

CYBERTEK ZINE

Issue #30 - 0x1346471



In memoriam Dave <REDACTED>, aka "Wildflower."
1953-2020

Wildflower's work bench at Wizard's Lair 2.0: Cyber-Tek HQ

Cybertek
The Cyberpunk Technical Journal
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sixth anniversary issue
TECHNOLOGY · SECURITY · SELF RELIANCE

"A people who mean to be their own governors must arm themselves with the power knowledge gives"
James Madison

Warning
The Surgeon General has determined that reading this periodical may be hazardous to totalitarianism and lead to the following side effects: technophilia, independent thought, self-determination, and libertarianism.



Cyber-Tek Zine

Issue #30 – 0x1346471

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"Do not go where the path may lead, go instead where there is no path and leave a trail."
- Ralph Waldo Emerson.

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Autumn 2020 Cyber-Tek Group Meeting After-Meeting Review

The Autumn 2020 meeting of the Cyber-Tek Group was held October 24, 2020 at CT Hackerspace in Watertown, CT. The following items were discussed at the meeting:

Item 1: NOOBS @ Target

Meeting attendees were advised that local Target stores have NOOBS (<https://www.raspberrypi.org/downloads/noobs/>) Raspberry Pi Linux SD card distro on clearance for under \$7.

Item 2: Moscow Rules

A copy of the Moscow Rules was shared with the attendees, reproduced below:

- Assume nothing.
- Never go against your gut.
- Everyone is potentially under opposition control.
- Do not look back; you are never completely alone.
- Go with the flow, blend in.
- Vary your pattern and stay within your cover.
- Lull them into a sense of complacency.
- Do not harass the opposition.
- Pick the time and place for action.
- Keep your options open.

Item 3: Presentation

A short presentation was given, which is reproduced below:

Intelligence vs. Information

Field Manual FM 30-5 Combat Intelligence, U.S. Army, 1973:

- “Information is unevaluated material of every description including that derived from observations, communications, reports, rumors, imagery, and other sources from which intelligence is produced. Information itself may be true or false, accurate or inaccurate, confirmed or unconfirmed, pertinent or impertinent, positive or negative.”
- “Intelligence is the product resulting from the collection, evaluation, and interpretation of information which concerns one or more aspects of foreign nations or of functional or geographic areas, and which is immediately or potentially significant to the development and execution of plans, policies, and operations.”
- Intelligence is also a discipline that exploits a number of information collection and analysis approaches to provide you with guidance and direction in support of your decisions. This is achieved by providing an assessment of available data from a wide range of sources, directed towards your requirements or responding to focused questions as part of your operational or planning activity.

- In order to provide an informed analysis, your requirements are first identified. These requirements are then incorporated into a process of intelligence collection, analysis and dissemination.

Initial Disaster Planning

- Time and Distance
 - FEMA/NRC Nuclear Plant Emergency Planning Zone
 - Primary (Plume Exposure Pathway):
 - 10 mile radius
 - Secondary (Ingestion Exposure Pathway):
 - 50 mile radius
 - What about other disasters?
 - Highway speeds: 55-80 MPH
 - 60 MPH = 1 mile/minute
 - Cycling: 20-30 MPH maximum
 - Walking: 3 MPH
 - Time and Distance: 30 miles
 - Slow Highway Speed: 60 MPH
 - 30 minutes
 - Fast Cycling: 30 MPH
 - 60 minutes
 - Slow Cycling: 15 MPH
 - 2 hours
 - Walking: 3 MPH
 - 10 hours
 - A-10 Thunderbolt II: 439 MPH
 - 4.1 minutes
 - FB-111 Aardvark: Mach 2.5 (1,650 MPH)
 - 1.09 minutes
 - Cycling and walking assume no rest stops.
- Area Of Interest
 - Local (City, Town, Village)
 - County
 - State
 - Federal(?)
 - Urban versus Rural

- Good rule of thumb is local + immediate surrounding jurisdictions.
- Hazard Analysis
 - Has the area experienced a disaster in the past?
 - Is the area prone to severe weather?
 - What are the wind patterns in case of HAZMAT incident?
 - What is the geography of the area?
 - Is the area near a coast or river?
 - Is the area near a fault line or an active volcano?
 - Is the area mountainous?
 - Is the area urban or rural?
 - How large or vital is the area?
 - Is the area a seat of government?
 - Are there major cities or industries located nearby?
 - Is the area near a major military installation?
 - Do major highways, railroads, or pipelines pass through the area?
 - How are the ethnic/race relations in the locale?
- Natural Disasters
 - Weather-Related
 - Drought
 - Heatwave
 - Mudslide
 - Avalanche
 - Storms
 - Winter storms
 - Blizzards
 - Severe thunderstorms
 - Hurricanes
 - Tornadoes
 - Non-weather Related
 - Earthquake
 - Tsunami
 - Fires
 - Forest
 - Range

- Volcanic eruption
- Man-Made Disasters
 - Hazardous Materials (HAZMAT)
 - Chemical
 - Radiological
 - Dam failure
 - Shortages
 - Structural fires & explosions
 - Domestic disturbances
 - Riots
 - Bomb threats
 - Terrorism
 - WMD events
 - Mass shootings
 - Plane crash

Discussion followed, emphasizing the reality and greater danger of commonplace natural and man-made disasters that have occurred in the past, versus the survivalist or prepper TEOTWAWKI fantasies taken from works of fiction.

Item 4: Communications Networks

Discussion regarding establishment of communications networks for Cyber-Tek Group associates under FCC Parts 15, 95, and 97. Attendees were advised to locate older Linksys WRT54 series WiFi routers (https://en.wikipedia.org/wiki/Linksys_WRT54G_series) for firmware updates using DD-WRT (<https://dd-wrt.com/>) and Open-WRT (<https://openwrt.org/>). Sufficient material on hand to implement Node1 using 2.4 GHz. 802.11b/g WiFi at CT Hackerspace, grid FN31ko. Looking for suitable location within communication range to implement Node2. If Part 15 operation untenable, network will switch to operation under Part 97.

A mention was made of the AmRRON Channel 3 Project (<https://amrron.com>), and a decision made to use MURS and CB Channels 3 (151.94 MHz. FM & 26.985 MHz. AM) as the Cyber-Tek Group's license-free calling and chat channels. A CTCSS/PL tone of 151.4 Hz. (5Z) was decided upon for use on MURS to mute non Cyber-Tek Group co-channel users when necessary. Post-meeting research indicated that 2 Meter Amateur Radio band frequency of 146.420 MHz. is being used as a repeater output in New England, along with 146.415 and 146.430 MHz. This fact makes 146.420 MHz. unsuitable for use as a simplex frequency in New England. A 2 Meter FM simplex calling/chat frequency for Cyber-Tek Group affiliates will be decided upon for the next meeting. In the interim, affiliates with an Amateur Radio license and the needed radio equipment are advised to monitor 146.5200 MHz. and their local repeater, preferably one that is networked.



Item 5: Show and Tell - uBITX

A Cyber-Tek Group member brought his uBITX (<https://www.hfsignals.com/>) to the meeting for show-n-tell. The



uBITX is a 10 Watt HF Amateur Radio transceiver kit that is Open Source and based on the Arduino Nano (<https://www.arduino.cc/en/pmwiki.php?n=Main/ArduinoBoardNano>). The full kit is \$209. The basic kit (minus speaker and enclosure) is \$160. At those prices, it provides a reasonably-priced alternative to more expensive 10 Watt class HF radios. Being Open Source and Arduino-based, the hacking possibilities for this radio are numerous, and significant hobbyist community support is available.

So you want to get on Two Meters...

The beginner go-to bands for local ham radio communications are the 2 Meter (144-148 MHz.) and 70 Centimeter (420-450 MHz.) bands. Two Meters was given to the hams right after World War II, along with tons of military surplus radio equipment being placed on the market. It became even more of a local band when HTs became available in the early 1970s. When 2 Meters started getting crowded, many hams shifted up to the 70cm band. These days, a ham operator can spend \$25 on one of the HTs made in China and access any number of repeaters, some of which are networked to provide extended regional coverage.

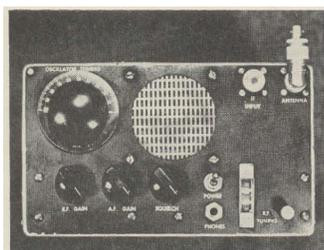
You are a newly minted Technician class Amateur Radio operator, and as usual you want to get on the 2 Meter (144-148 MHz.) band. You go and buy one of those sub \$100 Chinese HTs and you are all set, right? Wrong. Without getting into the well-established fact that the Chinese HTs, especially the Baofeng, are junk (see <http://www.nf9k.net/wp-content/uploads/2016/05/ARRL-Lab-HT-Testing.pdf>), you are doing yourself a disservice by starting out with an HT, regardless of which company made it.

You take your HT, program in a repeater that's 10 miles away, throw out your callsign, and someone 10 miles in the opposite direction comes back to you saying you're "full quieting" into the machine. All with a 5 watt handheld and rubber duck antenna. Great, right? The only thing that's great about that is the effort the repeater owner went into getting the machine on the air. The repeater is at a much higher elevation than you, is running 50-100+ watts (versus your 5) into an antenna system with some pretty high gain, and perhaps even a has preamp on the input to help the receiver hear better. In short, the repeater is doing all the heavy lifting so you can use that HT.

Get a friend of yours who also has an HT, and go on a hike to see how far away you can hear each other on simplex with 5 watts and a rubber duck antenna. I guarantee you that under normal circumstances you won't get more than a mile or two range. Now HTs are nice in that they are portable and you can carry them around, but unless you and your local ham buddies you like to ragchew with are all within a mile or two of each other, you will be out of luck if the repeater goes down, and repeaters do go down. Sometimes it's because of a natural disaster. Other times it's because the repeater owner is unable to maintain the machine any longer, and takes it off the air. Either way, being able to properly operate simplex and be self-sufficient on the air is a wise idea.

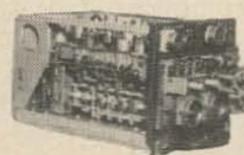


When heavy weather takes down a repeater, HT users will be screwed.



Conversion of the R-77/ARC-3 Receiver Provides Continuous Coverage From 100 to 156 mc Without Undue Sacrifice of 2 Meter Bandsread.

Roy E. Pafenberg W4WKM
316 Stratford Avenue
Fairfax, Virginia



TRANSCEIVER

AF/UTA-68 TRANSCEIVER AM
—115 to 152 MC on any one of ten preset frequencies, crystal controlled. Power output approx. 5 watts. With Tubes: Trans.: 6AG5, 2/6C4, 3/5Y63; Mod.: 6AU6, 2/6C4, 6AK6; Rec.: 3/6BH6, 3/6BJ6, 6AH6, 6AG5, & 12AT7.

(No crystals supplied) 26 Volt DC Dynamotor, output 265 VDC and—50 VDC. Size: 9 x 8 x 16"; Wt.: 25 lbs.
Price—Used\$24.95
Schematic: \$1.00 Plugs: \$1.50 ea. Ant. Plug: 50¢

The reliance on having to use repeaters, and the generally non-repairable nature of most modern VHF/UHF radio gear, especially the stuff made in China, should have you eventually looking for alternatives. There was, and remains, a large quantity of extremely undervalued vacuum tube and early solid state 2 meter base and mobile rigs on the used

equipment market. These radios are simple to operate compared to more modern rigs, and easily fixed by a ham operator with a modest test bench. They are more than adequate for local simplex communications.

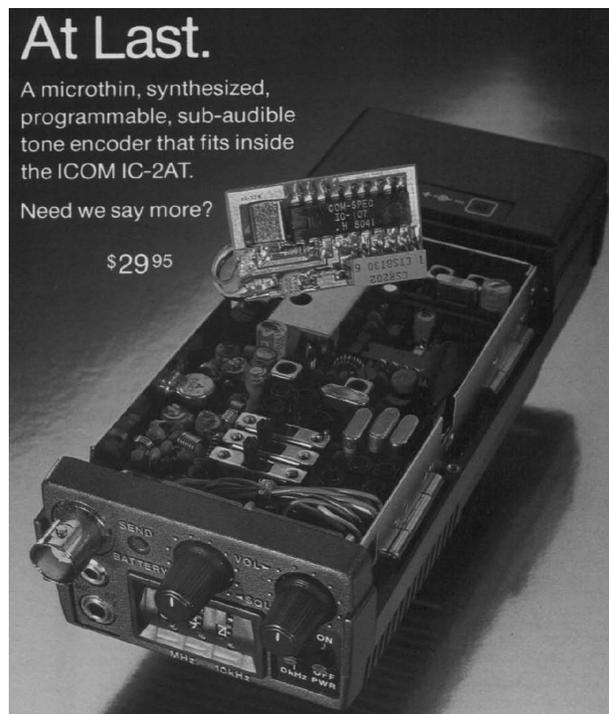


These rigs came without CTCSS because that capability was not a requirement for accessing most repeaters until the 1990s. In fact CTCSS was only used in the 1970s and 1980s for either “closed” private repeaters or repeaters in areas with extreme RF noise. When CTCSS became more common on the ham bands, many older radios had aftermarket CTCSS tone generator boards installed into them in order to make them repeater capable. The astute hobbyist will learn to recognize these boards, and look for them at hamfests either by themselves or installed in “junk” radios piled in a “make offer” box.

Shown here is a Communications Specialities (now Wisco - <https://wiscountl.com/CSpecialists/cspecialist.htm>) miniature encoder board that was designed to fit into the popular Icom IC-2AT 2m HT. The Icom IC-2AT came onto the ham radio scene in the early 1980s, and was the HT of choice for both Amateur Radio operators and many underground communications types. It's big selling point was that it was among one of the smallest HTs available on the market, being only the size of a dollar bill. This radio remained popular well into the era of CTCSS being a requirement for repeater access, so when is found on the used market, it will often have a CTCSS tone generator board installed in it.

6) Use simplex whenever possible. If you can complete your QSO on a direct frequency, there is no need to tie up the repeater and prevent others from using it.

In the realm of off-grid communications however, one has to ask oneself if CTCSS capability is really necessary. CTCSS is only needed to access repeaters. If one's little group of serious survivalist hams is sticking to simplex operation because they are all within communications range of one another and are following the old Sparks31 axiom of avoiding 3rd party infrastructure, then CTCSS is not needed. Otherwise, if one wanted easy local repeater access they can just buy a Baofeng HT and be good to go without having to spend the effort to get a level of sustainability in their comms. From a radio geek's standpoint, repeaters are useful if one is running a portable or mobile rig in less than adequate terrain, and needs a little help communicating. In short, they're a crutch. Handy when you need it, but not something you want to rely



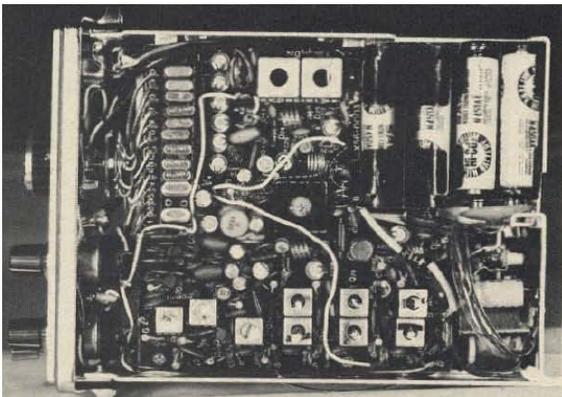
on. The late Ed Tilton, W1HDQ/SK, once said *“Repeaters are self-defeating.”* Any self-respecting ham, especially radio geeks, should have adequate local VHF simplex capability in their shack, assuming the terrain around their QTH cooperates with them. Work is 30 miles away and you’re giving your XYL a quick call on the local 2m machine to let her know you’ll be late? Great? Talking with other mobiles during the commute? That’s fine too. Using the repeater to talk to your friend in town when you can talk to him simplex? That would be a nope. Went through the time, effort, and money to set up your own repeater? It’s yours. Do whatever you want with it.

One should not overlook older “rockbound” radios that use quartz oscillator crystals for frequency selection. They are often given away (or close to it) at hamfests, and make excellent back-up or loaner rigs. They are usually loaded up with local repeater and common simplex frequencies such as 146.520 MHz. If they saw use on a repeater after the late 1980s, they also will have a CTCSS tone generator board installed. The primo radios of this era were the “portable” models such as the Icom IC-215 (top) and Drake TR-22 (bottom).

Why go with these older radios? There are a number of reasons. They can be found cheap at hamfests. They are simple to use with a minimal number of analog controls. They are much better built than a Baofeng. They run off common consumer electronics batteries instead of proprietary battery packs. Finally, they are of a construction that enables them to be easily repaired on (what should be) an average ham operator’s workbench. Look at the inside of a Drake TR-22. It is all thru-hole sold state component construction. As a ham *you should be able to troubleshoot and fix this radio.*



Icom IC-215



Drake TR-22 Internals



Drake TR-22

If you get a mobile/base 2 Meter transceiver and install an external antenna, your 1-2 mile simplex range becomes a 20-50 mile simplex range, and you won’t have to worry if the local repeater goes down because you will be able to reach out further to hit a more distant repeater, or work simplex. Here is what you will need and spend if you go the new equipment route.

- Two Meter Transceiver. Since I like Icom, I went with the IC-2300H.
- Antenna. The best antenna out there in my opinion is the Spectral Isopole (<https://www.isopole.com/>).
- A 12V power supply with enough current capacity to run the radio at full power. The IC-2300H, according to the manual needs 11 Amps. The old-skool trusty Astron RS-20A (16 Amps continuous, 20 Amps intermittent) is a good choice.

- Some coaxial cable to connect your radio to the antenna. Most of you probably wouldn't need any more than 50 feet or so, and you can get a preassembled 50 foot length of decent VHF-rated coax, say LMR-240, with PL-259 connectors on each end.

Looking at the "buy it new" route, setting up a station via Gigaparts, Ham Radio Outlet, or one of the other mail order outlets will cost the following:

Icom IC-2300H - \$150.00
Spectral Isopole- \$180.00
Astron RS-20A- \$149.00
50 feet LMR-240 with PL-259 connectors - \$50.00
Total - \$529.00



1980s vintage Icom IC-27H 2 Meter Transceiver

If you go the brand-new mail order route it would cost you \$529.00 to get on two meters. That's actually less than the new cost of just an entry-level HF rig. There is a better and less expensive way to get on 2 meters. You can save a lot of money if you buy used, and build your own antenna. You can buy a used two meter mobile rig off Ebay for less than \$100. A good used Icom, such as the 1980's vintage Icom IC-27H shown above, runs about \$70 or so. That almost halves the cost of your radio. I have seen older 2 meter mobile rigs for sale for even less at hamfests, around \$25-\$50. That knocks down your radio cost anywhere from half to a third. You can build an antenna out of \$10 worth of parts with information from an old copy of the ARRL Antenna book you find at a hamfest for \$5, or from data you find online. Go visit <https://www.hamuniverse.com/2metergp.html>. Used Astron power supplies cost about half their new price at hamfests, but for now you can get away with buying a suitable deep cycle battery from Wal-Mart or your local auto parts store for about \$60. The charger for it will be about \$20. Finally, if you measure out your actual coax length from your radio to your antenna, you will save some money there. At under 50 feet, you'll be able to get away with a higher-loss coax than LMR-240 because the differences between it and say RG-8X will be minimal at short distances. A 20 foot RG-8X coax jumper will set you back about \$18 at a local truckstop like Flying J or Pilot. Let's take a look at how much a station bought via the used gear will cost.

Used 2 meter mobile rig (average) - \$70.00
Used copy of ARRL Antenna Book and parts - \$15.00
Deep-cycle battery - \$60.00
Battery charger - \$20.00
RG-8X coax jumper - \$18.00
Total Cost: \$183.00

By going the used equipment route, and engaging in a little DIY, you can get on the air for about a third of the cost than if you went and bought everything new.

In the United States, Two Meters goes from 144-148 MHz. Most of that is unoccupied these days until you unknowingly key up on a frequency belonging to a repeater input or output. According to FCC Regs (Part 97), the band is as allocated as follows:

144-144.1 MHz. – CW Only

144.1-148 MHz. - CW, Phone, Image, MCW, RTTY/Data

That's it as far as the FCC is concerned. There are, however, a few places where FM simplex operation is commonplace. Stay above 144.300 MHz, because below that is where the weak signal (SSB/CW) hams operate. Repeater inputs and outputs should also be avoided, for obvious reasons. Preferred FM simplex frequency ranges are 144.300-144.500, 144.900-145.100, 145.500-146.000, 146.400-146.580, and 147.420-147.570 MHz.

Part 95 (and bootleg VHF/UHF) Surveys (aka Point Search) with Whistler WS1040



The [WS1040](#) and scanners with similar architecture are easy and ideal for this as frequency and service searches can be chained together as objects all in a single bank. In this case you would program the following objects into their own bank:

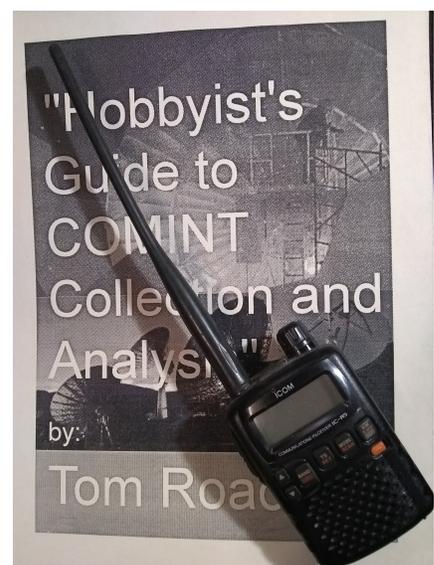
- MURS/FRS/GMRS Service search
- CB service search
- Sweeper search for VHF-High and UHF bands (2, 5, 6)

The biggest performance obstacle with this arrangement is the difference in antenna size (and resonance) between VHF-high and UHF bands used by the more common Part 95 services, and CB which is technically down in the HF band. If you want to have peak performance on one, there will be degraded reception on the other. Still, however, using a common 2m/70cm ham antenna will still let you hear CB units within a mile or so. Using a resonant antenna (or even one that is close to resonant such as a 10 meter ham antenna) will extend that CB monitoring range out quite a bit. Similarly, the more gain your antenna has on VHF and UHF will equal better detection range on those bands. With that said, on Thanksgiving, 2020 I heard "Radio Roadkill 252" from Amarillo, Texas on CB Channel 3, AM mode, with nothing more than a 22" whip antenna at a distance of 1600 miles. Admittedly though, he's probably running a lot more than 3 watts.

MURS and FRS are the VHF and UHF free parking spaces on the RF Monopoly board and even if the users of those frequencies aren't quite operating within FCC Regs, the chances of legal hassles are minimal so it gives all the Baofeng buyers a "safe" place to go play. CB has a bit of a reputation that keeps a lot of people away, despite the fact that you almost never hear anything on the 40 channels except for Channels 6, 19 near highways, and 38 during a band opening. Sad, because a properly installed CB station will always out perform MURS and FRS. You just need to use a [proper antenna](#). However, those [Baofeng](#) (and other model) radios can run from 136-174 and 400-520 MHz. Some semi-clever types might consider just playing dial roulette with their transceivers. A normal sector search for those two frequencies would take a while, but using Spectrum Sweeper will decrease that time significantly, along with a decrease in receive sensitivity. Still, the Spectrum Sweeper function will in a matter of seconds detect an HT signal within a quarter-mile.

So what this setup gets you is a means to detect nearby portable and mobile radio activity on the most common frequencies used by non-government actors. Whether are they are good actors or bad actors is either irrelevant, or depends on who and what you are. Either way, a bunch of rando people playing with radios in your neighborhood is something you want to know about.

intelligence aspects of current and planned EW operations. For example, the potential tactical advantages to be gained from jamming hostile radio transmissions must be weighed against the possible loss of SIGINT. For further details regarding electronic warfare see FM 32-20.



Wildflower's Last Notes

WILD NOTES:

SUMMER 2016

HELLO THERE!

AM THE WILDFLOWER

I CREATE, MAKE, REPAIR & IMPROVE

USING MATERIALS SQUAGED FROM TRASH,
BINS & CURBSIDE COMBINED WITH DOLLAR
STORES, HORROR FRIEGHT, GOODWILL AND
YARD SALES.

AS ON A LIMITED BUDGET, I TEND TO
"ROLL MY OWN", FROM SITOR EQUIPMENT TO
CRYSTAL RADIO GEAR. ALSO Dabble IN
MANY OTHER TECHNOLOGIES AND SCIENCES.

MY WORKS HAVE APPEARED IN "THE SURVIVOR",
"DWELING PORTABLY", "LIVING FREE", AND
"CYBERTEK".

NOW CURRENTLY WRITING ARTICLES
FOR A CERTAIN VARIATION OF AN EDITOR
WHOM MAYS ME NOTHING AER WORKS-
MAYBE BE FUTURE ARTICLE IS "LOWRIG
BOURBAQUE" WITH LOTSA PICTURES.

KEEP A HAPPY FACE
Wildflower 

WILD NOTES

SUMMER 2016

ALL FUTURE REPORTS BE DONE WITH
#2 PENCILS IN BLOCK PRINTING -

#2 PENCIL - USER FRIENDLY - NEEDS
NO EXOTIC PROGRAMS, BATTERIES, OR
MANUALS. CAN BE SHARPENED WITH
A PENCIL KNIFE OR PENCIL SHARPENER.

BEST FOR WORD PROCESSING,
DRAWING DIAGRAMS, OR CALCULATING
COMPLEX MATH. WATERPROOF AND
STAYS FOR YEARS TIL NEEDED.

A GROSS (144) OF #2 PENCILS -
SHARPENERS - 2 BOXES OF COLOR PENCILS -
AND PLASTIC SET OF RULES, COMPASS,
AND ANGLES SHOULD COST NO MORE
THAN \$20 (U.S.). BACK TO SCHOOL
SALES HAVE MANY ITEMS SOLD AT
DISCOUNT ALONG WITH PAPER OF ALL
SIZES.

TIL NEXT TIME

Wildflower

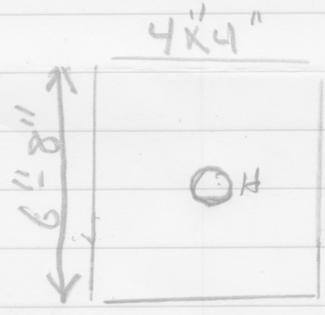
WILD NOTES
SUMMER 2016

WOOD MALLETS - MOST WHOM
CHISEL WOOD OR ROUND WOOD PEGS
OR NAILS PREFER SUCH A TOOL.

NOW DAMN HARD TO FIND - ONE
HAS TO MAKE THEIR OWN VERSIONS

VERSION ONE!

CUT A 4"x4" WOOD TO
6-8 INCHES LONG - CENTER
DRILL AND INSTALL 1/2"
LONG WOOD WANDER WITH



WOOD GLUE POUNDED IN
THEN DRILL ON SIDE 1/4" DIA
HOLE RIGHT THROUGH THE SHAFT
ROUND A WOOD NAIL WITH GLUE

SOME WILL TOP THE Mallet
WITH INNER TUBE OR LEATHER
TO "DAMPEN THE HAMMER" WHEN
WORKING WITH THIN METAL SHEET
FINE WOOD OR LEATHERWOOD



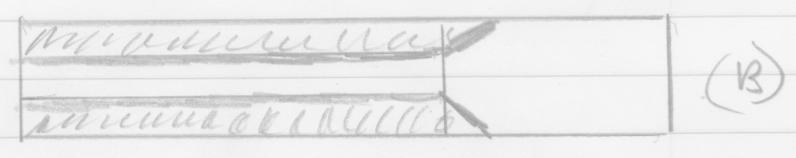
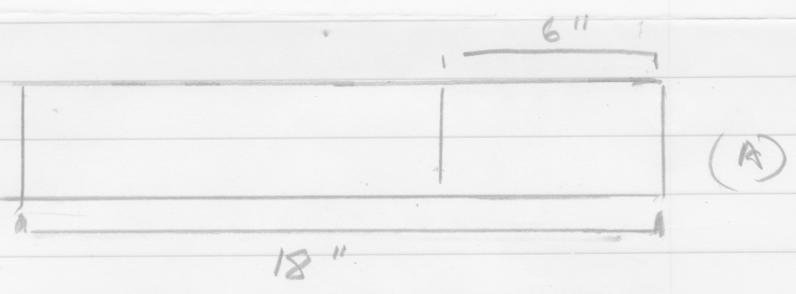
DRILL 1/4" HOLE AT END

WITH INSTALLED CORN
WOOD CAN HANG OFF
WALL PEE

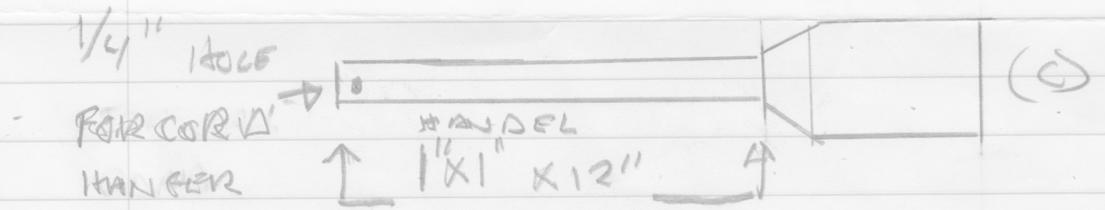


VERSION TWO:

WOOD 2"x4" (OR 2" X 3") X 18" (LENGTH)



CUT OFF TAPERED AREA



ROUND HANDLE WITH WOOD RUSH

(C) IS A NICE Mallet FOR BENCH USE

HAPPY TRAILS
Wildflower

WILD NOTES

FALL 2016

YOU NEED TOOLS TO RESHAPE YOUR SURVIVAL ENVIRONMENT. IN MANY POST APOCALYPTIC SITUATIONS THE TOOLS YOU NEED ARE NOT AVAILABLE SO ONE HAS TO MAKE THEM FROM WHATEVER IS AVAILABLE.

ONE GOOD BOOK FOR YOUR BOOKSHELF

TITLE COMPLETE MODERN BLACKSMITH
AUTHOR: ALEXANDER G. WEYERS
ISBN 0-89815-896-6
(NEW SPEED PRESS)

THREE SEPARATE HIGHLY ILLUSTRATED BOOKS IN ONE BOOK CAN SHOW YOU HOW TO:

- 1) MAKE TOOLS
- 2) MAKE UP A BLACKSMITH'S SHOP
- 3) RECYCLE, USE, AND REPAIR OF TOOLS LIKE METAL LATHE, TRIP HAMMER, DRILL BITS, METAL FILES, BERRING, WOOD LATHE, AND MORE BE FOUND HERE.

THIS IS THE KIND OF INFORMATION
 THAT CAN RESHAPE A NEW CIVILIZATION
 OUT OF THE SCRAP OF THE OLD ONE -

AT THE TIME GOT IN ON SOME FOR
 TWENTY DOLLARS AT BORDERS.

IN THE FUTURE USE WOULD BE
 WORTH IN GOLD.

Wald-Alexander 

**TEACH YOURSELF THE LOST ARTS OF
 BLACKSMITHING AND TOOL DESIGN AND REPAIR**

Design, forge, and fix your own tools, hardware, and household accessories with master craftsman and teacher Alexander G. Weygers. Weygers's three extraordinary books, *The Making of Tools*, *The Modern Blacksmith*, and *The Recycling, Use, and Repair of Tools*, are classics in their field—and in **THE COMPLETE MODERN BLACKSMITH**, they are brought together in their entirety for the first time ever. All three books contain clear, step-by-step instructions and hundreds of the author's own detailed drawings, bringing scores of time-honored techniques to modern artisans—experienced craftsmen and beginners alike.

THE MAKING OF TOOLS teaches the artist and craftsman how to make exactly the tool he or she needs: how to design, sharpen, and temper them, using only basic shop equipment and scrap steel. Dozens of tips and techniques are covered, from setting up a beginner's workshop and learning to temper steel to making simple tools such as screwdrivers and carving, cutting, and sharpening tools.

THE MODERN BLACKSMITH demonstrates, with lucid text and beautifully clear illustrations, the basic tools and techniques that are available to the modern blacksmith. This fascinating book covers everything from developing the correct hammer and body motions for forging to creating tools such as pliers and shovels and hardware such as hinges and door latches. Alexander Weygers explains the hows and whys of inventing, improvising, and constructing "things" out of "nothing."

THE RECYCLING, USE, AND REPAIR OF TOOLS stresses the creative reuse of old materials, and features a wealth of easy-to-follow procedures for making, repairing, and maintaining a great variety of equipment and parts, from shovels and chisels to washers and bearings. Alexander Weygers leads you step by step through making everything from a water pump to cutting tools to candlesticks and Christmas decorations out of scrap metal. In these pages, artists and craftsmen will learn to exploit the modern abundance of scrap steel with creativity and skill.

A truly unusual and unique resource, **THE COMPLETE MODERN BLACKSMITH** is an essential volume in any serious artist's or craftsman's library.




TEN SPEED PRESS

WILA NOTES
SUMMER 2016

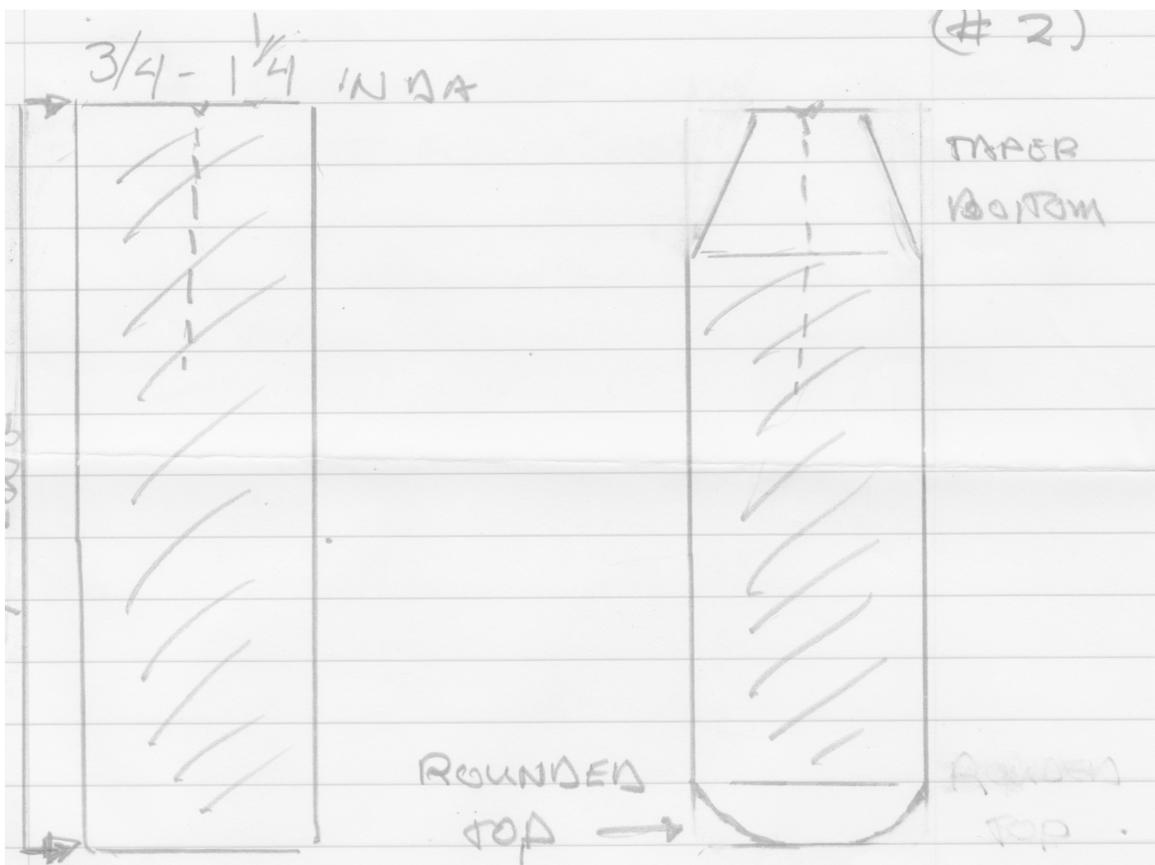
HANDLES FOR HOMEMADE SCREWDRIVERS,
POLES, OR FOR METAL FILES CANNOT BE
ALWAYS FOUND TO BE PURCHASED -

SO I MAKE MY OWN FROM SALVAGED
WOOD MOOP OR BROOM HANDLES THAT
ARE $3/4"$ TO $1\ 1/4"$ DIAMETER:

CUT WOOD INTO 4" SECTIONS WITH
A $1/8"$ DIA DRILL BIT CENTER DRILL AT LEAST
500 INCHES. IF DIAMETER OF POOL
SHAFT IS THICKER - THEN DRILL A LARGER
DIAMETER - WITH TAPERED SHAFTS OF
METAL FILES - DRILL DIA OF TOP DOWN
TO 2" THEN DRILL DIA OF BOTTOM 1" DOWN

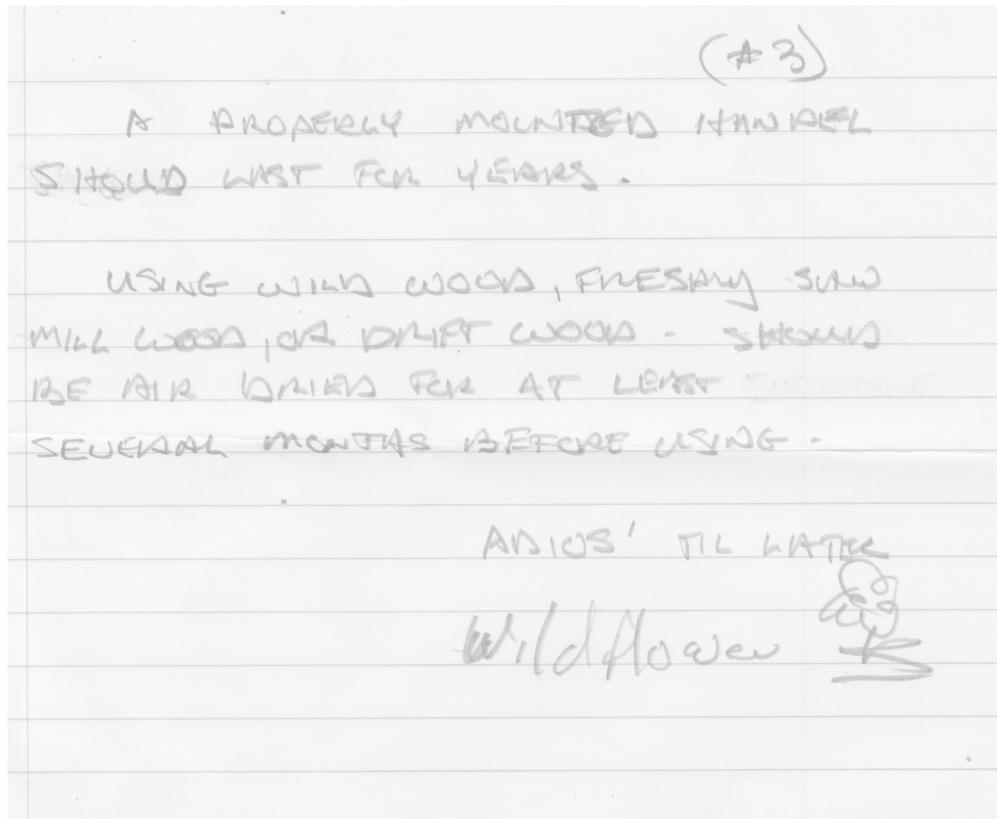
WITH A WOOD RASA. TAKE A CONE
AROUND SHAFT HOLE FOR 1". TOP OF HANDLE
TRY SHAPING A HALF ROUND WITH SHAVE
RASA.

* A PROPER BENCH VISE MAKES DRILLING,
SHAPING, AND MOUNTING HANDLE EASIER



WITH THE TOOL HELD IN A BENCH
 USE, CENTER OVER DIAMETER OF SHAFT
 AND WITH A WOOD Mallet SLOWLY
 ROUND / MOUNT HANDLE TO SHAFT (IF
 POSSIBLE COAT POLY SHAFT WITH HOUSEHOLD
 ASHES OF GLUE BEFORE MOUNTING HANDLE)

WITH SHARPENED SAVERS - HEAT METAL
 TANG WITH EACH 25" BURN MOUNT
 HANDLE ROUNDED ON, THEN LOOSEN,
 GLUE TANG AND REMOUNT HANDLE.



These scans are some of Wildflower's last material, received at Cybe-Tek Zine's former Wyoming location in 2016. Unfortunately, his declining health after that time precluded any further formal written correspondence. He did, however, continue experimenting and taking extensive notes up until his admittance into assisted living a few months before he passed away. Out of respect for his privacy and that of his surviving family members, we're in the process of redacting material of a personal nature before publishing it in a future issue. In addition to his personal lab notes, Dave and I worked on some Lo-Tek radio and electronics projects, using H.P. Friedrichs' Voice of the Crystal, Lindsay's Impoverished Radio Experimenter, and other books (mostly from Lindsay) as reference materials. I'm continuing that work as time permits, and when it is done you will see it here.

Wildflower and I met through Kurt Saxon of Poor Man's James Bond fame in 1991, and had been friends ever since. He was a true lo-tek hacker and technological survivalist, and the material he wrote has withstood the test of time. It shows that you don't need a lot of money or sophisticated gear to accomplish many interesting and cool things. Hopefully his material will act as a source of inspiration for others.

Shown in this picture is Wildflower (far left) and members of East American Survival Training along with his DIY solar-powered lead smelter made from PVC pipe and a Fresnel lens salvaged from a discarded projection TV he found on the curb the night before trash day. He occasionally, on sunny days, would use it for casting fishing sinkers to sell in the Bait & Tackle shop at his family's Marina.



Modern Technological Survivalism: This Is The Way

The entirety of preparing for an interesting present and uncertain future can appear to be a daunting task. Prepper websites and Youtube channels show an entire smörgåsbord of scenarios, equipment, and techniques. A beginner can feel overwhelmed, especially when the material is presented with a sense of apocalyptic urgency. I will later talk about what constitutes an urgent matter, but suffice to say unless you are about to drown, have a heart attack or stroke, home invasion, tornado, or another acute problem of similar severity while reading this book you can relax and not worry for the time being. There is a way you can engage in self-reliance and preparedness without falling into the trap of stress and eventual burn-out.

A True Story

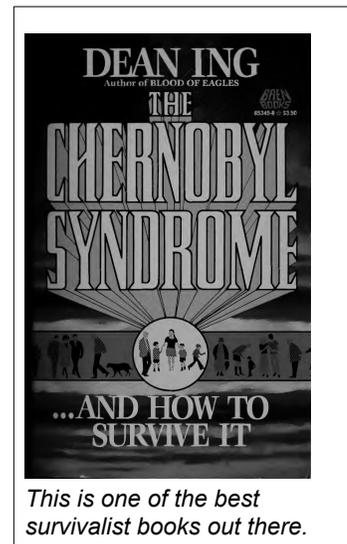
A good example of this was found in a local prepper-type whose name was John, and who was eventually given the moniker of “Neuro John.” This guy used to ask twenty questions about what survival gear to buy, dance around with the fanciest excuses to delay his purchases, and then come up with the same twenty questions again because someone posted up contradictory information on a web site. We saw him at a gun show once walking around like a zombie displaying absolutely zero situational awareness of anything. While doing this he was missing all the stuff he would continually ask about.

One day Neuro John asked about survival fishing. Fishing is not a hobby of mine at present. I used to drown worms while angling for panfish at my local lake when I was a kid, and go up to Quincy Bay just outside of Boston with my dad for our American Legion Post’s Flounder fishing trips. I took the Orvis 101 class and bought an Okuma set on clearance from Wal-Mart a few years back that has yet to see water. I keep telling myself “Maybe next season...” With these experiences behind me, I told Neuro John that the best way to learn how to survival fish was to take up fishing as a hobby, learn the styles of fishing that work best in his region, and become competent enough at them that he can pull something edible out of the water with minimal tackle. This, by the way, is the same philosophy that the US Military uses in their survival courses. The Survival Fishing Kit issued to aircrews in case they have to bail-out and ditch their aircraft contains a minimal amount of tackle, and assumes that the user has had some familiarity with angling. Upon explaining this approach to Neuro John, his reply was “I don’t want to learn how to fish. I want to learn how to survival fish.” Neuro John eventually reached a level of paranoia and burn-out where he stopped attending our group’s meetings. He became my favorite example of how not to go about being a survivalist, for there is a better way.

It’s Only A Hobby.

I was shown the way by Dave Wildflower when he gifted me a copy of The Chernobyl Syndrome, by the late techno-thriller author and aerospace engineer Dean Ing. It is now out of print, but used copies are on Amazon, and a PDF can be downloaded from Archive.org. This book gave me the best piece of advice regarding self-reliance and preparedness. The author suggested you treat prepping as a series of related hobbies. He stated that by preparing in this matter you will learn more, enjoy yourself more, mollify non-survivalists, and keep yourself from burning out. I also like to think of it as a secret agent kind of thing. Over the years I have met a few people who are covertly into self-reliance and preparedness. If you met them on the street, they present themselves as such average people that you would have no idea that they would be considered survivalists. This is the way I recommend.

The terms “survivalist” and “prepper” have a poor reputation among individuals who are not into self-reliance, self-sufficiency, and disaster preparedness. They also imply that there is going to be some great disaster referred to as TEOTWAWKI – the end of the world as we know it. They took it from the REM song of the same name. Lenny Bruce might not have been afraid, but I bet Michael Stipe is either amused or mortified



This is one of the best survivalist books out there.

about that bunch adopting his song. I don't believe there will ever be a TEOTWAWKI, and if there is we'll either all be dead or enough of us who remain will have the collective skills and knowledge to rebuild.

If you take a step back from all that TEOTWAWKI nonsense, you'll find that we have experienced plenty of natural, man-made, and political disasters of varying severity. If one thing can be certain, it is that more of those perhaps mundane but still quite serious disasters are certain to come. Realistically speaking, you should be more concerned about and prepared to deal with a tree landing on your house than you should about your nearby city getting nuked. Even when things are relatively quiet these days, there is still a dystopian feeling in society that I often feel is more concerning than a disaster of a relatively acute nature that you can mitigate and recover from.



A tree falling on your house is something you are more likely to deal with than TEOTWAWKI.

For what it's worth, I hate the term prepper. It's a term adopted by politically correct kinda-sorta survivalist types who doesn't want to offend anyone. Preppers are like peppers in that when you open one up you find both to be hollow and empty inside. I prefer and would rather use the term survivalist, but even then real survivalists don't go around advertising the fact because nobody needs to know they are one. That applies even more to modern technological survivalists.

What I See

When I see these yahoos on "Doomsday Preppers" and similar shows, I have to resist the the urge to put a bullet through the screen in the Edward Abbey tradition. I hope that my readers understand that the majority of guests on those shows are a bunch of paranoid narcissists with more money than common sense. The reality is that most of who are seriously into survivalism live in less than ideal locales, consider ourselves lucky if we have two Nickels to rub together after we pay the bills, and are not interested in showing all of TV land our stuff.

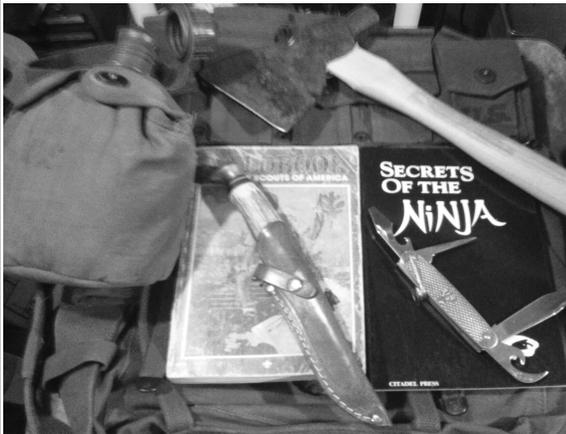
When you meet a survivalist, you can tell a lot about them if you keep quiet and listen to what they say (or don't say). I have found that there are three categories of survivalist types. What I call the Category One survivalist is actually more of a conspiracy theorist. They don't have much in the way of preps, bounce around with the fanciest excuses, and are usually more interested in talking about the conspiracy theory of the month whether it's FEMA, New World Order, GMOs, or raw milk. These people are useless, and you should avoid them. The Category Two survivalist is what many people call the Yuppie Survivalist. They usually have more money than common sense or skills, and think they can buy their way to preparedness. Many of the guests on "Doomsday Preppers" fit this category. This is the person who shows up to survivalist meetups with a high-end military-style rifle, Glock, Sig, or M1911 pistol in a tactical holster, and a sparkling new commercially-made military load bearing equipment (LBE) rig that has never seen any field use. I won't fault anyone for being able to afford the good stuff, but unless they've get skills to back up the gear, they too will be useless once the shit hits the fan except maybe resupply for someone a little smarter and more ornery. Then you have a Category Three survivalist. If you do not know this person closely, they will come across as either totally boring, completely batshit crazy, or one of the scariest people you've ever met. Most of the time they keep to themselves, and if you do come across an actual CAT3 survivalist, they will be either be a "friend of a friend," or someone you meet in a slightly related venue. These people are the people you want to emulate. When you go about networking with other and putting together your preps, think about the three different categories of survivalists. Consider the type you would want to work with and have your back.

A Better Way For A Better You

You probably partake one or more hobbies that are applicable towards self-reliance, preparedness, and dealing with disasters in general. Many of them revolve around building, fixing, and hacking things. Some others may involve increasing and maintaining physical fitness. They also may involve increasing one's self-sufficiency in other manners such as growing, foraging, or hunting food. You don't have to be an expert in everything, but if you are competent in a few that you enjoy everything else will fall into place. You will also find other like-minded individuals who have slightly different skill sets. You and two of your friends might all be into mountain biking and messing with Arduinos, but one is also an amateur machinist, and the other is into foraging wild plants, while you are into woodworking. All of you own a house with an acre or two, and try to do as much home improvement and repair work as you can to save money. That in itself encompasses a wide range of skills, and while none of you may do it at a professional level, you are still competent enough to do a good job. One might do plumbing better, another electrical, and you carpentry. The three of you have other like-minded friends with other skill sets. Now you're beginning to see a small community of individuals who all complement and can help one another. When disaster strikes, whatever it happens to be, you will have a brain trust that can mitigate the effects and eventually fix or rebuild what was damaged or destroyed. This is the way.

This Is How It Begins

Regardless of how many people may eventually become a part of your community, it all still begins with you. Many repair jobs involve getting under a sink, into the crawl space, under a vehicle, working in cramped quarters, going up ladders, and so on. The most important tool in your inventory is you. Barring any medical issues that would indicate to the contrary, make sure your physical shape and condition is such that you can safely do these things. If not, then one of your hobbies should be something that will help you improving it until you can do such tasks without worry. I will get into physical training later, for there is something with a higher priority that needs to be discussed. While you are working on getting your body in shape, you should also be working on your mind, and that is where this long strange trip begins.



You start with a notion, the discovery of the outside world, and the realization that things are fucked up. Beyond that? Maybe an old dog-eared copy of the [Boy Scout Fieldbook](#) and [Secrets of the Ninja](#), by one "Ashida Kim." But hell, it could be a combination of [Atlas Shrugged](#), [Desert Solitaire](#), [Getting Started in Electronics](#), and [Naked Lunch](#) for what it's worth. Books like that come to you when they are needed. Little soul boxes, each and every one of them, all containing a piece of the writer's distilled essence. Dangerous things, them books. All full of ideas and instructions. The stuff dreams, inventions, and revolutions are made of. What would you expect when the creator extracts a piece of his or her very being and bares it to the world in all of its raw, naked glory? Amazon lists 32,800,000 books for sale. That's a total of 537,919,983,600,000 possible combinations of 2 books that can flip a certain switch in your head. Then there's all the out-of-print stuff that you might find sitting in the corner of a

used book or antique store. For those are the places where the good stuff is, and where the magic really happens. It gets better! There is most certainly more than one combination that will accomplish the deed. Five Hundred Thirty-Seven Trillion potential little memetic booby traps waiting to burrow inside your head like that Ceti Eel from Star Trek. What are you waiting for?

I remember a time when every shopping mall and plaza had a bookstore in it. Every one. Waldenbooks and B. Dalton were the predominant players, but there were also smaller local chains. Our local shopping plaza's bookstore had the unimaginative name of "Book and Record." Now people go on Amazon and are steered like kindergarteners down safe, well-lit paths in a walled garden. Less chance they may wander into the uncharted badlands where crazy ideas perpetuated by deviant intellectual perverts may grab hold of them and infect them with strange bizarre notions, altering their brainwaves like some psycho-spiritual venereal disease. Holy shit, Batman! He's got copies of both [Atlas Shrugged](#) and [Naked Lunch](#)! Hell's gonna need a fleet of snow plows to fix this one! Bookstores were always fun like that. There was that

aisle you didn't explore, and one day you walk down it and one of those little innocent looking collections of bound wood pulp jumps out at you, crawls into your head, and forever alters your reality screen.

No shit, there I was. Cruising the science fiction section of my local Book and Record, looking for a copy of Neuromancer by William Gibson. "C" comes before "G", and as I'm going through the shelves, a pulp paperback by Arthur C. Clarke catches my eye. Report on Planet Three and Other Speculations, the title read. I stopped and took the little infernal device off the shelf, taking in the smell of fresh print, intoxicating! I turned a page, and the author's memetic honeypot activated. The sensation is the same you get from hacking a computer system that resists your access attempts to the point where you contemplate committing heavy-duty felonies just to get in and see what they're hiding on that hard-drive. I read a few pages, and was caught. Thank you, Mr. Clarke, for sharing that part of your mind with me. Two books came home that afternoon. Such diversions that lead to an altered reality screen cannot be experienced in an online venue. Meatspace, baby! As you may have guessed, that was one of the many 537,919,983,600,000 possible combinations that flipped a switch. It wasn't the first, and it certainly wasn't the last. Past that, it was just an army surplus backpack, canteen, German hunting knife, four-blade Boy Scout-style pocket knife, and an old hatchet. Nothing special, just ordinary stuff found at army/navy stores, tag sales, and flea markets. I packed a lunch and spent the day in the woods. Try stuff out, see what works (and doesn't), take notes, go home, and try it all again the next weekend or free afternoon. You learn a few things every time you go out in the field, and it starts adding up.

A journey of a Thousand miles begins with a single step, towards your local library.

How do you get there? You don't know what you don't know, and this is a problem if you wish to travel the path of the modern technological survivalist. Fortunately, there is a way, legal for the moment, to help you leave your walled garden prison and get out onto the mesa. You will need the location of your local public library, a library card for same, knowledge of the Dewey Decimal System, and the means of generating random numbers from zero to nine. The first two are the easiest. Once they are taken care of, you may proceed.

Most public libraries use the Dewey Decimal System to sort their book collections. It organizes books into 10 broad classes. Each class has ten divisions. Each division is further categorized into ten sections. A full list of classes, divisions, and sections can be found at https://en.wikipedia.org/wiki/List_of_Dewey_Decimal_classes, but for now you know the basics and can proceed. What you will do is randomly select three books from your local public library to read. You will do this by generating three random numbers from 00-99 that will tell you which class and division to select from. You get to pick the section. When you are done, you will have three books to read that you were previously unaware had even existed.

The easiest and most expedient way to generate these three numbers is visiting <http://www.random.org/>, but some people use 10-sided gaming/D&D dice, put 10 slips of paper labeled 0-9 in a hat, or use some other method. The method used is not important. What is important is that you make the process random. When you are done with this step you will have three random numbers from 0 to 99. Let's say they are 56, 80, and 99. You now have your divisions and sections from each division determined.



In this example 56n is Science - Fossils and Prehistoric Life; 80n is Literature and Rhetoric, and finally 99n is History & Geography - History of other areas. Go to the place in the stacks where each of the sections you generated is located. In that section, pick the first book that catches your eye. If there are no books in that particular section, flip a coin. If you get heads, look to the left and pick the first book that catches your eye. For tails, look to the right and do likewise. If your library is big enough, you can generate random numbers from 000-999 and have the section randomly chosen for you as well.

The random book selection technique is best for both beginners who have no idea where to start, and the more experienced modern technological survivalists who get into a rut, but here are also other ways. You can just browse the stacks looking for cool stuff that looks interesting. Your best best bet for classes to browse through will be 000, 600, and 700, or you can go through all of them. Start at class 000. Look at all the shelves in those three classes. When you see a book that catches your eye, for whatever reason, even briefly, take it and check it out. Do this until you have accumulated

three books. When you are done reading those three books, return to the library and pick up where you stopped the last time. Get another three books. Keep repeating until you reach the end.

Most libraries have a table containing the month's recommended selections. Pick up and check out the first one that catches your sight for more than a second. Make that your first selection for the three. Now look at its Dewey Decimal Number. Take the first two digits, and visit that section in the stacks. Select two books that catch your eye from that section. Perform any or all of these rituals until something clicks in your head, and then follow that rabbit hole down until you meet Alice and the dormouse.

If you are pressed for time, not ready to partake of the full experience your local has to offer, or are looking for “practical” stuff because you want to learn something DIY, you can limit your selections to classes 000 (Computer science, information and general works), 500 (Science), 600 (Technology), and 700 (Arts and Recreation). Furthermore in class 000 you can limit yourself to divisions 000-006 which are the divisions that deal specifically with computer science in in that class. Now take your lucky flipping coin whether it's the challenge coin from your last unit, or the 1969 Eisenhower dollar you received for your 10th birthday. Go into each section and flip your coin. Heads is n00-n49, tails is n50-n99. Flip it again, and split the divisions in half again. Eventually you will find yourself splitting hairs until you have narrowed down to a three digit section. Pick a book from that section. For example, you go into class 600, flip a coin, get tails. The next selection is 650-699. Flip it again, heads. Now you're at 650-674. Tails, 662.5-674. Heads, 662.5-668.75. Heads, 662.5-665.625. Tails, 664.062. Ignore everything past the decimal point, and you're now looking at books on food technology. You might not even want to flip far, depending on the size of the library and stop at 66n, which is the division for chemical engineering. Surely you can find *something interesting* there. Especially when you take a look through the selections and ask “How can this book help my education as a technological survivalist?”

Building Your Library

On my keyring is a USB stick drive that has around 2100 PDFs covering a range of modern technological survivalist topics from A to Z. The entire collection takes up about 5 Gigabytes of space, and I still have a little more than 10 Gigabytes free. Imagine what size library you could fit on a 1 or 2 Terrabyte drive. Physical books are nice, however, and there will be some texts you want in hardcopy so you can read them at any time without a device. Most department stores sell a 2'x3' three-shelf bookcase for \$20-\$25 depending on where you go, and if there's a sale. This gives you six feet of shelf space for books.

Keep your eyes open at tag sales, flea markets, gun shows, and similar places for plastic index card boxes full of microfiche that are labeled with a sticker that says “Pocket Survival, PO Box 2010, Dallas, TX 75221.” During the 1980s this company advertised a comprehensive survival library on microfiche with a small handheld reader in various survivalist and gun magazines. The microfiche in those boxes contain a useful variety of self-reliance and preparedness books and military manuals (Figure 2-1). As the original buyers of this collection age out, I would expect to see them become available at various second-hand venues. A useful book collection on microfiche, along with a handheld reader, is probably the best way to have a comprehensive library that takes up a minimum of space, and can be accessed at any time. Sadly, Pocket Survival is no longer in business, but I leave this as a something of a Holy Grail for those of you who want the ultimate modern technological survivalist library.



This is how survivalists kept their library in the 1980s.

Realistically speaking, the bulk of your library is going to be PDF files on some form of device, unless you get lucky and find a copy of the Pocket Survival microfiche collection. This is an adequate solution for now, but I can tell you from first hand experience that most devices will die after 10 yrsrs, losing the data they hold in the process. You will want a few hardcopy versions of books you consider “must haves.” I think filling one of those small bookshelf units would be a good start, and not take up too much space. Where do you begin? The answer is inside you and at your local independent bookstore. Alas,

independent bookstores are now few and far between, and even the big chains such as Barnes and Noble are getting to where they have more other stuff than books. To help you out, I will give you a list that would be a good starting point. You will be able to find these books online, or perhaps at a local bookstore if you have one nearby. Some are still in print, while others are not. Websites were provided when available, and I would suggest ordering them directly from the author/publisher when you can. Without further adieu, here is Ticom's Twenty. This is a rather eclectic selection of books, but a modern technological survivalist should expect nothing less.

Ticom's Twenty

1. The Art Of Tinkering, by Karen Wilkinson and Mike Petrich - <https://www.exploratorium.edu/>
2. Boy Scout Fieldbook (1980s or earlier edition)
3. Caveman Chemistry, by Kevin Dunn - <https://www.cavemanchemistry.com/>
4. The Chernobyl Syndrome, by Dean Ing - <https://archive.org/details/chernobylsyndrom00ingd>
5. Foxfire series, edited by Eliot Wigginton - <https://www.foxfire.org/>
6. Getting Started In Electronics, by Forrest Mims III - <http://www.forrestmims.com/>
7. The Good Life Lab, by Wendy Tremayne - <http://www.thegoodlifelab.com/>
8. How To Be An Explorer Of the World, by Keri Smith - <http://www.kerismith.com/>
9. The Knowledge, by Lewis Dartnell <http://the-knowledge.org/en-gb/>
10. Live Off The Land In The City And Country, by Ragnar Benson
11. Nuclear War Survival Skills – by Cresson H. Kearny - <https://www.oism.org/>
12. One Acre and Security, by Bradford Angier
13. The Poor Man's James Bond series, by Kurt Saxon
14. US Army Ranger Handbook
15. The Salt Book, and Salt II, edited by Pamela Wood - <https://www.saltstoryarchive.com/>
16. Secrets of the Ninja, by Ashida Kim - <http://www.ashidakim.com/>
17. Shelters, Shacks and Shanties, by D.C. Beard
18. Sixguns, by Elmer Kieth
19. The Voice of the Crystal, by H. P. Friedrichs - <http://www.hpfriedrichs.com/index.htm>
20. Walden, by Henry David Thoreau - <https://www.walden.org/>

To what end all this? Modern technological survivalism is about engaging in an everyday lifestyle of self-reliance and preparedness. More so than collecting toys, it's about learning things that can help you both now and in the future, whatever that future happens to be? That includes being able to fix or build things, and having enough education and training so you can stay employed and be able to keep/maintain a residence, afford the cost of daily living, and be able to put aside various preparations for when things go sideways. As my wife is fond of saying, knowledge is one of the things they can't take away from you. As I have learned and experienced first-hand, a broad skill set helps ensure that you not only can stay employed, but also take care of important stuff when cash gets a little tight. If TEOTWAWKI ever occurs, as unlikely it is to happen, you will be in a good position to recover and rebuild with a decent skill set. If it never happens in your lifetime, at least you had a good time learning useful things that helped you out along the way.

Turning Information Into Intelligence

If you look at some of the more conspiracy-oriented websites or social media groups, you will eventually come across a video or a URL that is labeled as an “Intel (short for Intelligence) Report.” What you encountered was a really piece of data. When you organize data in a coherent manner it then becomes information, but it still has not become intelligence. US Army Field Manual FM 5-30 Combat Intelligence defines information as “*unevaluated material (data) of every description including that derived from observations, communications, reports, rumors, imagery, and other sources from which intelligence is produced. Information itself may be true or false, accurate or inaccurate, confirmed or unconfirmed, pertinent or impertinent, positive or negative.*” (pg. 2-1) The same manual defines intelligence as “*the product resulting from the collection, evaluation, and interpretation of information which concerns one or more aspects of foreign nations or of functional or geographic areas, and which is immediately or potentially significant to the development and execution of plans, policies, and operations.*” (pg. 2-1) Therefore, information is not intelligence. Information is what you analyze and turn into intelligence. Furthermore, it has to apply to you in some manner.

Taking information and turning it into intelligence is an important skill. In 2018, the state of California suffered its deadliest and most destructive wildfire in the state’s history. The Camp Fire burned over 153,000 acres, destroyed over 18,000 buildings, and killed 85 people. For the residents of Butte County it was their zombie apocalypse, a mindless force of nature caused and compounded by human error. Yet, there was a series of traceable and noticeable events that an observant viewer could have used as an early warning system to alert them ahead of time that this was going to be more than a small garden variety brush fire, and to give them a little extra time to lessen the effects of this disaster. On the opposite side of the fence, in 2015 the US Department of Defense Special Operations Command held a Realistic Military Training exercise called Jade Helm that occurred over multiple southern and southwestern states, and involved about 1,200 military personnel. The states in the exercise included Texas, Arizona, Florida, Louisiana, Mississippi, New Mexico, and Utah. Those seven states comprise an area of over 700,000 square miles. This exercise spawned numerous rumors and conspiracy theories about martial law, gun confiscations, internment camps for political dissidents, and near earth objects. Yet, there was no series of traceable and noticeable events that lent credence to Jade Helm being anything other than a DOD exercise. In comparison to Jade Helm, it took 10,000 Army National Guard, 1,000 Federal tactical law enforcement, and 3,500 Active Duty military troops to help local police contain the 1992 Los Angeles Riot. The riot happened over an area of approximately 60 square miles, and there was no doubt in anyone’s mind as to what was going on at the time.

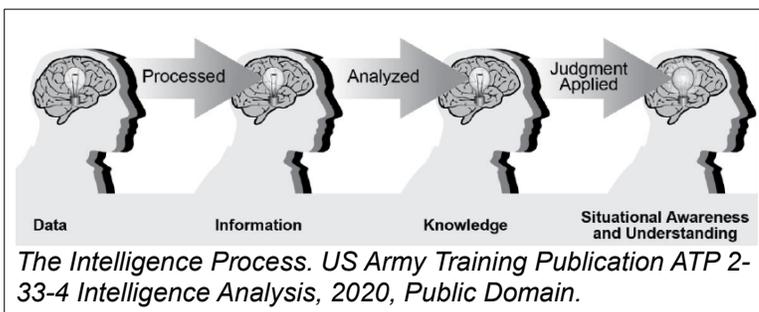
You do all this by establishing a baseline of what you might consider normal activity and looking for obvious short-term problem indicators. Long term analysis is an ongoing process that takes a while, but as Bob Dylan once said “You don’t need a weather man to know which way the wind blows.” Let’s say a pool supply business or similar chemical stockpile in town catches fire. It is safe to assume that industrial chemicals have hazardous properties. Where is the business located in relation to you? Are you downwind from it? If so, how far? Depending on the answers to these questions, you may have a problem. In that example you didn’t need a baseline established to come to a quick conclusion about your safety, and the need to take precautions or temporarily relocate to avoid breathing in something that could seriously injure or kill you.

Information you are collecting and analyzing to produce intelligence can be classified as either tactical or strategic. Tactical intelligence is short-term and often immediate in applicability. You’re listening to the police scanner and you hear a fire call. What is the nature and the location of the call? Is it something you have to worry about immediately, potentially, or not at all? Strategic intelligence is more long-term, and less urgent. An example would be your town’s social, economic, and political status and trends over a period of time.

A good and fast rule of thumb is that tactical information will be straight, factual, and to the point. Public safety calls heard over the radio are just the facts. Information you discover first hand through observation is what it is, and is exactly what you see, perception augmentation aside. If the weather station in your backyard says it’s 86 degrees, 40% humidity, and the wind is blowing Southwest at 7 MPH, then those are the weather conditions provided your instrumentation is calibrated and working properly. If you find yourself wearing a heavy jacket, the clouds have started to deluge, and the Beaufort Scale measurement based on watching the trees in your backyard is more like a 6 than a 2, then you might want to check your weather station as your instrument’s measurements are at odds with your empirical observations. If the map doesn’t match the terrain, fix the map.

Strategic information, especially that which is collected from open source content, is likely to be slanted in a particular direction. I treat the idea of “fake news” as irrelevant. It is the term used by low information consumers to dismiss any content they disagree with. I have previously said you have to question your assumptions because you cannot afford to have any. You will notice how the context of a particular piece of information will change slant depending on the relationship between the public figure who said it, and the news service reporting it. Fox tries to make liberals look bad and conservatives look good. CNN does the opposite. Radio Havana Cuba will report an American news story with a different slant to it than would the Christian Science Monitor. How do you deal with this? You collect from as many sources as possible, and isolate the commonality to null the slant out. You can also look for the raw data that generated the stories in the first place.

The process is shown to your right. You start with data that you have collected. That data is organized into a coherent form to make it information. That information is then evaluated and analyzed to provide knowledge, which, along with prior knowledge, to provide awareness and understanding. As this process continues in a cycle, what starts out as data becomes intelligence.



The US government, and each branch of the US Military has their own intelligence service collecting and analyzing information from a number of sources worldwide, for the whole range of functional and geographic areas. As a civilian interested in intelligence collection and analysis regarding disaster preparedness in your town, county, and state (in that order), your functional and geographic areas are much more limited. While you may not be able to task a Keyhole satellite to park itself over your town, there are other ways you and perhaps a small group of friends can stay apprised of current events and receive indications of matters that may concern you.

The term “Open Source” refers to data gathered from public sources. The sources can be Internet content, print media, public government data, professional publications, commercial data, and non-commercial “grey data.” With the exception of Internet-specific content, recently-published and current open source information is usually a good, reliable, and accurate source of background information, especially of the strategic variety. Care must be taken to ensure it is not obsolete or supplanted, and that you get the most recent version or edition of the information you are seeking. Internet-specific content can be a different story. Unless it is simply a digitized version of something originally published offline and can be confirmed as such, or can be vetted by other means, its reliability and accuracy should be considered suspect. You should use an especially jaded and skeptical eye whenever you see someone touting an “intel report.”

A little over a year ago, Connecticut was in a state of emergency from the COVID-19 pandemic. Mainstream news outlets reported on actions being taken by the state to stem the spread of the virus, and in particular the executive orders signed by Governor Lamont. Non-mainstream sources such as social media laymen, blog pundits, and conspiracy theory fucktards on the Internet did the same. The information presented was significantly abbreviated and simplified compared to the actual content of said executive orders and the statistics provided by the state. This was to be expected. News outlets have time, content, space, marketing, competition, and consumer attention span constraints to work with. Non-mainstream sources are usually operating under some sociopolitical agenda, and lack the skill and/or desire to research, observe, and report properly. If I however surfed on over the Connecticut Government Portal COVID-19 website, I would have found every news brief, executive order, and piece of official information regarding the COVID-19 response. The information found on that site would have confirmed or debunked the stories reported by the news outlets, and the conspiracy theorist fucktards that are found on social media and other web sites.

When you jump into this activity, stick to your local area to avoid information overload. As an individual person you’ll have your hands full with just keeping abreast of what’s going on around you. Take extensive notes of what you learn, discover, and notice. Ask yourself, “Is this applicable?” and “How does this affect me?” Look for patterns. Don’t try to make them where they don’t exist. Finally, don’t be afraid to trust your instincts.

When collecting information in the real world, the value of your observations is in proportion to how accurately you can view and report what you see. When I was in the Army, one of the first things they taught us was how use the

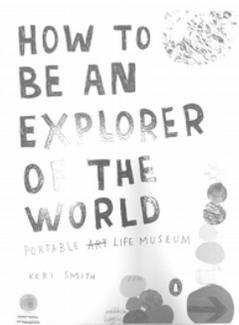
mnemonic “SALUTE” to help us remember the essential data that needed to be sent when reporting an observation in the field. This is really useful for recording observations you make when out and about.

- Size – How many did you see?
- Activity – What were they doing?
- Location – Where were they?
- Uniform/Unit – What were they wearing.
- Time – The day and time you saw them.
- Equipment – What did they have with them? What were they carrying?

Most if not all of you are packing a phone with a camera. That is good, because pictures capture more detail for later evaluation and analysis than you can usually remember. That is the first piece of your observation and investigation kit. The next thing you should do is go down to your local Dollar store and purchase a small pocket notebook and a package of your favorite writing instrument. You now have the means to record observations for later review. Another useful item to have is a voice recording app on your phone or a small digital voice recorder. Wal-Mart and Target have them starting at \$20 for a no-name brand all the way up to \$60+ for a nice Sony or Olympus. If you are like many folks, you hop into your car after getting your act together and drive 15-60 minutes into work. At the end of the day, you do it in reverse. You will have the opportunity to make plenty of interesting observations during this 30-120 minutes worth of commute time, but writing them down in your notebook while behind the wheel is dangerous and ill-advised. While you could wait until the drive is over, your recollection of the observation may degrade to the point where your SALUTE report is useless. The solution is to have a voice recorder handy so you can record your observation right as it happens. Although it costs more, a dash cam will serve the same purpose and also provide a visual component for later evaluation.

My advice is simple. When you are out and about pay attention to your surroundings. Note down not only anything that looks even remotely interesting or out of place, but also record your routine and mundane observations. You will be in the process of establishing a baseline, and without that baseline it will be extremely difficult to know when things deviate from normal. For those of you who have previously kept a diary or journal, this is nothing new. The rest of you will need some time to get up to speed and reach the level of “intelligence grade.” Try to get at least one entry a day. If nothing else at the end of the day before you retire for the night go over to your weather station, transcribe the day’s high and low temperature, and write a couple personal sentences about the day or some news story that caught you the right way. It’s that easy. As this process continues and increases in detail, you should begin to notice some patterns which after a while you will recognize as the normal baseline of activity. Deviations in those patterns indicate something interesting may be happening or may about to happen.

One of the best books I have found on this subject is actually an art book. It is called [How To Be An Explorer Of The World](#), by Keri Smith. I became aware of Ms. Smith’s work through another book of hers, [The Wander Society](#). Upon reading it, I realized that this author understands the big picture in a manner that few people do. [The Wander Society](#) was a good, albeit short, read, and remained for a while on the shelf next to the Thoreau, Emerson, and Whitman. After that, I added her name to the list of authors I look for during bookstore trips. It was at a local Barnes and Noble, in the Crafts and Hobbies section, that I found [How To Be An Explorer Of The World](#). Some of the exercises may seem pointless. They are not. This book is actually a training manual on how to observe and report that is presented in such an innocuous and gentle manner that you could give a copy of this book to your kid, and not worry about it finding its way to school with him or her. The exercises in this book will help you out greatly.



Drones are a very useful tool. Even a low-tier model such as \$64 Vivitar bought on sale at your local Wal-Mart offers a 1000 ft. range with real-time video. This will give you an elevated vantage point for collecting information, or allow visual access to a potentially dangerous area. As handy as they are, drones have acquired a reputation as voyeuristic and Orwellian due to the actions of a few irresponsible enthusiasts and their use for surveillance operations by governments. Individuals have taken to implementing countermeasures against drones they encounter, often leading to the loss of the equipment. Consider any drone you deploy off your own property to be an expendable item, and spend the appropriate amount of money on it. (To Be Continued)

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-Ticom

