POLYCOM®

User's Guide
Administrator's Guide

IMPORTANT SAFETY INSTRUCTIONS

When using your telephone equipment, the following safety precautions should always be followed to reduce the risk of fire, electric shock, and injury to people.

▼ Read and understand all instructions.

▼ Follow all warnings and instructions marked on the instrument.

▼ Installation must be performed in accordance with all national wiring rules.

▼ The outlet to which this apparatus is connected must be installed near the equipment, and must always be readily accessible.

▼ This instrument can be hazardous if immersed in water. To avoid the possibility of electrical shock, do not use the telephone equipment while you are in the bathtub or shower, or when you are wet. If you accidentally drop the equipment into water, do not retrieve it until you have first unplugged all cords. Do not reconnect the telephone equipment until it has dried thoroughly.

▼ Avoid using the telephone equipment during electrical storms in your immediate area. There is a remote risk of electric shock from lightning. Urgent calls should be brief. Even though protective measures may have been installed to limit electrical surges from entering your home or business, absolute protection from lightning is impossible.

▼ If you suspect a natural gas leak, report it immediately, but use a telephone away from the area in question. The telephone equipment's electrical contacts could generate a tiny spark. While unlikely, it is possible that this spark could ignite heavy concentrations of gas.

▼ Never push objects of any kind into the telephone equipment through housing slots as they may touch hazardous voltage points or short out parts that could result in a risk of electric shock. Never spill liquid of any kind on the telephone. If liquid is spilled, however, contact service personnel.

▼ To reduce the risk of electric shock, do not disassemble this telephone equipment. Opening or removing covers may expose you to hazardous voltages. Using incorrectly reassembled equipment can cause electric shock. If your telephone equipment does not work properly, refer to the section describing how to connect service. The support telephone number can be found on the outside back cover of this book.

▼ Never install telephone wiring during a lightning storm.

▼ Never install telephone jacks in wet locations unless the jack is specifically designed for wet locations.

▼ Never touch uninsulated telephone wires or terminals unless the telephone line has been disconnected from the network interface.

▼ Always use caution when installing or modifying telephone lines.

SAVE THESE INSTRUCTIONS

User's Guide

Introduction

Polycom Has Revolutionized Voice Conferencing... Again.

The revolutionary SoundStation VTX 1000™ is the world's first conference phone that *automatically* adapts to each meeting environment enabling amazingly clear voice quality for all participants.

Narrowband
300 - 3300 Hz
all other telephones

Polycom VTX Wideband
80-7000 Hz

| 100 | 300 | | 3500 | | 7000 |

Range of Human Speech
Frequency (Hz)
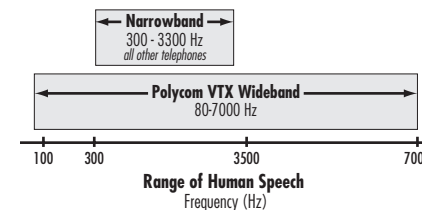
The SoundStation VTX 1000 features:

▼ **Amazing Room Coverage**
Allows participants to *automatically* be heard by remote participants when speaking from 2ft or even 20ft away from the microphone.

▼ **Revolutionary Voice Quality**
If 2 SoundStation VTX 1000 units are connected together, the call *automatically* enters Wideband Mode delivering life-like presence via VTX Wideband!

▼ **Removes Annoying Background Noises**
Automatically reduces PC, projector fan, and other noises from the meeting room for clear sound quality.

▼ **Handset Quality Conference Calls**
Automatically turns off the mics that are furthest away from the speaker to remove the "in the well" sound.

▼ **Acoustic Clarity Technology**
Polycom's legendary technology that *automatically* allows two people to speak at the same time.

▼ **Maximum Configuration Flexibility**
Independent input and output, Bass/Treble controls, and internal mic and speaker control for multiple uses and applications including external speakers, so you can be assured that your conference provides amazingly clear voice quality for all participants.

▼ **SoundStation VTX 1000 is Future-Proof**
The SoundStation VTX 1000 platform also provides investment protection by enabling software downloads for future voice enhancements and other media collaboration applications.

SoundStation VTX 1000 Key Features Summary
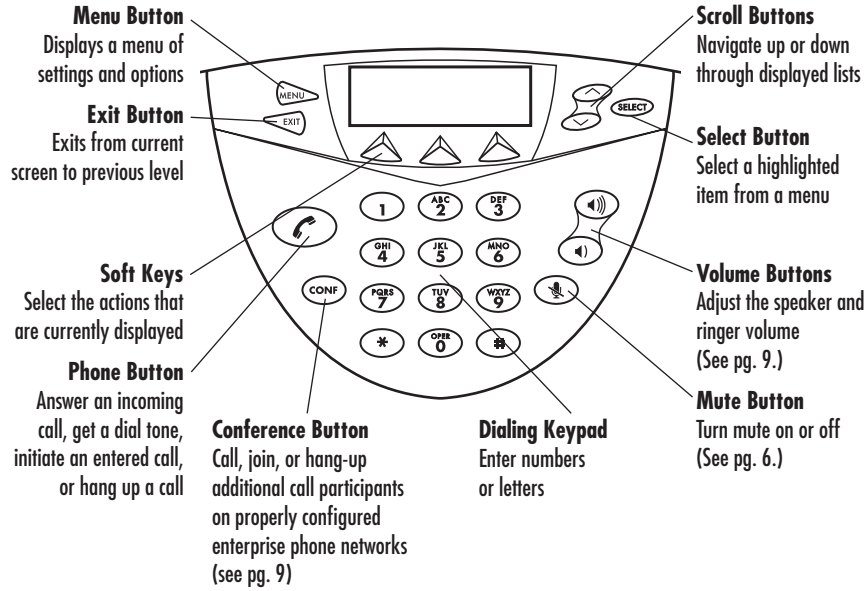
▼ Automatic Gain Control

▼ High-Fidelity VTX Wideband

▼ Dynamic Noise Reduction

▼ Gated Microphones with Intelligent Microphone Mixing

▼ Acoustic Clarity Technology

▼ User Selectable Auxiliary Audio Input and Output Options

▼ Dial-Up Software Download Functionality

▼ Backlit Graphical LCD

▼ Phone Book with Search/ Sort Functions

▼ Bass and Treble Controls

▼ And much more . . .

LEDs

Green – *Your call is in progress.*
Blinking Green – *A call is incoming.*
Red – *Your call is muted.*
Blinking Red – *Your call is on hold.*

POLYCOM®

Buttons

Menu Button
Displays a menu of
settings and options

Exit Button
Exits from current
screen to previous level

Soft Keys
Select the actions that
are currently displayed

Phone Button
Answer an incoming
call, get a dial tone,
initiate an entered call,
or hang up a call

Conference Button
Call, join, or hang-up
additional call participants
on properly configured
enterprise phone networks
(see pg. 9)

Scroll Buttons
Navigate up or down
through displayed lists

Select Button
Select a highlighted
item from a menu

Volume Buttons
Adjust the speaker and
ringer volume
(See pg. 9.)

Mute Button
Turn mute on or off
(See pg. 6.)

Dialing Keypad
Enter numbers
or letters

LCD

**Information and
Input Area**
Displays of
information, menus,
and input areas

♠(555)555-1111

READY

SP DIAL   PH BOOK   REDIAL
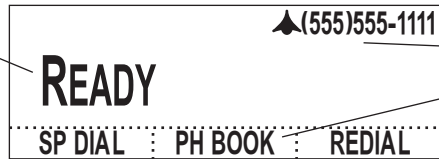
This Phone's Number

Soft Key Functions
Actions you can currently
take, based on the state
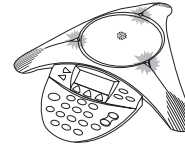of the phone

Multipoint Conference Bridging

The SoundStation VTX1000 is a
conference phone and can only perform
multipoint bridged conference calls on
a properly configured enterprise phone
network or when multipoint calls are
placed through a conference bridge
or a bridging service. Please contact
your telephone system administrator
for further details.

Answer a Call

Press the ✆ (Phone) button to pick up an
incoming call.

The three LEDs blink green when the phone rings.

When you answer a call from another VTX
phone, your SoundStation VTX 1000 tests
the quality of your line, and then initiates
a wideband connection. This process
takes 12 seconds, during which you hear
music, and both ends of the call are
unable to converse. The ☎ icon
is displayed once a wideband connection
has been established.

*Note: If you have a high quality line
you can change the line testing process
from 12 seconds to 6 seconds. Please
see page 36 for details, and refer to the
troubleshooting guide for more information
on line quality. The subwoofer (see "Using
the VTX Subwoofer", pg. 22) allows you to
experience the full spectrum of wideband
sound.*

Receiving an Additional Call

If you are on a call when another call
is received, you may or may not hear
a Call Waiting tone and/or see Caller ID.

▼ If you are on a regular, narrowband
call, and the most common types of
Call Waiting and Caller ID* are
ordinarily provided to you through
your phone network, then these
services will work in the usual way,
as specified by your provider.
(Note that it is not possible to join
the incoming call to the ongoing one.)

▼ Important: If you are on a wideband
call, Call Waiting and Caller ID are
unavailable and Call Waiting signals
will actually disrupt wideband
operation, preventing you from
maintaining a wideband connection.
It is highly recommended that Call
Waiting be disabled by the phone
company (or PBX administrator) for
lines used for VTX 1000 wideband
calls.

* *Namely, Telcordia (formerly Bellcore)
Standard Type I Caller ID.*

Dial a Call

You can dial a call the traditional
way, getting a dial tone first, or you
can dial the way cellular phones do,
entering and editing all the numbers
before you outpulse them, as shown below.

Speed Dial numbers are not
supported by this method.
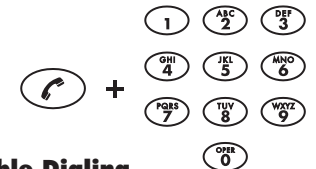
Dial Tone Dialing

1 Press the ✆ (Phone) button
to get a dial tone.

2 Dial the phone number.
Each number is dialed when
you press it.

Editable Dialing

1 Dial the phone number.

▼ If you make an error,
press the **<DEL** soft key to erase it.

▼ If you want to cancel the call,
press the **CANCEL** soft key.

2 Press the ☎ button or
the **SEND** soft key, and the
complete number will be dialed.

If you place a call to another
wideband-capable phone, 〰 will appear
on your LCD, indicating that your call
is benefitting from the enhanced audio
quality of a wideband connection.

*Note: The subwoofer (see "Using the
VTX Subwoofer," pg. 22) allows
you to experience the full spectrum
of wideband sound.*

*A wideband connection takes
several seconds to establish.
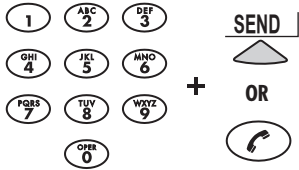Music will play while you wait.*

Mute and Unmute a Call

When a call is muted, you can hear the
remote party, but they cannot hear you.

Mute

To mute a call, press the 🎤 (Mute) button.

A Muted Call

MODE   HOLD
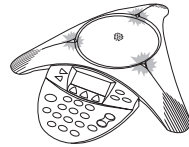
The three LEDs are red when a call is muted,
and green when it is not.

Unmute

Press the 🎤 button again
to unmute a call.

Hold and Resume a Call

When a call is on hold,
you cannot hear your remote party,
and they cannot hear you.

Hold

To hold a call, press the **HOLD** soft key.

Hold Soft Key During an Active Call

MODE   HOLD
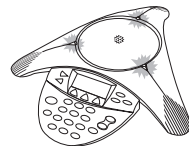
The three LEDs blink red when a call is on hold
and are green when it is resumed.

Resume

Press the **RESUME** soft key to
resume the conversation.

Resume Soft Key During a Held Call

MODE   RESUME
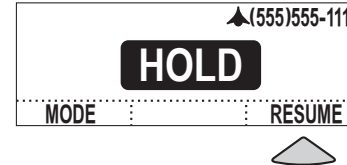
End a Call

To end a call, press the ☎ button.

▼ If you initiate a multi-point call, all
calls will disconnect when you press
the ☎ button.

The duration of your ended call
will be displayed for 6 seconds.
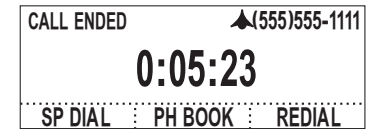
Redial a Call

To redial the last number dialed out
from the SoundStation VTX 1000,
press the **REDIAL** soft key.

The screen will display the phone
number of the party being dialed.

REDIAL

Dial a Call Using the Phone Book

Please refer to "Dial an Entry,"
in the Phone Book section, pg. 12,
for instructions on calling a number
in your Phone Book.

Speed Dial a Number

You can speed dial any entry in your Phone Book, in either of these ways:

Speed Dial Number First

1 Enter the 1- or 2-digit Speed Dial number.

2 Press the ☎ button or the **SEND** soft key.

SEND

OR
☎
❺ ❺ +
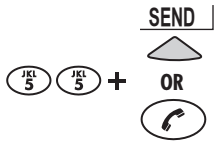
If a Speed Dial entry does not exist, a **NOT ASSIGNED** notice will appear. You can enter a new Speed Dial number or press the **CANCEL** soft key.

Note: For 1-digit numbers, you do not have to dial a leading 0 (e.g., for 02, you can also just press 2).Note: To create Phone Book entries and assign Speed Dial numbers, see "Add a New Entry," pg. 13, and "Assign a Speed Dial Number," pg. 14.

Soft Key First

1 Press the **SP DIAL** soft key.

2 Enter the 1- or 2-digit Speed Dial number (if you enter one digit, wait through the brief delay).

SP DIAL + ❺ ❺
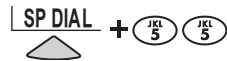
Add a Call

If your phone system provides one of the typical forms of multi-party call conferencing, then you can establish multi-party calls with your SoundStation VTX 1000, as described next.

▼ Please check with your System Administrator (not Polycom) to determine the number of parties that can be conferenced together, given your phone system's multi-party capabilities.

▼ If you cannot connect multiple parties using the method described below, please check with your System Administrator (not Polycom).

Your System Administrator may need to activate multi-party conferencing features, adjust the Flash Timing (as described in "Flash Timing," pg. 36), or provide you with instructions specific to your phone system.

▼ If your phone line supports Call Waiting, you can answer an incoming call using the **CONF** button, but the incoming call cannot be joined into the existing call. Only outgoing calls can be joined into a multi-point call.

During an ongoing call:

1 Press the **CONF** button.

▼ If you prefer, you can press the **HOLD** soft key first, and then the **CONF** button. Either way, your original call is put on hold.

Important: If you have already connected as many parties as your system can support, then pressing **CONF** will drop the last party you connected. (This response is a function of how your phone company or PBX works, not the SoundStation VTX 1000.)

2 At the dial tone, enter the next party's phone number.

Note: Only conventional dialing is supported for added calls. Redial, Speed Dial, and dialing from the Phone Book are unavailable.

3 When the next party has answered, press the **CONF** button again, or the **JOIN** soft key to join all the calls, so all parties can hear and speak to each other.

Note: All multi-party calls are narrowband calls. When you press the CONF button to add another party, any wideband connection you may have with your first party will revert to narrowband, and you will no longer see the ⌇ symbol on your display. Your connection will also revert to narrowband if another party picks up a phone connected in parallel with your SoundStation VTX 1000. The CONF key provides identical functionality to FLASH or R on most phone networks.

┌─────────────────────────┐
│   ▲(555)555-1111 │
│   │
│   ENTER NUMBER   │
│ CANCEL   │
└─────────────────────────┘
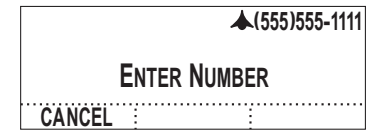
Note: If you change your mind before beginning to enter a phone number, press CONF again or the CANCEL soft key to return to your on-hold call, then press the RESUME soft key to reactivate that call, if you placed the caller on hold prior to pressing CONF.

Adjust Volumes

Adjust Speaker Volume

While the phone is in active use, press the ◄) button to lower the speaker volume, and the ◄))) button to raise the speaker volume.

Adjust Ringer Volume

While the phone is in a ready state (not actively in use), press the ◄) button to lower the ringer volume and the ◄))) button to raise the ringer volume.

Adjust Dial Tone

While the phone is in ready state, press the button to get dial tone, then use ☎ and ◄) to adjust the volume up or down.

Volume Up

◄)))

◄)

Volume Down

Turn Wideband Off

To turn wideband off

1 Press the **MODE** soft key.

```
        ⇝        ▲(555)555-1111
            0:23:13
     MODE                  HOLD
```

2 Press the **OFF** soft key
(or press the **BACK** soft key
to return to the Call Screen
without turning wideband off).

```
     WIDEBAND IS ON: 4

        BACK            OFF
```
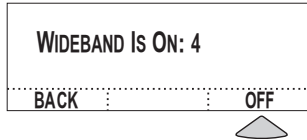
3 Press the **BACK** softkey
(or wait several seconds)
to return to the Call Screen.

Access the Phone Book

To access the Phone Book,
use either of these methods:

Soft Key

Press the **PH BOOK** soft key
if it is on your screen.

```
                    ▲(555)555-1111
     READY
     SP DIAL   PH BOOK   REDIAL
```
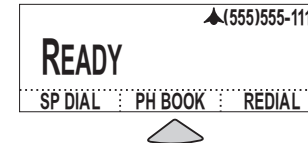
Menu

Press the **MENU** button, use the
⌄ button to highlight "Phone Book,"
and press the **SELECT** button.

```
          SETTINGS
     →    PHONE BOOK
          AUDIO SETUP        ⌄
          THIS PHONE
```

Sort the Entries

Press the **SORT** soft key to cycle through
the entry views by name, company,
or Speed Dial number.

▼ When you access the Phone Book,
the entries are listed in order by name,
with the first entry name highlighted.
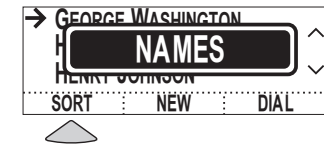
*Note: When sorted by company, entries
that lack company data are displayed at the
top of the list, with the name in brackets.*

```
     → GEORGE WASHINGTON
       H ┌──────────────┐  ^
         │    NAMES      │
       H └──────────────┘  ⌄
       HENRY JOHNSON
       SORT     NEW      DIAL
```

```
     → ACME INC - GEORGE WASH
       A ┌──────────────┐  ^
         │  COMPANIES    │
       A └──────────────┘  ⌄
       AFTER INC - JANE SMITH
       SORT     NEW      DIAL
```

```
     → 23 GEORGE WASHINGTON
       2 ┌──────────────┐  ^
         │ SPEED DIAL #  │
       2 └──────────────┘  ⌄
       25 NEVIN PENELOPE
       SORT     NEW      DIAL
```
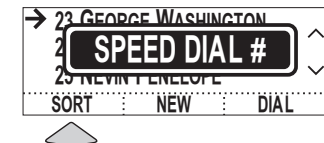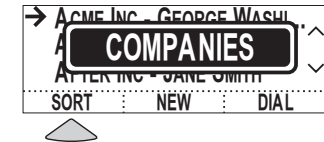
Find an Entry

You can look through the entries using the ⌃ or ⌄ buttons, or you can jump to them using the number buttons.

```
→ AARON JONES
  ANDREW ADAMS        ⌃
  BETTY SMITH         ⌄
  SORT    NEW    DIAL
```

Find Name

To jump to the entries that begin with a particular letter, press the number button with that letter on it.

▼ Press the same number button again to jump to the entries that begin with each of its letters; e.g., pressing **3** repeatedly will jump to **D**, **E**, **F**, **D**, etc.

Note: Jumping by letter works when the entries are listed by name or by company.

```
(DEF 3)  → DENNIS GRAY
            DEREK BROWN       ⌃
            DONALD WILSON     ⌄
            SORT    NEW    DIAL

(DEF 3)  → EARL EDWARDS
            ELIZABETH GRASON  ⌃
            ELLIOT RAY        ⌄
            SORT    NEW    DIAL

(DEF 3)  → FELIX MASON
            FIONA FERGUSON    ⌃
            FRANK JAMES       ⌄
            SORT    NEW    DIAL
```

Find Speed Dial Number

To jump to an entry with a particular Speed Dial number:

1 Make sure the entries are sorted by Speed Dial number (see "Sort the Entries," above).

2 Press the number buttons to jump to the entry with the 1- or 2-digit Speed Dial number you select.

▼ For 1-digit numbers, you do not have to dial a leading 0 (e.g., for 02, you can also just press 2).

▼ For 2-digit numbers, press both digits in succession, ignoring the jump that occurs when you enter the first digit.

```
(ABC 2)  → 02 CHRIS R
            03 MATT SMITHE    ⌃
            04 ANDREW ADAMS   ⌄
            SORT    NEW    DIAL

(DEF 3)  → 23 GEORGE WILLIAM
            24 HAROLD SMITH   ⌃
            25 JIM SHOE       ⌄
            SORT    NEW    DIAL
```

Dial an Entry

Entries in the Phone Book can be automatically dialed.

1 Highlight the entry you want to dial. (See "Find an Entry," above.)

2 Press the **DIAL** soft key.

You will see and hear the call being dialed.

*Note: You can also access the **DIAL** soft key after selecting an entry with the **SELECT** button.*

*Note: If another call is ongoing, the **DIAL** soft key will not appear.*

Dial From a List

```
→ GEORGE WILLIAM
  HAROLD SMITH        ⌃
  HENRY JOHNSON       ⌄
  SORT    NEW    DIAL
          ◁▷
```

Dial From a Selected Entry

```
  23 GEORGE WILLIAM
     5555555678
  ACME INC.
  CHANGE  REMOVE  DIAL
          ◁▷
```

Add a New Entry

To add a new entry:

1 Press the **NEW** soft key.

2 Enter a name, using the number buttons.

Character Entry

For each letter you want, press the number button that has that letter on it. Press the same button repeatedly to cycle through the letters on that button; e.g., pressing **3** repeatedly will display **D**, **E**, **F**, **3**, **D**, etc.

Advance a Character

For the next letter, press another number key. The cursor will advance automatically. To enter the same character, wait for 3 seconds then press the same key again.

Add a Space

Press the **SPACE** soft key (when available).

Delete a Character

Press the **< DEL** soft key

3 Press the ⌄ button, and enter the phone number, using the number buttons.

Pressing the **PAUSE** soft key will insert a 1.5 second pause (shown as a comma), which is often necessary when dialing from a PBX (or other enterprise) system that requires a prefix such as 9 for an external call.

4 If desired, press the ⌄ button again and enter a company, as above.

(You can continue to move among the fields with the ⌃ or ⌄ buttons.)

```
  23 CHARLES WHITE
     5555559876

  CHANGE  REMOVE  DIAL
          ◁▷
```

```
NAME: |
PH #:
  CO:
                 CANCEL
```

```
NAME: CHARLES |
PH #:
  CO:
  < DEL   SPACE   SAVE
```

```
NAME: CHARLES WHITE
PH #: 5555559876
  CO:
  < DEL   PAUSE   SAVE
```

5 Press the **SAVE** soft key.

▼ The **SAVE** soft key appears once you have entered data in the name and phone number fields.

▼ When you press the **SAVE** soft key, your entry will automatically be assigned the lowest available SpeedDial number.

```
NAME: CHARLES WHITE
 PH #: 5555559876
  CO:
  < DEL    PAUSE    SAVE
```

6 Press the **OK** soft key, to accept the displayed Speed Dial number.

You will be returned to the Phone Book list, with your new entry included.

Note: To assign a different Speed Dial number, see "Assign a Speed Dial Number," below.

```
     CHARLES WHITE

  SPEED DIAL #:  24|
  BACK            OK
```

Assign a Speed Dial Number

If you do not want to use the automatically assigned Speed Dial number (above), you can change it.

Enter the desired Speed Dial number with the number buttons, or use the ⌃ or ⌄ buttons to scroll through available Speed Dial numbers.

▼ If you choose a Speed Dial number that has already been assigned to another entry, you will be asked whether you wish to reassign the Speed Dial number to the new entry. Press **OK** to do so and return to the Phone Book list, or **CANCEL** to back up one screen and choose another number.

To leave the New Entry screen without saving, press the **EXIT** button. You will be returned to the Phone Book list.

```
     CHARLES WHITE

  SPEED DIAL #:  24|
  BACK            OK
```

```
     CHARLES WHITE

  SPEED DIAL #:  34|
  BACK            OK
```

```
     CHARLES WHITE

  SPEED DIAL #:  28|
  BACK            OK
```

Edit an Entry

1 Highlight the entry you want (see "Find an Entry," pg. 12), and then press the **SELECT** button.

2 Press the **CHANGE** soft key.

3 Proceed to edit the contents as described in "Add a New Entry," pg. 13.

```
  23 CHARLES WHITE
     5555559876

  CHANGE   REMOVE   DIAL
```

Remove an Entry

1 Make sure that the entry you want is highlighted (see "Find an Entry," pg. 12), and then press the **SELECT** button.

2 Press the **REMOVE** soft key.

3 You'll be asked to confirm by pressing **OK** before the entry is removed and you are returned to the Phone Book list. If you don't wish to remove the entry, press the **CANCEL** soft key instead, and the entry will be kept.

```
  23 CHARLES WHITE
     5555559876

  CHANGE   REMOVE   DIAL
```

```
  REMOVE FROM PH BOOK?
  23 CHARLES WHITE

  CANCEL            OK
```

Exit the Phone Book

In the entry view press the **EXIT** button to return to the Phone Book list view. Use **EXIT** to move from the Phone Book list view back to the Ready Screen, the Call Screen, or another previous display.

Adjust the Settings

Access the Settings

Press the **MENU** button. With "Settings" highlighted, press the **SELECT** button.

The Settings Menu will appear.

Main Menu

```
→ SETTINGS
  PHONE BOOK
  AUDIO SETUP          ⌄
  THIS PHONE
```

Select a Setting to Display

From the Settings Menu, use the ⌃ or ⌄ buttons to highlight the desired setting, and press the **SELECT** button.

Settings Menu

```
         SETTINGS
→ BACK LIGHT
  RINGER TYPE
  CONTRAST             ⌄
```
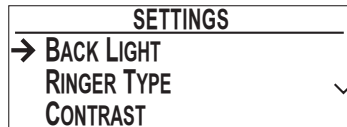
Adjust a Setting

1 Depending on the setting, use your soft keys to

  ▼ Turn the **BACK LIGHT OFF** or **ON**

  ▼ Select a **RINGER TYPE** (← or →)

  ▼ Adjust the screen **CONTRAST** (**–** or **+**)
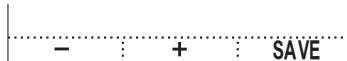
Note: You can also use the ⌃ or ⌄ buttons to cycle through each setting's options.

```
OFF        ON        SAVE
```

```
←          →         SAVE
```

```
–          +         SAVE
```

2 Important: Press the **SAVE** soft key or **SELECT** button to apply the new adjustment and return to the Settings Menu. Otherwise, you can use the **EXIT** button or **MENU** button to return to the Settings Menu or Main Menu, but your new setting will not be saved.

Details of each setting's purpose and options follow.

Back Light

The SoundStation VTX 1000 screen offers back lighting for easy viewing in dim light environments. Use this setting to turn the back light use display style **ON** or **OFF**.

```
BACK LIGHT

ON

OFF       ON        SAVE
```
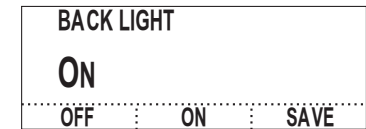
Ringer Type

You can select from 10 ringer options and OFF for Sound Station VTX 1000. Each ringer type is briefly auditioned when it is first displayed while pressing the ← or → soft keys.

```
RINGER TYPE

CLASSIC

←         →         SAVE
```

Contrast

To adjust the visibility of the screen, increase or decrease contrast with the **–** or **+** soft keys.

```
CONTRAST

■■■■□□□□

–          +         SAVE
```
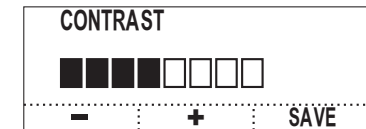
Adjust the Audio Setup

Access the Audio Settings

Press the **MENU** button. Use the ⌄ button to highlight "Audio Setup," then press the **SELECT** button.

The Audio Setup Menu will appear.

Main Menu

```
  SETTINGS
  PHONE BOOK
→ AUDIO SETUP         ⌄
  THIS PHONE
```

Select a Setting to Display

Use the ⌃ or ⌄ buttons to highlight the desired setting, and press the **SELECT** button.

Audio Setup Menu

```
         AUDIO SETUP
→  TREBLE EQ
   BASS EQ                    ⌄
   SUBWOOFER
```

```
         AUDIO SETUP
   AUX OUTPUT                 ⌃
   CONSOLE MICS
→  CONSOLE SPEAKER
```
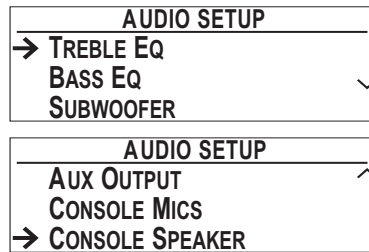
Adjust an Audio Setting

1 Depending on the setting, use your soft keys to

▼ Adjust the TREBLE (**–** or **+**)

▼ Adjust the BASS (**–** or **+**)

▼ Indicate the presence and type of AUX INPUT device (**←** or **→**)

▼ Indicate the presence and type of AUX OUTPUT device (**←** or **→**)

▼ Turn the CONSOLE MICS OFF or ON

▼ Turn the CONSOLE SPEAKER OFF or ON

▼ Turn the AUTOMATIC GAIN CONTROL OFF or ON

▼ Turn the NOISE REDUCTION OFF or ON
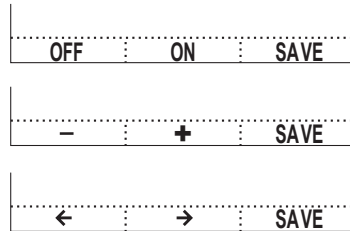
Note: You can also use the ⌃ or ⌄ buttons to cycle through each setting's options.

```
OFF       ON       SAVE
```

```
 –        +        SAVE
```

```
 ←        →        SAVE
```

2 Important: Press the **SAVE** soft key or **SELECT** button to apply the new adjustment and return to the Audio Setup Menu. Otherwise, you can use the **EXIT** button or **MENU** button to return to the Audio Setup Menu or Main Menu, but your new setting will not be saved.

Details of each setting's purpose and options follow.

Treble EQ

The Treble Equalizer adjusts the tone of the high frequency sound from the speakers. Use this setting to adjust the sharpness of the sound **–** (down) or **+** (up).

```
TREBLE EQ

■■■■□□□□

 –        +       SAVE
```
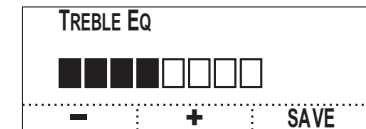
Bass EQ

The Bass Equalizer adjusts the tone of the low frequency sound from the speakers. Use this setting to adjust the amount of bass **–** (down) or **+** (up).

```
BASS EQ

■■■■□□□□

 –        +       SAVE
```
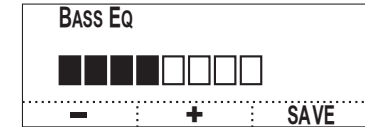
Subwoofer Volume

The subwoofer volume adjusts the volume of low frequency sound from the subwoofer and is used in concert with the Bass EQ to drive the appropriate low frequency level for the room (80-300 Hz). When the system is balanced, users should not perceive any sound coming from the subwoofer during normal operation, and the speech from the console speaker should sound warm and natural. Use this setting to adjust the amount of subwoofer volume **–** (down) or **+** (up).

```
SUBWOOFER VOLUME

■■■■□□□□

 –        +       SAVE
```
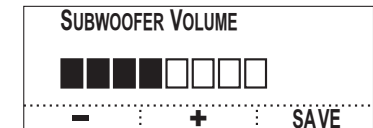
Aux Input

Besides its built-in microphones and extension microphones, the SoundStation VTX 1000 can also accept audio input from external sources, such as an external wireless microphone or microphone mixer. (See "Using the Extension Microphones," pg. 22, for one option, and see "Connection Diagram," pg. 31, for installation.) To use these optional devices, the Aux Input setting must reflect the device connected. If no external source is in use, you can turn Aux Input **OFF**, if you prefer.

POLYCOM WIRELESS MIC, OTHER INPUT, OFF

Note: For specifications related to auxiliary input, see "Aux In and Aux Out Specification Table," pg. 40.

```
AUX INPUT

POLYCOM WIRELESS MIC
 ←        →       SAVE
```

Aux Output

The SoundStation VTX 1000 combines sound from you and your remote party(s), and can output that sound to a subwoofer, or to another external audio device, such as a tape recorder or P.A. (public address) system. (See "Using the VTX Subwoofer," pg. 22, for one option, and see "Connection Diagram," pg. 31, for installation.) For these optional devices to work appropriately, the Aux Output setting must reflect whether a subwoofer or other device is connected.

OFF, SUBWOOFER, EXT SPEAKER, RECORD OUT

Note: Connections to some third party audio output devices may impair full duplex performance.

```
┌─────────────────────────────┐
│ AUX OUTPUT                   │
│                             │
│ SUBWOOFER                    │
│ ............................│
│   ←        →         SAVE    │
└─────────────────────────────┘
```

Console Mics

When using external microphones, you might prefer to turn off the SoundStation VTX 1000's console microphones. Use this setting to turn the console microphones **OFF** or **ON**. (Using this setting does not turn the extended microphones **OFF** or **ON**, so they should be disconnected if not required. Turning console mics **OFF** does not affect any other mics you may have connected to the AUX IN port.

```
┌─────────────────────────────┐
│ CONSOLE MICS                 │
│                             │
│ ON                           │
│ ............................│
│   OFF      ON        SAVE    │
└─────────────────────────────┘
```

Console Speaker

When using external speakers, you might prefer to turn off the SoundStation VTX 1000's console speaker. Use this setting to turn the console speaker **OFF** or **ON**.

```
┌─────────────────────────────┐
│ CONSOLE SPEAKER              │
│                             │
│ ON                           │
│ ............................│
│   OFF      ON        SAVE    │
└─────────────────────────────┘
```

Automatic Gain Control

During a call, Automatic Gain Control can be turned **OFF** from the default **ON** setting to reduce the amount of audio pick-up in the room if side conversations become a problem for the far-end party. This feature is also useful for demonstrating the benefits of Automatic Gain Control. Once the desired setting is selected, press the **SAVE** soft key to activate that setting.

```
┌─────────────────────────────┐
│ AUTOMATIC GAIN CONTROL       │
│                             │
│ ON                           │
│ ............................│
│   OFF      ON        SAVE    │
└─────────────────────────────┘
```
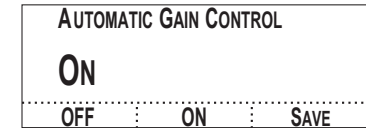
Noise Reduction

During a call, Noise Reduction can be turned **OFF** to demonstrate the benefits of this feature. Once the desired setting is selected, press the **SAVE** soft key to activate that setting.

```
┌─────────────────────────────┐
│ NOISE REDUCTION              │
│                             │
│ ON                           │
│ ............................│
│   OFF      ON        SAVE    │
└─────────────────────────────┘
```
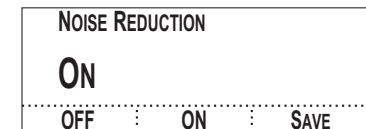
View Phone and Software Information

To view information about your phone:

1. Press the **MENU** button.

2. Press the ⌄ button to highlight "This Phone," then press the **SELECT** button.
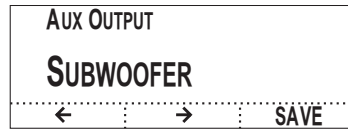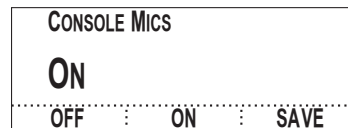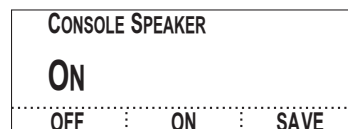
3. With "Location and Number" selected, press the **SELECT** button to display your phone's location and phone number.

   OR

   Press the ⌄ button to highlight "System Info," then press the **SELECT** button to display your phone's software version and date, hardware version, and serial number.

Press the **EXIT** button to step back through the submenu and Main Menu, and again to return to the Ready Screen.

```
┌─────────────────────────────┐
│        THIS PHONE            │
│ →1. LOCATION AND NUMBER      │
│   2. SYSTEM INFO             │
│                             │
└─────────────────────────────┘
```

```
┌─────────────────────────────┐
│                             │
│   MAIN CONFERENCE ROOM       │
│      (555) 555-1111          │
│                             │
└─────────────────────────────┘
```

```
┌─────────────────────────────┐
│ VTX.00.02.035 JAN 22 2003    │
│ CONSOLE FPGA REV.: A         │
│ SERIAL #1146270302           │
└─────────────────────────────┘
```
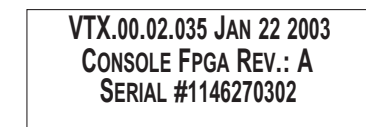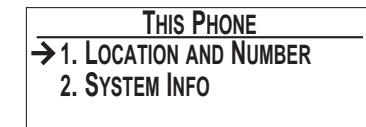
Peripheral Devices

Using the VTX Subwoofer

The SoundStation VTX Subwoofer allows you to experience the full spectrum of wideband sound and provides the low-frequency output that optimizes speech intelligibility and distinguishability.

To install the VTX Subwoofer, see the Connection Diagram on pg. 31.

Once it is connected, if you experience any problems with sound output, access the Audio Setup (as described on pg. 17) and restore Aux Output (pg. 19) to **SUBWOOFER** (which is the default setting).

Note: When the subwoofer is properly balanced, users should not perceive sound to be coming out of the subwoofer itself. Instead, users should perceive the sound to be coming from the console speaker only, with the subwoofer adding warmth (bass) to the overall sound in the room. If users perceive sound to be coming from the subwoofer, then either the Bass EQ or subwoofer volume control, or both, are

set too high. In large rooms or highly absorbent rooms, extra energy may be required from the subwoofer. Use the Bass EQ and Subwoofer volume controls in the Audio Setup menu to balance the system. If you suspect problems with the subwoofer, follow the External Speaker Test instructions on page 40.

You can control the treble and base tones in the Audio Setup's Treble EQ and Base EQ screens, as described on pg. 19.

Using Extension Microphones

Your SoundStation VTX 1000 can provide greater microphone coverage in larger conference rooms with the addition of Extension Microphones. If not purchased with your SoundStation VTX 1000, these SoundStation VTX 1000 Extension Microphones are available as an accessory from your Polycom Distributor.

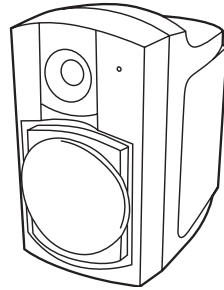To mute all microphones from an Extension Microphone, press 🎤. (When a call is muted, you can hear the remote party, but they cannot hear you.) All system LEDs will turn red to indicate the mute status. To resume two-way communication, press 🎤 again. All the red LEDs will return to green.

LED

Green – *Your call is in progress.*
Red – *Your call is muted.*

LED
MUTE
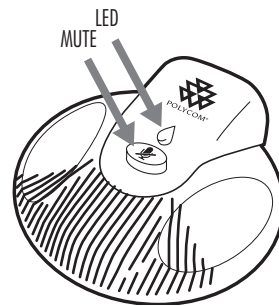
Using the Polycom Wireless Microphone System

Your SoundStation VTX 1000 can integrate with an optional Wireless Microphone System for presenters who stand or are mobile. If not purchased with your SoundStation VTX 1000, this Polycom Wireless Microphone System is available as an accessory from your Polycom Distributor.

For information about the components and setup of a Polycom Wireless Microphone System, as well as directions for its use, please refer to the User Guide that ships with it.

Note: The Polycom Wireless Microphone System is available only in North America.
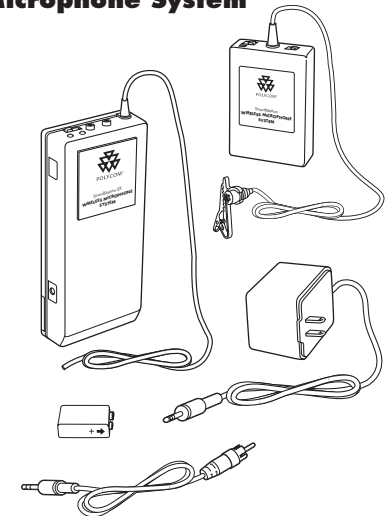
Troubleshooting

No Dial Tone

▼ Check that all connections are tight and in place.

▼ Make sure all connections are correct. (See "Connection Diagram," pg. 31.)

▼ Make sure that the console speaker is enabled. Refer to page 20.

SoundStation VTX 1000 Does Not Ring

▼ Check that the ringer is not turned off. (See "Ringer Type," pg. 17.)

▼ If the volume is turned all the way down, increase the volume with the ◀❱ button.

▼ Make sure that the console speaker is enabled. Refer to page 20.

Cannot Connect In Wideband Mode

▼ You must be connected to another SoundStation VTX 1000 to enter wideband mode.

▼ Modem Train Time: The short train mode (6 seconds) should only be used on high quality phone lines. If you consistently have problems achieving wideband mode, set the modem train time to long (12 seconds). Refer to page 36.

▼ Bridged Calls: Wideband mode currently does not work with external conference bridges (i.e. multiple calls).

▼ Line Quality: The VTX 1000's modem operates in two modes, wideband voice mode and software download mode. In software download mode, the modem connects at higher rates, typically those rates achieved with a data modem on the same lines. However, in wideband mode, the connection rate is optimized for reliability rather than speed. The maximum rate used for wideband is 19.2 kbps while the maximum rate for software download is 33 kbps.

Poor line quality can prevent connections in wideband mode. The VTX 1000 will connect in wideband mode on connections as low as 12 kbps. However, if the line quality does not consistently support 12 kbps, the unit will connect in narrowband mode. This will be the case if your local loop is longer that 12,000 feet. Also, this can be the case with shorter loops if there is a problem on the line. Please contact your local phone company for resolution. In general, a typical data modem should be able to achieve 24 kbps connections in order to support a VTX call.

In order to test your line quality, perform the following test: Configure a VTX 1000 which has a good line as a software download server in accordance with instructions on page 44. Configure the unit with the line problems to receive a software download from the unit configured as a download server.

When the software download starts, note the connect rate that is displayed as the connection is established. You may cancel the software download once the connect rate has been displayed. If the software download connect rate is below 19.2 kbps, the line will not support wideband calls.

▼ Call Waiting: Call Waiting signals will interfere with wideband operation. It is highly recommended that Call Waiting be disabled by the phone company (or PBX administrator) for lines used for VTX 1000 wideband calls.

No Caller ID

Caller ID is supported only through your local phone company and only if you have subscribed to Caller ID service.

Type II "Caller ID on Call Waiting" is not supported, only Type I.

PBX (and other enterprise phone system Caller ID), which is proprietary, is not supported.

Flickering LCD

If your screen appears to flicker, it may be because you are using a certain type of older fluorescent

lighting in your building. Move the SoundStation VTX 1000 away from the lights or replace the lights.

Quick Keypad Input Is Not Registered

▼ Press the buttons more slowly. Because of system responsiveness, some buttons may not be recognized if you press them quickly.

If the problem you are experiencing is not resolved here, please contact your System Administrator.

Muffled or "In a Well" Reception

This is caused by highly reverberant rooms and people speaking too far from a mic.

▼ Speak closer to the unit so the microphones can pick up your speech.

▼ Add more sound absorbency to the room.

Variable Sound Quality

▼ You will enjoy the highest sound quality when you are on a wideband call, which you can determine by the presence of 〰 on your screen.

▼ If you are on a multi-party call, or a call with a party whose phone is not wideband enabled, your SoundStation VTX 1000 establishes a narrowband call, and you may notice a change in sound quality.

Problematic Sound Quality or No Sound

▼ If sound quality is problematic, or there is no sound, first determine whether any external audio output devices are in use, such as a subwoofer, PA system, or tape recorder.

▼ If such devices are in use, check that all the connections are secure. (See "Connection Diagram," pg. 31.) Then, access the Audio Setup (as described on pg. 17) and make sure that Aux Output (pg. 19) is set correctly. If a Subwoofer is in use, set Aux Output to SUBWOOFER. If any other device is in use, set Aux Output to EXT SPEAKER, RECORD OUT, or OFF.

Excessive Noise

▼ Noisy equipment, such as a computer or fan, may make it difficult for you to hear the other party. Both parties should turn off any noisy equipment.

▼ Try calling again to see if another line provides a better connection.

Remote Party Cannot Hear You

▼ If a remote party cannot hear you at all, cannot hear you well, or cannot hear you via particular microphones, first determine whether any external audio input devices are in use, such as a wireless microphone or mic mixer.

▼ If such devices are in use, check that all the connections are secure. (See "Connection Diagram," pg. 31.) Then, access the Audio Setup (as described on pg. 17) and make sure that Aux Input (pg. 19) is ON, so that input from these devices is recognized.

▼ If such devices are not in use, access the Audio Setup (as described on pg. 17) and make sure that Console Mics (pg. 20) are ON.

▼ If the only such devices in use are the VTX's Extended Microphones, access the Audio Setup (as described on pg. 17) and make sure that Console Mics (pg. 20) are ON. This setting controls both the internal microphones and the Extended Microphones.

Reverting to Narrowband

▼ All multi-party calls are narrowband calls. When you press the **CONF** button to add another party, any wideband connection you may have had with your first party will revert to narrowband, and you will no longer see ⇌ on your screen.

▼ Your connection will also revert to narrowband if another party picks up a phone which is connected in parallel with your SoundStation VTX 1000.

▼ Excessive noise on the line will also cause the phone to automatically switch to narrowband. If this problem persists, contact your pone line telephone service provider or system administrator. VTX 1000 is designed to provide wideband service on business quality phone lines.

Short Silences, Echoes, or Clipped Speech

▼ Do not move the SoundStation VTX 1000 console while it is in use.

▼ Keep your hands away from the unit during calls.

▼ Keep papers, cups, coffee pots, etc., away from the unit.

▼ At the beginning of a call, let someone at each location speak in turn for a few moments, to enable SoundStation VTX 1000 to adapt to its environment.

▼ The other party may be using lower-quality equipment or a half-duplex conference bridge, in which case there may be little you can do.

▼ Try calling again to see if another line provides a better connection.

Physical Damage

▼ If physical damage is severe enough that the internal parts become visible, disconnect the SoundStation VTX 1000 immediately. Do not reconnect it to the telephone network until the SoundStation VTX 1000 has been repaired.

For Best Performance

Your SoundStation VTX 1000 performs optimally when you follow these guidelines:

▼ Position the SoundStation VTX 1000 in the center of a conference table or desk.

▼ Do not move the SoundStation VTX 1000 while on a call.

▼ Do not shuffle papers near the SoundStation VTX 1000.

▼ Position extended microphones 7 feet from the SoundStation VTX 1000 console.

▼ Speak at normal conversation levels, and direct your voice toward the SoundStation VTX 1000, or toward the extended microphone.

Maintenance

Unplug all cords from the modular wall jack before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

Administrator's Guide

Your SoundStation VTX 1000 audio conferencing system includes the following items:

SoundStation VTX 1000

Extension Microphones

This Operation Manual

Subwoofer

Phonejack Cable

Subwoofer Power Cord

Subwoofer Audio Cord

Interface Module

Optional Equipment

RJ 45 Cable

Wireless Microphone System (Available only in North America)

Interface Module Power Cord (Yours may differ.)
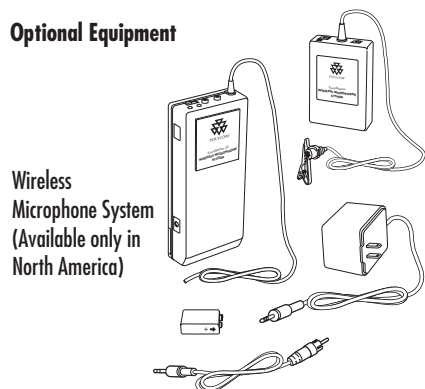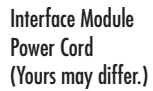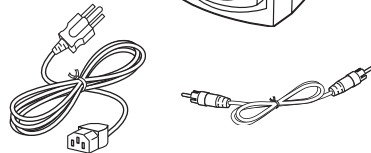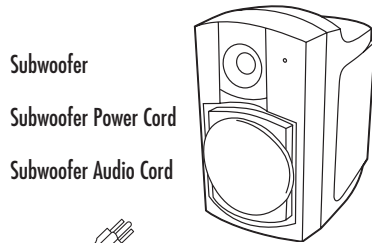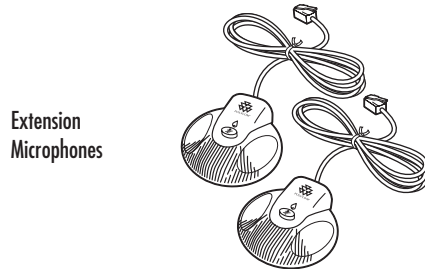
If any of the above parts is missing, please contact your Polycom representative or authorized dealer.

Power cables may differ.

For future applications

Postition subwoofer on floor - not on tabletop

Extend microphones completely for best performance
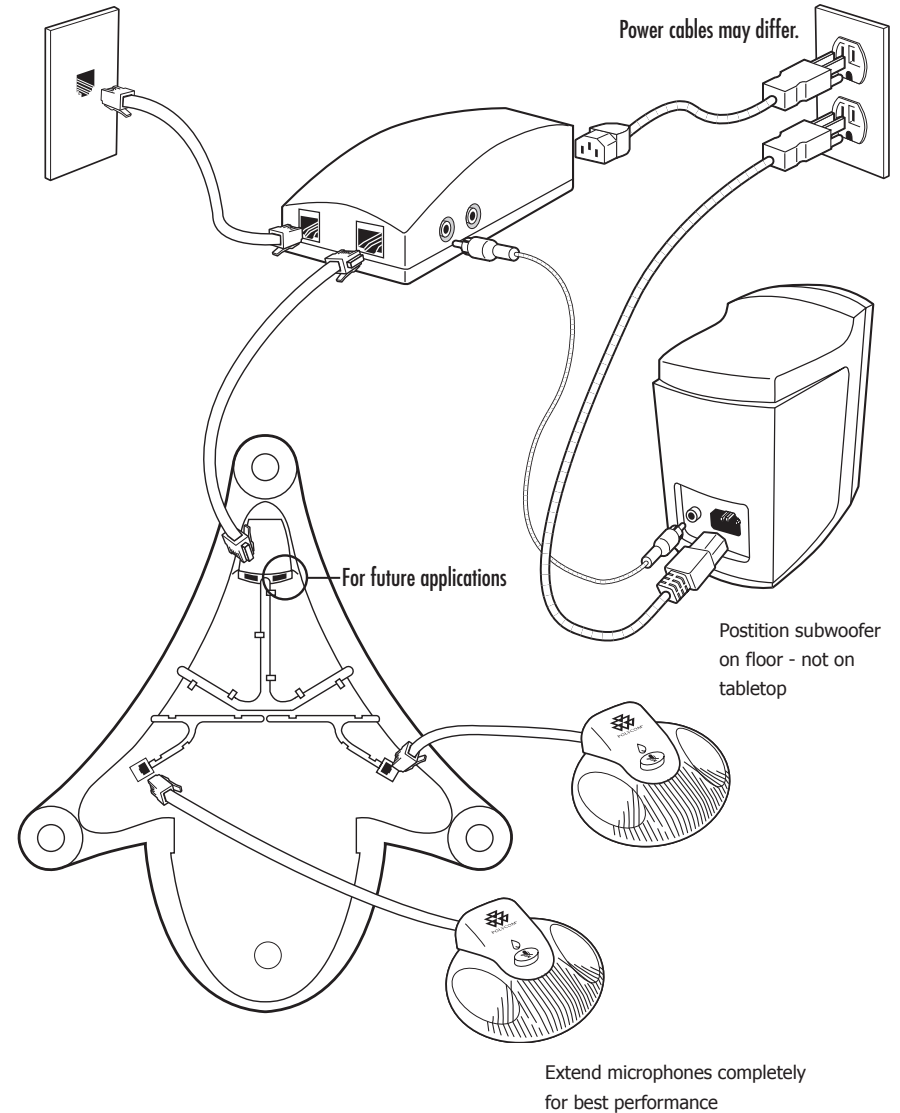
Administrative Setup Overview

The following items are part of the Administrative Setup area.

1. Location

1 Location Name	Enter a name for this SoundStation VTX 1000's location.
2 This Phone #	Enter this SoundStation VTX 1000's telephone number.

2. Phone System

1 Flash Timing	Set the flash delay to 75, 100, 300, or 600 milliseconds.
2 Caller ID	Turn Caller ID (if available) on or off.
3 Modem Setup	Select short train time (6seconds) for high quality line or long train (12 seconds) otherwise.
4 Wideband Monitor	Selecting "ON" (default) monitors wideband calls for line quality degradation.

3. Passcode

Set whether or not to require a passcode, and assign a new passcode.

4. Diagnostics

1 Mic Test	View the relative level of the sample received by each individual microphone.
2 Console Spkr (Speaker) Test	Select acoustic test signals to drive through the SoundStation VTX 1000 speakers
3 Ext Spkr Test (External Speaker)	Select acoustic test signals to drive through external audio output devices, such as speakers, PA systems, etc.
4 Modem Statistics	View the SoundStation VTX 1000 modem performance for the last call that made use of a modem connection.
5 Restore Defaults	Completely eliminate all settings and data that have been entered since the phone was first installed and restores original default settings.

5. Software

1 Upgrade Software	Dial in to download updated software directly to the SoundStation VTX 1000.
2 Configure Dialing Number	Enter the number to be dialed to upgrade software.
3 Configure as DL Server	Activate or deactivate the SoundStation VTX 1000's capability to provide software upgrades to other VTXs that call it.

The following pages explain how to access, select, adjust, use, and exit these settings and functions.

Access Administrative Setup

Press the **MENU** button. Use the ⌄ button to highlight **ADMIN SETUP**, then press the **SELECT** button.

No Passcode Assigned

If there is no Passcode assigned, the Admin Setup Menu will be displayed.

```
        ADMIN SETUP
  → 1. LOCATION
     2. PHONE SYSTEM        ⌄
     3. PASSCODE

     4. DIAGNOSTICS
     5. SOFTWARE
```

Passcode Assigned

If there is a Passcode assigned, use the number keypad to enter your 3-digit code, and then press **ENTER**.

```
      ADMIN SETUP        🔑

     PASSCODE: |
  ┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄
   CANCEL    < DEL    ENTER
```

▼ Use the **CANCEL** soft key to return to the Main Menu.

▼ If you make an error, press **<DEL** to delete characters.

Caution: Be sure to write down your passcode in a safe place in case you forget it. If you cannot remember or find your passcode, please contact Polycom Support at www.polycom.com/support and click on "How to Contact Support and Service" for your local support contact information.

Note: You can set whether or not to require a passcode in the "Passcode" section, pg. 37.

```
   INCORRECT PASSCODE

     PASSCODE:|
  ┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄
   CANCEL    < DEL    ENTER
```

If you enter an incorrect passcode, the digits you entered will disappear and you will be returned to the Admin Setup menu to re-enter your passcode.

Select an Item to Display
Standard Selection

Use the ⌃ or ⌄ buttons to highlight the desired item, and press the **SELECT** button.

```
      ADMIN SETUP        🔑
  → 1. LOCATION
     2. PHONE SYSTEM        ⌄
     3. PASSCODE

     4. DIAGNOSTICS
     5. SOFTWARE
```

Selection Shortcuts

For quick selection of the desired item, press its number on the keypad.

▼ Some Admin Setup sections have submenus, which are also numbered for quick selection, so you can enter a two-digit number for quickest access. For example, pressing **2 3** at the main Admin Setup Menu will select the **2. PHONE SYSTEM** submenu's **3. MODEM SETUP** item.

From the Admin Setup Menu

```
   ADMIN SETUP      O─┐
→ 1. LOCATION
   2. PHONE SYSTEM        ∨
   3. PASSCODE
   4. DIAGNOSTICS
   5. SOFTWARE
```

SELECT button

Display the Submenu or Item Screen of the current selection.

EXIT button

Return to the Main Menu.

From a Submenu

```
      LOCATION       O─┐
→ 1. LOCATION NAME
   2. THIS PHONE  #
```

(i.e., the Location Submenu, Phone System Submenu, Diagnostics Submenu or Software Submenu)

SELECT button

Display the Item Screen of the current selection.

EXIT button or **MENU** button

Return to the Admin Setup Menu or Main Menu.

From an Item Screen

SELECT button or **SAVE** soft key

Apply the new setting, information, or adjustment and return to the previous menu.

Note: For Passcode screens, this is the Admin Setup Menu, while for all the other subscreens, it's the corresponding submenu.

EXIT button

Return to the previous menu without saving your new settings, information, or adjustments.

Note: For Passcode screens, this is the Admin Setup Menu, while for all the other subscreens, it's the corresponding submenu.

MENU button

Return to the Main Menu without saving your new settings, information, or adjustments.

```
 LOCATION NAME      O─┐

 CONFERENCE ROOM B|
─────────────────────────
 < DEL    SPACE    SAVE
```

(i.e., a Location screen, Phone System screen, Passcode screen, Diagnostics screen, or Software screen)

Location Name

Use the number keypad to enter a location name, which will be displayed when "This Phone" is selected from the Main Menu.

```
      LOCATION       O─┐
→ 1. LOCATION NAME
   2. THIS PHONE  #
```

Character Entry

Character Entry

For each letter you want, press the number button that has that letter on it. Press the same button repeatedly to cycle through the letters on that button; e.g., pressing **3** repeatedly will display **D**, **E**, **F**, **3**, **D**, etc.

Advance a Character

To enter the same character, wait for 3 second then press the same key again.

Add a Space

Press the **SPACE** soft key (when available).

Delete a Character

Press the **< DEL** soft key.

```
 LOCATION NAME      O─┐

 CONFERENCE ROOM B|
─────────────────────────
 < DEL    SPACE    SAVE
```

This Phone

Use the number keypad to enter this SoundStation VTX 1000's phone number.

▼ If you make an error, use the **<DEL** soft key to erase it.

```
 THIS PHONE #       O─┐

 5554321|
─────────────────────────
 < DEL             SAVE
```

Save

Important: Press the **SAVE** soft key or **SELECT** button to retain the new location name and return to the Location Submenu. Otherwise, you can use the **EXIT** button to return to the Location Submenu, or the **MENU** button to return to the Main Menu, but your new location will not be saved.

Phone System

Flash Timing

You can adjust the timing of the Flash delay to 75, 100, 300, or 600 milliseconds. Use the ← and → soft keys or the ⌃ or ⌄ buttons to cycle through these Flash Timing options. Press the **SAVE** soft key to save the change.

```
FLASH TIMING              ⌐⊶
600 MSEC
    ←           →        SAVE
```

Caller ID

If available, you can turn Caller ID **ON** or **OFF** with your soft keys or the ⌃ or ⌄ buttons. Press the **SAVE** soft key to save the change.

```
CALLER ID                 ⌐⊶
OFF
   OFF         ON         SAVE
```

Modem Setup

The ability for two SoundStation VTX 1000s units to connect in wideband mode is largely dependent on telephone line quality. The longer the "training" time (the time between when two VTX phones connect until a wideband call is established) the higher the probability two SoundStation VTX units can establish a wideband call, even on relatively poor quality phone lines.

SoundStation VTX 1000 assumes poor line quality by default, defaulting to a Long Training Time of 10 - 12 seconds. However, a Short Training Time can be configured on higher quality phone

lines, such as analog lines on enterprise telephone systems (PBXs, etc.), in order to save wideband connection time.

▼ Training time can be decreased to 4 - 6 seconds by selecting **SHORT**, then pressing **SAVE** to save the change. If Short Training Time does facilitate consistent connections in wideband mode, return SoundStation VTX 1000 to **LONG** Training Time.

```
MODEM SETUP               ⌐⊶
SHORT TRAINING TIME
  SHORT     LONG         SAVE
```

```
MODEM SETUP               ⌐⊶
LONG TRAINING TIME
  SHORT     LONG         SAVE
```

Wideband Line Quality Monitor

During the course of a wideband call line quality on a telephone network can degrade, which can impact the clarity and overall audio quality of a VTX Wideband call. SoundStation VTX 1000s Wideband Line Quality Monitor will automatically revert a wideband call to narrowband mode if significant line quality degradation is detected, and is severe enough to impact wideband audio quality over time. The Wideband Line Quality Monitor is **ON** by default, but can be deactivated by selecting **OFF** and then **SAVE** . For shorter conference calls, the benefit of turning off the Wideband Line Quality Monitor is that it may be likely that your wideband call will end before any detectable degradation in audio quality can be detected, thus avoiding an unnecessary "drop" to narrowband.

```
LINE QUALITY MONITOR
ON
   OFF         ON         SAVE
```
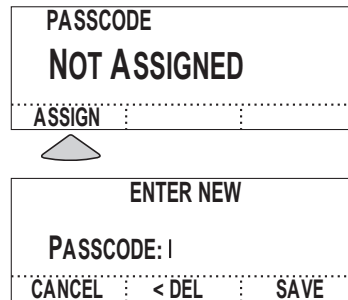
Passcode

You have the option to decide if a passcode should be required to enter the Admin Setup area. If a passcode is required, you may select your own passcode.

When you select **PASSCODE** from the menu, the screen will display whether or not a passcode is currently assigned.

Assign a Passcode

If no passcode is currently assigned, you can press the **ASSIGN** soft key to create one.

▼ Use the number keys to enter three digits, and then press the **SAVE** soft key.

▼ If you make an error, press the **<DEL** soft key to erase it.

▼ If you change your mind about assigning a passcode, press the **CANCEL** soft key.

```
PASSCODE
NOT ASSIGNED

ASSIGN
```

```
ENTER NEW

PASSCODE: |
CANCEL     < DEL     SAVE
```

Remove a Passcode

Removing a passcode means that you will no longer need a passcode to enter the Admin Setup area. After you press the **REMOVE** soft key, you will have to enter the current passcode before you can change it.

▼ Use the number keys to enter three digits, and then press the **ENTER** soft key.

▼ If you make an error, press the **<DEL** soft key to erase it.

▼ When you press the **ENTER** soft key, if the passcode you entered is incorrect, you will be notified to try again.

▼ Press the **CANCEL** key if you change your mind about removing the passcode.

```
PASSCODE              O┰
ASSIGNED

CHANGE    REMOVE
```

```
ENTER CURRENT         O┰

PASSCODE: |
CANCEL     < DEL     ENTER
```

Assign a New Passcode

To change the passcode, press the **CHANGE** soft key. You will be asked to enter the current passcode before the SoundStation VTX 1000 will allow you to change it.

▼ Use the number keys to enter three digits, and then press the **SAVE** soft key.

▼ If you make an error, press the **<DEL** soft key to erase it.

▼ When you press the **ENTER** soft key, if the passcode you entered is incorrect, you will be notified to try again.
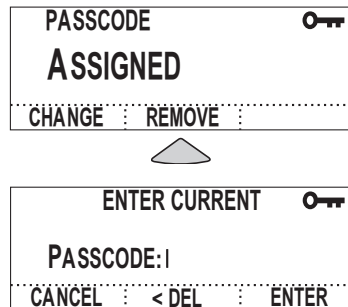
You will then be prompted to enter the new passcode.

▼ Use the number keys to enter three digits, and then press the **SAVE** soft key.

▼ If you make an error, press the **<DEL** soft key to erase it.

▼ If you change your mind about changing the passcode, press the **CANCEL** soft key.

```
PASSCODE              O┰
ASSIGNED

CHANGE    REMOVE
```

```
ENTER CURRENT         O┰

PASSCODE: |
CANCEL     < DEL     ENTER
```

```
ENTER NEW

PASSCODE: |
CANCEL     < DEL     SAVE
```
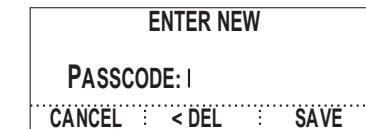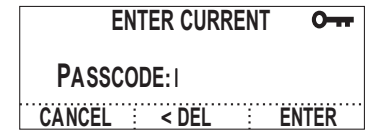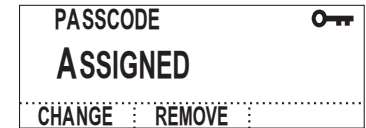
Diagnostics

Mic Test

To test the SoundStation VTX 1000's microphones from within the Mic Test portion of the Diagnostics section, highlight the microphone you wish to test, and then press the **SELECT** button. The microphones are numbered according to the diagram below:
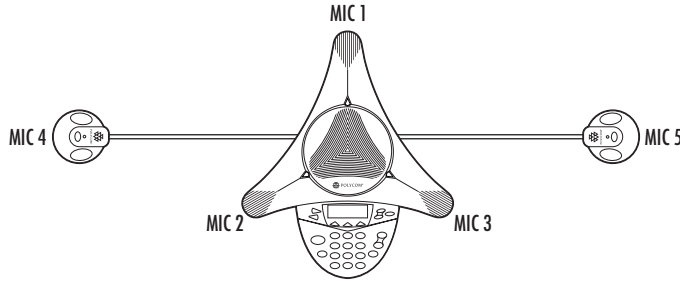
When you have selected a microphone:

▼ That microphone's LED will light up red.

▼ That microphone will begin sampling at a 1 Hz rate, 50% duty cycle.

▼ The display will show a meter that modulates according to the relative sample received by that microphone.
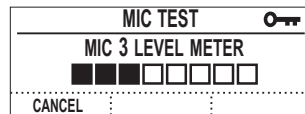
If a microphone's meter indicates that it is receiving an atypically low or high sample, despite appropriately controlled input, contact Polycom Technical Support.

Console Speaker Test

From the Console Speaker Test portion of the Diagnostics section, you can select an acoustic test signal to drive through the SoundStation VTX 1000's speaker for speaker testing and to sample the room acoustics.

Highlight the desired signal, and press the **SELECT** button soft key to activate the signal.

▼ Sine Sweep is a test signal consisting of a 100 Hz to 14,000 Hz sine wave whose frequency is swept according to a linear progression of frequency as a function of time, or $(t)=A*\sin(kt)$.

▼ One kHz Tone is a constant tone generated at exactly 1000 Hz.

▼ White Noise is a signal whose energy is distributed uniformly among all frequencies within a band of interest, which for the SoundStation VTX 1000 is 100 Hz to 14,000 Hz.

External Speaker Test

The External Speaker Test portion of the Diagnostics section works just as described above but drives the signal through the audio output device you have connected, such as a speaker, subwoofer, or PA system. (See the Connection Diagram, pg. 31, for setup of audio output devices. See also "Aux Output," pg. 19, for information on configuration.)

Note: The External Speaker Test signals can be used for the VTX Subwoofer (see "Using the VTX Subwoofer," pg. 22, and also see "Aux Output," pg. 19, for information on configuration), but output signal levels with the Subwoofer will not exceed 300 Hz.

Aux In and Aux Out Specification Table

External Device Output	Interface Module Input
Polycom Wireless Mic	
100 Hz < BW < 14 kHz *Zout < 200 ohms, typical* *Max Vout 0.25 Vpp to 1.0 Vpp*	*100 Hz < BW < 14 kHz* *Zin = 24k ohms, nom*
Ext Mic	
100 Hz < BW < 14 kHz *Audio out = 600 ohms, typical* *Level = 0.5 Vpp, nom*	*100 Hz < BW < 14 kHz* *Zin = 24k ohms, nom*
Ext Mixer	
100 Hz < BW < 14 kHz *Audio out = 600 ohms, typical* *Level = 0.5 Vpp, nom*	*100 Hz < BW < 14 kHz* *Zin = 24k ohms, nom*

External Device Input	Interface Module Output
Subwoofer	
80 Hz < BW < 300 Hz *Input impedance = 7k ohms, nom* *Sensitivity = 97 dBspl/Volt*	*80 Hz < BW < 300 Hz* *Output Impedance < 100 ohms* *Output Level = 0.7 Vrms, max*
External Speaker(s)	
80 Hz < BW < 14 kHz *Audio In = 10k ohms, typical* *Sensitivity = 100 dBspl/Volt, nom*	*80 Hz < BW < 14 kHz* *Output Impedance < 100 ohms* *Output Level = 0.7 Vrms, max*
Record Out	
80 Hz < BW < 15 kHz *Audio in = 10k ohms, nom* *Level = 0.7 Vrms, max*	*80 Hz < BW < 14 kHz* *Output Impedance < 100 ohms* *Output Level = 0.7 Vrms, max*

Modem Statistics

In the Modem Statistics portion of the Diagnostics section, you can view the SoundStation VTX 1000 modem performance for the last call that made use of a modem connection.

```
MONITORING LINE QUALITY
→ TX BIT RATE        28800
  RX BIT RATE        28800
  SNR                +18
  ROUND TRIP DELAY   30
  CRC ERRORS         0
```

The statistics provided are:

▼ **Tx Bit Rate** (Transmit Bit Rate)
The achievable rate for sending data over a given phone line with the modem, in bits per second

▼ **Rx Bit Rate** (Receive Bit Rate)
The achievable rate for receiving data over a given phone line with the modem, in bits per second

▼ **SNR** (Signal to Noise Ratio)
A measure, in microvolts, of signal strength relative to background noise as expressed in decibels

▼ **Round Trip Delay**
The elapsed round trip time for transit of a signal over the analog telephone circuit

▼ **CRC Errors**
(Cyclical Redundancy Check Errors) The cumulative number of lost data packets, a good measure of the robustness of the data connection

▼ **Monitoring Line Quality**
VTX 1000 provides text-based status indicators on the display to communicate the real-time operational details of the phone when testing line quality and negotiating wideband and narrowband connections. Below is a description of each.

1. "Line Quality Standby"

This will be displayed if the prior phone call did not use the modem. (i.e. narrow band).

2. "Monitoring Line Quality"

This is displayed during a wideband call.

3. "Narrowband Select on Poor Sync"

This will be displayed if the local VTX 1000 decided to fall to Narrowband because it believed the modem had lost sync due to detected errors in V.34's so called superframe bit inversion synchronization pattern.

4. "Narrowband Select on CRC Level 1"

This will be displayed if the unit detects a 15% or greater CRC Error Rate consistently at our local receiver for 60 seconds.

5. "Narrowband Select on CRC Level 2"

This will be displayed if we detect a 20% or greater CRC Error Rate consistently at our local receiver for 6 seconds.

6. "Narrowband Select on CRC Level 3"

This will be displayed if the unit detects a 40% or greater CRC Error Rate consistently at our local receiver for 6 seconds.

7. "Narrowband Select on CRC Level 4"

This will be displayed if the unit detects an 80 % or greater CRC Error Rate consistently at our local receiver for 3 seconds.

8. "Wideband Signal Loss Detected"

This will be displayed if the remote VTX 1000 shut off wideband. This will also be displayed if the remote side hangs up.

Restore All Defaults

When you select Restore Defaults, you will be prompted to confirm or cancel the complete elimination of all settings and data that have been entered since the phone was first installed.

▼ Important: If you Restore Defaults, all data entered since the phone was first installed, including, but not limited to, all Settings, Audio Setup entries, Administrative Setup passcode and data, etc., is irretrievably lost.

Note: Phone Book entries and Speed Dial numbers are not lost when restoring all defaults.

Press the **OK** soft key to confirm that you wish to Restore Defaults, or the **CANCEL** soft key to return to the Diagnostics submenu without restoring defaults.

Software

Upgrade Software

SoundStation VTX 1000 is the world's first analog telephone capable of software upgrades, via software download, over ordinary telephone lines. You can dial in to download software whenever free or purchased upgrades, improvements, or new functions are made available for your SoundStation VTX 1000.

(If no dialing number has ever been established for your SoundStation VTX 1000, then configure the dialing number as described in the next section, before proceeding with your upgrade.)

When you select Upgrade Software from the Software submenu, you will be prompted to indicate when you are ready for the SoundStation VTX 1000 to begin dialing in for a download. To initiate the process, press the **OK** soft key (or, to return to the Software submenu, press the **CANCEL** soft key).

Note: For an alternate way to receive upgrades, see "Configure as DL Server," pg. 43.

▼ The SoundStation VTX 1000 will dial, connect, and begin downloading. Displays will indicate the number being dialed, the connection rate, and then download progress.
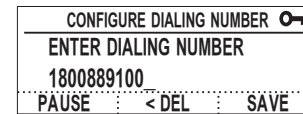
```
┌─────────────────────────────────┐
│  UPGRADE SOFTWARE        ⊙┳      │
│  SW UPGRADE IN PROGRESS         │
│  ▮▮▮▮▮▮▮▮▮▢▢▢▢▢       68%        │
│  CANCEL                         │
└─────────────────────────────────┘
```

▼ Generally, the download will take about 12 minutes on a high quality line which achieves 24 kbps connection rates. If the connection rate is lower or the bit errors (due to line noise) are high, download could take up to 1 hour. If you wish to cancel the download process, press the **CANCEL** soft key. After a confirmation prompt, a message will indicate that downloading was cancelled. Press the **BACK** soft key to return to the Software submenu.

▼ Upon completion of the software downloading process, a secondary process of writing the software to memory will occur accompanied by a warning message to not unplug the unit during this secondary process. Writing software to memory takes approximately 1 minute 30 seconds, followed by a message indicating that download was successful. Once the successful download message is displayed, the phone is ready for use.

Configure Dialing Number

To download software, your SoundStation VTX 1000 needs the phone number of the VTX Download Server for your area. Use the number keypad to enter the dialing number that should be used, in the Configure Dialing area of the Software section.

Pressing the **PAUSE** soft key will insert a 1.5 second pause (shown as a comma), which is often necessary when dialing from a PBX (or other enterprise) system that requires a prefix such as 9 for an external call.

```
┌─────────────────────────────────┐
│  CONFIGURE DIALING NUMBER  ⊙┳    │
│  ENTER DIALING NUMBER           │
│  1800889100                     │
│  PAUSE      < DEL      SAVE      │
└─────────────────────────────────┘
```

Configure as DL Server

Once a single SoundStation VTX 1000 within your organization has upgraded software, if you configure it as a download server, other VTX phones can call it to receive the upgrade, rather than each calling the main VTX Download Server for your area.

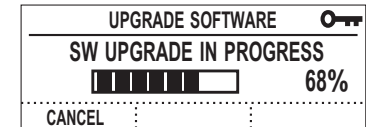Any SoundStation VTX 1000 can be configured as a download server.

▼ When you select Configure as DL Server from the Configure Software Upgrade submenu, if the phone is not already configured as a server, you will be asked whether to activate it as a server. Press the **OK** soft key to activate it as a server, or the **CANCEL** soft key to return to the Configure Software Upgrade submenu.

▼ If, instead, the phone is already configured as a server when you select Configure as DL Server, you'll be asked whether to deactivate it as a server. Press the **OK** soft key to deactivate the phone as a server, or the **CANCEL** soft key to return to the Configure Software Upgrade submenu.

▼ New software download availability and dialing numbers for your area are posted on the SoundStation VTX 1000 page on Polycom's web site:

WWW.POLYCOM.COM

▼ If you make an error, use the **<DEL** soft key to erase it.

▼ Important: Press the **SAVE** soft key to retain the new dialing number and return to the Configure Software Upgrade submenu. Otherwise, you can use the **EXIT** button to return to the Software Submenu, or the **MENU** button to return to the Main Menu, but your new dialing number will not be saved.

Once a SoundStation VTX 1000 unit is configured as a download server, other SoundStation VTX 1000 units can dial into it to download software. The process of configuring the dialing number and upgrading software is identical when using another SoundStation VTX 1000 as your download server, as described on pg. 42.

```
┌─────────────────────────────────┐
│  UPGRADE SOFTWARE        ⊙┳      │
│  SW UPGRADE IN PROGRESS         │
│  ▮▮▮▮▮▮▢▢▢            68%        │
│  CANCEL                         │
└─────────────────────────────────┘
```

Note: When VTX 1000 is configured for Server Mode, no audio calls are possible on VTX 1000 until it is deactivated as a download server.

Specifications and
Warranty Information
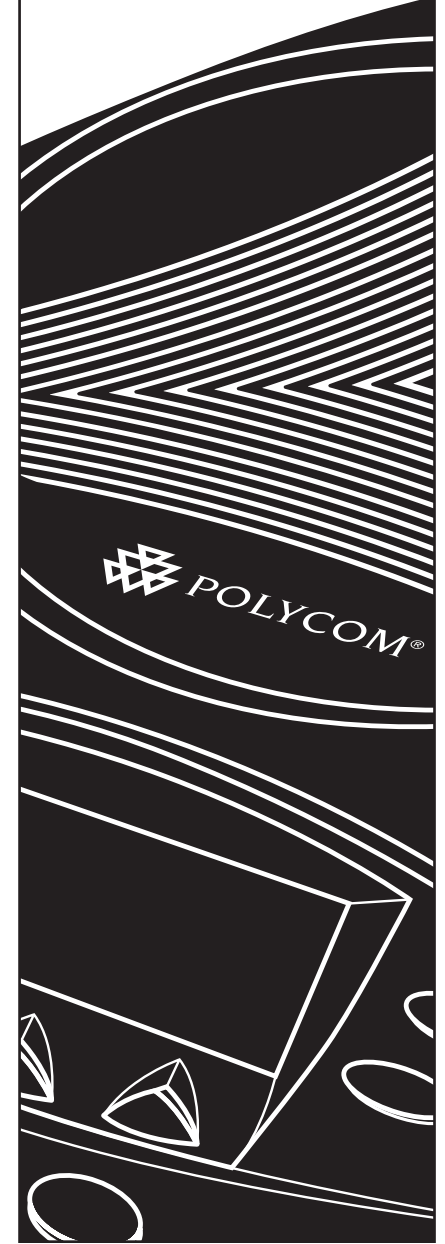
Limited Warranty and Limitation of Liability

Limited Warranty

Polycom warrants to the end user ("Customer") that this product will be free from defects in workmanship and materials, under normal use and service, for one year from the date of purchase from Polycom or its authorized reseller.

Polycom's sole obligation under this express warranty shall be, at Polycom's option and expense, to repair the defective product or part, deliver to Customer an equivalent product or part to replace the defective item, or if neither of the two foregoing options is reasonably available, Polycom may, in its sole discretion, refund to Customer the purchase price paid for the defective product. All products that are replaced will become the property of Polycom. Replacement products or parts may be new or reconditioned. Polycom warrants any replaced or repaired product or part for ninety (90) days from shipment, or the remainder of the initial warranty period, whichever is longer.

Products returned to Polycom must be sent prepaid and packaged appropriately for safe shipment, and it is recommended that they be insured or sent by a method that provides for tracking of the package. Responsibility for loss or damage does not transfer to Polycom until the returned item is received by Polycom. The repaired or replaced item will be shipped to Customer, at Polycom's expense, not later than thirty (30) days after Polycom receives the defective product, and Polycom will retain risk of loss or damage until the item is delivered to Customer.

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

Exclusions

Polycom will not be liable under this limited warranty if its testing and examination disclose that the alleged defect or malfunction in the product does not exist or results from

▼ Failure to follow Polycom's installation, operation, or maintenance instructions;

▼ Unauthorized product modification or alteration;

▼ Unauthorized use of common carrier communication services accessed through the product;

▼ Abuse, misuse, negligent acts or omissions of Customer and persons under Customer's control; or

▼ Acts of third parties, acts of God, accident, fire, lighting, power surges or outages, or other hazards.

WARRANTY EXCLUSIVE. IF A POLYCOM PRODUCT DOES NOT OPERATE AS WARRANTED ABOVE, CUSTOMER'S SOLE REMEDY FOR BREACH OF THAT WARRANTY SHALL BE REPAIR, REPLACEMENT, OR REFUND OF THE PURCHASE PRICE PAID, AT POLYCOM'S OPTION. TO THE FULL EXTENT ALLOWED BY LAW, THE FOREGOING WARRANTIES AND REMEDIES ARE EXCLUSIVE AND ARE IN LIEU OF ALL OTHER WARRANTIES, TERMS, OR CONDITIONS, EXPRESS OR IMPLIED, EITHER IN FACT OR BY OPERATION OF LAW, STATUTORY OR OTHERWISE, INCLUDING WARRANTIES, TERMS, OR CONDITIONS OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, SATISFACTORY QUALITY, CORRESPONDENCE WITH DESCRIPTION, AND NON-INFRINGEMENT, ALL OF WHICH ARE EXPRESSLY DISCLAIMED. POLYCOM NEITHER ASSUMES NOR AUTHORIZES ANY OTHER PERSON TO ASSUME FOR IT ANY OTHER LIABILITY IN CONNECTION WITH THE SALE, INSTALLATION, MAINTENANCE OR USE OF ITS PRODUCTS.

Service Agreements

If you purchased your product from a Polycom Authorized Reseller, contact the Authorized Reseller for information about service agreements applicable to your product. For technical assistance or information on service programs, please visit Polycom's website at www.polycom.com and select the Support menu.

Disclaimer

Some countries, states, or provinces do not allow the exclusion or limitation of implied warranties or the limitation of incidental or consequential damages for certain products supplied to consumers, or the limitation of liability for personal injury, so the above limitations and exclusions may be limited in their application to you. When the implied warranties are not allowed to be excluded in their entirety, they will be limited to the duration of the applicable written warranty. This warranty gives you specific legal rights which may vary depending on local law.

Governing Laws

This Limited Warranty and Limitation of Liability shall be governed by the laws of the State of California, U.S.A., and by the laws of the United States, excluding their conflicts of laws principles. The United Nations Convention on Contracts for the International Sale of Goods is hereby excluded in its entirety from application to this Limited Warranty and Limitation of Liability.

FCC Rules

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause

harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

▼ Reorient or relocate the receiving antenna.

▼ Increase the separation between the equipment and receiver.

▼ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

▼ Consult the dealer or an experienced radio/TV technician for help.

In accordance with part 15 of the FCC rules, the user is cautioned that any changes or modifications not expressly approved by Polycom Inc. could void the user's authority to operate the equipment.

Canadian Department of Communications Notice

This Class [B] digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe [B] est conforme à la norme N M B-003 du Canada.

US Telco Requirements

This equipment complies with part 68 of the FCC Rules. Please refer to the labeling on equipment for the following information:

▼ Registration Number

▼ Ringer Equivalence

▼ Grantee's Name

▼ Model Number

▼ Serial Number and/or Date of Manufacture

▼ Country of Origin

If requested this information must be provided to the telephone company

Notes:

▼ This registered equipment may not be used with party lines or coin lines.

▼ If trouble is experienced, the customer shall disconnect the registered equipment from the telephone line to determine if the registered equipment is malfunctioning and that if the registered equipment is malfunctioning, the use of such equipment shall be discontinued until the problem has been corrected.

▼ If, in the unlikely event that this equipment causes harm to the network, the telephone company will notify you in advance that temporary discontinuance of service may be required. However if advance notice is not practical, the telephone company will notify you as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it necessary.

▼ The telephone company may make changes to its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice so you can make the necessary modifications to maintain uninterrupted service.

REN

The REN is used to determine the quantity of devices that may be connected to the telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming

call. Typically the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line (as determined by the total RENs) contact the local telephone company.

Automatic Dialing

WHEN PROGRAMMING EMERGENCY NUMBERS AND/OR MAKING TEST CALLS TO EMERGENCY NUMBERS:

1. Remain on the line and briefly explain to the dispatcher the reason for the call.

2. Perform such activities in the off-peak hours, such as early morning or late evening.

A FCC compliant telephone cord and modular plug is provided with this equipment. This equipment is designed to be connected to the telephone network or premises wiring using a compatible modular jack that is Part 68 complaint. See the rest of these installation instructions for details.

"NOTICE: The Industry Canada label identifies certified equipment. This certification means that the equipment meets telecommunications protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s). The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations. Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate."

"NOTICE: The Ringer Equivalence Number (REN) assigned to each relevant terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed 5."

The term "IC:" before the certification/ registration number dignifies only that the Industry Canada technical specifications were met.

This SoundStation VTX 1000 has been marked with the CE mark. This mark indicates compliance with EEC Directives 89/336/EEC, 73/23/EEC 1999/5/EC. A full copy of the Declaration of Conformity can be obtained from Polycom Ltd, 270 Bath Road, Slough, Berkshire, SL1 4DX, UK.

Declaration of Conformity

Hereby, Polycom Ltd. declares that this SoundStation VTX 1000 is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

Konformitetserklæring

Hermed erklærer Polycom Ltd., at indestående SoundStation VTX 1000 er i overensstemmelse med de grundlæggen-de krav og de relevante punkter i direktiv 1999/5/EF.

Konformitätserklärung

Hiermit erklärt Polycom Ltd., dass der SoundStation VTX 1000 die grundlegenden Anforderungen und sonstige maßgebliche Bestimmungen der Richtlinie 1999/5/EG erfüllt.

Δήλωση Συμμόρφωσηζ

Δια του παρόντοζ, η εταιρεία Polycom Ltd. δηλώνει ότι η παρούσα συσκευή (δρομολογητήζ) SoundStation VTX 1000 πληροί τιζ βασικέζ απαιτήσειζ και άλλεζ βασικέζ προϋποθέσειζ Οδηλίαζ 1999/5/ΕΚ.

Vaatimustenmukaisuusvakuutus

Polycom Ltd. vakuuttaa täten, että SoundStation VTX 1000 on direktiivin 1999/5/EC keskeisten vaatimusten ja sen muiden tätä koskevien säännösten mukainen.

Déclaration de Conformité

Par la présente, Polycom Ltd. déclare que ce SoundStation VTX 1000 est conforme aux conditions essentielles et à toute autre modalité pertinente de la Directive 1999/5/CE.

Dichiarazione di Conformità

Con la presente Polycom Ltd. dichiara che il SoundStation VTX 1000 soddisfa i requisiti essenziali e le altre disposizioni pertinenti della direttiva 1999/5/CE.

Verklaring Van Overeenstemming

Hierbij verklaart Polycom Ltd. dat diens SoundStation VTX 1000 voldoet aan de basisvereisten en andere relevante voorwaarden van EG-richtlijn 1999/5/EG.

Declaração de Conformidade

Através da presente, a Polycom Ltd. declara que este SoundStation VTX 1000 se encontra em conformidade com os requisitos essenciais e outras disposições relevantes da Directiva 1999/5/CE.

Declaración de Conformidad

Por la presente declaración, Polycom Ltd. declara que este SoundStation VTX 1000 cumple los requisitos esenciales y otras cláusulas importantes de la directiva 1999/5/CE.

Överensstämmelseförklaring

Polycom Ltd. förklarar härmed att denna SoundStation VTX 1000 överensstämmer med de väsentliga kraven och övriga relevanta stadganden i direktiv 1999/5/EG.

Australia

Mains Powered POT's Voice Telephony Without Emergency 000 Dialing

> **Warning**
> This equipment will be inoperable
> when mains power fails

Japan

VCCI Class B

この装置は、情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準
に基づくクラスＢ情報技術装置です。この装置は、家庭環境で使用すること
を目的としていますが、この装置がラジオやテレビジョン受信機に近接して
使用されると、受信障害を引き起こすことがあります。
　取扱説明書に従って正しい取り扱いをして下さい。

POLYCOM®

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