NA4DC Field Day 2023

DCARC

Any text underlined is an active link

Rich Joerger
WB4EHG
2023/07/25

Field Day is:

An exhibition – show the world what we can do in emergencies

Practice – for a real emergency

An operating event – make contacts

A training event – teach others how to operate HF

A social event – food, friends, mosquitos

Contacts:

Stations in the United States and Canada participate by taking our equipment out into the field and operating under simulated emergency conditions with alternative power sources and make-shift antennas

We operate for 24 or 28 hours (depending on when you begin set up) using any mode that can pass the Field Day message (station class & ARRL/RAC section)

We work as many stations as possible in the contest period. Points are issued depending on the operating mode (phone, CW, digital) as well as completion of bonus items

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We say that Field Day is not a contest but we still accumulate points so maybe it is a competition?

One way we gain points is by making contacts …

- CW (Morse code) contacts are worth 2 points each

- Phone (SSB, AM, FM) are worth 1 point each

- Digital (RTTY, PSK, FT8, FT4, JTx, …) are worth 2 points each

We can work each another station once per band/mode
I.E. NA4DC can work WB4EHG once for SSB, CW, FT8 on any 1 band

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Field Day: The Operating Part

We operated two HF stations in the trailer and a 6m station in the new building powered by an inverter/generator to reduce tha audible noise.

We added the 6m station at the last minute since 6m propagation had been very good the previous few weeks. Sadly, it was not good for FD weekend.
The HF stations use the tri-band beam for 20m thru 10m and the 80m/40m inverted Vee.

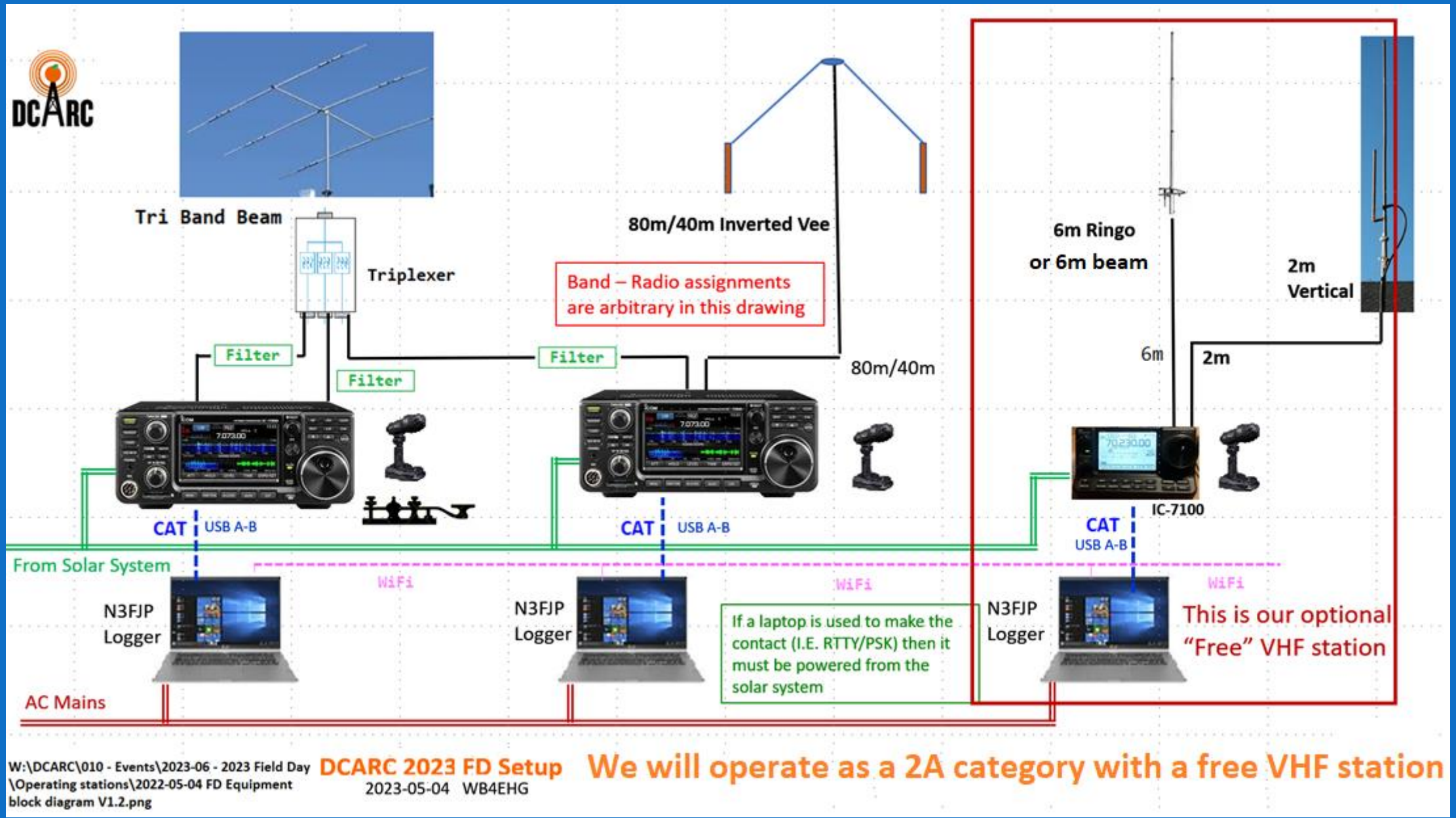
These stations as shown on the next slide, were able to operate CW, SSB and FT8 at 100W maximum power.

We changed bands as propagation conditions changed and it is possible (if you are operating “search and pounce”) to work every station you can for the current propagation on a band. In that case you either change bands, change modes or wait for propagation to change.

The 6m station found that the beam was bad so used the 6m Ringo.

Station Configuration

This is a block diagram of our station configuration



Looking at operating statistics provided by the N3FJP logging program:

Score Statistics	
Total CW Contacts	80
Total Phone Contacts	89
Total DIG Contacts	31
Total QSO Points	311
QSOs / Hr (Last 20 min)	0
QSOs / Hr (Last 60 min)	0

We made a total of 200 contacts

Total Contacts by Band and Mode:

Band	CW	Phone	Dig	Total	%
80	7	0	0	7	4
40	20	2	0	22	11
20	53	86	0	139	70
15	0	0	17	17	9
10	0	0	11	11	6
6	0	0	3	3	2
SAT	0	1	0	1	1
Total	80	89	31	200	100

2 pts for CW = 160
2 pts for DIG = 62
1 pt for PH = 89

Total: = 311pts

Power mult = X2 so
311 X 2 = 622pts

Operating Period: 2023/06/24 18:10 - 2023/06/25 17:51

Total op time (breaks > 30 min deducted): 12:53:26
Total op time (breaks > 60 min deducted): 14:04:44

Avg Qs/Hr (breaks > 30 min deducted): 15.5

By the numbers above, we operated ~13 of the 24 hours

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These are the ARRL sections we worked:

Red are worked sections,
Blue are unworked

Missed:
AK, CO, HI, MD, MI, MN, MT, ND, NE, NH, OR, VT, WY.
AB, BC, GH, MB, PE, QC, MB, NB,

DX		3		5		7		0	
DX		DE	MDC	AR	NTX	AK	NV	CO	MO
1		EPA	WPA	LA	OK	AZ	OR	IA	ND
CT	RI	**4**		MS	STX	EWA	UT	KS	NE
EMA	VT	AL	SC	NM	WTX	ID	WWA	MN	SD
ME	WMA	GA	SFL	**6**		MT	WY	**Canada**	
NH		KY	TN	EB	SCV	**8**		AB	ONE
2		NC	VA	LAX	SDG	MI	WV	BC	ONN
ENY	NNY	NFL	VI	ORG	SF	OH		GH	ONS
NLI	SNJ	PR	WCF	PAC	SJV	**9**		MB	PE
NNJ	WNY			SB	SV	IL	WI	NB	QC
						IN		NL	SK
								NS	TER

A BIG thank you to the guys who operated!.

Total Contacts by Operator:

Operator	Total	%
WB3ISP	61	31
WB2RUU	60	30
K2AU	36	18
N4MEO	17	9
KM4GCL	8	4
WB4BAG	6	3
KQ4DQS	5	3
KJ7GQH	3	2
W6BXQ	3	2
W4BAE	1	1

Total = 10

The states and provinces we worked:

Total Contacts by State\Prov:

State	Total	%	State	Total	%
TX	25	13	MS	4	2
IL	16	8	IA	3	2
FL	13	7	ID	3	2
NY	11	6	KY	3	2
CA	9	5	NJ	3	2
AL	8	4	NM	3	2
GA	8	4	OH	3	2
IN	7	4	UT	3	2
MO	7	4	WA	3	2
OK	7	4	DE	2	1
VA	7	4	MA	2	1
AR	6	3	ME	2	1
WI	6	3	RI	2	1
NC	5	3	SC	2	1
PA	5	3	WV	2	1
TN	5	3	CT	1	1
AZ	4	2	NV	1	1
KS	4	2	ON	1	1
LA	4	2			

Total = 37

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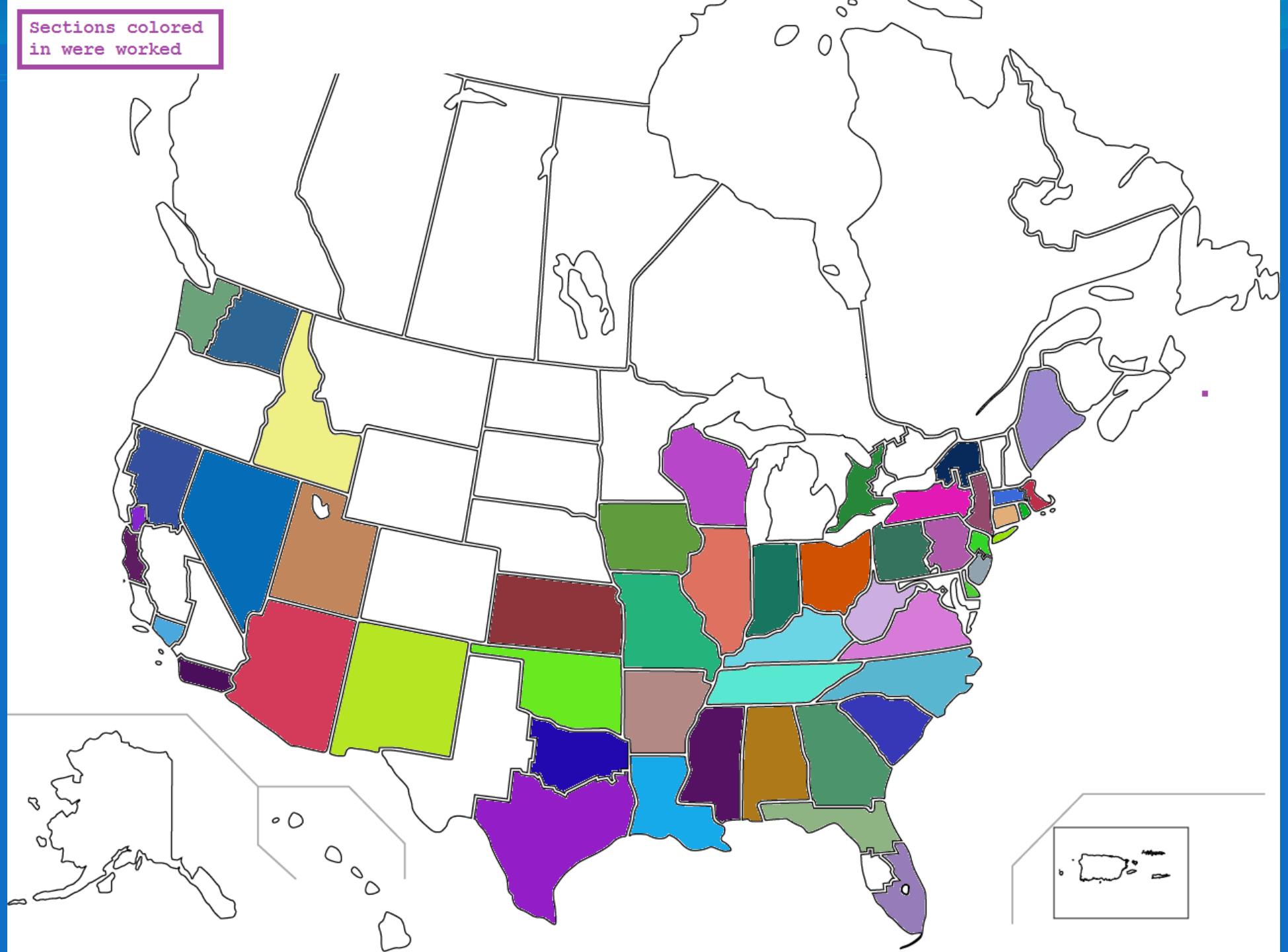
These are the states and provinces we worked
(Sections colored in were worked)



We gain points by executing bonus items:

100% Emergency Power	Education Activity	Safety Officer*
Natural Power*	Social Media	~~Visit by a Gvmt Official~~
~~10~~ 9 Messages Relayed*	~~Media Publicity*~~	~~Visit by Agency Rep~~
Message to SM*	Location in a Public Place	~~Youth participation~~
Satellite QSO's	Public Information Table*	W1AW Message*

Items with a * require proof submitted

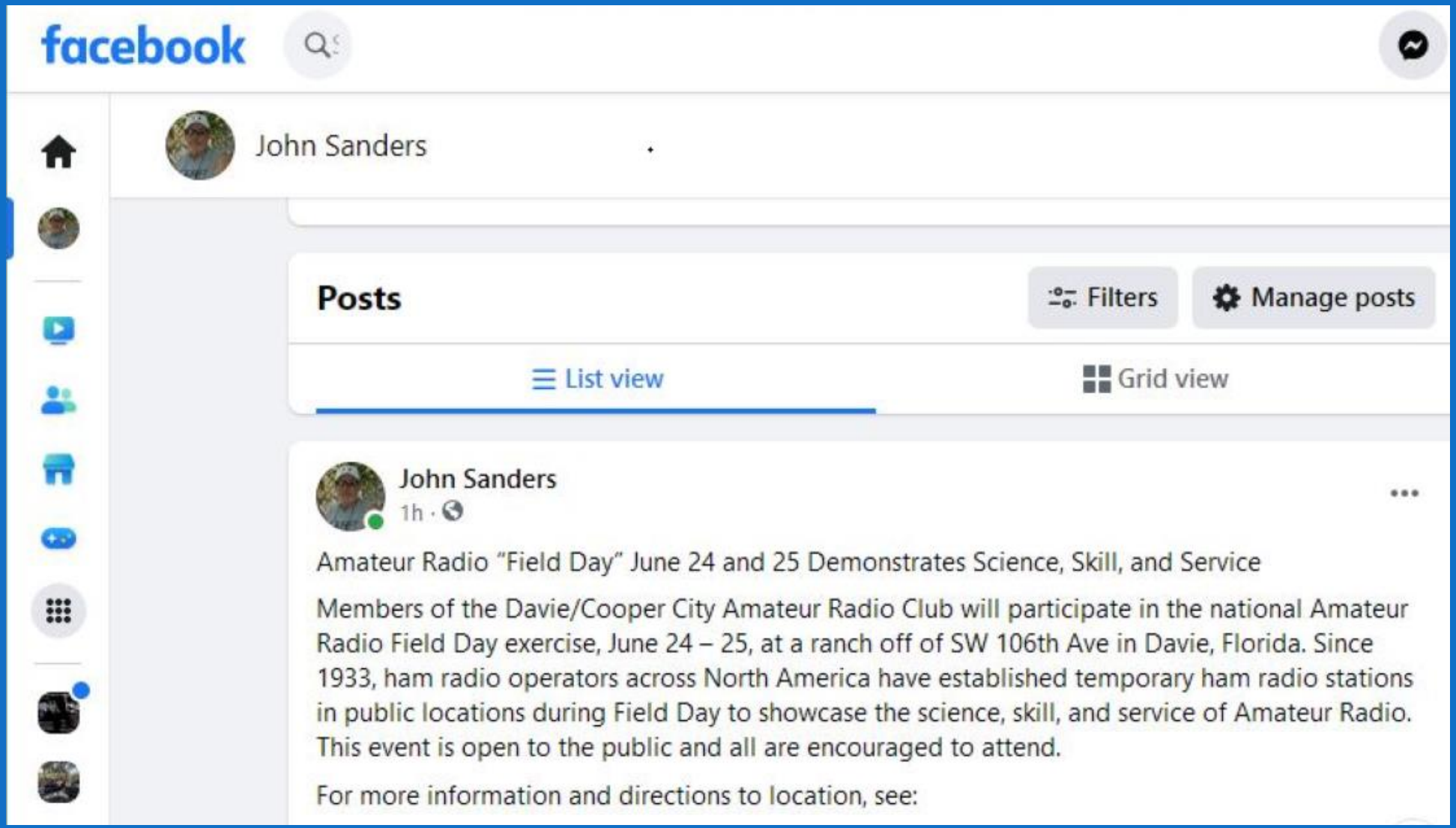
Two of these are difficult and we have never achieved them

- Visit by a government official
- Media publicity

Usually we have at least a visit by a Red Cross person and the ARRL Section Manager but this year none of them came to our event.

We collected 990 bonus points (the items that we had to upload to the ARRL to qualify for these points are in the following slides)

Our Social Media Post thanks to John W6BXQ



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This is a Radiogram (this is where the RELAY part of ARRL comes from)

This is what we mean when we say that we pass messages during a disaster:

There is a nation-wide traffic network in which messages are passed from local to state to regional to national to regional to state to local stations.

Many messages are predefined (IE ARL-50) only needing sender identification and destination addresses.

Using predefined messages increases the number of messages that can be sent

THE AMERICAN RADIO RELAY LEAG

RADIOGRAM

VIA AMATEUR RADIO

NUMBER	PRECEDENCE	HX	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE
1	R	OPT	NA4DC	ARL 4	Davie, FL	OPT	2022-06-25

TO:

See list to the on sheet: Address for Radiograms

THIS RADIO MESSAGE WAS RECEIVED AT:

AMATEUR STATION: DATE:
NAME:
STREET ADDRESS:
CITY, STATE, ZIP:

TELEPHONE NUMBER:

ARL fifty X-Ray 73

SIG: NA4DC

	FROM	DATE	TIME		TO	DATE	TIME
REC'D				SENT			

A licensed Amateur Radio Operator, whose address is shown above, handled this message free of charge. As such messages are handled solely for the pleasure of operating, a "Ham" Operator can accept no compensation. A return message may be filed with the Ham delivering this message to you. Further information on Amateur Radio may be obtained from ARRL Headquarters, 225, Main Street, Newington, CT 06111.

The American Radio Relay League, Inc. is the National Membership Society of licensed radio amateurs and the publisher of QST Magazine. One of its functions is promotion of public service communication among Amateur Operators. To that end, The League has organized the National Traffic System for daily nationwide message handling.

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ARL-50 means: Greetings by Amateur Radio

Expect that we will do a presentation on this topic, possibly during a net

This is the ARRL Field Day bulletin that W6BXQ copied via PSK, a digital mode similar to RTTY

2023-06-24 FD Bulletin.txt

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NEWINGTON CT  7,3 W PQE
TO ALLRAD AMAT
PG

 B SPCL ARL WRLXØØ7
ARLX)Ø 2Ø23 W1AW FIELD DAY BULLETI

THIS YEAR, AB W CELZBRATE THE YEAR OK THE VOGUNTEER, AND QE
EXPERIENCER THE EVER-INCRASING PROPAGATION BENEFITS OF SOLAR CYCLE
25, 2Ø23
RRL FIELB DAY IS DESTINED TO BE ONE OF THE BEST EMENTS IN
RECENT YEARS.

MANY AMATEUR RADIO OPERATORS CONSIDER FIELD DAY TO BE THE HIGHLIVHT
OF THLQ YEAR. SINCE UTS INCEPTION IN 1933,HLD EAY REMAINS THE
LARGEST HAM RADIO OPERATING EVENT IN NORTH AMERICA.

WHAT IS FIELD DAY? WHETVER IT'SLAN EMECGENCY EXERNISE, A SOCIAL
ACTIVITY, OR JUST FRIENDLY COMPETITION BETWEEN INDIVIDUALS OR CLUBS,
FIELD DAY IS WHATU MAKE OF IT.

IF YOU WISH TO PARTICIPATE AS PART OF A LOCALGROH'Q FIELD DAY
OPERATION, FIND ACTIVE GROUPS NEAR YOU BY USING THE ARRL FIELD DAY
LOCATOR SEARCH PAGE AT, ARRL.ORG/FIELD-DAY-LOCATOR.

REMEMBER TO PUBLICIZE YOUR PARTICIPATION IN THE EVENT, BEFORE,
DURING, AND AFTER THE EVENT USING SOCIAL MEDIA, PERHAPSPEVEN LIVE
STREAMING.

THERE AR
 BONUS POINTS AVAILABLE FOR OBTAINING MEDIA PUBLICITY, SOO
BE SURE TOIREACH OUT TO YOUR LOCAL MEDIA OUTLETS.

AFTER THE DUST SETTLES AND ALL THE GEAR IS PACKED AWAY, DON'T FORGET
TO SUIT YOUR ENTRY JLID THE ONLINE ENTRY FORM AT
FIELD-DAY.ARRL.ORG BEFORE 2Ø59 UTC ON TUESDAY, JULYQ QN 2Ø23.

GOOD LUCK AND 73.
NNNN
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Safety Officer Check List:

ARRL Field Day Safety Officer Checklist

To qualify for the 100-point Safety Officer bonus (for Class A stations), a group must appoint a qualified person/s who are present at their site from the 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 operation.

[check (or circle) any/all that apply]

- ✓ Safety Officer/s or qualified designated assistant/s was on site for the duration of the event.
- ✓ Fuel for generator properly stored.
- ✓ Fire extinguisher on hand and appropriately located.
- ✓ First Aid kit on hand.
- ✓ First Aid - CPR - AED versed else trained participant/s on site for full Field Day period.
- ✓ Access to NWS alerts to monitor for inclement weather.
- N/A Tent stakes properly installed and marked.
- ✓ Temporary antenna structures properly secured and marked.
- ✓ Site secured from tripping hazards.
- ✓ Site is set up in a neat and orderly manner to reduce hazards.
- ✓ Stations and equipment properly grounded.
- ✓ Access to a means to contact police/fire/rescue if needed.
- ✓ Safety Officer is designated point of contact for public safety officials.
- ✓ Minimize risks and control hazards to ensure no injuries to public.
- ✓ As necessary, monitoring participants for hydration and ensuring an adequate water supply is available.

Thomas R. Hayes N4MED

signature(s) / call(s)

Our sign directing everyone to our FD event

Field Day: The Social Part

Up to now, this document has concentrated on technical and competition aspects, but the social part of FD is very important.

This is how we introduce the public and new members into the fellowship of ham radio.

Usually members/visitors do not stay for long since June is so hot, humid and rainy during the event. Many people can't take it for more than a few hours and certainly not the full 28 hour period.

This year we had the new AIR CONDITIONED building that Fred erected. We owe Fred a Hugh Thank You!

I'd love to have a picture of the building from the outside if anyone has one

Our flag was outside the building so visitors would know where we were

Example of "fellowship": when I put my tower up, there were 15 club members here to help! Another: during contests we always end our contact with "Thank You (TU) AND "Good Luck!")

Three of the very few outdoor pictures I have

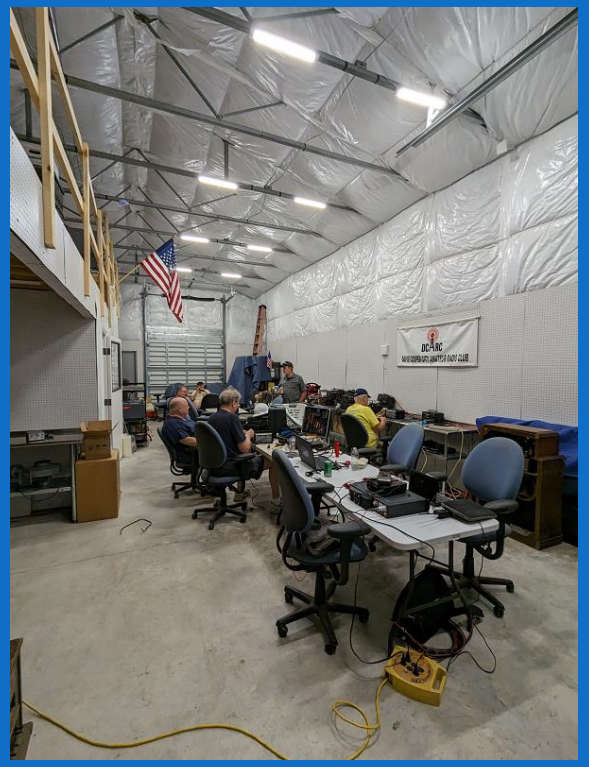
We need to have a club photographer, out last one retired!

Tony W6TNY grilling: lunch, dinner, breakfast and lunch again

A group of folks getting the tower and beam up Saturday AM

I don’t have any pictures of the outside of the building but here are a couple from the inside.

Diane KC4BAR welcomed and checked everyone in and had our ARRL documentation ready to hand out



There was plenty of chairs and room for everyone to congregate. More people stayed longer on both days thanks to the air conditioning.

Our “free” VHF station was located close to the door where it could be powered from a borrowed inverter/generator outside. Unfortunately 6m never opened so we made no contacts.

Attendees

Count	Name	Call	Member
1	Betty Collins	N4BJC	Y
2	Grumme	W4GRU	Y
3	Bruce Edrich	W4BAE	Y
4	Cameron Ramos	KO4VHB	Y
5	Carlos Castaneda	KQ4DQS	Y
6	Diane Joerger	KC4BAR	Y
7	Ed Ramos	KO4UZI	Y
8	Eddie Ramos	KB2EYD	Y
9	Edwin Martinez	KN4GPE	Y
10	Fred Perkins	WB4BAG	Y
11	George Seijo	N8XH	Y
12	Jacob McKaig	N4MCK	Y
13	Jeff Dale	WB3ISP	Y
14	Jerry Tyler	KN4UPI	Y
15	John Sanders	W6BXQ	Y
16	Mark Horwittz	K4AU	Y
17	Marty Hommel	KQ4CKB	Y
18	Matthew McKaig	N3MCK	Y
19	Neil Cinege	WB2RUU	Y
20	Phil Savels	K4OMD	Y
21	Rich Joerger	WB4EHG	Y
22	Richard Bardons	KQ4JKQ	Y
23	Ron Lowther	KQ4DQL	Y
24	Tom Hayes	N4MEO	Y
25	Tony Gawel	W6TNY	Y
26	Charles Bardons		Visitor
27	Chris Martinez		Visitor
28	Tony Pinto	KQ4ITU	N
29	Reed Talbert	KM4GCL	N
30	Nari Pala	KJ7GQH	Y

These are the people who signed in on both days.

Thanks! Everyone for joining us!

Our thanks to the following folks (operators are listed on slide 9)

WB4EHG Set up the 3 radios, cables, laptop software, networking, F

N4MEO update Windows, set up the tables, safety officer, Sgt at arms, NA4DC trustee (he's the guy responsible to the FCC for our on-air activities

WB2RUU raised the 80m/40m Vee and operated CW, maintain the generator

KC4BAR, WB4BAG, K4OMD & Elsia food and drinks

W6TNY Cooked lunch, dinner and breakfast and lunch

W4BAE & WB4BAG Satellite contact (at 0300ET!)

WB4EHG Educational bonus point activity

KC4BAR greeter, check-in list, distributed ARRL public information

WB4BAG for the site and air conditioned building

Everyone clean up and put everything away

The new member (?) who loaned us his generator/inverter to run the 6m station

If I missed anyone please let me know so I can add you (wb4ehg@rjoerger.com)

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President's Report

Well, folks, we have another Field Day behind us.
Those of you who listened in to last night's RF Net got a smattering of what fun we had.

Before I start, I have to thank all those who pitched-in to help (and offered to help). Some of the major tasks included:

- Buying, Preparing and Bringing Food (Phil K4OMD and Elsie Savels, Diane KC4BAR).
- Cooking (Tony W6TNY).
- Setup (Just about everyone who showed up 9a-2p on Saturday).
- Operating (That list will be part of the log, which will be reported later).
- Tear-down (Lots of members stayed past 2pm Sunday to help clean up).

I know there were many that I couldn't recall.... someone brought coffee and donuts, another brought ice. Drinks appeared somehow. Even the "super quiet" generator that we used. To those members and friends, I'm grateful for your help. And a special word for those who repeatedly offered to help -- even though there might not have been a task to perform at the time you were available, we all appreciate the offers. In particular, I want to thank Jeff WB3ISP and Richard KQ4JKQ for the help with the electrical work, both who spent considerable time on this project.

The club picked up the tab for (almost) all the food, refreshments and supplies. Members who still have receipts for reimbursements, please get them to Grumme.
We had forgone the door prize drawings and 50/50 (no one mentioned it, so I think we all forgot!), and we'll have them at the next meeting.

Characteristic of an event of this size, there are usually frayed nerves as the pressure mounts to get all the tasks done and start operating. This time I didn't see any -- I think we were focused on having fun and not worrying about having everything work perfectly. I sensed a much more relaxed environment. Maybe it was because Tom N4MEO kept everyone in line (he's the Safety Officer and Sgt. at Arms). It would be great to have this camaraderie all the time moving forward.

Although we had a glitch on the logging procedures, Rich WB4EHG saved the day and recovered the contacts we made. He's already working on a plan to make it less prone to the issues we faced.

Although I didn't see some of the faces we had last year, we had new ones and heartily welcome their participation.

President’s Report Continued

Unfortunately, I don't have pics of the activities (hopefully, others can post some pics!)
We operated until after 2am, but were still there at 3am when Bruce W4BAE came by to successfully make a satellite contact for the bonus points. The station was locked down at 3:45am and reopened (8am?) to resume operating.

We had 30 sign-ins on the clipboard, so if you were there, chime in with your comments (good or bad) about our Field Day.

Expect the results to be published in QST October or November. We'll see how we did compared to other clubs in the area.

73
Fred WB4BAG
DCARC President

A comment about the effect of training on operating

As I said earlier, FD has 3 aspects: operate, train and social.
There is a conflict between operating and training that serves neither of them well.

There is barely enough room to get 3 people into the trailer at the same time. Having an extra 2 or 4 visitors squeeze in behind the operators and ask questions interferes with the operators. We experienced this when we had FD at Markham park years ago and we had much more room at Markham.

Yet it is fair, necessary even, that newcomers to HF get to see firsthand how to operate HF and even sit down and operate for awhile.

We are open to ideas for how to meet these different needs.
My suggestion is to change from a 2A to 3A category with the 3rd station being outside the trailer where there is room for people to gather around and sit down and operate. That opens the question of where the 3rd station is located for which I have some ideas but that is for another time.

What went wrong

Please do not read this as criticism or placing blame. We can't improve if we don't recognize what needs to be improved.

- The previously mentioned high RF noise on 20m/15m/10m
- The laptop on station 2 kept losing the USB connection to the radio. A ferrite on the USB cable lessened but did not stop the problem. Luckily there was one on the table.
  - We need to understand and correct the root problem (grounding?)
- The 6m beam having such a high SWR that we could not use it.
  - This didn't matter because 6m never opened to SFL but we did make 3 local contacts
- We should have set up a 2m FM simplex station and worked some locals

What went wrong continued

- Lost log contacts

  We don't know what really happened. If the laptops were asleep when the early Sunday operators arrived and were rebooted (the log should have been backed up before one of them went to sleep. **Note: check how long the laptop waits before going to sleep**) or if the $12V_{DC}$ solar voltage dropped and the laptop batteries gave out (the laptops have to be powered from the $12V_{DC}$ solar system if we make contacts with them). I managed to find partial log files and knowing that the last contact made was 0332ET I was able to recreate the missing entries.

  Aside: N3FJP makes a copy of the log database and stores it in a user specified file every 15 minutes. This did not happen after the satellite contact was made at 0332ET which leads me to think that the laptop shut down due to power loss. Personally, I'd like to see the interval time being user settable.

  This has happened at previous Field Days and we thought it was solved.

  We will develop a procedure for how to leave the laptops when operating ends early Sunday AM so the Sunday morning operators can start with the laptop/log in a known state.

  We will implement a means for backing up the log to a 4^{th} computer running on $120V_{AC}$ on a short time basis and keeping earlier copies of the log.

What went wrong continued

About propagation and the high RF noise level we had:

Saturday morning started off with a very high noise level on 20m thru 10m.

It seemed to be from atmospheric conditions as it was also heard at a member's QTH at the same time. [We need more investigation to see if it is local to the club station] The Sun has been very active the past few months with X-Ray flares, sun spots and coronel mass ejections. Here are some web sites for your amusement

Space Weather Space Weather Woman Propagation DX Maps (shows contacts on a globe)

All the above effect propagation here on Earth.

This RF noise made copying HF stations very difficult as many were below the noise level.

DCARC

Rich Joerger
WB4EHG
2022/07/04

What went wrong continued

6 meters

We added the 6m station at the last minute since 6m was open the two weekends before FD.

6m did NOT open during FD. The VHF station was “free” so it cost nothing. Also we did not test the 6m beam before the event since we were not going to operate 6. When we set up the station Saturday AM we found the beam’s SWR was high and had to use the 6m omnidirectional Ringo.

Rich Joerger
WB4EHG
2022/07/04

And my final comment

New HF operators

We do a terrible job of getting our new (and even some not so new) hams to tryout HF operating.

Every year we have one new ham that really excels at HF operating. One out of how many new hams that join us each year?

I guess I don't understand the reluctance to get on HF. It was all that was available when I was first licensed in 1966. There was no 2m FM. I remember being nervous getting on HF CW as a novice. (crystal controlled transmitter so only 2 or 3 frequencies) and 75W Tx power. Yet I did it. Our Tech members can operate using the club call (supervised) as Extras. Great radios. Enthusiastic Elmers ready to help and guide you.

The club station is open every Sunday afternoon yet no one operates.

What can we do to encourage our members to give it a try?

Thanks to everyone who made this a great Field Day!

DCARC

Rich Joerger
WB4EHG
2023/06/25