



ARRL FIELD DAY MADE EASY

ARRL Field Day 2018 Workshop

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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
- Detailed history in Dec. 99 QST, p. 28:
http://p1k.arrl.org/pubs_archive/97445



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 23-24, 2018
- Begins at 1800 UTC (2 pm EDT) Saturday June 23 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 Friday evening at 6 pm, go on the air at 2:00pm Saturday and operate until 2:00pm Sunday.
- Place: Rosemary Kennedy BOCES Center, Wantagh, N.Y.



Entry Categories

- Composed of:
 - Number - indicating the maximum number of transmitters operating simultaneously
 - Letter - indicating the class of Operation

Number of transmitters

- The maximum count of transmitters in operation simultaneously.
 - For LIMARC that will be 6
 - Does not include bonus stations such as
 - GOTA Station
 - VHF/UHF Station
 - Satellite Station
 - But DOES include
 - A station powered by alternate means (not commercial mains or petroleum powered generator). LIMARC has used batteries charged using solar cells.

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 gasoline generators
- Class A battery – 3 or more operators, max output 5 watts, power cannot be commercial mains or motor driven generator
- 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
 - Note: may not contact other Class D stations
- Class E – home station using emergency power
- Class F – operation from an established Emergency Operations Center (government or served agency)



100% Emergency Power

Setup





Beam antennas will be hooked up to a triplexer allowing three stations to use one tri-band antenna



It Takes A Team

GOTA (“Get on the air”) station



- Only open to newly licensed hams (since FD 2017), inactive hams, or non-licensed public.
- Must use different call sign
 - We will use the call WV2LI
- Only open to Class A and F groups with 2 or more transmitters (we qualify).
- Same exchange as other transmitters
- 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.
- Maximum transmitter power 150 watts (except for QRP class = 5 watts)
- Maximum 500 contacts for credit plus certain bonus points
- May only operate on Field Day bands; single transmitter only
- Obey third-party traffic rules for unlicensed guest operators

Misc. Rules

- No contact between FD station and individual participants 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) are worth 1 point each.

Misc. Rules (cont.)

- All CW & digital contacts (PSK31, MT63, Packet, Pactor, etc.) are worth 2 points each
- No cross-band contacts (except Satellite)
- Only one transmitter per band at any time (except GOTA)
- No contacts on repeaters or on 146.52 simplex
- Batteries may be charged while in use, but not from commercial mains (except Class D)
- All stations must use same call sign (except 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 (for a total of 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 or Digital – “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 Section

- 71 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
 - NFL – Northern Florida
 - NLI – New York Long Island

All valid section abbreviations are listed on the screen of the software we use

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)
- You can listen to a previous contact that a station made and know their class and section before you even call them

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 transmitter (GOTA, VHF and Satellite not included)
- Media Publicity – 100 points
- Public Location – 100 points
- Public Information Table – 100 points
- Originating message to SM – 100 points
- Handling messages – 10 points each (maximum 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 representative – 100 points

Bonus Points (cont.)

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



Bonuses Added in 2016

- Safety Officer – Duties are to complete a check-list of key safety issues to ensure they have been addressed.
- Social Media - actively use Social Media platforms (such as Facebook, Twitter or Instagram) to engage the public in our Field Day activity.

Hash Tag: #ARRLFD

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 (500 points maximum)

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 Site
 - Via email
 - Via postal or delivery service
- Entries must be submitted by July 24, 2018. 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/2018/2018-Field-Day-Packet-complete-Rev-24-May-18.pdf>

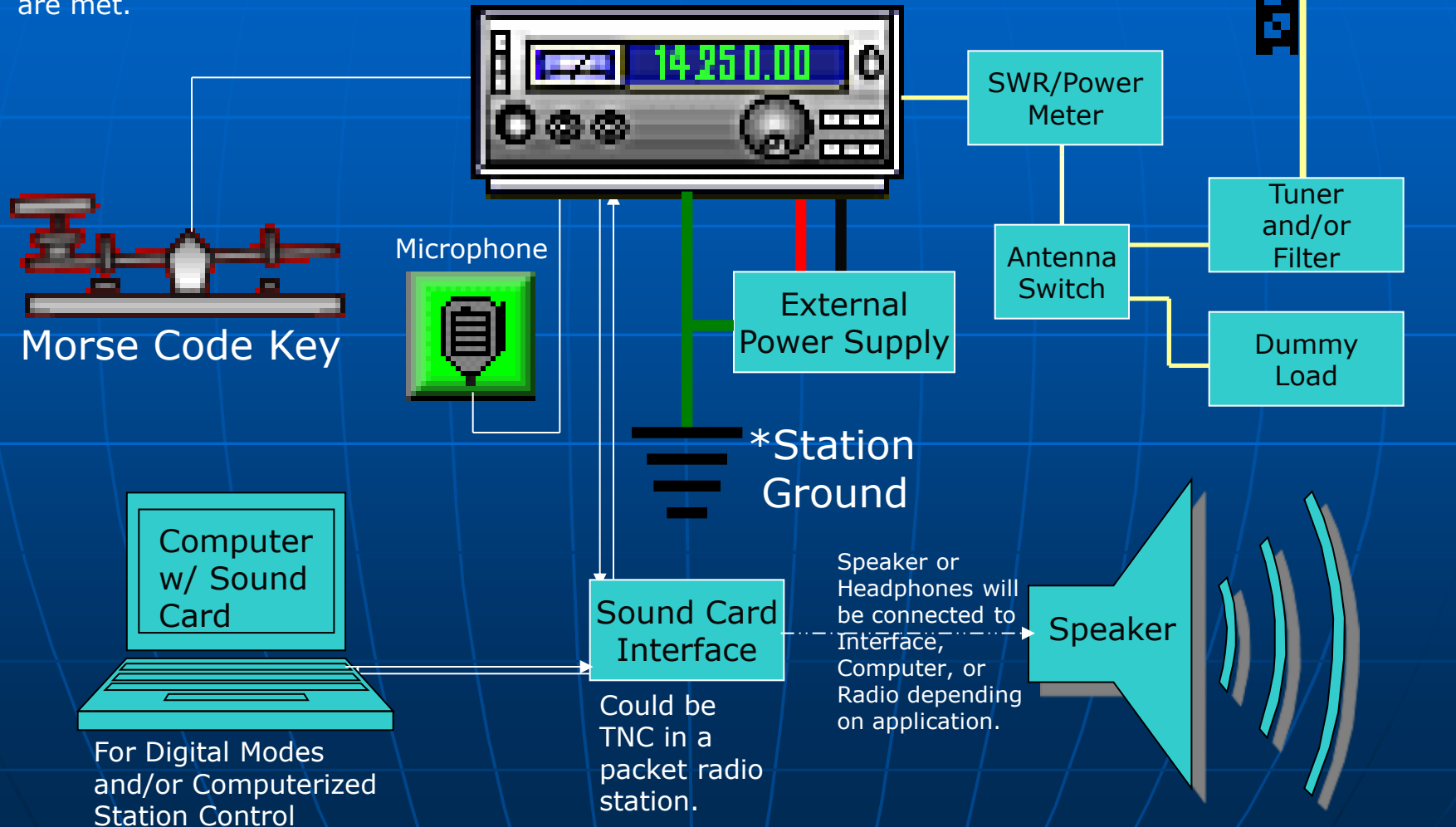
Station Setup



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

Logging contacts

- Used to be all manual with paper and pencil
- Needed to record date, time, band, mode, 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 web site 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
 - Setup crew needs to know computer and networking basics (operators do not)
 - 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

Sections Worked

1	3	5	7
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
2	4	6	8
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
			9
			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
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="button" value="Clear"/>		

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

Possible Duplicates	<input type="checkbox"/> On
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Sections Worked																																												
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		Canada
		NL SK
		MAR AB
		QC BC
		ON NT
		MB

2	8	9
NNY NNJ	MI WV	IL WI
ENY SNJ	OH	IN
NLI WNY		

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 (number of transmitters)
- 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!

Tower Vs. Ladder



Sumptuous Dining, Good Conversation



Family Fun





Let Officials Know What We Do



N2FP, SK

Q & A

- Come join us at Field Day!

