OSURC Rover 2015 Electrical Box Connector Wiring

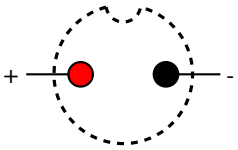
Nick Ames

Revision 2, 2015-03-17

1 Connector Pinouts

1.1 Drive Motors, E-Stop, and Lights

Jack, Solder Side



Pin #	Wire Color	Name	Description
1		-	Negative or Motor Black
2		+	Positive or Motor Red

Cable, Solder Side

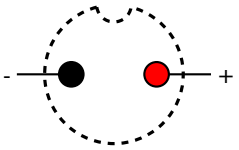
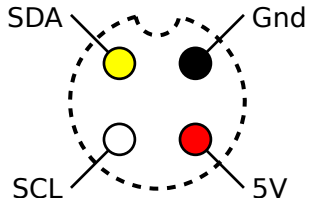


Figure 1: Drive Motors, E-Stop, and Lights

1.2 Gimbal Sensor

Jack, Solder Side



Pin #	Wire Color	Name	Description
1		Gnd	Gnd
2		5V	5V
3		SCL	I2C Clock
4		SDA	I2C Data

Cable, Solder Side

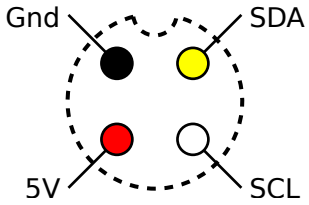
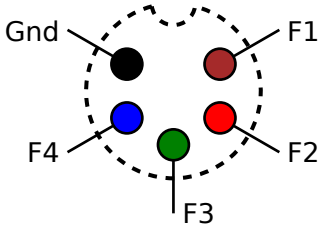


Figure 2: Gimbal Sensor

1.3 Arm Force Sensors

Jack, Solder Side



Pin #	Wire Color	Name	Description
1		F1	Force Ch. 1
2		F2	Force Ch. 2
3		F3	Force Ch. 3
4		F4	Force Ch. 4
5		Gnd	Gnd
Note: Use 6-conductor cable.			

Cable, Solder Side

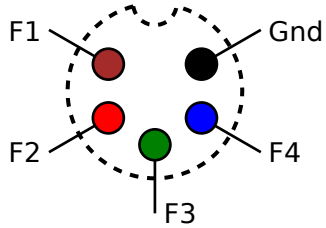
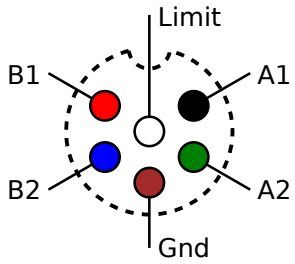


Figure 3: Arm Force Sensors

1.4 Arm Stepper Motors

Jack, Solder Side



Pin #	Wire Color	Name	Description
1		A1	Coil A-1
2		A2	Coil A-2
3		Gnd	Gnd
4		B2	Coil B-2
5		B1	Coil B-1
6		Limit	Limit Switch
Note: The limit connection is to the NC pin. Match stepper wire colors to cable wire colors.			

Cable, Solder Side

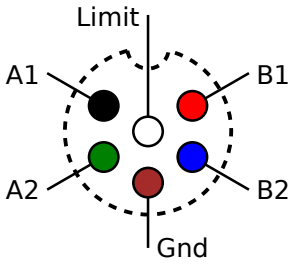
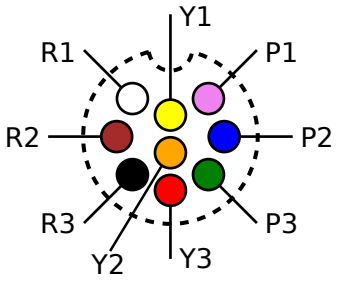


Figure 4: Arm Stepper Motors

1.5 Gimbal Motors

Jack, Solder Side



Pin #	Wire Color	Name	Description
1		P1	Pitch 1
2		P2	Pitch 2
3		P3	Pitch 3
4		Y3	Yaw 3
5		R3	Roll 3
6		R2	Roll 2
7		R1	Roll 1
8		Y2	Yaw 2
9		Y1	Yaw 1

Cable, Solder Side

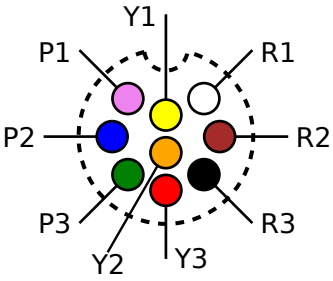


Figure 5: Gimbal Motors