

Robotic Grabber User Guide

To see the how-to video and the latest version of this user guide, please visit
canassist.ca/cdc



University
of Victoria

CAUTION!



Keep body parts out of potential pinch points.

NOTES

Notes on safe and proper operation:

- The Robotic Grabber is designed for indoor use.
- The Robotic Grabber should not be used in wet environments.
- The Robotic Grabber should not be used in sandy or dusty environments.
- Never touch the Robotic Grabber's moving components while in use.
- Do not open the Robotic Grabbers electronic housing.

ROBOTIC GRABBER

TABLE OF CONTENTS

WARNING!.....2

NOTES2

WHAT’S IN THE BOX.....4

WHAT YOU NEED5

 OVERVIEW5

 FEATURES5

 MOUNTING THE ROBOTIC GRABBER.....8

 POWERING ON AND USING THE ROBOTIC GRABBER8

WHAT'S IN THE BOX

- 1 Robotic Grabber, with joystick and universal mounting
- 1 Battery Charger
- 1 USB Extension
- 1 Clamp for alternate joystick mounting



ABOUT THE *ROBOTIC GRABBER*

OVERVIEW

Thank you for using CanAssist's Robotic Grabber.

The *Robotic Grabber* enables individuals with mobility challenges to pick up objects off the floor. The device typically mounts to a power chair and uses a joystick or four switches to raise, lower, open and close the bucket.



CanAssist designed the device to be very durable. Safety features ensure the gripper doesn't crush items being picked up and reduce the chance of damage to walls or floors.

Mounted to a power wheelchair, the device uses electronic linear actuators and its own battery to grip and lift the desired object.

This user guide provides instructions on setting up and using the *Robotic Grabber*.

FEATURES

- Attaches to most manual and powered wheelchairs
- Able to grip and lift up to 2.2 Kg.
- Can be controlled with the included joystick or 4 accessibility switches
- Integrated rechargeable battery

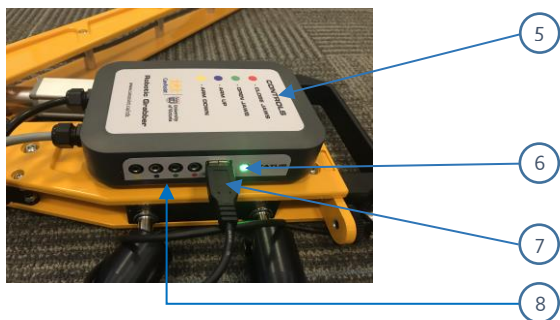
GET TO KNOW YOUR *ROBOTIC GRABBER*



	Left Side View
1	Grabber Jaws
2	Universal Mounting Arm



	Right Side View
3	Joystick
4	Carrying Handle



	Switch Panel
5	Control Functions
6	Status Light
7	Joystick Connection
8	Switch Control Jacks



	Power Switch Location
9	Power Off / Charge Position
10	Power On Position



	Joystick – Top View
11	Yellow – Arm Down
12	Green – Open Jaws
13	Red – Close Jaws
14	Blue – Arm Up

USE AND SET-UP

MOUNTING THE ROBOTIC GRABBER

1. Loosen both mounting arms and mounting clamps.
 2. Place the first clamp in the desired location on the right side of chair and tighten.
 3. Place the second clamp on the chair and tighten. The clamps should be attached to sturdy parts of the chair and should be at least a few inches apart.
 4. Hold the Robotic Grabber by its handle and position it as close to the chair as possible while keeping the handle level. Once the mounting arms are in the desired location, tighten them firmly. The jaws of the bucket should be able to touch the ground when the arm is fully lowered.
 5. If you'll be using the integrated joystick, loosen the joystick arm and move it to desired location. Then, tighten the arm.
OR,
If you plan to use switch control, tuck the joystick out of the way and plug your accessibility switches into the Robotic Grabber.
-

POWERING ON AND USING THE ROBOTIC GRABBER

1. Press the power switch located on top of the electrical enclosure. The status light will turn green indicating it is ready to use.

The Robotic Grabber has four basic motions, which can be controlled with the joystick or by using switch control. Each motion is colour coded on the switch jacks and the joystick.

2. To open the jaws, move the joystick towards the green position.
3. To close the jaws, move the joystick towards the red position.
4. To move the arm up towards the user, move the joystick towards the blue position.
5. To move the arm down away from the user, move the joystick towards the yellow position.

Note:

The farther the joystick is pushed, the faster the Robotic Grabber will move.

The Robotic Grabber has a feature that limits the amount of weight it can lift. When the device starts to lift anything over 2.2Kg (5lbs) the status light will blink green and the arm will stop moving. Lower the arm and release the object if the arm stops moving.

CHARGING THE ROBOTIC GRABBER

To charge the Robotic Grabber, first turn the power switch to the off position.

Then plug the charger into the charging jack on the side of the electrical enclosure.

Please note that the Robotic Grabber cannot be used while charging.

When the status light blinks red, it means the Robotic Grabber's battery is running low. Turn off the Robotic Grabber and plug it into the charger. It may take up to 4 hours to fully charge.

If the status light appears solid red, it means the Robotic Grabber's battery is dead. Contact CanAssist if the battery is dead.



	Charging View
15	Charger Plugged into Charging Jack

Status Light Appearance	Meaning
Solid Green	On and ready to use
Blinking Green	Maximum weight exceeded (2.2kg / 5lb)
Blinking Red	Battery low
Solid Red	Battery dead – Contact CanAssist

CARE, SAFETY, AND MAINTENANCE

Your *Robotic Grabber* does not have any user-serviceable parts. If repair is necessary, the unit should be returned to CanAssist.



Disposal of batteries is often subject to local laws. Please consult your local authorities for information regarding the proper disposal of batteries in your locale. Never dispose of a battery in fire.



Disposal of electronic devices is often subject to local laws. Please consult your local authorities for information regarding the proper disposal of electronics in your locale. Never dispose of electronic devices in fire.

CONTACT US

For more information about the *ROBOTIC GRABBER*, or if you need assistance with the set-up or operation of this device, please visit canassist.ca/cdc

ABOUT US

CanAssist at the University of Victoria is dedicated to helping people with disabilities improve their quality of life, with a focus on promoting independence and inclusion.



**University
of Victoria**

Our talented team develops innovative technologies and programs where there are gaps in existing services. We work with the exceptional students and faculty at UVic, along with partners in the wider community.

Last updated March 27, 2018