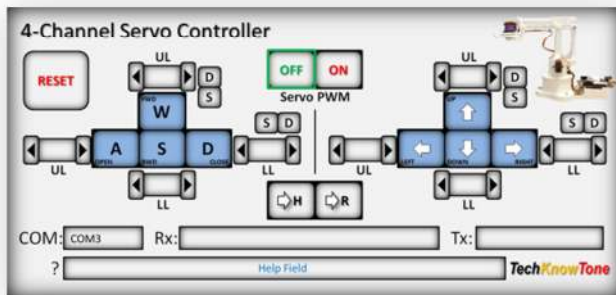


# Reach Robot Mk1 – Demo Functions



## Tech:

- Arduino UNO microcontroller
- 4 x Servo motors
- I2C wired Wii Classic controller
- 7.4v batteries / adapter
- 3-D printed construction

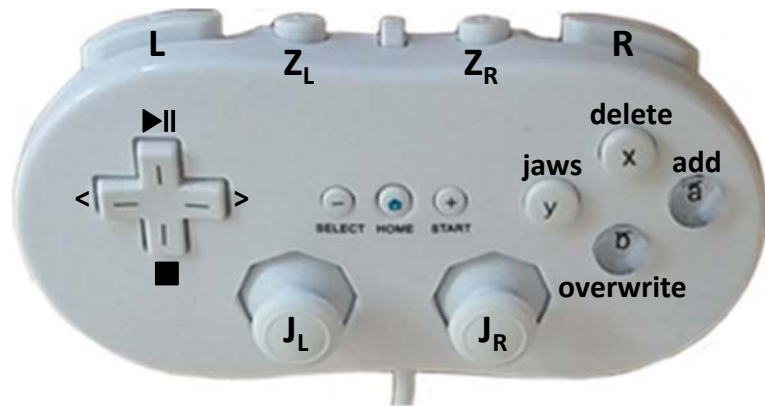
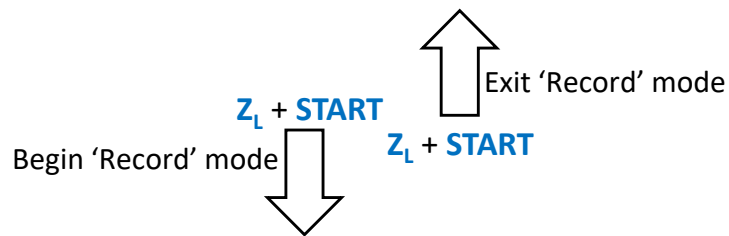
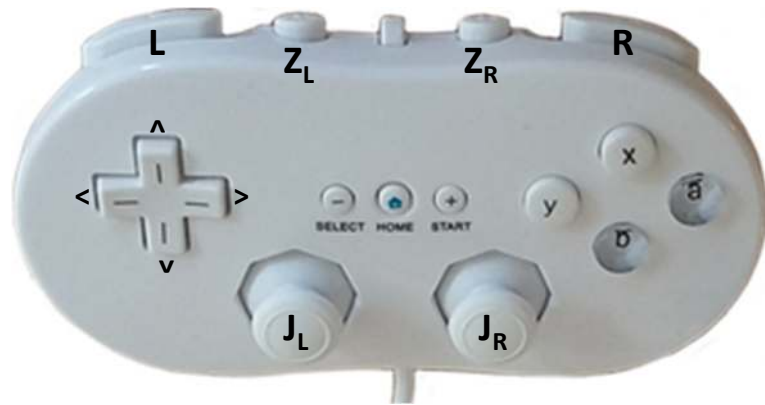
## Features:

- Safe start, move to rest
- Controlled via Wii controller
- Turns, reaches and opens jaws
- Performs pre-set moves
- XYZ programmed via Windows app

## Wii Controller (Normal Mode):

- **HOME** – moves to ready position
- **L + HOME** – performs main demo 2
- **J<sub>L</sub>** – joystick X moves jaws, Y moves reach
- **J<sub>R</sub>** – joystick X rotates L/R, Y moves up/down
- **L** or **R** – halves joystick demands
- **SELECT** – moves to reset/rest position
- **L + SELECT** – performs main demo 1
- **START** – moves to floor position
- **L + START** – performs main demo 3
- **y** – toggles step/continuous print servo values
- **Z<sub>L</sub>** or **Z<sub>R</sub>** – quarters joystick demands
- **Z<sub>L</sub> + START** – toggle Record/Normal modes
- **<** or **^** or **>** or **v** – perform reach moves L/C/R/D

# Reach Robot Mk1 – Wii Functions



Note:  
Front buttons 'L' 'Z\_L' 'Z\_R' 'R' act like control keys

## Wii Controller (Record Mode):

- ▶|| - play/pause the recorded move sequence
- (held) play cycle repeatedly until stopped
- - stop 'play' and go to 'start'
- < - move to previous recorded position, cycle
- > - move to next recorded position, cycle
- SELECT** - moves to reset/rest position, overwrites current
- HOME** - moves to ready position, overwrites current
- START** - moves to floor position, overwrites current
- a** - add a new point in the sequence, as current
- b** - insert/increment a delay, in 100ms steps
- if held down auto-increment up to 9.9 seconds
- x** - snapshot current position in memory
- y** - close/open jaws 'n' times (assumes open to start)
- J\_L** - X open/closes jaws, Y moves reach fwd/bckwd
- J\_R** - X rotates L/R, Y moves up/down
- L** (< or >) - insert a slow down/speed up command
- L + x** - recall, overwrite and move to the snapshot point
- L + y** - decrement stored clap count (9 – 0)
- L + b** - decrement delay, in 100ms steps to zero
- L + a** - appends the current position as last point
- L + R** - export recorded move sequence to serial port
- (L or R) + J\_n** - hold L or R to half joystick demands
- Z\_L + START** - RECORD mode enter/exit toggle, Hold to clear
- Z\_L + a** - delete current point
- (Z\_L or Z\_R) + J\_n** - hold L or R to quarter any joystick demands