Alcatel·Lucent Enterprise

AD51 DECT HEADSET MONAURAL
AD52 DECT HEADSET BINAURAL
AD1 DECT HEADSET BASE STATION
AD2 DECT HEADSET USB DONGLE

User Manual

8AL91482ENAA ed01

Table of contents

1 Introduction

This user guide describes the configuration, management, operation, and maintenance of the AD5X wireless headset series, which are part of the DECT system range. The series covers two different headset models (AD51 DECT Headset and AD52 DECT Headset).

1.1 References

Readers of this user guide may find additional information and supporting specifications in the following documents.

Reference		Name
1	8AL91483ENAA	ALE Headset Setup Tool User Manual
2	8AL91486ENAA	ADX DECT Headset Firmware Update

1.2 Abbreviations

Abbreviation	Description
AEI	EHS Standard (Additional Equipment Interface)
CELT	Constrained-Energy Lapped Transform
BT	Bluetooth®
DECT	Digital Enhanced Cordless Telecommunications
DHSG	EHS Standard (Drahtlose Hör-Sprech-Garnitur, Wireless Headset Interface)
DSP	Digital Signal Processing
EA40	EHS Standard (Alcatel-Lucent proprietary headset interface)
EHS	Electronic Hook Switch
ENC	Environmental Noise Cancellation
HAC	Hearing Aid Compatible
LED	Light Emitting Diode
TFT	Thin Film Transistor
USB	Universal Serial Bus

2 Overview

2.1 Package overview

Prior to opening, examine the shipping package for evidence of physical damage. If there is proof of mishandling prior to opening, report it to the relevant support center of the regional representative or operator.

The headset is sold both as a standalone product and together with the AD1 DECT Headset Base Station in a combined packaging. In general, every shipped headset unit box contains the items listed below:

- 1 x headset
- 1 x USB-A – USB-C cable
- 1 x 600mAh Li-polymer battery
- 1 x Safety information leaflet

If bought together with the base, the package includes the additional items:

- 1 x AD1 base
- 1x Jack – USB-A cable to use to power the base using a recommended external power supply (PSU).
- 1 x USB-A – USB-C cable
- 1 x Safety information leaflet

External PSU can be bought separately:

- Power Supply Europe 3BN67335AA
- Power Supply WW 3BN67336AA

The AD2 DECT Headset USB dongle is supplied with the headset or can be purchased separately.

2.2 System overview

The wireless headset system consists of three main products:

- AD1 DECT Headset Base Station (AD1)
- AD5X headset series (AD5X): AD51 and AD52 DECT Headsets (AD51, AD52)
- AD2 DECT Headset USB Dongle (AD2)

The high-end headset supports DECT and Bluetooth® technology to establish connections with other devices. They are used with the AD1 base/AD2 dongle and desk phone/PC/laptop/mobile phones. The selected microphone is balanced together with the headset filters to reduce the background noise to provide an ultimate understandable and clear speech.

Figure 1 below illustrates the high-level description of the system. It provides a basic understanding of the environment in which the headset needs to interact. All headset

communication possibilities are presented in the drawing below and further defined in the following sections.

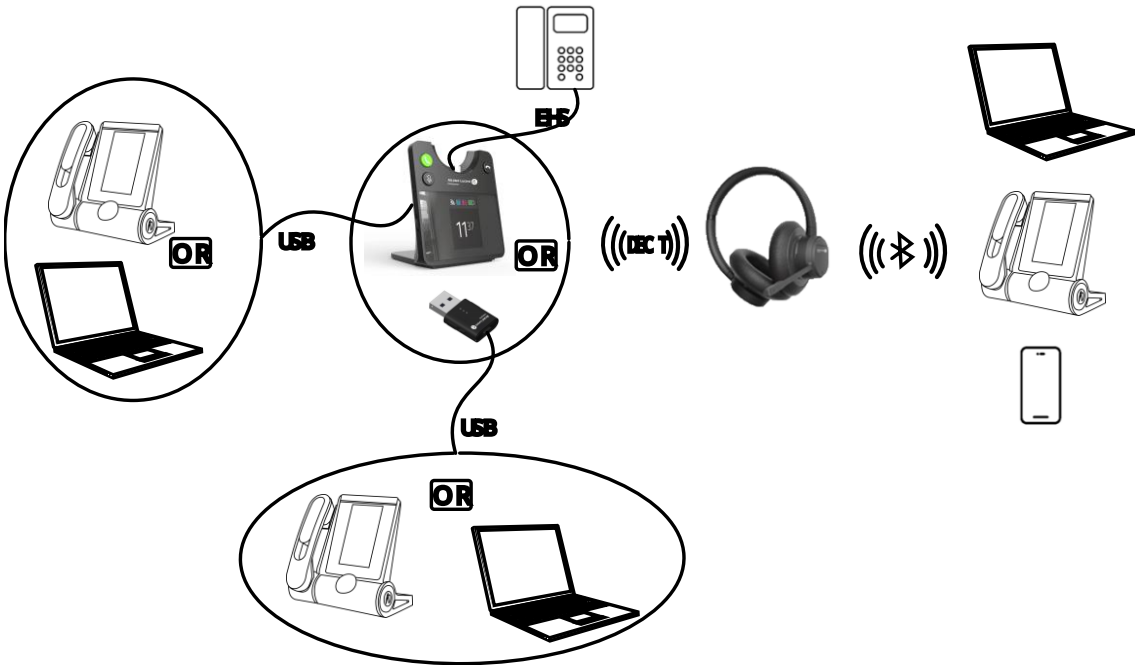


Figure 1: System overview

The headset can be connected via DECT to the AD1 or AD2 or via Bluetooth® directly to the ALE DeskPhone, PC/laptop or mobile. AD1 and AD2 can be connected to the ALE DeskPhone or PC/laptop via USB.

Only one DECT connection can be active at any time. You need to press the DECT button to switch between the base and the dongle.

2.3 Software client or application support

The AD1 base provides support for various software clients or applications. As such, it can be used with both PC Windows and macOS. This means that, the base combined with one of the headsets, supports the audio and USB API of the software clients or applications, such as:

- Alcatel-Lucent Enterprise SoftPhone.
- Alcatel-Lucent Enterprise Rainbow (application mode).
- Alcatel-Lucent IP Desktop Softphone.
- Microsoft Teams.
- Other customer clients supported by ALE Headset Setup Tool (see ALE Headset Setup Tool User manual for more details – ref 1).

If the headset is used in standalone mode over a Bluetooth® connection, the audio of the same applications will be supported. In addition, the headset can also be used as a generic USB headset for general audio.

3 Description

3.1 AD5X DECT Headset

The AD5X DECT Headset series are wireless DECT and Bluetooth® headsets. As previously mentioned, the headset connects to the base or the dongle via the DECT wireless technology. It can also connect via Bluetooth® to supported devices, such as mobile phones and Bluetooth® desk phones.

A busy-light indicator on the headband is used to indicate that the user is busy. The headset also features the Environmental Noise Cancellation (ENC) to suppress unwanted environmental noise for the microphone input. The headset offers Digital Signal Processing (DSP) assisted echo cancelling. The length of the headband is adjustable to suit the head-shape of different users, and the tilting angle of the boom can be adjusted to fit the position of the mouth of different users.

The base connects to a PC or laptop and can be used with ALE Softphone, Rainbow, Teams, or a selected range of software call clients from external vendors. It also supports a defined range of desk phones via the AD2 USB dongle, AD1 base and the EHS interface.

Call control can be managed through the base, connected desk phones, soft call clients on the PC, or the buttons on the left earcup of the headset.

A conferencing feature allows up to four headsets to connect to the same base, with users able to be added or removed from the conference call on the fly.

The headset is primarily intended to be used in call centers and office environments allowing the user to access the internet/VoIP calls and music playback via the PC/Bluetooth®.

3.1.1 AD5X DECT Headset models

The following table lists the two models of the AD5X DECT Headset series. For more details on the features for each of the headset models, please refer to section *Erreur ! Source du renvoi introuvable.*.

Model	Product	Country variant
AD51	Mono high-end headset	US/Canada: 3MH37051US Other countries: 3MH37051AA
AD52	Stereo high-end headset	US/Canada: 3MH37052US Other countries: 3MH37052AA

Table 1: AD5X headset type

3.1.2 Headset overview

The following subsection provides an overview of the headset, including the available buttons and LEDs. All models have an LED on the boom arm indicating if the user is busy.

Figure 2: Headset boom arm LED

The AD52 headset can be adjusted on both sides of the headband for a perfect fit. The AD51 is only adjustable on one side.

Figure 3: Headband adjustability

The headset has six different control buttons.

Figure 4: Buttons and user interface

1	Multi-function button for call control (answer, end, reject, AI voice assistant, busy).
2	Scroll wheel for volume.
3	Bluetooth® button.
4	On/Off button.
5	Mute button.
6	Microphone with LED light - For optimal use, we recommend having the microphone 2 cm from your mouth.
7	Flex area.
8	DECT button.
9	USB connection.

Figure 5 below shows the styling of the headsets which are available in black. The headset cushions are removable and replaceable to improve user comfort. There are two types of ear cushions: on-ear and over-the-ear.

Figure 5: Styles and ear cushions

To change the cushions, remove the current cushion by twisting it counterclockwise until it detaches. Attach the new cushion by aligning it with headset hook, then twist clockwise until it clicks into place. Please see below.

There is only one way to place the cushion on the headset. To help you, the same symbol shows you how to position the cushion on the headset.

Remove:

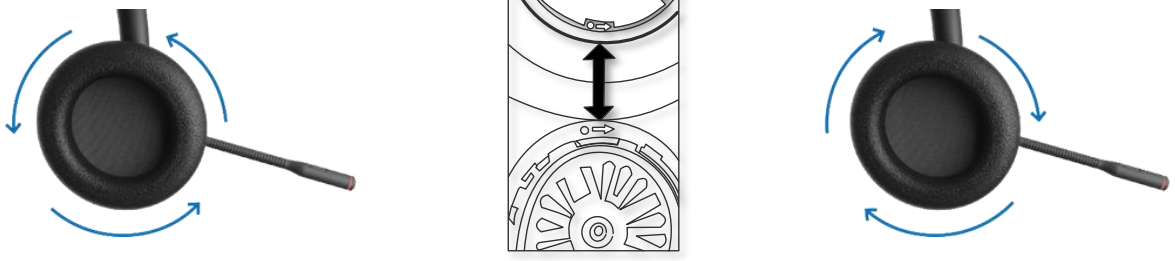


Figure 6: Cushion replacement

3.1.3 Physical buttons

The headset is operated by using the buttons on the earcup with the boom arm.

The following table describes the functions of the buttons shown in figure 4 above. For more details on the headset controls, please refer to subsection 5.1.

Input	Functions
Power slider	Power the headset on and off
Scroll wheel with an integrated button	Increase volume Decrease volume
Multi-function button	Answer call End call Reject call Trigger AI voice assistant Teams button Hold/swap/retrieve call Leave conference during call
Mute button	Toggle mute Play/pause music Skip to next track (double click) Announce battery level (press and hold)
DECT button	Enter DECT pairing mode (press and hold for 3 seconds) Toggle between base and dongle (travel kit) Reset settings (press and hold for 15 seconds) De-register 2nd headset when idle
Bluetooth® button	Toggle Bluetooth® Enter Bluetooth® pairing mode Swap Bluetooth® call in multi-call scenario*

Table 2: Physical buttons

**In a multi-call scenario, where one of the calls is via* Bluetooth®*, the user can swap between the calls using the Bluetooth® button instead of the Multi-function button.*

3.1.4 LED overview

The headset has a single tricolor LED on the tip of the boom arm, which is a combination of three LEDs – red, green, and blue. All visual indications are disabled if 'eco mode' is enabled for this device by your installer (see ALE Headset Setup Tool for more details – ref 1).

3.1.4.1 LED patterns

The LED supports three different kinds of patterns. The definitions of each pattern are described in the following table:

LED pattern	Definition
Blink	On/Off
Breathing	One color that slowly becomes brighter until it reaches full brightness and then dimmers until fully dimmed. It is a repeated cycle.
Alternating	Alternating between two colors.

Table 3: LED patterns

3.1.4.2 LED indication

The following table describes the LED indication depending on the status of the headset.

Function	Status	LED color	Pattern
System	Reset settings started	White	Blink three times
Bluetooth® registration	Registration - in progress	Blue, red	Alternating
	Registration - success	Green	Blink three times
	Registration - failed	Red	Blink three times
DECT registration	Registration - in progress	Blue, red	Alternating
	Registration - success	Green	Blink three times
	Registration - failed	Red	Blink three times
Battery status	No battery*	Cyan	Blink
	Fully charged*	Green	ON
	Charging	Green	Breathing
	Low	Red	Blink
Busy mode	Busy enabled or call active	Red	Breathing
	Microphone muted	Red	ON
Teams notifications	Meeting, voicemails, or missed calls	Purple	Breathing

Table 4: LED indication

** If the headset is turned off during charging, the LED is also turned off.*

3.1.5 Battery

The headset uses 600mAh Li-polymer battery, which is easily replaceable after removing the battery lid (twist the lid counterclockwise to remove it), as illustrated in figure 7 below.

Make sure to remove the plastic foil protecting the battery when powering the new headset.

Figure 7: Battery lid removed

The headset can be charged in three ways:

1. Place the headset in the base cradle, which displays the charging status.
2. Use the AD3 Desktop Charger. The charging status is shown on the boom arm LED.
3. Use a USB cable. The charging status is shown on the boom arm LED.

For more details about the battery LED indications, please refer to table 4. The battery performance can be seen in the feature summary table in section *Erreur ! Source du renvoi introuvable.*.

3.2 AD1 DECT Headset Base Station

The AD1 is a USB/EHS wireless base which provides USB/EHS connectivity to PC/laptop/desk phone, and DECT connectivity to the AD5X wireless headset series. It is designed as a Plug and Play solution, meaning that no additional driver installations are needed.

Figure 8 below illustrates a high-level description of the communication possibilities of the base. The AD1 base is connected to a host (PC or desk phone) with USB interface. It acts as a base for the headset.

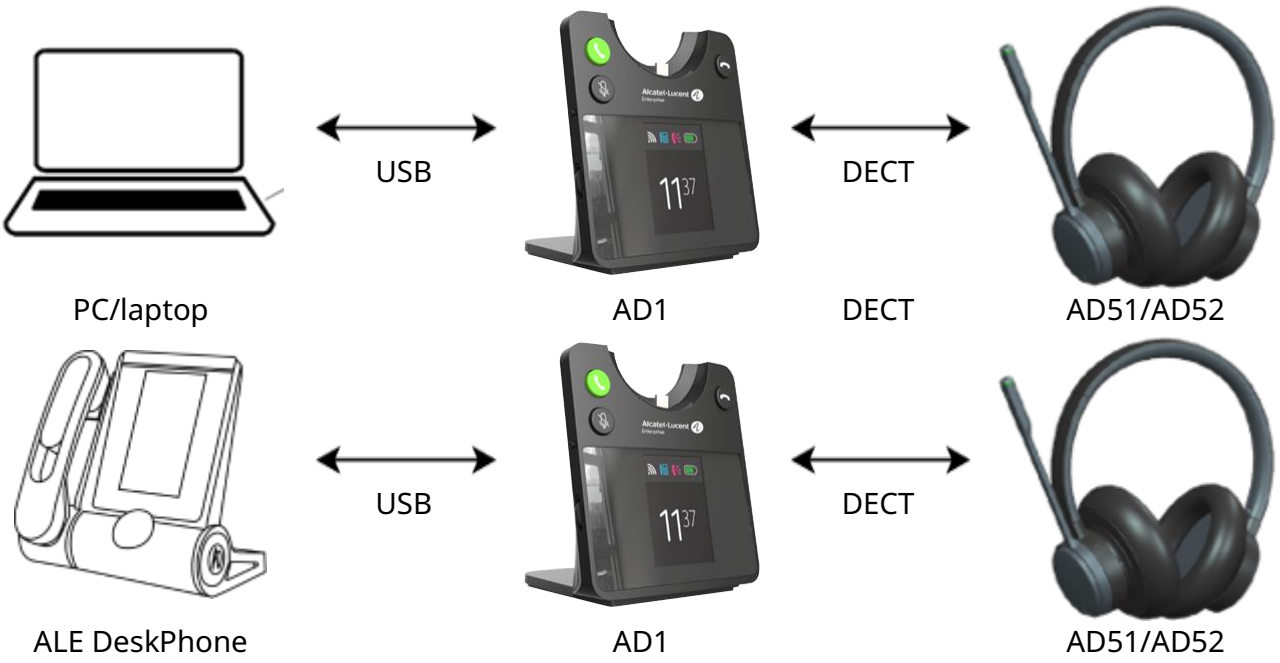


Figure 8: Base connections

The AD1 serves as a base and charger for the headset. It is primarily intended for use in call centers and office environments allowing the user to access internet/VoIP calls, music playback via the PC/laptop, and desk phone connectivity.

3.2.1 AD1 base overview

The base includes a 2.4-inch 240x320 TFT display for status and configuration. Furthermore, it has three buttons for call control handling (off-hook, on-hook, and mute), a clickable **Scroll wheel** and a **Back** button for easy menu navigation.

1	LCD.
2	Off-hook button to answer a call.
3	Mute button.
4	On-hook button to end or reject a call.
5	Back button (return to the parent menu or leave setting menu).
6	Scroll wheel (push to open menu, scroll for options and push to accept).
7	Room for spare battery.
8	Speaker for audio alerts.
9	RJ12, RJ9, RJ45 plugs. The RJ12 is used to connect a desk phone via the EHS interface.
10	USB-C connection (PC).
11	DC input.

Figure 9: AD1 base front view

3.2.2 Physical buttons

The following table shows further details on the functionality of the AD1 buttons.

Input	Functionality
Off-hook button	Answer call (short press). Swap between calls (short press). Swap between lines (double press). Hold/retrieve call (short press). Hold active call and accept incoming call (long press).
On-hook button	End call. Reject call.
Mute button	Toggle mute.
Back button	Return to parent menu of the current sub-menu. Leave settings menu. Toggle music control 'pop up'.
Scroll wheel	Open settings menu (press on the wheel). Select an item in settings menu (press on the wheel). Scroll to the next item in settings menu. Scroll to the previous item in settings menu. Adjust earphone volume.

Table 5: Functionality of the AD1 buttons

3.2.3 Spare battery charging

The base also includes a separate charger for a spare battery. The battery is placed on the back of the headset base, as shown in figure 10 below.

Figure 10: Spare battery charging

3.3 AD2 DECT Headset USB dongle

The AD2 DECT Headset USB dongle is a USB type A dongle that can establish a wireless connection with the AD5X wireless headset series.

The AD5X headset can be connected to an ALE DeskPhone or a PC/laptop using the AD2 DECT Headset dongle. This is convenient for users who want to use the headset remotely, for example in a home office or on-the-go where it is not possible to bring the base – please see figure below. The dongle is supported by both Windows and macOS.

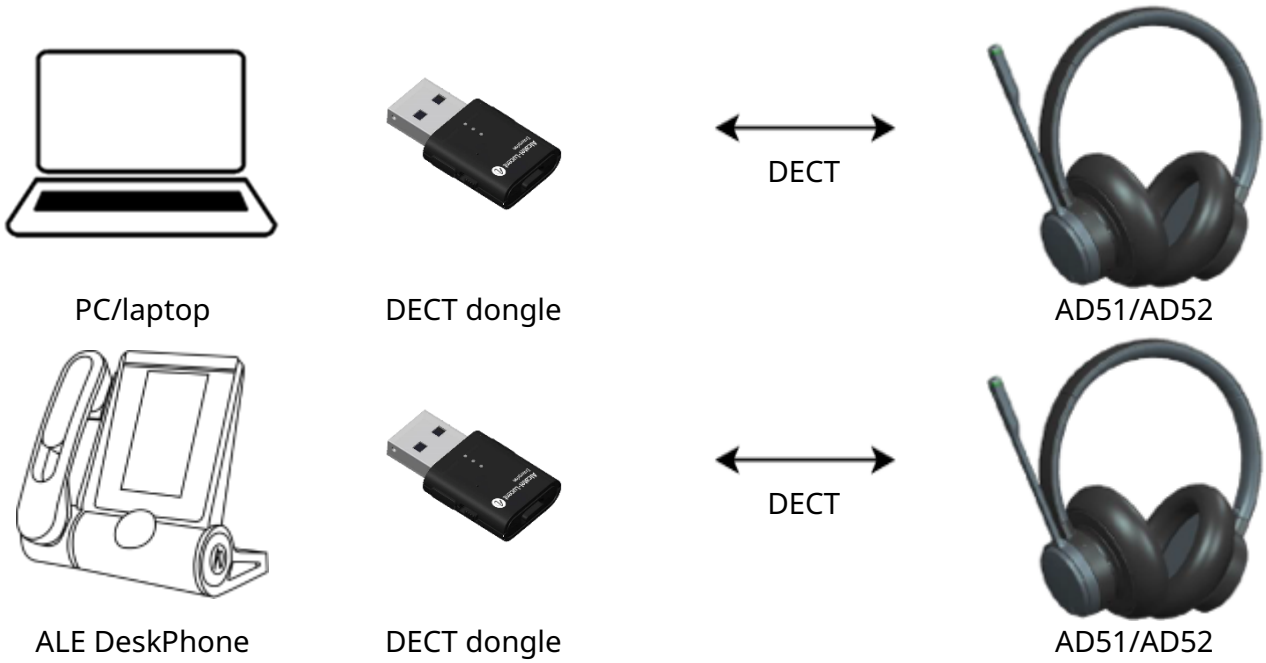


Figure 11: Headset connection via AD2 DECT Headset dongle

The dongle is designed to be easy to use with a desk phone/PC/laptop with exceptionally good sound quality. Since the dongle uses DECT technology, it can remember four registrations – one primary and three secondary. When the headset is connected via the AD2 DECT Headset dongle to a PC, the user may access calls from softphone or software phone clients, such as ALE SoftPhone, Rainbow or Teams. Support for other softphone or software phone clients is available and requires that the ALE Headset Setup Tool is installed on the used laptop/PC.

3.3.1 AD2 DECT Headset dongle overview

The AD2 DECT Headset USB dongle has one button and three LEDs: red, blue, and green.

The AD2 dongle has a USB-A interface. The USB-A to USB-C adapter (3MK37011AA) is required if you need to plug the AD2 dongle into an ALE Enterprise phone.

Figure 12: Dongle overview

1	LED.
2	Multi-function Button (registration, de-registration or reset).
3	Slide switch (future use).

3.3.2 LED patterns

The LED support various kinds of patterns, such as fast blink, slow blink, normal blink, and breathing.

LED pattern	Definition
Blink	On/Off
Breathing	Off-On-Off slowly

Table 6: LED patterns

3.3.3 LED indication

The following table shows the LED indication for different statuses of the DECT dongle.

Function	Status	LED	Pattern
System	Dongle reset started	Red, blue, and green	Blink three times
DECT connection	Registration - in progress	Blue	Blink alternately
	Registration - success	Blue and green	Blink three times
	Registration - failed	Blue and red	Blink three times
	Master headset registered	Blue	ON
	Master headset lost link	Red	Blink
	Ringing	Green	Blink
Call	Talk or hold	Green	ON
	Conference or intrusion call	Green	Breathing

Table 7: LED indication

3.3.4 Key configuration / user interface

The Multi-function button on the AD2 dongle is used for registration and deregistration of the headset. All setups are performed using the ALE Headset Setup Tool. Furthermore, all call-related controls are managed via the headset controls and/or desk phone/PC. The call is initiated from the soft call client running on the PC/laptop.

3.3.5 Factory reset

To reset the dongle, press and hold the Multi-function button for 15 seconds or until all three LED (red, blue, green) turn on and then off. Then, release the Multi-function button and the dongle will proceed to reset its settings.

4 How to connect the headset

4.1 AD1 DECT Headset Base Station registration

To register the AD5X headset to the AD1 base, please follow the steps below. Registration mode is enabled by placing the headset in the base cradle. The headset can be registered as both primary and secondary. When the headset is locked as secondary on another AD1 base or on an AD2 dongle, the user may return the headset to use its primary state by placing the headset in the cradle of the primary base.

4.1.1 Register AD5X headset

1. Place the headset in the base cradle.
2. Headset identifies itself to the base.
3. The base determines if the headset can register.
    a. If the headset is enabled to register, it plays back the ‘registering’ voice prompt once.
        i. Headset starts ‘registration, in progress’ LED pattern.
        ii. Base displays a visible notification that cradle registration has been initiated.
        iii. Headset plays back ‘registration succeeded’ voice prompt once.
        iv. Headset displays ‘registration, success’ LED pattern.
        v. Base displays a visible notification that the cradle registration has succeeded.
    b. If the headset is not allowed to register, it plays back the ‘registration failed’ voice prompt once.
        i. Headset displays ‘registration, failure’ LED pattern.
        ii. Base displays a visible notification that the cradle registration has failed.

Figure 13: DECT registration and charging

When a headset is registered to a base or a dongle, it will search for those after powering on or in case of coming out of range. This search time is max 1 hour. After 2 minutes, the headset LED will stop alternating between red and blue lights, and after one hour it will stop searching, to

preserve energy. To enable the search and open for registration, the user must briefly press the DECT button or the Multi-function button on the headset.

4.1.2 De-register AD5X Headset from the AD1 Base Station

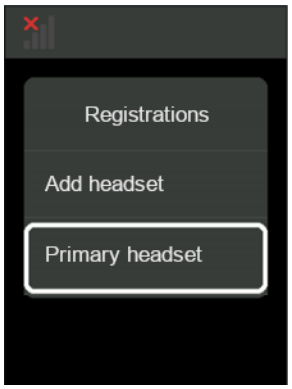


Figure 14 : Registrations

To de-register a registered headset from the AD1 base, open the registrations menu on the AD1, then select the primary or secondary headset to de-register and confirm.

AD5X headset can be de-registered from the ALE DECT Headset Tool. For more information, contact your administrator or consult the ALE Headset Setup Tool User Manual (ref 1).

4.2 Bluetooth® pairing

The headset is paired to a Bluetooth® device by pressing and holding the Bluetooth® button for two seconds. This will enable the pairing mode for the headset, which then allows it to be discovered by other Bluetooth® devices. The headset can store up to four paired Bluetooth® devices' information and remain connected to two of them at the same time. In case of reaching the limit and pairing a new device after the four existing ones, the oldest device information will be overwritten by the new device. Major mobile platforms are supported, such as iOS and Android.

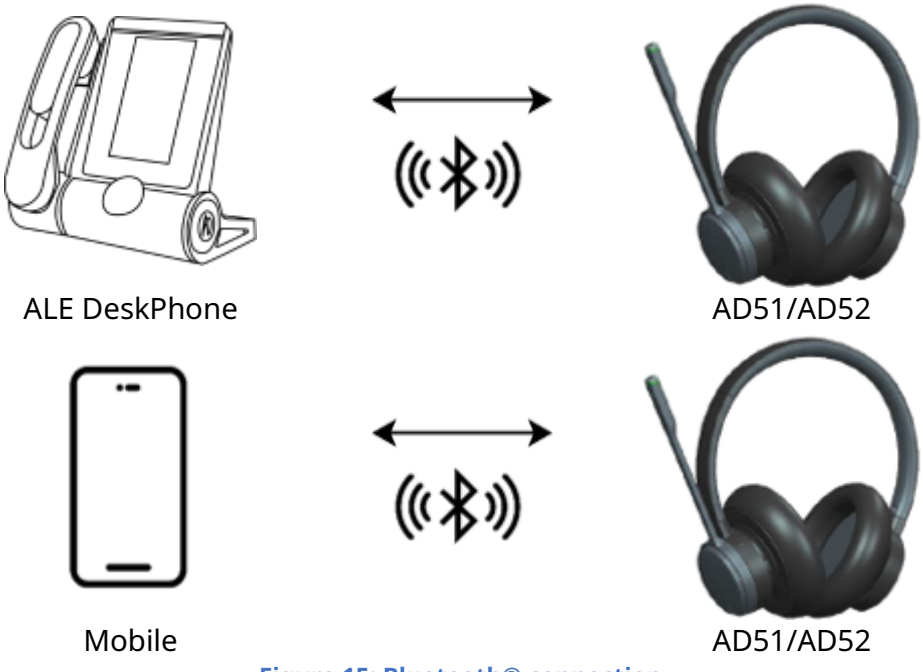


Figure 15: Bluetooth® connection

4.3 AD2 DECT Headset USB dongle registration

4.3.1 Register AD5X headset

At the first connection of the headset to a PC/laptop using the AD2 dongle, please follow the steps below.

1. Press and hold the AD2 **DECT dongle** Multi-function button for more than three seconds to enter pairing mode – blue LED is blinking.
2. Press and hold the headset **DECT** button for more than three seconds and release to enter pairing mode – LED flashes blue/red, alternately.
3. When registration is successful, the blue LED of the AD2 dongle will become static, and the green LED of the headset will blink three times.

Note: For subsequent uses, there is no need to repeat these steps. Simply plugging the dongle into the laptop is sufficient.

4.3.2 De-register AD5X headset from AD2 dongle

To de-register a registered headset from the AD2 dongle, press and hold the Multi-function button on the dongle for 10 seconds. Blue LED will start blinking, indicating that the dongle is in registration mode.

The AD5X headset can be de-registered from the ALE DECT Headset Setup Tool. For more information, contact your administrator or consult the ALE Headset Setup Tool User Manual (reference 1).

4.4 Hybrid functionality

The AD5X headset, AD1 base, and AD2 dongle are designed to work together with consideration of the modern hybrid office. The headset can be registered to both the base and the dongle, which allows the user to be more flexible and use the headset together with the dongle on-the-go. The user can switch between the two registrations with a single press on the AD5X DECT button.

5 AD5X Operations

The headset is equipped with six buttons that help the user to operate the headset. A short description of the buttons has been provided in subsection 3.1.3. This section provides more details about the use of button controls.

5.1 Controls

Each button on the headset supports multiple actions, depending on how long a button is pressed. The following table shows the different timings for button events.

Event	Timing
Press	Less than 2 seconds
Double press	2 x press less than 500 milliseconds apart
Long press	More than 2 seconds, but less than 10 seconds
Prolonged press	Hold for more than 10 seconds

Table 8: Button event timing

The controls are as shown in the following table:

Button	Press	Double press	Long press	Prolonged press	Scroll
Idle mode					
Multi-function	Voice assistant	Redial	Activates Teams		
Scroll wheel					Adjust volume
Mute	Play/Pause	Next track	Battery level		
DECT	De-register secondary headset		DECT pairing	Reset settings	
BT	Toggle BT on/off		BT pairing		
Incoming call					
Multi-function	Answer the call	Reject the call			
Scroll wheel					Adjust volume
During conversation					
Multi-function	End the call				
Scroll wheel					Adjust volume
Mute	Mute the audio				

Table 9: Button controls

Note Voice assistant and redial functions only work when a Bluetooth® connection is available and depending on the target application.
In idle state, the **scroll wheel** adjusts the music volume if music is playing. If no music is playing, it adjusts the ringtone volume, accompanied by a beep tone for the user's convenience.

Note If the headset is placed in the base cradle when the incoming call is announced, picking up the headset from the cradle will automatically answer the call. Placing the headset in the base cradle ends the active conversation.

5.1.1 Microsoft Teams integration

The **Multi-function** button includes built-in functionalities to interact with Teams when long-pressed in idle mode. Depending on the scenario, long-pressing the Teams button will trigger different actions within Teams:

- When there is *no notification* from Teams present, long-pressing the **Multi-function** button will bring Teams to the foreground.
- If there is *a missed call notification*, long pressing the **Multi-function** button will open the Teams missed calls list
- In case of a *voicemail notification*, the button will *open the* Teams voicemail list
- If there is a *meeting alert* present, it will open the Teams meeting

Additionally, the LED on the microphone also reacts with a purple blink upon notifications, missed call, voicemail, or meeting alert in Teams.

If the headset comes out of range during a Teams meeting, the base will put the call on hold automatically. It will also automatically resume the call when the headset is available again. The call is terminated if the headset is out of range for more than three minutes.

6 AD1 DECT Headset Base Station user interface

Th AD1 base supports a 2.4-inch 240x320 TFT display which has a user-friendly interface (UI). The UI is designed to be operated at arm's length, meaning that the status bar is large and visible – please see figure below.

Figure 16: Status bar

The idle screen is represented by two UI panels. The first, referred to as the **top area**, contains a status bar panel which displays icons, such as **signal level**, **battery status**, etc. The second area, referred to as the **main area**, lists items, such as current time, music control, and other available icons. Both idle areas are further described in the following sections.

6.1 Top area items

The following subsections show the available items displayed in the **top area**.

6.1.1 Signal level

The **signal level** icon displays the primary connection status of the headset. The status may vary depending on the signal strength.

Icon	Description
	Headset registered, excellent signal (> -50 dBm)
	Headset registered, good signal (> -65 dBm)
	Headset registered, fail signal (> -80 dBm)
	Headset registered poor signal (<= -80 dBm)
	Headset not registered or out of range, no signal

Table 10: Signal level

6.1.2 PC-USB status

When the AD1 base is connected to a PC via USB, the **USB** icon will be displayed in the status bar panel.

Icon	Description
	USB is connected, but no calls.
	USB is connected and there is an ongoing USB call.

Table 11: PC-USB status

6.1.3 Battery status

The battery status of the connected primary headset is displayed via a **battery** icon. Depending on the remaining power available, the icon changes color. The following table describes the different status levels.

Icon	Description
	The battery is fully charged (level 90 – 100%)
	The battery is charged at 70 – 89 %
	The battery is charged at 50 – 69 %
	The battery is charged at 31 – 49 %
	The battery is charged 11 – 30 %
	Low battery (level <= 10%). Icon is blinking when under 3%
No icon	Headset not registered or out of range; status unknown.

Table 12: Battery status

6.1.4 Other icons

Icon	Description
	Desktop phone connection status icon: • Displayed when EHS line is active (off-hook) • Blinking when EHS line is ringing • No icon is displayed when EHS line is idle

Table 13: Other icons

6.2 Main area items

The following subsections show the available items displayed in the **main area**.

6.2.1 Music control

The base UI provides a music control option to the user. The functionality includes adjusting the volume, playing/pausing/skipping tracks, etc. The **Control** buttons appear automatically when streaming music and can be shown/hidden by pressing the **Back** button.

Icon	Description
	The following **Control** buttons appear below the idle clock on the screen while streaming music.

Table 14: Music control

6.2.2 Other icons

Icon	Description
	Super Wideband.
	Eco mode activated (maximum power-saving audio quality with no LED notification, and adaptive RF is deployed).
	Upcoming Teams meeting.
	Teams missed call.

Table 15: Other icons

6.3 DECT registration status interface

The following screenshots represent the interface during a DECT registration.

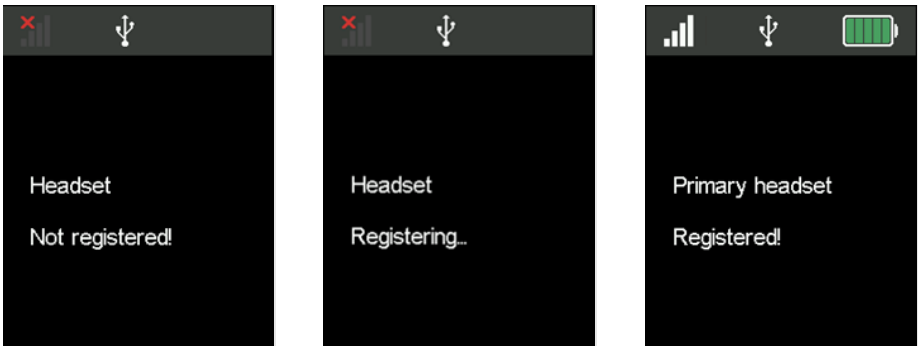


Figure 17: DECT status registration

6.4 Settings menu

When pressing the **Scroll wheel**, the user can access the **Settings** menu. This menu can be used to change configuration settings, such as language, audio settings, audio prompts, as well as handle registrations and to reset the base. Please see figure 18 below.

When pressing the **Scroll wheel**, the list of menu items is displayed on the screen. The menu items, which the user is currently able to choose, are displayed inside a white rectangle frame and are in bold letters. In some cases, the chosen value is also shown underneath. There is a **Scroll bar** on the right side of the screen that shows how far the user is in the menu.

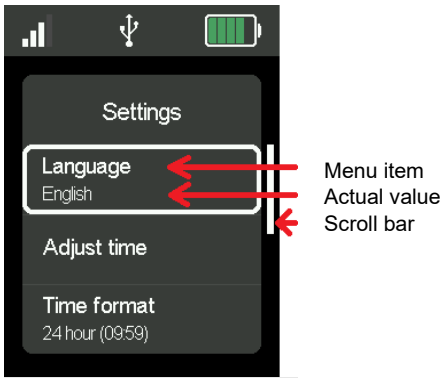


Figure 18: View of the settings menu

Figure 19 below displays an example of when there are multiple choices available.

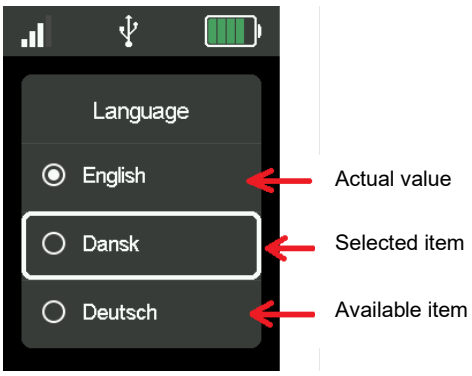


Figure 19: Multiple choices in the settings menu

The available units in the **settings** menu are explained in detail in the following subsections.

6.4.1 General

The following table displays the settings that can be configured with this menu.

Menu item	Default value	Description
Base language	English	Choose the language on the base.
Power mode	Normal	Choose power mode. There are three options available: Normal, Eco, and Super Wideband
Time format	24 Hour (HH:MM)	The time format can be set AM/PM, 24 Hour(H:MM) or 24 Hour (HH:MM)
Secondary auto de-register	On	Can be on or off. When active and secondary headset is present in a conference call, the base will automatically de-register the secondary headset as soon as the conference call has ended.
Power level	3	Set power level of the base. Can be set to adaptive or between values from 1 (max. power) to 6 (min. power). **Note**: If the user is in an area with a lot of interference, the user can set the power level to 1 (max power) but that will contribute to the noise. The adaptive settings set the base to choose the power level adaptively, but that will consume more energy. In an area with no other DECT devices present and/or other sources of interference using power level 6 (min power) will save energy.
Priority of incoming calls	PC	In the case when both USB and BT connections are used, this item allows the user to set the connection priority to answer incoming calls.
Web app support	Off	Could be On/Off. When a softphone without USB HID support is used, this feature allows for normal call indications: headset will show busy light and base will show active call screen. **Note**: Headset call controls in this case will not be available. Mute button will only mute the headset but will not affect the softphone itself i.e., if the microphone is in use, the system will interpret that as the softphone is being used.
Headset radio link	Active during call	Can be ***Active during call*** or ***Always active***. This feature allows the user to keep the DECT link always active between the headset and the base/dongle. **Note:** The permanent radio link will be temporarily disabled if user places the headset on the base or connects it via USB cable to the PC. In those cases, it will switch to normal radio link mode while the headset is using the USB connection. It will switch back automatically when it is picked up from base or disconnected from the USB connection.

Table 16: General

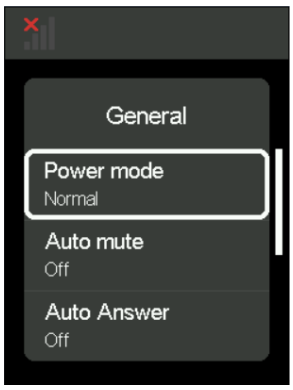


Figure 20: General settings

6.4.2 Audio settings

This menu allows the user to control the audio settings of both the base and the headset. The options are shown in figure 21 below and described in more detail in following table.

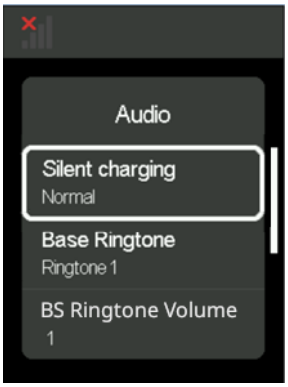


Figure 21: Audio settings

Menu item	Default value	Description
Silent charging	Normal	Choose whether there will be ringtone sound in the headset while it is placed in the cradle charging.
Base ringtone	Ringtone 1	Choose the ringtone sound that will be emitted from the base when there is an incoming call and the headset is placed in the cradle charging. There are five different sounds to choose from.
Base ringtone volume	3	Set the ringtone volume of the base.
Headset ringtone	Ringtone 1	Choose the ringtone sound that will be emitted in the headset when there is an incoming call, and the headset is not placed in the cradle. There are five different sounds to choose from.
Headset ringtone volume	2	Change the ringtone volume on the paired headset.

Table 17: Audio settings

The AD1 base has a built-in ringer for audible alerts. The audio settings of the ringer can be configured via the ALE Headset Setup Tool or the **base** menu (**Settings** menu > Audio). The ringer may be muted by setting the base ringtone volume to 0.

6.4.3 Audio prompt

This menu allows the user to configure the audio prompts that announce different events in the headset. The options are shown in figure 22 below and described in more detail in the following table.

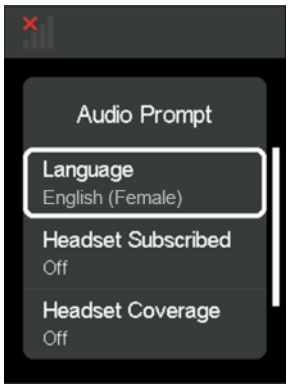


Figure 22: Audio prompt

Menu item	Default value	Description
Language	German for EU software variant. English for US software variant (Female)	Choose the voice prompt depending on the configuration: language, female, male languages.
Active audio prompts	All	Choose what category of audio prompts to be played. • **All** will play all audio prompts. • **Warning** will play audio prompts categorized as *Warning* or *Crucial*. • **Status** will only play audio prompts categorized as *Status* or *Crucial*. • **Silent** will only play *Crucial* audio prompts.
Headset subscribed	On	Turn on/off the audio prompt that is emitted when the headset is subscribed to the base.
Headset coverage	Off	Turn on/off the audio prompt that is emitted if the headset is out of coverage of the base.
Announce conference member	Off	Turn on/off the audio prompt that notifies whenever a member has joined/left the conference.

Table 18: Audio prompt

6.4.4 Registrations

This menu allows the user to register/de-register a headset to/from the AD1 base.

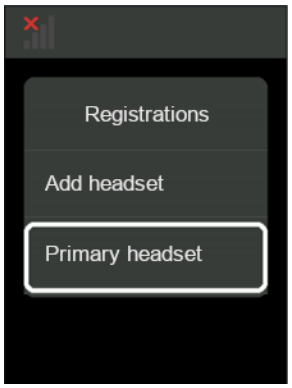


Figure 23: Registrations

6.4.4.1 Registration of the headset

Registration mode is enabled by placing the headset in the base cradle or by using the Add headset menu.

6.4.4.2 De-registration of the headset

Select the primary or secondary headset to de-register and confirm.

6.4.5 Adjust time

Allows the user to adjust the time shown on the idle screen. There are two options to choose from: sync with ALE Headset Setup Tool or adjust time manually when unmarking the **SetupTool Sync** in the little checkbox. In that case, an hour/minute count appears in the bottom part of the screen and, with the help of the **Scroll wheel**, the user can navigate through and adjust the time. When scrolling down to edit either hour or minutes, the user can choose the unit they want to change by pressing on the **Scroll wheel**. Arrows up and down will appear over and under the number and, with the help of the **Scroll wheel**, the user can change the value and press the **Scroll wheel** again to confirm their choice.

6.4.6 Reset user settings

This menu item allows the user to reset all configurations to their initial values. When chosen, the user can either confirm and reset all user settings or click cancel with the help of the **Scroll wheel**. If there is a headset registered to the base, it will send the command to the headset and reset all user settings for the headset as well.

6.4.7 Factory reset

This menu allows the user to perform factory reset and return the base to its initial state and clear the cache memory.

Reset user settings return all configurations to their initial state. The same happens when you perform a factory reset, but a factory reset will delete all current registrations as well.

Note Reset user settings return all configurations to their initial state. The same happens when you perform a factory reset, but a factory reset will delete all current registrations as well.

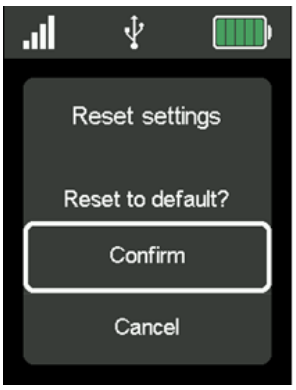


Figure 24: Factory reset

6.5 Call activity on base

To have call activity on the base, a master headset must be registered and locked to the base. If the master headset loses connection during call activity, all calls will be put on hold until the connection is restored. If the link fails to restore in a couple of seconds, all calls will be terminated.

6.6 Incoming call

The base will notify the user with a visible and audible notification whether an incoming call is from a USB or EHS line – please see figure 25 below. If both lines are in idle mode and an incoming call is received to one of the lines, the base rings and displays the call. However, if there are two simultaneous incoming calls from two different lines, the active control is made by the first incoming call (the first that came is served first). The second incoming call cannot be accepted by the base until the first incoming call has been answered or ended, or the line is swapped manually by the user. This means that when one of the lines occupied (in active call), the new incoming call will be displayed as waiting in a queue.

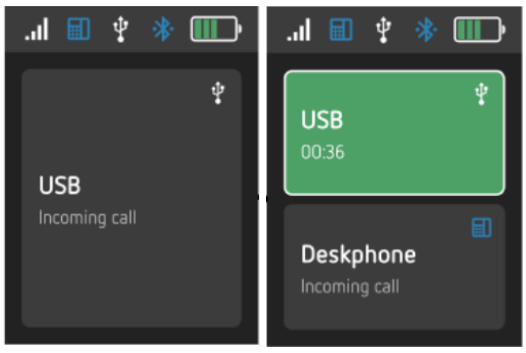


Figure 25: Incoming call

6.7 Ringer configuration

The AD1 base has a built-in ringer for audible alerts. The audio settings of the ringer can be configured via the ALE Headset Setup Tool or the **base** menu (**Settings** menu > Audio). The ringer may be muted by selecting 'Silent mode' in the set-up tool.

6.8 Active call

When a call is active, the base displays the active call with a green background.

When the microphone is muted, the active call is still displayed with a red background. In this case, if you try to speak, an audio prompt notifies you that the microphone is muted (see picture below).

Figure 26: Active call

It is not possible to have more than one active call on a single line at the same time.

6.9 On-hold call

When a call is put on hold, the base displays the hold-call status, and the audio path is disconnected between the far-end party and the headset. It is not possible to set an EHS active call on-hold via the base.

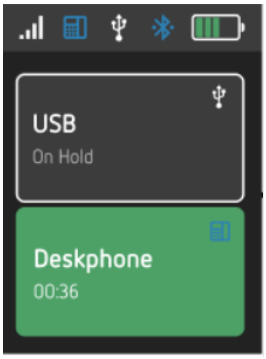


Figure 27: Two calls, one on hold

6.10 Multiple line

There is more than one call on a different line.

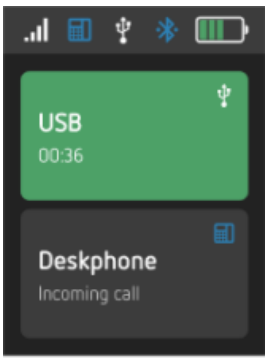


Figure 28: Multiple line

When a line is active, the base displays it in a green-colored field and enables the audio path to be connected via that line. It is not possible to have more than one active line at the same time.

When a line is inactive, the base displays it in a grey-colored field and disconnects the audio path via that line. It is not possible to have manual call control of the base when the line is inactive.

6.11 Volume control

When changing the volume using the scroll wheel from the headset, the level is displayed on the base.

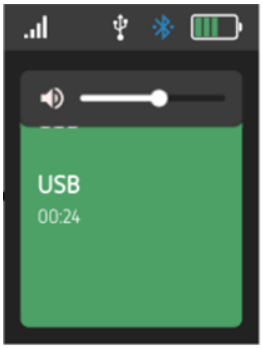


Figure 29: Volume control during a call

6.12 Call termination

All calls will be terminated when the master headset loses the link or is placed in the cradle – please see figure 30 below. This also occurs if it is not possible to put the calls on hold because the connection cannot be restored in a matter of seconds.

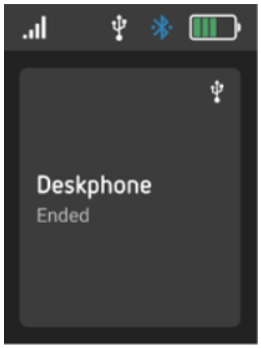


Figure 30: Call ended in single call

6.13 Line swapping

In the case of two calls established on two different lines, one of them is the active call on the active line. To make the line swapping simpler, the active line is swapped automatically depending on the change to call activities. It can occur in one the following scenarios:

- User makes an outgoing call by softphone or desk phone.
- User retrieves USB held call by softphone.
- User swaps USB call by softphone.
- User accepts an incoming call.
- Call from first active line is ended and the other call exists on the second inactive line.

The user can also swap the line from the base manually by double clicking the **Off-hook** button or by selecting the line via the UI. When a line is swapped successfully between two different lines, a visible notification is shown on the base.

7 AD2 DECT Headset USB Dongle features

The AD2 dongle has many of the same features as the AD1 base.

7.1 Main features

The dongle can be configured by using the ALE DECT Headset Setup Tool:

- Power mode
- De-register additional headsets when on-hook
- Power level
- Preferable audio source
- Web application support
- Announce new conference member
- Clear registrations
- Reset user settings

For more information, contact your administrator or consult the ALE Headset Setup Tool User Manual (ref 1).

From the dongle, the following features are available:

- Pairing mode: press and hold the **Multi-function** button for 3 seconds.
- De-registering a headset: press and hold the **Multi-function** button for 10 seconds.
- Factory reset: press and hold the **Multi-function** button for 15 seconds.

7.2 Conference

The AD2 dongle supports internal conferencing, which allows up to three additional headsets to listen in and participate in calls controlled by the primary headset of the DECT dongle.

The secondary headset can be registered on the DECT dongle before or during the call and will have the microphone muted by default when joining – please refer to section 4. The secondary headset user can unmute the microphone and then participate actively in the conference call. The secondary headset cannot terminate the conference call because the call is controlled by the primary headset, but they can actively leave the call.

A secondary headset is de-registered from the dongle when:

- The headset actively leaves the conference call by long pressing the **Multi-function** button.
- The conference call is terminated by either the primary or the far end headset (depends on the same settings as above).
- The headset registers back as the primary on its own dongle by short pressing the **DECT** button when idle (not in call).

7.3 Software client and application support

The AD2 DECT Headset dongle combined with one of the headsets supports the audio and USB API of the following applications:

- Alcatel-Lucent Enterprise SoftPhone.
- Alcatel-Lucent Enterprise Rainbow (application mode).
- Alcatel-Lucent IP Desktop Softphone.
- Microsoft Teams.
- Skype for Business (aka Lync).
- Customer client support implemented in the ALE Headset Setup Tool.

8 Call control action and call state table between Bluetooth® and DECT

#	Call state		Call control action						
	DECT	BT	**BT** button	DECT active **Multi-function** button			BT active **Multi-function** button		
			Short press	Short press	Long press	Double press	Short press	Long press	Double press
1	Idle	Idle	---	---	DECT: Teams button	DECT: Teams redial	---	---	---
2	Ringing	Idle	---	DECT: Accept	---	DECT: Reject	---	---	---
3	Hold	Idle	---	---	DECT: Retrieve	---	---	---	---
4	Hold and ringing	Idle	---	DECT: Accept	---	DECT: Reject	---	---	---
5	Off-hook	Idle	---	DECT: End	DECT: Hold	---	---	---	---
6	Off-hook and ringing	Idle	---	DECT: Hold and accept	DECT: End and accept	DECT: Reject	---	---	---
7	Off-hook and hold	Idle	---	DECT: End	DECT: Swap Call	---	---	---	---
8	Off-hook and hold and ringing	Idle	---	DECT: Hold and accept	DECT: End and accept	DECT: Reject	---	---	---
9	Idle	Ringing	---	---	---	---	BT: Accept	---	BT: Reject
10	Ringing	Ringing	---	Call prio: Accept	---	Call prio: Reject	Call prio: Accept	---	Call prio: Reject
11	Hold	Ringing	---	BT: Accept	---	BT: Reject	BT: Accept	---	BT: Reject
12	Hold and ringing	Ringing	---	BT: Accept	---	BT: Reject	BT: Accept	---	BT: Reject
13	Off-hook	Ringing	---	BT: Accept	---	BT: Reject	BT: Accept	---	BT: Reject
14	Off-hook and ringing	Ringing	---	Call prio: Accept	---	Call prio: Reject	Call prio: Accept	---	Call prio: Reject
15	Off-hook and hold	Ringing	---	BT: Accept	---	BT: Reject	BT: Accept	---	BT: Reject
16	Off-hook and hold	Ringing	---	Call prio: Accept	---	Call prio: Reject	Call prio: Accept	---	Call prio: Reject

#	Call state		Call control action						
	and ringing								
17	Idle	HOOK_OFF	---	---	---	---	BT: End	BT: Hold	---
18	Ringing	HOOK_OFF	---	DECT: Accept	---	DECT: Reject	DECT: Accept	---	DECT: Reject
19	Hold	HOOK_OFF	Toggle link BT/DECT	---	DECT: Retrieve	---	BT: End	BT: Hold	---
20	Hold and ringing	HOOK_OFF	---	DECT: Accept	---	DECT: Reject	DECT: Accept	---	DECT: Reject
21	Off-hook	HOOK_OFF	Toggle link BT/DECT	DECT: End	DECT: Hold	---	BT: End	BT: Hold	---
22	Off-hook and ringing	HOOK_OFF	---	DECT: Hold and accept	DECT: End and accept	DECT: Reject	DECT: Hold and accept	DECT: End and accept	DECT: Reject
23	Off-hook and hold	HOOK_OFF	Toggle link BT/DECT	DECT: End	DECT: Swap Call	---	BT: End	BT: Hold	---
24	Off-hook and hold and ringing	HOOK_OFF	---	DECT: Hold and accept	DECT: End and accept	DECT: Reject	DECT: Hold and accept	DECT: End and accept	DECT: Reject
25	Idle	Hold	---	---	---	---	BT: End	BT: Retrieve	---
26	Ringing	Hold	---	DECT: Accept	---	DECT: Reject	DECT: Accept	---	DECT: Reject
27	Hold	Hold	Toggle link BT/DECT	---	DECT: Retrieve	---	BT: End	BT: Retrieve	---
28	Hold and ringing	Hold	---	DECT: Accept	---	DECT: Reject	DECT: Accept	---	DECT: Reject
29	HOOK_OFF	Hold	Toggle link BT/DECT	DECT: End	DECT: Hold	---	BT: End	BT: Retrieve	---
30	Off-hook and ringing	Hold	---	DECT: Hold and accept	DECT: End and accept	DECT: Reject	DECT: Hold and accept	DECT: End and accept	DECT: Reject
31	Off-hook and hold	Hold	Toggle link BT/DECT	DECT: End	DECT: Swap Call	---	BT: End	BT: Retrieve	---
32	Off-hook and hold and ringing	Hold	---	DECT: Hold and accept	DECT: End and accept	DECT: Reject	DECT: Hold and accept	DECT: End and accept	DECT: Reject
33	Idle	Hold and ringing	---	---	---	---	BT: Accept	---	BT: Reject

#	Call state		Call control action						
34	Ringing	Hold and ringing	---	Call prio: Accept	---	Call prio: Reject	Call prio: Accept	---	Call prio: Reject
35	Hold	Hold and ringing	---	BT: Accept	---	BT: Reject	BT: Accept	---	BT: Reject
36	Hold and ringing	Hold and ringing	---	Call prio: Accept	---	Call prio: Reject	Call prio: Accept	---	Call prio: Reject
37	HOOK_OFF	Hold and ringing	---	BT: Accept	---	BT: Reject	BT: Accept	---	BT: Reject
38	Off-hook and ringing	Hold and ringing	---	Call prio is DECT: Hold and accept Call prio is BT: Accept	Call prio is DECT: End and accept	Call prio is DECT: Reject Call prio is BT: Reject	Call prio is DECT: Hold and accept Call prio is BT: Accept	Call prio is DECT: End and accept	Call prio is DECT: Reject Call prio is BT: Reject
39	Off-hook and hold	Hold and ringing	---	BT: Accept	---	BT: Reject	BT: Accept	---	BT: Reject
40	Off-hook and hold and ringing	Hold and ringing	---	Call prio is DECT: Hold and accept Call prio is BT: Accept	Call prio is DECT: End and accept	Call prio is DECT: Reject Call prio is BT: Reject	Call prio is DECT: Hold and accept Call prio is BT: Accept	Call prio is DECT: End and accept	Call prio is DECT: Reject Call prio is BT: Reject
41	Idle	Off-hook and ringing	---	BT: Hold and accept	BT: End and accept	BT: Reject	BT: Hold and accept	BT: End and accept	BT: Reject
42	Ringing	Off-hook and ringing	---	Call prio is DECT: Accept, Call prio is BT: Hold and accept	Call prio is BT: End and accept	Call prio is DECT: Reject Call prio is BT: Reject	Call prio is DECT: Accept, Call prio is BT: Hold and accept	Call prio is BT: End and accept	Call prio is DECT: Reject Call prio is BT: Reject
43	Hold	Off-hook and ringing	---	BT: Hold and accept	BT: End and accept	BT: Reject	BT: Hold and accept	BT: End and accept	BT: Reject
44	Hold and ringing	Off-hook and ringing	---	Call prio is DECT: Accept,	Call prio is BT:	Call prio is	Call prio is DECT: Accept,	Call prio is BT:	Call prio is

#	Call state		Call control action							
				Call prio is BT: Hold and accept	End and accept	DECT: Reject Call prio is BT: Reject	Call prio is BT: Hold and accept	End and accept	DECT: Reject Call prio is BT: Reject
45	HOOK_OFF	Off-hook and ringing	---	BT: Hold and accept	BT: End and accept	BT: Reject	BT: Hold and accept	BT: End and accept	BT: Reject
46	Off-hook and ringing	Off-hook and ringing	---	Call prio is DECT: Hold and accept Call prio is BT: Hold and accept	Call prio is DECT: End and accept Call prio is BT: End and accept	Call prio is DECT: Reject Call prio is BT: Reject	Call prio is DECT: Hold and accept Call prio is BT: Hold and accept	Call prio is DECT: End and accept Call prio is BT: End and accept	Call prio is DECT: Reject Call prio is BT: Reject
47	Off-hook and hold	Off-hook and ringing	---	BT: Hold and accept	---	BT: Reject	BT: Hold and accept	BT: End and accept	BT: Reject
48	Off-hook and hold and ringing	Off-hook and ringing	---	Call prio is DECT: Hold and accept Call prio is BT: Hold and accept	Call prio is DECT: End and accept Call prio is BT: End and accept	Call prio is DECT: Reject Call prio is BT: Reject	Call prio is DECT: Hold and accept Call prio is BT: Hold and accept	Call prio is DECT: End and accept Call prio is BT: End and accept	Call prio is DECT: Reject Call prio is BT: Reject
49	Idle	Off-hook and hold	---	---	---	---	BT: End	BT: Swap call	---
50	Ringing	Off-hook and hold	---	DECT: Accept	---	DECT: Reject	DECT: Accept	---	DECT: Reject
51	Hold	Off-hook and hold	Toggle link BT/DECT	---	DECT: Retrieve	---	BT: End	BT: Swap call	---
52	Hold and ringing	Off-hook and hold	---	DECT: Accept	---	DECT: Reject	DECT: Accept	---	DECT: Reject
53	HOOK_OFF	Off-hook and hold	Toggle link BT/DECT	DECT: End	DECT: Hold	---	BT: End	BT: Swap call	---

#	Call state		Call control action						
54	Off-hook and ringing	Off-hook and hold	---	DECT: Hold and accept	DECT: End and accept	DECT: Reject	DECT: Hold and accept	DECT: End and accept	DECT: Reject
55	Off-hook and hold	Off-hook and hold	Toggle link BT/DECT	DECT: End	DECT: Swap Call	---	BT: End	BT: Swap call	---
56	Off-hook and hold and ringing	Off-hook and hold	---	DECT: Hold and accept	DECT: End and accept	DECT: Reject	DECT: Hold and accept	DECT: End and accept	DECT: Reject

Table 19: Call control action and call state table between Bluetooth® and DECT

9 Quick User guide

9.1 Install the ALE Headset Setup Tool

- Download the zip file from My Portal or use the link provided by your installer.
- Install the tool by following the on-screen steps, then open the ALE Headset Setup Tool.

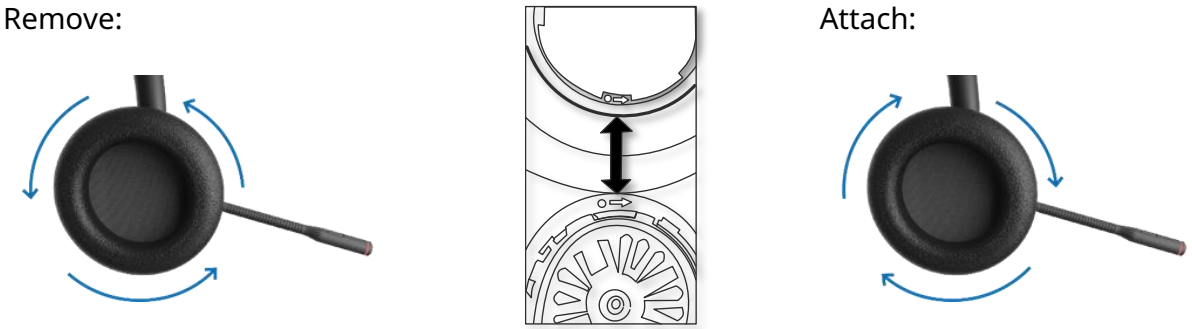
9.2 Set-up your headset and base

- Remove the cover that has a small battery icon (placed on the ear cup with the boom arm) by turning it counterclockwise.
- Remove the plastic foil that is protecting the battery by gently pulling it out.
- Place the cover back on the battery and turn it clockwise until it clicks back on.
- Move the on/off power slider to turn on the headset (battery is pre-charged at 40%).
- Charge the headset using the USB-C cable or the base. It is fully charged when the LED light on the boom arm turns green.

9.2.1 Changing ear cushions

To change the cushions, remove the current cushion by twisting it counterclockwise until it detaches. Attach the new cushion by aligning it with the headset hook, then twist it clockwise until it clicks into place.

There is only one way to place the cushion on the headset. To help you, the same symbol shows you how to position the cushion on the headset.



9.3 Buttons and features

AD1 DECT Headset Base Station

1	LCD.
2	Off-hook button to answer a call.
3	Mute button.
4	On-hook button to end or reject a call.
5	Back button (return to the parent menu or leave setting menu).
6	Scroll wheel (push to open menu, scroll for options and push to accept).
7	Room for spare battery.
8	Speaker for audio alerts.
9	RJ9, RJ12, RJ45 plugs.
10	USB-C connection (PC).
11	DC input.

AD2 DECT Headset USB Dongle

1	LED.
2	Multi-function button (registration, de-registration or reset).
3	Slide switch (future use).

AD51 DECT Headset monaural / AD52 DECT Headset binaural

Figure 31: Buttons and user interface

1	Multi-function button for call control (answer, end, reject, AI voice assistant, busy).
2	Scroll wheel for volume.
3	Bluetooth® button.
4	On/Off button.
5	Mute button.
6	Microphone with LED light - For optimal use, we recommend having the microphone 2 cm from your mouth.
7	Flex area.
8	DECT button.
9	USB connection.

9.4 Use cases

9.4.1 How to connect AD5x Headsets and AD1 base

Connect the base to the power supply via DC input and to the PC via USB.

Place the headset in the base to register the headset.

- If the headset is enabled to connect, it plays the “Headset base connected” voice prompt.
- If the headset is disenabled to connect, it plays the “Headset not subscribed” voice prompt. Is the headset turned on? Has the plastic foil been removed from the battery?

9.4.2 How to connect AD5x Headsets and a Bluetooth® device

- To enable or disable Bluetooth®, press the headset Bluetooth® button once.
- To enable pairing mode, press and hold the headset Bluetooth® button until it plays the “Bluetooth pairing” voice prompt.
- When pairing mode is enabled, the headset will appear on your Bluetooth® device.
- When the headset is discovered on the chosen device, click Connect and it plays the “Bluetooth connected” voice prompt.

Your headset can have both a Bluetooth® and a DECT connection available at the same time. The headset can store up to four paired BT devices’ information and remain connected to two of them at the same time.

9.4.3 How to connect AD5x Headsets and PC/laptop via the AD2 dongle

At the **first connection** of the headset to a PC/laptop using the AD2 dongle, please follow the steps below.

- Press and hold AD2 **DECT dongle** Multi-function button for more than 3 seconds to enter pairing mode – blue LED blinking.
- Press and hold headset **DECT** button for more than 3 seconds and release to enter pairing mode – LED flashes blue/red, alternately.
- When the headset is connected, it plays the “Headset dongle connected” voice prompt. The blue LED of the AD2 dongle will become static, and the green LED of the headset will blink three times.

It is possible to change between the base and the dongle when both are connected by pressing the headset DECT button once. During DECT registration process, make sure the USB-C cable is not connected to the headset.

9.4.4 Charging the headset

The headset can be charged in three ways:

1. Place the headset in the base cradle, which displays the charging status.
2. Use a desktop charger. The charging status is shown on the boom arm LED.
3. Use a USB cable. The charging status is shown on the boom arm LED.

Make sure to remove the plastic foil protecting the battery when powering the new headset.

9.4.5 Replacing the battery

The headset uses 600mAh Li-polymer battery, which is easily replaceable after removing the battery lid (twist the lid counterclockwise to remove it), as illustrated in figure 32 below.