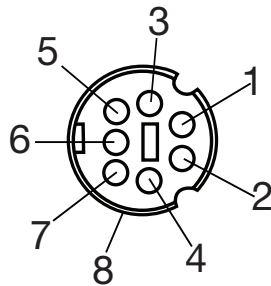


## Create® 2 to 5V Logic

The Create® 2 Serial Port uses 5V logic-level asynchronous serial communication, which is perfect for interfacing with boards which use 5V logic (like most Arduinos). To interface to such a device, the connection is very simple.

Procure the following part:

1. A 7-pin mini-DIN cable. For example, the Tensility 10-00543 will work.



**Front Side**

1. red wire
2. purple wire
3. black wire
4. brown wire
5. orange wire
6. yellow wire
7. green wire
8. drain wire

- Pins 1 and 2 are Create® 2 battery voltage. When plugged into the charger, this can be as high as 21V. Please check your device's input power specification before using this to power it! You may need a voltage regulator (linear or buck).
- Pin 3 is Roomba TX, which will go to the device's RX.
- Pin 4 is Roomba RX, which goes into the device's TX.
- Pins 5 and 6 are Ground.
- Pin 7 is Roomba BRC, which goes into a device GPIO. Note that the Tensility cable uses the opposite pin numbering conventions as Roomba.

In some cases, the drive strength of a Roomba TX line is not enough to drive the RX line of another board (for example, in some revisions of Arduino; see <http://goo.gl/M4Q56u> | [this post](#)] for details).

In this case, a simple PNP transistor (**2N2907A**, **2N3906**, or **2N4403**, among others) can be used to provide enough "drive" for the Arduino.

