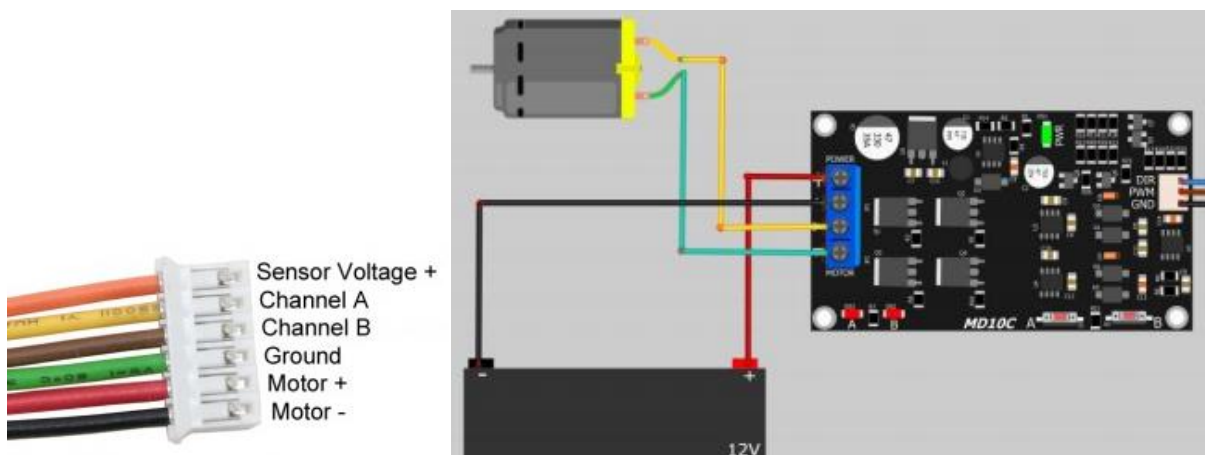


6 encoder A (yellow)
 6 encoder B (orange)
 6 encoder V+ (red)
 6 encoder Ground (black)
 4 PWM (blue)
 4 Direction (green)
 2 Step (purple)
 2 Enable (white)

NOTE: THE COMMON GROUND IS ONLY FOR PROTOTYPING PURPOSES. THE SERVO'S POWER AND LOGIC CONNECTIONS WILL BE ISOLATED IN THE FINAL DESIGN



			GN D		VIN				
RX_ODROID	RX1		0		AGN D				
TX_ODROID	TX1		1		3.3v				
		PW M	2		23 A9	PW M			M3_LIMIT_SW_EXTEN D
RESERVED FOR I2C	SCL 2	PW M	3		22 A8	PW M			M3_LIMIT_SW_FLEX
RESERVED FOR I2C	SDA 2	PW M	4		21 A7	PW M			M3_STEP
M1_DIR		PW M	5		20 A6	PW M	SDA 0		M3_DIR
M1_PWM		PW M	6		19 A5		SCL 0		M3_ENCODER_A
M1_ENCODER_A	RX3	PW M	7		18 A4				M3_ENCODER_B
M1_ENCODER_B	TX3	PW M	8		17 A3	PW M			M3_ENABLE
M1_LIMIT_SW_CW	RX2	PW M	9		16 A2	PW M			M4_ENABLE
M1_LIMIT_SW_CCW	TX2	PW M	10	TEENS Y 3.6	15 A1				M4_DIR
M4_ENCODER_A			11		14 A0	PW M			M4_STEP
M4_ENCODER_B			12		13				HEARTBEAT
			3.3v		GND				
M4_LIMIT_SW_EXTEN D			24			DAC 1			
M4_LIMIT_SW_FLEX			25			DAC 0			
M2_ENCODER_A			26		39 A20				
M2_ENCODER_B			27		38 A19	PW M	SDA 1		M6_ENCODER_B
M2_LIMIT_SW_FLEX			28		37 A18	PW M	SCL 1		M6_ENCODER_A
M2_LIMIT_SW_EXTEN D		PW M	29		36 A17	PW M			M6_PWM
M2_PWM		PW M	30		35 A16	PW M			M5_PWM
M2_DIR_PIN	RX4	A12	31		34 A15		RX5		M5_ENCODER_B
	TX4	A13	32		33 A14		TX5		M5_ENCODER_A

NOTE: the encoders for M5 and M6 won't be implemented yet because it would require modifying the servos which is risky.

NOTE: Ignore this and just use colour code 1 from the 4 wire stepper diagram. Reasoning is that in our case, we're connecting 8 wires into 4 using the series connection (see 8-wire diagram above). I wired it up so both motors have the same colour code which makes things easier for prototyping.

WIRES	1	2	3	4	5	6	7	8
Color Code 1	Blue White Stripe	Red White Stripe	Blue	Red	Green White Stripe	Black White Stripe	Green	Black
Color Code 2	Red	Yellow White Stripe	Red White Stripe	Yellow	Orange	Black White Stripe	Orange White Stripe	Black
Color Code 3	Red	Black White Stripe	Red White Stripe	Black	Green	Yellow White Stripe	Green White Stripe	Yellow
Bipolar Drive Parallel Connection	A		\bar{A}		B		\bar{B}	
Bipolar Drive Series Connection	A			\bar{A}	B			\bar{B}
Unipolar Drive	A	A/C Comm		C	B	B/D Comm		D

8 WIRES

