

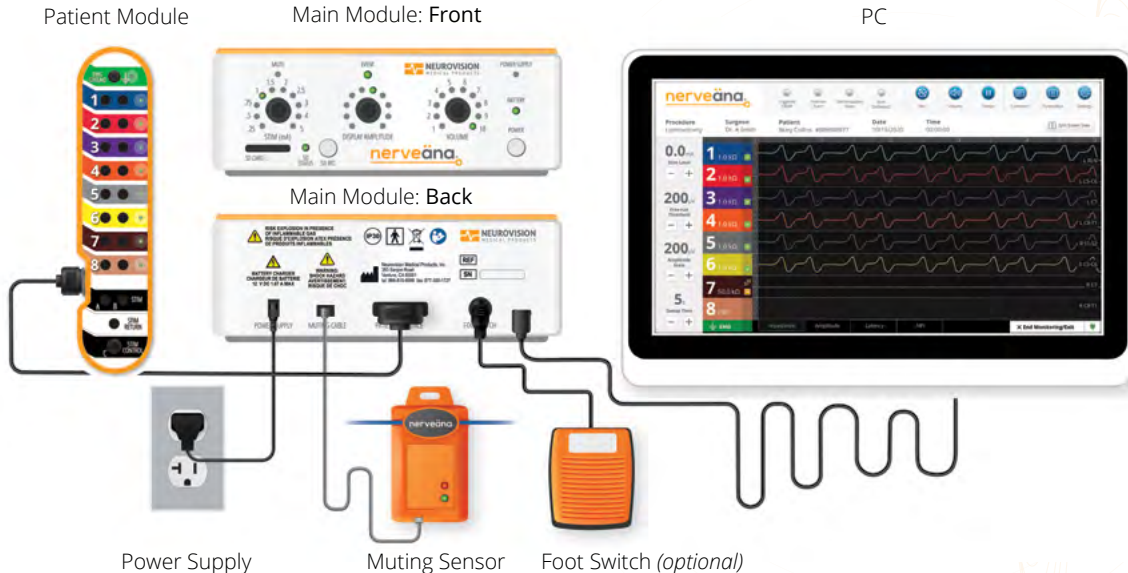


# nerveäna<sup>®</sup>

*System Quick Start Guide*

# NERVEÄNA PLUS SYSTEM SETUP

Connect all components of the Nerveäna Plus (NV+) system as shown. To turn on the system, press the power button on the NV+ main module and the NV+ PC.

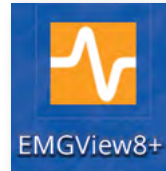


The NV+ Quick Start Guide is for users familiar with the Nerveäna Plus system and offers an overview of basic setup and system operation. For further assistance, refer to the NV+ manual for complete system setup instructions and operation details.

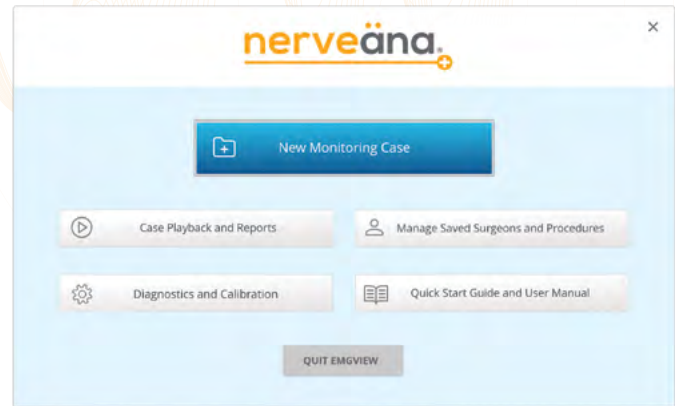
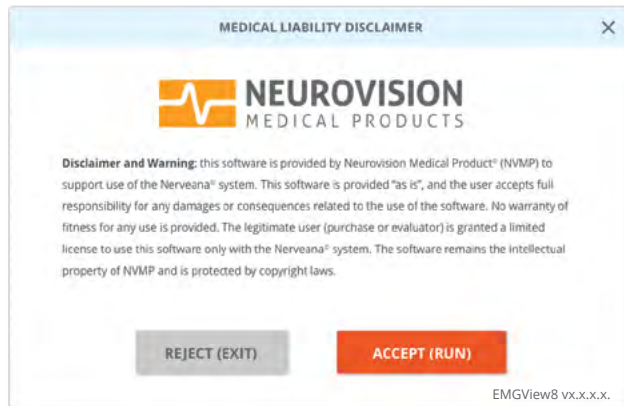
## GETTING STARTED WITH NV+ AND EMGVIEW8

EMGView8, the nerve monitoring software and interactive dashboard (pre-installed), provides seamless control over all the features of the NV+ system.

1. Launch **EMGView8** by selecting the its desktop icon.



2. **MEDICAL LIABILITY DISCLAIMER**, carefully review and to proceed click, **“ACCEPT (RUN)”**.
3. Select **“New Monitoring Case”** from the main menu.



## PROCEDURE AND CASE INFORMATION

EMGView8 comes with preset **PROCEDURES** programmed with monitoring configurations\* and electrode placement guidance.

**Surgeon:** Select the surgeon's name from the list.

Choose **"Guest"** if a profile has yet to be created.

**Procedure Category:** Pick a specialty to view preset procedures.

Choose **"Default"** to bypass presets.

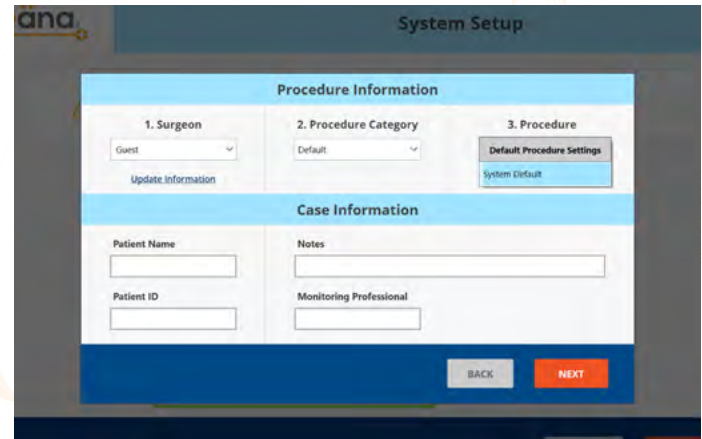
**Procedure:** Select the specific procedure.

Choose **"System Default"** to proceed to the custom monitoring settings.

**Case Information:** Complete fields and select **"NEXT"**.

Note: If a preset procedure wasn't chosen, refer to **page 5** for **Custom Procedure** details.

*\*All monitoring configurations can be adjusted at any time during the procedure.*



The screenshot displays the 'System Setup' interface for EMGView8. It is divided into two main sections: 'Procedure Information' and 'Case Information'.  
**Procedure Information:**  
1. Surgeon: A dropdown menu with 'Guest' selected and an 'Update Information' button below it.  
2. Procedure Category: A dropdown menu with 'Default' selected.  
3. Procedure: A 'Default Procedure Settings' button with a 'System Default' button below it.  
**Case Information:**  
Patient Name: A text input field.  
Patient ID: A text input field.  
Notes: A larger text input field.  
Monitoring Professional: A text input field.  
At the bottom right, there are 'BACK' and 'NEXT' buttons.

## PRESET PROCEDURE: APPLY AND CONNECT A NV+ SURGICAL KIT

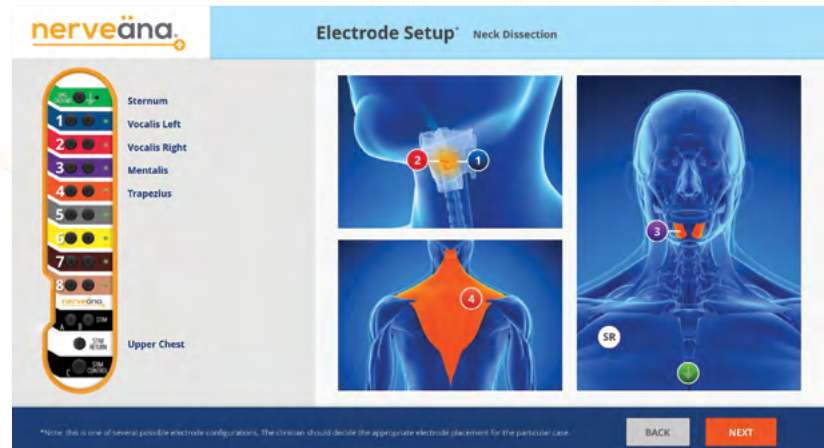
EMGView8 will display an **Electrode Setup** guide for the selected procedure. Refer to the diagram for proper electrode placement.

Apply the electrodes according to the package insert (IFU).

Place and secure/tape all the electrodes to the patient.

Connect the color-coded lead wires to the **PATIENT MODULE**.

Select **"NEXT"**.



Go to page 6: NV+ AND EMGVIEW8 SYSTEM CHECK.

## CUSTOM PROCEDURE: APPLY AND CONNECT A NV+ SURGICAL KIT

EMGView8 will display the general **Electrodes Setup** page for custom procedures, which can be tailored to the preferred configuration.

Apply the electrodes according to the package insert (IFU).

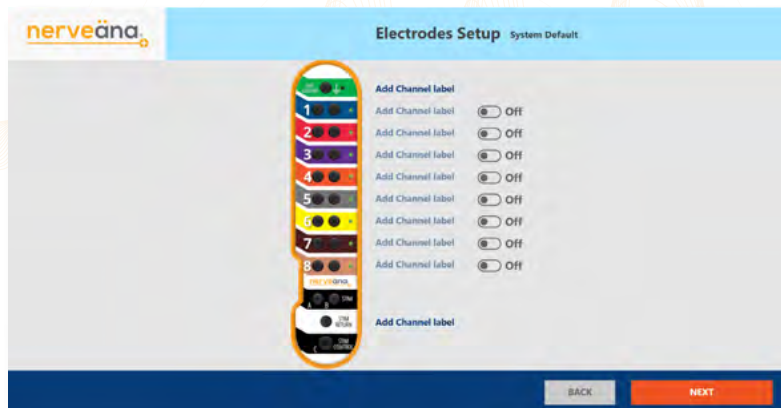
Place and secure/tape all the electrodes to the patient.

Connect the color-coded lead wires to the **PATIENT MODULE**.

To name each channel in use, select **“ADD CHANNEL LABEL”** (*optional*).

To activate the channel(s) for monitoring tap the toggle switch to the **“ON”** position.

Select **“NEXT”**.

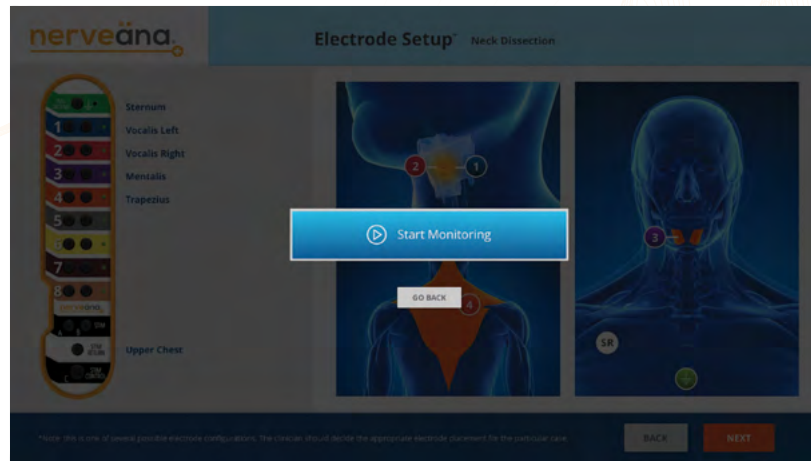


## NV+ AND EMGVIEW8 SYSTEM CHECK

EMGView8 will automatically check the electrode connections and impedances.

If an issue is detected during this process, a warning message will specify the issue and what action should be taken.\*

Once the electrode setup is complete, select **“START MONITORING”**.



*\*For more information on messages related to the Electrode Setup, see the NV+ User Manual.*

# EMGVIEW8: MONITORING SCREEN

All active channels deliver real-time EMG activity on-screen with accompanying audio tones. During the case, basic controls are available on-screen for adjustments.





## EMGVIEW8: END MONITORING

To end a case, select “End Monitoring/Exit” tab from the bottom right corner of the screen.

END MONITORING: *both are optional*

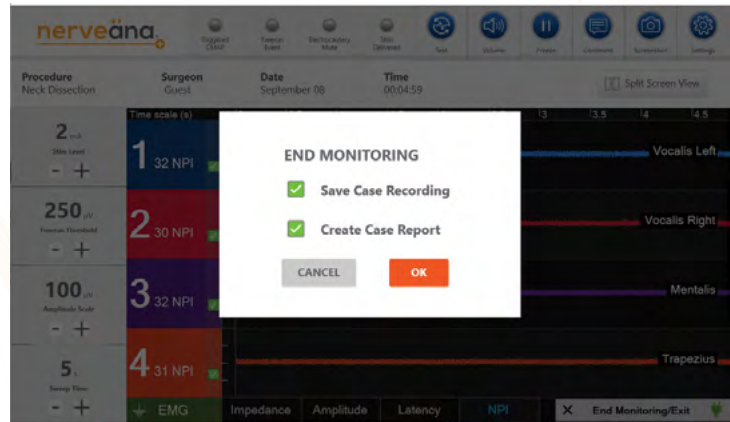
“Save Case Recording”

“Create Case Report”

Select:

“OK” to end case

“CANCEL” to continue monitoring



Detailed information, contraindications, warnings, and precautions can be found in the NV+ User Manual and the NV+ Surgical Kit IFU. For additional product support or assistance:

call 866-815-6999 or email [customer\\_service@neurovisionmedical.com](mailto:customer_service@neurovisionmedical.com)

# ELECTRODE SETUP GUIDE



nerveäna<sup>®</sup>+

ELECTRODE  
SETUP GUIDE

## ELECTRODE SETUP INTRO

The electrode setup guides are intended to support the positioning of electrodes based on the surgical procedure.

Not all possible electrode placements or configurations are shown.

A licensed medical practitioner should perform the placement of electrodes.

The final placement should always depend upon the surgeon's medical judgment as to the best mode of treatment for each surgical procedure.

Nerveäna Plus system and surgery kits use a standard color code to maintain setup consistency and help reduce errors.

For optimal performance, use of a Nerveäna Plus Surgical Kits is recommended.

EMGView8 nerve monitoring software comes pre-installed and integrates with the NV+ system.

EMGView8 allows touchscreen control of all NV+ features and provides an interactive dashboard enabling surgeons to analyze events visually.

Please see the package insert for a complete list of indications, warnings, precautions, and other medical information.

For product support or additional assistance, please get in touch with us directly:

**call 866-815-6999 or email [customer\\_service@neurovisionmedical.com](mailto:customer_service@neurovisionmedical.com)**

## ELECTRODE SETUP GUIDELINES

1. Place electrodes before draping the patient and establishing a sterile field.

Note: Use “Sterile Technique” when depositing the stimulator lead wire and probe on the sterile scrub table. The DIN connector of the stimulator should be passed off the sterile field and connected to a STIM port on the patient module.

2. Clean the placement areas with alcohol wipes. Use an EEG lead prep pad for adhesive electrodes.
3. Place the paired anode (+) and cathode (-) electrodes according to the packaged IFU or NV+ Electrode Placement Guide.
4. Insert subdermal electrodes accurately and safely:
  - a. Insert needle electrodes in parallel where possible.
  - b. Keep 5 mm to 10 mm of space between all electrodes.
  - c. Avoid electrodes making subcutaneous contact.
5. For RLN monitoring with an EMG ET tube (Cobra 3P or Dragonfly), see packaged IFU guidelines regarding intubation, placement and connection.
6. Place the ground electrode (green) and the STIM return (white) to complete the electrode setup according to the packaged IFU or NV+ Electrode Placement Guide.

## ELECTRODE SETUP GUIDELINES *cont.*

7. For optimal signals:
  - a. The STIM return needle should be placed close to or in the surgical field.  
The ground electrode should be placed more distal than the STIM return needle in relation to the surgical site and where stimulation is used.
8. Secure all electrodes with tape and draw the wires away from the sterile field towards the patient module.
9. Follow the color-coding to connect the electrode DIN plugs to the corresponding sockets on the patient module. Once all electrodes are connected, select NEXT on the setup screen.
10. NV+ and EMGView8 automatically checks that all active channels are connected and that the impedances are within the appropriate range for proper performance. If the system detects a problem, a warning message is displayed:
  - a. Subdermal needles and RLN electrodes should have an impedance below 2 kilohms ( $k\Omega$ ).
  - b. Hydrogel surface electrodes should have an impedance below 20 kilohms ( $k\Omega$ ).
11. *Note: Any electrode with an impedance outside of 0the acceptable range should be inspected for placement, corrected, or replaced.*

# ENDOCRINE / ENT

Neck Dissection	E1
Thyroidectomy, Parathyroidectomy	E2
Parotidectomy, Otologic Surgery (4 ch.)	E3
Parotidectomy (2 ch.)	E4
Submandibular Resection	E5
Hypoglossal Nerve Stimulator Implant	E6
Palate Surgery	E7

# NECK DISSECTION



Sternum

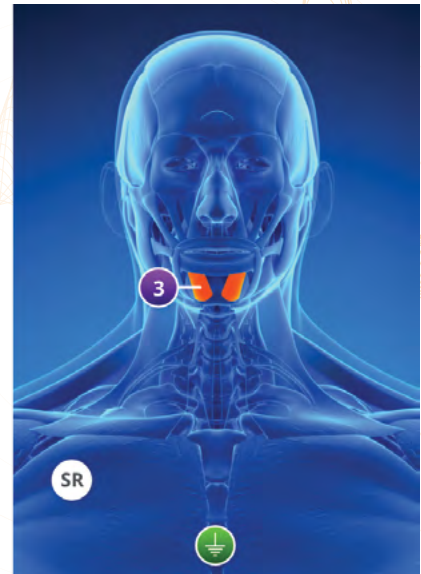
Vocalis Left

Vocalis Right

Mentalis

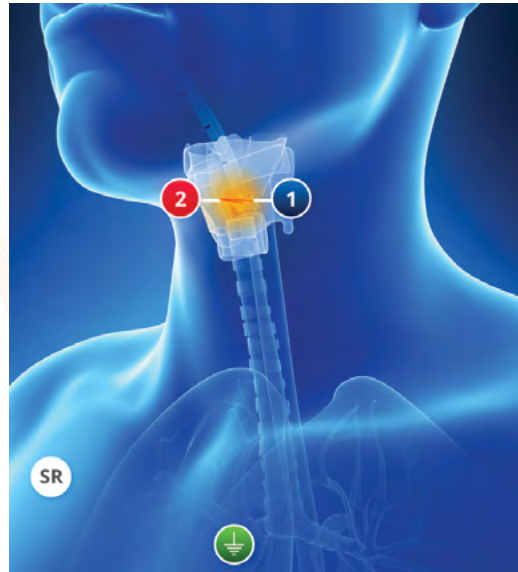
Trapezius

Upper Chest



\*Note: this is one of several possible electrode configurations. The clinician should decide the appropriate electrode placement for the particular case.

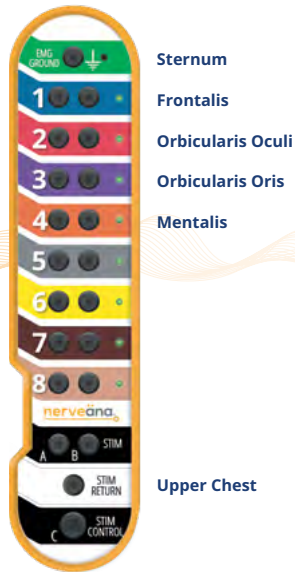
# THYROIDECTOMY, PARATHYROIDECTOMY



\*Note: this is one of several possible electrode configurations. The clinician should decide the appropriate electrode placement for the particular case.



# PAROTIDECTOMY (4 CH.), OTOLOGIC SURGERY



\*Note: this is one of several possible electrode configurations. The clinician should decide the appropriate electrode placement for the particular case.

# PAROTIDECTOMY (2 CH.)

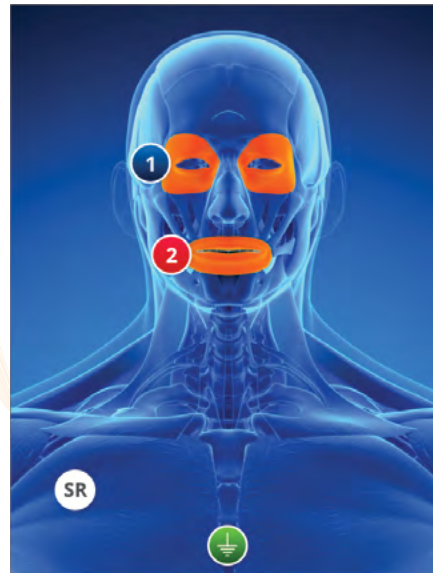


Sternum

1 Orbicularis Oculi

2 Orbicularis Oris

Upper Chest



\*Note: this is one of several possible electrode configurations. The clinician should decide the appropriate electrode placement for the particular case.

# SUBMANDIBULAR RESECTION



\*Note: this is one of several possible electrode configurations. The clinician should decide the appropriate electrode placement for the particular case.

# HYPOGLOSSAL NERVE STIMULATOR IMPLANT



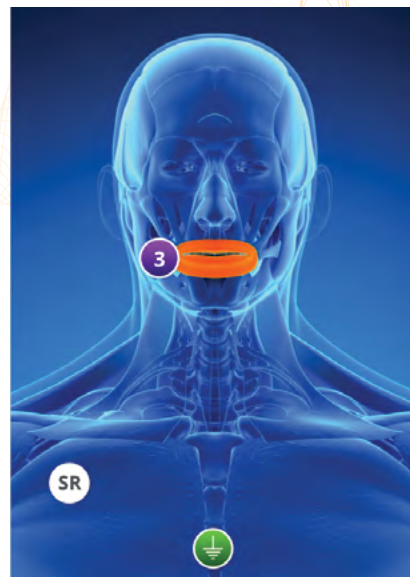
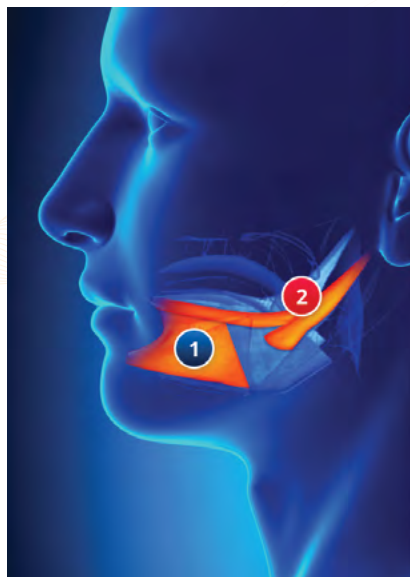
Sternum

1 Genioglossus

2 Styloglossus

3 Orbicularis Oris (Optional)

Upper Chest



\*Note: this is one of several possible electrode configurations. The clinician should decide the appropriate electrode placement for the particular case.

# PALATE SURGERY

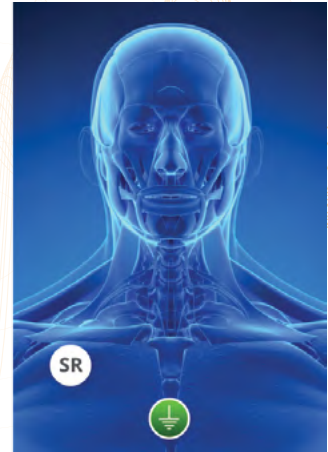
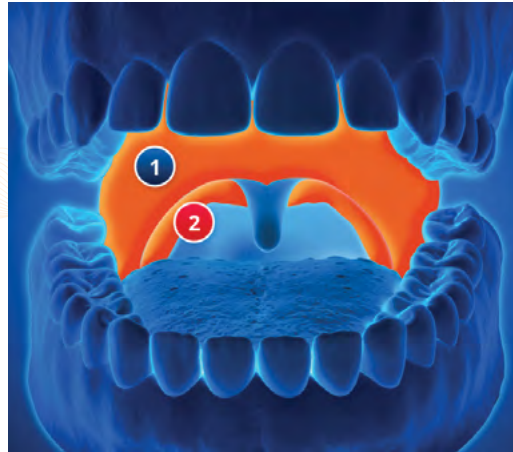


Sternum

Palatopharyngeus

Superior Pharyngeal Constrictor

Upper Chest



\*Note: this is one of several possible electrode configurations. The clinician should decide the appropriate electrode placement for the particular case.

# NEUROTOLOGY

Acoustic Neuroma (4 ch.)

N1

Acoustic Neuroma, Cochlear Implant, Mastoidectomy (2 ch.)

N2

## ACOUSTIC NEUROMA (4 CH.)



\*Note: this is one of several possible electrode configurations. The clinician should decide the appropriate electrode placement for the particular case.

# ACOUSTIC NEUROMA, COCHLEAR IMPLANT, MASTOIDECTOMY (2 CH.)

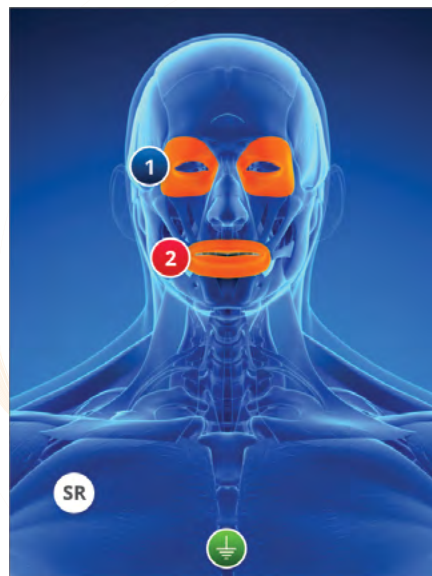


Sternum

1 Orbicularis Oculi

2 Orbicularis Oris

Upper Chest



\*Note: this is one of several possible electrode configurations. The clinician should decide the appropriate electrode placement for the particular case.



# PERIPHERAL

Upper Extremities

---

P1

Lower Extremities

---

P2

Knee (Peroneal)

---

P3

Ankle (Tibial)

---

P4

PERIPHERAL

# UPPER EXTREMITIES



Sternum

1 Trapezius

2 Deltoid

3 Biceps

4 Triceps

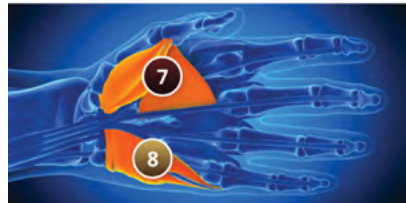
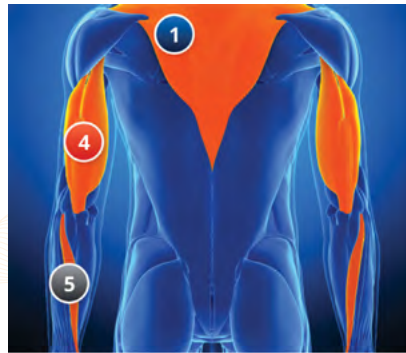
5 Extensor Carpi Ulnaris

6 Flexor Carpi Ulnaris

7 Thenar

8 Hypothenar

Upper Chest

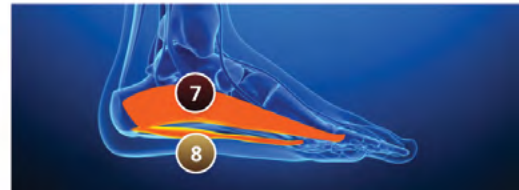


\*Note: this is one of several possible electrode configurations. The clinician should decide the appropriate electrode placement for the particular case.

# LOWER EXTREMITIES



- Anterior Hip
- 1 Vastus Lateralis
- 2 Vastus Medialis
- 3 Biceps Femoris
- 4 Gastrocnemius
- 5 Peroneus Longus
- 6 Tibialis Anterior
- 7 Abductor Hallucis
- 8 Abductor Digiti Minimi
- Posterior Hip



\*Note: this is one of several possible electrode configurations. The clinician should decide the appropriate electrode placement for the particular case.

# KNEE (PERONEAL)



Anterior Hip  
Vastus Lateralis  
Vastus Medialis

Posterior Hip



\*Note: this is one of several possible electrode configurations. The clinician should decide the appropriate electrode placement for the particular case.

# ANKLE (TIBIAL)



Anterior Hip

Abductor Hallucis

Abductor Digiti Minimi

Tibialis Anterior



\*Note: this is one of several possible electrode configurations. The clinician should decide the appropriate electrode placement for the particular case.

# SPINE

ACDF, RLN Only

---

S1

ACDF with RLN

---

S2

Cervical

---

S3

Lumbar

---

S4

# ACDF, RLN ONLY

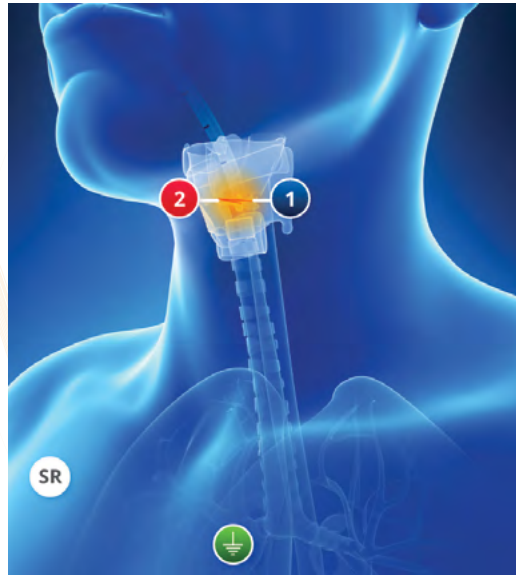


Sternum

Vocalis Left

Vocalis Right

Upper Chest (Optional)



\*Note: this is one of several possible electrode configurations. The clinician should decide the appropriate electrode placement for the particular case.

# ACDF WITH RLN



- Sternum
- 1 L Vocalis
- 2 R Vocalis
- 3 L Trapezius (C3/C4)
- 4 L Deltoid (C5/C6)
- 5 L Biceps – L Triceps (C7)
- 6 R Trapezius (C3/C4)
- 7 R Deltoid (C5/C6)
- 8 R Biceps – R Triceps (C7)
- Upper Chest (Optional)



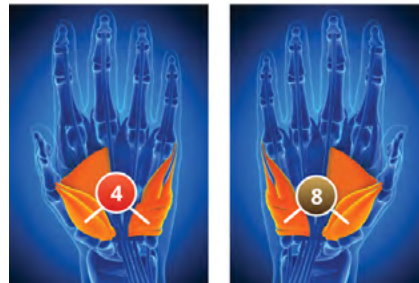
\*Note: this is one of several possible electrode configurations. The clinician should decide the appropriate electrode placement for the particular case.



# CERVICAL



- 1 Sternum
- 2 L Trapezius (C3/C4)
- 3 L Deltoid (C5/C6)
- 4 L Biceps – L Triceps (C7)
- 5 L Thenar – L Hypothenar (C8/T1)
- 6 R Trapezius (C3/C4)
- 7 R Deltoid (C5/C6)
- 8 R Biceps – R Triceps (C7)
- 9 R Thenar – R Hypothenar (C8/T1)
- Upper Chest (Optional)



\*Note: this is one of several possible electrode configurations. The clinician should decide the appropriate electrode placement for the particular case.

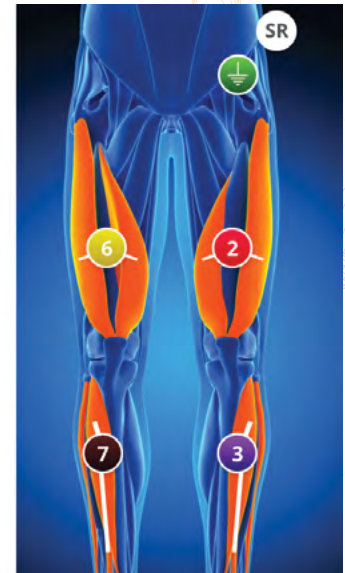
# LUMBAR



## Anterior Hip

- 1 L Lower Abdominal – L Iliopsoas (L2/L3/L1)
- 2 L Vastus Lateralis – L Vastus Medialis (L3/L4)
- 3 L Tibialis Anterior – L EHL (L5)
- 4 L Gastrocnemius, Medial – Lateral (S1)
- 5 R Lower Abdominal – R Iliopsoas (L2/L3/L1)
- 6 R Vastus Lateralis – R Vastus Medialis (L3/L4)
- 7 R Tibialis Anterior – R EHL (L5)
- 8 R Gastrocnemius, Medial – Lateral (S1)

## Posterior Hip



\*Note: this is one of several possible electrode configurations. The clinician should decide the appropriate electrode placement for the particular case.

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**Nerveäna® Plus System Quick Start Guide**

1028-0002-Rev. B

