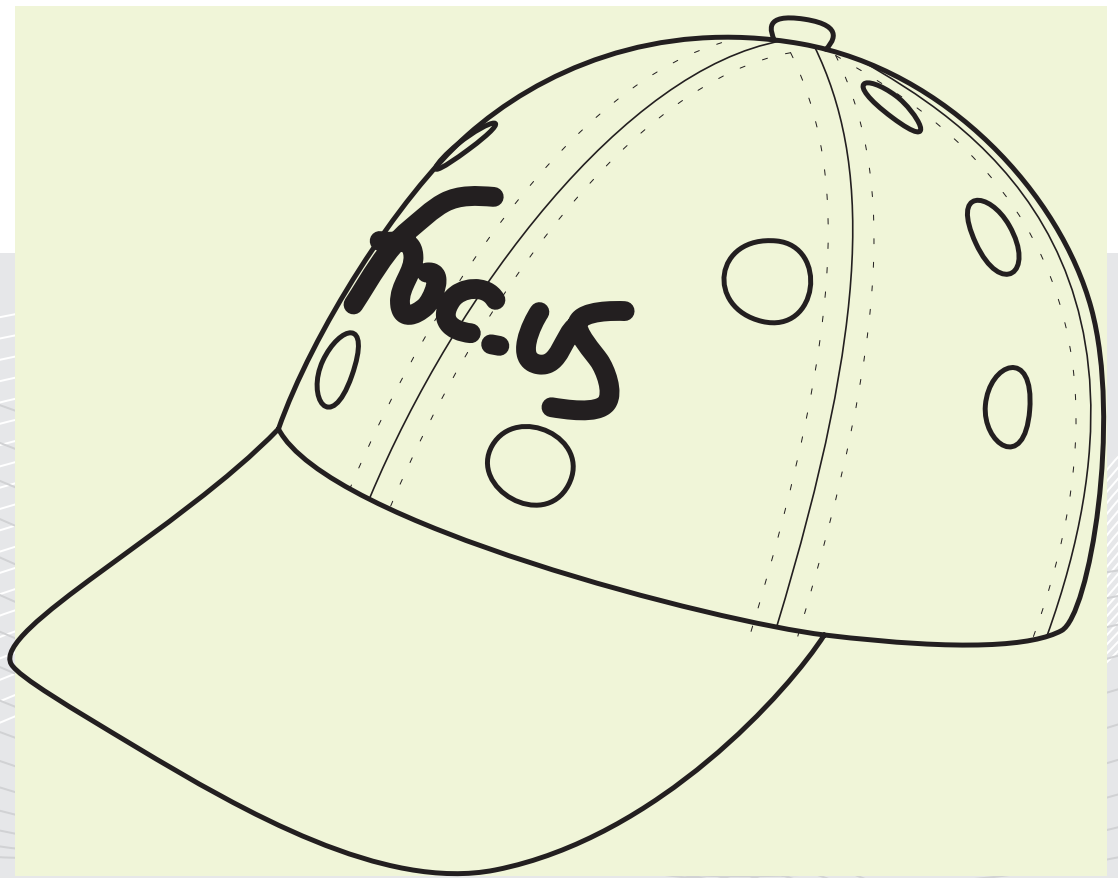




# GO FLOW SPORTS

## User Manual & Warranty



# INTRODUCTION

The latest research in sports science shows that it's not enough to train just your body. The brain is critical in all sporting prowess. Brain training enhances the control and co-ordination needed to improve sporting skills and extend sporting endurance. Gentle stimulation of the brain during training enhances the rate at which the brain adapts to the demands of any sporting pursuit. Go Flow Sports edition includes everything you need to incorporate brain stimulation into your weekly training regime.

Learn new skills faster  
Improve existing skills  
Train longer and harder than ever before

## Important!

You should not use the foc.us stimulator if you suffer from epilepsy, seizures, brain lesions, bipolar depression, or severe heart disease. Immediately stop using foc.us if you experience short short-term negative effects. Foc.us is not a toy and is not intended to be used by anyone under the age of 18 years old. If using external electrodes, it is not recommended to place electrodes in patterns that differ from the default foc.us configurations. Do not position electrodes in a manner where current may pass through the brainstem. Do not position electrodes over cuts, grazes, or damaged skin. Allow at least 48 hours between each use of foc.us. Always place wet sponges between the electrodes and your skin when using foc.us. Do not touch the metal electrodes or black silicone electrodes when using foc.us, as you may be burned.

## Again

foc.us Go Flow Sports is designed to be used by healthy adults who do not suffer from epilepsy, brain conditions, have a metallic implant such as a skull plate, or have other implants such as a cochlear implant or pace-maker. The sole purpose of foc.us Go Flow is to improve your brain.



## WARNING

If you suffer from epilepsy, brain lesions, bipolar depression or severe heart disease you should not use the foc.us stimulator. If you experience short term negative effects with foc.us you should immediately stop using it. This is not a toy and is not intended to be used by anyone under the age of 18 years old. Do not position the electrodes over cuts, grazes or damaged skin. Allow at least 48 hours between usage. Do not directly touch the electrodes as this can lead to burns. Always use electrodes with wet sponges.

# YOUR GO FLOW BRAIN STIMULATOR

Understand the different parts of your Go Flow tDCS brain stimulator.



## Go Flow

This is the Go Flow tDCS stimulator.



## Go Flow Cap

This is the Go Flow Sports cap with pre-cut holes based on 10/20 system.



## Go Flow Armband

This is the armband used to hold electrode on contralateral location.



## amx-y electrode

This is the amx-y conductive silicone sponge electrode cup.



## X/Y Cable

This is the tDCS electrode cables. X is anode, Y is cathode.



## 9v Battery

foc.us 9v 6LR61 Ultra alkaline non-rechargeable battery.

- Always store your Go Flow in the supplied box when not in use. Squeeze any excess liquid from the sponges when not in use, and place them in the electrodes. Ensure the lid of the supplied water bottle is tightly closed before returning to its place.
- The silicone electrodes can be removed for cleaning. Push to reinsert into the metal connectors. The expected service life is three years. Washing instructions for the cap and armband can be found inside the cap.

# CONTENTS

## 1.

### Getting Started

Introduction.....	2
Included with the Go Flow Sports.....	3
Quick start guide .....	5

## 2.

### Go Flow

Go Flow tDCS Stimulator .....	6
Step by step instructions .....	7
Electrode placements .....	8
Electrode setup details.....	9

## 3.

### Sports Montages

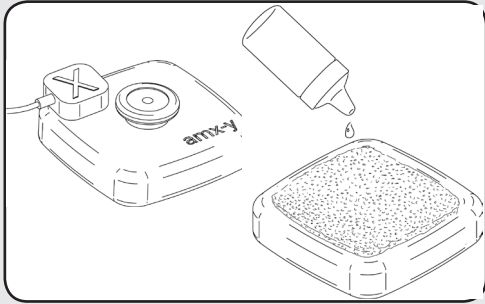
Training longer .....	10
Training harder .....	11
Skill acquisition & execution .....	12
Getting in the zone .....	13
What to expect .....	14

## 4.

### Addendum

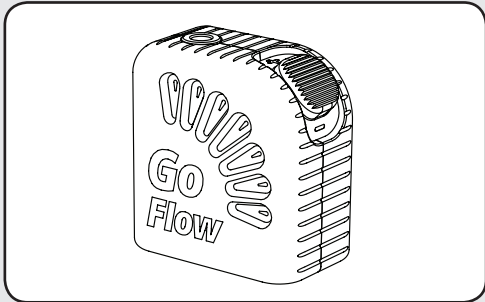
Specifications .....	14
Troubleshooting.....	14
Warranty & guarantee.....	15
Technical support contacts.....	16

# QUICK START GUIDE



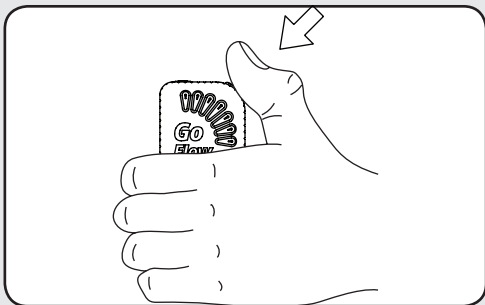
## 1. Prepare Electrodes

Position the electrodes & wet sponges in the cap and place cap on head. Connect the cable to the electrodes and the Go Flow.



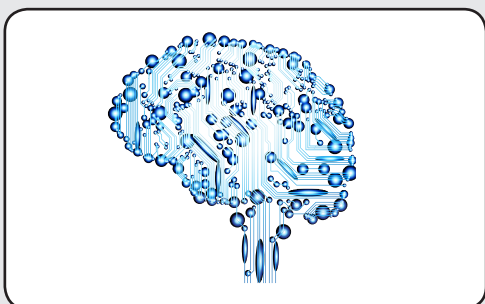
## 2. Set Current

Connect the 9v battery to the Go Flow and the lights will flicker. Orange lights indicate the current level. Use the blue rocker up and down to set from 0.5mA to 2mA. Press to set the current. *Tip: Start low!*



## 3. Set Duration

Green lights indicate the duration timer. Use the blue rocker up and down to set from 5 to 35 minutes. Press to set the time and start the session. *Tip: make your first session 10 mins or less.*



## 4. take charge

The current will start at 0mA and slowly increase. The Orange lights will indicate the actual current and the green will show approximate remaining time. You can increase or decrease the current using the blue rocker.



## 5. Go Flow

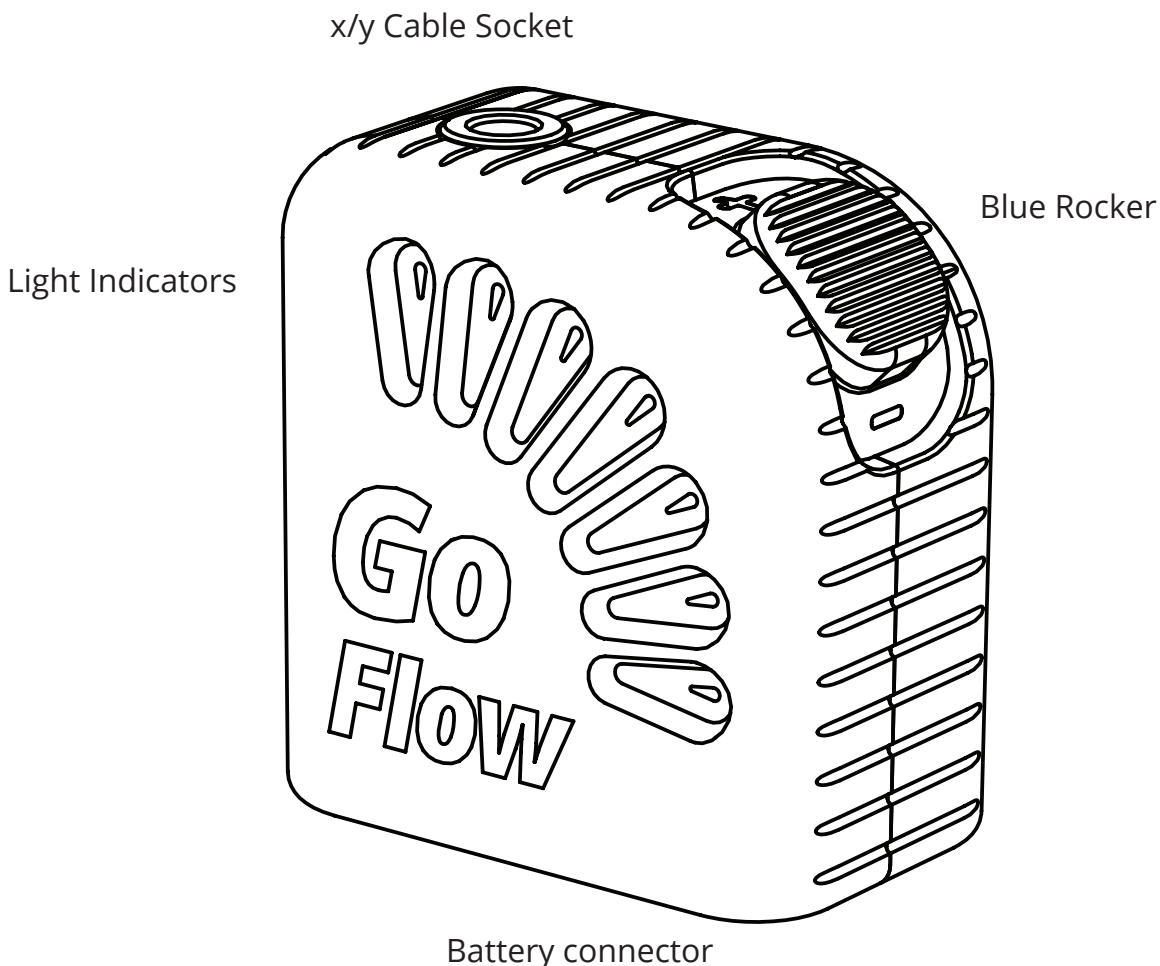
Your brain cells are now excited, your plasticity is increased. Go train or set a personal best.

# GO FLOW TDCS STIMULATOR

Your Foc.us Go Flow is an electrical neurostimulator which is designed to deliver a direct (meaning: constant) current across your cranium.

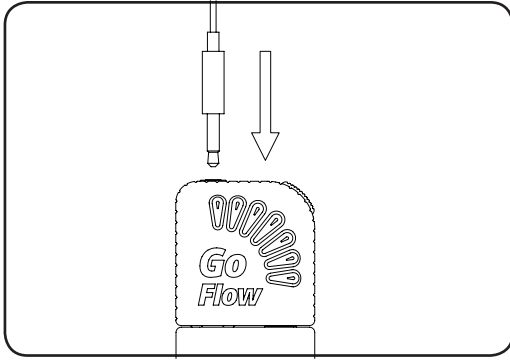
The theory of transcranial Direct Current Stimulation (tDCS) is that by delivering a constant current into your brain, the excitation levels of your brain cells are altered. The delivered current is small compared to the current that is already flowing in your brain so the current itself does not induce your brain cells to fire, but does prime some of your brain cells to fire more readily depending on the specific settings that are used. It is therefore important that the right settings are used to induce the right level of priming. It is recommended that you do not deviate from prescribed levels of current intensities, current durations and electrode placements. Given the right settings, the subtly induced changes in brain cell excitation levels can result in significant cognitive performance enhancements.

Possible side-effects include visual artifacts (such as white flashes), nausea, headaches, and fatigue. If you experience any of these side-effects, stop your foc.us session. If you see white flashes (known as phosphenes), adjust the position of the foc.us electrodes away from your eyes. You may feel tingling, hot, or cold sensations from using foc.us. If these sensations become uncomfortable or painful, stop your foc.us session. Skin redness may appear under electrodes after use, which will disappear after a short time. Repeated use of foc.us may lead to skin irritation. If you exceed the recommended session duration, you increase the risk of consolidating both the excitatory and inhibitory processes. Always proceed gradually and with caution.



# USAGE INSTRUCTIONS

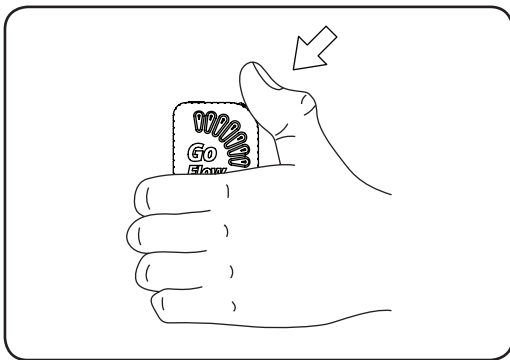
## Step by step Go Flow instructions



### 1. Connect cable & battery

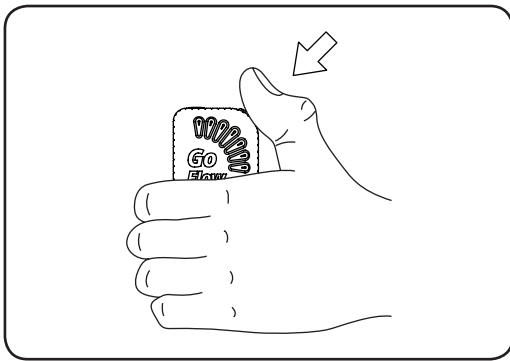
Go Flow will not work without a battery and connected cable. No battery means no lights. No cable will result in flashing Orange Green lights.

*Tip: Disconnect the battery when not in use*



### 2. Set Current - ORANGE lights

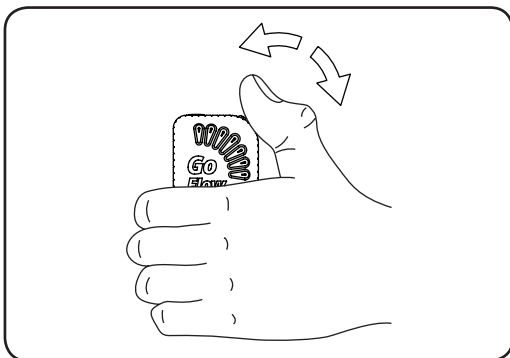
Orange lights indicate the current in mA. One light indicates 0.5mA and all seven lights 2mA. Use the blue rocker to increase or decrease the target current. Press the blue button to confirm the target current.



### 3. Set Duration - GREEN lights

Green lights indicate the stimulation duration. Each light is 5 minutes of stimulation. Set any value from 5 to 35 minutes using the blue rocker up or down. Press to confirm and start the session.

*Tip: You cannot change the duration once set*



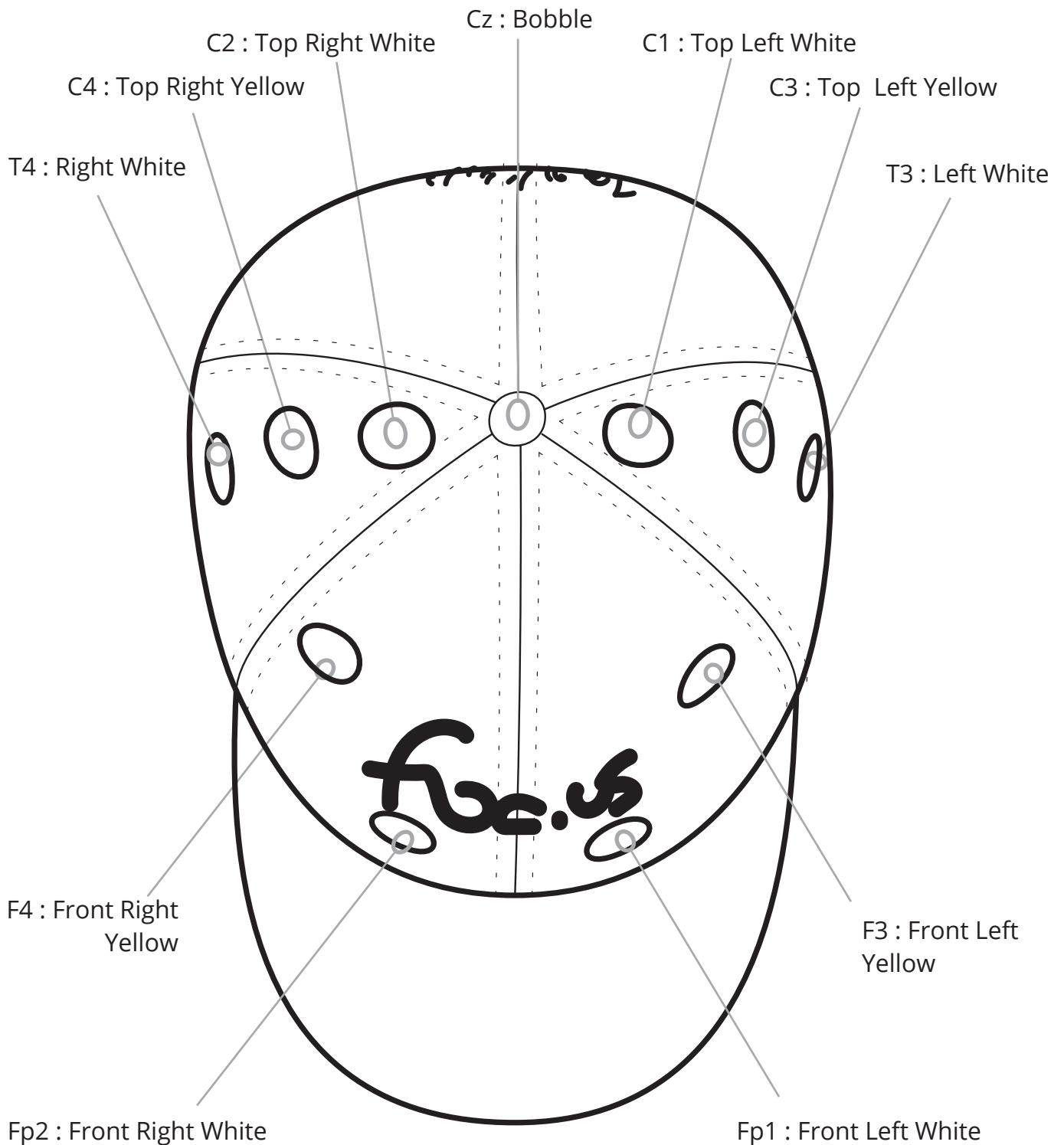
### 4. Monitor & Adjust Current

During the stimulation session the lights will alternate from Green to Orange. Orange shows you the exact actual current. Green shows the approximate remaining duration.

*Tip: Press the blue button to end the stimulation*

# ELECTRODE PLACEMENTS

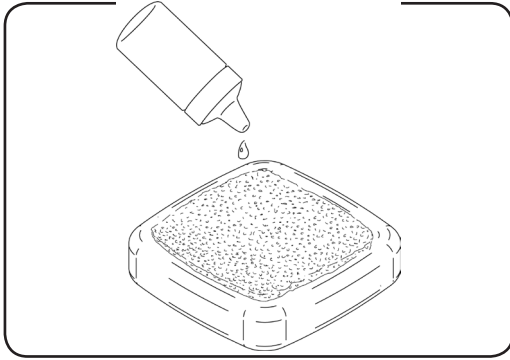
Place the cap on your head and position the bobble directly on the highest point of your head when you are looking straight ahead. This method quite accurately positions Cz. Once this is done, all the other electrode positions you need in the cap will be accurately lined up. If you want more details on how and why this works, visit the foc.us blog ( [www.foc.us/blog](http://www.foc.us/blog) )





# ELECTRODE SETUP DETAILS

## Step by step connection instructions



### 1. Wet sponges in amx-y

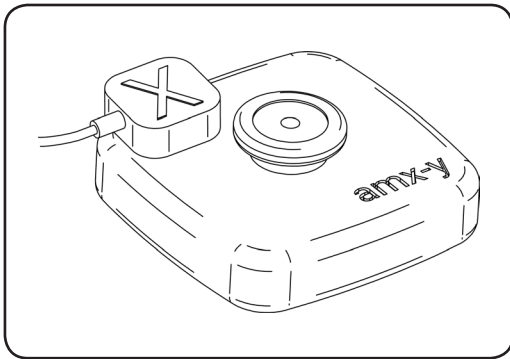
Sponges should be wet. Use the small water bottle to keep water handy. Be careful not to touch the black silicone as this can result in burns.

*Tip: Add a pinch of salt if you want a saline solution*



### 2. Amx-y electrodes in Cap

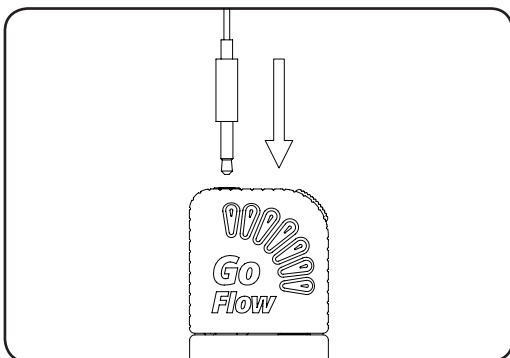
The amx-y electrode mushroom tips are designed to fit comfortably through the cap holes. Get them in place before putting the cap on your head. It doesn't matter which one you use as the polarity is determined by the cable.



### 3. Connect x/y cable to amx-y

X is the anode and Y is the cathode so it is important to get this the right way around. The X and Y magnetically connect to the metal backs on the amx-y electrodes.

*Tip: You can also route the wires inside the cap for style*



### 4. Connect x/y cable to Go Flow

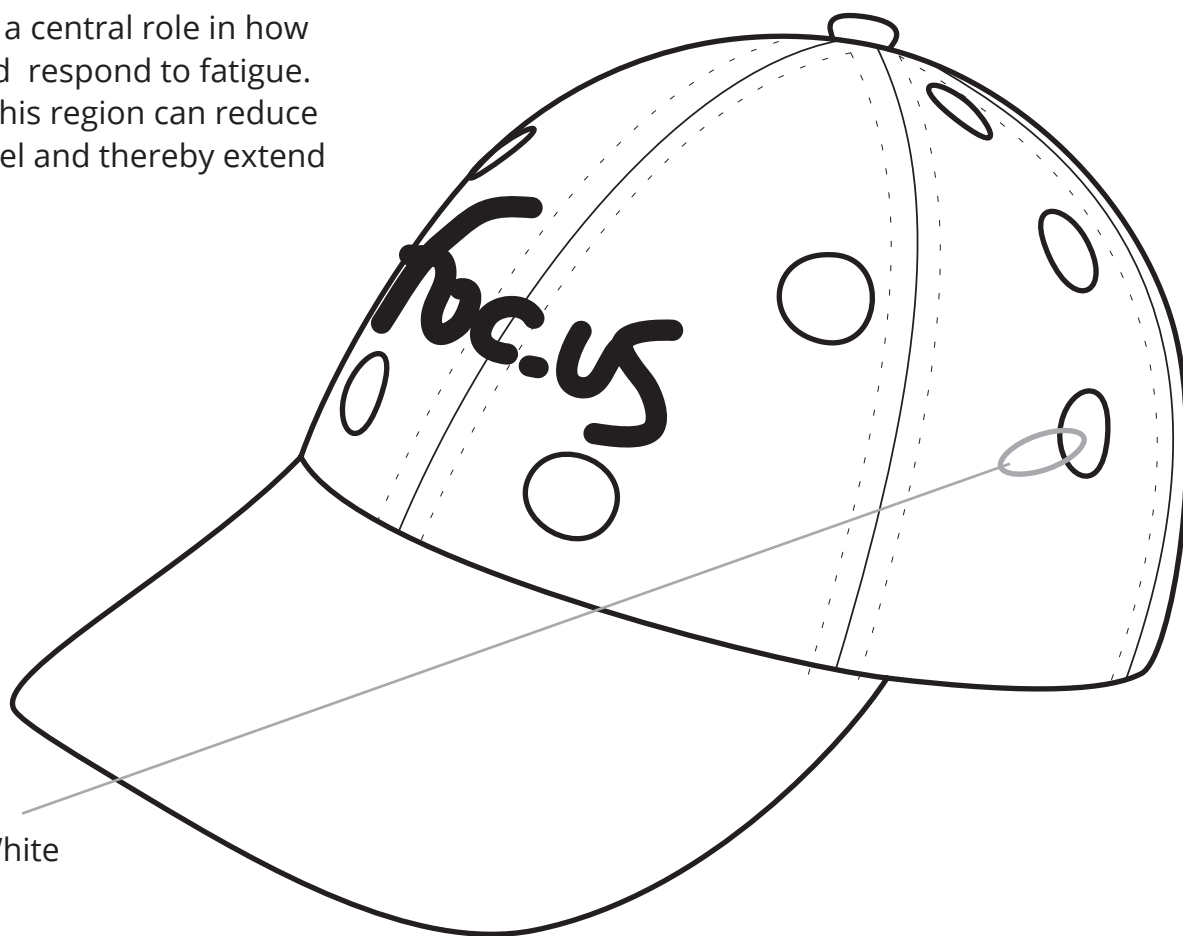
Insert the 2.5mm 4 pin jack end of the x/y cable into the socket on the top of the Go Flow and you are ready to go.

# SPORTS MONTAGES

Modern sports science believes that endurance is a complex interaction between brain and body. We feel tired not only due to physiological stress but also due to neurological stress - for example, if we've had a stressful day at work. By stimulating the brain in the right way, it is believed that physical endurance and performance can be extended. Scientific studies suggest two protocols to try.

## Training Longer

The temporal cortex of the brain is thought to play a central role in how we perceive and respond to fatigue. Modulation of this region can reduce how tired we feel and thereby extend endurance.

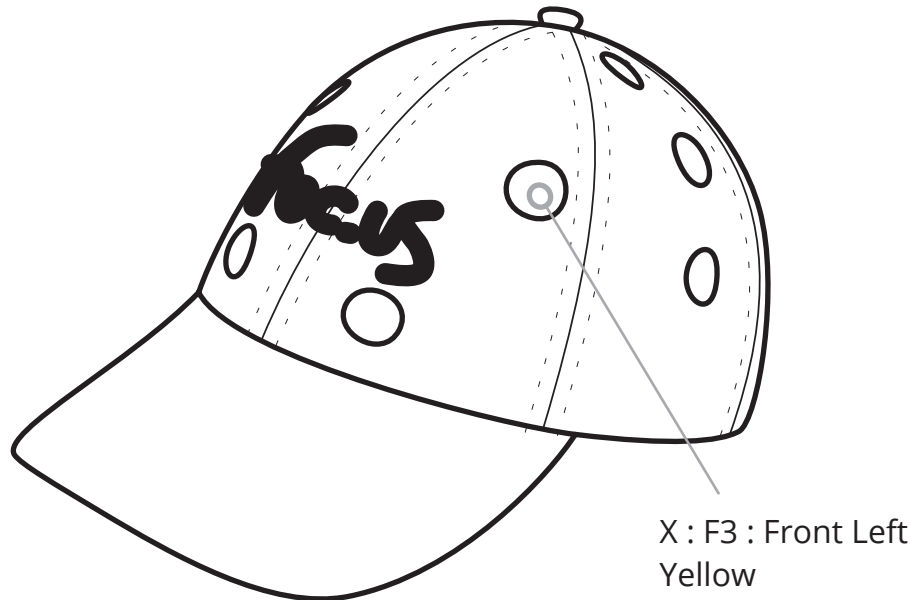


X : T3 : Left White

<b>Goal</b>	Training longer
<b>Target current</b>	2mA or less for comfort
<b>Duration</b>	20 mins
<b>Electrode placement</b>	X T3 left white, Y right arm.band
<b>Notes</b>	Stimulate prior to activity

## Training harder

Targeting the pain centers of the brain can increase our tolerance to fatigue. Studies suggest that one way of reducing perceived pain is by stimulating a region of the brain called the dorsolateral prefrontal cortex.

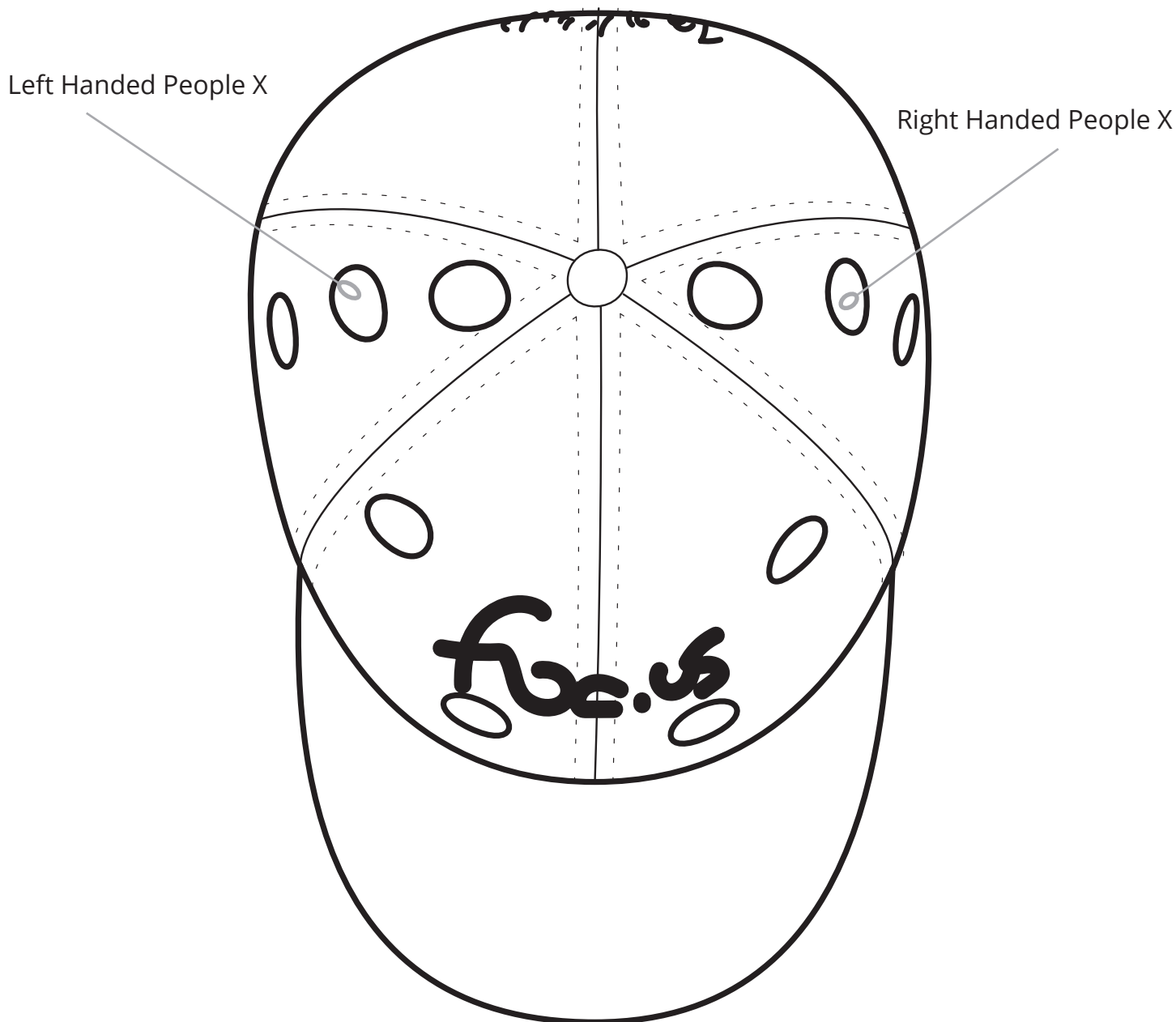


<b>Goal</b>	Training Harder
<b>Target current</b>	2mA or less for comfort
<b>Duration</b>	20 mins
<b>Electrode placement</b>	X F3 left white, Y right arm.band
<b>Notes</b>	Stimulate before athletic activity

# SKILL ACQUISITION & EXECUTION

## Learning New Skills

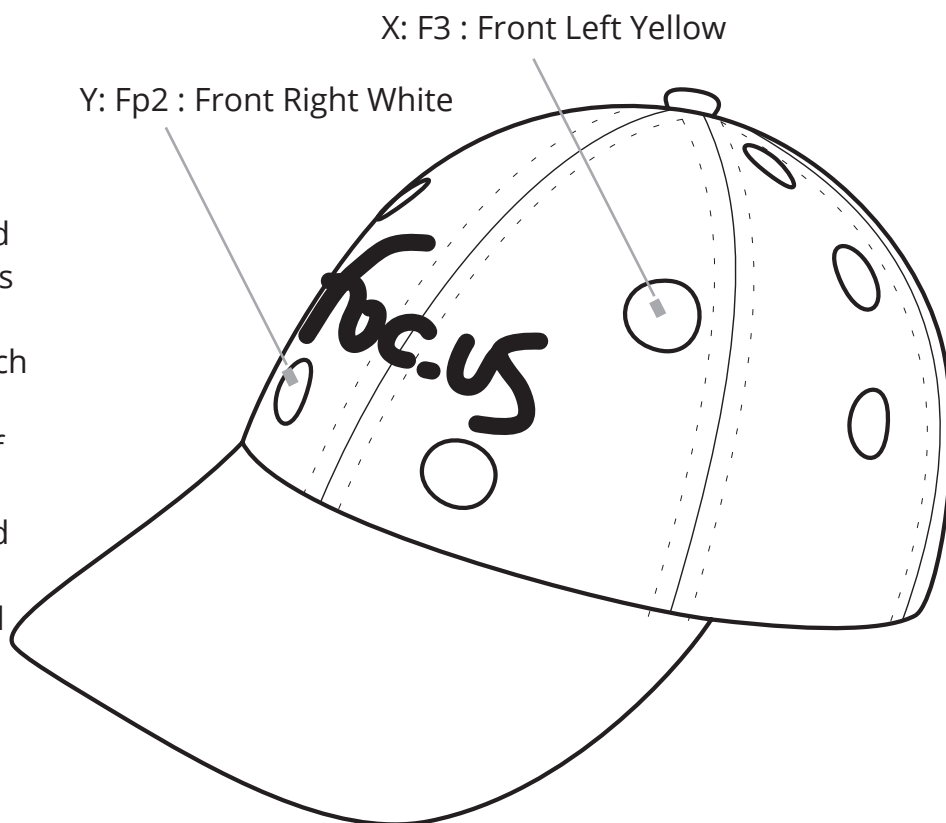
A part of our brain called the motor cortex plays a crucial role in the acquisition and retention of physical skills. Stimulating this region is believed to enhance the rate of skill acquisition.



<b>Goal</b>	Learning new skills
<b>Target current</b>	1mA
<b>Duration</b>	20 mins
<b>Electrode placement</b>	Left Handed: X C4 top right yellow, Y left armband Right Handed: X C3 top left yellow, Y right armband
<b>Notes</b>	Stimulate prior to activity

## Getting into the zone

Acquiring new physical skills requires mediation from our prefrontal cortex (situated toward the front of our brains), but execution of already learned skills is thought to be sometimes hindered by an overactive prefrontal cortex. Hence research suggests that lowering the excitation levels in this region of the brain can assist in implicit learning or help execute learned skills more consistently and effectively. This is often referred to by sportspeople as being 'in the zone'.



<b>Goal</b>	Get in the zone - go flow
<b>Target current</b>	1.5mA
<b>Duration</b>	15 mins
<b>Electrode placement</b>	X:F3 Front Left Yellow, Y: Fp2 Front White Right
<b>Notes</b>	Stimulate prior to activity

## What to expect

- **What to expect**
- You may feel a tingling when the stimulation starts. For most people this sensation is comfortable but if it is not you can try decreasing the current level. The increased excitation levels of your neurons caused by the stimulation move your brain into a ready state. This state will naturally wear off so you should look to undertake your sporting activity immediately after the stimulation session ends.
- Studies have shown these stimulation montages work. However, there are factors that can negatively impact your results. By changing the current (both down and up) and duration on different sessions over different days, you can find the best settings for your own unique brain physiology.

# SPECIFICATIONS

## Go Flow Specifications

<b>Size</b>	26mm x 28mm x 16mm
<b>Weight</b>	10g
<b>Battery</b>	9v 6LR61 Ultra alkaline
<b>tDCS Settings</b>	<ul style="list-style-type: none"><li>• 2.2mA maximum current, 25V maximum voltage</li><li>• 0.5, 0.75, 1, 1.25, 1.5, 1.75, 2.0mA configurable current</li><li>• 5, 10, 15, 20, 25, 30, 35 minutes timer</li><li>• 0.625, 0.875, 1.125, 1.625, 1.875mA incremental adjustments</li><li>• 0.1mA/s up and down ramping</li></ul>

## Go Flow Cap

<b>Size</b>	56cm diameter 6 panel cap
<b>Material</b>	Cotton, Polyester blend.
<b>10/20 Positions</b>	T3, C3, C1, C2, C4, T4. F3, F4. Fp1, Fp2.
<b>10/20 Colors</b>	<ul style="list-style-type: none"><li>• Front left white Fp1, Front left yellow F3</li><li>• Front right white Fp2, Front left yellow F4</li><li>• Top left white C1, Top left yellow C3, Ear left white T3</li><li>• Top right white C2, Top right yellow C4, Ear right white T4</li></ul>

<b>Problem</b>	<b>Solution</b>
<b>No lights on Go Flow</b>	Change the battery
<b>Flashing Orange Lights</b>	Resistance is too high, check sponges, not too much hair, good connections everywhere.
<b>Flashing Orange/ Green Lights</b>	No x/y cable connected to Go Flow. Connect cable.
<b>Cap doesnt fit</b>	Adjust strap on rear of cap
<b>Painful sensation</b>	If you experience discomfort you should stop using Go Flow

# WARRANTY & GUARANTEE

foc.us warrants the foc.us headset (the "Product"), and only the Product, against defects in materials and workmanship under normal use for a period of twelve (12) months commencing on the date of original purchase by the original purchaser (the Warranty Period). This warranty does not cover damage caused by misuse, accident, abuse, natural and/or external causes (i.e. fire, earthquake, flood, etc.), use other than as intended and described in the Product instruction manual, finishes, normal wear and tear, tampering, unreasonable use, service performed by unauthorised service agents, or loss or damage to the battery. foc.us does not warrant that the operation of the Product will be uninterrupted or error-free.

## Limitation of remedies

- Under this Limited Warranty, foc.us liability and customer's exclusive remedy under the foregoing paragraph will be limited to replacement or repair of the Product by foc.us or its authorized service centers. A replacement Product or part assumes the remaining warranty of the original Product or ninety (90) days from the date of replacement or repair, whichever is longer. To obtain warranty service, contact [help@foc.us](mailto:help@foc.us). For your security, please return your Product with an insured carrier (e.g., FedEx, UPS, USPS Parcel Post) and retain your receipt. foc.us is not responsible for items damaged or lost in transit. Other than for the reason of hardware defects, the return freight cost responsibility belongs solely to the customer.

## Limitation of damages

- In no event will foc.us or any of its affiliated or subsidiary companies be responsible for any special, incidental, or consequential damages resulting from the use of this Product, or based on any breach of warranty, breach of contract, negligence, tort, or any other legal theory. Such damages may include, without limitation: loss of savings or revenue; loss of profit; loss of use; the claims of third parties, including without limitation retailers; any cost of any substitute equipment or services. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you. The warranty gives specific legal rights, and you may have other legal rights, which vary from state to state or country to country. This Limited Warranty is valid only in the United States and Europe for Products sold in the United States and Europe. Resellers, agents, or employees of foc.us are not authorized to make any modification, extension, or addition to this Limited Warranty.

## FCC

- FCC warning statement: 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. This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

# Technical support

## Transcranial Ltd

88 Paul St  
London EC2A 4NE  
UK  
Tel.: +44 (0)8432 899833

help@foc.us  
uk.foc.us

## European Engineers

1017 El Camino  
Redwood City 94063  
US  
Tel.: +1 415 9387831

help@foc.us  
www.foc.us

## SUPPORT

More information is available on the website: <http://help.foc.us/>  
You can email [help@foc.us](mailto:help@foc.us) if you have any questions or concerns.

Equipment providing body floating protection against electric shock



---

**Transcranial Ltd. 88 Paul St. London EC2A 4NE, UK**  
Tel.: +44 (0)8432 899833 • Fax: +44 (0)8432 899833  
help@foc.us • www.foc.us