

Welcome

Since 1933 Field Day has been a tradition in Amateur Radio. It is the *contest that is not a contest* held each year in the last full weekend in June challenging operators to drag their equipment, antennas, power supplies, ropes, insect repellent, and comfortable clothes out of the house and into “the field” to work the world. While some of this sound like a picnic (literally), serious business is also afoot. Every Field Day exercise could be the key practice event before the next hurricane, earthquake, or flood.

There is a thrill communicating with someone hundreds, or thousands of miles away with just a wire and a box of mysterious looking parts. Radio operators routinely talk between continents with less power than that used by a nightlight. There is science. There is engineering. There is know-how. Some of the brightest engineers, scientists, doctors, and teachers are also Amateur Radio operators.

Field Day also represents the best opportunity for Amateur Radio operators nationwide to show the public what we do. Mostly, we have fun! Field Day is a chance to congregate with our friends and explore the hobby together. But, this isn’t just a fun day in the sun. This event is *scored*. The American Radio Relay League, the national organization for Amateur Radio, has a point system that allows individuals and clubs to compete and vie for the top spot in a given category. Radio contesting, or *radiosport*, as it has become to be known, is a rapidly growing hobby in its own right with Field Day as one of its earliest progenitors. In a typical radio contest, participants work during a fixed period and try to contact as many stations as possible, exchanging some set pieces of information in the process. In a typical contest, only your on-air activity can net points.

This is the *contest that is not a contest*, as some have come to call it, because Field Day points may be obtained not only from on-air activities, but also from preparation activities, events during the weekend, and from participation from the public and government officials. Field Day is not just about working the radio; Field Day is also about working well within the system, and being an effective communicator for your community.

Field Day is also the *contest that is not a contest* because most of those who participate do so to have fun, learn something, spend time with their friends, and generally have a good time. While there will always be those that are trying to rack-up the big score, most are content to make modest goals and have fun.

In the past, PART has always taken the rules for what they were, operated a few stations, and submitted their scores without much fanfare. This year, PART is trying something quite new and unique. It is using the event as a platform for learning, cross-training, and mentoring. One of the fine traditions in the Amateur Radio Service is that of *Elmering*, a term that evokes an image of an old man (named Elmer, of course), taking a young man under his wing and teaching him all he knows. Before the Internet, before vast retail chains and Federal Express, before Adult Education classes at the local community college, there was the *Elmer* and his understudy learning about electronics and antennas and skywave propagation.

We celebrate the *Elmer* this year by promoting a series of *Toolbox Talks*, brief, intimate demonstrations and hands-on discussions taught by club members, for club members. These talks (discussed in detail later) cover a wide range of topics from simple things

like “how to make a dipole”, to more complicated things like “how to predict HF propagation”.

While we will not score as many points as those hard-charging, point chasing testers, we believe that no one will teach more, or learn more this weekend than the members of PART. And, we believe that somewhere, an old man with thinning gray hair named *Elmer* is smiling because of it.


— *The PART Field Day Staff*

PART 2007 Field Day Staff Directory

Role	Lead	Contact this person for...
Field Day Chairman	Bo Budinger (WA1QYM)	Contact the Field Day Chairman for general questions, problems, or concerns with the event that cannot be resolved by those listed below.
Toolbox Talk Chief	B. Scott Andersen (NE1RD)	Contact the Toolbox Talk Chief regarding problems with the schedule for talks, or for assistance with facilities or other needs associated with these talks.
Safety Officer	Arthur Walsh (AA1HO)	Contact the Safety Officer <u>immediately</u> in the case of any injury (no matter how minor it may seem), or if any hazard is identified.
Facilities Manager	Hugh Maguire (N1QGE)	Contact the Facilities Manager if there are <u>any</u> problems with the building, grounds, parking, electricity, plumbing, or air conditioning. The Facilities Manager is also responsible for opening the building each morning, and securing it each evening.
SSB Station Chief	B. Scott Andersen (NE1RD)	Contact the SSB Station Chief regarding problems with the radio or computer on the SSB station.
CW Station Chief	Rich Crisafulli (AB1HD) Bo Budinger (WA1QYM)	Contact the CW Station Chief regarding problems with the radio or computer on the CW/Data station. Note that Rich will take the role Saturday, Bo will take the role Sunday.
VHF/UHF Station Chief	Allison Parent (KB1GMX)	Contact the VHF/UHF Station Chief regarding problems with the radio or computer on the VHF/UHF station.
Guest Relations Lead	Terry Stader (KA8SCP)	This event will draw the press, Westford town government officials, ARRL representatives, and the general public. Please direct them to the Guest Relations Lead, or his assistants. Dave Welsh (K1IR) and Hugh Maguire (N1QGE) assist.


WESTFORD EMERGENCY NUMBERS:
POLICE: (978) 692-2161 ~ FIRE: 978-692-6374

Schedule of Events for Saturday

Time	Lobby	Meeting area A	Meeting area B	Conference room	
9:00 AM	Antenna erection in the courtyard Please bring HTs and set to the frequency 146.550 SIMPLEX to coordinate outdoor activities			Station assembly DO NOT TRANSMIT DURING THIS TIME	
10:00 AM					
11:00 AM					
12:00 PM	Lunch				
1:00 PM			Dipole construction	On-air Operations 	
1:20 PM		Fishing pole vertical *			
1:40 PM		Using an antenna analyzer			
2:00 PM			Basic knots		
2:20 PM	Band going long?				
2:40 PM			Buddistick demo		
3:00 PM	HF propagation for the beginner				
3:20 PM		Improving your SSB audio			
3:40 PM	PSK31				
4:00 PM		Buddipole demo			
4:20 PM			Solar power for Field Day		
4:40 PM		Alternator filter for FM mobile			
5:00 PM			NVIS antennas		
6:00 PM					
6:20 PM					
6:40 PM					
7:00 PM	All operations cease. The site is secured for the night.				
7:30 PM	DINNER				

* The *Fishing pole vertical* Toolbox Talk will take place in the front of the building. The 40m vertical antenna to be used for Field Day operations will be constructed during the session.

Schedule of Events for Sunday

Time	Lobby	Meeting area A	Meeting area B	Conference room
9:00 AM		Sigma 5 vertical demo		<div>On-air Operations</div> 
9:20 AM	Buying and selling ham gear on eBay			
9:40 AM			Portable operation	
10:00 AM	APRS			
10:20 AM		Station grounding		
10:40 AM	Emergency communication			
11:00 AM			Working the EasySats	
11:20 AM	What is a contest?			
11:40 AM	Computer logging in contests			
12:00 PM	Lunch			
1:00 PM	Sunday afternoon provides an opportunity to offer encores of the most popular Toolbox Talks. Check the events board in the lobby for more information.			
1:20 PM				
1:40 PM				
2:00 PM	All operations cease			
	Tear down Please bring HTs and set to the frequency 146.550 SIMPLEX to coordinate outdoor activities			

Operating at Field Day

The PART Field Day operation will feature three stations: an HF SSB station, a CW/Data station, and a VHF/UHF station. Stations are positioned in the facility's conference room in the front of the building just off the main entrance. There is no GOTA (Get On The Air) station. Procedures specific to these stations appear below.

The PART Field Day operations are from an *Emergency Operation Center* (EOC) as established by the town of Westford. Although there is an emergency generator at this facility, all operations will be powered from wall outlets off of the electric mains. We will be participating on the air as a category **2F** entry. The "2" represents the number of simultaneous HF transmitters present. The "F" indicates this is an EOC.

The *exchange*, the information transferred during each QSO, consists of the category and location for each station. The ARRL section for Westford is Eastern Massachusetts, abbreviated EMA. A typical on-air exchange for both SSB and CW appear below.

TYPICAL SSB EXCHANGE

WE: CQ CQ CQ This is Whiskey Bravo One Gulf Oscar Foxtrot, Whiskey Bravo One Gulf Oscar Foxtrot standing by for a call.

THEY: Kilo Bravo Nine Alpha.

WE: Kilo Bravo Nina Alpha, you are five nine two foxtrot EMA Easy Mike Alpha over.

THEY: Roger. You are five nine three alpha Illinois.

WE: Roger your three alpha Illinois. Thank you. This is Whiskey Bravo One Gulf Oscar Foxtrot standing by for a call.

TYPICAL CW EXCHANGE

WE: CQ CQ CQ DE WB1GOF WB1GOF K

THEY: KB9A

WE: KB9A DE WB1GOF — UR 599 2F EMA BK

THEY: R R UR 599 3A IL BK

WE: R TU QRZ?

The signal report, categories for our stations, locations, and the stations we contact, must be *logged* properly along with the time (always in GMT), date, band, and mode. Additional information on computer logging may be found with the operating instructions for each station.

General Operating Rules

There will be multiple operators, on multiple radios, all in a limited space. There must be rules in place to avoid chaos! This section covers some of the general rules to be used during this event.

1. **Remember the club's event goals.** This is an *elmering* event where the emphasis is on teaching, training, and sharing. Please help create an atmosphere of sharing.

Encourage all members to get on the air. Assist those new to HF or contesting so they “learn the ropes.”

2. **Stations are operated in tandem.** Ideally stations have one experienced operator paired with a less experienced one. Both listen, but one operator executes the QSO and creates the log entry.
3. **Headphones must be used.** Each station has two sets of headphones for the tandem operators. CW and Data Mode operations should be completely silent. Phone operators are encouraged to keep noise to a minimum. Again, with three stations in a small space, noise from one station can diminish the effectiveness (and fun!) of others.
4. **Computer logging must be used.** Each station will utilize computer logging, though not necessarily the *same* logging program. Paper-and-pencil logging is strongly discouraged. One of the most important elements of contesting (and DXing and DXpeditioning) is keeping an accurate log. Please help ensure that the club submits a “clean” log by double-checking call signs, exchanges, and carefully recording band changes if your station does not use computer-based rig control.
5. **Computer-based rig control will be used wherever possible.** Computer automation, including computer rig control, is a key part of modern radiosport. Operators are encouraged to familiarize themselves with this technology. (Attending the *Toolbox Talk* on the subject is also encouraged.)
6. **Band coordination.** Modern transceivers are marvels of sensitivity and can be easily damaged by strong signals. The two HF stations must operate on different bands. Operators must coordinate with their fellow operators at the other station before making a band change. Failure to observe this rule may result in a destroyed radio.
7. **Observe NO TRANSMISSION times in the schedule.** Prior to 2PM local time antenna work and *Toolbox Talks* using sensitive equipment will take place. Do not transmit until given the ALL CLEAR from the Field Day Chairman.
8. **Safety First!** In the event of lightning in the area, operations of all stations shall cease. Antenna feed lines will be removed from the radios and secured. Please follow directives from Field Day staff. Operations will not resume until staff members give the ALL CLEAR.
9. **Observe good operating practices at all times.** This is an *elmering* event. Please provide a good example for your peers both on-the-air, and off. Use standard phonetics when on phone. Favor accuracy over speed on CW. Keep bandwidth use to a minimum on PSK-31 by lowering power levels and monitoring modulation. Steer clear of band edges. Be courteous.
10. **Treat all equipment and facilities with respect.** We are guests in this facility. All provided equipment has been loaned by other club members. Use common sense, restraint, and respect. Practice the *leave no trace* approach to the facilities by ensuring everything is as clean (or cleaner) than we found it, and all equipment is in good working order when we are finished.

Antenna Plan

There are sufficient antennas within the antenna plan to support two HF stations and one VHF/UHF station. The antenna plan has been carefully planned for this event. Do not attempt to deploy or use other antenna systems or radios within the Field Day site without the express permission of the Field Day Chairman.

The antenna placements are depicted in Figure 1 Antenna placement below. (Note that this plan is current as of the printing of this document. Some alterations of this plan may be made during the event.)

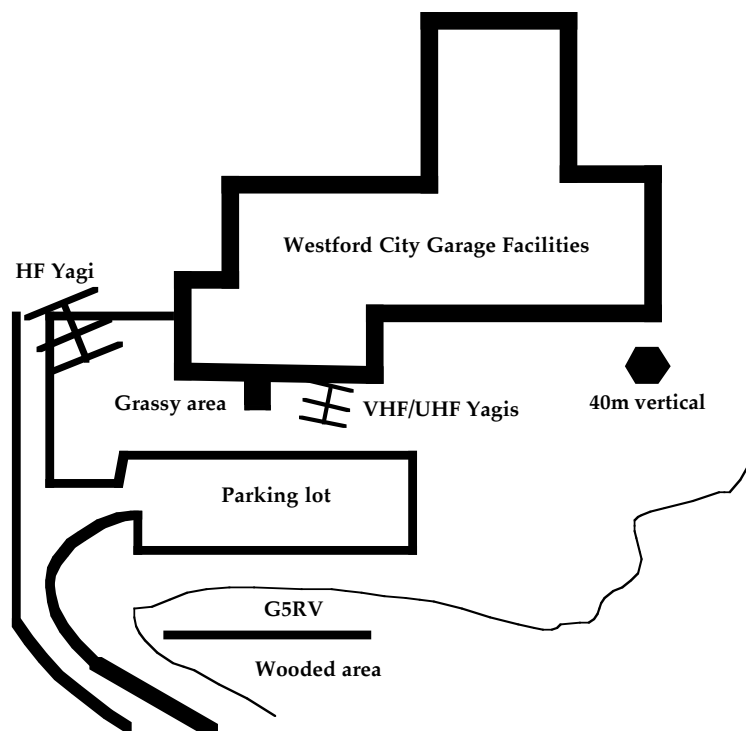


Figure 1 Antenna placement

The PART Field Day antenna plan accommodates two HF transmitters and one VHF/UHF station. The operating positions for all three stations are directly in front of the VHF/UHF antennas in the conference room of the Westford City Garage Facilities.

A G5RV is strung in the woods just beyond the parking lot. One station can use this antenna for all bands 10m-80m.

An HF Yagi triband antenna for 10-15-20m operations is erected on a 33-foot military mast in the corner of the fencing by the drive. There is no rotor so a rope is used to pull the antenna and point it in the desired direction.

A third antenna, a 40m vertical with two elevated radials, is mounted on the far right of the building. The second HF station uses either the HF Yagi or 40m vertical. The two HF stations may switch antenna systems as desired.

The VHF/UHF antennas are mounted on a mast as high as possible. Their proximity to the operating position is intentional as it is best to keep feed lines as short as possible for these bands.

Using the radios

Each station will have a *cheat sheet* with important information for the operators including instructions on how to operate the radio, how to operate the computer logging system with the radio, operation of the tuner, and more. Also, there will be a training session prior to the start of the contest by the station chief (who supplied the equipment) to ensure proper operation.

Score submission

At the conclusion of the contest logs from the station computers will be collected and coalesced into a single log for submission to the ARRL contest branch. In addition to the QSOs, other point-generating activities will also be tallied for this submission. There are a number of these point generating activities including:

- Copying the ARRL Field Day bulletins (100 points)
- Receiving a visitor from elected official (100 points)
- Receiving a visitor from an agency such as the Red Cross or local law enforcement (100 points)
- Availability of emergency power. EOCs need only show the availability of the generator to get 100 points per transmitter (200 points)
- Media publicity, or even the attempt to obtain publicity (100 points)
- Public location (100 points)
- Public information table (100 points)
- Message (NTS) to ARRL Section Manager (100 points)
- Message handling (10 points each up to 100 points)
- Satellite QSO (100 points)
- Alternate power bonus (100 points for 5 or more QSOs with solar, for example)
- Non-traditional modes (maximum of 300 points)
- GOTA (not being pursued this year)
- Web submission (50 points for sending your contest submission via the web)
- Youth participation (up to 100 points, 20 per person 18 years or younger making a QSO)

PART will submit a log for this event, though it is decidedly *not* a goal of the event to generate a high score. If, through the various *Toolbox Talks* some of these extra points can be tallied, fine, but no specific efforts will be made to qualify for these bonuses.

The Field Day Chairman is responsible for score submission.

PART Field Day 2007 Event Facilities

On-air and Toolbox Talk activities will be held at the town of Westford Highway Garage at the top of Snake Meadow Hill. This new facility provides a large conference room for radio operations, restrooms, air conditioning, and a large hallway / foyer providing a convenient gathering space. Signs and posters will be present throughout the facility with information about the Field Day event and activities.



Direction to the Westford Highway Garage Facility Field Day Site:

From 495 exit at Boston Road (exit 32). Proceed Northwest 1 mile towards Westford center. Keep left when approaching Westford center green. Turn left on to Main Street. Proceed 0.1 miles to Graniteville Road on the right. Turn on to Graniteville road. Drive 1.7 miles along Graniteville road until you reach the end which is North Street. Turn right on to North Street and proceed approximately 0.2 miles to the entry road for the Westford Highway Department facility on the left. This facility is marked with two small signs at the driveway entrance. Turn left into the driveway and proceed up the hill towards the Field Day site. The drive is long and winding, approximately 0.4 miles to the top. Look for signs with parking instructions for this event near the top of the hill.

GPS coordinates for hilltop: N 42.60169 W 071.47318 (Talk in on the PART repeater.)

Parking

The highway garage is at the top of Snake Meadow Hill. Parking for this event will be along the right side of the long road leading to the top of the hill. A limited number of parking spots are available in the parking lot for PART Field Day staff. Unless you have express permission from the Field Day Chairman to park in the lot, please park along the service road.

IMPORTANT: It is important that the service road be kept clear for emergency vehicles such as ambulances and fire-fighting equipment. When parking, please park only on the right side of the drive, and park well off the road to leave room for these other vehicles.

Lunch

Lunch will be available for purchase both Saturday and Sunday. A *pizza coupon* will be for sale for \$6.00 each day by the *Pizza Chairman* entitling the buyer to share in the stack of pizzas purchased by the club. Soft drinks will also be available for a nominal charge.

Please see the *Pizza Chairman* for more details. (The identity of the *Pizza Chairman* will be revealed on the Saturday of Field Day! Check out the event board in the lobby.)

PART Club Dinner

A private dinner for PART club members will be held Saturday evening beginning at 7:30 PM at the home of PART club President Bo Budinger. All *members in good standing* are invited to attend. The PART Treasurer will be available during the event to help members bring their PART club members renew (or establish) their membership.

Directions to Bo Budinger's home:

- Start out going SOUTH on NORTH ST toward BEACON ST. 0.2 miles
- Turn SLIGHT RIGHT onto N MAIN ST. 0.9 miles
- MAIN ST becomes E PRESCOTT ST. <0.1 miles
- Turn SLIGHT LEFT onto TOWN FARM RD. 0.4 miles
- TOWN FARM RD becomes ABBOT ST. 0.2 miles
- Turn LEFT onto PLEASANT ST / MA-225. 0.2 miles
- Turn SLIGHT RIGHT onto BEAVERBROOK RD. 0.5 miles
- Turn LEFT onto CHRISTOPHER RD. <0.1 miles
- End at 11 Christopher Road, Westford

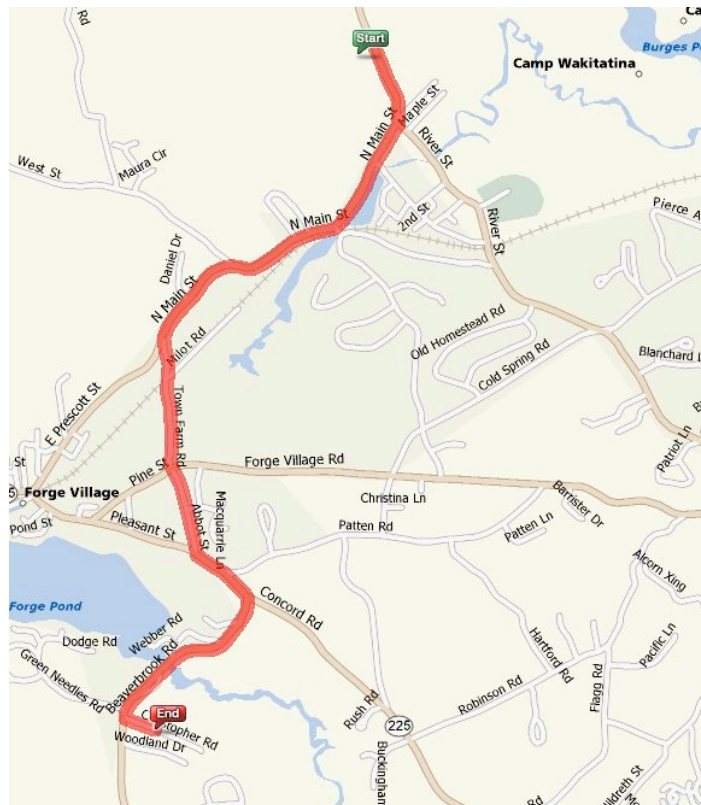


Figure 2 Map to Saturday night dinner

Toolbox Talks

The *Toolbox Talks* are the centerpiece of PART's 2007 Field Day effort. Nearly two-dozen talks will be presented over the two days on topics relating to antennas, propagation, basic knots, and solar power. There is something for everyone!

There are three designated for most of the Toolbox Talks: the Highway Garage lobby, and two other places designated as *Meeting area A* and *Meeting area B*. Weather permitting, *Meeting area A* and *Meeting area B* will be located outside in front of the building. In case of inclement weather, these meeting areas will be located inside (when possible).

Some Toolbox Talks must be held outside, even in bad weather. For example, the *Fishing pole vertical* session will create a 40m vertical antenna for Field Day operation.

The scheduled Toolbox Talks and their presenters appear below. Please check the schedule board in the lobby for any last minute changes.

Title	Speaker
Alternator filter for FM mobile	Ron (WQ1Z)
APRS	Andy (KB1OIQ)
Band going long?	Ron (WQ1Z)
Basic knots	Steve (N1BDA)
Buddipole demo	Scott (NE1RD)
Buddistick demo	Scott (NE1RD)
Buying and selling ham gear on eBay	Rick (W1RAG)
Computer logging in contests	Scott (NE1RD)
Dipole construction	Ron (WQ1Z)
Emergency communications	Terry (KA8SCP)
Fishing pole vertical	Scott (NE1RD)
HF propagation for the beginner	Bo (WA1QYM)
Improving your SSB audio	Ron (WQ1Z)
NVIS antennas	Steve (N1BDA)
Portable operations	Scott (NE1RD)
PSK31	Rich (AB1HD)
Sigma 5 vertical demo	Scott (NE1RD)
Solar power for Field Day	Allison (KB1GMX)
Station Grounding	Rich (AB1HD)
Using an antenna analyzer	Scott (NE1RD)
Weak signal VHF operation	Allison (KB1GMX)
What is a contest?	Scott (NE1RD)
Working the EasySats	Allison (KB1GMX)

The schedule for these talks appears in the front of this document.

Some Toolbox Talks require a printed visual aid to assist with the presentation. Those pages follow.

Appendix A: ARRL Field Day Rules for 2007

1. Eligibility: Field Day is open to all amateurs in the areas covered by the ARRL/RAC Field Organizations and countries within IARU Region 2. DX stations residing in other regions may be contacted for credit, but are not eligible to submit entries.

2. Object: To work as many 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 as well as to acquaint the general public with the capabilities of Amateur Radio.

3. Date and Time Period: Field Day is **always the fourth full weekend of June**, beginning at 1800 UTC Saturday and ending at 2100 UTC Sunday. **Field Day 2007 will be held June 23-24, 2007.**

3.1. Class A and B (see below) 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 their set-up earlier than 1800 UTC on the Friday preceding the Field Day period.

4. Entry Categories: Field Day entries are classified according to the maximum number of *simultaneously* transmitted signals, followed by a designator indicating the nature of their individual or group participation. Twenty (20) transmitters maximum are eligible for the purpose of calculating bonus points (2,000 points maximum). However, additional transmitters may be used simultaneously in determining your entry category. Switching and simulcasting devices are prohibited. **Bonus stations, such as the GOTA station and satellite station do not count towards determining the number of transmitters for the class and do not qualify for transmitter bonus points.**

4.1. (Class A) Club / non-club portable: Club or a non-club group of three or more persons set up specifically for Field Day. Such stations must be located in places that are not regular station locations and must not use facilities installed for permanent station use, or use any structure installed permanently for Field Day. A single licensee or trustee for the entry is responsible for the group entry. All equipment (including antennas) must lie within a circle whose diameter does not exceed 300 meters (1000 feet). To be listed as Class A, all contacts must be made with transmitter(s) and receiver(s) operating independent of commercial power mains. Entrants whom for any reason operate a transmitter or receiver from a commercial main for one or more contacts will be listed separately as Class A-Commercial.

4.1.1. Get-On-The-Air (GOTA) Station. Any Class A (or F) entry whose transmitter classification is two or more transmitters may also operate one additional HF station without changing its base entry category, known as the GET-ON-THE-AIR (GOTA) station.

4.1.1.1. This station **must use** a different callsign from the primary Field Day station. The GOTA station must use the same callsign for the duration of the event regardless if operators change. **The GOTA station uses the same exchange as its parent.**

4.1.1.2. The GOTA station may be operated by Novice, Technicians or generally inactive hams

under their existing operating privileges, or under the direction of a Control Operator with appropriate privileges, as necessary. Non-licensed persons may participate under the direct supervision of an appropriate control operator. A list of operators and participants must be included on the required summary sheet to ARRL HQ.

4.1.1.3. As per FCC rules, this station must have a valid control operator present if operating beyond the license privileges of the participant using the station.

4.1.1.4. The maximum transmitter output power for the GOTA station shall be **150 watts**. If the primary Field Day group is claiming the QRP multiplier level of 5, the maximum transmitter output power of the GOTA station may not exceed 5 watts.

4.1.1.5. A maximum of 500 QSOs made by this station may be claimed for credit by its primary Field Day operation. In addition, bonus points may be earned by this station under rule 7.3.13.

4.1.1.6. The GOTA station may only operate on the **Field Day HF Bands**. Only one transmitted signal is allowed from the GOTA station at any time.

4.1.1.7. The GOTA station does not affect the additional VHF/UHF station provided for under Field Day Rule 4.1.2. for Class A stations.

4.1.1.8. Participants are reminded that non-licensed participants working under the direction of a valid control operator may only communicate with other W/VE stations or with stations in countries with which the US has entered a third-party agreement.

4.1.1.9. The GOTA station does not qualify as an additional transmitter when determining the number of transmitters eligible for the 100-point emergency power bonus under Rule 7.3.1.

4.1.2. **Extra VHF Station:** Any Class A entry whose category is two or more transmitters may also operate **one additional transmitter** if it operates exclusively on any bands or combination of bands above 50 MHz (VHF/UHF) without changing its basic entry classification. This station does not qualify for a 100-point bonus as an additional transmitter. This station may be operated for the clubs Field Day period and all contacts count for QSO credit. It is operated using the primary callsign of the Field Day group.

4.2. (Class A - Battery) Club / non-club portable: Club or non-club group of three or more persons set up specifically for Field Day. All contacts must be made using an output power of 5 Watts or less **and** the power source must be something other than commercial power mains or motor-driven generator (e.g.: batteries, solar cells, water-driven generator). Other provisions are the same for regular Class A. Class AB is eligible for a GOTA station if GOTA requirements are met.

4.3. (Class B) One or two person portable: A Field Day station set up and operated by no more than two persons. Other provisions are the same for Class A except it is not eligible for a GOTA or free VHF station. One and two person Class B entries will be listed separately.

4.4. (Class B - Battery) One or two person portable: A Field Day station set up and operated by no more than two persons. All contacts must be made using an output power of 5 Watts or less **and** the power source must be something other than commercial mains or motor-driven generator. Other provisions are the same for Class A except it is not eligible for a GOTA or free VHF station. One and two person Class B - Battery entries will be listed separately.

4.5. (Class C) Mobile: Stations in vehicles capable of operating while in motion and normally operated in this manner. This includes maritime and aeronautical mobile. If the Class C station is

being powered from a car battery or alternator, it qualifies for emergency power but does not qualify for the multiplier of 5, as the alternator/battery system constitutes a motor-driven generating system.

4.6. (Class D) Home stations: Stations operating from permanent or licensed station locations using commercial power. Class D stations may only count contacts made with Class A, B, C, E and F Field Day stations.

4.7. (Class E) Home stations - Emergency power: Same as Class D, but using emergency power for transmitters and receivers. Class E may work all Field Day stations.

4.8. (Class F) Emergency Operations Centers (EOC): An amateur radio station at an established EOC activated by a club or non-club group. Class F operation must take place at an established EOC site. Stations may utilize equipment and antennas temporarily or permanently installed at the EOC for the event. Entries will be reported according to number of transmitters in simultaneous operation. Class F stations are eligible for a GOTA and free VHF station at Class 2F and above.

4.8.1. For Field Day purposes, an Emergency Operations Center (EOC) is defined as a facility established by:

- a) a Federal, State, County, City or other Civil Government, agency or administrative entity; or,
- b) a Chapter of a national or international served agency (such as American Red Cross or Salvation Army) with which your local group has an established operating arrangement;
- c) A private company EOC does not qualify for Class F status unless approved.

4.8.2. Planning of a Class F operation must take place in conjunction and cooperation with the staff of the EOC being activated.

4.8.3. Other provisions not covered are the same as Class A.

4.8.4. A Class F station may claim the emergency power bonus if emergency power is available at the EOC site.

4.8.4.1. The emergency power source must be tested during the Field Day period but you are not required to run the Class F operation under emergency power.

5. Exchange: Stations in ARRL / RAC sections will exchange their Field Day operating Class and ARRL / RAC section. Example: a three transmitter class A station in Connecticut which also has a GOTA station and the extra VHF station would send "3A CT" on CW or "3 Alpha Connecticut" on Phone. DX stations send operating class and the term DX (i.e. 2A DX).

6. Miscellaneous Rules

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.

6.3. Phone, CW and Digital (non-CW) modes on a band are considered as separate bands. A station may be worked only once per band under this rule.

6.4. All voice contacts are equivalent.

6.5. All non-CW digital contacts are equivalent.

6.6. Cross-band contacts are not permitted (Satellite QSOs cross-band contacts are exempted).

6.7. The use of more than one transmitter at the same time on a single band-mode is prohibited. Exception: a dedicated GOTA station may operate as prescribed in Rule 4.1.

6.8. No repeater contacts are allowed.

6.9. Batteries may be charged while in use. Except for Class D stations, the batteries must be charged from a power source other than commercial power mains. To claim the power multiplier of five, the batteries must be charged from something other than a motor driven generator or commercial mains.

6.10. All stations for a single entry must be operated under one callsign, except when a dedicated GOTA station is operated as provided under Field Day Rule 4.1.1, it uses a single, separate callsign.

7. Scoring: 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 period plus the bonus points.

7.1. QSO Points

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.

7.2. Power multipliers: The power multiplier that applies is determined by the highest power output of any of the transmitters used during the Field Day operation.

7.2.1. If all contacts are made using a power of 5 Watts or less *and* if a power source other than commercial mains or motor-driven generator is used (batteries, solar cells, water-driven generator), the power multiplier is 5 (five).

7.2.2. If all contacts are made using a power of 5 Watts or less, but the power source is from a commercial main or from a motor-driven generator, the power multiplier is 2. If batteries are charged during the Field Day period using commercial mains or a motor-driven generator the power multiplier is 2 (two).

7.2.3. If any or all contacts are made using an output power up to 150 Watts or less, the power multiplier is 2 (two).

7.2.4. If any or all contacts are made using an output power greater than 150 Watts, the power multiplier is 1 (one).

7.2.5. The power multiplier for an entry is determined by the maximum output power used by any transmitter used to complete any contact during the event. (Example: a group has one QRP station running 3 Watts and a second station running 100 Watts, the power multiplier of 2 applies to all contacts made by the entire operation).

7.3. Bonus Points: All stations are eligible for certain bonus points, depending on their entry class. The following bonus points will be added to the score, after the multiplier is applied, to determine the final Field Day score. Bonus points will be applied only when the claim is made on the summary sheet and any proof required accompanies the entry or is received via email or normal mail delivery.

7.3.1. 100% Emergency Power: 100 points per transmitter classification if all contacts are made only using an emergency power source (**maximum 2,000 points.**) **Free transmitters do not count towards the group's total. GOTA station and free VHF Station for Class A and F entries do not qualify for bonus point credit.** 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.**

7.3.2. Media Publicity: 100 bonus points may be earned for attempting to obtain publicity from the local media. A copy of the press release, or a copy of the actual media publicity received (newspaper article, etc) must be submitted to claim the points. **Available to all Classes.**

7.3.3. Public Location: 100 bonus points for physically locating the Field Day operation in a public place (i.e. shopping center, park, school campus, etc). The intent is for amateur radio to be on display to the public. **Available to Classes A, B and F.**

7.3.4. Public Information Table: 100 bonus points for a Public Information Table at the Field Day site. The purpose is to make appropriate handouts and information available to the visiting public at the site. A copy of a visitor's log, copies of club handouts or photos is sufficient evidence for claiming this bonus. **Available to Classes A, B and F.**

7.3.5. Message Origination to Section Manager: 100 bonus points for origination of a National Traffic System (NTS) style formal message to the ARRL Section Manager or Section Emergency Coordinator by your group from its site. You should include the club name, number of participants, Field Day location, and number of ARES operators involved with your station. The message must be transmitted during the Field Day period and a fully serviced copy of it must be included in your submission, in standard ARRL NTS format, or no credit will be given. **The Section Manager message is separate from the messages handled in Rule 7.3.6. and may not be claimed for bonus points under that rule. Available to all Classes.**

7.3.6. Message Handling: 10 points for each formal NTS style originated, relayed or received and delivered during the Field Day period, up to a maximum of 100 points (ten messages). Properly serviced copies of each message must be included with the Field Day report. **The message to the ARRL SM or SEC under Rule 7.3.6. does not be count towards the total of 10 for this bonus. Available to all Classes. All NTS messages claimed for bonus points must leave or enter the site via amateur radio RF.**

7.3.7. Satellite QSO: 100 bonus points for successfully completing at least one QSO via an amateur radio satellite during the Field Day period. "General Rules for All ARRL Contests" (Rule 3.7.2.), (the no-repeater QSO stipulation) is waived for satellite QSOs. Groups are allowed one dedicated satellite transmitter station without increasing their entry category. Satellite QSOs also

count for regular QSO credit. Show them listed separately on the summary sheet as a separate "band." You do not receive an additional bonus for contacting different satellites, though the additional QSOs may be counted for QSO credit unless prohibited under Rule 7.3.7.1. The QSO must be Earth-Satellite-Earth in nature. **Available to Classes A, B, and F.**

7.3.7.1 Stations are limited to one (1) completed QSO on any single channel FM satellite.

7.3.8. 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. This means an "alternate" energy source of power, such as solar, wind, methane or water. This includes batteries charged by natural means (not dry cells). The natural power transmitter counts as an additional transmitter. If you do not wish to increase your operating category, you should take one of your other transmitters off the air while the natural power transmitter is in operation. A separate list of natural power QSOs should be submitted with your entry. **Available to Classes A, B, E, and F.**

7.3.9. W1AW Bulletin: 100 bonus points for copying the special Field Day bulletin transmitted by W1AW (or K6KPH) during its operating schedule during the Field Day weekend (listed in this rules announcement). An accurate copy of the message is required to be included in your Field Day submission. (Note: The Field Day bulletin must be copied via amateur radio. It will not be included in Internet bulletins sent out from Headquarters and will not be posted to Internet BBS sites.) **Available to all Classes.**

7.3.10. Non-Traditional Mode Demonstrations: A maximum of 300 bonus points (100 points for each demonstration up to three) for setting up a demonstration of a non-traditional mode of amateur radio communications. This includes modes such as APRS, ATV, and SSTV. **Available to Classes A, B, and F.**

7.3.10.1. This bonus is not available for demonstration of a mode for which regular QSO credit is available. **PSK31 is not eligible as a demonstration bonus as it is now in wide-spread use and is eligible for regular QSO credit.**

7.3.10.2. A complete portable packet system may be included as one of the demonstration modes. This system must include a temporary, portable node and must be completely separate from the existing packet infrastructure of your area. Simply setting up a packet station does not qualify as a demonstration mode.

7.3.10.3. Demonstration modes must use the amateur radio spectrum at the point of the demonstration.

7.3.10.4. Frequency bands, such as 10 GHz are bands, not modes of communications and do not qualify for the demonstration mode bonus.

7.3.10.5. Each demonstration mode must be different - that is, you can not claim the bonus three times for doing the same demonstration mode repeatedly.

7.3.11. Site Visitation by an elected governmental official: One (1) 100-point bonus may be claimed if your Field Day site is visited by an elected government official as the result of an invitation issued by your group. **Available to all Classes.**

7.3.12. Site Visitation by a representative of an agency: One (1) 100-point bonus may be claimed if your Field Day site is visited by a representative of an agency served by ARES in your local community (American Red Cross, Salvation Army, local Emergency Management, law enforcement, etc) as the result of an invitation issued by your group. ARRL officials (SM, SEC, DEC, EC, etc) do not qualify for this bonus. **Available to all Classes.**

7.3.13 . GOTA Bonus. Class A and F stations operating a GOTA station may earn the following bonus points:

7.3.13.1. When a GOTA operator successfully completes 20 QSOs, they receive 20 bonus points. Upon reaching an additional 20 QSOs the same operator receives a second 20 bonus points, up to a maximum of 100 Bonus points per GOTA operator. An operator may make more than 100 QSOs but the QSOs over 100 do not qualify for an additional bonus.

7.3.13.1.1. Additional GOTA operators may earn the GOTA bonus points under this rule, up to the maximum of 500 bonus points. (Remember that there is a 500-QSO limit for the GOTA station. But no single GOTA operator may earn more than 100 of the GOTA bonus points except as provided in 7.3.13.2.

7.3.13.1.2. A single GOTA operator must complete all 20 QSOs required before the bonus is earned. There is no "partial credit" for making only a portion of the 20 QSOs or "pooling" QSOs between operators.

7.3.13.2. If a GOTA station is supervised full-time by a GOTA Coach, the bonus points earned for each 20 QSOs completed under Rule 7.3.13.1 will be doubled.

7.3.13.2.1. The GOTA Coach supervises the operator of the station, doing such things as answering questions and talking them through contacts, but may not make QSOs or perform logging functions.

7.3.13.2.2. To qualify for this bonus, there must be a designated GOTA Coach present and supervising the GOTA station at all times it is being operated.

7.3.14. Web submission. A 50-point bonus may be claimed by a group submitting their Field Day entry via the www.b4h.net/cabforms web site. **Available to all Classes.**

7.3.15. Field Day Youth Participation.

7.3.15.1. 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.

7.3.15.2. For a 1-person Class B station, a 20-point bonus is earned if the operator is age 18 or younger. For a 2-person Class B station, a 20-point bonus is earned for each operator age 18 or younger (maximum of 40 points.) Keep in mind that Class B is only a 1 or 2 person operation. This bonus does not allow the total number of participants in Class B to exceed 1 or 2.

8. Reporting:

8.1. Entries may be submitted to the ARRL in one of three ways:

8.1.1. Via Field Day Web Submission Applet site at www.b4h.net/cabforms/;

8.1.2. Via email to fieldday@arrl.org; or

8.1.3. Via land postal or delivery service to Field Day Entries, 225 Main St, Newington, CT 06111.

8.2. Entries must be postmarked, emailed or submitted by July 24, 2007. **Late entries cannot be accepted.**

8.3. A complete Field Day Web Applet Submission site entry consists of:

8.3.1. An official ARRL summary sheet which is completed on the site;

8.3.2. Supporting information must be emailed to fieldday@arrl.org or submitted by land service. Supporting information must include:

8.3.2.1. An attached list of stations worked by band/ mode during the Field Day period (dupe sheet or an alpha/ numeric list sorted by band and mode); and

8.3.2.2. Proof of all bonus points claimed (copies of visitor logs, press releases, NTS messages handled, photographs, etc).

8.4. A complete non-applet email submission consists of:

8.4.1. An electronic copy of an ARRL summary sheet completely and accurately filled out;

8.4.2. An attached list of stations worked by band/ mode during the Field Day period (dupe sheet or an alpha/ numeric list sorted by band and mode); and

8.4.3. Proofs of bonus points claimed (copies of visitor logs, press releases, NTS messages handled, photographs, etc).

8.5. A complete land postal or delivery non-electronic submission consists of:

8.5.1. A complete and accurate ARRL summary sheet;

8.5.2. An accompanying list of stations worked by band/ mode during the Field Day period (dupe sheet or an alpha/ numeric list sorted by band and mode); and

8.5.3. Proofs of bonus points claimed (copies of visitor logs, press releases, NTS messages handled, photographs, etc).

8.6. Complete station logs are not required for submission. The club should maintain log files for one year in case they are requested by ARRL HQ.

8.7. Cabrillo format log files are not required for Field Day entries. They will be accepted in lieu of the dupe sheets but do not substitute for a summary sheet.

8.8. Digital images of proof of bonus points are acceptable.

8.9. Electronic submissions are considered signed when submitted.

9. Miscellaneous:

9.1. The schedule of bulletin times for W1AW is included in this announcement. While W1AW does not have regular bulletins on weekends, the Field Day message will be sent according to the schedule included with this announcement. The W1AW bulletins will be transmitted on the

regular W1AW frequencies listed in *QST*. The PSK31 bulletin will be transmitted on the W1AW teleprinter frequencies.

9.1.2. The special Field Day bulletin will be transmitted from station K6KPH on the West Coast as included in the bulletin schedule.

9.2. See "General Rules for All ARRL Contests," "General Rules for All ARRL Contests on Bands Below 30 MHz," and "General Rules for All ARRL Contests on Bands Above 50 MHz" for additional rules (www.arrl.org/contests/forms) that may cover situations not covered in these Field Day rules.

9.3. Remember that the national simplex FM calling frequency of 146.52 MHz should not be used for making Field Day contacts.

9.4. The complete Field Day information package may be obtained by:

9.4.1. Sending a SASE with 5 units of postage to: Field Day Information Package, ARRL, 225 Main St., Newington, CT 06111; or

9.4.2. By downloading from the Contest Branch home page at: www.arrl.org/contests/forms

9.5. For more Field Day information/questions contact: fdinfo@arrl.org or phone (860) 594-0236.

RECOGNITION

Field Day is a large event to plan and there were many people who worked together to make it a success. This page recognizes some of these people for their contributions.

Thank you:

The **Westford Town Highway Department** for their generous contribution of the Field Day site, and the PART Emergency Operation Center.

Field Day Staff members who assisted with the planning and execution of this event.

Ron Quattrochi (WQ1Z) for producing a member survey, and presenting the results of that survey to the group, which guided the planning for this event.

Station chiefs **B. Scott Andersen** (NE1RD), **Bo Budinger** (WA1QYM), **Rich Crisafulli** (AB1HD), and **Allison Parent** (KB1GMX) for use of their equipment for this event.

Toolbox Talk presenters

- **Ron Quattrochi** (WQ1Z)
- **B. Scott Andersen** (NE1RD)
- **Steve Tesley** (N1BDA)
- **Bo Budinger** (WA1QYM)
- **Allison Parent** (KB1GMX)
- **Andy Stewart** (KB1OIQ)
- **Terry Stader** (KA8SCP)

for their generous contributions to the *elmering* part of this event.

The **Westford Police Department** for their very generous support of the club and its activities since the club's inception in 1975 including the usage of their meeting room facilities, and the support of the weekly PART net by providing space in their offices for Amateur Radio equipment.

The **citizens of Westford** for supporting the PART club.

The **members of PART**, who make the club the success it is!

PART of Westford Member Directory

Allison, George and Annette	K5IJ	k15ij@arrl.net
+Allison, Annette	KB1LSH	
Andersen, B. Scott	NE1RD	ne1rd@arrl.net
Atkins, John	N1NCO	johnatkins@comcast.net
Barbella, Peter	KB1LZH	kb1lzh@arrl.net
Barber, Andrew	KB8JDO	ajbarber@comcast.net
Bauer, Ernie	N1AEW	ebauer@aol.com
+Bauer, Madeline	N1JRG	
+Bauer, David	KB1JKG	
Beanland, John	AA1YE	g3bvu@arrl.net
Budinger, Bo	WA1QYM	wa1qym@arrl.net
Carney, William	N1RKB	n1rkb@msn.com
Crisafulli, Richard	KB1MCS	jck11g@yahoo.com
Cuti, Richard	N1HY	tvci616@comcast.net
Dawkins, Thomas	KB1OCM	threechairshdt@aol.com
DiMarco, Paul	KB1MAU	pdimarco65@gmail.com
Fallgren, Gus	W1OG	w1og@arrl.net
Farley, Mark	KB1OPM	btyhtr@comcast.net
+Farley, Stephen	KB1MGG	
+Farley, Mark	KB1OPM	
Forrest, John	WB1HBE	wb1hbe@arrl.net
+Forrest, Chris	KB1EKF	kb1ekf@gmail.com
Green, Rick	W1RAG	richardalangreen@yahoo.com
Hicks, Alan	KD1D	hicks.alan@epa.gov
+Hicks, Andrew	N1NSX	bluegerbil@aol.com
Hobson, Dave	KB1OCL	kb1ocl@arrl.net
Koen, Terence	N1IWF	n1iwf@comcast.net
Lewis, Alan	K1ALL	k1all@arrl.net
Lorenz, Jack	W1FKG	jack@clpworldhq.com
Lyons, Richard	W1LTR	rlyons3@verizon.net
Maguire, Hugh	N1QGE	hulin127@att.net
Mahar, Chuck	W1SKT	w1skt@arrl.net
Mallory, Darrel	K1EJ	k1ej@arrl.net
Martin, Alan	W1AHM	w1ahm@arrl.net
+Martin, Michelle	KB1NIQ	mmartin.ma.com.ultranet@rcn
Miller, Howard (Ed)	AB1CW	privatepilot@french.toast.net
Mudgett, Peter	KB1PBA	psmudgett@verizon.net
Parent, Allison J.	KB1GMX	kb1gmx@arrl.net
Piper, Bill	KB1MWC	bpipernrcm@aol.com
Quattrochi, Ron	KB1KRG	ron_quattrochi@verizon.net
Rimsa, Steve	WA1KBE	srimsa@comcast.net
Salmi, John	KB1MGI	wc27@netscape.com
+Salmi, Bryce	KB1LQC	kb1lqc@arrl.net
+Salmi, Brent	KB1LQD	kb1lqd@arrl.net
Schmeichel, Robert	N1RXV	n1rxv@arrl.net
Stader, Terry	KA8SCP	ka8scp@arrl.net
Staffier, Steve	K1SMS	k1sms@arrl.net
Steeves, David	KB1MKW	kb1mkw@arrl.net
Stewart, Andy	KB1OIQ	kb1oiq@arrl.net
Suprin, Charles	AA1VS	aa1vs@ayahoo.com
Telsey, Steven	N1BDA	n1bda@arrl.net
Thornton, Ron	N1JKL	ronandcarol@aerostation.org
+Conroy, Carol	N1LDM	
Walker, Carlton	W1OSL	carlu@verizon.net
Welsh, Dave	WI1R	wi1r@arrl.net
+Welsh, Joy	KA1TTT	
+Welsh, Kristen	KA1WCM	
York, Steve	KA1IKK	syork816@comcast.net

(+) indicates additional individual covered by Family membership