

COMMANDER PHONE

ESSENTIALS DESK T41P



USER GUIDE

> Please read carefully before use.
Applies to firmware version 71 or later.

COMMANDER

About This Guide

Thank you for choosing the Commander Essentials Desk T41P IP Phone, an ultra-elegant IP Phone which is exquisitely designed to provide business telephony features over an IP network.

This guide provides everything you need to quickly use your new phone. First, verify with your system administrator that the IP network is ready for phone configuration. Also be sure to read the Packaging Contents and Regulatory Notices sections in this guide before you set up and use the Commander Essentials Desk T41P IP Phone.

If this is your first time using the Commander Essentials Desk T41P IP Phone, we recommend that you first refer to the Quick Installation Guide and Quick Reference Guide, available online:

<http://commander.com/phone/commander-phone/resource-centre>

This guide may contain references to features that are supported by the handset however may not be available with your service or plan.

In This Guide

Topics provided in this guide include:

- ① Chapter 1 [Overview](#)
- ② Chapter 2 [Getting Started](#)
- ③ Chapter 3 [Customizing Your Phone](#)
- ④ Chapter 4 [Basic Call Features](#)
- ⑤ Chapter 5 [Advanced Phone Features](#)

Table of Contents

About This Guide	ii
In This Guide	ii
Table of Contents	iii
Overview.....	1
Hardware Component Instructions	3
Icon Instructions.....	5
LED Instructions	6
User Interfaces	7
Phone User Interface	7
Web User Interface.....	7
Documentations	10
Getting Started	11
Packaging Contents	11
Phone Installation.....	13
Phone Initialization	16
Phone Status	16
Basic Network Settings	16
Idle Screen.....	17
Customizing Your Phone	18
General Settings	18
Backlight	18
Language	19
Time & Date	19
Keypad Lock	21
Audio Settings	23
Volume.....	23
Ring Tones	24
Contact Management	26
Directory.....	26
Local Directory.....	28
Blacklist	37

Remote Phone Book.....	38
Call History Management	39
System Customizations	42
Headset Use.....	42
DSS Keys	43
Emergency Number	54
Hotline	54

Basic Call Features..... 57

Placing Calls.....	58
Answering Calls	60
Ending Calls.....	61
Redialing Numbers.....	61
Recent Call In Dialing.....	61
Auto Answer.....	62
Auto Redial.....	63
Call Return	64
Call Mute	64
Call Hold/Resume	65
Do Not Disturb (DND)	65
Call Forward.....	68
Call Transfer	74
Call Waiting.....	75
Conference.....	76
Local Conference	76
Network Conference	77
Call Park.....	78
Call Pickup.....	79
Anonymous Call	83
Anonymous Call Rejection.....	84

Advanced Phone Features 85

Busy Lamp Field (BLF)	87
Call Recording.....	90
Hot Desking	91
Intercom	93
Outgoing Intercom Calls	93
Incoming Intercom Calls	93
Multicast Paging.....	95
Sending RTP Stream.....	95
Receiving RTP Stream	97
Music on Hold	98
Automatic Call Distribution (ACD).....	99

Messages	101
Voice Mail	101
Message Waiting Indicator (MWI).....	102
Troubleshooting.....	105
Regulatory Notices	112
Service Agreements	112
Limitations of Liability	112
Safety Instructions	112
Index	114

Overview

This chapter provides the overview of the Commander Essentials Desk T41P IP Phone. Topics include:

- [Hardware Component Instructions](#)

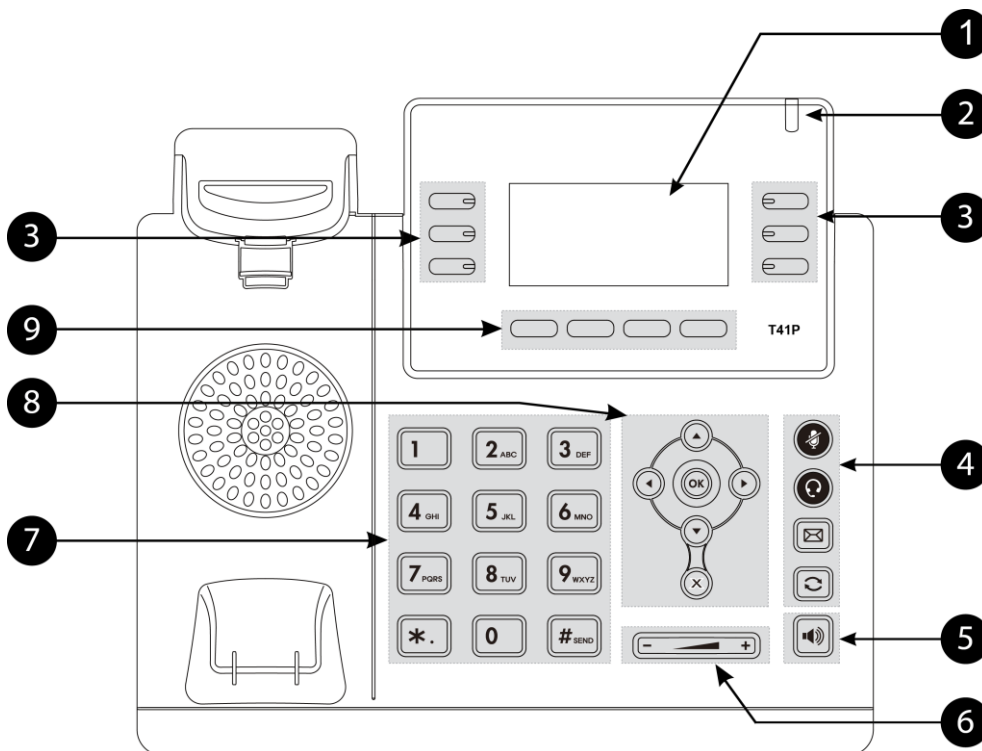
- [Icon Instructions](#)
- [LED Instructions](#)
- [User Interfaces](#)
-

- Documentations




If you require additional information or assistance with your new phone, contact your system administrator.

Hardware Component Instructions

The main hardware components of the Commander Essentials Desk T41P IP Phone are the LCD screen and the keypad.
























Hardware component instructions of the Commander Essentials Desk T41P IP Phone are:

	Item	Description
①	LCD Screen	Shows information about calls, messages, soft keys, time, date and other relevant data: <ul style="list-style-type: none"> • Call information—caller ID, call duration • Icons (for example, DND) • Missed call text or second incoming caller information • Prompt text (for example, "Saving file, please wait") • Time and date
②	Power Indicator LED	Indicates phone power and some feature statuses.
③	Line Keys	Use these keys to activate up to three accounts and assign various features.
④	Mute Key	Toggles and indicates mute feature.
	Headset Key	Toggles and indicates the headset mode.
	Message Key	Accesses voice mails.
	Redial Key	Redials a previously dialed number.
⑤	Speakerphone Key	Toggles the hands-free speakerphone mode.
⑥	Volume Key	Adjusts the volume of the handset, headset, speaker, and ringer.
⑦	Keypad	Provides the digits, letters, and special characters in context-sensitive applications.
⑧		Scroll through the displayed information.
		Confirms actions or answers incoming calls.
		Cancels actions or rejects incoming calls.
⑨	Soft Keys	Label automatically to identity their context-sensitive features.

Icon Instructions

Icons appearing on the LCD screen are described in the following table:

Icon	Description
	Network is unavailable
	Registered successfully
	Register failed
	Registering
	Hands-free speakerphone mode
	Handset mode
	Headset mode
	Voice Mail
AA	Auto Answer
DND	Do Not Disturb
	Call Hold
	Call Mute
	Ringer volume is 0
	Keypad Lock
2ab	Alphanumeric input mode
123	Numeric input mode
abc	Multi-lingual lowercase letters input mode
ABC	Multi-lingual uppercase letters input mode
Abc	Multi-lingual uppercase and lowercase letters input mode
	Call Forward/Forwarded Calls
	Missed Calls

Icon	Description
	Received Calls
	Placed Calls
	Recording box is full
	A call cannot be recorded
	Recording starts successfully
	Recording cannot be started
	Recording cannot be stopped

LED Instructions

Power Indicator LED

LED Status	Description
Solid red	The phone is initializing.
Fast flashing red	The phone is ringing.
Slow flashing red	The phone receives a voice mail.
Off	The phone is powered off, powered on or idle.

Line key LED

LED Status	Description
Solid green	The line is seized. The line is in conversation.
Fast flashing green	The line receives an incoming call.
Slow flashing green	The call is placed on hold.
Off	The line is inactive.

Line key LED (configured as BLF key)

LED Status	Description
Solid red	The monitored user is busy.
Fast flashing red	The monitored user receives an incoming call.
Off	The monitored user is idle. The monitored user does not exist.

Line key LED (used as page switch key)

LED Status	Description
Solid red	There is a parked call on the line key of the non-current page.
Solid green	There is a call on the line key of the non-current page.
Fast flashing green	The line receives an incoming call on the non-current page.
Fast flashing red	The monitored user receives an incoming call on the non-current page.
Off	Line keys on every page are idle.

User Interfaces

Two ways to customize configurations of your Commander Essentials Desk T41P IP Phone:

- ⑩ The user interface on the IP phone.
- ⑪ The user interface in a web browser on your computer.

The hardware components keypad and LCD screen constitute the phone user interface, which allows the user to execute all call operation tasks and basic configuration changes directly on the phone. In addition, you can use the web user interface to access all configuration settings. In many cases, it is possible to use either the phone user interface and/or the web user interface interchangeably. However, in some cases, it is only possible to use one or the other interface to operate the phone and change settings.

Phone User Interface

You can customize your phone by pressing the Menu soft key to access the phone user interface. The Advanced Settings option is only accessible to the administrator, and the default administrator password is “admin” (case-sensitive). For more information on customizing your phone with the available options from the phone user interface, refer to [Customizing Your Phone](#) on page 18.

Web User Interface

In addition to the phone user interface, you can also customise your phone via web user interface. In order to access the web user interface, you need to know the IP address of your new phone. To obtain the IP address, press the OK key on the phone. Enter the IP address (e.g., <http://192.168.0.10> or 192.168.0.10) in the address bar of web browser on your PC. The default username and password are `yui_user` and `yui_user123` (both case sensitive).

The options you can use to customise the IP phone via phone user interface and/or via web user interface are listed in the following table (note: some of the items in the below table cannot be edited due to security restrictions in place to ensure your phone service continues to work):

Options	Phone User Interface	Web User Interface
Status		
--IPv4		
--MAC		
--Firmware	√	√
--Network		
--Phone		
--Accounts		
Basic Call Features		
--Auto Answer	√	
--Auto Redial	√	
--Call Forward	√	
--Call Waiting	√	
--Call Park	√	
--Call Pickup	√	√
--Call Return	√	
--Conference		
--Anonymous Call	√	
--Anonymous Call Rejection	√	
--DND	√	
Basic Phone Settings		
--Language	√	√
--Time & Date	√	√
--Administrator Password	√	√
--Ring Tones	√	√
--Backlight	√	√
--Keypad Lock	√	√
--Phone Volume	√	
--Call History Management	√	
--Contact Management		√
--Local Directory	√	√
--Blacklist	√	√
--Remote Phone Book		√
--LDAP		√
--Dial Plan		√
--DSS Keys	√	√
--Key as Send	√	√
--Hotline	√	√
--Live Dialpad		√
--Emergency Number		√
Advanced Phone Features		√
--BLF	√	

Options	Phone User Interface	Web User Interface
--Call Recording	√	
--Intercom	√	
--Multicast Paging		
--Music on Hold		
--ACD	√	
--Messages	√	
SIP Account		√
--User Options		
--Register Status	√	
--Account Status	√	
--Label	√	
--Display Name	√	
--Register Name	√	
--User Name	√	
--Password	√	
--SIP Server	√	
--Server Option		
--Server Port		
--Outbound Status	√	
--Outbound Proxy	√	
--NAT Traversal		
--STUN Status	√	
--STUN Server	√	

Note The table above lists most of the feature options. Please refer to the relevant sections for more information.

Documentations

The following table shows documentations available for the Commander Essentials Desk T41P IP Phone.

Name	Contents	Where found	Format/ Language
Quick Installation Guide	Basic setup of the phone	In the package	PDF/English
Quick Reference Guide	Basic call features and phone customizations	In the package	PDF/English
User Guide	Phone/Web user interface settings Basic call features and advanced phone features	Online in the Commander Phone Resource Centre	PDF/English

Note

You can also download the latest documentations online:
[.commander.com/phone/commander-phone/resource-centre](http://commander.com/phone/commander-phone/resource-centre)

Getting Started

This chapter provides the following basic installation instructions and information for obtaining the best performance with the Commander Essentials Desk T41P IP Phone. Topics include:

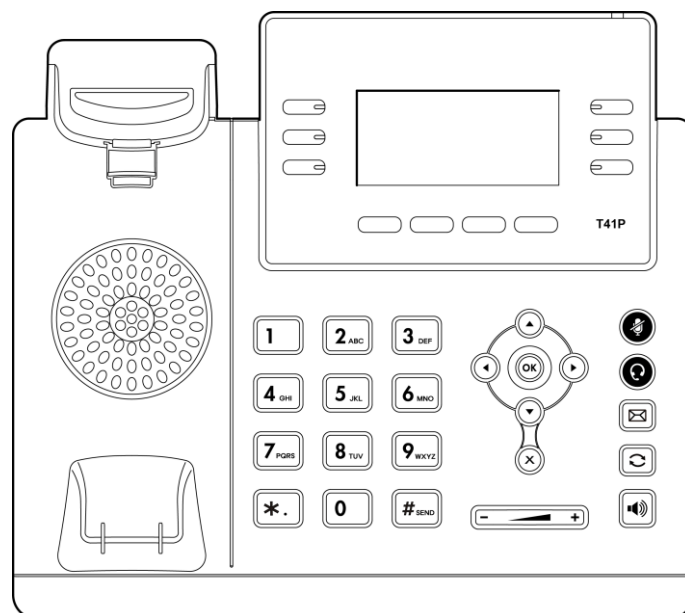
- [Packaging Contents](#)
- [Phone Installation](#)
- [Phone Initialization](#)
- [Phone Status](#)
- [Basic Network Settings](#)
- [Idle Screen](#)

If you require additional information or assistance with your new phone, contact your system administrator.

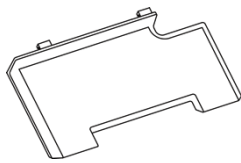
Packaging Contents

The following components are included in your Commander Essentials Desk T41P IP Phone package:

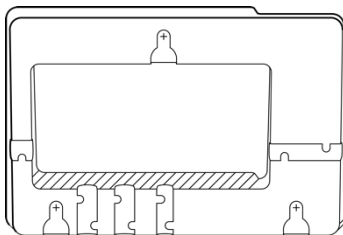
- Commander Essentials Desk T41P IP Phone



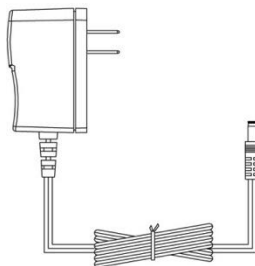
- Phone Stand



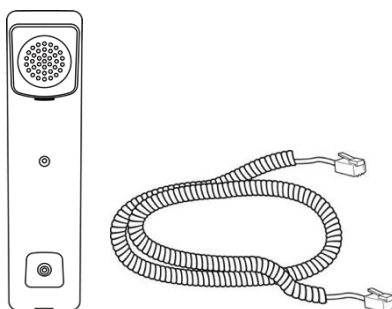
- Wall Mount Bracket (Optional)



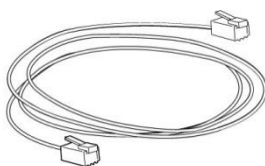
- Power Adapter (Optional)



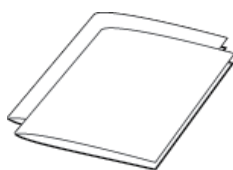
- Handset & Handset Cord



- Ethernet Cable



- Quick Installation Guide & Quick Reference Guide



Check the list before installation. If you find anything missing, contact your system administrator.

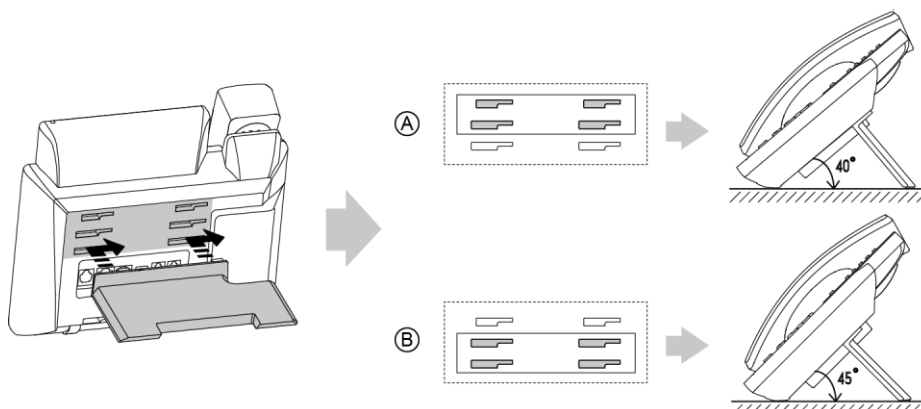
Phone Installation

If your phone is already installed, proceed to [Phone Initialization](#) on page 16.

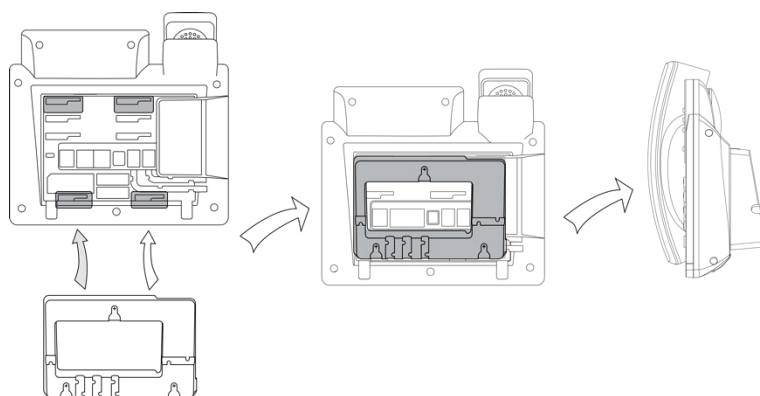
This section introduces how to install the phone:

- 1) Attach the stand or the optional wall mount bracket
 - 2) Connect the handset and optional headset
 - 3) Connect the network and power
-
- 1) Attach the stand or the optional wall mount bracket

Desk Mount Method



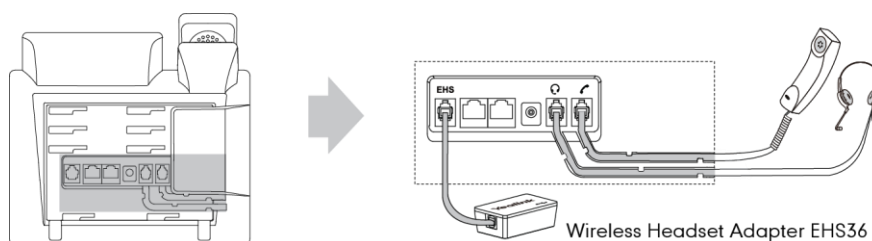
Wall Mount Method (Optional)



Note

The wall mount bracket should be purchased separately. For more information on how to attach the wall mount bracket, refer to *Commander Wall Mount Quick Installation Guide for SIP-T4X IP Phones*.

2) Connect the handset and optional headset



Note

The headset and wireless headset adapter EHS36 should be purchased separately. EHS36 is used for connecting the phone and a compatible wireless headset. For more information on how to use the EHS36, refer to *EHS36 User Guide*.

3) Connect the network and power

You have two options for power and network connections. Your system administrator will advise you which one to use.

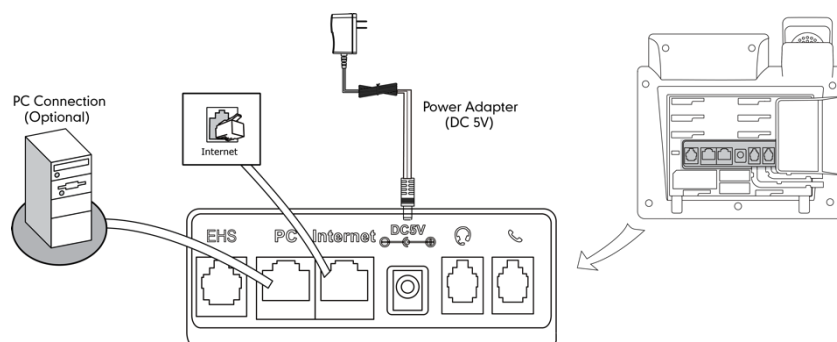
- AC power (Optional)
- Power over Ethernet (PoE)

AC Power (Optional)

To connect the AC power:

1. Connect the DC plug on the power adapter to the DC5V port on the phone and connect the other end of the power adapter into an electrical power outlet.

2. Connect the included or a standard Ethernet cable between the Internet port on the phone and the one on the wall or switch/hub device port.

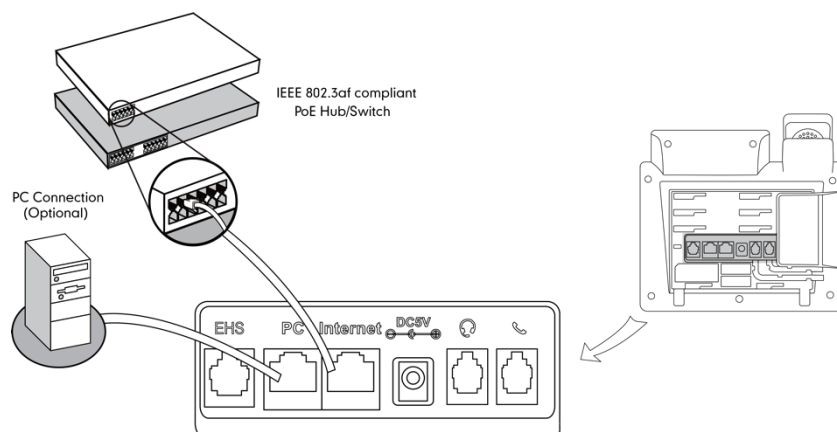


Power over Ethernet

With the included or a regular Ethernet cable, the Commander Essentials Desk T41P IP Phone can be powered from a Power over Ethernet (POE) compliant switch.

To connect via POE:

1. Connect the Ethernet cable between the Internet port on the phone and an available port on the POE switch.



Note

If Power over Ethernet (POE) switch is provided, you don't need to connect the phone to the power adapter. Make sure the switch is POE-compliant.

The phone can also share the network with another network device such as a PC (personal computer). It is an optional connection.

Important! Do not unplug or remove power to the phone while it is updating firmware and configurations.

Phone Initialization

After your phone is powered on, the system boots up and performs the following steps:

Automatic Phone Initialization

The phone finishes the initialization by loading the saved configuration. The LCD screen displays "Initializing...please wait" during this process.

DHCP (Dynamic Host Configuration Protocol)

The phone attempts to contact a DHCP server in your network to obtain valid IPv4 network settings (e.g., IP address, subnet mask, default gateway address and DNS address) by default.

Note

If your network does not use DHCP, proceed to [Basic Network Settings](#) on page 16.




Phone Status

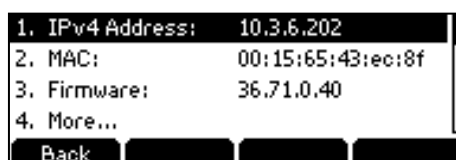
You can view phone status via phone user interface or web user interface.

Available information of phone status includes:

- Network status (e.g., IPv4 status, IP address mode, MAC address, LAN type, LAN IP and LAN mask).
- Phone status (e.g., device model, hardware version, firmware version and product ID).
- Account status (e.g., register status of SIP accounts).

To view the phone status via phone user interface:

1. Press , or press Menu->Status.
2. Press  or  to scroll through the list and view the specific information.



To view the phone status via web user interface:

1. Open the web browser on your computer.
2. Enter the IP address in the browser's address bar, and then press the Enter key.
3. Enter the user name (admin) and password (admin) in the login page.
4. Click Confirm to login.

The phone status is displayed on the first page of the web user interface.

Basic Network Settings

Your handset is designed to work on a local area network with IPv4 IP addresses assigned by DHCP.

If your phone cannot contact a DHCP server for any reason, you need to configure your network

settings to allow this to occur. If you are unsure how to do this please contact your network administrator.

Idle Screen

If the phone has successfully started up, the idle LCD screen will be shown as below.



The idle screen shows the label of current account, time and date, and four soft keys.

Customizing Your Phone

You can customize your Commander Essentials Desk T41P IP Phone by personally configuring certain settings, for example, contrast, time & date and ring tones. You can add contacts to the phone's local directory manually or from call history. You can also personalize different ring tones for different callers.

This chapter provides basic operating instructions for customizing your phone. Topics include:

- [General Settings](#)
- [Audio Settings](#)
- [Contact Management](#)
- [Call History Management](#)
- [System Customizations](#)

If you require additional information or assistance with your new phone, contact your system administrator.



General Settings

Backlight

You can configure backlight to adjust the brightness of the LCD screen. Backlight status on the LCD screen can be configured as the following types:

- Always On: Backlight is on permanently.
- 1 min, 2min, 5min, 10min, 30min: Backlight goes out when the phone has been inactive for approximately 1min, 2min, 5min, 10min or 30min.

To configure the backlight via phone user interface:

1. Press Menu->Settings->Advanced Settings (password: admin) ->Phone Setting->Backlight Settings.
2. Press  or , or the Switch soft key to select the desired value from the Backlight Time field.



3. Press the Save soft key to accept the change or the Back soft key to cancel.

Backlight is configurable via web user interface at the path Settings->Preference.



Language

The default language of the phone user interface is English. The phone will detect and use the same language as which of your web browser for the web user interface. If the language of your web browser is not supported by the phone, the web user interface will use English by default. You can change the language for the phone user interface and the web user interface respectively.

Note

Not all of the supported languages are available for selection. The available languages depend on the language packs currently loaded to the IP phone. Please contact your system administrator for more information on available languages of your new phone.

To change the language for the phone user interface:

1. Press Menu->Settings->Basic Settings->Language.
2. Press  or  to select the desired language.

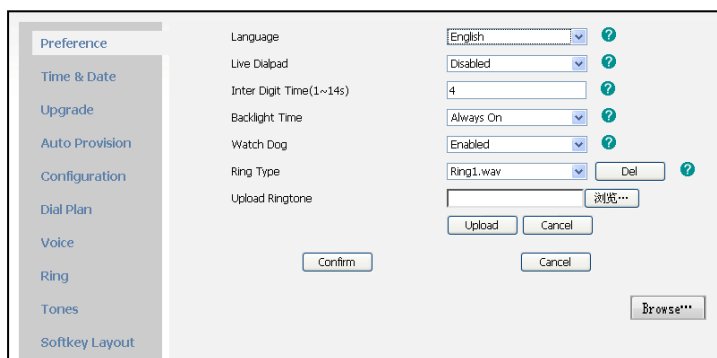


3. Press the Save soft key to accept the change.

Text displayed on the LCD screen will change to the selected language.

To change the language for the web user interface:

1. Click on Settings->Preference.
2. Select the desired language from the pull-down list of Language.



3. Click Confirm to accept the change.

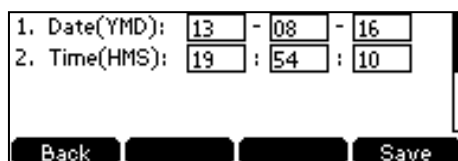
Text displayed on the web user interface will change to the selected language.

Time & Date

The time and date are displayed on the LCD screen when the phone is idle. This is configured automatically by Commander.

To configure the time and date manually via phone user interface:

1. Press Menu->Settings->Basic Settings->Time & Date->Manual Setting.
2. Enter the specific time and date.



3. Press the Save soft key to accept the change.

The date and time displayed on the LCD screen will change accordingly.

To configure the time and date format via phone user interface:

1. Press Menu Settings->Basic Settings->Time & Date->Time & Date Format.
2. Press ◀ or ▶, or the Switch soft key to select the desired time format (12 Hour or 24 Hour) from the Clock field.



3. Press ◀ or ▶, or the Switch soft key to select the desired date format from the Date Format field.
4. Press the Save soft key to accept the change or the Back soft key to cancel.

There are 7 available date formats. For example, for the date format "WWW DD MMM", "WWW" represents the abbreviation of the week, "DD" represents the two-digit day, and "MMM" represents the first three letters of the month.

The date formats you need to know:

Date Format	Example (2013-2-27)
WWW MMM DD	Wed Feb 27
DD-MMM-YY	27-Feb-13
YYYY-MM-DD	2013-02-27
DD/MM/YYYY	27/02/2013
MM/DD/YY	02/27/13
DD MMM YYYY	27 Feb 2013
WWW DD MMM	Wed 27 Feb

Time and date is configurable via web user interface at the path Settings->Time & Date.

Keypad Lock

You can lock the keypad of your phone temporarily when you are not using it. This feature helps to protect your phone from unauthorised use.





Keypad lock consists of the following:

- Menu key: The Menu soft key is locked. You cannot access the menu of the phone until unlocked.
- Function keys: The function keys are locked. You cannot use the MESSAGE, REDIAL, MUTE, OK, X, navigation keys, soft keys and line keys until unlocked.
- All keys: All keys are locked, except the Volume, Speakerphone, Headset, and digit keys. You are only allowed to dial emergency numbers, reject or answer incoming calls, and cancel a call.

Note


The emergency number setting, if desired, must be made before lock activation. For more information, refer to [Emergency Number](#) on page 54.

To activate the keypad lock via phone user interface:

1. Press Menu->Settings->Advanced Settings (password: admin) ->Phone Setting->Keypad Lock.
2. Press  or , or the Switch soft key to select Enabled from the Keypad Lock Enable field.
3. Press  or , or the Switch soft key to select the desired type from the Keypad Lock Type field.




4. Press the Save soft key to accept the change.

Long press  to lock the keypad immediately when the phone is idle.

The LCD screen prompts "Keypad locked" and displays  icon.

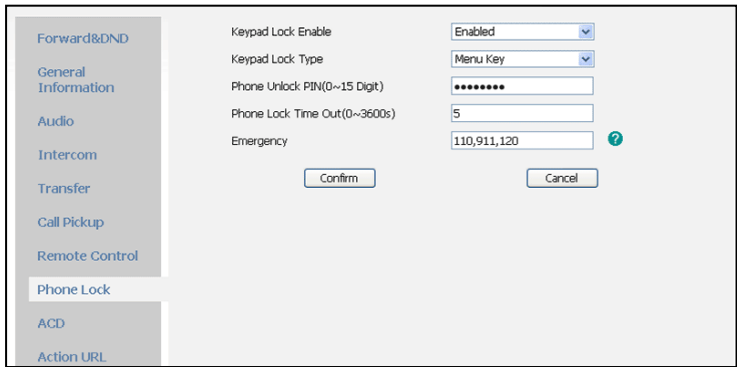


You can configure the interval (in seconds) to automatically lock the keypad instead of long pressing .

To configure the interval of automatic keypad lock via web user interface:

1. Click on Features->Phone Lock.

2. Enter the desired time in the Phone Lock Time Out (0~3600s) field.



3. Click Confirm to accept the change.

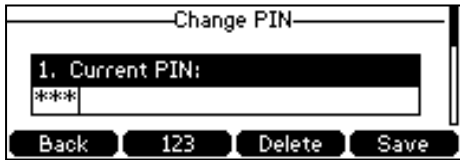
Note

The default timeout is 0 second, that is, you can long press to lock the keypad only. Interval of automatic keypad lock is configurable via web user interface only.

To unlock the keypad, you must know the keypad unlock PIN of the phone. The default keypad unlock PIN is "123".

To change the keypad unlock PIN via phone user interface:

1. Press Menu->Settings->Basic Settings->Phone Unlock PIN.
2. Enter the desired values in the Current PIN, New PIN and Confirm PIN fields respectively.



3. Press the Save soft key to accept the setting or the Back soft key to cancel.

Note

The unlock PIN length must be within 15 characters.


To unlock the keypad via phone user interface:

1. Press any locked key, the LCD screen prompts "Please Enter PIN".



2. Enter the PIN in the PIN field.
3. Press the Confirm soft key to unlock the keypad.



The icon disappears from the LCD screen.

You can long press  or wait for a period of time (if configured) to lock the keypad again.

Note

You can also unlock the keypad by administrator password. When you enter the administrator password to unlock the keypad, the phone will turn to the **Reset Phone PIN** interface.

To deactivate the keypad lock via phone user interface:

1. Press Menu->Settings->Advanced Settings (password: admin) ->Phone Setting->Keypad Lock.
2. Press  or , or the Switch soft key to select Disabled from the Keypad Lock Enable field.



3. Press the Save soft key to accept the change.

Keypad lock is configurable via web user interface at the path Features->Phone Lock.

Audio Settings

Volume

You can press the volume key to adjust the ringer volume when the phone is idle. You can also press the volume key to adjust the receiver volume of currently engaged audio devices (handset, speakerphone or headset) when the phone is in use.

To adjust the volume when the phone is idle:


1. Press  to adjust the ringer volume.



Note

If the ringer volume is adjusted to minimum,  icon will appear on the LCD screen.

To adjust the volume when the phone is during a call:

1. Press  to adjust the volume of currently engaged audio device (handset, speakerphone or headset).



Ring Tones

Ring tones are used to indicate incoming calls. You can select different ring tones to distinguish different accounts registered on your phone, or to distinguish your phone from your neighbor's.

To select a ring tone for the phone via phone user interface:

1. Press Menu->Settings->Basic Settings->Ring Tones.
2. Press or to select the desired ring tone.

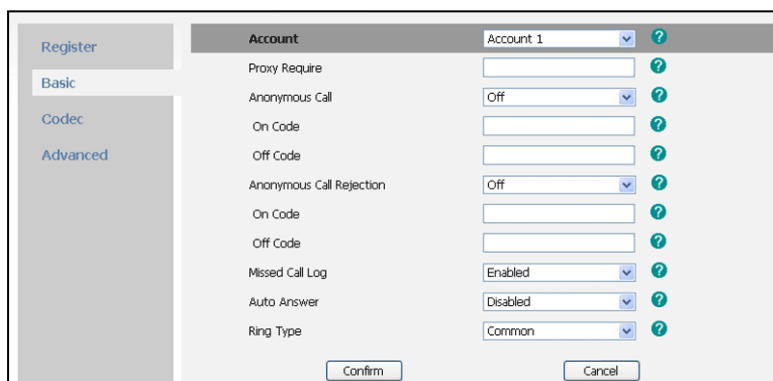


3. Press the Save soft key to accept the change or the Back soft key to cancel.

To select a ring tone for the account via web user interface:

1. Click on Account.
2. Select the desired account from the pull-down list of Account.
3. Click on Basic.
4. Select the desired ring tone from the pull-down list of Ring Type.

If Common is selected, this account will use the ring tone selected for the phone. Refer to the above instruction.



5. Click Confirm to accept the change.

Note

A ring tone for the account is configurable via web user interface only.

To upload a custom ring tone for your phone via web user interface:

1. Click on Settings->Preference.

- Click Browse to locate a ring tone (the file format must be .wav) file from your local system.

The screenshot shows a web interface for configuring a phone. On the left is a navigation menu with options: Preference, Time & Date, Upgrade, Auto Provision, Configuration, Dial Plan, Voice, Ring, Tones, and Softkey Layout. The 'Preference' section is active, showing settings for Language (English), Live Dialpad (Disabled), Inter Digit Time (1~14s) (4), Backlight Time (Always On), Watch Dog (Enabled), Ring Type (Ring1.wav), and Upload Ringtone. The 'Upload Ringtone' section has a text input field containing 'Ring1.wav', a 'Del' button, and a 'Browse...' button. Below this are 'Upload' and 'Cancel' buttons. At the bottom of the form are 'Confirm' and 'Cancel' buttons, and a 'Browse...' button is also visible at the bottom right of the interface.

- Click Upload to upload the file.

Note

The ring tone for an incoming call on the phone may be different. For example, when the phone receives an incoming call from a contact stored in the local directory, it will play the ring tone assigned to the contact in the local directory (refer to [Adding Contacts](#)). If no ring tone is assigned to the contact, the phone will play the ring tone assigned to the associated group (refer to [Adding Groups](#)). Otherwise, the phone will play the ring tone assigned to the account. If no ring tone is assigned to the contact and account, the phone will play the ring tone assigned to the phone.

All custom ring tone files must be within 100KB. Uploading custom ring tones for your phone is configurable via web user interface only.

Contact Management


This section provides the operating instructions for managing contacts. Topics include:

- [Directory](#)
- [Local Directory](#)
- [Blacklist](#)
- [Remote Phone Book](#)




Directory

Directory provides easy access to frequently used lists. The lists may contain Local Directory, History, Remote Phone Book and LDAP.

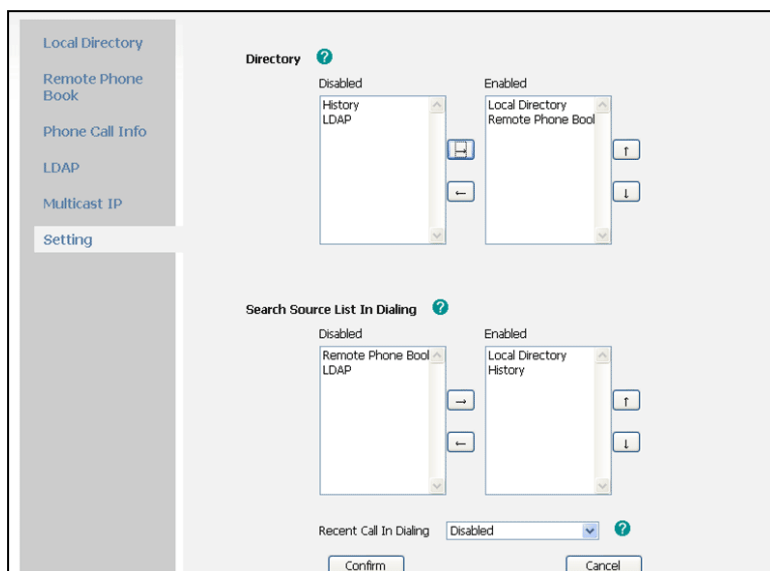
To configure the directory via web user interface:

- Click on Directory->Setting.
- In the Directory block, select the desired list from the Disabled column and then click  .

The selected list appears in the Enabled column.

3. Repeat the step 2 to add more lists to the Enabled column.
4. To remove a list from the Enabled column, select the desired list and click  .
5. To adjust the display order of enabled lists, select the desired list and click  or  .

The LCD screen displays the list(s) in the adjusted order.



6. Click Confirm to accept the change.

Note

Directory is configurable via web user interface only.

To check directory via phone user interface:

1. Press the Directory soft key when the phone is idle.

The LCD screen displays the enabled list(s) in the directory.



If there is only one list in the directory, press the Directory soft key to enter this list directly.

Note

If remote phone book and LDAP are not configured in advance, you cannot see remote phone book and LDAP lists on the phone user interface. For more information on remote phone book, refer to [Remote Phone Book](#) on page 38. For more information on the LDAP, contact your system administrator.

Local Directory

The built-in phone directory can store the names and phone numbers of your contacts. You can store up to 1000 contacts and 50 groups in your phone's local directory. There are four default groups in the local directory: All Contacts, Company, Family and Friend. You can add new groups and contacts; edit, delete or search for a contact; or simply dial a contact number from the local directory.

Adding Groups

To add a group to the local directory:

1. Press the Directory soft key.

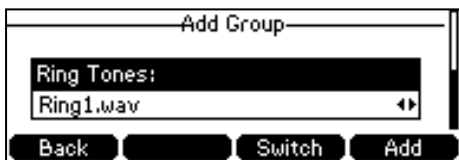
The IP phone enters the local directory directly as there is only Local Directory in the directory by default.



If Local Directory is removed from the directory, press Menu->Directory->Local Directory to enter the local directory.

2. Press the AddGrp soft key.
3. Enter the desired group name in the Name field.
4. Press ◀ or ▶ to select the desired ring tone from the Ring Tones field.

If Auto is selected, this group will use the ring tone assigned to the account. For more information on the ring tone for the account, refer to [Ring Tones](#) on page 24.



5. Press the Add soft key to accept the change or the Back soft key to cancel.

You can also edit or delete the Company, Family and Friend contact groups.

Editing Groups

To edit a group in the local directory:

1. Press the Directory soft key.

The IP phone enters the local directory directly as there is only Local Directory in the directory by default.



If Local Directory is removed from the directory, press Menu->Directory->Local Directory to enter the local directory.

2. Select the desired contact group.
3. Press the Option soft key and then select Detail from the prompt list.



4. Press or to highlight the group information and then edit.
5. Press the Save soft key to accept the change or the Back soft key to cancel.

Deleting Groups

To delete a group from the local directory:

1. Press the Directory soft key.

The IP phone enters the local directory directly as there is only Local Directory in the directory by default.

If Local Directory is removed from the directory, press Menu->Directory->Local Directory to enter the local directory.

2. Select the desired contact group.
3. Press the Option soft key and then select Delete from the prompt list.

The LCD screen prompts the following warning:



4. Press the OK soft key to confirm the deletion or the Cancel soft key to cancel.

You can also delete all groups by pressing the Option soft key, and then select Delete All.

Adding Contacts

You can add contacts to the local directory in the following ways:

- Manually
- From call history
- From remote phone book

Adding Contacts Manually

To add a contact to the local directory manually:

1. Press the Directory soft key.

The IP phone enters the local directory directly as there is only Local Directory in the directory by default.

If Local Directory is removed from the directory, press Menu->Directory->Local Directory to enter the local directory.

2. Select the desired contact group and press the Enter soft key.
3. Press the Add soft key.
4. Enter the name and the office, mobile or other numbers in the corresponding fields.



5. Press or , or the Switch soft key to select the desired account from the Account field.

If Auto is selected, the phone will use the first available account when placing calls to the contact from the local directory.

6. Press or , or the Switch soft key to select the desired ring tone from the Ring Tones field.

If Auto is selected, this contact will use the ring tone assigned to the group.

7. Press the Add soft key to accept the change or the Back soft key to cancel.

Note

If the contact has existed in the directory, the LCD screen will prompt "ContactName existed!".

Adding Contacts from Call History

To add a contact to the local directory from the call history:

1. Press the History soft key.
2. Press or to highlight the desired entry.

3. Press the Option soft key, and then select Move to Contacts from the prompt list.



4. Enter the contact name.
5. Press the Save soft key to accept the change.
The entry is successfully saved to the local directory.

Adding Contacts from Remote Phone Book

To add a contact to the local directory from the remote phone book:

1. Press Directory->Remote Phone Book.
If Remote Phone Book is removed from the directory, press Menu->Directory->Remote Phonebook to enter remote phone book.
2. Select the desired remote group and press the Enter soft key.
3. Press or to highlight the desired entry.
4. Press the Option soft key, and then select Move to Contacts from the prompt list.
5. Press the Save soft key to save the contact to the local directory.
If the contact has already existed in the local directory, the LCD screen will prompt "Overwrite the original contact?". Press the OK soft key to overwrite the original contact in the local directory or the Cancel soft key to cancel.



For more information on remote phone book operating, refer to [Remote Phone Book](#) on page 38.

Editing Contacts

To edit a contact in the local directory:

1. Press the Directory soft key.
The IP phone enters the local directory directly as there is only Local Directory in the directory by default.
If Local Directory is removed from the directory, press Menu->Directory->Local Directory to enter the local directory.
2. Select the desired contact group and press the Enter soft key.
3. Press or to highlight the desired contact.
4. Press the Option soft key, and then select Detail from the prompt list.



5. Press  or  to highlight the contact information and then edit.
6. Press the Save soft key to accept the change or the Back soft key to cancel.



Deleting Contacts

To delete a contact from the local directory:

1. Press the Directory soft key.

The IP phone enters the local directory directly as there is only Local Directory in the directory by default.

If Local Directory is removed from the directory, press Menu->Directory->Local Directory to enter the local directory.

2. Select the desired contact group and press the Enter soft key.
3. Press  or  to highlight the desired contact.
4. Press the Option soft key, and then select Delete from the prompt list.

The LCD screen prompts the following warning:



5. Press the OK soft key to confirm the deletion or the Cancel soft key to cancel.
- You can also delete all contacts by pressing the Option soft key, and then select Delete All.



Placing Calls to Contacts

To place a call to a contact from the local directory:

1. Press the Directory soft key.

The IP phone enters the local directory directly as there is only Local Directory in the directory by default.

If Local Directory is removed from the directory, press Menu->Directory->Local Directory to enter the local directory.

2. Select the desired contact group and press the Enter soft key.
3. Press  or  to highlight the desired contact.
4. Do one of the following:
 - If only one number of the contact is stored in the local directory, press the Dial soft key to dial out the number.
 - If multiple numbers of the contact are stored in the local directory, press the Dial soft key to display a list of numbers.

Press  or  to highlight the desired number.

Press the Dial soft key to dial out the number.

Searching for Contacts

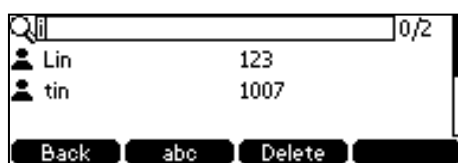
To search for a contact in the local directory:

1. Press the Directory soft key.

The IP phone enters the local directory directly as there is only Local Directory in the directory by default.

If Local Directory is removed from the directory, press Menu->Directory->Local Directory to enter the local directory.

2. Press the Search soft key.
3. Enter a few continuous characters of the contact name or the contact number using the keypad.



The contacts whose name or phone number matches the characters entered will appear on the LCD screen. You can dial from the result list.

Search Source List in Dialing

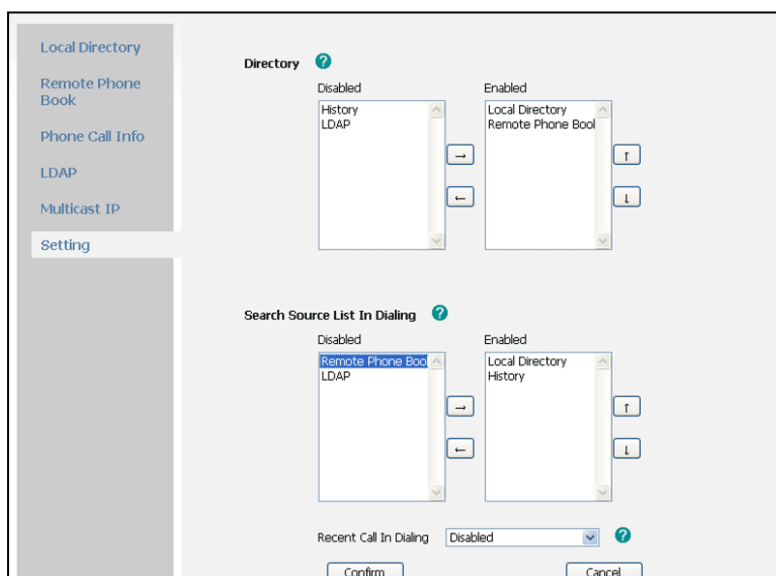
You can search for a contact from the desired lists when the phone is in the dialing screen. The lists can be Local Directory, History, Remote Phone Book and LDAP.

To configure search source list in dialing via web user interface:

1. Click on Directory->Setting.
2. In the Search Source List In Dialing block, select the desired list from the Disabled column and click .

The selected list appears in the Enabled column.
3. Repeat step 2 to add more lists to the Enabled column.
4. To remove a list from the Enabled column, select the desired list and then click .
5. To adjust the display order of the enabled lists, select the desired list and click or .

The LCD screen displays the search results in the adjusted order.



6. Click Confirm to accept the change.

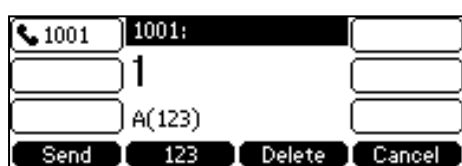
Note

Search source list in dialing is configurable via web user interface only.

To search for an entry in the enabled search source lists:

1. Pick up the handset, press the speakerphone or press the line key.
2. Enter a few continuous characters of the entry's name or the entry's phone number using the keypad.

The entries in the enabled search source lists whose name or phone number matches the characters entered will appear on the LCD screen. You can press **↑** or **↓** to scroll to the desired entry, and then place a call to the entry.

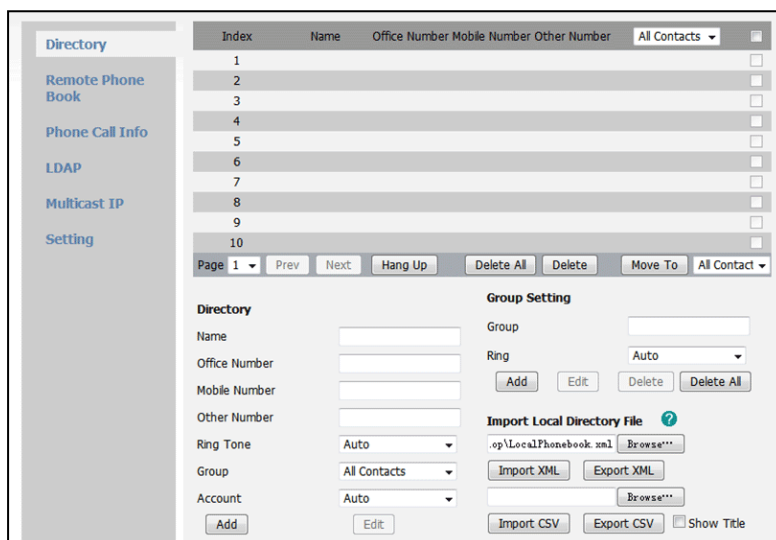


Importing/Exporting Contact Lists

You can manage your phone's local directory via phone user interface or web user interface. But you can only import or export the contact list via web user interface.

To import an XML file of contact list via web user interface:

1. Click on Directory->Local Directory.
2. Click Browse to locate a contact list file (file format must be .xml) from your local system.
3. Click Import XML to import the contact list.



The web user interface prompts "The original contact will be covered, Continue?".

4. Click OK to complete importing the contact list.

To import a CSV file of contact list via web user interface:

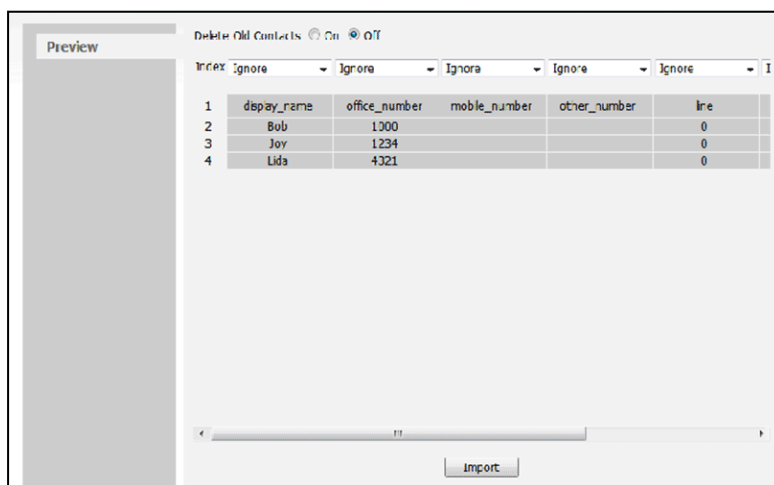
1. Click on Directory->Local Directory.
2. Click Browse to locate a contact list file (file format must be .csv) from your local system.
3. (Optional.) Check the Show Title checkbox.

It will prevent importing the title of the contact information which is located in the first line of the CSV file.

4. Click Import CSV to import the contact list.
5. (Optional.) Mark the On radio box in the Delete Old Contacts field.

It will delete all existing contacts while importing the contact list.

- (Optional.) Select the contact information you want to import into the local directory from the pull down list of Index.



- Click Import to complete importing the contact list.

To export a contact list via web user interface:

- Click on Directory->Local Directory.
- Click Export XML (or Export CSV).
- Click Save to save the contact list to your local system.

Note

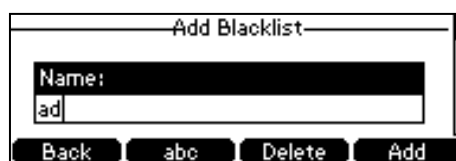
Importing/exporting contact lists is available via web user interface only.

Blacklist

The built-in phone directory can store the names and phone numbers for a blacklist. You can store up to 30 contacts in your phone's blacklist directory; add, edit, delete or search for a contact in the blacklist directory; even call a contact from the blacklist directory, but incoming calls from the blacklist directory contact will be rejected automatically.

To add a contact to the blacklist directory manually:

- Press Menu->Directory->Blacklist.
- Press the Add soft key.
- Enter the name and the office, mobile or other numbers in the corresponding fields.



- Press or , or the Switch soft key to select the desired account from the Account field.

If Auto is selected, the phone will use the first available account when placing calls to the contact from the blacklist directory.



5. Press the Add soft key to accept the change or the Back soft key to cancel.

To add a contact to the blacklist directory from the local directory:

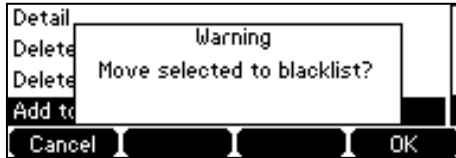
1. Press Directory soft key.

The IP phone enters the local directory directly as there is only Local Directory in the directory by default.

If Local Directory is removed from the directory, press Menu->Directory->Local Directory to enter the local directory.

2. Select the desired contact group and press the Enter soft key.
3. Press  or  to highlight the desired contact.
4. Press the Option soft key and then select Add to Blacklist from the prompt list.

The LCD screen prompts "Move selected to blacklist?".



5. Press the OK soft key to confirm the setting.

For operating instructions on editing, deleting, placing calls to and/or searching for contacts in the blacklist directory, refer to the operating instructions of [Local Directory](#) on page 28.

Remote Phone Book

You can add local contacts, search for a contact, or simply dial a contact number from the corporate directory.

Your phone is configured to display your corporate directory.

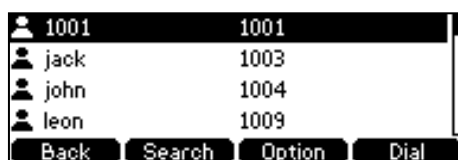
To access your corporate directory via phone user interface:

1. Press Directory->Remote Phone Book.

If this is the first time you have accessed the Remote Phone Book you may be prompted to enter a web access password. This password is your Command Central user password. If you change your Command Central user password you may be prompted to re-enter the password into the phone.

2. Select the desired remote group, and then press the Enter soft key.

The phone connects to load the corporate directory, and then the corporate contact list appears on the LCD screen.



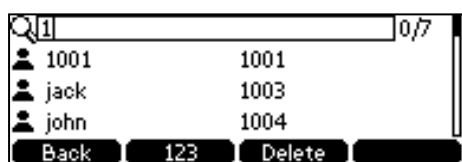
3. Press the Back soft key to back to the previous interface.

To search for a contact in the corporate directory:

1. Press Menu->Directory->Remote Phone Book.

If Remote Phone Book is added to the directory, press Directory->Remote Phonebook to enter remote phone book.

2. Select the desired remote group, and then press the Enter soft key to load the corporate directory.
3. Press the Search soft key.
4. Enter a few continuous characters of the contact name or continuous numbers of the contact number using the keypad.



The contacts whose name or phone number matches the characters entered will appear on the LCD screen. You can place a call from the result list.

To place a call from the corporate directory:

1. Press Menu->Directory->Remote Phone Book.

If Remote Phone Book is added to the directory, press Directory->Remote Phonebook to enter remote phone book.

2. Select the desired remote group, and then press the Enter soft key to load the corporate directory.
3. Select the desired contact in the corporate directory.
4. Press the Dial soft key.

In addition, you can enable the phone to present the caller identity stored in the corporate directory when receiving a call.

Call History Management

The Commander Essentials Desk T41P IP Phone maintains call history lists of Placed Calls, Received Calls, Missed Calls and Forwarded Calls. Call history lists support 400 entries in all. You can view the call history, place a call, add a contact or delete an entry from the call history list. You should enable history record in advance.

By default your phone is configured to use the network call history. This will ensure that any calls made from other devices associated with your service will also appear in your phones history.

If this is the first time you have accessed the Network Call History you may be prompted to enter a web access password. This password is your Command Central user password. If you change your Command Central user password you may be prompted to re-enter the password into the phone

To enable history record via phone user interface:

1. Press Menu->Features->History Setting.
2. Press ◀ or ▶, or the Switch soft key to select Enable from the History Record field.



3. Press the Save soft key to accept the change or the Back soft key to cancel.

To view the call history:

1. Press the History soft key.
The LCD screen displays all call records.
2. Press ◀ or ▶ to switch between All, Placed, Received, Missed and Forwarded call lists.
3. Press ▲ or ▼ to select the desired entry.
4. Press the Option soft key, and then select Detail from the prompt list.
The detailed information of the entry appears on the LCD screen.

To place a call from the call history list:

1. Press the History soft key.
2. Press ◀ or ▶ to switch between All, Placed, Received, Missed and Forwarded call lists.
3. Press ▲ or ▼ to select the desired entry.
4. Press the Send soft key.

To add a contact to the local directory (or blacklist directory) from the call history list:

1. Press the History soft key.
2. Press ◀ or ▶ to switch between All, Placed, Received, Missed and Forwarded call lists.
3. Press ▲ or ▼ to select the desired entry.
4. Press the Option soft key, and then select Move to Contacts (or Add to Blacklist) from the prompt list.



5. Enter the desired values in the corresponding fields.
6. Press the Save soft key to accept the change.

For more information, refer to [Contact Management](#) on page 26.

To delete an entry from the call history list:

1. Press the History soft key.
2. Press or to switch between All, Placed, Received, Missed and Forwarded call lists.
3. Press or to select the desired entry.
4. Press the Delete soft key.

To delete all entries from the call history list:

1. Press the History soft key.
2. Press or to switch between All, Placed, Received, Missed and Forwarded call lists.
3. Press the Option soft key, and then select Delete All from the prompt list.
4. Press the OK soft key.

The LCD screen prompts "Delete all records?".



5. Press the OK soft key to confirm the deletion or the Cancel soft key to cancel.

System Customizations

Headset Use

If you want to use a headset, physically connect your headset and activate the headset mode for use. For more information on physically connecting a headset, refer to [Phone Installation](#) on page 13.

Headset Mode Activation/Deactivation

To activate the headset mode:

1. Press  on the phone.

The headset key LED illuminates solid green when the headset mode is activated. Press the line key or the Answer soft key to answer an incoming call. The call will be connected to your headset automatically.

Enter the desired number and press the Send soft key, then the phone will place a call using the headset automatically. For more information on using the headset to place a call, refer to [Placing Calls](#) on page 58.

To deactivate the headset mode:

1. Press  again on the phone.

The headset key LED goes out when the headset mode is deactivated.

Headset Prior

You can use headset in priority when enabling headset prior. This feature is especially useful for permanent or full-time headset users.

To enable headset prior via web user interface:


1. Click on Features->General Information.

2. Select Enabled from the pull-down list of Headset Prior.

The screenshot shows the 'General Information' configuration page. The 'Headset Prior' dropdown menu is set to 'Enabled'. Other settings include Call Waiting (Enabled), Call Waiting On Code (empty), Call Waiting Off Code (empty), Auto Redial (Disabled), Auto Redial Interval (1~300s) (10), Auto Redial Times (1~300) (10), Key As Send (#), Headset Prior (Enabled), Auto-Logout Time(1~1000min) (5), Call Number Filter (,), Allow IP Call (Enable), IP Direct Auto Answer (Disabled), Call List Show Number (Disabled), Voice Mail Tone (Enable), and DHCP Hostname (SIP-T41P). There are 'Confirm' and 'Cancel' buttons at the bottom.

3. Click Confirm to accept the change.

To use headset prior, you should activate the headset mode in advance:

1. Physically connect the headset.
2. Press  to activate the headset mode.

Note

If headset prior is enabled, the headset mode will not be deactivated until you press the **Headset** key again.

Headset prior is configurable via web user interface only.

DSS Keys

Two types of DSS keys: Line Keys and Programmable Keys. Details will be introduced in the following. The Commander Essentials Desk T41P IP Phone supports 15 line keys.

Line Keys

You can assign predefined functionalities to line keys. You can also define a label for the line key feature which will appear on the LCD screen. Line keys allow you to quickly access features such as call return and voice mail. The line key LEDs will indicate the monitored status when line keys are assigned with particular features, such as BLF. The default key type of line key 1-3 is Account. The default key type of line key 4-15 is N/A, which indicates that this line key provides no functionality until configuration.

To assign functionality to the line key via phone user interface:

1. Press Menu->Features->DSS Keys.

2. Select the desired line key, and then press the Enter soft key.
3. Select the desired key type from the Type field.
4. (Optional.) Select the desired key event type from the Key Type field.
5. (Optional.) Select the desired line from the Account ID field.
6. (Optional.) Enter a string that will appear on the LCD screen in the Label field.
7. (Optional.) Enter the corresponding value in the Value field.
8. (Optional.) Enter the corresponding value in the Extension field.
9. Press the Save soft key to accept the change or the Back soft key to cancel.

Line key is configurable via web user interface at the path DSSKey->Line Key.

Note

When the phone is idle, you can also long press the line key to configure it directly on the phone.

You can assign functionalities to 15 line keys. These 15 line keys are indicated on three pages. When you assign functionality to line key 1-6, labels of line keys are indicated on the first page.

The following figure shows an example:



When you assign functionality to line key 7-15, labels of the line key 6-10 are indicated on the second page, and labels of the line key 11-15 are indicated on the third page. The right bottom line key is used to switch pages.

The following figure shows an example:



The following table lists the page icon and status:

Icons/Status	Description
1	Indicates the current page of line keys.
2 3	Indicates the non-current page of line keys.
Fast flashing	The BLF monitored user receives an incoming call on the non-current page. The line on the non-current page receives an incoming call.

	There is a hold call on the line on the non-current page.
--	---

You can configure the page icon and page switch key LED to indicate different statuses. This feature is disabled by default. For more information on the page switch key LED status, refer to [LED Instructions](#) on page 6.

To configure the page icon to indicate status via web user interface:

1. Click on DSSKey->Line Key.
2. Select Enabled from the pull-down list of Enable Page Tips.

Key	Type	Value	Label	Line	Extension
Line Key1	Line	default		Line 1	
Line Key2	Line	default		Line 2	
Line Key3	Line	default		Line 3	
Line Key4	N/A			N/A	
Line Key5	N/A			N/A	

Buttons: Confirm, Cancel

3. Click Confirm to accept the change.

Note

The page icon status is configurable via web user interface only.

Line key features are explained in the following subchapters in detail:

- Account
- Speed Dial
- Voice Mail
- Directed Pickup
- Group Pickup
- DTMF
- Prefix
- Local Group
- XML Group
- XML Browser
- LDAP
- Conference
- Forward
- Transfer
- Hold

- DND
- Group Listening
- Zero Touch
- URL
- Keypad Lock
- Directory

For more information, contact your system administrator.

Account

You can use this key feature to accept the incoming calls, place active calls on hold or resume a held call. It performs the same as a hard line key.

Dependencies: Type (Account)

Account ID (the account this feature will be applied to)

Value (default/Keypad Lock Settings/Float)

Usage: When receiving an incoming call, the DSS key LED flashes green:

1. Press the DSS key to accept the incoming call.
2. Press the DSS key to place the active call on hold.
3. Press the DSS key again to resume the held call.

If you select Keypad Lock Settings from the Value field, the line keys located in the same position of the other page will be automatically assigned the line key feature with Keypad Lock Settings filled in the Value field. Then you can use this key on every page. This feature is only applicable to line key 1-3.

If you select Float from the Value field, the phone will automatically switch to the page the line key located when the line key receives an incoming call.

Speed Dial

You can use this key feature to speed up dialing the numbers often used or hard to remember.

Dependencies: Type (Speed Dial)

Account ID (the account this feature will be applied to)

Label (key label displayed on the LCD screen)

Value (the number you want to dial out)

Usage: Press the DSS key to dial out the number specified in the Value field, using the account selected from the Account ID field.

Voice Mail

You can use this key feature to connect voice mail quickly. For more information, refer to [Voice Mail](#) on page 101.

Dependencies: Type (Key Event)

Key Type (Voice Mail)

Account ID (the account this feature will be applied to)

Label (key label displayed on the LCD screen)

Value (the voice mail access code)

Usage: Press the DSS key to dial out the voice mail access code, you can follow the voice prompt to listen to the voice mails.

Directed Pickup

You can use this key feature to answer someone else's incoming call on the phone.

Dependencies: Type (Key Event)

Key Type (Direct Pickup)

Account ID (the account this feature will be applied to)

Label (key label displayed on the LCD screen)

Value (directed pickup code followed by the specific phone number)

Usage: Press the DSS key on your phone when the specific phone number receives an incoming call. The call is answered on your phone.

Group Pickup

You can use this key feature to answer incoming calls in a group that is associated with their own group.

Dependencies: Type (Key Event)

Key Type (GPickup)

Account ID (the account this feature will be applied to)

Label (key label displayed on the LCD screen)

Value (the group pickup feature code)

Usage: Press the DSS key on your phone when a phone number in the group receives an incoming call. The call is answered on your phone.

DTMF

You can use this key feature to send the specification of arbitrary key sequences via DTMF.

Dependencies: Type (Key Event)

Key Type (DTMF)

Label (key label displayed on the LCD screen)

Value (DTMF sequence)

Note

DTMF sequence can only contain "0-9", "*", "#", and "A-D".

Usage: Press the DSS key during an active call to send the key sequence specified in the Value field.

Prefix

You can use this key feature to add a specified prefix number before the dialed number.

Dependencies: Type (Key Event)

Key Type (Prefix)

Label (key label displayed on the LCD screen)

Value (the prefix number)

Usage: Press the DSS key when the phone is idle, then the phone will enter into the dialing screen and display the prefix number which you specified in the Value field. You can enter other digits and then dial out.

Local Group

You can use this key feature to access the contact group in the local directory quickly. For more information, refer to [Local Directory](#) on page 28.

Dependencies: Type (Key Event)

Key Type (Local Group)

Local Group (the contact group name you want to access)

Label (key label displayed on the LCD screen)

Usage: Press the DSS key to access the contact group specified in the Local Group field.

XML Group

You can use this key feature to access the remote group in your corporate directory quickly. You should configure remote phone book in advance. For more information, refer to [Remote Phone Book](#) on page 38.

Dependencies: Type (Key Event)

Key Type (XML Group)

PhoneBook Name (the remote group name you want to access if the remote phone book is configured)

Label (key label displayed on the LCD screen)

Usage: Press the DSS key to access the remote group specified in the XML Group field.

XML Browser

You can use this key feature to access the XML browser quickly. The XML browser allows you to create custom services which meet your functional requirements on the server. You can customize practical applications, such as weather report, stock information, Google search, etc.

Dependencies: Type (Key Event)

Key Type (Xml Browser)

Label (key label displayed on the LCD screen)

Value (the access URL for XML browser)

Usage: Press the DSS key to access the XML browser specified in the Value field.

LDAP

You can use this key feature to access the LDAP search interface quickly.

Dependencies: Type (Key Event)

Key Type (LDAP)

Label (key label displayed on the LCD screen)

Usage:

1. Press the DSS key to access the LDAP search interface.
2. Enter a few continuous characters of the contact name or continuous numbers of the contact number using the keypad.

The contacts whose name or phone number matches the characters entered will appear on the LCD screen.

Conference

You can use this key feature to set up a conference call. For more information, refer to [Conference](#) on page 76.

Dependencies: Type (Key Event)

Key Type (Conf)

Label (key label displayed on the LCD screen)

Value (the number you want to add to the conference)

Usage: Press the DSS key during an active call to set up a conference with the number specified in the Value field.

Note

When leaving the **Value** field blank, the DSS key performs the same as the **Conf** soft key during a call.

Forward

You can use this key feature to forward an incoming call to someone else. For more information, refer to [Call Forward](#) on page 68.

Dependencies: Type (Key Event)

Key Type (Forward)

Label (key label displayed on the LCD screen)

Value (the number you want to forward to)

Usage:

1. Press the DSS key to forward an incoming call to the number specified in the Value field.
2. When call forward is in phone mode, press the DSS key to activate call forward for the phone.
3. When call forward is in custom mode, press the DSS key to access the custom call

forward interface. You can activate or deactivate call forward for one or all accounts.

Note

If the **Value** field is left blank, the DSS key performs the same as the **Fwd** soft key when receiving an incoming call.

When call forward is activated, the forward key LED will illuminate solid green.

Transfer

You can use this key feature to handle the call differently depending on the transfer mode via DSS key when there is an active call on the phone.

Dependencies: Type (Key Event)

Key Type (Tran)

Label (key label displayed on the LCD screen)

Value (the number you want to transfer to)

Usage:

- When the transfer mode via DSS key is Blind Transfer, press the DSS key to complete the blind transfer to the number specified in the Value field.
- When the transfer mode via DSS key is Attended Transfer, press the DSS key to dial out the number specified in the Value field, and then perform the attended or semi-attended transfer.
- When the transfer mode via DSS key is New Call, press the DSS key to place a new call to the number specified in the Value field.

Note

Transfer mode via DSS key is configurable via web user interface at the path **Features->Transfer**. For more information on how to configure the transfer mode via DSS key, refer to [Busy Lamp Field \(BLF\)](#) on page 87.

When leaving the **Value** field blank, the DSS key performs the same as the **Tran** soft key during a call.

Hold

You can use this key feature to place an active call on hold or retrieve a held call.

Dependencies: Type (Key Event)

Key Type (Hold)

Label (key label displayed on the LCD screen)

Usage:

1. Press the DSS key during an active call to place the call on hold.
2. Press the DSS key again to retrieve the held call.

DND

You can use this key feature to activate or deactivate the DND mode. You can also use this key feature to access the custom DND interface. For more information, refer to [Do Not Disturb \(DND\)](#) on page 65.

Dependencies: Type (Key Event)

Key Type (DND)

Label (key label displayed on the LCD screen)

Usage:

When DND is in phone mode:

1. Press the DSS key to activate DND.
2. Press the DSS key again to deactivate DND.

When DND is in custom mode:

1. Press the DSS key to access the custom DND interface. You can activate or deactivate DND for one or all accounts.

Note

When DND is activated, the DND key LED will illuminate solid green, and the incoming calls will be rejected automatically.

Group Listening

You can use this key feature to activate the Speakerphone and Handset/Headset mode at the same time. It is suitable for the group conversation which has more than one person at one side. You are able to speak and listen through the handset/headset, meanwhile the others nearby can only listen through the speaker.

Dependencies: Type (Key Event)

Key Type (Group Listening)

Label (key label displayed on the LCD screen)

Usage:

1. During a call, press the DSS key to activate the group listening mode.
You can then speak and listen through the handset/headset, other people at your side can listen through speaker at the same time.
2. Press the DSS key again to deactivate the group listening mode.

Zero Touch

You can use this key feature to configure auto provision and network parameters quickly.

Dependencies: Type (Key Event)

Key Type (Zero Touch)

Label (key label displayed on the LCD screen)

Usage:

1. Press the DSS key to access the zero touch screen.

2. Press the OK soft key within a few seconds.
3. Configure the network parameters in the corresponding fields.
4. Press the Next soft key.
5. Configure the auto provision parameters in the corresponding fields.
6. Press the OK soft key.

The phone will reboot to update configurations.

URL

You can use this key feature to trigger the phone to send an HTTP GET request containing a specific URL.


Dependencies: Type (URL)

Label (key label displayed on the LCD screen)

Value (the URL contained in the HTTP GET request)

Usage: Press the DSS key to trigger the phone to send an HTTP GET request containing the URL specified in the Value field.


Keypad Lock

You can use this key feature to immediately lock the keypad of your phone instead of long pressing . For more information, refer to [Keypad Lock](#) on page 21.

Dependencies: Type (Key Event)

Key Type (Keypad Lock)

Label (key label displayed on the LCD screen)

Usage: Press the DSS key to immediately lock the keypad of your phone instead of long pressing .

Directory

You can use this key feature to easily access frequently used lists. For more information, refer to [Directory](#) on page 26.

Dependencies: Type (Key Event)

Key Type (Directory)

Label (key label displayed on the LCD screen)

Usage: Press the DSS key to immediately access to frequently used lists.

Note

The DSS key performs the same function as the **Directory** soft key when the phone is idle.

Programmable Keys

You can customize the soft keys, navigation keys and function keys.

To customize the programmable keys via web user interface:

1. Click on DSSKey->Programmable Key.

2. Customize specific features for these keys.

Key	Type	Line	Value	Label	Extension
SoftKey 1	History	Local Call Log			
SoftKey 2	Directory	N/A			
SoftKey 3	DND	N/A			
SoftKey 4	Menu	N/A			
Up	History	Local Call Log			
Down	Directory	N/A			
Left	Switch Account	N/A			
Right	Switch Account	N/A			
OK	Status	N/A			
Cancel	N/A	N/A			
MUTE	N/A	N/A			

3. Click Confirm to accept the change.

Note

Programmable keys are configurable via web user interface only.

Multiple Line Keys per Account

You can configure multiple line keys to associate with an account. This enhances call visualization and simplifies call handling.

If this is the case, the LCD screen resembles the following figure:



Incoming calls to this account will be distributed evenly among the available line keys. Outgoing calls will be distributed similarly.

Your phone can be configured to have a combination of accounts with a single line key and accounts with multiple line keys.

Emergency Number

Public telephone networks in countries around the world have a single emergency telephone number (emergency services number), that allows a caller to contact local emergency services for assistance when necessary. The emergency telephone number may differ from country to country. It is typically a three-digit number so that it can be easily remembered and dialed quickly. Some countries have a different emergency number for each of the different emergency services.

You can specify the emergency telephone numbers on the IP phone for contacting the emergency services in an emergency situation.

Note

Contact your local phone service provider for available emergency numbers in your area.

To specify emergency numbers via web user interface:

1. Click on Features->Phone Lock.
2. Enter the emergency number in the Emergency field.

For multiple emergency numbers, enter “,” between every two numbers. The default emergency numbers are 110, 911 and 120.

The screenshot shows the 'Phone Lock' configuration page. The 'Emergency' field is set to '110,911,120'. Other fields include 'Keypad Lock Enable' (Disabled), 'Keypad Lock Type' (Menu Key), 'Phone Unlock PIN' (*****), and 'Phone Lock Time Out' (0).

3. Click Confirm to accept the change.

Note

Emergency number is configurable via web user interface only.

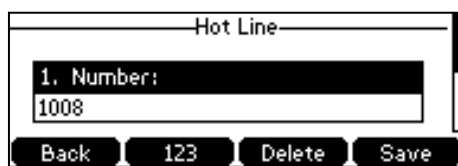
Hotline

You can dial a hotline number immediately upon lifting the handset, pressing the speakerphone key or the line key. You can also configure a delay, where the phone will dial out the hotline number automatically after the specified period of time.

To configure the hotline number via phone user interface:

1. Press Menu->Features->Hot Line.
2. Enter the desired number in the Number field.
3. Enter the delay time (in seconds) in the Hotline Delay field.

The valid values range from 0 to 10.



4. Press the Save soft key to accept the change or the Back soft key to cancel.

Hotline is configurable via web user interface at the path Features->General Information.

Basic Call Features

The Commander Essentials Desk T41P IP Phone is designed to be easily used like a regular phone on a public switched telephone network (PSTN). You can place calls, answer calls, transfer a call to someone else, or conduct a conference call.

This chapter provides basic operating instructions for the Commander Essentials Desk T41P IP Phone. Topics include:

- [Placing Calls](#)
- [Answering Calls](#)
- [Ending Calls](#)
- [Redialing Numbers](#)
- [Recent Call In Dialing](#)
- [Auto Answer](#)
- [Auto Redial](#)
- [Call Return](#)
- [Call Mute](#)
- [Call Hold/Resume](#)
- [Do Not Disturb \(DND\)](#)
- [Call Forward](#)
- [Call Transfer](#)
- [Call Waiting](#)
- [Conference](#)
- [Call Park](#)
- [Call Pickup](#)
- [Anonymous Call](#)
- [Anonymous Call Rejection](#)

If you require additional information or assistance with your new phone, contact your system administrator.

Placing Calls

You can place a call in three ways using your Commander Essentials Desk T41P IP Phone:

- Using the handset
- Using the speakerphone
- Using the headset

You can also dial the number first, and then choose the way you want to speak to the other party.



You can also search and dial a contact from call history, local directory or remote phone book. For more information, refer to [Contact Management](#) on page 26 and [Call History Management](#) on page 39.

During a call, you can alternate between Speakerphone, Headset, or Handset mode by pressing the Speakerphone key, the Headset key, or picking up the handset.

The call duration of active calls is visible on the LCD screen. In the figure below, the call to the number "1007" has lasted 15 seconds.



To place a call using the handset:

1. Pick up the handset.
2. Enter the desired number using the keypad.
3. Press , , or the Send soft key.

The # key is configured as a send key by default







Note

You can also dial using the SIP URI or IP address. To obtain the IP address of a phone, press the **OK** key. The maximum SIP URI or IP address length is 32 characters. For example, SIP URI: 3606@sip.com, IP: 192.168.1.15.

Your phone may not support direct IP dialing. Contact your system administrator for more information.







To place a call using the hands-free speakerphone mode:

Do one of the following:

- With the handset on-hook, press  or the line key to obtain a dial tone.
Enter the desired number using the keypad.
Press ,  or the Send soft key.
- With the handset on-hook, enter the desired number using the keypad.
Press , ,  or the Send soft key.

To place a call using the headset:

Do one of the following:





- With the optional headset connected, press  to activate the headset mode.
Press the line key to obtain a dial tone.
Enter the desired number using the keypad.
Press , , or the Send soft key.
- With the optional headset connected, press  to activate the headset mode.
Enter the desired number using the keypad.
Press , , or the Send soft key.



Note

To permanently use the headset mode, refer to [Headset Prior](#) on page 42.

To place multiple calls:

You can have more than one call on your Commander Essentials Desk T41P IP Phone. To place a new call during an active call, do one of the following:

- Press the line key. The active call is placed on hold.
Enter the desired number using the keypad.
Press , , or the Send soft key.
- Press the Hold soft key to place the original call on hold.
Press the New Call soft key.
Enter the desired number using the keypad.
Press , , or the Send soft key.

You can press  or  to switch between calls, and then press the Resume soft key to retrieve the desired call.

Answering Calls

When you are not in another call, you can answer a call in three ways:

- Using the handset
- Using the speakerphone
- Using the headset

Note

You can ignore incoming calls by pressing the **X** key, the **Reject** soft key or the **Silence** soft key. You can also activate Do Not Disturb mode to ignore the incoming calls without ring on your phone. For more information, refer to [Do Not Disturb \(DND\)](#) on page 65.

You can forward incoming calls to someone else by pressing the **Fwd** soft key. For more information, refer to [Call Forward](#) on page 68.

Answering When Not in Another Call


Call duration and destination will always appear on the LCD screen for the active call.

To answer a call using the handset:

1. Pick up the handset.


To answer a call using the hands-free speakerphone mode:

Do one of the following:

- Press .
- With the handset on-hook and the headset mode deactivated, press the Answer soft key.
- With the handset on-hook and the headset mode deactivated, press the line key (the line key LED flashes green).



To answer a call using the headset:

Do one of the following:

- Press .
- With the headset mode activated, press the Answer soft key.
- With the headset mode activated, press the line key (the line key LED flashes green).

Answering When in Another Call


If you have an active call, and an incoming call arrives on the phone, do one of the following:

- Press the Answer soft key.
The incoming call is answered and the original call is placed on hold.
- Press  to access the new call.
Press  or the Answer soft key.
The incoming call is answered and the original call is placed on hold.

Ending Calls

To end a call:

Do one of the following:

- If you are using the handset, press the Cancel soft key or hang up the handset.
- If you are using the headset, press the Cancel soft key.
- If you are using the speakerphone, press  or the Cancel soft key.

Note

To end a call placed on hold, you can press the **Cancel** soft key to end the call directly, or press the **Resume** soft key to resume the call before ending it.






Redialing Numbers

To redial the last dialed number from your phone:

1. Press  twice.

A call to your last dialed number is attempted.

To redial a previously dialed number from your phone:

1. Press  when the phone is idle.
2. Press  or  to select the desired entry from the placed calls list, and  press  or the Send soft key.

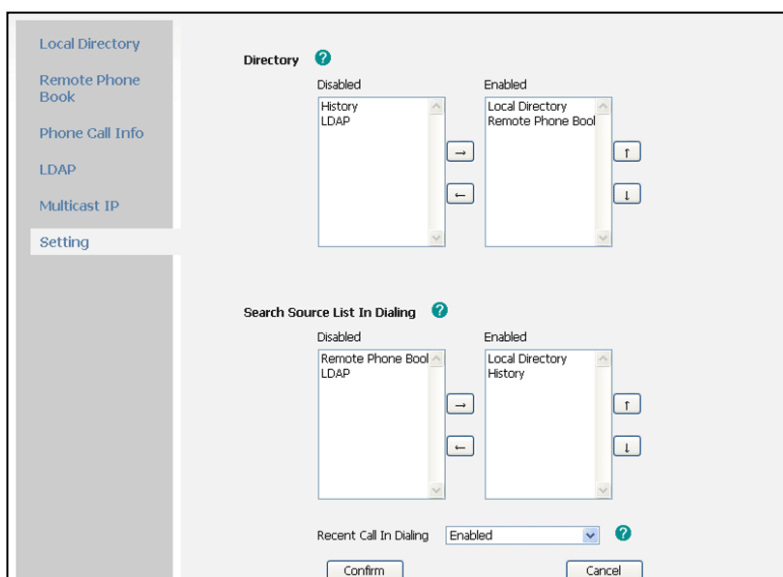
Recent Call In Dialing

To view the placed calls list when the phone is in the pre-dialing interface, you should enable recent call in dialing in advance.

To enable recent call in dialing via web user interface:

1. Click on Directory->Setting.

2. Select Enabled from the pull-down list of Recent Call In Dialing.



3. Click Confirm to accept the change.

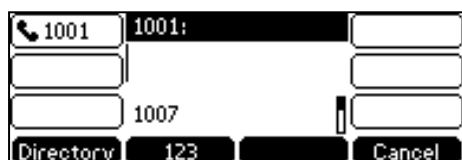
Note

Recent call in dialing is configurable via web user interface only.

To view placed calls list when the phone is in the pre-dialing interface:

1. Pick up the handset, press the speakerphone or press the line key.

The LCD screen displays the placed calls list.



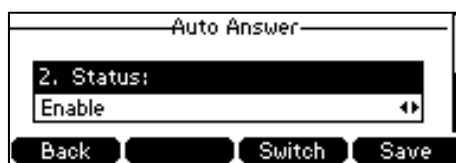
Auto Answer

You can use auto answer to automatically answer an incoming call on a line. Auto answer is configurable on a per-line basis.

To configure auto answer via phone user interface:

1. Press Menu->Features->Auto Answer.
2. Press or , or the Switch soft key to select the desired line from the Account field.

3. Press  or , or the Switch soft key to select Enable from the Status field.



4. Press the Save soft key to accept the change or the Back soft key to cancel.

The **AA** icon appears on the LCD screen.

Auto answer is configurable via web user interface at the path Account->Basic.



Note

Auto answer is only applicable when there is no other call in progress on the phone.

Auto Redial

You can enable auto redial to redial the phone number automatically when the called party is busy. You can also configure the times settings for auto redial and the time to wait between redial attempts.

To configure auto redial via phone user interface:

1. Press Menu->Features->Auto Redial.
2. Press  or , or the Switch soft key to select Enable from the Auto Redial field.



3. Enter the desired time (in seconds) in the Redial Interval field.
The default time interval is 10 seconds.
4. Enter the desired times in the Redial Times field.
The default value is 10.
5. Press the Save soft key to accept the change or the Back soft key to cancel.

Auto redial is configurable via web user interface at the path Features->General Information.

To use auto redial:

When the called party is busy, the LCD screen prompts the following:



1. Press the OK soft key to activate auto redial.

The LCD screen prompts the following:



2. Wait for a period of time or press the OK soft key to redial the phone number.

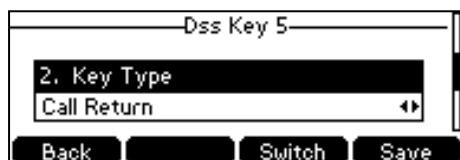
The phone will retry as many times as configured until the called party is idle.

Call Return

You can press a call return key to place a call back to the last incoming call.

To configure a call return key via phone user interface:

1. Press Menu->Features->DSS Keys.
2. Select a desired DSS key.
3. Press or , or the Switch soft key to select Key Event from the Type field.
4. Press or , or the Switch soft key to select Call Return from the Key Type field.
5. (Optional.) Enter a string that will appear on the LCD screen in the Label field.



6. Press the Save soft key to accept the change or the Back soft key to cancel.

Call return key is configurable via web user interface at the path DSSKey->Line Key.

Call Mute

You can mute the microphone of the active audio device during an active call, and then the other party cannot hear you.

To mute a call:


1. Press during an active call.

The mute key LED illuminates solid red.

The LCD screen indicates that the call is on mute.



To un-mute a call:

1. Press  again to un-mute the call.

The mute key LED goes out.

Call Hold/Resume

You can place an active call on hold. Only one active call can be in progress at any time. Other calls can be made and received while placing the original call on hold. When you place a call on hold, your IP PBX may play music on hold to the other party while waiting.

To place a call on hold:

1. Press the Hold soft key during a call.

The line key LED flashes green. The LCD screen indicates that the call is on hold.



Note



The phone will beep softly every 30 seconds to remind you that you still have a call on hold.

To resume a held call:

1. Press the Resume soft key.

Multiple Calls on Hold:

If multiple calls are placed on hold, do one of the following:

- Press  or  to switch between the calls, and then press the Resume soft key to retrieve the desired call.
- Press the corresponding line key to retrieve the call.

If more than one call is placed on hold, a numbered prompt appears on the LCD screen, for example "2/3", indicating that this is the second call out of three calls.

Do Not Disturb (DND)

You can use DND to reject incoming calls automatically on the phone. Callers will receive a busy message.

You can enable/disable DND for the phone system, or you can customize DND for each or all accounts.

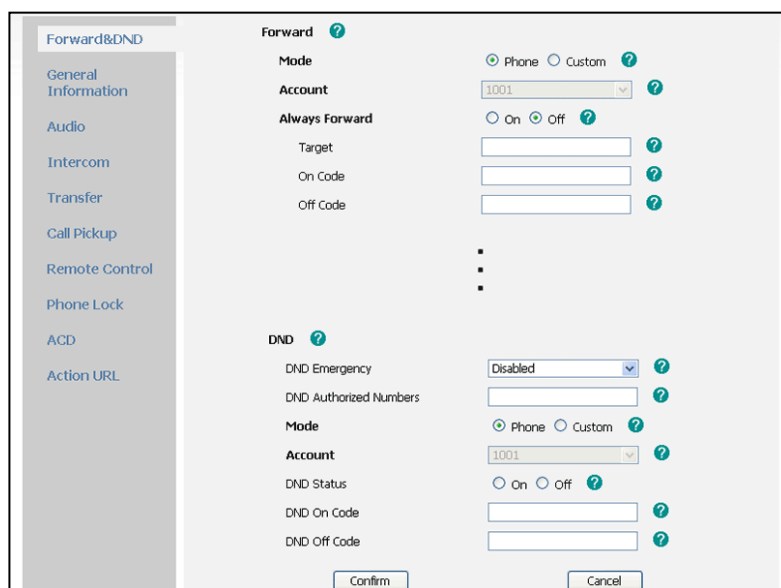
Two DND modes:

- Phone (default): DND is effective for the phone system.
- Custom: DND can be configured for each or all accounts

You can receive incoming calls from authorised numbers when DND is enabled.

To configure the DND mode via web user interface:

1. Click on Features->Forward & DND.
2. In the DND block, mark the desired radio box in the Mode field.



3. Click Confirm to accept the change.

Note

DND mode is configurable via web user interface only.

To activate DND in phone mode:

1. Press the DND soft key when the phone is idle.
The **DND** icon on the idle screen indicates that DND is enabled.

Incoming calls will be rejected automatically and "n Missed Call(s)" ("n" indicates the number of the missed calls) will prompt on the LCD screen.



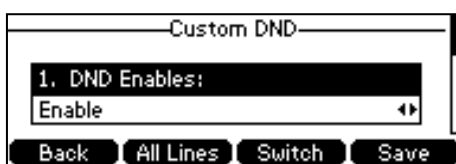
To activate DND in custom mode for a specific account:

1. Press the DND soft key when the phone is idle.

The LCD screen displays a list of accounts registered on the phone.



2. Press or to select the desired account and then press the Enter soft key.
3. Press or , or the Switch soft key to select Enable from the DND Enables field.



4. Press the Save soft key to accept the change.

The **DND** icon appears on the idle screen, and the associated line icon changes to .

Incoming calls on the specific line will be rejected automatically, and the LCD screen prompts "n Missed Call(s)" ("n" indicates the number of the missed calls).





To activate DND in custom mode for all accounts:

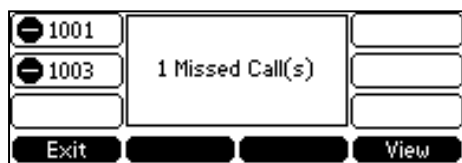
1. Press the DND soft key when the phone is idle.

The LCD screen displays a list of accounts registered on the phone.



2. Press the All On soft key to activate DND for all accounts.
3. Press the Save soft key to accept the change.

The **DND** icon appears on the idle screen, and all line icons  change to . Incoming calls will be rejected automatically, and "n Missed Call(s)" ("n" indicates the number of the missed calls) will be prompted on the LCD screen.



Note

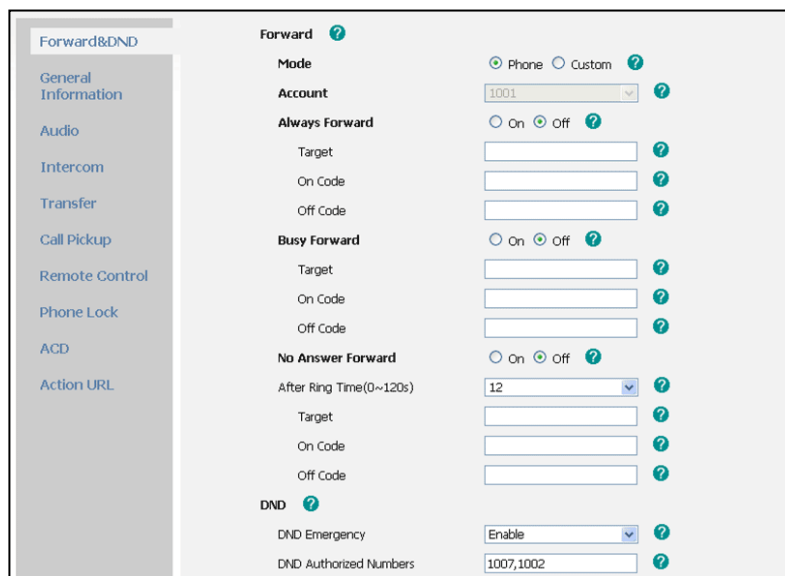
The prompt message displays only if Missed Call Log for the line is enabled. Missed call log is configurable via web user interface at the path **Account->Basic**.

Do not disturb is local to the phone, and may be overridden by the server settings. For more information, contact your system administrator.

To configure the DND Authorised numbers via web user interface:

1. Click on Features->Forward & DND.
2. Select Enable from the pull-down list of DND Emergency.
3. Enter the numbers in the DND Authorised Numbers field.

For multiple numbers, enter “,” between every two numbers.



4. Click Confirm to accept the change.

When DND is enabled on the phone, the phone can still receive incoming calls from the numbers specified in the DND Authorised Numbers field.

Note

DND authorised number is configurable via web user interface only.

Call Forward

You can configure your phone to forward incoming calls to another party by the static forwarding. You

can also forward calls while your phone is ringing, refer to the dynamic forwarding.

Static Forwarding

Three types of static forwarding:

- Always Forward: Incoming calls are immediately forwarded.
- Busy Forward: Incoming calls are immediately forwarded if the phone is busy.
- No Answer Forward: Incoming calls are forwarded if not answered after a period of time.

You can enable/disable call forward for the phone system, or you can customize call forward for each or all accounts. Two call forward modes:

- Phone (default): Call forward is effective for the phone system.
- Custom: Call forward can be configured for each or all accounts.

To configure the call forward mode via web user interface:

1. Click on Features->Forward & DND.
2. In the Forward block, mark the desired radio box in the Mode field.



The screenshot shows the 'Forward' configuration page. On the left is a sidebar with menu items: Forward&DND, General Information, Audio, Intercom, Transfer, Call Pickup, Remote Control, Phone Lock, ACD, and Action URL. The main area is titled 'Forward' and has a 'Mode' section with radio buttons for 'Phone' and 'Custom'. Below that is an 'Account' dropdown menu set to '1001'. There are three main forwarding sections: 'Always Forward', 'Busy Forward', and 'No Answer Forward'. Each section has radio buttons for 'On' and 'Off'. Under each section, there are three input fields: 'Target', 'On Code', and 'Off Code', each with a help icon. The 'No Answer Forward' section also includes an 'After Ring Time(0~120s)' dropdown menu set to '12'.

3. Click Confirm to accept the change.



Note

Call forward mode is configurable via web user interface only.

To enable call forward in phone mode:

1. Press Menu->Features->Call Forward.
2. Press  or  to select the desired forwarding type, and then press the Enter soft key.
3. Depending on your selection:



a.) If you select Always forward:

- 1) Press  or , or the Switch soft key to select Enable from the Always forward field.



- 2) Enter the destination number you want to forward all incoming calls to in the Forward to field.
- 3) (Optional.) Enter the always forward on code or off code respectively in the On Code or Off Code field.



b.) If you select Busy Forward:

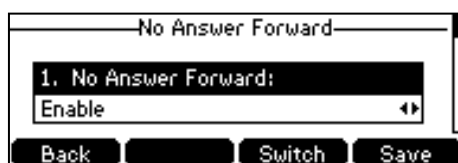
- 1) Press  or , or the Switch soft key to select Enable from the Busy Forward field.





- 2) Enter the destination number you want to forward all incoming calls to when the phone is busy in the Forward to field.
- 3) (Optional.) Enter the busy forward on code or off code respectively in the On Code or Off Code field.

c.) If you select No Answer Forward:

- 1) Press  or , or the Switch soft key to select Enable from the No Answer Forward field.



- 2) Enter the destination number you want to forward all unanswered incoming calls to in the Forward to field.
- 3) Press  or , or the Switch soft key to select the ring time to wait before forwarding from the After Ring Times field.







The default ring time is 12 seconds.

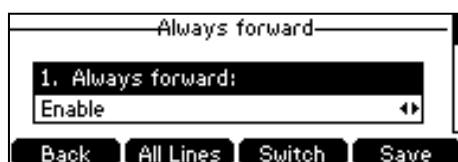
- 4) (Optional.) Enter the no answer forward on code or off code respectively in the On Code or Off Code field.

4. Press the Save soft key to accept the change or the Back soft key to cancel.

The  icon on the idle screen indicates the call forward is enabled.



To enable call forward in custom mode:

1. Press Menu->Features->Call Forward.
2. Press  or  to select the desired account, and then press the Enter soft key.
3. Press  or  to select the desired forwarding type, and then press the Enter soft key.
4. Depending on your selection:
 - a.) If you select Always forward, you can enable it for a specific account.
 - 1) Press  or , or the Switch soft key to select Enable from the Always forward field.

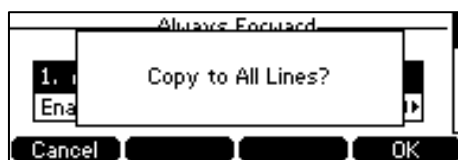


- 2) Enter the destination number you want to forward all incoming calls to in the Forward to field.
- 3) (Optional.) Enter the always forward on code or off code respectively in the On Code or Off Code field.

You can also enable always forward for all accounts. After always forward was enabled for a specific account, do the following:

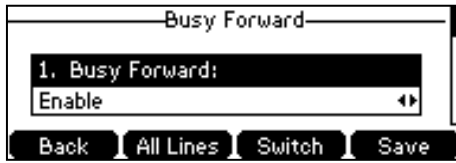
- 1) Press  or  to highlight the Always forward field.
- 2) Press the All Lines soft key.

The LCD screen prompts "Copy to All Lines?".



- 3) Press the OK soft key to accept the change or the Cancel soft key to cancel.
- b.) If you select Busy Forward, you can enable it for a specific account.

- 1) Press ◀ or ▶, or the Switch soft key to select Enable from the Busy Forward field.

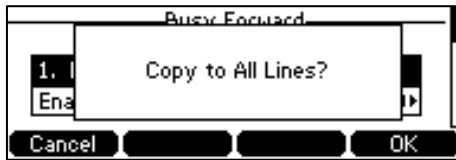


- 2) Enter the destination number you want to forward incoming calls to when the phone is busy in the Forward to field.
- 3) (Optional.) Enter the busy forward on code or off code respectively in the On Code or Off Code field.

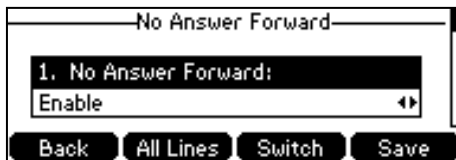
You can also enable busy forward for all accounts. After busy forward was enabled for a specific account, do the following:

- 1) Press ▲ or ▼ to highlight the Busy Forward field.
- 2) Press the All Lines soft key.

The LCD screen prompts "Copy to All Lines?":



- 3) Press the OK soft key to accept the change or the Cancel soft key to cancel.
- c.) If you select No Answer Forward, you can enable it for a specific account.
- 1) Press ◀ or ▶, or the Switch soft key to select Enable from the No Answer forward field.



- 2) Enter the destination number you want to forward all unanswered incoming calls to in the Forward to field.
- 3) Press ◀ or ▶, or the Switch soft key to select the ring time to wait before forwarding from the After Ring Times field.

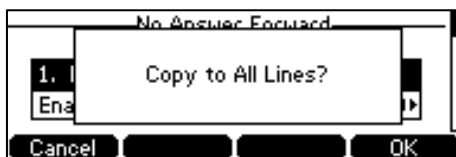
The default ring time is 12 seconds.



- 4) (Optional.) Enter the no answer forward on code or off code respectively in the On Code or Off Code field.

You can also enable no answer forward for all accounts. After no answer forward was enabled for a specific account, do the following:

- 1) Press ▲ or ▼ to highlight the No Answer Forward field.
- 2) Press the All Lines soft key.

The LCD screen prompts "Copy to All Lines?":







- 3) Press the OK soft key to accept the change or the Cancel soft key to cancel.
 5. Press the Save soft key to accept the change or the Back soft key to cancel.
- The  icon appears on the idle screen, and the associated line icon changes to .
- Call forward is configurable via web user interface at the path Features->Forward & DND.

Note







You can also enter the SIP URL or IP address in the **Forward to** field. For more information on using the SIP URL or IP address, refer to [Placing Calls](#) on page 58.

Call forward is local to the phone, and may be overridden by the server settings. Call forward on code or off code may be different between servers. For more information, contact your system administrator.

To disable call forward in phone mode:

1. Press Menu->Features->Call Forward.
2. Press  or  to select the desired forwarding type, and then press the Enter soft key.
3. Press  or , or the Switch soft key to select Disable to disable the call forward.
4. Press the Save soft key to accept the change.

To disable call forward in custom mode for a specific account:

1. Press Menu->Features->Call Forward.
2. Press  or  to select the desired account, and then press the Enter soft key.
3. Press  or  to select the desired forwarding type, and then press the Enter soft key.
4. Press  or , or the Switch soft key to select Disable to disable the call forward.
5. Press the Save soft key to accept the change.

Dynamic Forwarding

To forward an incoming call to another party:

1. When the phone is ringing, press the Fwd soft key.

2. Enter the number you want to forward the incoming call to.



3. Press , , or the Send soft key.

The LCD screen prompts a call forward message.

Call Transfer

You can transfer a call to another party in one of the three ways:

- Blind Transfer: Transfer a call directly to another party without consulting.
- Semi-Attended Transfer: Transfer a call when the target phone is ringing.
- Attended Transfer: Transfer a call with prior consulting.

To perform a blind transfer:





1. Press the Tran soft key during a call.
2. Enter the number you want to transfer the call to.



3. Press the Tran soft key to complete the transfer.





Then the call is connected to the number to which you are transferring.

To perform a semi-attended transfer:

1. Press the Tran soft key during a call.
2. Do one of the following:
 - Enter the number you want to transfer the call to.
 - Press the Directory soft key, and then select Local Directory. Select the desired group and search for the contact (Directory should be configured in advance. Refer to [Directory](#) on page 26 for more information).
 - Press the Directory soft key, and then select History. Select the desired list and press  or  to select the entry (Directory should be configured in advance. Refer to [Directory](#) on page 26 for more information).
 - Press the Directory soft key, and then select Remote Phone Book. Select the desired group and search for the contact (Directory should be configured in advance. Refer to [Directory](#) on page 26 and [Remote Phone Book](#) on page 38 for more information).
3. Press  or  to dial out.

4. Press the Tran soft key to complete the transfer when receiving ringback.

To perform an attended transfer:

1. Press the Tran soft key during a call.
2. Do one of the following:
 - Press the Directory soft key, and then select Local Directory. Select the desired group and search for the contact (Directory should be configured in advance. Refer to [Directory](#) on page 26 for more information).
 - Press the Directory soft key, and then select History. Select the desired list and press  or  to select the entry (Directory should be configured in advance. Refer to [Directory](#) on page 26 for more information).
 - Press the Directory soft key, and then select Remote Phone Book. Select the desired group and search for the contact (Directory should be configured in advance. Refer to [Directory](#) on page 26 and [Remote Phone Book](#) on page 38 for more information).
3. Press  or  to dial out.
4. After the party answers the call, press the Tran soft key to complete the transfer.



If you are using a handset, the transfer can be completed by hanging up the handset.

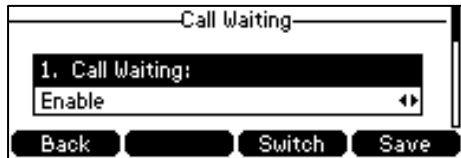
You can cancel the transfer before the call is connected by pressing the Cancel soft key.



Call Waiting

You can enable or disable call waiting on the phone. If call waiting is enabled, you can receive another call when there is an active call on the phone. Otherwise, another incoming call is automatically rejected by the phone with a busy message when there is an active call on the phone. You can also enable or disable the phone to play a warning tone when receiving another call.

To configure call waiting via phone user interface:

1. Press Menu->Features->Call Waiting.
2. Press  or , or the Switch soft key to select Enable from the Call Waiting field.



3. Press  or , or the Switch soft key to select Enable from the Play Tone field.
4. (Optional.) Enter the call waiting on code or off code respectively in the CW On Code or CW Off Code field.
5. Press the Save soft key to accept the change or the Back soft key to cancel.

Call waiting is configurable via web user interface at the path Features->General Information.

Conference

You can create a conference with two parties using the phone's local conference. You can create a conference between an active call and a call on hold by pressing the Conf soft key. The Commander Essentials Desk T41P IP Phone also supports network conference.



Note

Network conference is not available on all servers. For more information, contact your system administrator.

Local Conference



The Commander Essentials Desk T41P IP Phone supports up to 3 parties (including yourself) in a conference call. This is the default method of conference called Local Conference.

To set up a local conference call:



1. Place a call to the first party.
2. When the first party answers the call, press the Conf soft key to place a new call. The active call is placed on hold.
3. Enter the number of the second party and press , , or the Send soft key.
4. When the second party answers the call, press the Conf soft key again to join all parties in the conference.




To join two calls in a conference:

1. Place two calls using two different accounts on the phone (for example, place the first call using account 1, and then place the second call using account 2).
2. Press  or  to select the call for conference and make sure the call is active (for example, select the call on account 1).
3. Press the Conf soft key to join the two calls in the conference on account 1.

During the conference call, you can do the following:

- Press the Hold soft key to place the conference on hold.
- Press the Split soft key to split the conference call into two individual calls.
- Press the Manage soft key, and then press  or  to select the desired party:
- Press the Far Mute soft key to forbid the party from speaking.
- Press the Remove soft key to remove the party from the conference call.

- Press the New Call soft key to place a new call.
- Press the Back soft key to return to the previous interface.
- Press  to mute the conference call.
- Press the Cancel soft key to drop the conference call.

Network Conference

You can use network conference feature on the Commander Essentials Desk T41P IP Phone to conduct a conference with multiple participants.

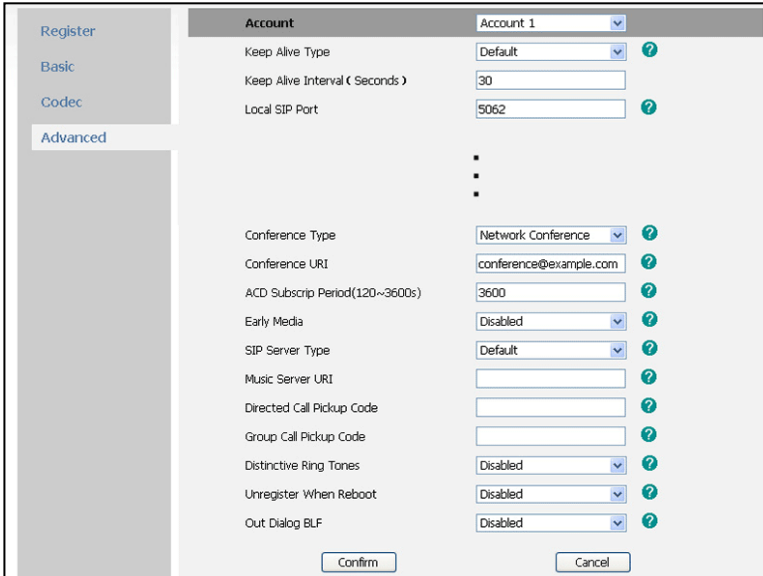
This feature allows you to perform the following:

- Join two calls together into a conference call.
- Invite another party into an active conference call.
- Remove a specific conference party.

To use this feature, contact your system administrator for the network conference URI in advance.

To configure network conference via web user interface:

1. Click on Account->Advanced.
2. Select Network Conference from the pull-down list of Conference Type.
3. Enter the conference URI (e.g., conference@example.com) in the Conference URI field.









The screenshot shows the 'Advanced' configuration page for 'Account 1'. The 'Conference Type' is set to 'Network Conference' and the 'Conference URI' is 'conference@example.com'. Other settings include 'Keep Alive Type' (Default), 'Keep Alive Interval (Seconds)' (30), 'Local SIP Port' (5062), 'ACD Subscrip Period(120~3600s)' (3600), 'Early Media' (Disabled), 'SIP Server Type' (Default), 'Music Server URI', 'Directed Call Pickup Code', 'Group Call Pickup Code', 'Distinctive Ring Tones' (Disabled), 'Unregister When Reboot' (Disabled), and 'Out Dialog BLF' (Disabled). There are 'Confirm' and 'Cancel' buttons at the bottom.

4. Click Confirm to accept the change.

Note

Network conference is configurable via web user interface only.

To set up a network conference call:

1. Place a call to the first party.
2. Press the Conf soft key to place a new call.
The active call is placed on hold.
3. Enter the number of the second party and   ,  , or the Send soft key.
4. When the second party answers the call, press the Conf soft key to add the second party to the conference.
5. Press the Conf soft key to place a new call.
The conference is placed on hold.
6. Enter the number of the new party and then   ,  , or the Send soft key.
7. When the new party answers the call, press the Conf soft key to add the new party to the conference.
8. Repeat steps 5 to 7 until you have added all intended parties.

The procedures to set up a network conference call on specific servers may be different from introduced above. Contact your system administrator for more information.





Call Park

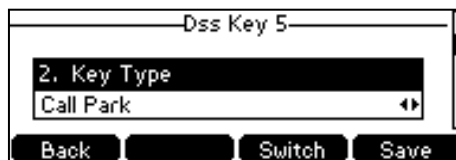
You can use call park to place a call on hold, and then retrieve the call from another phone in the system (for example, a phone in another office or conference room). You can park an active call by pressing the call park key on the phone. If the call is parked successfully, the response is either a voice prompt confirming that the call was parked, or a visible prompt on the LCD screen.



Note

Call park is not available on all servers. Contact your system administrator for more information.

To configure a call park key via phone user interface:

1. Press Menu->Features->DSS Keys.
2. Select the desired DSS key.
3. Press  or  , or the Switch soft key to select Key Event from the Type field.
4. Press  or  , or the Switch soft key to select Call Park from the Key Type field.



5. Press  or  , or the Switch soft key to select the desired line from the Account ID field.
6. (Optional.) Enter the string that will appear on the LCD screen in the Label field.

7. Enter the call park code in the Value field.
8. Press the Save soft key to accept the change or the Back soft key to cancel.

Call park key is configurable via web user interface at the path DSSKey->Line Key.

To use call park:

1. User on phone A places a call to phone B.
2. User on phone A wants to take the call in a conference room for privacy, then presses the call park key on phone A.
3. User on phone A walks to an available conference room where the phone is designated as phone C. The user dials the call park retrieve code to retrieve the parked call.
The system establishes call between phone C and B.

Note

The call park code and call park retrieve code are predefined on the system server. Contact your system administrator for more information.

If the parked call is not retrieved within a period of time assigned by the system, the phone performing call park feature will receive call back.

Call Pickup

You can use call pickup to answer someone else's incoming call on the phone. The Commander Essentials Desk T41P IP Phone supports directed call pickup and group call pickup. Directed call pickup is used for picking up a call that is ringing at a specific phone number. Group call pickup is used for picking up a call that is ringing at any phone number in the group. The pickup group should be predefined, contact your system administrator for more information.

You can pick up an incoming call by using the DPickup/GPickup soft key. To use call pickup, you need to configure the call pickup code beforehand on a global or per-line basis via web user interface.

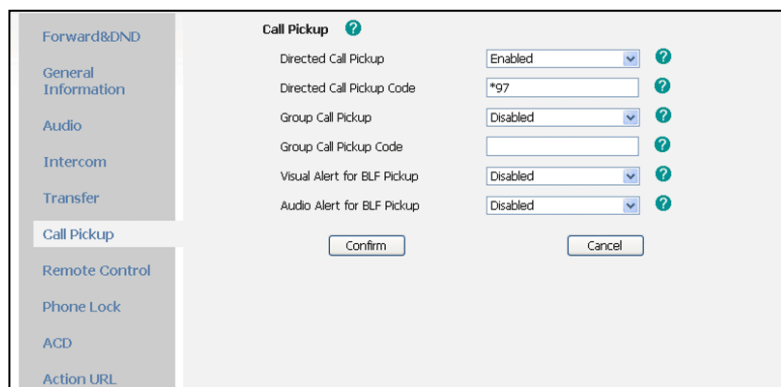
Note

If there are many incoming calls at the same time, pressing the **GPickup** soft key on the phone will pick up the call that rings first.

Directed Call Pickup

To enable directed call pickup and configure the directed call pickup code on a global basis via web user interface:

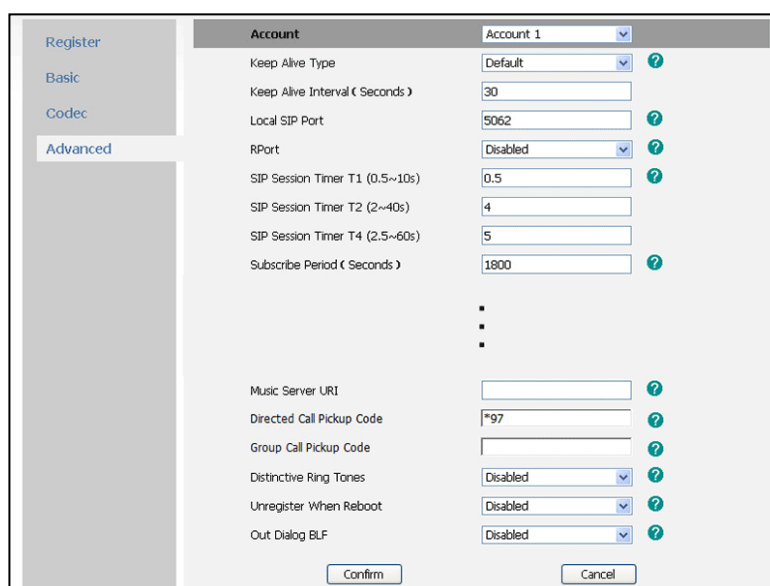
1. Click on Features->Call Pickup.
2. Select Enabled from the pull-down list of Directed Call Pickup.
3. Enter the directed call pickup code in the Directed Call Pickup Code field.



4. Click Confirm to accept the change.

To configure the directed call pickup code on a per-line basis via web user interface:

1. Click on Account.
2. Select the desired account from the pull-down list of Account.
3. Click on Advanced.
4. Enter the directed call pickup code in the Directed Call Pickup Code field.

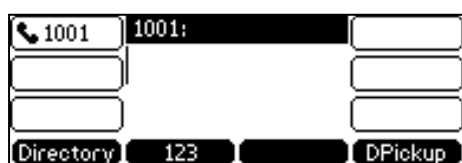


5. Click Confirm to accept the change.

To pick up a call directly:

1. Pick up the handset.

The DPickup soft key appears on the LCD screen.



2. Press the DPickup soft key on your phone when a phone receives an incoming call.
3. Enter the phone number which receives an incoming call.
4. Press the DPickup soft key again.

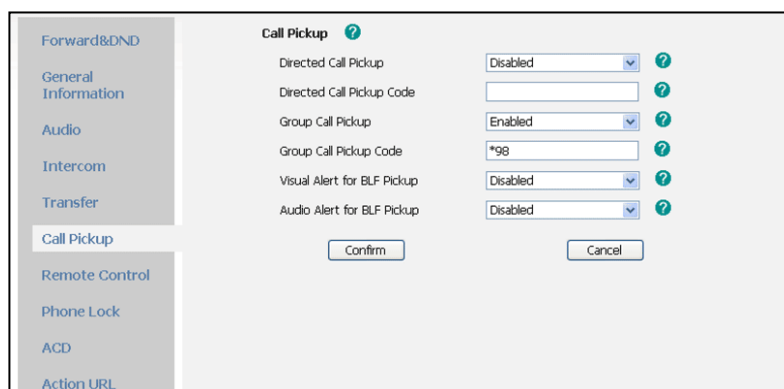
The call is answered on your phone.

You can also configure a DSS key as directed pickup key via phone user interface or web user interface. You can pick up a call by pressing the directed pickup key directly.

Group Call Pickup

To enable the group call pickup and configure the group call pickup code on a global basis via web user interface:

1. Click on Features->Call Pickup.
2. Select Enabled from the pull-down list of Group Call Pickup.
3. Enter the group call pickup code in the Group Call Pickup Code field.



4. Click Confirm to accept the change.

To configure the group call pickup code on a per-line basis via web user interface:

1. Click on Account.
2. Select the desired account from the pull-down list of Account.
3. Click on Advanced.
4. Enter the group call pickup code in the Group Call Pickup Code field.

The screenshot shows the 'Advanced' settings page for 'Account 1'. The left sidebar has 'Advanced' selected. The main area contains the following settings:

Setting	Value	Help Icon
Account	Account 1	
Keep Alive Type	Default	?
Keep Alive Interval (Seconds)	30	
Local SIP Port	5062	?
RPort	Disabled	?
SIP Session Timer T1 (0.5~10s)	0.5	?
SIP Session Timer T2 (2~40s)	4	
SIP Session Timer T4 (2.5~60s)	5	
Subscribe Period (Seconds)	1800	?
• • •		
Music Server URI		?
Directed Call Pickup Code		?
Group Call Pickup Code	*98	?
Distinctive Ring Tones	Disabled	?
Unregister When Reboot	Disabled	?
Out Dialog BLF	Disabled	?

At the bottom of the settings area are 'Confirm' and 'Cancel' buttons.

5. Click Confirm to accept the change.

To pick up a call in the group:

1. Pick up the handset.

The GPickup soft key appears on the LCD screen.



2. Press the GPickup soft key on your phone when a phone in the group receives an incoming call.

The call is answered on your phone.

You can also configure a DSS key as group pickup key via phone user interface or web user interface.

You can pick up a call by pressing the group pickup key directly.

Note

The directed call pickup code and group call pickup code are predefined on the system server. Contact your system administrator for more information.

The call pickup code configured on a per-line basis takes precedence over that configured on a global basis.

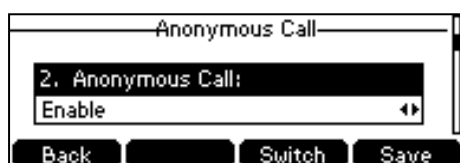
Anonymous Call

Note

Activating Anonymous call will prevent your phone from making outbound calls. Please do not activate this feature if you wish to make outbound calls. If you wish to make an anonymous call please use the feature access codes.

To configure anonymous call via phone user interface:

1. Press Menu->Features->Anonymous Call.
2. Press or , or the Switch soft key to select the desired line from the Line ID field.
3. Press or , or the Switch soft key to select Enable from the Anonymous Call field.



4. (Optional.) Enter the anonymous call on code in the Call On Code field.
5. (Optional.) Enter the anonymous call off code in the Call Off Code field.
6. Press the Save soft key to accept the change or the Back soft key to cancel.

Anonymous call is configurable via web user interface at the path Account->Basic.

To place an anonymous call:

1. Using the specific line on the phone to place a call to phone B.

The LCD screen of phone B prompts an incoming call from anonymity.

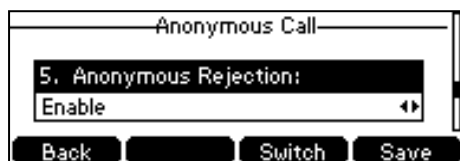


Anonymous Call Rejection

You can use anonymous call rejection to reject incoming calls from anonymous callers. Anonymous call rejection automatically rejects incoming calls from callers who deliberately block their identities and numbers from showing up. Anonymous call rejection is configurable on a per-line basis.

To configure anonymous call rejection via phone user interface:

1. Press Menu->Features->Anonymous Call.
2. Press or , or the Switch soft key to select the desired line from the Line ID field.
3. Press or to scroll to the Rejection field.
4. Press or , or the Switch soft key to select Enable from the Anonymous Rejection field.



5. (Optional.) Enter the anonymous call rejection on code in the Reject On Code field.
6. (Optional.) Enter the anonymous call rejection off code in the Reject Off Code field.
7. Press the Save soft key to accept the change or the Back soft key to cancel.

Anonymous call rejection is configurable via web user interface at the path Account->Basic.

Advanced Phone Features

This chapter provides operating instructions for the advanced features of the Commander Essentials Desk T41P IP Phone. Topics include:

- [Busy Lamp Field \(BLF\)](#)
- [Call Recording](#)
- [Hot Desking](#)
-

- Intercom
- [Multicast Paging](#)
- [Music on Hold](#)
- [Automatic Call Distribution \(ACD\)](#)

- [Messages](#)



If you require additional information or assistance with your new phone, contact your system administrator.

Busy Lamp Field (BLF)



You can use BLF to monitor a specific line for status changes on the phone. For example, you can configure a BLF key on the phone for monitoring the status of a friend's line (busy or idle). The BLF key LED illuminates solid red when the friend's line is in use. For more information on BLF key LED indications, refer to [LED Instructions](#) on page 6.

You can press a BLF key to dial out the monitored phone number when the monitored line is idle. You can receive a visual and an audio alert (if enabled), and also pick up the call when the monitored line receives an incoming call. For more information, contact your system administrator.

To configure a BLF key via phone user interface:

1. Press Menu->Features->DSS Keys.
2. Select the desired DSS key.
3. Press  or , or the Switch soft key to select BLF from the Type field.



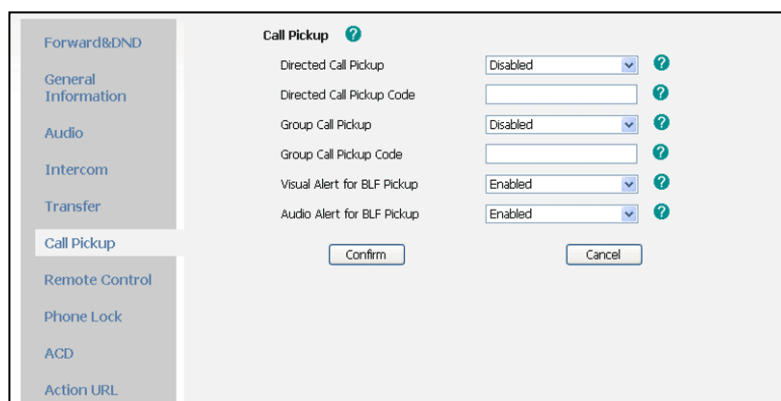
4. Press  or , or the Switch soft key to select the desired line from the Account ID field.
5. (Optional.) Enter a string that will appear on the LCD screen in the Label field.
6. Enter the phone number or extension you want to monitor in the Value field.
7. (Optional.) Enter the pickup code in the Extension field.
8. Press the Save soft key to accept the change or the Back soft key to cancel.

BLF key is configurable via web user interface at the path DSSKey->Line Key.

You can enable audio alert for BLF pickup on the phone. This allows the monitoring phone to play a warning tone when the monitored line receives an incoming call. You can also enable visual alert for BLF pickup on the phone. This allows the LCD screen of the monitoring phone to display the caller ID when the monitored line receives an incoming call.

To enable visual and audio alert via web user interface:

1. Click on Features->Call Pickup.
2. Select Enabled from the pull-down list of Visual Alert for BLF Pickup.
3. Select Enabled from the pull-down list of Audio Alert for BLF Pickup.



4. Click Confirm to accept the change.

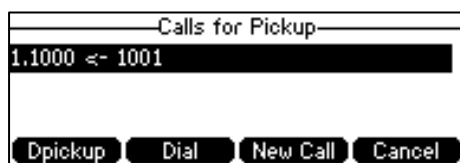
Note

Visual and audio alerts are configurable via web user interface only.

When the monitored line receives an incoming call, the followings occur on the phone:

- The phone plays a warning tone (if enabled).
- The BLF key LED flashes red.
- The caller ID appears on the LCD screen (if enabled).

In the following figure, the LCD screen shows an incoming call from 1001 on the monitored line.



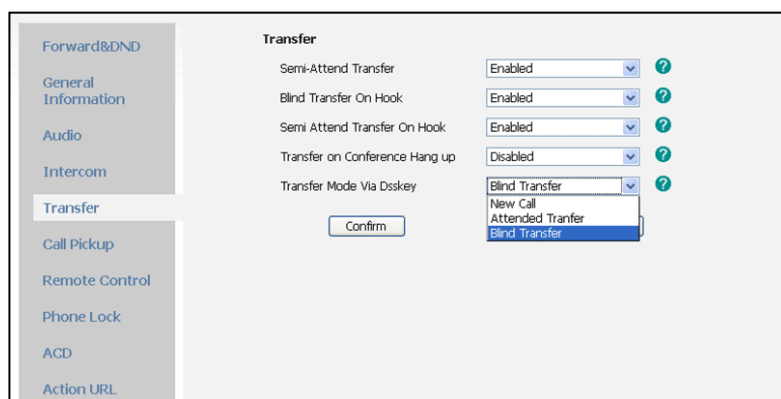
Note

If your phone is locked and the type of the keypad lock is configured as **Function Keys** or **All keys**, you cannot use the **Dpickup**, **Dial**, **New Call** and **Cancel** soft keys until

When there is an active call on the IP phone, you can transfer the active call to the monitored phone number directly by pressing the BLF key. The phone transfers the active call differently depending on the transfer mode via DSS key. For more information on performing call transfer, refer to [Call Transfer](#) on page 74.

To configure the transfer mode via DSS key via web user interface:

1. Click on Features->Transfer.
2. Select the desired transfer mode from the pull-down list of Transfer Mode Via Dsskey. Depending on your selection:
 - If you select Blind Transfer, press the BLF key to blind transfer the call to the monitored phone number.
 - If you select Attended Transfer, press the BLF key to dial out the monitored phone number and then you can perform the attended or semi-attended transfer.
 - If you select New Call, press the BLF key to place a new call to the monitored user.



3. Click Confirm to accept the change.

Note

Transfer mode via DSS key is configurable via web user interface only.

Call Recording

You can record calls by pressing a record key on the phone. The Commander Essentials Desk T41P IP Phone supports record and URL record.





Two ways of call recording:

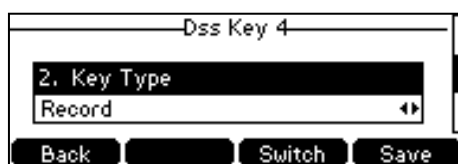
- Record: The phone sends SIP INFO message containing a specific header "Record: on/off" to trigger a recording.
- URL Record: The phone sends HTTP URL request to trigger a recording. Contact your system administrator for the predefined URL.

Note

Call record is not available on all servers. Contact your system administrator for more information.



To configure a record key via phone user interface:

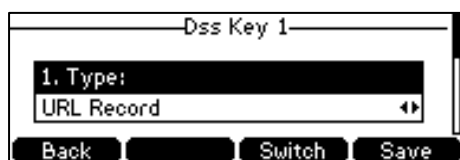
1. Press Menu->Features->DSS Keys.
2. Select the desired DSS key.
3. Press  or , or the Switch soft key to select Key Event from the Type field.
4. Press  or , or the Switch soft key to select Record from the Key Type field.



5. (Optional.) Enter a string that will appear on the LCD screen in the Label field.
6. Press the Save soft key to accept the change or the Back soft key to cancel.

To configure a URL record key via phone user interface:

1. Press Menu->Features->DSS Keys.
2. Select the desired DSS key.
3. Press  or , or the Switch soft key to select URL Record from the Type field.



4. (Optional.) Enter a string that will appear on the LCD screen in the Label field.
5. Enter the URL (e.g., <http://10.1.2.224/phonerecording.cgi>) in the Value field.
6. Press the Save soft key to accept the change or the Back soft key to cancel.

Record and URL Record keys are configurable via web user interface at the path DSSKey->Line Key.

The Record and URL Record keys control the recording, and are available:

- During an active call
- When calls are on hold or mute
- During a blind or attended transfer
- During a conference call
- When the phone prompts you to answer an incoming call






The Record and URL Record keys are not available when:

- There are no connected calls on your phone
- You place a new call

To record a call:

1. Press the Record or URL Record key during a call.
If the recording starts successfully, the recording icon will appear on the LCD screen, and the Record or URL Record key LED will flash green.
2. Press the Record or URL Record key again to stop recording.
The recording icon disappears from the LCD screen, and the Record or URL Record key LED goes out.

Recording status indications you need to know:

Circumstance	Icons on the LCD screen
A recording is started	 appears on the LCD screen
A recording cannot be started	 appears for 1 second
A recording cannot be stopped	 appears for 1 second, then goes back
The recording box is full	 appears for 1 second
The call cannot be recorded	 appears for 1 second

You can listen to the recordings stored on your server system. For example, you can dial an access code to listen to the recordings.

Note

The way in which you listen to the recordings may be different on different servers. Contact your system administrator for more information.

Hot Desking

Hot desking originates from the definition of being the temporary physical occupant of a work station or surface by a particular employee. A primary motivation for hot desking is cost reduction. This feature is regularly used in places where not all the employees are in the office at the same time, or not in the office for very long at all, which means actual personal offices would be often vacant, consuming valuable space and resources.

You can use hot desking on the Commander Essentials Desk T41P IP Phone to log out of the existing

accounts and then log into a new account. As a result, many users can share the phone resource in different time. To use this feature, you need to configure a hot desking key in advance.

Note Hot desking is not available on all servers. Contact your system administrator for more information.

To configure a hot desking key via phone user interface:

1. Press Menu->Features->DSS Keys.
2. Select the desired DSS key.
3. Press ◀ or ▶, or the Switch soft key to select Key Event from the Type field.
4. Press ◀ or ▶, or the Switch soft key to select Hot Desking from the Key Type field.
5. (Optional.) Enter a string that will appear on the LCD screen in the Label field.



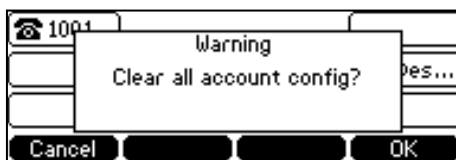
6. Press the Save soft key to accept the change or the Back soft key to cancel.

Hot desking key is configurable via web user interface at the path DSSKey->Line Key.

To use hot desking:

1. Press the hot desking key when the phone is idle.

The LCD screen prompts the following warning:



2. Press the OK soft key, registration configurations of all accounts on the phone will be cleared immediately.

The login wizard will be shown as below:



3. Enter the login information in each field.
4. Press the Save soft key to login or the Back soft key to cancel.

Intercom



Intercom is a useful feature in an office environment to quickly connect with the operator or the secretary. You can press the intercom key to automatically connect with a remote extension for outgoing intercom calls, and the remote extension will automatically answer the incoming intercom calls.

Note

Intercom is not available on all servers. Contact your system administrator for more information.

Outgoing Intercom Calls

To configure an intercom key via phone user interface:

1. Press Menu->Features->DSS Keys.
2. Select the desired DSS key.
3. Press  or , or the Switch soft key to select Intercom from the Type field.



4. Select the desired line from the Account ID field.
5. (Optional.) Enter the string that will appear on the LCD screen in the Label field.
6. Enter the remote extension number in the Value field.
7. Press the Save soft key to accept the change or the Back soft key to cancel.

Intercom key is configurable via web user interface at the path DSSKey->Line Key.

To place an intercom call:

1. Press the intercom key when the phone is idle.
The phone is automatically connected to the extension specified in the Value field.
2. Press the intercom key again or the Cancel soft key to end the intercom call.

Incoming Intercom Calls

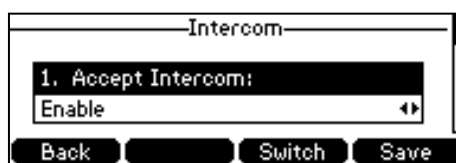
The Commander Essentials Desk T41P IP Phone supports automatically to answer an incoming intercom call by default. The phone automatically plays a warning tone when it receives an incoming intercom call. In addition, you can enable the phone to mute the microphone when it automatically answers an incoming intercom call. You can also enable the phone to automatically answer an incoming intercom call while there is already an active call on the phone. The active call is placed on hold.

Intercom features you need to know:

Intercom Feature	Description
Accept Intercom	Enable or disable the IP phone to automatically answer an incoming intercom call.
Intercom Mute	Enable or disable the microphone on the IP phone for intercom calls.
Warning Tone	Enable or disable the IP phone to play a warning tone when it receives an incoming intercom call.
Intercom Barge	Enable or disable the IP phone to automatically answer an incoming intercom call while there is already an active call on the phone.

To configure intercom features via phone user interface:

1. Press Menu->Features->Intercom.
2. Make the desired changes.



3. Press the Save soft key to accept the change or the Back soft key to cancel.

These specific parameters are configurable via web user interface at the path Features->Intercom.

Accept Intercom

You can enable or disable the phone to automatically answer an incoming intercom call. If Accept Intercom is enabled, the phone automatically answers an incoming intercom call. If Accept Intercom is disabled, the phone rejects incoming intercom calls and sends a busy message to the caller. Accept Intercom is enabled by default.

Note

Your administrator can set a period of delay time before the phone automatically answers intercom calls. Contact your system administrator for more information.

Intercom Mute

You can mute or un-mute the microphone on the phone for intercom calls automatically. If Intercom Mute is enabled, the microphone is muted for intercom calls. If Intercom Mute is disabled, the microphone works for intercom calls. Intercom Mute is disabled by default.

Warning Tone

You can enable or disable the phone to play a warning tone when receiving an intercom call. If Warning Tone is enabled, the phone plays a warning tone before answering the intercom call. If Warning Tone is disabled, the phone automatically answers the intercom call without warning. Intercom Tone is enabled by default.

Intercom Barge





You can enable or disable the phone to automatically answer an incoming intercom call while there is already an active call on the phone. If Intercom Barge is enabled, the phone automatically answers the intercom call and places the active call on hold. If Intercom Barge is disabled, the phone handles an incoming intercom call like a waiting call. Intercom Barge is disabled by default.

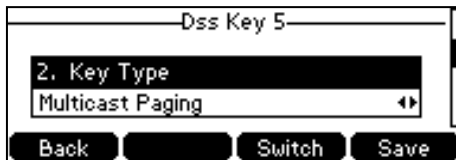
Multicast Paging

You can use multicast paging to quickly and easily forward time sensitive announcements out to people within the multicast group. You can configure a multicast paging key on the phone, which allows you to send a Real Time Transport Protocol (RTP) stream to the pre-configured multicast address(es) without involving SIP signaling. You can configure the phone to receive an RTP stream from pre-configured multicast listening address(es) without involving SIP signaling. You can specify up to 10 multicast listening addresses.

Sending RTP Stream

To configure a multicast paging key via phone user interface:

1. Press Menu->Features->DSS Keys.
2. Select the desired DSS key.
3. Press  or , or the Switch soft key to select Key Event from the Type field.
4. Press  or , or the Switch soft key to select Multicast Paging from the Key Type field.



5. (Optional.) Enter the string that will appear on the LCD screen in the Label field.
6. Enter the multicast IP address and port number (e.g., 224.5.6.20:10008) in the Value field.

The valid multicast IP addresses range from 224.0.0.0 to 239.255.255.255.

7. Press the Save soft key to accept the change or the Back soft key to cancel.

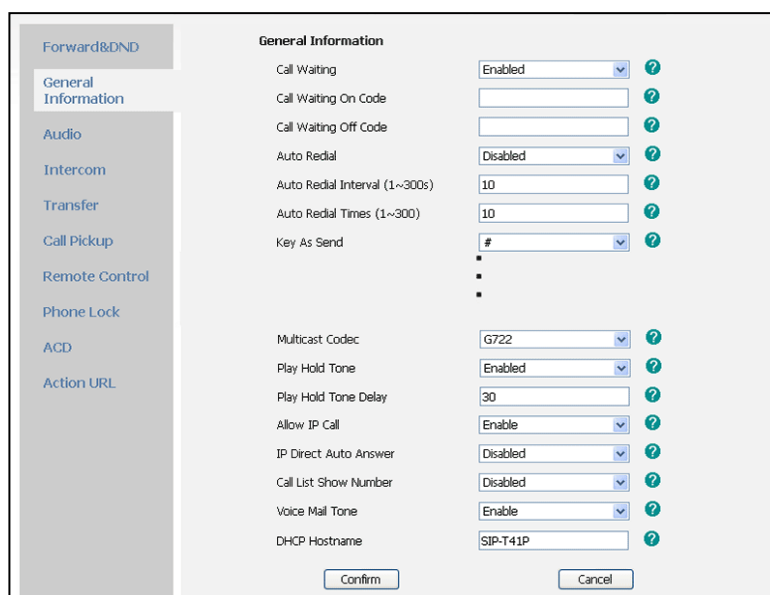
Multicast paging key is configurable via web user interface at the path DSSKey->Line Key.

You can also configure the phone to use a default codec for sending multicast RTP stream via web user interface.

To configure a default codec for multicast paging via web user interface:

1. Click on Features->General Information.
2. Select the desired codec from the pull-down list of Multicast Codec.

The default codec is G722.



3. Click Confirm to accept the change.

Note

If G722 codec is used for multicast paging, the LCD screen displays the HD icon to indicate that is providing high definition voice.

Default codec for multicast paging is configurable via web user interface only.

To send RTP stream:

1. Press the multicast paging key when the phone is idle.

The phone sends RTP to a preconfigured multicast address (IP: Port). Any phone in the local network then listens to the RTP on the preconfigured multicast address (IP: Port). For both sending and receiving of the multicast RTP, there is no SIP signaling involved.

The multicast paging key LED illuminates solid green.

The following figure shows a multicast RTP session on the phone:



2. Press the Hold soft key to place the current multicast RTP session on hold.
3. Press the Cancel soft key to cancel the multicast RTP session.

Note

Multicast RTP is one way only from sender to the multicast address(es) (receiver). For outgoing RTP multicasts, all other existing calls on the phone will be placed on hold.

Receiving RTP Stream

You can configure the phone to receive a Real Time Transport Protocol (RTP) stream from the pre-configured multicast address(es) without involving SIP signaling. You can specify up to 10 multicast addresses that the phone listens to on the network.

How the phone handles incoming multicast paging calls depends on Paging Barge and Paging Priority Active parameters configured via web user interface.

Paging Barge

Paging barge parameter defines the priority of the voice call in progress. If the priority of an incoming multicast paging call is lower than that of the active call, it will be ignored automatically. If Disabled is selected from the pull-down list of Paging Barge, the voice call in progress takes precedence over all incoming multicast paging calls. Valid values in the Paging Barge field:

- 1 to 10: Define the priority of the active call, 1 with the highest priority, 10 with the lowest.
- Disabled: The voice call in progress shall take precedence over all incoming paging calls.

Paging Priority Active

Paging priority active parameter decides how the phone handles incoming multicast paging calls when there is already a multicast paging call on the phone. If enabled, the phone will ignore incoming multicast paging calls with lower priorities, otherwise, the phone will answer incoming multicast paging calls automatically and place the previous multicast paging call on hold. If disabled, the phone will automatically ignore all incoming multicast paging calls.

To configure multicast listening addresses via web user interface:

1. Click on Directory->Multicast IP.
2. Select the desired value from the pull-down list of Paging Barge.
3. Select the desired value from the pull-down list of Paging Priority Active.
4. Enter the multicast IP address(es) and port number (e.g., 224.5.6.20:10008) which the phone listens for incoming RTP multicast in the Listening Address field.

5. Enter the label in the Label field.

Label will appear on the LCD screen when receiving the multicast RTP stream.

IP Address	Listening Address	Label	Priority
1 IP Address	224.5.6.20:10008	Paging1	1
2 IP Address			2
3 IP Address			3
4 IP Address			4
5 IP Address			5
6 IP Address			6
7 IP Address			7
8 IP Address			8
9 IP Address			9
10 IP Address			10

6. Click Confirm to accept the change.

Note

The priorities of listening addresses are predefined: 1 with the highest priority, 10 with the lowest.

Both the multicast paging sender and the receiver play a warning tone when establishing a multicast paging call.

Multicast listening addresses are configurable via web user interface only.

Music on Hold

Music on hold (MoH) is the business practice of playing recorded music to fill the silence that would be heard by the party placed on hold. To use this feature, you should specify a SIP URI pointing to a Music on Hold Server account. When a call is placed on hold, the phone will send a SIP INVITE message to the Music on Hold Server account. The Music on Hold Server account automatically answers to the SIP INVITE messages and immediately plays audio from some source located anywhere (LAN, Internet) to the held party. Contact your system administrator for the SIP URI.

To configure music on hold server via web user interface:

1. Click on Account.
2. Select the desired account from the pull-down list of Account.
3. Click on Advanced.
4. Enter the SIP URI (e.g., sip:moh@sjp.com) in the Music Server URI field.

Account		Account 1
Keep Alive Type		Default
Keep Alive Interval (Seconds)		30
Local SIP Port		5062
RPort		Disabled
SIP Session Timer T1 (0.5~10s)		0.5
SIP Session Timer T2 (2~40s)		4
SIP Session Timer T4 (2.5~60s)		5
Subscribe Period (Seconds)		1800
...		
Music Server URI		sip:moh@sip.com
Directed Call Pickup Code		
Group Call Pickup Code		
Distinctive Ring Tones		Disabled
Unregister When Reboot		Disabled
Out Dialog BLF		Disabled

Confirm Cancel

5. Click Confirm to accept the change.

When you have placed a call on hold, the held party can hear the music.

Note

All involved parties cannot use encrypted RTP (SRTP).

Music on hold server is configurable via web user interface only.

Automatic Call Distribution (ACD)



ACD is often used in offices for customer service, such as call center. The ACD system handles large volumes of incoming calls from callers who have no need to talk to a specific person but who require assistance from any of multiple persons at the earliest opportunity. ACD on the Commander Essentials Desk T41P IP Phone allows the ACD system to distribute large volumes of incoming calls to the registered ACD users. To use this feature, you should configure an ACD key in advance.

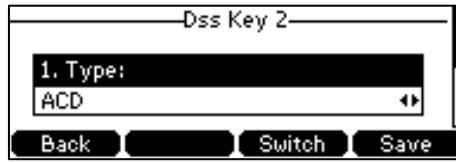
Note

Make sure ACD is enabled on your IP phone. For more information on enabling ACD, contact your system administrator.

To configure an ACD key via phone user interface:

1. Press Menu->Features->DSS Keys.
2. Select the desired DSS key.

3. Press  or , or the Switch soft key to select ACD from the Type field.



4. (Optional.) Enter the string that will appear on the LCD screen in the Label field.
5. Press the Save soft key to accept the change or the Back soft key to cancel.

ACD key is configurable via web user interface at the path DSSKey->Line Key.

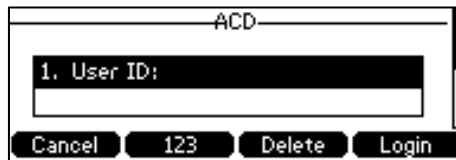
To log into the ACD system:

1. Press the ACD key when the phone is idle.

The LCD screen prompts you the following information:

User ID: the identity used to log into the queue.

Password: the password used to log into the queue.



2. Press the Login soft key to log in.

Note

Contact your system administrator for the User ID and Password to access the ACD system.

After configuring an ACD key, you can press the ACD key to log into the ACD system. After logging in, you are ready to receive calls from the ACD system. You can press the ACD key to show your current ACD user status. You can press the Available/Unavailable soft key to change your ACD user status. ACD user status synchronizes on both IP phone and ACD system. When you set the ACD user status to be available, the ACD key LED illuminates solid green, and then the server begins distributing calls to your phone. When you set the ACD user status to be unavailable, the ACD key LED flashes green, and then the server temporarily stops distributing calls to your phone. To log out of the ACD system, press the Logout soft key.

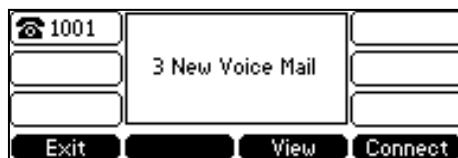
Note

It is recommended you configure no more than one ACD key per phone. At any time, at most one ACD key can be in progress on your phone.

Messages

Voice Mail

You can leave voice mails for someone else on the Commander Essentials Desk T41P IP Phone. You can also listen to the voice mails stored in a centralized location. When receiving a new voice mail, the phone will play a warning tone, and the power indicator LED will slow flash red. The LCD screen will display a prompt message and appear an icon.



Note

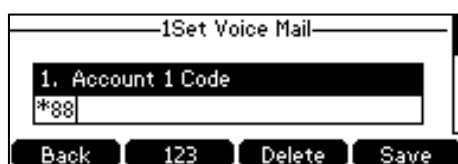
Voice mail is not available on all servers. Contact your system administrator for more information.

To leave a voice mail:

You can leave a voice mail for someone else when he/she is busy or inconvenient to answer the call. Follow the voice prompt from the system server to leave a voice mail, and then hang up.

To configure voice mail access codes via phone user interface:

1. Press Menu->Messages->Voice Mail->Set Voice Mail.
2. Press the navigation keys to highlight the account which you want to set.
3. Press the 123 soft key to select the proper input mode and then enter the voice mail access code (e.g., *88).




4. Press the Save soft key to accept the change or the Back soft key to cancel.

Note

Voice mail access code must be predefined on the system server. Contact your system administrator for the more information.

To listen to the voice mails:

1. When the phone user interface prompts receiving new voice mails and the power indicator LED slow flashes red, press  or the Connect soft key to dial out the voice mail access code.
2. Follow the voice prompt to listen to voice mails.

Note

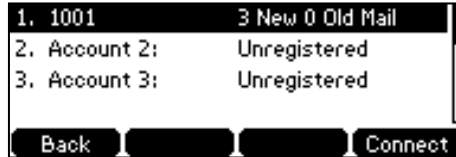
Before listening to voice mails, make sure the voice mail access code has been configured.

When all new voice mails are retrieved, the power indicator LED will go out.

To view the voice mail via phone user interface:

1. Press Menu->Messages->Voice Mail->View Voice Mail.

The LCD screen displays the amount of new and old voice mails.



2. Select an account and then press the Connect soft key to listen to voice mails.

Message Waiting Indicator (MWI)

The Commander Essentials Desk T41P IP Phone supports MWI feature when receiving a new voice message. If someone leaves you a voice mail, you will receive a message waiting indicator. MWI will be indicated in three ways: a warning tone, an indicator message (including a voice mail icon) on the LCD screen, and the power indicator LED slow flashes red. This will be cleared when you retrieve all voice mails or delete them.

The MWI service is unsolicited for some servers, so the Commander Essentials Desk T41P IP Phone only handles the MWI messages sent from the server. But for other servers, the MWI service is solicited, so the Commander Essentials Desk T41P IP Phone must enable subscription for MWI.

Note

MWI service is not available on all servers. Contact your system administrator for more information.

The MWI subscription parameters you need to know:

Options	Description
Subscribe for MWI	Enable or disable a subscription for MWI service.
MWI Subscription Period	Period of MWI subscription. The IP phone sends a refresh SUBSCRIBE request before initial SUBSCRIBE expiration.
Subscribe MWI to Voice Mail	Enable or disable a subscription to the voice mail number for MWI service. To use this feature, you should also configure the voice mail number.

To configure subscribe for MWI via web user interface:

1. Click on Account.

2. Select the desired account from the pull-down list of Account.
3. Click on Advanced.
4. Select Enabled from the pull-down list of Subscribe for MWI.
5. Enter the period time in the MWI Subscription Period (Seconds) field.

Register	Account	Account 1	?
Basic	Keep Alive Type	Default	?
Codec	Keep Alive Interval (Seconds)	30	
Advanced	Local SIP Port	5062	?
	RPort	Disabled	?
	SIP Session Timer T1 (0.5~10s)	0.5	?
	SIP Session Timer T2 (2~40s)	4	
	SIP Session Timer T4 (2.5~60s)	5	
	Subscribe Period (Seconds)	1800	?
	DTMF Type	RFC2833	?
	DTMF Info Type	DTMF-Relay	
	DTMF Payload Type(96~127)	101	
	Retransmission	Disabled	?
	Subscribe for MWI	Enabled	?
	MWI Subscription Period(Seconds)	3600	

6. Click Confirm to accept the change.

The IP phone will subscribe to the account number for MWI service by default.

Note

Whether the phone sends SUBSCRIBE messages for MWI service to the account or the voice number MWI service depends on the server. Contact your system administrator for more information.

To enable Subscribe MWI to Voice Mail via web user interface:

1. Click on Account.
2. Select the desired account from the pull-down list of Account.
3. Click on Advanced.
4. Select Enabled from the pull-down list of Subscribe MWI To Voice Mail.

- Enter the desired voice mail number in the Voice Mail field.

Register	Account	Account 1	?
Basic	Keep Alive Type	Default	?
Codec	Keep Alive Interval (Seconds)	30	
Advanced	Local SIP Port	5062	?
	RPort	Disabled	?
	SIP Session Timer T1 (0.5~10s)	0.5	?
	SIP Session Timer T2 (2~40s)	4	
	SIP Session Timer T4 (2.5~60s)	5	
	Subscribe Period (Seconds)	1800	?
	DTMF Type	RFC2833	?
	DTMF Info Type	DTMF-Relay	
	DTMF Payload Type(96~127)	101	
	Retransmission	Disabled	?
	Subscribe for MWI	Disabled	?
	MWI Subscription Period(Seconds)	3600	
	Subscribe MWI To Voice Mail	Enabled	?
	Voice Mail	*88	?

- Click Confirm to accept the change.

The IP phone will subscribe to the voice mail number for MWI service using Subscribe MWI to Voice Mail.

Note

MWI subscription is configurable via web user interface only.

Troubleshooting

This chapter provides general troubleshooting information to help you solve the problems you might encounter when using your Commander Essentials Desk T41P IP Phone.

If you require additional information or assistance with your new phone, contact your system administrator.

Why is the LCD screen blank?

- Ensure that the phone is properly plugged into a functional AC outlet.
- Ensure that the phone is plugged into a socket controlled by a switch that is on.
- If the phone is plugged into a power strip, try to plug it directly into a wall outlet instead.
- If the phone is powered from PoE, ensure you use a PoE-compliant switch or hub.

Why does the phone display "Network Unavailable"?

- Ensure that the Ethernet cable is plugged into the Internet port on the phone and the Ethernet cable is not loose.
- Ensure that the switch or hub in your network is operational.

Why doesn't the phone display time and date correctly?

The phone is configured to obtain the time and date from the SNTP server automatically. If the phone is unable to access the SNTP server, you need to check your network configuration or set the time and date manually.

How do I find the basic information of the IP phone?

Press the OK key when the IP phone is idle to check the basic information of the IP phone, such as IP address and firmware version. For more basic information, refer to [Phone Status](#) on page 16.

How to obtain the MAC address of a phone when the phone is not powered on?

Three ways to obtain the MAC address of a phone:

- You can ask your supplier for shipping information sheet which includes MAC addresses according to the corresponding PO (Purchase Order).
- You can find the MAC address in the label of carton box.
- You can also find the MAC address from the phone's bar code on the back of the phone.

Why can't I get a dial tone?

- Check for any loose connections and that the phone has been installed properly. For the

installation instructions, refer to [Phone Installation](#) on page 13.

- Switch between the Handset, Headset (if present) or Hands-Free Speakerphone to check whether the dial tone is present for one of the audio modes.

If the dial tone exists on another audio mode, connect a different handset or headset to isolate the problem.

Why doesn't the phone ring?

Check the ringer volume on the phone. To adjust the ringer volume setting, press the Volume key when the phone is on-hook and idle. For more information, refer to [Volume](#) on page 23.

Why can't I receive calls?

- Check the SIP registration with your system administrator.
- Check that DND (Do Not Disturb) mode is deactivated on your phone. Refer to [Do Not Disturb \(DND\)](#) on page 65.
- Check that call forward is disabled on the phone. Refer to [Call Forward](#) on page 68.
- Check whether the caller number is stored in the blacklist directory. Refer to [Blacklist](#) on page 37.
- Check if you have anonymous call rejection activated on your phone.

Why is my handset not working?

Check that the handset cord is fully connected to both the handset jack on the phone and handset. Refer to [Phone Installation](#) on page 13.

Why is my headset not working?

- Check that the headset cord is fully connected to the headset jack on the phone. Refer to [Phone Installation](#) on page 13.
- Check that the headset mode is activated. Refer to [Headset Use](#) on page 42.
- Check that the headset volume is adjusted to an appropriate level. Refer to [Volume](#) on page 23.

What is the difference between user name, register name and display name?

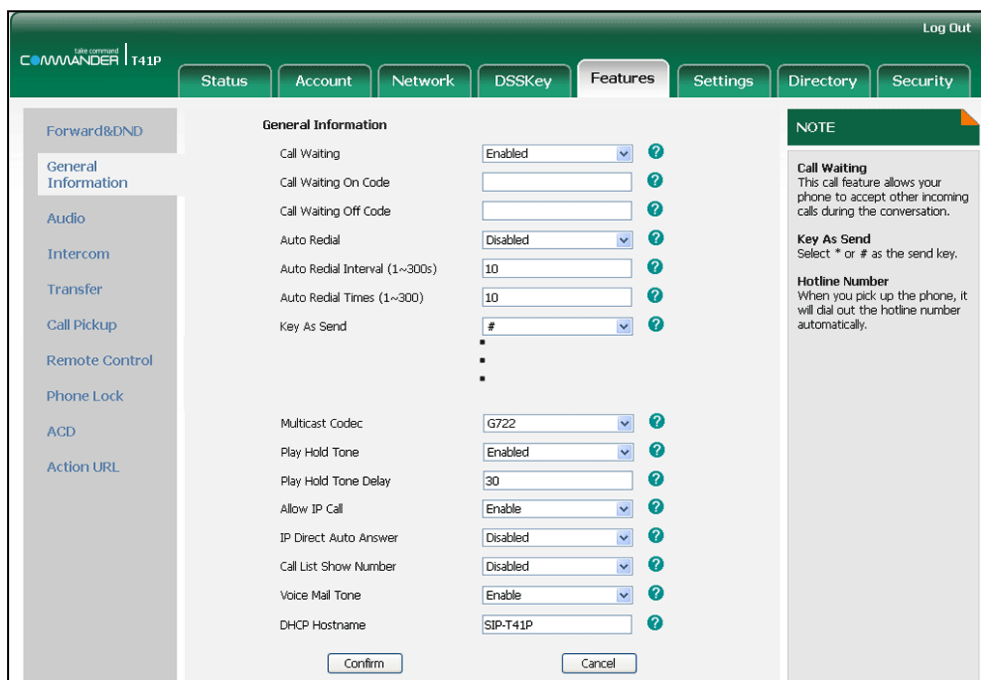
Both user name and register name are defined by the server. A user name is used to identify the account, while a register name matched with a password is used for authentication if the server requires. Display name is the caller ID that will be displayed on the callee's LCD screen. Server configuration may override the local configuration.

Why does the phone play a tone when hold? How to disable it?

When there is a call is on hold, the phone will play a hold tone every 30 seconds. Play hold tone is enabled by default. Play hold tone and the interval of playing a hold tone are configurable via web user interface only.

To configure the call hold tone and call hold tone delay via web user interface:

1. Click on Features->General Information.
2. Select Enabled or Disabled from the pull-down list of Play Hold Tone.
3. Enter the desired time in the Play Hold Tone Delay field.

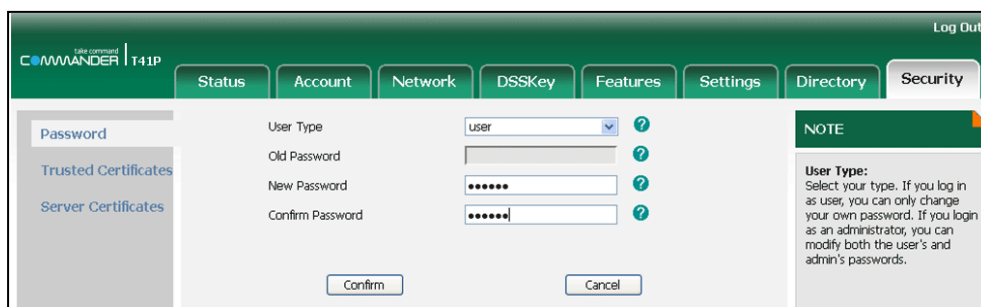


4. Click Confirm to accept the change.

How to change the user password?

To change the user password via web user interface:

1. Click on Security->Password.
2. Select user from the pull-down list of User Type.
3. Enter the new user password in the New Password field and Confirm Password field.



4. Click Confirm to accept the change.

You can also contact your system administrator for help.

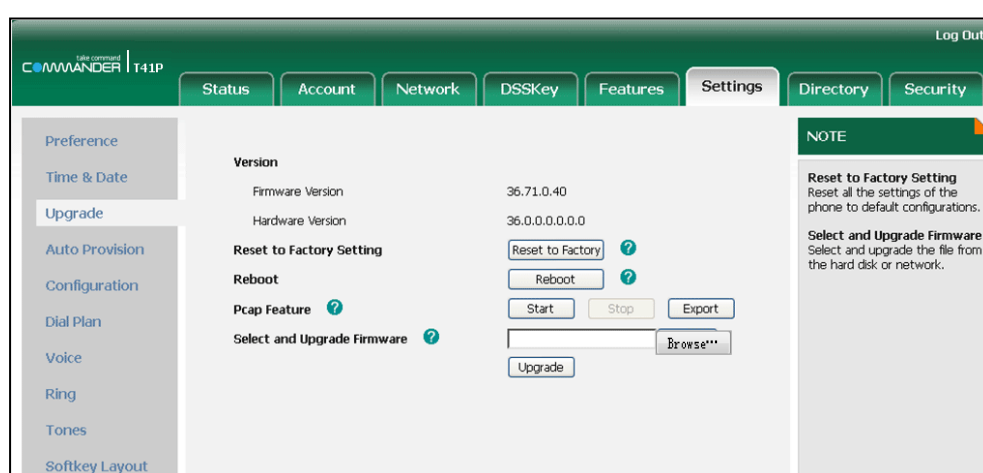
Note

If logging into the web user interface of the phone with the user credential, you need to enter the current user password in the **Old Password** field.
User password is configurable via web user interface only.

How to reboot the phone?

To reboot the phone via web user interface:

1. Click on Settings->Upgrade.



2. Click Reboot to reboot the IP phone.

Note

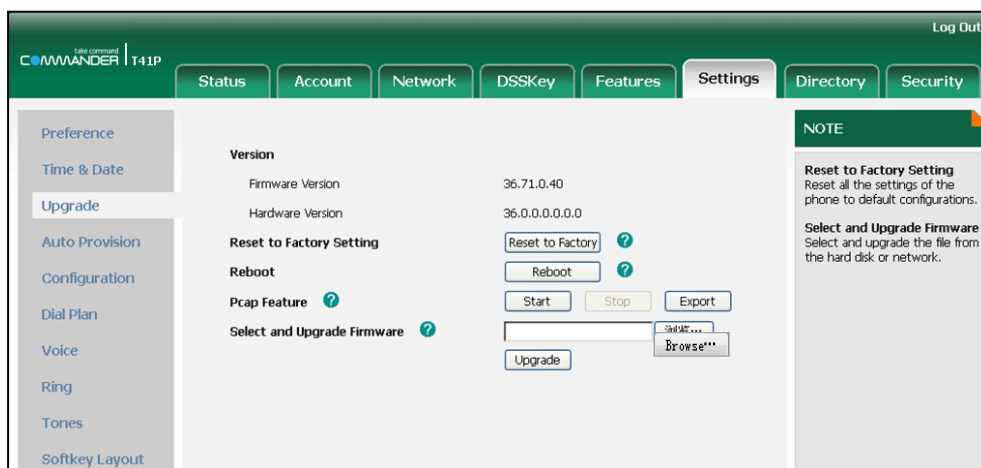
Any reboot of the phone may take a few minutes.

How to export PCAP trace?

We may need you to provide a PCAP trace to help analyze problem.

To export a PCAP trace via web user interface:

1. Click on Settings->Upgrade.
2. Click Start to begin capturing signal traffic.
3. Recreate the error to be documented in the trace.
4. Click Stop to stop the capture.



5. Click Export open file download window, and then save the file to your local system.

How to export system log?

We may need you to provide the phone configurations to help analyze problem. In some instance, you may need to import configurations to your phone.

To export the system log to local PC via web user interface:

1. Click on Settings->Configuration.
2. Select 6 from the pull-down list of System Log Level.

The default system log level is 3.

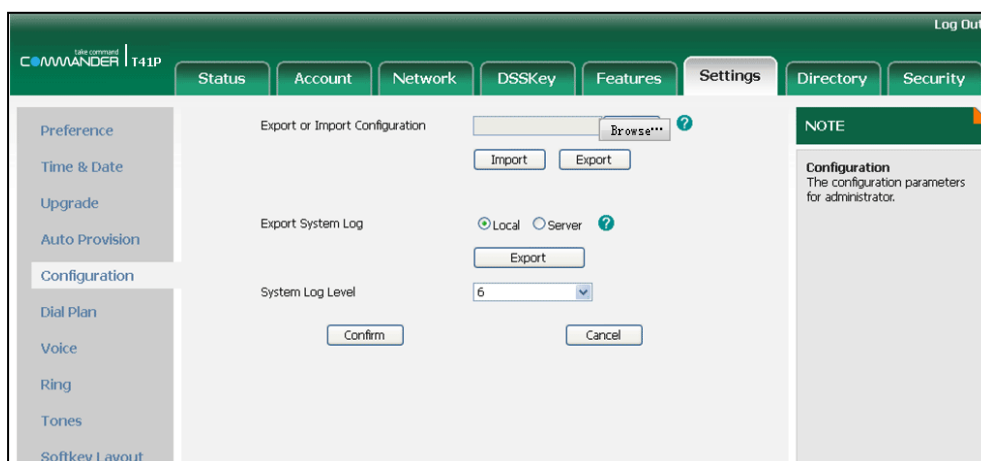
3. Click Confirm to accept the change.

The web user interface prompts "Do you want to restart your machine?". The configuration will take effect after reboot.

4. Click OK to reboot the phone.

After the IP phone finishes reboot, the system log level is set as 6, the debug level.

5. Mark the Local radio box in the Export System Log field.



6. Click Export open file download window, and then and save the system log file to your local system.

You can also export the system log to a syslog server, contact your system administrator for more information.

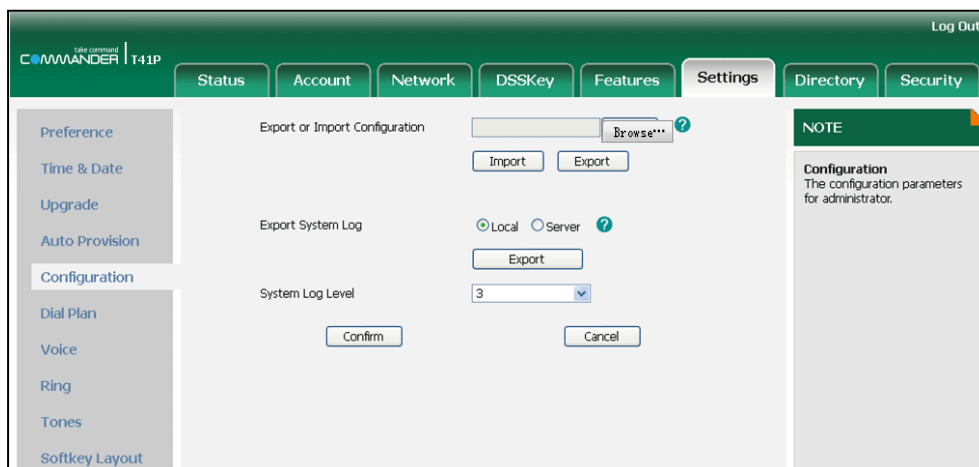
How to export/import the phone configurations?

We may need you to provide the phone configurations to help analyze problem. In some instance, you may need to import configurations to your phone.

To export the phone configurations via web user interface:

1. Click on Settings->Configuration.

2. Click Export to open file download window, and then save the file to your local system.



To import the phone configurations via web user interface:

1. Click on Settings->Configuration.
2. Click Browse to locate a configuration file from your local system.
3. Click Import to import the configuration file.

Note

The file format of configuration file must be .bin.

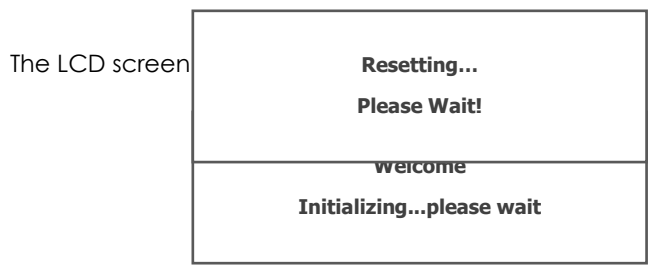
How to reset the phone?

Reset the phone to factory configurations after you have tried almost all troubleshooting suggestions but do not solve the problem. You need to note that all customized settings will be overwritten after reset.

To reset the phone via phone user interface:

1. Press and hold the 'OK' button on the phones keypad until you are asked if you want to factory default the phone. Press 'Yes'.

The LCD screen prompts the following:



The phone will be reset to factory sucessfully after startup.

Note

Reset of the phone may take a few minutes. Do not power off until the phone starts up successfully.

Regulatory Notices

Service Agreements

Contact Commander for information on service agreements applicable to your product.

Limitations of Liability

TO THE FULL EXTENT ALLOWED BY LAW, COMMANDER EXCLUDES FOR ITSELF AND ITS SUPPLIERS ANY LIABILITY, WHETHER BASED IN CONTRACT OR TORT (INCLUDING NEGLIGENCE), FOR INCIDENTAL, CONSEQUENTIAL, INDIRECT, SPECIAL, OR PUNITIVE DAMAGES OF ANY KIND, OR FOR LOSS OF REVENUE OR PROFITS, LOSS OF BUSINESS, LOSS OF INFORMATION OR DATA, OR OTHER FINANCIAL LOSS ARISING OUT OF OR IN CONNECTION WITH THE SALE, INSTALLATION, MAINTENANCE, USE, PERFORMANCE, FAILURE, OR INTERRUPTION OF ITS PRODUCTS, EVEN IF COMMANDER OR ITS AUTHORIZED RESELLER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, AND LIMITS ITS LIABILITY TO REPAIR, REPLACEMENT, OR REFUND OF THE PURCHASE PRICE PAID, AT COMMANDER'S OPTION. THIS DISCLAIMER OF LIABILITY FOR DAMAGES WILL NOT BE AFFECTED IF ANY REMEDY PROVIDED HEREIN SHALL FAIL OF ITS ESSENTIAL PURPOSE.

Safety Instructions

Save these instructions. Read these safety instructions before use!

The following basic safety precautions should always be followed to reduce risk of fire, electrical shock, and other personal injury.

General Requirements

- Before you install and use the device, read the safety instructions carefully and observe the situation during operation.
- During the process of storage, transportation, and operation, please always keep the device dry and clean.
- During the process of storage, transportation, and operation, please avoid collision and crash of the device.
- Please attempt not to dismantle the device by yourself. In case of any discrepancy, please contact the appointed maintenance center for repair.
- Without prior written consent, no organization or individual is permitted to make any change to the structure or the safety design of the device. Commander is under no circumstance liable to consequences or legal issues caused by such changes.
- Please refer to the relevant laws and statutes while using the device. Legal rights of others should be respected as well.

Environmental Requirements

- Place the device at a well-ventilated place. Do not expose the device under direct sunlight.
- Keep the device dry and free of dusts.
- Place the device on a stable and level platform.
- Please place no heavy objects on the device in case of damage and deformation caused by the heavy load.
- Keep at least 10 cm between the device and the closest object for heat dissipation.

- Do not place the device on or near any inflammable or fire-vulnerable object, such as rubber-made materials.
- Keep the device away from any heat source or bare fire, such as a candle or an electric heater.
- Keep the device away from any household appliance with strong magnetic field or electromagnetic field, such as a microwave oven or a refrigerator.

 Operating Requirements

- Do not let a child operate the device without guidance.
- Do not let a child play with the device or any accessory in case of accidental swallowing.
- Please use the accessories provided or authorised by the manufacturer only.
- The power supply of the device shall meet the requirements of the input voltage of the device. Please use the provided surge protection power socket only.
- Before plugging or unplugging any cable, make sure that your hands are completely dry.
- Do not spill liquid of any kind on the product or use the equipment near water, for example, near a bathtub, washbowl, kitchen sink, wet basement or near a swimming pool.
- Do not tread on, pull, or over-bend any cable in case of malfunction of the device.
- During a thunderstorm, stop using the device and disconnect it from the power supply. Unplug the power plug and the Asymmetric Digital Subscriber Line (ADSL) twisted pair (the radio frequency cable) to avoid lightning strike.
- If the device is left unused for a rather long time, disconnect it from the power supply and unplug the power plug.
- When there is smoke emitted from the device, or some abnormal noise or smell, disconnect the device from the power supply, and unplug the power plug immediately. Contact the specified maintenance center for repair.
- Do not insert any object into equipment slots that is not part of the product or auxiliary product.
- Before connecting a cable, connect the grounding cable of the device first. Do not disconnect the grounding cable until you disconnect all other cables.

 Cleaning Requirements

- Before cleaning the device, stop using it and disconnect it from the power supply.
- Use a piece of soft, dry and anti-static cloth to clean the device.
- Keep the power plug clean and dry. Using a dirty or wet power plug may lead to electric shock or other perils

Index

A

About This Guide ii
 Adding Contacts 30
 Anonymous Call 83
 Anonymous Call Rejection 84
 Answering Calls 60
 Attaching Stand 13
 Audio Settings 23
 Auto Answer 62
 Auto Redial 63
 Automatic Call Distribution 99

B

Backlight 18
 Basic Network Settings 16
 Blacklist 37
 Busy Lamp Field (BLF) 87

C

Call Forward 68
 Call Mute 64
 Call History Management 39
 Call Hold/Resume 65
 Call Park 78
 Call Pickup 79
 Call Recording 90
 Call Return 64
 Call Transfer 74
 Call Waiting 75
 Conference 76
 Contact Management 26
 Copyright i
 Customizing Your Phone 18

D

Deleting Contacts 33
 Do Not Disturb (DND) 65
 Documentation 10
 DSS Keys 43
 Directory 26

E

Editing Contacts 32
 Emergency Number 54
 Ending Calls 61

G

General Settings 18
 Getting Started 11

H

Hardware Component Instructions 3
 Headset Use 42
 Headset Mode Activation/Deactivation 42

Hotline 54
 Hot Desking 91

I

Icon Instructions 5
 Idle screen 17
 Importing/Exporting Contact lists 35
 In This Guide ii
 Incoming Intercom Calls 93
 Intercom 93

K

Keypad Lock 21

L

Language 19
 LED Instructions 6
 Limitation of Liability 112
 Line Keys 43
 Local Conference 76
 Local Directory 28

M

Message Waiting Indicator 102
 Messages 101
 Multicast Paging 95
 Multiple Line Keys per Account 53
 Music on Hold 98

N

Network Conference 77
 Network Connection 13

P

Packaging Contents 11
 Phone Initialization 16
 Phone Installation 13
 Phone Status 16
 Phone User Interface 7
 Placing Calls 58
 Placing Calls to Contacts 33
 Programmable Keys 52

O

Outgoing Intercom Calls 93
 Overview 1

R

Recent Call In Dialing 61
 Redialing Numbers 61
 Regulatory Notices 112
 Remote Phone Book 38
 Ring Tones 24

S

- Safety Instructions [112](#)
- Search Source List in Dialing [34](#)
- Searching for Contacts [34](#)
- Service Agreements [112](#)
- System Customizations [42](#)

T

- Time & Date [19](#)
- Troubleshooting [105](#)

V

- Voice Mail [101](#)
- Volume [23](#)

W

- Web User Interface [7](#)