ALLUX™

Application Remote Control Instruction Manual

(Android Version)

For Users

Product Type : NE-Z41, NE-Z41SH

Document Number : 81-SS00124 (ver.6)

Application Ver. 1.0.0 or later

Date of issue : 2025-10-31

Language : English

⚠️ CAUTION

■ Carefully read the instruction manual prior to use.

■ Keep this instruction manual for future reference.

Nabtesco

Nabtesco Corporation

Introduction

Thank you for purchasing Nabtesco's ALLUX™.

Matters concerning typical usage such as fitting and walking, maintenance, trouble shooting, and cautionary notes are described in the User's Guide that comes with an ALLUX™ (hereinafter referred to as the User's Guide).

This Application Remote Control Instruction Manual (hereinafter referred to as this manual) describes how to install and use the Application Remote Control (hereinafter referred to as this App) in the Android system environment.

For safe and comfortable use, thoroughly read the User's Guide mentioned above and this manual, sufficiently understand the contents, and strictly observe the safety precautions stated in those documents.

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Table of contents

1 Supported model and operating environment

● ALLUX^{TM} (type: NE-Z41)

    ＊ALLUX^{TM} (type: NE-Z4) is not supported.

    The model can be identified by the design of the front link pad.

    It can also be identified by the indication on the charging port.

NE-Z41 (Supported type)	NE-Z4 (Non-supported type)	NE-Z41 (Supported type)	NE-Z4 (Non-supported type)

● Compatible OS: Please refer to the "OS requirements" listed in the application software information on the Google Play Store.

● Free storage space: 500 MB or more is recommended.

Bluetooth®

Precautions on Bluetooth

■ Radio waves emitted by a Bluetooth device may affect the operation of electronic devices and other devices. Turn off Bluetooth devices when near priority seats in trains, in areas where flammable gas is generated such as in airplanes near automatic doors and fire alarm devices, as it may cause an accident.

■ We do not take any responsibility for the leakage of information when using Bluetooth technology.

■ This product does not guarantee wireless connection with all Bluetooth devices. The Bluetooth device to be connected must comply with the Bluetooth standard specified by Bluetooth SIG and must have obtained at least a certification. In addition, even if the device to be connected complies with the Bluetooth standard, phenomena such as inability to connect or different display/operation may occur, depending on the characteristics and specifications of the device.

■ Do not disassemble or modify this product as the wireless functionality of this product has been certified to meet technical standards.

2   Install procedures and initial settings

2.1   Installation procedures

1. Sign in with your Google ID.

    Type the App name "ALLUX2" into the Search field.

    Tap the 🔍 button on the keyboard.
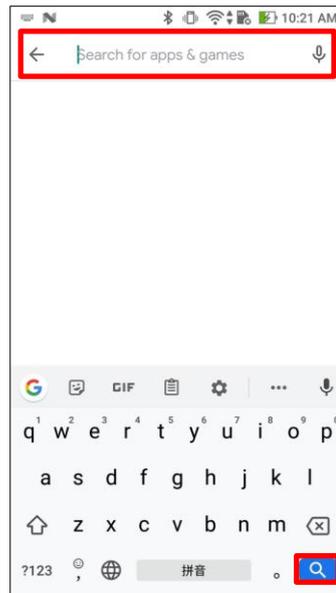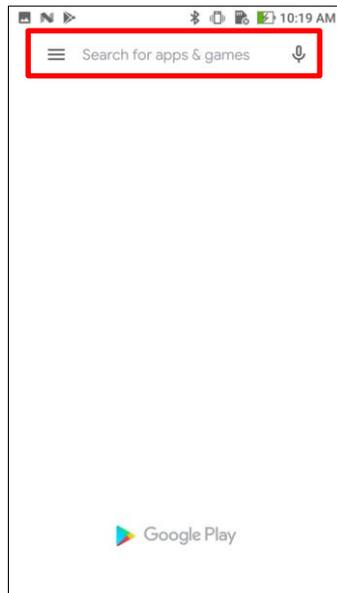
The following QR code can be used to install.

2. After the search results are displayed, tap the target App as shown below.

3. Tap the "Install" button.

4. After the installation is completed, the icon of the App is created on the home screen of the smartphone.

5. Tap the icon to start the App.

② Install procedures and initial settings

2.2 Bluetooth pairing

Bluetooth pairing is required before using this App.

Follow the procedure below for pairing.

*The procedure and screen will differ depending on your smartphone and the version of the Application. Please check the manual for your smartphone.

1. Remove the power OFF cap from ALLUX^{TM} to enable ALLUX^{TM} to communicate.

    *The power is turned on when the power off cap is removed and turned off when it is inserted. (Refer to page 7)

2. Tap Bluetooth from the Settings button or Device Connections, etc. Select ALLUX: XXXXXXX from the available devices and tap Allow or Pair if permission is required.
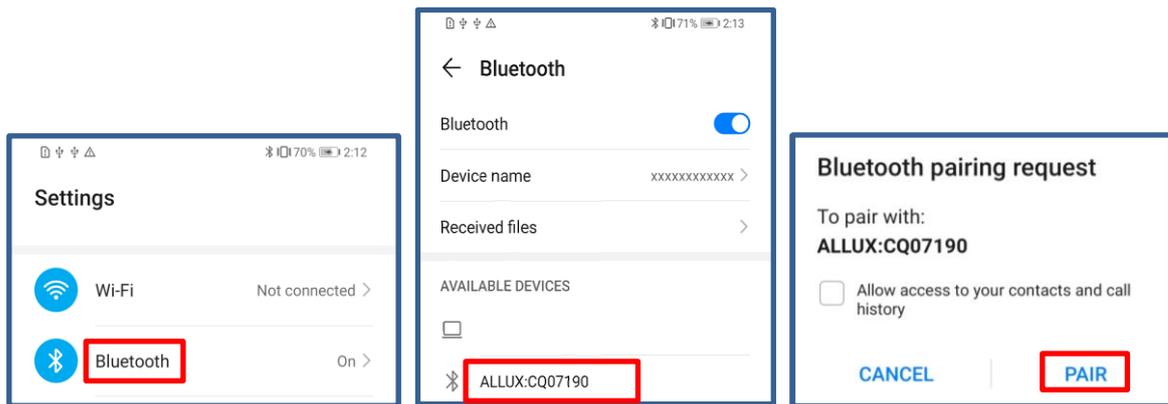
3. When paired correctly, the display will look like this
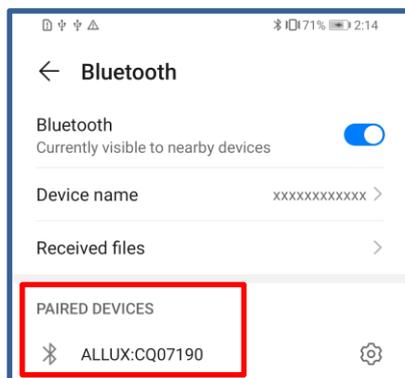
4. Insert the power-off cap of ALLUX^{TM} to disconnect pairing with ALLUX^{TM}.

3　Safe posture

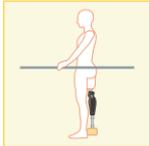Before changing the operational mode of ALLUX^{TM} using the Application Remote Control, the user needs to take a posture which is safe even if hydraulic resistance changes. This posture is referred to as 'safe posture'. Be sure to understand the following safe postures before using ALLUX^{TM}.

【Safe posture】

: The ALLUX^{TM} is fully straighten, stable and will be safe to place your body weight on it.

: Weight is off of the ALLUX^{TM} , but it may be bent.

⚠ CAUTION
■ When taking the safe posture without applying the body weight to ALLUX^{TM}, hold a handrail or sit down.
　 You may lose your balance and fall over.

[Request for safe posture]

If ALLUX 2^{TM} is not in the safe posture when changing the operational mode of ALLUX^{TM}, a popup is displayed. Make sure you have the safe posture, and tap "OK" button.

Assume a safe posture.

No Load　　or　　No Movement

Cancel　　OK
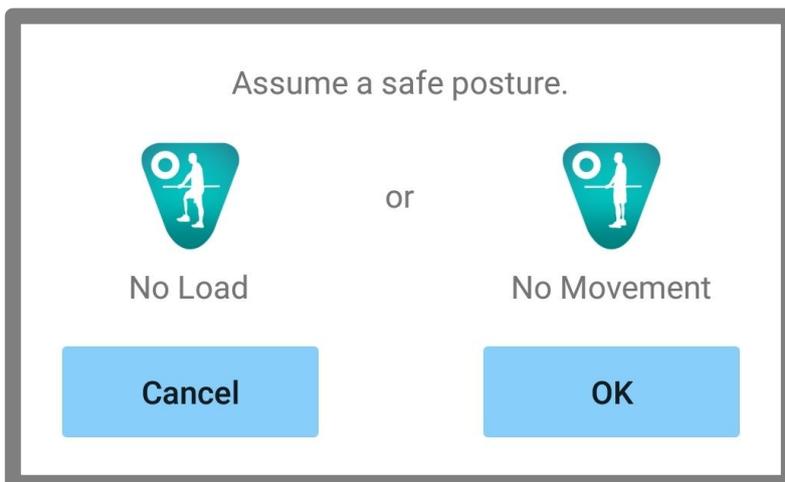
## 4   Communication mode and how to connect Bluetooth

In order to conserve power, ALLUX™ is not always in communication mode.
In order to enable the communication mode, you need to perform the following operations.
Once ALLUX™ communication is established using this App, this state lasts until communication is disconnected.

[Communication mode enabled]
1. For 5 minutes after ALLUX™ is slightly flexed and extended.
2. For 5 minutes after you apply your body weight to ALLUX™.
3. For 5 minutes after the charger or the power OFF cap is disconnected from ALLUX™.
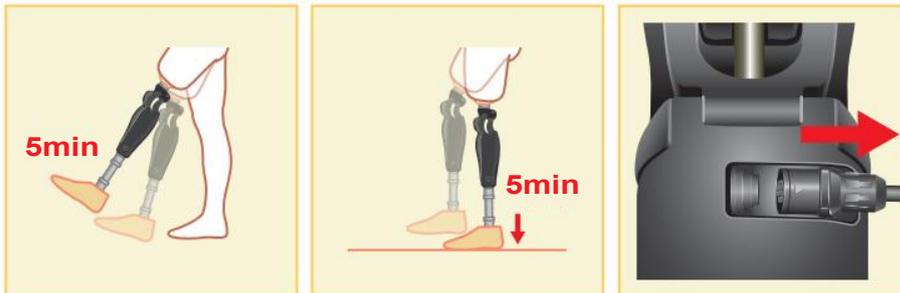
It is possible to turn OFF wireless connection when the user gets on a plane, etc. To restore wireless connection from that state, the actions such as the one shown below are required.
1. Disconnect the charger or the power OFF cap form ALLUX™.
2. "Apply a load on the heel 4 times intermittently" or "Apply a load on the toe 4 times intermittently"
   *You can switch to either one you like by a method described in page 14.

*Just starting this App does not connect to ALLUX™. Tap the Bluetooth icon on the "Mode Change" screen (Refer to page 12) to connect to ALLUX™.

*Just tapping the home button etc. on the smartphone does not disconnect communication with ALLUX™ and this App keeps working behind the screen. If you tap the icon of this App again, it starts in the connected state.

⚠️ **CAUTION**

■ Do not turn off the smartphone or force-quit this App while changing a mode with this App. Doing so may cause adjustment values to turn into an unintended state and result in a fall.

NOTICE

■ Even if this App is hidden on the smartphone, the connection with ALLUX™ is maintained and the battery of the smartphone keeps being consumed.
If you are concerned about battery consumption, disconnect the smartphone from ALLUX™ or close this App.

---

5   ALLUX™ operational modes

ALLUX™ has the following five operational modes.

[Normal mode]
The normal mode is adjusted for normal walking. Judging various walking situations and normal motions with the sensor, ALLUX™ automatically adjusts the flexion and extension.
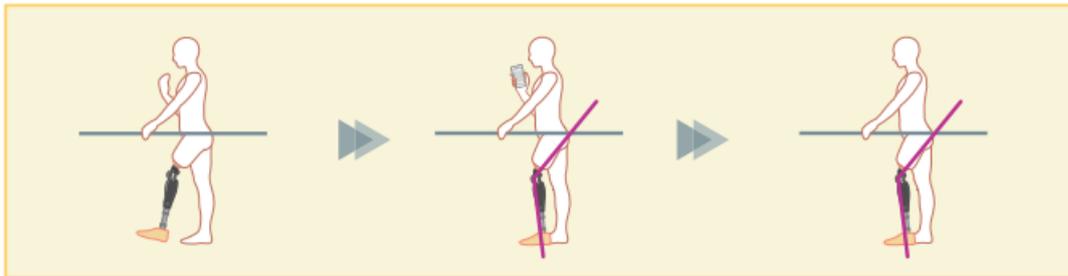
[Flexion angle limit mode]
In flexion angle limit mode, flexion resistance is locked at a designated angle while extension resistance remains free.
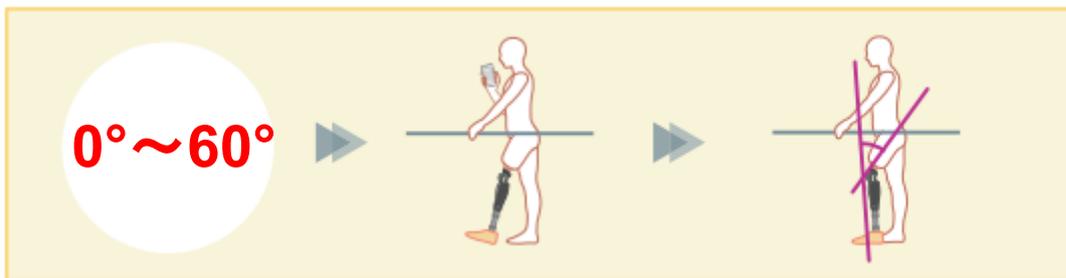
[Variable selective flexion lock mode]
ALLUX™ remembers the angle at which variable selective flexion lock mode is turned on. Flexion resistance is locked when it reaches that angle while extension resistance remains free.
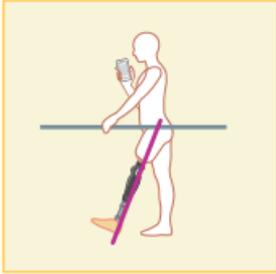

| NOTICE	■ When the flexion angle limit mode or variable selective flexion lock mode is used, do not apply excessive force to ALLUX™ when locking it. If an excessive impact force is applied to ALLUX™, it may be damaged.

⑤ ALLUX™ operational modes

[Full extension lock mode]

ALLUX™ is locked in a fully extended state.

[Free swing mode]

In free swing mode, ALLUX™ is kept free (resistance-free state).
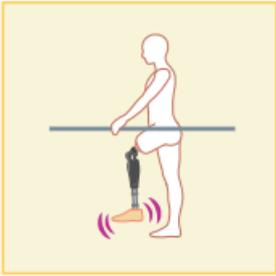
Each of these operational modes can be assigned to the buttons in the Application Remote Control by the prosthetist using the Adjustment App, and you can change to a mode you want by tapping the corresponding button on the "Mode Change" screen of the Application Remote Control. (page 12)
The normal mode is always assigned to Button 1 on the Application Remote Control.
You can freely assign the five operational modes above to buttons 2 to 5 on the Application Remote Control.

Default remote controller configuration:

- Button 2: Flexion Angle Limited mode
- Button 3: Variable Selective Flexion Lock mode
- Button 4: Full Extension Lock mode
- Button 5: Free Swing mode

6   Initial settings

*The pop-up screen will vary depending on the smartphone you are using.

1. Tap the icon of this App to start.

2. A popup is displayed asking for permission for this App to access the smartphone's location. Tap "Allow".

    Android 12 or later versions do not use location information. A popup will appear asking for permission regarding nearby devices, please allow it.
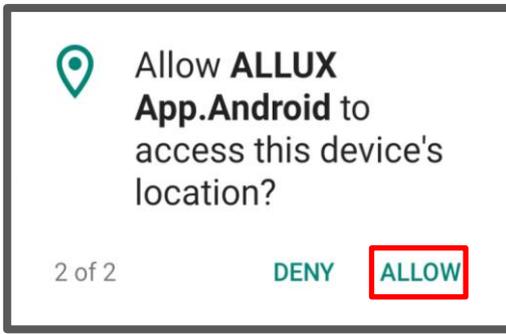
3. The "Legal & Regulatory" dialog is displayed.
    Read it and tap the "OK" button.
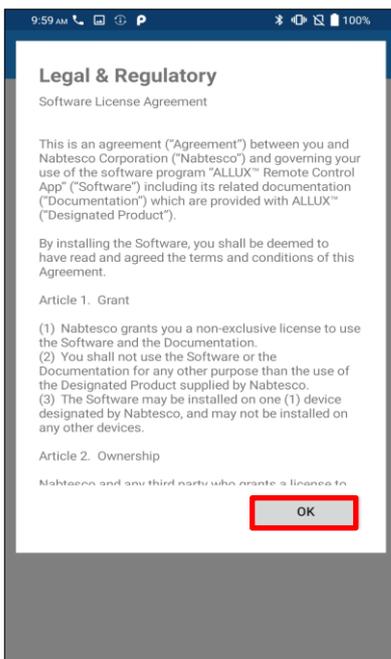
⑥ Initial settings

4. The company logo is displayed. From the second time, the above screens are skipped and this screen is displayed when you tap the icon of this App.
After the company logo is displayed on screen for a second, this screen is automatically changed to next screen.
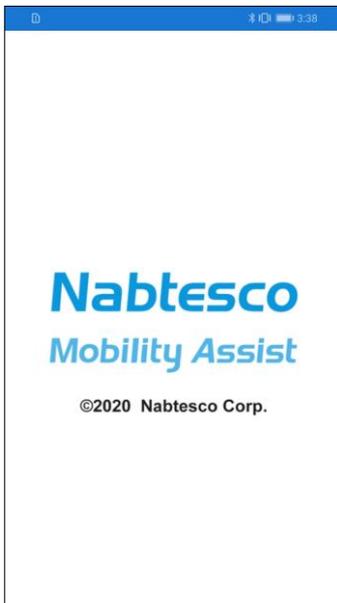
5. A warning popup is displayed. Read it and tap the "OK" button.

7 Mode change screen

"Mode Change" screen is displayed after the warning popup.

●**Reconnect icon:**
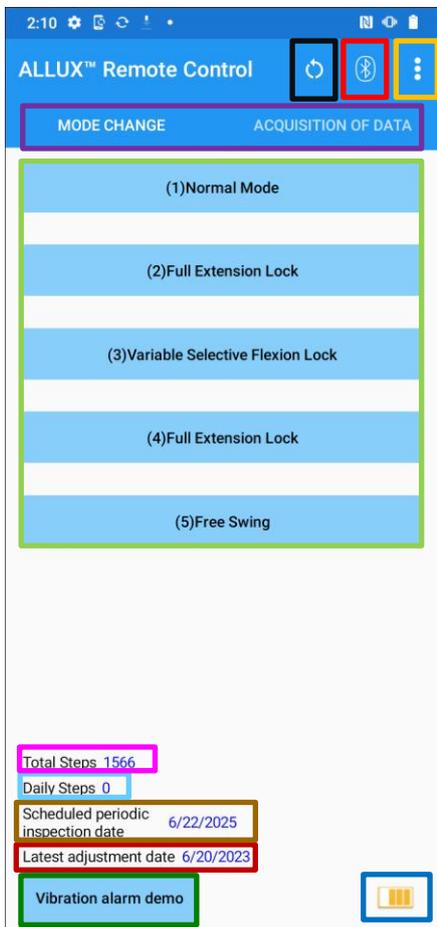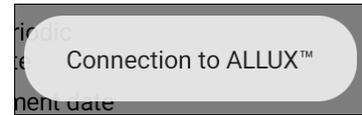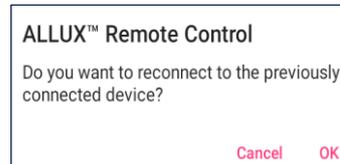Tap this icon to connect to the previously connected ALLUX™. The following popups are displayed before and after the connection

ALLUX™ Remote Control
Do you want to reconnect to the previously connected device?

Cancel   OK

Connection to ALLUX™

●**Bluetooth icon:**
Tap this icon to display the "Connection to ALLUX™" screen (page 13). The icon changes depending on the connection state. When it is in a disconnected state, tap the icon to enable connection

Disconnected   Connected

●**General icon:**
Tap this icon to display the "General" screen (page 15).

Standby mark:
While this App is communicating with ALLUX™ or performing other processing, a standby mark is displayed. While this mark is displayed, all on-screen operations are disabled.

●**Remote control button:**
When you tap one of these buttons, the state of ALLUX™ changes to the operational mode which was assigned by the prosthetist beforehand. When you tap the button, a popup is displayed. Tap the "OK" button.

●**Screen change tab:**
You can switch between the "Mode Change" screen and "Acquisition of Data" screen. Tap on these characters or slide each screen to left or right to switch the screen.

●**Total steps:**
It shows the number of steps you have made up to this point.

●**Daily Steps**
It shows the number of steps you made on the day.

●**Scheduled periodic inspection:**
If you entry the start date of use in the "Other settings" of the General icon, the scheduled date of the periodic inspection will be displayed.

●**Latest adjustment date:**
It shows the date when ALLUX™ was in last adjusted.

●**Vibration alarm demo button:**
ALLUX™ vibrates in demo.

●**Battery level:**
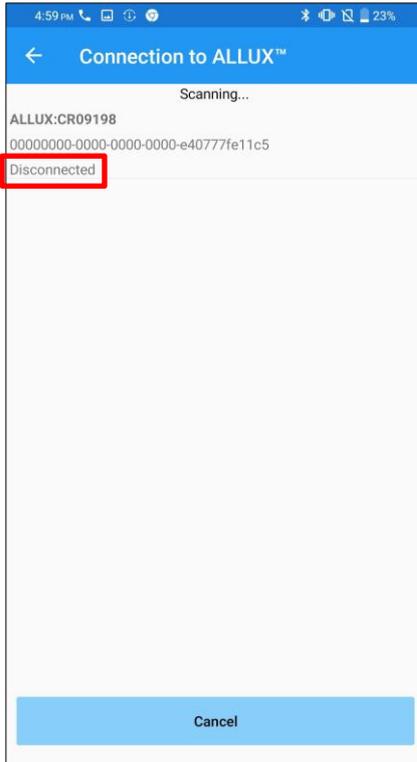It shows the battery level of ALLUX™.

10% or less   10~40%   40~70%   70% or more

8 Connection to ALLUX™ screen

1. On the "Connection to ALLUX™" screen, scanning for wireless devices automatically starts.

2. The devices related to ALLUX™ are listed up. The indicated characters vary based on the serial number of ALLUX™.
   The third line indicates the connection state.
   - Disconnected
   - Connecting
   - Connected

3. "ALLUX:Serial No" is displayed. If more than one device is listed up, according to the Serial No. of your ALLUX™, select the appropriate wireless device.

4. If the wireless device for ALLUX™ is not listed up, the wireless connection of ALLUX™ may be in sleep mode. Activate the wireless connection referring to page 7 After that, tap the "Cancel" button and then tap the "Scan" button displayed in that position to search for wireless devices again.

5. Tap the wireless device on the list. If the wireless connection is successfully done, the "Mode Change" screen (page 12) is displayed automatically.

When connecting to ALLUX™ for the first time the screen of "Connection to ALLUX™" is displayed. Enter the password indicated on the charging port of ALLUX™. If you fail in entering the password 3 times, you need to restart this App.
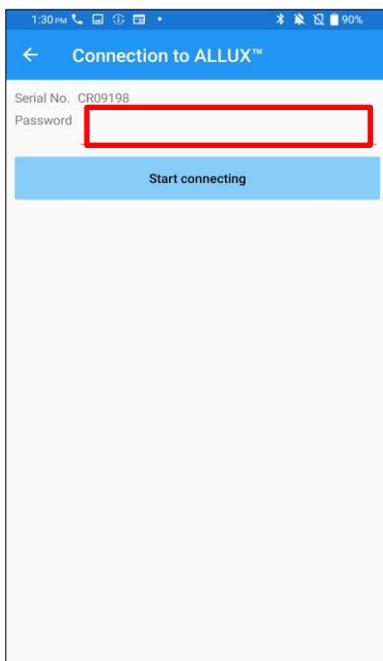
9   Acquisition of data screen

You can check the state of ALLUX^{TM} on this screen.
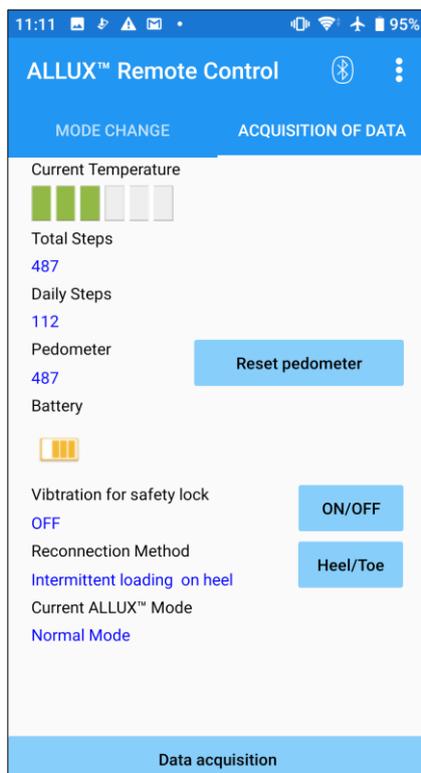
● Current Temperature:

You can check the temperature of ALLUX^{TM}.

Repeated yielding motion may cause high temperature.

When ALLUX^{TM} gets hot, it enters high temperature

mode and you cannot walk.

● Total Steps:

It shows the number of steps you have made up to this

point.

● Daily Steps:

It shows the number of steps you made on the day.

● Pedometer:

When you tap the "Reset pedometer" button, the number

of steps becomes 0 once and then it starts to show the

number of steps you make from that point.

● Battery:

It shows the battery level. (The displayed marks are the

same as those shown in page 12 .)

● Vibration for safety lock:

This button is used to set whether or not to vibrate the

ALLUX^{TM} when the safety lock (page 10 of the User's

Guide) is enabled. The default is set to "ON" (vibrate).

● Reconnection method:

This button is used to change the method to return

wireless connection to ON without using the charger or

the power OFF cap when wireless connection was turned

OFF to get on a plane, etc. Refer to page 7.

● Current ALLUX^{TM} Mode:

Shows the current walking mode. Refer to page 8.

● Data acquisition button:

When you tap this button, information such as the

number of steps is updated.

10   General screen

When you tap the General icon ⦙ on the "Mode Change" screen or the "Acquisition of Data" screen, the screen displays the "General" screen.

✈⚠	✳ 📶 45% ▭ 8:51
← **General**	
About ALLUX™	
Change the name of mode	
Other settings	
Airplane mode	
Reboot	
Instruction Manual	
Legal & Regulatory	
About APP	
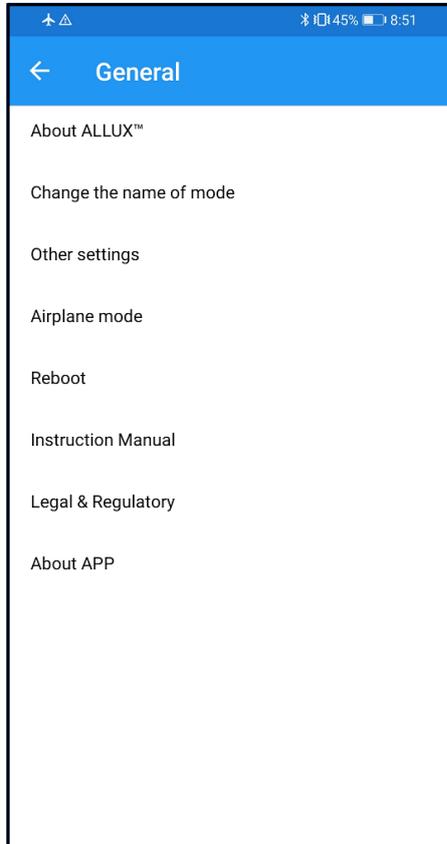
● About ALLUX^{TM}:
   "About ALLUX^{TM}" screen (page 17) is displayed.

● Change the name of mode:
   "Mode Name" screen (page 18) is displayed.

●Other settings:
   "Other settings" screen (page 16) is displayed.
   In this screen, you can set whether to automatically connect to the previously connected ALLUX^{TM} when the App starts, set whether to confirm when changing modes, and enter the start date of use.

● Airplane mode:
   A popup is displayed. Tap the "OK" button to turn OFF ALLUX^{TM} wireless connection.

● Reboot:
   When you tap this button, a popup is displayed. Tap the "OK" button to reboot ALLUX^{TM}.
    * As the communication is disconnected, you need to enable connection again.
   (The same action as removing and inserting the power OFF cap.)

● Instruction Manual:
   Download the instruction manual from jumped link.

● Legal & Regulatory:
   The "Legal & Regulatory" dialog (page 10) is displayed.

●About APP:
   Displays application name, usage, UDI-DI, etc.

11 Other settings screen
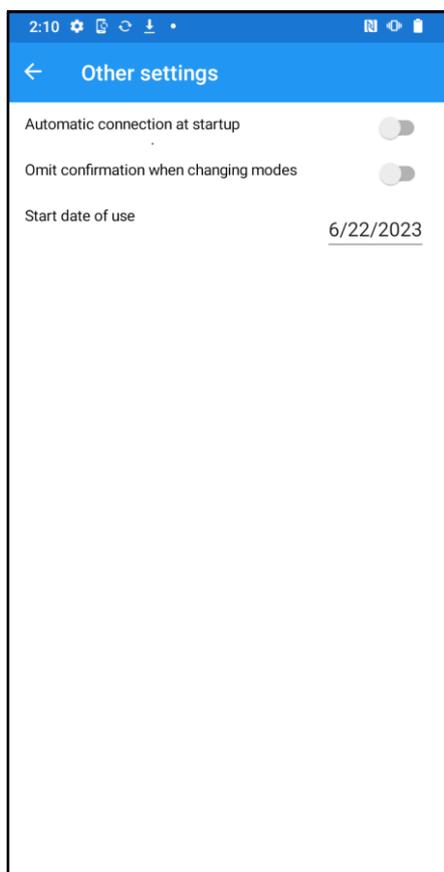
:ON (works)

:OFF (does NOT work)

●Automatic connection at startup:

You can set whether to automatically connect to the previously connected ALLUX™ when the App starts.

●Skip confirmation when changing modes:

You can set whether to display a confirmation popup when you click a button for changing mode.

●Start date of use:

You can enter the start date of use. This entry is required when displaying the scheduled periodic inspection date.

12 About ALLUX™ screen

App Version
0.4.0
ALLUX™ firmware version
50.36/07.32
Serial No.
CR09198
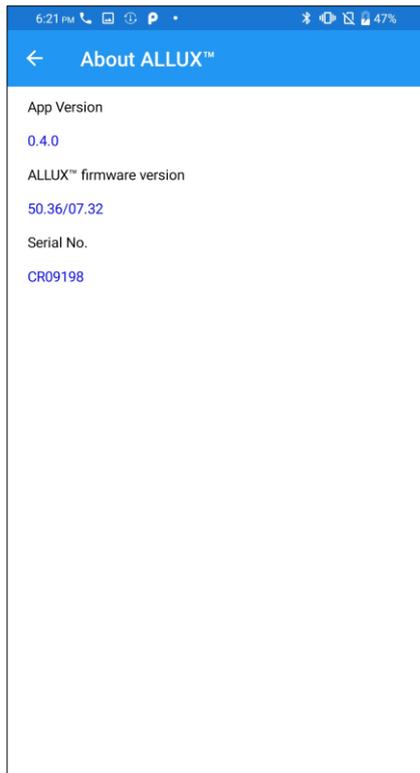
● App Version:

The version of this App is displayed.

● ALLUX™ firmware version:

The firmware version of ALLUX™ is displayed.

● Serial No:

The serial number of the ALLUX™ is displayed.

13 Mode name screen

ALLUX^{TM} allows to freely assign the operational modes described in page 8 to the buttons on the Application Remote Control. ALLUX^{TM} also allows to change the button names indicated on the "Mode Change" screen. Be sure to check the assignment with the prosthetist and change the button names according to the assignment.

It is convenient to name the buttons according to the adjustment values, for example, 'Normal mode (for a shoe with a high heel)' or 'Flection Angle Limited mode (50 deg.)'.

If the prosthetist changes the mode assignment, the mode names return to the defaults.
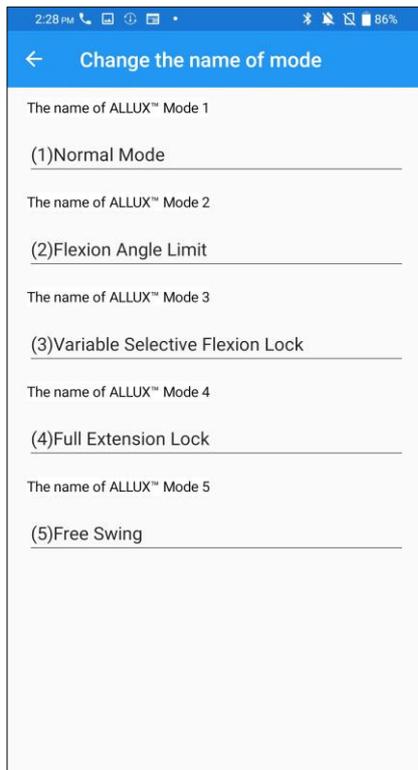
1. Tap the operational mode to change the name.

2. A keyboard is displayed on the screen.

3. Enter a new name.

4. Tap "✓" to complete the entry.

5. Once return to "Mode Name" screen, the name is reflected to this App.

14   Error message popup

If an error occurs during an operation, a popup is displayed.

Please follow the instructions in the popup.

14.1 Location information error A

ALLUX™ Remote Control

Go to Settings-> Apps-> "ALLUX™ Remote Control"-> Permissions and turn on location.
App closes when the "OK" button is pressed.

OK

Location information is required to use "ALLUX™ Application Remote Control". Therefore, you need to have set to allow this App to access the location information of the smartphone in the operation in page 10. This error occurs if you did not allow it at that time or if you manually denied the use of location information after that. Follow the instructions in this popup to allow the use of location information.

*Android 12 or later versions do not use location information.

14.2 Location information error B

ALLUX™ Remote Control

Turn on "Use Location"

OK

This error occurs when the location information function of the smartphone itself is not enabled. Enable the location information function of the smartphone.

*Android 12 or later versions do not use location information.

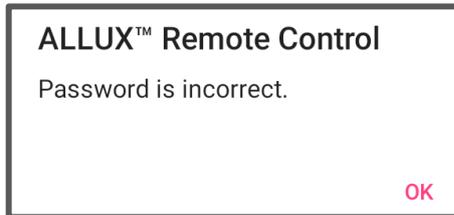### 14.3 Bluetooth setting error

ALLUX™ Remote Control

No Bluetooth connection

OK

If Bluetooth is OFF, this App cannot communicate with ALLUX™. Turn ON Bluetooth with the function of the smartphone.
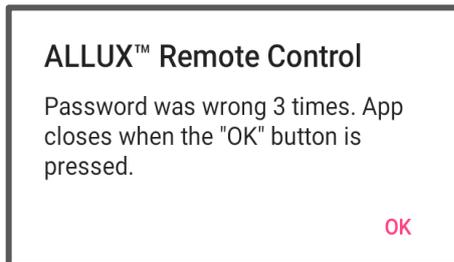
⑭ Error message popup

14.4 Connection to ALLUX™ error

> **ALLUX™ Remote Control**
>
> Password is incorrect.
>
>   OK

This error occurs when the wrong password was input on the "Connection to ALLUX™" screen. Enter the password indicated on the charging port again.

14.5 Password error (3 times)

> **ALLUX™ Remote Control**
>
> Password was wrong 3 times. App closes when the "OK" button is pressed.
>
>   OK

This error occurs if you fail in entering the password 3 times. And then this App closes at once. When you start up this App again, you can enter the password again.

14.6 Wireless connection error

> **ALLUX™ Remote Control**
>
> Unable to connect Bluetooth
>
>   OK
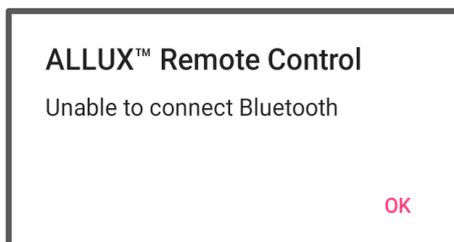
This error occurs when wireless connection between ALLUX™ and Bluetooth on smartphone is failed. Try to turn ON the wireless connection of ALLUX™ referring to page 7

14.7 Wireless communication error

> **ALLUX™ Remote Control**
>
> Connection to ALLUX™ was failed
>
>   OK
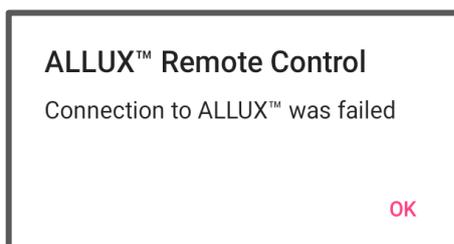
This error occurs when communication between ALLUX™ and App on smartphone is failed. Enable wireless connection again referring to page 12.

If this occurs during a mode change, check the status of ALLUX™ and use it.

14.8 Safe posture error

> Assume a safe posture.
>
> No Load   or   No Movement
>
> Cancel   OK
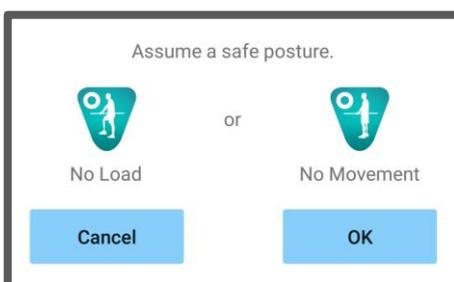
If the user does not take a safe posture, ALLUX™ cannot change the settings. Assume a safe posture referring to page 6.

⑭ Error message popup

14.9 Hydraulic control error

ALLUX™ Remote Control

A warning requests you to refrain from use of ALLUX™.Contact the prosthetist.

OK

Because hydraulic control may be out of order, the control of ALLUX^{TM} is stopped.
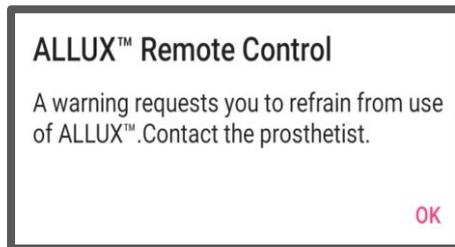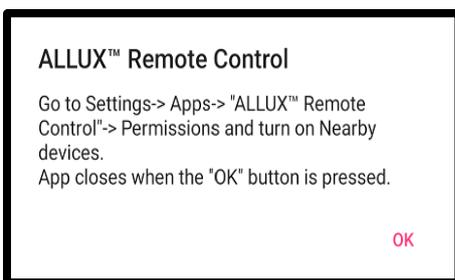Contact the prosthetist to have maintenance service.

14.10 Device connection error in the vicinity

ALLUX™ Remote Control

Go to Settings-> Apps-> "ALLUX™ Remote Control"-> Permissions and turn on Nearby devices.
App closes when the "OK" button is pressed.

OK

The permission of "Nearby devices" is required to use "ALLUX^{TM} Application Remote Control". Therefore, you need to have set to allow "Nearby devices" in the operation in page 10. This error occurs if you did not allow it at that time or if you manually denied after that. Follow the instructions in this popup to allow "Nearby devices"

14.11 Reconnect button error

ALLUX™ Remote Control

No prior device connection.

OK
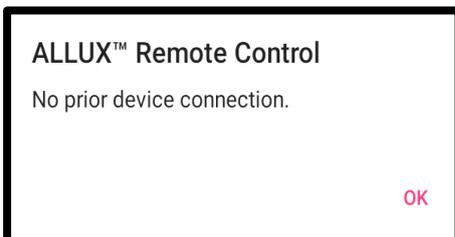
This error is displayed when you tap the Reconnect button with no previously connected ALLUX^{TM}. Make connection according to the regular procedure before using.

15 Troubleshooting

Problem	Check item	Remedy
The Application Remote Control cannot be installed.	Check that the operating system version is appropriate.	Update your OS to a compatible version listed in the app store.
	Check that the hard disk of the smartphone etc. has a required free space.	Increase the free space on the hard disk.
ALLUX™ cannot be connected.	Check that ALLUX™ is recognized on the "Connection to ALLUX™" screen (page 13).	Select ALLUX™ on the "Connection to ALLUX™" screen.
	Check that ALLUX™ communication is not connected with multiple devices.	ALLUX™ cannot be connected with multiple devices. If the Prosthetist is using the Adjustment App, ask the prosthetist to disconnect the communication.
	Check that Bluetooth is "ON" on the smartphone.	Turn ON Bluetooth on the smartphone.
	Cannot be connected even with the above remedies.	Perform the following three steps before reconnecting. (1)Reboot the ALLUX™ power supply. 　(Insert the charger or the power OFF cap once and then remove it.) (2)Turn OFF the smartphone's Bluetooth once and then turn it back ON. (3)Restart the Application Remote Control.
Wireless connection cannot be restored even if a load is applied on the heel or the toe 4 times intermittently.	Check that the toe or heel setting is correct or the way of applying a load is correct.	Check the setting with this App or the way of applying a load again referring to page 7. If the wireless connection still cannot be restored, remove and insert the battery charger or the power OFF cap for restoration.
ALLUX™ is not indicated on the "Connection to ALLUX™" screen.	Check that the ALLUX™ wireless connection is ON.	Turn ON wireless connection referring to page 7.
	Check that battery for ALLUX™ has been charged.	Charge the battery for ALLUX™.
	Check that multiple Apps are not working at the same time.	Close unnecessary Apps.
	Check that the Bluetooth function is "ON" on the smartphone.	Turn ON the Bluetooth function.

15 Troubleshooting

Communication between ALLUX™ and App is easily disconnected.	Check that the battery capacity for ALLUX™ or smartphone is low battery status.	Charge the battery for ALLUX™ or smart phone.
	Check ALLUX™ is used under the specific wireless condition such as beside railway, highway, TV tower, airport, in exhibition and hospital.	Avoid using the device in an environment where trains or vehicles frequently come and go, or in an environment where there are multiple wireless connections.
	Check if there are huge shields against radio wave around ALLUX™ user.	Remove shields that block radio waves.

ALLUX™

Nabtesco Corporation

Manufacturer

Nabtesco Corporation

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