Greetings and welcome to the last Gavel of the club year. Yes, we finally made it and the lazy, hazy days of summer are on our doorstep. As we wind down and prepare to take a break for a couple of months, it gives me a bit of time to reflect on the past year and, in particular, how my first term as your club President fairied. I will say it has been quite an experience so far. Yes, we’ve had our ups and downs; but I’m looking forward to the next year as we continue to grow as a club.

Generally, when you tell somebody you’ve got good news and you’ve got bad news, they invariably ask for the bad news first. I guess it is human nature to get past the less desirable stuff and get on with the good stuff. Well, far be it from me to upset the status quo! First off, probably the biggest disappointment was our unsuccessful attempt to access space at a Mississauga fire hall. Initially, it started out as a plan to locate a potential new home for the VE3MIS repeaters. We invested time and effort in preparing a proposal and meeting the people in charge to present our case. The feedback was positive by the frontline people involved. However, when “pen hit paper” and the details emerged, we were unable to agree on some fundamental aspects of the arrangement and the project was shelved. For another day perhaps? That is my hope.

Our club also endured other unfortunate events over the past year. Last fall, Dr. Ernie Meyer passed away. He was one of the founding members of MARC. And, just recently, the untimely loss of Dave Harford shocked all of us. I will talk about Dave later on in the newsletter. Suffice to say, losing past and present members who contributed so much to our club is something we will never forget.

Having said all that, our club has had a number of positive experiences this past year. Our courses under the direction Earle, VE3XEL, continue to attract many people into the hobby. And many of those people have continued on as active MARC members. Ham-Ex under the leadership of Rick, VE3IMG, was a success, attracting more MARC volunteers, more table sales, and more income for the club than ever before. Our special projects group led by Michael, VE3TKI; Ed, VA3TPV; and Robin, VE3VVS; has been successful in attracting club members who are interested in building electronics and radio-related projects. I am profoundly impressed with the creativity and enthusiasm these individuals have expressed in advancing the hobby beyond simply “talking on the radio”. And, let’s not forget our big end-of-the-year event: Field Day. Year after year, MARC has consistently put together one of the largest groups of radio operators, all working together to help each other set up, get on the air, and work all those stations across North America. This year’s coordinators Lorne, VE3CXT, and Tom, VE3TWG, are no exception and have done an excellent job putting it together for us.

So yes, while we did have to work through some bad news, I think the good news far outweighs it. We as a club have learned to overcome the adversities and become what we are today. I feel fortunate having been President during this time. They say a leader’s success is a reflection of the people around him. Well, I like to think the people who are around me have helped make MARC the success that it’s been; I simply helped steer it in the right direction.

73 --- Jeff Stewart VA3WXM
Commentary

It is June and the club is busily preparing for the ARRL Field Day Event, our premier activity of the year.

This June issue of The Communicator has turned into an issue primarily focusing on Field Day articles which you are sure to enjoy. Read Michael, VE3TKI’s article on the VE3MIS Field Day Experience, the article ARRL Field Day 2010 Overview, and lastly the article ARRL Field Day Tips and Techniques That Everyone Can Use.

Be sure to read George, VE3YY’s article, Amateur Radio in Malta, a tale of George’s recent vacation on the island nation.

The RAC Contests are popular favourites. I have included an article on Working The RAC Canada Day Contest to encourage your participation.

It is with sadness that this month we lost one of MARC’s members, Dave Harford. The article Remembering Dave Harford, VA3DFH (SK), gives a tribute of Dave’s contribution to MARC.

The Communicator is one of MARC’s methods for communicating information to club members and is your newsletter. Let me know what you would like the newsletter to be and what you would like it to include. I solicit your input on topics for articles i.e. antennas, kits you have built, great operating experiences, operating tips, book reviews, etc. for consideration by the technical committee.

Without your constant support in the form of ideas, suggestions and article submissions, we would not have such a fine newsletter month after month. I look forward to hearing from all you budding or aspiring authors. Your experience is what makes amateur radio what it is. Let’s hear from you.

I can be reached at any club meeting or via email at va3tpv@rogers.com (remove spaces).

73, Ed Spingola (VA3TPV)
CLUB CALENDAR FOR 2010

June, 2010
01 Tue VHF/UHF - 2 Meter Net
03 Thu Exec Meeting
04 Fri Bread and Honey Festival
06 Sun HF – 75/80 Meter Net
08 Tue VHF/UHF - 2 Meter Net
10 Thu Club Meeting - Speaker’s night
13 Sun HF – 75/80 Meter Net
13 Sun Juvenile Diabetes walk
15 Tue VHF/UHF - 2 Meter Net
17 Thu ARES Meeting
20 Sun HF – 75/80 Meter Net
22 Tue VHF/UHF - 2 Meter Net
24 Thu Club Meeting - Speaker’s night
26 Sat ARRL Field Day Event
29 Tue VHF/UHF - 2 Meter Net
30 Wed RAC Canada Day Contest

July, 2010
01 Thu RAC Canada Day Contest
04 Sun Sunday Brunch – Symposium Restaurant
10 Sat IARU HF World Championships
16 Fri North American QSO Party - RTTY
24 Sat RSGB IOTA Contest

August, 2010
01 Sun Sunday Brunch – Symposium Restaurant
07 Sat North American QSO Party – CW
13 Fri Worked All Europe DX Contest - CW
21 Sat North American QSO Party – SSB

September, 2010
02 Thu Exec Meeting
05 Sun Sunday Brunch – Symposium Restaurant
05 Sun HF – 75/80 Meter Net
07 Tue VHF/UHF - 2 Meter Net
09 Thu Club Meeting - Speaker’s night
10 Fri Worked All Europe DX Contest - SSB
12 Sun HF – 75/80 Meter Net
14 Tue VHF/UHF - 2 Meter Net
16 Thu Club Meeting - Speaker’s night
18 Sat Halton County Radial Railway - Special Event
19 Sun HF – 75/80 Meter Net
21 Tue VHF/UHF - 2 Meter Net
23 Thu Club Meeting - Speaker’s night
26 Sun HF – 75/80 Meter Net
28 Tue VHF/UHF - 2 Meter Net
30 Thu Club Meeting - Speaker’s night

October, 2010
03 Sun HF - 75/80 Meter Net
03 Sun Sunday Brunch – Symposium Restaurant
05 Tue VHF/UHF - 2 Meter Net
07 Thu Exec Meeting
10 Sun HF - 75/80 Meter Net
12 Tue VHF/UHF - 2 Meter Net
14 Thu Club Meeting - Member's night
17 Sun HF - 75/80 Meter Net
19 Tue VHF/UHF - 2 Meter Net
24 Sun HF - 75/80 Meter Net
26 Tue VHF/UHF - 2 Meter Net
28 Tue Club Meeting - Member's night
29 Fri CQ WW DX Contest - SSB

November, 2010
02 Tue VHF/UHF - 2 Meter Net
04 Thu Exec Meeting
07 Sun HF - 75/80 Meter Net
07 Sun Sunday Brunch – Symposium Restaurant
09 Tue VHF/UHF - 2 Meter Net
11 Thu Club Meeting - Member's night
14 Sun HF - 75/80 Meter Net
16 Tue VHF/UHF - 2 Meter Net
21 Sun HF - 75/80 Meter Net
23 Tue VHF/UHF - 2 Meter Net
25 Thu Club Meeting - Member's night
26 Fri CQ WW DX Contest - CW
28 Sun HF - 75/80 Meter Net
30 Tue VHF/UHF - 2 Meter Net

December, 2010
02 Thu Exec Meeting
05 Sun HF - 75/80 Meter Net
05 Sun Sunday Brunch – Symposium Restaurant
07 Tue VHF/UHF - 2 Meter Net
09 Thu Club Meeting - Member's night
12 Sun HF - 75/80 Meter Net
14 Tue VHF/UHF - 2 Meter Net
19 Sun HF - 75/80 Meter Net
21 Tue VHF/UHF - 2 Meter Net
23 Thu Club Meeting - Member's night
26 Sun HF - 75/80 Meter Net
28 Tue VHF/UHF - 2 Meter Net

NOTES
1. Meetings start 7:30PM at St. Thomas A Becket Church Hall, 3535 South Common Court unless otherwise noted.
2. Brunch is at 9:30AM unless otherwise noted.
3. Classes are from 7:00PM - 9:00PM at Meals On Wheels at 2445 Dunwin Drive
4. There are no MARC HF or VHF Nets during July or August.

Visit our website: http://www.marc.on.ca for any updates of the calendar.
Amateur Radio in Malta

by George Gorsline, VE3YV

I recently vacationed in Malta, about a 90 minute flight south of Rome and the southernmost European Union country. Malta is a popular tourist destination, for summer beaches and for its history, including several UNESCO World Heritage sites with some of the oldest man-made structures in the world. It’s also a popular cruise stop-over, but one day barely scratches the surface. A few weeks before leaving, I dropped a note to the email contact address on the Malta Amateur Radio League (MARL) website, asking for recommendations on restaurants that catered to locals serving local dishes (fish and rabbit are specialties) and also whether anyone would be interested in DXCC card checking. A quick reply came from the MARL Secretary, Ivan, 9H1PI, inviting me to their headquarters plus contact information for a ham living in the town where we were staying who could drive me there.

Malta is in the centre of Mediterranean, making it a crossroads of cultures and influences. Pre-historic neolithic ruins dating to 3500 BC are fascinating, as are the bronze-age structures, which were usually built on top of them some 1500 years later. Phoenicians left their mark in both language (Maltese is an interesting blend sounding somewhat like Arabic), and the traditional painted fishing boats with eyes on their bows to ward off evil spirits.

The Greeks and Romans also influenced Malta, whose name is derived from the local sweet honey. In more recent times, the Knights of St John were given Malta as their base of operations after being driven out of Cyprus by the Ottoman Empire in the middle ages. As a result of being a church-state, Malta and its two smaller sister islands, Gozo (named for the mythical Calypso) and Comino (named for the spice cumin), have a domed church on every hill and usually one in the valley in between. And there are a lot of hills, many with terraced agriculture. On the larger hills, the church is part of a fortress in the best middle ages tradition of building, surrounded by a town (“rabat” – literally suburb) outside the two or more meter thick fortress walls and moat. Britain became the island’s governor until independence in 1964 and more recently joining the EU in 2004. One of the legacies of British rule is that everyone speaks English as well as Maltese, with many also speaking Italian and other EU languages.

MARL is the national society for 400 resident hams and is also the club, with about 80 active members. Malta calls are two-letter suffixes, except for special events, and the prefixes indicate location:

- 9H1 Malta Island
- 9H4 Gozo Island
- 9H8 Comino Island
- 9H5 Code-free licenses

Other prefixes (e.g. 9H0) may be used for special events. In addition, 3-month visitor licenses are granted using the prefix 9H3. Unfortunately, visitors cause quite a problem for the 9H QSL bureau, with several large boxes of cards stacked in the corner of the MARL office full of cards for calls where the operator is unknown. As DX from North America goes, Malta is in the middle of the pack on rarity, being neither as common as nearby Sicily (IS0), nor a really “rare one.”

MARL headquarters is located in a small industrial park, a few kilometres outside of Valetta, the capital and is easily accessible by car or the ubiquitous yellow buses that cover the island (a bargain at 14€ for a weekly pass). The main club houses the station, 9H1MRL, with HF and VHF equipment and a triband beam on a tower and three other rooms: an office which can also be used for small meetings, a kitchenette, and a large meeting room, with one wall covered with display cases of vintage radio equipment, and another with the QSL bureau pigeon.
holes, both incoming and out-going. Like many national QSL bureaus, there is a fee for outgoing cards (.07 €), which is why many DX stations prefer direct QSLing with green stamps or use LoTW – it gets expensive – they probably don’t need another VE3 card. The club has three open houses per week, where all that have the time come out to meet, operate, and welcome any visitors that may be passing through. With an 80% import duty, most equipment is a few generations behind the latest stuff on the store shelves. Very small lots and hilly terrain make it difficult to erect other than simple wire antennas, and only a few have the space for a tower and HF beam. There seems to be a strong interest in 6m operations, especially given the antenna size, and also Malta’s geographic location.

The one DXCC application that was arranged for checking was for 170 countries, quite an accomplishment! Although I didn’t take my handheld (to minimize customs hassles), MARL operates a number of repeaters, on 2m and 440, plus one ATV repeater.

The Maltese are very gracious and friendly people. If you do get to Malta, drop in and visit our 9H cousins, either on one of the open days (Sunday 10-12, Tuesday and Thursday, 1800-2000) or email to arrange another time.

My hosts: 9H1EI, Ray; 9H1BW, Chris; 9H1LO, Stanley; 9H1PC, Publius (standing); 9H1PS, Arthur (standing); 9H1JT, Paul; 9H1AQ, Carmelo; and 9H1ZZ, Robin (QSL bureau manager). Not shown is 9H1PI, Ivan.

The VE3MIS Field Day Experience

By Michael Brickell, VE3TKI

Introduction:

The members of the Mississauga Amateur Radio Club (VE3MIS) have mounted annual Field Day operations for almost the entire time of the Club’s existence since the mid 1980’s. Our Field Day operations have evolved, especially since the early 1990’s, from a relatively simple ad-hoc approach to today’s sophisticated, extensively planned operation. Our annual Field Days have now developed to the point where they are (almost) a “cookie cutter” event as far as planning is concerned.

Field Day is the Club’s premiere operating event of the year. Our foremost objectives are to have fun as a group in a social environment, and to maximize opportunities for members, especially new hams, to experience and develop their skills in a real operating environment. Secondary objectives are to hone our operating skills, test our emergency preparedness’ abilities, in particular setting up stations in an “emergency” situation. Last but not least, we attempt to maximize the number of contacts and produce a reasonable score!

Over the years we have learned to plan and execute what has become a fairly complex exercise. This article describes some of the things we have learned to do in order to ensure a successful annual Field Day operation.

Field Day Sites:

In the early 1990’s the Club was able to use what is now the Camp Goodyear Scout Camp, in Orangeville. The site consisted of a very large field, with two open wooden shelters, one on each side of the field. The advantage of this location was lots of space. However, Orangeville is about an hour away from Mississauga, which presented a problem if someone...
forgot something vital, such as their radio.

We have since used various sites within the City of Mississauga, which is much more convenient for everyone.

The next site we used was Camp Totoredaca, which is located between Winston Churchill Blvd and Mississauga Road, just north of Highway 401. We set up in the campground, and were entertained by the sound of buzzing mosquitoes, who apparently wanted to compete with us for the space. This was a pretty good site however, as it had lots of trees for antennas.

Camp Toto became temporarily unavailable due to construction activities, and we were offered a very unique site, on a flat area at the south end of the Britannia Rd landfill site, which was active at the time. There were differing opinions about this site. For some reason, some operators objected to the smell of methane gas wafting through the operating tents.

After further discussion with the City, we got permission to set up in a section of Erindale Park. This site has washrooms which were left open for us, which was a bonus as you can imagine, and we had lots of space. We were located in valley however, and we thought that propagation to the south was somewhat problematic as a result.

After more discussions, the City offered us the use of the grounds of the location now known as the Riverwood Estate, off Burnamthorpe Rd just west of Creditview. This estate is very large, has lots of open space, plus many tall trees. We were allowed to use the washroom in the 1920’s era home on the site. All in all, this was ideal for Field Day.

Unfortunately for MARC, Riverwood has been redeveloped as a beautiful public garden, and is no longer available. Once again, we were back at Camp Toto. We learned from our previous bug infested operation, and set up in the soccer field portion of the park. On the Saturday, we shared the site, somewhat nervously, with a local model airplane club. But no planes fell from the sky as a result of our transmissions, so we were ok. This was the year of the movies. We used a baseball backstop to hang some sheets, and showed a couple of movies at midnight for light relief.

The inevitable happened again, and Camp Toto was closed for redevelopment. For the last two years, we have set up operations in a section of the Meadowvale Conservation Park, adjacent to the old town of Meadowvale, and on the shore of the Credit River. This has proven to be another ideal site for us, again with lots of space, and washrooms.

We have been very fortunate in that the City of Mississauga has been very helpful in giving us permission to use some very nice locations.

Field Day Management:

In the early 1990’s the organization of Field Day was quite informal and ad-hoc. Nowadays we run a 9A or 10A operation, with various bands and modes. In this situation, we have found that things go more smoothly when we put a somewhat more formal management structure in place. The Field Day Manager is appointed late in the year, for the next year’s Field Day. The Field Manager then finds victims to be responsible for the various activities required. Thus individuals are asked to be responsible for obtaining the site permit, antenna location planning, generator power balance, location, and safety, producing the site drawing, arranging for meals (Saturday night dinner and Sunday morning breakfast), publicity including the visitor tent and log, operation of the logging network, and submission of the logs.

Early in the new year, signup sheets are prepared for club members to indicate their preferred bands and modes, and their interest in logging. We assign an individual to be band manager for each band and mode to be operated. The band manager is responsible for providing a shelter (tent trailer, or tent for example), and equipment including transceiver and antenna.

Typically, VE3MIS has run an “XXA” operation. The “A” refers to operation independent of commercial power, i.e., from portable generators, and the “XX” is the number of simultaneous transmitters on the air. Typically, on ssb, we run 7 transmitters (160m, 80m, 40m, 20m, 15m,10m and 6m), plus two cw stations (40m, and one operating all the other bands), plus a VHF/UHF station (which does not increase the station count), and a single digital station running various bands. This would put us in the 10A class. The exchange would be 10A Ontario in this case.

We have agreed for years to run all stations at less than 150 watts, as this allows us to multiply the raw score by two rather than one.

For the first time, this year, we will be running a separate GOTA (Get On The Air) station, as allowed by the rules, under
the club’s other call, VE3RCX. This will provide an additional opportunity for new hams to get on the air. As well, there will be an educational component as part of the GOTA activities.

From time to time, we have tried satellite QSOs, and used non-traditional power sources, for example solar panels, as an experiment.

**Antenna Planning:**

Careful antenna planning is very important when running a large number of stations close together. To maximize the number of contacts (and thus the score), we orient all our antennas in roughly an east-west direction, since in central Ontario; most of our contacts are with US rather than Canadian stations. As well, we orient the antennas end to end to the extent possible. This is difficult to achieve within the permitted 300m diameter circle, but we try. As well we ask band managers to use only single band antennas, to minimize inter-station interference. We have been able to do this for all stations except the digital station and the multi-band cw station.

The club owns two 40 ft military masts, and various members have similar masts, which are used as antenna supports.

**Generator Planning:**

The club owns a 5 kw and a 1.5 kw generator. Typically we have been able to borrow a couple of other generators. The total capacity is roughly 15 kw, easily enough to operate our 10A set up. The generator manager does a power balance indicating which stations are connected to each generator. The generators are located as far away from the operating positions as possible, to minimize noise. We find that standard 100 foot long “lawnmower style” power cords provide sufficient current carrying capacity.

A few years ago we tried a “dxpedition” approach to generator location, in which we located all the generators in one place. This “generator farm” was surrounded with plywood noise baffles, and put a good distance from the stations.

In retrospect this was not a good plan, as the complication and expense (in cable costs) is not worth the effort.

For safety, “hot fuelling” of the generators is not allowed.

**Site Planning:**

The end result of the planning process is a site plan. The site plan has evolved from no site plan, to rough hand drawn sketches (see Figure 2, a 2005 site plan), to today’s very detailed drawing produced using an autocad program. Our latest site drawing (see Figure 3, the 2010 site plan) is based on satellite photos of the Field Day site. The drawing is produced using the dimensions of a known object (a building) to correctly scale the satellite photo. We take the draft scale drawing to the site and check the locations of trees, buildings, shelters, etc. The drawing is modified accordingly, and then the station locations, antennas, and generators are located on it, as accurately as possible. We organize a site visit about a month before Field Day, to confirm equipment locations.

![Figure 2: A 2005 Site Plan, Chappell Estates](image)

![Figure 3: The 2010 Site Plan, Meadowvale Conservation Area](image)
Handouts:
Each operator and band manager is given a copy of the final drawing. As well, we provide a personal and equipment check list, and two copies of the Field Day section list, one sorted alphabetically by section abbreviation (see Figure 4), and another sorted by section name.

Logging:
Some years ago, we decided to try computer logging. We have tried various programs, and have now settled on N1MM Logger, a free contest logging program, developed by Tom, N1MM. The N1MM program offers advantages in that we also use this program in the club station for contesting, and it is easy to network the logging computers wirelessly.

Originally logging was done on stand-alone computers, one per station. However for the last several years we have run a wireless logging network. This saves time in collating the logs after Field Day and makes log submission easier.

The main server computer and wireless access point (a Linksys router) are located in the club’s Field Service Vehicle (aka FSV, see Figure 5). To ensure adequate coverage on the site, we set up a wireless amplifier at a central point, to rebroadcast the signal. This equipment is lovingly tended by various computer literate members.

We require that everyone log on a computer with wireless capability. Each computer keeps its particular station log individually and from time to time the main server computer polls all the others and updates the master log.

N1MM can be set up so that it controls a transceiver. This is especially handy for cw, because you can call cq using computer keying rather than manual keying. This, and calling cq continually on a particular frequency rather than doing search and pounce (trolling up and down the bands looking for new contacts) helps maximize the number of contacts.

Meals:
We have tried various approaches for meals. The current practice is to arrange for Saturday night dinner, and Sunday morning breakfast, to be catered.
Interference Issues:

As noted above, we do our best to minimize inter-station interference by appropriate location of antennas, and by using single band antennas wherever possible. However we have found that the digital stations are a source of significant interference to the other stations, to the extent that it is almost impossible to hear QSOs properly when the digital stations are transmitting. Last year we discovered that by using band pass filters on the digital stations we are able to almost completely eliminate the interference to stations operating on other bands. As a result, the club is building several sets of switchable band pass filters to be used by the digital stations, and also the multi-band cw station.

The Big Day Arrives:

All the preplanning comes down to activities on the morning of Field Day. After a nice breakfast, everyone arrives at the site, ready to set up. Generally, lots of club members pitch in to help set up, beginning around 09:30 - 10:00 Saturday morning. Once the stations, antennas, and the logging network are in place we’re ready to go. The Field Day Manager calls a brief meeting to confirm everyone is ready, and also to confirm the station class. Then, at 1800 UTC, we’re on the air (well, at least we hope so, but sometimes Murphy kicks in, which has meant very delayed starts on occasion for some stations).

ARRL Field Day 2010 Overview

From ARRL Field Day web site
http://www.arrl.org/field-day

ARRL Field Day is the single most popular on-the-air event held annually in the US and Canada. Each year over 35,000 amateurs gather with their clubs, friends or simply by themselves to operate. ARRL Field Day is not a fully adjudicated contest, which explains much of its popularity. It is a time where many aspects of Amateur Radio come
together to highlight our many roles. While some will treat it as a contest, most groups use the opportunity to practice their emergency response capabilities. It is an excellent opportunity to demonstrate Amateur Radio to local elected community leaders, key individuals with the organizations that Amateur Radio might serve in an emergency, as well as the general public. For many clubs, ARRL Field Day is one of the highlights of their annual calendar.

**Objective:** To work as many stations as possible on any and all amateur bands (excluding the 60, 30, 17, and 12-meter bands) and to learn to operate in abnormal situations in less than optimal conditions. 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.

**Dates:** Field Day is always the fourth full weekend of June, beginning at 1800 UTC Saturday and running through 2059 UTC Sunday. Field Day 2010 will be held June 26-27, 2010.

**Bands:** Any Amateur Radio band except 12, 17, 30 and 60 Meters.

**ARRL Field Day 2010 Rules**

The following is a synopsis of the ARRL Field Day 2010 Rules. Detailed rules may be found on the ARRL web site at [http://www.arrl.org/field-day](http://www.arrl.org/field-day)

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. CW, Phone and Digital modes may be used.

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 2010 will be held June 26-27, 2010.

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 proceeding 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 station without changing its base entry category, known as the GET-ON-THE-AIR (GOTA) station. This GOTA station may operate on any Field Day band, HF or VHF, but is limited to one transmitted signal at any time.

4.1.1.1. This station must use a different call sign from the primary Field Day station. The GOTA station must use the same call sign 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 any person licensed since the previous year’s Field Day, regardless of license class. It may also be operated by a generally inactive licensee. 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 operate on any Field Day band. 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. Free 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 band 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 and exchange of the main Field Day group and is separate and distinct from the GOTA station.

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 semi-permanent location 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;

4.8.1.1. 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).

Further Details

For other information see the ARRL Field Day event web site: http://www.arrl.org/field-day
ARRL Field Day Tips and Techniques That Everyone Can Use

From The Communicator, June 2009

Many amateurs treat ARRL Field Day (June 27-28) as a contest, even though it isn't one. But if your idea of Field Day fun is to go for the highest score possible, ARRL Contest Branch Manager Sean Kutzko, KX9X, offered the following suggestions at the ARRL Field Day Forum at the 2009 Dayton Hamvention.

1) You will get many more stations in your log by calling CQ than by tuning the dial and answering CQs; however, if you're calling CQ and not getting any replies, keep calling. Most major contesters call CQ for several minutes at a time before giving up. Giving up after three or four CQs is giving up too soon.

2) Keep your CQs short and to the point: "CQ Field Day, CQ Field Day, Whiskey-One-Alfa-Whiskey, Field Day." Wait about 5 seconds between CQs -- this gives stations enough time to answer you.

3) Use standard phonetics. "Cute" phonetics don't always get through and they can confuse newer operators.

4) When working a station, you should give your exchange information only once and keep it simple. "Whiskey-One-Alfa-Whiskey, copy 3F Connecticut, QSL?"

If they didn't get all of the exchange, they will ask for a repeat.

5) If you are running a pileup: Once you have pulled a call out of the pileup, give your exchange information first. Here's an example: "Whiskey-One-Alfa-Whiskey, copy 3F Connecticut, QSL?" Don't ask for the calling station's information first -- this will reduce any sense of rhythm and timing in the pileup.

6) If you get a pileup of stations and can't make out an entire call, listen for one letter and ask for it specifically: "The station with Delta only, go ahead."

7) When you get the other station's information, keep your acknowledgement simple. "QSL, thanks, QRZ Field Day from Whiskey-One-Alfa-Whiskey."

8) Find a comfortable pace for you and maintain that pace. You will tire quickly if you are screaming into the microphone or trying to work stations too quickly. This leads to inefficiency.

9) Use a headset with a boom microphone and a foot switch -- this frees up your hands to log QSOs. Writing or typing with a mike in your hand slows you down.

10) Go for as many bonus points as you possibly can. Numerous opportunities exist, from copying the Field Day message to sending traffic to using natural power for QSOs. These tips should help maximize your score on Field Day. Remember: No matter how you choose to enjoy Field Day, maximize your fun, however you define it.

Working The RAC Canada Day Contest

By Ed Spingola, VA3TPV

I will be the first to admit that my style of operating is more casual than contest competitive. However, the Radio Amateurs of Canada (RAC) sponsored contests are two of the contests that I enjoy. RAC sponsors the Canada Day Contest each July 1st and the Canada Winter Contest each December. I find that the RAC contests have an atmosphere of casual friendliness. There does not seem to be that drive to speed off to the next QSO point or multiplier. There is usually some casual conversation with the usual July 1st or season's greetings. There are, of course, some competitive entrants who fail to smell the roses and would prefer to seize the moment to speed off into the ionosphere in search of the next QSO point. For the beginner, the RAC contests are a good place to gain experience.

Intent, Bands and Modes

All amateur radio operators throughout the world are invited to participate in the RAC Canada Day and RAC Winter Contest. The intent of these contests is to work as many contacts within Canada on the following eight contest bands: 160, 80, 40, 20, 15, 10, 6 and 2 meter bands using CW and Phone. RAC Contests are unusual in that both CW and Phone may be used during the same contest period.

Contest Period

Each year the RAC Canada Day Contest is held on July 1st, from 0000 to 2359 UTC. The Winter contest date varies.

Suggested Frequencies

The RAC Contests have suggested frequencies of operation which make it somewhat easier to find other contestants. The RAC suggested frequencies are: CW – 25 kHz up from the band edge and for SSB – 1850, 3776, 7075, 7225, 14175, 21250, and 28500 kHz. In practice, you will find contestants on
or about these frequencies. In crowded bands, you will need to scan the band for contacts. Check for CW activity on the half-hour.

**Contest Exchange**

The contest exchange in the RAC contests for stations in Canada is a simple RS(T) (Readability, Strength, Tone) signal report and province or territory. Stations outside Canada send RS(T) and a serial number starting at 001 for each contact. As an example, we here in Ontario would give the exchange <your call sign> 59(9) ON. ON represents the postal abbreviations for the Canadian call areas given in the multiplier section of the article.

**QSO’s**

As with any contest, there has to be a method of ranking the participants. Each contact that you make counts for a specific number of points. The RAC contests allocate a hierarchy of points to each contact. RAC uses the following point allocations: Contacts with stations in Canada or VE0’s are worth 10 points. Contacts with stations outside Canada are worth 2 points. Contacts with RAC official stations are worth 20 points. The RAC official stations are: VA2RAC, VA3RAC, VE1RAC, VE4RAC, VE5RAC, VE6RAC, VE7RAC, VE8RAC, VE9RAC, VO1RAC, VO2RAC, VY1RAC, and VY2RAC. You may work any station once on each of the two modes (CW and phone), on each of the eight contest bands.

Duplicate contacts, called DUPS, on each mode on each band are disqualified.

It is prohibited to make CW contacts in the conventional phone sub-bands and phone contacts in the conventional CW sub-bands. Contacts or soliciting QSOs through a repeater during the contest period is not allowed.

VE0’s (International waters). VE0 call signs are only intended for use when the amateur radio station is operated from vessels that make international voyages.

**Multipliers**

Multipliers are used in calculating the final score of your contest activity. Most contest software that supports the RAC contests will calculate your score but you should be familiar with how this is done in order for you to formulate a contest strategy as to which contacts are worth more effort to capture.

The RAC contests have thirteen possible multipliers. These multipliers are the 10 provinces and three territories. Each multiplier may be counted once on each mode on each of the eight contest bands. The multipliers, with their postal abbreviations and prefixes are: Nova Scotia [NS] (VE1, VA1, CY9, CYØ); Quebec [QC] (VE2, VA2); Ontario [ON] (VE3, VA3); Manitoba [MB] (VE4, VA4); Saskatchewan [SK] (VE5, VA5); Alberta [AB] (VE6, VA6); British Columbia [BC] (VE7, VA7); Northwest Territories [NT] (VE8); New Brunswick [NB] (VE9); Newfoundland and Labrador [NL] (VO1, VO2); Nunavut [NU] (VY0); Yukon [YT] (VY1); and Prince Edward Island [PE] (VY2). Certain special Canadian prefixes in use at the time of the contest may also apply; however, there may be no more than 13 multipliers on each band/mode meaning that a multiplier may only be used once for each mode on each band. Please use the multiplier abbreviations noted above. In some contests you have earned a “Clean Sweep” when you have made at least one contact on each band and mode in all of the possible sections.

**Final Score**

Your final score is the total QSO points from all modes and bands multiplied by the total number of multipliers from all bands.

**Busted Contacts**

Busted calls are call signs incorrectly logged. The penalties assessed during log checking for a busted call, miscopied exchange, or "not in the log" QSO are there to create an incentive for accurate copy. No, a penalty is NOT an accusation of cheating...it's just a "mistake fee" like the five yards assessed for an off sides infraction in football. There is a lot of confusion about what the penalty consists of: first, the bad QSO is removed, as should be expected. Then, a number of QSO points equivalent to the number of penalty QSOs are subtracted from your total - actual additional QSOs are not removed from the log. For example, should I bust an intercontinental QSO in RAC Canada Winter Contest, that QSO will be deleted from my log and an additional points depending upon the contact type, RAC station, International, Canadian station, or multiplier will be subtracted from my total. This is sufficient penalty for me to slow down and get all the information right before logging the contact - and that's one of the reasons we have ham radio contests!

**Category Notes**

An amateur may enter the RAC contest in one of the following 9 categories. Each category is eligible for a certificate or award.

- Single Operator All Bands High Power (>100 watts)
- Single Operator All Bands Low Power (max. 100 watts output)
- Single Operator QRP (max. 5 watt output) All Bands & Single Band
- Single Operator All Bands CW only, any authorized power
- Single Operator All Bands PH only, any authorized power
- Single Operator Single Band, any authorized power
- Multi-Operator Single Transmitter High Power (>100 watts)
- Multi-Operator Single Transmitter Low Power (max. 100 watts output)
- Multi-Operator Multi-Transmitter, any authorized power

As can be seen from the above categories, there is a place for the single operator running barefoot (without a linear amplifier boosting their transceiver’s output power) to multi-operator and multi-transmitter stations running the legal limit high power.
Awards

Most contests award a certificate or a plaque to the top-scoring entrant(s) in each category. See the RAC Contest Rules for more information on the RAC Canada Contest awards.

An additional benefit of entering an RAC contest is that these contacts can also be used for other awards and certificates issued by the Radio Amateurs of Canada (RAC) and other amateur radio organizations within Canada. Confirmation of the contact in the form of a signed QSL card is usually required to apply for an award. Some of these other awards are as follows:

- Worked All RAC (WARAC) Award
- Canadaward
- Maple Leaf Awards
- Worked All VE (WAVE) Award
- Worked All Canada (WACAN) Award
- Worked All VO (WAVO) Award
- Zone 2 Award

A more extensive list of Canadian awards and specific details of the above listed awards is given on the RAC web site and also in The RAC Operating Manual.

Log Submission

Paper mail entries must contain a summary sheet showing score calculation, a dupe sheet listing calls worked on each band, a multiplier check sheet and log sheets. Log sheets must show time (UTC), band, mode, call sign of station worked, exchanges sent and received, and points claimed for each QSO. New multipliers must be clearly marked in the log.

An entry greater than 100 contacts should be submitted in digital form by email or on a 3.5” MS-DOS formatted diskette.

A more general description of the Cabrillo format with sample files for various contest logs may be found at http://www.kkn.net/~trey/cabrillo/

RAC Cabrillo QSO Template.

---info sent------ ---info rcvd-----
QSO: freq mo date time call rst exch call rst exch
0000000011111111122222222233333334444444444555555555566666666677777777778
1234567890123456789012345678901234567890123456789012345678901234567890
QSO:******* ** yyyy-mm-dd nnnn ************* nnn ***** ************* nnn *****
QSO: 21000 CW 2009-12-19 1044 VE3KZ 599 ON K4BAI 599 103
QSO: 14000 PH 2009-12-19 1050 VE3KZ 59 ON VE5RI 59 SK
END-OF-LOG

Note that each field starts at the same location on each QSO record. It is this consistency of location that makes the Cabrillo format computer readable.

Contest Logging Software

Several logging programs support the RAC Contests. QRP Canada has a free logging program for the RAC contest on their web site at http://www.qrp-canada.com/wp/?page_id=41

Another program is RAC Contest Log 1.7 by N3FJP at http://www.n3fjp.com/RAC.htm
N1MM Logger also supports the RAC contests.

http://www.n1mm.com/

As a cautionary note, whatever logging program you choose to use or if you roll your software, the prudent thing to do is to become familiar with this program before contest start.

So sharpen your pencils. Turn on your logging software and get active.

Contesting Strategy

The topic of contesting strategy would fill several newsletter articles ranging from propagation and band planning, dealing with sleep deprivation, and contact strategy to name a few topics. I will deal with the latter topic.

Two strategies to making contacts during a contest, each with their own merits are:

1) Camp-on (“running” – calling CQ)
2) Search and pounce.

In the camp-on method, also called “running” you operate from a single frequency calling CQ. You will get many replies. This method is good for achieving many contacts on a specific band. The strategy is that there are more amateurs operating in the contest searching the bands than operate camp-on.

In the search and pounce method, you search the band(s) looking for key contacts like multipliers which will have a greater impact to increasing your score.

Obviously no one method would produce the highest score. A mix of camp-on and search and pounce is usually employed.

That’s all there is to it. See you in the contest.

This article has given a brief explanation of the RAC Canada Winter Contest rules. The full official RAC Rules are given on the RAC website1.

Notes:

1.) RAC Contest Rules


Remembering Dave Harford
VA3DFH (SK)
By Jeff Stewart, VA3WXM

On May 18, I received an e-mail message from Lorne VE3CXT telling me that Dave Harford VA3DFH, a past President of MARC and our Webmaster and Membership Manager, had passed away suddenly the night before. I was shocked and saddened by the news.

Dave joined MARC a few years after I did and quickly became involved in many aspects of the club. In 2005, he stepped up in a big way and became President of MARC. During his tenure he brought to the table many fresh ideas on how the club should operate, how to improve its status in the community and generally shake things up. While not all of his plans were implemented it certainly made the membership sit up and take notice that the status quo was not good enough. In addition to his club executive activities, Dave also took an active role in the club website, looking to redesign and improve many of its aspects. This was not surprising given his technical background in web design and programming. Through his efforts the MARC website has become more dynamic and more eye-popping, and incorporated new functionality that our old site never had. I’m sure others will agree with me that one of the neatest aspects is the real-time club events calendar.

After finishing his presidential tenure, Dave remained active in the club as both the full-time Webmaster and Membership Manager. Being in charge of signing up new and returning members allowed Dave to implement some new ideas including the issuance of computer-generated and laminated membership cards, complete with cardholder picture. The intent was to give a more professional image to club members particularly when participating in community service events.

The untimely loss of Dave has left a significant void in the Mississauga Amateur Radio Club. He made an indelible mark on our club and will be missed by many. A final 73 to VA3DFH from VE3MIS.

Jeff, VA3WXM
**RAC MEMBERSHIP APPLICATION/TCA SUBSCRIPTION OPTIONS**

For two- or three-year memberships or renewals please contact the RAC Office given at bottom of this page.

<table>
<thead>
<tr>
<th>Please enter applicable choice(s)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 year RAC membership; (includes $45.00 subscription for TCA) @ $50.00 plus GST or HST as applicable</td>
<td></td>
</tr>
<tr>
<td>Total $52.50 in BC, AB, SK, MB, QC, PE, NT, NU</td>
<td></td>
</tr>
<tr>
<td>Total $56.50 in NL, NS, NB, ON</td>
<td></td>
</tr>
<tr>
<td>1 year RAC membership only; for a blind person NO MAGAZINE @ $20.00 plus GST or HST as applicable</td>
<td></td>
</tr>
<tr>
<td>Total $21.00 in AB, SK, MB, QC, PE, NT, NU</td>
<td></td>
</tr>
<tr>
<td>Total $22.60 in NL, NS, NB, ON, Total $22.40 in BC.</td>
<td></td>
</tr>
<tr>
<td>Family membership; price per extra family member @ $20.00 plus GST or HST as applicable per year (one TCA per family) (Does not apply to simple subscriptions.)</td>
<td></td>
</tr>
<tr>
<td>Total $21.00 per person in AB, SK, MB, QC, PE, NT, NU</td>
<td></td>
</tr>
<tr>
<td>Total $22.60 per person in NL, NS, NB, ON. Total $22.40 per person in BC.</td>
<td></td>
</tr>
</tbody>
</table>

**CONTACT INFORMATION**

<table>
<thead>
<tr>
<th>Name:</th>
<th>Call sign:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address:</td>
<td>City/Town:</td>
</tr>
<tr>
<td>Province:</td>
<td>Postal Code:</td>
</tr>
<tr>
<td>Family Member Name</td>
<td>Family Member Call sign:</td>
</tr>
<tr>
<td>If you enter something on line above, a charge of $20.00 (plus taxes) will be added to your membership</td>
<td></td>
</tr>
<tr>
<td>Family Member Name</td>
<td>Family Member Call sign:</td>
</tr>
<tr>
<td>If you enter something on line above, a charge of $20.00 (plus taxes) will be added to your membership</td>
<td></td>
</tr>
<tr>
<td>Email:</td>
<td>Telephone #:</td>
</tr>
</tbody>
</table>

**DONATION OPTIONS**

| Donation to the RAC Foundation enclosed | $ |
| Donation to the Defence of Amateur Radio Fund enclosed | $ |
| Donation to the Youth Education Programme enclosed | $ |
| Donation to the Amateur Radio Emergency Service (ARES ) Programme enclosed | $ |
| Grand Total: | $ |

**PAYMENT OPTIONS** (Cheque or)

<table>
<thead>
<tr>
<th>Visa/MasterCard No:</th>
<th>Card Expiry Date (MM/YY):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Security code on back of card (CVV2):</td>
<td></td>
</tr>
<tr>
<td>Name of person credit card is issued to:</td>
<td></td>
</tr>
</tbody>
</table>

Mail to:
Radio Amateurs of Canada Inc.
720 Belfast Road, Suite 217
Ottawa, ON, K1G 0Z5
Telephone #: 614-244-4367 or 877-273-8304, Fax: 613-244-4369
Email: rachq@rac.ca