

# Frc Robot Simulator Controls

## Recommended Keyboard Controls

To match the features of a controller, set up the keys according to the table below.

axis	dec	inc	button	key	button	key	pov	key
axis0	a	d	b1	z	b5	1	pov 0	8
axis1	w	s	b2	x	b6	3	pov 45	9
axis2		q	b3	c	b7	,	pov 90	6
axis3	-	→	b4	v	b8	.	pov 135	3
axis4	↑	↓					pov 180	2
axis5		e					pov 225	1
							pov 270	4
							pov 315	7

- `wads` are like the arrow keys, but on the left side. That's the left joystick: `axis0` and `axis1`. The arrow keys are the right joystick: `axis3` and `axis4`.
- `q` and `e` correspond to the shoulders on the controller. so they're positioned on the shoulders of `wads`. These buttons cause `axis2` and `axis5` to increase from `0.000` to `1.000` rapidly. The controller shoulders work the same way, except they start at `-1.000`
- `1` and `3` trigger `LeftBumper` and `RightBumper`. They have similar positions on the controller & keyboard.
- `Back` and `Start` are set to `,` and `.` because keys like `Backspace` and `Return` couldn't be used.
- `;` and `'` were close to those keys and trigger `LeftStick` and `RightStick`. These are the button events that trigger when you push down the joystick.

WPIlib Button ID	1	2	3	4	5	6	7	8	9	10
X-Box	A	B	X	Y	LeftBumper	RightBumper	Back	Start	LeftStick	RightStick
Custom Keyboard 0	z	x	c	v	1	3	,	.	;	'

## Default Keyboard Controls

For each keyboard joystick `k0`, `k1`, `k2`, the key in the first column will decrease that axis' value.

	k0	k0	k1	k1	k2	k2
axis0	a	d	j	l	←	→
axis1	w	s	i	k	↑	↓
axis2	e	r				
b1		z		m		Ins
b2		x		,		Home
b3		c		.		PgUp
b4		v		/		Delete
b5						End
b6						PgDn
pov 0		8				
pov 45		9				
pov 90		6				
pov 135		3				
pov 180		2				
pov 225		1				
pov 270		4				
pov 315		7				

## Default Controls Support

dev	support	function	desc
k0	full	pov	numpad around the clock
		3 axes	wads+er
		4 buttons	zxcv
k1	2	axes	ijkl shifted, but ik flipped
		4 buttons	m,. along the bottom right
k3	2	axes	arrow keys, up/down flipped
		6 buttons	Ins, del, (cursor control keys)