

### What's it all About?

You could turn your set of tools into a great project by creating a display or video presentation. Exploring and explaining the origins of the device and the proper use would be very educational for all. Not only would this help you better understand the proper use, you will end up with tools that you'll have on hand the rest of your life.

### Tools and Descriptions

- **Toolbox or Pouch:** Needed to keep tools organized and together, also makes transport easier.
- **Rip Claw Hammer:** A good hammer is always needed in any tool set. A 12 or 16 ounce hammer is fine for electrical work and you may want to consider a fiberglass handle.
- **Lineman Pliers:** These pliers are used to cut wire and cable to length. They are also used to twist bare wires together to make a good electrical/mechanical connection. 8-inch pliers are a common size for most uses.
- **Diagonal Cutting Pliers:** Also known as Side Cutters, are used to cut wire and cable to length. Very handy in tighter places to make cuts. 8-inch pliers are a common size for most uses.
- **Channel Lock Pliers:** Adjustable pliers whose jaw width can be changed as needed. Often used to tighten or loosen nuts on devices or conduit bushings and fittings. 9 ½ inch pliers are a common size for most uses.
- **Needle-nose Pliers:** Also known as Long-nose pliers, has long tapered jaw for reaching into tight spots to hold or bend wire. Most have a wire cutting area by the hinge. 5- or 6-inch pliers are a common size for most uses.
- **Wire Stripper/Multipurpose Tool:** Wire strippers are used to remove insulation from a wire before making a connection. The multipurpose tool is designed to cut and strip wire, crimp terminals on ends of wire, gauge wire, and cut small screws.
- **Screwdrivers:** A variety of Flat and Phillips heads are required. Varying shaft lengths may be needed as well. Insulated screwdrivers are available.
- **Nut Driver:** A tool for tightening nuts, bolts and screws. It essentially consists of a socket attached to a shaft and cylindrical handle and is similar in appearance and use as a screwdriver. 1/4 & 5/16 inch are a common size socket typically needed. Insulated nut drivers are available.
- **Square Head Screwdriver:** Also known as a Robertson or Scrulox, it makes inserting the tool easier, and tends to help keep the screw on the tool tip without the user needing to hold it there. Assorted sizes based on the screw diameter.
- **Torx Screwdriver:** The hex lobular socket screw drive, often referred to by the alternative generic name Star Drive, uses a star-shaped recess in the fastener with six rounded points. Assorted sizes based on screw diameter and tamper resistant tips available.
- **Utility Knife:** Also known as a Box Cutter, is a knife with a handle that has a triangle-shaped blade, which is retractable, on one end used for cutting.
- **Adjustable Wrench:** Also known as a Crescent Wrench, is an open-end wrench with a movable jaw, allowing it to be used with different sizes of nut and bolt heads. An 8-inch wrench is a common size for most uses.
- **Multimeter:** An electronic measuring instrument that combines several measurement functions in one unit. A typical multimeter can measure voltage, current, and resistance. (Resistance measurements must be performed only on non-energized circuits)

- **Plug-in Circuit Analyzer:** A device used to verify that an electrical wall outlet is connected correctly. It confirms continuity and polarity of the electrical connections but does not verify current-carrying ability or electrical safety.
- **Non-Contact Voltage Tester:** Also known as a Test Pen, an amplified electronic tester that relies on capacitive current only, and essentially detects the changing electric field around AC energized objects. This means that no direct metallic contact with the circuit is required.
- **Nylon Fish Tape:** A tool used to route new wiring through walls and electrical conduit. Nylon is non-conductive, resists corrosion and is safe in occupied duct or panels. 25- or 50-foot length is a common size for most uses.
- **Safety Glasses:** Glasses with shatterproof polycarbonate lenses. May have additional shields on the sides to protect from flying objects such as wire or insulation pieces when wire is being cut or stripped.
- **Soldering Equipment:** A soldering iron is a hand tool used in soldering. It supplies heat to melt solder so that it can flow into the joint between two workpieces. Soldering tips or bits vary in size and can sometimes be interchangeable. Only use rosin core solder on electrical connections.