



This page is intentionally left blank.

FCC ID: 2APBVPL321100

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications made to this equipment not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

RF Exposure Information

This equipment is exempt from routine RF exposure evaluation per FCC 47 CFR §2.1093, as the calculated Specific Absorption Rate (SAR) levels are below the threshold requiring evaluation. No minimum separation distance is required between the device and the user's body during normal operation.

CONTENTS

1.0 Welcome to NeuroStrip 03

2.0 Operating NeuroStrip 04

 2.0 EMG Placement 04

 2.1 Patch Alignment 05

3.0 Patient Manager 06

 3.0 Intro Screen 06

 3.1 New Patient Setup 07

 3.2 Patient Overview 08

 3.3 Patient Sessions 09

 3.3 Patient Notes 10

 3.4 Patient Measurements 11

4.0 Connections Screen 12

5.0 Protocols 13

 5.1 Create New Protocol 14

 5.2 Edit Protocol 16

6.0 Sessions 17

 6.0 Create New Session 17

 6.1 Select Protocol 18

7.0 Session Graph 19

 7.0 Session Graph Recording Screen 19

 7.1 Session Graph Controls 20

8.0 Welcome to NeuroNode Ngage 21

 8.1 Overview of NeuroNode Ngage 22

 8.2 Overview of NeuroNode Ngage Accessories 23

9.0 Troubleshooting 24



NEUROSTRIP™



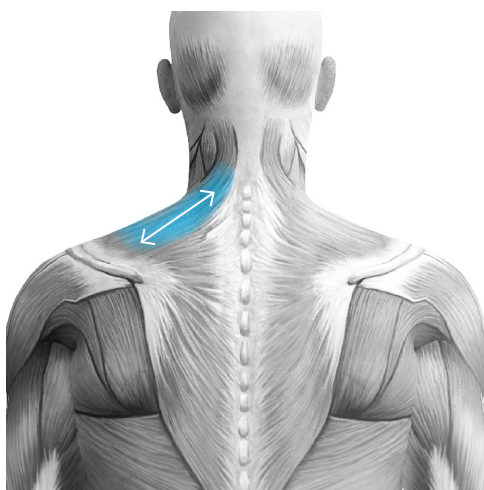
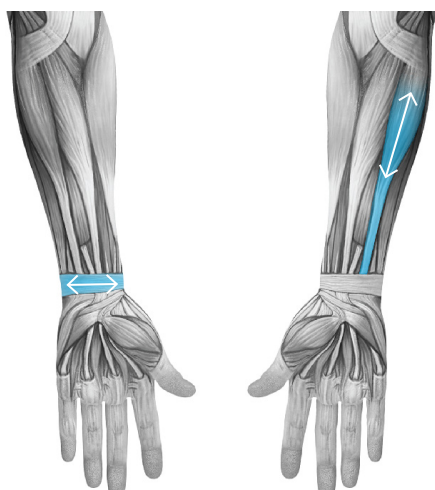
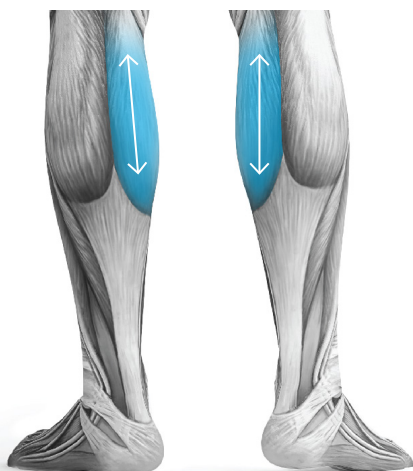
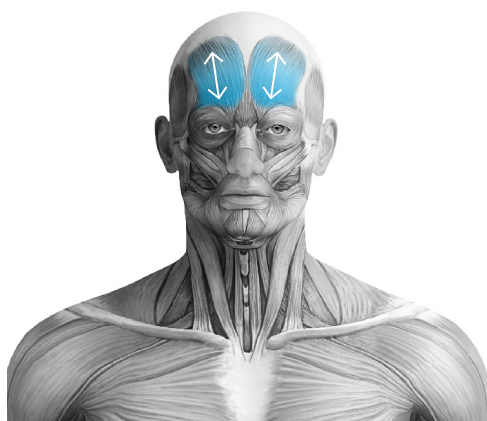
1.0 WELCOME TO NEUROSTRIP

NeuroStrip offers insight into muscle activation and intent by monitoring the body's bioelectric signals. Using high-fidelity sensors, the patent-pending NeuroStrip transmits and records real-time surface electromyography (sEMG) from the selected muscles and accelerometer data from device movement, providing a versatile tool across a wide range of industries, including rehabilitation, sports science, wearables, and medical technology.

The NeuroStrip Application allows multiple devices to be connected and processed within a single session. The App supports highly customized data visualization, with the ability to record and review sessions, track progress, and enhance client recovery and performance.



The above are trademarks of their respective companies



2.0 EMG PLACEMENT

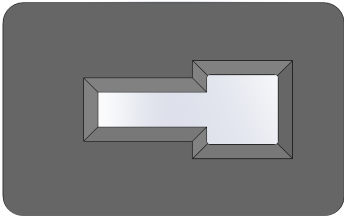
The chosen EMG Target Muscle should respond, at least minimally, to a command to contract the muscle. The muscle should return to a resting state in a timely manner.

The muscle does not need to function at optimal levels. The NeuroStrip is designed to detect muscle movement reliably and accurately to microvolt signal levels at the Target Muscle site.

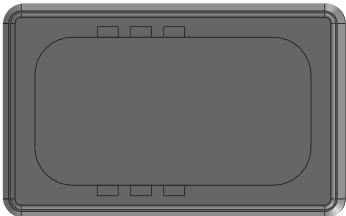
2.1 PATCH ALIGNMENT

The NeuroStrip kit includes the Patch Alignment Tool. This tool is used to properly align the NeuroStrip to the electrode targets on the patch.

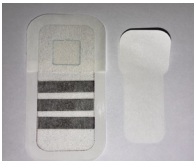
PATCH ALIGNMENT TOOL



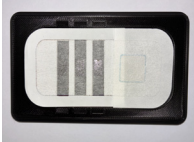
TOP



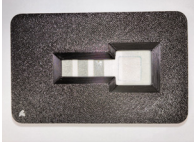
BASE



STEP 1:
Remove Key hole liner from top of NeuroStrip Patch.



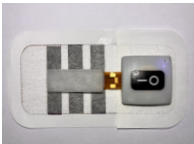
STEP 2:
Place patch in base of patch alignment tool.



STEP 3:
With patch inserted, place top of the tool onto the base making sure it is a flush, snug fit.



STEP 4:
With tool together, insert NeuroStrip into outline and pressed down to adhere to the patch.



STEP 5:
Remove the joined NeuroStrip and patch from the tool.



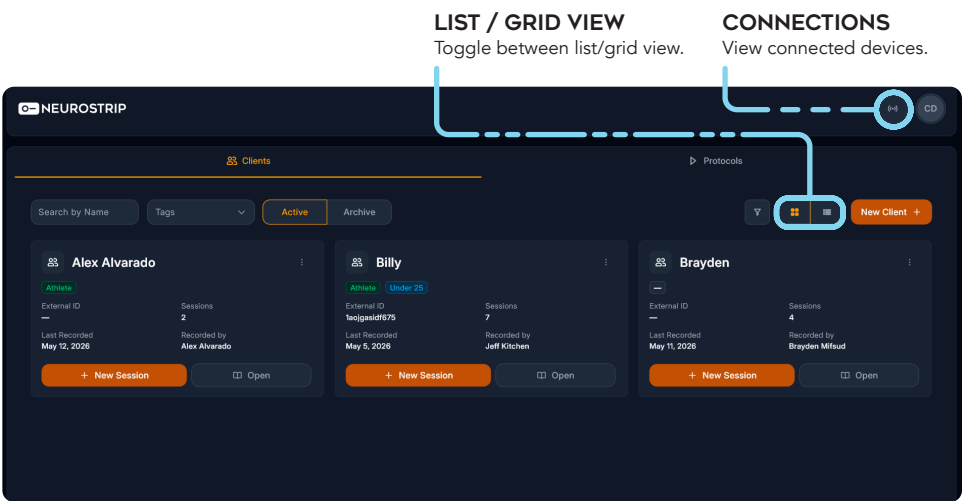
STEP 6:
Remove the bottom liner, adhere to the body and apply the overdressing to the tail section only.

3.0 INTRO SCREEN

Once logged in, the Intro Screen serves as the main dashboard for accessing and managing clients and protocols, with tools to search, filter, create new records, start sessions, and open existing client or protocol details.

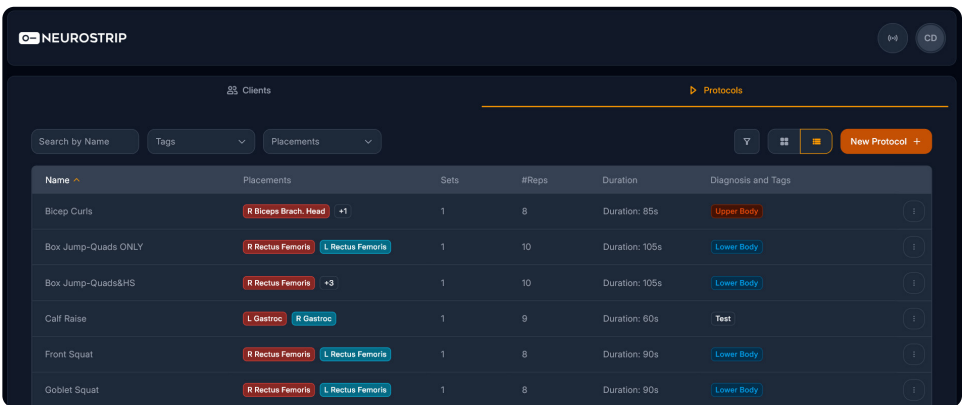
CLIENTS TAB:

Users can search and filter patient records, view active or archived patients, create a new patient, open an existing patient profile, and start a new session directly from a patient card.



PROTOCOLS TAB:

On the Protocols tab, users can search and filter protocols, create a new protocol, review protocol details, and use the actions menu to manage existing protocols.

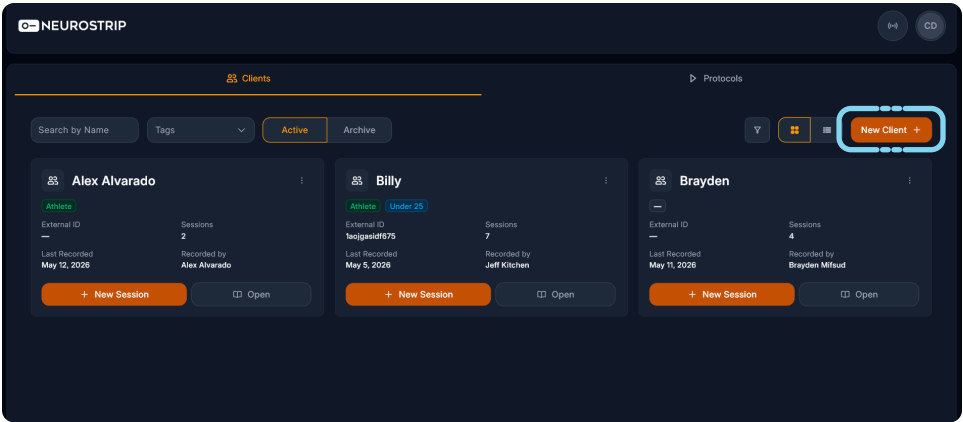


3.1 NEW PATIENT SETUP

The NeuroStrip Application lets you manage client records directly within the app. Add a new client or select an existing profile to begin.

ADD OR SELECT A CLIENT TO BEGIN:

Click the plus sign to add new patient/client, otherwise, click small box to left of name or on the name to select a previously entered patient/client.





Profile photo (Optional)

Upload photo

Remove

We support PNGs, JPEGs under 10MB

Name *

Enter your name

Diagnosis and Tags

Select tags

Tags are used to add searchable characteristics to your patient/athlete including but not limited to diagnosis, injury, type of athlete, position, etc.

Gender *

Select gender

External ID

Enter external ID

Age *

Enter your age

Cancel

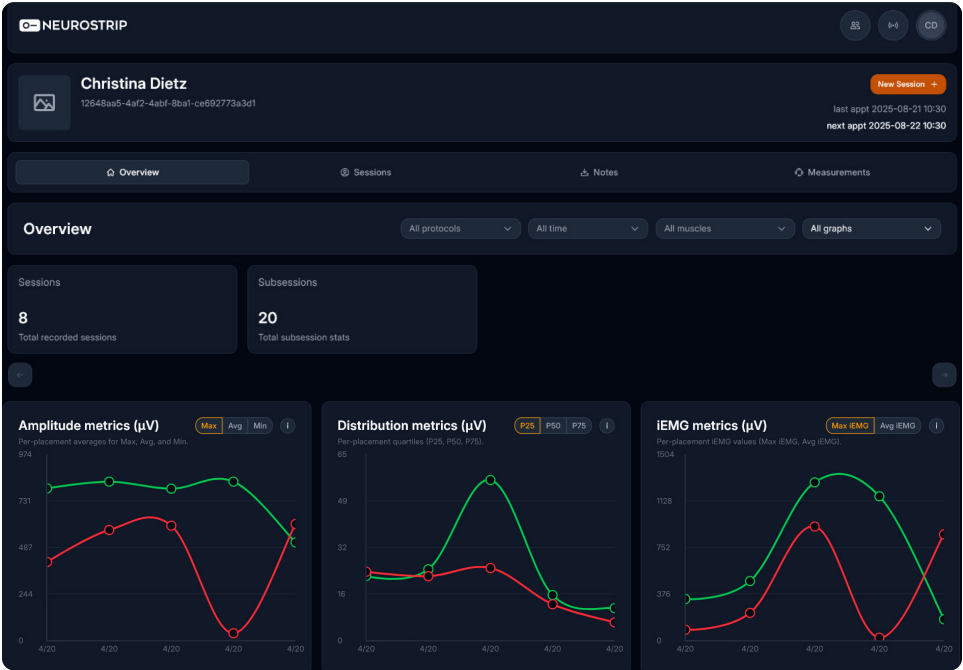
Continue

NEW PATIENT:

After selecting **+ New Patient** from the intro screen, the new patient pop-up allows users to enter the patient's information and then select **Continue** to proceed.

Tags are clinician-created categories that can be assigned to patients to make searching and organization easier.

3.2 PATIENT OVERVIEW



OVERVIEW

When a patient is selected from the main screen, this pop-up appears with session options for that individual. The navigation tabs allow users to move between the athlete's main sections: Overview, Sessions, Notes, and Measurements. The Overview shows total Sessions and Subsessions. Use the chart toggles to switch between available metric views.

AMPLITUDE METRICS

Shows per-placement muscle signal averages, including maximum, average, and minimum amplitude values.

DISTRIBUTION METRICS

Shows per-placement signal distribution using percentile values, such as P25, P50, and P75.

IEMG METRICS

Shows integrated EMG values, including maximum iEMG and average iEMG.

When ready to perform an exercise, click + New Session to begin.

3.3 PATIENT SESSIONS

NEUROSTRIP

Example Athlete 1

e4903bef-8bf9-4bf4-bfff-220cf20e9df0

Performance Vertical Basketball

New Session +

last appt 2025-08-21 10:30

next appt 2025-08-22 10:30

Overview

Sessions

Notes

Measurements

Search by Name

Date	Name	Protocols	Details
2026-04-20 23:40:15	Session 1	NeuroBounce Program - Base...	5 subsessions
2026-04-20 23:43:24	↳ Subsession 1	NeuroBounce Program - Base...	30s • Vastus Lateralis (L), Vastus Lateralis (R)
2026-04-20 23:44:06	↳ Subsession 2	NeuroBounce Program - Feed...	60s • Vastus Lateralis (L), Vastus Lateralis (R)
2026-04-20 23:45:21	↳ Subsession 3	NeuroBounce Program - Sum...	60s • Vastus Lateralis (L), Vastus Lateralis (R)

10 Items per page 1-1 of 1

Open session details

Generate report

Download Raw data

SESSIONS

The Sessions screen is accessed by clicking the Sessions tab. From here, users can review past sessions by double-clicking on a session to open it.

EXPORT OPTIONS

Click dots next to session for session export options.

3.4 PATIENT NOTES

NEUROSTRIP

Jeffrey S Kitchen

e85a7a11-f33a-4332-9b29-476472b0a424

sports performance

baseline

shortstop

New Session

last appt 2025-08-21 10:30

next appt 2025-08-22 10:30

Overview

Sessions

Notes

Measurements

Search notes...

Add note

Date	Created by	Note	
2025-03-30 19:15:10	Zafar Faraz Mohammed	Showing dylan we are good people	
2025-03-24 18:07:58	Zafar Faraz Mohammed	We feel the patient is making good progress	
2025-03-23 17:57:45	Jeff Kitchen	Closing note for this batch with next-step considerations recorded.	
2025-03-22 17:57:45	Jason Williams	Care-related update documented for continuity across staff.	
2025-03-21 17:57:45	Zafar Faraz Mohammed	General progress note saved for ongoing client history.	
2025-03-20 17:57:45	Jeremy Steele	Observation note entered regarding participation and responses.	
2025-03-19 17:57:45	Jeff Kitchen	Routine check-in completed and outcome noted for reference.	

10 items per page 1-10 of 12

1

2

NOTES

The Notes tab displays a searchable list of client notes, including the date, author, and note details, with options to add a new note, view additional note actions, and navigate through saved entries.

PATIENT MANAGER | 10

3.5 PATIENT MEASUREMENTS

MEASUREMENTS TAB

The Measurements tab displays client performance measurements, including the selected measurement type, number of saved records, latest result, best result, performance delta, trend graph, and measurement history, with options to record a new measurement and review progress over time.



MEASUREMENT SELECTOR

Shows which performance test or measurement is being recorded, such as Agility 10m L-R.

RECORD NEW MEASUREMENT

Click to record new measurement.

TREND GRAPH

Displays performance changes across recorded measurements. In this example, the note "Lower is better" indicates that decreasing values reflect improvement.

The 'Record Measurement' window is shown, allowing users to build a measurement set by adding cards below. It features a 'Measurement Card 1' for 'Agility 10m L-R'. The card has a dropdown menu for the measurement type (currently set to 'Agility 10m L-R') and a text input field for the 'Value'. Below the card is a '+ Add Measurement' button. At the bottom of the window are 'Cancel' and 'Save Measurements' buttons.

RECORD MEASUREMENT

The Record Measurement window allows users to add one or more measurement entries by selecting a measurement type, entering the result value, adding additional measurement cards if needed, and saving the measurements to the client profile.

VALUE FIELD

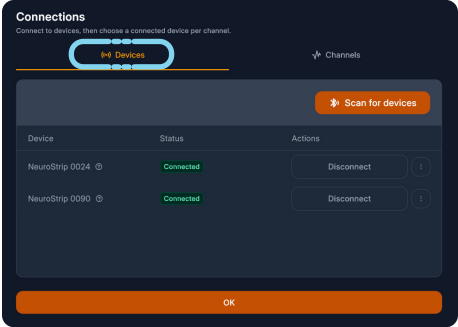
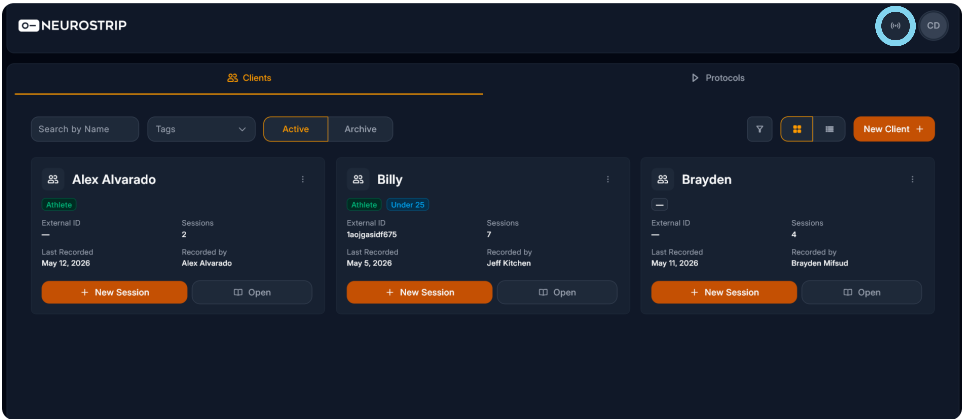
Where the user enters the measurement result before saving.

ADD MEASUREMENT BUTTON

Allows the user to add another measurement card and record multiple measurements at once.

4.0 CONNECTIONS SCREEN

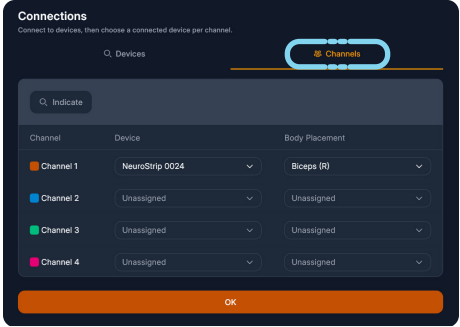
The Connections screen is accessed by clicking the **Connections** tab in the top-right corner of the intro screen. After shaking the device to wake it up, users can select Scan for Devices to locate devices, use the Channels tab to assign devices to a channel and muscle, and click the **? icon** next to the device name to view the current firmware and device serial number.



CONNECTION SCREEN DEVICES

Reached by clicking Connections tab on top right corner of the Intro Screen.

Click **Scan For Devices** after shaking device to wake up. **? icon** next to device name can be clicked to view current firmware and the device serial number.



CONNECTION SCREEN CHANNELS

Able to assign devices to channel and muscle.

5.0 PROTOCOLS SCREEN

The Protocols screen is accessed by clicking the Protocols tab from the intro screen. From here, users can select Clone to copy an existing protocol or click New Protocol to create a new one.

NEUROSTRIP

Connections

Christina Dietz
Admin

Clients

Protocols

Protocols

Summation Jumps

Duration: 60s

Target: 0

Clone

Edit

Staves experiment

Duration: 42s

Target: 0

Clone

Edit

NeuroBounce Sample

Duration: 90s

Target: 0

Clone

Edit

Feedback Jumps

Duration: 60s

Target: 0

Clone

Edit

NEW PROTOCOLS +

Create a new protocol.

CLONE

Copy an existing protocol.

EDIT

Edit an existing protocol.

5.1 CREATE NEW PROTOCOL

Create new protocol

1

Activity Details

2

Activity Set Timeline

3

Visualization

Exercise name *

Enter exercise name

Tags *

Select tags

Muscle channels *

Select muscle

+ Add new muscle channels

Back

Next

CREATE NEW PROTOCOL

Reached by clicking Connections tab Enter details.
Tags can be assigned for easier searching (Examples: ACL rehab, Return to Play, Baseball, etc)

Create new protocol

1

Activity Details

2

Activity Set Timeline

3

Visualization

Exercise name *

LAQ

Tags *

ACL 2wks

Muscle channels *

Mid Lower Quad (L)

+ Add new muscle channels

Back

Next

ACTIVITY DETAILS COMPLETE

Completed screen. Select **Next** once filled in.

Create new protocol

Activity Details

2

Activity Set Timeline

3

Visualization

Activity 1

Select activity type

+ Add activity

Protocol timeline

10.00

CountdownExerciseRest

Screen breakInterval

Back

Next

ACTIVITY SET TIMELINE

Select activity type.

Activity Type *

Repetition

Prompt *

Straighten Knee

Reps (Sec) *

Intervals (Sec) *

Reps *

+ Add activity

5.1 CREATE NEW PROTOCOL

Create new protocol

Activity Details

2 Activity Set Timeline

3 Visualization

Straighten Knee

Reps (Sec)4

Intervals (Sec)4

Reps2

Activity timeline

+ Add activity

Protocol timeline

1

0

0.0

10

Countdown

Exercise

Rest

Screen breakInterval

Back

Next

ACTIVITY SET TIMELINE COMPLETE

Completed screen. Bars below show a preview of what each Activity will look like on screen. Select **Next** once completed.

Create new protocol

Details

Activity Set Timeline

3 Visualization

4 Preview

Graphs to Include

☒ sEMG

☐ Accelerometer

☐ Activity Heat Map

☐ Separate Graphs

Mid Lower Quad (L)

sEMG Graph Scale (µV)600

Target Line (µV)450

Target Line ConditionAbove

Back

Next

VISUALIZATION

Graph details can be edited here.

GRAPH SCALE

Max value on Y axis.

TARGET LINE

What patient needs to “hit” for a successful rep.

TARGET ABOVE CONDITION

Rep is successful if rep is above or below target line.
Rep will almost always be above.

Click **Next**.

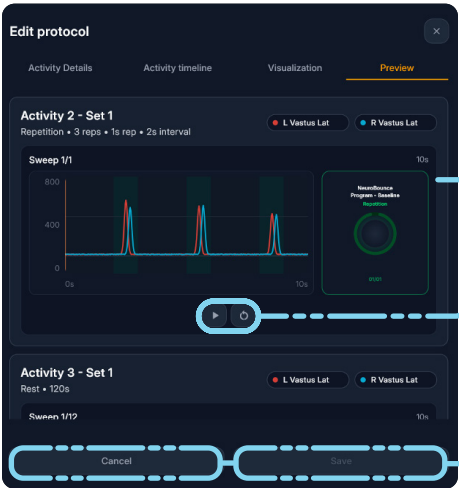
5.2 EDIT PROTOCOL

The Preview tab allows you to review how the protocol will appear and run during a session before saving your changes.

PREVIEW TAB

Each activity is displayed in order, including repetitions, sets, and timing details. For exercise activities, the preview shows the selected muscle channels and the expected activation pattern for each repetition.

The graph displays the timing of each muscle signal during the activity. Each colored line represents a selected muscle channel, such as L Vastus Lat and R Vastus Lat. Peaks on the graph indicate periods of muscle activation, while shaded areas represent the active intervals within the repetition sequence.



SESSION PREVIEW PANEL

The session preview panel on the right shows how the activity will appear to the user during the session, including the program name, activity type, and repetition count.

PLAYBACK CONTROLS

Use the playback controls below the graph to preview or restart the activity. This allows you to confirm that the timing, repetition count, intervals, and visual feedback are correct before saving the protocol.

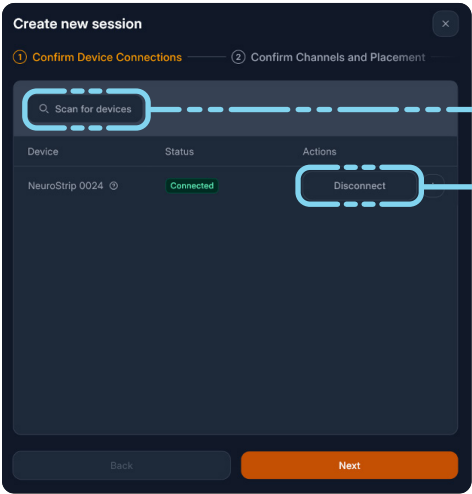
SAVE OR CANCEL

Select **Save** to apply the protocol changes, or select **Cancel** to exit without saving.

6.0 CREATE NEW SESSION

The Create New Session workflow allows users to connect a NeuroStrip device, assign active channels, confirm body placements, and continue to protocol selection.

CONFIRM DEVICE CONNECTIONS



SCAN FOR DEVICES BUTTON

Searches for available NeuroStrip devices that can be connected.

DEVICE LIST

Displays available or connected devices, such as NeuroStrip 0024.

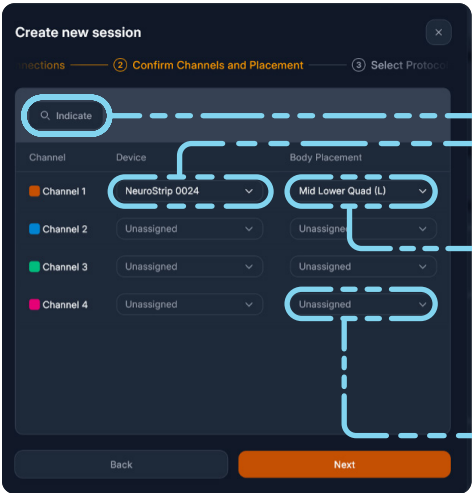
STATUS COLUMN

Shows whether the device is connected. A green Connected status confirms the device is ready.

CONNECT / DISCONNECT ACTION

Allows the user to connect to an available device or disconnect from a currently connected device.

CONFIRM CHANNELS AND PLACEMENT



INDICATE BUTTON

Helps identify or confirm the active device/channel before placement is assigned.

CHANNEL LIST

Displays each available channel, with a unique color indicator for easy identification.

DEVICE DROPDOWN

Assigns each channel to the connected NeuroStrip device.

BODY PLACEMENT DROPDOWN

Selects where the channel is placed on the client's body, such as Mid Lower Quad (L).

UNASSIGNED CHANNELS

Channels that are not being used can remain marked as Unassigned.

6.1 SELECT PROTOCOL

SELECT PROTOCOLS

Select protocol by clicking box and then select Next.



SEARCH FIELD

Find a protocol by name or ID.

OTHER AVAILABLE PROTOCOLS

Displays protocols that can be added to the session.

PROTOCOL CARDS

Show key protocol details, including name, duration, target, and protocol label.

SELECTION CHECKBOX

Indicates which protocols are selected for the session.

SELECTED PROTOCOLS SEQUENCE

Shows the order of protocols that will run during the session.

7.0 SESSION GRAPH RECORDING SCREEN

The Session Recording screen allows users to view live EMG activity, monitor channel live readings, track recruitment patterns, and control the recording while a session is in progress. To simplify the graph view, users can turn each EMG visual on or off by selecting the corresponding channel indicator, which is especially helpful when multiple channels are active.

EMG CHART

Displays live muscle activity for the active channels during the session.

CHANNEL INDICATORS

Show each assigned channel, its color, selected muscle placement, and current reading.

RECRUITMENT PATTERNS PANEL

Displays a body map visualization for reviewing muscle recruitment patterns during the session.



START RECORDING BUTTON

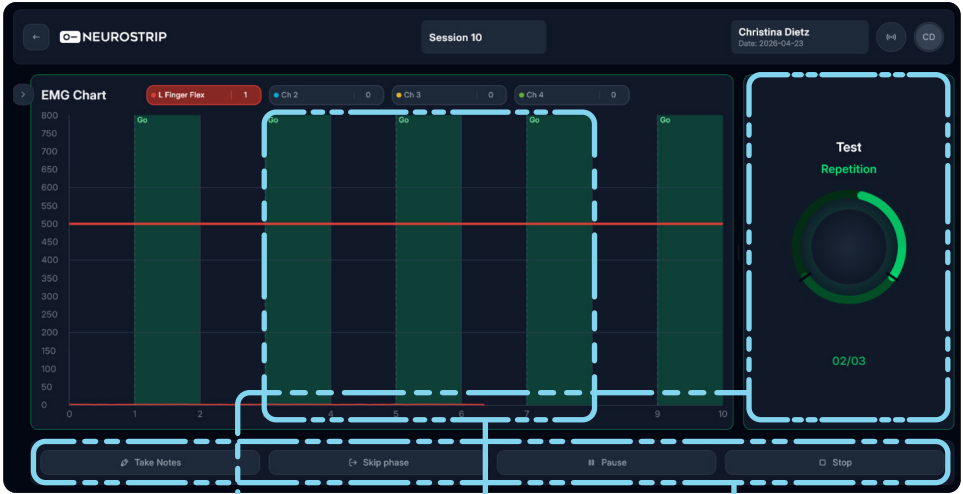
Begins recording data for the selected session protocol.

7.1 SESSION GRAPH CONTROLS



WIDGET CONTROLS

Allows users to choose which graph elements are visible during the session, including live readings, accelerometer data, raw X/Y/Z data, the EMG chart, and body heatmap; the Audio toggle enables a beep when the target line is reached.



ACTIVE PROTOCOL DISPLAY

Shows the current activity or phase, such as Test and Repetition, during the recording.

REPETITION COUNTER

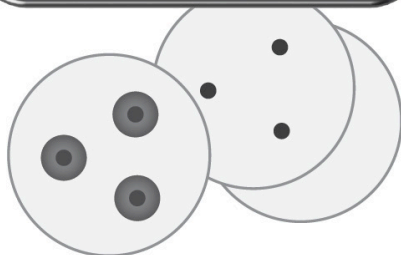
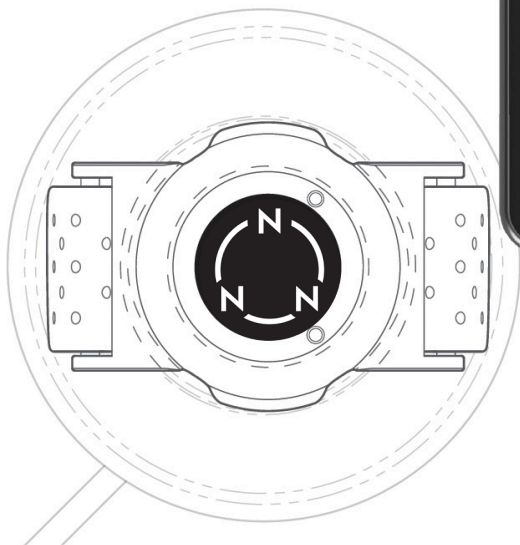
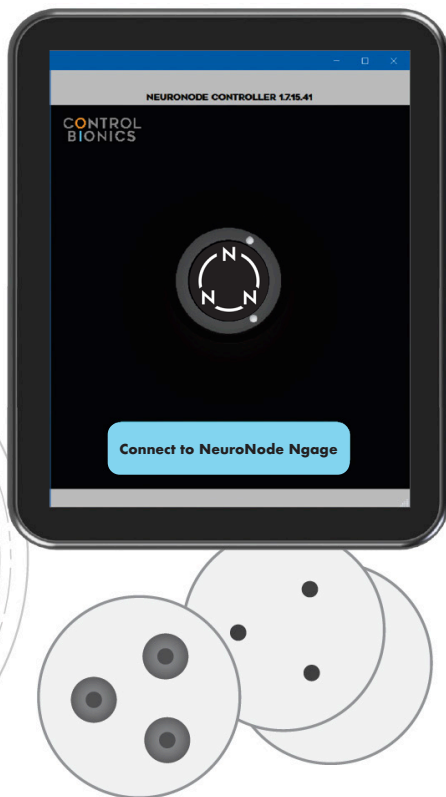
Tracks progress through the current activity, such as 02/03 repetitions completed.

GO INTERVALS

Green shaded areas on the chart show when the user should perform the activity.

SESSION CONTROLS

Allow users to take notes, skip a phase, pause the session, or stop the recording.



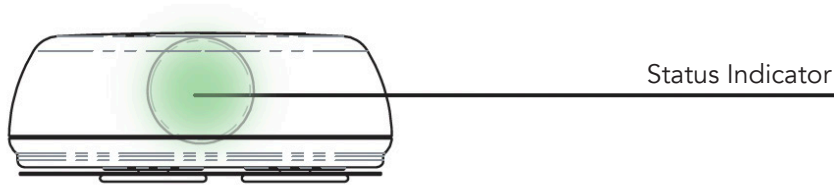
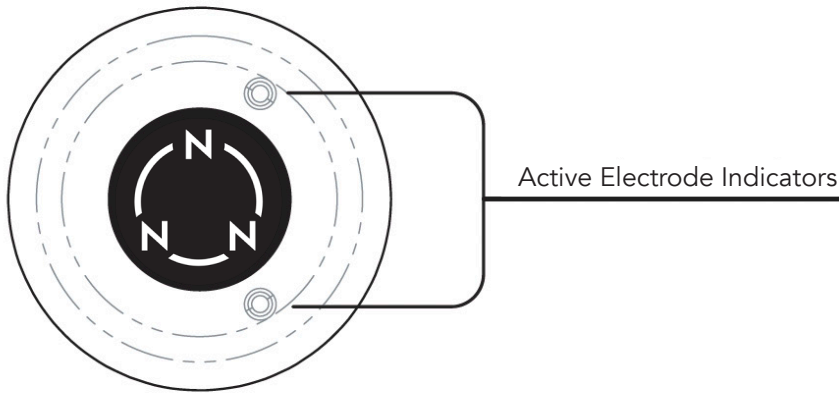
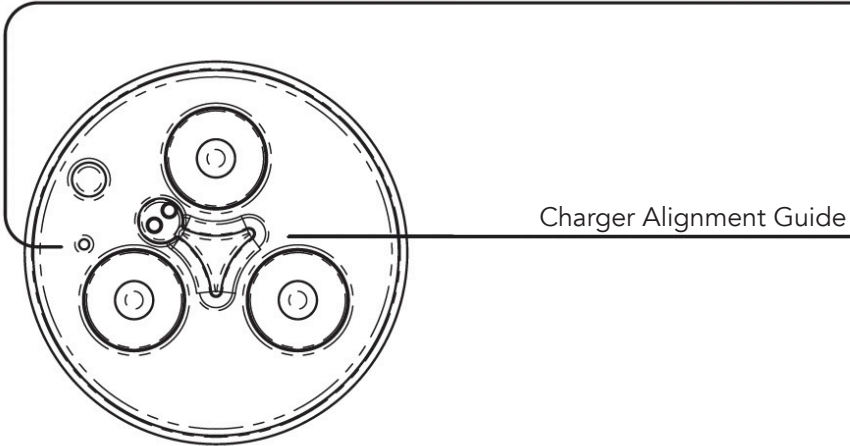
8.0 WELCOME TO NEURONODE NGAGE

NeuroNode Ngage offers insight into muscle activation and intent through bio-electrical signal data. As a wearable, wireless sEMG device, Ngage uses adhesive electrodes placed on the skin to capture accurate muscle fiber activity and support meaningful muscle activation tracking and analysis. As an alternative to NeuroStrip, Ngage gives users another flexible setup option for capturing muscle activation data in rehabilitation, sport science, strength and conditioning, wearables, and medical technology applications.

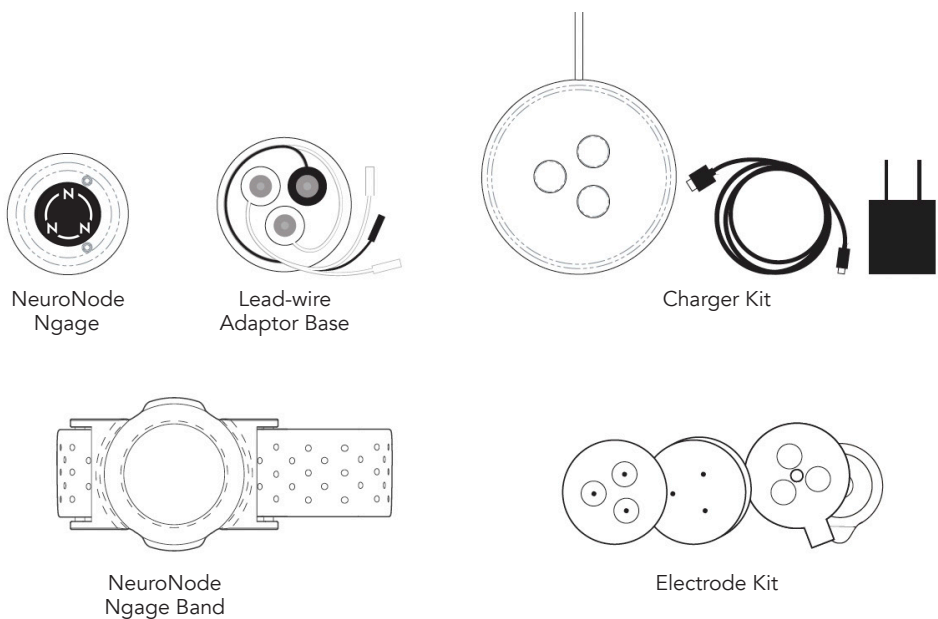
Muscle activation data is collected, displayed, and summarized through clear statistics, graphs, and performance insights. This helps clinicians, trainers, and strength and conditioning coaches review activation patterns, guide sessions, track progress, and identify areas for improvement.

8.1 OVERVIEW OF NEURONODE NGAGE

NeuroNode Ngage Reset Button



8.2 OVERVIEW OF NEURONODE NGAGE ACCESSORIES



ITEM	FUNCTION
NEURONODE NGAGE	The NeuroNode Ngage is a wearable, wireless, EMG + 3D Spatial device.
LEAD-WIRE ADAPTER BASE	The Lead-wires connect to the Lead-wire Adapter Base of the NeuroNode Ngage. The three Snap-leads on the other end of the Lead-wires attach to the electrodes on the user's skin.
CHARGER KIT	The NeuroNode Ngage Charging Base and included cords allow for hassle-free charging for up to 24 hours of battery life.
NEURONODE NGAGE BAND	The NeuroNode Ngage Band is an adjustable, adhesive-free solution for placement of the NeuroNode Ngage on the user's skin.
ELECTRODE KIT	A starter electrode kit is included with the NeuroNode Ngage. This kit includes both adhesive and non-adhesive solutions as required.

9.0 TROUBLESHOOTING

Below are issues that may arise when using NeuroStrips and the NeuroStrip Application.

CONNECTIVITY ISSUES:

Issue: Devices do not appear when the Connections screen loads.

If devices are not on and in BLE broadcast mode (flashing blue light) prior to moving to the Connections screen, then the receiving BLE connection will not find them. To find them, simply click the **Discover** button at the top of the Connections screen.

Issue: Devices will not connect to the application.

Occasionally hitting the **Connect** button once or twice is required to establish a connection with a NeuroStrip device. Once connected devices will remain connected until the **Disconnect** button is hit.

SEMG GRAPH ISSUES:

Issue: Inaccurate / Erratic readings on the sEMG graph

- Ensure good skin preparation and adherence of the NeuroStrip patch to the body. An overdressing should be applied to ensure adequate pressure on the tail section. The overdressing should be only applied to the tail section or the entirety of the NeuroStrip. Avoid placing an overdressing on the tail and flexible mid-section at the same time. This could cause damage to the mid-section
- Check alignment of the NeuroStrip electrodes to the NeuroStrip patch electrodes. Poor alignment can lead to inaccurate readings. Using the Patch Alignment Tool when placing the NeuroStrip on the patch should eliminate most alignment issues.
- Check sEMG accuracy by placing a connected device into the NeuroStrip charger. When inside the cradle, the NeuroStrip should read near 0 μ V on the graph. This is an indication that the device is working properly and that there is a likely issue with the physical medium.
- In some scenarios, a hard reset of the NeuroStrip is needed. To do this, use the pin tool found within the kit and insert into the pinhole on top of the head of the NeuroStrip. Push and hold the button down for three seconds to reset the device.
- As a final step for troubleshooting, restart the NeuroStrip Application.

This page is intentionally left blank.

