marcOgram

Official Publication of The Montreal Amateur Radio Club Inc.
Box 53047 - RPO Dorval, Dorval Quebec H9S 5W4

Volume 68, Number 4 **January 2022**

NEXT MEETING

Tuesday 25 January 2022 at 20:00 via ZOOM.

THIS MONTH:
Travel along with the DXpedition: K4M Midway.

General meetings are being held via the Zoom platform. Below are the details you need to join the meeting. A rag-chew session starts at 19:30 with the formal meeting starting at 20:00.

Join Zoom Meeting: https://us06web.zoom.us/j/83309071097?pwd=ZmVWUjNyZkJ3ZVhNZjUxelRBNlRhZz09

Meeting ID: 833 0907 1097 Passcode: 308989 Or by phone 438-809-7799 using the above meeting ID and passcode.
Important: Please use a headset or headphones and make sure to test your mic/camera ahead of the meeting.
We hope to see you there.

FROM THE EDITOR'S DESK

HAPPY NEW YEAR, FOLKS!

Let's hope it's somewhat better than the last two, both of which were not satisfactory due to the various waves of COVID-19.

Not only have we found a good place to hold our hamfest, but we are also hoping to make this an in-person hamfest. Unfortunately, with the method that restrictions or the removal of same are announced, nobody knows until the night before whether we are permitted to hold an in-door gathering of 25 people.

This makes planning ahead almost impossible, so stand by for a hamfest announcement sometime in March.

73 de Nora, VA2NH

- . . . -

Christmas Party!

The Christmas Party was held at Casa Grecque in Lasalle

IN PERSON!

What a novelty after two years of isolation and non-meetings!

It almost felt back-to-normal, with 21 attendees, good food, animated conversation and winners of door prizes.

We were lucky with the timing because, due to more rising numbers of COVID-19 Omicron infections and the consequent overloading of valuable hospital space, here in January 2022 we're back to isolating, all restaurants are closed for all but take-out and delivery, and no indoor gatherings in rented venues are permitted.

On a brighter note, the MARC extends its thanks to Norm VE2FKC for his generous donation to the club of a reasonably modern oscilloscope, see page 4.

The MARCogram is published nine times per year on the second to last Wednesday of September through June, excepting December by the Montreal Amateur Radio Club. Advertising and copy deadline is one week prior to publication.

Annual fees are:

General Members	...	$30.00
Family Member	...	$35.00
per additional family member	...	$ 3.00
Postal delivery of MARCogram	...	$10.00

The membership year runs from September 1 to August 31. Memberships received on or after June 1 commence immediately and extend through the subsequent membership year - covering a period of up to fifteen months.

Meetings of the Board of Directors

Meetings of the Board of Directors are held on the first Tuesday of the month (Aug to June) at 19:30 on-line using the Zoom platform. The club no longer holds in-person board meetings. If you have questions, concerns or suggestions for the Board to discuss, please send an email to ve2arc@marc.ca for inclusion in the meeting agenda.

Club Activities

Monthly Meetings are by ZOOM

(last Tuesday of the month)

January - K4M Midway DXpedition, video
February - Caglar VA2AKG, µController tuned MagLoop
March - TBA
April - TBA
May - Show and Tell

Every Wednesday, @ 20:00 (00:00Z), go to the net on VE2RED.
See page 3.

Radio Classes

A Basic level Course started 8 January, held via Zoom. If you know of anyone interested in taking the course, please direct them to https://marc.ca/course/ for more information. Online registration is now closed until the next session.

MARC Hamfest

The 2022 MARC flea market is back!

We think we've found a good venue to hold the 2022 MARC hamfest. Mark the date: 16 April 2022. Research and negotiations are on-going but we still welcome other ideas as back-up. Please contact any of the board members if you have an idea.
Go to http://marc.ca/fest/ for more information as it happens.

Incoming QSL card service

As has been mentioned in previous MARCograms, we are resuming the club's service of having incoming QSL cards sent to the club for members to pick up at meetings. This is a service which we are offering to our members which both saves the individual members money as well as makes more efficient use of our collective resources.
If you would like to avail yourself of this service please send an e-mail to qsl@marc.ca and we will add you to the list of cards that the incoming bureau sends to the club and we will get them to you somehow.

SolderSpot

Group build Power Supply Project - By Leo VE2SI

If you're interested and even if you've spoken with me before, please send an email to VE2ARC@marc.ca and indicate your level of interest.
Participation is open to everyone and MARC membership is not a requirement. Due to COVID-19, SolderSpot is temporarily on hold. Other options are being considered.
This project is standing by due to COVID-19.

Upcoming Fleas/Events

2022

What: Iroquois ARC Fleamarket
Who: Iroquois Amateur Radio Club
When: Saturday, 2 Apr 2022
Where: Iroquois ON

What: NEAR-Fest XXX
Who: New England Amateur Festival, Inc.
When: Fri & Sat, 29 & 30 Apr, 2022
Where: Deerfield Fairgrounds Deerfield, NH

What: London Vintage Radio Club Flea Market
Who: London Vintage Radio Club
When: Saturday, 11 Jun, 2022
Where: Guelph, ON

What: Carp 24th Annual Hamfest
Who: Ottawa Amateur Radio Club, Inc.
When: Saturday, 10 Sep, 2022
Where: Carp Agricultural Fair Grounds, Carp, ON

Note from the editor.
Due to COVID -19, the list of hamfests and events is severely limited. Please check with the organizing authority before planning to attend as some may be cancelled.

VE2RED Tuesday Net Report

Any discrepancies, please inform Leo, VE2SI

Please join us every **Wednesday** evening at 20:00 local on VE2RED on 2m output frequency of 147.270 MHz (+600 kHz input offset) CTCSS tone of 103.5 Hz. Everyone is welcome. If you have something to sell, or are looking to buy, feel free to mention it.

We have a few Net operators hosting it, but we're always interested in adding to this team if you're interested. Send me an email if you would like to try out Net Operations for an evening.

Leo, VE2SI
leo49@videotron.ca

2021-11-17 Net commenced 20:00 local, 00:00Z
Net control Leo, VE2ARC (VE2SI)
Net closed: 21:19
Check-ins: 10
Discussion: Solder - lead-based or lead-free?

2021-11-24 Net commenced 20:00 local, 00:01Z
Net control Leo, VE2ARC (VE2SI)
Net closed: 21:24
Check-ins: 9
Discussion: 20, 50, 60 years ago you could understand all of amateur radio. Is this still possible?

2021-12-01 Net commenced 20:00 local, 00:00Z
Net control Sam VE2ARC (VE2LJV)
Net closed: 20:47
Check-ins: 3 [MARC Xmas party held on same night]
Discussion: Radios of the past, tube vs ICs; entry into amateur radio, likes and dislikes.

2021-12-08 Net commenced 20:00 local, 00:00Z
Net control George VE2ARC (VE2NGH)
Net closed: 20:45
Check-ins: 6
Discussion: What would you like to get from Santa as a ham radio present?

2021-12-15 Net commenced 20:00 local, 00:00Z
Net control Leo VE2ARC (VE2SI)
Net closed: 21:16
Check-ins: 12
Discussion: How has COVID-19 affected amateur radio?

2021-12-22 Net commenced 20:00 local, 00:00Z
Net control Leo VE2ARC (VE2SI)
Net closed: 21:10
Check-ins: 9
Discussion: Have you ever experienced propagation effects due to weather?

THANKS!

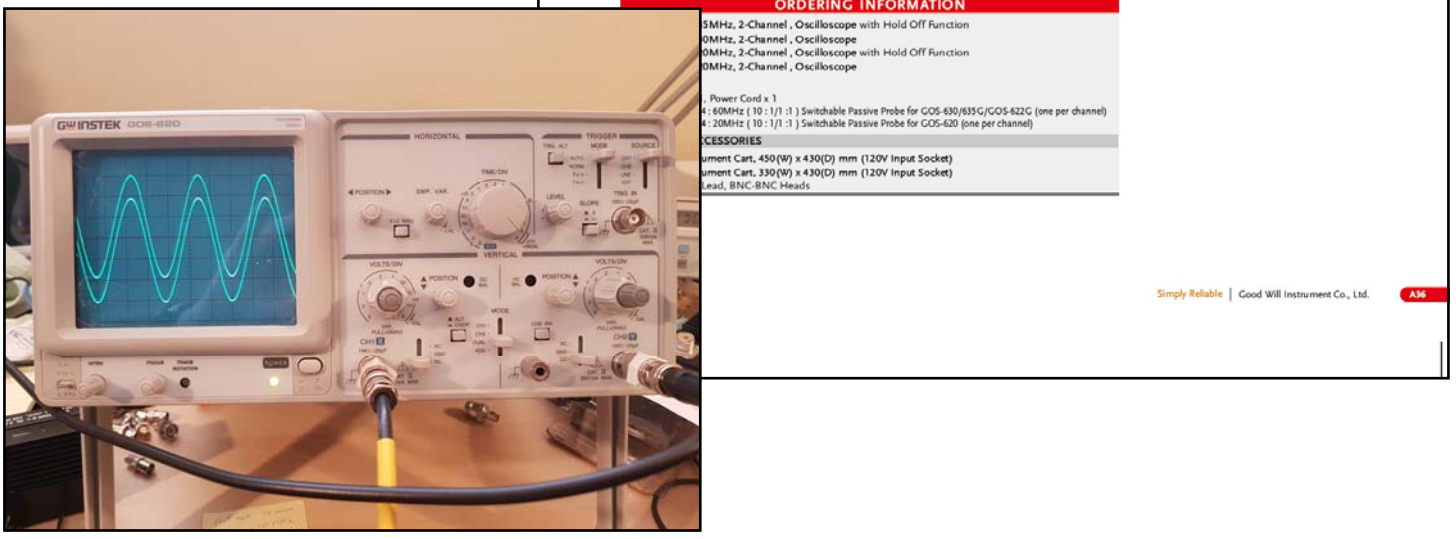
Are due to Norm VE2KFC for his donation to the Club of an oscilloscope.

Leo VE2SI has given it a thorough check-up and here are the results:

I checked out the CRT/solid-state GW Instek GOS-620 'scope that Norm VE2KFC donated to MARC at the Christmas party. It appears to be in new condition and everything (both vertical channels, triggering, time base/sweep circuit, etc.) works. The 620 is supposed to have a 20MHz bandwidth and the 630 (see attached spec. sheet) raises that to 30MHz. I ran a function generator into both channels of the 'scope's 1Mohm input and the measured upper-frequency -3dB point is around 32MHz. A very quick measurement of the scope's risetime (corrected for pulse generator risetime) came out to around 10 or 11nsec and confirms the measured 30MHz+ bandwidth.

The 'scope came with 3 probes. Two are 100MHz bandwidth Yang Xun model P6100 probes with the grabber clip and ground lead, and the third is labeled HP9060 with a stated 60MHz bandwidth. I checked the two P6100 probes and they work and look new, but I didn't check the HP9060; it's missing the grabber tip. There's no printed manual but it's available on the Web.

GW Instek might have made one 30MHz 'scope, labeled them as 20MHz and 30MHz models but priced them differently. The only negative comment is that it lacks graticule illumination. A graticule that isn't illuminated is real nuisance when you're trying to make quantitative measurements. The model is obsolete now but it would be a perfect starter 'scope for someone without the money for a digital 'scope and it's more than adequate for audio, 30MHz RF and TTL logic troubleshooting.



The 20MHz GOS-620 oscilloscope is an economic analog oscilloscope with 5mV/div ~ 5V/div vertical sensitivity and 0.2us/div ~ 0.5s/div horizontal sweep speed. Its outstanding mainstream specifications, reliable industrial design as well as the high build quality make it an ideal choice when updating equipment for education, training, manufacturing or service and maintenance.

GOS-635G (35MHz)
GOS-622G (20MHz)

GOS-630 (30MHz)
GOS-620 (20MHz)

OSCILLOSCOPES

SPECIFICATIONS

	GOS-635G/GOS-622G	GOS-620/GOS-630
CRT		
Type	6-inch rectangular type with internal graticule 8 x 10 div (1div=1cm)	6-inch rectangular type with internal graticule 8 x 10 div (1div=1cm)
Z-Axis Input	Input Impedance: Approx. 5kΩ Sensitivity: Above 3Vp-p Bandwidth: DC ~ 5MHz	Input Impedance: Approx. 47kΩ Sensitivity: Above 5Vpp Bandwidth: DC ~ 2MHz
VERTICAL SYSTEM		
Sensitivity	5mV/div ~ 5V/div±3%, 1mV ~ 2mV/div± 5%	5mV/div ~ 5V/div±3%, x 5MAG: ±5%
Bandwidth	DC ~ 35MHz (GOS-635G) DC ~ 20MHz (GOS-622G) DC ~ 10MHz at 1~ 2mV/div	DC (AC 10Hz) ~ 20MHz(-3dB) (GOS-620) DC ~ 30MHz (GOS-630) DC (AC 10Hz) ~ 7MHz(-3dB)
Rise Time	10ns (35ns at 1mV~2mV/div) (GOS-635G) 17.5ns(35ns at 1mV~2mV/div) (GOS-622G)	17.5ns (50ns at x 5 MAG) (GOS-620) 11.7ns (50ns at 1mV~2mV/div) (GOS-630)
Input Impedance	Approx. 1MΩ	Approx. 1MΩ
Input Coupling	AC, DC, GND	AC, GND, DC
Vertical Mode	CH1, CH2, DUAL, ADD, CH2 INV (Dual automatic switching ALT and CHOP)	CH1, CH2, DUAL (ALT/CHOP), ADD, CH2 INV
HORIZONTAL SYSTEM		
Sweep Time	0.1μs ~ 0.5s/div ±3% 100ns ~ 50ms/div ± 5% (x 10 MAG) 10ns ~ 50ns ± 8% (x 10 MAG)	0.2μs ~ 0.5s/div ±3% 100ns ~ 50ms/div ±5% (x 10 MAG) 20ns ~ 50ns/div : uncalibrated
TRIGGER		
Trigger Mode	AUTO, NORM	AUTO, NORM, TV-V, TV-H
Trigger Source	CH1, CH2, ALT, LINE, EXT	CH1, CH2, ALT, LINE, EXT
Trigger Coupling	AC, DC, HF REJ, TV	AC
Trigger Slope	"+" or "-"	"+" or "-"
X - Y OPERATION		
Sensitivity	5mV ~ 5V/div ±4%	5mV ~ 5V/div±4%
X-axis Bandwidth	DC ~ 1MHz	DC ~ 500kHz
Phase Error	3° or less from DC ~ 50kHz	3° or less from DC ~ 50kHz
OUTPUT SIGNAL		
Trigger Signal Output	Voltage: approx. 50mV/div into 50Ω	Voltage: approx. 20mV/div into 50Ω
Calibrator Output	1kHz Square wave, 2Vp-p±2%	1kHz Square wave, 2Vp-p±2%
POWER SOURCE		
	AC 100V/120V/220V/230V±10%, 50Hz/60Hz	AC 115V/230V±15%, 50Hz/60Hz
DIMENSIONS & WEIGHT		
	310(W) x 150(H) x 455(D) mm; Approx. 8.2kg	310(W)x150(H)x455(D) mm; Approx. 8kg

FEATURES

- 35MHz Bandwidth, Dual Channel (GOS-635G)
- 30MHz Bandwidth, Dual Channel (GOS-630)
- 20MHz Bandwidth, Dual Channel (GOS-622G)
- 20MHz Bandwidth, Dual Channel (GOS-620)
- High Sensitivity 1mV/div
- TV Synchronization
- Z Axis Input
- ALT Triggering Function
- Hold Off Function (GOS-635G,GOS-622G)
- CH1 Output

ORDERING INFORMATION

5MHz, 2-Channel , Oscilloscope with Hold Off Function
0MHz, 2-Channel , Oscilloscope
0MHz, 2-Channel , Oscilloscope with Hold Off Function
0MHz, 2-Channel , Oscilloscope

, Power Cord x 1
4 : 60MHz (10 : 1/1 :1) Switchable Passive Probe for GOS-630/635G/GOS-622G (one per channel)
4 : 20MHz (10 : 1/1 :1) Switchable Passive Probe for GOS-620 (one per channel)

CCESSORIES

ument Cart, 450(W) x 430(D) mm (120V Input Socket)
ument Cart, 330(W) x 430(D) mm (120V Input Socket)
Lead, BNC-BNC Heads

Simply Reliable | Good Will Instrument Co., Ltd. A36

ARISS UPDATE

Following the article that was published in the 2020 November MARCogram, Vol. 67, No. 3, wherein we learned the details of Sam VE2LJV's reception of a Russian SSTV image from the ISS in Oct 2020, and his regret at missing the opportunity to receive not only the image, but an award too, here is an update.

Sam received the following email form the ARISS:

-------- Original message --------
From: sstv.award@gmail.com
Date: 2022-01-04 5:53 a.m. (GMT-05:00)
To: samuel.galet@outlook.com
Subject: ARISS SSTV Award

Hello VE2LJV,

This ARISS SSTV event is dedicated to "Present ISS Space Agency Contributions to Lunar Exploration, Past, Present and Future." The SSTV slides provide some historical context to several missions, some not well known, that significantly contributed to Lunar Exploration either from a technology or scientific perspective. General intention of the ARISS SSTV slides is to provide aspects to the observers that may not be known before and could offer a base for own investigations on space history.

Amateur Radio on the International Space Station (ARISS) is a cooperative venture of international amateur radio societies and the space agencies that support the International Space Station (ISS). The primary goal of ARISS is to promote exploration of science, technology, engineering, the arts, and mathematics topics. ARISS does this by organizing scheduled contacts via amateur radio between crew members aboard the ISS and students. Before and during these radio contacts, students, educators, parents, and communities take part in hands-on learning activities tied to space, space technologies, and amateur radio.

More info:
https://www.ariss.org/
https://www.ariss-eu.org/
https://ariss.pzk.org.pl/sstv/

The ARISS Ad-hoc Award Committee:
- Oliver DG6BCE (chair)
- Armand SP3QFE
- Francesco IK0WGF
- Bruce W6WW
- Shizuo JE1MUI
- Darin VE3OIJ
- Ian VE9IM

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******** Happy New Year 2022! ********

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Greetings - Slawek SQ3OOK
ARISS SSTV Award Manager

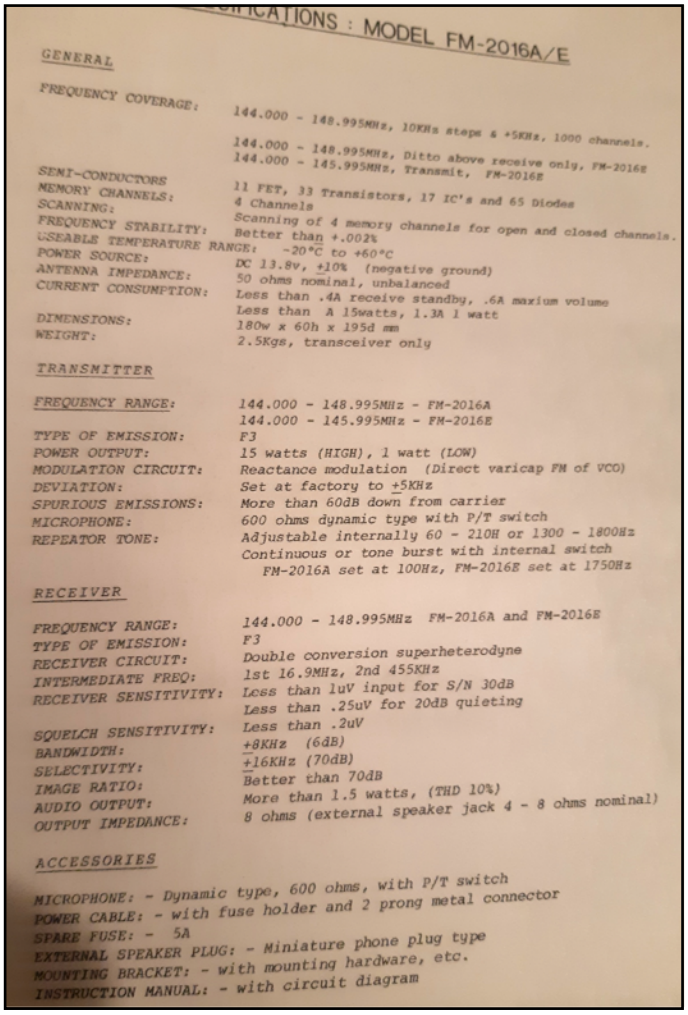
And here is what the award looks like.
Congratulations, Sam!

For Sale

Model FM-2016a/e 2meter transceiver
with power cord and DTMF microphone.

Great winter project for a new ham. Spec sheet below. Asking $15 or best offer.

email: samuel.galet@outlook.com, VE2LJV.



...ICATIONS : MODEL FM-2016A/E

GENERAL

FREQUENCY COVERAGE:	144.000 - 148.995MHz, 10KHz steps & +5KHz, 1000 channels. 144.000 - 148.995MHz, Ditto above receive only, FM-2016E 144.000 - 145.995MHz, Transmit, FM-2016E
SEMI-CONDUCTORS	11 FET, 33 Transistors, 17 IC's and 65 Diodes
MEMORY CHANNELS:	4 Channels
SCANNING:	Scanning of 4 memory channels for open and closed channels.
FREQUENCY STABILITY:	Better than +.002%
USEABLE TEMPERATURE RANGE:	-20°C to +60°C
POWER SOURCE:	DC 13.8v, ±10% (negative ground)
ANTENNA IMPEDANCE:	50 ohms nominal, unbalanced
CURRENT CONSUMPTION:	Less than .4A receive standby, .6A maxium volume Less than A 15watts, 1.3A 1 watt
DIMENSIONS:	180w x 60h x 195d mm
WEIGHT:	2.5Kgs, transceiver only

TRANSMITTER

FREQUENCY RANGE:	144.000 - 148.995MHz - FM-2016A 144.000 - 145.995MHz - FM-2016E
TYPE OF EMISSION:	F3
POWER OUTPUT:	15 watts (HIGH), 1 watt (LOW)
MODULATION CIRCUIT:	Reactance modulation (Direct varicap FM of VCO)
DEVIATION:	Set at factory to ±5KHz
SPURIOUS EMISSIONS:	More than 60dB down from carrier
MICROPHONE:	600 ohms dynamic type with P/T switch
REPEATOR TONE:	Adjustable internally 60 - 210H or 1300 - 1800Hz Continuous or tone burst with internal switch FM-2016A set at 100Hz, FM-2016E set at 1750Hz

RECEIVER

FREQUENCY RANGE:	144.000 - 148.995MHz FM-2016A and FM-2016E
TYPE OF EMISSION:	F3
RECEIVER CIRCUIT:	Double conversion superheterodyne
INTERMEDIATE FREQ:	1st 16.9MHz, 2nd 455KHz
RECEIVER SENSITIVITY:	Less than 1uV input for S/N 30dB Less than .25uV for 20dB quieting
SQUELCH SENSITIVITY:	Less than .2uV
BANDWIDTH:	±8KHz (6dB) ±16KHz (70dB)
SELECTIVITY:	Better than 70dB
IMAGE RATIO:	More than 1.5 watts, (THD 10%)
AUDIO OUTPUT:	8 ohms (external speaker jack 4 - 8 ohms nominal)
OUTPUT IMPEDANCE:	

ACCESSORIES

MICROPHONE: - Dynamic type, 600 ohms, with P/T switch
POWER CABLE: - with fuse holder and 2 prong metal connector
SPARE FUSE: - 5A
EXTERNAL SPEAKER PLUG: - Miniature phone plug type
MOUNTING BRACKET: - with mounting hardware, etc.
INSTRUCTION MANUAL: - with circuit diagram

For Sale

Peak Atlas LCR40
passive component analyzer

While your multimeter might be able to measure resistance, the LCR40 makes it easy to measure inductance and capacitance quickly.

Measures capacitance (1pF to 10,000uF), inductance (1uH to 10H) and resistance (1 ohm to 2 Mohm)

Manufacturer:
https://www.peakelec.co.uk/acatalog/lcr40-atlas-lcr-meter.html

Like new: $60

Email: leo49@videotron.ca Home: 450-424-6355
Leo, VE2SI

1914 April, Modern Electrics & Mechanics.
Courtesy World Radio History web page.