Lastly, I needed a display terminal. I wasn't willing to shell out the cash for a laptop, besides, it's kind of overkill for this application and it's also a bit too bulky. So I turned to my programmable calculator (which, like backpacks, are all the rage among students at engineering schools). I had just bought a Hewlett Packard HP48sx, and it had just what I needed - a big screen (if you consider 3" big), a serial I/O port, and 32k of memory. All I needed to do was to write a program to emulate an ASCII terminal, since HP didn't build this in (look for this feature in the next HP product - a 'palmtop' pc) - no problem, right?

Well, a few months and much caffeine later, a colleague and good friend of mine, Paul Banasik N8ORO, and I had a working version together. It performs the basic functions of a terminal, and will display 10 lines by 30 characters - a little awkward for the 80-column format of most BBS's, but still pretty good for a calculator. We have ideas for all kinds of features for future versions, including text filtering and formatting, scripts or macros (ask a hardcore BBS'er), split screen for multiple-connect operation, as well as a few others. Another interesting note is that the HP even has a time/alarm feature that will, when programmed, turn itself on at a certain time and date, run a program, then shut off - useful for scheduled packet operations.

I'm interested in hearing if you have seen anything like this setup before, or if you have any suggestions for features you think might make the terminal program better. If you are inclined to get a similar setup going, or have any other questions, feel free to get hold of me through TFMCS or send a note to me @ *W2SEX.WNY.NY.NA.USA* (my callbook address is not current).

The Hamilton Amateur

February 1992

(Established 1932)

The Hamilton Weather Office

Get input directly from an expert!

Terry Dwyer

Modern technology in weather forecasting.
And some info on hurricanes.

Meeting: 19 February 1992 - 20:00 hrs

HARC EXECUTIVE FOR SEPTEMBER 1991/92:

PRESIDENT:	VE3OQG	Flore Manga	578-1789
PAST PRESIDENT:	VE3SON	Jim Walsh	689-6839
VICE PRESIDENT:	VE3GCP	Fred Robinson	575-5197
VICE PRESIDENT:	VE3OQX	Everett Englert	385-0879
SECRETARY:	VE3JAI	Emsley Mitchel	627-0333
TREASURER:	VE3MWH	Mark Gibson	389-4308
MEMBERSHIP:	VE3LTD	Paul Webb	574-0818

HARC COMMITTEE CHAIRPERSONS FOR 1991/92:

AWARDS & CONTESTS:	Open		
HISTORIAN:	VE3BLQ	George Olenick	383-7338
PROPERTY:	VE3DWJ	Dave Bruton	383-9808
BULLETIN EDITOR:	VE3SON	Jim Walsh	689-6839
EDUCATION:	VE3EKY	Bernie Granby	527-7175
EMERGENCY COORD:	VE3SMF	Stuart Fedak	628-4131
FIELD DAY COORDINATOR:	VE3OQX	Everett Englert	385-0879
FLEA MARKET:	VE3DKJ	Keith Johnson	529-1603
HEALTH & WELFARE:	VE3GFE	Stan Bolibruch	528-4002
PROGRAMS:	VE3GCP	Fred Robinson	575-5197
PUBLIC LIASON:	VE3GCP	Fred Robinson	575-5197
HOSPITALITY COORD:	VE3OGQ	Mary Urbanski	388-8383
60th ANNIVERSARY PLAN:	VE3GCP	Fred Robinson	575-5197
SWAP NET CONTROL:	VE3TJB	Ted Boerkamp	578-9266
REPEATER:	VE3OCY	Don Graziano	560-1960
TECHNICAL:	VE3OCY	Don Graziano	560-1960
VE3DC LICENCEE:	VE3FHQ	Glen Gibson	385-2786
VE3NCF LICENCEE:	VE3OCY	Don Graziano	560-1960
VE3RCB LICENCEE:	VE3NYC	Paul Hazen	
DESIGNATED EXAMINERS:	VE3EKY	Bernie Granby	527-7175
	VE3DKJ	Keith Johnson	529-1603
	VE3GCP	Fred Robinson	575-5197
	VE3SMF	Stuart Fedak	628-4131

FEBRUARY MEETING SPEAKER

On Wednesday February 19, 1992, Mr Terry Dwyer will be our guest speaker. Terry is the meteorologist at the Department of Environment at the Mount Hope Airport Weather Station. Mr Dwyer will tell us how a weather man does his job and about some of the tools he uses. There will be a short film on hurricanes and slides of the Mount Hope station. Technology is a big part of weather detection these days and that includes computers and satellite communications.

This promises to be a very interesting evening, so please be prompt.

VE3GCP Fred Robinson, Programs

BITS AND PIECES

The JANUARY GENERAL MEETING with VE3DVV and VE3OCY speaking on packet was very well attended (52 people). The topic was so interesting, we didn't get to the coffee and donuts until 9:40!!! This sort of QUALITY PRESENTATION gives you a real appreciation of the EXPERTISE held by club members.

Also at the General Meeting, our Membership Chairman VE3LTD Paul was busy. He took in two RENEWALS; Vito Delviccio and VE3FRJ Robert James, and TWO NEW MEMBERS; VE3ZKO Norm McDonald and Andy Deli. Let's welcome Norm and Andy, and welcome back Vito and Robert. Total membership now stands at 154.

It was nice to see several visitors at the General meeting. One of these was YU7BCD Tony Skorucak. Tony is in Natural Sciences at McMaster and is aiming for a Physics degree. If you don't recognize a face at the meetings, extend your hand - you may meet someone as interesting as Tony.

If preliminary indications are correct, there is going to be another CROP OF NEW HAMS surfing the airwaves of Hamilton shortly. Some of VE3EKY Bernie's latest class of students jumped the gun and took their tests early. Five tried and five were certified. The youngest was 13!! If their scores are any indication of what's to come, there should be no fears of our hobby fading away. Not in HAMilton at least.

Listen for their NEW CALLSIGNS- VE3KSC Sue, VE3YOH Yohann, VE3KSN Kelvin, VE3OCM Odile and VE3HTU Richard.

CARF NEWS BULLETIN 01-92 15 JANUARY 1992
Issued at CARF Headquarters, P.O. Box 356, Kingston, On, K7L 4W2
Editor: William H. (Bill) Mason VE3NFU

ITEM 1. WANTED: CARF is planning a listing of Canadian Nets, coast to coast. This information will be used as a CARF Aid and will be printed in The Canadian Amateur magazine and also will be available as hand-outs. Information is needed on the frequencies and times of all Nets, such as Provincial, Trans-Canada, CJ, YL, local club nets, swap-shops, voice, CW, packet, RTTY, QRP, in fact Nets of every sort. Please send this information to: Roy Kerr VE3ALK, R.R. # 1, PARRY SOUND, ON, P2A 2W7, who has kindly volunteered to do this for CARF.

ITEM 3. SATURDAY 11 APRIL 1992 SOUTH PICKERING AMATEUR RADIO CLUB ANNUAL 'HAMFEST' FLEAMARKET. For information contact Ken Grant VE3FIT, 416-283-6271, or P.O. Box 54, PICKERING, ON, L1V 2R7

ITEM 4. FRIDAY, SATURDAY, SUNDAY 24, 25, 26 APRIL 1992 DAYTON HAMVENTION - General info: 513-454-1456, FAX, 513-890-5464, ATT: HAMVENTION, or write P.O. Box 964, DAYTON, OH 45401-0964, U.S.A. Lodging info: 513-223-2612 (no reservations by phone) or write: LODGINGS, Dayton Hamvention, Chamber Plaza, 5th & Main Streets, Dayton, OH 45402-2400, USA. Fleamarket info: 513-767-1107

ITEM 5. To commemorate the 500th Anniversary of the Discovery of America by Columbus, the following prefixes have been assigned for use by Canadian Amateurs from 00:00 hrs on 1 January 1992 to 24:00 HRS on 29 February 1992, local time.

VE1-VE8	may use VC1-VC8	VO1,VO2	may use CY1,CY2
VY1,VY2	may use CZ1,CZ2	VY9	may use CZ9

ITEM 8. To commemorate the 150th Anniversary of the Geological Survey of Canada, the following prefixes have been assigned for use by Canadian Radio Amateurs from 00:00 hrs on 1 March 1992 to 24:00 hrs on 30 April 1992, local time:

VE1-VE8	may use VG1-VG8	VO1,VO2	may use XJ1,XJ2
VY1,VY2	may use CG1,CG2	VY9	may use CG9

ITEM 9. Guides On The Air: Fill your shack with YL Amateurs of the future, and help them earn the Girl Guides Amateur Radio Badge. Saturday, Sunday , February 22, 23, 1992.

TO USERS OF THE CLUB ROOMS
AT THE RED CROSS BUILDING:

PLEASE NOTE

Any operators or users of the Club Headquarter facilities (radio room and meeting room) at the Red Cross Building during normal business hours MUST be out of the building by 4:30 p.m. sharp.

Failure in this respect may result in embarrassment to the Club with further restrictions on our privileged access to the building.

The CLUB COMMITTEE CHAIRMEN are pretty busy. You may have received a call from VE3DWJ Dave (PROPERTY CHAIRMAN) looking for some item you borrowed from the Club in 1986 and forgot to return. VE3SMF Stuart (EMERGENCY) is settling into the job. He's planning some exercises, taking inventory and looking into getting some other funding for his projects. VE3EKY Bernie (EDUCATION) is planning ANOTHER CLASS starting the end of February. There may be one or two places open for the course, check with him 527 7175. VE3GCP Fred, wearing his PROGRAMS hat has announced and "OPEN DOOR" policy for our meetings. Along those lines, he has invited the entire BURLINGTON AMATEUR RADIO CLUB to the February General Meeting. The program promises to be a great one, and the icing on the cake is all the old friends you will get a chance to see again. As 60th ANNIVERSARY CHAIRMAN, VE3GCP Fred has enlisted the assistance of VE3TTO Gary to approach CITY HALL to get a proclamation commemorating our Diamond Jubilee. As PUBLIC LIAISON, Fred reports several upcoming PUBLIC SERVICE EVENTS:

AROUND THE BAY ROAD RACE - 22 March, Volunteers Wanted, Newcomers Welcome - contact VE3GCP Fred 575 5197 or VE3SMF Stuart 628 4131
GREAT RIDE FOR CANCER - 26 April, Volunteers Needed
RED SHIELD APPEAL (SALVATION ARMY) - 4 May, Volunteers Wanted

All these events involve radio support in one way or another, and are good exercises in proper radio practice. Last year, the Great Ride for Cancer raised $55,000, and the club received a nice thank you for their radio coordination. We also recieved a nice thank-you letter for our work on the 50 Mile Golden Horseshoe race. Fred is investigating the possibility of setting up an Amateur Radio Booth at the WINONA PEACH FESTIVAL this year.

TESTING REPORT - FIVE FOR FIVE

The eighth of January testing session produced five new amateurs out of five candidates. This type of success is a joy for the testers and especially for Bernie VE3EKY who taught four of the five. The new hams are Sue and Yohann Calpu (mother and son), Kelvin and Odile Mangaroo (son and mother- many of us recognize the last name - Ken VE3NCM should be proud) and Richard Hutchinson. A special pat on the back for Yohann and Kelvin for their impressive work - Yohann is 13, Kelvin is 14 years old.

These results are a tribute to Bernie VE3EKY's abilities as a teacher. It is very rare that we get so many scores in the 90's.

VE3LMS GRANT, (416)544-4151
3 COMPUTER PWR SPLY BY CONDOR, 120 WATTS, HAS +5 VDC +24 VDC AND -12 VDC OUTPUTS, BRAND NEW IN BOX $30 O.B.O.

VE3JTE HANK, (416)878-3791
3 SWITCHING PWR SPLY BY L.H. RESEARCH, MEASURES 5 X 8 X 11, OUTPUT 11-16VDC, RATED 1KW THEREFORE 15V @ 67A POSSIBLE, IN MINT CONDX $200

VE3GTU JAY, (416)639-9824 NIGHTS (416)827-7411 DAYS
2 ICOM 2SA 2M H.H., 7.2V AND 12V BATTERY PACKS, CHARGERS, TONE BD., MANUAL, MODIFIED COVERAGE 136-174MHZ RECEIVE AND TRANSMIT $200 OR SWAP FOR VHF RIG

VE3DXT DEREK, (416)389-2936
o YAESU FR101 RECEIVER, COVERS 17 BANDS $200

VE3SCH CONRAD, (416)560-1031
2 KNWD TR2600A 2M H.H., SPKR MIC, WALL CHARGER, DESKCHARGER, DC-DC CONVERTER $250 O.B.O.

VE3ISZ FRED, (416)827-8425
2 2-IBM COMPATIBLE AMBER COMPUTER MONITORS $20 + $25

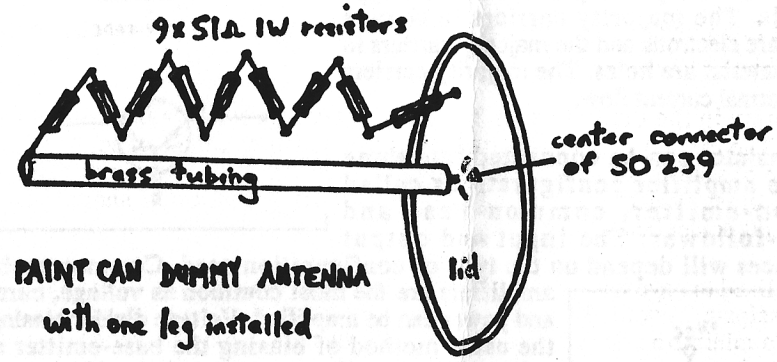
VE3GGY HERB, (416)892-2304
2 ARRL HANDBOOKS, YEARS 48, 52, 54, 56, 58, 60, 65, 68, 71, 72, 78 $5 EA.

VE3WSW WALT, (416)544-0200 AFTER 4:30PM
2 RADIO SHACK PRO 2022 SCANNER, 200 CHANNEL, MANUAL, COVERS 30-960MHZ, BRAND NEW $275

VE3TMM BOB, (519)756-0291
2 HW101 HF RIG, MIC, SPKR, P/S, 2 SETS TUBES, 2 SETS SPARE FINALS $250
o RANGER COMMUNICATIONS MARINE RADIO, MODEL RC18500, LOTS OF FEATURES, 25W OUT $200

VE3ANB RICH, (416)546-4734 WORK# OR AUTODIAL 10
2 KNWD PC1 PHONE PATCH, 4 PIN TYPE $55

purposes. However it's nice to know that everything is symmetrical and balanced. Take your choice.



73, Frank Gue, VE3DPC

Editor's note:
For resistances in series: R(total) = R1 + R2 + R3 +...+ Rn
For resistances in parallel solve the equation for total resistance:
1/R(total) = 1/R1 + 1/R2 +...+ 1/Rn

UNDERSTANDING BIPOLAR TRANSISTOR REFERENCE DATA

by DON KOURI VE3BZE

Amateur radio publications dedicate articles pertaining to the building of station accessories and to the modification of existing ham equipment. Many hams have been discouraged from electronic experimentation because they were unable to obtain the same components that the designer of the circuit had specified in the project's list of materials. This article will address the topics of bipolar transistor substitution and understanding transistor specification data.

The three sections of a bipolar transistor are the emitter, base and collector. One lead from each section is brought out of the transistor via the packaging case for connection to circuit components. For linear mode operation (see next page) the emitter-base junction is forward biased and the collector-base junction is reverse

- VE3DVV John gave an interesting history of packet radio, from its genesis in September 1979 when Dr. DiMercado of the D.O.C. gave the go-ahead to Canadian amateurs to experiment with this mode. He mentioned some of the Canadian pioneers in the field, VE7AVU in Vancouver, VE2BQF in Montreal, an Ottawa group and the Hamilton group including VE3DSP Glen and VE3HWB Ken. John covered the U.S. contributions, which came after F.C.C. approval in 1980, and included the Tucson AXL25 protocol and V1 and V2 protocols.
- VE3OCY Don outlined the necessary equipment for packet, with examples, and explained the increase in bandwidth necessary for an increase in baud rate. He gave common packet frequencies, frequencies to avoid, good operating tips, showed us how a packet travels the packet nodes to reach it's destination and followed with an enlightening slide presentation of actual operation.

Meeting adjourned for coffee at 9:42 pm and resumed approx. 10:00 pm.

- VE3MWH Mark, Treasurer gave the bank balance - 6907.04
- VE3SMF Stuart, Emergency Coordinator related a fascinating story of how his Red Cross card got him out of a harrowing situation in Romania. He thanked the donors of equipment which he had taken overseas. Stuart mentioned plans to upgrade and use more frequently the Red Cross station VE3RCB. He also plans some exercises tied in with the "Worked all Ports" project.
- FROM the floor, VE3EIK suggested the club investigate purchasing the Callbooks on CD ROM, and making them available on VE3DC packet system.
- VE3GCP Fred, V-P, 60th Anniversary Chairman intends to strike a small committee to handle possible anniversary events. He asked for input and volunteers for the legwork. He intends to invite the Burlington Amateur Radio Club to the next General meeting. VE3TTO Gary offered to help Fred.

MOTION TO ADJOURN by VE3DKJ Keith, seconded by VE3SMF Stuart, carried.
Meeting closed at 10:29 p.m.

THESE MINUTES TAKEN BY:
Keith Johnson VE3DKJ, temporary acting secretary in VE3JAI Emsley's absence

COLUMN EXPLANATION:

Description and Application: Provides basic information about the device. The device is made of silicon, NPN, and used as an AF/RF driver. Although not stated, this device can be used in general purpose low power applications.

Collector to Base Volts: The voltage applied between the collector and base not to exceed 75 volts. Also referred to as the collector breakdown voltage.

Collector to Emitter Volts: 40 volts maximum.

Base to Emitter Volts: Sometimes called the emitter breakdown voltage. Not to exceed 6 volts.

Maximum Collector Current: Maximum current handling 600 mA. Note: designers would keep current values well below maximum.

Maximum Power Dissipation: Practically all of the power dissipated occurs at the collector junction which is reverse biased. This can be calculated by multiplying the Collector Current by the Collector-Emitter Voltage. Based on 25 degrees C. 500 mW maximum.

Frequency (Current Gain - Bandwidth Product): Frequency at which the current gain in the common-emitter configuration is equal to one. In this device that frequency is 300 MHz.

Current Gain: 200 typical. Circuit current due to gain must not exceed maximum collector current.

Packaging: In addition to outlining the package type for physical mounting and dimensioning, the leads are also identified.

Typically many transistors used in general purpose applications can be substituted without altering circuit operation. At many of the hamfests that I have attended vendors have been selling circuit boards that contain many bipolar devices for under a dollar. By using data sheets many of these transistor devices can be implemented in your projects and repairs.

THE ORDER OF MERIT

The club has several awards for various purposes (see a summary in your October 1991 bulletin). The Order of Merit is not a regularly awarded distinction. It is given, subject to review, when a member or past member of the club performs a "distinguished service in the realm of amateur radio" worthy of recognition. There are no pre-set nomination forms, and nominations can be made at any time.

Keep this award in mind through the coming year and think back over the past year. If you know of any actions or services that fit the criteria, let the executive know as well.

NOMINATION RULES OF THE ORDER OF MERIT:

The "Order of Merit" is awarded by the Hamilton Amateur Radio Club in recognition of distinguished service, in the realm of amateur radio.

The person eligible to be nominated for this award shall both
a) be a member or past member of the club
b) have performed a service to amateur radio which is not that normally expected for any appointment or elected position or office; or have performed a service to amateur radio which has prompted and resulted in greater interest and enjoyment from amateur radio for the members of the club, or any allied organization, which is worthy of recognition by the club.

Any club member may nominate a person in writing for this award, provided that the nomination states the service performed by the nominated person that warrants the nomination.

The nomination must be signed by three current club members.

Nominations will be reviewed by the Awards Committee.

Awards will not be awarded on an annual or fixed time bases, but according to the frequency that such truly distinguished services are performed or brought to the attention of the club.

Persons awarded the "Order of Merit" shall have their name and call sign engraved upon the "Order of Merit" plaque.

(This is an abridgement of the full rules, but contains all the information necessary regarding nomination rules. The omitted parts govern Awards Committee selection and voting. Full text can be read in the "Hambook of Job Descriptions" kept at head office).

MARY VE3OGQ's COOKIE RECIPE

YOU TASTED THEM AT THE LAST GENERAL MEETING, NOW YOU CAN HAVE THEM AT HOME

VE3OGQ Mary, our HOSPITALITY COORDINATOR, puts in more than a little extra effort into her duties. Rather than just buy the cookies, most of the time she brings something she has whipped up herself. At the January meeting Mary outdid herself. Several members asked for her recipe to be published, so here it is:

Cookie recipe from the Hospitality Coordinator Mary VE3OGQ
(makes 7 to 8 dozen)

1 cup margarine	1 cup white sugar	1 cup oil
2 eggs	1 cup rice krispies	1 cup flaked coconut
1 cup rolled oats	1 teaspoon soda	1 teaspoon salt
1 teaspoon cream of tartar		3.5 cups flour

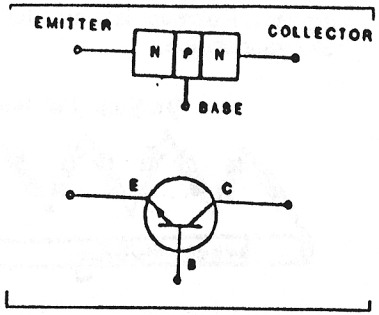
Cream margarine with sugar until light and fluffy. Add eggs and beat. Add oil and beat well. Add all other ingredients, flour last, and mix. Drop from teaspoon onto baking sheet. Bake at 350 deg F 12 to 15 minutes. Remove to wire racks.

MINUTES

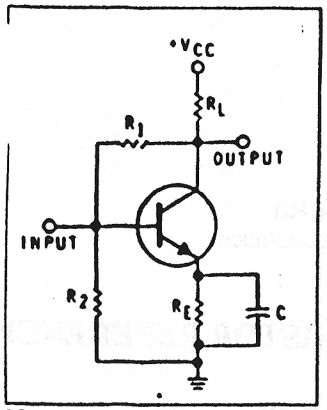
General Meeting, Hamilton Amateur Radio Club, 15 JANUARY 1992
Location: Nash Auditorium, Chedoke Hospital Grounds
Start time: 8:07 p.m., with VE3OQG Fiore presiding, 52 total attendance

- VE3TJB Ted reported on his unsuccessful attempt to get a special callsign for the club's 60th anniversary, noting the stringent requirements that the DOC has for such requests.
- VE3GCP Fred explained that his scheduled speaker (topic Weather) wasn't available, and introduced VE3OCY Don and VE3DVV John to speak on packet.
- VE3OCY Don gave a brief intro to packet, mentioning it started in Canada, and introduced VE3DVV John.

biased. The transistor can be constructed using either silicon or germanium. The semiconductor material can be doped to produce N and P type materials. The majority carriers in N-type material are electrons and the majority carriers in P-type material are holes. The majority carriers sustain normal current flow.



The transistor can be connected into three possible amplifier configurations called common-emitter, common-base and emitter-follower. The input and output impedances will depend on the type of configuration used. Common-emitter amplifiers are the most common as voltage, current and power can be amplified. Voltage divider biasing is the usual method of biasing the base-emitter and collector-base junctions.



A semiconductor reference manual is a must for the experimenter. The reference manual allows cross referencing between different manufacturers of a similar device. Example:

417-109(Heath)	123AP
417-109-13163	123A
417-110	123A
417-110-13163	123A
417-111	129

The design calls for a Heath 417-109 transistor. Using the reference manual it can be seen that an ECG 123AP can be substituted with acceptable results. Note: I use an ECG manual for my cross referencing. Other manufacturers produce similar manuals.

A good quality manual will have an index, specification, application, and cross reference sections. To find the specifications of an 123AP simply look the number up in the index and turn to the page indicated in the reference section.

ECG Type	Description and Application	Collector To Base Volts BVCBO	Collector To Emitter Volts BVCEO	Base to Emitter Volts BVEBO	Max. Collector Current Ic Amps	Max. Device Diss. PD Watts	Freq. in MHz fT	Current Gain hFE	Package Case	Package Fig. No.
ECG123A	NPN-Si, AF/RF Amp, Sw	75	40	6	.8	.500 (TA = 25°C)	300	200 typ	TO-18	T2
ECG123AP	NPN-Si, AF/RF Amp, Driver (Compl to ECG159)	75	40	6	.6	.500 (TA = 25°C)	300	200 typ	TO-92	T16

To list items: VE3NCF (146.76) Tuesdays 8 pm, OR Call Ted (VE3TJB) 578-9266 or Ralph (VE3BYM) 388-6146 or Rich (VE3ANB) 547-8192, OR leave message on the VE3DC Packet BBS (145.590 MHz) or via modem on BBS at 575-4745 (pick your password) to Ted Boerkamp.

Items accepted should be related to the enjoyment of our common hobby, Amateur Radio - this has been interpreted to include also computer equipment, C.B. and other electronic gear that can be used or converted to Amateur Radio use. All prices are negotiable unless otherwise stated. Listings are read over the air for four weeks, published once in The Hamilton Amateur, and posted on the packet and computer BBS VE3DC (sysop VE3JSJ Gord) 145.590 and 575-4745. The Swap Shop meets every Tuesday evening, except the summer months at 8:00 p.m. on VE3NCF 146.760. During the swap shop, a telephone number is usually provided for those without 2 meter capabilities (SWL's, new hams) to provide access to the net. Number in front of listing is number of weeks already on.

29 JAN 1992

***VE3JIS JACK*, (416)648-6443**

2 UNIDEN 2510 10M RIG $325
o RCI 2950 10M RIG $325

***VE3PKY CHRIS*, (416)547-3169**

2 DIAWA LA2035R 2M LINEAR AMP, 2W IN 20W OUT, GASFET PREAMP $75
o 4A HR NICAD BATTERY PACK HAS 10 4A D-CELL NICADS $50
o QUANTITY 12V GEL CEL CHARGERS $8 EA. or 2/$15

***VE3JCJ JERRY*, (416)544-7770**

3 ANTIQUE GRS 6CH BASE STATION MADE BY GUARDIAN, WILL TRADE FOR OLD TRANSISTOR RADIOS (AM/FM HANDHELD TYPES ONLY)

***VE3BLD LES*, (519)822-1975**

3 KNWD TS830S, MC50 DESK MIC $650
o ICOM AT500 AUTOTUNER $460
o ISOPOLE 2M ANT $50

***VE3CZI NORM*, (416)335-8962**

3 2-XT CLONE COMPUTERS, 640K RAM, MONO VIDEO CARD AND MONOCHROME MONITOR, ONE HAS SINGLE 5.25 DRIVE AND 10M H/D, SECOND HAS PAIR OF 5.25 DRIVES AND 20M H/D FIRST ONE PRICED $375, SECOND ONE PRICED $425
o GEMINI 10X PRINTER $115
o ZENITH MINI SPORT LAPTOP COMPUTER, 2M RAM, DOS 3.3, LAPLINK, 1200 BAUD INT MODEM, EXTRA BATTERY AND CHARGER ASKING $1000

PROJECT: LOW POWER DUMMY ANTENNA
by VE3DPC Frank Gue

Here is a low-power dummy antenna that is cheap, light, dry, low-reactance, fully shielded and easily made.

The dummy in the diagram uses 81 51-ohm, 1-watt resistors bought for $2 at Dayton. The unused paint can is available at some stores for $1 or so, or you can clean one of your own. The SO-239 is likely around 75 cents. The center post is a piece of brass tubing of the kind available at all good hobby shops. All the components solder beautifully.

I'd have liked to have had 10 limbs of 10 (100 watts) but there wasn't enough room. So to dissipate 81 watts I needed nine limbs in parallel, each of nine resistors in series. To minimize self capacitance and self-inductance, they are series connected zig-zag and spaced around the can on radials 40 degrees apart. The assembly looks pretty rough-and- ready but actually is carefully spaced. The center post is cut half an inch shorter than the depth of the can. The series limbs are soldered to the can lid at one end and into the center post at the other. Check resistance, after each limb goes on, against the series-parallel formulae in the Handbook. If it is building up low, make one limb 10 instead of nine in series. If high, let it go until you are done and then solve the Handbook formula for the resistance needed to trim down to your 50 or 52 ohms. This resistor will be much higher in value and will be unlikely to need to be over 1 watt. In my case, I needed one leg of 10 resistors, and obtained 51.8 ohms.

To eliminate springiness I tied and glued each outside joint to its neighbour with a continuous piece of string.

The dummy load is finished by pouring in a half cup of high-temperature flat black stove paint, closing up, rotating carefully until all inside parts are covered, then pouring off the excess. Whan that has dried, clean out the lid parts with steel wool, close up permanently, paint the outside with the same paint. The flat black improves heat transfer.

The dummy is good for 81 watts continuous, 100 watts momentary, and has less than 4% reflected power across all frequencies from 1.8 to 30 mHz. It is usable at 144 mHz but is more reactive. Its power handling capability could of course be raised by oil filling; but then one gets into leakproofing SO239's and other messy problems.

You might tap one of the resistor strings to bring out some low-level RF, for testing

VE3RMX DAVE, (416)957-7137
1 SONY 2010 PORTABLE SHORTWAVE RECEIVER $400

VE3OZY RICK, (416)544-3253
1 YAESU FT101ZD HF RIG, 500HZ CW FILTER, FAN, MIC,MANUAL $600

VE3YAG RICHARD, (416)572-6380
1 1991 NORTH AMERICAN CALLBOOK $15

DON'T MISS THE PEEL FLEAMARKET

SATURDAY MARCH 7, 1992

ADMISSION $5 from 9-10:30
$4 from 10:30-14:00

MALTON COMMUNITY CENTER
3540 MORNINGSTAR DRIVE
(NEAR AIRPORT)

TALK-IN
VE3PRC 146.880 -.600

DOORS OPEN: VENDORS 7:00
GENERAL PUBLIC 9:00

ITEM 10. THE ARAWA REPUBLIC OF BOUGAINVILLE, A South Pacific island of 160,000 people, declared their independence from the Territory of New Guinea on 17 May 1990. Papua, New Guinea, responded by blocking the island. The interim Bougainville government has now authorized its first amateur radio licence. Licence NO. 1 and the callsign C15A goes to Sam Voron VK2BVS of Roseville, NSW Australia, who is affiliated with the Glenn Baxter/K1MAN International Amateur Radio Network.

Third party no-charge messages are allowed. Maximum transmitter power: 10 kilowatts output mean or peak power. The licence was authorized by the Secretary for the Republic of Bougainville on behalf of the Communications Minister on 3 December 1991. While Bougainville amateur licence No 1 authorizes all modes of traditional Ham frequencies, there are some differences ... for example 1.6-2.0, 26.4-29.7, 30-56 and 70-73 MHz. Credit W5YI Report.

ITEM 11. IPARN IS COMING TO ONTARIO: Many Ontario Amateurs have recently received information on IPARN - The Inter-Provincial Amateur Radio network. IPARN is building a Canada-wide, full-time satellite network which will be interfaced to local repeater networks in every province and territory.

You will simply use your handheld and your local repeater to talk from one province to another ... coast to coast! This is a chance for many newly licensed Amateurs to work 'DX' on 2 metres! The network is already operating in B.C. and Alberta and has been for over a year and a half with regular nets and many new friendships made. IPARN recently announced a target date of 1 June 1992 for expanding the satellite network into Ontario through TFMCS and VE3ULR Repeater Association networks.

The key to reaching this target date is membership support. If you have not yet received any information on IPARN please let them know by writing to: IPARN, P.O. Box 3156, LANGLEY, BC, V3A 4R5. If you have already received some information, take another look at it and seriously consider joining IPARN today. This is your opportunity to have a say in the future of Amateur networking in Canada.

ITEM 12. Please note change in masthead. After nearly four years of twice a month bulletins I have run out of inspiration. The news service Editor is now Bill Mason VE3NFU, who has recently retired from the Kingston Whig-Standard newspaper. Please send bulletin copy to Bill c/o CARF Headquarters in Kingston. 73 and thanks for your input and co-operation in the past years. VE3NB.

73 de VE3VCA

AUDIT - 1990/91

I have completed the audit of the club's financial records as delivered to me in September 1991 for the financial year beginning 01 September 1990 and ending on 31 August 1991. Following is a summary of my report:

Opening Balance: 2005.18 Expenses: 5824.68 Closing Balance: 3043.84
Income: 6863.34

I believe the balance sheet and transaction record accurately reflects the financial status of the Hamilton Amateur Radio Club as at 31 August 1991. Details are available from the Club Executive.

Dave Rypma, VE3HTC
1991 10 23

THE PRESIDENT'S MESSAGE

Dear Friends,

Again, January 15, 1992 was a good meeting with interesting issues on Packet Radio. Both our guest speakers gave an excellent and interesting presentation. Thank you to John and Don for the good work and interesting issue. For February 19, 1992 our program coordinator has scheduled another excellent surprise for all of us, please be there.

I would like to congratulate our hospitality coordinator Mary VE3OGQ for the excellent work and effort shared with us in the Club. She always has a surprise home brew cookies.

I won't stop to thank the executives and all of you in the support and interest in the Club, without you it would not be a Club. Lately many new members have joined the Club, please let us give them a hand to encourage them to be good amateur radio operators.

Many events are scheduled for 1992 but we need some help to assist our committee chairmen, if you are interested, please let us know. Don't be shy or afraid to come forward for the good work. We always need supporters.

Best 73, VE3OQG Flore, President, Hamilton Amateur Radio Club

THE HAMILTON AMATEUR RADIO CLUB

BOX 91215 Effort Square Postal Outlet, Hamilton Ontario Canada L8N 4G4

CLUB MEETINGS:
8:00pm on the 3rd Wednesday of each month except for July & August (special arrangements are often made for the December meeting as well), in the Nash Auditorium, Chedoke Hospital. Non-members & friends are welcome - coffee and donuts on the house!

EXECUTIVE:
Meets at 1930 on the fourth Wednesday of the month, except June & July, in the Radio Room, Red Cross, 400 King Street East.

STATION:
An emergency radio station is maintained in the RED CROSS, HAMILTON BRANCH (400 King East).

MEMBERSHIP:
$25.00 per year with a common renewal date of September 1. Included is a subscription to the club bulletin. Additional Family Memberships (no bulletin) $1.

EDUCATION:
Call Bernie (VE3EKY) or Stan (VE3CFE) for information on Amateur Radio training opportunities. Phone numbers are on the front cover. Licence testing on the 2nd Wednesday of the month (with appointment).

REPEATER:
VE3NCF, Located on the Hamilton escarpment it is available for use by any amateur. Input: 146.16 Mhz. Output: 146.76 MHz. Part of the VE3RPT Link system. Contact a member of the Club Executive for information concerning Emergency use, Autopatch, Mail-boxes, Links etc.

FIELD-DAY:
HARC operates a multi-station site during Field- Day. Contact coordinator Ev Englert, VE3OQX, for information. His number can be found on the front page.

SWAP-NET:
Every Tuesday at 8.00 pm on VE3NCF (146.76/16) except July & August. Contact Ted, VE3TJB if you have items to buy or sell. Swap Shop listings are also available on the club's packet bulletin board station VE3DC operated by VE3JSJ on 145.590 FM.

FLEA-MARKET:
Held during September each year at the Ancaster Fair Grounds. Note that the flea market has both indoor and outdoor sales facilities. Call to reserve tables/power.

BULLETIN:
"The Hamilton Amateur", the official news bulletin of the club, is published 10 times a year and sent to all full club members (family members share a bulletin) during the first 2 weeks of the month (except July and August).

REPRINT OF A REPRINT:

The following article was published in last month's bulletin, but unfortunately was very difficult to read. Due to the overwhelming interest in the subject matter, we will try again. The article is taken from the Toronto FM Communications Society Inc. Newsletter.

SHIRTPOCKET PACKET

by PAUL SMITH

N2KYW Since I've just signed on with TFMCS, most of you probably don't know me (except perhaps if Lyman BEG, John POJ, and Van ARV recall their visit to the Tonawandas). I've been a ham for two years and in packet for one, and I'm currently in college.

Up at school (which is in "8" land) I enjoy getting on the air with packet, partly to get away from the books, and partly because I think it's so interesting. We have a club station at school (K8HPS - perhaps you've heard the call on 10m?) which has a packet setup, but I can't always get to the shack when I want to. What I needed was a QRP station of my own - something I could carry around in my backpack (ever notice the abundance of backpacks around campuses?) for whenever the packet bug struck.

The first step was to get a portable rig - easy enough, already had it. I use a Yaesu FT-411. Second, to find a portable TNC. Heathkit has a nice unit about the size of a deck of cards, and will run on an internal ni-cad pack. The model is HK-21 and it's got some neat features to boot. It's a bit pricey for a college student, but hey - it's for ham radio, right?