
Introduction to the IQ Conference Room

How to Configure, Control and
Troubleshoot Standard
Functions: Prototype



Student Guide

Christine Wessels
Desiree Hodge
Holly Maso



TABLE OF CONTENTS

1. INTRODUCTION TO THE IQ ROOM 3

 1.1. Capacity & Features 3

 1.1.1. Equipment 3

 1.1.2. Capabilities 4

 1.2. IQ Room Control Graphic User Interface (GUI)..... 4

 1.2.1. Control Options and Groups..... 4

2. LIGHTING CONTROL SYSTEM 6

 1.2.2. Lighting Control Software Start Procedures 6

 1.2.3. Understanding the Lighting Control Software Interface 6

 1.2.4. Lighting Control Software Operation 7

3. AUDIO & VIDEO TELECONFERENCING (VTC)..... 8

 1.3. Configuring the Video Switch Control..... 8

 1.3.1. Video Control Software Start Procedures 8

 1.3.2. Anatomy of the Video Control Interface 9

 1.3.3. Video Control Software Operation 10

 1.4. Configuring the Audio Switch Control..... 11

 1.4.1. Audio Control Software Start Procedures 11

 1.4.2. Anatomy of the Audio Control Interface 11

 1.4.3. Audio Control Software Operation..... 13

 1.4.4. Configuring the Audio System for an Audio Conference and/or VTC..... 14

 1.4.5. Configuring the Video System for an Audio Conference and/or VTC..... 14

 1.4.6. Operating the Cameras in the IQ Room 14

4. PROCEDURES FOR PUSHING AN IMAGE FROM A LAPTOP THE VIDEO SYSTEM 16

5. TABLE OF FIGURES 17

INTRODUCTION TO THE IQ ROOM

The IQ Room is a unique and technologically advanced resource at CDH Technologies. Its primary purpose is to host large-scale events (15 or more people up to a total of 80) such as workshops and special events that require its exclusive capabilities.

CAPACITY & FEATURES

Maximum desktop capacity.....64
 Maximum seated capacity.....80
 Default configuration.....
*Left Side: "U", Right Side: Classroom*
 Location CDH Technologies, 11th Floor

BOOKING CONTACT:

Name: _____
 Phone: _____
 E-mail: _____

TECHNICAL CONTACT:

Name: _____
 Phone: _____
 E-mail: _____

EQUIPMENT

- 3 – NEC 61" LCD displays mounted on the front wall.
- 2 – Adjustable NEC 50" LCD displays mounted on the east and west walls.
- 3 – Dell laptop computers configured to control audio, video, and lighting.
- 2 – Video cameras (mounted on the ceiling) with remote controls
- Ceiling-mounted-microphones (16) and speakers (6)
- 24 Floorboxes. These boxes allow for any PC or laptop to connect to the video switch, audio system, and data network. Each box is equipped with the following:
 - 1 VGA (video input)

The photographs below show the default configuration for this space. However, it can be reconfigured with both sides in the classroom style to accommodate up to 64 participants at the tables and an additional 16 guests in the back row.

Figure 1 - IQ Room: Left-side Standard Configuration



Classic "U" configuration seats 16 around the table and an additional 10-14 seats around the sides and back wall.

Figure 2 – IQ Room: Right-side Standard Configuration



Classroom configuration seats 32 at the tables and an additional 8 along the back wall.

- 1 audio port (2mm)
- 2 power outlets
- 2 RJ45 data ports (internet connections)
- 1 – USB/Serial adaptor
- 32 – tables equipped with dual power A/C sockets (doghouses)
- VTC integrated into the A/V network provides the capability to send any video or audio source connected to the network.

CAPABILITIES

- **Video**
 - Video-teleconferencing: Point-to-point and multi-point video conferences. (Note: Multi-point conferences exceeding 3 points require a video bridge. See the Event Coordinator to set up.)
 - 5 LCD screens and the VTC system enable information from a laptop to be projected within the room and out to remote participants.
- **Audio**
 - Audio-teleconferencing: Point-to-point and multi-point audio conferences. (Note: Multi-point conferences exceeding 3 points require an audio bridge. See the Event Coordinator to set up.)
- **Internet Access**

Features:

 - Accommodates up to 44 concurrent users
 - Wi-Fi up to 20 concurrent connections
 - 24 standard Internet connections

IQ ROOM CONTROL GRAPHIC USER INTERFACE (GUI)

CONTROL OPTIONS AND GROUPS

Below is a list of the equipment control groups available in the IQ Room GUI and a brief description of each.

Lighting – presents a graphical layout of light fixtures (or groups of fixtures) and controls to select them and set their illumination levels.

Video – presents a graphical layout of video sources and displays. The displays indicate which source is connected. Sources may be connected to displays.

Audio – presents a graphical layout of the audio inputs and outputs. The inputs may be connected to outputs by connecting to common mixing channels.

Tip! - When opening more than one control group, minimize each of the windows. This will make switching between them more convenient.

Figure 3 - IQ Room Control Interface





LIGHTING CONTROL SYSTEM

The lighting control software provides the user with the ability to control groups of one or more light fixtures.

LIGHTING CONTROL SOFTWARE START PROCEDURES

From a laptop:

1. Start a browser.
2. From the Link Menu, select 'IQ Room Control GUI' OR enter the following IP address: 123.45.67.8
3. From the home control page, select the 'Lighting' control.

UNDERSTANDING THE LIGHTING CONTROL SOFTWARE INTERFACE

The Menu bar displays the following options:

- **Configuration** - The first menu item selects configuration. The available configurations are listed under the menu item. The default configuration is determined by the server and loaded when the first server connection is established. The current configuration is displayed on the status bar below the menu.
- **View** - The View menu option presents toggles for name and level zone labels. The Rotate option rotates the displayed configuration 90 degrees. The scale option fits the layout to the frame.
- **Select** - You may select all zones, or complement the current selection (selected zones are deselected, and non-selected zones are selected), or capture the selections for later recall.
- **All Zones** - This option provides the operator the choice of turning all the lights ON, OFF, OR DIM (10%). The Save menu option captures the current settings of all lights and adds a menu selection that will restore the saved selections.
- **Presets** – Defined by the server. This option allows the user to save a setting in the current client session using the preset Save option. Selecting the created preset will request the lights return to the saved levels.
- **Help** – This option presents a document describing the operation of the interface.

LIGHTING CONTROL SOFTWARE OPERATION

1. Using a laptop, open the IQ Room GUI.
2. Click on 'Lighting' icon.

The application will launch two web pages that must remain open. The status bar at the top displays the current configuration name. As the mouse travels over a zone, it displays the zone name and the range of levels in that zone. The main panel displays the lighting zones as polygons on a background image of the floor plan. The view of the room is from overhead, facing the front LCD screens. The slider to the right adjusts the level of the selected zone(s) and the blue indicators display the brightness level.

3. Click and drag to select the desired units. The lights selected will be highlighted in red.
4. Using the slider on the right, adjust the brightness level.

To adjust one zone: Select the polygon of the desired zone. Modify the level of the selected unit. The slider may be adjusted by dragging the slider, or by tapping on a position on the slider.

The blue indicators on the side of the slider are updated when the server confirms that the hardware has adjusted the level.

To adjust multiple zones: Hold the 'Shift' key and using the mouse, select additional polygons, and/or drag the mouse/mouse over multiple zone polygons. The slider will automatically switch to the multiple-zone mode where the thumb is positioned in the middle. Adjusting the thumb changes each of the selected zones by the same relative amount. The blue indicators confirm the brightness levels of the zones.

Turning all zones on or off: Select 'ALL ZONES' from the menu bar and select either 'On' or 'Off'.



Check Point

Tips for trouble-shooting the lighting system:

✓ *If none of the lights respond to commands using the lighting control interface, use the toggle switch on either side of IQ Room.*



AUDIO & VIDEO TELECONFERENCING (VTC)

Administrative Note: VTC is one of the most requested resources in the IQ Room. When reserving a room with the intent of hosting a multi-point video teleconference, the Host must select the multi-point video bridge option on the reservation form with a minimum of 48 hours notice. Requests received with less than 48 hours notice cannot be guaranteed.

CONFIGURING THE VIDEO SWITCH CONTROL

The video control software provides the ability to connect a video source to one or more of the LCD displays and the VTC system.

VIDEO CONTROL SOFTWARE START PROCEDURES

Prior to connecting to the Video system, confirm that all the LCD displays are on:

1. Locate an NEC remote control for the LCD displays.
2. Aim the remote control at each individual display and press 'On'.

A green light at the bottom right of the screen indicates the LCD display is on.

TO CONNECT A PC OR LAPTOP TO THE VIDEO NETWORK:

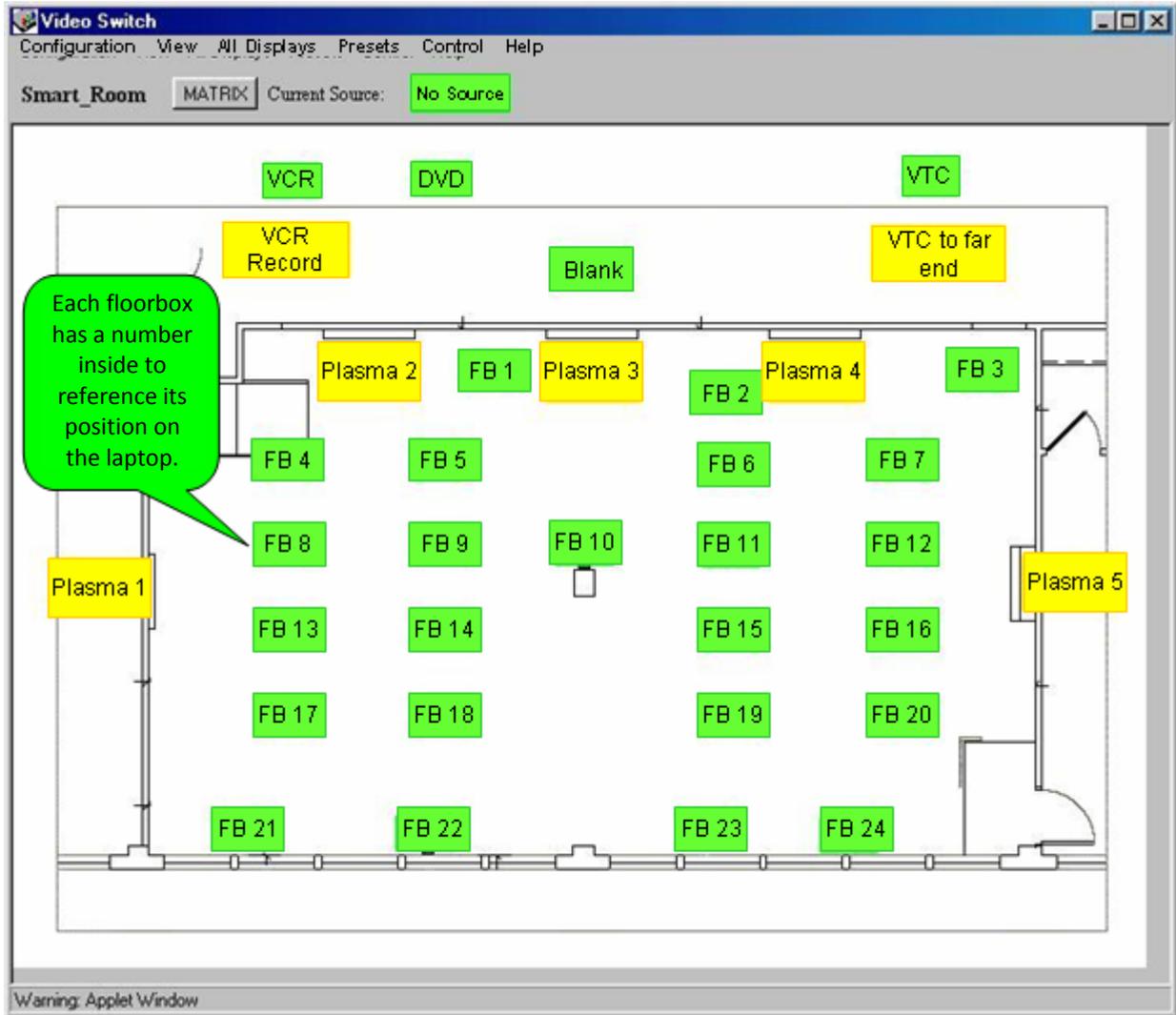
1. Locate one of the 24 floorboxes.
2. Open a floorbox and locate the VGA connector.¹
3. Use a Video cable to connect the VGA connector from the floorbox to the VGA connector on the laptop.²
4. Open a browser and connect to the IQ Room Control GUI.
5. Select the 'Video' control.
6. Click the 'Video' icon.

¹ The floorbox number is located inside the box.

² If the image does not appear on the LCD display, push the video signal out from the laptop (e.g., on Dell laptops, pressing Fn+F8 on the keyboard will activate the VGA connector.)

The application will launch two web pages that must remain open.

Figure 4 - Video Control Interface



ANATOMY OF THE VIDEO CONTROL INTERFACE

Refer to Figure 4 on page 9.

The Menu bar displays the following options:

Configuration - The first Menu item on this interface selects the configuration. The available configurations are listed under the menu item. A default configuration is determined by the server and then loaded when the first connection is established. The current configuration is displayed on the status bar below the menu.

View - View Info Frame displays a panel with the video sources and displays of the node under the pointer.

- Rotate: rotates the configuration 90 degrees.
- Scale: fits the layout to the frame.

All Displays - Contains the following selections:

- Blank: disengage all displays.
- Resume: all displays request connection state before Blank
- Selected Source: all displays request the selected source.

Presets – A named group of connections.

- One of a list of server-defined presets may be selected.
- Save Connection: The current connection state is stored as Client #.
- Client #: The saved connections are restored.

Control – Some devices have supplemental control capabilities. Any devices that are available will be listed here. Selecting an item will present a window with the device's controls. Example controls are power, mode, presets, input channel, and status.

Help – Presents a document describing the operation of the interface.

The status bar at the top displays the current configuration name, the selected source, and confirms a connection to the server. The main panel displays the source, display, and device nodes on the IQ Room ground plan. The source nodes are green (■), and the display nodes are yellow (■). The display nodes indicate which source is connected beneath the display name label.

VIDEO CONTROL SOFTWARE OPERATION

When the interface is loading, 'Connecting to Server' will appear in red in the status bar. Once connection has been established, the configuration (since last use) is loaded. Standard practice is to reset or 'blank' out all video inputs and outputs at the close of a session.

1. Turn on the LCD display(s) using the NEC remote control.
2. Locate the floorbox number on the web page. These are the boxes in green (■).
3. Select the desired LCD screen(s). These are the boxes in yellow (■).

The yellow display box will indicate the number of the floorbox selected.

TO CONNECT A SOURCE TO A DISPLAY:



Check Point

Tips for troubleshooting the lighting system:

✓ *If video from a laptop does not appear on a screen, use the LCD remote to toggle the video input (set to Video 1).*

✓ *Set the resolution of the projecting laptop to 1024x768 resolution with a refresh rate of 60mHz.*

✓ *Check that the floorbox number that the laptop is plugged into is correctly assigned to at least one LCD screen on the video control interface.*

1. Select a source (■). The source will appear in the status bar.
2. Select a display (■). The source will appear on the display highlighted with a color. The color will change to the background color when the connection is confirmed.
3. The current selected source may be connected to subsequent displays by clicking on the display nodes.³

DISCONNECTING A SOURCE (BLANKING) FROM A DISPLAY:

1. Select the 'BLANK' source.
2. Select the display(s) to be blanked.



CONFIGURING THE AUDIO SWITCH CONTROL

The audio control software enables assigned audio sources to connect to one or more outputs via the channel bus.

AUDIO CONTROL SOFTWARE START PROCEDURES

From a laptop:

1. Open up IQ Room GUI.
2. Open the Audio Control Interface.
3. The application will launch two web pages that must remain open.

ANATOMY OF THE AUDIO CONTROL INTERFACE

The Menu bar displays the following options:

Refer to Figure 3 and Figure 4 on page 13.

Configuration - The configurations available are listed under the Configuration Menu Button. The current configuration is displayed on the status bar below the Menu bar.

View – The information box displays the current output of each of the channels.

All Outputs - Allows the operator to mute or disengage all outputs.

³ If the image from the laptop to the LCD screen is disproportionate, use the Auto Adjust button on the LCD display remote reset the image by pressing the button and waiting 10 seconds.

Help – Presents a document, describing the operation of the interface.

The status bar at the top shows the current configuration name, the selected node and type, and indicates a connection to the server.

The main panel displays the input and output nodes on the floor plan. The input nodes are green (■), and the output nodes are yellow (■). The nodes indicate which nodes are muted and which channels are connected.

The bottom panel operates the currently selected node. The node may be muted, and connected to any of eight channels. If the node is an output, the eight volume controls will be visible. The master control provides a means of adjusting the volume of several channels. The master control is meant to appear as the edge of a thumb wheel.

Figure 5 - Audio Control Interface

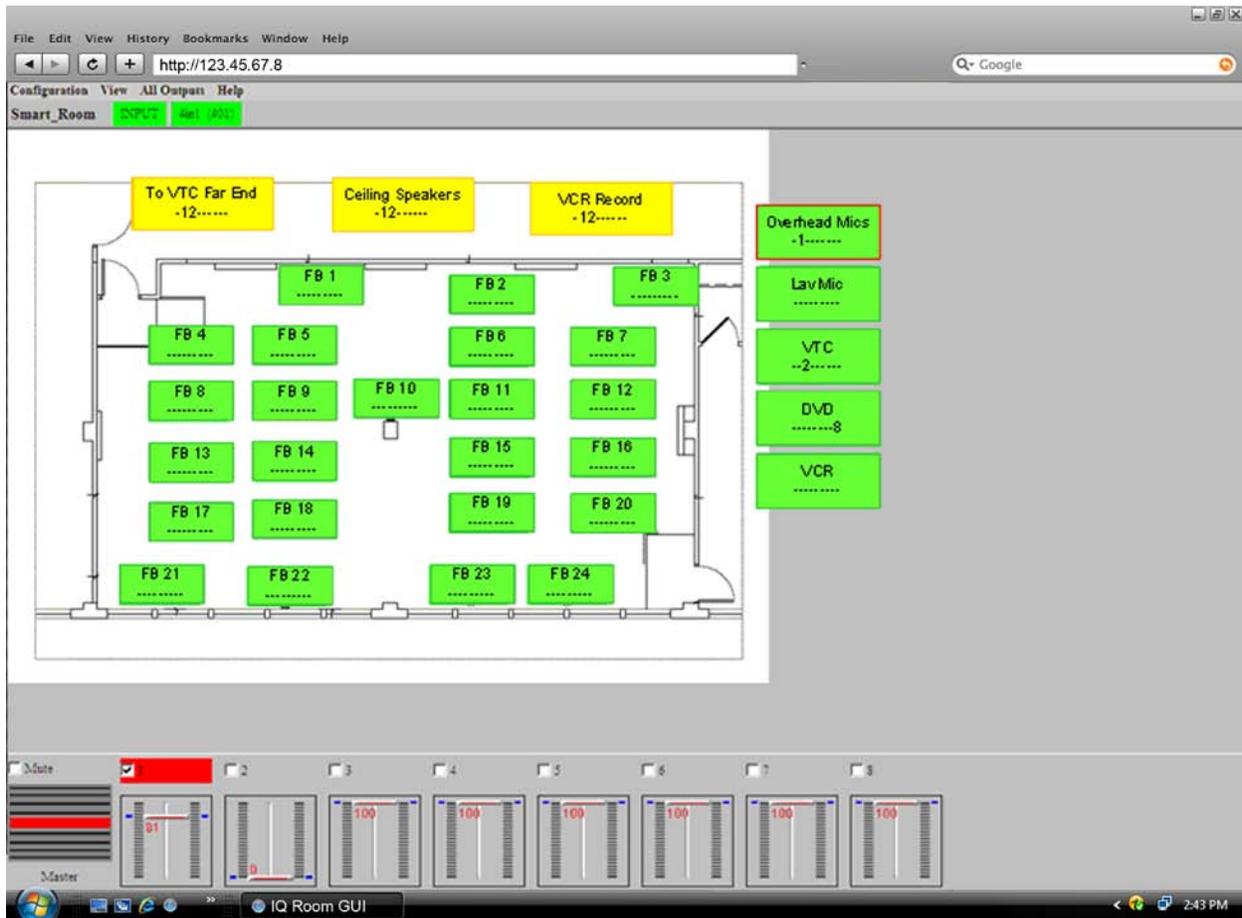
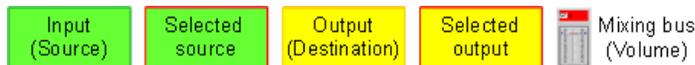


Figure 6 - Audio Control Interface Legend



AUDIO CONTROL SOFTWARE OPERATION

The mixers have inputs (■), outputs (■), and mixing channels (■). To transmit an audio signal from an input device to an output device, both must be connected to a common channel.

There are eight mixing channels to which inputs and outputs may be connected in any combination. Only outputs may be attenuated (may have the volume controlled). Each input and output device may be individually muted.

Typically, each input is connected to one channel exclusively, and outputs are connected to multiple channels. The main panel presents the inputs and outputs as buttons. Each button presents its name, mute status, and the connected Channels. For example: M1-34---8 is muted and connected to Channels 1, 3, 4, and 8.

CONFIGURING THE AUDIO SYSTEM FOR AN AUDIO CONFERENCE AND/OR VTC

1. Using a laptop, open up a browser.
2. Click on the 'Audio' control.
3. Assign the ceiling microphones (■) to Channel 1 (■), then assign Channel 1 to the 'VTC Far End' (■), maximize the volume.
4. Assign the VTC (■) to Channel 2 (■), then assign Channel 2 to the ceiling speakers (■).
5. Adjust volume as desired.

Note: Any time a source is assigned to an output, the default volume level is 0. To increase the volume, select the output device and adjust volume of each channel.

CONFIGURING THE VIDEO SYSTEM FOR AN AUDIO CONFERENCE AND/OR VTC

1. Obtain the VTC Polycom remote and the VTC ParkerVision™ (or Camera Man) Camera remote for the camera located at the front of the room.
2. To start a VTC connection, aim the Polycom Remote at the remote receiver above the center LCD display.
3. Wake up the VTC system by pressing the 'Call/Hang up' button.
4. The Main Menu screen is now displayed, with 'Make a Video Call' highlighted.
5. Press the 'Call/Hang up' button to open dialing page. Type in the ISDN number or IP address using the remote.
6. Press the 'Call/Hang up' button again to place the call.
7. Six progress icons will appear on the lower left screen. The six progress icons turn green once the connection is established. The far end camera view will appear on the screen.

OPERATING THE CAMERAS IN THE IQ ROOM

The picture-in-picture will appear at the bottom-right of the screen once the connection has been established. This is the remote view. There are two cameras located on the front and rear of the room. To select the camera view to promote to the remote sites, press the 'Near' button. A display will pop up with the camera options. Press '1' for the rear camera or '4' for the front camera on the remote.



Tips for preventing audio-related issues:

✓ *To avoid feedback in the IQ Room, ensure the overhead microphones are NOT connected to the ceiling speakers.*

✓ *Un-mute the VTC by pressing the large orange 'Mute' button on the VTC remote control.*

✓ *Check the volume settings for each output (make sure the mute check-box is unchecked).*

✓ *Check that the master volume is disengaged.*

Figure 7 - VTC Remote Control

- 
1. Call/Hang Up
 2. Far Camera Control
 3. Slides
 4. Select
 5. Snapshot
 6. Volume
 7. Mute Microphone
 8. Information Help
 9. Menu/Back Button
 10. Zoom
 11. Arrow to move camera
 12. Automatic
 13. Near Camera Control

POINT-TO-POINT VTC

Using the VTC Remote Control:

1. Press the 'Call/Hang up' button.
2. Enter the IP or ISDN number.
3. Select IP or ISDN in the call type box.
 - a. For an IP call, select 384 for the speed.
4. Press the 'Call/Hang up' again to initiate the dialing sequence.

MULTI-POINT VTC AND CONFERENCE CALLS

Press the 'Call/Hang up' button again and repeat steps 2-4 in the previous exercise.

The Polycom/VTC system is capable of accommodating up to three sites at one time (including the CDH Technologies site). Note that multi-point calls without a bridge reduce the bandwidth for each site resulting in a significant degeneration of video quality. Additionally, the view on the monitor is automatically split into a three-part screen.

SIMULTANEOUS VIDEO AND AUDIO CONFERENCING

The Polycom system is also capable of accommodating a video teleconference and an audio conference simultaneously. To dial out to a regular phone line, press the menu button and select the telephone icon. Dial the number and press the green 'Call/Hang up' button.

ADJUSTING THE CAMERA ANGLE OF THE NEAR VIEW

1. Using the Polycom remote, navigate to the 'Home' screen, with the 'Video Call' screen highlighted.
2. Press the 'Near' button on the remote.
3. A small camera icon will appear in the upper-right corner pointing towards the user, indicating that the system is prepared to adjust the near camera view.
4. Press 'Zoom' on the remote to adjust the size of the image and the arrow keys to pan or tilt.
5. Press 'Menu' to return to the 'Home' screen.

ADJUSTING THE FAR VIEW ON A SINGLE-POINT VTC

Once a VTC has been successfully connected, the 'Far View' can be adjusted.

1. Using the VTC remote control, press the 'Far' button .
2. The camera icon will rotate toward the far site, indicating the system is ready to be adjusted.
3. Press the 'Zoom' or arrow keys on the remote to adjust the view ( & ).



PROCEDURES FOR PUSHING AN IMAGE FROM A LAPTOP THE VIDEO SYSTEM

1. Using a laptop, open the video control interface.
2. Plug a VGA cable from the laptop into any of the 24 floorboxes in the IQ Room.
3. Select the corresponding floorbox on the video control interface.
4. Click on one or more of the LCD screens.
5. To push an image from a laptop to a VTC, select the floorbox again and click on VTC.

TABLE OF FIGURES

Figure 1 - IQ Room: Left-side Standard Configuration 3

Figure 2 – IQ Room: Right-side Standard Configuration..... 3

Figure 3 - IQ Room Control Interface..... 5

Figure 4 - Video Control Interface 9

Figure 6 - Audio Control Interface 13

Figure 7 - Audio Control Interface Legend..... 13

Figure 8 - VTC Remote Control 15