



Accelerating the Growth of Your Emergency
Communications Group
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OVERVIEW

- Respect authority
- CARE for your volunteers
 - Servant leadership
- Develop real expertise – inexpensively!
- Serve real needs – on multiple fronts
- Set the pace
- Build your leaders & create a TEAM
- CARE for your volunteers

1. Respect Authority

- We are **volunteers** **No authority.**
 - *At this stage of my life, I don't really WANT to be "in charge" anyway.*
- Many jurisdictions have **legally authorized officials** who have power to direct the emergency response.
- You will get a lot farther if you work WITH them.....than if you don't
- They have a JOB to do (and protect) and if you don't seem to be part of THEIR TEAM,....it won't go well for you. Look at it from their eyes!
- ARRL Authority: In the ARRL Field Organization, there are recognized structures, which **set standards** and **make requests** of leaders & volunteers.
- You will get a lot farther if you pay attention to their requests!



Relationships with Emergency Managers

- Majority of US counties have Emergency Managers
- Trained, passed lots of courses
- Fulfill many requirements imposed on them from wide variety of overseers & critics
- Work in concert with governmental elected and appointed leadership
- Responsible for outcomes – obvious scapegoat
- **Variable relationship to volunteer groups....**
- GET FACE TIME WITH THEM... Be part of THEIR team.

Communications: All over the map!

- **Some Counties:** ARES® provide primary backup communications and may have significant delegated authority / responsibility
- **Some Counties:** ARES® plays a subservient role working well under direction of EM; badged subset is approved.
- **Some Counties:** ARES® leadership bucks or opposes Emergency Manager.... This usually doesn't work well.

Communications II

- Emergency Manager may have multiple comms options
 - Trunked systems (Motorola, P25...etc)
 - Ambulance / Hospital systems
 - State-created systems
 - GMRS repeaters
 - React
 - Ham radio
- Emergency Manager MAY really value obvious expertise of volunteers...but not problematic groups with limited skills.



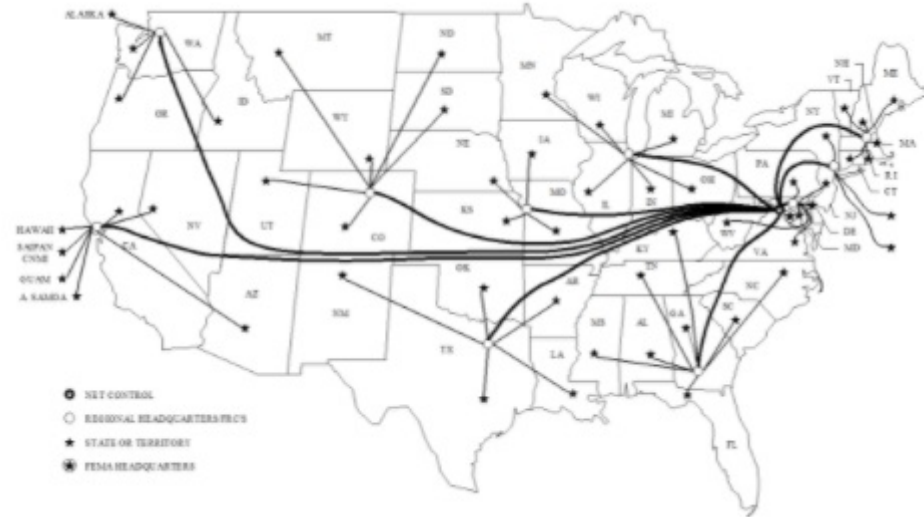
ARRL Leadership

- Nothing is perfect, but lots of minds worked to come up with Taskbooks to paint a path of progress.
- **Common background with EOC personnel (same courses) [explain]**
- Wider understanding of available comms (EC001)
- Wider technical grasp [hands-on tasks]
- Wider comms techniques [informal, formal, data etc]
- Catch up to FEMA / HSEEP

IS-100: Intro to the Incident Command System
IS-120: An Introduction to Exercises
IS-200: Basic Incident Command and Initial Response
IS-230: Fundamentals of Emergency Management
IS-240: Leadership and Influence
IS-241: Decision Making and Problem Solving
IS-242: Effective Communication
IS-244: Developing and Managing Volunteers
IS-288: The Role of Voluntary Organization in Emergency Management
G-300: Intermediate Incident Command System for Expanding Incidents
G-400: Advanced ICS for Command and General Staff
IS-700: Intro to the National Incident Management System
IS-800: National Response Framework an Introduction
EC-001: Intro to Emergency Communications
EC-016: Emergency Communications for Management

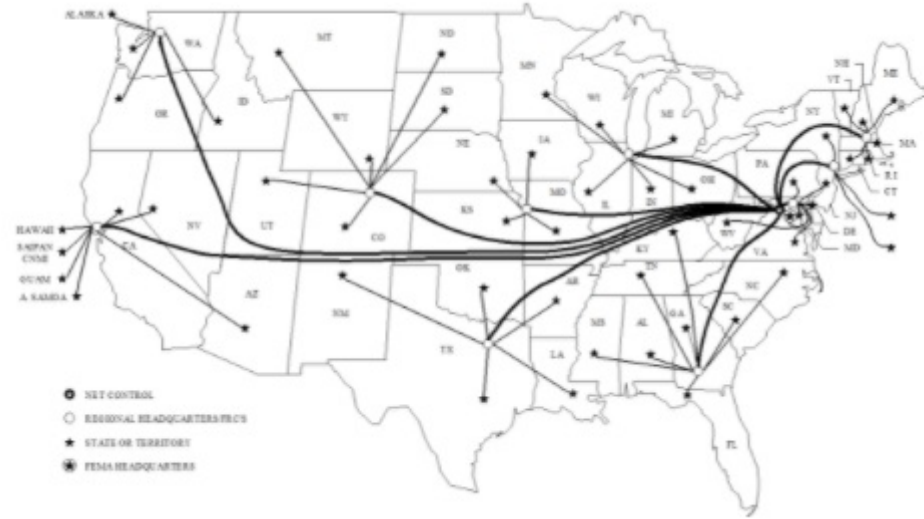


- Comms systems available
 - FNARS – see <https://www.wb5lhs.net/fnars>
 - State specific systems (e.g. Florida SLERS)
 - MARC
 - Forestry
 - FEMA Mobile Emergency Response Support (MERS) detachments & assoc. assets
 - Law enforcement, Fire, Ambulance comms systems
 - Enormous cell phone systems
 - Satellite systems (both LEO and HEO)
 - SHARES
 - DOD





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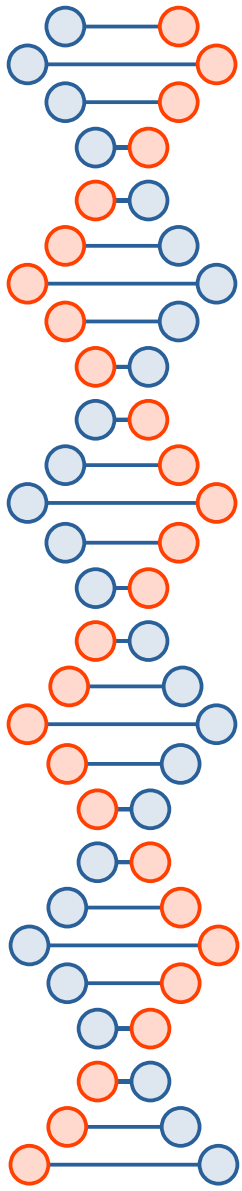


- Citizen volunteers (often amateur operators) are no longer the only game in town for emergency comms... so your group will advance if you take the time to become PART of the system.
- If you haven't tested it...it doesn't exist.
- Fire Dept beat us soundly in one exercise – but we both learned issues!



2. CARE for your volunteers

- Rather than lord position over participants, a servant-leader sees themselves as serving the participants.
- Serving: observe their needs for ***direction, friendship, meaningfulness, encouragement***
- Serving: do the work of scouting out where the organization can go.
 - You ought to be reading FAR more widely than the average member, all over the spectrum
- Serving: do the work of blazing the trail on technology and relationships
 - You ought to be learning constantly to find opportunities, and developing new relationships constantly both locally and above.



- Serving: provide opportunities for training and growth in bunches of areas
 - Antennas, radios, protection, power, data, structures, vehicles – ANYTHING that is useful in a disaster
- Serving: **warm and caring atmosphere** where participants find friendship and belonging.
 - Both from YOU and others – you will have to deal with people who PUT OTHERS DOWN, do ONE-UPSMANSHIP, or yell at people...these are ways to destroy a group.
- Serving: Think even more widely!
 - Finances? Lots of retirees are living meagerly [“finance net”]
 - Make things INEXPENSIVE

Teach License Courses

- Every year hold at least one or two ham radio license courses – build your volunteers & teachers!
- Put a **PROJECT** into every license course

ARRL makes this SO EASY with slide sets for all the Questions / Answers.

Edit them to make it move faster and add photos and additional materials.

GROW YOUR PEOPLE!!





Provide EDUCATION

- Make your meetings MOVE!
- Lots of training
- TechNite
- Solder Sessions (“LabNLunch”)

3. REAL Expertise

- Time was, having a handi-talkie (radio asset) made you extremely valuable. **No more.** Trunked systems and handitalkies abound.
- Modern expertise includes:
 - Trunked is down: can you substitute for it?
 - Internet is down: can you reach next counties and state EOC?
 - Lots of traffic: can you reliably move **data**? Maps, lists, spreadsheets?
 - Power is down: How many days can you go?
 - Disaster is here: How many can you count on?
 - Chaos is here: Is your team functional in an ICS environment?

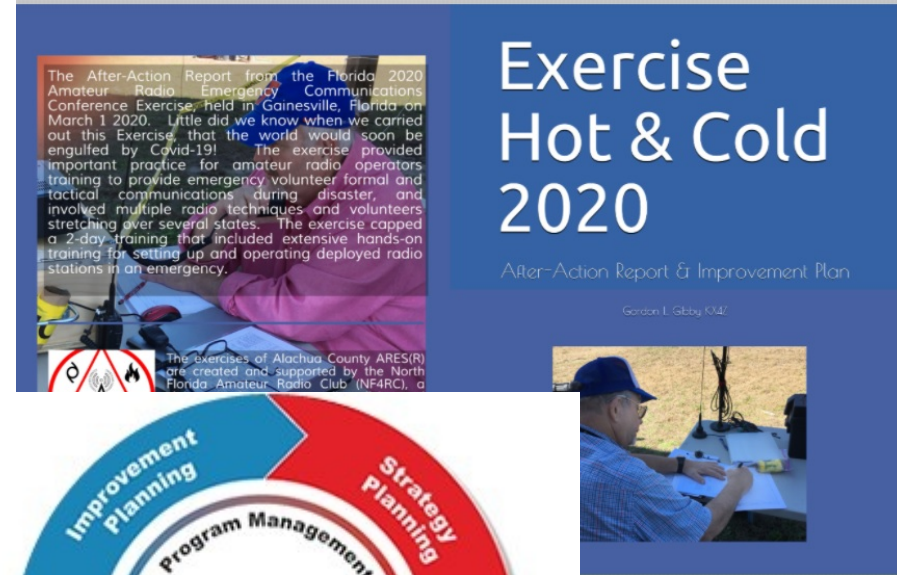


Useful Expertise

- The ARRL set the leadership standard with a Taskbook
- Voice comms: tactical and formal
- Data comms: can you do both broadcast and formal traffic? Both FLDGI and WINLINK?
- ICS: Have you made it thru Professional Dev. Series? Many of your EM staff have!
- Antennas – can you put anything needed together?
- Power – can you provide it any time any place?
- Increasingly: do you understand TCP/IP?

You have expertise?

- **PROVE IT!**
- HSEEP Exercises are the gold standard. Your EM does them. Knows them. Recognizes them.
<https://www.fema.gov/emergency-managers/national-preparedness/exercises/hseep>
- Government format (IS-120, IS-136)
- Government AARIP
- *Doesn't have to be overwhelming.*



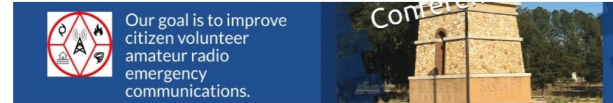


Use ICS wherever possible

- IAP ICS-201 provides who where what when why how all in one package.
- We use it for
 - Antenna Parties on dorm roof 164 feet up
 - Field Day!
 - ARRL National Convention
 - Conferences
 - Anything we can!!

Promotional Expertise

- **Email** – must be able to reach your people. **Contact Lists**
- **Forums** – groups.io huge gain for our group (bidirectional)
- **WEB PRESENCE** – allows structure
 - Free web hosting (qsl.net)
 - Free web creation software (Komposer, Libre Office)
 - Free FTP software
 - Cannot be static!
- Print promotion – books
- PIO expertise – ARRL Course / develop CONTACTS
- YOU MUST WRITE!
- MUST BE REACHABLE
- N Florida PIO Scott Roberts KK4ECR does great job providing great tips!



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Site updated: Feb 6 2022

BADGING REQ. Alachua Cty Vol IPP 2021 FIELD DAY NFARC	North Florida Amateur Radio Club <i>created to support Alachua County ARES(R)</i>	FCC Licensed Club Callsign: NF4RC Contact Information Trustee Gordon Gibby MD docvacuumtube@gmail.com More information on qrzq.com
	We are a DYNAMIC and VIBRANT amateur radio club involved in almost every aspect of this incredibly fun hobby, teaching and training as many people as we can, both to benefit them and to increase support for serving our Community through backup radio communications in times of need.	MEETING WEDNESDAY EVENING 6:30 ChitChat 7:00 Meeting Tentative Agenda Feb Meeting NFARC Zoom Link

4. Serve REAL needs

- What does your community need from volunteers?
- Carried out your Threat and Hazard Analysis and Risk Assessment (THIRA)?
 - Community Preparedness Guide 201
<https://www.fema.gov/sites/default/files/2020-04/CPG201Final20180525.pdf>
 - <https://qsl.net/nf4rc/2021/DraftAlachuaCountyARESIntegratedPreparednessPlanning.pdf>
 - Alachua County:
 - 1) Hurricanes
 - 2) Wildfire
 - 3) Cyber Attack: Infrastructure
 - 4) Mass Civil Unrest
 - 5) Electromagnetic Pulse / Coronal Mass Eruption
- FAR more than the typical “shelter comms”



**Communications Threat - Risk Assessment
Integrated Preparedness Plan / Radio Volunteers**

**Developed by Amateur Radio Emergency Service of
Alachua County, Florida**

Calendar Years 2021-2023
May 2021

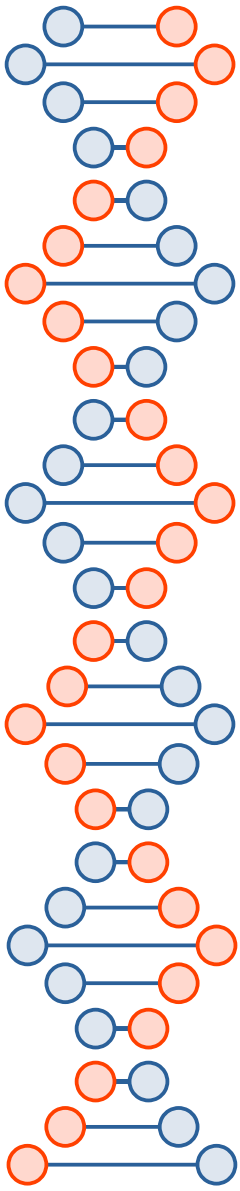


Understand your Emergency Manager

- What did they want from your group?
- Sat down and discussed all these additional threats?
- Develop “products” that meet perceived real needs.
 - Voice net to shelters
 - Data capabilities – various speeds
 - Ability to supplement Trunked Systems
 - Enough caches?
 - Portable? C-O-O-P? Go-boxes?
- *More products than they even asked for.*
- How many other groups might your volunteers serve?
 - Prepare your volunteers for service for other NGOs, eg. Salvation Army, [State] Baptist Disaster Relief, missions, etc.

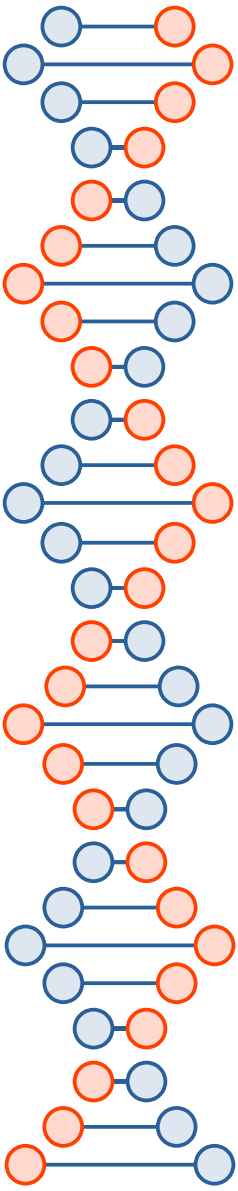
Develop deeper bench

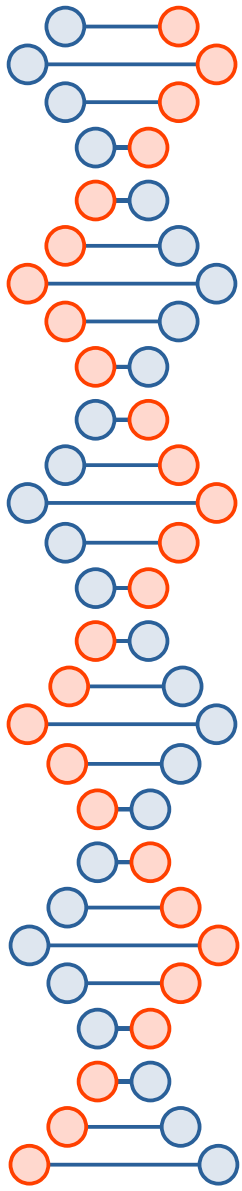
- Shelter communications – more capable deployment persons
- State-wide comms – train more people on SHARES, niche systems, WINLINK, etc.



5. SET THE PACE

- Tough to follow a leader who is **behind** everyone.
- Easy to be inspired by a leader who is in **front** of everyone.
- COMPETENCE and CHARACTER stand out.
- **The leader sets the pace.** No matter who they are. They may not be the person with the “title.”

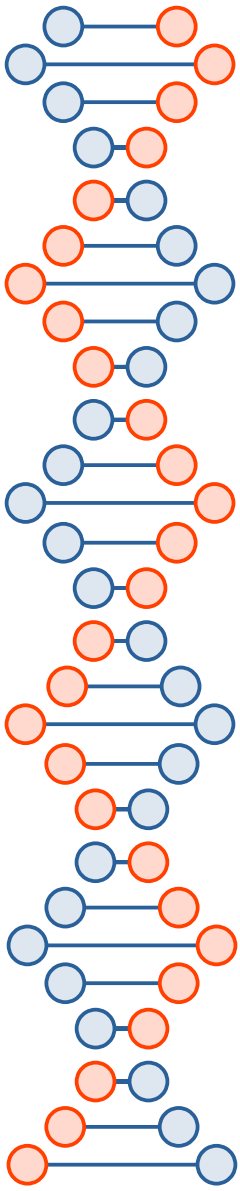




- Track developments across the spectrum: voice networks, WINLINK, FLDGI, SHARES, radio projects, NGO volunteer efforts
- Foot in the door in multiple systems: NTS nets, winlink practice, SHARES, MESH, etc.
- Gaining technology grasp: antennas, microprocessors, repeaters, etc – find interesting stuff and LEARN

You should be ahead

- Get the highest license you can
- You should be in every possible venue
 - SHARES
 - EOC
 - Other NGOs (FBDR?)
 - Nets
 - Data
 - Building young hams



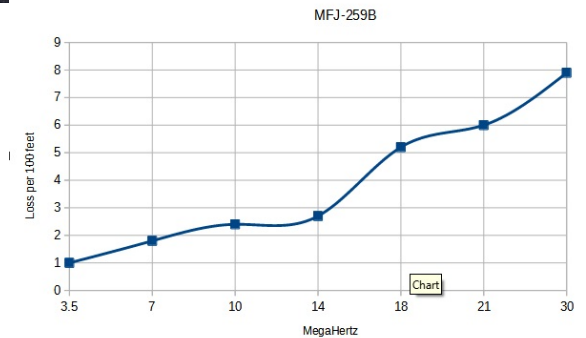


- Antenna Projects

- Slim Jim Antennas
<https://qsl.net/kx4z/TwoMeterHomeMadeSlimJim.pdf>
- 4:1 current baluns (OCF antennas)
<https://www.qsl.net/nf4rc/BalunPart1.pdf>
- 49:1 end-fed baluns (FT-240-43, 14 turns/ 2 turns)
- SWR meters esp QRP
- Educate about nanoVNA (cheap!!!)
- Gas Discharge protection (EMP / Lightning)
<https://qsl.net/nf4rc/2018/LightningArresterInstructionManual.pdf>
- FUN things like the extension cord antenna!

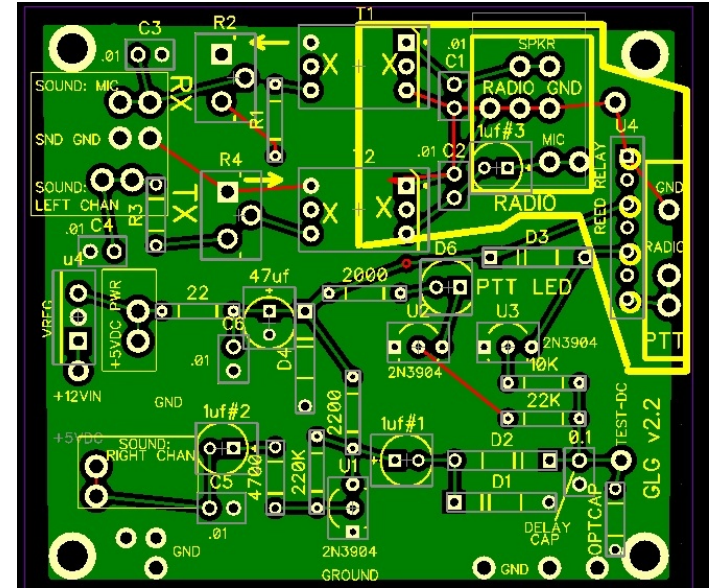


Estimated Loss dB/100 feet 3-wire Exterior Extension Cord



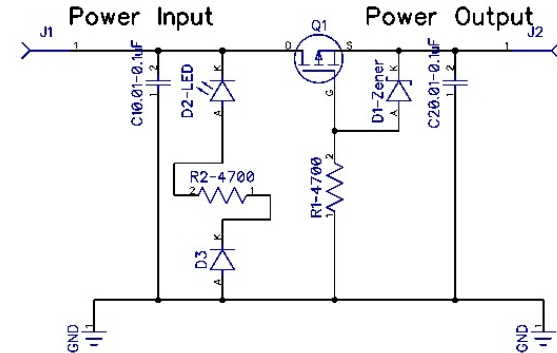
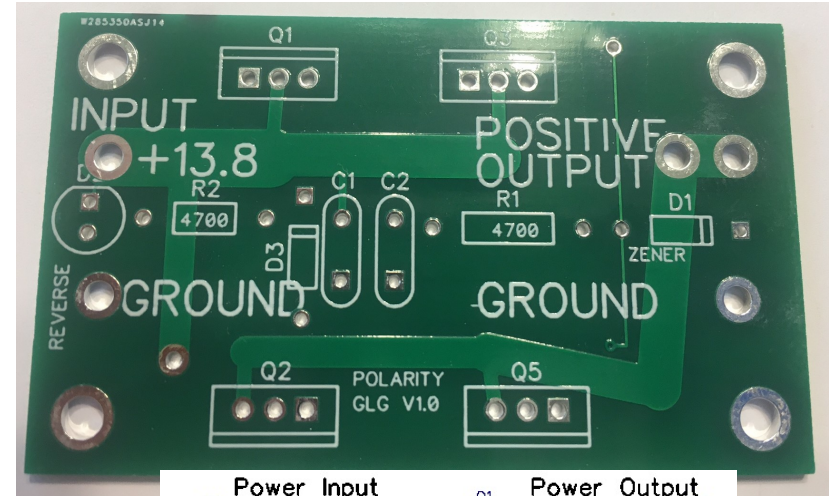
Radio Projects

- Soundcard interface
<https://qsl.net/nf4rc/2019/SmallBoxSoundCardInterfaceManual2.2.pdf>
- Direct conversion receiver
<https://qsl.net/nf4rc/2021/RadioReceiverIntroduction.pdf>



Power Projects

- Power distribution box
<https://www.qsl.net/nf4rc/2019/PowerDistributionProject.pdf>
- AC Line Choke:
<https://qsl.net/nf4rc/2020/LabNLunchACCommonModeChoke.pdf>
- Polarity Protector:
<https://qsl.net/nf4rc/2021/PolarityProtectorPartOne.pdf>





6. Build your TEAM

- DO THE WORK needed to be a quality leader for your group. Give them the best leadership you can.
- BUILD YOUR TEAM! – Christine Duez WCF EC
- Make opportunities for budding leaders
 - Get them to teach sections of license classes
 - Get them to handle parts of conferences
 - Challenge them to do projects
 - Provide them “promotion”



7. CARE for your volunteers

- The best kind of leader is the servant-leader, who is sincerely trying to benefit everyone in their group.
- Put THEIR interests above yours as much as you can.
- Pay ATTENTION to their needs.

