

Car Signals + Pins

<u>Description</u>	<u>Pin</u>
Left Motor IN4	PB3
Left Motor IN3	PB2
Left Motor IN2	PB1
Left Motor IN1	PB0
Right Motor IN4	PE4
Right Motor IN3	PE3
Right Motor IN2	PE2
Right Motor IN1	PE1
IR Sensor	PA2
Set Button	PF4
Race Button	PF0

Car Outputs Mapped to GPIO Ports + Pins

Output	Port Name	Pin
Left Motor IN4	STEPPER_B.3	PB3
Left Motor IN3	STEPPER_B.2	PB2
Left Motor IN2	STEPPER_B.1	PB1
Left Motor IN1	STEPPER_B.0	PB0
Right Motor IN4	STEPPER_E.4	PE4
Right Motor IN3	STEPPER_E.3	PE3
Right Motor IN2	STEPPER_E.2	PE2
Right Motor IN1	STEPPER_E.1	PE1

Car Inputs Mapped to GPIO Ports + Pins

Input	Port Name	Pin
IR Sensor	PA.2	PA2
Set Button	Buttons.4	PF4
Race Button	Buttons.0	PF0

Car State Table

Output: {Stepper_E.INV, Stepper_B.INV} **Input:** {Move, Forward, Backward}

State Name	Delay (ms)	Output	000	001	010	011	100	101	110	111
State Stop	2	0x00	State Stop	State Stop	State Stop	State Stop	State Stop	State D	State A	State Stop
State A	2	0x93	State Stop	State Stop	State Stop	State Stop	State Stop	State B	State B	State Stop
State B	2	0xC6	State Stop	State Stop	State Stop	State Stop	State Stop	State A	State C	State Stop
State C	2	0x6C	State Stop	State Stop	State Stop	State Stop	State Stop	State D	State D	State Stop
State D	2	0x39	State Stop	State Stop	State Stop	State Stop	State Stop	State C	State A	State Stop

Car State Diagram

