Integrator's Reference Manual for the Polycom® RealPresence® Group Series

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About This Guide

The Integrator's Reference Manual for Polycom® RealPresence® Group Systems is for system integrators who need to configure, customize, manage, and troubleshoot Polycom RealPresence Group systems. The API commands in this guide are applicable to the Polycom RealPresence Group 300, Polycom RealPresence Group 500, and Polycom RealPresence Group 700 systems.

Contents

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Room Integration

Setting Up a Room for Video Conferencing

For detailed information about setting up a room for video conferencing, refer to Room Design and Layout on page 227.

Room Layout Examples

Use the following diagrams as examples for setting up a conference room with Polycom RealPresence Group systems. Polycom recommends that you contract an experienced contractor to ensure all the components operate as a single cohesive system.

Small Conference Room

Large Conference Room: Option 1

Acoustic Panels

Polycom SoundStation®
IP 7000 Phone

Ceiling
Microphone

Polycom Touch Control

Ceiling
Microphone

Polycom EagleEye
Director

50"
Monitor 1

50"
Monitor 2

Polycom RealPresence
Group System

Network Outlets   Power Outlets

Large Conference Room: Option 2

Acoustic Panels

Document Camera

Polycom SoundStation®
IP 7000 Phone

Ceiling
Microphone

Polycom Touch
Control

Ceiling
Microphone

Projector

50"
Single Display

Polycom EagleEye
Director

Polycom RealPresence
Group Media Center

Network Outlets

Power Outlets

Classroom

Teacher's Podium

Polycom Touch Control

Computer

Document Camera

Monitor 1

Polycom RealPresence Group System with EagleEye Director with Dynamic Speaker Locating Technology and Polycom SoundStructure™

Monitor for VGA Out

Camera 2

Monitor 2

Wall-mounted Display with EagleEye camera

= Ceiling Microphone

Integrating Video

The following sections describe how to connect cameras to Polycom RealPresence Group systems. After you connect a camera to a Polycom RealPresence Group system, refer to the *Administrator's Guide for the Polycom RealPresence Group Series* for information about configuring the camera options in the user interface.

Connecting Polycom Cameras

You can connect Polycom RealPresence Group systems to a Polycom EagleEye Acoustic, Polycom EagleEye III, Polycom EagleEye Director, Polycom EagleEye HD, Polycom EagleEye 1080, Polycom EagleEye View, or Polycom EagleEye II camera from Polycom. Refer to the release notes for the software release installed on the Polycom RealPresence Group system for a list of supported PTZ cameras.

Polycom EagleEye Acoustic Camera as the Main Camera

You can connect a Polycom EagleEye Acoustic camera (part number 2624-65058-001) to a RealPresence Group 300 system as the main camera.

Connecting a Polycom EagleEye Acoustic Camera to a RealPresence Group 300 system:
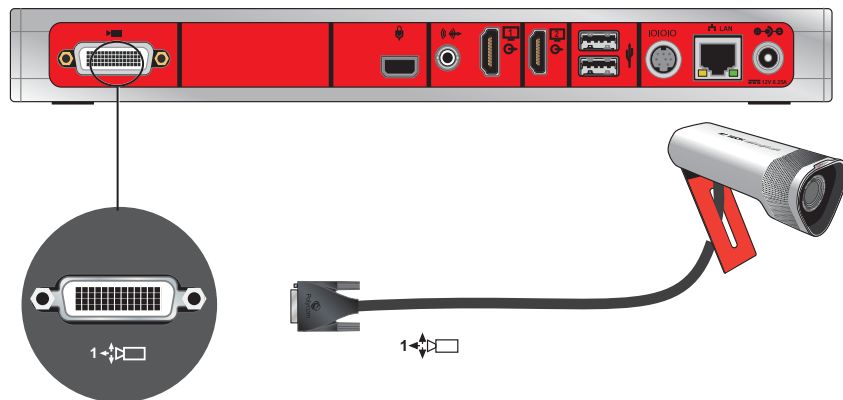
Connecting a Polycom EagleEye Acoustic Camera to a RealPresence Group 500 system:
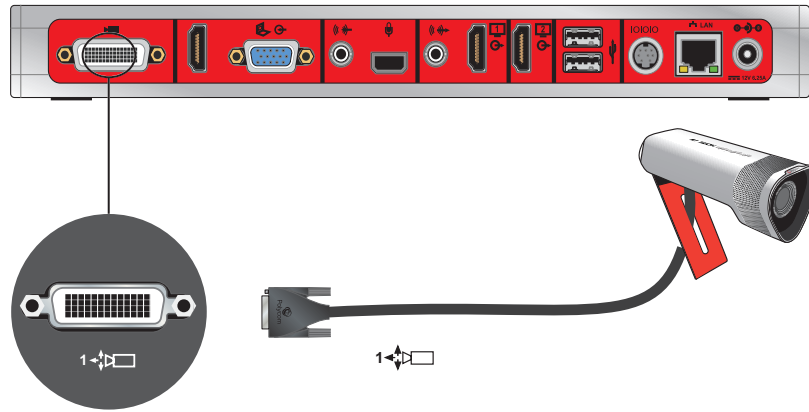
Connecting a Polycom EagleEye Acoustic Camera to a RealPresence Group 700 system:
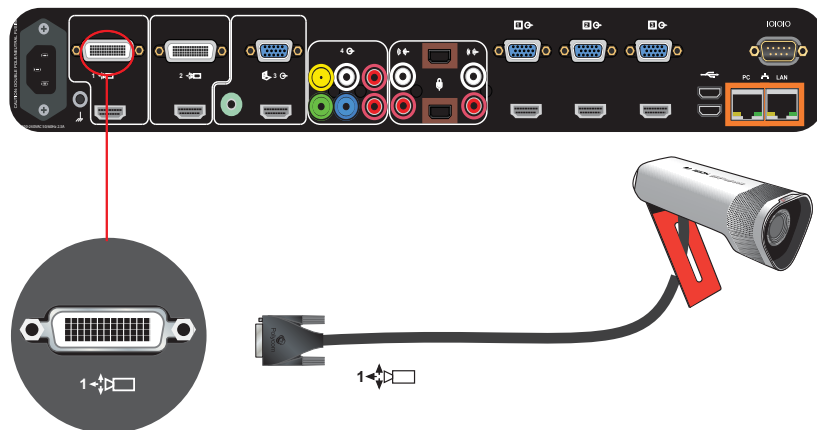
Polycom EagleEye III Camera as the Main Camera

You can connect a Polycom EagleEye III camera (part number 1624-08283-002, 8200-63730-xxx, or 8200-63740-xxx) to a Polycom RealPresence Group system as the main camera using:

Option 1

- HDCI Analog Camera Cable on page 29.

Connecting a Polycom EagleEye III Camera to a Polycom RealPresence Group 300 system:
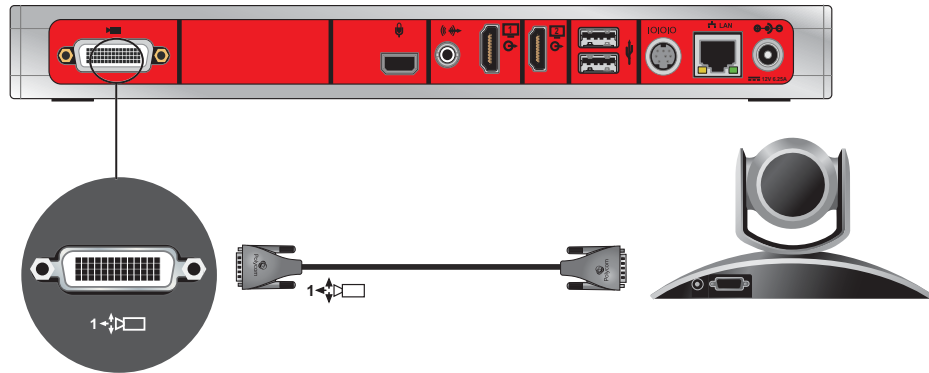
Connecting a Polycom EagleEye III Camera to a Polycom RealPresence Group 500 system:
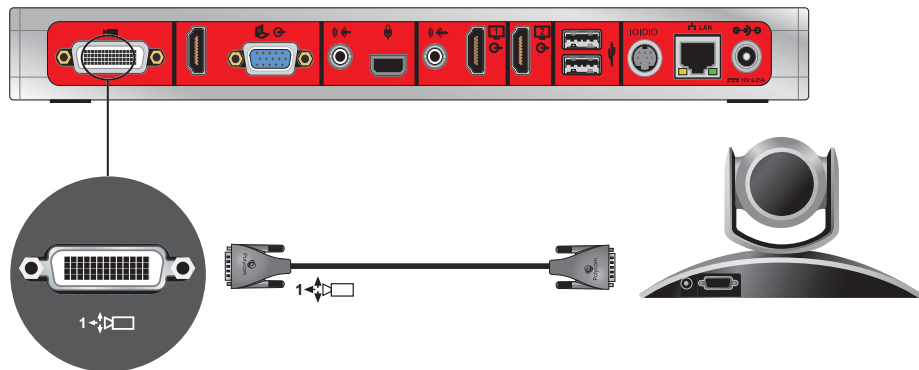
Connecting a Polycom EagleEye III Camera to a Polycom RealPresence Group 700 system:

Option 2

- A—Two HDCI Camera Break-Out Cable on page 25.

- B—Coaxial analog video cables.

- C—DB-9 serial cable.

- Power supply. Power supply is only required if you want to use the IR remote to wake the system when it is in sleep mode on RealPresence Group 700 systems. Use only the approved power supply from Polycom (part number 1465-52748-040). Do not exceed 12 Volts at 3 Amps. Verify the polarity of the power supply as shown on the Polycom camera next to the power supply input.

> Polycom recommends this configuration when a custom cable length is required. The BNC and serial cables can be built to custom lengths.

Connecting a Polycom EagleEye III Camera to a Polycom RealPresence Group 300 system:

Optional, up to 100 ft
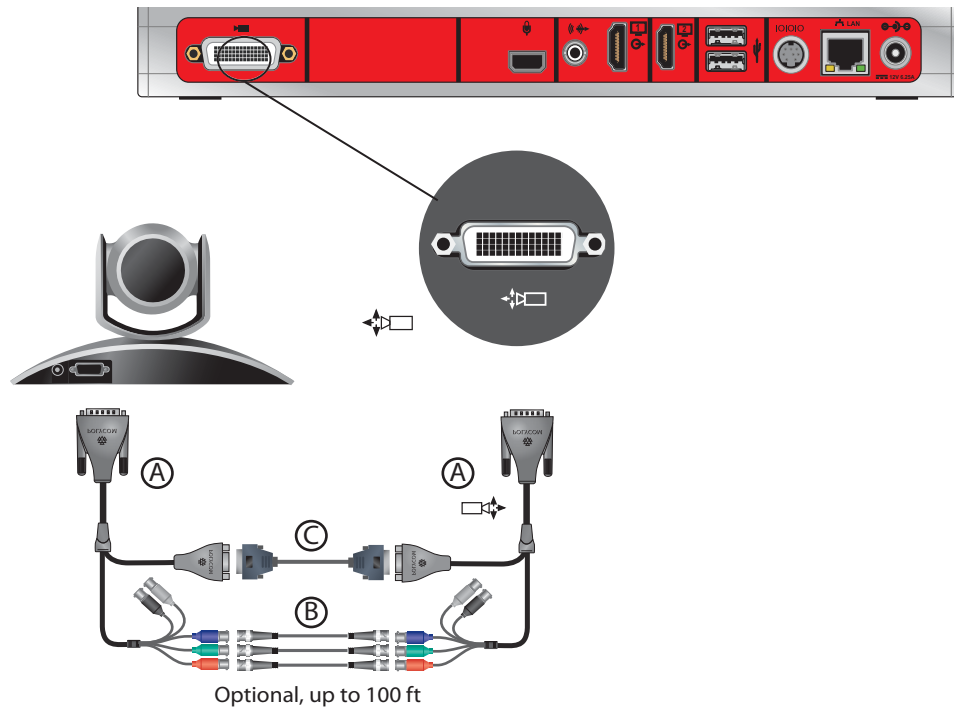
Connecting a Polycom EagleEye III Camera to a Polycom RealPresence 500 system:

Optional, up to 100 ft
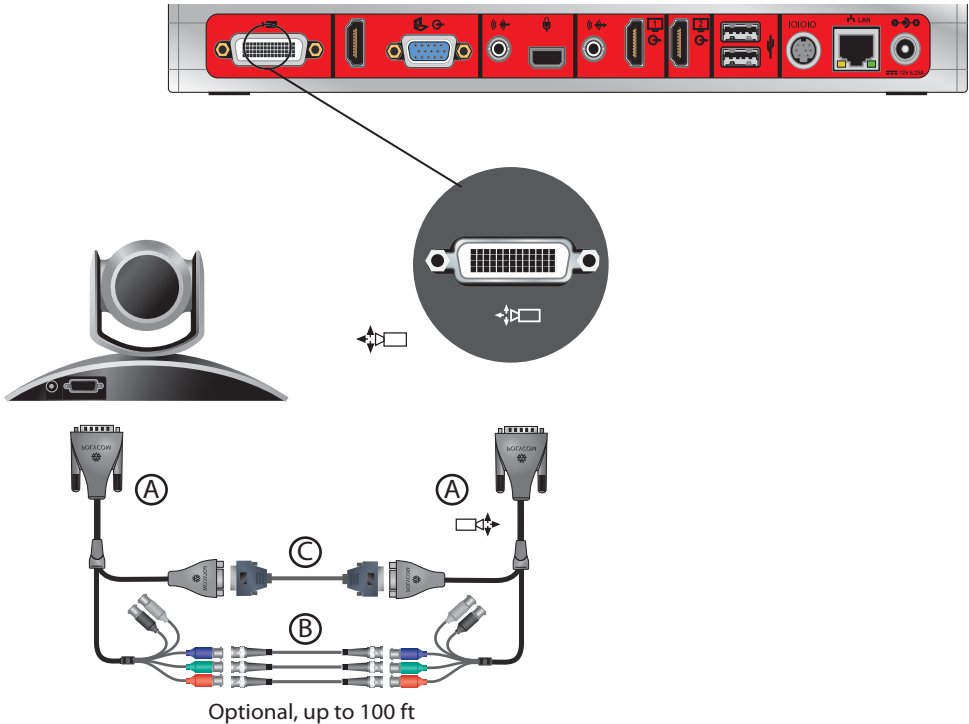
Connecting a Polycom EagleEye III Camera to a Polycom RealPresence 700 system:

Use Polycom Power Supply Only

DC IN 12V

Optional, up to 100 ft
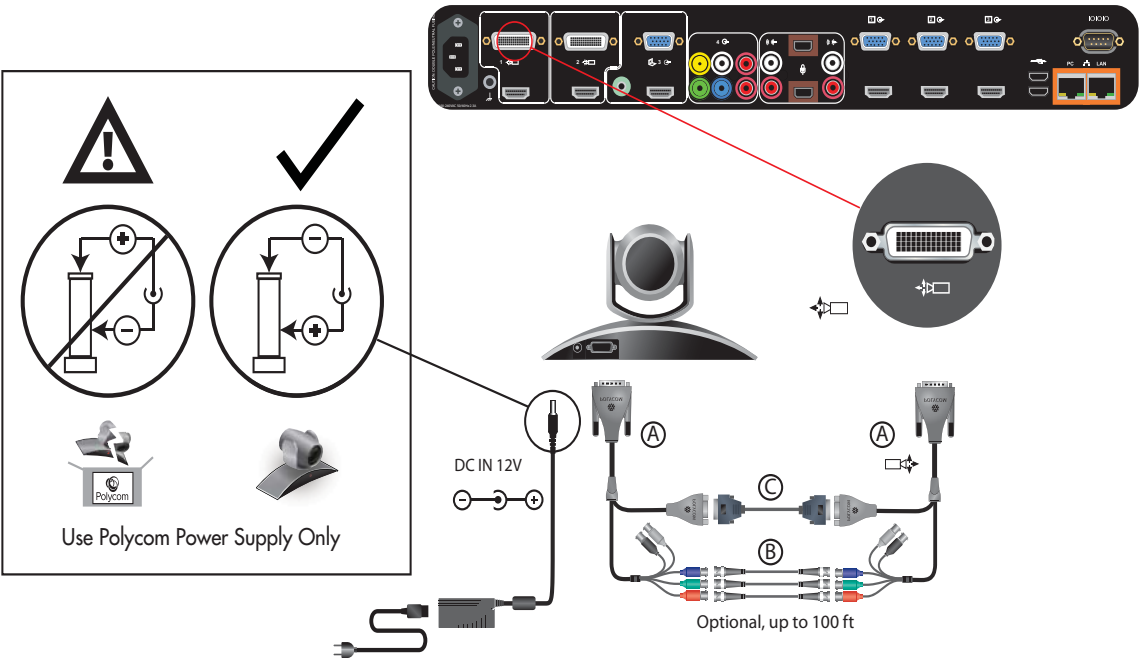
Polycom EagleEye III Camera as the Second Camera

You can connect a Polycom EagleEye III camera (part number 1624-08283-002, 8200-63730-xxx, or 8200-63740-xxx) to a Polycom RealPresence Group 700 system as the second camera.

Option 1

- HDCI Analog Camera Cable on page 29.

- Power supply. Power supply is only required if you want to use the IR remote to wake the system when it is in sleep mode on RealPresence Group 700 systems. Use only the approved power supply from Polycom (part number 1465-52748-040). Do not exceed 12 Volts at 3 Amps. Verify the polarity of the power supply as shown on the Polycom camera next to the power supply input

Connecting to a Polycom EagleEye III Camera to a Polycom RealPresence Group 700 system:

Use Polycom Power Supply Only

DC IN 12V

Part Number: 1465-52733-040

Option 2

- A—Two HDCI Camera Break-Out Cable on page 25.

- B—Coaxial analog video cables.

- C—DB-9 serial cable.

- Power supply. Power supply is only required if you want to use the IR remote to wake the system when it is in sleep mode on RealPresence Group 700 systems. Use only the approved power supply from Polycom

(part number 1465-52748-040). Do not exceed 12 Volts at 3 Amps. Verify the polarity of the power supply as shown on the Polycom camera next to the power supply input.

Connecting to a Polycom EagleEye III Camera to a Polycom RealPresence Group 700 system:

Use Polycom Power Supply Only

DC IN 12V

Part Number: 1465-52733-040

Optional, up to 100 ft

Polycom EagleEye Director as the Main Camera or Second Camera

EagleEye Director can be connected to Polycom RealPresence Group 300 and 500 systems as the main camera. Polcyom EagleEye Director can be connected to Polycom RealPresence Group 700 as the main camera or second camera.

Connect a Polycom EagleEye Director (part number 7200-82632-xxx, 7200-82631-xxx, or 2200-82559-xxx) to Polycom RealPresence Group systemas the main camera using:

- A—HDCI Analog Camera Cable on page 21.
- B—Polycom EagleEye Director Audio Feedback Phoenix to RCA Cable on page 30.

Connecting a Polycom EagleEye Director to a Polycom RealPresence Group 300 system:
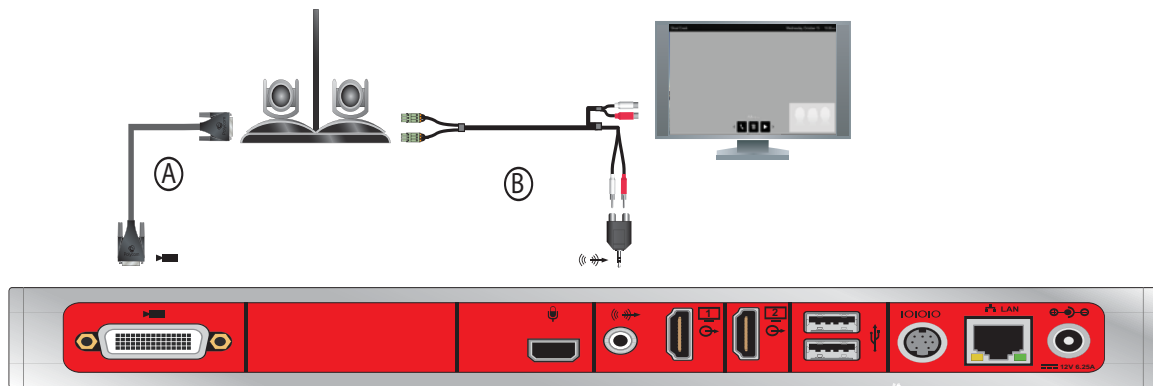
Connecting a Polycom EagleEye Director to a Polycom RealPresence Group 500 system:

Connecting a Polycom EagleEye Director to a Polycom RealPresence Group 700 system:

Integrating Audio and Content

Connecting a Computer to a Polycom RealPresence Group System

You can connect Polycom RealPresence Group series 500 and 700 systems to a computer using the HDMI Monitor Cable on page 20.

Connect a computer to a RealPresence Group 500 system:

To connect a computer to a RealPresence Group 700 system:

2
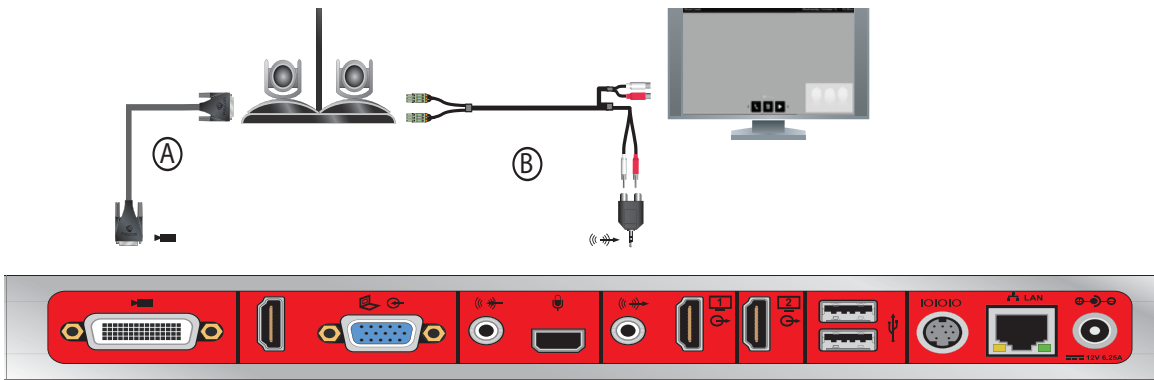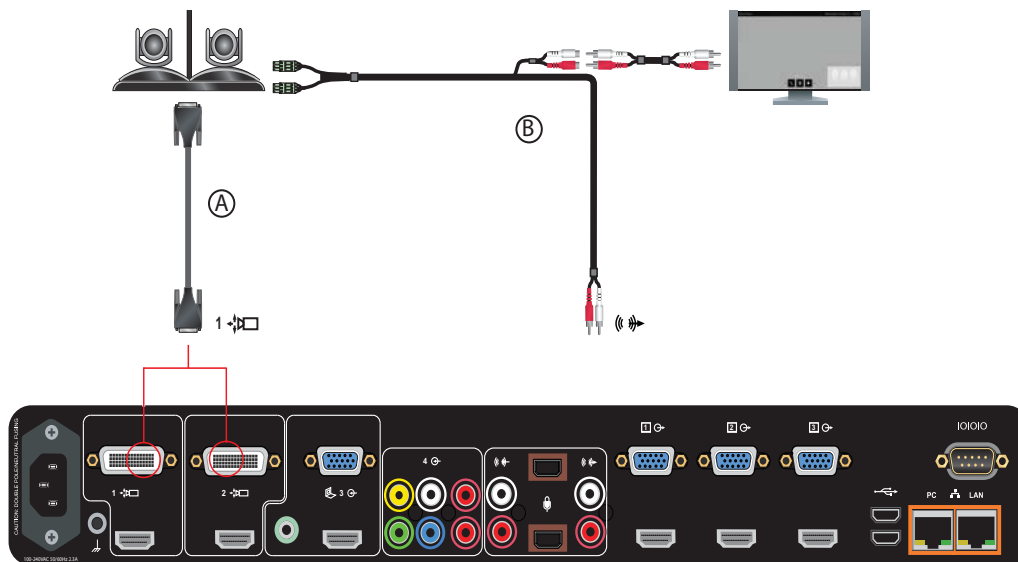
Cables

This chapter includes information about cables that can be used with a RealPresence Group system. Please note that drawings and part numbers are provided for reference only. Compliance information is provided for the Restriction of certain Hazardous Substances Directive (RoHS).

Network Cables

CAT 5e LAN Cable

This cable connects a RealPresence Group system to the LAN. It has orange RJ-45 connectors on both ends. It meets category 5e requirements and is wired according to EIA/TIA-568B. The maximum approved length for this cable is 100 ft (30 m) on an 802 network.

Length	Part Number	RoHS Compliant
12 ft (3.6 m)	2457-23537-001	Yes
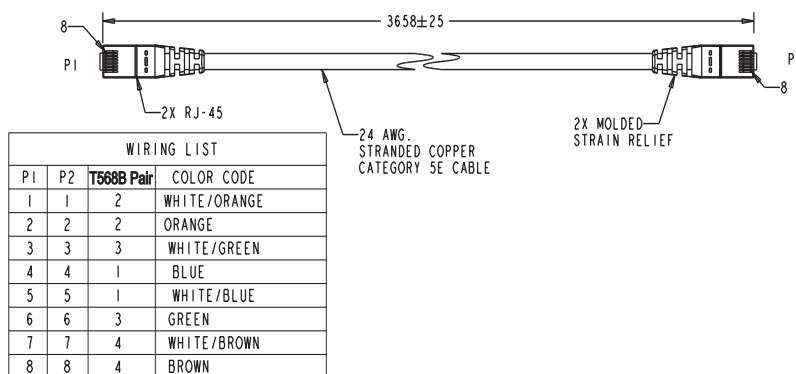
WIRING LIST			
PI	P2	T568B Pair	COLOR CODE
I	I	2	WHITE/ORANGE
2	2	2	ORANGE
3	3	3	WHITE/GREEN
4	4	I	BLUE
5	5	I	WHITE/BLUE
6	6	3	GREEN
7	7	4	WHITE/BROWN
8	8	4	BROWN

Drawings and part numbers are provided for reference only. Polycom claims no responsibility or liability for the quality, performance, or reliability of cables based on these reference drawings, other than cables provided by Polycom. Contact your Polycom distributor or Polycom Custom/Vertical Products to order cables that meet the appropriate manufacturing tolerances, quality, and performance parameters for your application.

LAN Cable

This cable connects a RealPresence Group to the LAN. It has orange RJ-45 connectors on both ends and is used with all systems. The maximum approved length for this cable is 100 ft (30 m).

Length	Part Number	RoHS Compliant
12 ft (3.6 m)	2457-08343-001	Yes
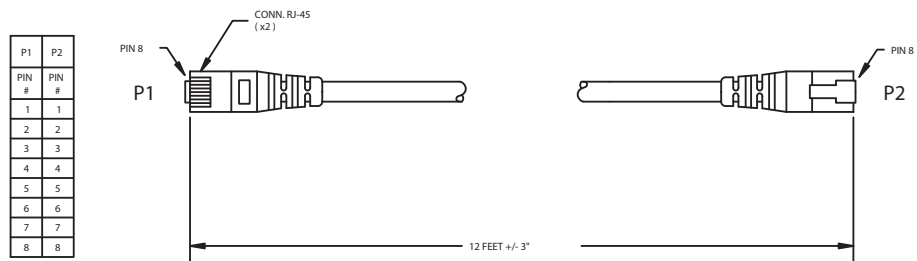
Drawings and part numbers are provided for reference only. Polycom claims no responsibility or liability for the quality, performance, or reliability of cables based on these reference drawings, other than cables provided by Polycom. Contact your Polycom distributor or Polycom Custom/Vertical Products to order cables that meet the appropriate manufacturing tolerances, quality, and performance parameters for your application.

Polycom Touch Control LAN Cable

This cable connects a Polycom Touch Control device to the LAN.

Length	Part Number	RoHS Compliant
25 ft (7.62 m)	2457-26994-001	Yes

WIRING LIST

P1	P2	COLOR CODE
1	1	WHITE/ORANGE
2	2	ORANGE/WHITE
3	3	WHITE/GREEN
4	4	BLUE/WHITE
5	5	WHITE/BLUE
6	6	GREEN/WHITE
7	7	WHITE/BROWN
8	8	BROWN/WHITE

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Polycom Touch Control Power Adapter

This adapter connects the Polycom Touch Control device to the LAN and a power supply (part number 2200-42740-XXX) for rooms that do not have Power over Ethernet (PoE).

Length	Part Number	RoHS Compliant
2.1 ft (.61 m)	2457-40054-001	Yes

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Video and Camera Cables

HDMI Monitor Cable

This cable connects the RealPresence Group system HDMI output to an HDMI monitor. It is HDMI to male HDMI.

Length	Part Number	RoHS Compliant
6 ft (1.8 m)	2457-28808-004	Yes
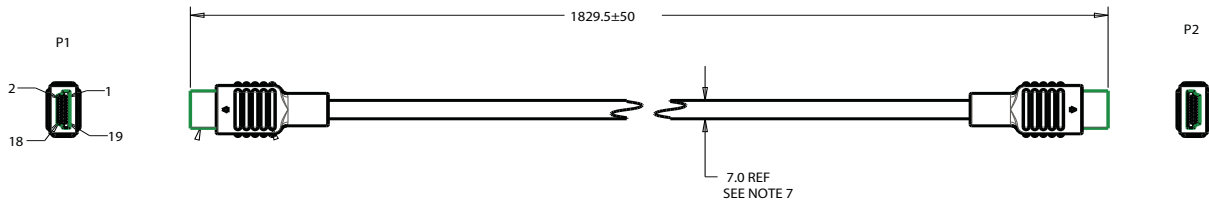
WIRING LIST				
SIGNAL	P1	P2	CABLE UNIT	CONDUCTOR
TMDS Data2+	1	1	D1	TIP
TMDS Data2 Shield	2	2	D1	DRAIN
TMDS Data2-	3	3	D1	RING
TMDS Data1+	4	4	D2	TIP
TMDS Data1 Shield	5	5	D2	DRAIN
TMDS Data1-	6	6	D2	RING
TMDS Data0+	7	7	D3	TIP
TMDS Data0 Shield	8	8	D3	DRAIN
TMDS Data0-	9	9	D3	RING
TMDS Clock+	10	10	D4	TIP
TMDS Clock Shield	11	11	D4	DRAIN
TMDS Clock-	12	12	D4	RING
CEC	13	13	E1	——
RESERVED	14	14	E2	——
SCL	15	15	F	TIP
SDA	16	16	F	RING
DDC/CEC GROUND	17	17	E3	——
+5 Volts	18	18	E4	——
Hot Plug Detect	19	19	E5	——
Cable Shield	SHELL	SHELL	B	——
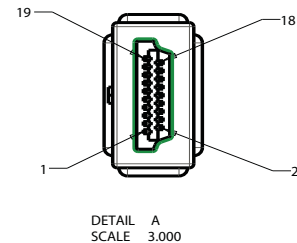
DETAIL   A
SCALE   3.000

Drawings and part numbers are provided for reference only. Polycom claims no responsibility or liability for the quality, performance, or reliability of cables based on these reference drawings, other than cables provided by Polycom. Contact your Polycom distributor or Polycom Custom/Vertical Products to order cables that meet the appropriate manufacturing tolerances, quality, and performance parameters for your application.

HDCI Analog Camera Cable

This cable connects a RealPresence Group system to a Polycom EagleEye HD, Polycom EagleEye II, Polycom EagleEye III, or Polycom EagleEye Director. This cable can be connected to the EagleEye View camera, but does not support audio. It has male HDCI connectors on both ends. The over-mold connectors of the 2457-27453-001 and 2457-27454-001 cables are black.

Length	Part Number	RoHS Compliant
3 ft 7 in (1.1 m)	2457-27453-001	Yes
6 ft 3 in (1.9 m)	2457-27454-001	Yes
9 ft 10 in (3 m)	2457-23180-003	Yes
9 ft 10 in (3 m)	2457-65015-003	Yes
33 ft (10 m)	2457-65015-010	Yes
33 ft (10 m)	2457-23180-010	Yes
50 ft (15 m)	2457-23180-015	Yes
100 ft (30 m)	2457-23180-030	Yes

WIRING LIST					
SIGNAL NAME	P1 PIN#	P2 PIN#	CABLE UNIT	CONDUCTOR	COLOR
Y	47	47	D1	CENTER	
Y SHIELD	46	46		SHIELD	
Pb	13	13	D2	CENTER	
Pb SHIELD	12	12		SHIELD	
Pr	14	14	D3	CENTER	
Pr SHIELD	15	15		SHIELD	
+12 VDC	4	4	E1	-	
+12 VDC	5	5	E2	-	
+12 VDC	10	10	E3	-	
+12 VDC	11	11	E4	-	
GND	7	7	E5	-	
GND	8	8	E6	-	
GND	48	48	E7	-	
GND	58	58	E8	-	
Rx	1	1	E9	-	
Tx	2	2	E10	-	
IR	3	3	E11	-	
GND	SHELL	SHELL	B	-	

Drawings and part numbers are provided for reference only. Polycom claims no responsibility or liability for the quality, performance, or reliability of cables based on these reference drawings, other than cables provided by Polycom. Contact your Polycom distributor or Polycom Custom/Vertical Products to order cables that meet the appropriate manufacturing tolerances, quality, and performance parameters for your application.

HDCI Polycom EagleEye Director Cable

This cable connects a Polycom EagleEye II or Polycom EagleEye III camera to the Polycom EagleEye Director base. It has male HDCI connectors on both ends.

Length	Part Number	RoHS Compliant
1 ft (0.3 m)	2457-26122-001	Yes

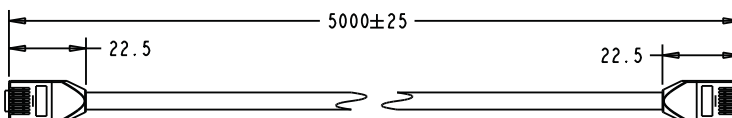| WIRING LIST					
SIGNAL NAME	P1 PIN#	P2 PIN#	CABLE UNIT	CONDUCTOR	COLOR
Y	47	47	D1	CENTER	
Y SHIELD	46	46		SHIELD	
Pb	13	13	D2	CENTER	
Pb SHIELD	12	12		SHIELD	
Pr	14	14	D3	CENTER	
Pr SHIELD	15	15		SHIELD	
+12 VDC	4	4	E1	-	
+12 VDC	5	5	E2	-	
+12 VDC	10	10	E3	-	
+12 VDC	11	11	E4	-	
GND	7	7	E5	-	
GND	8	8	E6	-	
GND	48	48	E7	-	
GND	58	58	E8	-	
Rx	1	1	E9	-	
Tx	2	2	E10	-	
IR	3	3	E11	-	
GND	SHELL	SHELL	B	-	

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As shown in the following figure, the EagleEye Director has seven microphones embedded in the base.

Vertical Mic Top

Vertical Mic Center

Horizontal Mic Left

Horizontal Mic Left Center

Horizontal Mic Center

Horizontal Mic Right Center

Horizontal Mic Right
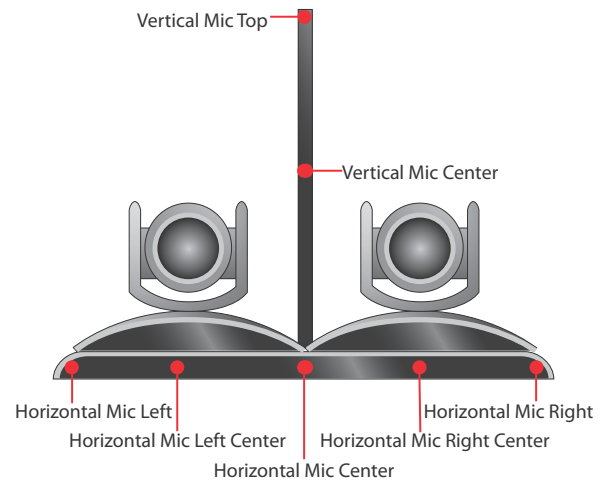
HDCI Camera Break-Out Cable

This cable breaks out the HDCI camera cable video and control signals to standard interfaces. This cable can be connected to the EagleEye View camera, but does not support audio. The five BNC connectors can be used to carry composite and digital video composite video, S-Video, or analog component YPbPr video. The DB-9 connector is used to connect to PTZ camera control interfaces. It is male HDCI to five female BNC and one female DB-9.

Length	Part Number	RoHS Compliant
1ft (0.3 m)	2457-23521-001	Yes
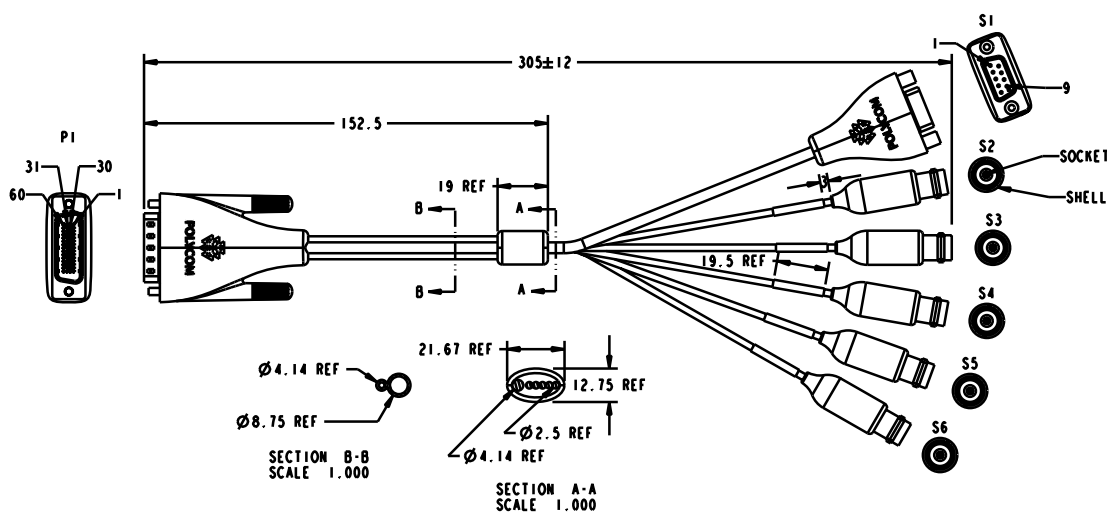
WIRING LIST

SIGNAL	WIRE	P1	S1	S2	S3	S4	S5	S6
RS-232 Rx	28 AWG #1	1	2	—	—	—	—	—
RS-232 Tx	28 AWG #2	2	3	—	—	—	—	—
IR	28 AWG #3	3	9	—	—	—	—	—
GROUND	28 AWG #4	7	5	—	—	—	—	—
Pb/B SHIELD	COAX #1 SHIELD	12	—	—	—	SHELL	—	—
Pb/B	COAX #1 CENTER	13	—	—	—	SOCKET	—	—
Pr/R/C SHIELD	COAX #2 CENTER	14	—	SOCKET	—	—	—	—
Pr/R/C	COAX #2 SHIELD	15	—	SHELL	—	—	—	—
Y/G/C SHIELD	COAX #3 SHIELD	46	—	—	SHELL	—	—	—
Y/G/C	COAX #3 CENTER	47	—	—	SOCKET	—	—	—
HSync	COAX #4 CENTER	50	—	—	—	—	SOCKET	—
VSync	COAX #5 CENTER	51	—	—	—	—	—	SOCKET
HSync SHIELD	COAX #4 SHIELD	52	—	—	—	—	SHELL	—
VSync SHIELD	COAX #5 SHIELD		—	—	—	—	—	SHELL
—	BRAIDED SHIELD	SHIELD	SHIELD	—	—	—	—	—
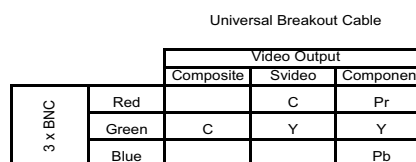
Universal Breakout Cable

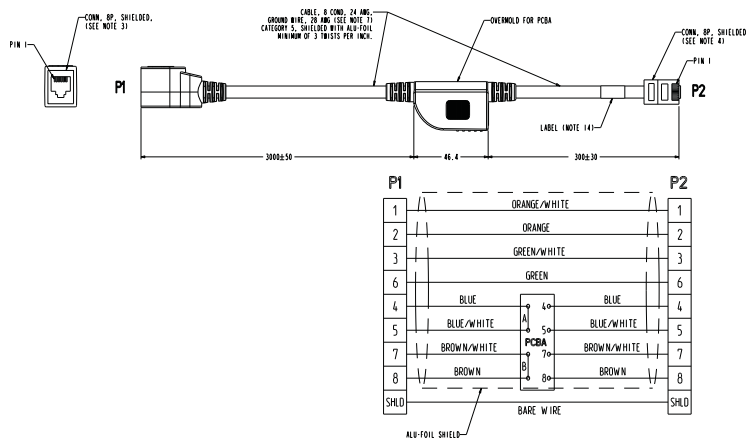|		Video Output		
		Composite	Svideo	Component
3 x BNC	Red		C	Pr
	Green	C	Y	Y
	Blue			Pb

Drawings and part numbers are provided for reference only. Polycom claims no responsibility or liability for the quality, performance, or reliability of cables based on these reference drawings, other than cables provided by Polycom. Contact your Polycom distributor or Polycom Custom/Vertical Products to order cables that meet the appropriate manufacturing tolerances, quality, and performance parameters for your application.

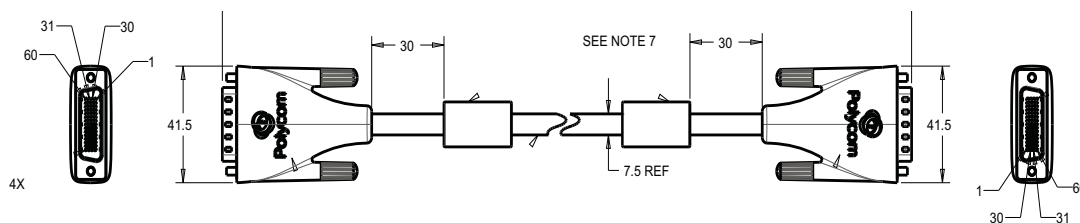## HDCI Polycom EagleEye 1080 Camera Cable

This cable connects a Polycom system HDCI video input to the Polycom EagleEye 1080 camera. It is HDCI to 8-pin mini-DIN and HD-15. The maximum approved length for this cable is 100 ft (30 m).

Length	Part Number	RoHS Compliant
1 ft (0.3 m)	2457-23548-001	Yes
9 ft 10 in (3 m)	2457-28153-001	Yes
33 ft (10 m)	2457-28154-001	Yes
50 ft (15m)	2457-28154-050	Yes
100 ft (30m)	2457-28154-100	Yes
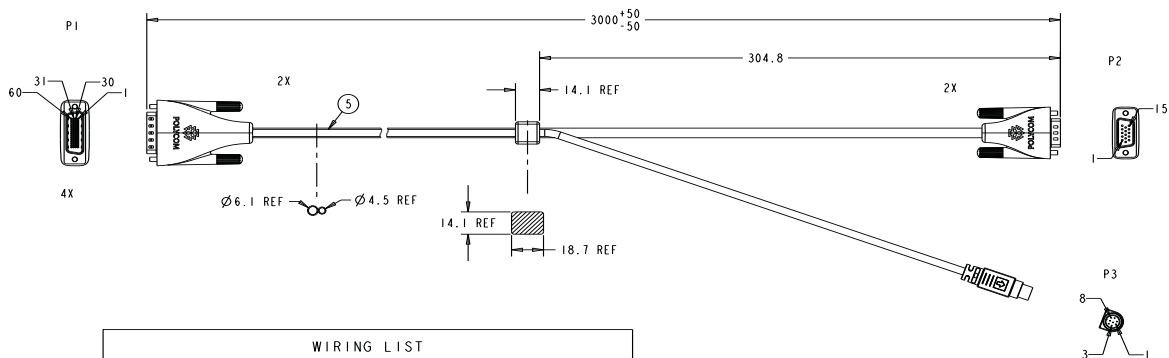
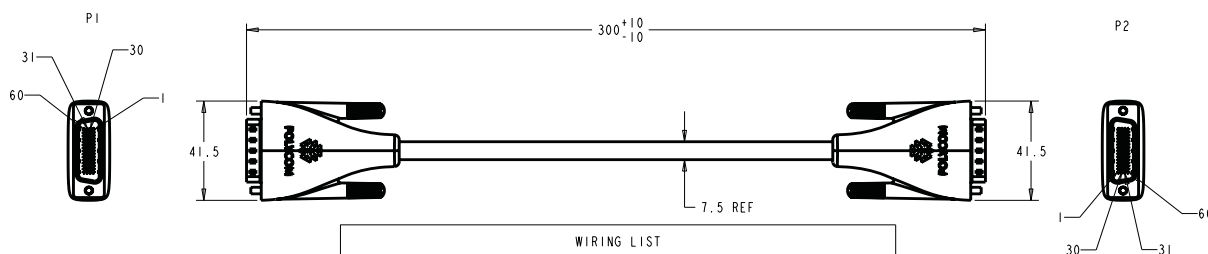| WIRING LIST				
SIGNAL NAME	P1	CABLE UNIT	P2	P3
RS-232 Rx	1	E1	——	3
RS-232 Tx	2	E2	——	5
IR	3	E3	——	7 / 8
GROUND	7	E4	——	4
B SHIELD	12	D1 SHIELD	8	——
B	13	D1 CENTER	3	——
R	14	D2 CENTER	1	——
R SHIELD	15	D2 SHIELD	6	——
G SHIELD	46	D3 SHIELD	7	——
G	47	D3 CENTER	2	——
H SYNC	50	D4 CENTER	13	——
V SYNC	51	D5 CENTER	14	——
VSYNC GROUND	52	D4 SHIELD	11	——
HSYNC GROUND		D5 SHIELD	10	——
GROUND	48	E5	4	——
	58	E6	5	——
SHIELD	SHELL	B1	——	SHELL
		B2	SHELL	——

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HDCI Polycom EagleEye View Camera Cable

This cable connects a RealPresence Group system HDCI video input to a Polycom EagleEye View camera. It has male HDCI connectors on both ends.

The over-mold connectors of the 2457-09729-001 cable are brown.

Length	Part Number	RoHS Compliant
1.5 ft (457 mm)	2457-09729-001	Yes
9 ft 10 in (3 m)	2457-29759-001	Yes
33 ft (10 m)	2457-29759-010	Yes
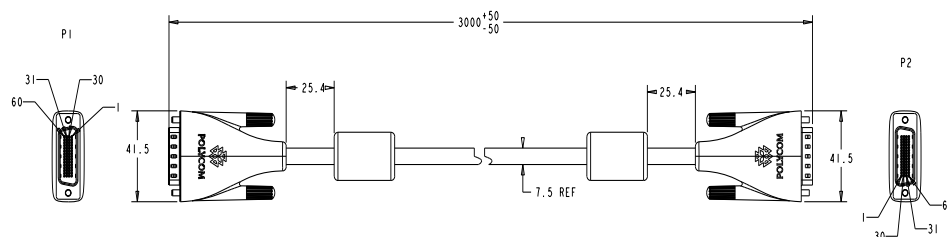
WIRING LIST				
SIGNAL NAME	P1 PIN#	P2 PIN#	CABLE UNIT	CONDUCTOR
Y	47	47	D1	CENTER
Y SHIELD	46	46		SHIELD
Pb	13	13	D2	CENTER
Pb SHIELD	12	12		SHIELD
Pr	14	14	D3	CENTER
Pr SHIELD	15	15		SHIELD
LEFT MIC	16	16	D4	CENTER
LEFT MIC SHIELD	45	45		SHIELD
RIGHT MIC	17	17	D5	CENTER
RIGHT MIC SHIELD	44	44		SHIELD
+12 VDC	4	4	E1	-
+12 VDC	5	5	E2	-
+12 VDC	10	10	E3	-
+12 VDC	11	11	E4	-
GND	7	7	E5	-
GND	8	8	E6	-
GND	48	48	E7	-
GND	58	58	E8	-
Rx	1	1	E9	-
Tx	2	2	E10	-
IR	3	3	E11	-
GND	SHELL	SHELL	B	-

Drawings and part numbers are provided for reference only. Polycom claims no responsibility or liability for the quality, performance, or reliability of cables based on these reference drawings, other than cables provided by Polycom. Contact your Polycom distributor or Polycom Custom/Vertical Products to order cables that meet the appropriate manufacturing tolerances, quality, and performance parameters for your application.

Audio Cables

RealPresence Group Microphone Array Cable

This cable connects two RealPresence Group microphone arrays.

Length	Part Number	RoHS Compliant
25 ft (7.6 m)	2457-23216-002	Yes
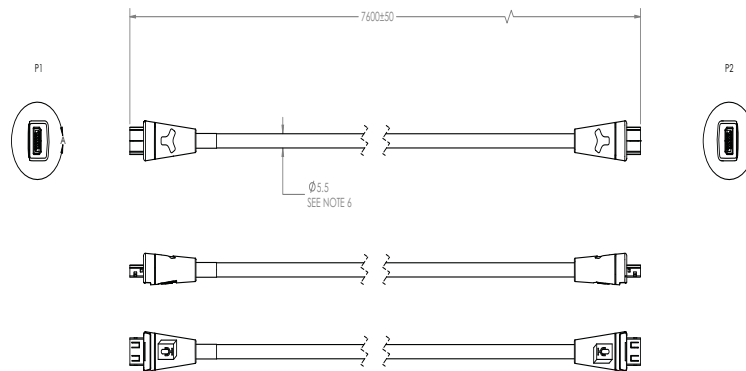

```
WIRING LIST

P1      P2      CABLE UNIT       CONDUCTOR
10      2       TWISTED PAIR #1   1
14      6                         2
2       10      TWISTED PAIR #2   1
6       14                        2
13      13      CONDUCTOR #1      -
9       9       CONDUCTOR #2      -
3       3       DRAIN             -
SHIELD  SHIELD  SHIELD            -

P1      P1      CABLE UNIT
4       13      JUMPER #1         -

P2      P2      CABLE UNIT
4       13      JUMPER #2         -

PINS 1, 5, 7, 8, 11 AND 12 OF
P1 & P2 ARE NOT USED AND SHALL BE
LEFT OPEN.
```

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Audio Cable
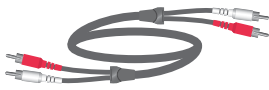
This cable connects a system to an external audio system. It has dual RCA connectors (red/white) on both ends. The maximum approved length for this cable is 100 ft (30 m).

Length	Part Number	RoHS Compliant
25 ft (7.6 m)	2457-09212-002	Yes
9 ft 10 in (3 m)	2457-09212-010	Yes
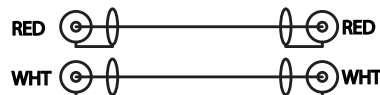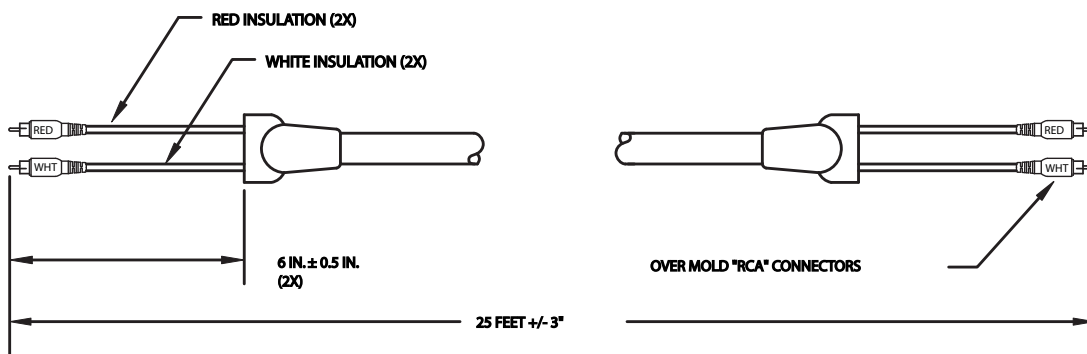
Drawings and part numbers are provided for reference only. Polycom claims no responsibility or liability for the quality, performance, or reliability of cables based on these reference drawings, other than cables provided by Polycom. Contact your Polycom distributor or Polycom Custom/Vertical Products to order cables that meet the appropriate manufacturing tolerances, quality, and performance parameters for your application.

Polycom EagleEye Director Audio Feedback Phoenix to RCA Cable

This cable connects a RealPresence Group series system to the Polycom EagleEye Director and the room audio playback system. It is dual male Phoenix connectors (for RealPresence Group systems) to dual male RCA connectors (for the EagleEye Director) with dual female RCA connectors (for the room audio playback system).

Length	Part Number	RoHS Compliant
9.10 ft (3 m)	2457-82587-001	Yes
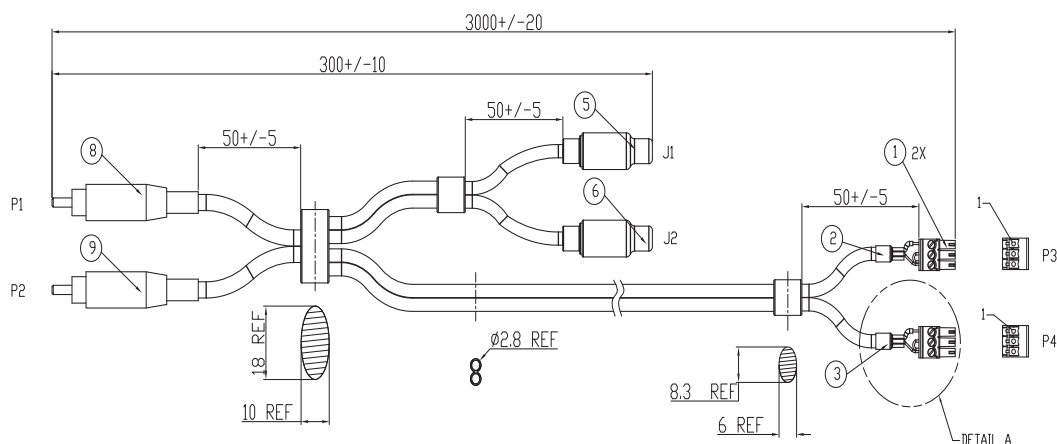
WIRING LIST								
PLUG	CONTACT	CONDCTOR	PLUG	CONTACT	CONDCTOR	JACK	CONTACT	CONDCTOR
P1	1	CENTER	P3	1	A	J1	1	CENTER
	2	SHELL		3	A DRAIN		2	SHELL
	—	—		2	—		—	—
P2	1	CENTER	P4	1	B	J2	1	CENTER
	2	SHELL		3	B DRAIN		2	SHELL
	—	—		2	—		—	—
INSTALL JUMPER BETWEEN CONTACT 2 AND CONTACT 3 OF BOTH P3&P4 AS SHOWN IN DETAIL "A"								

Drawings and part numbers are provided for reference only. Polycom claims no responsibility or liability for the quality, performance, or reliability of cables based on these reference drawings, other than cables provided by Polycom. Contact your Polycom distributor or Polycom Custom/Vertical Products to order cables that meet the appropriate manufacturing tolerances, quality, and performance parameters for your application.

Serial Cables

Polycom RealPresence Group Series Serial cable

This cable connects a Polycom RealPresence Group system to a serial device. It is 8-pin mini-DIN to DB-9.

- The 8-pin mini-DIN RS232 connection is wired per Polycom RS232 and does not follow VISCA pinout convention. Do NOT try to use a cable meant to support VISCA in this application as it will not work correctly.

- Do not use this adapter with an AMX device. AMX systems support both RS-232 and RS-422. Therefore, for RS-232 support, use a null modem cross-over cable that carries only pins 2, 3, and 5, with pins 2 and 3 crossed.

Length	Part Number	RoHS Compliant
10 ft (3 m)	2457-63542-001	Yes

P1

3000±50

P2
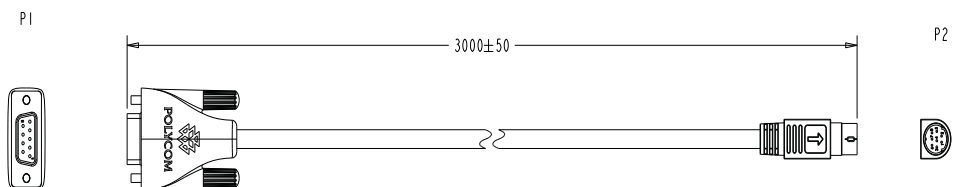
WIRING LIST			
P1		P2	
SIGNAL	PIN	PIN	SIGNAL
RXD	2	2	RXD
TXD	3	3	TXD
DTR	4	4	DTR
GND	5	5	GND
DSR	6	6	DSR
RTS	7	8	CTS
CTS	8	7	RTS
BRAIDED SHIELD	SHELL	SHELL	BRAIDED SHIELD

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Straight-Through Serial Cable

This cable connects a RealPresence Group system to a serial device. It has a DB-9 connector on each end. The maximum approved length for this cable is 100 ft (30 m).

Polycom does not recommend using this straight-through serial cable for RS-232 communication from a computer, Crestron system, or AMX device. Instead, for RS-232 communication, Polycom recommends using a cross-over cable with pin 2 wired to pin 3, pin 3 wired to pin 2, and pin 5 wired to pin 5. The other pins are not used.

If you choose to use this straight-through serial cable for RS-232 communication from a computer or Crestron system, the Null Modem Adapter on page 34 is required. However, the null modem adapter does not work for RS-232 communication from AMX devices and causes problems if you try to use it.

Length	Part Number	RoHS Compliant
25 ft (7.6 m)	2457-09172-001	—
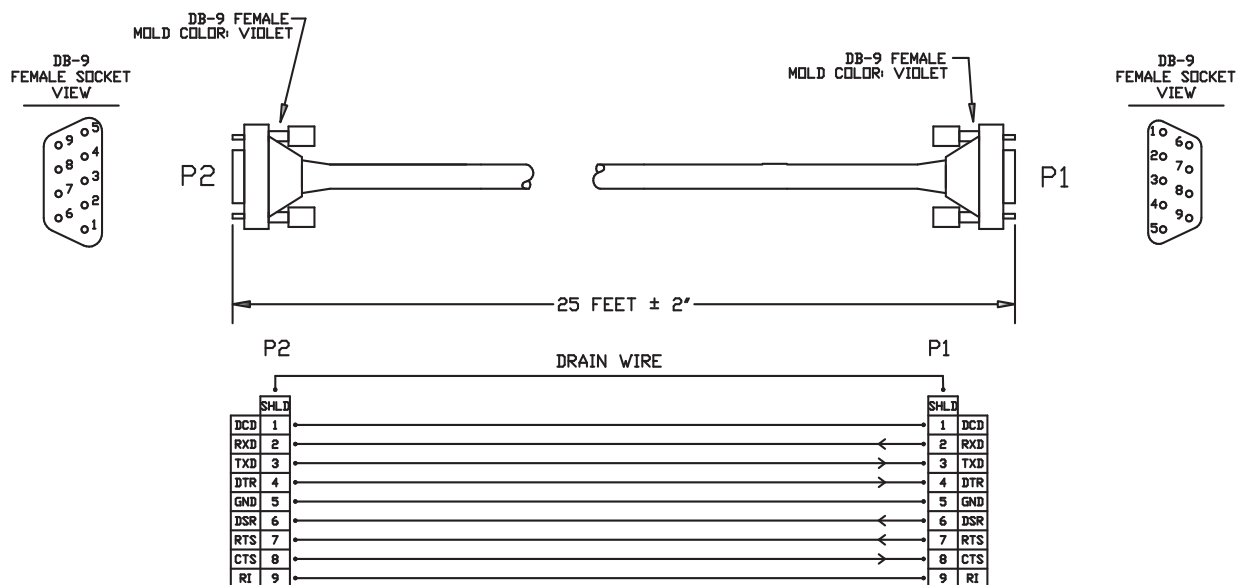
Null Modem Adapter

This adapter is used when connecting RealPresence Group 700 system to a serial device that transmits on pin 3 such as Crestron Pro2 processor. It is a male to female DB-9 adapter plug.

Do not use this adapter with an AMX device. AMX systems support both RS-232 and RS-422. Therefore, for RS-232 support, use a null modem cross-over cable that carries only pins 2, 3, and 5, with pins 2 and 3 crossed.

Length	Part Number	RoHS Compliant
—	1517-61577-001	Yes

DB9F	DB9M
PIN 1&6	PIN 4
PIN 2	PIN 3
PIN 3	PIN 2
PIN 4	PIN 1&6
PIN 5	PIN 5
PIN 7	PIN 8
PIN 8	PIN 7
PIN 9	N/C
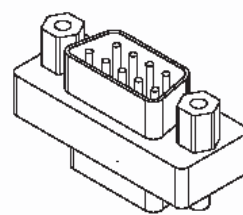
Drawings and part numbers are provided for reference only. Polycom claims no responsibility or liability for the quality, performance, or reliability of cables based on these reference drawings, other than cables provided by Polycom. Contact your Polycom distributor or Polycom Custom/Vertical Products to order cables that meet the appropriate manufacturing tolerances, quality, and performance parameters for your application.

3

Using the API

The Application Programming Interface (API) is a set of commands for advanced users who want to automate a Polycom RealPresence Group system. You can use the API by connecting a control system or computer RS-232 serial port to a Polycom RealPresence Group system. You can also use Telnet over the LAN to use the API with Polycom RealPresence Group systems.

Using the API with an RS-232 Interface

If you use an RS-232 interface to send API commands, you must connect and configure the control system or computer and the Polycom RealPresence Group system for serial communication.

Configuring the RS-232 Interface

If you use the API with a serial connection, make sure that the RS-232 interfaces of the Polycom RealPresence Group system and your computer are configured appropriately.

To access the RS-232 settings on your system, go to **Admin Settings > General Settings > Serial Port** from the web interface.

Configure the Baud Rate and RS-232 Mode options as follows:

Option	Configure this way on your computer	Configure this way on the Polycom RealPresence Group system
Baud Rate	Must be the same rate for both devices. Available rates are: • 9600 • 14400 • 19200 • 38400 • 57600 • 115200	
RS-232 Mode	—	Control

The RS-232 port on the Polycom RealPresence Group system supports Control mode. In Control Mode, a device (for example, a computer) connected to the RS-232 port can control the system using the API.

Starting an API Session using an RS-232 Interface

Polycom RealPresence Group systems can run API sessions from the RS-232 interface.

After you have verified that the Polycom RealPresence Group system and your computer or control system are both configured appropriately, set up both devices as follows:

1 Power off the computer or control system and the Polycom RealPresence Group system.

2 Use an RS-232 cable to connect the computer or control system RS-232 port to an RS-232 port on the Polycom RealPresence Group system as shown in the following illustrations. This connection may require the Null Modem Adapter

— To connect a computer to a Polycom RealPresence Group 300 system:
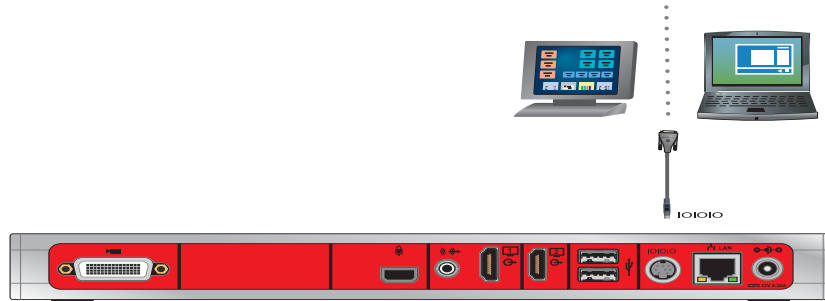
— To connect a computer to a Polycom RealPresence Group 500 system:
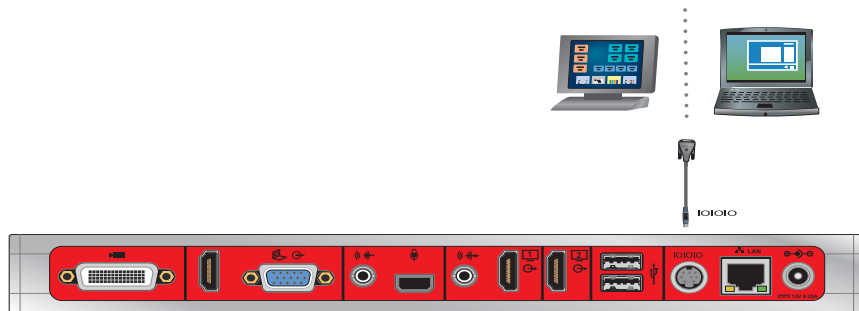
— To connect a control system to a Polycom RealPresence Group 700 system:
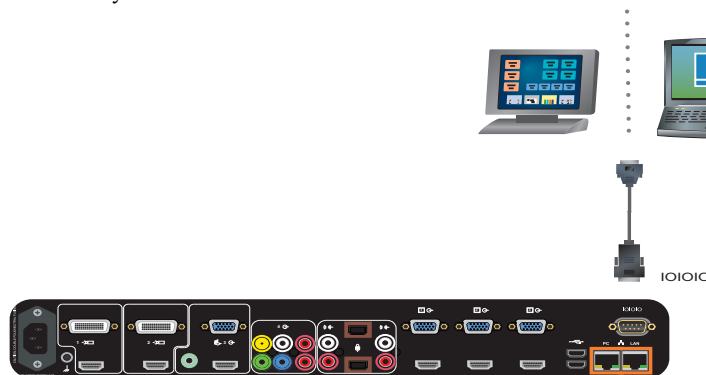
3 Power on the computer or control system and the Polycom RealPresence Group system.

4 From the computer or control system, start a serial session using HyperTerminal or another appropriate utility.

Using the API with a LAN Connection

If you have a computer connected to the LAN, you can send API commands to the Polycom RealPresence Group system through telnet port 24.

1 On the computer, open a command line interface.

2 Start a Telnet session using the Polycom RealPresence Group system IP address and port number — for example, `telnet 10.11.12.13 24`.

Using the API Controller Code

In cooperation with the leading touch panel controller manufacturers, Polycom provides its own version of controller code designed to run on a Crestron control system. It provides a fully executable controller program but also serves as a guideline for ongoing development using Polycom preferred methodology and commands.

Additional API Resources

The following online resources are available for your reference as you use the API.

Technical Support Contact Information

To contact Polycom Technical Support, go to support.polycom.com. This web site provides you with contact information for Polycom technical support. Use this web site when you need help using the API.

Feature Enhancement Request Web Site

Go to support.polycom.com and navigate to **Feature Request**. This web site allows you to submit suggestions for feature enhancements. Use this web site when you have requests for future development of the Polycom API.

Video Test Numbers

Refer to www.polycom.com/videotest. This web site provides you with test numbers of various Polycom systems worldwide. Use this web site when you need to access video test numbers to use when testing your Polycom system.

Knowledge Base

Refer to the Knowledge Base at support.polycom.com. This tool allows you to search for user guides, release notes, and other forms of product documentation. You can also search for troubleshooting information and technical briefs. Use this web site when you need to access Polycom product documentation or tips.

4

System Commands

This chapter describes the API commands for RealPresence Group software version 4.0.0.

For an alphabetical list of all the commands, refer to the table of contents for this document. For a list of commands by category, refer to "Categorical List of API Commands" on page 247.

About the API Commands

Syntax Conventions

The following conventions are used for the API command descriptions in this chapter. All of the commands are case sensitive.

Convention	Meaning
`<param1|param2|param3>`	Multiple valid parameters are enclosed in angle brackets and separated by the pipe ("|") character. Example: `allowdialing <yes|no|get>` shows that the `allowdialing` command must be followed by one of the parameters listed.

Convention	Meaning
`[param]` `["param"]`	Optional parameters are enclosed in square brackets. Quotation marks indicate strings to be supplied by the user. Example: teleareacode set ["telephone_area_code"] shows that you can supply a value for the area code, or omit it and let the default value apply. You do not need to enclose the actual value in quotes unless it contains a space.
`{a..z}`	A range of possible alphanumeric values is enclosed in braces. Example: `abk letter {a..z}` shows that the `abk` command can be used to return address book entries that begin with an alphanumeric character in the range specified. Example: `camera near {1..4}` shows that the `camera` command can be used to select Camera 1, 2, 3, or 4 at the near site.
`"x"`	Quotation marks indicate strings to be supplied by the user. You do not need to enclose the value in quotes unless it contains a space.

Although the API command parser may accept the minimum number of characters in a command that makes it unique, you should always use the full command string.

Availability of Commands

The availability of API commands depends on the type of system optional equipment installed or connected, security settings and the software version installed on the system. If a particular command is not supported on the system, the command returns feedback such as "`error: this command is not supported on this model`" or "`command is not available in current system configuration`". If a setting is configured by a provisioning service, the command may return feedback such as "`this setting is controlled by a provisioning service and cannot be changed. For more information about provisioned settings, refer to your provisioning service administrator.`"

Deprecated commands are included for backward compatibility only and are not recommended for use with this version. Suitable replacements are noted for each deprecated command.

Commands that are not listed in this chapter are not supported by Polycom. Commands might change or be removed at any time. Polycom discourages integrators from using unpublished commands.

API support is not available for software versions for the Joint Interoperability Test Command (JITC) certification.

Command Response Syntax

When you send a command, the system returns responses using the syntax described in the following sections, where <CR> indicates a carriage return and <LF> indicates a line feed.

> The end of line (EOL) character for the echo is different for serial and LAN responses. The feedback examples below and elsewhere in the Integrator's Reference Manual are based on the serial response.

When Not Registered to Receive Notifications

When your system is not registered to receive any notifications and you send an API command, a single API acknowledgement is returned.

For example:

`camera near 2 <CR>`API command
returns
`camera near 2<CR><LF>`API acknowledgement

In the example above, the command was sent with an end of line character of a carriage return <CR>.

The API expects a carriage return <CR> as well as the standard end of line characters carriage return/line feed <CR><LF>. All API responses end in carriage return/line feed <CR><LF>.

When Registered to Receive Notifications

Registering for notifications adds extra line responses in the form of API registration responses. The number of additional lines depends on the specific registration. In the following example, the response shows an API acknowledgement and an API registration response returned.

- `camera near 1 <CR>`API command
  returns
  `camera near 1<CR><LF>`API acknowledgement
  `notification:vidsourcechange:near:1:Main:people<CR><LF>`
  API registration response

When your system is registered for notifications, always use the API registration response for status.

Commands that Restart the System

Commands that Restart the System with a Prompt

- `reboot`

Commands that Restart the System without a Prompt

- `reboot now`

- `resetsystem`

Additional Tips

- The system does not provide flow control. If the connection is lost through restarting the system or other means, you must re-establish the connection.

- The API processes one command at a time.

- Polycom does not recommend sending multiple commands simultaneously without a pause or delay between them.

- For commands with a single action and a single response: A delay of 200 milliseconds between commands is usually sufficient. Examples of these commands include the commands for switching cameras (`camera near 1`), sending content (`vcbutton play`), and checking the status of the audio mute (`mute near get`).

- For commands with a single action and a more extensive response: The time required to receive the response, and thus the time between commands, may be longer than 200 milliseconds. The response length, which can vary in size, determines the time required to receive the response. Examples of these commands include the commands for retrieving the local address book (`addrbook all`), the global address book (`gaddrbook all`), the list of system settings, and system session information (such as `whoami`).

- When developing your program, always allow enough time for the response to the requested command to complete before sending another command.

- Do not send any commands while an incoming or outgoing call is being established.

- The API provides feedback status in two ways: registrations or polling.

- It is only required that you send registration and notification API commands once, because the registrations become written into Flash memory and are retained even upon restarting the system.

- Polycom recommends putting registrations in the initialization or startup of Crestron and AMX systems.

- Registrations are recommended over polling since they will provide status updates without having to query for changes.

- Never poll for registrations.

- Registrations are specific to the port from which they are registered. If you register for notifications from com port 1, registration will not be sent to com port 2 or Telnet port 24.

addrbook

Returns local directory (address book) entries.

Syntax

```
addrbook all
addrbook batch {0..59}
addrbook batch search "pattern" "count"
addrbook batch define "start_no" "stop_no"
addrbook letter {a..z}
addrbook range "start_no" "stop_no"
addrbook refresh
addrbook names <all|video|phone> [<range_start>] [<range_end>]
addrbook names <all|video|phone> size
addrbook names search "search_pattern" <all|video|phone>
                         [<range_start>] [<range_end>]
addrbook names search "search_pattern" <all|video|phone> size
addrbook group "group_name" [<range_start>] [<range_end>]
addrbook group "group_name" size
addrbook address "sys_name" ["sys_label"]
```

Parameter	Description
`all`	Returns all the entries in the local directory.
`batch`	Returns a batch of 10 local directory entries. Requires a batch number, which must be an integer in the range `{0..59}`.
`search`	Specifies a batch search.
`"pattern"`	Specifies a pattern to match for the batch search.
`"count"`	Specifies the number of entries to list that match the pattern.
`define`	Returns a batch of entries in the range defined by "`start_no`" to "`stop_no`."
`letter`	Returns entries beginning with the letter specified from the range `{a..z}`. Requires one or two alphanumeric characters. Valid characters are: `- _ / ; @ , . \` `0` through `9` `a` through `z`
`range`	Returns local directory entries numbered "`start_no`" through "`stop_no`". Requires two integers.

Parameter	Description
"start_no"	Specifies the beginning of the range of entries to return.
"stop_no"	Specifies the end of the range of entries to return.
refresh	Gets a more current copy of the local directory.

names	Returns a list of system names in the local address book. Also returns the system type: video, multicodec, phone, or multisite. A multi-codec system will appear as a single row.
	
	The response is in the following format:
	`addrbook names {0..n}. name:"sys_name"`
	`                sys_label:"sys_label"`
	`                type:`
	`<video|multicodec|phone|group>`
	`...`
	`addrbook names <all|video|phone> done`

<all|video>	Specifies the type of entries to return. video returns entries that have video addresses. all returns entries with video numbers or phone numbers or both.

size	Returns the size of the result set that will be returned by the command. The size parameter can be used with the names and the names search commands.
	
	The response is in the following format:
	`addrbook names <all|video|phone> size {0..n}`
	`addrbook names search "search_pattern"`
	`                <all|video|phone> size {0..n}`

range_start	For the names, names search, and group commands, specifies the beginning of the range of entries to return.
range_end	For the names, names search, and group commands, specifies the end of the range of entries to return. If a range_start is specified without a range_end, then the single range_start entry will be returned. If range_end is -1, all entries starting with range_start will be returned.

Parameter	Description

`search`	Returns a list local directory names that match the search criteria.
	
	The response is similar to the `names` command described above:
	`addrbook search {0..n}. name:"sys_name"`
	`                sys_label:"sys_label"`
	`                type:`
	`<video|multicodec|phone|group>`
	`...`
	`addrbook names search "search_pattern"`
	`          <all|video|phone> done`

`search_pattern`	Specifies the string pattern for which to search. Wildcard characters are not supported. The search string is used to match the beginning of any of the attributes listed in the "names search" parameter description above. For example, the search string "Jo" would match any name that begins with Jo, such as John or Jones. The search is not case sensitive.

`group`	Returns a list of the names of all the sites included in a local directory group in this format:
	`addrbook group {0..n}. name:"site_sys_name"`
	
	`sys_label:"site_sys_label"`
	`...`
	`addrbook group "group_name" [range] done`
	`addrbook group size <num_entries>`

`group_name`	A local address book group name.
`address`	Obtains the address information for a specified entry. If the entry is an ITP system, the results will include the addresses for all codecs. If codecs support multiple protocols, the different addresses will be returned on separate lines. This command is not supported for multisite entries.
`sys_name`	The friendly name for an address book entry. It is the name of the person or the room. It is surrounded by quotes if it contains spaces.
`sys_label`	If a person/room has more than one system, the result set will include a row for each system. If those systems are of the same type the client will consider that entry to be a telepresence system with multiple codecs rather than separate systems. If the systems are of different types, then this sys_label attribute will be included to differentiate the systems.

Parameter	Description
type	The type of local address book entry. Possible values are: video, multicodec, phone, group
site_sys_name	The name of a site in a group. It is surrounded by quotes if it contains spaces
site_sys_label	The label associated with a site name in a local group. It is surrounded by quotes if it contains spaces.
codec:<1..4>	If the entry is a telepresence system, each codec will include a codec number attribute.
h323_spd	The preferred speed for an H.323 call to this entry. If no speed is associated with the entry, then the value of the configuration variable "globaladdrmaxh323" is returned. The default is 384.
h323_num	H.323 address or alias.
h323_ext	H.323 extension or E.164 number.
sip_spd	The preferred speed for a SIP call to this entry. If no speed is associated with the entry, then this is the same as the h323_spd.
sip_num	IP address.
xmpp_addr	XMPP address, also known as the Jabber ID (JID).

Feedback Examples

- addrbook all
  returns
  addrbook 0. "Polycom Group Series Demo 1" isdn_spd:384
  isdn_num:1.700.5551212 isdn_ext:
  addrbook 1. "Polycom Group Series Demo 2" h323_spd:384
  h323_num:192.168.1.101 h323_ext:7878
  addrbook 2. "Polycom Group Series Demo 3" sip_spd:384
  sip_num:polycomgroupseries@polycom.com
  addrbook 3. "Polycom Group Series Demo 3" phone_num:1.512.5121212
  (and so on, until all entries in the local directory are listed,
  then:)
  addrbook all done

- addrbook batch 0
  returns
  addrbook 0. "Polycom Group Series Demo 1" isdn_spd:384
  isdn_num:1.700.5551212 isdn_ext:
  addrbook 1. "Polycom Group Series Demo 2" h323_spd:384

h323_num:192.168.1.101 h323_ext:7878
addrbook 2. "Polycom Group Series Demo 3" sip_spd:384
sip_num:polycomgroupseries@polycom.com
addrbook 3. "Polycom Group Series Demo 3" phone_num:1.512.5121212
(and so on, through the last entry in the batch of 10 directory
entries, such as:)
addrbook 9. "Polycom Group Series Demo 20" h323_spd:384
h323_num:192.168.1.120 h323_ext:
addrbook batch 0 done

- addrbook batch define 0 2
  returns
  addrbook 0. "Polycom Group Series Demo 1" isdn_spd:384
  isdn_num:1.700.5551212 isdn_ext:
  addrbook 1. "Polycom Group Series Demo 2" h323_spd:384
  h323_num:192.168.1.101 h323_ext:7878
  addrbook 2. "Polycom Group Series Demo 3" sip_spd:384
  sip_num:polycomgroupseries@polycom.com
  addrbook batch define 0 2 done

- addrbook names all size
  returns
  addrbook names all size 21

- addrbook names all size 21
  returns
  addrbook names all size 21
  addrbook names 0. name:"Eng RPX" sys_label:"Group Series"
  type:multicodec
  addrbook names 1. name:"Fulton" sys_label:"" type:video
  addrbook names 2. name:"Gen Group" sys_label:"" type:group
  addrbook names 3. name:"Geno Alissi" sys_label:"" type:video
  addrbook names 4. name:"Joseph Sigrist" sys_label:"" type:video
  addrbook names 5. name:"Lab TPX" sys_label:"" type:video
  addrbook names 6. name:"Minuteman RPX" sys_label:"" type:multicodec
  addrbook names 7. name:"Monday Staff Mtg" sys_label:"" type:group
  addrbook names 8. name:"Polycom Austin Stereo" sys_label:""
  type:video
  addrbook names 9. name:"Polycom Austin HD" sys_label:"" type:video
  addrbook names all 0 9 done

- addrbook names all
  returns
  addrbook names 0. name:"Eng RPX" sys_label:"HDX" type:multicodec
  addrbook names 1. name:"Fulton" sys_label:"" type:video
  addrbook names 2. name:"Gen Group" sys_label:"" type:group
  addrbook names 3. name:"Geno Alissi" sys_label:"" type:video
  addrbook names 4. name:"Joseph Sigrist" sys_label:"" type:video
  addrbook names 5. name:"Lab TPX" sys_label:"" type:video
  addrbook names 6. name:"Minuteman RPX" sys_label:"" type: multicodec
  addrbook names 7. name:"Monday Staff Mtg" sys_label:"" type:group
  addrbook names 8. name:"Polycom Austin Stereo" sys_label:""

```
                    type:video
                    addrbook names 9. name:"Polycom Austin HD" sys_label:"" type:video
                    addrbook names 10. name:"Polycom Austin USA IP" sys_label:""
                    type:video
                    addrbook names 11. name:"Polycom Japan" sys_label:"" type:video
                    addrbook names 12. name:"Scott CMAD IP" sys_label:"" type:video
                    addrbook names 13. name:"Scott Phone" sys_label:"" type:phone
                    addrbook names 14. name:"Scott PVX" sys_label:"" type:video
                    addrbook names 15. name:"Scott Quasar 19" sys_label:"" type:video
                    addrbook names 16. name:"SQA Group Series" sys_label:"" type:video
                    addrbook names 17. name:"Sunil Bhalla" sys_label:"" type:video
                    addrbook names 18. name:"Test System 1" sys_label:"" type:video
                    addrbook names 19. name:"Test System 2A" sys_label:"" type:video
                    addrbook names 20. name:"Test System 2B" sys_label:"" type:video
                    addrbook names all done
```

- addrbook names search "p" all
  ```
  returns
  addrbook search 0. name:"Polycom Austin HD" sys_label:"" type:video
  addrbook search 1. name:"Polycom Austin Stereo" sys_label:""
  type:video
  addrbook search 2. name:"Polycom Austin USA IP" sys_label:""
  type:video
  addrbook search 3. name:"Polycom Japan" sys_label:"" type:video
  addrbook search 4. name:"Scott Phone" sys_label:"" type:phone
  addrbook search 5. name:"Scott PVX" sys_label:"" type:video
  addrbook search search p all done
  ```

- addrbook names search "p" all 0 2
  ```
  returns
  addrbook search 0. name:"Polycom Austin HD" sys_label:"" type:video
  addrbook search 1. name:"Polycom Austin Stereo" sys_label:""
  type:video
  addrbook search 2. name:"Polycom Austin USA IP" sys_label:""
  type:video
  addrbook search search p all 0 2 done
  ```

- addrbook group "Monday Staff Mtg"
  ```
  returns
  addrbook group 0. name:"Eng RPX" sys_label:"HDX"
  addrbook group 1. name:"Geno Alissi" sys_label:""
  addrbook group 2. name:"Joseph Sigrist" sys_label:""
  addrbook group 3. name:"TPW" sys_label:"HDX"
  addrbook group "Monday Staff Mtg" done
  ```

- addrbook address "Geno Alissi"
  ```
  return
  addrbook address 0. name:"Geno Alissi" sys_label:"" codec:1
                        h323_spd:384 h323_num:172.25.137.101 h323_ext:
  addrbook address name:"Geno Alissi" sys_label:"" done
  ```

See Also

gaddrbook command on page 110 and speeddial command on page 175.

advnetstats

Gets advanced network statistics for a call connection.

Syntax

advnetstats [{0..n}]

Parameter	Description
{0..n}	Specifies a connection in a multipoint call, where n is the maximum number of connections supported by the system. 0 is call #1, 1 is call #2, 2 is call #3, and so on. Select a number from this range to specify a remote site call for which you want to obtain advanced network statistics. Omit this parameter when retrieving statistics for a point-to-point call.

Feedback Examples

- advnetstats 1
  returns
  call:1 tar:24k rar:24k tvr:64.3k rvr:104k
  tvru:63.8k rvru:114.6k tvfr:15.0 rvfr:15.0 vfe ---
  tapl:66 rapl:0 taj:46mS raj:40mS tvpl:122 rvpl:0
  tvj:21mS rvj:60mS dc:--- rsid:Polycom_4.2 ccaps:E9P

- Returned parameters are:
  tar=Transmit audio rate
  rar=Receive audio rate
  tvr=Transmit video rate
  rvr=Receive video rate
  tvru=Transmit video rate used
  rvru=Receive video rate used
  tvfr=Transmit video frame rate
  rvfr=Receive video frame rate
  vfe=Video FEC errors
  tapl=Transmit audio packet loss (H.323 calls only)
  tlsdp=Transmit LSD protocol (H.320 calls only)
  rapl=Receive audio packet loss (H.323 calls only)
  rlsdp=Receive LSD protocol (H.320 calls only)
  taj=Transmit audio jitter (H.323 calls only)
  tlsdr=Transmit LSD rate (H.320 calls only)
  raj=Receive audio jitter (H.323 calls only)
  rlsd=Receive LSD rate (H.320 calls only)
  tvpl=Transmit video packet loss (H.323 calls only)
  tmlpp=Transmit MLP protocol (H.320 calls only)
  rvpl=Receive video packet loss (H.323 calls only)

```
rmlpp=Receive MLP protocol (H.320 calls only)
tvj=Transmit video jitter (H.323 calls only)
tmlpr=Transmit MLP rate (H.320 calls only)
rvj=Receive video jitter (H.323 calls only)
rmlpr=Receive MLP rate (H.320 calls only)
dc=Encryption information
rsid=Remote system id
ccaps=Content capability, where possible responses include "9"
(H.239), "E" (enterprise dual streams), "N" (none), and "P" (content
over the people stream)
```

See Also

To return network statistics for a call, use the .

all register

Registers for most commonly-used user registration events.

Syntax

```
all register
```

Feedback Examples

```
all register
returns
callstate registered
camera registered
linestate registered
mute registered
preset registered
screen registered
vcbutton registered
volume registered
```

Comments

Registers changes to any of the following types of parameters:

- Current near-site or far-site source

- State of privacy

- Current volume level

- Active camera presets

- Status of point-to-point or multipoint calls

- IP connection to codec

- System information

This command is particularly useful when two different control systems are being used simultaneously, such as the web and API commands. The system maintains the registration changes through restarts.

To register for events not included in this feedback, refer to the specific registration command.

This is a one time registration command that is retained in flash memory. Sending the command a second time results in the following feedback response:

- info: event/notification already active:callstate
  info: event/notification already active:camera

  info: event/notification already active:linestate
  info: event/notification already active:mute

  info: event/notification already active:preset
  info: event/notification already active:screen
  info: event/notification already active:vcbutton
  info: event/notification already active:volume

The `all register` command does not return local camera movements if the camera is moved using the remote control, the web interface, or the Polycom Touch Control virtual remote.

all unregister

Simultaneously unregisters all registered user feedback so that the API no longer reports changes to the parameters.

Syntax

```
all unregister
```

Feedback Examples

```
all unregister
```
returns
```
callstate unregistered
camera unregistered
linestate unregistered
mute unregistered
preset unregistered
screen unregistered
vcbutton unregistered
volume unregistered
```

Comments

The following types of parameters are unregistered:

- Current near-site or far-site source
- State of privacy
- Current volume level
- Active camera presets
- Status of point-to-point or multipoint calls
- IP connection to codec
- System information

amxdd

Sets or gets the AMX Device Discovery beacon.

Syntax

```
amxdd get
amxdd <on|off>
```

Parameter	Description
get	Returns the current setting.
on	Turns on the AMX Device Discovery beacon.
off	Turns off the AMX Device Discovery beacon.

Feedback Examples

- `amxdd get`
  returns
  `amxdd off`

- `amxdd on`
  returns
  `amxdd on`

Comments

The default setting for this signal is `off`.

answer

Answers incoming video calls.

Syntax

```
answer <video>
```

Parameter	Description
video	Answers incoming video calls when Auto Answer Point-to-Point Video or Auto Answer Multipoint Video is set to No.

Feedback Examples

- `answer video`
  returns
  `answer incoming video call failed`

- `answer video`
  returns
  `answer incoming video call passed`

audiotransmitlevel

Sets or gets the audio volume transmitted to the far site, or notification of transmit level changes.

Syntax

```
audiotransmitlevel <get|up|down|register|unregister>
audiotransmitlevel set {-20..30}
```

Parameter	Description
get	Returns the current setting.
up	Sets the volume 1 decibel higher than the current setting.
down	Sets the volume 1 decibel lower than the current setting.
register	Registers to receive notification when audio transmit level changes.
unregister	Unregisters to receive notification when audio transmit level changes.
set	Sets the volume to the specified dB level. Valid values are: {-20..30}.

Feedback Examples

- `audiotransmitlevel set 2`
  returns
  `audiotransmitlevel 2`

- `audiotransmitlevel get`
  returns
  `audiotransmitlevel 2`

- `audiotransmitlevel up`
  returns
  `audiotransmitlevel 3`

- `audiotransmitlevel down`
  returns
  `audiotransmitlevel 2`

- `audiotransmitlevel register`
  returns
  `audiotransmitlevel registered`

- `audiotransmitlevel unregister`
  returns
  `audiotransmitlevel unregistered`

autoanswer

Sets or gets the Auto Answer Point-to-Point Video mode, which determines how the system handles an incoming call in a point-to-point video conference.

Syntax

```
autoanswer <get|yes|no|donotdisturb>
```

Parameter	Description
yes	Allows any incoming video call to be connected automatically. This is the default setting.
no	Prompts the user to answer incoming video calls.
donotdisturb	Notifies the user of incoming calls, but does not connect the call. The site that placed the call receives a Far Site Busy (H.320) or Call Rejected (H.323) code.
get	Returns the current setting.

Feedback Examples

- `autoanswer` yes
  returns
  `autoanswer` yes

- `autoanswer` no
  returns
  `autoanswer` no

- `autoanswer` get
  returns
  `autoanswer` no

- `autoanswer donotdisturb`
  returns
  `autoanswer donotdisturb`

Comments

If `autoanswer` is set to `no` or `donotdisturb`, you must rely on API session notifications to answer inbound calls.

autoshowcontent

Specifies whether to send content automatically when a computer is connected to the system.

Syntax

```
autoshowcontent <get|on|off>
```

Parameter	Description
get	Returns the current setting.
on	Sets the system to send content automatically when a computer is connected to the system.
off	Sets the system to not send content automatically.

Feedback Examples

- `autoshowcontent on`
  returns
  `autoshowcontent on`

- `autoshowcontent off`
  returns
  `autoshowcontent off`

- `autoshowcontent get`
  returns
  `autoshowcontent off`

basicmode

Sets or gets the Diagnostic Mode configuration, a limited operating mode that uses H.261 for video and G.711 for audio. Basic mode provides administrators with a workaround for interoperability issues that cannot be solved using other methods.

Syntax

```
basicmode <get|on|off>
```

Parameter	Description
get	Returns the current setting.
on	Enables diagnostic mode.
off	Disables diagnostic mode.

Feedback Examples

- `basicmode on`
  returns
  `basicmode on`

- `basicmode off`
  returns
  `basicmode off`

- `basicmode get`
  returns
  `basicmode off`

calendardomain

Gets and sets the domain used by the calendaring service to log in to the Microsoft® Exchange server.

Syntax

```
calendardomain get
calendardomain "domain"
```

Parameter	Description
get	Returns the domain used by the calendaring service.
"domain"	The domain to be used by the calendaring service.

Feedback Examples

- ```
  calendardomain get
  ```
  returns
  ```
  calendardomain smithfield
  ```

- ```
  calendardomain fairview
  ```
  returns
  ```
  calendardomain fairview
  ```

See Also

To enable or disable the calendaring service, use the calendarregisterwithserver command on page 70. To configure the Microsoft Exchange server address used by this service use the calendarserver command on page 73. To set the resource mailbox to be monitored, use the calendarresource command on page 72.

calendarmeetings

Retrieves scheduled meetings within the given time span or with the given meeting ID.

Syntax

```
calendarmeetings list "starttime" ["endtime"]
calendarmeetings info "meetingid"
```

Parameter	Description
`list`	Returns the meeting id or ids for meetings that start at or after the specified start time and end time.
`"starttime"`	The start time of meetings to be retrieved. The start time can be entered in one of the following formats: • YYYY-MM-DD:HH:MM • today:HH:MM • today • tomorrow:HH:MM • tomorrow The times are interpreted to be local times in the time zone the system was configured for.
`"endtime"`	The end time of meetings to be retrieved. This parameter can be given in the following format. • YYYY-MM-DD:HH:MM • today:HH:MM • today • tomorrow:HH:MM • tomorrow The times are interpreted to be local times in the time zone the system was configured for.
`info`	Retrieves meeting details for scheduled meetings when the system is registered with the calendaring service. Returns information such as the location, subject and organizer of the meeting.
`"meetingid"`	The ID of the meeting for which you want to find details.

Feedback Examples

- `calendarmeetings list tomorrow`
  returns
  ```
  calendarmeetings list begin
  meeting|AAAaAEFsZXguTWFjRG9uYWxkQHBvbHljb20uY29tAVEACIjMne2/ndgARg
  AAAADr9GlhsSjWEZBcAAKzMphJBwA4wicbtr3UEZArAKAk09LtAAACZpKWAADe7hJl
  eQIOS7j2mzRJxkLKAAADI/F8BAAA|2010-03-30:08:30|2010-03-30:09:00|Dis
  cuss Budget
  meeting|AAAaAEFsZXguTWFjRG9uYWxkQHBvbHljb20uY29tAVEACIjMne2/ndgARg
  AAAADr9GlhsSjWEZBcAAKzMphJBwA4wicbtr3UEZArAKAk09LtAAACZpKWAADe7hJl
  eQIOS7j2mzRJxkLKAAAA/9PhAAAQ|2010-03-30:09:00|2010-03-30:09:30|Pro
  gram Review
  meeting|AAAaAEFsZXguTWFjRG9uYWxkQHBvbHljb20uY29tAVEACIjMne2/ndgARg
  AAAADr9GlhsSjWEZBcAAKzMphJBwA4wicbtr3UEZArAKAk09LtAAACZpKWAABZ29fO
  U0S5Q6xzZ1lzDDNnAABFQAQ3AAAQ|2010-03-30:10:00|2010-03-30:11:00|Cus
  tomer Care Commitment Meeting
  calendarmeetings list end
  ```

- `calendarmeetings list 2010-03-30:08:00 2010-04-01:17:00`
  returns
  ```
  calendarmeetings list begin
  meeting|AAAaAEFsZXguTWFjRG9uYWxkQHBvbHljb20uY29tAVEACIjMne2/ndgARg
  AAAADr9GlhsSjWEZBcAAKzMphJBwA4wicbtr3UEZArAKAk09LtAAACZpKWAADe7hJl
  eQIOS7j2mzRJxkLKAAADI/G8AAAQ|2010-03-30:08:30|2010-03-30:09:00|Bug
  Scrub
  meeting|AAAaAEFsZXguTWFjRG9uYWxkQHBvbHljb20uY29tAVEACIjMne2/ndgARg
  AAAADr9GlhsSjWEZBcAAKzMphJBwA4wicbtr3UEZArAKAk09LtAAACZpKWAABZ29fO
  U0S5Q6xzZ1lzDDNnAABFQARCAAAQ|2010-03-30:11:30|2010-03-30:12:30|gro
  upseries/IP7000/Conference Coordination
  meeting|AAAaAEFsZXguTWFjRG9uYWxkQHBvbHljb20uY29tAVEACIjMne2/ndgARg
  AAAADr9GlhsSjWEZBcAAKzMphJBwA4wicbtr3UEZArAKAk09LtAAACZpKWAABZ29fO
  U0S5Q6xzZ1lzDDNnAABFQAQ3AAAQ|2010-04-01:16:30|2010-04-01:17:00|Cus
  tomer Care Commitment Meeting
  calendarmeetings list end
  ```

- `calendarmeetings info`
  `AAAaAEFsZXguTWFjRG9uYWxkQHBvbHljb20uY29tAVEACIjMne2/ndgARgAAAADr9G`
  `lhsSjWEZBcAAKzMphJBwA4wicbtr3UEZArAKAk09LtAAACZpKWAADe7hJleQIOS7j2`
  `mzRJxkLKAAADI/G8AAAQ`
  returns
  ```
  calendarmeetings info start
  id|AAAaAEFsZXguTWFjRG9uYWxkQHBvbHljb20uY29tAVEACIjMne2/ndgARgAAAAD
  r9GlhsSjWEZBcAAKzMphJBwA4wicbtr3UEZArAKAk09LtAAACZpKWAADe7hJleQIOS
  7j2mzRJxkLKAAADI/G8AAAQ
  2010-03-30:08:30|2010-03-30:09:00|dialable|public
  organizer|Russell Bell
  location|Russell's RMX Meeting Room - IP Video Number: 123456 (if
  registered to corp GK); 888-123-4567/978-123-4567 with passcode:
  #760900
  subject|Bug Scrub
  ```

```
dialingnumber|video|733397@vsgwstdma01.r13.vsg.local2|sip
dialingnumber|video|733397|h323
dialingnumber|audio|48527
meetingpassword|none
attendee|Russell Bell
attendee|Rebecca Sharp
calendarmeetings info end
```

- `calendarmeetings info`
  `AAAaAEFsZXguTWFjRG9uYWxkQHBvbHljb20uY29tAVEACIjMn4AUcVgARgAAAADr9G`
  `lhsSjWEZBcAAKzMphJBwA4wicbtr3UEZArAKAk09LtAAACZpKWAADe7hJleQIOS7j2`
  `mzRJxkLKAAAA30GwAAAQ`
  `returns`
  `calendarmeetings info start`
  `id|AAAaAEFsZXguTWFjRG9uYWxkQHBvbHljb20uY29tAVEACIjMn4AUcVgARgAAAAD`
  `r9GlhsSjWEZBcAAKzMphJBwA4wicbtr3UEZArAKAk09LtAAACZpKWAADe7hJleQIOS`
  `7j2mzRJxkLKAAAA30GwAAAQ`
  `2010-04-01:10:30|2010-04-01:11:00|nondialable|private`
  `organizer|Rebecca Sharp`
  `location|Red River conference room`
  `subject|Escalations Review`
  `attendee|Roslin Adam`
  `attendee|Conf.AUS.Red River`
  `attendee|Claudia Nevarez`
  `calendarmeetings info end`

Comments

If the meeting's end time is more than 31 days from the meeting's start time, the response is shortened to `starttime+31days`, and meetings that start in that time span are returned.

If an API client is logged in with user-level credentials and if the system is configured to hide private meeting information on the web interface, the API hides the information from the API client and shows the subject of the meeting as "Private Meeting"; for example:

```
calendarmeetings list begin
meeting|AAAaAEFsZXguTWFjRG9uYWxkQHBvbHljb20uY29tAVEACIjMn4AUcVgARgAAAA
Dr9GlhsSjWEZBcAAKzMphJBwA4wicbtr3UEZArAKAk09LtAAACZpKWAADe7hJleQIOS7j2
mzRJxkLKAAAA30GwAAAQ|2009-09-25:08:30|2009-09-25:09:15|private meeting
calendarmeetings list end
```

If a system is configured to provide private meeting information on the web interface, the API provides the same information to the API client; for example:

```
calendarmeetings list begin
meeting|AAAZAGV4Y2H1C2VYMDFACJEZLNZZZY5SB2NHBDIARGAAAAAAKQKC8WW3CUWGCP
M+AP66WQCASOLXUYMOMEKYBQJJ1ZOMBWASDQANHQAASOLXUYMOMEKYBQJJ1ZOMBWASDQAS
VGAA|2009-09-25:08:30|2009-09-25:09:15| Demo
calendarmeetings list end
```

If the API client is logged in with admin-level credentials, the API provides private meeting information to the API client, regardless of the configuration for displaying private meeting information; for example:

```
calendarmeetings list begin
meeting|AAAZAGV4Y2H1C2VYMDFACJEZLNZZZY5SB2NHBDIARGAAAAAAKQKC8WW3CUWGCP
M+AP66WQCASOLXUYMOMEKYBQJJ1Z0MBWASDQANHQAASOLXUYMOMEKYBQJJ1Z0MBWASDQAS
VGAA|2009-09-25:08:30|2009-09-25:09:15|Release plan
meeting|AAAZAGV4Y2H1C2VYMDFACJEZLNZZZY5SB2NHBDIARGAAAAAAKQKC8WW3CUWGCP
M+AP66WQCASOLXUYMOMEKYBQJJ1Z0MBWASDQANHQAASOLXUYMOMEKYBQJJ1Z0MBWASDQAS
VGAA|2009-09-23:11:00|2009-09-23:11:45|Product roadmap for 2010
calendarmeetings list end
```

The calendaring service must be registered with Microsoft Exchange server for the calendarmeetings command to work successfully. If the calendar credentials are invalid, the server address is not valid, or the configured user credentials don't have access permissions to the resource mailbox calendar, the service will fail to register.

This command has multi line output.

The following characters in the meeting subject will not be displayed:

- | (vertical bar)
- CR (carriage return)
- LF (line feed)

See Also

To enable or disable the calendaring service, use the calendarregisterwithserver command on page 70. To configure the Microsoft Exchange server address used by this service use the calendarserver command on page 73.

calendarpassword

Sets the password used by the calendaring service to log in to the Microsoft Exchange server.

Syntax

calendarpassword "password"

Parameter	Description
"password"	The password used by the calendaring service to log in to the Microsoft Exchange server.

Feedback Examples

- calendarpassword Dsca1end@r
  returns
  calendarpassword Dsca1end@r

Comments

The password can be up to 15 characters long and is case-sensitive. Use strong passwords that combine uppercase and lowercase letters, numbers, and symbols.

See Also

To enable or disable the calendaring service, use the calendarregisterwithserver command on page 70.

calendarplaytone

Enables or disables the reminder alert tone that plays with the meeting reminder when the system is registered with the calendaring service.

Syntax

```
calendarplaytone get
calendarplaytone <yes|no>
```

Parameter	Description
get	Gets the current setting for the alert tone.
yes	Enables the alert tone.
no	Disables the alert tone.

Feedback Examples

- `calendarplaytone get`
  returns
  `calendarplaytone yes`

- `calendarplaytone yes`
  returns
  `calendarplaytone yes`

- `calendarplaytone no`
  returns
  `calendarplaytone no`

See Also

See calendarremindertime command on page 71.

calendarregisterwithserver

Enables or disables the calendaring service.

Syntax

```
calendarregisterwithserver get
calendarregisterwithserver <yes|no>
```

Parameter	Description
get	Returns the current server registration status.
yes	Enables the calendaring service.
no	Disables the calendaring service.

Feedback Examples

- `calendarregisterwithserver get`
  returns
  `calendarregisterwithserver no`

- `calendarregisterwithserver yes`
  returns
  `calendarregisterwithserver yes`

- `calendarregisterwithserver no`
  returns
  `calendarregisterwithserver no`

Comments

To configure the Microsoft Exchange server address used by the calendaring service use the calendarserver command on page 73.

calendarremindertime

Gets and sets the reminder time for meetings in the calendar when the system is registered with the calendaring service.

Syntax

`calendarremindertime <get|1|5|10|15|30|none>`

Parameter	Description
`get`	Gets the current reminder time.
`1|5|10|15|30|none`	The number of minutes before a meeting starts that a meeting reminder is given.

Feedback Examples

- `calendarremindertime get`
  returns
  `calendarremindertime 5`

- `calendarremindertime 15`
  returns
  `calendarremindertime 15`

- `calendarremindertime none`
  returns
  `calendarremindertime none`

Comments

By default, the reminder time is set to 5 minutes.

See Also

Use the notify command on page 151 to register for meeting reminders.

See also calendarplaytone command on page 69.

calendarresource

Gets and sets the mailbox account being monitored for calendar events. The mailbox account is called a resource.

Syntax

```
calendarresource get
calendarresource "resource"
```

Parameter	Description
get	Returns the resource being monitored for calendar events.
"resource"	The resource to monitor for calendaring events.

Feedback Examples

- `calendarresource get`
  returns
  `calendarresource radam@abcde.com`

- `calendarresource jmcnulty@abcde.com`
  returns
  `calendarresource jmcnulty@abcde.com`

Comments

A resource can be a user mailbox or a resource mailbox. A resource mailbox is a mailbox specifically assigned to a meeting room.

See Also

Use the calendarregisterwithserver command on page 70 to enable or disable the calendaring service. See the calendarserver command on page 73 to configure the Microsoft Exchange server address used by the calendaring service.

calendarserver

Gets or sets the Microsoft Exchange server used by the calendaring service.

Syntax

```
calendarserver get
calendarserver "server"
```

Parameter	Description
get	Gets the current Microsoft Exchange server used by the calendaring service.
"server"	The IP address or DNS name of the Microsoft Exchange server to be used by the calendaring service.

Feedback Examples

- `calendarserver get`
  returns
  `calendarserver 192.168.44.168`

- `calendarserver 192.168.23.221`
  returns
  `calendarserver 192.168.23.221`

- `calendarserver get`
  returns
  `calendarserver mail.exchangeserver.local.com`

- `calendarserver mail2.exchserver.local.com`
  returns
  `calendarserver mail2.exchserver.local.com`

See Also

Use the calendarregisterwithserver command on page to enable or disable the calendaring service.

calendarshowpvtmeetings

Enables or disables the display of private meetings in the calendar when the system is registered with the calendaring service.

Syntax

```
calendarshowpvtmeetings get
calendarshowpvtmeetings <yes|no>
```

Parameter	Description
get	Gets the current setting for private meeting display.
yes	Enables the display of private meetings.
no	Blocks the display of private meetings.

Feedback Examples

- `calendarshowpvtmeetings get`
  returns
  `calendarshowpvtmeetings no`

- `calendarshowpvtmeetings yes`
  returns
  `calendarshowpvtmeetings yes`

- `calendarshowpvtmeetings no`
  returns
  `calendarshowpvtmeetings no`

calendarstatus

Returns the status of the Microsoft Exchange server connection.

Syntax
`calendarstatus get`

Parameter	Description
get	Returns the Microsoft Exchange server connection status.

Feedback Examples

- `calendarstatus get`
  returns
  `calendarstatus established`

- `calendarstatus get`
  returns
  `calendarstatus unavailable`

See Also

Use the calendarregisterwithserver command on page 70 to enable or disable the calendaring service.

calendaruser

Gets or sets the user name the calendaring service uses to log in to the Microsoft Exchange server.

Syntax

```
calendaruser get
calendaruser "username"
```

Parameter	Description
get	Returns the user name being used by the calendaring service.
username	The user name the calendaring service uses to log in to the Microsoft Exchange server.

Feedback Examples

- `calendaruser get`
  returns
  `calendaruser jpolycom`

See Also

See the calendarserver command on page 73 to configure the Microsoft Exchange server address used by this service.

callinfo

Returns information about the current call. If you are in a multipoint call, this command returns one line for each site in the call.

Syntax
```
callinfo all
callinfo callid "callid"
```

Parameter	Description
`all`	Returns information about each connection in the call.
`callid`	Returns information about the connection with the specified call ID.

Feedback Examples

- `callinfo all`
  returns
  ```
  callinfo begin
  callinfo:43:Polycom Group Series Demo:192.168.1.101:384:connected:
  notmuted:outgoing:videocall
  callinfo:36:192.168.1.102:256:connected:muted:outgoing:videocall
  callinfo end
  ```

- `callinfo callid 36`
  returns
  ```
  callinfo:36:192.168.1.102:256:connected:muted:outgoing:videocall
  ```

- `callinfo all`
  returns
  `system is not in a call`
  when no call is currently connected

Comments

The `callid` information is returned using the following format:
```
callinfo:<callid>:<far site name>:<far site number>:<speed>:
<connection status>:<mute status>:<call direction>:<call type>
```

callstate

Sets or gets the call state notification for call state events.

Syntax

```
callstate <get|register|unregister>
```

Parameter	Description
get	Returns the current setting.
register	Registers the system to give notification of call activities.
unregister	Disables the register mode.

Feedback Examples

- `callstate register`
  returns
  `callstate registered`

- `callstate unregister`
  returns
  `callstate unregistered`

- `callstate get`
  returns
  `callstate unregistered`

After registering, the following callstate (cs:) data is returned when connecting an IP call:

```
cs: call[34] chan[0] dialstr[192.168.1.103] state[ALLOCATED]
cs: call[34] chan[0] dialstr[192.168.1.103] state[RINGING]
cs: call[34] chan[0] dialstr[192.168.1.103] state[COMPLETE]
active: call[34] speed [384]
```

After registering, the following response occurs when disconnecting an IP call:

```
cleared: call[34]
dialstr[IP:192.168.1.103 NAME:Polycom Group Series Demo]
ended: call[34]
```

See Also

You can also use the notify command on page 151 and the nonotify command on page 150 for notifications.

camera

Sets or gets the near-site or far-site camera settings.

Syntax

```
camera near {1..4}
camera far {1..4}
camera <near|far> move <left|right|up|down|zoom+|zoom-|stop>
camera <near|far> source
camera <near|far> stop
camera near ppcip
camera near tracking statistics
camera near tracking <get|on|off>
camera for-people {1..4}
camera for-content {1..4}
camera list-content
camera <register|unregister>
camera register get
```

Parameter	Description
near	Specifies that the command selects or controls the near camera.
far	Specifies that the command selects or controls the far camera.
{1..4}	Specifies a near or far camera as the main video source. Camera 3 and Camera 4 are available on RealPresence Group 700 systems only.
move	Changes the near or far camera's direction or zoom. Only continuous and discrete return feedback. Valid directions are: left, right, up, down, zoom+, zoom-, stop, continuous, and discrete.
left	Starts moving the camera left.
right	Starts moving the camera right.
up	Starts moving the camera up.
down	Starts moving the camera down.
zoom+	Starts zooming in.
zoom-	Starts zooming out.
stop	Stops the near or far camera when in continuous mode. Returns no feedback.

Parameter	Description
source	Returns the number of the near or far camera source currently selected.
ppcip	Specifies People+Content IP as the main video source if it is running and connected to the system.
for-people {1..4}	Sets the source for the specified camera to People. Camera 3 and Camera 4 are available on RealPresence Group 700 systems only.
for-content {1..4}	Sets the source for the specified camera to Content. Camera 3 and Camera 4 are available on RealPresence Group 700 systems only.
list-content	Gets a list of cameras configured as Content.
register	Registers to receive feedback when the user changes the camera source. Returns the current camera registration state when followed by the get parameter.
unregister	Unregisters to receive feedback when the user changes the camera source.
tracking statistics	Gets EagleEye Director tracking statistics. Tracking statistics measure: • the amount of time tracking is turned off divided by the total call time in the most recent 100 calls lasting more than five minutes. • the amount of room and close-up view switches divided by the total call time in the most recent 100 calls lasting more than five minutes.
tracking <get|on|off>	Enables or disables the Polycom EagleEye Director tracking feature. on turns the tracking feature on, off turns the tracking feature off, and get returns the current tracking feature setting.

Feedback Examples

- camera far 2
  specifies camera 2 at the far-site and returns
  camera far 2

- camera far move left
  causes the far-site camera to start panning to the left and returns
  event: camera far move left

- camera near move zoom+
  causes the near-site camera to zoom in and returns
  event: camera near move zoom+

- `camera register`
  returns
  `camera registered`

- `camera unregister`
  returns
  `camera unregistered`

- `camera near tracking off`
  returns
  `camera near tracking off`

- `camera near tracking on`
  returns
  `camera near tracking on`

- `camera near tracking get`
  returns
  `camera near tracking Voice`

Comments

If the `camera near {1..4}` API command is used for an input configured as content, the command becomes a toggle. You must send the command once to send the content source and a second time to stop the content source.

The `camera register` command does not return local camera movements if the camera is moved using the remote control or the web interface.

camerainput

Gets the format for a video source.

Syntax

```
camerainput <1..4> get
```

Parameter	Description
<1..4>	Specifies the video source. Camera 3 and Camera 4 are available on RealPresence Group 700 systems only.
get	Returns the current setting.

Feedback Examples

- `camerainput 1 get`
  returns
  `camerainput 1 component`

configdisplay

Sets or gets the video format, aspect ratio and resolution for Monitor 1 or Monitor 2.

Syntax

```
configdisplay [<monitor1|monitor2>] get
configdisplay <monitor1|monitor2> <component|vga|dvi|hdmi|>
configdisplay <monitor1|monitor2> <component|vga|dvi|hdmi|>
[<60hz640x480p|50hz1280x720p|60hz1280x720p|60hz1280x1024p|60hz1024x768
p|60hz1920x1080p|50hz1920x1080i|60hz1920x1080i|50hz1920x1080p|60hz1920
x1200p>]
configdisplay monitor2 off
```

Parameter	Description
get	Returns the current setting.
monitor1	Specifies Monitor 1.
monitor2	Specifies Monitor 2.
vga	Sets the specified display to VGA format.
dvi	Sets the specified display to DVI format.
component	Sets the specified display to Component format.
hdmi	Sets the specified display to HDMI format.
60hz640x480p	Sets the resolution to 640x480p, 60 Hz.
50hz1280x720p	Sets the resolution to 1280x720p, 50 Hz.
60hz1280x720p	Sets the resolution to 1280x720p, 60 Hz.
60hz1280x1024p	Sets the resolution to 1280x1024p, 60 Hz.
60hz1024x768p	Sets the resolution to 1024x768p, 60 Hz.
60hz1920x1080p	Sets the resolution to 1920x1080p, 60 Hz.
50hz1920x1080i	Sets the resolution to 1920x1080i, 50 Hz.
60hz1920x1080i	Sets the resolution to 1920x1080i, 60 Hz.
50hz1920x1080p	Sets the resolution to 1920x1080p, 50 Hz.
60hz1920x1200p	Sets the resolution to 1920x1200p, 60 Hz.
off	Sets Monitor 2 to off.

Feedback Examples

- `configdisplay get`
  returns
  `configdisplay monitor1 hdmi 1920x1080p 60Hz`

- `configdisplay monitor2 get`
  returns
  `configdisplay monitor2 hdmi 1920x1080p 60Hz`

- `configdisplay monitor2 off`
  returns
  `configdisplay monitor2 off`

- `configdisplay monitor2 hdmi`
  returns
  `configdisplay monitor2 hdmi`

configparam

Sets or gets the video quality setting for the specified video input for motion or sharpness.

Syntax

```
configparam <"parameter"> get
configparam <"parameter"> set <"value">
```

Parameter	Possible Values	Description
camera_video_quality <1|2|3|4>	motion|sharpness	Sets or gets the video quality setting for the specified video input for motion or for sharpness (for images without motion).

Feedback Examples

- `configparam camera_video_quality 1 set motion`
  returns
  `camera1_video_quality motion`

configpresentation

Sets or gets the content presentation settings for Monitor 1 or Monitor 2.

Syntax

```
configpresentation get
configpresentation <monitor1|monitor2> get
configpresentation monitor1 <near|far|content|near-or-far|
content-or-near|content-or-far|all|none>
configpresentation monitor2 <near|far|content|near-or-far|
content-or-near|content-or-far|all|none>
configpresentation monitor1 "value" monitor2 "value"
```

Parameter	Description
`get`	Returns the current settings for the active monitors.
`monitor1`	Specifies settings for Monitor 1.
`monitor2`	Specifies settings for Monitor 2.
`near`	Selects near-site video as the video source to display on the specified monitor.
`far`	Selects far-site video as the video source to display on the specified monitor.
`content`	Selects content as the video source to display on the specified monitor.
`near-or-far`	Selects both near-site and far-site video as video sources to display on the specified monitor.
`content-or-near`	Selects both near-site video and content as video sources to display on the specified monitor.
`content-or-far`	Selects both content and far-site video as video sources to display on the specified monitor.
`all`	Selects content, near-site video, and far-site video as video sources for the specified monitor.
`none`	Clears all video sources for the specified monitor.
`"value"`	Sets presentation mode for both monitors.

Feedback Examples

- `configpresentation monitor1 get`
  returns
  `configpresentation monitor1:all`

- `configpresentation monitor2 get`
  returns
  `configpresentation monitor2:near-or-far`

- `configpresentation monitor2 far`
  returns
  `error: configpresentation not applied since monitor2 is off`
  when Monitor 2 is off

contentauto

Sets or gets the automatic bandwidth adjustment for people and content in point-to-point H.323 calls. Automatic adjustment maintains equal image quality in the two streams.

Syntax

```
contentauto <get|on|off>
```

Parameter	Description
get	Returns the current setting.
on	Enables automatic bandwidth adjustment for people and content.
off	Disables automatic bandwidth adjustment for people and content. The system Quality Preference settings is used instead.

Feedback Examples

- `contentauto off`
  returns
  `contentauto off`

- `contentauto on`
  returns
  `contentauto on`

- `contentauto get`
  returns
  `contentauto on`

daylightsavings

Sets or gets the daylight saving time setting. When you enable this setting, the system clock automatically changes for daylight saving time.

Syntax

daylightsavings <get|yes|no>

Parameter	Description
get	Returns the current setting.
yes	Enables automatic adjustment for daylight savings time.
no	Disables automatic adjustment for daylight savings time.

Feedback Examples

- daylightsavings no
  returns
  daylightsavings no

- daylightsavings yes
  returns
  daylightsavings yes

- daylightsavings get
  returns
  daylightsavings yes

defaultgateway

Sets or gets the default gateway.

Syntax

```
defaultgateway get
defaultgateway set "xxx.xxx.xxx.xxx"
```

Parameter	Description
get	Returns the default gateway IP address.
set	Sets the default gateway when followed by the "xxx.xxx.xxx.xxx" parameter.
"xxx.xxx.xxx.xxx"	IP address to use as the default gateway.

Feedback Examples

- `defaultgateway set 192.168.1.101`
  returns
  `defaultgateway 192.168.1.101`

Comments

This setting can only be changed if DHCP is turned off. After making a change, you must restart the system for the setting to take effect.

dhcp

Sets or gets DHCP options.

Syntax

dhcp <get|off|client>

Parameter	Description
get	Returns the selected DHCP option.
off	Disables DHCP.
client	Enables DHCP client, setting the system to obtain an IP address from a server on your network.

Feedback Examples

- dhcp off
  returns
  dhcp off

- dhcp client
  returns
  dhcp client

- dhcp get
  returns
  dhcp client

Comments

After making a change, you must restart the system for the setting to take effect.

dial

Dials video or audio calls either manually or from the directory.

Syntax

```
dial addressbook "addr book name"
dial auto "speed" "dialstr"
dial manual "speed" "dialstr1" ["dialstr2"] [h323|ip|sip]
dial phone <sip_speakerphone> "dialstring"
```

Parameter	Description
addressbook	Dials a directory (address book) entry. Requires the name of the entry.
"addr book name"	The name of the directory (address book) entry. The name may be up to 25 characters. Use quotation marks around strings that contain spaces. For example: "John Doe".
auto	Dials a video call number dialstr1 at speed of type h323. Requires the parameters "speed" and "dialstr". Allows the user to automatically dial a number. . Deprecated. Instead of this command, Polycom recommends using dial manual and not specifying a call type.
"speed"	Valid data rate for the network.
"dialstr", "dialstr1", "dialstr2"	IP directory number.
manual	Dials a video call number dialstr1 at speed of type h323. Requires the parameters "speed" and "dialstr1". Use dial manual "speed" "dialstr" "type" when you do not want automatic call rollover or when the dialstring might not convey the intended transport.
h323|ip|sip	Type of call.
sip_speakerphone	Specify to dial SIP call.
"dialstring"	Numeric string specifying the phone number to dial. Enclose the string in quotation marks if it includes spaces. Example: "512 555 1212"

Feedback Examples

- If registered for `callstate` notifications (callstate register), the API returns
  ```
  cs: call[44] chan[0] dialstr[5551212] state[ALLOCATED]
  cs: call[44] chan[0] dialstr[5551212] state[RINGING]
  cs: call[44] chan[0] dialstr[5551212] state[CONNECTED]
  cs: call[44] chan[0] dialstr[5551212] state[CONNECTED]
  cs: call[44] chan[0] dialstr[5551212] state[COMPLETE]
  cs: call[44] chan[0] dialstr[5551212] state[COMPLETE]
  active: call[44] speed[64]
  ```

- `dial addressbook "John Polycom"`
  returns
  `dialing addressbook "John Polycom"`

- `dial phone sip_speakerphone 123456`
  returns
  `dialing sip_speakerphone`

- If registered for `callstate` notifications (callstate register), the API returns
  ```
  cs: call[44] chan[0] dialstr[192.168.1.101] state[ALLOCATED]
  cs: call[44] chan[0] dialstr[192.168.1.101] state[RINGING]
  cs: call[44] chan[0] dialstr[192.168.1.101] state[COMPLETE]
  active: call[44] speed[384]
  ```

  ```
  Notes: The [BONDING] responses in IP calls are extraneous text that
  will be removed in a subsequent software version.

  Call ID (call [44]) is an example of the response. The Call ID number
  depends upon the call type.
  ```

- If registered for `callstatus` notifications (notify callstatus), the API returns,
  ```
  notification:callstatus:outgoing:45:null 1::opened::0:videocall
  notification:callstatus:outgoing:45: Polycom Austin:
  192.168.1.101:connecting:384:0:videocall
  notification:callstatus:outgoing:45: Polycom Austin:
  192.168.1.101:connected:384:0:videocall
  ```

  ```
  Note: The call ID number (45) is an example of the response. The
  Call ID number depends upon the call type.
  ```

Comments

When searching for feedback from the `dial` command, expect to see the set of described strings as many times as there are channels in the call.

See Also

Refer to the callstate command on page 78. You can use callstate register to obtain updated information on the status of a call. For example, when using the dial manual to place a call, callstate register can tell you when the call is connected.

dns

Sets or gets the configuration for up to four DNS servers.

Syntax

```
dns get {1..4}
dns set {1..4} "xxx.xxx.xxx.xxx"
```

Parameter	Description
get	Returns the current IP address of the specified server. A server identification number {1..4} is required.
{1..4}	Specifies the server identification number.
set	Sets the IP address of the specified DNS server when followed by the "xxx.xxx.xxx.xxx" parameter. A server identification number {1..4} is required.
"xxx.xxx.xxx.xxx"	Specifies the IP address for the specified server.

Feedback Examples

- ```
  dns set 1 192.168.1.205
  ```
  returns
  ```
  dns 1 192.168.1.205
  ```

Comments

After making a change,you must restart the system for the setting to take effect. These values cannot be set if the system is in DHCP client mode.

dynamicbandwidth

Sets or gets the use of dynamic bandwidth allocation for Quality of Service.

Syntax

```
dynamicbandwidth <get|yes|no>
```

Parameter	Description
get	Returns the current setting.
yes	Enables the dynamic bandwidth option.
no	Disables the dynamic bandwidth option.

Feedback Examples

- `dynamicbandwidth yes`
  returns
  `dynamicbandwidth yes`

- `dynamicbandwidth no`
  returns
  `dynamicbandwidth no`

- `dynamicbandwidth get`
  returns
  `dynamicbandwidth no`

Comments

The system's dynamic bandwidth function automatically finds the optimum line speed for a call. If you experience excessive packet loss while in a call, the dynamic bandwidth function decrements the line speed until there is no packet loss. This is supported in calls with end points that also support dynamic bandwidth.

e164ext

Sets or gets an H.323 (IP) extension, also known as an E.164 name.

Syntax

```
e164ext get
e164ext set "e.164name"
```

Parameter	Description
get	Returns the current setting.
set	Sets the E.164 extension when followed by the "e.164name" parameter. To erase the current setting, omit "e.164name".
"e.164name"	A valid E.164 extension (usually a four-digit number).

Feedback Examples

- `e164ext set`
  returns
  `e164ext <empty>`

- `e164ext set 7878`
  returns
  `e164ext 7878`

- `e164ext get 7878`
  returns
  `e164ext 7878`

Comments

The extension number is associated with a specific LAN device.

echocanceller

Sets or gets the configuration of echo cancellation, which prevents users from hearing their voices loop back from the far site.

Syntax

```
echocanceller <get|yes|no>
```

Parameter	Description
get	Returns the current setting.
yes	Enables the echo canceller option.
no	Disables the echo canceller option.

Feedback Examples

- ```
  echocanceller yes
  ```
  returns
  ```
  echocanceller yes
  echocanceller yes
  ```

- ```
  echocanceller no
  ```
  returns
  ```
  echocanceller no
  echocanceller no
  ```

- ```
  echocanceller get
  ```
  returns
  ```
  echocanceller no
  echocanceller no
  ```

Comments

This option is enabled by default. Polycom strongly recommends that you do not turn off echo cancellation except when using an external microphone system with its own built-in echo cancellation.

echoreply

Sets or gets the system's ability to send an Echo Reply message in response to an Echo Request message sent to an IPv4 multicast/anycast address.

Syntax

```
echoreply <get|yes|no>
```

Parameter	Description
get	Returns the current setting.
yes	Enables the echo reply option.
no	Disables the echo reply option.

Feedback Examples

- `echoreply get`
  returns
  `echoreply yes`

- `echoreply no`
  returns
  `echoreply no`

Comments

The number of responses may be traffic-conditioned to limit the effect of a denial of service attack.

After making a change, you must restart the system for the setting to take effect.

enablefirewalltraversal

Sets or gets the **Enable H.460 Firewall Traversal** setting. This feature requires an Edgewater session border controller that supports H.460.

Syntax

```
enablefirewalltraversal <get|on|off>
```

Parameter	Description
get	Returns the current setting.
on	Enables the firewall traversal feature.
off	Disables the firewall traversal feature.

Feedback Examples

- `enablefirewalltraversal on`
  returns
  `enablefirewalltraversal on`

- `enablefirewalltraversal off`
  returns
  `enablefirewalltraversal off`

- `enablefirewalltraversal get`
  returns
  `enablefirewalltraversal off`

enablekeyboardnoisereduction

Sets or gets the **Enable Keyboard Noise Reduction** setting.

Syntax

enablekeyboardnoisereduction <get|yes|no>

Parameter	Description
get	Returns the current setting.
yes	Enables keyboard noise reduction.
no	Disables keyboard noise reduction.

Feedback Examples

- enablekeyboardnoisereduction yes
  returns
  enablekeyboardnoisereduction yes

- enablekeyboardnoisereduction no
  returns
  enablekeyboardnoisereduction no

- enablekeyboardnoisereduction get
  returns
  enablekeyboardnoisereduction no

enablelivemusicmode

Sets or gets the **Enable MusicMode** setting.

Syntax
```
enablelivemusicmode <get|yes|no>
```

Parameter	Description
get	Returns the current setting.
yes	Enables live music mode.
no	Disables live music mode.

Feedback Examples

- `enablelivemusicmode yes`
  returns
  `enablelivemusicmode yes`

- `enablelivemusicmode no`
  returns
  `enablelivemusicmode no`

enablepvec

Sets or gets the Polycom Video Error Concealment (PVEC) setting on the system.

Syntax

enablepvec <get|yes|no>

Parameter	Description
get	Returns the current setting.
yes	Enables the PVEC option.
no	Disables the PVEC option.

Feedback Examples

- enablepvec yes
  returns
  enablepvec yes

- enablepvec no
  returns
  enablepvec no

- enablepvec get
  returns
  enablepvec no

Comments

This option is enabled by default.

enablersvp

Sets or gets the RSVP (Resource Reservation Protocol) setting on the system, which requests that routers reserve bandwidth along an IP connection path.

Syntax

```
enablersvp <get|yes|no>
```

Parameter	Description
get	Returns the current setting.
yes	Enables the RSVP option.
no	Disables the RSVP option.

Feedback Examples

*   enablersvp yes
    returns
    enablersvp yes

*   enablersvp no
    returns
    enablersvp no

*   enablersvp get
    returns
    enablersvp no

Comments

This option is enabled by default.

enablesnmp

Sets or gets the SNMP configuration.

Syntax

```
enablesnmp <get|yes|no>
```

Parameter	Description
get	Returns the current setting.
yes	Enables the SNMP option.
no	Disables the SNMP option.

Feedback Examples

- `enablesnmp yes`
  returns
  `enablesnmp yes`

- `enablesnmp no`
  returns
  `enablesnmp no`

- `enablesnmp get`
  returns
  `enablesnmp no`

Comments

After making a change, you must restart the system for the setting to take effect.

encryption

Sets or gets the AES encryption mode for the system.

Syntax

`encryption <get|yes|no|requiredvideocallsonly|requiredallcalls>`

Parameter	Description
`get`	Returns the current setting.
`yes`	Use encryption when the far site is capable of encryption. Note: This parameter is called "When Available" in the user interface.
`no`	Disables encryption. Note: This parameter is called "Off" in the user interface.
`requiredvideocallsonly`	Enforces encryption on all video endpoints. Any video calls to or from systems that do not have encryption enabled are not connected. Audio-only calls are connected.
`requiredallcalls`	Enforces encryption on all endpoints. Any video or audio calls to or from systems that do not have encryption enabled are rejected and are not connected.

Feedback Examples

- `encryption yes`
  returns
  `encryption yes`

- `encryption no`
  returns
  `encryption no`

- `encryption get`
  returns
  `encryption no`

- `encryption requiredvideocallsonly`
  returns
  `encryption requiredvideocallsonly`

- `encryption requiredallcalls`
  returns
  `encryption requiredallcalls`

Comments

You cannot use this command while a call is in progress. Using this command while the system is in a call returns an `error: command has illegal parameters` message.

exit

Ends the API command session.

Syntax

```
exit
```

Feedback Examples

* `exit`
  returns
  `Connection to host lost.`

Comments

For serial sessions, this command effectively starts a new session.

farcontrolnearcamera

Sets or gets far control of the near camera, which allows far sites to control the camera on your system.

Syntax

```
farcontrolnearcamera <get|yes|no>
```

Parameter	Description
get	Returns the current setting.
yes	Allows the far site to control the near camera if the far site has this capability.
no	Disables far control of the near camera.

Feedback Examples

- `farcontrolnearcamera` yes
  returns
  `farcontrolnearcamera` yes

- `farcontrolnearcamera` no
  returns
  `farcontrolnearcamera` no

- `farcontrolnearcamera` get
  returns
  `farcontrolnearcamera` no

gaddrbook

Returns global directory (address book) entries.

Syntax

```
gaddrbook all
gaddrbook batch {0..59}
gaddrbook batch define "start_no" "stop_no"
gaddrbook batch search "pattern" "count"
gaddrbook letter {a..z}
gaddrbook range "start_no" "stop_no"
gaddrbook refresh
gaddrbook grouplist [<range_start>] [<range_end>]
gaddrbook grouplist size
gaddrbook group "group_name" [<range_start>] [<range_end>]
gaddrbook group "group_name" size
gaddrbook names search "search_pattern" [<range_start>] [<range_end>]
gaddrbook names search "search_pattern" size
gaddrbook address "sys_id_string"
```

Parameter	Description
all	Returns all the entries in the global directory.
batch	Returns a batch of 20 global directory entries. Requires a batch number, which must be an integer in the range {0..59}.
define	Returns a batch of entries in the range defined by "start_no" to "stop_no."
search	Specifies a batch search.
"pattern"	Specifies a pattern to match for the batch search.
"count"	Specifies the number of entries to list that match the pattern.
letter	Returns entries beginning with the letter specified from the range {a..z}. Requires one or two alphanumeric characters. Valid characters are: - _ / ; @ , . \ 0 through 9 a through z
range	Returns global directory entries numbered "start_no" through "stop_no". Requires two integers.
"start_no"	Specifies the beginning of the range of entries to return.

Parameter	Description
"stop_no"	Specifies the end of the range of entries to return.
refresh	Gets a more current copy of the global directory.

grouplist	Returns a list of group names in this format:
	`gaddrbook grouplist {0..n}.`
	`group:"group_name"`
	`...`
	`gaddrbook grouplist done`

size	Returns the size of the result set that will be returned by the command. The size parameter can be used with the grouplist, group, and names search commands. The response is in the following format: `gaddrbook <command> size {0..n}`
range_start	For the grouplist, group, and names search commands, specifies the beginning of the range of entries to return.
range_end	For the grouplist, group, and names search commands, specifies the end of the range of entries to return. If a range_start is specified without a range_end, then the single range_start entry will be returned. If range_end is -1, all entries starting with range_start will be returned. Note that the LDAP server will limit the maximum number of entries that may be returned.

group	Returns a list of the members of a specified group. A multi-codec system will appear as a single row with a sys_id_string field containing multiple sys_id's. (See the sys_id_string description below.)
	The response is in the following format, one row for each address book entry:
	`gaddrbook system {0..n}. name:"sys_name"`
	`                sys_label:"sys_label"`
	`                sys_id:"sys_id_string"`
	`                phone_num:"phone_num"`
	
	`type:<video|multicodec|phone>`
	`...`
	`gaddrbook group "group_name" done`

Parameter	Description

group_name	Returns summary information for the people or rooms that match the search criteria. The search looks for a match at the beginning of any of these attributes: first name, last name, display/friendly name, or room name. The response is similar to the group command:
	
	`gaddrbook search {0..n}. name:"sys_name"`
	`                    sys_label:"sys_label"`
	`                    sys_id:"sys_id_string"`
	`                    phone_num:"phone_num"`
	
	`type:<video|multicodec|phone>`
	`...`
	`gaddrbook names search`
	`"search_pattern" done`

names search	Returns summary information for the people or rooms that match the search criteria. The search looks for a match at the beginning of any of these attributes: first name, last name, display/friendly name, or room name.
	
	The response is similar to the group command:
	
	`gaddrbook search {0..n}. name:"sys_name"`
	`                    sys_label:"sys_label"`
	`                    sys_id:"sys_id_string"`
	`                    phone_num:"phone_num"`
	
	`type:<video|multicodec|phone>`
	`...`

search_pattern	Specifies the string pattern for which to search. Wildcard characters are not supported.

Parameter	Description

`address`	Obtains the address information for a specified entry. For a multi-codec system, there will be separate lines for each codec, distinguished by the codec's sys_id. The codecs will be retuned in order, starting with the primary codec. If codecs support multiple protocols, the different addresses will be returned on separate lines.
	
	 The response is in the following format:
	
	 `gaddrbook address {0..n}.`
	`sys_id:"sys_id"`
	         `h323_spd:"h323_spd"`
	`h323_num:"h323_num"`
	         `h323_ext:"h323_ext"`
	`gaddrbook address {0..n}.`
	`sys_id:"sys_id"`
	         `sip_spd:"sip_spd"`
	`sip_num:"sip_num"`
	`gaddrbook address {0..n}.`
	`sys_id:"sys_id"`
	         `xmpp:xmpp_addr`
	`gaddrbook address {0..n}.`
	`sys_id:"sys_id"`
	         `isdn_spd:"isdn_spd"`
	`isdn_num:"isdn_num"`
	         `isdn_ext:"isdn_ext"`
	`...`
	`gaddrbook address "sys_id_string" done`

`sys_id_string`	The unique identifier string for an endpoint. When the client retrieves the members of a group or searches by name, the results will include a list of people or rooms and the endpoints or systems associates with each of those entries. Each endpoint will have a sys_id_string which can be used to query for the endpoint's address information. For multi-codec systems, the sys_id_string will include multiple sys_id's, one for each codec, separated by a # delimiter. For LDAP, the sys_id will be the LDAP commUniqueID. It should be a quoted string. See examples below.
`sys_id`	This is the unique identifier for a codec. If an entry has just a phone number and no video codecs, this attribute will be blank.
`sys_name`	The friendly name for an address book entry. It is the name of the person or the room. It is surrounded by quotes if it contains spaces.

Parameter	Description
sys_label	If a person/room has more than one system, the result set will include a row for each system. If those systems are of the same type, such as , the client will consider that entry to be a telepresence system with multiple codecs rather than separate systems. If the systems are of different types, such as an and a CMAD, then this sys_label attribute will be included to differentiate the systems.
type	The type of global address book entry. Possible values are: `video, multicodec, phone`.
h323_spd	The preferred speed for an H.323 call to this entry. If no speed is associated with the entry, then the value of the configuration variable "globaladdrmaxh323" is returned. The default is 384.
h323_num	For LDAP entries systems currently do not use this field. It is always blank.
h323_ext	If an LDAP entry has a value for the H.350.1 `h323Identityh323-ID` attribute (H.323 alias), it will be returned as the h323_ext. If there is no `h323Identityh323-ID`, then if there is a value for the H.350.1 `h323IdentitydialedDigits` attribute (E.164 number), it will be returned.
sip_spd	The preferred speed for a SIP call to this entry. If no speed is associated with the entry, then this is the same as the `h323_spd`.
sip_num	SIP address. For LDAP this is the H.350.4 `SIPIdentitySIPURI` attribute.
xmpp_addr	XMPP address, also known as the Jabber ID (JID). For LDAP this is the H.350.7 `XmppIdentityURI` attribute.

Feedback Examples

- `gaddrbook all`
  returns
  `gaddrbook 0. "Polycom Group Series Demo 1" isdn_spd:384`
  `isdn_num:1.700.5551212 isdn_ext:`
  `gaddrbook 1. "Polycom Group Series Demo 2" h323_spd:384`
  `h323_num:192.168.1.101 h323_ext:7878`
  `gaddrbook 2. "Polycom Group Series Demo 3" sip_spd:384`
  `sip_num:polycomgroupseries@polycom.com`
  `gaddrbook 3. "Polycom Group Series Demo 3" phone_num:1.512.5121212`

(and so on, until all entries in the global directory are listed, then:)
gaddrbook all done

- gaddrbook batch 0
  returns
  gaddrbook 0. "Polycom Group Series Demo 1" isdn_spd:384 isdn_num:1.700.5551212 isdn_ext:
  gaddrbook 1. "Polycom Group Series Demo 2" h323_spd:384 h323_num:192.168.1.101 h323_ext:7878
  gaddrbook 2. "Polycom Group Series Demo 3" sip_spd:384 sip_num:polycomgroupseries@polycom.com
  gaddrbook 3. "Polycom Group Series Demo 3" phone_num:1.512.5121212
  (and so on, through the last entry in the batch of 20 directory entries, such as:)
  gaddrbook 19. "Polycom Group Series Demo 20" h323_spd:384 h323_num:192.168.1.120 h323_ext:
  gaddrbook batch 0 donegaddrbook batch define 0 2
  returns
  gaddrbook 0. "Polycom Group Series Demo 1" isdn_spd:384 isdn_num:1.700.5551212 isdn_ext:
  gaddrbook 1. "Polycom Group Series Demo 2" h323_spd:384 h323_num:192.168.1.101 h323_ext:7878
  gaddrbook 2. "Polycom Group Series Demo 3" sip_spd:384 sip_num:polycomgroupseries@polycom.com
  gaddrbook batch define 0 2 done

- gaddrbook batch search Polycom 3
  returns
  gaddrbook 0. "Polycom Group Series Demo 1" isdn_spd:384 isdn_num:1.700.5551212 isdn_ext:
  gaddrbook 1. "Polycom Group Series Demo 2" h323_spd:384 h323_num:192.168.1.101 h323_ext:7878
  gaddrbook 2. "Polycom Group Series Demo 3" sip_spd:384 sip_num:polycomgroupseries@polycom.com
  gaddrbook batch search Polycom 3 done

- gaddrbook letter p
  returns
  gaddrbook 0. "Polycom Group Series Demo 1" isdn_spd:384 isdn_num:1.700.5551212 isdn_ext:
  gaddrbook 1. "Polycom Group Series Demo 2" h323_spd:384 h323_num:192.168.1.101 h323_ext:7878
  gaddrbook 2. "Polycom Group Series Demo 3" sip_spd:384 sip_num:polycomgroupseries@polycom.com
  gaddrbook 3. "Polycom Group Series Demo 3" phone_num:1.512.5121212
  gaddrbook 19. "Polycom Group Series Demo 20" h323_spd:384 h323_num:192.168.1.120 h323_ext:
  gaddrbook letter p done

- gaddrbook range 0 2
  returns
  gaddrbook 0. "Polycom Group Series Demo 1" isdn_spd:384
  isdn_num:1.700.5551212 isdn_ext:
  gaddrbook 1. "Polycom Group Series Demo 2" h323_spd:384
  h323_num:192.168.1.101 h323_ext:7878
  gaddrbook 2. "Polycom Group Series Demo 3" sip_spd:384
  sip_num:polycomgroupseries@polycom.com
  gaddrbook range 0 2 done

- gaddrbook grouplist sizereturnsgaddrbook grouplist size 6

- gaddrbookgrouplist size 0 3returnsgaddrbook grouplist 0.
  group:"Andover ITP"
  gaddrbook grouplist 1. group:"ITP Test Systems"
  gaddrbook grouplist 2. group:"Support"
  gaddrbook grouplist 3. group:"SW Group"
  gaddrbook grouplist 0 3 done

- gaddrbook grouplist
  returns
  gaddrbook grouplist 0. group:"Andover ITP"
  gaddrbook grouplist 1. group:"ITP Test Systems"
  gaddrbook grouplist 2. group:"Support"
  gaddrbook grouplist 3. group:"SW Group"
  gaddrbook grouplist 4. group:"Video Group"
  gaddrbook grouplist 5. group:"VSG Software"
  gaddrbook grouplist done

- gaddrbook group "Andover ITP" size
  returns
  gaddrbook group "Andover ITP" size 5

- gaddrbook group size 0 3
  returnsgaddrbook system 0. name:"AVKit TPX 306"
  sys_label:"groupseries" sys_id:"10062#10055#10056"
  phone_num:""type:multicodec
  gaddrbook system 1. name:"Mark Duckworth" sys_label:"groupseries"
  sys_id:"10006" phone_num:"978.292.5478" type:video
  gaddrbook system 2. name:"Minuteman RPX" sys_label:"groupseries"
  sys_id:"10074#10020" phone_num:"" type:multicodec
  gaddrbook system 3. name:"Support 400" sys_label:"groupseries"
  sys_id:"10058#10059#10060#10061" phone_num:""type:multicodec
  gaddrbook group "Andover ITP" 0 3 done
  In the example above, the multicodec systems have sys_id strings with multiple
  sys_id's, one for each codec, separated by a # delimiter.

- gaddrbook group "Video Group"
  returns
  gaddrbook system 0. name:"Dan Renalds" sys_label:"groupseries"
  sys_id:"10002" phone_num: type:video
  gaddrbook system 1. name:"Mark Duckworth" sys_label:"groupseries"
  sys_id:"10006" phone_num:"978.292.5478" type:video

```
gaddrbook system 2. name:"Scott Wilson" sys_label:"groupseries"
sys_id:"10047" phone_num:"978.292.5347" type:video
gaddrbook system 3. name:"Simbalab" sys_label:"groupseries"
sys_id:"10037#10038#10077" phone_num: type:multicodec
gaddrbook system 4. name:"Tanvir Rahman"
sys_label:"groupseries"sys_id:"10031#10035" phone_num:
type:multicodec
gaddrbook system 5. name:"Tanvir Rahman" sys_label:"VSeries"
sys_id:"10032#10033" phone_num: type:multicodec
gaddrbook system 6. name:"Vineyard"
sys_label:"groupseries"sys_id:"10065#10009#10010" phone_num:
type:multicodec
gaddrbook system 7. name:"VSG SW Lab" sys_label:"groupseries"
sys_id:"10018#10082" phone_num: type:multicodec
gaddrbook group "Video Group" done
```

- ```
  gaddrbook names search "s" size
  ```
  returns
  ```
  gaddrbook names search s size 5
  ```

- ```
  gaddrbook names search "s"
  ```
  returns
  ```
  gaddrbook search 0. name:"Sami Hamdi" sys_label:"groupseries"
                      sys_id:"10094" phone_num:"" type:video
  gaddrbook search 1. name:"Scott Wilson" sys_label:"CMADesktop"
                  sys_id:"10111" phone_num:"978.292.5347" type:video
  gaddrbook search 2. name:"Scott Wilson" sys_label:"groupseries"
                  sys_id:"10047" phone_num:"978.292.5347" type:video
  gaddrbook search 3. name:"Simbalab" sys_label:"groupseries"
                      sys_id:"10037#10038#10077" phone_num:""
                      type:multicodec
  gaddrbook search 4. name:"Support 400" sys_label:"groupseries"
                      sys_id:"10058#10059#10060#10061" phone_num:""
                      type:multicodec
  gaddrbook names search s done
  ```

- ```
  gaddrbook names search "s" 0 3
  ```
  returns
  ```
  gaddrbook search 0. name:"Sami Hamdi" sys_label:"groupseries"
  sys_id:"10094" phone_num:"" type:video
  gaddrbook search 1. name:"Scott Wilson" sys_label:"CMADesktop"
  sys_id:"10111" phone_num:"978.292.5347" type:videogaddrbook search
  2. name:"Scott Wilson" sys_label:"Group Series" sys_id:"10047"
  phone_num:"978.292.5347" type:video
  gaddrbook search 3. name:"Simbalab" sys_label:"Group Series"
  sys_id:"10037#10038#10077" phone_num:"" type:multicodec
  gaddrbook names search s 0 3 done
  ```

- `gaddrbook address "10047`
  returns
  `gaddrbook address 0. sys_id:"10047" h323_spd:Auto h323_num:`
  `h323_ext:1246540010`
  `gaddrbook address 10047 done`

- `gaddrbook address "10065#10009#10010"`
  returns
  `gaddrbook address 0. sys_id:"10065" h323_spd:Auto h323_num:`
  `h323_ext:44041gaddrbook address 1.`
  `sys_id:"10009" h323_spd:Auto h323_num: h323_ext:44042`
  `gaddrbook address 2. sys_id:"10010" h323_spd:Auto h323_num:`
  `h323_ext:44043`
  `gaddrbook address 10065#10009#10010 done`

Comments

Entries with multiple addresses (for example, an H.323 address and a SIP number) return each address type on separate lines with an incremented record number.

When the system is registered with the LDAP directory server, only the `gaddrbook` batch search "pattern" "count" is supported. All other `gaddrbook` commands return the response `command not supported`.

When the system is registered with the Polycom GDS directory server, all of the `gaddrbook` commands and parameters are supported.

`gaddrbook` entries are stored in the global directory (address book).

See Also

addrbook command on page 45.

gatekeeperip

Sets or gets the IP address of the gatekeeper.

Syntax

```
gatekeeperip get
gatekeeperip set ["xxx.xxx.xxx.xxx"]
```

Parameter	Description
get	Returns the current setting.
set	Sets the gatekeeper IP address when followed by the "xxx.xxx.xxx.xxx" parameter. To erase the current setting, omit "xxx.xxx.xxx.xxx".
"xxx.xxx.xxx.xxx"	IP address of the gatekeeper.

Feedback Examples

- `gatekeeperip set 192.168.1.205`
  returns
  `gatekeeperip 192.168.1.205`

- `gatekeeperip get`
  returns
  `gatekeeperip 192.168.1.205`

The gatekeeperip get command feedback may include the port number after the IP address.

gendial

Generates DTMF dialing tones.

Syntax

```
gendial <{0..9}|#|*>
```

Parameter	Description
{0..9}	Generates the DTMF tone corresponding to telephone buttons 0-9.
#	Generates the DTMF tone corresponding to a telephone # button.
*	Generates the DTMF tone corresponding to a telephone * button.

Feedback Examples

- `gendial 2`
  returns
  `gendial 2`
  and causes the system to produce the DTMF tone corresponding to a telephone's 2 button

getcallstate

Gets the state of the calls in the current conference.

Syntax

```
getcallstate
```

Feedback Examples

*   `getcallstate`
    returns
    ```
    cs: call[34] speed[384] dialstr[192.168.1.101] state[connected]
    cs: call[1] inactive
    cs: call[2] inactive
    ```

See Also

To register the shell session to receive notifications about call state activities, see the callstate command on page 78.

getconfiguredipaddress

Retrieves the currently configured IPv4 address from the system.

Syntax

`getconfiguredipaddress`

Feedback Examples

- `getconfiguredipaddress`
  returns
  `getconfiguredipaddress 1.2.3.4`

Comments

`getconfiguredipaddress` returns the currently configured IPv4 address of the system regardless of the status of the LAN connection. This differs from the `ipaddress get` command, which returns the current IP address of the system if it has an active LAN connection, else it returns 0.0.0.0.

The definition of "currently configured IPv4 address" depends on the IPv4 address configuration settings:

- If the IP address is set manually the configured IP address is returned, regardless of whether the LAN connection is currently active.

- If the IP address is obtained automatically, the currently-assigned address is returned, or 0.0.0.0 is returned if there is no active connection.

h239enable

Sets or gets the H.239 People+Content setting.

Syntax

```
h239enable get
h239enable <yes|no>
```

Parameter	Description
get	Returns the current setting.
yes	Enables H.239 People+Content on the system.
no	Disables H.239 People+Content on the system.

Feedback Examples

- `h239enable yes`
  returns
  `h239enable yes`

- `h239enable no`
  returns
  `h239enable no`

- `h239enable get`
  returns
  `h239enable no`

h323name

Sets or gets the system's H.323 name.

Syntax

```
h323name get
h323name set ["H.323name"]
```

Parameter	Description
get	Returns the current setting.
set	Sets the H.323 name when followed by the "H.323name" parameter. To erase this setting, omit the "H.323name" parameter.
"H.323name"	Character string specifying the H.323 name. Use quotation marks around strings that contain spaces. For example: "Polycom Group Series Demo"

Feedback Examples

- `h323name set My`
  returns
  `h323name my`

- `h323name set "Polycom Group Series Demo"`
  returns
  `h323name "polycom group series demo"`

- `h323name get`
  returns
  `h323name "polycom group series demo"`

hangup

Hangs up the current video call.

Syntax
```
hangup video ["callid"]
hangup all
```

Parameter	Description
video	Disconnects the current video call. If the "callid" parameter is omitted, the system disconnects all video far sites in the call.
all	Disconnects all video and audio sites in the call.

Feedback Examples

- `hangup video`
  returns
  `hanging up video`

- `hangup video 42`
  returns
  `hanging up video`
  and disconnects the specified site, leaving other sites connected

- If callstate register is used for notifications,
  `hangup video 42`
  returns
  `hanging up video`
  `cleared: call[42]`
  `dialstring[IP:192.168.1.101 NAME:Polycom Group Series Demo]`
  `ended: call[42]`
  and disconnects the specified site, leaving other sites connected

Comments

After sending the hangup command, feedback that the call has ended can take up to 15 seconds.

hostname

Sets or gets the LAN host name, which is assigned to the system for TCP/IP configuration and can be used in place of an IP address when dialing IP calls.

Syntax

```
hostname get
hostname set ["hostname"]
```

Parameter	Description
get	Returns the current setting.
set	Sets the system's LAN host name when followed by the "hostname" parameter.
"hostname"	Character string specifying the LAN host name of the system. The LAN host name follows these format rules:
	Starts with a letter (A-a to Z-z). It is not case sensitive.
	Ends with a letter (A-a to Z-z) or a number (0 to 9).
	May include letters, numbers, and a hyphen.
	May not be longer than 63 characters.
	Note: The LAN host name is initialized during the setup wizard sequence. The LAN host name is the same as the system name, if the system name conforms to the rules above. If the system name does not conform to these rules, the invalid characters are removed from the system name.

Feedback Examples

- `hostname set`
  returns
  `hostname ADMIN`

- `hostname set "My"`
  returns
  `hostname My`

- `hostname get`
  returns
  `hostname My`

Comments

A LAN host name is required; it cannot be deleted or left blank. After making a change, you must restart the system for the setting to take effect.

ipaddress

Sets or gets the LAN IP address (IPv4) of the system.

Syntax

```
ipaddress get
ipaddress set "xxx.xxx.xxx.xxx"
```

Parameter	Description
get	Returns the current setting.
set	Sets the LAN IP address to the "xxx.xxx.xxx.xxx" parameter. This setting can only be changed when DHCP is off.
"xxx.xxx.xxx.xxx"	IP address of the system.

Feedback Examples

- `ipaddress set 192.168.1.101`
  returns
  `ipaddress 192.168.1.101`

- `ipaddress get`
  returns
  `ipaddress 192.168.1.101`

Comments

Use this command when you need to allocate a static IP address to your system. After making a change, you must restart the system for the setting to take effect.

lanport

Sets or gets the LAN port settings of the system.

Syntax

`lanport <get|auto|10hdx|10fdx|100hdx|100fdx|1000hdx|1000fdx>`

Parameter	Description
`get`	Returns the current setting.
`auto|10hdx|10fdx|` `100hdx|100fdx|` `1000hdx|1000fdx`	Sets the LAN speed and duplex mode. This parameter is not allowed while in a call. `auto`: Automatically negotiates the LAN speed and duplex mode. 10hdx: 10 Mbps, half duplex 10fdx: 10 Mbps, full duplex 100hdx: 100 Mbps, half duplex 100fdx: 100 Mbps, full duplex 1000hdx: 1000 Mbps, half duplex 1000fdx: 1000 Mbps, full duplex

Feedback Examples

- `lanport auto`
  returns
  `lanport auto`
  `restart system for changes to take effect. restart now? <y,n>`

- `lanport get`
  returns
  `lanport auto`

Comments

After making a change, you are prompted to restart the system.

ldapauthenticationtype

Sets or gets the authentication type required to authenticate with an LDAP server.

Syntax

```
ldapauthenticationtype get
ldapauthenticationtype set <anonymous|basic>
```

Parameter	Description
get	Returns the current setting.
set	Sets the authentication type of an LDAP server. Note: This parameter does not change the setting on the server. Instead, this parameter changes how the Polycom system recognizes the server.
anonymous	Specifies "anonymous" as the authentication type of an LDAP server.
basic	Specifies "basic" as the authentication type of an LDAP server.
ntlm	Specifies "ntlm" as the authentication type of an LDAP server. This is the default setting.

Feedback Examples

- `ldapauthenticationtype get`
  returns
  `ldapauthenticationtype anonymous`

- `ldapauthenticationtype set basic`
  returns
  `ldapauthenticationtype basic`

- `ldapauthenticationtypeset ntlm`
  returns
  `ldapauthenticationtype ntlm`

ldapbasedn

Sets or gets the base distinguished name (DN) of an LDAP server.

Syntax

```
ldapbasedn get
ldapbasedn set ["base dn"]
```

Parameter	Description
`get`	Returns the current setting.
`set`	Sets the base DN of an LDAP server. To erase the current setting, omit the "`base dn`" parameter. Note: This parameter does not change the setting on the server. Instead, this parameter changes how the Polycom system recognizes the server.
`"base dn"`	Specifies the base DN of an LDAP server. Valid characters include: Unicode (ISO-10646) characters, including IA5/ASCII characters and extended characters such as é, Ø, and å.

Feedback Examples

- `ldapbasedn get`
  returns
  `ldapbasedn dc=hardware,dc=domain,dc=Polycom,dc=com`
  where:
  dc=domain component

- `ldapbasedn set dc=software,dc=domain,dc=Polycom,dc=com`
  returns
  `ldapbasedn dc=software,dc=domain,dc=Polycom,dc=com`
  where:
  dc=domain component

ldapbinddn

Sets or gets the bind DN for LDAP Simple Authentication.

Syntax

```
ldapbinddn get
ldapbinddn set ["bind dn"]
```

Parameter	Description
get	Returns the current setting.
set	Sets the bind DN for LDAP Simple Authentication. To erase the current setting, omit the "`bind dn`" parameter. Note: This parameter does not change the setting on the server. Instead, this parameter changes how the Polycom system recognizes the server.
"bind dn"	Specifies the bind DN of an LDAP server. Valid characters include: Unicode (ISO-10646) characters, including IA5/ASCII characters and extended characters such as é, Ø, and å.

Feedback Examples

- `ldapbinddn get`
  returns
  `ldapbinddn cn=plcm admin1,ou=plcmsupport,ou=plcmhelp,`
  `dc=hardware,dc=domain,dc=polycom,dc=com`
  `where:`
  `cn=common name`
  `ou=organizational unit`
  `dc=domain component`

- `ldapbinddn set cn=plcm admin2,ou=plcmaccounts,ou=plcmservice,`
  `dc=hardware,dc=domain,dc=polycom,dc=com`
  returns
  `ldapbinddn cn=plcm admin2,ou=plcmaccounts,ou=plcmservice,`
  `dc=hardware,dc=domain,dc=polycom,dc=com`
  `where:`
  `cn=common name`
  `ou=organizational unit`
  `dc=domain component`

ldapdirectory

Sets or gets whether the LDAP directory server is enabled.

Syntax

```
ldapdirectory <get|yes|no>
```

Parameter	Description
get	Returns the current setting.
yes	Enables the LDAP directory server.
no	Disables the LDAP directory server. This is the default setting.

Feedback Examples

- `ldapdirectory get`
  returns
  `ldapdirectory yes`

- `ldapdirectory no`
  returns
  `ldapdirectory no`

Comments

Each Polycom system supports a single global directory server at any given time. Therefore, enabling the LDAP directory server automatically disables any other global directory server, such as the Polycom GDS directory server, that is enabled.

If the Polycom GDS directory server and another directory server are defined on the system, the Polycom GDS directory server becomes the default directory server after upgrading the system software.

ldapntlmdomain

Sets or gets the domain in which authentication takes place in the Active Directory server.

Syntax

```
ldapntlmdomain get
ldapntlmdomain set ["domain"]
```

Parameter	Description
get	Returns the current setting.
set	Sets the domain in which authentication takes place in the Active Directory server. To erase the current setting, omit the "domain" parameter. Note: This parameter does not change the setting on the server. Instead, this parameter changes how the Polycom system recognizes the server.
"domain"	Specifies the domain in which authentication takes place in the Active Directory server. Valid characters include: 0 through 9, a through z, A through Z, hyphen (-), and period (.) Note: The domain name cannot begin or end with a hyphen or a period.

Feedback Examples

- `ldapntlmdomain get`
  returns
  `ldapntlmdomain AUSTIN`

- `ldapntlmdomain set ANDOVER`
  returns
  `ldapntlmdomain ANDOVER`

ldappassword

Sets the password for Simple or NT LAN Manager (NTLM) authentication of an LDAP server.

Syntax

`ldappassword set [“password”]`

Parameter	Description
`set`	Sets the password for Simple authentication of an LDAP server. To erase the current setting, omit the “`password`” parameter. Note: This parameter does not change the setting on the server. Instead, this parameter changes how the Polycom system recognizes the server.
`ntlm`	Specifies setting the password for NTLM authentication of an LDAP server.
`basic`	Specifies setting the password for Simple authentication of an LDAP server.
`“password”`	Specifies the password for Simple or NTLM authentication of an LDAP server. Valid characters include: Unicode (ISO-10646) characters, including IA5/ASCII characters and extended characters such as é, Ø, and å. Note: The server administrator may specify additional restrictions for password creation.

Feedback Examples

- `ldappassword set ntlm P!cmp@s5wd`
  returns
  `ldappassword NTLM P!cmp@s5wd`

- `ldappassword set basic P0!yc0mp@s5`
  returns
  `ldappassword BASIC P0!yc0mp@s5`

ldapserveraddress

Sets or gets the LDAP server address.

Syntax

```
ldapserveraddress get
ldapserveraddress set ["address"]
```

Parameter	Description
get	Returns the current setting.
set	Sets the IP address or the DNS name of an LDAP server. To erase the current setting, omit the "address" parameter. Note: This parameter does not change the setting on the server. Instead, this parameter changes how the Polycom system recognizes the server.
"address"	Specifies the IP address or the DNS name of an LDAP server. The DNS name requires alphanumeric characters. Valid characters include: 0 through 9 a through z A through Z - Note: The "-" character cannot be used as the first or last character in the DNS name.

Feedback Examples

- `ldapserveraddress get`
  returns
  `ldapserveraddress hardware.domain.polycom.com`

- `ldapserveraddress set software.domain.polycom.com`
  returns
  `ldapserveraddress software.domain.polycom.com`

ldapserverport

Sets or gets the port number of an LDAP server.

Syntax

```
ldapserverport get
ldapserverport set ["port number"]
```

Parameter	Description
get	Returns the current setting.
set	Sets the port number of an LDAP server. To erase the current setting, omit the "port number" parameter. Note: This parameter does not change the setting on the server. Instead, this parameter changes how the Polycom system recognizes the server.
"port number"	Specifies the port number of an LDAP server. The default setting is 389.

Feedback Examples

- `ldapserverport get`
  returns
  `ldapserverport 389`

- `ldapserverport set 636`
  returns
  `ldapserverport 636`

ldapsslenabled

Sets or gets the Secure Sockets Layer (SSL)/Transport Layer Security (TLS) encryption state for LDAP operations.

Syntax

```
ldapsslenabled get
ldapsslenabled set [on|off]
```

Parameter	Description
get	Returns the current setting.
set	Sets the SSL encryption state for LDAP operations. Note: This parameter does not change the setting on the server. Instead, this parameter changes how the Polycom system recognizes the server.
on	Specifies "on" as the encryption state for LDAP operations. This is the default setting.
off	Specifies "off" as the encryption state for LDAP operations.

Feedback Examples

- `ldapsslenabled get`
  returns
  `ldapsslenabled off`

- `ldapsslenabled set on`
  returns
  `ldapsslenabled on`

ldapusername

Sets or gets the user name for NTLM authentication of an LDAP server.

Syntax

```
ldapusername get
ldapusername set ["user name"]
```

Parameter	Description
get	Returns the current setting.
set	Sets the user name for NTLM authentication of an LDAP server. To erase the current setting, omit the "user name" parameter. Note: This parameter does not change the setting on the server. Instead, this parameter changes how the Polycom system recognizes the server.
"user name"	Specifies the user name for NTLM authentication of an LDAP server. Valid characters include: Unicode (ISO-10646) characters, including IA5/ASCII characters and extended characters such as é, Ø, and å.

Feedback Examples

- `ldapusername get`
  returns
  `ldapusername jpolycom`

- `ldapusername set mpolycom`
  returns
  `ldapusername mpolycom`

listen

Registers the RS-232 session to listen for incoming video calls or system sleep or awake state and, consequently, to give notification when the registered state occurs.

Syntax

`listen <video|sleep>`

Parameter	Description
video	Instructs the session to listen for incoming video calls. When this event occurs, the message "`listen video ringing`" is received.
sleep	Instructs the session to listen for when the system goes into sleep mode. When this event occurs, the message "`listen going to sleep`" is received. When the system wakes up, the message "`listen waking up`" is received. Deprecated. Polycom recommends using `sleep register` instead of this command.

Feedback Examples

* `listen sleep`
  returns
  `listen sleep registered`
  to acknowledge that the session is now registered to listen for sleep mode

* `listen video`
  returns
  `listen video registered`
  to acknowledge that the session is now registered to listen for incoming video calls

maxtimeincall

Sets or gets the maximum number of minutes allowed for call length.

Syntax

```
maxtimeincall get
maxtimeincall set [{0..2880}]
```

Parameter	Description
get	Returns the current setting.
set	Sets the maximum time for calls when followed by a parameter from {0..2880}. To erase the current setting, omit the time parameter or set it to 0. The call will then stay up indefinitely.
{0..2880}	Maximum call time in minutes. Must be an integer in the range {0..2880}. The value in minutes will be rounded up to hours in the system, the valid hour values are 1_hour, 2_hours to 12_hours, 24_hours and 48_hours.

Feedback Examples

- `maxtimeincall set`
  returns
  `maxtimeincall <empty>`

- `maxtimeincall set 180`
  returns
  `maxtimeincall 180`

- `maxtimeincall get`
  returns
  `maxtimeincall 180`

Comments

When the time has expired in a call, a message asks you if you want to hang up or stay in the call. If you do not answer within one minute, the call automatically disconnects.

mpautoanswer

Sets or gets the Auto Answer Multipoint mode, which determines how the system will handle an incoming call in a multipoint video conference.

Syntax

```
mpautoanswer <get|yes|no|donotdisturb>
```

Parameter	Description
get	Returns the current setting.
yes	Connects incoming video calls automatically. The screen will split into a multipoint call progress screen as the incoming call is answered.
no	For an incoming video call, the user will be notified and given the choice to answer the call. If the user selects Yes, the call is added to the ongoing conference. If the user selects No, the call is rejected. The default is No.
donotdisturb	The user is not notified of incoming video calls. The sites that placed the calls receive a Call Rejected (H.323) code.

Feedback Examples

- `mpautoanswer` yes
  returns
  `mpautoanswer` yes

- `mpautoanswer` no
  returns
  `mpautoanswer` no

- `mpautoanswer` get
  returns
  `mpautoanswer` no

- `mpautoanswer donotdisturb`
  returns
  `mpautoanswer donotdisturb`

Comments

If `mpautoanswer` is set to `no` or `donotdisturb`, you must rely on API session notifications to answer inbound calls.

mpmode

Sets or gets the multipoint conference viewing mode for the system in a multipoint call. The multipoint mode can be set to auto, discussion, presentation, or fullscreen. By default, it is set to auto.

Syntax

mpmode <get|auto|discussion|presentation|fullscreen>

Parameter	Description
get	Returns the current setting.
auto	In Auto mode, the system switches between Full Screen Mode and Discussion mode, depending on the interaction between the sites. If one site is talking uninterrupted for 15 seconds or more, the speaker appears full screen.
presentation	In Presentation mode, the person who is speaking appears full screen to the far sites, while the person who is speaking sees all the other sites on a split screen.
discussion	In Discussion mode (also called Continuous Presence mode), every site sees all the sites in the meeting at the same time, on a split screen.
fullscreen	In Full Screen mode, every site in the call sees the current speaker, or the latest person to speak, on the full screen.

Feedback Examples

- mpmode auto
  returns
  mpmode auto

- mpmode discussion
  returns
  mpmode discussion

- mpmode get
  returns
  mpmode discussion

Comments

This option is not available unless the multipoint option is enabled.

What you see during a multipoint call can depend on many factors such as the system's monitor configuration, the number of sites in the call, whether content is shared, and whether dual monitor emulation is used.

mute

Sets or gets the near or far site mute settings.

Syntax

```
mute <register|unregister>
mute near <get|on|off|toggle>
mute far get
```

Parameter	Description
register	Registers to receive notification when the mute mode changes.
unregister	Disables register mode.
near	Sets the command for the near site. Requires on, off, toggle, or get.
get	Returns the current setting for the near or far site.
on	Mutes the near site (mute near on).
off	Unmutes the near site (mute near off).
toggle	If mute near mode is mute near on, this switches to mute near off, and vice versa.
far	Returns the mute state of the far site system. Requires the parameter get.

Feedback Examples

- `mute register`
  returns
  `mute registered`

- `mute near on`
  returns
  `mute near on`

- `mute far get`
  returns
  `mute far off`

Comments

In register mode, the system sends notification to the API session when the far or near site is muted or unmuted.

muteautoanswer

Sets or gets the Mute Auto Answer Calls mode. When this setting is selected, the microphone is muted to prevent the far site from hearing the near site when the system answers automatically.

Syntax

```
muteautoanswer <get|yes|no>
```

Parameter	Description
get	Returns the current setting.
yes	Enables Mute Auto Answer Calls mode. The microphone will be muted when the system receives a call while in Auto Answer mode.
no	Disables Mute Auto Answer Calls mode. The microphone will not be muted when the system receives a call while in Auto Answer mode.

Feedback Examples

- `muteautoanswer yes`
  returns
  `muteautoanswercalls yes`

- `muteautoanswer no`
  returns
  `muteautoanswercalls no`

- `muteautoanswer get`
  returns
  `muteautoanswercalls no`

natconfig

Sets or gets the NAT configuration.

Syntax

```
natconfig <get|auto|manual|off>
```

Parameter	Description
get	Returns the current setting.
auto	Specifies that the system is behind a NAT; specifies that the system will automatically discover the public (WAN) address.
manual	Specifies that the system is behind a NAT. Requires the WAN address to be assigned using the wanipaddress command on page 224.
off	Disables the option when the system is not behind a NAT.

Feedback Examples

- `natconfig auto`
  returns
  `natconfig auto`

- `natconfig manual`
  returns
  `natconfig manual`

- `natconfig off`
  returns
  `natconfig off`

- `natconfig get`
  returns
  `natconfig off`

nath323compatible

Sets or gets the **NAT is H.323 Compatible** setting.

Syntax

```
nath323compatible <get|yes|no>
```

Parameter	Description
get	Returns the current setting.
yes	Specifies that NAT is capable of translating H.323 traffic.
no	Specifies that NAT is not capable of translating H.323 traffic.

Feedback Examples

- `nath323compatible yes`
  returns
  `nath323compatible yes`

- `nath323compatible no`
  returns
  `nath323compatible no`

- `nath323compatible get`
  returns
  `nath323compatible no`

netstats

Returns network statistics for each call.

Syntax

```
netstats [{0..n}]
```

Parameter	Description
{0..n}	Call in a multipoint call, where n is the maximum number of calls supported by the system. 0 is the first site connected. If no call is specified, `netstats` returns information about the near site.

Feedback Examples

- `netstats 2`
  returns
  `call:1 txrate:128 K rxrate:128 K pktloss:0 %pktloss:0.0 % tvp:H.263`
  `rvp:H.263 tvf:CIF rvp:CIF tap:G.722.1 rap:G.722.1 tcp:H.323`
  `rcp:H.323`
  `where:`
  `txrate=transmit clock rate`
  `rxrate=receive clock rate`
  `pktloss=number of packet loss/errors`
  `%pktloss=percentage of packet loss/errors`
  `tvp=transmit video protocol`
  `rvp=receive video protocol`
  `tvf=transmit video format`
  `rvf=receive video format`
  `tap=transmit audio protocol`
  `rap=receive audio protocol`
  `tcp=transmit comm protocol`
  `rcp=receive comm protocol`

nonotify

Unregisters the API client to receive status notifications.

Syntax

```
nonotify <callstatus|linestatus|mutestatus|screenchanges>
nonotify <sysstatus|sysalerts|vidsourcechanges>
```

Parameter	Description
calendarmeetings	Stops the system from receiving meeting reminders.
callstatus	Stops the system from receiving changes in call status, such as a connection or disconnection.
linestatus	Stops the system from receiving line status notifications.
mutestatus	Stops the system from receiving changes in audio mute status.
screenchanges	Stops the system from receiving notification when a user interface screen is displayed.
sysstatus	Stops the system from receiving system status notifications.
sysalerts	Stops the system from receiving system alerts.
vidsourcechanges	Stops the system from receiving notification of camera source changes.

Feedback Examples

- `nonotify callstatus`
  returns
  `nonotify callstatus success`

- If entered again,
  `nonotify callstatus`
  returns
  `info: event/notification not active:callstatus`

- `nonotify calendarmeetings`
  returns
  `nonotify calendarmeetings success`

See Also

See the related notify command on page 151.

notify

Lists the notification types that are currently being received, or registers to receive status notifications.

Syntax

```
notify
notify <callstatus|linestatus|mutestatus|screenchanges>
notify <sysstatus|sysalerts|vidsourcechanges>
notify calendarmeetings
```

Parameter	Description
notify	Lists the notification types that are currently being received, in the following format: `registered for <num> notifications[:notification type>...]`
calendarmeetings	Registers the API client to receive meeting reminders.
callstatus	Registers the system to receive changes in call status, such as a connection or disconnection, in the following format: `notification:callstatus:<call direction>:<call id>:<far site name>:<far site number>:<connection status>:<call speed>:<status-specific cause code from call engine>:<calltype>`
linestatus	Registers the system to receive line status notifications as they occur, in the following format: `notification:linestatus:<direction>: <call id>:<line id>:<channel id>: <connection status>`
mutestatus	Registers the system to receive changes in audio mute status, in the following format: `notification:mutestatus:<near or far>:<call id>:<site name>:<site number>:<mute status>`
screenchanges	Registers the system to receive notification when a user interface screen is displayed, in the following format: `notification:screenchange:<screen name>:<screen def name>`

Parameter	Description
sysstatus	Registers the system to receive system status notifications, in the following format: `notification:sysstatus:<sys parameter name>:<value1>[:<value2>...]`
sysalerts	Registers the system to receive system alerts, in the following format: `notification:sysalert:<alert name>:<value1>[:<value2>...]`
vidsourcechanges	Registers the system to receive notification of camera source changes, in the following format: `notification:vidsourcechange:<near or far>:<camera index>:<camera name>:<people or content>`

Feedback Examples

- `notify mutestatus`
  returns
  `notify mutestatus success`
  acknowledging that the session is now registered to receive mutestatus notifications

- `notify callstatus`
  returns
  `notify callstatus success`
  acknowledging that the session is now registered to receive callstatus notifications

- If entered again,
  `notify callstatus`
  returns
  `info: event/notification already active:callstatus`

- `notify`
  returns
  `registered for 2 notifications:mutestatus:`

- `notify calendarmeetings`
  returns
  `notify calendarmeetings success`

The following are examples of notifications that may be returned after registering to receive them.

- `notification:callstatus:outgoing:34:Polycom Group Series Demo:192.168.1.101:connected:384:0:videocall`

- `notification:mutestatus:near:near:near:near:muted`

- `notification:screenchange:systemsetup:systemsetup_a`

- `notification:vidsourcechange:near:1:Main:people`

- `notification:linestatus:outgoing:32:0:0:disconnected`

- `notification:vidsourcechange:near:6:ppcip:content`

- `notification:vidsourcechange:near:none:none:content`

- `notification: calendarmeetings:`
  `AAAaAEFsZXguTWFjRG9uYWxkQHBvbHljb20uY29tAVEACIjMne2/ndgARgAAAADr9G`
  `lhsSjWEZBcAAKzMphJBwA4wicbtr3UEZArAKAkO9LtAAACZpKWAADe7hJleQIOS7j2`
  `mzRJxkLKAAADI/G8AAAQ:Product Planning:10`

Comments

The `notify callstatus` command registers the current API session for call status notifications. The API client receives call status notifications as a call progresses.

Registration for status notifications is session-specific. For example, registering for alerts in a Telnet session does not return alerts in a simultaneous RS-232 session with the same system.

Duplicate registrations produce another success response. The notify setting remains in effect, even if you restart the system or update the software with system settings saved.

See Also

See also the nonotify command on page 150 and the callinfo command on page 77.

oobcomplete

Completes the setup wizard and restarts the Polycom system.

Syntax
```
oobcomplete
```

Feedback Examples
```
oobcomplete
returns
oobcomplete
```

Comments

The `oobcomplete` command is processed only when the Polycom system is in setup wizard mode.

To execute `oobcomplete` successfully, the Polycom system name must be configured.

preset

Sets the presets or goes (moves) to the presets for the near or far camera source. Also registers or unregisters the API session to give notification when the user sets or goes to presets.

Syntax

```
preset <register|unregister>
preset register get
preset far <go|set> <{0..15}>
preset near <go|set> <{0..99}>
```

Parameter	Description
register	Registers the system to give notification when the user or far site sets or goes to a preset. Returns the current preset registration state when followed by the get parameter.
unregister	Disables register mode.
far	Specifies the far camera. Requires a set or go parameter and a preset identifier.
go	Moves the camera to a camera preset. Requires a "preset" parameter.
set	Sets a camera preset. Requires a "preset" parameter.
{0..15}, {0..99}	Camera preset identifier. Must be an integer in the range {0..15} for a far-site camera or {0..99} for a near-site camera.
near	Specifies the near camera. Requires a set or go parameter and a preset identifier.

Feedback Examples

- preset register
  returns
  preset registered

- preset near go 1
  returns
  preset near go 1
  and moves the near-site camera to the preset 1 position

- `preset near set 2`
  returns
  `preset near set 2`
  and saves the current location/position of the near-site camera as preset 2

Comments

Up to 100 preset camera positions can be set. These camera presets can be distributed across the far camera and up to four near-site cameras.

reboot

Restarts the system.

Syntax

```
reboot [now]
```

Parameter	Description
now	restarts the system without prompting you.

Feedback Examples

- `reboot now`
  does not prompt the user to confirm and restarts the system with no other feedback returned

Comments

The preferred format is `reboot now`.

remotemonenable

Gets the state of remote room and call monitoring.

Syntax

```
remotemonenable <get>
```

Feedback Examples

- `remotemonenable get`
  returns
  `remotemonenable on`

- `remotemonenable get`
  returns
  `remotemonenable off`

resetsystem

Resets the system and, optionally, deletes system settings or local address book entries.

Syntax

```
resetsystem [deletesystemsettings]
[deletelocaldirectory][deletecdr][deletelogs][deletecertificates]
```

Parameter	Description
`deletesystemsettings`	Resets all configuration settings to default values.
`deletelocaldirectory`	Deletes all local directory entries from the address book.
`deletecdr`	Deletes the CDR file from the /opt/polycom/cdr directory after copying the contents of the file to the trace log.
`deletelogs`	Deletes the system logs.
`deletecertificates`	Deletes all certificates from the system.

Feedback Examples

- `resetsystem`
  returns
  `resetsystem`

- `resetsystem deletesystemsettings`
  returns
  `resetsystem deletesystemsettings`

- `resetsystem deletelocaldirectory`
  returns
  `resetsystem deletelocaldirectory`

- `resetsystem deletecdr`
  returns
  `resetsystem deletecdr`

- `resetsystem deletesystemsettings deletelocaldirectory deletecdr`
  returns
  `resetsystem deletesystemsettings deletelocaldirectory deletecdr`

- `resetsystem deletelogs`
  returns
  `resetsystem deletelogs`

- resetsystem deletecertificates
  returns
  resetsystem deletecertificates

rs232 baud

The `rs232` baud command sets or gets the baud rate for the first RS-232 port.

Syntax

`rs232 baud <get|9600|14400|19200|38400|57600|115200>`

Parameter	Description
`get`	Returns the current baud rate setting.
`9600|14400|19200|` `38400|57600|115200`	Sets the RS-232 port to this baud rate.

Feedback Examples

- `rs232 baud 9600`
  returns
  `rs232 baud 9600`

- `rs232 baud get`
  returns
  `rs232 baud 9600`

rs232 mode

The `rs232 mode` command sets or gets the operational mode of the first RS-232 port.

Syntax

`rs232 mode <get|off|control>`

Parameter	Description
get	Returns the current mode setting.
off	Sets the operational mode of the RS-232 port to off.
control	Sets the RS-232 port to Control mode.

Feedback Examples

- `rs232 mode control`
  returns
  `rs232 mode control`

screen

Returns the name of the current user interface screen on the system, registers or unregisters for screen changes, or goes to a specific user interface screen.

Syntax

```
screen
screen register get
screen [register|unregister]
screen "screen_name"
```

Parameter	Description
`screen`	Returns the name of the current user interface screen if not followed by other parameters.
`register`	Registers for user interface screen changes. In register mode, the name of every screen accessed is listed.
`get`	Returns the registration state for screen change events when followed by the `get` parameter.
`unregister`	Unregisters from user interface screen changes.
`"screen_name"`	Changes the user interface to display the specified screen. The supported screens depend on the system configuration. To determine the name to use for a specific screen, navigate to that screen in the user interface and send the `screen` command.

Feedback Examples

- `screen`
  returns
  `screen: adminsettings`
  if the Admin Settings screen is currently displayed in the user interface

- `screen register`
  returns
  `screen registered`

- `screen monitors`
  returns
  `screen: monitors`
  and displays the Monitors screen in the user interface

serialnum

Returns the serial number of the system.

Syntax

```
serialnum
```

Feedback Examples

- `serialnum`
  returns
  `serialnum 82065205E72E1`

session

Names or finds an active API session.

Syntax

```
session name "session-name"
session find "session-name"
```

Parameter	Description
name	Names the current API session.
find	Finds an active API session for this system.
session-name	Unique string that identifies the session.

Feedback Examples

- `session name sessionone`
  returns
  `session name sessionone success`

- `If entered again,`
  `session name sessionone`
  returns
  `info: the supplied session name is already in use`
  `session name sessionone failed`

- `session find sessionone`
  `info: session sessionone attached`

- `session find sessiontwo`
  `info: session sessiontwo not connected`

setpassword

Sets the admin password for the Polycom system local admin account.

Syntax

```
setpassword admin room "currentacctpasswd" "newacctpasswd"
```

Parameter	Description
admin	Specifies the Polycom system local admin account.
room	Changes the room password.
"currentacctpasswd"	The current account password.
"newacctpasswd"	The new account password.

Feedback Examples

- `setpassword admin room 123 456`
  returns
  `password changed`

- `setpassword admin room '' 456`
  returns
  `password changed`

- `setpassword admin room 123 ''`
  returns
  `password changed`

Comments

If the account has no administrator room password, enter a pair of single quotes ('') to denote an empty password.

sleep

Registers or unregisters the system for sleep or wake events.

Syntax

```
sleep <register|unregister>
```

Parameter	Description
register	Registers for sleep or wake events.
unregister	Unregisters from sleep or wake events.

Feedback Examples

- `sleep register`
  returns
  `sleep registered`

- If entered again,
  `sleep register`
  returns
  `info: event/notification already active:sleep`

- `sleep unregister`
  returns
  `sleep unregistered`

- If entered again,
  `sleep unregister`
  returns
  `info: event/notification not active:sleep`

See Also

To wake the system from sleep mode, use the .

sleeptime

Sets or gets the wait time value before the system goes to sleep and displays the screen saver.

Syntax

`sleeptime <get|0|1|3|15|30|60|120|240|480>`

Parameter	Description
`get`	Returns the current setting.
`0|1|3|15|30|60|120|240|480`	Sets the number of minutes from last user interaction to entering sleep mode. The default value is 3. A value of 0 indicates that the system will never go to sleep.

Feedback Examples

- `sleeptime 30`
  returns
  `sleeptime 30`

snmpadmin

Sets or gets the SNMP administrator name.

Syntax

```
snmpadmin get
snmpadmin set ["admin name"]
```

Parameter	Description
get	Returns the current setting.
set	Sets the administrator name when followed by the "admin name" parameter. To erase the current setting, omit "admin name".
"admin name"	SNMP administrator contact name. Character string. Enclose the character string in quotation marks if it includes spaces. Example: "John Admin"

Feedback Examples

- `snmpadmin set`
  returns
  `error: command needs more parameters to execute successfully`

- `snmpadmin set` "John Admin"
  returns
  `snmpadmin` "John Admin"

- `snmpadmin get`
  returns
  `snmpadmin` "John Admin"

Comments

After making a change, you must restart the system for the setting to take effect.

snmpcommunity

Sets or gets the SNMP community name.

Syntax

```
snmpcommunity get
snmpcommunity set ["community name"]
```

Parameter	Description
get	Returns the current setting.
set	Sets the SNMP community name when followed by the "community name" parameter. To erase the current setting, omit the parameter.
"community name"	SNMP community name. Character string. Enclose the character string in quotation marks if it includes spaces.

Feedback Examples

- `snmpcommunity set`
  returns
  `snmpcommunity <empty>`

- `snmpcommunity set Public`
  returns
  `snmpcommunity Public`

- `snmpcommunity get`
  returns
  `snmpcommunity Public`

Comments

After making a change, you must restart the system for the setting to take effect.

snmpconsoleip

Sets or gets the SNMP console IP address.

Syntax

```
snmpconsoleip get
snmpconsoleip set ["xxx.xxx.xxx.xxx"]
```

Parameter	Description
get	Returns the current setting.
set	Sets the SNMP console IP address when followed by the "xxx.xxx.xxx.xxx" parameter. To erase the current setting, omit the parameter.
"xxx.xxx.xxx.xxx"	IP address of the console.

Feedback Examples

- `snmpconsoleip set`
  returns
  `snmpconsoleip <empty>`

- `snmpconsoleip set 192.168.1.111`
  returns
  `snmpconsoleip 192.168.1.111`

- `snmpconsoleip get 192.168.1.111`
  returns
  `snmpconsoleip 192.168.1.111`

Comments

After making a change, you must restart the system for the setting to take effect.

snmplocation

Sets or gets the SNMP location name.

Syntax

```
snmplocation get
snmplocation ["location name"]
```

Parameter	Description
get	Returns the current setting.
"location name"	SNMP location name. Enclose the location name in quotation marks if it includes spaces. To erase the current setting, omit the parameter.

Feedback Examples

- `snmplocation`
  returns
  `snmplocation <empty>`

- `snmplocation "Mary_Polycom in United States"`
  returns
  `snmplocation "Mary_Polycom in United States"`

- `snmplocation get`
  returns
  `snmplocation "Mary_Polycom in United States"`

Comments

After making a change, you must restart the system for the setting to take effect.

snmpsystemdescription

Sets or gets the SNMP system description.

Syntax

```
snmpsystemdescription get
snmpsystemdescription set ["system description"]
```

Parameter	Description
get	Returns the current setting.
set	Sets the SNMP system description when followed by the "system description" parameter. To erase the current setting, omit the parameter.
"system description"	SNMP system description.

Feedback Examples

- `snmpsystemdescription set`
  returns
  `snmpsystemdescription <empty>`

- `snmpsystemdescription set "videoconferencing system"`
  returns
  `snmpsystemdescription "videoconferencing system"`

- `snmpsystemdescription get`
  returns
  `snmpsystemdescription "videoconferencing system"`

Comments

After making a change, you must restart the system for the setting to take effect.

snmptrapversion

Sets or gets the SNMP trap version.

Syntax

```
snmptrapversion get
snmptrapversion set <v1|v2c>
```

Parameter	Description
get	Returns the current setting.
set	Sets the SNMP trap protocol that the system uses.
v1|v2c	SNMP trap version 1 or version 2c.

Feedback Examples

* `snmptrapversion set v1`
  returns
  `snmptrapversion v1`

* `snmptrapversion set v2c`
  returns
  `snmptrapversion v2c`

* `snmptrapversion get`
  returns
  `snmptrapversion v2c`

Comments

After making a change, you must restart the system for the setting to take effect.

speeddial

Returns speed dial (Sites) entries.

Syntax

```
speeddial names <all|video|phone> [<range_start>] [<range_end>]
speeddial names <all|video|phone> size
speeddial group "group_name" [<range_start>] [<range_end>]
speeddial group "group_name" size
speeddial address "sys_name" ["sys_label"]
```

Parameter	Description
names	Returns a list of system names in the speed dial (Sites) list. Also returns the system type: video, multicodec, phone, or multisite. A multicodec system appears as a single row.
	The response is in the following format:

	`speeddial names {0..n}. name:"sys_name"`
	`                    sys_label:"sys_label"`
	`                    type:`
	`<video|multicodec|phone|group>`
	`...`
	`speeddial names <all|video|phone> done`

<all|video>	Specifies the type of entries to return. `video` returns entries that have video addresses. `all` returns entries with video numbers or phone numbers or both.
size	Returns the size of the result set that will be returned by the command. The size parameter can be used with the names command.
	The response is returned in the following format: `speeddial names <all|video|phone> size {0..n}`
range_start	For the names and group command, specifies the beginning of the range of entries to return.
range_end	For the names and group command, specifies the end of the range of entries to return. If a `range_start` is specified without a `range_end`, then the single `range_start` entry is returned. If `range_end` is `-1`, all entries starting with `range_start` are returned.

Parameter	Description

`group`	Returns a list of the names of all the sites included in a local directory group in this format:
	
	`speeddial group {0..n}. name:"site_sys_name" sys_label:"site_sys_label"`
	
	`...`
	
	`speeddial group "group_name" [range] done`
	`speeddial group size <num_entries>`
	
	Note: For ITP version 2.5 and later a "group" is a local directory multisite entry.

`group_name_multisite_entry_name`	A local directory group name.

`address`	Obtains the address information for a specified entry. If the entry is an ITP system, the results include the addresses for all codecs. If the codecs support multiple protocols, the different addresses are returned on separate lines. This command is not supported for multisite entries.
	
	The response is in the following format:
	
	`speeddial address {0..n}. name:"sys_name"`
	`                sys_label:"sys_label"`
	`                codec:<1..4>`
	`                h323_spd:"h323_spd"`
	`h323_num:"h323_num"`
	`                h323_ext:"h323_ext"`
	`speeddial address {0..n}. name:"sys_name"`
	`                sys_label:"sys_label"`
	`                codec:<1..4>`
	`                sip_spd:"sip_spd"`
	`sip_num:"sip_num"`
	`speeddial address {0..n}. name:"sys_name"`
	`                sys_label:"sys_label"`
	`                codec:<1..4>`
	`                xmpp:"xmpp_addr"`
	`speeddial address {0..n}. name:"sys_name"`
	`                sys_label:"sys_label"`
	`                codec:<1..4>`
	`                phone_num:"phone_num"`
	`speeddial address {0..n}. name:"sys_name"`
	`                sys_label:"sys_label"`
	`                codec:<1..4>`
	`                isdn_spd:"isdn_spd"`
	`isdn_num:"isdn_num"`
	`                isdn_ext:"isdn_ext"`
	`...`
	`speeddial address name:"sys_name"`
	`sys_label:"sys_label"`

Parameter	Description
sys_name	The friendly name for a speed dial entry. It is the name of the person or the room. It is surrounded by quotes if it contains spaces.
sys_label	If a person/room has more than one system, the result set includes a row for each system. If those systems are of the same type, such as allRealPresence Group systems, the client considers that entry to be a telepresence system with multiple codecs rather than separate systems. If the systems are of different types, such as a RealPresence Group system and a CMA Desktop system, then this sys_label attribute is included to differentiate the systems.
type	The type of speed dial entry. Possible values are: video, multicodec, phone, group.
site_sys_name	The name of a site in a group. It is surrounded by quotes if it contains spaces.
site_sys_label	The label associated with a site name in a group. It is surrounded by quotes if it contains spaces.
codec: <1..4>	If the entry is a telepresence system, each codec includes a codec number attribute.
h323_spd	The preferred speed for an H.323 call to this entry. If no speed is associated with the entry, then the value of the configuration variable globaladdrmaxh323 is returned. The default is 384.
h323_num	H.323 address or alias.
h323_ext	H.323 extension or E.164 number.
sip_spd	The preferred speed for a SIP call to this entry. If no speed is associated with the entry, then this is the same as the h323_spd.
sip_num	SIP address.
xmpp_addr	XMPP address, also known as the Jabber ID (JID).

Feedback Examples

- speeddial names all size 4
  returns
  speeddial names 0. name:"Evergreen" sys_label:"groupseries"
  type:video
  speeddial names 1. name:"ITP Staff Mtg" sys_label:"" type:group
  speeddial names 2. name:"Magnolia" sys_label:"groupseries"

```
type:video
speeddial names 3. name:"Vineyard" sys_label:"groupseries"
type:multicodec
speeddial names all done
```

Speed dial entries can link to either local or global directory entries and can be a local group.

- ```
  speeddial names all 0 1
  ```
  returns
  ```
  speeddial names 0. name:"Evergreen" sys_label:"groupseries"
  type:video
  speeddial names 1. name:"ITP Staff Mtg" sys_label:"" type:group
  speeddial names all 0 1 done
  ```

- ```
  speeddial group
  ```
  returns
  ```
  speeddial group "Monday Staff Mtg"speeddial multi sites 0. name:"Eng
  RPX" sys_label:"groupseries"
  speeddial multi sites 1. name:"Geno Alissi" sys_label:""
  speeddial multi sites 2. name:"Joseph Sigrist" sys_label:""
  speeddial multi sites 3. name:"TPW" sys_label:"groupseries"
  speeddial multi sites "Monday Staff Mtg" done
  ```

The group query is the same as that for the local directory. It returns all the sites in the group.

- ```
  speeddial address "Vineyard" "groupseries
  ```
  returns
  ```
  speeddial address 0. name:"Vineyard" sys_label:"groupseries"
  codec:1
  
                        h323_spd:384 h323_num: h323_ext:44042
  speeddial address 1. name:"Vineyard" sys_label:"groupseries"
  codec:2
                        h323_spd:384 h323_num: h323_ext:44043
  speeddial address 2. name:"Vineyard" sys_label:"groupseries"
  codec:3
  h323_spd:384 h323_num: h323_ext:44044
  speeddial address name:"Vineyard" sys_label:"groupseries" done
  ```

If the entry is an ITP system, the results include address information for each codec. If the entry has multiple endpoints of different types, the addresses for each endpoint are returned including a `sys_label` attribute to distinguish the endpoints. For Polycom RealPresence Resource Manager, `sys_label` is the type of endpoint, such as CMA Desktop.

Comments

You do not need to enclose a value in quotes unless it contains a space.

See Also

addrbook command on page 45 and gaddrbook command on page 110.

subnetmask

Sets or gets the subnet mask of the system.

Syntax

```
subnetmask get
subnetmask set ["xxx.xxx.xxx.xxx"]
```

Parameter	Description
get	Returns the current subnet mask.
set	Sets the subnet mask of the system when followed by the "xxx.xxx.xxx.xxx" parameter. To erase the current setting, omit "xxx.xxx.xxx.xxx". This paramater is not allowed while in a call.
"xxx.xxx.xxx.xxx"	Subnet mask of the system.

Feedback Examples

- `subnetmask set 255.255.255.0`
  returns
  `subnetmask 255.255.255.0`

- `subnetmask get`
  returns
  `subnetmask 255.255.255.0`

Comments

After making a change, you must restart the system for the setting to take effect.

systemname

Sets or gets the name of the system.

Syntax

```
systemname get
systemname set "system name"
```

Parameter	Description
get	Returns the current setting.
set	Sets the system name to "system name".
"system name"	Character string specifying the system name. Enclose the string in quotation marks if it includes spaces. Example: "Polycom Group Series Demo"

Feedback Examples

- `systemname set "Polycom Group Series Demo"`
  returns
  `systemname "Polycom Group Series Demo"`

- `systemname set get`
  returns
  `systemname "Polycom Group Series Demo"`

Comments

The first character must be a numeric (a digit) or an alphabetic (a letter) character including foreign language characters. The name can be any combination of alphanumeric characters and may be up to 30 characters in length. The system name cannot be blank.

systemsetting 323gatewayenable

Enables IP-to-IP calling through a gateway.

Syntax

```
systemsetting 323gatewayenable <True|False>
systemsetting get 323gatewayenable
```

Parameter	Description
True	Enables IP gateway calls.
False	Disables IP gateway calls.
get	Returns the current setting.

Feedback Examples

- `systemsetting 323gatewayenable True`
  returns
  `systemsetting 323gatewayenable True`

- `systemsetting get 323gatewayenable`
  returns
  `systemsetting 323gatewayenable True`

systemsetting cameracontent

Specifies Camera 1 as a People or Content source.

Syntax

```
systemsetting cameracontent <People|Content>
systemsetting get cameracontent
```

Parameter	Description
People	Specifies camera as a People source.
Content	Specifies camera as a Content source.
get	Returns the current setting.

Feedback Examples

- `systemsetting cameracontent People`
  returns
  `systemsetting cameracontent People`

- `systemsetting cameracontent Content`
  returns
  `systemsetting cameracontent Content`

- `systemsetting get cameracontent`
  returns
  `systemsetting cameracontent Content`

systemsetting cameracontent1

Specifies Camera 2 as a People or Content source.

Syntax

```
systemsetting cameracontent1 <People|Content>
systemsetting get cameracontent1
```

Parameter	Description
People	Specifies camera as a People source.
Content	Specifies camera as a Content source.
get	Returns the current setting.

Feedback Examples

- `systemsetting cameracontent1 People`
  returns
  `systemsetting cameracontent1 People`

- `systemsetting cameracontent1 Content`
  returns
  `systemsetting cameracontent1 Content`

- `systemsetting get cameracontent1`
  returns
  `systemsetting cameracontent1 Content`

Comments

This command is valid on Polycom RealPresence Group 500 and 700 systems only.

systemsetting cameracontent2

Specifies Camera 3 as a People or Content source.

Syntax

```
systemsetting cameracontent2 <People|Content>
systemsetting get cameracontent2
```

Parameter	Description
People	Specifies camera as a People source.
Content	Specifies camera as a Content source.
get	Returns the current setting.

Feedback Examples

- `systemsetting cameracontent2 People`
  returns
  `systemsetting cameracontent2 People`

- `systemsetting cameracontent2 Content`
  returns
  `systemsetting cameracontent2 Content`

- `systemsetting get cameracontent2`
  returns
  `systemsetting cameracontent2 Content`

Comments

This command is valid on Polycom RealPresence Group 700 systems only.

systemsetting cameracontent3

Specifies Camera 4 as a people or content source.

Syntax

```
systemsetting cameracontent3 <People|Content>
systemsetting get cameracontent3
```

Parameter	Description
People	Specifies camera as a people source.
Content	Specifies camera as a content source.
get	Returns the current setting.

Feedback Examples

- `systemsetting cameracontent3 People`
  returns
  `systemsetting cameracontent3 People`

- `systemsetting cameracontent3 content`
  returns
  `systemsetting cameracontent3 Content`

- `systemsetting get cameracontent3`
  returns
  `systemsetting cameracontent3 People`

Comments

This command is valid on Polycom RealPresence Group 700 systems only.

systemsetting connectionpreference

Specifies whether the system uses the Video Dialing Order or the Audio Dialing Order first when placing calls.

Syntax

```
systemsetting connectionpreference <VIDEO_THEN_AUDIO|AUDIO_THEN_VIDEO>
systemsetting get connectionpreference
```

Parameter	Description
VIDEO_THEN_AUDIO	Sets Video as the preferred call choice before Audio calls.
AUDIO_THEN_VIDEO	Sets Audio as the preferred call choice before Video calls.
get	Returns the current setting.

Feedback Examples

- `systemsetting connectionpreference VIDEO_THEN_AUDIO`
  returns
  `systemsetting connectionpreference VIDEO_THEN_AUDIO`

- `systemsetting get connectionpreference`
  returns
  `systemsetting connectionpreference VIDEO_THEN_AUDIO`

systemsetting dialingmethod

Specifies the preferred method for dialing various call types.

Syntax

```
systemsetting dialingmethod <Auto|Manual>
systemsetting get dialingmethod
```

Parameter	Description
Auto	Sets the dialing mode to Auto. Calls use the configured dialing order.
Manual	Sets the dialing mode to Manual. The system prompts the user to select the call type from a list when placing a call.
get	Returns the current setting.

Feedback Examples

- `systemsetting dialingmethod Auto`
  returns
  `systemsetting dialingmethod Auto`

- `systemsetting get dialingmethod`
  returns
  `systemsetting dialingmethod Auto`

systemsetting displayiconincall

Specifies whether to display icons on the info bar when the system is in a call.

Syntax

```
systemsetting displayiconincall <True|False>
systemsetting get displayiconincall
```

Parameter	Description
True	Specifies to display the icons on the info bar while in a call.
False	Specifies to not display the icons on the info bar while in a call.
get	Returns the current setting.

Feedback Examples

- `systemsetting displayiconincall True`
  returns
  `systemsetting displayiconincall True`

- `systemsetting get displayiconincall`
  returns
  `systemsetting displayiconincall True`

systemsetting enablepolycommics

Specifies whether microphones attached to the system's microphone input are enabled.

Syntax

```
systemsetting enablepolycommics <True|False>
systemsetting get enablepolycommics
```

Parameter	Description
True	Enables Polycom microphones.
False	Disables Polycom microphones.
get	Returns the current setting.

Feedback Examples

- `systemsetting enablepolycommics True`
  returns
  `systemsetting enablepolycommics True`

- `systemsetting get enablepolycommics`
  returns
  `systemsetting enablepolycommics True`

systemsetting iph323enable

Allows the system to make IP calls.

Syntax

```
systemsetting iph323enable <True|False>
systemsetting get iph323enable
```

Parameter	Description
True	Enables IP call capability.
False	Disables IP call capability.
get	Returns the current setting.

Feedback Examples

- `systemsetting iph323enable True`
  returns
  `systemsetting iph323enable True`

- `systemsetting get iph323enable`
  returns
  `systemsetting iph323enable True`

systemsetting lineinlevel

Sets or returns the volume level for audio input 1.

Syntax

```
systemsetting lineinlevel {0..10}
systemsetting get lineinlevel
```

Parameter	Description
0..10	Sets the volume level for input 1. Valid range is 0 to 10.
get	Returns the current setting.

Feedback Examples

* `systemsetting lineinlevel 5`
  returns
  `systemsetting lineinlevel 5`

* `systemsetting get lineinlevel`
  returns
  `systemsetting lineinlevel 5`

systemsetting lineoutmode

Specifies whether the volume for a device connected to the audio line out connectors is variable or fixed.

Syntax

```
systemsetting lineoutmode <fixed|variable>
systemsetting get lineoutmode
```

Parameter	Description
fixed	Sets the volume to the audio level specified in the system interface.
variable	Allows users to set the volume with the remote control.
get	Returns the current setting.

Feedback Examples

- `systemsetting lineoutmode fixed`
  returns
  `systemsetting lineoutmode fixed`

- `systemsetting get lineoutmode`
  returns
  `systemsetting lineoutmode fixed`

systemsetting maxrxbandwidth

Specifies the maximum receive line speed between 64 kbps and 4096 kbps.

Syntax

```
systemsetting maxrxbandwidth [speed]
systemsetting get maxrxbandwidth
```

Parameter	Description
speed	Sets the maximum speed for receiving calls.
get	Returns the current setting.

Feedback Examples

- `systemsetting maxrxbandwidth 1920`
  returns
  `systemsetting maxrxbandwidth 1920`

- `systemsetting get maxrxbandwidth`
  returns
  `systemsetting maxrxbandwidth 1920`

systemsetting maxtxbandwidth

Specifies the maximum transmit line speed between 64 kbps and 4096 kbps.

Syntax

```
systemsetting maxtxbandwidth [speed]
systemsetting get maxtxbandwidth
```

Parameter	Description
speed	Sets the maximum speed for placing calls.
get	Returns the current setting.

Feedback Examples

- `systemsetting maxtxbandwidth 1920`
  returns
  `systemsetting maxtxbandwidth 1920`

- `systemsetting get maxtxbandwidth`
  returns
  `systemsetting maxtxbandwidth 1920`

systemsetting mediainlevel

Specifies the volume level for the media audio input.

Syntax

```
systemsetting mediainlevel <auto|0..10>
systemsetting get mediainlevel
```

Parameter	Description
auto	Allows the system software to adjust the input level.
0..10	Sets the volume level of the media input to the specified value.
get	Returns the current setting.

Feedback Examples

- `systemsetting mediainlevel 5`
  returns
  `systemsetting mediainlevel 5`

- `systemsetting get mediainlevel`
  returns
  `systemsetting mediainlevel 5`

systemsetting model

Returns the model of the RealPresence Group system

Syntax

`systemsetting get model`

Parameter	Description
get	Returns the current setting.

Feedback Examples

- `systemsetting get model`
  returns
  `systemsetting model "RPG 500"`

systemsetting primarycamera

Specifies which camera is the main camera.

Syntax

```
systemsetting primarycamera {1..4}
systemsetting get primarycamera
```

Parameter	Description
1..4	Sets the specified input as the primary camera (numbering convention matches the numbering in the on-screen user interface). Camera 3 and Camera 4 are available on Polycom RealPresence Group 700 systems only.
get	Returns the current setting.

Feedback Examples

- `systemsetting primarycamera 1`
  returns
  `systemsetting primarycamera 1`

- `systemsetting get primarycamera`
  returns
  `systemsetting primarycamera 1`

Comments

This command causes the system to restart.

The primary camera is active when the Polycom RealPresence Group system initializes. Its source is automatically set to People.

systemsetting remotechannelid

Specifies the IR identification channel to which the Polycom RealPresence Group system responds.

Syntax

```
systemsetting remotechannelid {0..15}
systemsetting get remotechannelid
```

Parameter	Description
0..15	Sets the channel ID to be used with the remote control.
get	Returns the current setting.

Feedback Examples

- `systemsetting remotechannelid 7`
  returns
  `systemsetting remotechannelid 7`

- `systemsetting get remotechannelid`
  returns
  `systemsetting remotechannelid 7`

systemsetting sipaccountname

Sets or returns the SIP user account name.

Syntax

```
systemsetting sipaccountname <"sipuser">
systemsetting get sipaccountname
```

Parameter	Description
"sipuser"	Specifies the user account name.
get	Returns the current setting.

Feedback Examples

- `systemsetting sipaccountname polycom_user`
  returns
  `systemsetting sipaccountname polycom_user`

- `systemsetting get sipaccountname`
  returns
  `systemsetting sipaccountname polycom_user`

systemsetting sipdebug

Sets or retrieves the state of SIP debug tracing in the system log.

Syntax

```
systemsetting sipdebug <True|False>
systemsetting get sipdebug
```

Parameter	Description
True	Enables SIP debug tracing in the system log.
False	Disables SIP debug tracing in the system log.
get	Returns the current setting.

Feedback Examples

- `systemsetting sipdebug True`
  returns
  `systemsetting sipdebug True`

- `systemsetting get sipdebug`
  returns
  `systemsetting sipdebug True`

systemsetting sipenable

Enables or disables SIP calling.

Syntax

```
systemsetting sipenable <True|False>
systemsetting get sipenable
```

Parameter	Description
True	Enables SIP calling.
False	Disables SIP calling.
get	Returns the current setting.

Feedback Examples

- `systemsetting sipenable True`
  returns
  `systemsetting sipenable True`

- `systemsetting get sipenable`
  returns
  `systemsetting sipenable True`

systemsetting sippassword

Sets the SIP server password.

Syntax

`systemsetting sippassword <"password">`

Parameter	Description
"password"	Password used to register with SIP server.

Feedback Examples

- `systemsetting sippassword secret`
  returns
  `systemsetting sippassword secret`

systemsetting sipproxyserver

Sets or retrieves the address of the SIP proxy server.

Syntax

```
systemsetting sipproxyserver <address>
systemsetting get sipproxyserver
```

Parameter	Description
address	Address of the proxy server. Format can be either an actual IP address or a valid DNS hostname (PQP or FQP).
get	Returns the current setting.

Feedback Examples

- `systemsetting sipproxyserver pserver.abc.com`
  returns
  `systemsetting sipproxyserver pserver.abc.com`

- `systemsetting get sipproxyserver`
  returns
  `systemsetting sipproxyserver pserver.abc.com`

systemsetting sipregistrarserver

Sets or retrieves the address of the SIP registrar server.

Syntax

```
systemsetting sipregistrarserver <address>
systemsetting get sipregistrarserver
```

Parameter	Description
address	Address of the registrar server. Format can be either an actual IP address or a valid DNS hostname (PQP or FQP).
get	Returns the current setting.

Feedback Examples

- `systemsetting sipregistrarserver pserver.abc.com`
  returns
  `systemsetting sipregistrarserver pserver.abc.com`

- `ssystemsetting get sipregistrarserver`
  returns
  `systemsetting sipregistrarserver pserver.abc.com`

systemsetting siptransportprotocol

Indicates the protocol the system uses for SIP signaling.

Syntax

```
systemsetting siptransportprotocol <Both|TCP|UDP>
systemsetting get siptransportprotocol
```

Parameter	Description
Both	Specifies to use both TCP and UDP as the SIP protocol.
TCP	Specifies to use TCP as the SIP protocol.
UDP	Specifies to use UDP as the SIP protocol.
get	Returns the current setting.

Feedback Examples

- `systemsetting siptransportprotocol TCP`
  returns
  `systemsetting siptransportprotocol TCP`

- `systemsetting get siptransportprotocol`
  returns
  `systemsetting siptransportprotocol TCP`

systemsetting sipusername

Specifies the system's SIP name.

Syntax

```
systemsetting sipusername ["name"]
systemsetting get sipusername
```

Parameter	Description
"name"	Specifies to use both TCP and UDP as the SIP protocol.
get	Returns the current setting.

Feedback Examples

- `systemsetting sipusername Polycom`
  returns
  `systemsetting sipusername Polycom`

- `systemsetting get sipusername`
  returns
  `systemsetting sipusername Polycom`

systemsetting stereoenable

Specifies that Polycom StereoSurround is used for all calls.

Syntax

```
systemsetting stereoenable <True|False>
systemsetting get stereoenable
```

Parameter	Description
True	Enables Polycom stereo.
False	Disables Polycom stereo.
get	Returns the current setting.

Feedback Examples

- `systemsetting stereoenable True`
  returns
  `systemsetting sstereoenable True`

- `systemsetting get stereoenable`
  returns
  `systemsetting stereoenable True`

systemsetting telnetenabled

Sets or gets the telnet ports.

Syntax

```
systemsetting telnetenabled <on|off|port24only>
systemsetting get telnetenabled
```

Parameter	Description
get	Returns the current setting.
on	Enables port 23 and port 24.
off	Disables port 23 and port 24.
port24only	Enables port 24 and disables port 23.

Feedback Examples

- `systemsetting telnetenabled on`
  returns
  `systemsetting telnetenabled on`

- `systemsetting get telnetenabled`
  returns
  `systemsetting telnetenabled on`

Comments

After making a change, you must restart the system for the setting to take effect.

systemsetting transcodingenabled

Specifies whether the system allows each far-site system to connect at the best possible call rate and audio/video algorithm.

Syntax

```
systemsetting transcodingenabled <True|False>
systemsetting get transcodingenabled
```

Parameter	Description
True	Enables transcoding.
False	Disables transcoding.
get	Returns the current setting.

Feedback Examples

- `systemsetting transcodingenabled True`
  returns
  `systemsetting transcodingenabled True`

- `systemsetting get transcodingenabled`
  returns
  `systemsetting transcodingenabled True`

systemsetting webenabled

Specifies whether to allow remote access to the system using the web interface.

Syntax

```
systemsetting webenabled <True|False>
systemsetting get webenabled
```

Parameter	Description
True	Enables remote access from the web interface.
False	Disables remote access from the web interface.
get	Returns the current setting.

Feedback Examples

- `systemsetting webenabled True`
  returns
  `systemsetting webenabled True`

- `systemsetting get webenabled`
  returns
  `systemsetting webenabled True`

systemsetting whitebalancemode

Sets or returns the user white balance mode for a Polycom camera on Camera port 1.

Syntax

```
systemsetting whitebalancemode <atw|indoor|outdoor|awc>
systemsetting whitebalancemode <3680K|4160K|4640K|5120K>
systemsetting get whitebalancemode
```

Parameter	Description
`<atw|indoor|outdoor|awc>`	`atw`–Manual one touch white balance indoor–Indoor lighting outdoor–Outdoor lighting `awc`–Automatic white balance
`<3680K|4160K|4640K|5120K>`	3680K--3680° Kelvin 4160K--4160° Kelvin 4640K--4640° Kelvin 5120K--5120° Kelvin
`get`	Returns the current setting.

Feedback Examples

- `systemsetting whitebalancemode awc`
  returns
  `systemsetting whitebalancemode awc`

- `systemsetting get whitebalancemode`
  returns
  `systemsetting whitebalancemode awc`

systemsetting whitebalancemode1

Sets or returns the user white balance mode for a Polycom camera on Camera port 2.

Syntax

```
systemsetting whitebalancemode1
<atw|indoor|3680K|4160K|4640K|5120K|outdoor|awc>
systemsetting get whitebalancemode1
```

Parameter	Description
`<atw|indoor|3680K|416 0K|4640K|5120K|outdoo r|awc>`	atw–Manual one touch white balance indoor—Indoor lighting 3680K—3680° Kelvin 4160K—4160° Kelvin 4640K—4640° Kelvin 5120K–5120° Kelvin outdoor—Outdoor lighting awc—Automatic white balance
`get`	Returns the current setting.

Feedback Examples

- `systemsetting whitebalancemode1 awc`
  returns
  `systemsetting whitebalancemode1 awc`

- `systemsetting get whitebalancemode1`
  returns
  `systemsetting whitebalancemode1 awc`

usegatekeeper

Sets or gets the gatekeeper mode.

Syntax

```
usegatekeeper <get|off|specify|auto>
```

Parameter	Description
get	Returns the current setting. Note: A gatekeeper is not required to make IP-to-IP LAN calls. In these situations, select the off option.
off	Select this option if no gatekeeper is required or if you make IP-to-IP LAN calls.
specify	Specifies a gatekeeper. If this option is selected, you must enter the gatekeeper IP address or name using the gatekeeperip command on page 119.
auto	Sets the system to automatically find an available gatekeeper.

Feedback Examples

- `usegatekeeper off`
  returns
  `usegatekeeper off`

- `usegatekeeper specify`
  returns
  `usegatekeeper specify`

- `usegatekeeper auto`
  returns
  `usegatekeeper auto`

- `usegatekeeper get`
  returns
  `usegatekeeper auto`

See Also

See the gatekeeperip command on page 119.

vcbutton

Controls a content video source. It can also register or unregister the API session to receive notification of content events.

Syntax

```
vcbutton play {1..4}
vcbutton <get|stop|register|unregister>
vcbutton map <get|{1..4}>
vcbutton source get
```

Parameter	Description
play	Starts sending the content from the specified content video source. If no content video source is specified, starts sending content from the default content video source. Starts content from any content video source without the need to change source mapping and without needing to stop the currently playing content video source. Fails and does not stop the current content video source if the specified content video source is not valid. Stops the current content video source if the specified content video source is valid but is currently unavailable.
{1..4}	Specifies a content video source. Camera 3 and Camera 4 are available on RealPresence Group 700 systems only.
get	Returns the current setting (play or stop).
stop	Stops sending content from the content video source that is currently playing.
register	Registers the API session to receive notifications about content events.
unregister	Unregisters the API session to receive notifications about content events.
map get	Gets the content video source currently specified for control.
map {1..4}	Specifies the content video source to control. Note: This parameter is only necessary if no video source was specified when using the vcbutton play command. Camera 3 and Camera 4 are available on RealPresence Group 700 systems only.
source get	Gets the content video source that is currently playing.

Feedback Examples

If not registered for notifications:

- `vcbutton play 4`
  returns
  `vcbutton play 4`
  `vcbutton play succeeded`
  `camera near 4`

If registered for notifications:

- `vcbutton play 4`
  returns
  `Control event: vcbutton play`
  `Control event: vcbutton source 4`
  `Control event: vcbutton play`
  `vcbutton play 4`
  `vcbutton play succeeded`
  `camera near 4`

- `vcbutton play 3`
  returns
  `vcbutton play failed`

- `vcbutton play`
  returns
  `Control event: vcbutton play`
  `vcbutton play succeeded`

- `vcbutton play`
  returns
  `vcbutton play failed`

- `vcbutton play 2`
  returns
  `error: input 2 is not a content source`
  `vcbutton play failed`

- `vcbutton play 5`
  returns
  `error: invalid value! (valid ranges 1..4)`
  `vcbutton play failed`

- `vcbutton register`
  returns
  `vcbutton registered`

- `vcbutton stop`
  returns
  `Control event: vcbutton stop`
  `Camera near none`
  `vcbutton stop`
  `vcbutton stop succeeded`

- vcbutton get
  returns
  vcbutton stop
  vcbutton get succeeded

- vcbutton source get
  returns
  vcbutton source get 1
  vcbutton source get succeeded

- vcbutton source get
  returns
  vcbutton source get none
  vcbutton source get succeeded

Polycom recommends registering for notifications. If vcbutton register is used for notifications, the following responses occur.

- Pressing the play button at the far site
  returns
  Control event: vcbutton farplay

- Pressing the stop button on the local system
  returns
  Control event: vcbutton stop

version

Returns the current system's version information.

Syntax

```
version
```

Feedback Examples

- `version`
  returns
  `version "release 4.0 - 30Nov2012 11:30"`

vgaqualitypreference

Sets or gets the bandwidth split for people and content video.

Syntax

```
vgaqualitypreference get
vgaqualitypreference <content|people|both>
```

Parameter	Description
get	Returns the current setting.
content	Sets the VGA quality preference to content video.
people	Sets the VGA quality preference to people video.
both	Sets the VGA quality preference to both people and content video.

Feedback Examples

- `vgaqualitypreference people`
  returns
  `vgaqualitypreference people`

- `vgaqualitypreference content`
  returns
  `vgaqualitypreference content`

- `vgaqualitypreference both`
  returns
  `vgaqualitypreference both`

- `vgaqualitypreference get`
  returns
  `vgaqualitypreference both`

videocallorder

Sets the video call order of the specified protocol to the specified slot.

Syntax

```
videocallorder <h323|sip> <1|2|3|4>
```

Parameter	Description
h323	Specifies IP protocol.
sip	Specifies SIP protocol.
1|2|3|4	Sets the order in which the specified protocol is attempted when a video call is placed.

Feedback Examples

- `videocallorder h323 1`
  returns
  `videocallorder h323 1`

- `videocallorder sip 2`
  returns
  `videocallorder sip 2`

See Also

To set the dialing order for audio-only protocols, use the volume command on page .

volume

Sets or gets the call audio volume (not sound effects) on the system or registration for volume changes.

Syntax

```
volume <register|unregister>
volume <get|up|down|set {0..50}>
volume range
```

Parameter	Description
register	Registers to receive notification when the volume changes.
unregister	Disables register mode.
get	Returns the current volume level.
up	Increases the audio volume by 1.
down	Decreases the audio volume by 1.
set	Sets the volume to a specified level. Requires a volume setting from {0..50}.
range	Returns the valid volume range available to the user.

Feedback Examples

- volume register
  returns
  volume registered

- If entered again,
  volume register
  returns
  info: event/notification already active:volume

- volume set 23
  returns
  volume 23

- volume up
  returns
  volume 24

- volume get
  returns
  volume 24

Comments

Changes the call audio volume (not sound effects) on the system.

wake

Wakes the system from sleep mode.

Syntax
wake

Feedback Examples

- wake
  returns
  wake
  and wakes the system from sleep mode

See Also

To put the system in sleep mode, use the sleep command on page 167.

wanipaddress

Sets or gets the WAN IP address.

Syntax

```
wanipaddress get
wanipaddress set ["xxx.xxx.xxx.xxx"]
```

Parameter	Description
set	Sets the WAN IP address when followed by the "xxx.xxx.xxx.xxx" parameter. To erase the current setting, omit the "xxx.xxx.xxx.xxx" parameter.
get	Returns the WAN IP address.
"xxx.xxx.xxx.xxx"	WAN IP address.

Feedback Examples

- `wanipaddress set 192.168.1.101`
  returns
  `wanipaddress 192.168.1.101`

- `wanipaddress get`
  returns
  `wanipaddress 192.168.1.101`

Comments

The **NAT Configuration** option on the Firewall screen must be set to **Auto**, **Manual**, or **UPnP** for this option to be available.

webmonitoring

Enables or disables the ability to view video from a Polycom Real Presence Group system via the web interface. This command is available in serial API sessions only.

Syntax

```
webmonitoring "remoteaccesspasswd" <yes|no>
```

Parameter	Description
`"remoteaccesspasswd"`	Current remote access password.
`yes`	Allows Polycom Real Presence Group video to be viewed via the web interface.
`no`	Disables Polycom Real Presence Group video from being viewed via the web interface.

Feedback Examples

- `webmonitoring "1234" yes`
  returns
  `webmonitoring yes`

- `webmonitoring "1234" no`
  returns
  `webmonitoring no`

Comments

The `webmonitoring` setting can be controlled by a provisioning server. For this reason, provisioned systems do not allow modification to the `webmonitoring` setting.

`webmonitoring` has no 'get' operation. Use the instead.

If the system has no remote access password, enter a pair of single quotes ('') to denote an empty password.

whoami

Displays the same initial banner information as when the RS-232/Telnet session was started with the system.

Syntax

```
whoami
```

Feedback Examples

- `whoami`
  returns
  ```
  Hi, my name is: Polycom Group Series Demo
  Here is what I know about myself:
  Model: Group Series 500
  Serial Number: 82065205E72E1
  Software Version: 1.0
  Build Information: root on domain.polycom.com
  Contact Number: <empty>
  Time In Last Call: 0:43:50
  Total Time In Calls: 87:17:17
  Total Calls: 819
  SNTP Time Service: auto insync ntp1.polycom.com
  Local Time is: Wed, 30 Nov 2008 10:41:46
  Network Interface: NONE
  IP Video Number: 192.168.1.101
  MP Enabled:  AB1C-2D34-5EF6-7890-GHI1
  H323 Enabled: True
  HTTP Enabled: True
  SNMP Enabled: True
  ```

Comments

The response can vary depending on your system configuration.

A

Room Design and Layout

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For clarity of discussion, we have divided this section into the following sub-sections:

- Room construction, including wall construction, windows and window treatments, ceilings and HVAC;

- Interior design and finishes;

- Furniture design, including placement and layout;

- Room acoustics and acoustic treatment; and

- Room lighting.

The initial layout and construction of the space affects all the elements that are discussed in other sections of this book [*Basics of Audio and Visual Systems Design*], including acoustic characteristics and performance, general and ambient light control, and overall comfort.

Room Requirements

We begin with general room requirements. The total floor space required for VC is much greater than we have become used to for general local presentation and meeting. In architectural terms it is not uncommon to find a rule-of-thumb applied that allows for up to 15 square feet of floor space per participant in a traditional presentation or meeting room. If there is a front-of-room presenter position at a podium, and if there is some use of in-room technology (projection devices, whiteboards, etc.), then this figure may increase to as much as 20 square feet of floor space per participant, but rarely any more than that.

It is here that we have our first conflict. In videoconferencing we have to consider not only the issues related to local viewing and hearing but also the issues of being seen and heard by people at the far-end of the connection. This

means that we must consider sight lines and angles of participant interaction that go beyond traditional presentation environments. As a rule we should allow not less than 30 square feet and generally not more than 45 square feet of floor space per participant in a videoconference space. Though two to three times what we are used to allowing, this amount ensures that local participants will see one another and the display of local and remote electronic images. It also ensures that participants at the far-end will see and hear everyone arriving at their location via the connection, and that all will see and hear at a level of quality that does not detract and, in the best deployment, even enhances the communications.

Having determined the required size of the space, we can move on to the actual renovation or construction of the space itself. Again the requirements here are generally less forgiving than those applied in local-only meeting spaces. In the most basic sense this is because, by sheer definition, at least some of the participants in a conference-based meeting are not actually in the room. As such, we cannot count on the typical human mechanisms (the human ears and brain and our ability to locate sound in three-dimensional space) to manage any acoustic anomalies.

If we are, for example, in a room that is adjacent to a double-door entry to the building, then knowing this we can take the inevitable doorway noise into account as we filter the sounds we hear both inside the meeting room and coming from that adjacent entryway. Within our own physical and local environment we have the ability to isolate local unwanted noise from local "sound of interest" (voices of other people, etc.), and place the unwanted noise in an inferior position in our conscious thought pattern. We are able to do this because we know where the noise is coming from and (usually) what is causing it. We may be annoyed by the noise, but we generally are able to ignore it. As soon as we add conferencing to the meeting equation, however, we add the element of electronic pickup and reproduction of all sounds. For the people at the far-end, the unwanted noise is much more difficult (if not impossible) to ignore. They do not have the ability to isolate it in three-dimensional space (the microphones eliminate the spatial reference) and they often do not know what is making the noise. The brain of the far-end participant will devote more and more conscious observation and thought energy to trying to work out these elements, in an attempt to isolate and finally "ignore" the unwanted sound. We have already stated that they cannot do this, however, due to the electronic separation between the locations. Thus they are left with an impossible task that takes up more and more thought energy, eroding the perceived quality of the spoken communication over time. Frustration and exasperation quickly set in, and the communication flow quickly falls apart.

This, then, is one reason we must pay even greater attention to the acoustic and visual issues for any presentation space that will be connected via conference to another. Minor, seemingly insignificant anomalies we often ignore in the local environment become significant impediments to smooth communication with people at the far-end of any connection. In short, we must always ask ourselves, "What does this look like and sound like to the people at the farend?"

In order to guarantee that the final conference environment will have a solid foundation, we begin with the construction of the walls, floors and ceilings for videoconference spaces.

Walls

Conference room walls should be built from slab to slab. That is, there should be no gaps from the concrete of one floor to the concrete of the next floor. Resilient, gypsum board mountings should be used to close any gaps. The thickness of the gypsum board should be 5/8" or more (one layer of 5/8" and one layer of 1/2" bonded together would be ideal) on the inside of the room, with 1/2" thick (or as required by local building codes) appropriate for the outside of the walls. There should always be a difference in thickness between the materials used on the inner versus the outer walls. That difference in thickness subdues mechanical coupling (vibration) between the two layers. A good overall wall thickness is 6". It is recommended that "offset stud" construction be used, typically a 6" header and footer with 3.5" verticals attached in an alternating pattern one toward the outside of the footer, the next toward the inside and so on.

Fiberglass dense batting or mineral rock wool, 4" to 6" thick (the equivalent of R-11 to R-13) should be placed in the wall space. The thickness of the batting is not critical. The critical aspect is that it must be loosely placed in the wall space, not compacted to fit. The resultant wall will have excellent acoustic isolation from the outside world. More significant acoustic isolation can be achieved by placing an additional barrier layer within the wall space. Typically this barrier will be made of a dense polymer material, about 1/8" thick, and the improvement regarding loss of sound transmitted through the wall will be roughly a factor of 10. These materials are available from a variety of manufacturers.

Windows

Windows usually present the equivalent of an acoustic nightmare (as well as altering the way a camera renders colors and brightness). They not only transmit room sound, but also allow unwanted outside noise to intrude on the conference space. In the event that windows cannot be avoided, it becomes essential that window treatment of some sort be used. This treatment should match the interior look and feel of the space, while providing a high level of sound and light block. Typically a heavyweight drape (24 ounces or more) of heavy fullness (not less than 6" fullness on not less than 8" centers per fold) is preferred. In all cases, the use of sheer draperies or standard vertical or horizontal blinds should be avoided, due to their inherent inefficiency in blocking sound and light, and the fine lines they create within the camera field of view.

Ceiling Tiles

These should be high-quality acoustic tiles, ideally 1"- thick compressed densecore fiberglass. An added benefit of this kind of ceiling tile is that it works well with the indirect lighting as specified elsewhere in this section. To reduce any extraneous noise from leaving or entering the room via the ceiling space, the ceiling tiles can be blanketed completely from the plenum side, with a minimum of 6"- thick unfaced dense fiberglass batting or mineral rock wool, (the equivalent of R-15 to R-19). Here again, a barrier layer will improve the performance, but all local building codes must be followed for allowable materials in the various aspects of room acoustic modifications. To make entry and exit from the ceiling space easier, the blanket and barrier do not need to rest on the ceiling tiles, but may be suspended above it.

Air Conditioning

It is critical that all air-handling equipment (blowers, heat exchangers, solenoid valves, etc.) be located outside the physical meeting room space. This will prevent the noise burden associated with such equipment from affecting the participants of any meetings held in the room. Location of air-handling equipment within the ceiling space of a conference room often renders that room unusable for video or audio-only conferencing.

The air vents should be of open construction to eliminate "wind noise" while the system is running. These vents normally are specified as "low-velocity" diffusers. The number of air vents within the room should be sufficient to maintain a consistent temperature throughout the space. All HVAC ducts and diffusers should be oversized for the general application in the space, with minimum 2' diameter insulated flexible ducts and matching 2' noise dampening diffusers generally best. All ducts should be installed with gradual bends and curves rather than rigid 90-degree corners. This will minimize "thunder" sounds as the initial air pushes through the ductwork and into the room.

There should be a thermostat to control this specific room system independently of the rest of the building, and that control should be located within the room.

Important: Allow an additional 5,000 BTU of cooling capacity for a standard "roll-about" singlemonitor VC system with extended in-room peripherals (PC, document camera, scan converter, etc.) and a minimum of 10,000 BTU for a dual display multimedia presentation system with large screen displays. For the comfort of the participants, the room must accommodate these heat loads, plus the heat load of a room full of people, with minimal temperature rise.

Interior Design and Finishes

Wall colors within the field of view of the camera have a significant impact on the far-end perception of the room video quality. Certain colors are better suited to video rooms than others. The electronics and software of the videoconferencing system "builds" the images at the far-end from a gray/blue reference image. When there is a minimal difference between the room background and the reference image color, the codec has an easier time turning the image into numbers, with the result that the far-end will see a much higher quality video presentation. In general, light gray with just a touch of blue seems to work best. For rooms that have marginal lighting, slightly darker colors are quite useful.

In keeping with these color recommendations, the acoustic panels (discussed elsewhere in this section) should be ordered in light colors such as silver-gray, quartz or champagne for panels within the camera field of view. For aesthetics, however, panels may be alternated in color along the wall.

Furniture

As we have noted, VC rooms should be slightly on the large side for the typical number of attendees. The placement of furniture should present a natural rapport with the videoconference system, but shouldn't preclude the local interaction of conference participants. Doorways used for access to the space usually should be within the view of one of the camera presets to prevent the perception from the far-end that people could come into their meeting unseen. Doorways should not, however, be in constant, direct view of the camera system, as this may cause unwanted distractions and movement of people in the picture field.

Any tables within the conference environment should have a light top surface. Glossy tops should be avoided, as should strong colors or any bold wood grain. If glossy or saturated color surfaces are unavoidable, then proper lighting can help reduce (but not necessarily eliminate) their ill effects. The best table surface color is a flat satin finish, in neutral gray. In cases where the worst possible surfaces are present, the proper surface color effect can be achieved by using a table covering, put in place only when the room is being used for videoconferencing. This will, however, create problems related to the use of access ports in the tables or movement of end-user items across the surface.

Acoustics

Additional general elements related to the interior finish details for the space include acoustics. In terms of ambient noise level, the acoustic design goal for any conference- enabled room is at least NC-30 (NoiseCriteria-30). This level of specification dictates a very quiet space (somewhere around 40-dBCSPL

ambient noise level). A room built to the description found elsewhere in this section will usually fall between NC-30 and NC-35. The actual NC value is not critical; what is important is that the room be built with the intent and care required to achieve the low noise rating. Typically in architectural design, a site evaluation and analysis are required to certify the noise performance of a given space. The quieter the room, the easier it is to hear others in the same room as well as be heard by others who are participating via conference connection to a far-end location (or locations).

Almost every conference room of medium to large size (larger than 12'x15') requires some level of acoustic treatment to provide good speech-rendering to other conference sites. The quality differences lie in the areas of intelligibility and consistency of loudness as presented to the far-end. While the people at the far-end may hear the sounds coming to them, it may be hard for them clearly to distinguish all of the vowels, consonants, inflections and nuances of actual human speech communication. (We all know that it is not simply what you say but how you say it—i.e., the inflections and intonations—that makes the difference in perceived meaning in human communications.)

Good audio practice dictates that the treated surfaces be composed of at least two nonparallel walls. And, as the VCS hardware is a potential source of distracting fan noises, the walls to be treated should include the wall immediately behind the VCS hardware, whenever this hardware is within the conference room proper. To help prevent meeting audio from leaking into adjoining hallways or offices, the walls along those areas also should be treated.

Approximately 50 percent of the wall area needs be covered with acoustic panels. The type recommended is 1" thick compressed, dense-core fiberglass, fabric-covered, or equivalent, with a SABIN (sound absorption index) value of 0.9 average. This specification is sometimes referred to as NRC (noise reduction coefficient). If reduction of sound passing through is required, then an additional barrier layer is laminated to the dense-core material, usually 3/8" thick fiber compression board. The barrier layer is placed against the existing wall material, then the acoustic absorption panels are placed on the interior-room side of that. The barrier panels will have a SABIN of 0.9, but will have an additional specification of an STC (sound transmission coefficient) of 20. STC is a measure of the amount of reduction in loudness of sound passing through the material. Having an STC rating of 20 means there is a factor of 10 reduction in the amount of sound passing through that material. A high-quality conference room wall usually has an STC of 60 or more—that is, less than 1/1,000 of the sound in the room leaks through the wall.

Room Lighting

The brightness of the lighting in a videoconference room plays an important role in determining the far-end view of the meeting. When there are low to moderate amounts of light—20fc to 35fc (footcandles), typical office lighting—the distance range of "in focus" objects (depth-of-field) usually is

only 2' or 3' from nearest in-focus to furthest in-focus. With bright light (70fc or more) the range of in-focus objects can more than double. Participants at the far-end will see more people in sharp focus, and the codec will have an easier time encoding the image.

Bright standard direct fluorescent lighting has the undesirable side effect of being harsh for the local participants. In addition, the direct down lighting casts significant "drop shadows." The result is undue stress among participants.

The best plan for videoconferencing is to use indirect lighting for 80 to 85 percent of the light, and evenly distributed direct lighting for the remaining 15 to 20 percent. The indirect light will help minimize shadows on the faces of the participants, and make the room more comfortable for viewing the far-end on the TV monitor. The direct light can be used to create backlight separation between foreground and background objects or surfaces.

There should be not less than 55fc and ideally as much as 75fc of light (770lux) on the faces of the participants in the facial field as viewed by the camera in the conference space. The light should be completely even across the field of measure or view, and of one consistent color temperature.

To best meet these requirements, indirect fluorescent lighting most often is recommended. This type of lighting works by using the upper walls and ceiling as diffuse reflectors for the light. The usual recommended color temperature for these is 3,000 to 3,800 degrees Kelvin. If there is a significant quantity of outdoor light entering the room, the lamps should be more than 5,500 degrees Kelvin.

Light Fixtures

The light fixtures generally recommended for indirect lighting are available from a number of manufacturers. They typically are three-tube, 8" oval indirect up-lights, though they may take the form of chandelier-style pendant lights, wall sconces, cove lights or flushmounted specialized troughs. Many manufacturers work closely with contractors and lighting designers to ensure that the correct light levels and shadow-free zones are designed into the room, especially when used for videoconferencing. Lamps for these fixtures are available in a variety of specified color temperatures from numerous manufacturers, including Sylvania, General Electric and Osram/Phillips. Indirect fixtures are available in a number of different designs or "looks," and can be purchased in configurations that will complement and not detract from the interior design of the space.

Lighting layout recommendations and determination of the number of fixtures needed are handled either by the architectural design firm or by submitting a complete floor plan, including reflected ceiling, walls and furniture placement, to fixture vendors. The vendors will analyze the plans and return a finished lighting layout to the customer, detailing the number of fixtures, placement and required wiring.

It is important to remember that the use of traditional meeting room downcans—even those that have color-corrected light sources—for any lighting in the field of view that may include human faces is to be avoided at all costs. These will result in extremely uneven fields of light, or pools, and heavy, unnatural shadows on the faces of the participants.

Room Preparation Conclusion

When we follow the above guidelines we dramatically improve the odds for success in the final deployment of live bi-directional conference-based human communications. An added benefit is that this approach dramatically enhances the effectiveness of the room as it operates for more traditional meetings and presentations. The environment is more comfortable and flexible, and less dependent on specialized electronics for "fixing" deficiencies in the environment.

Audio Elements

Once the space is prepared, we can focus on integration of the various audiovisual tools within the environment: audio, video and control.

Audio Input

The primary input device for the audio portion of any conference system is the microphone. Elsewhere in this book [*Basics of Audio and Visual Systems Design*] we have discussed how these devices operate within a given acoustic environment. We turn now to a short discussion of how these elements operate within a conference environment, where such factors as "three-to-one" rules and "critical distance" often are pushed to the limit or violated entirely.

When sound travels in a room, it follows "the inverse square law." This means that the sound level heard at a microphone drops by a factor of four every time the distance doubles. Another important consideration in room audio design is the concept of "critical distance," or the distance at which the loudness of the room background noise plus reverberation is less than one tenth of the loudness of voices getting to a particular microphone. (This definition is the result of research conducted by Don and Carolyn Davis. that is referenced in the chapter "Designing for Intelligibility" in the Handbook for Sound Engineers.[1])

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1. Davis, Don and Carolyn. "Designing for Intelligibility" in Handbook for Sound Engineers: The New Audio Cyclopedia, ed. Glen Ballou (Indianapolis: Howard Sams & Co., 1991), 1279-1297.

As an example, we will work with a room having an ambient noise level of approximately 60dBA-SPL. A person speaking in a normal voice is 72dBA-SPL at about 2' distance. At 4' the loudness drops to approximately 66dBA-SPL. This already is farther than the critical distance criteria allow, given the ambient noise level. At 8' distance, a normal speaking voice is approximately 60dBA-SPL. Now the voice energy and the room background noise are about equal. For "send" audio systems in a room to work correctly, therefore, the room noise level would have to be below 40-45dBA-SPL at the microphones at all times. This gives us some measure by which we can begin to plan the microphone array within a space, including selection based on pickup pattern, sensitivity, noise rejection and signal-to-noise in relation to the ambient noise floor or level within the space. The good news is that a room designed and built as described in this section will provide an acoustic space where almost any properly configured and installed audio system can operate with very good results.

Perhaps the most difficult issue for any room designer or system planner is actual microphone placement within the space. Given the fact that many people view conference table space as sacred (to be used for papers, laptops, coffee cups and other end-user items), there often is a great deal of pressure to place the local microphones on the ceiling instead of on the table surface. But this approach must be taken with great caution. We have already seen the dramatic impact of changes in the distance between people (their mouths) and the microphone. Ceiling systems generally place microphones farther away from the participants' mouths, not closer; critical distance calculations may eliminate ceiling placement from consideration for this reason alone. In addition, the ceiling surface generally is one of the noisiest areas of the room. Proximity to HVAC ducts and vents, attachment of tiles and runners to building members that are prone to vibration and shaking, and proximity to noise from other spaces migrating through the plenum make this area one of the least desirable for placement of microphones. This doesn't, however, keep people from looking at this broad open surface as the best place for microphones, to "get them off the table."

If ceiling placement is chosen, the system planner must select the components with great care from a manufacturer that specializes in this type of audio voice reinforcement. The manufacturer must be skilled in live audio and capable of installing the components (that is, being both able and willing to locate microphones at precisely measured distances from speakers, and locating those speakers at precisely measured intervals from each other and from the walls) to extremely tight tolerances. The system provider must fully inform the endusers of the potential downside effects of this approach. In any event, simply mounting a standard tabletop microphone on the ceiling tiles or implementing this solution in an ambient noise environment of 45dBA-SPL or greater will all but guarantee costly failure. No amount of post-microphone processing will fix the problems.

Audio Output

For conference communication we do not really care about producing the thundering roar of jet aircraft engines, or other sounds reproduced on TV or in the movies. We are interested in reproducing the human voice. The tone, intonation, pitch and level of people speaking from the far-end should sound as much as possible like the sound they would make if they were speaking in the room. Given what has been covered in other sections of this book [*Basics of Audio and Visual Systems Design*], we will touch base here on a couple of simple, basic elements of the speaker technology we deploy in the conference room. These basics fall into three subcategories: direction, power and range/frequency response.

Direction

As human beings, we feel most comfortable when the voice we hear appears to come from the same direction as the image of the person speaking. This means that reliance on ceiling speakers alone is not an ideal practice when the system is used for videoconferencing. In many small and medium-sized systems, front-firing speakers alone can provide proper direction and adequate coverage. Larger rooms (greater than 12'x15') probably need both front-firing and side or top-fill speakers in order to maintain proper coverage at nominal power levels.

In planning systems for larger rooms, we need to take advantage of the HAAS effect. Basically stated, this is the human brain's interpretation of sound direction when the same sound arrives at the ear from two or more directions within a certain time period. We attribute the direction of the sound to the direction from which the sound is first perceived, even if it is mixed with that same sound arriving from a completely different direction, as long as the two (or more) instances of the sound are within about 30ms of one another. Since sound travels faster electronically than it travels through the open air we may need to add audio delay to the side firing or ceiling speaker arrays in order to keep the primary perceived point source as the front of room/front-firing speakers.

Power

Power is a function of loudspeaker efficiency and total available system power. Most speakers operate in a power range that is broader than the range in which they operate without distortion. For the purpose of conference communication, we are interested in sound that has little or no distortion. Sound that is reproduced accurately (with no distortion) will most accurately represent the voice of the people from the far-end (our primary goal). Accurate reproduction also will aid the echo-cancellation circuitry in the system, minimizing the amount of echo that the system sends back to the people at the far-end, and thereby increasing perceived ease of intelligibility and understanding. Remember that any distortions present in the playback audio system—whether harmonic, amplitude (gain compression) or temporal (time

delays) — will be recognized by the echo canceller as "new audio information," and it will send those distortions to the far-end, perhaps wreaking havoc on the system audio quality. In short, speaker power should be matched to overall audio subsystem power. The speakers should provide adequate coverage and be able to present approximately 80 to 85dBA-SPL (continuous) at the local site with the system operating at nominal power utilization, and have a peak reserve of 15 to 20dB before distortion.

Range/Frequency Response

The human ear is able to hear sounds in a very wide range of frequencies (as low as 70Hz and as high as 12,000Hz). The human voice is able to produce sounds in a narrower range (100Hz to 8,000Hz). Most spoken communication occurs, however, in a range that is only 150Hz to about 6,000Hz. This means that we need to select speakers that operate with ideal performance in a fairly narrow range for human voice (as opposed to speakers used for music, that may have ranges of 20Hz to 20,000Hz). We must also be alert to the crossover characteristics of the speakers we select. Many coaxial and paraxial speakers have their crossover within the middle audio frequencies, thereby inducing potential distortion within the spoken frequency range and creating anomalies within the system that hinder voice communication.

Video Elements

As a general rule, any display used in a videoconferencing environment should be sized for the number of attendees, the physical distances involved and the type of material presented onscreen. The screen size should allow for clear and easy viewing at the various distances experienced within the room. A measure of required screen size that often is applied to projection technology is: no closer than 1.5 times the diagonal measure and no farther than 7 times that measure. Nobody should have to sit closer than 2 times the screen diagonal measure, nor farther than 8 times that measure.

Direct viewed tube-type displays (monitors) almost always are sharpest and brightest in a videoconferencing environment. "Retro-projector cabinet" displays (which look like largescreen TVs) are next in sharpness and brightness, and "front-screen" projectors come in last. Glare and uncontrolled ambient room lighting adversely affect the quality of the image most with front-screen projectors and least with direct view tubes. A very limited number of frontscreen projection systems have sufficient brightness and contrast to be useful in a properly lit videoconference room.

Video Projection for Use in Videoconference

Many installations make use of video projection devices. The most important thing to remember in the planning of video projection for a videoconference space is that front projection is vastly inferior to rear projection. Front projection systems are less expensive and easier to implement, but the conflicting interest between the camera and the projection display makes this form of display a very poor choice. Front projection setups operate best when the lighting in the room is dimmed or doused. When this is done, the videoconference cameras can no longer operate, since they require even, bright, color-corrected light. A direct conflict between these two technologies is clear. In the event that a rear projection room cannot be set aside, retro-projection units can be purchased from a number of manufacturers. These units normally are available in sizes ranging from 40" to 72" diagonal measure. To display high-quality video while maintaining optimum lighting for interactive video meetings will require a projector of the "light-valve" or DLP™ class.

Regardless of the exact type of projector selected and the exact nature of "front versus rear," there are certain essential rules for projector placement. The goal in projection is to get the image beam to aim directly into the audience's eyes. In Western cultures the average distance from the floor to a seated person's eye is 4'. That distance becomes the target for the direct beam of the projector. Again keep in mind that front projection should be avoided except in the most extreme cases. If it is employed at all it must be used with an extremely bright projector (2,500 lumens or greater for any space smaller than 25'x40').

Cameras

There usually is a "main" or "local people" camera positioned on top center of the display, so that it can "see" the participants and anything necessary at the sides of the room, using pan and tilt features. If individual presentations may be made from the side or "front of audience" area of the room, an additional camera should be located at the back of the room, also mounted to allow a view of the presenters when necessary. Some cameras contain an active camera pointing system that also can be used effectively, given proper care in the mounting of the camera assembly. The area immediately surrounding the camera assembly needs to be acoustically "dead" to ensure that the voice tracking and pointing algorithms work correctly. This is another reason to pay close attention to the acoustic environment and acoustic treatment of any space intended for use with this type of camera system.

If local presentation is blended with VC for any events, we must consider the needs of the presenter who will not be "facing" the local image or inbound image displays used by the main body of the local audience. One or two monitors (and a camera) should be mounted at the back of the "audience-end" of the room, with the horizontal centerline at approximately 5' from the floor for ease of presentation interaction between the presenter and the group(s) at the farend(s). Remember that, with the exception of PC-based information that is not in a standard composite narrowband video format, any information we

wish to "show" or "view" must be translated to video, most often with some sort of camera mechanism. Document cameras, 35mm slide-to-video units, video scanners and scan conversion devices all are designed to take one format of source material and convert it to a standard video signal that can be digitized, shipped to the far-end(s), and converted back to composite video for display. Which devices are selected and how they are used depends entirely on the needs and goals of the end-users of the system(s) and the format of their source materials.

Room Control Elements

To give all participants the easiest use of the room for any and all presentation or conference purposes, a fully integrated room controller is recommended. It is important that one controller operate all devices in the room so that only one user interface needs to be learned by those managing the facility. The common controller also makes it much easier to expand and enhance room capabilities over time by adding or upgrading equipment. A proper room controller can operate and coordinate the use of lighting, curtains, displays, audio devices, VCRs and slide projectors, as well as all the conferencing equipment, including any network-related control needed. In lieu of a complete control system, a limited functionality controller can be located at the presentation interface panel to control the switching and routing of the computer graphics and configure the overhead camera video paths.

It is strongly advised that at least 20 percent of the time spent developing a videoconferencing room be devoted to this important sub-system, as it will complete the integration of the conference and presentation environment.

And remember that simpler is always better. People do not pay for technology. They pay for the benefits that technology can bring. The doorway to those benefits is a simple, straightforward and intuitive user control.

B

Polycom RealPresence Group Series Specifications

Back Panel Information

Refer to the *Administrator's Guide for the Polycom RealPresence Group Series* at support.polycom.com for back panel views of Polycom Real Presence Group systems and for details about the various connections available on each Polycom Real Presence Group back panel connector.

Inputs/Outputs

Audio Specifications for Polycom RealPresence Group 500 systems

Characteristic	Value
Maximum Input Level 0 dBFS, Analog Inputs	0 dBV (1.0 V_{RMS}), $\pm$ 1 dB
Input Impedance Analog Inputs	20kΩ, $\pm$ 5%
Maximum Output Level Line Output (≥600 Ω load):	+6 dBV (2.0 V_{RMS}), 1 dB
Output Impedance Line Output	150, ±5% Ohms
Signal-to-Noise Ratio Either analog audio input routed to Main Output: Any digital audio input routed to any digital output:	>85 dB, A-weighted >95 dB, A-weighted

Characteristic	Value
Dynamic Range Either analog audio input routed to Main Output: Any digital audio input routed to any digital output:	>85 dB, A-weighted >95 dB, A-weighted
Crosstalk and Feed-Through Any input or output channel to any other channel	≤−80 dB, 20 Hz to 20 kHz
Frequency Response Any input to any output, Relative to 997 Hz	+1, −3 dB, 50 Hz to 20 kHz
Total Harmonic Distortion + Noise vs. Frequency -1 dBFS Input Level -20 dBFS Input Level −1 dBFS input level −20 dBFS input level	 −60 dB, 50 Hz to 20 kHz −65 dB, 50 Hz to 20 kHz −95 dB, 50 Hz to 20 kHz −75 dB, 50 Hz to 20 kHz

Audio Specifications for Polycom RealPresence Group 700 systems

Characteristic	Value
Maximum Input Level 0 dBFS, Analog Inputs 0 dBFS for Line Inputs	 0 dBV (1.0 V_{RMS}), ± 1 dB +6 dBV (2.0 V_{RMS}), ± 1 dB
Input Impedance Analog Inputs	 20kΩ, ± 5%
Maximum Output Level Line Output (≥600 Ω load):	 +6 dBV (2.0 V_{RMS}), 1 dB
Output Impedance Line Output	 150 Ω, ± 5%
Signal-to-Noise Ratio Any analog audio input routed to the analog output Any digital audio input routed to any digital output:	 >90 dB, >95 dB, A-weighted

Characteristic	Value
Dynamic Range Either analog audio input routed to Main Output: Any digital audio input routed to any digital output:	>90 dB >95 dB
Crosstalk and Feed-Through Any input or output channel to any other channel	≤−90 dB, 20 Hz to 20 kH
Frequency Response Any input to any output, Relative to 997 Hz	+1, −3 dB, 20 Hz to 20 kHz
Total Harmonic Distortion + Noise vs. Frequency -1 dBFS Input Level -20 dBFS Input Level −1 dBFS input level −20 dBFS input level	 −80 dB, 50 Hz to 20 kHz −70 dB, 50 Hz to 20 kHz −95 dB, 50 Hz to 20 kHz −75 dB, 50 Hz to 20 kHz

DTMF Dialing

The Polycom RealPresence Group series systems generate the following tip/ring signal levels:

- Low-frequency tone: -10.2 dBV, -8.0 dBm when AC termination of the line is 600 Ohms

- High-frequency tone: -8.2 dBV, -6.0 dBm when AC termination of the line is 600 Ohms

- The system seizes the line and waits 1.5 seconds. The number is then dialed with a 80 ms tone period followed by a 80 ms silence period for each digit.

Remote Control

This section provides information about the IR signals for Polycom RealPresence Group systems.

> This information is provided for reference only. Polycom claims no responsibility or liability for programmed third-party remote control devices.

Notes

- Wake up – 2.6 ms on; 2.6 ms off

- 0–559 µs (22 pulses at 38 KHz) on; 845 µs (33 pulses at 38 KHz) off

- 1–845 µs (33 pulses at 38 KHz) on; 1192 µs (46 pulses at 38 KHz) off

- EOM–559 µs (22 pulses at 38 KHz) on

- System Code consists of a User ID field (upper nibble) and the Polycom Vender Code (lower nibble) with value 0x5. The default User ID value is 0x3, so the default System Code value is 00110101 or 0x35.

- Parity is a 2-bit field consisting of a parity bit (b1) and a toggle bit (b0). Parity is even.

- Inter-burst timing is 2200 pulse times at 38.062 KHz or 57.8 ms

- 38.062 KHz signal is at 1/3 duty cycle to LED

- Multi-bit fields are transmitted most significant bit first

- Bits are labeled b0..bn, where b0 is the least significant bit

Protocol is: <Wake up> + <System Code> + <Key Code> + <Parity> + <EOM>

Key Name	Key Code	Key Code	Parity
#	1100	0CH	Even
*	1011	0BH	Odd
0	110000	30H	Even
1	110001	31H	Odd
2	110010	32H	Odd
3	110011	33H	Even
4	110100	34H	Odd
5	110101	35H	Even
6	110110	36H	Even

Key Name	Key Code	Key Code	Parity
7	110111	37H	Odd
8	111000	38H	Odd
9	111001	39H	Even
Auto	11001	19H	Odd
Call	100101	25H	Odd
Call/Hang Up	11	03H	Even
Camera	11110	1EH	Even
Colon	101111	2FH	Odd
Delete	100010	22H	Even
Dial String	0	00H	Even
Directory	11010	1AH	Odd
Dot	100001	21H	Even
Down Arrow	110	06H	Even
Far	10001	11H	Even
Fast Forward	101011	2BH	Even
Feet Down	10110	16H	Odd
Feet Up	11000	18H	Even
Hang Up	100110	26H	Odd
Home	11011	1BH	Even
Info (Help)	10100	14H	Even
Keyboard	100011	23H	Odd
Left Arrow	1001	09H	Even
Low Battery	10111	17H	Even
Menu (Back)	10011	13H	Odd
Mute	111010	3AH	Even
Near	1111	0FH	Even
Option	101000	28H	Even
Pause	101101	2DH	Even
PIP	11101	1DH	Even

Key Name	Key Code	Key Code	Parity
Play	101001	29H	Odd
Power	100111	27H	Even
Preset	11111	1FH	Odd
Record	101110	2EH	Even
Return	111	07H	Odd
Rewind	101100	2CH	Odd
Right Arrow	1010	0AH	Even
Slides (Graphics)	10010	12H	Even
Snapshot (Snap)	10101	15H	Odd
Stop	101010	2AH	Odd
Up Arrow	101	05H	Even
Volume Down	111100	3CH	Even
Volume Up	111011	3BH	Odd
Zoom In	1101	0DH	Odd
Zoom Out	1110	0EH	Odd

RS-232 Serial Interface

The RS-232 serial port is implemented by an FPGA-based UART (Universal Asynchronous Receiver/Transmitter) that supports the following values.

Mode	Baud Rate	Parity	Stop Bits	Data Bits	Flow Control
Control	9600 (default), 14400, 19200, 38400, 57600, 115200	None	1	8	Off

C

Categorical List of API Commands

You can view the table of contents for this book to see an alphabetical list of available API commands. These commands are categorized into the following sections:

- Local Directory Commands on page 250
- Call Function Commands on page 250
- Conference Setting Commands on page 251
- Global Services Commands on page 251
- LAN, WAN, and IP Commands on page 253
- Miscellaneous Network Commands on page 254
- Video and Audio Commands on page 254
- Registration Commands on page 255
- System Commands on page 256
- User Interface and System Display/Sound Commands on page 257
- Miscellaneous Commands on page 258

Local Directory Commands

Call Function Commands

Calling Commands

Call Status Request

Call Registrations

Call Account Settings

Call Preference Settings

Conference Setting Commands

Conference Settings

Global Services Commands

Calendar Commands

GAB and GDS Commands

GMS Commands

LDAP Commands

SNMP Commands

LAN, WAN, and IP Commands

H323 Commands

Gatekeeper Commands

Gateway Commands

LAN and WAN Commands

Network and QoS Commands

Miscellaneous Network Commands

Miscellaneous Network Commands

Video and Audio Commands

Audio Commands

Content Commands

Camera Control/Input Select Commands

Camera Input Setting Commands

Monitor Video Output Setting Commands

Registration Commands

System Commands

System Setting Commands

Query Commands for System Information

Diagnostic Commands

User Interface and System Display/Sound Commands

Sound Setting Commands

Display Setting Commands

IR Emulation Commands and Control

Miscellaneous Commands

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