



**Avaya 1400 Series Digital
Deskphones**
for Avaya Aura™ Communication
Manager
Installation and Maintenance Guide
Release 1.0

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Interference

Using a cell, mobile, or GSM telephone, or a two-way radio in close proximity to an Avaya IP Telephone might cause interference.

Contents

Chapter 1: Introduction	5
About This Guide	5
Intended Audience.	5
Document Organization	5
Other Documentation	6
Customer Support	6
Chapter 2: 1400 Series Digital Deskphones Installation	7
Introduction	7
Digital Telephone Models	7
Software	7
Pre-Installation Checklist	8
Assembling the 1400 Series Digital Deskphones	9
Upgrading the Firmware for 1400 Series Digital Deskphones	14
Upgrading the Firmware on a G650 System	14
Upgrading the Firmware on a G700/450/350 System	15
Printing Button Labels	17
Chapter 3: Administering 1400 Series Digital Deskphones	19
Introduction	19
Administering a 1400 Series Digital Deskphone.	19
Chapter 4: Troubleshooting Guidelines	21
Introduction	21
Operational Errors and Status Messages	21
Index	23

Contents

Chapter 1: Introduction

About This Guide

This guide describes how to install, administer, and troubleshoot the Avaya 1408 and 1416 Digital Deskphones for Avaya Aura™ Communication Manager.

The 1400 Series Digital Deskphones product line works with Avaya Aura Communication Manager Release 5.2 or later call servers.

Intended Audience

This document is intended for personnel who install and administer the 1400 Series Digital Deskphones.

Document Organization

The guide contains the following sections:

Chapter 1: Introduction	Provides an overview of this guide.
Chapter 2: 1400 Series Digital Deskphones Installation	Describes the equipment and resources required to properly install and operate the 1400 Series Digital Deskphones. Provides instructions on installing the telephones out of the box.
Chapter 3: Administering 1400 Series Digital Deskphones	Describes how to administer the 1400 Series Digital Deskphones on Avaya Aura Communication Manager.
Chapter 4: Troubleshooting Guidelines	Describes error conditions and messages that might occur during the installation of the 1400 Series Digital Deskphones.

Other Documentation

See the Avaya support site at <http://www.avaya.com/support> for 1400 Series Digital Deskphones technical and end user documentation.

The following documents are available for the 1400 Series IP Telephones:

- *Avaya 1400 Series Digital Deskphones for Avaya Aura™ Communication Manager Installation and Maintenance Guide*, Document Number 16-603143.
- *Avaya 1400/1500 Series Digital Telephones Safety Instructions*, Document Number 16-603144.
- *Avaya 1400/1500 Series Digital Telephones Service Adapter Safety Instructions*, Document Number 16-603379.
- *Avaya 1400/1500 Series Digital Telephones Wall Mount Instructions*, Document Number 16-603148.
- *Avaya 1400/1500 Series Digital Telephones Stand Instructions*, Document Number 16-603149.
- *Avaya 1400 Series Digital Deskphones User Guide for Avaya Aura™ Communication Manager*, Document Number 16-603151.
- *Avaya 1400 Series Digital Deskphones Quick Reference for Avaya Aura™ Communication Manager*, Document Number 16-603155.

Customer Support

For 1400 Series Digital Deskphones support, call the Avaya support number provided to you by your Avaya representative or Avaya reseller.

Information about Avaya products can be obtained at the following URL:

<http://www.avaya.com/support>

Chapter 2: 1400 Series Digital Deskphones Installation

Introduction

This chapter describes how to install the 1400 Series Digital Deskphones.

For details about using the features provided by the telephones, see the *Avaya 1400 Series Digital Deskphones User Guide for Avaya Aura™ Communication Manager*, Document Number 16-603151.

For information about desk or wall mounting the 1400 Series Digital Deskphones, go to the Avaya support web site <http://www.avaya.com/support>.

Digital Telephone Models

The 1400 Series Digital Deskphones family consist of two telephones and one button module:

Model	Call Appearance/ Feature Buttons	Display Size
● 1408 Digital Deskphone	8	3 row by 24 column display
● 1416 Digital Deskphone	16	4 row by 24 column display
● DBM32 Button Module	32	No display

Software

As shipped from the factory, the 1400 Series Digital Deskphones may not contain the most up-to-date software for registration and operation. To install the latest software, see [Upgrading the Firmware for 1400 Series Digital Deskphones](#) on page 14.

Pre-Installation Checklist

Before plugging in the 1400 Series Digital Deskphones, verify that the following requirements are met. Failure to do so prevents the telephone from working properly. Print copies of this checklist for each telephone.

Verify These Avaya Aura Communication Manager Requirements

- ☐ 1. Avaya Aura Communication Manager Release 5.2 or later software is installed. Avaya Aura Communication Manager Release 5.2 or later software supports the 1400 Series Digital Deskphones, aliased as 2400 Series Digital Telephones. Specifically, the 1408 should be aliased as a 2410, and the 1416 should be aliased as a 2420.
- ☐ 2. There are available ports on a DCP module in the Avaya Aura Communication Manager system. The following DCP modules are supported on the switch:
 - TN2214
 - TN2224
 - MM312
 - MM712
 - MM717



Important:

For more information about DCP modules, see the *Communication Manager Software and Firmware Compatibility Matrix* on the Avaya support web site <http://www.avaya.com/support>.

- ☐ 3. The available ports are wired to the cross-connect field or termination closet.
- ☐ 4. The Avaya Aura Communication Manager system is configured correctly. The Avaya Aura Communication Manager documentation is available at <http://www.avaya.com/support>.

Requirements to Verify for Each 1400 Series Telephone

- ☐ 5. You have an extension number on the Avaya Aura Communication Manager system.
- ☐ 6. You know the room location, jack number, and wire number.
- ☐ 7. You know the port address. The port address is a combination of the port network, carrier, board slot, and port number (for example, **01a0515** - port network 1, carrier A, 5th slot, 15th port) or the gateway number, module slot, and port number (for example, **031v405** - media gateway 31, virtual slot 4, and port 5 on the MM712 card). You can determine the port address using the **list configuration station** command from the Avaya Aura Communication Manager administration interface.
- ☐ 8. A digital jack is available at each telephone site.

- ❑ 9. Verify that the 1400 Series Digital Deskphones package includes the following components:
- 1 telephone set with stand.
 - 1 handset capable of transmitting and receiving 3.4 kHz audio.
 - 1 H4DU 9-foot long (when extended) 4-conductor coiled handset cord, plugged into the telephone and the handset.
 - 1 2-wire line cord.
-

Assembling the 1400 Series Digital Deskphones

 CAUTION:

Be careful to use the correct jack when plugging in the telephone. The jacks are located on the back of the telephone housing and are flanked by icons to represent their correct use.

[Figure 1](#), [Figure 2](#), and [Figure 3](#) show how to connect cords to jacks on the 1400 Series Digital Deskphones. Before installing these telephones, keep in mind the following information:

- All 1400 Series Digital Deskphones are powered from the switch.
- You can connect one DBM32 Button module to the 1416 telephone. The 1416 telephone has a special jack for connecting the DBM32 Button module.

Note:

The DBM32 Button module requires an external power supply (that is, the 1151C power supply). You must order the 1151C power supply separately.

 CAUTION:

For Australian installations only:

Installations of the 1416 telephone with an 1151 power supply and a DBM32 Button module must be restricted to the same building as the host gateway. That is, the 1416 telephone - if installed with an 1151 power supply and a DBM32 Button module - cannot be connected in a campus environment where the 1416 telephone is installed in a building that is separate from the building housing the gateway. This application cannot be used with exposed (out-of-building) wiring.

For installations in which the 1416 telephone is used without an 1151 power supply and a DBM32 Button module, campus connections are acceptable: the 1416 can be located in a separate building in these cases.

This restriction applies to Australian installations only.

Figure 1: Connection Jacks on a 1408 Digital Deskphone

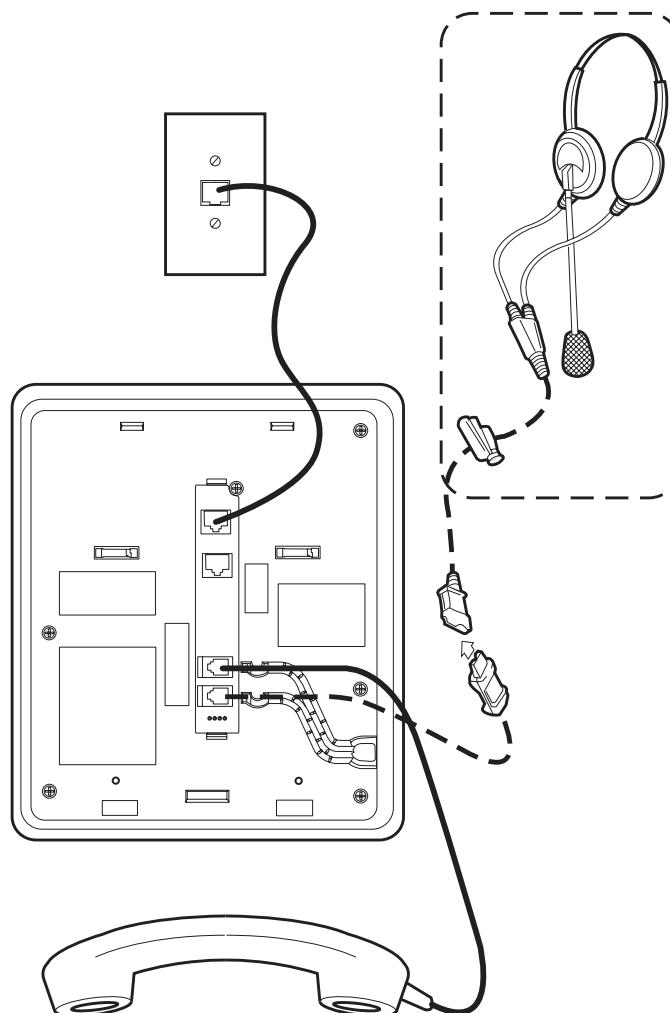


Figure 2: Connection Jacks on a 1416 Digital Deskphone

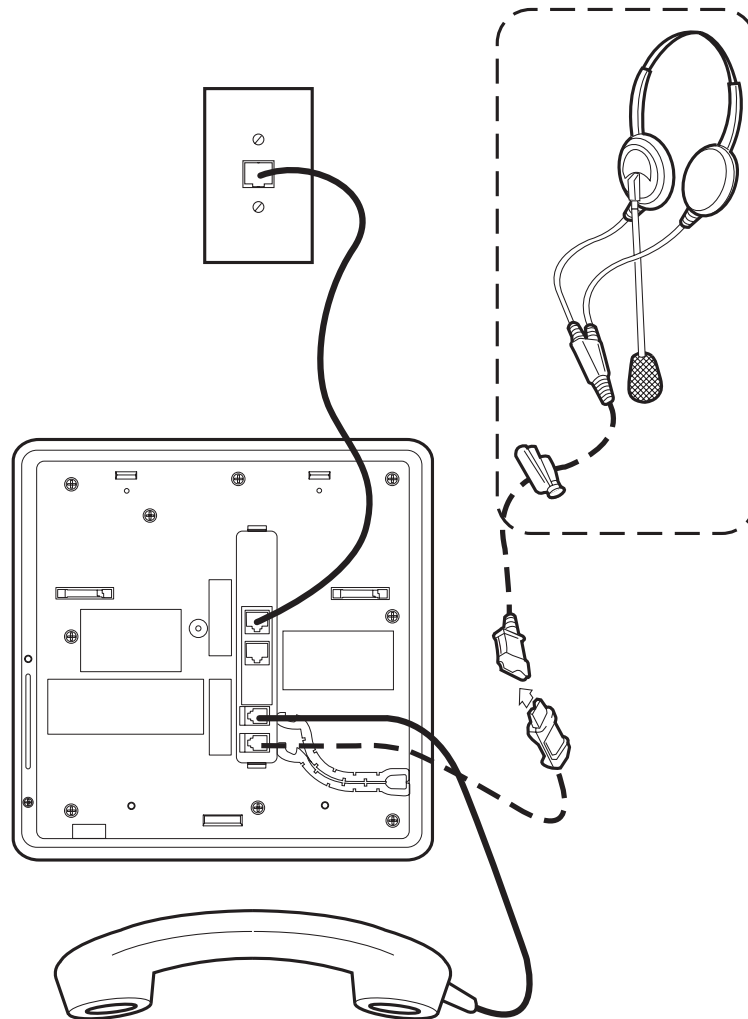
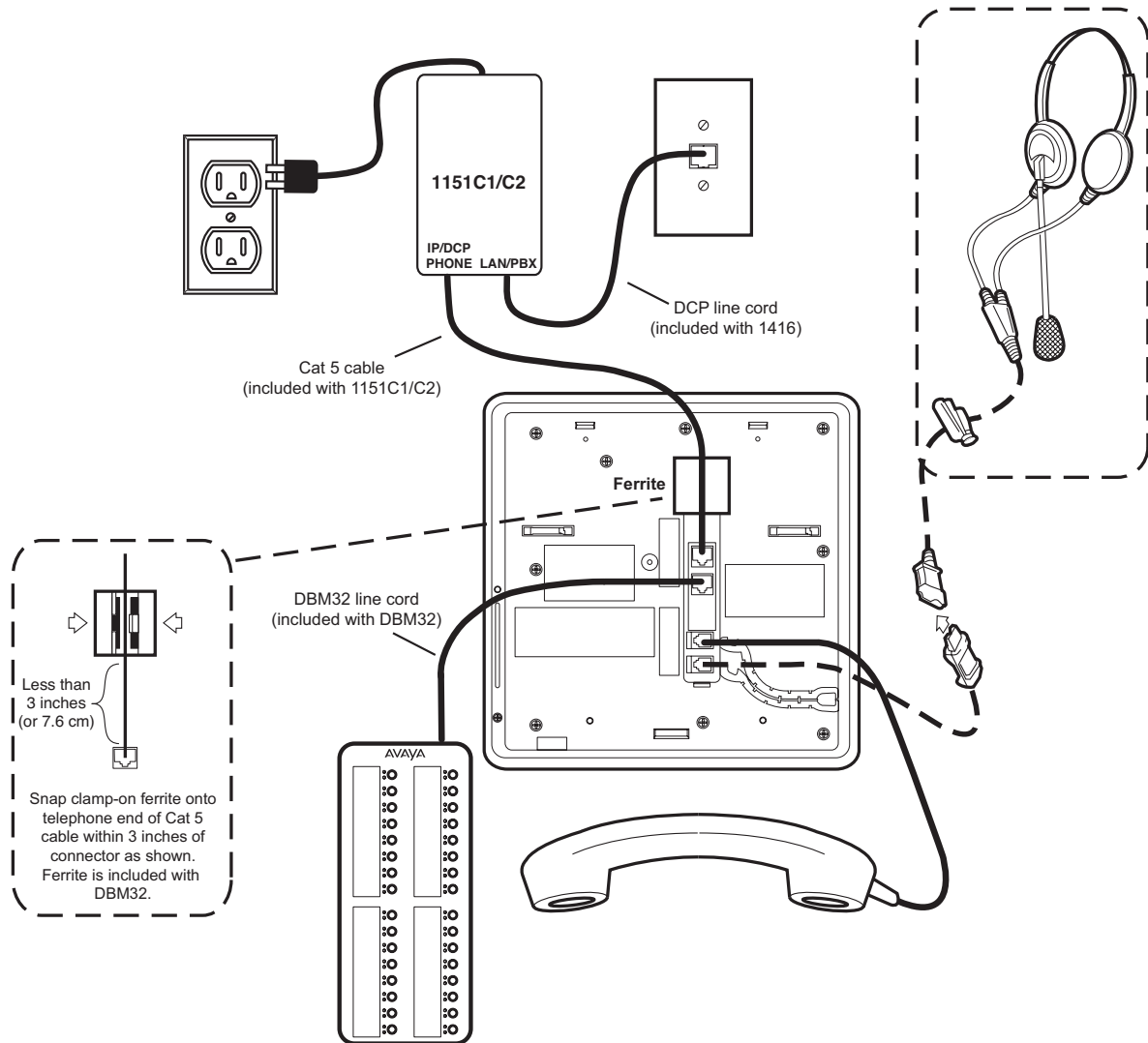


Figure 3: Connection Jacks on a 1416 Digital Deskphone with a DBM32 Button Module



Note:

The DBM32 Button module shown in the lower left corner can also be attached to the telephone with the connector packaged with the module.

1. Plug one end of the modular line cord into the line jack on the 1400 Series Digital Deskphone.
2. Plug the other end of this cord into the wall jack.

If you are connecting a DBM32 Button module to a 1416 telephone:

1. Plug one end of the cord that shipped with the DBM32 Button module into the jack on the DBM32 Button module.
2. Plug the other end of the cord that shipped with the DBM32 Button module into the MOD jack on the 1416 telephone.
3. Plug one end of the line cord that shipped with the 1151C power supply into the IP/DCP PHONE jack on the 1151C power supply.
4. Snap the clamp-on ferrite onto the other end of the line cord that shipped with the 1151C power supply within 3 inches of the connector (as shown in Figure 3).
5. Plug the other end of the line cord that shipped with the 1151C power supply into the line jack on the 1416 telephone.
6. Plug one end of the modular line cord into the LAN/PBX jack on the 1151C power supply.
7. Plug the other end of the modular line cord into the wall jack.
8. Plug the power cord of the 1151C power supply into the wall electrical socket.

Upgrading the Firmware for 1400 Series Digital Deskphones

Perform the appropriate procedure to upgrade the firmware for 1400 Series Digital Deskphones.

Upgrading the Firmware on a G650 System

Before performing the procedure in this section, make sure you have the following:

- the latest firmware for the 1400 Series Digital Deskphones. You can download the latest firmware from <http://www.avaya.com/support>.
- the IP address of your TFTP server
- the computer name (that is, node name) where your TFTP server is running
- a TN2214 or TN2224 DCP board

To upgrade the firmware, perform the following steps:

1. Log into the Avaya Aura Communication Manager administration interface.
2. Enter the **change node-name ip** command.

The Change Node Names screen appears.

3. Add the node name of your TFTP server in the Name field.
4. Add the IP address of your TFTP server in the IP address field.
5. Save your changes.
6. Copy the latest 1400 Series Digital Deskphones firmware that you downloaded from <http://www.avaya.com/support> to your TFTP server.
7. Start your TFTP server.
8. Browse your firmware outbound and inbound file, and make sure your TFTP server is running.
9. From the Avaya Aura Communication Manager administration interface, enter the **change tftp-server** command.

The TFTP Server Configuration screen appears.

10. In the Local Node Name field, enter the name of the CLAN.
11. In the TFTP Server Node Name field, enter the name of the computer that is running the TFTP server.
12. Make sure the TFTP Server Port field is set to **69**.

13. In the File to Retrieve field, enter the name of the firmware file. Be sure to include the **.bin** suffix in the filename.
14. Save your changes.
15. Enter the **change feature-access-codes** command.
The Feature Access Codes screen appears.
16. In the Station Firmware Download Access Code field, enter the FAC value you want use (for example, ***35**).
17. Save your changes.
18. Log out of the Avaya Aura Communication Manager administration interface.
19. Perform one of the following steps:
 - If you are at the target station that you want to upgrade, dial the FAC you specified in the Station Firmware Download Access Code field (for example, *35), and then press the # button.
 - If you are not at the target station that you want to upgrade, dial the FAC you specified in the Station Firmware Download Access Code field (for example, *35), and then dial the extension of the target station.
20. Place the telephone on-hook within four seconds after hearing the confirmation tone.
21. Repeat steps 19 and 20 for each station you want to upgrade.

Upgrading the Firmware on a G700/450/350 System

Before performing the procedure in this section, make sure you have the following:

- the latest firmware for the 1400 Series Digital Deskphones. You can download the latest firmware from <http://www.avaya.com/support>.
- the IP address of your TFTP server
- the computer name (that is, node name) where your TFTP server is running
- an MM312, MM712, or MM717 DCP board

To upgrade the firmware, perform the following steps:

1. Log into the Avaya Aura Communication Manager administration interface.
2. Enter the **change node-name ip** command.
The Change Node Names screen appears.
3. Add the node name of your TFTP server in the Name field.
4. Add the IP address of your TFTP server in the IP address field.
5. Save your changes.

6. Copy the latest 1400 Series Digital Deskphones firmware that you downloaded from <http://www.avaya.com/support> to your TFTP server.
7. Start your TFTP server.
8. Browse your firmware outbound and inbound file, and make sure your TFTP server is running.
9. From the Avaya Aura Communication Manager administration interface, enter the **change tftp-server** command.

The TFTP Server Configuration screen appears.

10. In the Local Node Name field, enter **Procr**.
11. In the TFTP Server Node Name field, enter the name of the computer that is running the TFTP server.
12. Make sure the TFTP Server Port field is set to **69**.
13. In the File to Retrieve field, enter the name of the firmware file. Be sure to include the **.bin** suffix in the filename.
14. Save your changes.
15. Enter the **change feature-access-codes** command.

The Feature Access Codes screen appears.
16. In the Station Firmware Download Access Code field, enter the FAC value you want use (for example, ***35**).
17. Save your changes.
18. Log out of the Avaya Aura Communication Manager administration interface.
19. Perform one of the following steps:
 - If you are at the target station that you want to upgrade, dial the FAC you specified in the Station Firmware Download Access Code field (for example, *35), and then press the # button.
 - If you are not at the target station that you want to upgrade, dial the FAC you specified in the Station Firmware Download Access Code field (for example, *35), and then dial the extension of the target station.
20. Place the telephone on-hook within four seconds after hearing the confirmation tone.
21. Repeat steps 19 and 20 for each station you want to upgrade.

Printing Button Labels

You can download software from www.desi.com that enables you to print button labels for the 1400 Series Digital Deskphones. To download this software, perform the following steps:

1. Using your web browser, go to <http://www.desi.com>.
2. Click **DESI downloads**.
3. Download the appropriate application.

Chapter 3: Administering 1400 Series Digital Deskphones

Introduction

This chapter describes how to administer 1400 Series Digital Deskphones on Avaya Aura Communication Manager.

Administering a 1400 Series Digital Deskphone

Perform the following steps for each 1400 Series Digital Deskphone:

1. Log into the Avaya Aura Communication Manager administration interface.
2. Perform one of the following steps:
 - If you are adding a new extension and want to assign a specific extension number, use the **add station nnnn** command, where **nnnn** is the new extension you want to assign.
 - If you are adding a new extension and want to assign the next available extension number, use the **add station next** command.
 - If you are installing the 1400 Series Digital Deskphone at an existing extension, use the **change station nnnn** command, where **nnnn** is the existing extension you want to modify.

The Station screen appears.

3. Perform one of the following steps:
 - If you are administering a 1408 telephone, type **2410** in the Type field.
 - If you are administering a 1416 telephone, type **2420** in the Type field.
4. In the Port field, type the port address.
5. In the Name field, type the name to associate with this telephone.

6. Configure the remaining fields on the Station screen pages. Keep in mind the following information:

- If you are administering a 1408 telephone, the first eight call appearance/feature buttons displayed on the Station screen are administered on the 1408 telephone. (Since the 1408 telephone is aliased as a 2410 telephone, the Station screen displays 10 call appearance/feature buttons.) The remaining buttons displayed on the Station screen are not administered.
- If you are administering a 1416 telephone, the first 16 call appearance/feature buttons displayed on the Station screen are administered on the 1416 telephone. (Since the 1416 telephone is aliased as a 2420 telephone, the Station screen displays 20 call appearance/feature buttons.) The remaining buttons displayed on the Station screen are not administered.
- If you are administering a 1416 telephone with a DBM32 Button module, the first 16 call appearance/feature buttons displayed on the Station screen are administered on the 1416 telephone. The remaining eight call appearance/feature buttons displayed on the Station screen are administered on the first eight buttons of the DBM32 Button module. The 24 buttons of the EU24 expansion module displayed on the Station screen are administered for the remaining 24 buttons of the DBM32 Button module.

For more information about administration and features, see:

- *Administering Avaya Aura™ Communication Manager*, Document Number 03-300509
- *Avaya Aura™ Communication Manager Feature Description and Implementation*, Document Number 555-245-205
- *Avaya Aura™ Communication Manager Screen Reference*, Document Number 03-602878

7. When finished administering this extension, save your changes.

Chapter 4: Troubleshooting Guidelines

Introduction

This chapter describes problems that might occur during both installation and normal operation of the 1400 Series Digital Deskphones and possible ways of resolving these problems.

Operational Errors and Status Messages

[Table 1](#) identifies some of the possible operational problems that you might encounter after successful installation of the 1400 Series Digital Deskphones.

Table 1: Operational Error Conditions for 1400 Series Digital Deskphones

Condition		Cause/Resolution
The message light on the telephone turns on and off intermittently, but the telephone never registers.		CAUSE: This is a hardware fault. RESOLUTION: The telephone must be returned to Avaya for repair.
The telephone stops working in the middle of a call,	AND no lights are lit on the telephone and the display is not lit.	CAUSE: Loss of power. RESOLUTION: Check the connection between the telephone and the jack.
The telephone was working, but does not work now,	AND no lights are lit on the telephone and the display is not lit.	CAUSE: Loss of power. RESOLUTION: Check the connections between the telephone and the jack.
Calls cannot be received.		RESOLUTION: On the Station form in the Avaya Aura Communication Manager administration interface, make sure the Restrict Last Appearance field is set to n for this station.

1 of 2

Table 1: Operational Error Conditions for 1400 Series Digital Deskphones (continued)

Condition	Cause/Resolution
The telephone works, but the audio quality is poor, specifically:	
the user hears echo when speaking on a handset.	CAUSE: Echo from digital-to-analog conversion on your Avaya media server trunk. RESOLUTION: Verify which trunk is causing the echo, and swap the trunk's Trunk Termination parameter on the call server.
the user hears echo on a headset, but not on a handset.	CAUSE: Improper headset adapter. RESOLUTION: Replace adapter with Avaya's M12LU or 3412-HIC adapters. We recommend the M12LU, since it supports Automatic Gain Control.
the user is on Speaker and hears no echo, but the far-end hears echo.	CAUSE: Room acoustics. RESOLUTION: Ensure that there are six inches or so of blank space to the right of the telephone. If that is insufficient, use the handset.
the user hears fluctuations in the volume level which are worse when the Speaker is on, or at the beginning of a call, or when a call goes from no one talking abruptly to a loud voice.	CAUSE: The user has changed the Automatic Gain Control (AGC) or environmental acoustics are not consistent with the current audio settings. RESOLUTION: Try different on/off settings for the AGC and audio parameters.
The telephone works properly except for the Speaker.	CAUSE: The Speaker was turned off at the call server. RESOLUTION: Administer the call server to allow that station's Speaker to operate. If that does not work, do a self-test on the telephone, as explained in the user guide.
Hands-Free Answer (HFA) is administered but the telephone did not automatically answer a call.	CAUSE: HFA only works if the telephone is idle. A second call is ignored if it comes in while a call is in progress, including ringing before the first call is answered. RESOLUTION: None.
2 of 2	

Index

Numerical

1400 Series Digital Deskphone	
Administration	19
Assembling the	9
button labels	17
Connection Jacks.	10 , 11 , 12
Installation	7
Models.	7
Requirements	8

A

About This Guide	5
Assembling the 1400 Series Digital Deskphone	9

B

button labels.	17
------------------------	--------------------

C

Connection Jacks for 1400 Series Digital Deskphones 10 , 11 , 12	
Customer Support	6

D

DBM32 Button Module	
Connection Jacks.	12
Digital Deskphone Models	7
Document Organization	5

I

Installation.	7
Intended Audience, for this document	5

O

Operational Errors and Status Messages	21
Other Documentation	6

P

Pre-Installation Checklist	8
--------------------------------------	-------------------

S

Software	7
--------------------	-------------------

T

Technical Support	6
Troubleshooting	
Guidelines for	21
Operational Errors and Status Messages	21
