are set.

Operator – Changing / adding more Operators

In default, the first extension (2000) of the system is the main operator.

If first Operator is to be changed then first reset the default Operator number 2000 with following program:

```
Reset ACD <9> member <2000>
```

Now add more Operators (KTS / SLT) with following program:

```
ADD ACD <9> member <Ext Number>
```

Note: Up to 3 more Operator Extensions can be defined in the PBX.

: Incoming calls first land on the First Operator. If busy then it shifts to the 2nd Operator.

Printer Port & Print Commands

Upper Serial Port: This is for connecting to a PC for Programming the system.

Lower Serial Port: This is for connecting to a PC for PMS interface or taking call details on a Hyper Terminal.

In default, call details are given on the Parallel port of the CPU.

To get call details on the Lower Serial Port, do the following programming:

set sys prnport

To cancel the above and to take call details through the Parallel port, the command is:

reset sys prnport

Printing commands from Computer

Print outs can be taken through either of the following 2 commands:

Command having 5 options for printouts

set sys print <parameter>

Where, <parameters> can be any of the following values:

- 1 - Print online (When it is entered for the first time, all calls in buffer will print and then the on line printing will continue. Whereas if this command is entered again and again, then the buffer shall not be printed.)
- 9 – Prints all the calls in buffer and then continues On Line printing.
- 2 - Clear buffer without printing
- 5 - Stop buffering Incoming calls
- 6 - Start buffering Incoming calls
- 0 - Stop printing

Note: Call details of the incoming Junction calls are stored and printed if DG TKB-CLI card is installed and CLI feature is activated.

Command for Date wise Printout

For printing of calls of a particular date or for all calls from a date:

DWPRINT DD MM YY C

Note: In this command to be entered from Computer, there is no prefix "set sys" to this command.

Where, DDMMYY = Date (Day/Month/Year)

C = 0 for particular date printout

= 1 for printing of all calls from DDMMYY till date.

Printing commands from Operator's KTS

The CPU processes the outgoing/incoming calls made, computes the data and delivers the computed results to the Printer/Buffer manager, which stores this data into the buffer. The Printer/Buffer manager prints the calls as per the commands as follows.

Press "Prog" Key - 1 2 3 4 – then the following

- 120 - Stop printing.
- 121 - Print all calls made till now and then print further calls On-line.
- 122 - Clear buffer.
- 129 - Print all calls made till now and then print further calls On-line.
 - Stop buffering Incoming calls
 - Start buffering Incoming calls

13 DDMMYYC - For printing of calls of a particular date or for all calls from a date:

Where, DDMMYY - Date (Day/Month/Year)

C = 0 for particular date printout

= 1 for printing of all calls from DDMMYY till date.

22+line number - For extension/Junction wise printout of a defined extension/Junction line

26+the starting extension number – For extension wise printout of all the extensions

189 - For printout of current days calls

Note: Call details of the incoming Junction calls are stored and printed if DG TKB-CLI card is installed + CLI feature is activated + Call Details of Internal Calls / Incoming Junction Calls

Default: 120.

CTI Interface – Lower Port

The Lower serial port of the system can be used for interfacing with a computer. The various commands for sending data through the second serial port is given below:

- 126 - Start sending on CSI.
- 127 - Stop sending on CSI.
- 128 - Re-start sending on CSI. i.e. send all calls again.
- 125 - This code is reserved and is used only for factory testing.
 - Using this may lead to error on CSI or printing.

Call Printout - Change of length of Tel No in printouts

This command is used for increasing or decreasing the length of the local telephone number in printout. The command is as given below:

```
set sys diglen x
```

where, x = 4-16 digits length of the local telephone number.

In default the length of the local telephone number in printing is 7 digits and it can be programmed upto 16 digits.

Call Details of Internal Calls / Incoming Junction Calls

This command is used for enabling the malicious call-tracing feature. On enabling this feature, the activities of all extensions and Junctions will be recorded on a file. This file can be used for further processing. This command will also enable the details of Incoming Junction calls on the lower serial Port. The command for enabling this feature is:

```
set sys trace
```

Command for disabling this feature is:

```
reset sys trace
```

The output comes on the lower port of the CPU in the following string :

```
% V Calling Ext Called Ext $
```

The lower port of the CPU is to be made functional with the following command :

```
% H $
```

It will be replied by the PBX as below :

```
% g $
```

Default: Call tracing is disabled

TWT Line

This command is applicable only for both way Junction lines. It is used for defining the length of route ID and the route id. The command is:

```
set routeid <l> <xxxx..>
```

where, l = Length of the route id

xxxx = Route id. The route id entered must be equal to the length

set. Example:

To set the route id as 6834, the command is:

```
set sys routeid 4 6834
```

Default: No route id is set.

Minimum No of Digits to be Dialed before seizing the Line

It is used for defining the minimum number of digits to be Dialed before seizing the both way Junction and for setting the offset digits. The offset digits are required for filtering any digits before Dialing them on the both way Junction. The command is:

```
set sys rtgrp <g> <o> <s>
```

where, g = both way Junction group number

o = minimum digits to be dialed before seizing the line.

s = offset.

Example: In route 1, if a minimum of 2 digits are to be dialed before seizing the route & if it is required to filter the first 2 digits, the command is:

```
set sys rtgrp 1 2 2
```

Default: The minimum digit before seize & the offset are 0.

Virtual Account Code

This command is used for virtual telephony. This command is used for creating virtual extension numbers and their password and class of service. A maximum of 500 virtual accounts can be created for a system. The command is:

```
set sys acts <a/c number> <pass code> <COS>
```

The account number must be of 4 digits and the pass code must be of 3 digits. The virtual extension numbers are independent of the extension numbers in the system. The password can be changed by the virtual account user. The COS is the outward Dialing rights for the virtual account. The valid COS values are.

0 - no outward Dialing

1 - restricted Dialing

2 - local Dialing except level 1 numbers

3 - local number Dialing

4 - STD number Dialing

5 - ISD number Dialing

Default: No virtual extensions are defined in the system.

Voice Mail Equipment Integration + IVRS

This command is used for voice mail integration. It is used for defining an analogue extension as voice mail port, which can then be connected to the voice mail equipment. Only analogue ports can be defined as voice mail port. The command is:

set / reset ext <extn. no.> vmail

IVRS

This command is used to activate the IVRS operation on an extension. The command is

Set/ Reset cos <cos no> IVRS

Terms of Warranty

Copper Connections warrants that this product is manufactured under stringent quality standards, making it free from defects in material and workmanship, as per the following terms and conditions:

1. The limited warranty for the system is valid for a period of twelve months from the date of purchase or fifteen months from the date of manufacture which ever is earlier.
2. The limited warranty extends only to the original consumer/ purchaser of the product and is not assignable or transferable to any subsequent purchaser/end user.
3. During the limited warranty period, Copper Connections or its authorised service network will repair or replace, at Copper Connections option, any defective product or parts thereof with a new or factory rebuild replacement items and return the product to the consumer in working conditions. No charge will be made to the consumer for either parts or labour in repairing or replacing the product. All replaced parts shall become the property of Copper Connections.
4. Repaired product will be warranted for a balance of original warranty period.
5. Upon request from Copper Connections or its authorised service centre, the consumer must provide purchase receipt or other information to prove the date and place of purchase.
6. The consumer shall have no benefit or coverage if any of the following conditions are applicable:
 - a) The product has been subjected to abnormal use, abnormal condition, improper storage, exposure to moisture or dampness, exposure to excessive temperature or fire etc., unauthorised modifications, unauthorised connections, unauthorised repairs including but not limited to use of unauthorised spare parts in repairs, misuse, neglect, abuse, accident, alteration, improper installation.
 - b) Copper Connections was not notified by consumer of the alleged defect or malfunction of the product during the limited warranty period.
 - c) The product was used with or connected to equipment not fit for use with Copper Connections system or used in other than its intended use.
- d) **THE SYSTEM IS NOT CONNECTED TO A PROPER EARTH OR INCASE HIGH VOLTAGES APPEAR ON EARTH.**
- e) **THE DAMAGE IS CAUSED BY LIGHTENING ON EXTENSIONS/ JUNCTION LINES/ OR SPIKES/ SURGES/ HIGH VOLTAGES FROM AC MAIN SUPPLY.**
7. The consumer may contact the authorised dealer to call the service personnel for carrying out repairs or maintenance and the same would be attended within a reasonable response time assigned to the dealer.
8. The consumer will be billed for parts or labour charges not covered by this limited warranty.
9. If the product is brought to Copper Connections for repairs, after the warranty period Copper Connections normal service policy shall apply and customer shall be charged accordingly.
10. In no event shall Copper Connections or their authorised dealer be liable for special or consequential damages or any delay in the performance of this warranty due to causes beyond their control. Copper Connections shall not be liable for incidental or consequential damage or a loss of anticipated benefits or profits, loss or impairment of privacy of conversation, work stoppage or loss or impairment of data arising out of the use or inability to use the product. Company's liability in no event and under no circumstances shall exceed the price paid to the company for goods stated in the invoice.
11. Copper Connections neither assumes nor authorises any authorised service centre or any person or entity to assume for it any other obligation or liability beyond what is expressly provided by this limited warranty. All warranty information, product features and specifications are subject to change without prior notice.
12. Any dispute arising out of this warranty shall be subjected to jurisdiction of the arbitrator within the city of Delhi.
13. The decision of Copper Connections, on defects, damages etc shall be final and binding on the parties and no dispute regarding this, could be agitated before any civil court.

Part No:CC-COX-504 DG PROGRM-33