

May 12th Lake Washington Ham Club Presentation:

"Go-kit your way to freedom!"

An open panel discussion with James Hansen K1IMO ,
John Nance KI7PMJ, and Tom Early KE7PWL.

Possible suggested uses:

- Hams interested in emergency communications – Grab and Go!
- Hams interested in portable operations, e.g. IOTA, local parks, etc.
- Hams interested in having a portable station because of size limitations, antennas, or HOA restrictions, e.g. apartments, condos, RVs, etc.

James Hansen K1IMO



Item	Manufacturer	Model number	Cost	Seller	Link
HF	Yaesu	FT-450d	\$679.95	HRO	https://www.hamradio.com/detail.cfm?pid=H0-010897
Case	Gatpr	GR-6S ATA	\$133.39	Music friend	https://www.musiciansfriend.com/accessories/gator-gr-6s-ata-6-space-shallow-rack-case/544846000000499
Power supply	Powerwerx	SS-30DV	\$109.95	HRO	https://www.hamradio.com/detail.cfm?pid=H0-010662
Drawer	Navepoint	B019JJ580Y	\$45.95	Amazon	https://www.amazon.com/NavePoint-Drawer-19-Inch-Server-Cabinet/dp/B019JJ580Y/
power splitter	Furman	M-8Lx	\$79.95	Amazon	https://www.amazon.com/Furman-Standard-Conditioning-Outlets-Spacing/dp/B0014598WQ/
splitter 12v	West mountain	RR/4004/usb	\$89.95	HRO	https://www.hamradio.com/detail.cfm?pid=H0-009868
12v DC backup	West mountain	PG40S	\$134.95	HRO	https://www.hamradio.com/detail.cfm?pid=H0-007770
LED lighting	supernight	smd5050	\$19.84	amazon	https://www.amazon.com/gp/product/B00ASHQQKI/
panel power	social	iec 320 c14	\$3.32	amazon	https://www.amazon.com/gp/product/B00843KZP0/
UHF					
connector		uhf-08-tgnz	\$4.95	HRO	https://www.hamradio.com/detail.cfm?pid=H0-015399
powerpole	anderson	asorted kit	\$50.00	powerwerx	https://powerwerx.com/150-piece-anderson-powerpole-connector-case
crimper	TR1crimp		\$39.99	powerwerx	https://powerwerx.com/tricrimp-powerpole-connector-crimping-tool
Assorted metal parts no cost to me					

John Nance KI7PMJ



- Mobile Radio of your choice – Mine Yaesu FT-7900 Dual Band (detachable face radios offer more mounting options), I may go with a HF/Dual Band mobile in the future. A Cross-band radio could be useful deployed as a impromptu hill hopper for a team.
- Ammo Can - .50 Cal or “Fat 50” depending on radio and battery size (Harbor Freight sells the .50 Cal at a reasonable price. I got my Fat 50 from Amazon for about \$35)

- Battery – Used a 20 Amp Hour AGM non-spillable about \$40 from Amazon; enough to go all day; can be mounted any position. A 7AH would suffice for shorter planned activity. May go with a L-ion battery in the future to reduce weight - Many options for your application.
- NMO Mount for Antenna connection. I used one without the coax attached and supplied a short Coax. Option would be to buy one with the coax and cut it and put on a coax connector.
- 12-14 gauge wire (approximate 3 feet). You could cut up the supplied power line for your mobile radio keeping the T-connector and fuses (connect radio to charge controller) and using the excess for solar panel to charge controller and charge controller to battery.
- Fuses and Fuse Holders. I prefer the in-line style that uses the glass tube fuses over the blade. I got mine from Amazon. I would go with the micro blade fuses as a second choice. Everything is fused for safety.
- Connectors (used Anderson Power Pole connectors but XT-60 connectors or even Ideal Luminaries Power Plugs; all are polarized. Anderson's are widely used in Ham Radio, but the XT and Ideal allows configurations what keep you from hooking things up incorrectly
- U or eye connectors for connecting to battery posts
- Mobile Dual Band Antenna to attach to the ammo can. Suggest low power if using the mobile antenna to limit RF exposure.
- NMO to UHF Female Adapter for connecting to external antenna. Used a N9TAX ladder-line Slim Jim Dual Band antenna.
- NMO Rain Cap to protect NMO mount when in transport.
- Wood or metal frame to mount radio / battery and keep parts from shifting in transport.

Optional Solar Power

- Solar Panel: 10 to 30 watt, 12 volt panel.
- Solar Charge Controller: rated for max amp radio will draw. Helpful for protection against over-discharge even if you don't hook it to a panel. **Caveat:** most charge controllers require they be connected to a battery before you supply power from the solar panel. Doing otherwise will fry the controller.
- Binding Post Terminals (pass through the ammo can for connecting to an outside power source).
- Cigarette lighter plug with Anderson connectors for giving your battery a boost if the solar panel can't keep up with your transmissions.

Tom Early KE7PWL



Left Panel:

FT-8900R Data Port
2M/70cM PL259 Antenna Male Connection
6M PL259 Antenna Male Connection
Packet PL259 Antenna Connection
3AG| fuse and holder
AC Power Connection
AC Power Cord
Laptop USB Cord
AC Power Cord

Parts list:

Water Proof Sealed Box
Yaesu Quad Band FT-8900R Transceiver
TNC-X
Motorola Transceiver
Power Supply (Astron 55-3M)
Speaker