



## Do It Yourself Checklist

Want to make the cables yourself but don't know where to start. With this checklist, we will run through the steps involved to produce quality, professional cables.

### Step 1 - Measure Cable Length:

- Determine the total length of cable you require. It is wise to measure a little longer than you need. Cutting is a lot easier than joining.
- You can view how to correctly measure cable [here](#).
- Knowing the length will also help you calculate any [voltage drop](#).

### Step 2 - Voltage, Power & Current Requirements:

**Voltage** - Are you using 12V, 24V, 36V or 48V?

**Power** - Your accessories, starter etc. power requirements. Usually measured in Watts or Amps.

**Current** - Determined by your voltage & power requirements. (General formula is Power/Volts = Current)

**For example:** 1500W Inverter running on 12V will require a current flow of 125A ( $1500/12 = 125$ )

- You will also need to take into account [voltage drop](#) and [derating factors](#).

**Please note:** This only a guide - please seek professional advice if still unsure



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### Step 3 - Cable Gauge Size:

Now that you know your current flow requirements.

You will need to choose a cable that has an Amp Rating that exceeds your requirements.

[\(Refer Cable Size Guide\)](#)

### Step 4 - Slide on Sleeving:

If you plan on using any sleeving, it is a good idea to slide this over the cable before crimping lugs or terminals. Split tubing can be fitted later.

### Step 5 - Slide on Heat Shrink:

Heat Shrink, it is normally best to slide down the cable before crimping any lugs or terminals. Ensure it is large enough to fit over any sleeving you have fitted. For this reason, it is best to use Adhesive Lined Shrink as it has a 3:1 shrink ratio as well as sealing your connections.

### Step 6 - Slide on Insulators:

If you are using insulators, be sure to slide them over the cable before crimping lugs or terminals. In most cases it can be done after crimping but is generally more difficult.



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### Step 7 - Select Lugs & Battery Terminals:

When selecting lugs and terminals be aware that they are matched to the gauge of the cable.

[\(Refer Accessory Size Guide\).](#)

Lugs - Check cable gauge and the stud size.

Battery Terminals - Check cable gauge, polarity (Positive or Negative) and whether you need straight or elbow fitment.

### Step 8 - Strip Cable:

Strip cable using cable stripper, Stanley knife or similar, being careful not to cut too many strands. Once cable has been stripped, do not twist the copper strands, as this increases the diameter of the conductor, making it more difficult to fit the lugs/terminals.

### Step 9 - Crimping or Soldering:

**Crimping:** - It is recommended that you properly and firmly crimp all connections with either an indent or hex style crimper appropriate to the size of your cable.

**Soldering:** - Generally it is not recommended as it is difficult to do correctly.

If not done correctly soldering can result in the following issues:

- Cold Solder Joints - Not enough heat applied
- Deformed/Burnt Insulation - Too much heat applied
- Loss of Flexibility - Solder wicking along the copper strands



**Custom** Power Cables

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### Step 10 - Apply Heat to Heat Shrink:

Slide the pre-installed heat shrink (Step 5) back over crimped lug/terminal and/or sleeving.

Preferably using a heat gun, slowly apply enough heat until the heat shrink forms tightly around your connections. Be careful not to melt any sleeving or insulators.

### Step 11 - Fit Insulators:

If you are using insulators, be sure to slide them into place over your lugs/terminals.

**Your cables are now complete.**