

# Portable Communication Systems For Emergency and POTA Operations

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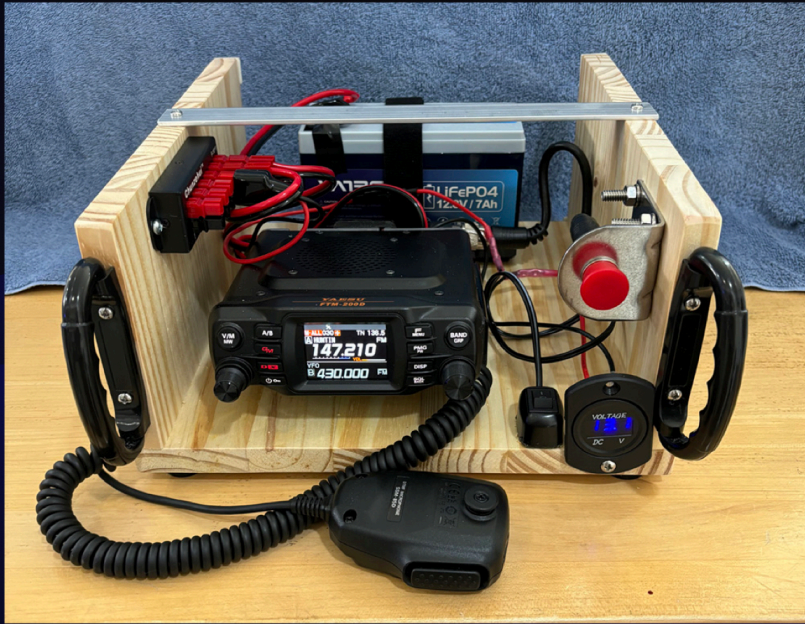
## Portable Communications Systems

For Emergency and POTA Operations

Dr. John A. Allocca, February 12, 2025, [www.wb2lua.com](http://www.wb2lua.com)



Portable Communications in the 25th Century



**VHF/UHF/C4FM Portable System**

Yaesu FTM-200DR - Yaesu FTM-200DR 50W C4FM-FM Dual Band Digital Transceiver

12 volt / 7 ah lithium phosphate battery

12 volt digital meter with on-off switch

Tram Stainless Steel So-239 to So-239 Antenna Mirror Mount (3270)

F-1011 6-Position 45A Power Pole Distribution Block Module, Connector Power Splitter Distributor Source Strip.

METALLIXITY Luggage Handle (108mm/4.25") 2Pcs, Plastic Pull Handle Grip Replacement - for Home Box Case Suitcase, Black

Wood box with metal bar across the top (11" wide x 11.5" Deep x 5-3/4" High)



**HF + 50 MHz Portable System**

YAESU FT-891 HF + 50 MHz All Mode Mobile Transceiver

12 volt / 7 ah lithium phosphate battery

12 volt digital meter with on-off switch

Tram Stainless Steel So-239 to So-239 Antenna Mirror Mount (3270)

F-1011 6-Position 45A Power Pole Distribution Block Module, Connector Power Splitter Distributor Source Strip.

METALLIXITY Luggage Handle (108mm/4.25") 2Pcs, Plastic Pull Handle Grip Replacement - for Home Box Case Suitcase, Black

Wood box with metal bar across the top (11" wide x 11.5" Deep x 5-3/4" High)



**Stacked Vertically on a Table**

VHF/UHF/C4FM Portable System

HF + 50 MHz Portable System



**Stacked Horizontally on a Table**

VHF/UHF/C4FM Portable System

HF + 50 MHz Portable System



**Stacked Horizontally in Their (LP Album) Carry Cases on a Table**

VHF/UHF/C4FM Portable System

HF + 50 MHz Portable System



**Stacked Horizontally in Their Carry Cases Ready to Go**

VHF/UHF/C4FM Portable System

HF + 50 MHz Portable System



**Portable Antenna with Dual Hamsticks and UHF Mount on Top - Mounted on a Photo Stand**



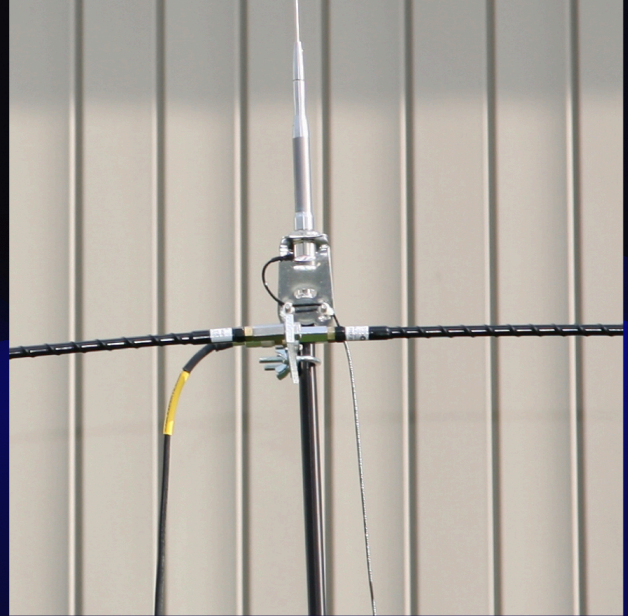
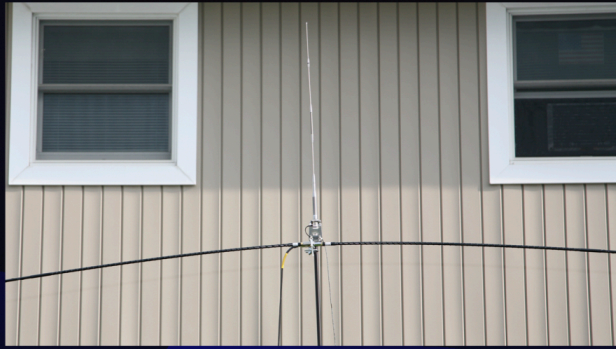
**Portable Antenna with Dual Hamsticks and UHF Mount on Top - Mounted on a Photo Stand**



**Portable Antenna with Dual Dual (Quad) Hamsticks with VHF/UHF Mount on Top - Mounted on a Photo Stand**



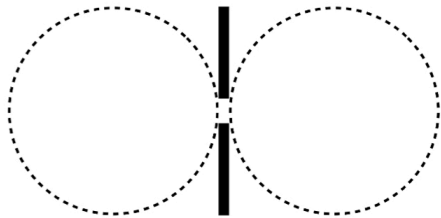
**Portable Antenna with Dual Dual (Quad) Hamsticks with VHF/UHF Mount on Top - Mounted on a Photo Stand**



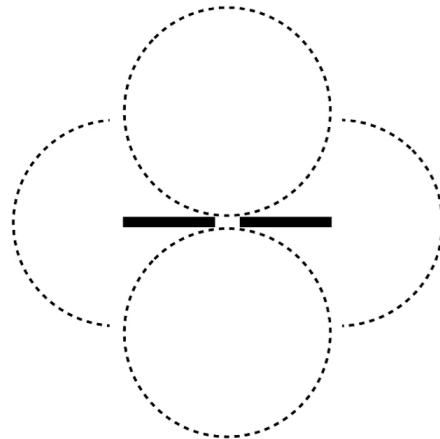
**Portable Antenna with Dual Hamsticks with VHF/UHF Mount on Top**



**Portable Antenna with Dual Hamsticks with VHF/UHF Mount on Top**



**Dipole Radiation Pattern**



**Double Dipole Radiation Pattern?  
(Theorized, not measured)**



**Mobile Communications Trailer**





**Mobile Communications Trailer**



**Mobile Communications Trailer**



**Mobile Communications Trailer at Huntington Halesite Firehouse (mini field day)**

**For more information, visit  
[www.wb2lua.com](http://www.wb2lua.com)**

## Parts List (Partial)

### **VATRER POWER 12V 7AH LiFePO4 Battery Deep Cycle Lithium Battery**

Built-in 12A BMS, 5000+ Cycles Rechargeable Battery

Nominal Voltage: 12.8V

Charge Voltage: 14.2V -14.6V

Weight: 1.98LB /0.9KG

Energy: 89.6Wh

Max Continuous Charging Current: 7A

Max Continuous Discharging Current: 7A

Recommend Charge Current: 1.4A (0.2C )

Max Load / Inverter: 89.6W

Operating temperatures: Charge 0°C~50°C(32°F~122°F), Discharge

-20°C~60°C(-4°F~140°F), Storage -10°C~50°C(-14°F~122°F)

\$28 at Amazon

[https://www.amazon.com/dp/B0B64XSGNV?ref=ppx\\_yo2ov\\_dt\\_b\\_product\\_details&th=1](https://www.amazon.com/dp/B0B64XSGNV?ref=ppx_yo2ov_dt_b_product_details&th=1)

### **ULTRAPOWER 4-Amp 14.6 Volt LiFePO4 Battery Charger**

12.8 Volt LiPO Lithium Battery Charger,4-Stages Smart Battery Charger for

Cars,Motocycles,Golf Carts,UAV,Fishing Boat,Automatically Active BMS

\$29 at Amazon

[https://www.amazon.com/dp/B08MPX414R?psc=1&ref=ppx\\_yo2ov\\_dt\\_b\\_product\\_details](https://www.amazon.com/dp/B08MPX414R?psc=1&ref=ppx_yo2ov_dt_b_product_details)

### **DaierTek Battery Voltage Meter**

Waterproof DC 12V 24V LED Voltmeter Panel 12 Volt 24 Volt 36 Volt Battery Monitor with Blue Light Round Digital Voltage Display for Marine Boat Car Automotive Motorcycle

\$10 at Amazon

[https://www.amazon.com/dp/B0CF22LR2X?ref=ppx\\_yo2ov\\_dt\\_b\\_product\\_details&th=1](https://www.amazon.com/dp/B0CF22LR2X?ref=ppx_yo2ov_dt_b_product_details&th=1)

### **Jtron Car DIY Switches Water Drop Shape Push Button Switches Off/ON DC 12V AC**

**250V/6A 125V/10A 12v Surface Mount Switch** for Fog Lights,DRL,LED Light

Bar,etc(Cable:19.6"")

\$8 from Amazon

[https://www.amazon.com/dp/B074V5WHSX?ref=ppx\\_yo2ov\\_dt\\_b\\_product\\_details&th=1](https://www.amazon.com/dp/B074V5WHSX?ref=ppx_yo2ov_dt_b_product_details&th=1)

### **Valley Enterprises Two-Way Radio OEM-T Power Connector with Anderson Powerpole Connectors**

Length 18 Inches, Compatible with Most Icom, Yaesu, Alinco, Kenwood, ADI, BTECH, and Other Chinese Radios

\$20 at Amazon

[https://www.amazon.com/gp/product/B07GHD9Z7W/ref=ppx\\_yo\\_dt\\_b\\_asin\\_title\\_o00\\_s00?ie=UTF8&psc=1](https://www.amazon.com/gp/product/B07GHD9Z7W/ref=ppx_yo_dt_b_asin_title_o00_s00?ie=UTF8&psc=1)

### **Tram Stainless Steel So-239 to So-239 Antenna Mirror Mount (3270)**

\$16 at Amazon

[https://www.amazon.com/gp/product/B01EXIFYCI/ref=ox\\_sc\\_act\\_title\\_1?smid=ATVPDKIKX0DER&psc=1](https://www.amazon.com/gp/product/B01EXIFYCI/ref=ox_sc_act_title_1?smid=ATVPDKIKX0DER&psc=1)

**RFAdapter RG8X Coax Cable, 1ft 12inch Short PL259 Jumper CB Antenna Cable UHF Male Connector 50 ohm Low Loss for Ham Radio, Antenna Analyzer and SWR Meter**

\$9 at Amazon

[https://www.amazon.com/gp/product/B087BLHMHF/ref=ppx\\_yo\\_dt\\_b\\_search\\_asin\\_title?ie=UTF8&th=1](https://www.amazon.com/gp/product/B087BLHMHF/ref=ppx_yo_dt_b_search_asin_title?ie=UTF8&th=1)

**UHF Male PL-259 to UHF Female SO-239 L Shape Right Angle 90 Degree RF Coax Coaxial Adapter Connector (Pack of 4)**

\$15 at Amazon

[https://www.amazon.com/dp/B07RND7HC4/?coliid=I3SVOYMF05MUCP&colid=1YOLJO65R88Q0&psc=1&ref\\_=list\\_c\\_wl\\_lv\\_ov\\_lig\\_dp\\_it](https://www.amazon.com/dp/B07RND7HC4/?coliid=I3SVOYMF05MUCP&colid=1YOLJO65R88Q0&psc=1&ref_=list_c_wl_lv_ov_lig_dp_it)

**Chunzehui F-1011 6-Position 45A Power Pole Distribution Block Module, Connector Power Splitter Distributor Source Strip.**

\$33 at Amazon

[https://www.amazon.com/dp/B07KQD9V3G?psc=1&ref=ppx\\_yo2ov\\_dt\\_b\\_product\\_details](https://www.amazon.com/dp/B07KQD9V3G?psc=1&ref=ppx_yo2ov_dt_b_product_details)