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Project We Love ゲーム機 Waterloo, Canada

### Impulse Neuro-Controller for PC Gaming

Impulse works with your current gaming mouse to help you react faster and win more. Play at the Speed of Thought.

**¥3,849,172** **226** **24**  
の総プレッジ額 (¥1,196,081 中) 人のバックカー 日で締切

このプロジェクトをバックする

お気に入りに登録

All or Nothing このプロジェクトは 2020年12月11日 (金曜) の07:00 UTC +09:00 までにゴールを達成した場合のみファンディングされます

- キャンペーン
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#### ストーリー

# HOLD UP!



- Please watch our campaign video above before reading on -

You'll learn a lot from our video. We promise!  
Please take a few minutes to watch and learn more before scrolling on.



**Brink Bionics**  
はじめてのプロジェクト · 1 バック済

Impulse is the only neural technology-based gaming controller for PC that enables you to compete at the speed of your thought. Impulse works... [もっとみる](#)

プレッジ(支援)する

リワードなしでプレッジ

## Introducing **IMPULSE**

Designed by leading researchers in neural interfaces and bionic limbs from the University of Waterloo, Impulse is the first gaming peripheral that enables you to react at the speed of thought by recognizing your intention to click your mouse. Commands activated with Impulse are faster than mouse clicks by up to 80 milliseconds, paving the way for an unprecedented gaming experience.



Impulse has built-in sensors that use a proprietary machine-learning algorithm to read your muscles' biosignals and predict your clicking intentions. Essentially, we're cutting out the time lag between when you think about clicking and when your finger actually executes on that movement through muscular contraction.



Impulse weighs less than 50 grams and works with any gaming mouse, so you don't need to change your existing gaming setup to use it.

## Improve Your **Reaction Times**

From faster gaming mice to better monitors, you're constantly trying to improve your reaction in your game-play. Impulse is the next evolution—reducing your lag by interpreting your intentions from the neural data in your muscles.

CA\$ 10

約 ¥798

このプロジェクトの可能性を信じてバックしよう。

リワード無しでも「支援したい!」と思わせてくれるような、あなたの心に訴えかけるプロジェクトをサポートしてみませんか?

CA\$ 162 以上のプレッジ

約 ¥12,918

### Early Bird

KS Price: \$123 USD / \$162 CAD  
MSRP: \$164 USD / \$215 CAD  
% Discount: 25%

Secure the Impulse Neuro-Controller at Early Bird Pricing and save big on the future of gaming.

リワード内容:

- Impulse Neuro-Controller
- Cable Cord Organizer
- Custom Kickstarter Packaging
- Free shipping for Canada and the USA

お届け予定 2021年 5月 発送 世界各国

数量限定(限定200個中 残り155個)  
45人のバックカー

CA\$ 172 以上のプレッジ

約 ¥13,709



Perfect for **FPS , MOBA**  
**Games and More!**

Impulse gives you an extra edge in FPS, MOBA, RTS games, and more. React, fire, and rapid fire faster to beat out the competition. **Impulse improves performance for both left and right click actions.**

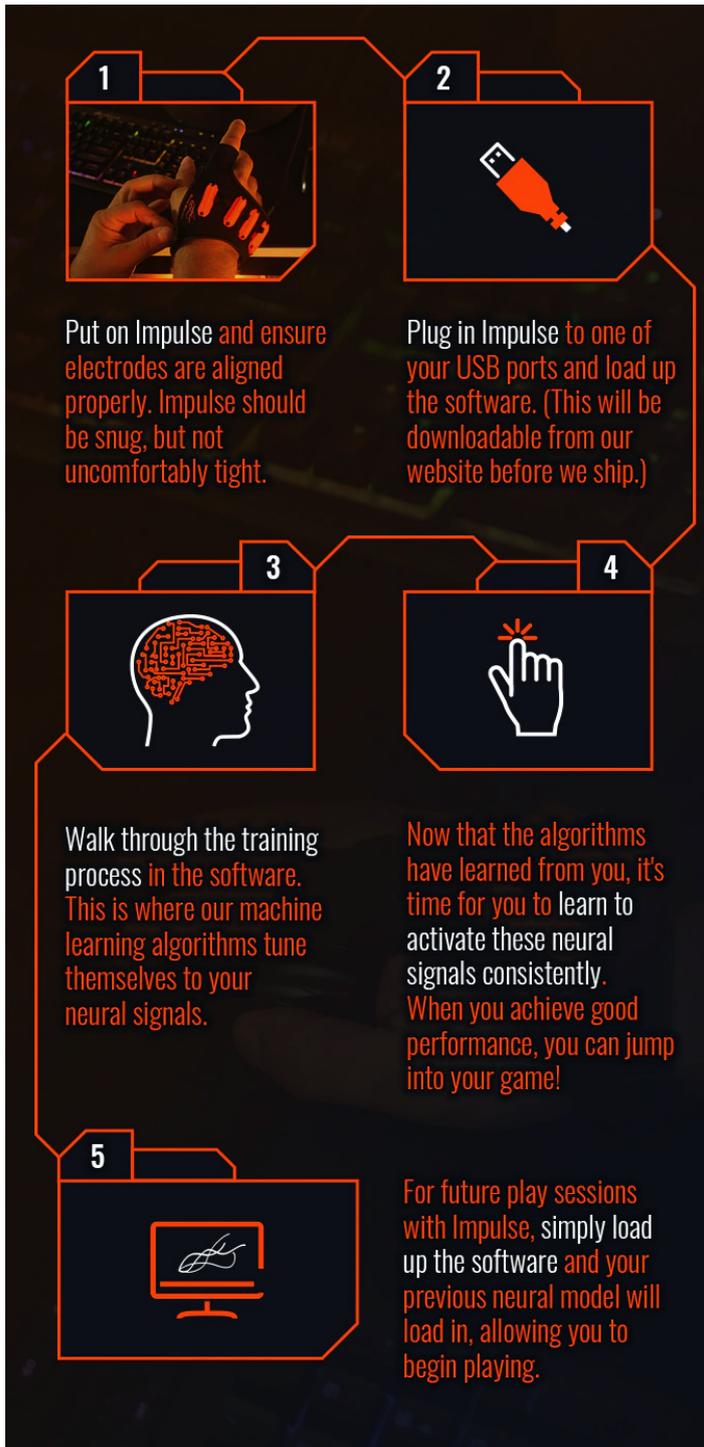


FPS Games	MOBA Games	RTS Games
		
Aim and Shoot More Rapidly	Select Abilities and Move Quicker	Select Units and Assign Actions Faster

Easy to **Set Up**

After a couple of sessions, some of our beta testers started to forget they were even wearing Impulse. Have more than one gaming device? No problem, Impulse works with

any mouse, any time. Impulse will also be available for both left- and right-handed gamers.

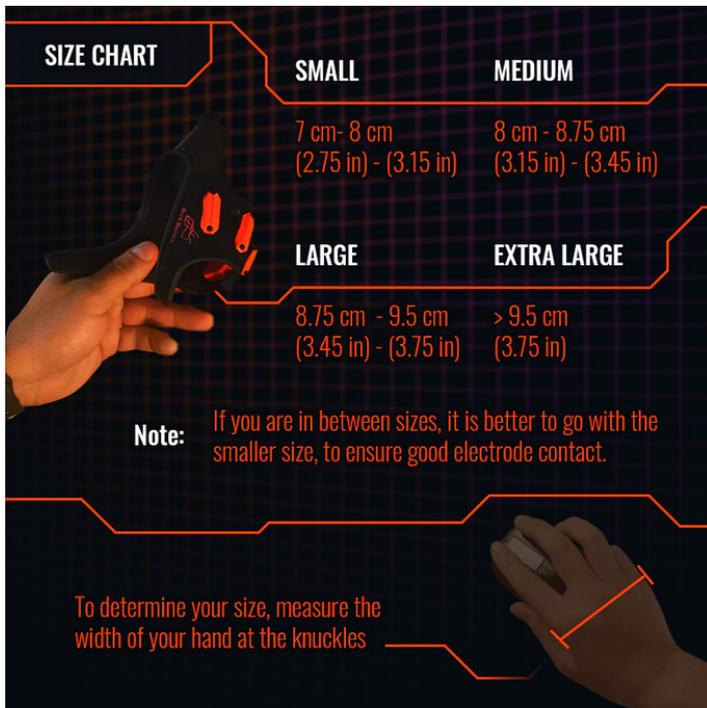


**SIZE CHART**

SMALL	MEDIUM
7 cm - 8 cm (2.75 in) - (3.15 in)	8 cm - 8.75 cm (3.15 in) - (3.45 in)
LARGE	EXTRA LARGE
8.75 cm - 9.5 cm (3.45 in) - (3.75 in)	> 9.5 cm (3.75 in)

**Note:** If you are in between sizes, it is better to go with the smaller size, to ensure good electrode contact.

To determine your size, measure the width of your hand at the knuckles



## Gamers Love **IMPULSE**

Beta User Test 01 censored



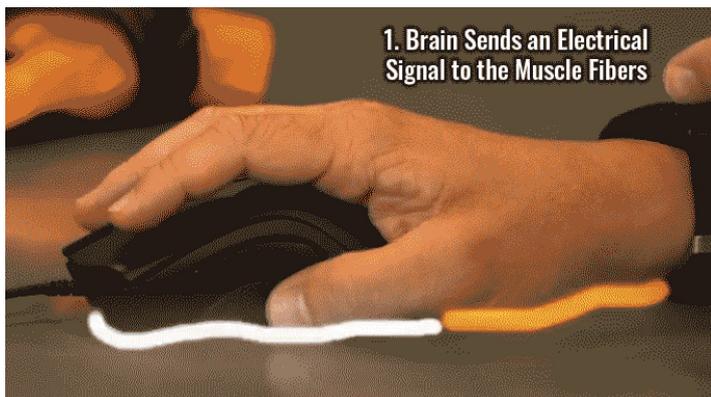
“I hit flick shots a lot more with Impulse.”  
**GAV, Beta User**

“It’s definitely faster, I can feel and see the difference between shooting with Impulse, and shooting with my mouse left click.”  
**BRAYDEN, Beta User**

“After using Impulse, I can’t go back to just using my gaming mouse. The sensation I get from the instantaneous response time is unreal!”  
**GRIFFIN, Ex Halo Reach MLG Player**

## The Tech

Between your intention to click your mouse, and when the actual click happens, two processes take place simultaneously:



The time difference between these two processes is called EMD. The proprietary algorithm of Impulse leverages the electric process, while the physical mouse relies on the mechanical process. This is the Impulse difference!



Here's a full breakdown of our tech specs:

<p><b>REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>◇ Windows 7 / Windows 10</li> <li>◇ USB Port</li> <li>◇ 300 MB free HD space</li> </ul>	<p><b>TECH SPECS</b></p> <ul style="list-style-type: none"> <li>◇ 4 Channel muscle sensor</li> <li>◇ Wired USB</li> <li>◇ Microprocessor: ARM Cortex M0</li> </ul>
<p><b>PHYSICAL SPECS</b></p> <ul style="list-style-type: none"> <li>◇ Available Sizes: S, M, L, XL</li> <li>◇ Adjustable glove</li> <li>◇ Weight: 1.5oz (45g)</li> <li>◇ Cable Length: 6.5ft (2m)</li> </ul>	
<p><b>RESPONSIVENESS</b></p> <ul style="list-style-type: none"> <li>◇ Average latency improvement: 30-50 ms</li> <li>◇ Peak latency improvement: 80 ms</li> <li>◇ USB report rate: 2000 Hz (0.5 ms)</li> </ul>	

## Evolution of Impulse

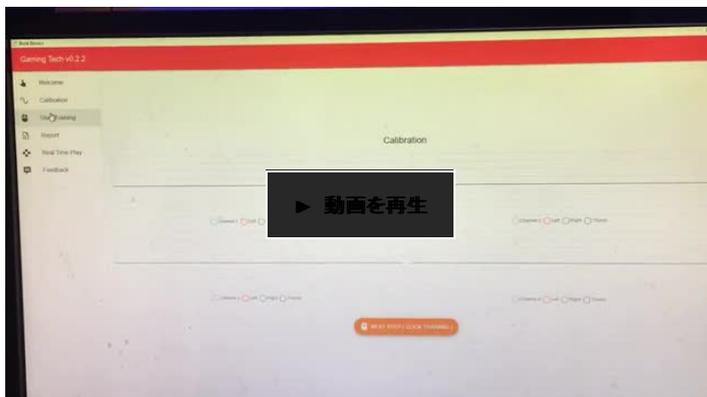


**Aug 2019**



**Jun 2020**

This video shows the interface up close to the screen:



This video is more zoomed where I (Erik, CEO & Co-Founder) show myself activating Impulse with both hands on the screen, with the mouse and without it. I also pull the camera back to show where I am in the room.



## How We Compare

Impulse is the very first consumer neural interface of its kind, but we're far from the first team to attempt to improve gamer reaction time with innovative tech. Here's how we compare:



## The Team

Our team includes some of the foremost experts in neural interface technologies, and we're confident that we have the experience to make the Impulse a reality for you. To further ensure our ability to deliver, we've harnessed over \$350,000 in VC funding and

have secured partnerships with a full-stack manufacturing team and hardware development team.



**Erik Lloyd**  
CEO, Co-founder

Erik Lloyd is a recent graduate of the University of Waterloo, one of the top engineering schools in Canada, with a MASc in System Design Engineering.

Erik has developed bionic arm robotic hardware for prosthetic research applications, and his long term focus is to develop robotic and neural interface technologies that can be used to enhance human performance for able bodied users that want to exceed the limits of the human body.



**Dr. Ning Jiang**  
CSO, Co-founder

Dr. Ning Jiang is one of the leading researchers in the development of advanced neural interfaces for various applications.

His surface EMG work on peripheral nervous system processing and control techniques has launched a shift in the way bionics limbs are controlled, and his non-invasive brain-computer interface technologies have demonstrated best-in-world treatment improvement for stroke patients.



**Dr. Jiayuan He**  
CTO, Co-founder

Dr. He is currently an assistant research professor in the Engineering Bionics Lab at the University of Waterloo, and the CTO of Brink Bionics.

His research includes more than 15 publications in myoelectric control systems for bionic arm technologies, and his work expands into using bio-signals for biometric identification systems in security applications. Dr. He was pivotal in the development of the neural scanning algorithms that allow Impulse to detect a gamers movement intentions.

## Our Partners



**B E R L I N**  
KraftWorks

Berlin KraftWorks Inc. makes it quicker and easier for companies to get their products to market. By aligning supply chain and engineering, their hands-on solutions integrate into the entire process from design, through the supply chain, to the end-user.



OT Bioelectronica is a leading company in neural interface research hardware. Bioelectronica's work has been featured in over 570 papers and 177 different journals.



Wilfrid Laurier University Athletics and Recreation announced their entry into the realm of competitive eSports in September 2020. Laurier Athletics and Recreation is a proud partner with Brink Bionics for the pursuit of various eSport gaming technologies and research.

CAMPAIGN STRATEGY BY



ARORAPROJECT.CO

## Reward Tiers

### VIP PACKAGE

MSRP: \$176 USD / \$232 CAD

**\$123 USD / \$162 CAD**

**SAVE 30%**

100 Available



VIPs get all the perks! Secure your Impulse Neuro-Controller at VIP pricing, plus get a FREE carrying case as our gift to you.

**Including:**

- ◊ (1) Impulse Neuro-Controller
- ◊ (1) Cable Cord Organizer
- ◊ (1) FREE Carrying Case
- ◊ Custom Kickstarter Packaging
- ◊ Free shipping for Canada and the USA

3D Display Stand NOT Included

MSRP: \$164 USD / \$215 CAD

**EARLY BIRD**

**\$123 USD / \$162 CAD**  
**SAVE 25%**

200 Available



Secure the Impulse Neuro-Controller at Early Bird Pricing and save big on the future of gaming.

Including:

- ◇ (1) Impulse Neuro-Controller
- ◇ (1) Cable Cord Organizer
- ◇ Custom Kickstarter Packaging
- ◇ Free shipping for Canada and the USA

3D Display Stand NOT Included

MSRP: \$164 USD / \$215 CAD

**KICKSTARTER EXCLUSIVE**

**\$131 USD / \$172 CAD**  
**SAVE 20%**

300 Available



Secure the Impulse Neuro-Controller at Kickstarter Exclusive Pricing and save big on the future of gaming.

Including:

- ◇ (1) Impulse Neuro-Controller
- ◇ (1) Cable Cord Organizer
- ◇ Custom Kickstarter Packaging
- ◇ Free shipping for Canada and the USA

3D Display Stand NOT Included

MSRP: \$197 USD / \$260 CAD

**THE GAMER PACK**

**\$158 USD / \$208 CAD**  
**SAVE 20%**

100 Available



For the gamer who wants it all, we've created a Kickstarter exclusive gaming pack with everything you need and more.

Including:

- ◇ (1) Impulse Neuro-Controller
- ◇ (1) Cable Cord Organizer
- ◇ (1) Carrying Case
- ◇ (1) LED Mousepad
- ◇ Custom Kickstarter Packaging
- ◇ Free shipping for Canada and the USA

3D Display Stand NOT Included

MSRP: \$186 USD / \$245 CAD

**THE DISPLAY PACK**

**\$149 USD / \$196 CAD**  
**SAVE 20%**

20 Available



Secure the Impulse Neuro-Controller at Display Pack Pricing and save big on the future of gaming.

Including:

- ◇ (1) Impulse Neuro-Controller
- ◇ (1) Cable Cord Organizer
- ◇ (1) 3D Printed Display Stand
- ◇ Custom Kickstarter Packaging
- ◇ Free shipping for Canada and the USA

**LOCKED - \$50k Stretch Goal**

3D Display Stand NOT Included

MSRP: \$220 USD / \$289 CAD

**THE DUAL PACK**

**\$220 USD / \$289 CAD**  
SAVE 25%

**LOCKED - \$75k Stretch Goal**

Free shipping for Canada and the USA

For our VIP Backers, here is your first look at The Impulse Carrying Case!



## Stretch Goals

If we are fortunate enough to go above and beyond our funding minimum, we have some bonus features for you! Here's a look:

**\$50K USD**  
**65.5K CAD**

**3D Printed Impulse Display Unlocked**

Level up your gaming setup with the 3D Printed Impulse Display. This tier will unlock once we reach 50K.

This is limited to 20 displays and we will give you plenty of notice before they are available.



**\$75K USD  
98.6K CAD**

**Dual Pack Impulse Neuro-Controller Unlocked**

Team up with friends with the dual pack for the ultimate gaming experience. Keep one Impulse Neuro-Controller and gift one to your favorite gamer.

3D Display Stand NOT Included



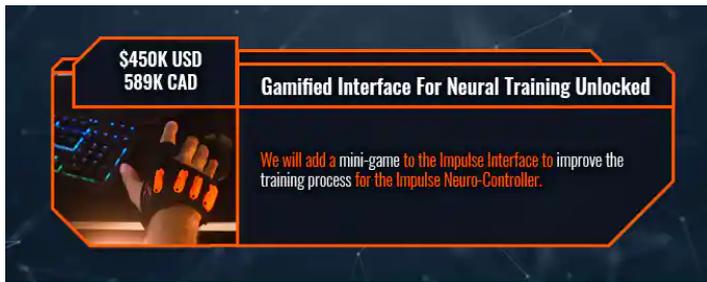
**\$200K USD  
262K CAD**

**New Colorways Unlocked**

We will add new colorways for Impulse:

- ◊ Black Impulse with Black Muscle Signal (EMG) Electrode Covers
- ◊ Black Impulse with White Muscle Signal (EMG) Electrode Covers

3D Display Stand NOT Included



**\$450K USD  
589K CAD**

**Gamified Interface For Neural Training Unlocked**

We will add a mini-game to the Impulse Interface to improve the training process for the Impulse Neuro-Controller.

## Our Timeline

Before setting our production timeline, we did extensive research and spoke at length with our manufacturing and operations partners. The resulting timeline takes into account our determination to deliver a high-quality product, without the constant delivery extensions that plague many Kickstarter campaigns.

**February 2018**



Founded as a  
Bionic Arm Company

Raised +\$92,000 in grant  
funding from competitions  
and early investments.

**June- Dec 2018**



Pivoted to developing the  
Impulse Neuro-controller.  
During this time we spoke  
with competitive and  
casual gamers to  
understand where their  
performance could best  
improve in gaming.

**March 2019**



First Impulse Neuro-controller  
proof of concept completed.

**April 2019**



**October 2019**



Attended EGLX gaming  
convention as an exhibitor to  
get feedback from gamers  
and validate interest.

**November 2019**



Alpha prototype  
completed

Promoted by **Jellop**

*This project is promoted by Jellop, the ad tech power behind the best Kickstarter launches with 1,400+ successful Kickstarter projects and over \$500M raised in total.*



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## リスクと課題

### Production Challenges:

To ensure we have the proper expertise to manufacture and deliver a quality product, we have hired an outside firm, Berlin Kraftworks (BKW), that specializes in manufacturing, supply chain, and design for manufacturing.

We foresee no significant challenges here, as Brink Bionics has already acquired the necessary funding to accomplish this, and is working with a highly experienced contracted manufacturing and design team.

### Sourcing/Supply Chain Challenges:

We will be leveraging our BKW expertise in order to ensure no issues in component sourcing. They are working with our team to find the best local manufacturers, and source the right components from reputable manufacturers.

We foresee no significant challenges here, as Brink Bionics has already acquired the necessary funding to accomplish this, and is working with a highly experienced contracted team to source optimal component suppliers.

### Manufacturer Sourcing Challenges:

The biggest concern is ensuring our product is of high quality and is delivered in line with our projected delivery date to backers. For manufacturing, we will be assembling Impulse locally, to ensure we have strong control over the delivery and final production of our product. This makes Impulse a bit more expensive, but the quality of a Canadian assembled product will make it well worth it. We are sourcing a contract manufacturer with the assistance from our partners at BKW.

We foresee no significant challenges, as Brink Bionics has already acquired the necessary funding to accomplish this, and is working with a highly experienced contracted team to find local contract manufacturers for Impulse.

### Manufacturing Delivery Time Challenges:

We are mitigating this risk around delivery time by looking for local manufacturing options to ensure we have a tight grasp on our production chain, and regular contact with our manufacturers. Furthermore, as previously mentioned, we are working with BKW to be sure we are making the right production decisions to deliver your Impulse on time.

As a result, we are not overly concerned with delays on delivery time, but with any hardware product, there is always a risk of production delays.

### Development Challenges:

Impulses base functions for allowing users to map left and right clicks to their nervous system are completed, and we have Beta users working with us to improve the final product. This is where our team excels, as we have more than 35 years of experience developing cutting-edge neural interface technologies. There are no significant risks here.

We foresee no financial challenges here, as Brink Bionics has already acquired the necessary funding to accomplish the remaining development for Impulse.

[Kickstarter上の説明責任について詳しく知る](#)

このプロジェクトに関して質問がある?[FAQ](#)

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Xtron Pro: Creating Games, Learning Programming and More

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award-winning hardware | 2x deep click buttons | auto game detection and loading of expert profiles

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Xsleeve: Esports Performance & Ergonomics

VH-80SE: The World's First Bilateral Laser Distance Measurer

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