



Arlington Radio Public Service Club
Field Day Reference Guide

Overview

This Reference Guide is for anyone who wants to operate one of the ARPSC Field Day stations and it should be helpful for the following people:

- Newly licensed hams who are not familiar with Field Day, HF operations or contesting.
- People who don't hold a ham radio license but are interested in getting a license.
- Experienced hams who may want to learn new techniques.

This reference guide will be revised as needed. Submit corrections to fieldday@w4ava.org.

What is Field Day?

The American Radio Relay League (ARRL) annual Field Day exercise usually takes place during the last weekend of June. There are many aspects to Field Day:

- It's a test of emergency preparedness for ham radio operators. Many hams leave the comfort of their home stations to set up portable operations in the field. The goal is to set up a station under simulated emergency conditions (no commercial power, no pre-installed antennas etc.).
- It's an opportunity to demonstrate ham radio to the community. The ARPSC Field Day site is at Minor Hill Park in Arlington County. Arlington County officials and employees are invited.
- It's a learning experience. There are so many facets to ham radio. This is a chance to experience some of them including: voice, Morse Code,¹ digital, HF, VHF, etc.
- It's a social event. Bring your friends and family. Have fun!
- It's a contest. We try to contact as many other Field Day participants as possible during the time W4AVA is on the air, battling crowded bands, fading and fatigue.

2009 ARPSC Field Day – Minor Hill Park, Arlington County

Friday June 26 - Field Day Training/Club Social – starts 6 p.m. Some Field Day set up Friday evening.

Saturday June 27- Field Day set up in the morning. Radio operations begin at 2 p.m.

Sunday June 28 – Close operations and clear site by 10 a.m.

¹ Morse Code is also referred to as CW which stands for *Continuous Wave*, the emission type. Thus, CW in this reference guide refers to Morse Code.

Who can participate?

Anyone. Your license class doesn't matter. And Field Day rules provide for a special station for unlicensed or newly licensed operators. It is called the *Get On The Air, or GOTA* station and we earn additional points that contribute to our overall score.

So how does Field Day work?

ARPSC in cooperation with the Arlington County Radio Amateur Civil Emergency Service (RACES) contacts as many other stations as possible during the exercise starting Saturday afternoon at 2 p.m. EDT and ending Sunday morning. For a contact to count under Field Day rules we must exchange and record the following information:



1. Time of the contact. W4AVA operators will use N3FJP² logging software, which will record the time of the contact automatically.
2. The frequency and mode of the contact. Each station may be contacted multiple times as long as each contact is on a different frequency band and/or mode (Voice (AM, FM or SSB), Digital (RTTY, PSK etc.), CW)
3. Call signs. W4AVA and a separate call sign for the GOTA station.
4. Number of transmitters and class. We will be running 3 portable transmitters on emergency power, which means that W4AVA will be in class 3A. Other classes that you may hear while operating Field Day are B (one or two person portable), C (mobile), D (home station), E (emergency power) or F (a government emergency operations center).
5. ARRL Section. The ARRL divides the U.S. into "sections," which generally correspond with the 50 states and territories. Our section is "Virginia" or "VA" on CW and digital. On voice, to clarify that you are saying "Virginia" (e.g. when there is interference, static or fading and the station you are trying to contact is having trouble copying you) you might say "VIRGINIA, VICTOR-ALPHA, VICTOR-ALPHA." States with large populations – such as California, Florida, Texas – are divided into multiple sections (see list below). Canadian provinces are logged using Canada's section identifiers like U.S. sections. All other countries are logged as "DX."

What is this "victor alpha" I hear people saying?

What you're hearing is the NATO phonetic alphabet. Hams often use it instead of normal letters because it is less prone to ambiguity, especially when the conditions for communicating are difficult because so many stations are operating nearby or band conditions are not the best (e.g. static, fading). It is easy to confuse the sound of the letter M with the letter N but it is difficult to confuse MIKE and NOVEMBER.

A full listing of the NATO phonetic alphabet is included below. Not everyone adheres to it and many use other systems including ones that they learned in the military. For example, you may hear the letter M as MEXICO or the letter N as NORWAY etc.

² www.n3fjp.com



Just remember that our call is:

WHISKEY FOUR ALPHA VICTOR ALPHA and that our info is THREE ALPHA VIRGINIA. (or VICTOR ALPHA if someone is having trouble copying VIRGINIA).

A typical message that we send to other stations might be:

W5TR this is W4AVA, THREE ALPHA VIRGINIA, THREE ALPHA VICTOR-ALPHA over.

This message is addressed to the station W5TR and it is telling him or her who we are, our class and section. As a reply we might receive the following:

W4AVA, QSL this is W5TR, WHISKEY FIVE TANGO ROMEO, ONE DELTA WEST TEXAS, ONE DELTA WHISKEY TANGO DELTA. QSL?

Translated this means:

W4AVA (Its us that he's talking to)

QSL (He copied all our information)

W5TR (His or her call sign)

ONE DELTA (His class is 1D)

WEST TEXAS (We enter WTX in the log)

QSL? (He wants confirmation that we copied this ok).

Our response would be something like:

QSL good luck WHISKEY FOUR ALPHA VICTOR ALPHA, QRZ? (Q-R-ZED on voice)

This means:

QSL (Yes, we got it)

Good luck (we're ALWAYS polite in ham radio)

WHISKEY FOUR ALPHA VICTOR ALPHA (that's our call sign said phonetically in case someone is having difficulty hearing us)

QRZ? (Is somebody calling me?)

CQ Field Day

A CQ call is a general call meaning that you want to contact someone. It's an abbreviation coined during the early days of radio when CW was in its prime and before voice communication was available. The same for QSL and QRZ mentioned above, and as explained more fully below.

Call CQ frequently. **Allow no more than 3 seconds between CQ calls to ensure that stations scanning for contacts (search & pounce) hear you.** A typical Field Day CQ call would be:

CQ FIELD DAY CQ FIELD DAY THIS IS W4AVA, WHISKEY FOUR ALPHA VICTOR ALPHA, FIELD DAY.

The example above is fairly long-winded and appropriate for less than quiet bands. When things get busy, you might just say:

CQ FIELD DAY. WHISKEY FOUR ALPHA VICTOR ALPHA, FIELD DAY.

Calling CQ and waiting for other stations to call W4AVA is the most efficient way to operate Field Day and other contests. But one can also “search and pounce” by tuning the radio dial to find other Field Day stations calling CQ. In this mode you have to enter the call sign of the stations into the computer to make sure that you’ve not had a previous contact with the CQ-ing station on this band and mode. If you have, move on and clear the call sign you just typed in. Call new stations by just giving your call sign phonetically once: WHISKEY FOUR ALPHA VICTOR ALPHA. Once he recognizes W4AVA and gives you his/her report, then you can reply WHISKEY FOUR ALPHA VICTOR ALPHA, THREE ALPHA VIRGINIA, QSL?

► **IMPORTANT:** As you get started, it may be difficult to find a clear frequency during this busy event. Do not call on top of another station. Listen and do the best you can to find at least 3 KHz separation between stations. Once you start calling CQ, you may be called by another station claiming that you are interfering with them. This often happens after you’ve made several contacts. This could be a tactic used by the complaining station to steal your frequency. Ignore the complainer, stay on your frequency and continue calling CQ and making contacts.

QSL? QRZ?

Ham radio operators use a system of codes or abbreviations that date back to the early days of radiotelegraph and CW prior to the advent of voice communications. Common abbreviations you’ll hear during Field Day include:

- QSL - I confirm the contact/can you confirm the contact?). Also “Roger” on voice.
- QRZ? - Is there someone calling me? (on voice, you will hear “Q-R-Zed?”)
- QTH – Location (during Field Day you typically use “Section” on voice; “SEC” on CW)
- QRX - Wait (you may also use “Stand by” on voice)
- QRM - Interference from other stations
- QRN - Static
- QSB - Signal is fading
- QSY - Change frequency
- QRP - Low power

NATO Phonetics

The table contains the official NATO phonetic alphabet. On air, you will hear alternative and creative phonetics. Geographic names are sometimes used, e.g. *America* instead of Alpha, *Honolulu* instead of Hotel, *Zanzibar* instead of Zulu. Try using alternatives during rough conditions when other stations find it difficult to copy your report.



Letter	Word	Pronunciation
A	Alfa (ICAO, ITU, FAA) Alpha (ANSI)	AL FAH
B	Bravo	BRAH VOH
C	Charlie	CHAR LEE or SHAR LEE (ICAO, ITU)
D	Delta	DELL TAH
E	Echo	ECK OH
F	Foxtrot	FOKS TROT
G	Golf	GOLF
H	Hotel	HO TELL (ICAO) HOH TELL (ITU, FAA)
I	India	IN DEE AH
J	Juliatt (ICAO, ITU, FAA) Juliet (ANSI)	JEW LEE ETT
K	Kilo	KEY LOH
L	Lima	LEE MAH
M	Mike	MIKE
N	November	NO VEM BER
O	Oscar	OSS CAH
P	Papa	PAH PAH
Q	Quebec	KEH BECK
R	Romeo	ROW ME OH
S	Sierra	SEE AIR RAH (ICAO, ITU) SEE AIR AH (FAA)
T	Tango	TANG GO
U	Uniform	YOU NEE FORM or OO NEE FORM (ICAO, ITU)
V	Victor	VIK TAH
W	Whiskey	WISS KEY
X	X-ray	ECKS RAY (ICAO, ITU) ECKS RAY (FAA)
Y	Yankee	YANG KEY
Z	Zulu	ZOO LOO

Tips to save time.

Here are a few tips to help improve the number of contacts you make per minute, which will help our Field Day score:

- Don't waste time. Every second counts. If you can complete a contact in 15 seconds that's 240 per hour, in 18 seconds that's 200 per hours. If you take 30 seconds that's only 120 per hour.

Compare the following exchanges (assume strong signals):

1. A SLOW EXAMPLE (about 30 seconds)

- WHISKEY FOUR ALPHA VICTOR ALPHA CALLING CQ FIELD DAY³ AND STANDING BY FOR A CALL
- KILO SEVEN ALPHA BRAVO CHARLIE
- KILO SEVEN ALPHA BRAVO CHARLIE THIS IS WHISKEY FOUR ALPHA VICTOR ALPHA, YOU'RE⁴ THREE ALPHA VIRGINIA, THREE ALPHA VIRGINIA, OVER.
- QSL YOU ARE FIVE ALPHA WESTERN WASHINGTON QSL?
- KILO SEVEN ALPHA BRAVO CHARLIE THIS IS WHISKEY FOUR ALPHA VICTOR ALPHA. QSL THANKS AND GOOD LUCK. CQ FIELD DAY, WHISKEY FOUR ALPHA VICTOR ALPHA, W4AVA, QRZ.

2. A FAST EXAMPLE (about 15 seconds)

- WHISKEY FOUR ALPHA VICTOR ALPHA FIELD DAY.
- KILO SEVEN ALPHA BRAVO CHARLIE
- KAY SEVEN A B C THREE ALPHA ORANGE, THREE ALPHA VIRGINIA.
- QSL YOU ARE FIVE ALPHA WESTERN WASHINGTON QSL?
- QSL GOOD LUCK. WHISKEY FOUR ALPHA VICTOR ALPHA. QRZ.
- Adjust to the situation. If it's 4:00 AM and you haven't had a CQ answered for 5 minutes, then long CQs are fine. Or it may be time to change bands and/or search and pounce. If it's 6:00 PM on Saturday night and you have a pile-up of stations calling you on 20M, then you don't need to call CQ or even give your call every time. Don't repeat his call back to him phonetically - he knows it already! Finishing with "QSL. GOOD LUCK. QRZ" will suffice. Give your call every second or third contact and then just once phonetically. WHISKEY FOUR ALPHA VICTOR ALPHA.
- Acknowledge the calling stations. If you're called by 2 or 3 stations, note what you can of all the calls and say something like:

SEVERAL STATIONS IN THERE. NØSM AND 3XYZ STAND BY. N5TR YOU'RE THREE ALPHA VIRGINIA QSL? After working N5TR, NØSM YOU'RE THEE ALPHA VIRGINIA QSL? And then after finishing with NØSM, STATION ENDING XYZ THREE ALPHA VIRGINIA QSL?

³ You will also hear stations saying "CQ Contest" because of the competitive aspect of Field Day.

⁴ "You're 3A Virginia" is an abbreviated form of "Your report is 3A Virginia."

And then you would get XYZ's full call sign and report to log. Sometimes when you get to a station down your list, they've moved on, so you can try calling them one more time and if they don't answer someone else might or you can call QRZ W4AVA.

- Help the other station, e.g. you're having difficulty hearing someone because of nearby splatter, tell him. STATION ENDING BRAVO CHARLIE (BC), QRM, AGAIN?. Or when the splatter subsides quickly say YOUR CALL SIGN NOW or YOUR REPORT NOW or YOUR SECTION NOW, etc.
- Tell him what you need. SECTION. SECTION ONLY. AGAIN ? or PREFIX?⁵ or CLASS AGAIN?

► Accuracy Transcends Speed – We want to make as many contacts as possible to rack up a good score. But more importantly, accurately copy the reports other stations give you. From an emergency communications standpoint, accuracy is very important. Imagine if you were copying down a list of needed medications received from a station in a disaster zone. Someone's life may depend on how accurately you record the information. Interference from nearby stations, static, and fading all contribute to the challenge of copying Field Day information accurately. Don't let your desire to make lots of contacts hamper accuracy. If it takes a minute to accurately record the other station's report, take the time to do it. Errors will cost us points when the ARRL compares logs after the exercise. At some point if, after several tries, you are unable to get the other station's call sign or report, there's nothing wrong with saying, "Sorry I'm unable to copy you through the noise. Maybe we'll do better later. QRZ W4AVA, Field Day."

SSB, CW & Digital Frequencies

160 Meters

1.850 - 2.000 MHZ (CW & Digital: 1.800 – 1.840)

If available to W4AVA operators on Field Day, primarily a nighttime band. Expect noise & static.

80 Meters

3.600 - 4.000 MHZ (CW & Digital: 3.500 – 3.600)

During the day, expect to contact nearby stations out to a few hundred miles depending on conditions. The band stretches out at night, making contacts several hundred miles away possible. **Avoid the DX window on 3.790 to 3.800 MHZ** and listen carefully before you move onto a frequency. This band is full of established net frequencies and you may get a less than friendly response if you encroach on one.

40 Meters

7.150 - 7.300 MHZ (CW & Digital: 7.000 – 7.150)

There will be activity on 40M during the day but it will really get busy (and noisy) after dark as the band lengthens. Strong broadcast stations and static can make 40M a battlefield. If you manage to establish a clear frequency, stick with it and protect it best you can.

⁵ The call sign prefix consists of the letter(s) and call district number. For example, the prefix for call sign W4AVA is W4 (or Whiskey Four); the prefix for WA3GIN is WA3 (or Whiskey Alpha Three).

20 Meters

14.150 - 14.350 MHz (CW & Digital: 14.000 – 14.100)

Expect crowded conditions. Avoid 14.300 and 14.313 MHz, which are maritime mobile emergency net frequencies. Be sure to listen for 20M to come alive around dawn Sunday.

15 Meters

21.200 - 21.450 MHz (CW & Digital: 21.000 – 21.100)

Should be a major source of points from mid-morning to sunset but will close or become very patchy from dusk to dawn.

10 Meters

28.300 - 29.700 MHz (CW & Digital: 28.000 – 28.100)

Most of the activity will be in the 28.300 - 28.500 MHz range. Don't go above 29.000 (satellites, AM, FM and repeaters are all up at that end). 10M may be open during the middle of the day. Expect patchy conditions E/W and some DX from South America. May be some E layer propagation into the evening.

6 Meters

50.100 - 50.600 MHz (CW: 50.000 – 50.100; 50.700 is RTTY calling frequency)

Mainly a daytime band with SSB will be centered on or about 50.125. There may be some FM above 50.300. 6M is unpredictable. Expect some single skip Es openings. Do not hog the calling frequency (50.125)

2 Meters

SSB: 144.200 +/-; FM: 146.400 – 146.600; 147.400 – 147.600; CW:144.00 – 144.100)

SSB will be centered around 144.200, FM above and below (not on). 146.520 is the national FM calling frequency. Best to stay off of it. And no Field Day contacts on repeaters.

► *Note: We may use narrower CW & Digital sub-bands for certain bands during Field Day.*

To Do

Take a few moments to:

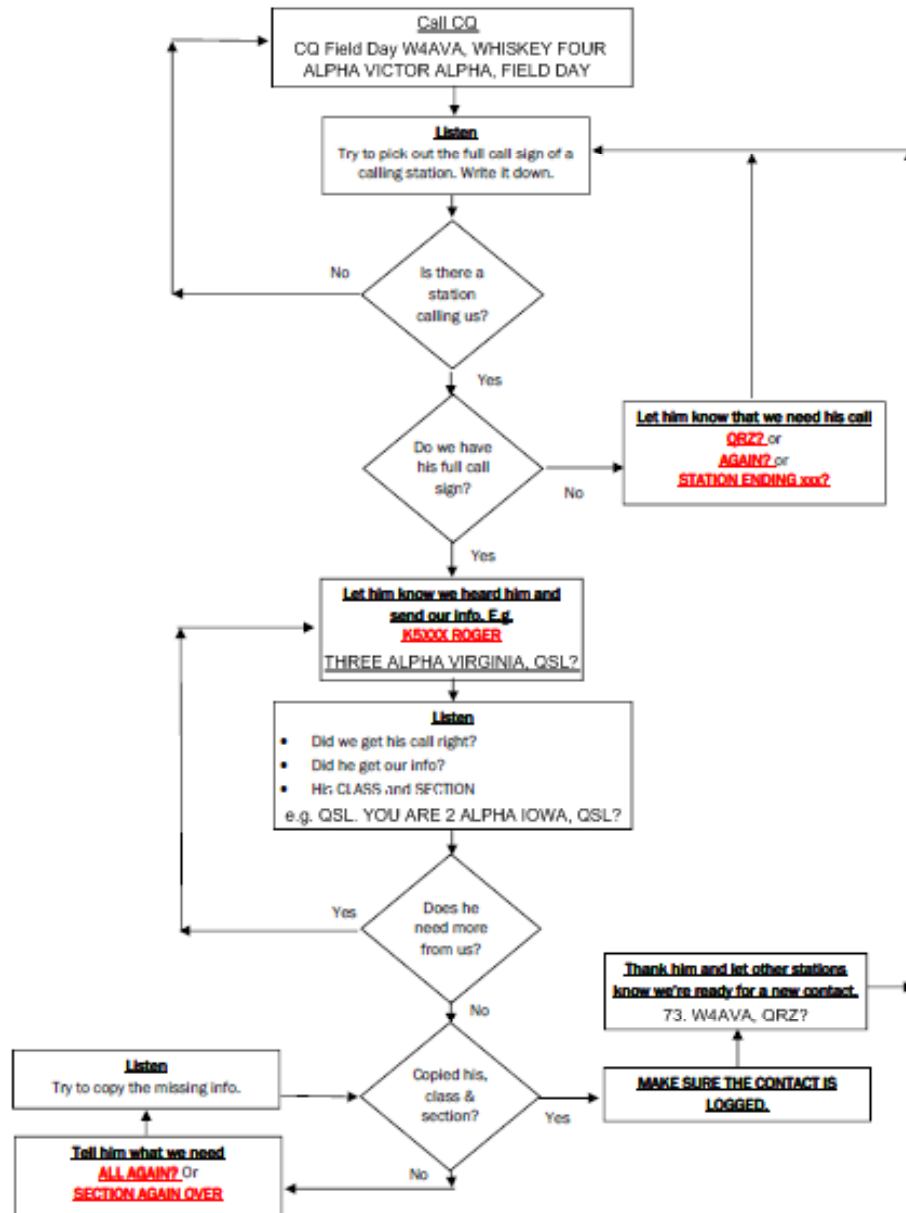
- Sign up for Field Day Training & Club Social on Friday, June 26 at Minor Hill Park, starting 6 p.m. Learn about the radios and logging software that will be used during Field Day. Food and beverage provided for this combined training and club social event. To sign up, send your name and call sign to fieldday@w4ava.org.
- Visit the ARPSC Field Day web page: www.w4ava.org/fieldday.htm
- Ask questions: fieldday@w4ava.org.

ARRL SECTION LIST

(All other countries are 'DX')

1		5		8	
Connecticut	CT	Arkansas	AR	Michigan	MI
Eastern Massachusetts	EMA	Louisiana	LA	Ohio	OH
Maine	ME	Mississippi	MS	West Virginia	WV
New Hampshire	NH	New Mexico	NM		
Rhode Island	RJ	North Texas	NTX		
Vermont	VT	Oklahoma	OK		
Western Massachusetts	WMA	South Texas	STX		
		West Texas	WTX	9	
				Illinois	IL
2				Indiana	IN
Eastern New York	ENY	6		Wisconsin	WI
New York City-Long Island	NLI	East Bay	EB		
Northern New Jersey	NNJ	Los Angeles	LAX	0	
Northern New York	NNY	Orange	OR6	Colorado	CO
Southern New Jersey	SNJ	Santa Barbara	SB	Iowa	IA
Western New York	WNY	Santa Clara Valley	SCV	Kansas	KS
		San Diego	SD6	Minnesota	MN
		San Francisco	SF	Missouri	MO
3		San Joaquin Valley	SJV	Nebraska	NE
Delaware	DE	Sacramento Valley	SV	North Dakota	ND
Eastern Pennsylvania	EPA	Pacific	PAC	South Dakota	SD
Maryland-DC	MDC				
Western Pennsylvania	WPA				
		7		Canada	
4		Arizona	AZ	Maritime-Newfoundland	MAR
Alabama	AL	Eastern Washington	EWA	Quebec	QC
Georgia	GA	Idaho	ID	Ontario	ON
Kentucky	KY	Montana	MT	Manitoba	MB
North Carolina	NC	Nevada	NV	Saskatchewan	SK
Northern Florida	NFL	Oregon	OR	Alberta	AB
South Carolina	SC	Utah	UT	British Columbia	BC
Southern Florida	SFL	Western Washington	WWA	Northwest Territories/ Yukon	NWT
Tennessee	TN	Wyoming	WY		
Virginia	VA	Alaska	AK		
Puerto Rico	PR				
Virgin Islands	VI				

Contact Flow Chart (for non hams)



Directions to Field Day Site

Minor Hill Park is located at 3400 North Powhatan Street, Arlington, Virginia 22213, 1.25 miles north of I-66 on North Sycamore Street at North Powhatan Street. Turn left at Powhatan and the park entrance will be to the left 400 feet beyond the intersection and just beyond 35th Street, North. Talk-in will be on the ARPSC repeater W4AVA on 146.625 MHz (PL 107.2).

