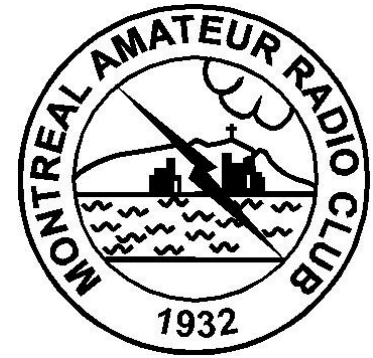


# marcOgram

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



Volume 69, Number 5

February 2023

## NEXT MEETING

# 28 February, 2023

### THIS MONTH:

Gabriel VA2QA, president of RAQI with a news update.

Ragchew and general chit-chat: 19:30  
Club meeting: 20:00

St. Thomas' Anglican Church,  
6897 Somerled (corner of Rosedale) in N.D.G. - Montreal

## FROM THE EDITOR'S DESK

As you may have noticed, our speaker for the January meeting turned out to be Eric, VE2LRZ, with an interesting presentation on 160m operation.

Our speaker this month is Gabriel VA2QA, the president of RAQI, the federation of amateur radio clubs in Quebec, in which the MARC is a member. Gabriel will bring us up to date on the latest news.

George VE2NGH will be regaling you with his Winter Field Day 2023 adventures in the March issue, but don't let that stop you from contributing your own articles and photographs.

SEE YOU THERE!

73 de Nora, VA2NH

- . . . -

## SK

### Art Horovitch VE2AHH

The Club regrets to inform you that a member from a few years ago, Art (Arthur) Horovitch, died on 29 December 2022 in Cornwall, ON.

Art will be missed by his wife Suzan Green-Horovitch, his daughters Vivian Horovitch-Kelley and Debbie Horovitch, his grandchildren Aidan and Sydney and his sister Hilda Horovitch-Smolash. Art's passions included traveling with his wife Suzan by RV, hiking in nature and communicating with people near and far on his ham radio. For many years Art and Suzan ran their farm in Alberta and then in St. Jean Baptiste, Quebec. Art was highly regarded as a master teacher who inspired hundreds of students to enjoy math in Alberta at the Vauxhall High School and in Quebec at the High School of Montreal and other adult centres.

Thanks to Samuel VE2LJV for the information.

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.

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Family Member ... .. \$35.00  
per additional family member ... \$ 3.00  
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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.

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The opinions expressed herein are, unless otherwise stated, solely those of the authors concerned, and not those of the Club, the Directors or members and do not represent the policy of the Club.

### Directors

President: Marc-André Gingras, VE2EVN .... [ve2evn@marc.ca](mailto:ve2evn@marc.ca)  
Vice-Pres: Leo Nikkinen, VE2SI ..... [ve2si@marc.ca](mailto:ve2si@marc.ca)  
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Martin Charbonneau, VA2HKR..... [ve2hkr@marc.ca](mailto:ve2hkr@marc.ca)

Club Call Sign: VE2ARC

Club Website: <http://www.marc.ca>

### Repeaters

**VE2BG** 147.06 MHz (+) 103.5

Owned and operated by the Montreal Amateur Radio Club. Back on the air but still looking for a new location.

**VE2RED** 147.27 MHz (+) 103.5

On the air from Ridgewood Ave. in Montreal; CTCSS tone of 103.5 Hz for access. Thanks to Claude Everton, the VE2RMP group and Metrocom for making this possible.

The repeaters are open to all amateurs.

### 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](mailto:ve2arc@marc.ca) for inclusion in the meeting agenda.

## Club Activities

### Monthly Meetings

(last Tuesday of the month)

28 Feb - Gabriel VA2QA, President of RAQI, news update.  
28 Mar - Leo VE2SI on electro-magnetic fields around a dipole  
25 Apr - TBA  
30 May - Show and Tell

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

### Radio Classes

The 2023 January Basic level course have commenced. If you know of anyone interested in taking the course, please direct them to <https://marc.ca/course/> for more information. The next planned Basic course will start in January 2024.

### MARC Hamfest

#### The MARC flea market is back!

The next MARC flea market will be held on 15 April 2023. The venue we found for the last hamfest was a success, so we will return to the Royal Canadian Legion Hall in Lachine, 3015 Henri-Dunant, from 09:00 to 12:00.

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](mailto: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](mailto: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 available time.**



## UPCOMING FLEAS/EVENTS

### 2023

**What:** Iroquois ARC Fleamarket  
**Who:** Iroquois Amateur Radio Club  
**When:** Saturday, 1 Apr 2023  
**Where:** Iroquois, ON

**What:** **MARC Hamfest**  
**Who:** **Montreal Amateur Radio Club**  
**When:** **Saturday, 15 Apr 2023**  
**Where:** **Lachine, QC**

**What:** NEAR-Fest Fleamarket  
**Who:** New England Amateur Radio Festival Inc.  
**When:** 28-29 Apr 2023  
**Where:** Deerfield, NH.

**What:** 37th Annual Smith Falls Fleamarket  
**Who:** Rideau Lakes Amateur Radio Club  
**When:** Saturday, 3 Jun 2023  
**Where:** Smith Falls, ON

**What:** Ottawa/Carp Hamfest  
**Who:** Ottawa Amateur Radio Club  
**When:** Saturday, 9 Sep 2023  
**Where:** Carp, ON

**What:** Montreal South Shore Hamfest  
**Who:** Club Radio Amateur Rive-Sud de Montreal  
**When:** Saturday, 21 Oct 2023  
**Where:** Longueuil, QC

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

## VE2RED WEDNESDAY 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 looking for more net operators!**

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](mailto:leo49@videotron.ca)

### 2023-02-01 Net commenced 20:00 local, 00:00Z

Net control Leo, VE2ARC (VE2SI)  
 Net closed: 21:30  
 Check-ins: 13  
 Discussion: Station equipment documentation, digital? paper, on phone?

### 2023-01-25 Net commenced 20:00 local, 00:00Z

Net control Leo, VE2ARC (VE2SI)  
 Net closed: 20:13  
 Check-ins: 4  
 Discussion: None. Repeater problem, output good, input choppy.

### 2023-01-18 Net commenced 20:00 local, 00:00Z

Net control Leo, VE2ARC (VE2SI)  
 Net closed: 21:31  
 Check-ins: 14  
 Discussion: "Green" electrical generation; are solar panels & windmills worth it?

### 2023-01-11 Net commenced 20:00 local, 00:00Z

Net control Leo, VE2ARC (VE2SI)  
 Net closed: 21:27  
 Check-ins: 12  
 Discussion: What changes should be incorporated into courses? If you took the course many years ago, what material should be removed/replaced so that the course reflects AR in 2nd decade 21st century?

### 2023-01-04 Net commenced 20:00 local, 00:00Z

Net control Leo, VE2ARC (VE2SI)  
 Net closed: 21:03.  
 Check-ins: 9  
 Discussion: What plans do you have for 2023, try something new?

# UNIDENTIFIED FLYING OBJECTS

The news services were all agog about unidentified flying objects with payloads floating over Canada and the US. Said to have originated in China, rumours were full of the details of the harm these objects could present, and the US security people were full of potential threat assessments for these objects.

Photographs soon appeared in the media, and the objects became more than a vague idea. They resembled large spherical balloons, with instrumentation suspended below them, and to a population already wary of foreign threats, they were said to be capable of carrying surveillance and hazardous materials, ready willing and able to drop these items on the population.

The first balloon entered US airspace 28 Jan 2023 over the Aleutian Islands, AK, and was said to be the size of three buses. It floated southwards over Canada's Northwest Territories, then re-entered US airspace over Idaho, travelling vaguely southeast. By 4 Feb it reached the Atlantic off South Carolina, and a US F-22 shot it down over water to avoid causing damage/harm to buildings/people on the ground. The US State department stated that the object carried an array of antennas and instruments capable of collecting and geo-locating communications; it was powered by solar panels.

9 Feb another UFO (Unidentified Floating Object) was detected over northeast Alaska, and two F-22s were dispatched 10 Feb to observe it. One of them fired an AIM-9X sidewinder missile and brought it down over Deadhorse AK. It was described as a small metallic balloon with something suspended from it. By 12 Feb the US had shot down a total of four UFOs. The balloons cost approximately \$30.00 US; flying two F-22 jets costs \$85,325/hour each, and each AIM-9X Sidewinders costs \$400,000. The whole incident was enormously expensive.

To anyone familiar with fields of meteorology (weather science) and amateur radio, these objects were clearly weather balloons, thousands of which are released globally every day. They are not powered and drift wherever the winds and the jet stream blows them, providing weather observations.

A large sub-group of the amateur radio field is very interested in outfitting balloons with small transmitters and GPS powered by solar panels and tracking the upper winds by following the balloon's transmissions of its location; they're called "pico-balloons." The UFO which had traversed Canada from northeast to southwest was shot down over Yukon, Canada, and was quite likely to be K9YO-15, an amateur

radio pico-balloon transmitting via APRS and WSPR.

A Reddit post by I. K. Luft KO6YQ explained a bit more. "... we are still watching to see if K9YO-15 transmits any telemetry today.

"So far K9YO-15 has not sent any new telemetry since Friday before sunset over Alaska. Some have misread confusing data presentation on Sondehub which lists last known telemetry as covering a time range from then to now. Currently the last we've heard from K9YO-15 was Friday Feb 10 before sunset over Alaska (00:48 GMT Feb 11). But the map on Sondehub does show the last reported position.

"These floater balloons often use only solar panels, no batteries. Batteries were dropped from the projects early on because they have limited charging cycles before they stop accepting a charge, especially in the harsh temps at altitude, -40F/-40C or worse. When the battery stops accepting a charge, it ends telemetry from the mission. So they only report telemetry during daylight, when the sun is at a high enough angle to illuminate the tiny solar panels. In the Arctic winter, the days are short and the sun might not get high enough to wake up the electronics. So it stays dormant for one or more days until it drifts back down to lower latitudes where there's more sunlight. So K9YO-15 was in a period where watchers didn't expect to hear from it for a few days. But we expected it today. So far nothing. As I write this, daylight is almost done way up there for Tuesday, Feb 14.

"We (the Amateur Radio balloon community) only expect any telemetry from it today would be via WSPR, none via APRS. WSPR uses HF and can be received at long distances, where it's relayed to Internet map sites. APRS is (usually) on VHF and UHF, only received by line of sight. There are no relay stations in range of today's projected flight course in northern Ontario and James Bay, Canada. So APRS-fed sites wouldn't show updates today anyway.

"The club in Illinois [Northern Illinois Bottlecap Balloon Brigade] that built the balloon [had tracking links but it's a dead link. Try <https://github.com/projecthorus/sondehub-infra/wiki> - Ed.]

"For an introduction, I'm Ian KO6YQ. I was involved in the first Ham Radio balloons that circumnavigated the globe starting in 2016, launched from San Jose, California. I had roles on them including tracking analyst and social media spokesman. I also organized and led the Ham Radio tracking teams which recovered the Civilian Space eXploration Team (CSXT) first amateur rocket to (suborbital) space in 2004." [Ref: RTL-SDR.COM, radio news and projects, retrieved 21 Feb 2023]

*(Continued on page 5)*

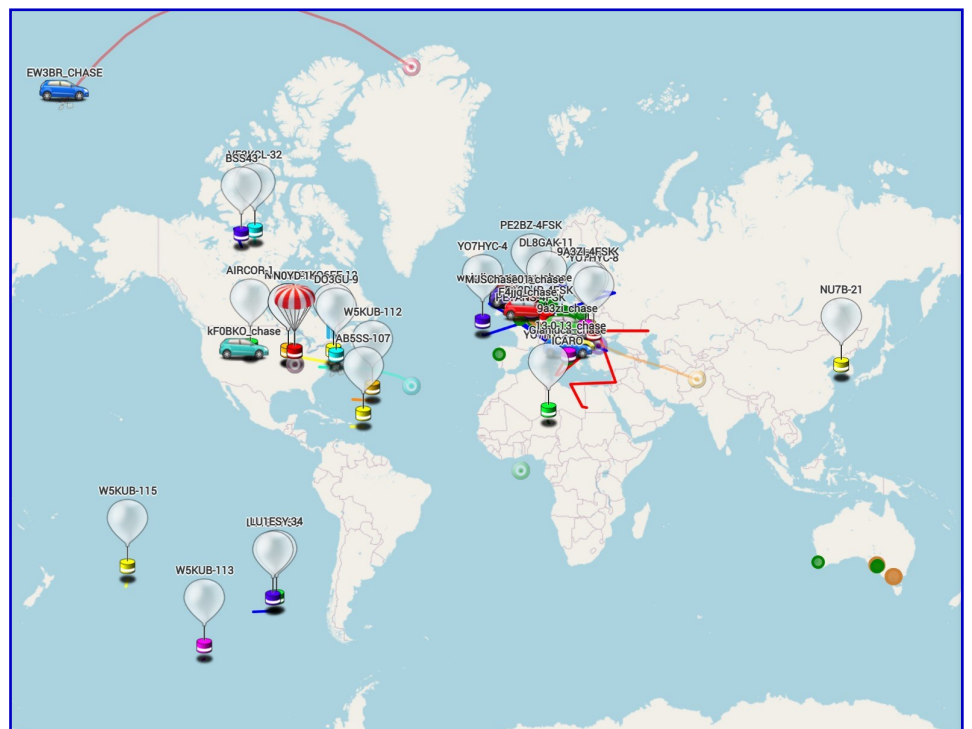
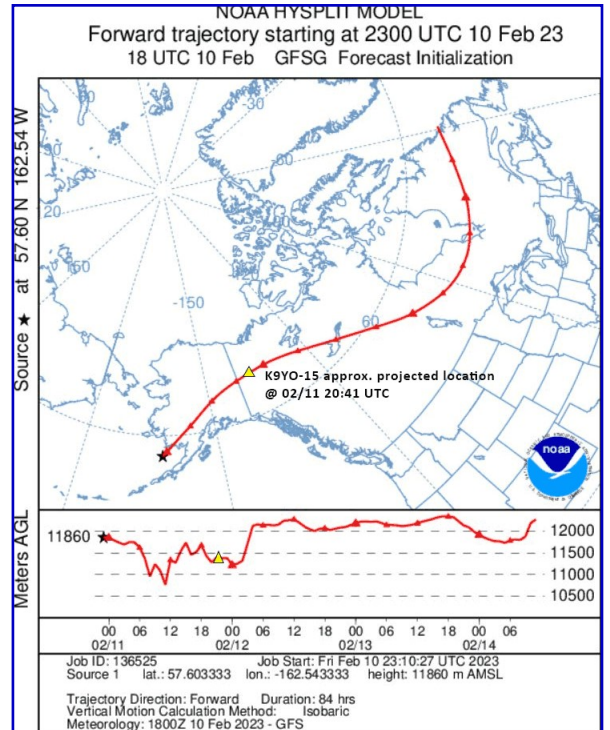
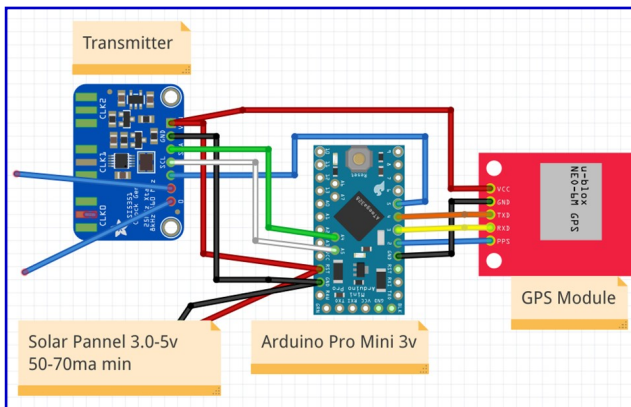


(Continued from page 4)

K9YO-15 was launched from Illinois on 10 Oct 2022 and was on its seventh circumnavigation of the globe, aloft for 123 days. It consisted of a silver mylar 32" spherical party balloon. The payload was a GPS module, Arduino, SI5351 used as a WSPR and ARPS transmitter, and a solar panel, total weight 16.4g. The balloon was incapable of stretching so its maximum size was 32". The object shot down over Canada, according to a memo from the US Pentagon, described it as a "small metallic balloon with a tethered payload," which fits the appearance of K9YO-15 perfectly. A study of its projected course puts it close to the area where the US Air Force/NORAD jet shot it down, at an altitude of approximately 40,000 feet. NIBBB Ham Radio Club has reported it as "missing in action."



**Left:** NIBBB logo.  
**Right:** NOAA track of K9YO-15.  
**Middle:** K9YO-15 payload  
**Lower left:** Balloon & payload similar to K9YO-15 pico-balloon  
**Lower right:** tracking map, SondeHub-Amateur.



# THE MONTREAL AMATEUR RADIO HAMFEST!

The Montreal Amateur Radio Club Flea Market returns this year to the same location as last year in Lachine!

We're also back to our usual Saturday, on April 15, 2023 at 9 AM

The Royal Canadian Legion Hall,  
3015 rue Henri-Dunant,  
Lachine, QC, H8S 1R5

Google Map: <https://goo.gl/maps/YP3q7LHEKBZxaCAJ6>

STM Bus # 191 stops at corner Provost/31st Av.

Enter through the front of the building.

Opening: Vendors 08:15 AM, Public 09:00 AM - to Noon

Door Prizes - - Free parking

General Admission \$8.00

Tables \$8.00 each, two for \$15.00; does not include price of admission

Reservations by email (preferred) [fest@marc.ca](mailto:fest@marc.ca)

or Voice mail: 514-316-7765

Reserve early. Number of tables available is limited.

Important: Current Public Health guidelines no longer require masking but it is recommended along with social distancing.

We hope to see you!





# FOR SALE!

## TRANCEIVERS AND TEST EQUIPMENT.

A Kenwood TS-50 transceiver with the matching AT-50 automatic tuner and the connecting cables and microphone. Both are in mint condition from a non smoking, no pets, estate of an old ham. The backup battery in the transceiver has been changed and is now in a socket if it needs to be replaced at a later date. Both original manuals are available as well some of the mounting hardware for installation in a car, boat or plane. The transceiver has 100 memories, and runs on 12 volts. It supplies power to the tuner. Radio covers from 160-10 meters and all WARC bands; 60 meters not available. 100 watts maximum power. Available modes are SSB, FM, CW and AM. The tuner can be modified to work on any HF radio.

I'm asking for \$600.00 for the two units together or best offer. I can be reached at [samuel.galet@outlook.com](mailto:samuel.galet@outlook.com) or 514-891-9954. 73 de VE2LJV Samuel Galet.



Model FM-2016a/e 2-meter transceiver with power cord and DTMF microphone. Great winter project for a new ham. Spec sheet attached. Asking \$15 OBO.

### 8. SPECIFICATIONS : 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  
**SPIRIOUS EMISSIONS:** More than 60dB down from carrier  
**MICROPHONE:** 600 ohms dynamic type with P/T switch  
**REPEATER 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)  
**SELECTIVITY:** +16KHz (70dB)  
**IMAGE RATIO:** Better than 70dB  
**AUDIO OUTPUT:** More than 1.5 watts, (THD 10%)  
**OUTPUT IMPEDANCE:** 8 ohms (external speaker jack 4 - 8 ohms nominal)

#### 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

## MORE GOODIES FROM SAMUEL VE2LJV

ITEM	INFO
	<p>Heathkit digital frequency meter IM-2410 with manual, in working condition. Asking \$85 OBO.</p>
	<p>Two leather handi holders. Asking \$5 each.</p>
	<p>Yaesu Musen frequency counter YC-500J with manual, in working condition, in original box. Asking \$85 OBO.</p>
	<p>Home-made Popular Electronics project Noise Blunker with schematic from Oct 1968, with schematic and instructions. Asking \$75 OBO.</p>
	<p>Home-made tuner with bag of plug-in coils. Asking \$55 OBO.</p>
	<p>Home-made keyer in great shape. Asking \$45 OBO.</p>
	<p>Popular Electronics completely transistorized Signal Monitor in mint condition. Asking \$85 OBO.</p>