

Communications Trailer Capabilities

Los Alamos Amateur Radio Club



Radios

ICOM IC-706 MKIIG

HF (80-6 meter) amateur bands.
VHF/UHF Amateur bands.
Digital comms via attached computer.

Kenwood TM-D710

VHF, UHF, APRS, Packet on Amateur bands. Cross-band repeat capable.

PowerWerx DB-750X

UHF, VHF, Amateur and Public Safety / SAR bands. Cross-band repeat capable.

ICOM IC-F1020

VHF Public Safety / SAR band.

Motorola Air-to-Ground

Dedicated 121.5 MHz radio w/ 10 watt amplifier.

Radio Shack PRO-2067

Digital trunking scanner.



Antennae

HF

Roof-mounted vertical whip with coupler.

NVIS large field antenna with tuner.

VHF/UHF/AIR

Mast mounted J-poles for Amateur and Public Safety bands.

Detachable antenna at 121.5 MHz for Air-to-Ground.

Permanent roof-mounted antennae for all other radios.

WiFi

External antennae for WiFi router provides 150m LAN radius.



Power

Batteries

1 x 100 AH – Lighting.

2 x 100 AH - Mains.

Switch

Marine battery switch for Main 1,
Main 2 batteries.

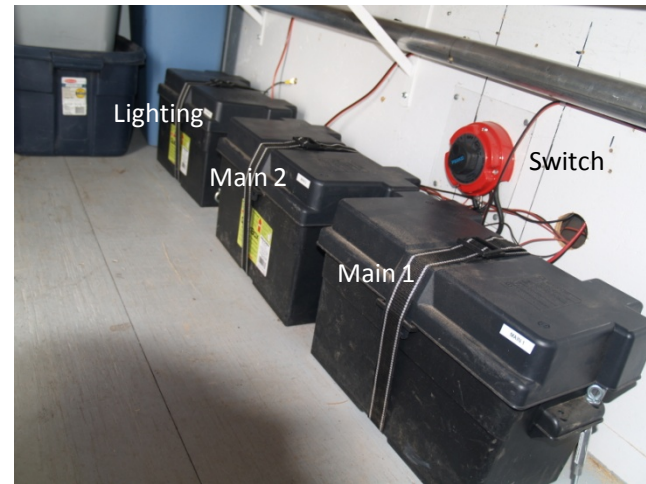
Enables dedicated charging of one
battery while making use of the other.

Chargers

3 ea 2A / 10A Chargers / Battery
Maintainers (1 per battery).

Generator

2KW Honda EU-2000i generator w/
extended run tank.



Computing

WD5JRO-WEB

Main server handling File, Print, Web services as well as SARTrack server and APRS interface to the Kenwood.

WD5JRO-1

Main comms workstation includes scan, print, logging, SARTrack, digital comms via Signalink to the IC-706.

WD5JRO-2

Alternate comms workstation, handles logging, scanning, printing, and SARTrack.

Brother PocketJet printer

Greyscale 300 DPI thermal printer – runs on DC.

HP LaserJet 5MP printer

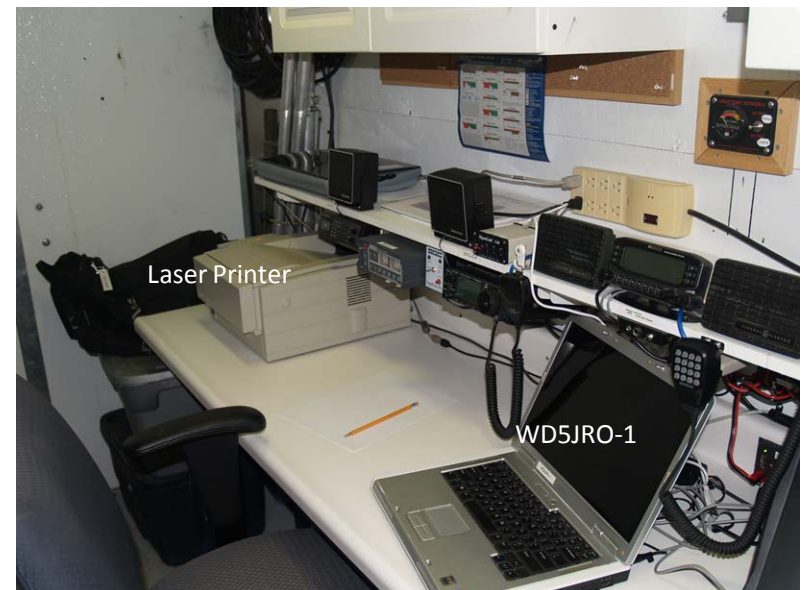
Greyscale 300DPI – runs on AC only.

Canon ProScan

300 DPI greyscale scanner.

Linksys WiFi Router

Manages the EMCOMM-SAR LAN.



EMCOMM-SAR LAN

NMSARC and ICS Forms

Acrobat fillable forms for downloading.

Mission Documents

Document storage for Web retrieval of scanned and filled mission documents.

Current Mission Map

Updated every 20 seconds via SARTrack software. Positions posted live from APRS feeds and/or manually updated as required.

SARTrack Server and Workstations

Enables map viewing and updating from multiple LAN workstations.

Any team or staff laptop within 150 meters of the trailer that has SARTrack installed can connect to the LAN and automatically connect to the SARTrack server to view positions, exchange messages, etc.

WD5JRO Local Mission Intranet

Los Alamos Amateur Radio Club
EMCOMM / SAR Communications Unit

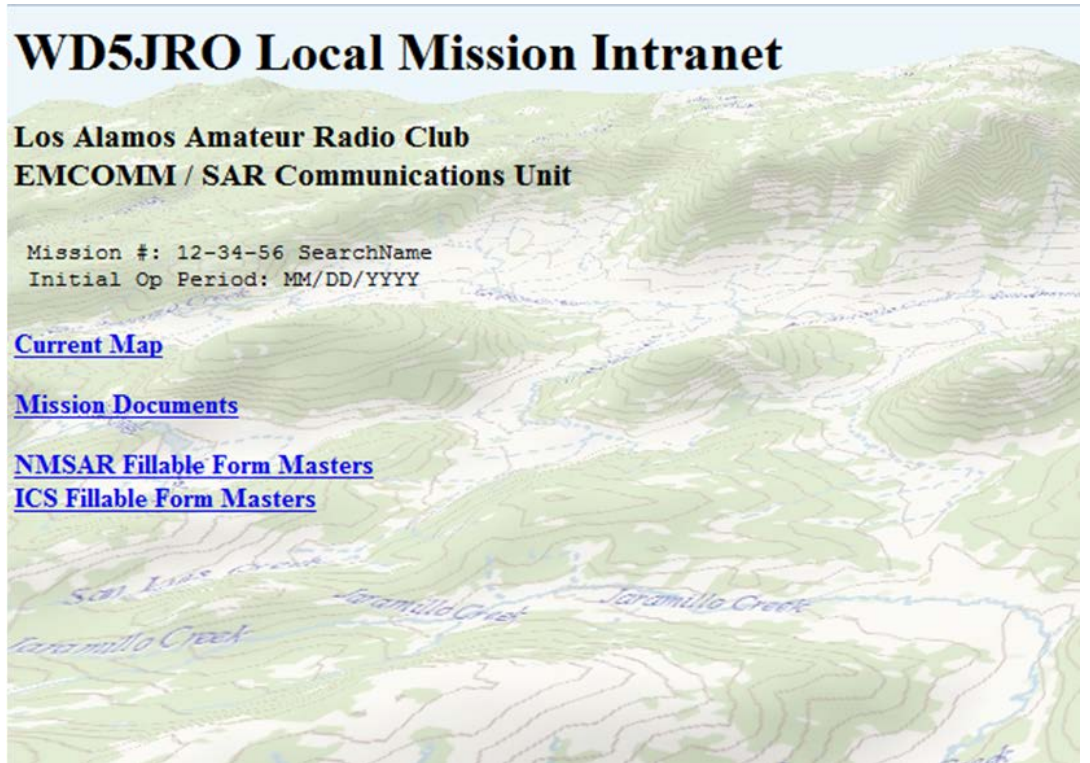
Mission #: 12-34-56 SearchName
Initial Op Period: MM/DD/YYYY

[Current Map](#)

[Mission Documents](#)

[NMSAR Fillable Form Masters](#)

[ICS Fillable Form Masters](#)



SARTrack Software

Built specifically to support SAR missions.

Central server and multiple workstations.

Each workstation can display a different type and scale of map.

All positions and entered objects are reflected accurately on each different map.

Manual plotting of PLS, probability rings, search area boundary, IC location, and clues.

Automatic or manual tracking of team locations.

Automatic conversion of Tracker call sign to Team & Assignment designator.

Map tile sets available:

- ARCGIS World Topo
- MapQuest Satellite Hybrid
- CalTopo USFS NM

