



# ARRL FIELD DAY MADE EASY

A Workshop for  
ARRL Field Day 2024

# Field Day A ...B ... C

- Purpose of FD
- Basic rules
- The Contact Exchange
- Scoring
- Station Setup
- Logging Software
- Practice Exercise



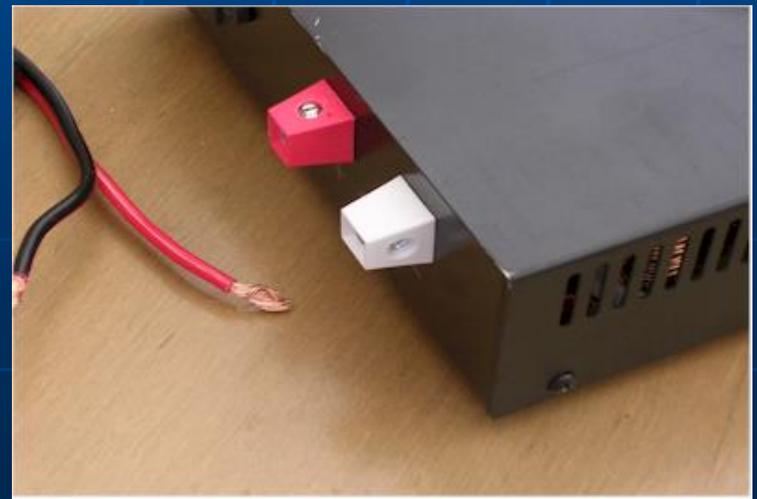
# Field Day Purpose

- Emergency preparedness
  - Training ourselves
  - Demonstration of emergency preparedness to the public, government, and served agencies
  - Experimentation with antennas, portable equipment, and unusual power sources
- Social gathering
  - Eating and drinking
  - Camaraderie and friendship
  - Camping
  - Weekend “getaway”



# Field Day Purpose (cont.)

- Chance to try different radios
- Knowledge building and learning new skills
- Recruiting new hams and new club members
- Challenge of operating in abnormal situations and in less than ideal conditions
- Contest/competition
- FUN!



# Field Day History

- First Field Day in 1933
- Started simple with few participants and low scores (by today's standards)
- Annual tradition that grew and grew
- The most popular ham event of the year



# Workshop focus

- Contest aspect of Field Day



# Motivation for this workshop

- Many hams profess no interest in operating radio on Field Day, but in reality they're often reluctant to participate because of
  - "Mike fright"
  - Unfamiliarity with contesting procedures
  - No experience on HF (but hey, ham radio is more than 2M repeaters!)

# So...

- Those of us with experience are here to help you become comfortable with operating in an easy and non-threatening way.
- Consider us your “Elmers” (ham jargon for mentors)
- So here we go...



# Eligibility to Participate in Field Day

- All amateurs in US and Canada and possessions
- DX stations may be contacted for credit but are not eligible to submit entries



# Object

- Contact as many other stations as possible
- On any and all amateur bands (excluding the 60, 30, 17, and 12 meter bands)
- And in doing so to learn to operate in abnormal situations in less than optimal conditions.
- A premium is placed on
  - developing skills to meet the challenges of emergency preparedness
  - acquainting the general public with the capabilities of Amateur Radio

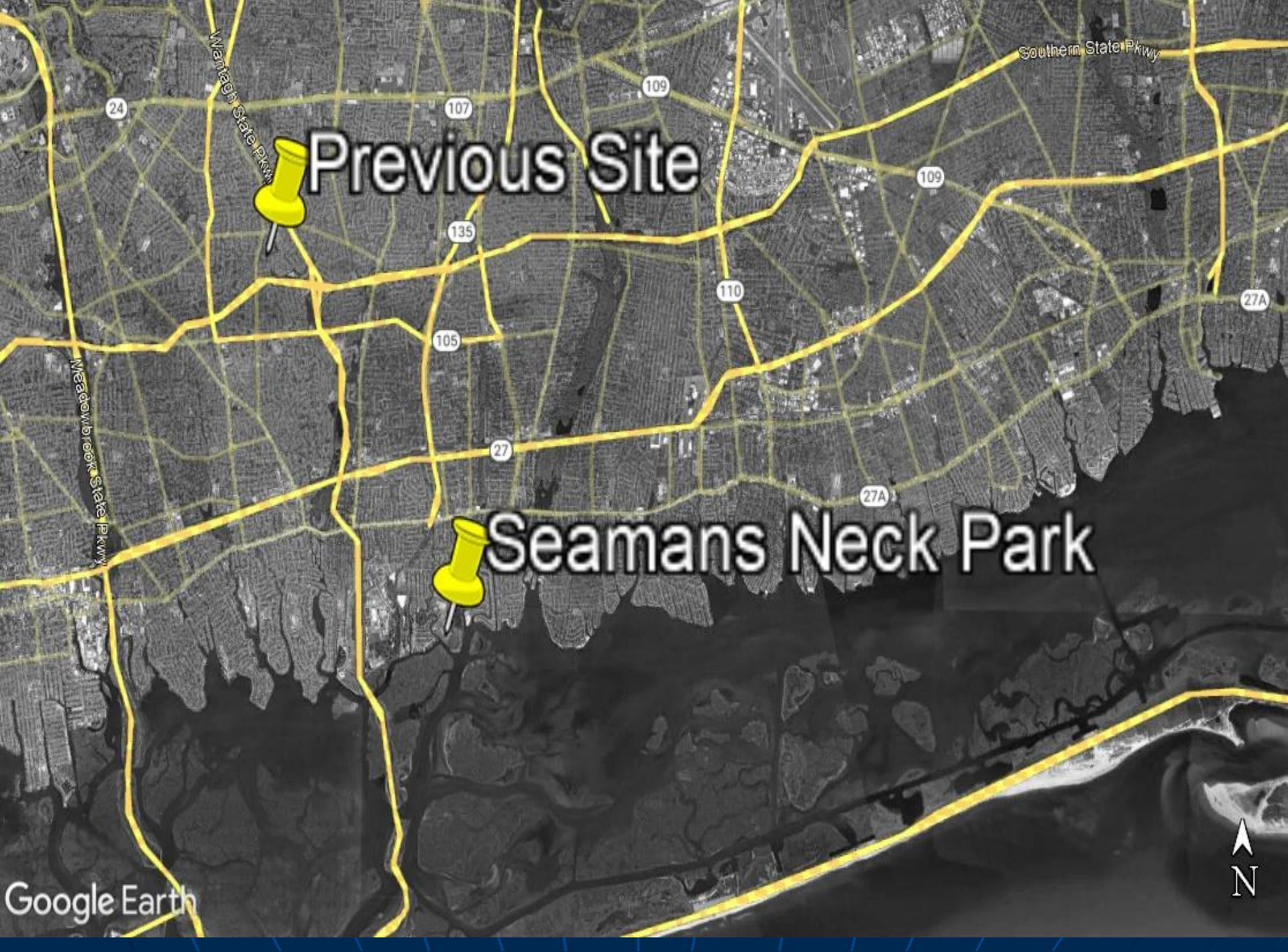
# Date and Time Period

- Always the fourth full weekend in June
  - June 22-23 2024
- Begins at 1800 UTC (2 pm EDT) Saturday June 22 and ends 24 hours later
- EXCEPTION: Class A and B stations that do not begin setting up until 1800 UTC may operate 27 hours.
- Nobody can start setup before 1800 UTC Friday.

# Our Operation

- We will start setup Saturday morning at 7 am, go on the air at 2:00 PM and operate until 2:00 pm Sunday or until we run out of steam, usually late Sunday morning, reserving an ounce of energy for teardown.
- Place: Seamans Neck Park  
2700 S Seamans Neck Rd,  
Seaford, NY 11783





**Previous Site**

**Seamans Neck Park**





CW2

SSB 1

CW 1

Ladder1

SSB 2

food

Ladder2

Stick

Dig 1 & 2

Stick

Stick

# Entry Categories

- Are based on
  - Number of transmitters operating simultaneously
  - Class of Operation



# Number of transmitters

- The maximum number of transmitters in operation simultaneously.
  - For LIMARC's FD that will be 6
  - Does not include bonus stations such as
    - GOTA Station
    - VHF Station if someone wants to set it up
    - Satellite Station if someone wants to set it up
  - But DOES include
    - A natural power demonstration station if someone wants to set it up

# Number of xmtrs (cont)

- All transmitters must be within a 1000' diameter circle.
- All transmitters will use the LIMARC club call W2VL with the exception of the GOTA station which will use WV2LI.

# 8 Classes of operation

- Class A – portable station with 3 or more operators, using 100% emergency power
  - This is our class – we will use a gasoline generator
- Class A - battery – same, 5 watts max., battery
- Class B – portable station with 1 or 2 operators, using 100% emergency power
- Class B - battery – same, 5 watts max., battery
- Class C – mobile station

# Class of operation (cont.)

- Class D – home station on commercial power
- Class E – home station on emergency power
- Class F – operation from an established Emergency Operations Center

# GOTA (“Get on the air”) station



- Only open to newly licensed hams (since FD 2023), inactive hams, or non-licensed public.
- Must use different call sign
  - We will use the call WV2LI
- Only open to Class A and F with 2 or more xmtrs. We qualify to have it.
- Same exchange as other xmtrs
- A person who operated a GOTA station the previous year is ineligible this year.

# GOTA (cont.)

- A control operator must be present if operating beyond license class privileges of the operator.
- Max. xmtr power 150W (except for QRP class = 5W)
- Max. 500 contacts for credit + certain bonus points
- May only operate on FD bands; single xmtr only
- Obey third-party traffic rules for unlicensed guest operators

# Misc. Rules

- No contact between FD station and individual participant of that station
- Radios cannot be used for more than one callsign during FD period
- Phone, CW, and Digital are considered separate "bands"
- All voice contacts (SSB, FM, AM, satellite) are equivalent (1 point each).

# Misc. Rules (cont.)

- All CW & digital contacts (PSK31, MT63, Packet, Pactor, etc.) are equivalent (2 points each)
- No cross-band contacts (exc. Satellite)
- Only one xmtr per band/mode at any time (exc. GOTA)
- No contacts on repeaters or on 146.52 simplex
- Batteries may be charged while in use, but not from commercial mains (exc. Class D)
- All stations must use same call sign (exc. GOTA)

# Limitation

- Can only work each station once per band-mode
  - For example you can work each station once on 20M phone, once on 20M CW, and once on 20M digital mode (total 5 points).
  - You can work the same station on other frequency bands and modes for additional points.

# The Contact “Exchange”

- In order to make a valid contact, the information to be exchanged consists of
  - Number of transmitters at your site
  - Class of operation
  - ARRL Section
- Examples
  - On CW – “6A NLI”
  - On phone – “Six Alpha, NLI”

# Exchange must be accurate

- You must copy the information correctly from the other station AND...
- The other station must copy your information correctly, OR ELSE...
- It is not a valid contact and your final score may be penalized.

# ARRL/RAC Sections

- 84 Sections
- Basically each US state and Canadian province
- Some states are divided into more than one section
  - Ohio is one section
  - New Jersey is 2 sections
  - Texas is 3 sections
  - New York is 4 sections
  - California is 9 sections

# ARRL Sections (cont.)

- Use 2 or 3 letter abbreviations
  - OH – Ohio
  - KY – Kentucky
  - EMA – Eastern Massachusetts
  - LAX – Los Angeles
  - WTX – West Texas
  - NFL – Northern Florida
  - NLI – New York Long Island

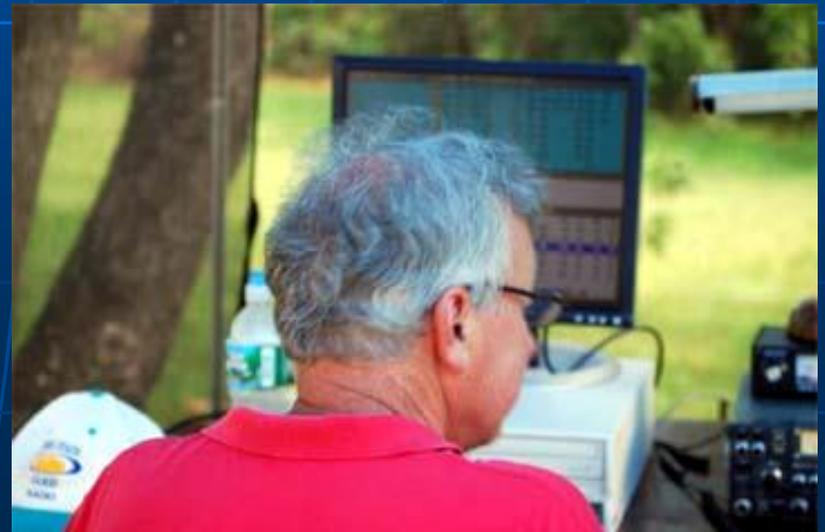
# ITU Phonetics on Phone

- You MUST memorize and be familiar with ITU phonetics on phone.

Alpha	Hotel	Oscar	Victor
Bravo	India	Papa	Whisky
Charlie	Juliet	Quebec	X-ray
Delta	Kilo	Romeo	Yankee
Echo	Lima	Sierra	Zulu
Foxtrot	Mike	Tango	
Golf	November	Uniform	

# Two Basic Strategies

- Hunt and pounce
  - Look for stations calling CQ and answering them
- Running a frequency
  - Calling CQ and waiting for stations to answer you



# Hunt and pounce

- You can be selective who you contact
- You can avoid stations with big pileups, which waste your time and reduce your Q rate (contact, or QSO, rate per minute or hour)
- While not applicable to FD, it's a useful technique in other contests where multipliers are ARRL sections, DX zones, and other selective categories, because you can hunt for specific multipliers to increase your score

# Running a frequency

- You never know who will answer
- Usually can work a lot more stations (more points, higher Q rate)
- Easy to do with voice or CW recorder, but can get tiring if no one answers
- May have to handle pileup if you're a rare multiplier (N/A for FD)
- May not work as many multipliers (N/A for FD)

# Example of Good Exchange

- CQ Field Day, CQ Field Day from W2VL, Whiskey Two Victor Lima
- W2VL, here is November Four Echo Tango Tango
- N4ETT, please copy Six Alpha, NLI
- QSL, please copy Four Alpha, South Florida
- Thank you, good luck in Field Day. CQ Field Day, CQ Field Day...

# Bad Example #1

- CQ Field Day, CQ Field Day from W2VL, Whiskey Two Victor Lima
- W2VL, here is November Four Echo Tango Tango, Four Alpha, South Florida...
- N4ETT didn't give you a chance to recognize his call. If you heard a different station better, you wouldn't have contacted N4ETT and he wasted time with the exchange info ("Four Alpha, South Florida...").

# Bad Example #2

- CQ Field Day, CQ Field Day from W2VL, Whiskey Two Victor Lima
- W2VL, here is Norway Four Easy Tom Tom
- Used non-ITU phonetics. Tom could easily be mistaken for Don, Ron, John, etc.

# Ask for repeats

- CQ Field Day, CQ Field Day from W2VL, Whiskey Two Victor Lima
- W2VL, here is November Four Echo Tango Tango
- N4ETT, please copy Six Alpha, NLI
- QSL, please copy <static crash!>...
- N4ETT, please repeat the exchange!

# Ask for fills

- CQ Field Day, CQ Field Day from W2VL, Whiskey Two Victor Lima
- W2VL, here is November Four Echo Tango Tango
- N4ETT, please copy Six Alpha, NLI
- QSL, please copy Four Alpha, <static crash!>...
- N4ETT, give me your section again!
- South Florida, South Florida, Sierra Foxtrot Lima.
- QSL, South Florida, thank you! CQ CQ Field Day...

# Field Day Scoring

- 1 point for each voice contact
- 2 points for each CW or digital contact
- Add total points for all QSOs
- Multiplier is power level
  - QRP (very low power) without gas generator or commercial mains – 5x
  - QRP with gas generator or commercial power or batteries charged from either – 2x
  - Low Power (< 150 W) – 2x
  - High Power (> 150 W) – 1x
- Add bonus points

# Bonus Points

- 100% Emergency Power – 100 points per xmtr (GOTA, VHF and Satellite not incl.)
- Media Publicity – 100 points
- Public Location – 100 points
- Public Information Table – 100 points
- Originating message to SM – 100 points
- Handling messages – 10 points each, max 100 points

# Bonus Points (cont.)

- Satellite QSO (just 1) – 100 points
- Use of alternate power: solar, wind, methane, water, human powered bicycle, - 100 points
  - Need to make 5 contacts minimum
  - Counts as one of the transmitters
  - Includes batteries charged by alternate power

# Bonus Points (cont.)

- Copying special Field Day bulletin from W1AW (must be copied over the air) – 100 points
- Educational activity - 100 points
- Site visit by elected government official – 100 points
- Site visit by served agency rep. – 100 points

# Bonus Points (cont.)

- Web submission of FD Entry – 50 points
- Youth participation: 20 points per youth (18 or younger) who completes at least one contact (max. 100 points).



# GOTA Bonus Points

- If operator completes 20 QSOs = 20 points (no partial credit)
- If same operator completes another 20 QSOs = another 20 points, up to 100 points per operator.
- Other operators can earn up to 100 points each up to 500 points max.

# GOTA Bonus Points (cont.)

- If GOTA supervised full-time by coach, bonus points are doubled.
- Coach supervises operation, answers questions, talks operator through QSO, but
  - May NOT make QSOs
  - May NOT perform logging function
- Anyone volunteer to be GOTA coach?

# Field Day -- Reporting

- Entries may be submitted to the ARRL
  - Via Field Day Web Submission
  - Via email
  - Via postal or delivery service
- Entries must be submitted by July 25, 2023 23:59 UTC. Late entries cannot be accepted.
- See official rules for details
- Complete ARRL packet with details, forms, rules, and FAQs is at
  - <http://www.arrl.org/files/file/Field-Day/2023/2023%20Field%20Day%20Packet%20v2.pdf>

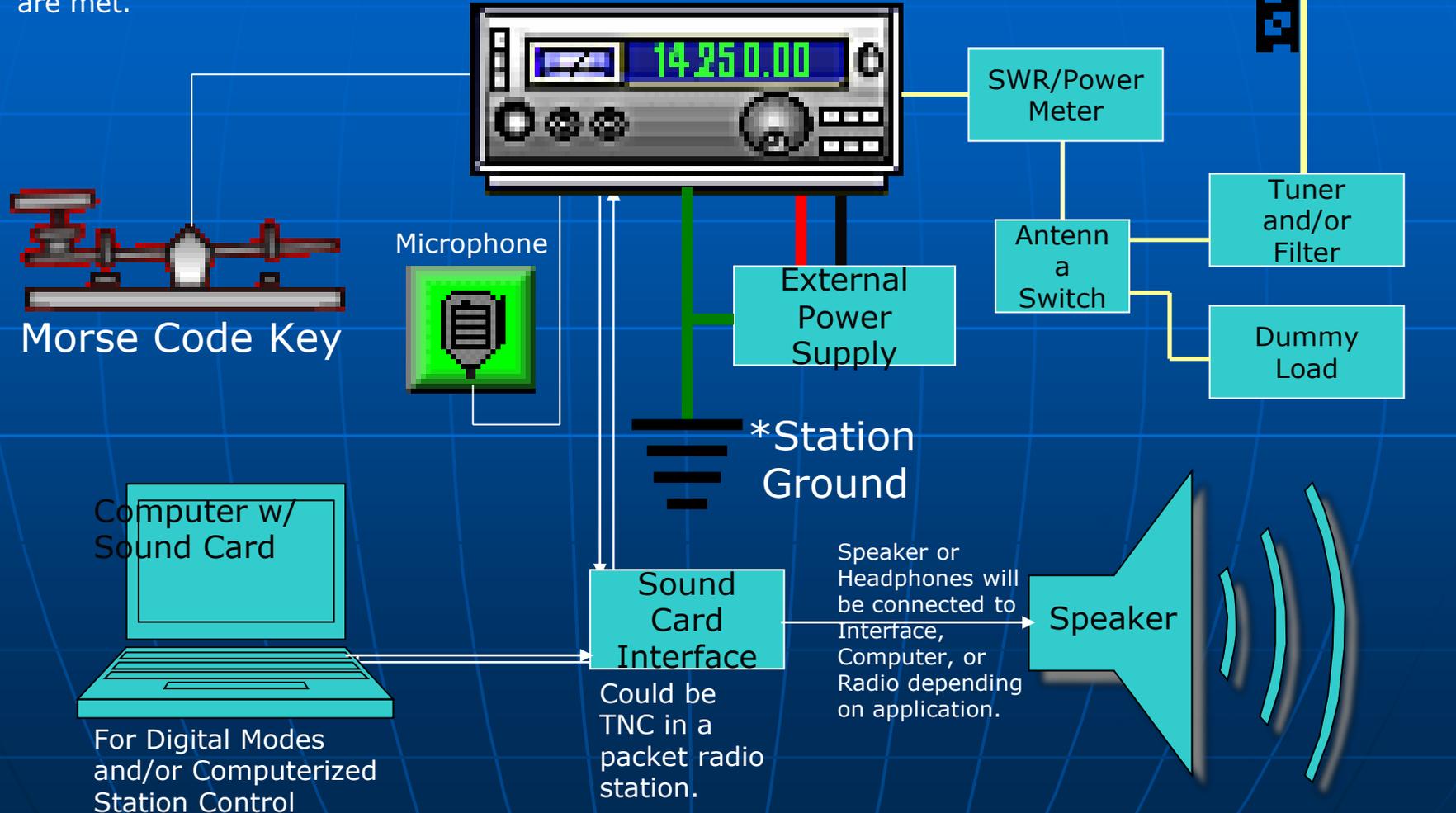
# Station Setup



# Typical Station Configuration

A Station may be configured to meet the need!

\* Typically every effort should be placed with ensuring that all station equipment is bonded to a common station ground and requirements of the National Electrical Code are met.



# Control Operator ALWAYS Needed

- GOTA Station Licensee
- W2VL – Station Trustee is W2QZ
- WV2LI – Station Trustee is N2GA
- Club Call License is a Station License only and conveys NO operating authority
  
- IF YOU ARE PARTICIPATING ON A FREQUENCY WHERE YOU DON'T HAVE OPERATING PRIVILEGES THERE MUST BE A CONTROL OPERATOR WITH THOSE PRIVILEGES WITHIN THE ZONE OF THE CONTROL POINT!  
[http://nara.eqth.info/n8ara\\_station\\_control.pdf](http://nara.eqth.info/n8ara_station_control.pdf)

# Logging contacts

- Used to be all manual with paper and pencil
- Needed to record date, time, callsign, exchange
- Needed to fill out "dupe" (duplicate) sheet
- Needed to add up points, multiply by multiplier, and add in bonus points
- Tedious and lots of opportunity for errors

# Computer logging

## ■ Advantages

- Tracks number of QSOs, Q rate, multipliers worked and needed, and current score at all times
- Avoids working stations more than once (“dupes” or duplicates)
- Can use as CW keyboard with exchange components stored in memory – no key or keyer necessary
- Can format log for digitally submitting entry via email so that log can be checked electronically
- Multiple stations can be networked via cable or wirelessly so others can see progress of group

# Computer logging (cont.)

- Disadvantages
  - Need to know computer and networking basics
  - Typing skills are definite advantage
  - Computers and network components can crash and data can be lost – unlikely, but catastrophic to contest score if it happens
- Many popular competing brands of software
- We use N3FJP Software

# N3FJP's Field Day Log Software

N3FJP's Field Day Log 2.8 www.n3fjp.com

File Options Setup Band Mode Graph Map Operator Help

### Recent Contacts

Rec#	Call	Class	Sec	Date	Time	Bnd	Mode	Opr

Click record to edit or delete.

### Score Statistics

Total CW Contacts.....	0
Total Digital Contacts...	0
Total Phone Contacts...	0
Total QSO Points.....	0
QSOs / Hr (last 20 min)	0
QSOs / Hr (last 60 min)	0

**Call**  
N3FJP

**Class**  
3A

**Section**  
SC

Select a band and mode from the menu bar!

**Possible Duplicates**  On

### Sections Worked

<b>1</b>	<b>3</b>	<b>5</b>	<b>7</b>
CT RI EMA VT ME WMA NH	DE MDC EPA WPA	AR NTX LA OK MS STX NM WTX	AZ OR EWA UT ID WWA MT WY NV AK
<b>2</b>	<b>4</b>	<b>6</b>	<b>8</b>
NNY NNJ ENY SNJ NLI WNY	AL SFL GA WCF KY TN NC VA NFL PR SC VI	EB SDG LAX SF ORG SJV SB SV SCV PAC	MI WV OH
			<b>9</b>
			IL WI IN

**Canada**  
 NL SK  
 MAR AB  
 QC BC  
 ON NT  
 MB

Band **15**

Mode **CW**

**N8ARA**

**3A**

**OH**

9:33:43 PM
01:33:43 UTC

# N3FJP Field Day Logging Software

N3FJP's Field Day Log 2.8 www.n3fjp.com

File Options Setup Band Mode Graph Map Operator Help

### Recent Contacts

Rec#	Call	Class	Sec	Date	Time	Bnd	Mode	Opr
2	KA8PCP	1F	OH	5/14	1:39	15	CW	ELP
1	N8WL	1A	OH	5/14	1:39	15	CW	ELP

### Score Statistics

Total CW Contacts.....	2
Total Digital Contacts...	0
Total Phone Contacts...	0
Total QSO Points.....	4
QSOs / Hr (last 20 min)	0
QSOs / Hr (last 60 min)	0

Call

Class

Section

**Dupe: N8WL 1A OH 2007/05/14  
01:39:02 ON 15 CW Rec# 1**

**Possible Duplicates**

### Sections Worked

<b>1</b>	<b>3</b>
CT RI	DE MDC
EMA VT	EPA WPA
ME WMA	
NH	

<b>5</b>	<b>7</b>	<b>0</b>
AR NTX	AZ OR	CO MO
LA OK	EWA UT	IA NE
MS STX	ID WWA	KS ND
NM WTX	MT WY	MN SD
	NV AK	

<b>2</b>	<b>4</b>	<b>6</b>	<b>8</b>	<b>9</b>
NNY NNJ	AL SFL	EB SDG	MI WV	OH
ENY SNJ	GA WCF	LAX SF	OH	
NLI WNY	KY TN	ORG SJV		
	NC VA	SB SV		
	NFL PR	SCV PAC		
	SC VI			

**Band** 15 **Mode** CW

**N8ARA** 3A OH

9:41:02 PM  
02:41:02 UTC

# Practice Exercise

- Use your call sign
- Use some number from 1 to 10 (no. of xmtrs)
- Use some letter from A to F (class)
- Use any ARRL section except NLI

# Exercise

- Volunteer (“Ham #1”) calls “CQ Field Day” with his call sign
- Everyone needs to copy down that call sign
- Everyone yells out his/her call sign
- Ham #1 tries to identify one call (or part of one and asks for fill)
- They work the exchange carefully to get it right
- Ham #1 calls CQ again and works down the pile-up
- Practice, practice, practice!

# Q & A

- Come join us at Field Day!

