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### **Essential Tools for Home Survival**

For many preppers, gear is the name of the game when it comes to disaster survival. You're already familiar with the term bug out bag and you may already have one (or more) of your own. But a bug out bag isn't just only intended for those individuals intent on getting out of dodge as soon as disaster strikes.

Furthermore, bugging out might not always be a viable option. The survival essentials that you'd want to have in a wilderness or on-the-road survival situation are the same items you'd want on hand at home when SHTF.

With that in mind, we'll introduce you to some essential tools to keep in your home to give you a much better chance at surviving a disaster.

Since we're assuming you'll be using your home as a shelter, we won't discuss tools associated with shelter building. We will focus on the other crucial components for survival including:

- Water procurement
- Fire-making

- Cooking
- First Aid
- Communication
- Security

#### **Water Procurement**

Water is the single most important element you need to survive. It's a great idea to store large quantities of water in your home in case of emergencies, but keep in mind even bottled water has a shelf life and requires rotation. When the pipes run dry and your stores run out, you'll need a way to procure water on your own. In a survival situation you should aim to drink at least 1-liter of water each day.

Keep in mind that you'll not only need water for drinking, but for cooking, cleaning, and hygienic purposes as well.

Boiling rainwater and making a homemade still are options, but when it comes to waterprocuring tools a purifying straw can be a great device to own.

The LifeStraw is an award-winning portable filtration device that allows you to drink directly from any fresh water source, contaminated or not.

It's basically a big, plastic tube that allows you to suck water through a series of hollow fibers in a process called microfiltration–this frees the water you drink from 99.9% of bacteria and parasites.



A single personal LifeStraw can filter up to 1,000 liters of water and has a 3-year shelf life.

#### **Fire-making**

Fire is essential for keeping warm, disinfecting water, cooking, and overall morale. If you already have a wood-burning fireplace in your home you're off to a good start, as those powered by gas and electricity will be quick to fail when SHTF.

Whether hunkering down or bugging out, it's recommended you always carry at least 3 tools for starting a fire. This could be your **basic plastic lighter**, a box of**waterproof matches**, a **magnesium rod** and striker, or **emergency flares**. Regardless of your preferred choice, always have a backup to your backup.

In addition to actually starting a fire, you'll need tools capable of providing you with a sustainable supply of fuel, most often in the form of wood. The best tools for gathering wood are **wood-splitting mauls** (somewhere in the 6 to 8 pound range), **crosscut saws**, and **sledgehammers** and **wedges**.

#### Cooking

Many home preppers are advocates of stockpiling as much shelf-stable, dehydrated, and nonperishable food items as your space and budget can afford. Whether or not this is your route, you'll still need a handful of basic tools and utensils to make meal preparation and cooking much easier.

- Basic utensil set (fork, knife, spoon) or spork
- Can opener
- Plate set
- Enamelware camp mug
- Single burner stove (with extra fuel canisters)
- Homemade alcohol stove
- Metal pot

#### **First Aid**

Hopefully you already have a sense of what should go into a basic survival first aid kit. Things like gauze, hydrogen peroxide, antibacterial ointment, bandages, and scissors are all basics that you should have on hand.

Some other essential first aid tools and instruments to consider include:

- Tweezers
- Safety pins
- Suture kit
- Razor blades
- Tampons
- Surgical tubing



#### Communication

When disaster strikes, power lines and cell towers are sure to be affected and leave you without information pertaining to your surroundings.

In a disaster situation, knowledge is the key to your survival. That begs the importance of having a **backup radio** (or two or three) on hand to make receiving and transmitting pertinent information to others a possibility. Beyond the radio itself you probably won't need many tools to keep it operating aside from a power source and antenna.

See the post on communications or its follow up on some less-conventional techniques for more information on this topic.

#### **Security**

In a hunker-down, home survival scenario, you must think about what measures you are willing to take to protect your family and property.

No bug out bag or home of a self-respecting prepper should be without some form of weapon to be used for self-defense and security purposes. Firearms should be your first option if available to you, as they are the most effective and powerful of self-defense weapons. Not to mention they have the ability to put food on the table if used for hunting.

Other self-defense tools/items include:

- Pepper spray
- Gun cleaning kit
- Gun oil/lubrication

If a gun isn't available to you, you may consider using one of the multi-purpose tools listed in the next category, as some of them can be adapted to be used for security in addition to their intended practicality.

Keep in mind that every prepper is different and has his/her own ideas of what tools, equipment, and supplies you should have on hand when SHTF. Arguably, you'll have a much better chance surviving a disaster scenario if you stay in your home and use the



### **Survival Toolkits for Your House**

You know what you should have in your survival kits and bug-out bags. Now we'll take some time to discuss some tools and supplies that you should have to do emergency home repairs in case you can't call a professional.

This is particularly important for anybody who lives in an area where any type of storm is possible; in other words, everybody should have this stuff!

**Allen wrenches** – also known as hex keys or Allen keys, these tools are used to drive bolts or screws with hexagonal sockets. They come in a set of different sizes and in both metric and standard. We recommend a set of each.

**Bolt cutters** – Cuts through fence, bolts, and chains or just about anything that may be in the way of making your house safe. Can also be used to cut small saplings or lengths of heavy rope.

**Carpenter's pencil** – If you need to measure a board to make repairs, a carpenter's pencil works better than a regular pencil because it's more durable.

**Claw hammer** – You can use this to drive nails or to pry things apart. Would come in handy when putting up or taking down plywood over your windows and for a wide variety of tasks. Also makes a good hand-to-hand weapon.

**Crow bar** – Can be used to pry things apart and is also a handy lever if you need to lift/move something. Also a great hand-to-hand weapon.

**Duct tape** – What can we say? It's duct tape! You can use this for everything from repairing a whole in your tarp to making a splint or fashioning a cup. Have a few rolls!

**Electrical tape** – Great for fixing wiring but also can be used to lash limbs together, tie up a tarp to collect water, or for many other purposes.

**Fishing line** – 12lb test or higher. Waterproof and strong, fishing line has so many uses that there's no way to list them all.



Gloves, disposable - In a flood situation,

touching anything that's been exposed to flood water is dangerous. Same goes for treating injuries, cleaning up after somebody that becomes ill. Have at least 1 box.

**Hack saw with blades** – you'll need this to fix pipe leaks/breaks or to cut down limbs that have fallen. Can also be used to cut just about anything that's in your way.

**Manuals** – We're big advocates of becoming a jack of all trades but having a manual on hand for such things as plumbing and home DIY projects can be invaluable in a situation where you may have to fix things yourself.

**Multi-tool** – We've already suggested having this in your survival kit but having an extra around the house is a good idea, too. This may take the place of your pliers and other tools, though we still recommend having them as back-ups in case your multi-tool breaks or is lost.

**Nails** – A variety box of nails, or a few boxes of different sized nails is a must-have. You can nail boards over your windows, fix broken doors, shingles or furniture, or use them to create hooks to hang your tarp from.

**Note pad** – use it to write down measurements or instructions, or to leave notes about your whereabouts. Can also be used to help start a fire. Get one with the wire binding because the wire can be useful, too.

Pipe primer and solvent kit - if a pipe breaks, you'll need this to fix it.

**Pipe wrench** – Can be used for a number of things, including fixing pipes and as a weapon.

**Pliers, standard and needle-nose** – there are so many uses for pliers that it would require an encyclopedia to list them all.

**PVC Pipe and elbows** – it never hurts to have an extra piece of PVC pipe and elbows in the size to fix under your sinks in case your pipes freeze or are otherwise damaged.

**Razor blades** – Use for cutting, scraping, stripping wire (carefully!) and for self-defense.

**Safety glasses** – The last thing you need is an eye injury in an emergency situation.

**Safety pins** – Repair clothing or rips in tents or tarps and pin curtains together so that people can't see in your windows. Safety pins have numerous uses.

**Screwdriver kit** – Have a variety of sizes and lengths. Can be used for the obvious reason (removing or driving screws) and also as a lever, a pry tool or as a weapon.

**Sledge Hammer** – Some jobs just require a bit of force. A sledgehammer is your tool for those occasions. Also valuable as a weapon.

**Tarp** – Use it to repair roof leaks, to catch fresh water, or to build a temporary structure. You can wrap things in them, or put materials in them to carry. Can also be used as an impromptu stretcher.

**Twist ties** – Great for small repairs such as if you lose the screw to your glasses or a small screw in plumbing or electrical situations. Can be used to bind things together, too.

**Volt Meter** – it's always a good idea to be sure that there's no electricity going to the spot that you're working on. You can also use it to test your generators.

Wire, 22-24 gauge, 100 ft. – you can use it to repair broken fixtures or furniture or to make a snare or trip wire. Multiple other uses for good wire.



**Wire cutter with stripper** – always handy to have whether you're working on your electricity or your vehicle. Can also be used to cut fence or to cut your wire into usable lengths.

Remember that these tools are in addition to your survival kits and bug out bags. In those, you'll have your first aid kits, knives, rations, changes of clothes and all of the other good things needed to live.

The tools that we discussed today, though useful for many survival situations, are just what you'll need to make repairs around the house post-SHTF.



# The Old-School Forgotten Art To EMP-Proof Electronics

Even though we've all seen the effects of solar flares and their ability to knock out electricity and communications, some do not believe that an EMP attack will lead to social collapse. But it will...

As someone that loves to tinker with electronic devices, I am a firm believer in the potential for both natural (odds have increased substantially in the last few months because Earth's magnetic field is weakening faster than expected) and human-made EMP attacks.

That being said, I also know that many of the worst problems that will come from an EMP attack can be reduced by using older technologies that rely on electronic components which are far less vulnerable to an EMP.

#### **Electronic Devices Are Not As Complex As You Might Think**

If you find yourself confused by electronic devices, simply remember that every component does one of five things with mathematical precision depending on the materials used:

• allows electrons to flow through it

- does not allow electrons to flow through it
- prevents electrons from flowing until enough of them build up on one end of the component
- allows electrons to flow if they are moving in one direction, but not if they try to go the opposite way
- atoms within the component may change the organization of their own electrons so that the flow of electricity is accelerated, slowed down, or number of passing electrons increases

Once you understand what each component does, connecting parts in various patterns will create larger devices that meet specific goals.

All you need are the right components and a diagram that shows you how to arrange them.

#### **Electronics Before Integrated Circuit (IC) Electronics**

While Tesla and Edison were battling for control of how electricity would be produced and transmitted, most people were relying on oil lamps for light and cranks to start their automobile engines.

Interestingly enough, everything from the first telephones, victrolas, and radios, to televisions and nuclear bombs operated without the use of microchips and other semiconductor components that are highly vulnerable to EMP attack.

Therefore, if we go back to "old fashioned" electronics, we can both store and maintain EMP resistant devices. Perhaps even better, when you go back to basic electronics, you can fashion components from the same kinds of Earth or nature/wilderness based materials that you might use for a fishing pole or some other survival need.

#### **To Build Or Not Build Semiconductors?**

As you may be aware, a semiconductor is a special material that is selective in how to allow or denies passage of electrons.

When semiconductors are arranged in layers with insulators (materials that do not allow the flow of electrons) and conductors (materials that easily allow transmission of electrons), you can create all kinds of fascinating effects that take the place of older style electronic components.

This includes resistors, capacitors, relays, diodes, crystals, vacuum tubes, transistors and circuits (paths that arrange electronic components).

Many people today mistakenly believe that it is not possible to avoid using semiconductors in electronic devices.

Further, there is also a belief that semiconductors will not be available because the technology will be lost to build integrated circuits.

That being said, you can still create some semiconductor based applications by layering glass and copper.

You can also use crystals, capacitors, and resistors to duplicate transistor effects. While they may take more power and require more maintenance, they will still be of use until other technologies can be recovered.



### Simple Devices That You Can Build And Keep On Hand

Here are just a few simple things you can use to make fairly powerful electronic components. Once you master making these basic elements, you can easily go on to building radios, transmitters, perimeter defense alerts, generators, and jury rigging for bypassing electronic systems in other gadgets.

- salt water, oil, and paper based capacitors
- wood and paper based resistors
- speaker wire and metal rings for coils
- simple grounds from wire and nails
- earth batteries
- solar power arrays that use heat to generate electricity
- Tesla turbines and shell designs that run on moving water or air
- quartz crystals for translation of sound to electrical pulses

#### **Suggestions for Further Study**

Not so long ago, you could visit your local Radio Shack store and pick up an electronics project kit that would easily teach you about electronic components and how to arrange them into useful circuits.

Unfortunately, if you walk into a Radio Shack these days, all you see are endless arrays of cell phones and pre-built devices while "old fashioned" electronic components are relegated to dusty bins in the darkest corner of the store.

To add insult to injury, project kits for kids these days are little more than solar cells, snap together robots, and an IC chip that do very little in the way of hands on educational building and exploration.

From that perspective, I recommend starting off with a used book on introductory electronics. Make sure the table of contents includes information on basic principles of electron movement, resistors, capacitors, diodes, transistors, relays, crystals, and coils.

There are also some good YouTube videos available if you would prefer that form of learning. I also highly recommend the Mechanical Universe series if you are math inclined and want to delve into physics more than electronics.

If you do some research online, you will also find a few places that offer surplus electronic components. You can get grab bags of different components to practice with, and then gradually move towards making your own parts. For example, once you build a simple FM radio from basic parts, you can go on to make your own capacitors, etc as the next stage in your learning. With regard to tools I recommend the following:

- a multi-meter that measures AC/DC, amperage, resistance, and capacitance. It does not need to be digital or hook up to a computer
- a good quality soldering iron with variable heat settings
- circuit board etching kit
- breadboards and wire connectors for practicing
- grounding strap and non-magnetic tools
- calming aides for your family members if they fear you will blow up the house or get into some other silly mischief
- a place to work outside the house if calming aides do not work.

"Old fashioned" resistors, capacitors, relays, diodes, crystals, and simple wire can be used to build radios, transmitters, generators, and many other simple devices. While you may not be able to repair a cell phone or computer, these old technologies offer a starting point that can be used for survival, and ultimately, recapturing lost solid state and other technologies.

Perhaps even better, if you know how to create these simple electronic parts, you can also make them on your own from bits of paper, ore bearing rocks, natural crystals, and other items that you don't normally think about in terms of building electronic devices.



## **Prepper Skills: Metalworking**

In surviving a disaster scenario, knowledge is always power. The skills you possess will far outweigh any gear and gadgets when it comes to giving you and your family the best chance at survival.

In a worst-case scenario, we will be charged with rebuilding society from the ground up.

That means reverting back to our industrial roots when skills and trades done by hand were the true gears that kept civilization churning.

These skills will not only be effective to sustain yourself; they will also become an important part of the inevitable post-collapse barter economy. In normal times, you trade your time working for money to support yourself. When SHTF, you may have no choice but to trade your handiwork for food, tools, and anything else you may need to support your family.

#### **Skills to Rebuild**

With that said, some skills are bound to be in demand more than others. Doctors, farmers, engineers, and self-defense experts each possess vital survival abilities worth trading for, but what about more primitive jobs like masonry, woodworking, or blacksmithing/metalworking?

In the event we do have to rebuild society, rebuild will be the operative word.

Construction, equipment repair, and tool making will no doubt become necessary to keep some semblance of routine and infrastructure.

Thus, blacksmithing and metalworking–including the ability to weld–will become crucial skills in a post-disaster world.

#### **Beginner Blacksmithing**

Though it is a difficult skill to master, getting started with blacksmithing doesn't require much. At minimum, you will need a hammer, a forge, an anvil, and a vice.



The most important element of a blacksmithing setup is the *forge*.

While industrial-grade forges can be quite large and complicated, you can make a homemade substitute out of things like brake drums, sheet metal, or a stainless steel sink. The forge can be fueled by propane, run on coal or charcoal, and oxygenated via a bellows, hairdryer, or direct blowing.

The *anvil* is the other crucial component to blacksmithing. Traditional blacksmithing anvils can sometimes be found at flea markets or online, though they can be quite expensive. Alternatively, any large, heavy piece of scrap steel can be used in place of a normal anvil.

Since hammer work is a crucial part of metalworking, you'll want your anvil–whether bought or scrapped–to be at about waist level. You could fabricate yourself a stand, but tree stumps work just fine.

As for the *hammer*, a medium-weight ball peen hammer is all you'll need for everyday blacksmithing jobs.

Hammer control is one of the hardest aspects of blacksmithing to master, but also one of the most important. Knowing how to hit your mark and how to use the hammer to shape metal properly takes practice and control, which will allow you to complete projects in less blows.

#### **Sourcing Metal**

Perhaps the most difficult part of fashioning a sustainable blacksmithing operation is sourcing the metal needed to make tools and repairs. Space is a limiting factor that plagues every prepper, especially when food, water, and medicine will always outweigh scrap steel when it comes to post-SHTF usefulness. If you have the property to keep a cache of scrap metal, by all means do so. Source it from wherever it's inexpensive and readily available, and don't be afraid to recycle. Railroad spikes are pretty easy to obtain and make for good mediums for crafting knives and various hand tools.

A word of caution: stay away from galvanized metal, as it can be deadly if you breathe its fumes.

#### Learning to Weld

Welding can be done in a variety of ways, with some easier and more practical than others. Since flammable gases will be difficult to source after a disaster, an electrical arc welder will best serve the novice welder for most welding tasks.

If it is within your budget and part of your plan to practice blacksmithing/metalworking after SHTF, a welder/generator combo is worth consideration.

So long as you have an ample supply of gasoline or other suitable fuel, these machines will deliver both emergency power and basic welding capabilities.



If you already have a generator to power a welder, you may choose to invest in a stick welder or fluxcore wire feed welder.

Both varieties are suited for tool making and equipment repair, though stick welders usually require more skill to operate.

On the other hand, flux-core welders are usually more expensive but easier to learn how to use.

However, flux-core welders may require more maintenance as they contain more moving parts and require additional consumables to power–something to consider when deciding between the two. Stick welding doesn't take much to learn.

Seeing as you'll mostly be tasked with small, simple jobs, you only need to learn which rods to use and which amperage to power your machine to properly join two pieces of metal.

Not only will welding give you the ability to create dozens of different tools and make necessary equipment repairs, it will also make you a more valuable asset to other preppers who may have goods or skills of their own to trade.

#### How to Get Started in Metalworking

There's no better place to learn blacksmithing and welding than in the presence of an experienced tradesman. However, you can get started with the basics of these skills by taking a class at a community college, reading how-to books, watching the many instructional videos online, or visiting a living museum with a working blacksmith shop.

It will only take a few classes or lessons to learn the basics, which will award you with enough skill to make a simple blade, hook, or hinge. From there, the more you practice the more competent–and in demand–you will become.