Emergency Response Go-Kits

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Agenda
1. Overview
2. Show and tell

CARES mission

The mission of Cupertino ARES is to maintain and train Amateur Radio volunteers capable of providing professional emergency communications, increasing the City's emergency response effectiveness, and speeding the recovery effort.

You just were activated… now what!?!

In Cupertino, we may be responding to any of the following:

- Earthquakes
- Flooding by dam failure
- Flooding by rain
- Wild land fire
- Large urban fire
- Manmade disasters (BNICE)

Each of these events has a different communications needs and expectations on how we perform.

So, how do we prepare?

Emergency Response Go-Kits

Types of Assignments

As an CARES Field Responder, you may be asked to assist with any of a number of assignments, from a variety of station operating locations, such as:

Base Station

- Incident Command Post (ARKs, Staging Areas, etc.)
- County Fire Stations
- Emergency Operations Center
- At Home (Traffic Net)

Field-Portable Station

- Search and Rescue Field support
- Shelter

Mobile Station

- Mobile Command Post
- Shadow
- Vehicle Ride-Along (Transport, SAG Wagon, etc.)
- Cross-band Repeat Station Control Operator

Length of Assignments

The length of time you are asked to assist with emergency communications will depend on the type and size of the incident and the number of Field Responders available:

- Short – a few hours to less than a day

- Overnight

- Two to three days
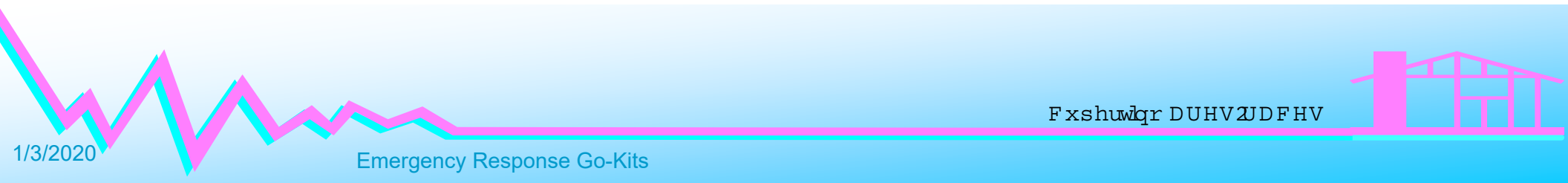
- Long-Duration – greater than 72 hours

The longer the assignment, the more we need to bring to the event.

What is a Go-Kit?

- A Go-Kit is a pre-staged collection of equipment and personal gear that you will need to perform your duties as an Emergency Communicator in the event of a call-out.

- Your Go-Kit should be tailored to your needs, your equipment, expected assignments, and expected length of assignments.

Why do you need one?

Adapted with permission from Dan O'Connor, KE7HLR

Some reasons why you need a Go-Kit:

- In the event of a major disaster, your assignment location will probably be without power, heat, water, and telephone service. Most businesses in the area will probably not be open due to the emergency.

- As a Field Responder, YOU must provide your own equipment and gear.

- You are responsible for your own safety, and you must provide for your own welfare and comfort.

Building your Go-Kit now ensures:

- The items you need are available <u>when</u> you need them.

- The items you need are <u>where</u> you expect them to be.

- When the Activation Call comes, you won't have time to hunt for things!

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Emergency Response Go-Kits

Types of Go-Kits

Your Go-Kit should be tailored to your needs, your equipment, your expected assignments, and the expected length of assignments. Go-Kits should be broken-up into different types of kits, depending on function and location:

Go-Kits by Function

- Types of Incident

- Type of Assignment or Mission

- Length of Assignment

Go-Kits by Location

- Carried on Person

- Carried in Vehicle

- Stored at Fixed Location (Home, Office, Shop, etc.)

- Non-Cached Equipment—gathered as needed (Home, Office, Shop, etc.)

Think Modular

Basic Go-Kits

- Day Pack – Items needed for a short-duration or mobile/foot assignment. Keep in vehicle for immediate access.

- 24-Hour Kit – Supplemental items needed for an overnight assignment.

- 72-Hour Kit – Supplemental items needed for an extended assignment of up to 3 days.

Specialty Go-Kits

- Office Kit – Paperwork and operational references that may be useful for setting-up and maintaining a portable or base communications station.

- Portable Radio Kit – the "Radio in a Briefcase" for voice or packet.

- Computer Kit – Notebook computer and interface equipment for packet.

- Tool Kit – Tools and equipment needed to set-up and maintain your radio station.

- Antenna and Mast Kit – Portable antenna, mast, and tripod or guy lines, for setting-up an outdoor antenna.

- Emergency Power Equipment – Batteries, Generator, Cables and related gear.

Think Modular (continued)

Miscellaneous Go-Kits

- Additional Gear – Sleeping bag, tent, shade canopy, etc.

- Vehicle Tool Kit – Equipment needed to keep your vehicle going.

- Evacuation Kit – Food, water and equipment needed if it becomes necessary to evacuate from your current location.

SC County RACES Recommendation

2 Hour Carry Kit

 Purpose: To be kept nearby at all times for immediate (within minutes) communication of damage reports during Initial Activation Operations. Also used to remain in contact with Resource Net while returning home to retrieve 12-hour Go-Kit.
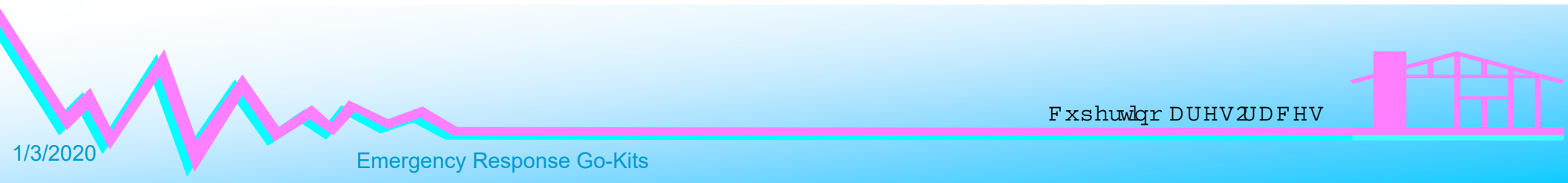
12 Hour Go-Kit

 Purpose: For fully independent operation; unknown environment (heat, cold, wind, rain); unknown time (day, night, up to 12 hours). Usually need to return home to retrieve.

Lets take a look at them…

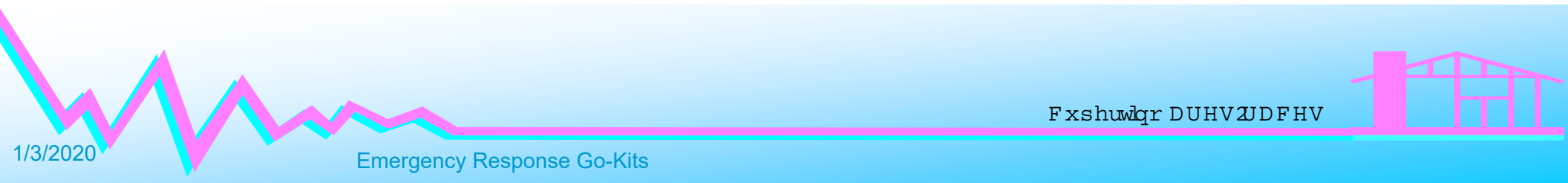Fxshuwlqr DUHV 2UDFHV

References

1. Santa Clara County RACES Go-Kits
   http://www.scc-ares-races.org/gokit/SCCo_Go_Kit_rev100716.pdf

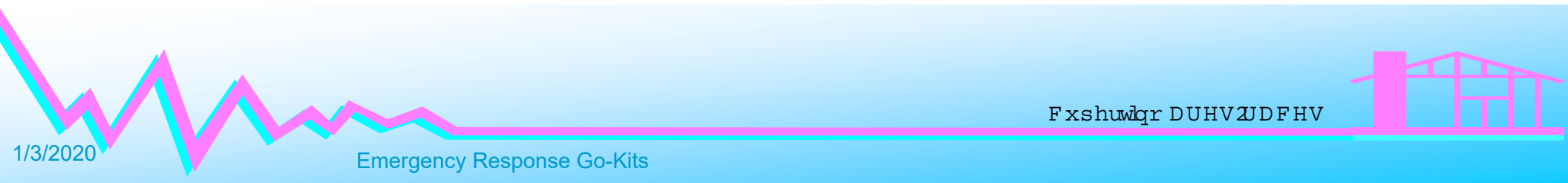2. Personal Go-Kit for Emergency Communication, Dan O'Connor, KE7HLR
   http://www.ke7hlr.com/ecw/index.html

Go-Kit show and tell

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Thank you

Any Questions?

Emergency Response Go-Kits

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Legend:

X = Required (must have in kit at all times)

R = Recommended (likely useful on many assignments)

O = Optional (useful on some assignments)

2-Hour Carry Kit

Purpose: To be kept nearby at all times for immediate (within minutes) communication of damage reports during Resource Net Level 1 ops. Also used to remain in contact with Resource Net Level 2 while returning home to retrieve 12-hour Go-Kit.

Items:

X 2m/70cm dual-band radio
- HT recommended (min. 5W on 12V/2.5W on batt)
- Mobile 25W optional (if vehicle will not be far away)
- Programmed with Resource Net frequencies

X Charged batteries for 2-3 hours operation

X 2m/70cm dual-band mobile antenna (mag mount, window mount or existing mobile antenna)

X Modified Mercalli (Mike-Mike) scale

X Notepad / pens

R Cigarette lighter adapter

R Emergency county and city telephone contact list

R Cell phone

R Water (16 oz.)

12-Hour Go Kit

Purpose: For fully independent operation; unknown environment (heat, cold, wind, rain); unknown time (day, night, up to 12 hours). Return home to retrieve.

Equipment

Portable Radio:

X 2m/70cm dual-band handie-talkie (HT)
- minimum 5W on 12V/2.5W on batteries [Note 1]
- dual-receive recommended

X Radio user manual or cheat sheet

X Earbud or headphones minimum; headset, earbud/mic, or speaker/mic/earbud, or similar recommended

R Small backpack, vest, chest harness or other similar method for carrying HT while operating portable

Power Source:

X Charged batteries for 12 hours (min. 3000 mAH) [Note 2]

X Power cord adapters — connect to various power sources:
- Powerpoles
- Cigarette lighter socket
- Vehicle battery terminals

X Spare fuses

Antennas:

X Coax adapters: connect HT to coax, coax to the following:
- BNC plug (male) & BNC socket (female)
- UHF plug (PL-259) & UHF socket (SO-239)
- N-type plug (male) and N-type socket (female)

X Min. 25 feet of 50 ohm coaxial cable

X 2m/70cm dual-band magnetic or window mount antenna

R 2m/70cm high gain HT antenna

R 2m/70cm dual-band portable base antenna (e.g. roll-up J-pole or other)

R Portable mast (elevates antenna min. 10 ft.)

R Tripod or self-supporting base for mast

R Window clip antenna mount (for non-metallic vehicles)

Other Communications Gear:

R Cell phone & charger and/or cigarette lighter adapt.

O FRS/GMRS Radio

O Satellite phone

Tools:

R Duct tape

R Electrical tape

R Nylon Tie-Wraps/wire ties

R Utility knife

R Small multi-tool or tool kit

O Volt-Ohm meter

O SWR/Power meter

Operating Position:

X Sign(s) for operating position

R Lighting for operating position

R Rope or Dacron cord (50')

R Folding chair

O Magnetic sign for car

O Folding table

O Pop-up Canopy

O Tarp (8' by 8' or larger)

O Folding cart

O Safety strobes or flares

O Caution/flagging tape (for marking cables, antennas, …)

Documentation

Identification:

X CA Driver's license or CA-issued ID card

X Amateur Radio license

X County Emerg. Resp. ID card (blue card) or MAC Badge

X If issued: SCCo ID badge, city badge, MAC Qual card

Maps:

X Thomas Guide for "Santa Clara County"

Power

R Powerpole splitter or fused distribution panel

R Extension cord, 3-wire, 3-6 ft., multi-outlet

O Extension cord, 3-wire, 50-100 ft.

O Power Inverter

Forms and Documentation:
- X Compass or GPS
- R Maps of antenna locations (if available)
- R City, county or other detail maps
- X Modified Mercalli (Mike-Mike) scale
- X ICS 205-SCCo – Communications Plan (min. 5)
- X ICS 211A-SCCo – Communications Check-In (min. 5)
- X ICS 213-SCCo – Message (min. 10)
- X ICS 214-SCCo – Unit Activity Log (min. 5)
- X ICS 309-SCCo – Communications Log (min. 5)
- X ICS 314-SCCo – Windshield Survey (min. 5)
- X Phone message pad (2-part style recommended)
- R County Performance Standards (Required for MACs)

Logging / Note taking:
- X Clipboard (covered type recommended)
- X Notepads (standard or waterproof)
- X At least 2 pens / pencils
- O Highlighters / felt-tip pens

Contact Lists:
- X SCCo Voice and Packet Frequency Lists
- X DEC/ADEC and city EC telephone contact list
- X Police/Fire direct dial phone numbers
- O Repeater directory

Personal Gear

Vehicle:
- X Reliable operating condition
- X Fueled – minimum ½ full at all times
- R Jumper cables

General Items:
- X Money (paper and coin) – in case ATMs are down
- X Watch or clock
- R Trash bags

Personal Safety Gear:
- X Flashlight or headlamp and spare batteries for 12 hours
- X Safety vest, ANSI standard (lime yellow recommended)
- R First Aid kit
- R Whistle
- R Work gloves
- R Sunglasses
- R Sunscreen lotion
- R Insect Repellent
- R Safety glasses
- R Mask (NIOSH-certified N95 or better)
- O Hearing protection (e.g. foam ear plugs)
- O Hard hat (lime yellow recommended)
- O Chemical light sticks

Clothing:
- X Sturdy, closed-toe shoes (no sandals)
- X Long pants (no shorts)

Santa Clara County ARES®/RACES

- X Hat (broad brim recommended)
- X Seasonal jacket / rain gear

Food & Water:
- X Food for 12 hours (make your own list)
- X Water for 12 hours (3-4 quarts recommended)
- R Small cooler or ice chest

Toiletries:
- R Hand soap and/or sanitizer
- R Toilet paper
- O Tylenol
- O Antacid tablets

As Needed / Appropriate:
- Prescription medication
- List of medication used
- Eyeglasses & spare

Miscellaneous (as needed)
- Portable AM radio and spare batteries
- Binoculars
- Baggies to seal/protect items
- Shovel
- Fire extinguisher
- Disposable camera

Mobile Radio Kit (as needed)
- 2m/70cm mobile radio
  - 25W minimum
  - Dual-receive, cross-band repeat recommended
- Radio user manual or cheat sheet
- Headset (stereo recommended for VFO per ear)
- Battery for 12-hours operation (20 AH min.; 26 AH rec.)
- Battery charger
- Power cord adapters – connect to various power sources:
  - Powerpoles
  - Cigarette lighter socket
  - Vehicle battery terminals
- Coax adapters: connect mobile to coax, coax to following:
  - BNC plug (male) & BNC socket (female)
  - UHF plug (PL-259) & UHF socket (SO-239)
  - N-type plug (male) and N-type socket (female)

Packet Equipment (as needed)
- Laptop with Outpost and PacFORMS installed
- USB flash drive (i.e. USB key)
- TNC (may be hardware, software or built into radio)
- Cables: TNC to radio; TNC to PC
- Shade cover for display
- Portable printer
- Entire station can operate for min. 1 hr on battery

Extended Go Kit

Personal Go Kit Items/Notes:

Purpose: Additional items for fully independent operation over an extended period of time. Used in situations where returning home after shift is not possible or not ideal.

As Needed

Power Source:
- Regulated DC power supply
- Battery charger
- Spare batteries (for charging while operating)
- Portable generator and fuel
- DC distribution panel & cables (Powerpoles recommended)

Clothing:
- Rain gear
- Jacket
- Warm clothing (preferably in layers)
- Under garments (3 sets)
- Socks (3 sets)
- Pants (3)
- Belt
- Shirts (3)
- Alternate boots or shoes
- Sleepwear
- Cold water laundry soap (e.g. Woolite)

Food and Water:
- MREs (self heating) or other non-perishable meals
- Water (1 gal/day recommended, depending on conditions)
- Water purification tablets or devices
- Can opener
- Cooler or ice chest
- Bowl and eating utensils
- Coffee cup

Shower Items:
- Washcloth and towel
- Soap and shampoo
- Razor and shaving cream
- Toothbrush and toothpaste
- Comb and/or brush
- Deodorant/antiperspirant
- Wash basin (in case of no sink)

Shelter:
- Sleeping pad
- Sleeping bag/blanket
- Pillow
- Blanket
- Tent
- Alarm clock

Notes:

1. Most recently manufactured hand held radios ARE capable of 5W output when 12-13.8 VDC is connected to the DC-IN jack and at least 2.5W output power using rechargeable battery packs. Check your radio's user manual to be sure your radio outputs at least 2.5W on rechargeable batteries. However, most hand held radios are NOT capable of producing a minimum of 2.5W output power using AA batteries. Some known exceptions are the Kenwood TH-D7 and the Yaesu FT-60. For all other radios, rechargeable battery packs will be needed unless the radio can be shown to have a minimum of 2.5W output on AA batteries (check user manual or test with power meter).

2. A review of the most popular handheld radios was conducted. Receive current, transmit current and rechargeable battery pack capacity were reviewed. 3000 mAH was determined to be the minimum capacity needed for 12 hours of operation. (Some radios may require a little more). Depending on the make and model, this translates to 2 or 3 rechargeable battery packs. This minimum requirement correlates well with real-world experience in drills and real incidents such as Katrina.

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