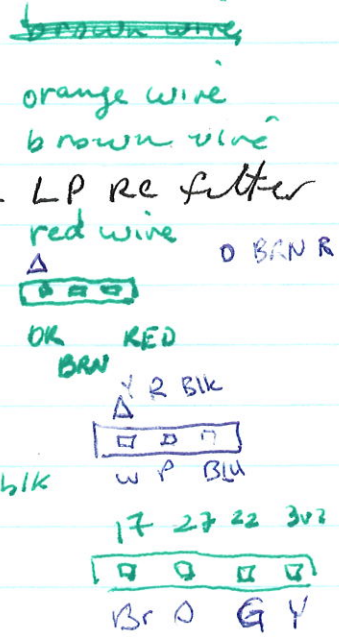
Header		RPi GPIO	Use
1	13	21	~~LA dir~~ LA_DIR
2	14	~~20~~ GND	~~LA mot~~ GND
3	11	20	LA_MOT — LP RC output
4	12	GND	GND
5	9	~~16~~ 16	~~SPARE~~ SWITCH
6	10	GND	GND
7	7	~~3V3~~ 3V3	~~SWITCH~~ 3V3
8	8	~~GND~~ GND	GND
9	5	22	STP_DIR
10	6	~~GND~~ GND	~~GND~~ GND
11	3	27	STP_EN
12	4	GND	GND
13	1	17	STP_MOT
14	2	~~GND~~ GND	GND

2 4 6 8 10 12 14

1 3 5 7 9 11 13

RPi GPIO/signal

14	YEL	~~GND~~	GND	~~brown wire~~
13	OR		21	LA_DIR — orange wire
12	RED		GND	brown wire
11	BRN		20	LA_MOT — LP RC filter — red wire
10	BLK		GND	~~blk~~
9	WHT		16	SWITCH yellow
8	GRY		GND	
7	PUR		3V3	3V3 red
6	BLU		GND	~~black~~ blk
5	GRN		22	STP_DIR
4	YEL		GND	
3	OR		27	STP_EN
2	RED		GND	
1	BRN		17	STP_MOT



Current GPIO flow

PWM.c #.c 20

linear actuator

moves.c 16 or input 22 DIR

16 or input 16

Linear accurator
20 - PWM drive
21 - DIR
GND - GND

Zero.c 22 DIR
27 ENABLE
17 MOTOR
26 SWITCH
↳ make 20 16

Steppers

20 in use
? 21

? 26
? 19

2 4 6 8 10 12 14
1 3 5 7 9 11 13

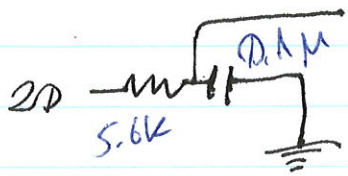
1 Brown
2 Red
3 orange
4 yellow
5 Green
6 Blue
7 purple
8 gray
9 white
10 black
11 brown
12 red
13 orange
14 yellow

Cable grey

17 MOT
27 EN
22 DIR
3V3
GND
20
16
19 NA
21 LA DIR

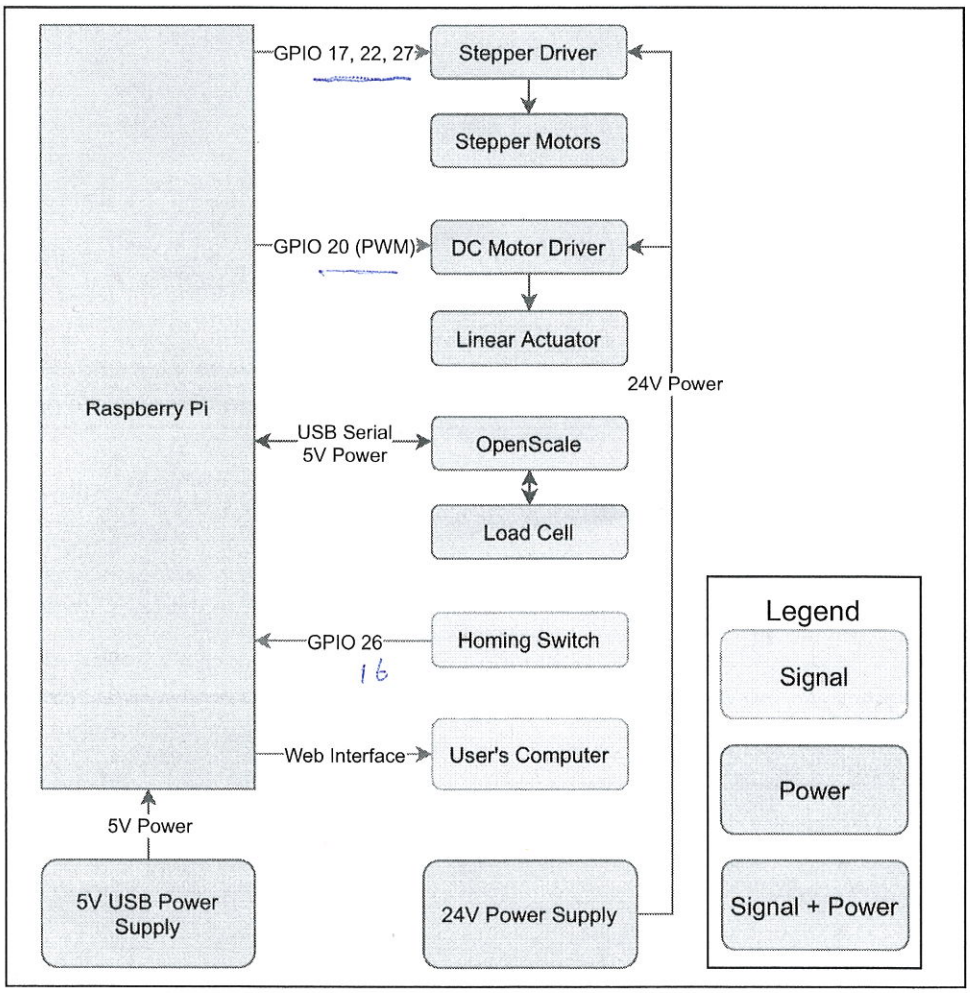
Breadboard

✓
✓
✓
✓
✓
✓
✗
✓



Stepper cable

	Silver Side mark	Yellow PUL+, ENA+ 3V3 DIR+	Black DIR−	Green ENA−	Red PUL−
RPi ribbon		purple	green	orange	Brown
		3V3	22	27	17
			STP_DIR	STP_EN	STP_MOD


Raspberry Pi
GPIO 17, 22, 27
Stepper Driver
Stepper Motors
GPIO 20 (PWM)
DC Motor Driver
Linear Actuator
24V Power
USB Serial
5V Power
OpenScale
Load Cell
GPIO 26
Homing Switch
16
Web Interface
User's Computer
5V Power
5V USB Power Supply
24V Power Supply
Legend
Signal
Power
Signal + Power