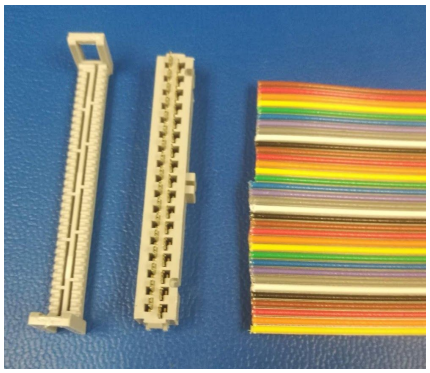
Simulated Signal from a Frequency Generator

The purpose of this document is to provide information on connecting the wires for several components of OpenPMU.

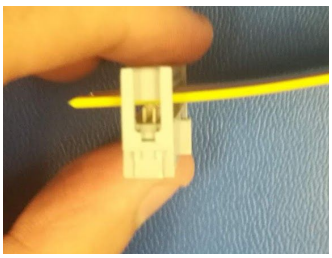
Ribbon Cable Construction

Start by obtaining the USB-6009 OEM IDC Socket with 34 contacts, and at least 5 inches (12 cm) of ribbon cable, cut to 34 individual wires.



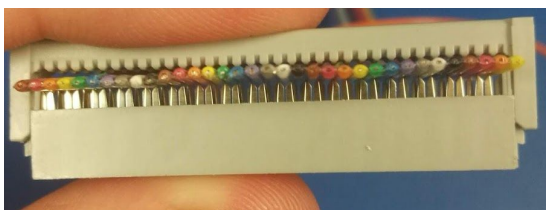
To connect the ribbon cable and the IDC Socket, you will need something similar to the vice grip shown to the right.

Take the ribbon cable and sandwich it between the socket and the stress relief.

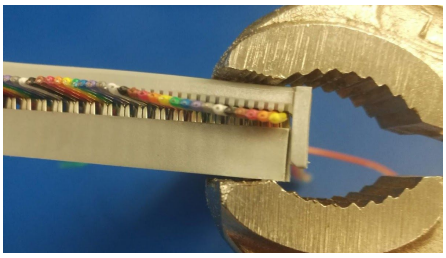


ATTENTION: Wear some sort of eye protection when connecting the the ribbon cable to the IDC socket, as the stress relief may break.

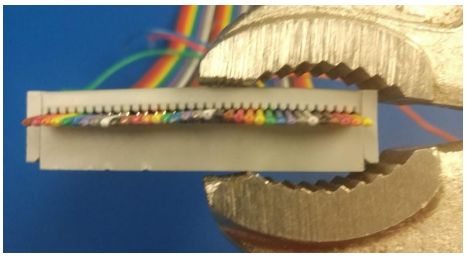
ATTENTION: Make sure that each wire has a corresponding connection before using the vice grip to clamp the connectors together.



ATTENTION: Ensure that the notch is pointing in the same direction as your ribbon cables. If it is not, you will have to start over. The notch is circled in the image below.



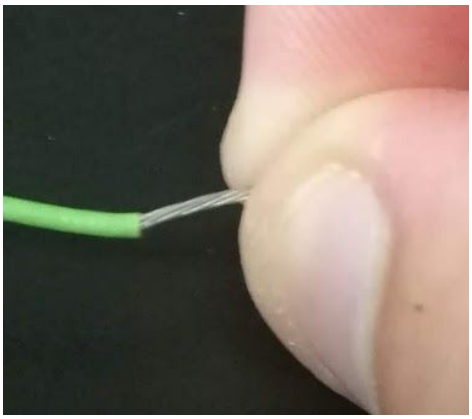
Start on the edges, and with force, clamp the stress relief down with the vice grip. Continue to clamp the stress relief down, making sure the top is level, and every connection is established. When complete, as shown, there are no visible copper connectors. Carefully insert the IDC socket into your USB-6009.



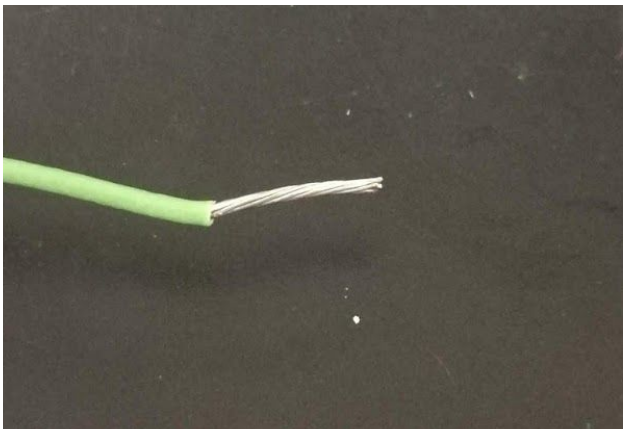
The image to the left shows the ribbon cable successfully added to the IDC socket. Notice that there are no visual connectors.

Tinning

Here is an example of how to "tin" wires, which involves stranded cables. You will need to start by stripping the end of a stranded wire. With your fingers, twist the end of the stranded cable to combine all of the strands into one. Apply a small amount of solder to the twisted end to create a homogenous wire, similar to the images shown below.



The twisted stranded wires:



When applying the solder, your wires should look something similar to the image to the right.