

So, you think you know Field Day?

By Jim Wright N2GXJ
Gloucester Co ARC, Southern NJ



Where's this?
(drone photo courtesy of Bob KD2GFL)

So, you think you know Field Day? (GCARC)

Field Day, A Tradition!

Q: Who are
these guys?

Think you know FD?
Let's try some Q&A



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ARRL Field Day

ARRL Field Day is the most popular on-the-air event held annually in the US and Canada. On the fourth weekend of June, more than 31,000 radio amateurs gather with their clubs, groups or simply with friends to operate from remote locations.

<https://www.arrl.org/field-day>



Q: When is Field Day each year?

Q: In what year was first Field Day?

[https://en.wikipedia.org/wiki/Field_Day_\(amateur_radio\)](https://en.wikipedia.org/wiki/Field_Day_(amateur_radio))

Bonus Q: In what year did GCARC first participate in Field Day?

<https://gloucestercountyarcs.weebly.com/club-history.html>

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From ARRL's Field Day rules

2. Object:

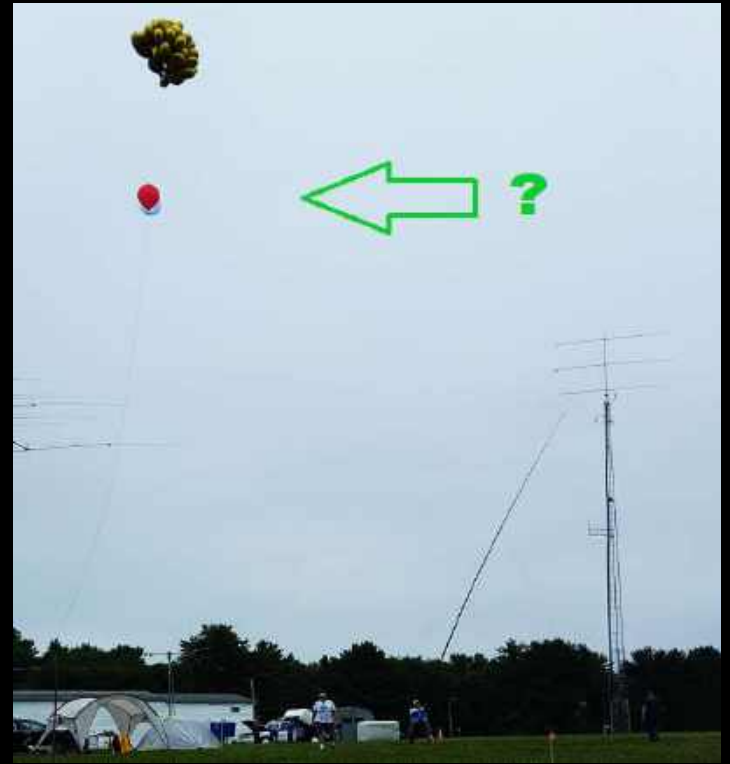
To work as many stations as possible on the 160, 80, 40, 20, 15 and 10 Meter HF bands, as well as all bands 50 MHz and above, and in doing so learn to operate in abnormal situations in less than optimal conditions.

A premium is placed on developing skills to meet the challenges of emergency preparedness as well as to acquaint the general public with the capabilities of Amateur Radio

Q: Is it OK to make FD contacts on 17 M?

Q: Is it OK to make FD contacts on 2 M?

Q: What's this?



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Q: What's this?



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Q: What's this?



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Q: What's this?



 **K0BWJ**
Bruce Wayne Joyner
103 Ash Street
Monona County
Soldier, IA 51572 USA
k0bwj@arrl.net
Omiss # 4936
Ten-Ten # 74090

TO	W2MMD	BAND	40m RX: 40m
		MODE	FT4/FT4
		FREQ	7.048 Mhz
FR	K0BWJ	WHEN	27 Jun 2021 07:02 UTC
		RSTS/R	1D / 7A

Thanks for the QSO and hope to see you on the band again.

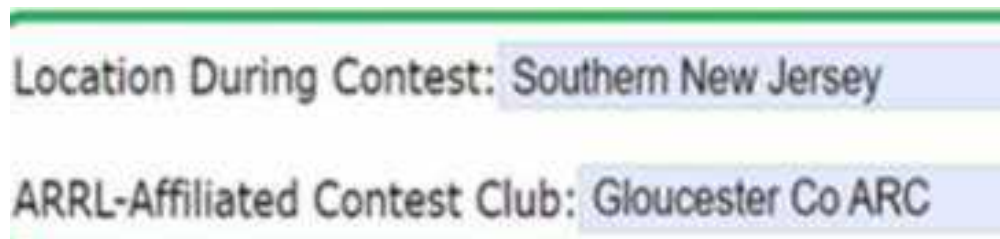
So, you think you know Field Day? (GCARC)

Rule change since 2022

- Q: If you operate from home under your own callsign, can you add your score to our club's aggregate field day score?

Aggregate Club Score

- Yes! (rules, section 7)
 - Aggregate Club Score: An aggregate club score will also be published, which will be the sum of all individual entries indicating a specific club (similar to the aggregate score totals used in ARRL affiliated club competitions). Participants from any Class can optionally include a single club name with their submitted results following Field Day.
- How?
 - When submitting your log, use “Gloucester Co ARC” when typing in ARRL-Affiliated Contest Club, like this:



- ***Bonus Q: Can you operate at W2MMD, then later contact W2MMD from your home?**

Nope. From the miscellaneous rules section

- 6.1. A person may not contact for QSO credit any station from which they also participate
- 6.2. A transmitter/receiver/transceiver used to contact one or more Field Day stations may not subsequently be used under any other callsign to participate in Field Day.
 - Family stations are exempt provided the subsequent callsign used is issued to and used by a different family member.

FD rules. Think you know?

- Q: Starting at 1800 UTC on Saturday, how many hours of continuous operating is Field Day?

Depends when start setting up!

- 3.1. Class A and B stations that do not begin setting up until 1800 UTC on Saturday may operate the entire 27-hour Field Day period.
- 3.2. Stations who begin setting up before 1800 UTC Saturday may work only 24 consecutive hours, commencing when on-the-air operations begin.
- 3.3. No class A or B station may begin its set-up earlier than 0000 UTC on the Friday (Thursday afternoon or evening local time) preceding the Field Day period. Cumulative set-up time shall not exceed a total of 24 hours.

For **W2MMD**, our setup starts Friday, so for w2mmd, limit is 24 hours.

FD rules. Think you know?

- Q: Which counts more, a contact to Ohio or a contact to California?

A contact is a contact

- **Neither counts more – they are the same!**
 - Unlike most radio contests – there are no multipliers for DX, for States, nor for ARRL/RAC Sections
 - Total contacts are what counts, for a given band-mode, not how far or close the stations are
 - but tracking can be fun 😊 Worked All States in 24 hrs?
- Hum ... maybe this affects your choice of antenna?

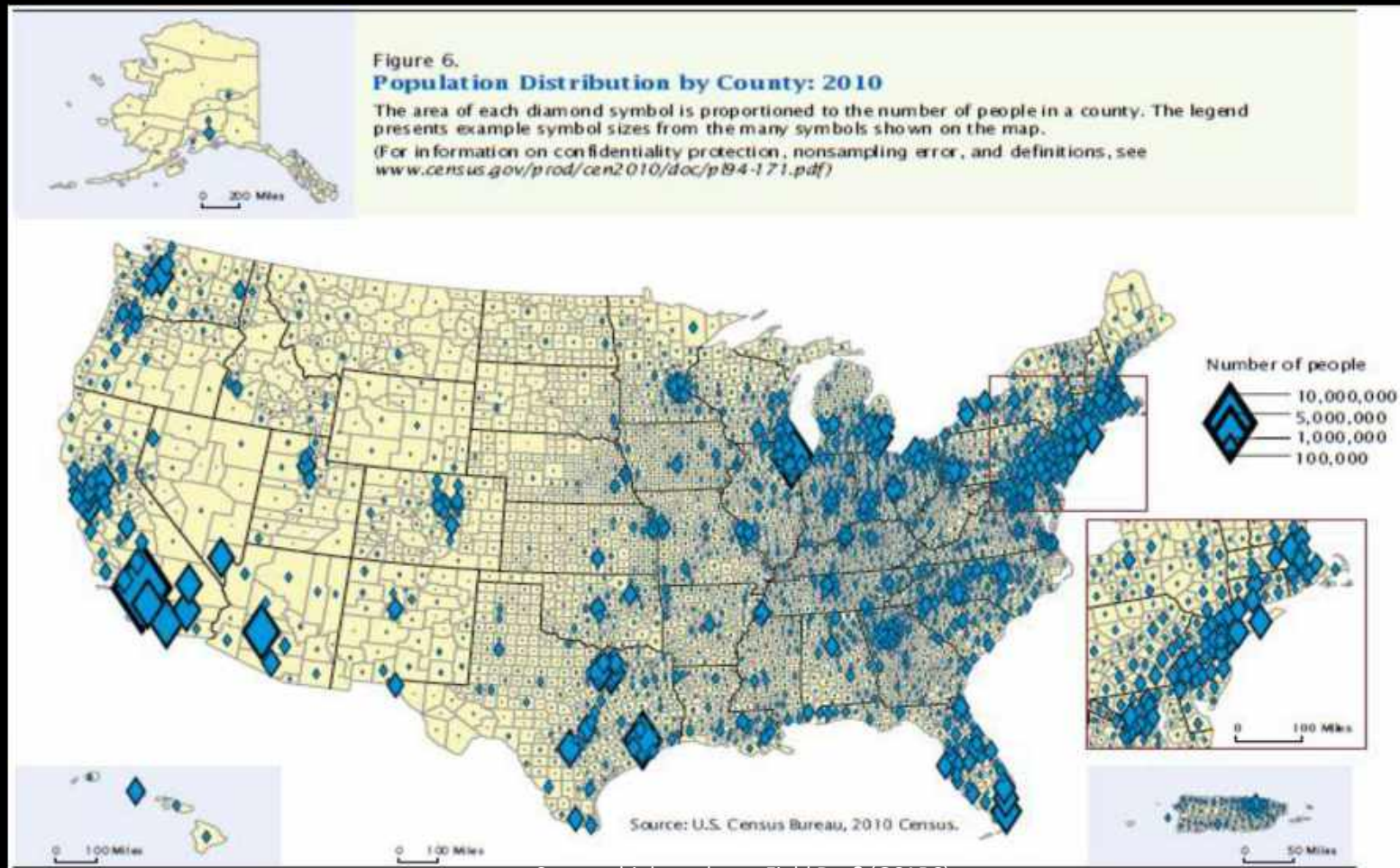
What antenna might work best for us for FD?

To answer this, you need to figure out....

1. Where are the most field day stations located?
2. Where are we located, compared to them?
3. What preferred antenna pattern gets to the most stations?
4. What kind of antenna might provide that pattern?

Let's look at these some more....

Where are FD stations? Where the people are!



So, you think you know Field Day? (GCARC)

Where are the FD stations located? Confirmed

<https://www.arrl.org/field-day-locator> – W2MMD is located in Southern NJ, close to many other FD stations

Field Day Locator!

Looking for a Field Day site near you? Want to promote your club's Field Day efforts? Use the Field Day Locator to do both!

[Learn More](#)



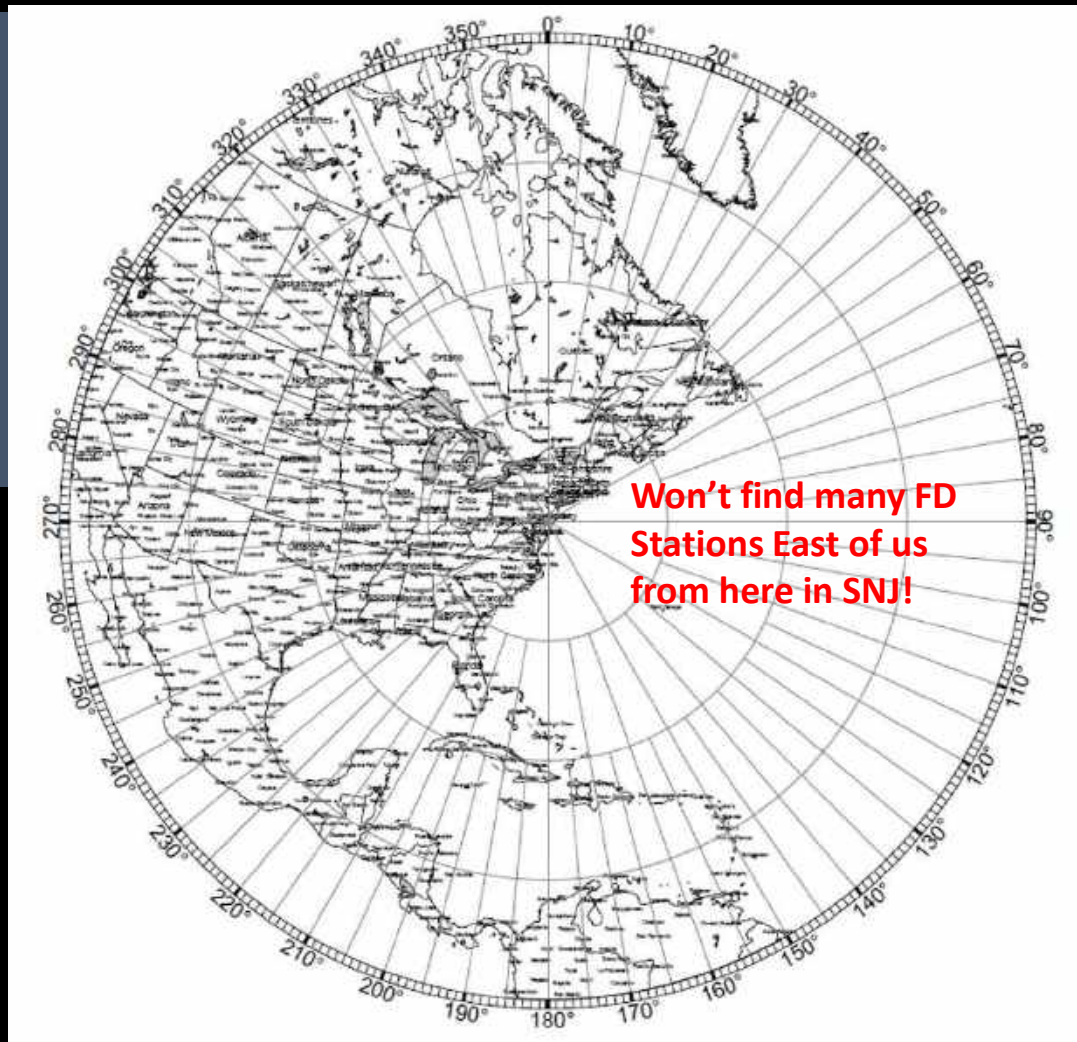
So, you think you know Field Day? (GCARC)

On a map, easy to see radio energy to the East from SNJ is wasted

Q: historically, where does W2MMD make the most FD contacts?
- Let's optimize for that

Answer is in the stats.
- short skip to PA, OH, NY, VA

State	Total	%
PA	217	7
OH	212	7
NY	176	6
VA	148	5
MI	129	4
CA	127	4
ON	126	4
NC	125	4
IL	99	3
MA	97	3
TX	95	3
MD	93	3
FL	92	3
TN	80	3
NJ	78	3



So, you think you know Field Day? (GCARC)

Want our signals to target where the most stations are

Where are the FD stations?

- Majority FD stations are East of the Mississippi, clustered here on East Coast, mostly west and SW of here
- We're ideally positioned for this!
 - see purple "+" where we are in SNJ

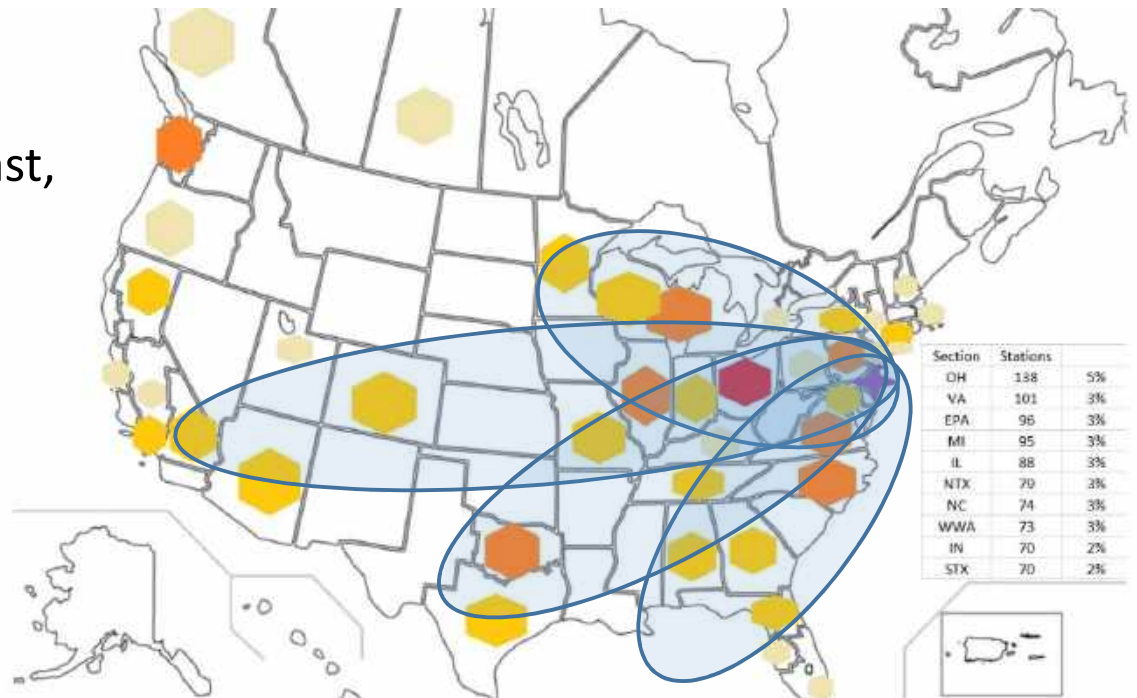
Antenna pattern desired

- Think "short skip" distances, not DX!
 - PA, OH, NY, VA primary target areas
- Directional, nothing to the East

Antenna candidates

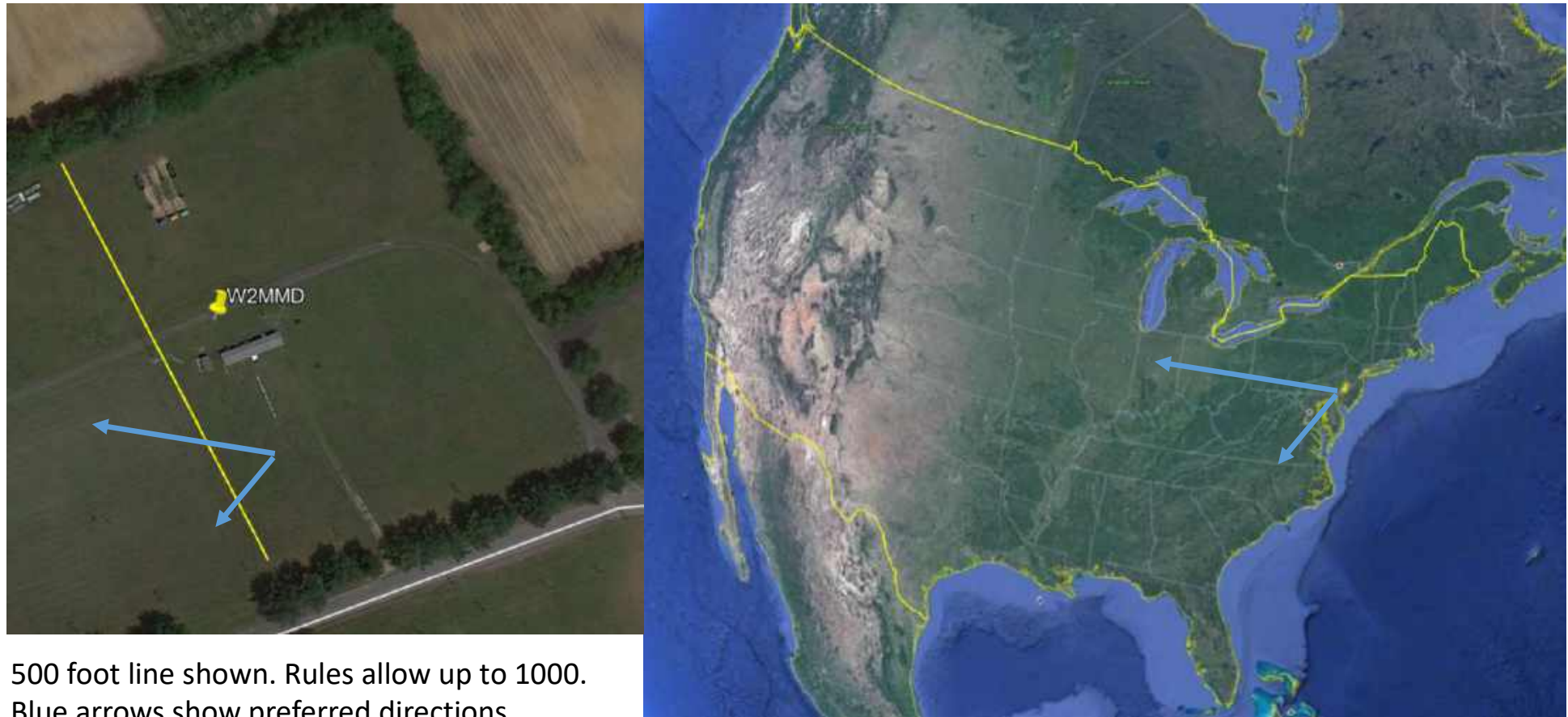
- NVIS, wire beams and horizontal antennas with some directionality to W/SW

So, you think you know Field Day? (GCARC)



RED- #1 target area is Ohio
ORANGE – next top 7
YELLOW – less dense targets

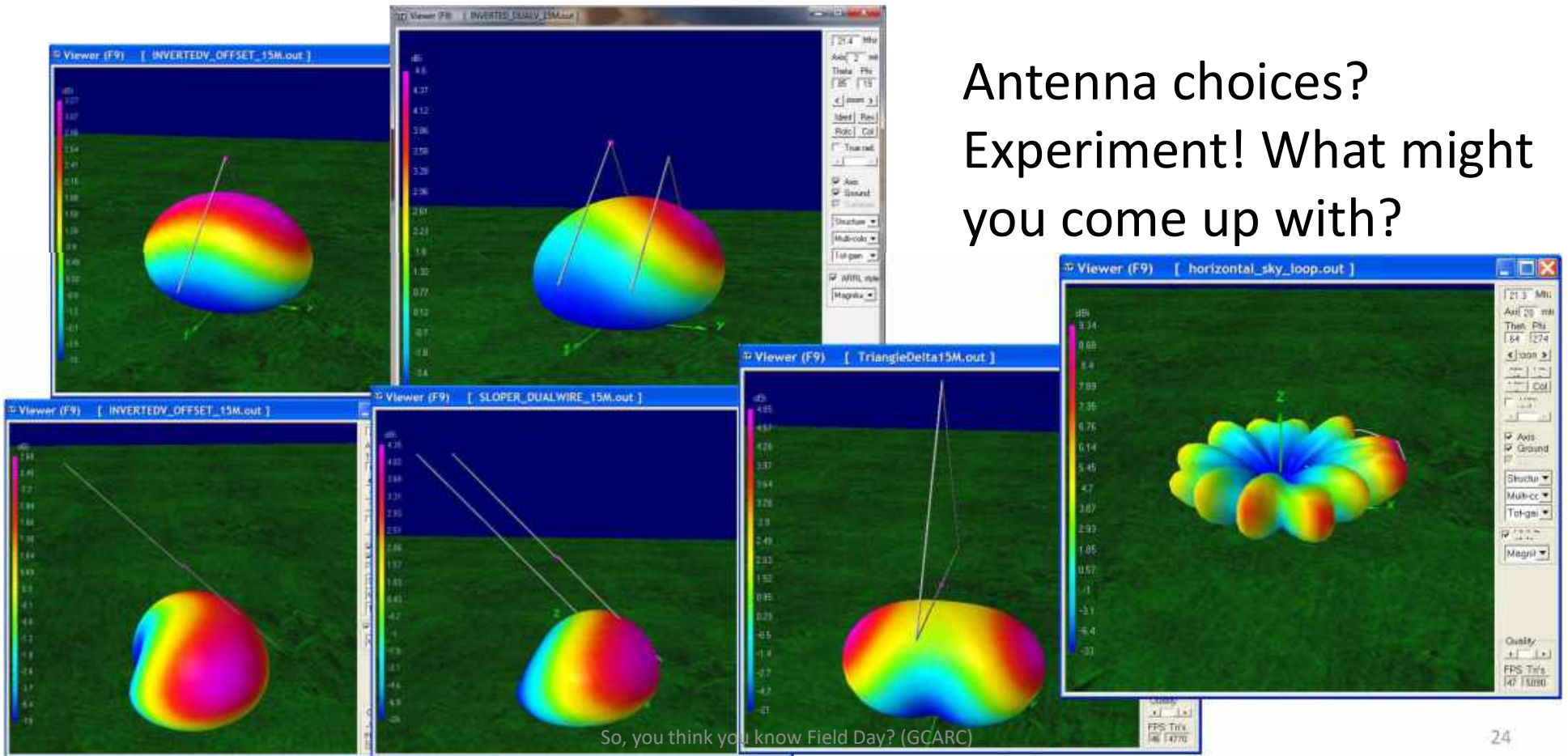
Overlay of desired directivity to W/SW from our FD site



500 foot line shown. Rules allow up to 1000.
Blue arrows show preferred directions
Want directional antennas pointing in preferred directions

How get directivity up/down coast & to Ohio?

Antenna choices?
Experiment! What might
you come up with?



FD rules. Think you know?

- Q: Can you contact the same station (callsign) on 20 meters on FT4, and again on FT8, and again on voice, and again on CW?
- Q: What about on 2 meters? Can you contact them on FM, then again on SSB? What about through a repeater?

From the Rules

- 6.3. Field Day contacts are allowed using Phone, CW and Digital (non-CW) modes. **Stations can be worked once per band per mode** under this rule.
- 6.4. All voice contacts are equivalent.
- 6.5. All non-CW digital contacts are equivalent.
- 6.10. No repeater contacts are allowed

Recording Contacts

- It won't count if you don't log it!
- Q: What 6 things (plus your exchange information) need to be recorded for each Field day contact?



The screenshot shows a software interface for logging field day contacts. At the top, there are three input fields labeled 'Call', 'Class', and 'Section'. Below these fields is a large cyan-colored box with the text 'Ready to begin!' and 'Please select your band and mode from the menu options!'. At the bottom of the interface, there are two buttons: 'Clear' and 'Spot Last'.

N3FJP Field Day Logger SW

So, you think you know Field Day? (GCARC)

Contact Logging requirements

Their Exchange information

1. Their **CALLSIGN**, of station you are contacting
2. Their **CLASS** (Number+one or two letters), e.g. 1D (common), or 6A, or 2AB (unusual)
3. Their ARRL/RAC **SECTION** (or dx), e.g. SNJ (Southern New Jersey) – see map of sections

UTC Date/Time of this contact

- e.g. 6/28/2025 18:01 (remember, is UTC, not local time)
- Your computer logger program usually handles this if set up correctly

Band used for this contact

- e.g. 20M, or actual dial frequency e.g. 14.074 from which dupe sheet can know the band
- Your computer logger program usually handles correctly if have cat control to radio

Mode used for this contact

- Pick only 1 from this list: [CW, or PH (phone), or DIG (digital), or SAT], e.g. PH

Plus Your Exchange Information

- Your Callsign, Class, ARRL/RAC section – plus your power output (by rule, must be < 100W)
- These are expected to be constant, not changing for each of your W2MMD contacts during FD

Did you remember all 6 things (plus your exchange info) to record per contact?

What's that number in the class? E.g. 6A

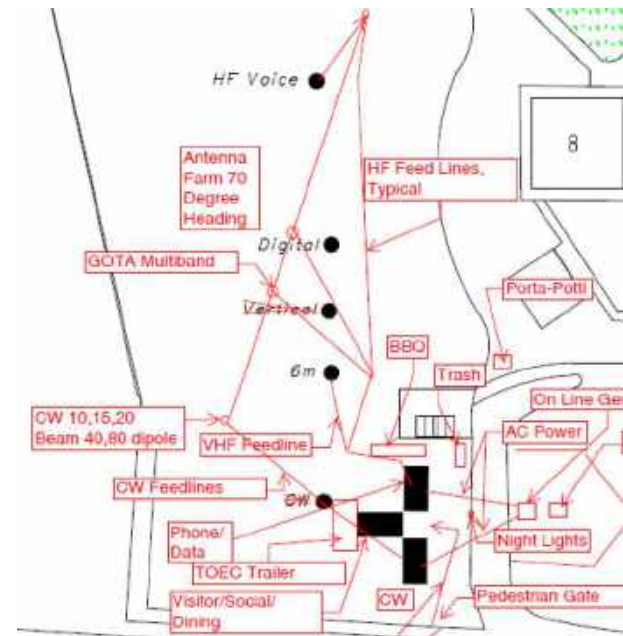
- It is the maximum number of signals that can be simultaneously transmitted from the FD site
 - i.e. # of transmitters at the site set up that can transmit simultaneously
- Q: How many bonus points do you get for setting up one additional transmitter at our FD site, when we all run with off-the-grid power?
- Q: What's the maximum number of simultaneous transmitters you can claim for bonus points when all are run with off-the-grid power?
- Just for Fun Q: for the experienced FD operator, what's the highest # of transmitters you've heard claimed by a station in FD exchange?
 - Note: Most common was 1 in 2024 (48%) (source: <http://field-day.arrl.org/fdresults.php>)

Just for fun



<https://www.cvarc.org/category/field-day/>

- AA6CV Class 21A in 2024 ?!!
- That's 21 simultaneous transmitters at one site!
- Antenna farm with multi-band directional antennas with triplexers (allow simultaneous use)
- 3 large triage tents, centralized operations, good PR, good fun!



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Bonus points per transmitter. From the Rules

7.3.1. 100% Emergency Power, bonus points:

- **100** points per transmitter classification if all contacts are made only using an emergency power source up to a total of **20** transmitters (maximum 2,000 points.) However, additional transmitters which may legitimately be used simultaneously will determine your entry category classification, but will not earn additional bonus points (i.e. 22 transmitters = 22A).
- GOTA station and free VHF Station for Class A and F entries do not qualify for bonus point credit and should not be included in the club's transmitter total.
- All transmitting equipment at the site must operate from a power source completely independent of the commercial power mains to qualify.
 - Example: a club operating 3 transmitters plus a GOTA station and using 100% emergency power receives 300 bonus points
- Available to Classes A, B, C, E, and F.

Know what those Class letters mean?

What are those one or two letters in class? E.g 6A

- Q: if a station is set up portable specifically for FD, with 3 or more people operating, what FD class are they likely using?
- Q: If a contact is being made from an airplane, what FD class are they likely using?
 - Yes, we did log one of these! 😊

Those letters in the class field of the exchange

Designator	Definition
A	Portable, 3 or more persons set up specifically for field day in not normal station location
AB	Class A plus all contacts 5 watts or less, battery - not commercial/ not motor driven gen
B	1 or 2 person version of Class A
BB	1 or 2 person version of Class AB
C	Stations in vehicles capable of operating in motion. Includes maritime and aeronautical
D	Home stations using commercial power [2022: D are allowed to contact other D, in past, no]
E	Home stations using emergency power for transmitters and receivers
F	Emergency Operation Centers (EOC). Must be at an EOC site

Home station? Expect to hear D (sometimes E)

So, you think you know Field Day? (GCARC)

What are ARRL/RAC Section in the exchange?

- Easy case
 - most states have just one section
 - A station in Ohio will say they are in “OH” (for Ohio).
 - A station Georgia will say they are in “GA” (for Georgia)
- A little more interesting:
 - Some states are broken into multiple sections, so you have to pay attention to which section they say they are in
 - Example: NJ has 2 sections, and we are in Southern New Jersey.
 - When we give our exchange from W2MMD, we say we are in “SNJ”
- Q: In addition to New Jersey, which 7 other states are broken into sections for field day?

How is FD scored?



Scores are based on the total number of QSO points times the power multiplier corresponding to the highest power level under which any contact was made during the Field Day, plus the bonus points.

Claimed Score = (QSO Points x Power Mult) + Bonus Points

QSO Points



- QSO Points (for each unique callsign per band-mode)
 - 7.1.1. Phone contacts count one point each.
 - 7.1.2. CW contacts count two points each.
 - 7.1.3. Digital contacts count two points each.

Example:

$(30 \text{ PH} \times 1) + (20 \text{ CW} \times 2) + (10 \text{ DIG} \times 2) = 90 \text{ QSO Points}$

Power Multiplier



- Power Multipliers

- 5x

- if all contacts made with 5 Watts or less using power source other than commercial mains or motor-driven generator, and not recharged from generator/alternator during field day

- 2x

- if any or all contacts made with more than 5 watts
 - In all cases, Power-limit (since 2022) 100 watts max
 - W2MMD operates with 2x multiplier (stations up to 100W)

Bonus points opportunities!

- SAT contact: 100 bonus points for successfully completing at least one QSO via an amateur radio satellite during the Field Day period
- Message Origination: 100 bonus point to Section Manager or Section Emergency Coordinator from group site!
- Message Handling: 10 points for each formal message originated, relayed or received and delivered during the Field Day period, up to a maximum of 100 points!
- Alternate Power: 100 bonus points for Field Day groups making a minimum of five QSOs without using power from commercial mains or petroleum driven generator!
- Youth Participation: A 20-point bonus (maximum of 100) may be earned by any Class A, C, D, E, or F group for each participant age 18 or younger at your Field Day operation that completes at least one QSO.

More bonus points. Q: What's this?



So, you think you know Field Day? (GCARC)

More bonus point opportunities



So, you think you know Field Day? (GCARC)

Q: How can I help get Bonus Points?

- #TX, 100% Emergency Power
- Set-up In Public Place (A,B,F)
- Safety Officer - checklist
- Public Information Table (A,B,F)
- Educational Activity - formal
- Alternate power qsos – need 5 (A,B,E,F)
- Satellite qso –1 scores 100 pts! (A,B,F)
- W1AW Bulletin – accurate copy (all classes)
- Media Publicity – must obtain
- Social Media
- Formal msg to section mgr (100pts)
- Msg handling (10pt ea, up to 100pts)
- Site Visited by invited Served Agency Official
- Site Visited by invited elected gov official
- Youth Element Achieved (18 & under)
- Submitted Using the b4h.net Applet
- Others (e.g GOTA) – not chasing this year

ARRL SECTION MESSAGE

ARRLX007 follows
 ARRLX007 follows
 ZCZC AX07
 QST de W1AW
 Special Bulletin 7 ARRLX007
 From ARRL Headquarters
 Newington CT June 23, 2017
 To all radio amateurs
 SB SPCL ARL ARLX007
 ARRLX007 2017 W1AW Field Day Bulletin
 Get ready, get set, ARRL Field Day 2017 is r
 what is Field Day? Each year thousands of R
 visitors participate in this communications
 made both locally and nationally across Nort
 internationally, and even out to space and back. whet
 participants are new or seasoned radio hobbyists, this event offers
 something for everyone.



2017
 ARRL Field Day Safety Officer Checklist

To qualify for the 100-point Safety Officer bonus (for Class A stations), a gr must appoint a qualified person/s who are present at their site from beginning of set-up until the end of break-down.
 This form is not intended to be all inclusive.
 The Safety Officer/s certify by submitting this form that due diligence was made to provide a safe environment.

facebook



Bonus Points:

- 100% Emergency Power
- Media Publicity
- Public Location
- Public Information Table
- Formal message to ARRL SM/SEC
- W1AW Field Day Message



Do you think you know Field Day? (GCARC) ...

Field day is many things

- **A campout**
- **An informal contest**
- **Practice for emergency preparedness**
- **An opportunity for community and served agency outreach**
- **A social event with fellow club members**
- **A learning experience**
- **And, of course, FUN!**

Alright!
Let's have some
Field Day fun!



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