

Field Day is where the FUN begins

Additional bands and bonus points



IC-905

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IC-7300 HF / 6M



IC-9700 2M / 70CM / 23CM



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IC-7610

HF / 6M

Understanding the Field Day GOTA Station

BY ARRL CONTEST PROGRAM MANAGER PAUL BOURQUE, N1SFE

nyone can get on the air during ARRL Field Day, also known as amateur radio's open house. Event rules allow group participants to set up a dedicated Get on the Air (GOTA) station so that new, inactive, and inexperienced hams, as well as visitors from the general public, have the opportunity to experience the excitement of amateur radio.

Station Rules and Operations

The frequency privileges of a GOTA station are dependent on the license held by the control operator overseeing the operations. For example, if an unlicensed visitor or a Technician-class licensee is operating the station while a General- or Amateur Extra-class control operator is present, they may operate in the General or Amateur Extra portions of the bands.

While a different call sign than the one used by the parent (Class A) station must be used, the exchange is the same as the parent station.

The ARRL Field Day rules don't preclude seasoned hams from operating GOTA stations. If a more experienced operator wants to try out a band or mode they don't normally use, that would be well within the purpose of the GOTA station. For example, if an active General-class licensee has never operated HF and wants to try working 20-meter SSB for the first time, they could use the GOTA station to do so.

Tips for a Successful GOTA Station

- 1. Prior to Field Day, recruit club members to act as GOTA coaches, and create a schedule to make sure someone is available at the station during periods when visitors may be present to greet and assist them. I recall going to Field Day right after I received my license, and everyone was so focused on making contacts that no one even acknowledged me. Needless to say, I didn't stick around very long.
- 2. Let the public know that your Field Day location will have a GOTA station. The ARRL Field Day Station Locator (www.arrl.org/field-day-locator) can help get the word out and promote your group's event. Use the locator to add your Field Day location to the map. Remember to also include your contact information and if you'll have a GOTA station.
- 3. Set up your GOTA station in a spot that will attract visitors. It should be accessible and inviting, as well as



Micah Gallant, VY2MIC, and his daughter Arden Gallant, VY2ALG, operated the Charlottetown Amateur Radio Club's GOTA station from Victoria Park on Prince Edward Island, Canada, during the 2023 ARRL Field Day. A total of six new hams, two of which were youth, made their first HF contacts using the club's GOTA station. [Micah Gallant, VY2MIC, photo]

- organized and uncluttered. Consider putting up a sign or banner so it can be easily found.
- 4. Create a written script of the on-air exchange and post it prominently at the control point. Make sure the phone operators are comfortable sending and copying phonetics. Have a band chart and information about the radio's operation readily available.
- 5. Make sure everyone who wants to operate the station gets the chance to do so. There's no time limit for GOTA operators, but if there's a line of people waiting to use the station, common courtesy dictates that everyone should get a turn.

Station Benefits

A successful GOTA station helps make the public and amateur radio newcomers aware of all the excitement that the hobby can offer, and it can also earn your club's Field Day operation some bonus points! Contacts made by GOTA operators not only count toward your main station's contact total, each GOTA contact is worth an additional five GOTA bonus points. This is a great incentive for having a GOTA station at your club's Field Day event. See section 4.1.1 of the ARRL Field Day rules at www.arrl.org/field-day-rules for more information.

We hope to hear you on the air on June 22 and 23 for 2024 ARRL Field Day!

Improve Your Field Day **Operations with Band Planning**

BY CARL LUETZELSCHWAB, K9LA

RRL Field Day is a time to enjoy camaraderie with other hams, to develop skills that meet the challenges of emergency preparedness, to learn how to operate in abnormal situations in less-than-optimal conditions, and to acquaint the general public with the capabilities of amateur radio. Of course, it's also a time for making lots of contacts. Here are some guidelines for how to do just that.

Field Day operations begin at 1800 UTC on Saturday, June 22, which is 2:00 PM on the east coast and 11:00 AM on the west coast. Thus, everyone starts operating in the daylight, goes through the hours of darkness, and ends in daylight on Sunday, June 23. There are six elements that affect which bands are available during these times: the solar cycle, the ionosphere, band characteristics, sporadic E, propagation disturbances, and your Field Day site.

1. The Solar Cycle

We're more than 4 years into Solar Cycle 25, and we're close to solar maximum. Right now, Cycle 25 is stronger than Cycle 24 (which was the fourth smallest in recorded history), but not by much. Thankfully, it's still strong enough to give us propagation on 15 and 10 meters (and sometimes on 6 meters) for several years at appropriate daily and seasonal times.

2. The lonosphere

Due to solar radiation at various wavelengths impinging on our atmosphere, three regions are formed in the ionosphere: the F region (which can split into the F1 and F2 regions during the day, but we'll focus on the F2 region), the E region, and the D region. In the ARRL book, Here to There: Radio

Wave Propagation, these regions are depicted in Figures 2, 19, and 23.

The F2 region is the highest altitude ionospheric region that refracts our signals back to Earth, thus, it gives the longest distance hops (generally best for coast-to-coast propagation). The E region also refracts our signals back to Earth, but it's lower in altitude than the F2 region, thus, it gives the shortest distance hops (generally good for closerin propagation). The D region does not refract signals back to Earth on frequencies allowed for Field Day — it's simply where ionospheric absorption (more loss) occurs, which reduces the strength of our signals.

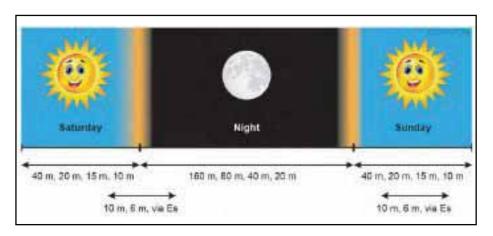
3. Band Characteristics

Bands that are critically dependent on ionospheric absorption in the D region of the ionosphere include 160, 80, and 40 meters. During the night, the D region is essentially out of the picture on frequencies allowed for Field Day, but it still affects LF and VLF signals during the night. With the D region at a minimal level, night signals on these three lower bands will be strong and will provide the opportunity to make lots of contacts. Forty meters should be good for closer-in contacts during the day. Of course, strong atmospherics from thunderstorms could be a detriment to these frequencies.

Twenty meters is not as dependent on ionospheric absorption as the three lower frequencies discussed above. It should be good during the day and into the early evening. If Cycle 25 was stronger, 20 meters would offer the chance to make contacts well into the night.

Fifteen, 10, and 6 meters are critically dependent on the

amount of ionization in the F2 region of the ionosphere. More ionization means higher maximum usable frequency (MUF) for a specific path at a specific time. Unfortunately, the F2 region has a seasonal dependence that puts summer in the northern hemisphere at a disadvantage with lower MUFs than in the fall and winter months. Your best bet for making contacts during the day will be on 15 meters, but keep an eye on 10 meters (visit www.dx maps.com/spots/mapg.php?Lan=E and select 28 MHz to check who's contacting whom). If 10 meters isn't productive via the F2 region, hope for sporadic E.



Bands that should be available throughout the Field Day weekend.

4. Sporadic E

The best time to look for sporadic E (also referred to as Es) is during the summer months (June, July, and August) around late morning and early evening local times. If it occurs, this is a great propagation mode for Field Day. Hopefully, we'll have sporadic E during the Field Day weekend to increase your number of contacts on 10 and 6 meters.

5. Propagation Disturbances

The above discussion assumes the sun won't produce a disturbance to propagation during Field Day. Of the three categories of disturbances — geomagnetic storms, solar radiation storms, and radio blackouts (visit www.swpc.noaa.gov/ **noaa-scales-explanation** for more details) — a geomagnetic storm triggered by a coronal mass ejection (CME) on the sun is generally the worst-case disturbance. If a CME occurs and is directed at Earth, you may have to go down in frequency to mitigate this disturbance. But also look for a short-term enhancement on the higher frequencies. Unfortunately, solar maximum (about where we are) is when most CMEs occur (along with big solar flares that cause the other two categories of disturbances).

6. Your Field Day Site

Having good antennas and a quiet location can play an important role in how many Field Day contacts you make. Do the best you can when selecting a site, and be safe when erecting antennas. But remember that there may be contradictory issues in your site selection. For example, a quiet location may put you farther away from a location that will attract more public attendance.

Putting It All Together

Now, you can put together a band plan for Field Day this year. Remember, the ionosphere is quite dynamic, so this plan is only a guideline.

With three operating modes available (phone, CW, and digital) during the event, there's something for everyone.



Make sure to get on your favorite operating mode, and maybe even try a new one to expand your amateur radio horizon; it's a great time to try a new band, too! Take advantage of the available mentors at your site.

Good luck, and have fun!





ecently, I stepped away from nearly 40 years of television news experience. Here are some tips to help you become a photojournalist for your own event and get your Field Day story into your favorite TV news program or newspaper.

- Get your camera phone ready prior to the event. If you're using a newer iPhone, tap your SETTINGS icon. Scroll down the list and select CAMERA. Here, you'll see the FORMATS option near the top of the list. Select it and make sure that you're using the MOST COMPATIBLE mode, rather than HIGH **EFFICIENCY**. Even some professional systems have trouble with HIGH EFFICIENCY mode, so I recommend avoiding it.
- Make sure your phone has sufficient memory. Before Field Day, save existing photos and videos to either an external device or your cloud service to free up some space. Remember that video recordings consume considerably more memory than photographs, so make sure you have several minutes of recording time available.
- **Shoot horizontally.** Television is a 16:9 aspect ratio format, so you must hold your phone horizontally, with the REC button to the right. While vertically shot images can be used, they require some editing.

- Shoot at a wide setting. Cell phone optics have continued to evolve, but they're still not great. My suggestion for producing quality, steadily shot video is to always shoot with your lens at its widest, least-telephoto setting.
- Shoot sequences to tell a story. Sequential images give editors choices, but don't overwhelm them by sending more than a handful of images.

Get these three types of shots:

- 1. The establishing shot (see the lead image). Get close enough to fill the frame with the operators, typically from the connector side of the equipment — let's see some faces! Hit the record button and hold that shot for at least 10 seconds. Resist moving or attempting to use the zoom function. In fact, you should never need to zoom if you follow these techniques.
- 2. The medium shot. Physically move closer with your camera and shoot the operators. If there's a control operator and a visitor, fill the frame with them and their interactions with one another (see Figure 1). Roll for a full 10 seconds, then stop.



GEAR UP FOR ARRL FIELD DAY



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- 3. The tight shot (see Figures 2 and 3). Get a close-up of an operator's face and the microphone, again filling the frame. Ten seconds of video will do.
- 4. Repeat the process, moving on to another station at your site, or introducing a fresh set of operators.
- Get relevant audio. Be sure that you're rolling right before an operator calls CQ, or try to record the better part of an exchange between your crew and another Field Day site.
- Send your photos. Emailed .jpeg images are almost universally accepted and should be sent in the largest file size possible. Your email service probably has file size limits, so forward files via several emails if needed. Contact the editor first, so they are aware the photos are being sent. Remember to include the names of everyone in the images and a detailed description of the event.
- Send your videos. Make sure they are in either .mov or .mp4 file formats. If you recorded with an iPhone in MOST COMPATIBLE mode, the videos will have been saved as H.264 files (.mp4 clips), so they won't necessarily need to be edited before you send them. Ask the broadcaster how they accept video from outside sources; options might include file transfer programs like Dropbox or WeTransfer. A quick call to their assignment editor or a check of the station's website can provide the necessary directions. Emailed files will need to be scaled down, but they will highlight your event all the same.



Chris Brady, N3CB, was first licensed in 1989. His 40-year career in broadcast television began at WNEP-TV, in Scranton, Pennsylvania. Chris spent his last 39 years as News Operations Supervisor at CBS/Paramount's KYW-TV in Philadelphia, before leaving the station in 2023. Chris can be reached at n3cb@arrl.net.

Figure 1: The medium shot is a more personalized view of what you wish to highlight. Figure 2: The tight shot completes the sequence. When all the portions of the sequence are edited together, the result is a view with logically shot images that create a short story of your Field Day activity. It visually walks the viewer through your event. Figure 3: Another type of tight shot can be a close-up of an operator sending Morse code or typing a reply on FT8. Regardless, each example could be considered a logical, visual progression from the site-wide establishing shot and the medium shot.







2024 ARRL FIELD DAY PHOTO CONTEST

Use the tips in this article to create your best Field Day photos yet and submit them to the 2024 ARRL Field Day Photo Contest! Upload high-resolution images of your operation to the Field Day Soapbox at https://field-day.arrl.org/fdsoapbox.php by August 1, 2024. Be sure to include a model release form (www.arrl.org/photo-video-release-form) with your submission (this form is required for photos with minors). Winners will be notified by October 1, 2024. Winning photos will be used in Field Day coverage, and photographers will receive a cash honorarium upon publication.

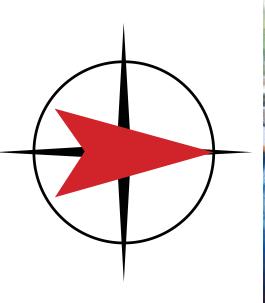
ARRL FIELD DAY 2024 JUNE 22-23



MORE THAN 30,000

Hams Participate in Field Day Each Year







125 NILLON CONTACTS MADE IN 2023



FIND A FIELD DAY SITE

www.arrl.org/ field-day-locator

Get Your 2024 ARRL Field Day Gear at www.arrl.org/shop/fieldday

Choose Your Field Day Focus

ARRL Field Day is a picnic, a campout, practice for emergencies, an informal contest, and, most of all, fun! Here are three ways you can participate by demonstrating ham radio's science, skill, and service to our communities and our nation.



Emergency Communications

ARRL Minnesota Section Assistant Section Emergency Coordinator Erik Westgard, NY9D

If your club or group is searching for a way to focus your Field Day operation, treating it as a test of your readiness capabilities can be valuable — not only for your group, but for your community as well.

The Minnesota Section ARES group used Field Day 2021 as an opportunity to operate our new 6 kW diesel generators, which led us to discover we had large power loads from recreational vehicles. This test turned into an opportunity to learn about high-current ac power distribution and transformers for load balancing. For this year's Field Day, we've been invited to a large state exercise that will allow us to test the use of multiple communications trailers, to test the use of diesel and solar power, and to test the ability to cover a large area with Wi-Fi and Starlink.

"Try to create a portable field station rather than recreating your home ham shack in the field."

— TOM CORT, VA2NW



Public Outreach

ARRL Public Relations and Outreach Manager Sierra Harrop, W5DX

Setting up in a visible public place displays something interesting and unusual in a place where the public already is. Don't be afraid to think outside the park - one of the most effective ARRL Field Day locations I've ever seen was in the parking lot of a local Walmart, and the club got foot traffic from lots of people they wouldn't have reached otherwise.

This is an opportunity to tell our story and let our neighbors know what amateur radio does in the local community.

An effective public relations plan, coupled with proclamations from your local dignitaries, will also highlight the value of the event.

Remember, many licensed amateurs are not active hams, so ARRL Field Day is a chance for them to reconnect with the hobby. Create an environment that makes people want to become a part of ham radio and to stay active!

"Start your PR campaign [in early April]! Prepare press releases, start posting on social media, make signs, organize a testing session, and connect with a local Scout troop. Maximizing bonus points and showcasing the hobby to as many folks as possible takes a lot of time and planning."

— ARRL PUBLIC RELATIONS COMMITTEE MEMBER ANDY MILLUZZI, KK4LWR



Friendly Competition

Hayden Honeywood, VK7HH/KD9SSB

Even though ARRL Field Day isn't a contest, that doesn't preclude the spirit of competition that inherently energizes participants.

The essence of competition is alive in the pursuit of operational excellence and strategic ingenuity. This blend of serious readiness training with a lighthearted rivalry brings a dynamic flavor to Field Day. In Australia, where Field Days are more openly competitive, this spirit drives amateurs to think critically about their setups, from selecting the most advantageous operating locations to investing in equipment for higher bands, knowing that such strategies might amplify their score through distance-based points and frequency multipliers.

The competitive vibe Field Day creates makes the experience more exciting, mixing the fun of competing with the important mission of using amateur radio to help others.

"Last year, our radio, lights, a fan, and logging software were all powered by solar. The bonus points and multipliers are wonderful under the Field Day rules!"

- DAVID CHASE, K8RXB

BONUS POINTS ADD UP!



Use this Bonus Points Calculator to keep track of your Field Day Bonus Points (see Rule 7.3 for details). Many bonus points require submission of proof and will be verified before being added to your score. Maximum bonus points are listed unless otherwise noted.

POINTS	ACTIVITY	AVAILABLE CLASSES
	100% Emergency Power. 100 bonus points per transmitter; max. 20 transmitters, max. 2,000 points. Bonus stations (such as the GOTA station and satellite station) do not count toward determining the number of transmitters for the class and do not qualify for transmitter bonus points.	A, B, C, E, and F
	Media Publicity. 100 bonus points. Bonus points may be earned for obtaining publicity from the local media. A copy of the media publicity received (newspaper article, news website post, etc.) must be submitted to claim the points.	All
	Set Up in Public Place. 100 bonus points.	A, B, and F
	Public Information Table. 100 bonus points. Bonus points may be earned for making information about amateur radio available to the public at your Field Day site.	A, B, and F
	W1AW Field Day Message. 100 bonus points. Copy, via amateur radio, the special Field Day bulletin transmitted by W1AW or K6KPH, and include an accurate copy of the message with your Field Day entry.	All
	Message Handling NTS/ICS-213. 0 to 100 points max., calculated by taking the Number of Messages (max. 10 messages): × 10 bonus points for each formal message originated, relayed, or received and delivered during the Field Day period. Copies of each message must be included with the Field Day entry. The message under Rule 7.3.5 does not count. All messages claimed for bonus points must leave or enter the Field Day operation via amateur radio RF.	All
	Message to ARRL Section Manager or Section Emergency Coordinator. 100 bonus points. See Rule 7.3.5 for message format. This message is separate from the messages handled in Rule 7.3.6 and may not be claimed for bonus points under that rule. A copy of the message must be included with the Field Day entry.	All
	A Satellite QSO. 100 bonus points. Satellite QSOs also count for regular QSO credit. List these contacts separately on the summary sheet as a separate "band." The QSO must be between two Earth stations through a satellite. Stations are limited to one completed QSO on any single channel FM satellite.	A, B, and F
	Natural Power QSOs. 100 bonus points. Complete at least five QSOs without using power from commercial mains or a petroleum-driven generator. A separate list of natural power QSOs should be submitted with your entry.	A, B, E, and F
	Site Visit by Invited Elected Official. 100 bonus points.	All
	Site Visit by Invited Served Agency Official. 100 bonus points. Visits from ARRL officials (SM, SEC, DEC, EC, etc.) do not qualify for this bonus.	All
	Educational Activity. 100 bonus points. See the ARRL Field Day website for D and E rules.	A, D, E, and F
	Youth Participation. For Class A, C, D, E, or F groups: 20 bonus points per participant age 18 or younger who completes at least one QSO; max. 100 points. For a one-person Class B station: 20 bonus points if the operator is age 18 or younger; max. 20 points. For a two-person Class B station: 20 bonus points for each operator age 18 or younger; max. 40 points.	All (see specific points per class)
	GOTA. See Rule 7.3.13 for the bonus point breakdown.	A and F
	Use the Field Day Entry Web App. 50 bonus points. Submit your entry using the web app at https://field-day.arrl.org/fdentry.php.	All
	Safety Officer. 100 bonus points. Include a statement with the supporting documentation for your entry, verifying that a designated Safety Officer completed the ARRL Field Day Safety Check List.	A
	Social Media. 100 bonus points. Promote your Field Day activation to the general public via social media (Facebook, Instagram, etc.). Individual participants do not qualify for this bonus. Club websites do not qualify as social media.	All
	Field Day Responsibilities (New for 2024) 50 bonus points. Include a statement with the supporting documentation for your entry, verifying that a designated individual completed the Field Day Responsibilities Check List.	B, C, D, E, and F
	TOTAL BONUS POINTS CLAIMED	



ARRL/RAC Section Checklist

UNITED STATES

ALABAMA · AL ALASKA · AK ARIZONA · AZ ARKANSAS · AR

CALIFORNIA

EAST BAY · EB LOS ANGELES · LAX ORANGE · ORG

SACRAMENTO VALLEY · SV

SAN DIEGO · SDG SAN FRANCISCO · SF

SAN JOAQUIN VALLEY · SJV

SANTA BARBARA · SB SANTA CLARA VALLEY · SCV

COLORADO · CO CONNECTICUT · CT

DELAWARE · DE

FLORIDA

NORTHERN FL · NFL SOUTHERN FL · SFL WEST CENTRAL FL · WCF

GEORGIA · GA

HAWAII/PACIFIC · PAC

IDAHO · ID ILLINOIS · IL INDIANA · IN IOWA · IA $\mathsf{KANSAS} \cdot \mathsf{KS}$ **KENTUCKY · KY** I OUISIANA · I A

MAINE · ME

MARYLAND/DC · MDC

MASSACHUSETTS

EASTERN MA·EMA WESTERN MA · WMA

MICHIGAN · MI MINNESOTA · MN MISSISSIPPI · MS MISSOURI · MO MONTANA · MT **NEBRASKA** · **NE**

NEVADA · NV

NEW HAMPSHIRE · NH

NEW JERSEY

NORTHERN NJ · NNJ SOUTHERN NJ · SNJ

NEW MEXICO · NM

NEW YORK

EASTERN NY · ENY NORTHERN NY · NNY WESTERN NY · WNY NYC/LONG ISLAND · NLI

NORTH CAROLINA · NC NORTH DAKOTA · ND

OHIO · OH OKLAHOMA · OK OREGON · OR

PENNSYLVANIA

EASTERN PA · EPA WESTERN PA · WPA

PUERTO RICO · PR RHODE ISLAND · RI SOUTH CAROLINA · SC **SOUTH DAKOTA · SD** TENNESSEE · TN

TEXAS

NORTH TX · NTX SOUTH TX · STX WFST TX · WTX

US VIRGIN ISLANDS · VI

UTAH·UT VERMONT · VT VIRGINIA · VA

WASHINGTON

EASTERN WA · EWA WESTERN WA · WWA

WEST VIRGINIA · WV WISCONSIN · WI WYOMING · WY

CANADA

ALBERTA · AB **BRITISH COLUMBIA · BC** GOLDEN HORSESHOE · GH MANITOBA · MB NEW BRUNSWICK · NB

NEWFOUNDLAND/LABRADOR · NL

NOVA SCOTIA · NS ONTARIO EAST · ONE ONTARIO NORTH · ONN ONTARIO SOUTH · ONS PRINCE EDWARD ISLAND · PE QUEBEC · QC SASKATCHEWAN · SK

TERRITORIES · TER

