

User Manual Table of Contents

Table of Contents	1
Introduction - The Dolphin Neurostim™	2
Product Contents	3
User Support	3
Device Features and Controls	4
Instructions for Use	5
Testing and Replacing the Battery	6
Adjusting the Polarity and Sensitivity	7
Holding the Unit	8 - 9
Locating Treatment Points	10
Using the Extension Probe	11
Instructions for Care.....	12
Troubleshooting	12 - 13
Warranty	13
Service.....	13
Warnings and Precautions.....	14 - 15
Operating Instructions - Quick Start	16
Description of Electrical Performance	17 - 18
Technical Specifications	19
Index	20

Introduction — The Dolphin Neurostim™

Dolphin Neurostim™ (DNS) is a hand-held micro current point stimulation device, similarly to transcutaneous electrical nerve stimulators (TENS), specifically designed for the temporary relief of muscular pain.

The DNS is engineered to detect and stimulate therapeutically active points with great scientific precision. This unique approach for the relief of muscular pain has been developed with input from healthcare professionals and has been thoroughly tested for over 30 years.

The end result is a simple, natural, and effective approach for the relief of muscular pain when and where you need it. It is our belief the DNS will greatly assist many suffering patients, dramatically improving their quality of life.



Caution

It is strongly advised all DNS users read this entire user manual before operating this device. If you have any questions, please call our toll-free number: 1 (800) 567-7246.

Warning

The DNS should never be directly applied to the eyes, ears (canals), or genitals. Metal tip may cause tissue damage resulting in permanent impairment in these areas.

Indications for Use

The Dolphin Neurostim™ is designed for symptomatic relief of chronic intractable pain.

Product Contents

The shipping box should contain the following device compotents:

- 1. **Dolphin Neurostim™ Treatment Device**
- 2. **Black Carrying Case**
- 3. **Extension Probe**
- 4. **User Manual**
- 5. **Warranty Card**

Please inspect contents to ensure that there is no damage to the DNS treatment device or wrist strap before use.

User Support

For additional support, as well as additional resources (including books, videos, and posters) please call or email Acumed Medical Ltd. at our toll-free number: 1 (800) 567-7246, or: info@dolphinneurostim.com. You may also visit our website at www.DolphinNeurostim.com for more information.

Please use the following forms to document your important medical phone numbers for your reference when you use this device.

Home Medical Equipment Supplier: _____

Home Healthcare Agency: _____

Doctor: _____

Device Features and Controls

1. **Probe (tip)**
2. **Simulation Button:** Press to activate stimulation.
3. **On/Off Switch and Intensity Control:**
4. **Battery Test Button:** With unit on, pressing this button indicates battery strength. If light does not illuminate brightly, replace battery.
5. **Red Indicator Light:** This light is activated when the Dolphin Neurostim™ unit is switched on. Light flickers off when point has been located.
6. **Ground Plate:** Thumb or finger must be in contact with the plate when locating or stimulating points.
7. **Sensitivity Adjustment:** Increases point location.
8. **Polarity Switch:** Tonify (+), Disperse (-).
9. **Battery Compartment:** The Dolphin Neurostim™ is optimally powered by Duracell 9V.

FRONT

1. Metal Tip

Point Locator/
Stimulator

2. Treatment Button

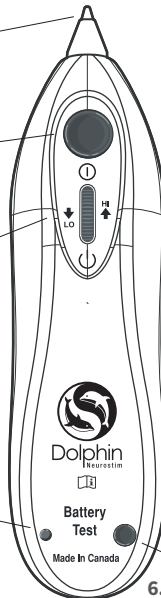
After locating point, press
and hold for 20 - 30 seconds/
beeps

3. On/Off Intensity Dial

Roll forward turn on, back
turn off; continue to roll
forward increases strength

5. Battery Test Light

Turns green (on) if battery
strength sufficient



BACK

11. Polarity Switch

10. Sensitivity Adjustment

Turn to adjust skin sensitivity

12. Battery Compartment

9. Ground Plate

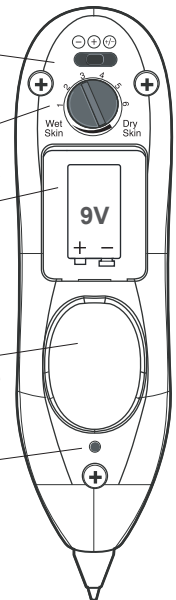
Thumb is firmly held on plate
to locate/stimulate points

8. Point Indicator Light

Is green when on, turns off
when point is located

6. Battery Test Button

With unit on, press to
test battery strength



Instructions for Use

Read All Instructions:

Read the entire user manual, front to back, before attempting to use the DNS.

Turning on Unit

How to Turn on Unit:

The on/off intensity wheel is located at top/front of unit. The wheel has two functions:

- a) First, rolling wheel forward (with finger tip) will turn unit on. The wheel will click, the DNS will emit an audible tone, and indicator light will turn on, bright green.
- b) Secondly, it increases or decreases current strength during application (rolling wheel forward increases strength, rolling backward decreases strength).

KEY TIP: Most patients start treating on lowest level, and then gradually increase current strength over treatment. *There is no difference in pain relief between low and high levels, this feature is only for patient comfort.*

Testing and Replacing the Battery



To Test Battery Strength:

With the unit on, press the battery test button (see diagram on page 3), located at bottom of the front of the unit - this will indicate the battery strength and determine if it needs replacement. When the button is pressed (with unit on) and light does not glow, it is time to change the battery. Test the battery light every few weeks.

To Replace the Battery:

The battery door can be removed by twisting a coin or similar object in the slot provided. Check and replace the battery first if you experience any problems in the operation of the DNS. Use only Alkaline or Heavy Duty batteries.

Note: Rechargeable batteries should **not** be used. Remove the battery if not using the device for some time. Battery must be disposed of in line with the local Environmental Protection Agency for requirements.



Adjusting the Polarity and Sensitivity



Select Polarity:

The Polarity Setting is found at the bottom/back of unit. Negative (-) is similar to applying an ice pack, positive (+) is like applying a heat pack. The default setting is negative.

It is recommended that when selecting polarity, you begin with negative; if pain worsens after 2 to 3 treatments, switch the polarity to positive and re-treat the area.



Adjust Sensitivity Dial:

The Sensitivity Dial assists in accurate point location. The DNS locates trigger points by measuring changes in skin resistance, which is influenced by moisture. Normal skin should have dial pointing upwards to 3 (11 o'clock).

KEY TIP: Once the sensitivity dial is “set” to a patient’s skin type, further adjustment is rarely necessary. Circumstances where adjustments may be required include, weather (ie. humidity), and individual’s hydration.

Holding the Unit



Properly Hold and Ground DNS:

The DNS produces electrical current and therefore, human skin must be touching ground plate, during point location and stimulation. The DNS is designed to be held like a pen with thumb firmly placed on ground plate and index/middle finger wrapped around and gripping top of unit.

How Much Pressure to Apply:

While properly holding unit, gently place tip on skin with medium pressure (pen to paper pressure), and slowly move/drag tip over general area of point, waiting for indicator light to “flicker off” and audible pitch to rise.



KEY TIP: During application, the wheel may be rolled forward or backwards, to increase or decrease strength of current. If stimulation feels too strong, roll wheel backwards, and if more stimulation is desired roll wheel forward. This feature is designed for comfort - adjusting the strength of the stimulation does not change the effectiveness.

Treating Someone Else:

The same hand positioning as above, but the free hand of the applicator, must touch skin of the patient to complete circuit. The more skin contact that is made, the stronger the stimulation will be.



Locating Treatment Points



Point Location:

Point indicator light is located about the ground plate on the top of the back of the unit. This light, which turns bright green when unit is turned on, will flicker “off” when a point has been successfully located.



Difficulty locating points means **dry skin**, turn sensitivity dial clockwise to between 4-6 to increase sensitivity. Too many points means **moist skin**, turn sensitivity dial counter-clockwise to between 1-3 to decrease sensitivity.



Treatment Button:

Activation/treatment button is located on top of unit in front of wheel (see diagram on page 3). Once point has been successfully located, press and hold treatment button for 20-30 seconds, approximately 20-30 “beeps.”

Increasing/decreasing strength of stimulation/current

The on/off intensity wheel permits for significant increasing/decreasing of the output current. On low, with the wheel slightly rolled forward from on position, the DNS is producing around 80 microamps. On high, with the wheel rolled all the way forward, the DNS is producing around 800 microamps.

KEY TIP: There is no harm to treating points longer than 30 seconds, especially if you feel it is providing additional benefits. For additional application tips, contact our customer service at 1 (800) 567-7246, or info@dolphinneurostim.com.

Using the Extension Probe



Use the extension probe to treat hard to reach areas of the body, such as the upper and lower back.

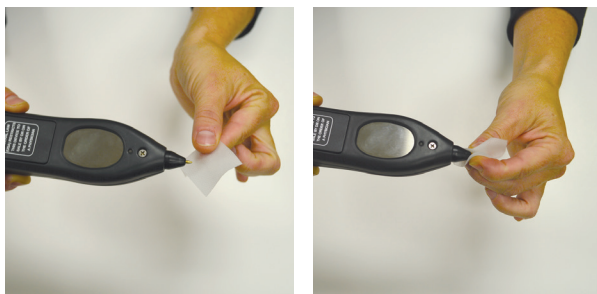
To use, firmly place the extension cap onto tip of unit. Hold unit, as shown, so that the indicator light is visible beside the thumb. With your other hand, slide plastic knob of probe down to expose extension tip. Use the tip of the probe as you would the tip of the unit and locate points with extension probe as described in the proceeding section.



KEY TIP: Turn DNS upside down while cleaning wheel with tooth brush to ensure excess alcohol does not drip inside and adversely affect circuit board. For further cleaning and maintenance instructions, call customer service.

Instructions for Care

Metal Tip: Metal tip requires regular cleaning. Although tip is hypo-allergenic and non-invasive, it is recommended alcohol swabs are applied to the tip prior to each usage. This is especially true of the DNS is being applied to different patients in a clinical setting.



Storage and Temperature

Storage

Caution: Do not store the DNS in a damp or moist environment. Dampness may result in temporary device malfunction. *Always store the DNS in a dry environment.*

General Tips

- Do not disassemble the device.
- Do not drop the device or handle it roughly.
- Do not immerse the device in water or any liquid.
- After each treatment, wipe the tip of the device with an alcohol swap.
- If using the device on more than one person, carefully decontaminate the treatment end, including the extension probe, with a moist alcohol swab.

Troubleshooting

No Pain Relief

If you are not receiving pain relief, or the relief is short lasting (under one day), then contact customer service at 1-800-567-PAIN or email info@dolphinneurostim.com. Please allow a minimum 24 hour response for emails.

Pain Worsens after DNS application

Call customer service immediately and request free consultation with one of our trained therapist: 1 (800) 567-7246.

Caution: If after 3 DNS applications, your condition is still aggravated, discontinue use and call customer service at 1 (800) 567-7246.

Warranty

Dolphin Neurostim™ comes with a 1-year warranty. If your device malfunctions due to defective materials and/or workmanship, it is fully guaranteed for one year from the date of purchase, providing:

- The enclosed warranty card is mailed to Acumed Medical Ltd. within 10 days of product purchase;
- The DNS is returned for servicing to Acumed Medical Ltd.;
- The DNS is not misused, altered, or serviced by any person or entity other than Acumed Medical Ltd.;
- The DNS is used according to these instructions and in the manner intended.

Service

If your DNS requires servicing please contact Acumed Medical Supplies Ltd. for a Return Authorization (RA) form and shipping instructions.

Acumed Medical Supplies Ltd.
3679 Lake Shore Boulevard West
Toronto, ON M8W 1P7

Include the following information with your unit: name, address for return, phone number, and email address. Acumed Medical Ltd. will contact you with an estimate of cost to complete any repairs, if not under warranty, and arrange for payment.

Warnings and Precautions

Contraindications

The Dolphin Neurostim™ should not be used by patients with Implanted Cardiac Pacemakers.

The Dolphin Neurostim™ should not be used in the area of the carotid sinus nerves or elsewhere in the region of the front of the neck or in the mouth.

The Dolphin Neurostim™ should not be used for an undiagnosed pain condition and should only be used on the advice of a medical practitioner.

The Dolphin Neurostim™ should not be used so that flow occurs transcerebrally (through the head).

The Dolphin Neurostim should not be used on pregnant women.

Warnings

The Dolphin Neurostim™ for use during childbirth or pregnancy should only be used after full evaluation of each case by a physician.

The Dolphin Neurostim™ equipment should be kept out of the reach of children.

The Dolphin Neurostim™ is a symptomatic treatment and as such, does not have a curative value.

The Dolphin Neurostim™ may also suppress other sensations that might otherwise serve as a protective mechanism on the outcome of a clinical process.

The Dolphin Neurostim™ is not effective for pain of central origin (headache).

The Dolphin Neurostim™ stimulation may cause electronic monitoring equipment to malfunction.

Precautions

The Dolphin Neurostim™ effectiveness is dependent on individual patient characteristics including such parameters as psychological state and drug use.

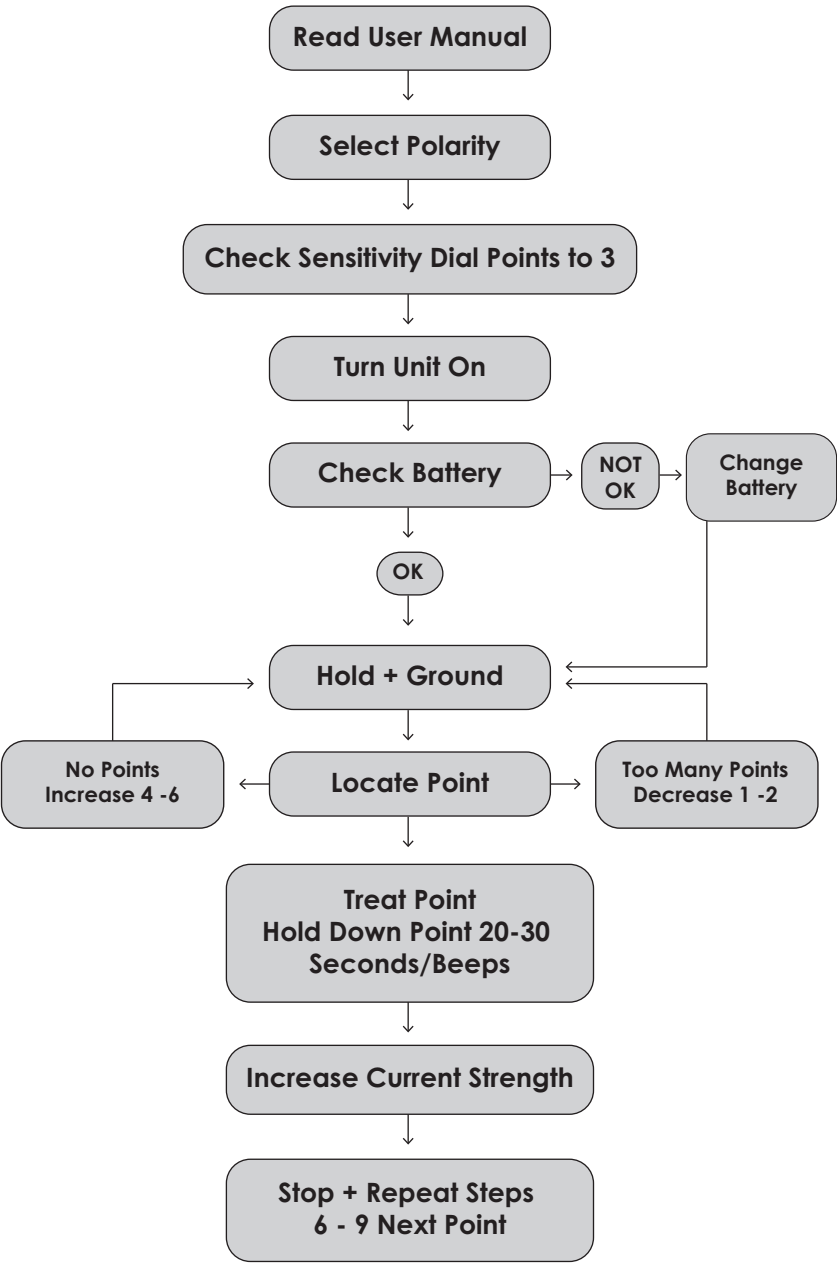
The Dolphin Neurostim™ should not be used to stimulate the same point on the + and – modes within a 12 hour period.

Adverse Reactions

The Dolphin Neurostim™ should not be continued if irritation occurs on or near the electrodes sites. Skin irritations should be clinically investigated.

Note: Do not discontinue any medical treatment you may be receiving without consulting your medical advisor. Continue medication intake as per your doctor's advice. If problems persist, despite the use of the Dolphin Neurostim, seek medical attention.

Operating Instructions - Quick Start



Description of Electrical Performance

The device is powered by a 9-Volt battery. The electrical output of the device consists of square waveform pulsed DC stimulation. The pulse parameters vary with skin resistance.

The Dolphin Neurostim™ is battery operated; there is no leakage current to the ground.

Search Mode

During the **search mode**, testing from 500K Ohms (skin resistance) produces the following output parameters:

Voltage: 3.8 mv	Pulse length: 0.0909 microseconds
Frequency: 5.518 KHz	Duty Cycle: 51%

Stimulation Mode - Monophasic Parameters

During the **stimulation mode**, the maximum **monophasic parameters** at resistance of 500 Ohms on the positive cycle are (also see graph):

Voltage: .896 V	Pulse length: 213 microseconds
Frequency: 2.35 KHz	Duty Cycle: 51%

Maximum Values

Maximum pulse width (duration) **in stimulation** mode is 213 milliseconds **for all polarity settings** (“+”, “-”) (see graph)

Output in the stimulation mode can be varied with the intensity control:

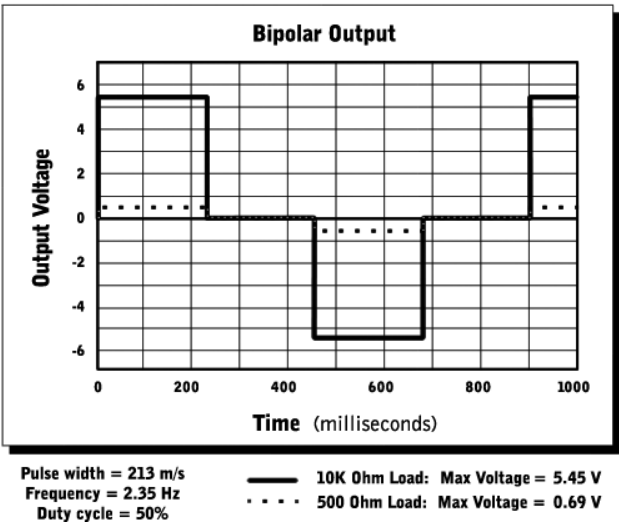
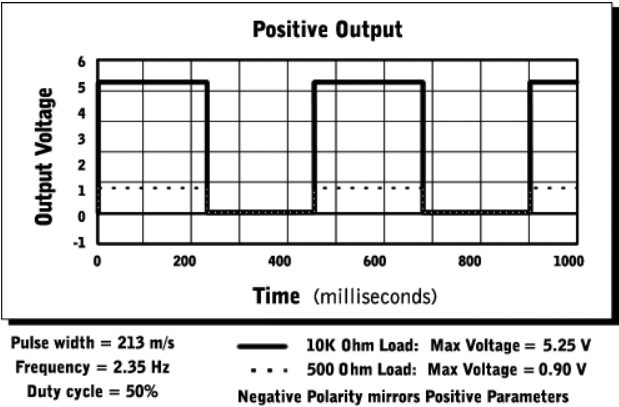
Maximum (amplitude) **intensity setting:**

500 Ohms resistance gives 85 microamps

10K Ohms resistance gives 600 microamps

Minimum (amplitude) **intensity setting:**

10K Ohms resistance gives 300 microamps



Technical Specifications

During Search	
Waveform, Shape	Biphasic, Square Wave
Maximum Output Voltage	1.38 mA @ 500 ohm load 10.9 mA @ 10K ohm load
Maximum Output Current	85 mA peak at 500 ohm load
Pulse Width	50% duty cycle
Frequency	2.8 Hz +/- 10%
Pulse Period	200 mS
Maximum Current Density	???
Maximum Power Density	???
Maximum Charge Per Pulse	???
Power	
Battery	9 volt

During Stimulation	
Waveform, Shape	Biphasic, Square Wave
Maximum Output Voltage	1.38 mA @ 500 ohm load 10.9 mA @ 10K ohm load
Maximum Output Current	85 mA peak at 500 ohm load
Pulse Width	50% duty cycle
Frequency	2.8 Hz +/- 10%
Pulse Period	200 mS
Maximum Current Density	???
Maximum Power Density	???
Maximum Charge Per Pulse	???
Power	
Battery	9 volt

Index

- Table of Contents.....1
- Introduction - The Dolphin Neurostim™2
 - Caution2
 - Warning2
 - Indications for Use2
- Product Contents3
- User Support.....3
- Device Features and Controls.....4
- Instructions for Use5
 - Turning on Unit.....5
- Testing and Replacing the Battery6
- Adjusting the Polarity and Sensitivity.....7
- Holding the Unit8 - 9
- Locating Treatment Points10
- Using the Extension Probe.....11
- Instructions for Care.....12
 - Storage and Temperature12
 - General Tips.....12
- Troubleshooting.....12 - 13
- Warranty13
- Service13
- Warnings and Precautions.....14
 - Contraindications.....14
 - Warnings14
 - Precautions.....15
 - Adverse Reactions15
- Operating Instructions - Quick Start16
- Description of Electrical Performance.....17
 - Search Mode17
 - Stimulation Mode.....17
 - Maximum Values18
- Technical Specifications19
- Index.....20