



THINGS TO TRY

# Motor Cable

The Motor Cable Connector was inspired by

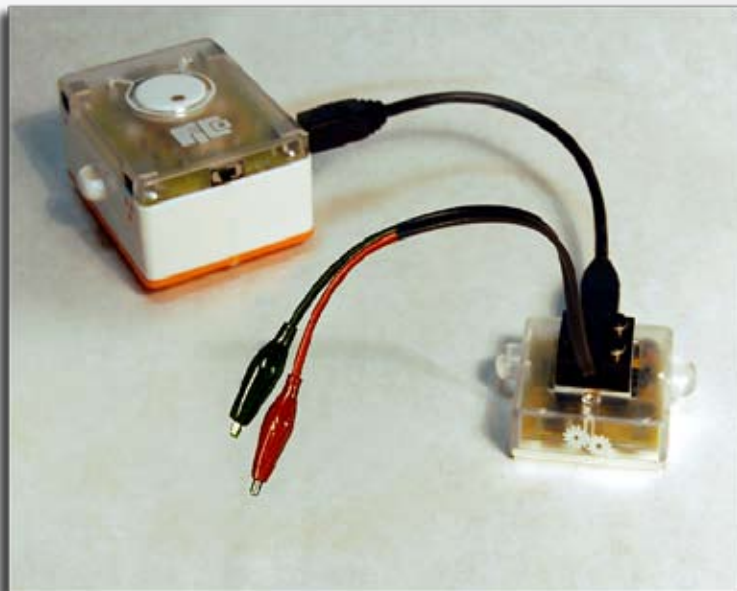


our surplus store visits. Check out the surplus store inspiration on the [PIE website](#).

PIE Institute shares a playful and inventive approach to teaching science, art, and technology.



We always bring a PicoCricket, motor board, and this motor cable connector to test salvaged electronic parts at our local surplus store. This homemade connector will let you connect salvaged actuators (output devices) such as relays, lights, motors, and other electronic parts that can be powered by 4 to 6 volts.



## TRY IT! Collect these things:

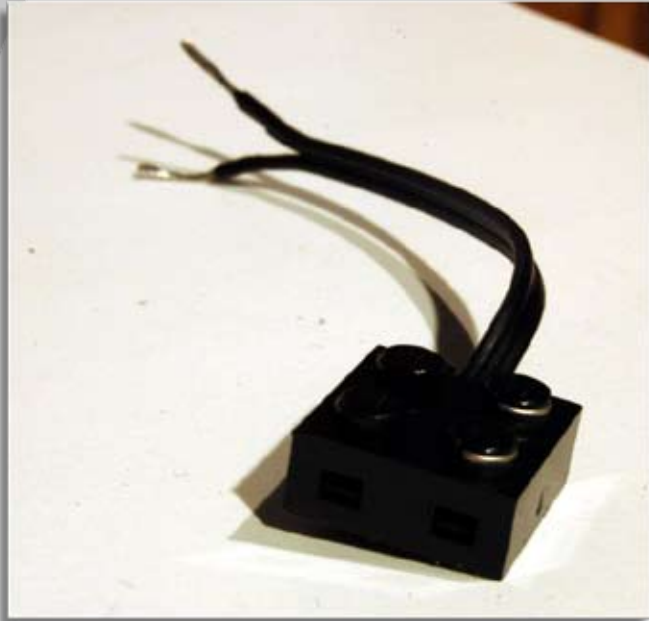
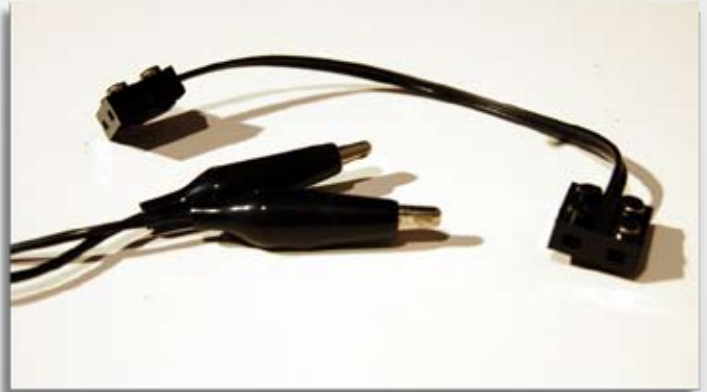
- LEGO motor cable
- alligator clip wire connector
- scissors
- wire stripper
- electrical tape



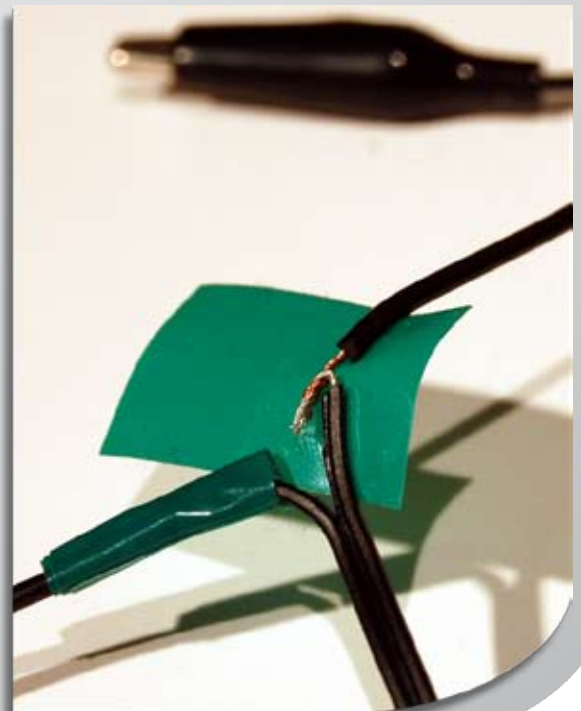
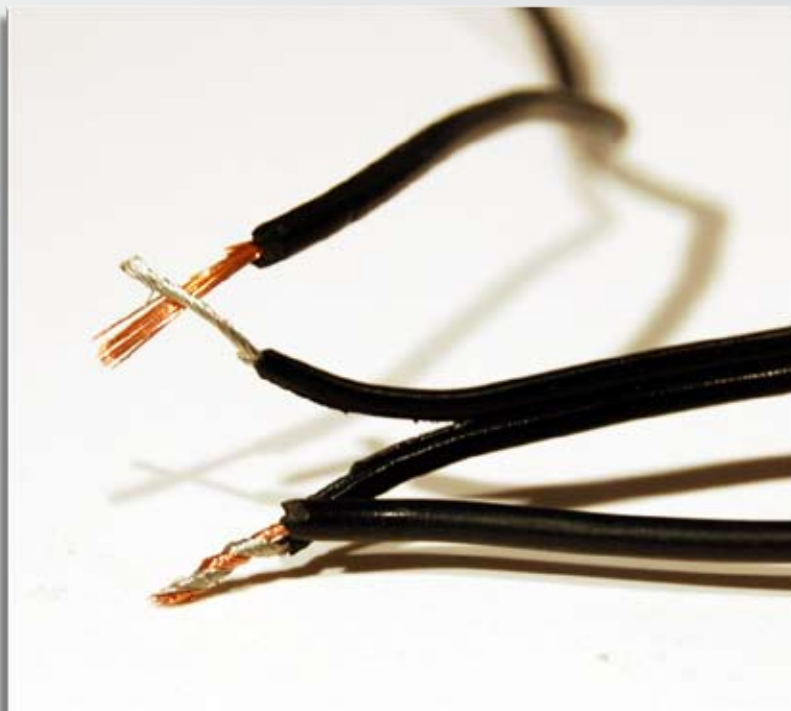
PicoCricket motor controller, cables and switch  
[www.picocricket.com](http://www.picocricket.com)

## GETTING STARTED

Cut a LEGO motor cable in half.  
Cut the alligator clip wire connector in half.  
Strip all the ends.

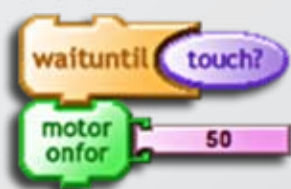
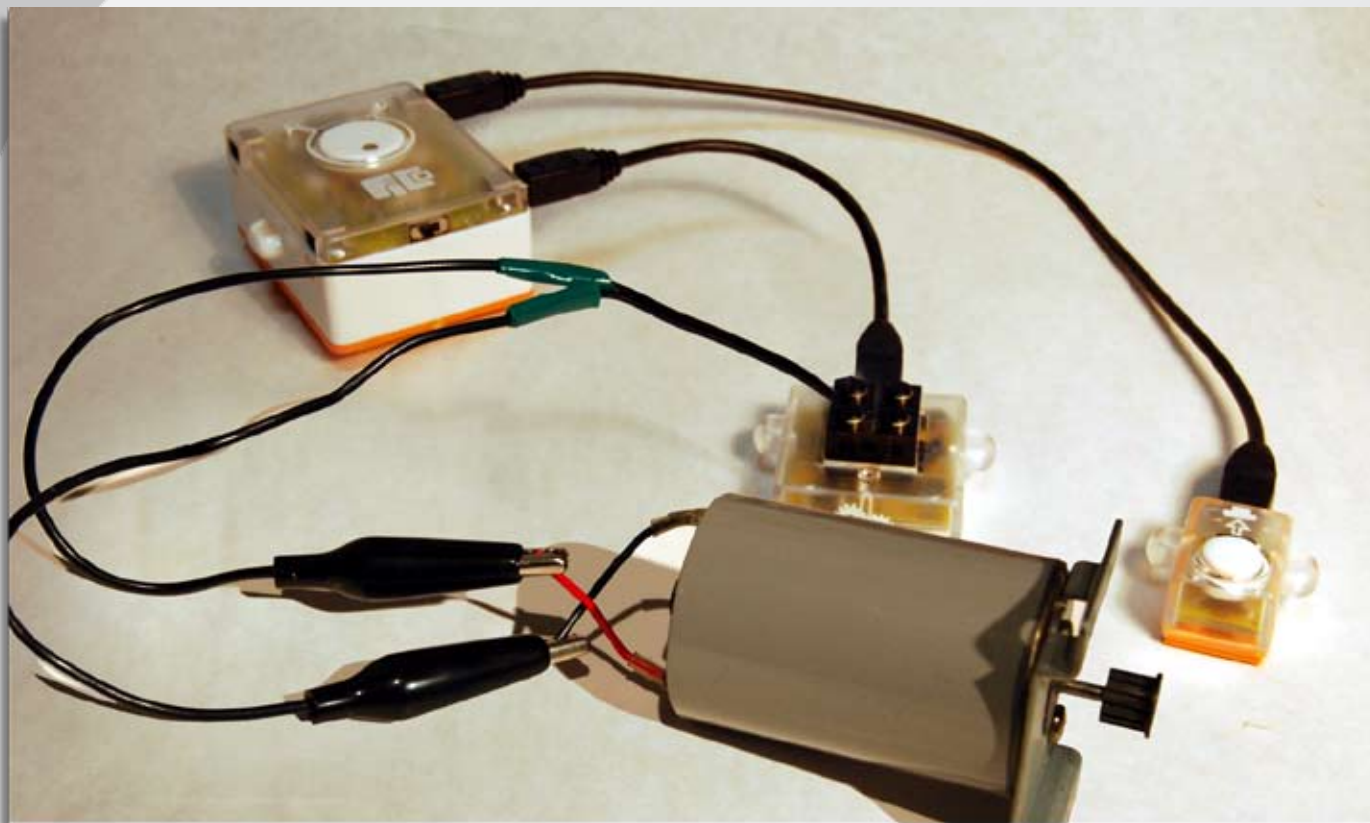


Twist (or solder) the ends of the alligator clip wire connector to the ends of one half of the LEGO motor cable. (You can use the other half of the LEGO motor cable at another time.)  
Tape each twisted pair of wires.



## TEST IT OUT

Connect your motor cable connector to a PicoCricket motor board and to a motor or other electronic device that can be powered by 4 to 6 volts.



*Tip: Some small motors and other electronic devices may require more electricity than the Cricket can provide. If this happens, the Cricket will stop running its program. Restart the PicoCricket and try another electronic part if this happens.*

*Tip: You can connect your motor cable connector to a relay*



*if you want to use an electronic device that requires more than 6 volts.*

## TAKING IT FURTHER

Go get stuff to test! Take apart an old electronic toy, search an online electronics store, or visit a surplus store to find electronic components such as lights, relays, and motors that will work with the PicoCricket. Try visiting <http://www.electronix.com>



## WHY IS THIS A PLAYFUL AND INVENTIVE EXPLORATION

### New use for the everyday object

This is an inventive way to reuse components from discarded toys and electronic devices.

### Extending the PicoCricket kit

The motor connector cable extends the PicoCricket kit, allowing the use of a wide variety of salvaged output devices.

### Learning a new skill

This activity is a good way to learn how to solder.

## RELATED IDEAS

Cell phones and pagers use offset motors when they vibrate. You can harvest a motor from a discarded phone or pager, then connect it to the PicoCricket to see how it runs.

Many of the PIE activities utilize salvaged electronic parts for use as inputs and outputs with the PicoCricket.



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