

Software version TC4.0  
NOVEMBER 2010

# EX90

## User guide



# What's in this guide?

The top menu bar and the entries in the Table of Contents are all hyperlinks. Just click on them to go to the topic.

We recommend that you visit the Cisco web site regularly for updated versions of this guide. Go to: <http://www.cisco.com>

## Introduction

Introduction .....	4
--------------------	---

## Connecting the EX90

Rear sockets access .....	7
The EX90 parts .....	7
Connecting .....	7
Connecting for use as PC screen .....	7
Connecting a PC to the unit.....	8
Use as PC screen .....	8
Setting the screen resolution.....	8
Using an external monitor to show presentations.....	8

## Using the EX90

Camera adjustments .....	10
Use as document camera .....	10
The touch screen controller—initial view .....	11
Initial settings—before you begin.....	12
Calling someone by dialing .....	13
Calling someone using Recent calls.....	14
Calling someone using My contacts .....	15
Calling someone using the Phone book.....	16
Search the Phone book, then call.....	17
Phone book matters.....	18
Adding someone to My contacts from call lists or the Phone book .....	18
Entering a new contact manually .....	18
Editing in My contacts.....	18
Calling more than one (I).....	19
Calling more than one (II).....	20
Call transfer .....	20
Sharing presentations .....	20
Receiving calls.....	21
Do not disturb.....	21
Far end camera control.....	21
Receiving another call while already in a call .....	21

## The settings using touch screen

Setting the EX90 in standby.....	23
Shutting down the EX90 .....	23
Reverting to factory default settings.....	23
Changing background image on touch screen .....	23
Entering the Settings menus .....	24
Call settings .....	25
Date, time & location.....	26
Ringtone & sound settings .....	27
Display settings.....	28
Camera control & settings .....	29
IP settings.....	30
H.323 settings.....	31
SIP settings .....	32
System information .....	33
Call status .....	34

## The web interface

Entering the web interface.....	36
---------------------------------	----



## Chapter 1

### Introduction

## Introduction

The objective of this documentation is to provide the reader with assistance in using and configuring the product. The specifications for the product and the information in this Guide are subject to change at any time, without notice, by TANDBERG. Every effort has been made to supply complete and accurate information in this Guide; however, TANDBERG assumes no responsibility or liability for any errors or inaccuracies that may appear in this document.

TANDBERG® is a registered trademark belonging to Tandberg ASA. Other trademarks used in this document are the property of their respective holders.

This Guide may be reproduced in its entirety, including all copyright and intellectual property notices, in limited quantities in connection with the use of this product. Except for the limited exception set forth in the previous sentence, no part of this Guide may be reproduced, stored in a retrieval system, or transmitted, in any form, or by any means, electronically, mechanically, by photocopying, or otherwise, without the prior written permission of TANDBERG.

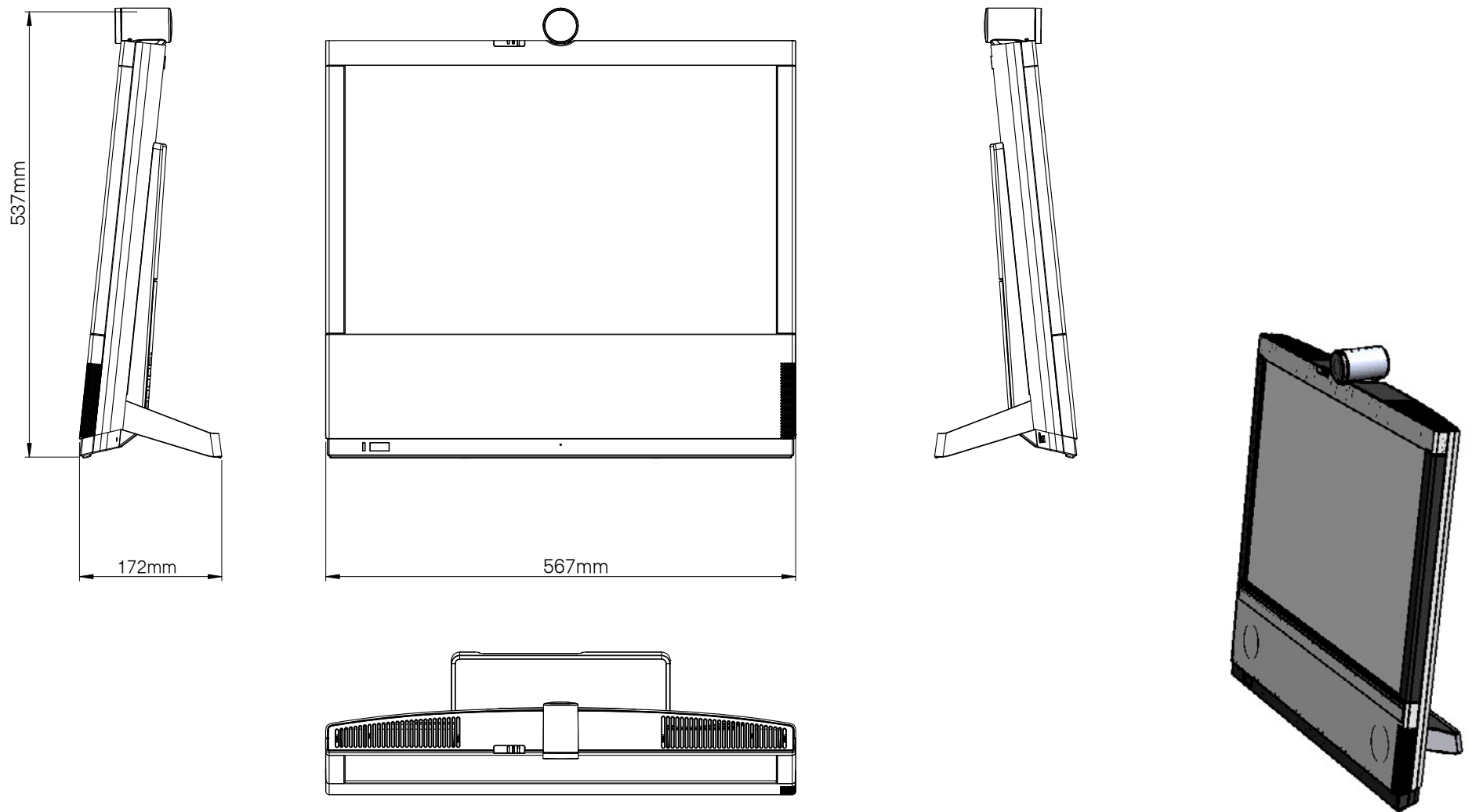
[www.tandberg.com](http://www.tandberg.com)

TANDBERG is now part of Cisco

© 2010 TANDBERG

This unit makes use of photos provided by Fotolia. These photos are Copyright © Fotolia. The following photographers have contributed:

Anette Linnea Rasmussen  
Alex Bramwell  
Stephen Coburn  
Eric Gevaert  
Stephen Coburn  
Stocksnapper  
Yurok Aleksandrovich  
ordus  
Sven Taubert  
Bas Meelker  
Paylessimages  
Vilnis





## Chapter 2

# Connecting the EX90

## Connecting the EX90

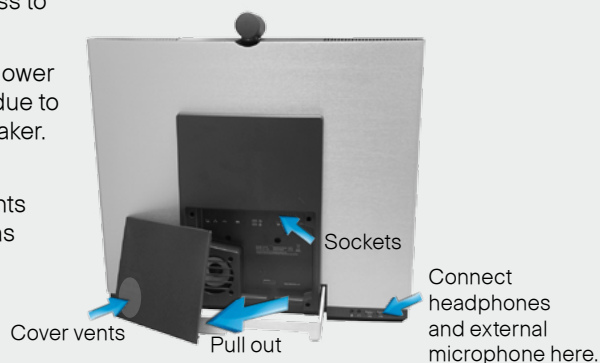
Connect the cables as shown. Sockets are located behind the rear cover. If you have one LAN connection only—and need that for your PC—the EX90 has a built in Gigabit ethernet switch that enables you to connect your PC to the EX90 to access the LAN through the EX90.

### Rear sockets access

Remove cover to get access to the connector sockets.

The cover is vented in the lower left corner (external view) due to the rear mounted loudspeaker.

When mounting the cover back on, make sure the vents are where the speaker is (as shown).



### The EX90 parts

Camera with built-in privacy shutter.



The Cisco TelePresence touch screen controller



### Connecting



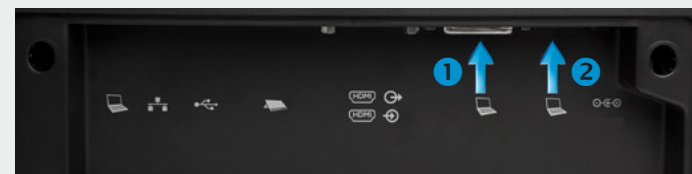
- 1 Connect your PC here if you need to share a single LAN connection with the EX90.
- 2 Connect your EX90 to the LAN.
- 3 USB socket (for future use).
- 4 Connect the touch screen controller.
- 5 HDMI In (inner socket) and HDMI Out\* (outer socket).
- 6 Connect power here.

\* HDMI out is used when connecting an extra monitor (typically for presentations)—see the next page for more.

### Connecting for use as PC screen

Your EX90 has an HD display, which also may serve as your PC screen.

Connect your PC to the sockets on the rear panel as shown below.

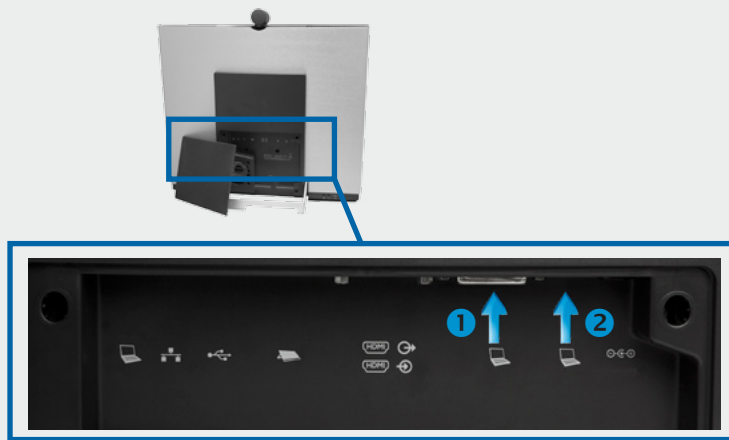


Connect your PC video to 1 and PC audio to 2

A resolution of 1920 × 1200 is recommended. For a list of other screen resolutions supported, see “Setting the screen resolution” on page 9.

## Connecting a PC to the unit

Your EX90 has an HD display, which also may serve as your PC screen. Connect your PC to the sockets on the rear panel as shown below. For optimal PC image quality, digital output (DVI) from the PC is recommended. If both DVI and HDMI are connected, a **Source** button appears in the setup menu on the touch screen to let you select which source to use as PC screen.



Connect your PC video to **1** and PC audio to **2**

## Setting the screen resolution

A resolution of 1920 × 1200 is recommended. However, other resolutions may also be used as shown in the below tables.

### Digital input via DVI

1920 × 1200 (recommended)  
1920 × 1080  
1776 × 1000 (not full screen)  
1680 × 1050  
1600 × 1200 (not full screen)  
1440 × 900  
1400 × 1050 (not full screen)  
1280 × 1024 (not full screen)  
1280 × 960 (not full screen)  
1280 × 800  
1280 × 768 (not full screen)  
1280 × 720 (not full screen)  
1152 × 648 (not full screen)  
1024 × 768 (not full screen)  
960 × 600 (not full screen)  
800 × 600 (not full screen)

### Analog input via DVI

1920 × 1200 (recommended)  
  
1680 × 1050  
1600 × 1200 (not full screen)  
1440 × 900  
  
1280 × 1024 (not full screen)  
  
  
1024 × 768 (not full screen)  
  
800 × 600 (not full screen)

Screen resolution must be set via the web interface, using the **Video Output HDMI [1] Resolution** setting. For details on this, see the EX90 Administrator Guide, which is available separately for download.

## Use as PC screen

Your EX90 has an HD display, which also may serve as your PC screen. Connect your PC to the sockets on the rear panel as shown above.

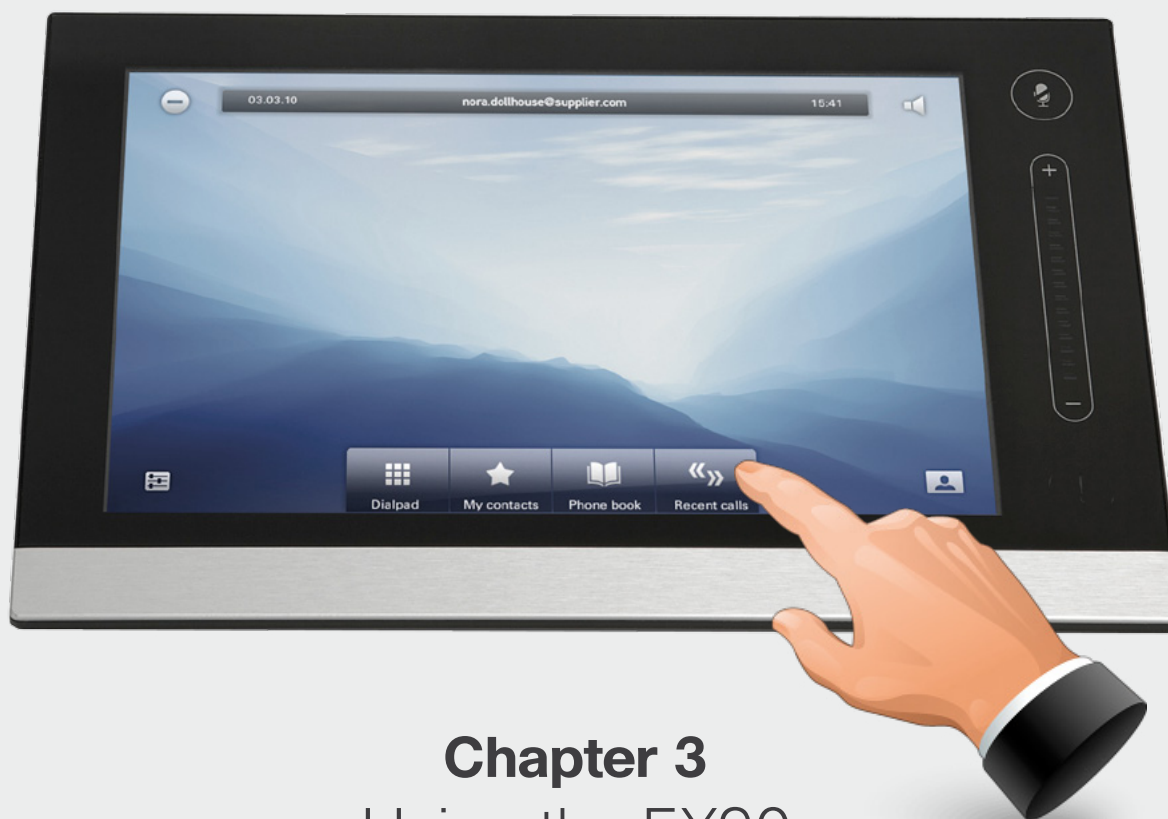
Your EX90 will serve as your PC screen outside calls. In a call tap **View desktop** to see the desktop.

Your desktop is **not** exposed to the other side.

## Using an external monitor to show presentations

You may connect an external monitor to your EX90 to have it work with two monitors at the same time. The second monitor can be configured to show presentations instead of having everything on a single screen.

To enable the use of a second monitor the system must be configured for it. This is done via the web interface using the **Video DefaultPresentationSource** setting. Doing so is described in the EX90 Administrator Guide which is available separately for download .



## Chapter 3

### Using the EX90

## Camera adjustments

The camera can be tilted mechanically in vertical direction.



Turn the circumference to activate the privacy shutter.



## Use as document camera

Tilt the camera as shown to use it as a document camera. Image is automatically turned upside down, so that both parties will see the document correctly.



touch screen controller—initial view



## Initial settings—before you begin

1



Tap **Selfview** to see what others will see of you.



2



Tilt the camera to obtain the best view. The best view will be the view that positions your face as high up on the screen as possible without cutting off the top of your head.

3



If you need to adjust zoom, tap **Setup**.



4



Tap **Camera**.



5



Use **+** and **-** to adjust the zoom.



6



Collapse menu after use.



## Calling someone by dialing



Tap **Dial pad**.



Use the numeric keypad for numbers, or use the keyboard mode.

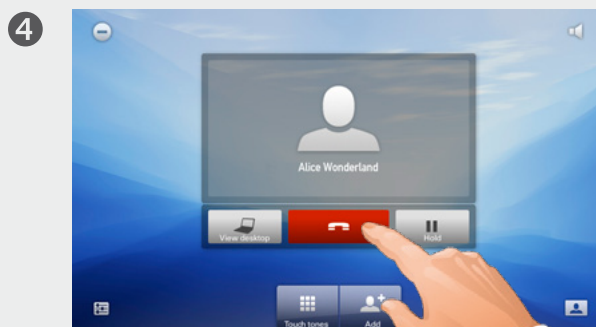
Tap **abc** to change to keyboard and **123** to change back.



If you need to key in digits or special characters, press and hold the key until the character appears.



Tap the green **Call** button to place the call.



Terminate the call by tapping the red **Terminate call**.

## Calling someone using Recent calls



Tap **Recent calls** to display the list of recent calls.




Recent calls is a list of placed, missed and received calls since the last time you cleared the list.

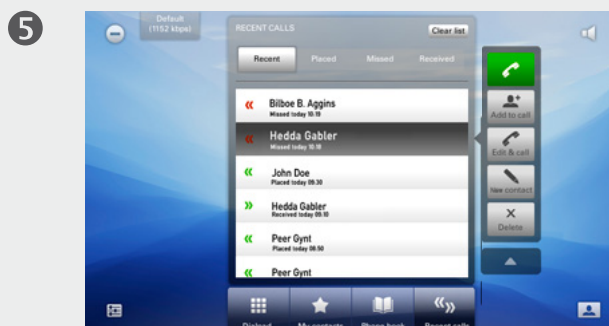
- » Calls placed
- « Calls received
- «« Calls missed



Scroll by dragging up or down anywhere in these lists.



Tap the entry to be called. This will cause the **Call** button to appear. Tap  to display the context sensitive options list, if needed.



You may now either call the entry; add the entry to call more than one; edit the entry before calling; add the entry to *My contacts* or simply remove the entry. Or you may do nothing—just tap **Recent calls** again to hide the entire *Recent calls* list.



Place the call.

Terminate the call as described in "Calling someone by dialing" on page 15.

## Calling someone using My contacts



Tap **My contacts** to display your personal phone book.



Scroll by dragging up or down anywhere in the list.



Tap the entry to be called. This will cause the **Call** button to appear. Tap to display the context sensitive options list, if needed.



Call the entry now.  
Add to call¹.  
Edit before calling.  
Edit the entry itself.  
Remove the entry.  
Contract list.

<sup>1)</sup> Systems with the optional *Add to call* let you specify which two to call before you call them. When both have been added to the call list, they can be called in one go.

## Calling someone using the Phone book



Tap **Phone book** to display the corporate phone book.



Phone books may have subfolders.  
Tap a subfolder to display its contents.

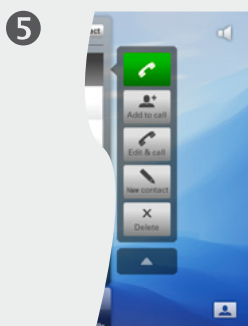


Scroll by dragging up or down anywhere in these lists.

Tap the entry you want to call.



Tap **Call** to place the call.



You may expand the list to get the same options as on the previous pages.

## Search the Phone book, then call



Tap **Phone book** to display the corporate phone book.



Tap in the search field to start searching for an entry.

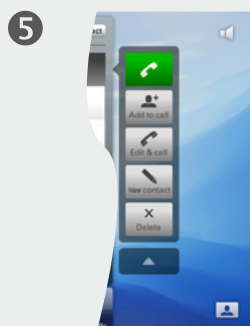
The keyboard will now appear.



Start keying in the entry. Matches will appear as you write.



Tap **Call** to place the call.



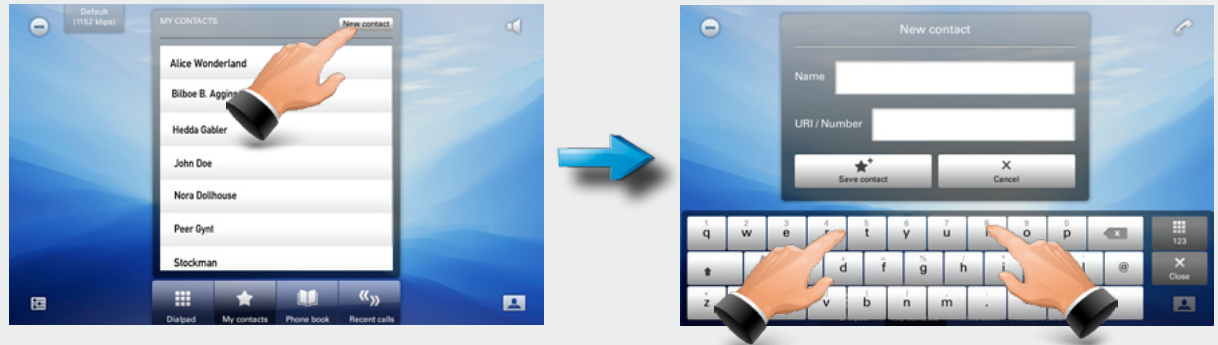
You may expand the list to get the same options as outlined on the previous pages.

## Phone book matters

The contents of the phone book cannot be altered by the user. However, any entries in the phone book may be copied to *My contacts* and altered there, if needed.

In addition the “number” of any call received or dialed (including entries in the list of recent calls) can be entered into *My contacts*.

## Entering a new contact manually

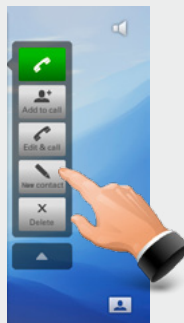


Once within *My contacts*, tap **New contact** to produce the *New contact* dialog. Fill in as required and tap **Save** contact to exit dialog, putting changes into effect.

## Adding someone to My contacts from call lists or the Phone book

There is a multitude of ways to enter someone into *My contacts*. You may add entries from the *Phone book*; entries from the *Recent calls* list, as well as the “number” of anyone you call or receive calls from.

To add someone, expand the call menu as shown and tap **New contact**. This will produce the *Edit contact* dialog box. Edit if required and tap **Save** to add the new contact to the *My contacts* list.



## Editing in My contacts

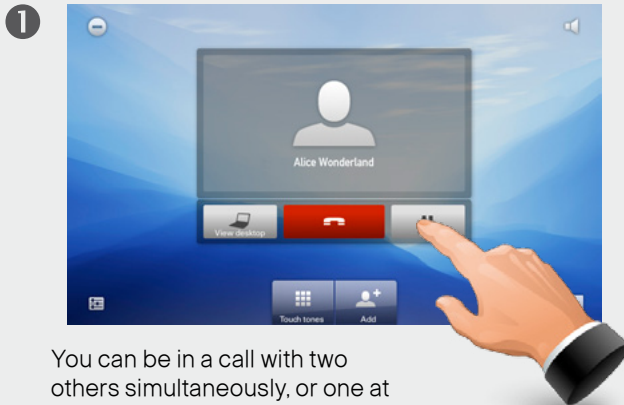
To edit, including delete, any of the entries in *My contacts*, tap **My contacts** and tap the entry to be edited or deleted.

Expand the menu, if required.

Tap **Edit** to produce the *Edit* dialog box and **Delete** to delete the entry. You will be alerted to confirm.

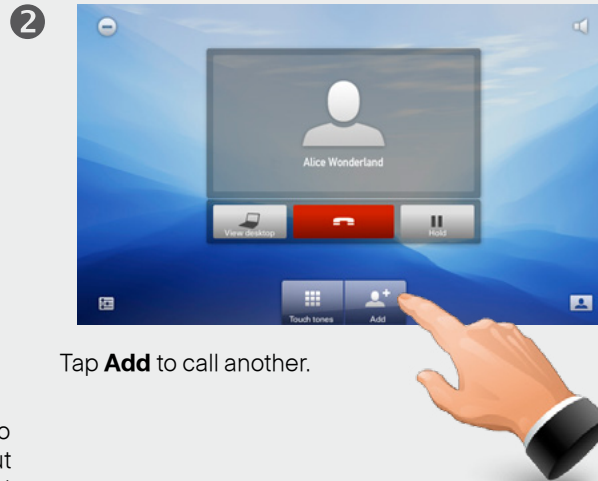


## Calling more than one (I)



You can be in a call with two others simultaneously, or one at a time. This is an optional feature that may, or may not, be present in your system.

You may want to (but do not have to) put the current call on hold first.



Tap **Add** to call another.



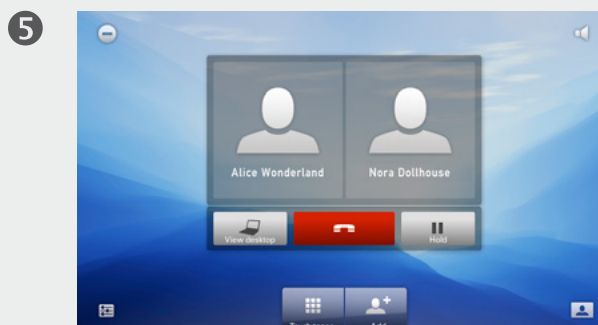
You will now see the list of recent calls. Tap an entry here, or tap **My contacts** or **Phone book** and do your selection there.

Alternatively, you may tap the **Dial pad** and use that to place the call as shown in "Calling someone by dialing" on page 15.

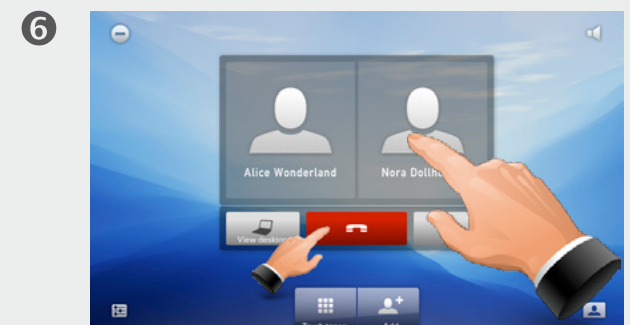


Place the call.

(Optional feature)

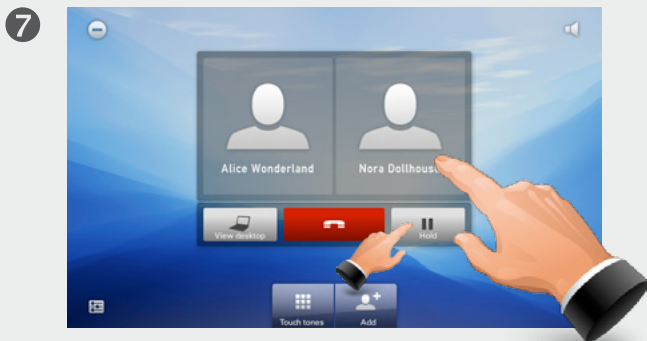


You will now have both parties shown side-by-side on your main screen.



To terminate one of the two calls, tap the participant to be disconnected. This will produce a small menu, with which you may terminate that part of the call. To terminate both calls, tap the **Terminate call** directly.

## Calling more than one (II)



To put one of the participants on hold, tap that participant. A menu will appear next to that person allowing you to put him or her on hold. To put both on hold, tap **Hold** (next to the red **Terminate call** button), as outlined.

(Optional feature)



Tap on the participant on hold to display options.



Tap **Swap** to swap the two participants (switch between the two). If you expand the list you will be able to also choose between joining the two (bring the one on hold back in) or disconnecting the one on hold.

## Call transfer

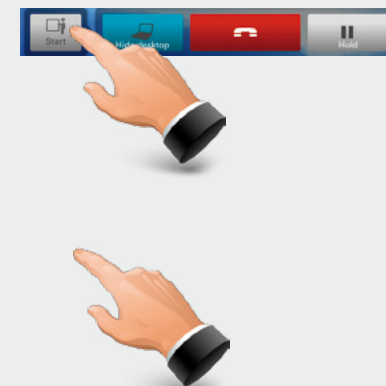


With one on hold, tap the one in call to display the menu. The menu will allow you to transfer this call to someone else. A ▼ indicates that you should use the *Dialpad*, the *Phone book*, or the *Recent calls* list to locate whom to transfer the call to.

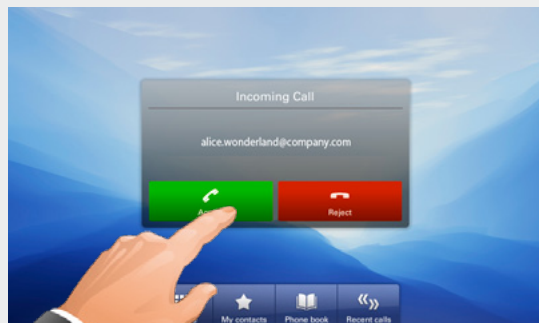
## Sharing presentations

In a call, you may share your PC screen with the other side. Tap **View** desktop (as above) and then tap **Start** to activate. To deactivate, tap **Stop**.

For other aspects of this feature, including how to use the EX90 as your PC screen—see the section “Use as PC screen” on page 10

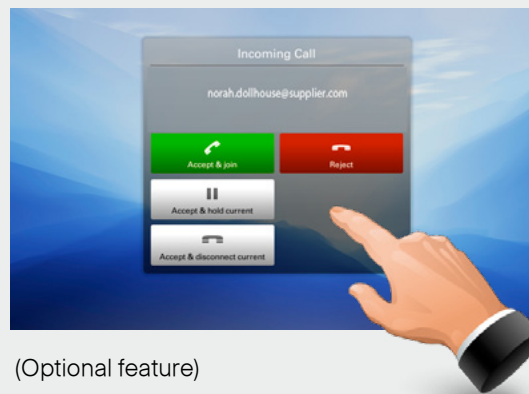


## Receiving calls



Tap **Accept** to accept the incoming call or **Reject** to reject it.

## Receiving another call while already in a call



(Optional feature)

If you already are in a call and someone else calls you will get the following options:

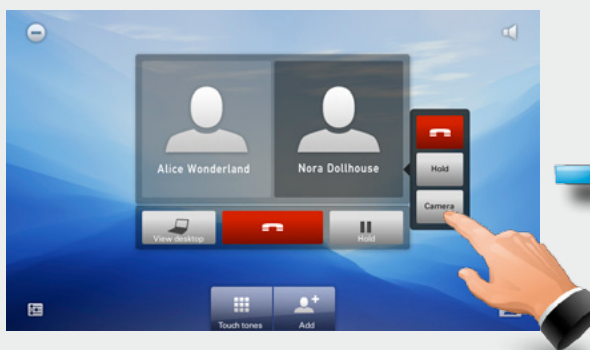
- Accept the incoming call and join it with the current call.
- Accept the incoming call and put the current call on hold.
- Accept the incoming call and disconnect the current call.
- Reject the incoming call and continue with the current call.

## Do not disturb



The *Do not disturb* feature can be activated to disable the incoming call alert signal. You may still receive and place calls. Tap to activate—the icon will then turn red and white. Tap again to deactivate.

## Far end camera control



If the other end point permits it, you may control their camera. This is known as *Far end camera control*. Tap **Camera**.



Pan and zoom the far end camera as needed. If the other camera cannot be controlled, nothing happens. Press **Exit** when finished.



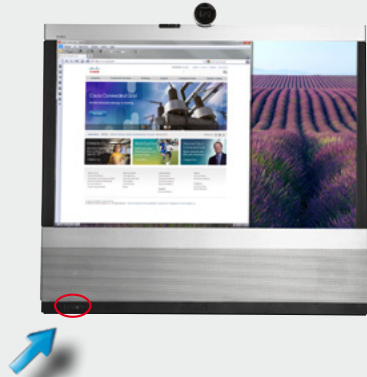
The EX90 can be configured via the touch screen controller or via its web interface. For full access to all configurable parameters the web interface must be used—the touch screen controller provides access to a limited set of parameters only.

## Chapter 4

### The settings using Cisco Telepresence touch screen

## Setting the EX90 in standby

Outside a call, you may have the unit enter standby mode by touching the **Power** button on the main unit (the screen). The *Standby* dialog is displayed and the unit enters standby immediately. This does not work when you are in a call.

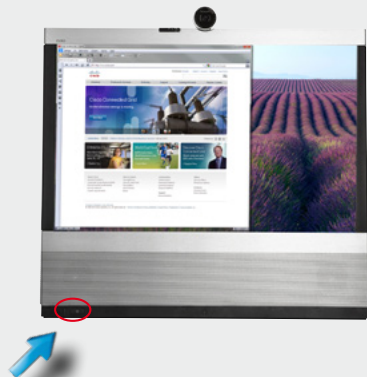


Tap as shown to wake up the system from standby.

## Shutting down the EX90

Outside a call, press the **Power** button until the *Shutdown progress bar* is filled completely.

Release the button and the unit will go in shutdown in just a few seconds.



To start the system again, press the **Power** button until the LED illuminates (green light).

## Reverting to factory default settings

**To revert to the factory default settings, do as follows:**

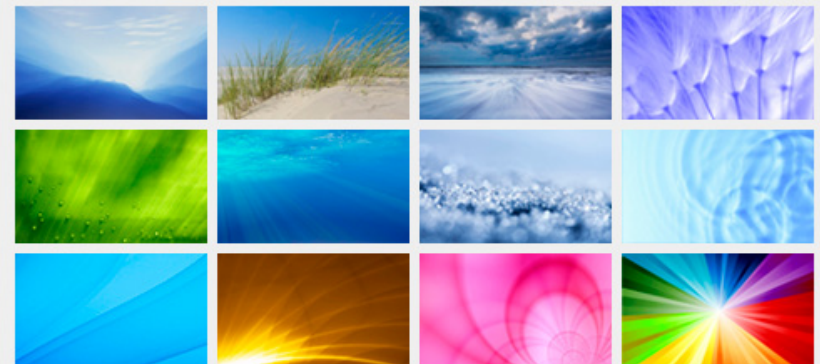
1. Disconnect the power cord.
2. Reconnect the power cord—a green light will illuminate shortly after.
3. Press the **Power** button as soon as the green light appears. Keep it depressed for 15 seconds or so, until the green light starts flashing.
4. Release the button and press twice within 2 seconds. All settings will now revert to factory default settings.

## Changing background image on touch screen

The background image on the touch screen can be changed.

**Do as follows:**

1. Draw a circle with your finger anywhere on the screen where there are no icons.
2. The below image will then appear on the touch screen screen. Tap one of the small images to use it as background image.



## Entering the Settings menus



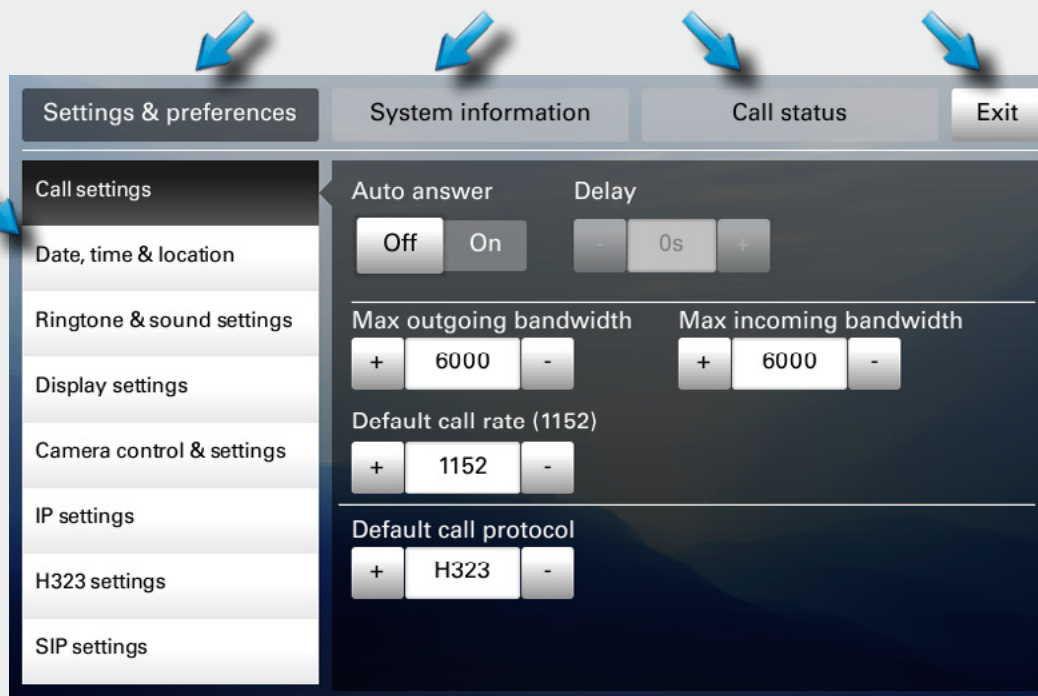
Tap **Setup**.

Tap a field to enter the corresponding settings.



Tap **Settings** to gain access to the *Settings*.

Select the tab required by tapping on it.



If both DVI and HDMI are connected to external sources, a **Source** button will appear in addition, letting you select which source to display.

## Call settings

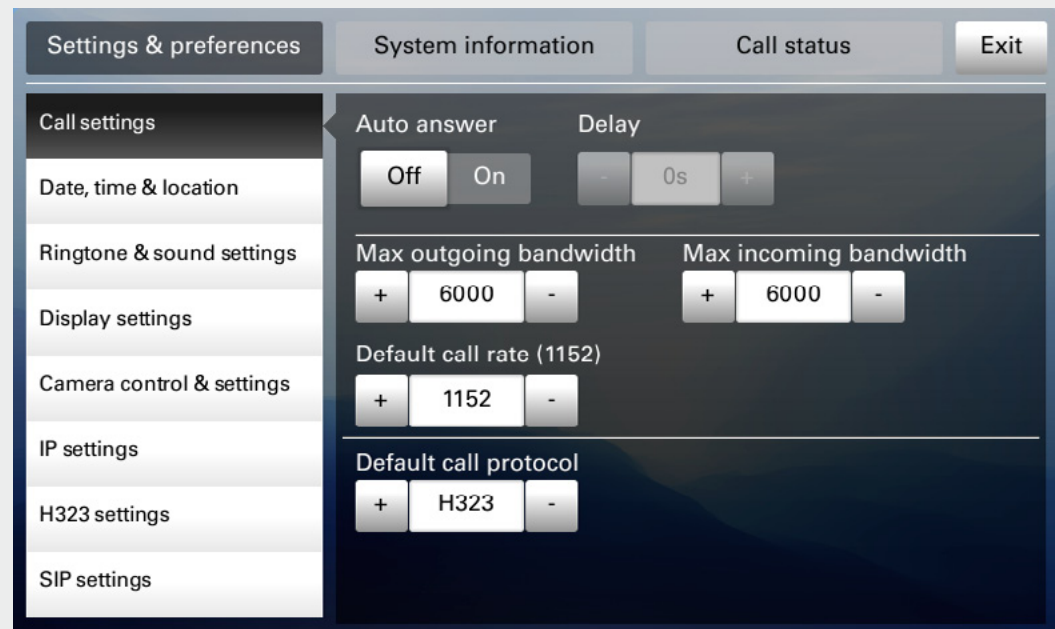
The *Call settings* let you define whether your EX90 shall respond automatically to incoming calls or not.

If you set it to *Auto answer On*, you may specify a delay from the moment an incoming call appears until the unit responds. The delay can be set to 0–50 seconds in one-second steps.

You may also specify:

- Maximum outgoing and incoming bandwidth. The two may have different settings.
- A preferred default call rate different from the one the unit comes with, if needed.
- The default call protocol, choose between SIP and H.323.

Bandwidth and call rates can be set to 128, 384, 512, 768, 1152, 1920, 2560, 3072, 4000 or 6000 kbps.

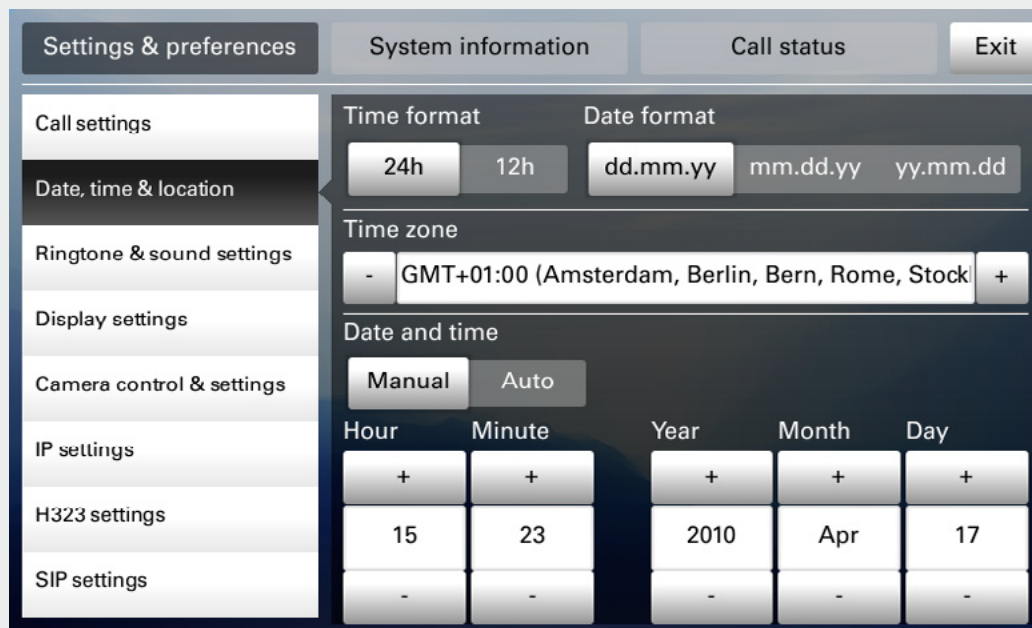


Settings & preferences	System information	Call status	Exit
<b>Call settings</b> Date, time & location Ringtone & sound settings Display settings Camera control & settings IP settings H323 settings SIP settings	<div> Auto answer Delay </div> <div> Off On - 0s + </div> <hr/> <div> Max outgoing bandwidth Max incoming bandwidth </div> <div> + 6000 - + 6000 - </div> <hr/> <div> Default call rate (1152) </div> <div> + 1152 - </div> <hr/> <div> Default call protocol </div> <div> + H323 - </div>		

## Date, time & location

The *Date, time & location* settings let you specify:

- 24h or 12h time format.
- Your preferred date format.
- Your preferred time zone.
- Whether date and time shall be set automatically or manually.



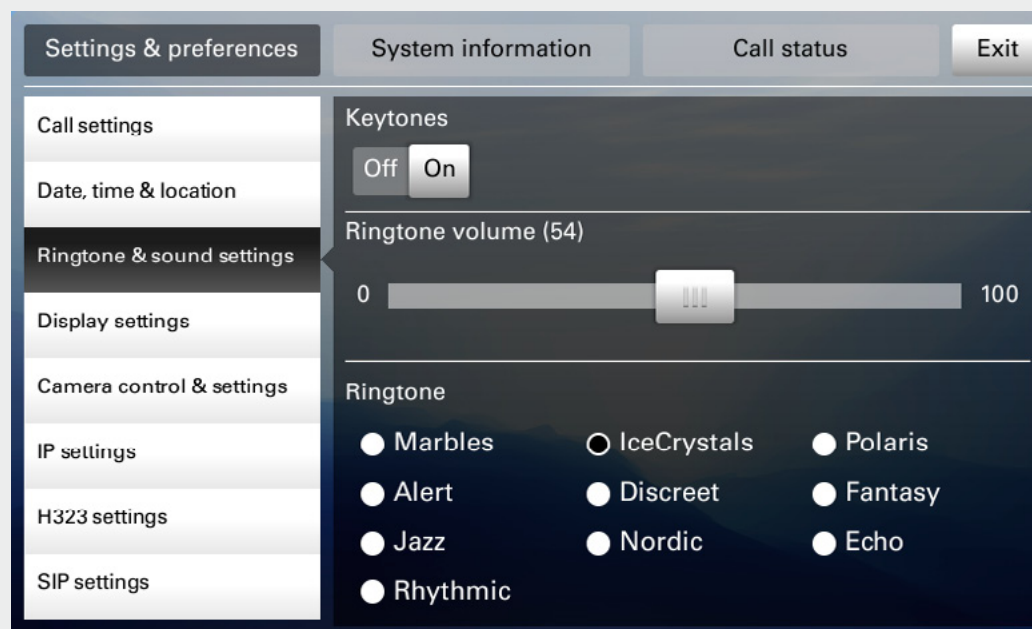
The screenshot shows the 'Settings & preferences' menu on the left, with 'Date, time & location' selected. The main panel displays the following settings:

- Time format:** 24h (selected), 12h
- Date format:** dd.mm.yy (selected), mm.dd.yy, yy.mm.dd
- Time zone:** - GMT+01:00 (Amsterdam, Berlin, Bern, Rome, Stock) +
- Date and time:** Manual (selected), Auto
- Hour:** +, 15, -
- Minute:** +, 23, -
- Year:** +, 2010, -
- Month:** +, Apr, -
- Day:** +, 17, -

## Ringtone & sound settings

The *Ringtone & sound settings* let you specify:

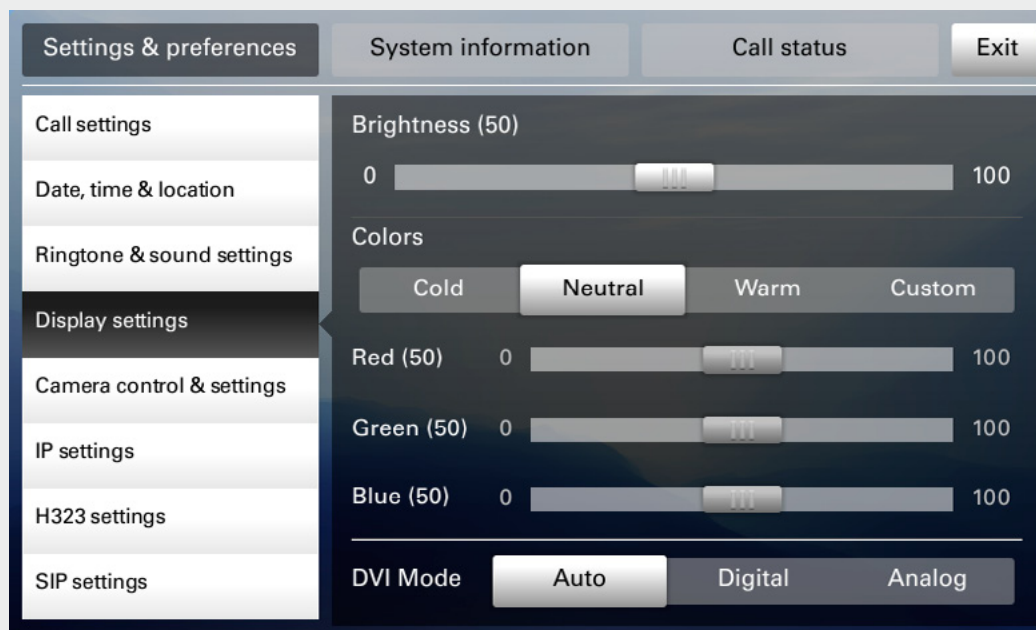
- Audible tones when tapping keys on or off.
- The ringtone volume.
- The type of ringtone. Tap a ringtone to hear what it sounds like.



## Display settings

The *Display settings* let you adjust:

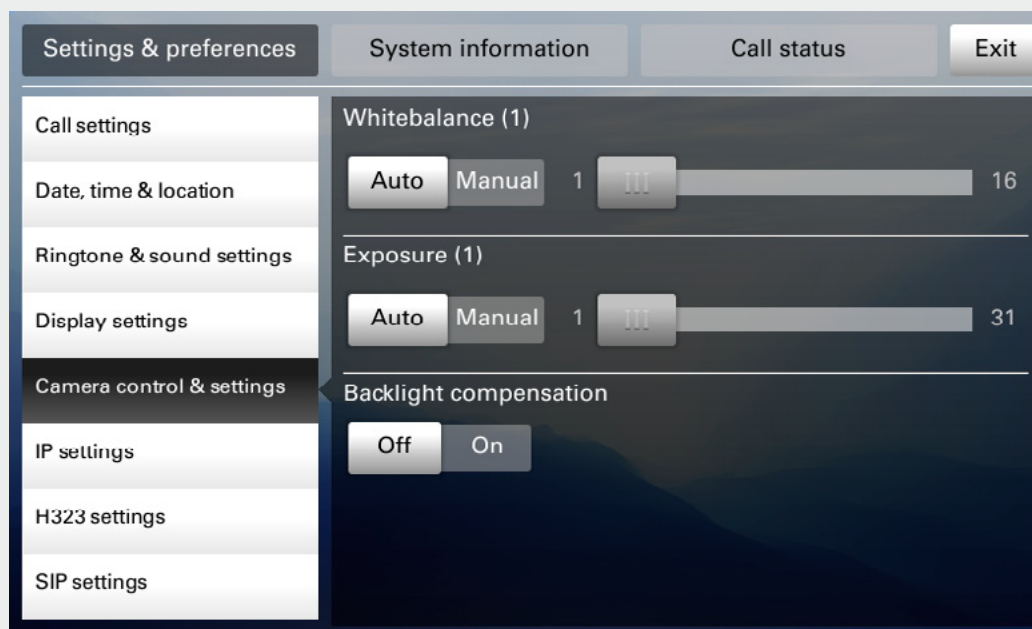
- Preferred brightness by moving the *Brightness* slider.
- The color balance. There are four preset color settings (**Cold**, **Neutral**, **Warm** and your own (**Custom**)) available. When you select **Custom**, you may use the **Red**, **Green** and **Blue** sliders to specify your own setting.
- The DVI mode can be set to automatically detect the type of video signal received, or forced to analog or digital. The DVI mode is used when the unit is connected to a PC to serve as a PC monitor.



## Camera control & settings

The *Camera control & settings* let you specify:

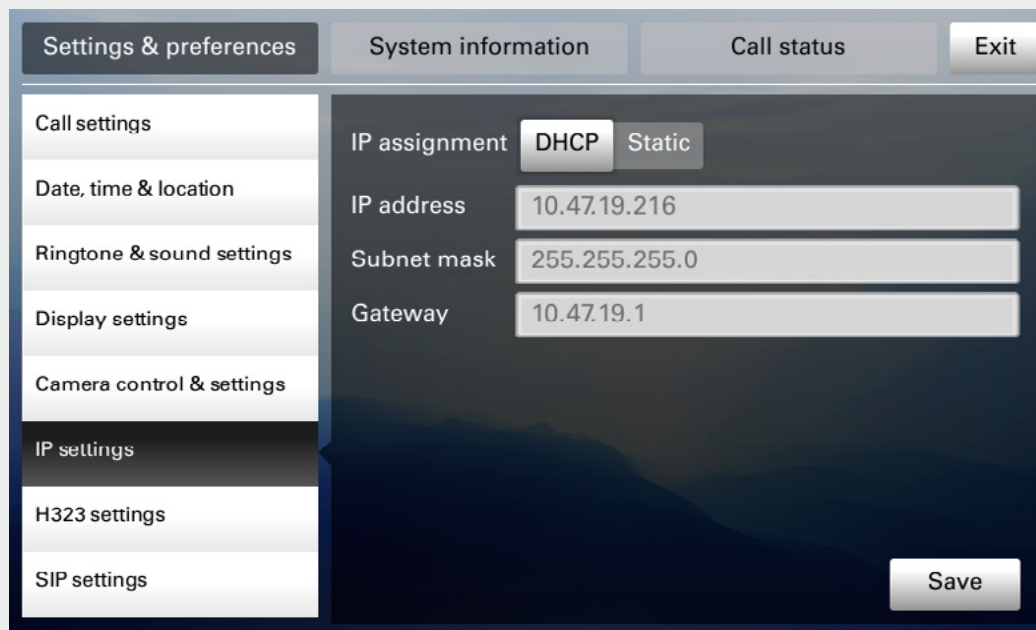
- The *Whitebalance* setting.
- The *Exposure* setting.
- Whether *Backlight compensation* shall be activated or not. Backlight compensation is used to avoid that you appear darker than needed whenever there is much light behind you.



## IP settings

The *IP settings* let you specify:

- The use of *DHCP* or *Static* IP addresses. If you decide to use *Static*, make sure you tap **Save** before leaving the menu.



The screenshot shows the 'IP settings' screen. At the top, there are four tabs: 'Settings & preferences' (selected), 'System information', 'Call status', and 'Exit'. On the left side, there is a vertical menu with the following options: 'Call settings', 'Date, time & location', 'Ringtone & sound settings', 'Display settings', 'Camera control & settings', 'IP settings' (highlighted), 'H323 settings', and 'SIP settings'. The main area of the screen displays the 'IP assignment' section with two radio buttons: 'DHCP' (selected) and 'Static'. Below this, there are three input fields: 'IP address' with the value '10.47.19.216', 'Subnet mask' with the value '255.255.255.0', and 'Gateway' with the value '10.47.19.1'. A 'Save' button is located at the bottom right of the main area.

## H.323 settings

The *H.323 settings* let you specify:

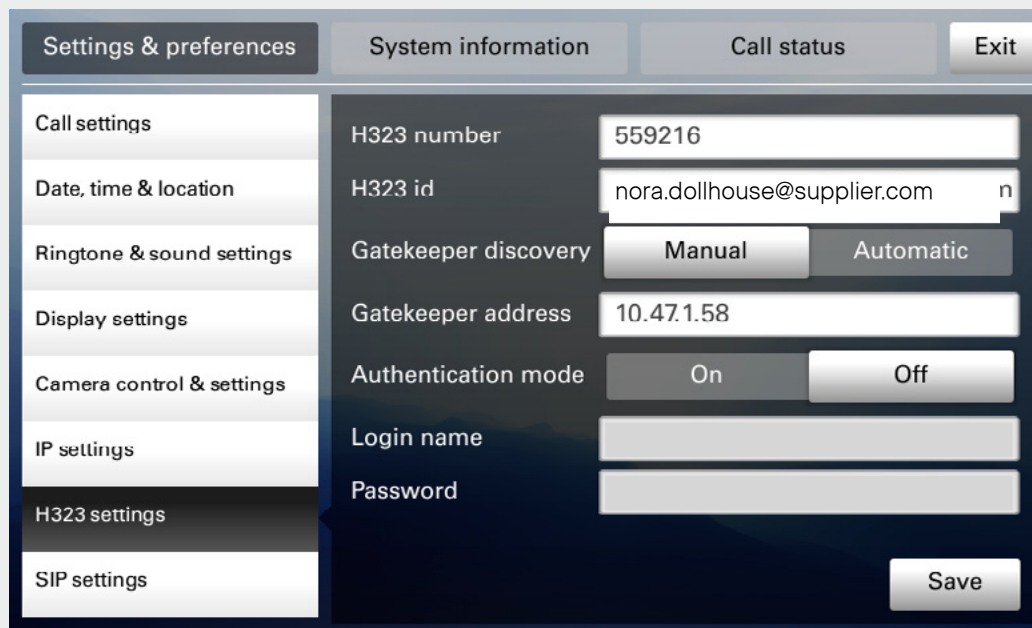
- An H.323 alias.
- Your H.323 id.
- *Gatekeeper discovery* (*Manual* or *Automatic*).
- The *Gatekeeper address* must be specified by you if discovery has been set to manual.
- *Authentication mode* *On* or *Off*. If set to *On*, the EX90 will send Login name and password to the Gatekeeper for authentication.

In addition there are:

- Two fields to enter *Login name* and *password*. The alphanumeric keyboard will appear whenever needed.

Be sure to:

- Tap **Save** to put changes into effect.



Settings & preferences	System information	Call status	Exit
Call settings	H323 number	559216	
Date, time & location	H323 id	nora.dollhouse@supplier.com n	
Ringtone & sound settings	Gatekeeper discovery	Manual Automatic	
Display settings	Gatekeeper address	10.47.1.58	
Camera control & settings	Authentication mode	On Off	
IP settings	Login name		
H323 settings	Password		
SIP settings	Save		

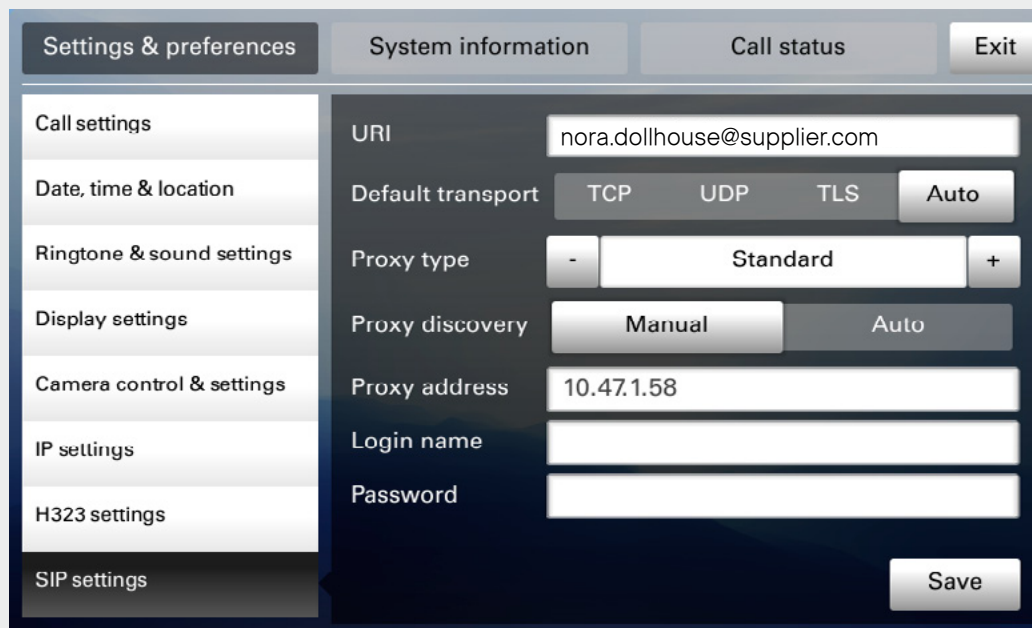
## SIP settings

The *SIP settings* let you specify:

- Your *URI*.
- The *Default transport* layer, this can be set to *TCP*, *UDP*, *TLS* or *Auto*.
- The proxy type can be set to *Standard*, *Alcatel*, *Avaya*, *TANDBERG*, *Microsoft*, *Nortel*, *Experimental*, *Siemens*. The experimental setting is for testing purposes.
- *Outbound* is not used in this version.
- *Proxy discovery* can automatic or manual. In the case of manual the proxy address must be specified by you.
- *Login name* and *password* is required by the VCS.

Be sure to:

- Tap **Save** to put settings into effect.



## System information

The **System information** provides all the system information at a glance.

Scroll down to also see status on video inputs (DVI and HDMI).

Settings & preferences	System information	Call status	Exit
System name: nora.dollhouse@supplier.com			
Uptime: 26 days, 18 hours, 30 minutes			
<b>NETWORK</b>			
IP address: 10.47.6.212			
<b>H323</b>			
Number: n/a			
ID: nora.dollhouse@supplier.com			
Gatekeeper: 10.47.1.58			
Status: Registered			
<b>SIP</b>			
Address: nora.dollhouse@supplier.com			
Proxy: 10.47.1.58			
Status: Registered. Secured. Not verified.			
<b>SOFTWARE</b>			
Version: TC3.1.0.-Beta1 (TEST SW)			
Options installed: MultiSite, PremiumResolution			
<b>HARDWARE</b>			
Module serial: A1AR00000006			
MAC address: [REDACTED]			

## Call status

The **Call status** provides all the call status information at a glance.

Settings & preferences

System information

Call status

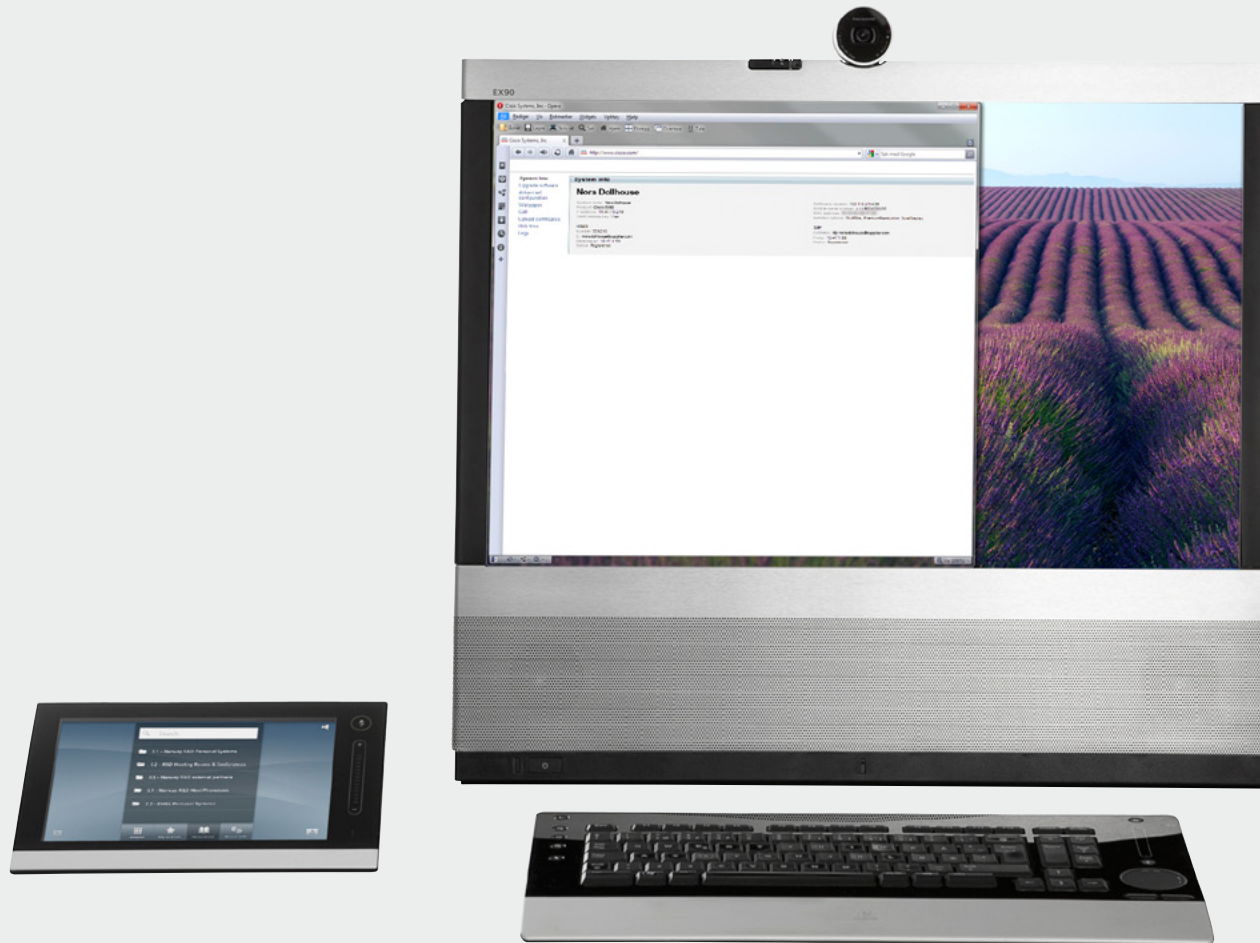
Exit

nora.dollhouse@supplier.com

Call rate:	1152	Encryption type:	Aes-128	
Protocol:	h323	Encryption status:		

VIDEO	Transmit	Presentation	Receive	Presentation
Protocol:	H264	Off	H264	Off
Resolution:	768x448	n/a	768x448	n/a
Frame rate:	30	n/a	26	n/a
Channel rate:	245 kbps	n/a	373 kbps	n/a
Packet loss:	0 packets		0 packets	
Packet loss (%):	0.00%		0.00%	
Jitter:	4 ms		7 ms	

AUDIO	Transmit	Receive
Protocol:	AACLD	AACLD
Channel rate:	63 kbps	63 kbps
Packet loss:	0 packets	0 packets
Packet loss (%):	0.00%	0.00%
Jitter:	1 ms	0 ms




## Chapter 5

### The web interface

## Entering the web interface

Key in the IP address of your EX90 in your browser to access its web interface. A detailed description of the options available can be found in the Administrator guide for this product. The Administrator guide is available separately for download.


Signed in : admin

**System Information**  
[Call](#)  
[Snapshot](#)  
[Users](#)  
[Change Password](#)  
[Wallpaper](#)  
[Login Banner](#)  
[Upload Certificates](#)  
[Audit Certificate](#)  
[Logs](#)  
[XML Files](#)  
[Upgrade Software](#)  
[Advanced Configuration](#)  
[Restart](#)  
[Sign Out](#)

**System Info**
⌵
⌴

### My Codec

System name: My System	Software version: TC4.0
Product: Cisco TelePresence EX90	Module serial number: BA9876543210
IP address: 192.168.1.128	MAC address: 00:33:66:99:CC:FF
Valid release key: Yes	Installed options: NaturalPresenter, MultiSite, PremiumResolution

<b>H323</b> Number: 1234567 ID: firstname.lastname@company.com Gatekeeper: 192.168.1.1 Status: Registered	<b>SIP</b> Address: sip.firstname.lastname@company.com Proxy: 192.168.1.1 Status: Registered
---	---

**Login Info**
⌵
⌴

Last successful login: Tue Oct 26 15:05:08 2010  
 Number of unsuccessful login attempts since last logon: 0  
 Password expires in: Never

**Security**
⌵
⌴

Strong security mode: Disabled

THE SPECIFICATIONS AND INFORMATION REGARDING THE PRODUCTS IN THIS MANUAL ARE SUBJECT TO CHANGE WITHOUT NOTICE. ALL STATEMENTS, INFORMATION, AND RECOMMENDATIONS IN THIS MANUAL ARE BELIEVED TO BE ACCURATE BUT ARE PRESENTED WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. USERS MUST TAKE FULL RESPONSIBILITY FOR THEIR APPLICATION OF ANY PRODUCTS.

THE SOFTWARE LICENSE AND LIMITED WARRANTY FOR THE ACCOMPANYING PRODUCT ARE SET FORTH IN THE INFORMATION PACKET THAT SHIPPED WITH THE PRODUCT AND ARE INCORPORATED HEREIN BY THIS REFERENCE. IF YOU ARE UNABLE TO LOCATE THE SOFTWARE LICENSE OR LIMITED WARRANTY, CONTACT YOUR CISCO REPRESENTATIVE FOR A COPY.

The Cisco implementation of TCP header compression is an adaptation of a program developed by the University of California, Berkeley (UCB) as part of UCB's public domain version of the UNIX operating system. All rights reserved. Copyright © 1981, Regents of the University of California.

NOTWITHSTANDING ANY OTHER WARRANTY HEREIN, ALL DOCUMENT FILES AND SOFTWARE OF THESE SUPPLIERS ARE PROVIDED "AS IS" WITH ALL FAULTS. CISCO AND THE ABOVE-NAMED SUPPLIERS DISCLAIM ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, THOSE OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OR ARISING FROM A COURSE OF DEALING, USAGE, OR TRADE PRACTICE.

IN NO EVENT SHALL CISCO OR ITS SUPPLIERS BE LIABLE FOR ANY INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES, INCLUDING, WITHOUT LIMITATION, LOST PROFITS OR LOSS OR DAMAGE TO DATA ARISING OUT OF THE USE OR INABILITY TO USE THIS MANUAL, EVEN IF CISCO OR ITS SUPPLIERS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Cisco and the Cisco Logo are trademarks of Cisco Systems, Inc. and/or its affiliates in the U.S. and other countries. A listing of Cisco's trademarks can be found at [www.cisco.com/go/trademarks](http://www.cisco.com/go/trademarks). Third party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1005R)

Any Internet Protocol (IP) addresses and phone numbers used in this document are not intended to be actual addresses and phone numbers. Any examples, command display output, network topology diagrams, and other figures included in the document are shown for illustrative purposes only. Any use of actual IP addresses or phone numbers in illustrative content is unintentional and coincidental.



On our web site you will find an overview of the worldwide Cisco contacts.

Go to: <http://www.cisco.com/web/siteassets/contacts/index.html>

Corporate Headquarters  
Ciso Systems, Inc.  
170 West Tasman Dr.  
San Jose, CA 95134 USA