1

2

3

4

1

2

3

4

1

2

3

4

Speaker

Audio Right

Audio Left

Eye LEDs

Head Nod Servo

Head Nod Servo Cntrl

Gnd

6V

1

2

3

4

Head Rotate Servo

Gnd

6V

Gnd (LEDs and Audio)

Back Air Cylinder (Up/Down)

Back Cntrl

(black wire)

Short - Back up   
Open - Back down

12V

(red wire)

4

3

1

2

Head Rotate Servo Cntrl

Two 7-wire Sprinkler cables used from the controller to the Prop (18 gauge wire can handle 16 amps max). . Although any pin of the connectors can handle at most 8 amps. 6V power supplies supply max 3 amps per. supply, Air cylinder valve draws at most 2.5/12 = 0.21 amps but requires circuitry as shown below to drive the Air cylinder relay to reduce flyback problems (non turn off). LEDs draw maybe 20 milliamps combined with 500 ohm resistor in series

E

B

C

Air Cylinder Relay Red wire

Digital Relay Cntrl In

Arduino Mega Pin 23

12 V

Air Cylinder Relay

Air Cylinder Relay Black wire

+5V - Relay on

0V - Relay off

1K ohm (or maybe 500 ohm) resistor? Verify what resistor value we need?

Arduino Mega pin 22

Eye LEDs

Head Rotate Servo Cntrl - Arduino Mega pin 11 (PWM)

Head Nod Servo Cntrl - Arduino Mega pin 12 (PWM)

Eye LEDs - See circuit above

MDFLY MP3 Audio Player pins:

pin 17 Right Audio   
pin 18 Left Audio

Pin 19 GND (RTN)