

## "What's In Your Go' Kit?"

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Many amateurs carry an HT as part of their daily routine. Those who do 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 autopatch 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. The Fairfax ARES Handbook, the Skywarn Net Control Operations Manual and the ARRL ARES Field Resource Manual provide excellent guidance on "Go Kits."

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, two MREs and water in the car. Two "evacuation" bags at home have three days supply of food, water and medications, a boxed non-spillable 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 always 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 carry enough cash for a tank of gas, hot meal and a room.

A minimum "go" kit should sustain a full day of continuous operating and be easily supplemented for overnight or weekend 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) nicad, or backup AA battery case for HT.
- 5) DC adapter & cigarette plug cord for LIT
- 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) Mini-Mag-Lite, extra bulb 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 S0..239 to fit HT gain antenna to jumper.
- 14) 6 ft. RG8-X jumper w/BHC male and female connectors to extend Ht antenna with suction cups or auto window clip.
- 15) Spare eye glasses of current prescription.
- 16) Band aids, moist towelettes and sunscreen
- 17) Pocket sewing kit, matches
- 18) Small pocket compass
- 19) Operating reference card for HT
- 20) ARES phone and frequency reference card

The "Backup Bag" carries "24-hour" items in a sturdy shoulder bag with carrying strap. Mine has external pockets marked as to contents. The large main compartment carries a gel cell battery and 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 ARES photo 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. AWG 10 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 following this list.
- 8) Gain antenna for HT: (telescoping half-wave Larsen 2m or dual-band Comet CH-722SA (1/2 wave VHF, collinear UHF), plus tiger tail, throw weight and

cord to pull up into a tree.

9) HT nicad 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) Spare AA Alkalines for HT and flashlight.

12) RG8-Xjumper of various length with soldered PL-259s, to total 50 ft. with double-female UHF barrel connectors to combine all.

13) Adapters: BNC-male+BNC female to 80-239; BNC-male+BNC female to PL-259; NMO to SO-239 adapters plus others if you need them.

14) Cable ties, electrical tape, pliers, diagonal cutters and multi-bit screwdriver.

15) Compass and local area topo map

16) Two sharpened pencils, pencil sharpener, gum eraser, note pad, water-proof permanent marker.

17) ARES Field Resource Manual

18) Compact, rugged, flashlight (Pelican Stealthlite), with extra bulb and AA batteries

19) Two sets of spare fuses (2A, 10A, 15A) for HT cords, mobile radio and/or brick amplifier.

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, 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 my HTX 202. The Kenwood TH22 I replaced it with 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 ARES use and pass that advice along. Unless 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 idea! ARES portable amp should weigh no more than 1.5 Lb., provide 10-15w output when driven by the HT on its low, (battery conserve) power setting and 25-40w 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 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 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 and underwear, flashlight and sleeping bag or heavy wool blanket in a soft backpack. Store in sturdy, waterproof, transportable containers, such as metal trash cans, with 3 days supply of nonperishable food, water and sanitation supplies which family members can take with them if they must evacuate.

Establish a "refuge" or safe meeting place within walking distance of your home, work or school at a friend or neighbor's 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 in an emergency from your home can tell emergency services where they are. Install a flashing porch light with blinker option so first-responders can find your house quickly. Everyone in the family must know the emergency contact phone and address. Sew labels with your phone number and address in small children's clothing.

ARES Mutual Assistance Teams are self-sufficient and operate independently of local resources strained to their limits. The following isn't the "last word. " but a "thought starter" for your disaster planning. If you want to help, you had better be prepared:

- 1) 3-ring binder with phone and frequency lists, repeater control codes, County disaster plan, ARES/RACES/SKYWARN /NTS scripts and manuals, topo maps and manual for mobile rig, all in a weather resistant, zippered portfolio.
- 2) Dual-band or 2m antenna, at least 3db gain, with 50 feet of coax on reel. Recommend a radial adapter kit and clamps for your mobile antenna, a small omni-directional base antenna such as the Cushcraft AR-270 or a portable 3 or 4 element yagi.
- 3) Military mast kit or TV roof tripod, spikes for anchoring, 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), and automatic, low amperage charger and UL-Listed AC extension cord. (Highly recommend Schumacher Electric Corp Model SE-1-12S, readily available from Wal-Mart, cost about \$25).
- 6) 12-volt, 8w fluorescent or auto taillight bulb in PVC bottle with soldered clip leads. Adequate light is important for operating efficiency and morale. A strong, battery light is safer and more reliable than gasoline

lanterns.

7) Propane soldering iron, fuel, solder and flux.

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, two sets of extra dry socks and underwear.

9) Tarp, shelter half or poncho

10) Wool blanket or insulated poncho liner

11) Two each. message pads, pencils

12) Grease pencil, 2 sheet protectors, 12 push pins.

12) Vinyl electrical tape for rain wraps, 1 roll

13) Cable ties, large and small, 1 dozen each

14) Rubber bands, medium and large, six ea. -

15) Adjustable open-end wrench, 6" x 0-5/8"

16) Folding hex key set

17) Lineman's pliers w/crimpers /side cutters

18) Needle-nose pliers

19) Channel locks or Vise-Grip pliers

20) Mobile-type, dual-band SWR/power meter

21) Pocket VOM or multi-meter w/ test leads

22) Connectors / adaptors including no-solder type BNC and UHF for emergency repairs

23) First Aid Kit container.

24) Mess kit, utensils 3 days bottled water and nonperishable food (which can be eaten cold\*).

25) 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 which are loaded with salt or fat and hard to digest. Sterno is best for warming. Use up and replace emergency food and water stocks every six months.