

What's In Your "Go-Kit?"

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Many amateurs carry an HT as part of their daily routine. Those who do so, should always include basic accessories such as an extra NiCd pack, external power cord, some sort of gain antenna, comfort and safety items "just in case." All it takes is your battery to "die" when you need to access the auto patch to report a traffic accident, get lost or break down on the road in an unfamiliar place to fully appreciate the value of being "prepared."

The best "Go-kit" for you won't fit anyone's canned list. Assemble one which fits your routine, experience and local conditions. Commuters using mass transit should keep at least bare essentials handy. A larger kit is practical if you are usually near your car. The trunk is the best place to store emergency gear because it is dry, accessible either at home or away and relatively secure. I have three kits which supplement each other. My "every day" kit fits in a briefcase and accompanies an HT.

A "backup" shoulder bag in the car provides basic tools and first aid supplies, some cash, a spare HT, 25w brick amp, coax, antenna, gel cell battery and accessories for 24 hours operation. I also carry a fire extinguisher, first aid kit, blanket, two MREs and a gallon of water in the car. Two "evacuation bags" at home have three days supply of food, water and medications, a boxed non-spillable AGM deep cycle battery, battery charger, tool kit, rain gear, clothing, safety and shelter items.

In rural areas, fire making supplies, pocket knife, map and compass should be in your kit. In the suburbs, keep a local street atlas, change for a pay phone and some emergency cash or credit card. A compact, sturdy flashlight, extra batteries, first aid kit, extra HT battery pack and spare eyeglasses are useful everywhere. If you take require prescription medications, carry a 3-day supply. On the road also carry enough cash for a tank of gas, hot meal and a room.

A minimum "Go-kit" should sustain a day of continuous operation and be easily supplemented for overnight trips. The bare essentials are a 2-meter or dual-band HT, some sort of "gain" antenna, auxiliary power source, writing materials, comfort and safety items. You can do a lot with a minimum kit, if you plan carefully. There is risk of not having something you may need if you go too light, but obvious "bells and whistles" should stay home. My "every day" kit, including a dual-band HT, weighs 5 pounds and is 4"x6"x10," fits in a waist pack and contains:

- 1) Dual-band HT in padded belt case.
- 2) Copy of current FCC Operating License.
- 3) "Tiger tail" (*counterpoise enhances Tx and Rx of a typical "rubber duck" by 3 db*).
- 4) Extra high-capacity (1000 mah) NiCd, or backup AA battery case for HT.
- 5) DC adapter & cigarette plug cord for HT
- 6) Two extra 2A fuses, for HT cord
- 7) Earphone and speaker mike
- 8) Spartan pattern Swiss Army pocket knife
- 9) Leatherman multi-purpose tool
- 10) CMG Infinity Ultra LED task light and 2 spare AAs
- 11) Pencil and pocket note pad
- 12) Emergency gas/phone/meal money (\$20 bill, \$6 quarters + five dimes in 35mm film can).
- 13) SO-239 to male-BNC adapter to fit HT to mobile antenna coax and female BNC to SO-239 to fit HT gain antenna to jumper.
- 14) 8 ft. RG8-X jumper w/BHC male and female connectors to raise and extend HT antenna.
- 15) Spare eye glasses of current prescription.
- 16) Band aids, baby wipes and sunscreen
- 17) Pocket sewing kit, matches
- 18) Small pocket compass
- 19) Operating reference card for HT
- 20) RACES phone and frequency card
- 21) Repeater auto patch and control code card

The "**Backup Bag**" carries "24-hour" items in a sturdy shoulder bag or lumbar pack with carrying strap. Mine has external pockets marked as to contents. The large main compartment carries a 7ah gel cell battery and 20w brick amp while other items are packed around and between them. It stays in the car until needed. I am trying to reduce it from its 12"x8"x6" size and 18 lbs. weight. Suggested contents are:

- 1) Neck-lanyard pocket with spare car keys, emergency cash, credit card, long-distance calling card and RACES ID.
- 2) Second, “ backup / loaner” 2-meter HT. (*Accessories interchange with dual-bander*)
- 3) Spare large capacity NiCd or AA-battery pack, ear phone and speaker-mike for second HT
- 4) Operating manuals for both HT’s.
- 5) Fused DC adapter cords with Molex connectors for brick amplifier and HTs.
- 6) 10 ft. AWG10 gage extension cord, with battery clips, in-line fuses and Molex connectors to power brick amp and/or HT from a car battery.
- 7) Compact, rugged, 25-40w 2 meter or dual-band brick amplifier. - **See comments below**.**
- 8) Gain antenna for HT: (*telescoping half-wave Larsen 2m or dual-band Comet CH-722SA (½ wave VHF, collinear UHF)*), plus tiger tail, throw weight and cord to pull up into a tree.
- 9) HT NiCd and 12V gel cell AC chargers.
- 10) One 15ah or two 7ah, 12V gel cells to power brick amp on 10-25w @ 25% duty cycle 24 hrs.
- 11) 16 spare AA Alkalines for HT and flashlight(s).
- 12) RG8-X jumpers, various lengths to total 50 ft., with soldered PL-259s, and double-female barrel connectors to connect all.
- 13) Adapters: BNC-male+BNC female to SO-239; BNC-male+BNC female to PL-259; NMO to SO-239 adapters plus others, such as SMA and N if your group uses them.
- 14) Cable ties, electrical tape, pliers, diagonal cutters and multi-bit screwdriver.
- 15) Compass and local area USGS 7.5 minute topo map
- 16) Two sharpened pencils, pencil sharpener, gum eraser, note pad, waterproof permanent marker.
- 17) ARRL [ARES Field Resource Manual](#)
- 18) Compact, rugged, flashlight (*Pelican Stealthlite*), with extra bulb and extra AA alkalines (above) batteries

19) Two sets of spare fuses (2A, 10A, 20A) for HT cords, FM mobile, HF or brick amp.

20) Comfort, safety and basic first aid items: sunglasses, matches, tissues, toothbrush, sun block, sewing kit, insect repellent, tweezers, band-aids, adhesive tape, gauze pads, wound cleaning wipes, latex gloves, CPR mask, etc.

****HT Duty Cycle Limits and Brick Amps**

Today’s compact HTs are rated for only 20% duty cycle at 5w output, or 30 seconds transmit to 2 minutes of standby. Their final power transistors may fail prematurely if subjected to frequent full power transmissions of several minutes. When I first got my license, I burned up three sets of finals during the warranty period of an HTX 202. The Kenwood TH22 I replaced it with later fared no better.

Kenwood’s service center admonished me that I was exceeding the recommended duty cycle for their HT and should buy a mobile, which I did. I also sought full-sized, rugged HTs with adequate heat sink, built to public safety standards for RACES use and pass that advice along. Unless you know that your handheld is, limit your use of full power to short transmissions.

A small brick amplifier is also recommended to provide better range and signal clarity from your HT. Good operating practice and maximum endurance on battery power demand that you limit RF output to the minimum needed to maintain reliable communication, but the emphasis is still on “reliable.” An ideal portable amp for EmCom should weigh no more than 1.5 lb., provide 10-15w output when driven by the HT on a low, (battery conserve) power setting and 25-45w when driven by the HT at full power from its regular NiCd battery pack. The amp should not require no more than 8A current at maximum output, enabling it to operate safely from a Series 1545, .093 pin Molex connector and fused cigarette lighter plug. No preamp is wanted, because preamps FM just increase intermod. It is more important to buy a rugged, quality amplifier with an ample heat sink than to seek the smallest “box.”

Disaster Bags— are duffels of family survival gear stored above flood level in your house to shelter in place which can also be grabbed quickly and thrown into the car with the backup bag in the car trunk, if needed. Many hams overlook these, but in a real disaster, they will be are your most important item.

Each family member needs their own evac bag with personal medications, warm hat, rain gear, sturdy shoes, a change of warm clothes, socks and underwear,

flashlight and sleeping bag or heavy wool blanket in a soft backpack. Store in sturdy, waterproof containers, with handles, such as metal trash cans, with a 3 day supply of nonperishable food, water and sanitation supplies, so the family can take when told to evacuate.

Establish a refuge or safe meeting place within walking distance of your home, work or school at a friend or neighbors if family members can't get home, or must leave for their personal safety. Arrange with an out-of-state friend or relative to accept collect calls. Family members should meet at the refuge or call the out-of-state contact when they reach another place of safety. Sew tags in children's clothing with your address and telephone number. Label home telephones with YOUR address to ensure that visitors calling from your home can tell emergency services where they are. Install a flashing porch light so that the responders can find you. All family members must know the emergency contact phone and address! RACES mutual aid and rapid assessment teams must be self-sufficient to operate independently of local resources strained to their limits. The following is a "thought starter" for your disaster planning.

- 1) 3-ring binder with phone and frequency lists, repeater control codes, County disaster plan, RACES /SKYWARN /NTS scripts and manuals, topo maps and manual for mobile rig, in weather resistant portfolio.
 - 2) Dual-band or 2m antenna, at least 3db gain, with 50 feet of coax, RG8 or better on reel. Examples: radial kit and mast clamp for your such as from www.hamstick.com; compact dual-band base antenna such as Diamond X-50 or a small yagi such as Cushcraft 124WB.
 - 3) Military mast kit; or 3 ft. rooftripod, landscaping spikes for anchoring, guy ropes and four 5 ft. TV mast sections.
 - 4) AC charger for HT NiCds or small gel cells
 - 5) Two sealed gell or AGM BCI Group U1 (33ah) deep cycle batteries or one Group 24 (80ah) or Group 27 (96 ah), automatic, low amperage charger and UL-listed AC extension cord. (*Schumacher Electric Corp Model SE-1-12S, from www.batterychargers.com*).
 - 6) 12-volt, 8w fluorescent or auto backup light bulb with 10 ft. long, soldered clip leads for attachment to battery. *Adequate light is important for operating efficiency and morale. A strong, battery light is safer and more reliable than gas lanterns.*
 - 7) Propane soldering iron, fuel, and Solder-It Kit.
 - 8) Leather work glove shells, wool finger-less liners, wool knit hat, hard hat, wind/rain suit, wool sweater, insulated safety boots, safety glasses, reflective vest, extra dry socks and a change of underwear.
 - 9) Tarp, shelter half or poncho
 - 10) Wool blanket or insulated poncho liner
 - 11) Two each, message pads, pencils
 - 12) Grease pencil
 - 13) 2 sheet protectors, 12 push pins.
 - 14) Vinyl electrical tape for rain wraps, 1 roll
 - 15) Cable ties, large and small, 1 dozen each
 - 16) Rubber bands, medium and large, six ea.
 - 17) Adjustable open-end wrench, 6"x 0-5/8"
 - 18) Folding hex key set
 - 19) Lineman's pliers w /crimper /side cutters
 - 20) Needle-nose pliers
 - 21) Channel locks or Vise-Grip pliers
 - 22) Mobile-type, dual-band SWR/power meter
 - 23) Pocket VOM or multi-meter w/ test leads
 - 24) Connectors / adaptors including no-solder type BNC and UHF for emergency repairs
 - 25) First Aid Kit container.
 - 26) Mess kit, utensils 3 days bottled water and nonperishable food (which can be eaten cold*).
 - 27) Personal hygiene and sanitation supplies. Good choices are pre-packaged baby wipes, waterless antibacterial hand cleaner and paper towels.
- *1 gallon of water per person/day is needed for drinking and washing. Good emergency foods are canned soup or stew, beans, tuna, juices, fruits, veggies which can be eaten cold, or warmed without preparation; also peanut butter, cheese spread or jam in plastic jars, lots of hard candy, instant coffee, tea, dried fruit, crackers. Avoid processed meats such as Spam which are loaded with salt or fat and hard to digest. Sterno, heat tabs or MRE heaters are best for warming. Use up and replace emergency food and water stocks every six months.*