











SUGGESTED TOOLS	STOCK PHOTO	DESCRIPTION	WHY I USE IT	AMAZON LINK
<b>SOLDERING IRONS</b>				
Yihua 853 D Soldering Station		Soldeiring Iron, Heat Gun and Power Supply. Comes with brass cleaning sponge, assorted tip sizes, heat gun tips, solder, and testing leads.	All in 1 desktop combo. Can solder LEDs and test on the same machine. Very solid iron. I have used my first one (with 1 Amp Power supply) for 10+ years, and second for 4+ years.	<a href="https://amzn.to/4j8qlPa">https://amzn.to/4j8qlPa</a>
Weller 1010NA - 70 Watts		Replacement for Weller WSD51. Digital display soldering iron with +/- 4 degrees F, 2 degrees C.	This thing is a workhorse and portable enough for a wired station. My Weller has taken tumbles off the workbench and still works flawlessly every time.	<a href="https://amzn.to/4cveRMH">https://amzn.to/4cveRMH</a>
Ryobi 18 volt Hybrid Soldering Station		Hybrid Battery and 120v plug in soldering station. Adjustable temperature.	Part of my Ryobi 18 volt soldering-to-go kit. With the Ryobi drill, heatgun, glue gun, and the rest of their full line I only need one battery type.	<a href="https://amzn.to/4iuCsyI">https://amzn.to/4iuCsyI</a>
Fanttik T1 Cordless Soldering Iron Kit		Battery Powered soldering iron with 4 tips. 390 to 840 degrees F.	Great battery powered soldering iron with stand. Great for quick repairs and small tip for tight spaces. Heats quickly, and chargeable via USB-C.	<a href="https://amzn.to/3G5Z8Ym">https://amzn.to/3G5Z8Ym</a>
<b>WORKBENCH</b>				
Yihua 948DQ-I Fume Extactor		Fume extractor with front and rear charcoal filters and built in hands.	Keeps fumes out of my face, and another pair of helping hands/alligator clips is convenient right in front of the fan.	<a href="https://amzn.to/4j8xf0w">https://amzn.to/4j8xf0w</a>
Silicon Soldering Mat		Soldering Mat with compartments and magnets for storage of parts. Protect your workspace from solder burns.	Protects my work surfaces and easy enough to take on the go. Compartments are convenient to have pre-cut heatshrink and parts at the ready.	<a href="https://amzn.to/42awxd2">https://amzn.to/42awxd2</a>
Helping Hands with Magnifying Glass		Alligator clip helping hands. Magnifying glass for tiny detailed work.	Having extra hands to hold wire and LED Strip. Travels easy by removing the magnifying glass.	<a href="https://amzn.to/3Rk8knP">https://amzn.to/3Rk8knP</a>
Octopus Helping Hands		6 arm alligator clip helping hands good for holding multiple pieces and PCBs. Rubber protective jaw covers to prevent tearing work pieces.	Can never have too many hands. Great for holding and positioning hard to hold pieces with articulating arms that the other helping hands can't manipulate position.	<a href="https://amzn.to/4lcX523">https://amzn.to/4lcX523</a>


<p><b>Digital Microscope</b></p>		<p>Digital Microscope with 2000x zoom. Comes with 3 interchangeable lenses and has built in lighting for intricate work.</p>	<p>My go to for fine work and PCB detail work. Great to record repairs for repeatability and to see imperfections in PCB and microcontrollers.</p>	<p><a href="https://amzn.to/3YvMpob">https://amzn.to/3YvMpob</a></p>
<p><b>Cutting Mat</b></p>		<p>Healable Cutting Mat. Protects work surface from cutting with blades and rotary cutters.</p>	<p>I keep a larger one at my home office and a smaller one for travel in my to-go kits. Convenient measurement markers for uniform cutting of heatshrink and wires.</p>	<p><a href="https://amzn.to/4lrQvZ">https://amzn.to/4lrQvZ</a></p>


**HAND TOOLS**


<p><b>Soutwire Wire Stripper</b></p>		<p>16-26 AWG Wire Stripper.</p>	<p>This is my go to tool. It's the most comfortable in my hands, and I can strip faster than using an automatic stripper.</p>	<p><a href="https://amzn.to/3E1PiPy">https://amzn.to/3E1PiPy</a></p>
<p><b>Klein Wire Stripper</b></p>		<p>22-30 AWG Wire Stripper.</p>	<p>Small gauge wire stripper. Used many times and spring loaded helps hand fatigue.</p>	<p><a href="https://amzn.to/4jsNTYi">https://amzn.to/4jsNTYi</a></p>
<p><b>Klein Wire Stripper</b></p>		<p>12-22 AWG Wire Stripper with Crimpers.</p>	<p>My daily carry for larger gauge wire. Nice needle nose pliers on the tip. I prefer strippers on the tip and crimpers below, but it's a preference. Can also cut 8-32 and 10-24 screws.</p>	<p><a href="https://amzn.to/3Ej9gg0">https://amzn.to/3Ej9gg0</a></p>
<p><b>Klein 14-in-1</b></p>		<p>14-in-1 Micro Screwdriver. Has Flat, Phillips screw heads, as well as tamper proof T bits, and 6 nut drivers.</p>	<p>One of my daily carries. Used for tightening smaller gauge wires in phoenix connectors and similar screw terminals. T bits are useful on many common plug types.</p>	<p><a href="https://amzn.to/3G7rhyn">https://amzn.to/3G7rhyn</a></p>
<p><b>Klein 11-in-1</b></p>		<p>11-in-1 Screwdriver. Flat, Phillips screw heads, as well as larger T bits, square and nut drivers.</p>	<p>Another daily carry. Used for standard gauge wires common with electrical work (18-12). Nut Drivers are common sized and used frequently in electrical work as well.</p>	<p><a href="https://amzn.to/4jbeOGY">https://amzn.to/4jbeOGY</a></p>
<p><b>Sprue Cutter</b></p>		<p>Flush Cutter. Sharp blades and flat cutting surface.</p>	<p>Another daily carry for me. I prefer this over the diagonal cutters. Better for small gauge wire, &lt;16 AWG, and I also prefer this method to cut zip ties flush so you don't cut your hands.</p>	<p><a href="https://amzn.to/4cyzQPE">https://amzn.to/4cyzQPE</a></p>


8" Wire Cutter and Stripper		8" Wire Cutter and Wire Stripper for 8-16 AWG.	Great for larger diameter wire >14 and heavily sheathed multi conductor cable. Reduces fatigue when you need to cut a lot of wire.	<a href="https://amzn.to/4ia7mMs">https://amzn.to/4ia7mMs</a>
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Utility Knife		Utility Knife. Retractable knife with blade that can break off when dull.	Daily carry for me on most jobs. Affordable blade, and useful for everything from cable insulation to boxes.	<a href="https://amzn.to/4lmKXhH">https://amzn.to/4lmKXhH</a>
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Hemostats		Various Sized Hemostats. Lockable pliers useful for snaking and gripping small wires.	I always have a few in my kit. Love these for grabbing onto small gauge wires in tough to reach places or hold extremely small parts.	<a href="https://amzn.to/4lqKvin">https://amzn.to/4lqKvin</a>
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Wiha Screwdrivers		Small Flat and Phillips Screwdrivers.		<a href="https://amzn.to/44nPZEx">https://amzn.to/44nPZEx</a>
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Eklind Hex Set		Hex T-handle set. With both Metric and SAE ranging in size from 3/32" to 3/8" and 2 to 10mm.	T-handles are useful for repeated use and much easier than multi size sets. The rubber coating is comfortable.	<a href="https://amzn.to/4jgvfWb">https://amzn.to/4jgvfWb</a>
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Klein 7-in-1 Nut Driver		7 size Nut Driver. With SAE sizes ranging from 1/4" to 9/16"	In my to go kit for common nut sizes. Little heavy, but convenient for multiple sized nuts.	<a href="https://amzn.to/427Tjix">https://amzn.to/427Tjix</a>
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Insulated Screwdriver and Pliers		14 Piece 1000V Insulated Screwdriver and Pliers Kit	Great for working on or near live circuits. Protecting yourself is always important.	<a href="https://amzn.to/3RMSUz8">https://amzn.to/3RMSUz8</a>
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**TESTING & MEASURING**





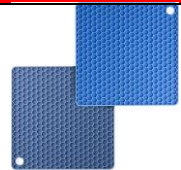
Fluke 17B+		AC/DC Multimeter. Measures and tests continuity, ohms, voltages and ampacities.	Another tool in my daily kit. Fluke is known for it's quality in measuring electrical circuits.	<a href="https://amzn.to/4icmXek">https://amzn.to/4icmXek</a>
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Fluke Tip Set		Fluke IC tips, Alligator clips, and TL series tips. Rated at 3 Amps.	Fits onto the probes that come with the Fluke meter. Great for getting into small tight spaces on the PCB to meter chips and integrated circuits. Alligator clips are ideal for locking onto wires for hands free use.	<a href="https://amzn.to/42FWLnt">https://amzn.to/42FWLnt</a>
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<p><b>Allosun Digital Multimeter</b></p>		<p>Allosun Compact Digital Autoranging Multimeter</p>	<p>Great little pocket meter for field troubleshooting. This one is in my carry everywhere bag that I wear on my hip. Used frequently to check for power or continuity.</p>	<p><a href="https://amzn.to/3EqG0nm">https://amzn.to/3EqG0nm</a></p>
<p><b>Klein Tools Edison and Non-contact voltage tester</b></p>		<p>Klein 80025 Outlet Tester with GFCI and Non-contact voltage tester.</p>	<p>Both of these live in my kit. Easy ways to detect voltage and see quickly if plugs are wired correctly.</p>	<p><a href="https://amzn.to/3RdqU7C">https://amzn.to/3RdqU7C</a></p>
<p><b>Klein Outlet Tester with GFCI</b></p>		<p>Klein RT250 GFCI Outlet Tester with digital display.</p>	<p>Test the speed that your GFCI trips to the millisecond. Shows wiring and voltage ratings on the digital display.</p>	<p><a href="https://amzn.to/4j9k6V0">https://amzn.to/4j9k6V0</a></p>
<p><b>BOSCH Laser Distance Measure</b></p>		<p>165' Laser Distance Measure.</p>	<p>Useful for measuring distances to determine LED strip or cable lengths without a tape measure. Great for measuring longer distances and accurate.</p>	<p><a href="https://amzn.to/3XVANuC">https://amzn.to/3XVANuC</a></p>
<p><b>Torque Screwdriver</b></p>		<p>10-60 Pound Torque Screwdriver with Bits.</p>	<p>Great tool for torquing wires to connectors and terminals.</p>	<p><a href="https://amzn.to/3XS5lrG">https://amzn.to/3XS5lrG</a></p>
<p><b>Digital Caliper</b></p>		<p>6" Digital Caliper with LCD Display</p>	<p>Good to find centers of LEDs on strip and exact dimensions for CAD and other drafting.</p>	<p><a href="https://amzn.to/3XSkotL">https://amzn.to/3XSkotL</a></p>
<p><b>COMBO KITS</b></p>				
<p><b>6 Pack 100' 22 AWG Wire</b></p>		<p>6 Colors 100' 22 AWG Silicon Insulated Copper</p>	<p>Great kit to have ready for repairs and quick builds. Multiple colors of wire to help keep power and data separated or all the same color to hide your wires in garments.</p>	<p><a href="https://amzn.to/43KqVOG">https://amzn.to/43KqVOG</a></p>
<p><b>Heatshrink Combo Kit</b></p>		<p>10 Sizes Heatshrink Combo</p>	<p>Great kit for quick repairs. Multiple sizes to choose from, and figure out the sizes you use most often.</p>	<p><a href="https://amzn.to/3G72xGl">https://amzn.to/3G72xGl</a></p>
<p><b>Crimp Terminal Combo Kit</b></p>		<p>Wire Terminals with Crimping Tool. Assorted sizes and terminal types.</p>	<p>Great kit for repairs and quick builds. Multiple sizes and included tool makes jobs quick and easy.</p>	<p><a href="https://amzn.to/42baH9i">https://amzn.to/42baH9i</a></p>

<p><b>Wago Combo Kit</b></p>		<p>78 Piece Assorted Wago Kit with 3 different sizes. 2 Position, 3 Position and 5 Position</p>	<p>Great kit for prototyping and quickly splicing and temporarily extending wires with lever locks.</p>	<p><a href="https://amzn.to/4cxFxfS">https://amzn.to/4cxFxfS</a></p>
<p><b>Grommet Combo Kit</b></p>		<p>190 Piece Grommet Combo Kit ranging from 1/4" to 1".</p>	<p>Great kit to have on hand especially when running wires through metal. Grommets protect your wires insulation from being shredded and creating shorts. Various sizes are helpful in giving you options and locating the size you need for larger quantity ordering.</p>	<p><a href="https://amzn.to/3Edqk73">https://amzn.to/3Edqk73</a></p>
<p><b>Ferrule Combo Kit</b></p>		<p>1800 Piece Ferrule Kit with Crimper. Sizes franging from 22 AWG to 10 AWG</p>	<p>Great kit for crimping wires to go into screw terminals and phoenix connectors.</p>	<p><a href="https://amzn.to/4lpiKXw">https://amzn.to/4lpiKXw</a></p>
<p><b>JST Combo Kit</b></p>		<p>1550 Piece 2.54mm Dupont and JST-XH Combo Kit with Crimper.</p>	<p>Great kit for small crimp connectors. Used for quick repair and build of quick disconnect connectors.</p>	<p><a href="https://amzn.to/4cNulX">https://amzn.to/4cNulX</a></p>

**PERSONAL PROTECTIVE**

<p><b>Safety Glasses</b></p>		<p>8 Interchangeable Lenses and case.</p>	<p>Safety Glasses should always be worn while doing electrical work. Protecting your eyes from flying wire, arc flashes, and you just look cool!</p>	<p><a href="https://amzn.to/4iglPSI">https://amzn.to/4iglPSI</a></p>
<p><b>Petzl Helmet</b></p>		<p>Petzl Helmet with chinstrap for climbing. Certification (s): CE, EN 397, EN 12492, ANSI Z89.1 Type I Class C, EAC</p>	<p>I wear and recommend this style helmet especially for working at height. More comfortable than a construction style helmet.</p>	<p><a href="https://amzn.to/42EjUJ">https://amzn.to/42EjUJ</a></p>
<p><b>230 Degree Headlamp</b></p>		<p>230 Degree LED Headlight for use with helmet. Has focused and wide beams for dark</p>	<p>This is a great light and can switch between flood and spot lights. With just a wave of a hand you don't need to fumble for a switch. Chargeable by USB cables.</p>	<p><a href="https://amzn.to/4ihWs7w">https://amzn.to/4ihWs7w</a></p>
<p><b>Silicone Finger Protectors</b></p>		<p>24 Piece Finger Protectors for heated work. Large, Medium and small sizes</p>	<p>I use these to protect my fingers when soldering wearables to protect my fingers because I'm holding the wires.</p>	<p><a href="https://amzn.to/4igMD9M">https://amzn.to/4igMD9M</a></p>
<p><b>Silicone Trivet</b></p>		<p>2 Piece Silicone Trivet.</p>	<p>I use these to protect clothing from soldering burns. Just cut a split down the middle to wrap your wire.</p>	<p><a href="https://amzn.to/3G4ISrM">https://amzn.to/3G4ISrM</a></p>

<p><b>Re-usable FaceMask</b></p>		<p>Re-usable facemask with changeable filters.</p>	<p>More comfortable than reusable masks. Great for the shop, and dusty environments. And it's yours so it's washable and you know where it's been.</p>	<p><a href="https://amzn.to/3XWIDgp">https://amzn.to/3XWIDgp</a></p>
<p><b>KN95 FaceMasks</b></p>		<p>50 Piece KN95 Facemasks</p>	<p>If you don't use it often enough to buy your own reusable mask, it never hurts to have a few of these on hand.</p>	<p><a href="https://amzn.to/4jtwwdS">https://amzn.to/4jtwwdS</a></p>
<p><b>Burn Cream</b></p>		<p>12 Pack Burn Cream</p>	<p>I always keep a few of these, because working with soldering irons and glue guns and heat guns you'll inevitably brush a hot piece of metal. Protect yourself because only you can.</p>	<p><a href="https://amzn.to/42onEvd">https://amzn.to/42onEvd</a></p>
<p><b>Contractor First Aid Kit</b></p>		<p>182 Piece 25 person First Aid Kit.</p>	<p>Should always have at least a general first aid kit. You can always add elements more specialized such as the burn cream and other items targeted to what you're doing.</p>	<p><a href="https://amzn.to/4jn9TnA">https://amzn.to/4jn9TnA</a></p>
<p><b>Non-Latex Gloves</b></p>		<p>100 Pack Non-Latex Gloves. Sized Large.</p>	<p>Good for wearing when using resin, painting, cleaning especially when dealing with any bloodborne pathogens.</p>	<p><a href="https://amzn.to/4ctnDLf">https://amzn.to/4ctnDLf</a></p>
<p><b>High Visibility Vest</b></p>		<p>High Visibility Vest</p>	<p>Required at some jobsites. Breathable mesh with a few pockets and pen or radio holder. Easy to ball up and put in a pocket.</p>	<p><a href="https://amzn.to/3RMVDbQ">https://amzn.to/3RMVDbQ</a></p>
<p><b>Arc Rated High Visibility Vest</b></p>		<p>Contractors High Visibility Arc rated Vest. Meets ANSI/ISEA 107 Class 1 Type O and CSA Z96 Class 2 Level standards. ATPV 10 cal/cm<sup>2</sup>, ARC 2 Arc Rating category</p>	<p>Heavier duty vest that is Arc Flash rated. More and bigger pockets. Radio biscuit straps.</p>	<p><a href="https://amzn.to/4jxfUhw">https://amzn.to/4jxfUhw</a></p>