

NUADA Glove Manual

Version 1.2.0



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Proper Use

The NUADA Glove has been designed and built for individual use. It should only be worn as a Glove and used to support maintaining grasps. Use for any other purpose will be deemed improper and NUADA Lda cannot accept any responsibility for the consequences of improper use.

Before using the NUADA glove, always carefully read and comply with all these instructions.

For Your Safety



Please read and note carefully the following important safety information.

By doing this, you can avoid harmful events:

- Do not put on the Glove when it is turned on. Make sure it is properly turned off.
- Turn the Glove on only after properly putting it on your hand.
- Switch the Glove off before removing it.
- Do not unlock individual sliders without being in the proper configuration menu. Read instructions below.
- Be careful to ensure that the object you are about to disengage does not fall and harm you or others when you switch to the 'unlocking' state.
- Place the Glove out of the reach of children.
- Protect the smartwatch and supporting system from wet environments.
- Only connect the smartwatch to the power supply to charge. Do not charge while using the Glove.

People, including children, who

- do not have the physical, sensory or mental capabilities to use the Glove or
- are inexperienced or lack knowledge in how to use the Glove safely

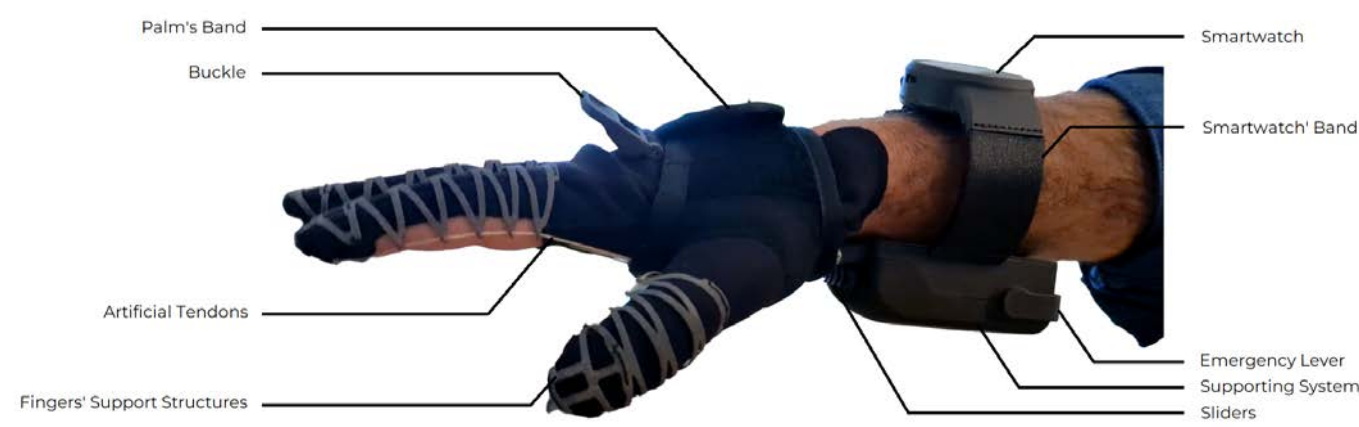
must be supervised by a responsible person when using it, or must be instructed in how to use it correctly.

Please consider the following warnings:

- **Not for Medical:** do not use for medical or surgical procedures.
- **Proper Fit is Critical:** ensure glove fit snugly but not too tight. Loose-fitting gloves may reduce dexterity and increase the risk of accidents.
- **Do Not Use if Damaged:** inspect glove before each use. Do not use if there are visible tears, holes, or other damage to the gloves.
- **Heat Resistance:** Not suitable for use in extreme heat or cold conditions.
- **Electric Shock:** not insulated against electric shock. Do not use for electrical work.

- **Safety While Using:** use caution when handling sharp objects or machinery. Gloves provide limited protection against punctures and cuts.
- **Clean and Maintain:** regularly clean and maintain gloves. Improper maintenance may reduce their effectiveness.
- **Emergency Removal:** disengage the support system by pulling the emergency lever in the box.
- **Limitation of Use:** use it until you feel comfortable.
- **Not a Substitute for Proper Safety Procedures:** Gloves are not substitute for following proper safety procedures and protocols. Always follow workplace safety guidelines.
- **Keep Out of Reach of Children.**
- **Discontinue Use if Irritation Occurs:** If skin irritation, discomfort, or any other adverse reactions occur while using these gloves, discontinue use immediately and seek medical advice if necessary.
- **Charging Precautions:** do not charge the smartwatch near water or in a humid environment. Disconnect the charger when not in use.
- **Battery Care:** Avoid overcharging the smartwatch. Disconnect it from the charger once fully charged. Prolonged overcharging may damage the battery.
- **Water Resistance:** This smartwatch is water-resistant, but not waterproof. Avoid submerging it in water or exposing it to pressurized water, such as showering or swimming.
- **Strap Adjustment:** Ensure the strap is correctly adjusted loosely to prevent discomfort or skin irritation. Do not wear the smartwatch tightly.
- **Weight and Size Restrictions:** Overloading may lead to structural damage or injury.
- **Unauthorized Modifications:** Do not modify or alter the exoskeleton without the manufacturer's approval. Unauthorized modifications may compromise safety.
- **User Manual:** Read and understand the user manual provided by the manufacturer. Adhere to all safety guidelines and recommendations.
- **User Training:** proper training and understanding of glove usage are essential. Ensure users are educated of safe practices.

NUADA Glove



The NUADA Glove Manual

This is the manual for your NUADA Glove. The information contained in this manual will help you to familiarize yourself with your NUADA Glove safely and quickly and tech you the full range of capabilities it offers.

Chapter 1, 'Putting on the Nuada Glove', states the initial conditions before putting on glove, and explains step-by-step how to put on and turn on the Nuada glove.

The next two chapters are important for you to read as they describe the normal functioning of the NUADA Glove, which has two modes.

Chapter 2, 'Manual Mode of the Nuada Glove' explains a normal usage of the glove in the manual mode, where you control the locking mechanism with clicks on the smartwatch.

Chapter 3, 'Automatic Mode of the Nuada Glove' explains a normal usage of the glove in the automatic mode where you control the locking mechanism with your wrist.

Chapter 4 is intended to help you configure the NUADA Glove as you find best.

With NUADA Glove, you will recover hand function in your hands, as you will be able to grab and hold objects with super-human firmness and stability.

1. Putting on the Nuada Glove

Initial Conditions



Before putting on the NUADA glove, verify the following:

- **Glove is turned off.**

If the screen of the smartwatch is off, touch it to make sure it is turned off. If the screen is on, press the middle button on the side for 5 seconds until the screen turns off.

- **Emergency lever is turned off.**

Make sure the emergency lever is aligned with the box, just as shown in the initial figure.

- **Straighten the fingers.**

Pull the fingers of the glove completely until they are fully extended. You will hear the support system clicking.

Putting On Glove



Start by putting on the fingers.

You can put on the fingers through the openings of the glove, and adjust the top parts at the end.



Lace the band of the palm firmly.

Make sure the thumb is correctly placed through the hole of the band.



Lace the band of the smartwatch, ensuring some slack.

It should have some slack so that the band can freely move along the forearm when fully extending and flexing the wrist.



(Optional) Put on the Wrist Strap

Prior to putting on the glove, insert the loop on the arm. Then, put on the glove (follow the previous steps).

- With the Loop part, circle the box



- With the Strap part, route it below the smartwatch and buckle up on the back of the hand.

Fasten the strap loosely so that you can still fully flex the wrist.

Switch On (and Switch Off)

Press the middle button of the smartwatch for five 5 seconds to switch on the NUADA glove.

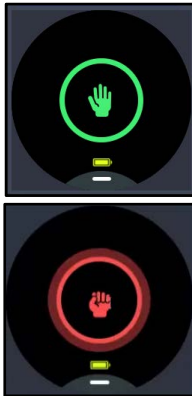
Once finished using, do the same to turn it off.



2. Manual Mode of the Nuada Glove

Functioning

The icon on the center of the smartwatch indicates the state of the glove



- **green**, the glove is in a **'unlocking'** state where you can freely move your fingers as a normal glove.
- **red**, the glove is in a **'locking'** state where your fingers are unable to extend.

In the manual mode, you switch the state by clicking the icon.

Lock

A regular usage starts in the **'unlocking'** state

Click on the screen of the smartwatch to switch to the **'locking'** state.



Wrap your fingers around an object, and in this state, you will not be able to open the hand.



Make the grip tighter, by flicking the wrist down and up

- Moving down will shrink the artificial tendons of the fingers.
- Moving up, back in a straight position, will make the grip tighter.
- To make your grip steady, one or two movements are usually enough, but you can repeat it as many times as you desire as long as it remains comfortable.

Unlock



Click on the screen of the smartwatch in order to switch the glove back to the **'unlocking'** state.

You can now freely open your fingers and unleash the object.

3. Automatic Mode of the Nuada Glove

Functioning

Switching between the **'locking'** and **'unlocking'** states is controlled by the wrist movement.



Switch to the **'locking'** state by extending your wrist upwards past a certain threshold for a certain period.



Switch to the **'unlocking'** state by flexing your wrist downwards past a certain threshold for a certain period.

Thresholds and time periods are configurable. See below.



The state of the glove is indicated in the smartwatch:

- icon in the center of the smartwatch indicates the state of the locking mechanism.
- top arch indicates the state of the wrist-controlled mechanism:
 - circle indicates the current value of the wrist, which is also in textual format above the arch.
 - green and red segments of the arch are the areas that correspond to the **'unlocking'** and **'locking'** states, respectively. Where the segments touch, is the threshold required to switch to the opposite state.

If you extend your wrist upwards, the value will increase. If you flex your wrist downwards, the value will decrease.

Lock



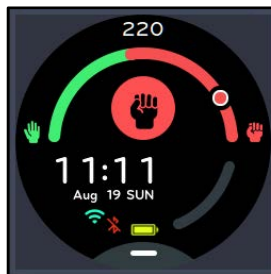
If the center icon is green, and the wrist value is on the green segment of the arch, then you are in the **'unlocking'** area in the **'unlocking'** state.



Switch to the **'locking'** state by extending your wrist upwards, so that the circle in your the top arch goes to the 'red' segment of the arch (ie. the wrist value goes past the threshold).

Once you are in that zone for a certain time period, the glove will switch to **'locking'** state.

Unlock



If the center icon is red and the wrist value is on the red segment of the top arch, then you are in the **'locking'** area in the **'locking'** state.



Switch to the **'unlocking'** state by flexing your wrist downwards so that the wrist circle goes to the 'green' segment of the arch.

Once you are in that zone for a certain time period, the glove will switch to **'unlocking'** state.

4. Configurations Menus

Options Bar



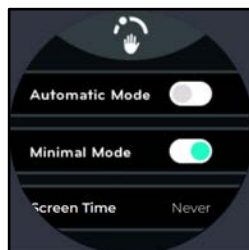
Below the main screen, there is a horizontal bar. By clicking it a configuration menu pop-up with 5 options:

- (1) configuration of the glove
- (2) configuration of the sliders for the fingers
- (3) configuration of the date time
- (4) configuration of the connectivity
- (5) information about the glove.

The navigation in the configuration screens is intuitive. You click on the items you want and click on the upper part of the screen to move backwards to the previous screen.

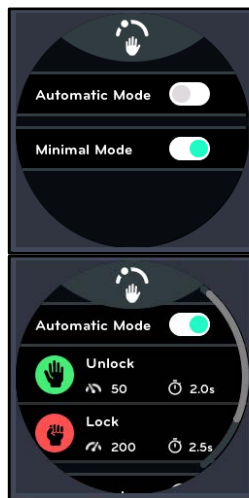
4.1. Configurations of the Nuada Glove

Configurations Panel



The first option of the options menu is for the configuration of the NUADA Glove. There are 4 options in this configuration screen.

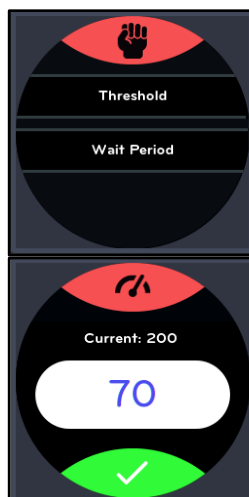
Automatic Mode



The 'Automatic Mode' switcher configures the control mode of the locking mechanism.

If switched off, the manual mode is activated. You control the locking mechanism with clicks on the smartwatch.

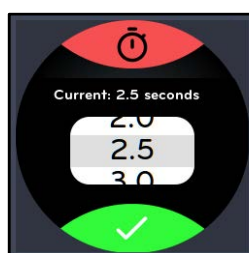
If switched on, the automatic mode is activated. You control the locking mechanism with the wrist. Additionally, two list items popup below, which indicate the threshold value and the time period of each state.



To change the values of the '**locking**' state, you click on the respective item. You will be presented a list with two items.

To change the 'threshold' you click on the first item, and a screen displays the current value of the wrist position. Place your wrist on the threshold position you want and confirm on the bottom icon.

Suggestion: select a threshold value close to the maximum extension of the wrist. Extend your wrist to the max, then relax slightly, and confirm.



To change the 'time period', click on the second item. You are directed to a screen with a vertical spinner. Select the period and confirm on the bottom icon.

This will be the period that you need to be past the threshold value so that the state of the Glove can be switched back to the 'unlocking' state.

To change the values of the '**unlocking**' system, the logic is very similar.

Suggestion: select a threshold value close to the maximum flexion. Flex your wrist to the max, then relax slightly, and confirm.

Minimal Mode

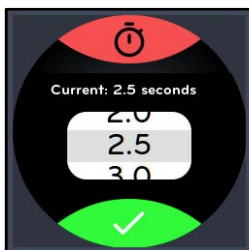


The 'Minimal Mode' switcher configures the information displayed on the main screen.

If switched on, detailed information regarding the time, date and an arch for the battery life are displayed.

If switched off, the main screen only displays the critical information regarding the locking mechanism.

Screen Time



The 'Screen Time' option configures the amount of time that the screen of the smartwatch is on until going to sleep. You can choose with a vertical spinner.

Even though the screen is off, the locking mechanism is still working

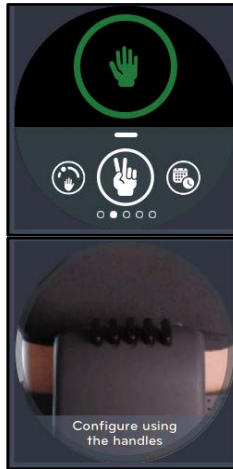
Flip Screen



The 'Flip Screen' option configures the display's direction. The changes will be visible after restarting. Turn off and back on the glove by clicking the middle button.

4.2. Configuration of the Sliders

Configuration Screen



The second option of the options menu is for the configuration of the individual sliders of the NUADA Glove.

Click on this option and the Glove will reach a state where you can turn on or off the locking mechanism for fingers. A sequence of illustrative images is shown in the smartwatch.



Configure the sliders by sliding up to turn on or sliding down to turn off. You can find 5 sliders in the bottom of the supporting system, each slider for each finger.

For those fingers whose slider is turned off, they are unrestricted from the locking mechanism. In the **'locking'** state, only the fingers whose slider is turned on are locked, thus you will not be able to extend them.



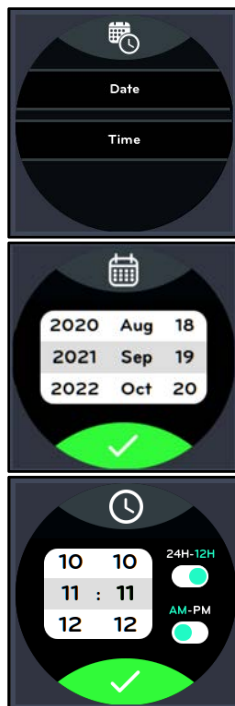
Click on the screen of the smartwatch once the sliders are properly configured, to exit this configuration stage.

Example: by turning off the slider of the index finger, you can have the fingers locked around an object, and have the index finger free to handle a trigger.



4.3. Date and Time Configuration

Date and Time



The third option of the options menu is for the configuration of date and time. You can adjust these parameters with rollers.

4.4. Connectivity Configuration

Connectivity



The fourth option of the options menu is for the configuration of connectivity.

You can enable Wi-Fi connectivity with switchers. You will need connectivity when updating the software that is running on the smartwatch.

4.5. Information

Information Panel

The fifth option of the options menu displays information regarding the NUADA Glove, such as the version and licenses.

Troubleshooting - FAQs

I am having difficulties fitting the fingers in the glove – Verify if the initial conditions are correct: the emergency lever is aligned with the box, the Nuada Glove is turned off, and the fingers are fully stretched/straightened.

The Nuada Glove is not locking, even if the locking state is on – You may have turned on the emergency lever. It should be turned off, aligned with the box.

While changing the settings, the screen of the smartwatch freezed – Restart the system, by turning off and then back on. You may have to press the middle button for 30 seconds for a hard restart.

When in the automatic mode, the locking states often switch involuntarily – Increase the period in the menu configurations. Another option is to maximize threshold values.

The Nuada Glove is not turning on – The battery of the system may be gone. Charge it for 30 minutes and try again.

Technical Data

Weight	500g
Box Dimensions (W x H x L)	4 x 2 x 2 cm
Battery Voltage	3.7V
Battery Current	1500mAh
Maximum Support Capacity	40 kg

NUADA contact details / Legal information

NUADA Lda.
Porto, Portugal

@ Contact information is available on the company website at www.nuada.pt

Technical Changes	We reserve the right to make technical changes. The illustrations used in the Nuada Glove Manual show the Nuada Glove for the right hand. Your glove might incorporate minor changes and for the opposite hand.
Feedback	Your opinion is important to us! Use the contact link at www.nuada.pt
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