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Feeding Experimentation Device (FED): Construction and Validation of an Open-source Device for Measuring Food Intake in Rodents

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URL: <http://www.jove.com/video/55098>

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Materials

Name	Company	Catalog Number	Comments
Electronics			
Adafruit Motor/Stepper/Servo Shield for Arduino v2 Kit - v2.3	Adafruit	1438	Use of other motor shields has not been tested and will require changes to the code
Adafruit Assembled Data Logging shield for Arduino	Adafruit	1141	Use of other data logging shields has not been tested and will require changes to the code
PowerBoost 500 Charger	Adafruit	1944	Other voltage regulator boards have not been tested, but should work if they have similar specifications
FTDI Friend + extras - v1.0	Adafruit	284	Any FTDI-USB connection will work
Small Reduction Stepper Motor - 5VDC 32-Step 1/16 Gearing	Adafruit	858	Use of other stepper motors has not been tested
Arduino Pro 328 - 5V/16MHz	SparkFun	DEV-10915	Other Arduino boards should work, although may require changes to the code
Photo Interrupter - GP1A57HRJ00F	SparkFun	SEN-09299	Other photointerrupters will work, but may require changes to the 3D design
SparkFun Photo Interrupter Breakout Board - GP1A57HRJ00F	SparkFun	BOB-09322	Other photointerrupters will work, but may require changes to the 3D design
Connectors, screws, and miscellaneous items			
Shield stacking headers for Arduino (R3 Compatible)	Adafruit	85	Any stacking header that says Arduino R3 compatible will work
Multi-Colored Heat Shrink Pack - 3/32" + 1/8" + 3/16"	Adafruit	1649	Any heatshrink will work
Hook-up Wire Spool Set - 22AWG Solid Core - 6x25ft	Adafruit	1311	Any wire will work
Lithium Ion Battery Pack - 3.7V 4400 mAh	Adafruit	354	Any 3.7 V Lithium battery with a JST connector will work
SD/MicroSD Memory Card (8GB SDHC)	Adafruit	1294	Any SD card will work
50 Ohm BNC Bulkhead Jack (3/8" D-Hole)	L-com	BAC70A	Any BNC bulkhead will work
Type 316 Stainless Steel Pan Head Phillips Sheet metal screw, No 6 size, 1/4" Length	McMaster-Carr	90184A120	Any screws of this specification will work

Type 316 Stainless Steel Pan Head Phillips Sheet metal screw, No 2 size, 1/4" Length	McMaster-Carr	91735A102	Any screws of this specification will work
Nylon 100 Degree Flat Head Slotted Machine Screw, 4-40 Thread, 1" Length	McMaster-Carr	90241A253	Any screws of this specification will work
Nylon Hex Nut, 4-40 Thread Size	McMaster-Carr	94812A200	Any nut of this specification will work
2 Pin JST M F Connector 200 mm 22AWG Wire Cable	NewEgg	9SIA27C3FY2876	Any 2 pin connector will work for this connection
Metal Pushbutton - Latching (16 mm, Red)	SparkFun	COM-11971	Any push button or switch will work
Resistor Kit - 1/4 W	SparkFun	COM-10969	Any 1/4 W resistors will work