

# OSURC Rover 2015 Electrical Box Connector Wiring

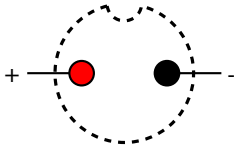
Nick Ames

Revision 4, 2015-03-28

## 1 Connector Pinouts

### 1.1 Drive Motors, E-Stop, and Lights

Jack, Solder Side



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

Cable, Solder Side

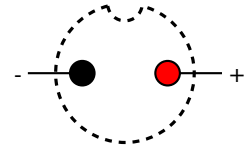
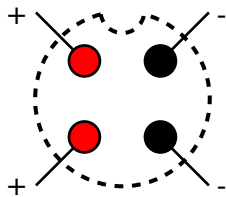


Figure 1: Drive Motors, E-Stop, and Lights

### 1.2 Main Power Input

Jack, Solder Side



Pin #	Wire Color	Name	Description
1	Black	-	Gnd
2	Black	-	Gnd
3	Red	+	24V In
4	Red	+	24V In

Cable, Solder Side

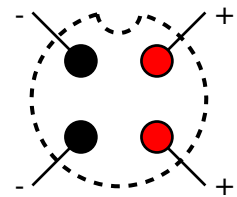
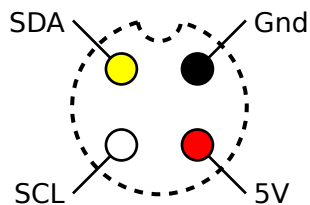


Figure 2: Gimbal Sensor

### 1.3 Gimbal Sensor

Jack, Solder Side



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

Cable, Solder Side

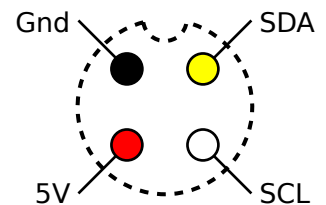
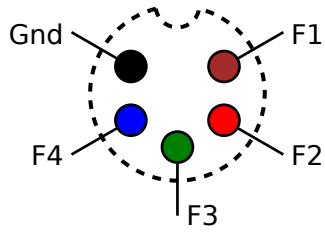


Figure 3: Gimbal Sensor

## 1.4 Arm Force Sensors

### Jack, Solder Side



Pin #	Wire Color	Name	Description
1	Brown	F1	Force Ch. 1
2	Red	F2	Force Ch. 2
3	Green	F3	Force Ch. 3
4	Blue	F4	Force Ch. 4
5	Black	Gnd	Gnd

*Note: Use 6-conductor cable.*

### Cable, Solder Side

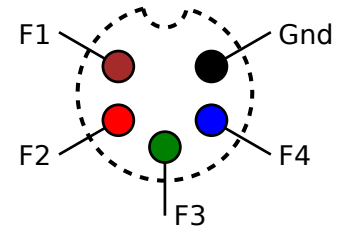
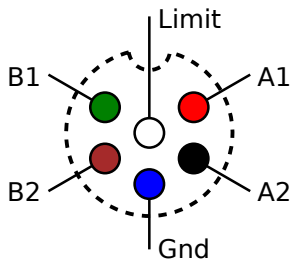


Figure 4: Arm Force Sensors

## 1.5 Arm Stepper Motors

### Jack, Solder Side



Pin #	Wire Color	Name	Description
1	Black	A1	Coil A-1
2	Green	A2	Coil A-2
3	Brown	Gnd	Gnd
4	Blue	B2	Coil B-2
5	Red	B1	Coil B-1
6		Limit	Limit Switch

*Note: The limit connection is to the NC pin.*

### Cable, Solder Side

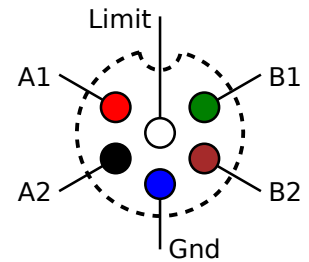
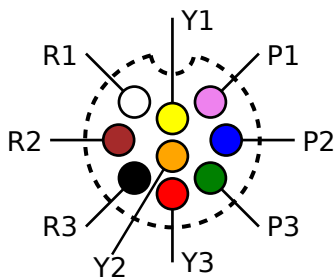


Figure 5: Arm Stepper Motors

## 1.6 Gimbal Motors

### Jack, Solder Side



Pin #	Wire Color	Name	Description
1	Purple	P1	Pitch 1
2	Blue	P2	Pitch 2
3	Green	P3	Pitch 3
4	Red	Y3	Yaw 3
5	Black	R3	Roll 3
6	Brown	R2	Roll 2
7		R1	Roll 1
8	Orange	Y2	Yaw 2
9	Yellow	Y1	Yaw 1

### Cable, Solder Side

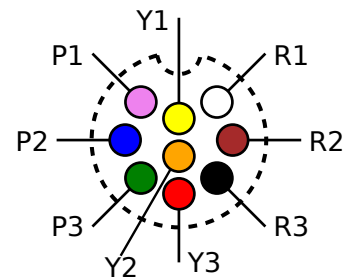


Figure 6: Gimbal Motors