CARF
the canadian amateur
October 1978 No. 9

Tariff Board hearings

For some years the request for lowering of tariff on Amateur gear has occupied a considerable amount of thought and time in Amateur circles but never seemed to get anywhere.

Now, however, with a change in procedures the Tariff Board will hold public hearings "during which it will deal with all representations concerning hobby equipment".

Your Federation, which has already attended hearings to see how they work, will present a formal brief for the abolition of tariffs on Amateur equipment to the Board when it holds a hearing in Ottawa during the week of November 13.

Continued on Page 2

'No-Code' Experimenter ticket arrives

After what was probably one of the most extensive and excellent examples of the consultative process, changes to the Radio Regulations, featuring "packet radio" and the new "no-code" certificate, known up to now as the "Experimenter" ticket were put into effect September 30 by DOC.

Holders of the new ticket, now called the "Amateur Digital Radio Operator's Certificate" will be permitted operation on two metres and above using various modes of operation, including pulse modes. They may obtain an Advanced certificate after a year's operation and passing a 15 w.p.m. code test.

Advanced Amateurs may use pulse modes after passing the relevant portion of the new exam. The new exams for all three classes of certificate will start November 15 this year.

Packet radio will be permitted to all three classes in certain parts of the 220 MHz band. Along with other modes it may be used from 220.1 to 220.5 MHz. An exclusive two megahertz slot for packet radio only is allowed from 221.0 to 223.0 MHz. There are no other changes in the 220 band which affect Amateur and Advanced class operators.

Another exclusive packet radio slot is shown from 433.0 to 434.0 MHz. Packet

Continued on Pg. 17

CARF the canadian amateur

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Editor:
VE3CDC Doug Burrill

Publisher:
Steve Campbell

Slow speed net

A slow speed CW net, sponsored by the London, Ont. ARC will start on Monday, Sept. 18, 1978. The net is open to all and will operate on 3675 kHz at 7:30 p.m. (Eastern Time) Monday to Friday. Central station speed will be 10 wpm.

For further information please contact: Dick Reiber VE3IBV, 417 Regal Dr. London, Ont. N5Y 1J8.

Tariffs

Continued from Page 1

Hearings have been tentatively scheduled for the week of October 23 in Vancouver and in Edmonton followed by one in Toronto during the week of November 6.

More specific dates, time and places will appear in local newspapers, according to the Board. If you are interested in attending, write to the Tariff Board, Ottawa, Ont. requesting details of hearings in your area.

THE NATIONAL AMATEUR RADIO

Symposium

At press time the Calgary Amateur Radio Association, host for the National Amateur Symposium, reported that despite actual or threatened strikes in the post office and airlines the event was shaping up well.

The Mayor of Calgary proclaimed 24-30 as Amateur Radio Week, which will wind up with the Symposium banquet which will be attended by Calgary's Deputy Mayor. Guest speakers will be Ron Gebhardt, VE1VE/3 who will unveil the plans for the new Canadian Armed Forces Amateur Radio Service and Mike Moorhouse VE6VM of the CBC, from Edmonton, who will tell about the Telecommunications used for the Commonwealth Games.

Details of this conference convened by CARF, will be in our November issue.

RSO Convention

Don't forget the RSO Convention at the Holiday Inn in London, October 13-15. Hear Peter Ruderman in the CARF Forum talk on non-ionizing radiation effects. Saturday night banquet and dance and Sunday flea market. Sponsored by the London ARC, Box 82, Station B, London, Ont. N6A 4V3. Registration $8.00 for members, $9.00 for others.

SHORT CIRCUITS

by
Stan Hill
VE3DQ

"I BEEN TRACKIN' YOU FELLERS WITH MY LOOP WHEN YOU WERE OVER FRISCO, ALBYKIRKY, SANT LOOEY, DEETROIT AND TORONTO! DO YOU FELLERS HAVE CLEARANCE FROM DOC AN' FCC TO LOUSE UP OUR HAM BANDS THATAWAY?!!"

NOTICE

SPECIAL GENERAL MEETING

A Special General Meeting of the members of the Federation will be held at 9.00 a.m. on December 2, 1978, in the Conference Room at RMC, Kingston, Ontario, for the purpose of up-dating By-laws Number 3, 4 and 5. These By-laws were approved by the Directors of CARF on May 28, 1978, and cover the French name of the Federation, the appointment of Committees as well as the borrowing of money, the issue of securities and the securing of liabilities. Those planning to attend the meeting should advise the General Manager of the Federation prior to November 15, 1978.

Dated at Ottawa this 16th day of September, 1978.

Joan Powell, VE3FVO, Secretary.

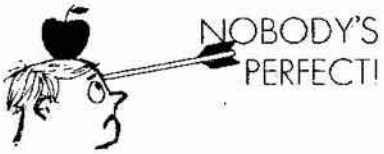
New Quebec Nets-

The Federation des Radio Amateurs du Quebec have started their own nets on:

15.115 kHz at 5.00 p.m. on Wednesdays and

3.775 kHz at 6.30 p.m. on Saturdays and Sundays

and have requested that other Amateurs leave these frequencies free at these times. The net control station is VE2FQJ. The nets will close down at 7.25 p.m. so that the Quebec net can take place.



Flak from the Montreal area shot us down with a count of two errors in recent issues. The "packet radio" demo in Montreal on May 31 was organized by the Montreal ARC and was not, as mistakenly reported in a burst of enthusiasm, co-sponsored by CARF, although CARF officials were there.

Another shaft from Monteal struck us down with the remark that the photos of our annual meeting which appeared in the July/August issue goofed in the caption of one of them; in the pic with Frank Merritt and Bob Rouleau of MARC was VE2FCX, Leon Arnold, not Jacques Orsali, who was also present.

Yukon QSLs

The Yukon Amateur Radio Association, PO Box 4597, Whitehorse, Yukon Y1A 2R8, handles all QSL cards for Yukon and guarantees delivery.

CRAG Canadian Repeater Advisory Group

VE8DWL Hugh Lines

Unfortunately, the CRAG column was not available at press time. Hugh will be back next month with the latest repeater news.

Help wanted

...in locating John Brown, VE7JB, who at one time around 1959-60 edited a publication called "The Canadian Amateur" (This early publication has no connection with today's publication of the same name.) It was printed by Adanac Printing, in Whalley, B.C., just outside of Vancouver.

INTERNATIONAL NEWS

--The DOC sent two officials to the Candian Forces Base, Lahr, Germany to conduct examinations for the Lahr and Baden clubs. CARF correspondent Lynn Boothroyd, DJ0NT and Mike DA1OU got their advanced tickets. The graduating class consisted of Fred DA1UP, Ernie, VE3LAM, Daryl VE1BTQ, Howard DA1 JM, Bill DA1MH, John VE3KYT, Gable VE7BQO, Arn VE3JUX. The DOC inspectors were John Demers and Larry Greetham. The "D" calls can now be exchanged for Canadian ones.

--Representations are being made by External Affairs Department for reciprocal and third party arrangements with a number of foreign countries but the negotiations are lengthy and may not be too fruitful. Incidentally, Haiti is one of these and rumors that such privileges had been okayed for Canada were, at press time, just rumors and no more.

--The FCC is inquiring into the administration of exams to handicapped persons and has asked whether the handicapped should have less rigorous CW standards, and if so if their operating privileges should be reduced. Also under discussion is a no-code ticket for the handicapped.

--Unfortunately, according to HR Report, little publicity was given to the use of Amateur radio during the historic trans-Atlantic flight of the "Eagle" balloon. There were Amateurs among the ground crew and although none of the balloonists had tickets when at one point all other communications failed they operated on the Amateur bands under the emergency conditions permitted by ITU rules. The call used was W5OPC.

--Hard to believe? ... WB8FKB in the U.S. has proposed a power limit of 250 watts for CW on HF. The FCC has asked for comments on the proposal. Wonder what they will be?

How it was before Radar

Cec Kenny, recently retired from DOC HQ in Ottawa, reminisces in the DOC publication 'Modulation'. Back in the thirties, Cec held the call VE1JS and then VE1FC. He interspersed his 'hamming' with stints at sea with the RCMP preventive section. Recalling his days aboard the cutter 'Fleur-de-lis', Cec tells of shadowing rum runners and trailing them until they escaped in darkness, fog or storm because they had no radar then.

As Cec tells it, "...The rum runners' objective was to rendezvous with a shore boat which would take part of its load of between 1,000 and 5,000 kegs or cases of liquor and land it at some isolated point on the Nova Scotia coast for transportation to thirsty markets. When the rum runner disposed of its cargo, it went back to the mother ship, lying on one of the fishing banks with a cargo of up to 20,000 kegs or cases.

"One August day that year we were standing by one of the many rum runners operating off the Atlantic coast. I looked at the rum runner's shortwave antenna strung between its stub masts. If the rum runner's communications were picked up and deciphered, it would be possible to intercept and seize the ship and its cargo at the drop site inside the three-mile limit.

"This would cut down on monotonous and usually fruitless trailing of rum runners. It also could save thousands of gallons of fuel oil. Not having a short-wave receiver, I obtained the parts on our next trip into port and constructed one, ready to intercept the signals of the next rum runner we came across.

"The opportunity was not long in coming. I feverishly tuned across the dial. Being so close, the rum runner's key clicks soon led to the frequency of operation, about 60 metres or five megahertz (MHz) in today's parlance. The rolling of both ships made it difficult to follow the signal up and down the dial with one hand while writing down the coded messages with the other.

"The signals of other rum runners and the shore station were soon picked up. After many days of recording enough "Traffic", together with the runner's give-away practice of interspersing the code with plain language, I was successful in deciphering the messages.

"Our ship's radio station was then supplied with a much more efficient Marconi short-wave receiver. The RCMP's marine section at Halifax was kept informed of rum runners' movements and intentions. After a few months of this, I was transferred ashore where I carried on a one-man monitoring and cryptanalysis bureau from my home in Halifax until 1939.

"While seizures were made as a result of the interception and deciphering of rum runners' signals, many times the rum runner was intercepted at the drop but got away in his faster boat, sometimes in a hail of machine gun fire from the cutter.

"Once the rum-running control station, apparently aware it was being monitored, called "RCMP" a number of times, using some choice epithets. Nevertheless, we had the last laugh. The control station had just given instructions for a drop at Portapique in the Bay of Fundy. Although the rum boat got away, the liquor-laden trucks were seized.

"By late winter and spring 1939, several prosecutions had been instituted against liquor traffickers for conspiring

to defraud the government of lawful revenue. Besides the radio traffic being available as evidence, coded telegrams sent between persons in the Maritimes and St. Pierre-Miquelon suspected of trafficking in liquor had been subpoenaed. I had decoded a large number of these messages which were also presented in evidence.

"The information contained in them, as well as the radiocommunications intercepted over the years provided valuable evidence which assisted in bringing the suspects to court. In the trials that followed I appeared as a witness to testify in support of this evidence. Convictions followed.

"The use and acceptance of deciphered messages as evidence is believed to be unique in Canadian juriprudence."

(Cec, after a short stint in the navy during WWII, ran a DOC monitoring facility on the east coast and has many other interesting tales, including his station's involvement in the "Bismarck" chase).

CARF's mailing address is P.O. Box 356, Kingston, Ont. K7L 4W2.

Postal Codes

The use of the postal code on your address already speeds sorting of your mail and your copy of "The Canadian Amateur" in many areas. As more automatic sorting machines are installed it will become even more advantageous to use it.

The postal code contains enough information to determine the destination of a letter right down to one side of a city street between intersections, and sometimes even further.

In urban areas, the Area Code (the first three characters) describes an area roughly the size of 25 letter carrier routes. The last three characters denote a very small and easily-defined section within the area described by the Area Code. These characters can specify one side of a city block, an apartment building, an office building or a large firm or organization which does considerable business with the Post Office. They can also denote a service from a post office or postal station -- rural route, general delivery.

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Put your membership number and call (not counted), if any, at the end of your ad. Print or type your ad and include your address with postal code. If using a phone number, include the area code. CARF and The Canadian Amateur accept no responsibility or liability for content or matters arising from ads.

Send to CARF, Inc., Box 356, Kingston, Ont. K7L 4W2.

WANTED: Collins 30S-1, C. Gutman, 7526 Mountbatten Rd., Montreal, Que. H4W 1J9.

FOR SALE: New, mercury-wetted contact relays, 8-12 volt, SPST, for keyer, RTTY etc.; 3/8 x 3/8 x 1 1/2", @$8.75 P.P. -- F. Merritt, 400 Prideaux St., Nanaimo, B.C. V9R 2N5.

FOR SALE: HW-101, CW filter, power supply, factory aligned, for sale to licensed Amateur only, $489. Jim Prior VE7CKF, 806 West 18th Ave., Vancouver, B.C. V5Z 1W3. (604)-876-2360.

FOR SALE: 2 meter Transceiver FT221R, as new c/w Ringo Base Antenna and Mobile Antenna. $850.00 complete. Roly Burley VE3GRL, P.O. Box 194, Bridge North, Ont. K0L 1H0. 705-292-7352.

news briefs

--The Halifax club made 39 satellite contacts for field day and worked UA3 TCL, the first contact "east of Montreal" for a Russian station via the bird, according to the HARC bulletin.

--Nova Scotia VHF coverage is to be augmented by a new repeater on Nutby Mountain, near Truro. Primary purpose is for RTTY and data, on 147.72 in and 147.12 out.

--A number of Montreal Amateurs have taken a keen interest in the packet radio proposals from their first appearance and have set up an organization called "AMPAC" to pursue experimentation with digital transmissions. VE2PY, Bob Rouleau, heads the group.

--No. 1 certificate in the CANADAWARD went to Bud Jones, VE3ET, Ottawa.

Morse Code to the rescue

Here is a real-life experience in which Morse code helped to save a Canadian Amateur and two friends downed in northern Manitoba. Jim Prentice VE2JI related this story in the Amateur Radio League of Manitoba's publication.

It all began when two friends of mine, Chuck and Dave and myself, decided to go on a fishing trip. This was to be no ordinary trip. Our location is Gillam. The town is situated on the Nelson River, north of the 56th parallel, about 80 miles west of Hudson Bay.

Chuck and I, both being pilots, decided a trip farther north in his Cessna 180 float plane would produce the desired catch; we invited Dave along as he and I had often talked of this dream trip.

On Saturday, June 25, 1977, in the predawn hours, we pumped out the floats, gased up, loaded the gear, checked out the aircraft; and as dawn lit the northern skies, we got airborne. Our destination is a small lake south of Nejanilini Lake in Manitoba's far north at 59 Degrees 20 Minutes North 97 Degrees 40 Minutes West, about 260 air miles north of Gillam.

On to the fish! Our first glimpse showed a glistening deep green lake about a mile long and 1/8 mile wide. At the north end is a waterfall about eight feet high and forty feet wide. The lake is surrounded with stunted spruce trees about ten feet high.

Chuck eased us towards the surface and touched down gently. We slowly taxied to the rocky shore and tied up to a clump of willow. This was it!

We had been casting from a rocky point at the base of the falls and when a fish was hooked we each had to back out of the way to avoid tangling lines and land the fish downstream. To ease the congestion, Chuck fired up the Cessna and taxied around the white water to the far side of the falls.

An exotic blend of black flies, mosquitoes and sand flies attacked us but the bug repellent was with Chuck, in the plane, across the river. We shouted and convinced him we needed the spray.

Chuck started the engine to taxi over to us, but an unseen current gripped the aircraft and pushed it out into the lake. Trying to elude its grasp he applied more power; and, with a sickening crunch he struck a rock which couldn't be seen because of drifting foam. Application of nearly full power wouldn't budge the plane. Here Dave and I sat, on a cold, rocky, bug infested shore, 260 miles from home, with our transportation stuck on a rock 200 feet off shore in fast water!

Somehow Chuck managed to pry the plane off the rocks and came over, picked us up, and we taxied to the shallow end of the lake to check the damage.

The right float was badly holed, on the bottom, at a bulkhead between two tanks. We tried to seal the holes by stuffing them with pieces of life jacket lashed down with heavy twine. We tried a takeoff ... no go. We decided it best if Chuck tried alone and went for help. Backing the plane up into the shallows for as long a run as possible, he firewalled the throttle and we held our breath. Slowly the speed came up until he was on the step ... the high speed planing attitude necessary to attain airspeed. As we watched we shouted, hearts pounding, "He's going to make it." The aircraft was now approaching the far end of the lake where a rocky, fast moving river begins. The right wing lifted, but the float wouldn't break loose. He lowered the right wing and lifted the left wing. The left float lifted clear of the water, but the right one remained glued down. The next few seconds seemed like slow motion as we watched, mesmerized, on the shore. We heard the engine die, a series of muffled, thumping sounds, and

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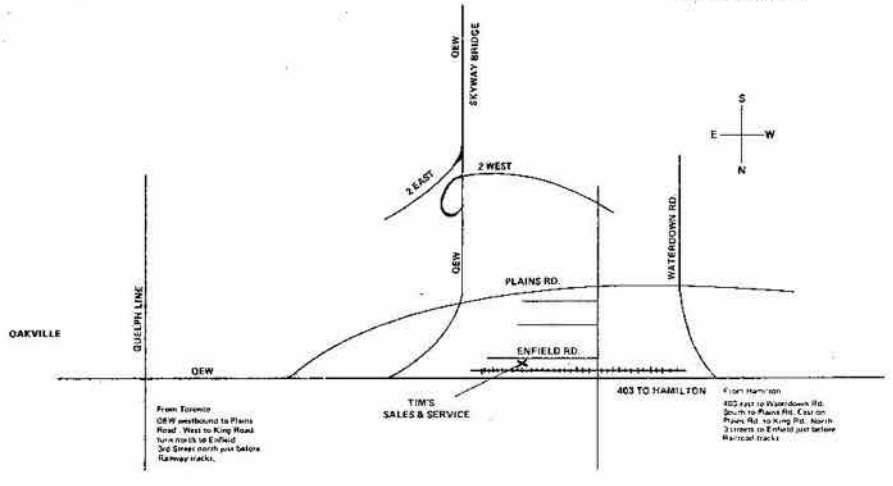

ALL YOUR RADIO REALLY NEEDS!

at last a great bang. To our instant relief Chuck climbed out and stood on a float, then got down into the shallow water. At least he was O.K. but what of the machine? But listen, he's started the engine again. What's happening? Is he going to try again?

After a mile and a half walk through the bush, swamp and muskeg, carrying what gear we could, and one 25 pound trout, we looked over the damage and got the story.

Chuck said, "She came up on a plane pretty quick and at about 50 mph I tried to pull the right float, but she wouldn't come. The left one came out fine, but she wouldn't fly. The end of the lake was coming up pretty fast; so, I pulled off the power and aborted the takeoff. I had a choice of a trip down the river or onto the rocks; so, I beached her. When you heard the engine start again, that's after I found out the bottoms of both floats were ripped wide open. I was using it to power up the radios. I've just sent our first Mayday call but got no answer. We'll try again later."

On hearing this Dave and I looked at each other glumly; and I said, "What a hell of an ending for such a great trip."

We took stock of our supplies, built a fire, tried to build a lean-to (but without much success -- not much material for building -- and the axe had been forgotten in Gillam).

We tried calling Mayday at 30 minute intervals for several hours hoping to contact a commercial flight on the polar route but no replies. Our ELT (emergency locator transmitter) was screaming out its own electrifying, siren type signal on the same frequency as our VHF radio on 121.5 megahertz; so, we turned off the ELT after each distress call to listen for replies.

We were trying to get comfortable enough to grab a couple of hours sleep. Chuck had just finished a Mayday call a few minutes before, and he said, "Give it another try Jim, before you relax." I picked up the mike, fired up the VHF transceiver, and began something like this:

"Mayday, Mayday, Mayday!

This is CF IXJ CF IXY CHARLIE FOXTROT INDIA XRAY JULIET CF IXJ. We are down on a lake at position 59 degrees 20 minutes North 97 degrees 40 minutes West. Our floats are holed. Cannot take off. Mayday, Mayday, Mayday. CF IXJ CHARLIE FOXTROT INDIA XRAY JULIET over ..."

I reached to hang up the mike, when to our amazement, I got a reply: "CF IXJ CF IXJ CF IXJ this is Panam flight"... (at this point my memory fails me as to which airlines I spoke to or in what sequence. I hope their Captains and crew will forgive me and our greatest thanks to them all ... God bless you ...) "We have your location as 59 degrees 20 minutes North by 97 degrees 40 minutes West. Is that correct? Over."

I immediately replied, "Panam this is IXJ. Position is correct. Boy are we glad to hear you."

We talked to 5 or 6 airliners that night; and finally, at about nine thirty,

we got a message that a helicopter was on its way. The chopper pilot figured he was about 40 miles south of us, and we were instructed to start a signal fire. Well, we started the damnedest blaze you ever saw, gasoline-soaked kapok from the life jackets, sticks, leaves, grass, anything we could find. We broke fingernails while clawing moss off the rocks to produce a dense white smoke. We kept this up for over an hour.

Meanwhile, convinced that our rescue was near at hand, we started packing all we could in preparation. At Chuck's suggestion I took the ADF out of the plane but left the VHF for the last minute. We figured that helicopter at a cruise speed of about 120 MPH should have been here at least 40 minutes earlier.

Right about then I heard the VHF in the plane squawking; so, I jumped in and listened. I believe it was either KLM or Air France asking me to confirm our position as 57-20N 97-40W. I couldn't believe it! After a correct read back on the original position they now had us 2 degrees farther south; well, at about 60 miles per degree they were searching 120 miles too far south; no wonder the chopper hadn't arrived!

I grabbed the mike and sent our correct position again. The airliner said, "We are receiving carrier only, no voice; please repeat, over." So I tried again, same thing. When I removed the automatic direction finder I had apparently broken a wire under the panel in the audio circuitry, and now we were without communications. Or were we?

I jumped into the pilot's seat, put the microphone on my knee and hit the press to talk switch with my finger in the familiar stacatto of Morse code, "SOS SOS SOS DE CF IXJ CF IXJ CF IXJ HW CPY BK." Long hours of practice and conversations as an Amateur operator were beginning to pay off in unheard of dividends. The airliner, apparently in contact with another aircraft said, "That guy down there sure knows his Morse code. Sounds like he is telling us something but none of us know the code." My heart sank. What good is Morse code if the guy can't copy the other end? I decided to slow down and try again. Well, the guy got the point. I guess he looked up the code printed on his flight manuals and after a tedious stretch at about 1/2 word per minute and a check on each word, he finally confirmed that he had the location and that Air Sea Rescue would be out in the morning.

I couldn't sleep worth a hoot; so, I sat in the pilot's seat cat-napping. With the first rays of dawn I heard an aircraft. I looked out and could see one about 6 or 7 miles away going east. It was a Canadian Forces Hercules, doing an electronic search, homing on our ELT beacon. At about 4:00 a.m. he came right at us. I turned on the strobe lights and jumped out onto the float, lit a red railroad flare and waved it like a man demented.

A helicopter finally picked us up at about 8:00 a.m. and took us to Churchill from where we made our way back to Gillam after arranging to have my air-

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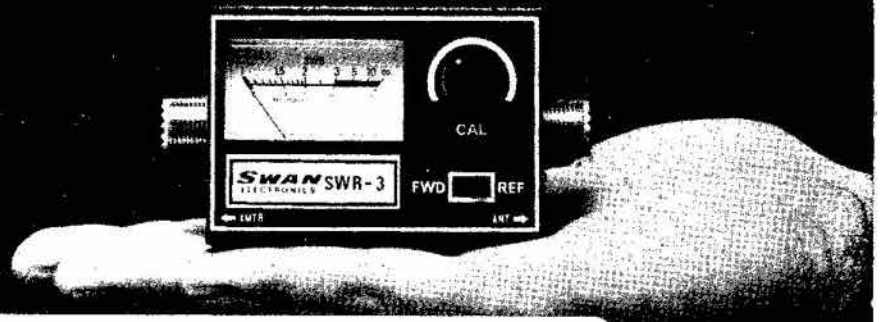

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craft ferried in for transportation home. We were tired, hungry, fishless, bug bitten, but glad to be out of the bush.

The plane has since been brought out of the bush and repaired; and we made another journey to Nejanilini, picked up the gear we left behind and did some fishing. We didn't catch many prize trout, but we sure enjoyed it.

I hope you enjoyed our story. I enjoyed putting it on paper. My thanks to fellow Amateur Operators Ed VE4YE, Pete VE4PG, Chris VE4NE and all the others that convinced me it was worth writing.

EQUIPMENT REVIEW

AED Electronics Ft 227R Scanner Kit
Price: $34.95
Manufacturer: AED Electronics Ltd., 750 Lucerne Road, Montreal, Quebec, Canada.

VE2PY,
1050 Churchill, Town of Mount Royal, P.Q. H3R 3B6, Canada

I recently acquired an FT227R 2 meter rig. While this is an excellent rig on its own merits, one of the major factors influencing me was the availability of a good inexpensive scanner for it.

Within days of getting the rig I got one in kit form, and installed it in the rig. It worked very well, exactly as advertised. For my $34.95 I got a mailing pouch well packed with goodies. There are some 35 components in all, including two ICs and a glass epoxy circuit board. Right off I was favourably impressed by the double-sided board with silk screened component locations, this impression was confirmed by the high quality parts and the inclusion of sockets for the ICs.

Assembly took me about three and a half hours. This may be the all time slowest record for doing the job, but when I work inside a brand new half kilobuck radio, I work ver-r-r-ry carefully!

The kit went together very easily, no hassles. For a change all of the parts fit where they were supposed to and the holes were drilled out to the right size. One is well-advised to use a micropoint iron as there are a lot of components packed into a small space. The circuit board measures about 1/2 inch by some four inches in length so there's not a lot of room for error.

From the scanner board there are 11 wires going to various parts of the radio, and the instructions are very clear, no danger of putting the V+ to ground. The instructions themselves are much in the Heath tradition, well done and very clear. The only difference I

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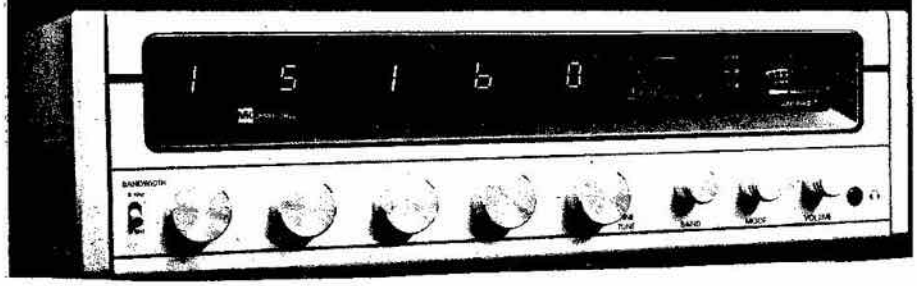

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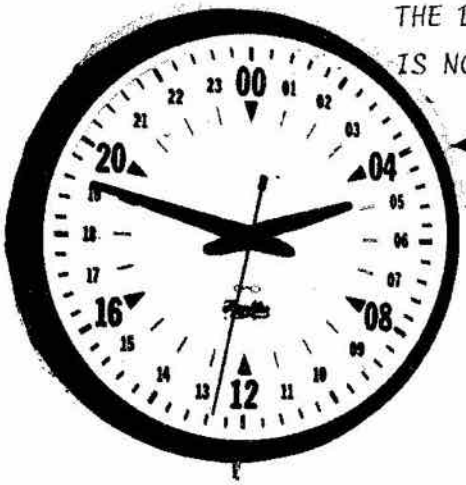

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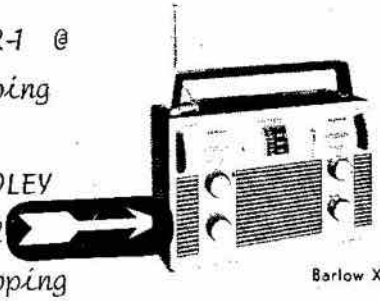
Out of Band

BARLOW WADLEY XCR 30 Mk2 @$299 +shipping



Barlow XCR-30

Shortwave Listening

NEW!!JUST ARRIVED----A BEAUTIFUL FREQUENCY SPECTRUM CHART BY McGRAW HILL--3Khz-300 Ghz-multi-colored-$4.00 +$1.50 shipping in protective tubing!!

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Attention-Doug Wismer VE3EHC

FREE--FREE--OUR NEW WSI GENERAL CATALOG --JUST WRITE OR SEND QSL MARKED--'CATALOG'---

noticed was that resistors are referred to by their values instead of by colour. Nice to know that someone has confidence in us Amateurs still.

The scanner fits right inside the radio, along the side rail of the chassis as seen from the front. The only sign that the radio has been modified is the small toggle switch sticking out of the mic. You could restore the unit to absolutely stock condition for the price of a new mic case. Instructions on how to modify the mic are included with the kit along with the switch. For those who use the Drake TT mic, instructions are included for it as well. A nice touch I thought, especially since I had one and used it with the 227R.

The kit comes with complete schematic and board layout, so in the unlikely event that something goes wrong, a look at the circuit and a study of the theory of operation will make it easy to fix.

How does it work? Very well. It is, in fact, more of a sampler than a scanner as we usually know it. When you flip the switch on the mic to "scan", it scans the band in 10 kHz steps until it locks onto a signal. It will then pause there for 3 seconds before it resumes scanning. This means that you can eavesdrop all over the band without lifting a finger. When you hear something interesting, you just flip the switch to operate mode and the rig is ready to transmit.

This feature means that those repeaters which stay on the air using a tone to indicate that the timer has recycled won't cause your scanner to lock up on them. Both the frequency range and the delay are programmed by the user. You can cover the whole band or any portion of it in 1 MHz increments. Mine is set to cover from 146 to 148 MHz, as there is almost no activity below 146 here.

The scanner operates in conjunction with the digital readout of the 227R so you always know where you are. If you disconnect the antenna it takes about 18 seconds to go from 146 to 148 MHz. Once it hits the high limit, it starts back down again. The 227R has a very sensitive squelch circuit so it locks up on any signal which is audible. Since the device uses CMOS circuits it draws negligible current from the radio.

Frankly, AED Electronics makes a fine product. I have one of their scanners for the IC 22S in the car, and have been very satisfied with it. The new one, coupling to the 227R with its digital readout is even better. Locally this rig has taken the market by storm, and almost everybody has a scanner as well. I've heard no complaints at all. My only concern is that AED Electronics can't be getting very rich selling so much product for this price!

Experimenter

Continued from Page One

will also be permitted on 24.0 to 24.01 gigahertz.

For identification purposes, packet headers will carry an ASCII mapping of the call sign. Secret codes and ciphers are not permitted. Modulation techniques and emissions for packet radio will be determined by experiments undertaken by Amateurs themselves.

Pulse modes P0 and P1 are permitted on two metres between 145.5 MHz and 145.8 MHz and P0, P1, P2 and P3 are allowed from 434.0 to 434.5 MHz, with P4, P5 and P9 being added in the 1215.0 to 1300 MHz slot and in bands from 2300 MHz on up.

Further changes to the Regulations note that for all classes of certificates exams will be held four times annually, normally in October, January, April and July. Separate credits for code exams are good for one year. Multiple choice questions will remain for the Regulations portion, with narrative type questions for the theory.

Details of the new regulations and the examination requirements for all three classes of certificates are contained in the new DOC bulletins, TRC 24, effective October 1, 1978 and TRC 25, effective September 30, 1978. These may be obtained from the Department of Communications Regional offices in Vancouver, Winnipeg, Toronto, Montreal or Moncton, or from the Telecommunication Regulatory Service at DOC HQ, 300 Slater Street, Ottawa, Ont. K1A 0C8.

Here is a summary of changes in certain bands:

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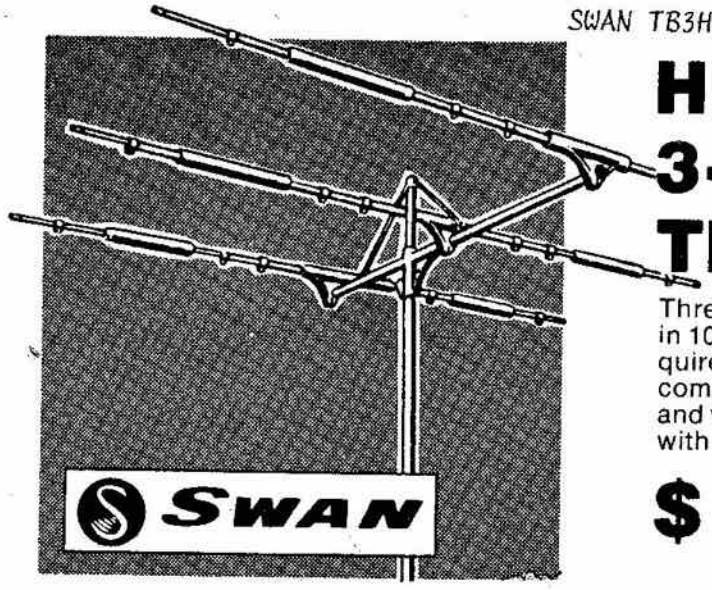

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Three working elements on each band in 10, 15 and 20 meters. 16 foot boom requires a lighter duty rotor and tower than comparable antennas. Precision tuned and weather-proofed traps are combined with rugged construction.

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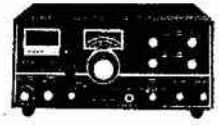

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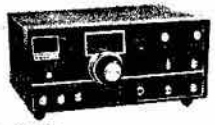
If you're ready for 700 loud-talking watts, you're ready for the new 750CW.

- 700 watts P.E.P. input on SSB
- 400 watts DC input on CW
- CW audio filter selectable 80 or 100 Hz.
- CW sidetone monitor with adjustable pitch and volume control
- 80 through 10 meters, USB, LSB, CW
- Selectable 25 or 100 KHz crystal calibrator
- Standard 5.5 Mhz, 2.7 Hz bandwidth crystal filter or optional accessory 16 pole filter available with 140 Db ultimate rejection.

Accessories
- VX-2 Vox
- MK-II Linear amplifier
- DD-76 Digital Dial

The 750CW is a CW man's dream come true. What's more there's a long list of accessories you can add later for increased performance.

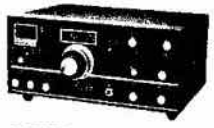


350A —

- 300 watts P.E.P. input SSB
- 200 watts DC input on CW
- 80 through 10 meters, USB, LSB, CW
- 5.5 Mhz, 2.7 KHz bandwidth crystal filter
- Oscillators are solid state and IC regulated for stability
- CW sidetone monitor with adjustable pitch and volume
- CW audio filter 80 and 100 Hz selectable
- Built in 117 VAC power supply and speaker. (220 VAC power supply available on special request)

Accessories
- VX-2 Vox
- 14A DC Converter
- 1200X linear amplifier

- Crystal Calibrator (350A only)



350D —

- Same basic features as 350A except added feature of:
- 6 Digit LED frequency display with readout to 100 Hz

Both the 350A and the 350D are compatible with the same line of Swan accessories that has built a reputation for reliability and performance that's second to none, including linear amplifiers to boost your power to the legal limit.

So they're perfect for novices or anyone else because you can build capability as you need it.

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SWAN TB2A BEAM	$189.00
SWAN MB40H 40M "	$279.00
SWAN 750CW-700 w	$949.00
SWAN PSU-3 ps/spkr	239.00
SWAN 350A (int.p.s.)	849.0
SWAN 350D " "	995.00
SWAN #45 80-10Meters mobile antennas	165.00

SUMMARY OF CHANGES IN CERTAIN BANDS

144 MHz Band: The following allocations are specified:

144.000 - 144.100	A1
144.100 - 145.500	AØ, A1, A2, A3, A4, F1, F2, F3, F4
145.500 - 145.800	In addition to emission types AØ, A1, A2, A3, A4, F1, F2, F3, F4, pulse modes PØ, P1 are allowed but are restricted to a maximum bandwidth of 15 kHz. RF output power limitations are 100 watts and 10 watts respectively for pulse modes.
145.800 - 148.000	AØ, A1, A2, A3, A4, F1, F2, F3, F4

220 MHz Band: The following allocations are specified:

220.000 - 220.100	Reserved exclusively for non-packet transmissions. Long distance communications, weak signal. Emission types AØ, A1, A2, A3, A4, F1, F2, F3, F4 are permitted.
220.100 - 220.500	All transmission modes including packet are permitted. Packet emission bandwidths - 10 kHz maximum.
220.500 - 221.000	All transmission modes including packet are permitted. Packet emission bandwidths - 100 kHz maximum, for inter-repeater links.
221.000 - 223.000	Reserved exclusively for packet transmission, packet emission bandwidths - 25 kHz maximum.
223.000 - 223.500	All transmission modes including packet are permitted. Packet emission bandwidths - 100 kHz maximum, for inter-repeater links.
223.500 - 225.000	Reserved exclusively for non-packet transmissions. Emission types AØ, A1, A2, A3, A4, F1, F2, F3, F4 are permitted.

420 MHz Band: The following allocations are specified:

*420.000 - 433.000	AØ, A1, A2, A3, A4, A5, F1, F2, F3, F4, F5
*433.000 - 434.000	Reserved exclusively for packet transmissions. Packet emission bandwidths - 100 kHz maximum, for inter-repeater links.
*434.000 - 434.500	Reserved exculsively for non-packet transmissions. In addition to emission types AØ, A1, A2, A3, A4, A5, F1, F2, F3, F4, F5, pulse modes PØ, P1, P2, P3 are allowed but are restricted to a maximum bandwidth of 30 kHz. Peak power and average power shall not exceed 100 watts and 10 watts respectively for pulse modes.
*434.500 - 450.000	AØ, A1, A2, A3, A4, A5, F1, F2, F3, F4, F5

- 100% solid state SSB/CW Transceiver
- Full coverage of 10 – 160 meter bands
- 350 watts P.E.P. or CW input
- Digital Dial Frequency Readout (optional)
- Plug-in auxiliary VFO or crystal oscillator (optional)

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Atlas 350-XL
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Model 305 Plug-in Auxiliary VFO
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1215 MHz Band 2300 MHz Band 3300 MHz Band 5650 MHz Band 10000 MHz Band: These bands are reserved exclusively for non-packet transmissions. In addition to AØ, A1, A2, A3, A4, A5, F1, F2, F3, F4, F5 the following types of emissions are specified:

*1215.000 - 1300.000	PØ, P1, P2, P3, P4, P5, P9 For pulse emissions peak power is limited to 2.5 kW and average power is limited to 25 watts.
*2300.000 - 2450.000	"
*3300.000 - 3500.000	"
*5650.000 - 5925.000	"
*10000.000 - 10500.000	"

24000 MHz Band: The following allocations are specified:

24000.000 - 24010.000	All transmission modes including packet are permitted, satellite links.
24010.000 - 24050.000	Emission types PØ, P1, P2, P3, P4, P5, P9, are allowed, in addition to emission types AØ, A1, A2, A3, A4, A5, F1, F2, F3, F4, F5. For pulse emissions peak power is limited to 2.5 kW and average power is limited to 25 watts.
*24050.000 - 24250.000	"

*A person who operates an amateur radio station in this band shall not:

(a) cause harmful interference to any station providing a Radiolocation Service in that band; or

(b) claim protection from interference caused by any station providing a Radiolocation Service in that band.

POWER LIMITATIONS FOR PACKET RADIO & PULSE MODE

-Except as noted below, DC power input to the final RF stage is limited to 1000 watts;
-The final stage RF output power used for packet transmission shall not exceed 100 watts peak power and 10 watts average power;
-The final stage RF output power limitations for pulse emissions below 1215.000 MHz is restricted to 100 watts peak power and 10 watts average power;
-The final stage RF output power limitation for pulse emissions at or above 1215.000 MHz is restricted to 2.5 kW peak power and 25 watts average power.

REGIONAL DIRECTORS — Nomination Call

The affairs and policies of the Canadian Amateur Radio Federation Inc. shall be managed by a Board of nine Directors of whom six shall be Regional Directors nominated and elected by the Full Members of each Region. Regional Directors are the senior CARF officials in the regions they represent and receive expenses to cover their CARF activities and travel expenses to attend the annual Board meetings. Regional Directors shall each be a Full Member of the Federation, resident in Canada and are elected to hold office for a two-year period beginning at the conclusion of the Annual General Meeting that immediately follows their election.

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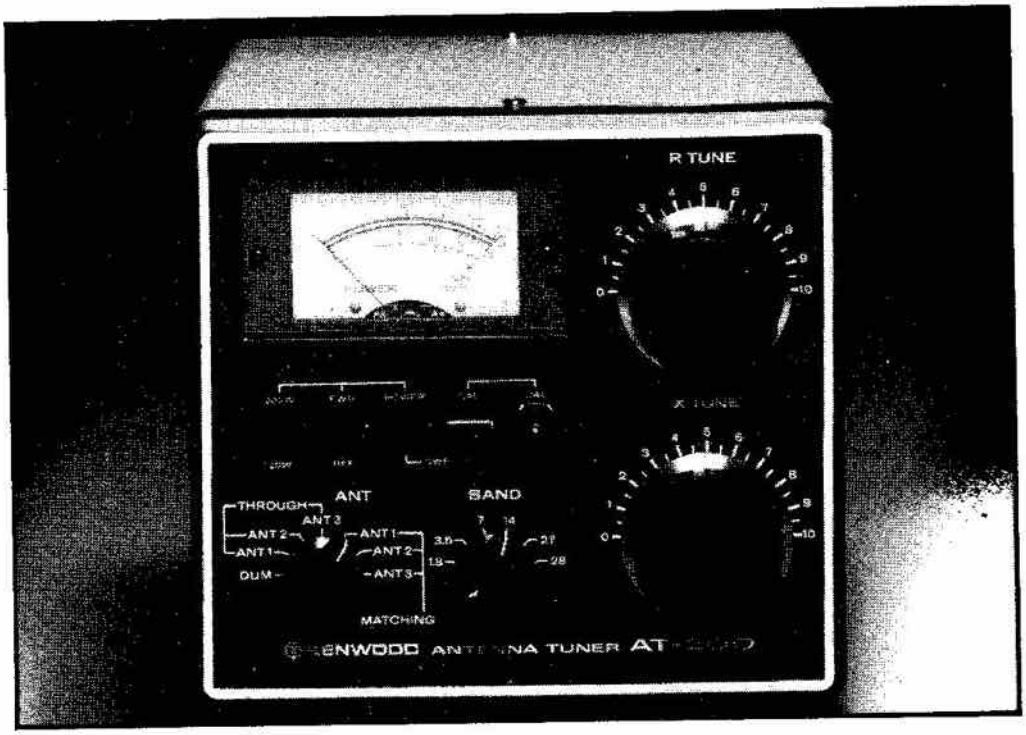

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The CARF Regions are:

ATLANTIC -- Atlantic provinces and Atlantic-based Maritime Mobile.

QUEBEC -- province of Quebec.

ONTARIO (2 Directors) -- province of Ontario.

MID-WEST -- provinces of Manitoba, Saskatchewan and Alberta and N.W.T.

PACIFIC -- province of British Columbia, Yukon Territory and Pacific-based Maritime Mobile.

Five or more CARF Full Members may nominate any other Full Member residing in their Region for election as Regional Director by signing and having the nominee sign a Notice of Nomination and by sending such Notice to the Secretary, CARF, Box 356, Kingston, Ont. K7L 4W2, by Registered Mail for arrival prior to 15th January 1979. The Notice of Nomination must contain the following; "We, the undersigned, hereby nominate (Name, Call, Postal Address) for the office of (Region) Director of the Canadian Amateur Radio Federation Inc." signed by the five or more nominators. "I hereby accept the nomination for (Region) Director and, if elected, will perform the duties and responsibilities of my office to the best of my abilities."

All nominees will receive a copy of the current By-laws and Regulations of the Federation and be placed on the distribution list for Executive Newsletters and other documentation. For the information of voting members, nominees should forward to the CARF Kingston office a resume of their qualifications and their interest in seeking office and views they hold on the future of the Federation. This information must be received by CARF before January 10, 1979 for inclusion in the February issue of the Canadian Amateur, which will also contain election ballots.

CARF & the Future

A Statement of Policy

The Canadian Amateur Radio Federation Inc. (CARF) is the outcome of early attempts on the part of Canadian Amateurs to set up a national association which is independent of the American Radio Relay League Inc. It fully reflects the needs and wishes of Canadian Amateurs -- something the ARRL cannot do because it has to be attentive to the wants of the much larger body of American Amateurs and the American regulatory processes.

CARF has grown steadily since its formation and is now an association with a strong and credible voice. This is probably a good time to restate our objectives so that Amateurs both in Canada and abroad will know what CARF is all about, have confidence in it and support it by being members.

In pursuing its aims it was inevitable that CARF would appear to be in conflict with the ARRL and its Canadian Division which now uses the name Canadian Radio Relay League. CARF has never believed that conflict between two Canada-wide organizations is good for Canadian Amateur radio. On the other hand, because Canadian Amateurs have proven their ability to determine their own needs and solutions, because Canadian regulatory principles, regulations and regulation making processes are different from those in the United States and, finally, because the Canadian Amateur population is smaller than that in the United States, the association that represents Canadian Amateurs must be totally Canadian and not a part of nor dependent on a foreign association.

The starting point for Canadian Amateur action cannot be in the United States; the solution to Canadian problems cannot always be the United States solution.

The work of the ARRL in the formative days of North American Amateur radio is much appreciated, but we Canadian Amateurs have reached maturity and are quite able to manage our own affairs. This is especially important as the pressures and operating environment which we face are not the same as those which confront our American friends.

Independence has been a desire of Canadians that has grown since Confederation. One need not recount here all the developments that have taken place

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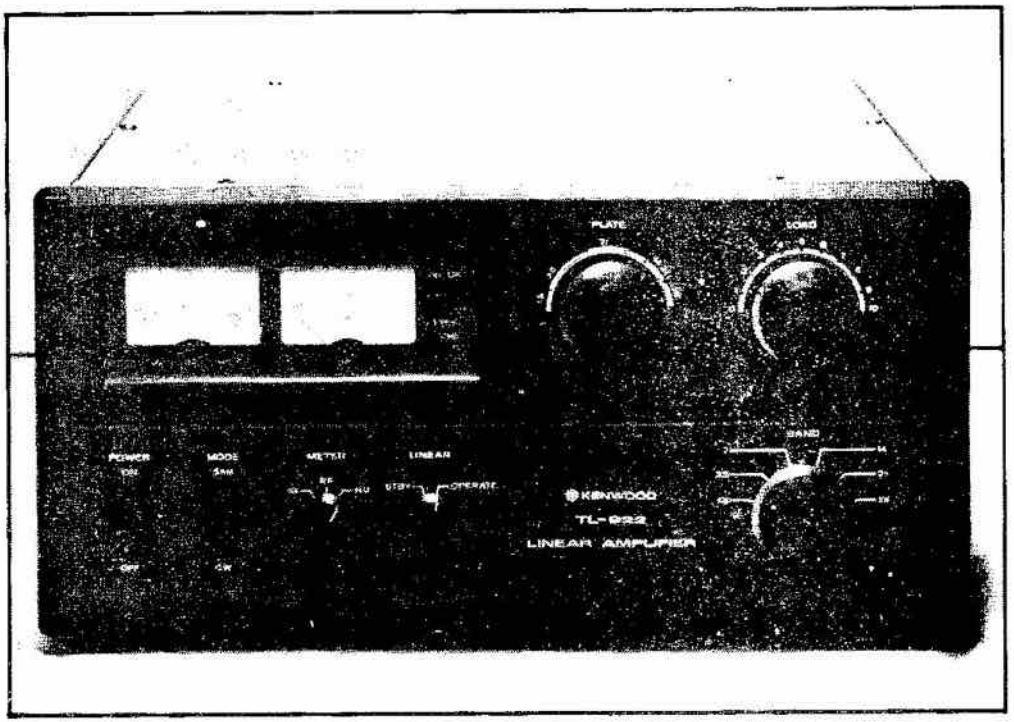

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as a result of this trend and which have increasingly lessened the influence of the United States on this country. Most trade unions, businesses and associations have adjusted to a greater or lesser extent in response to this desire. Unfortunately, in the case of the ARRL, there has been no similar development though it tells us frequently that its Canadian Division is independent.

The criteria which define independence are quite well known. The key ones are listed below and they apply equally to any kind of association or company.

a) The composition of the executive and the membership of the association. It is generally accepted that the organization will reflect the national views of the country of which the majority of members and directors are citizens. If they are Canadian as in the case of CARF, any brief submitted on behalf of the members will therefore address Canadian needs and will take into account foreign pressures only if the Canadian majority wishes this to be the case. The strategy followed in presenting the brief will be appropriate to the Canadian regulatory philosophies, regulations and regulation-making processes because it is done by Canadians.

b) The country in which an association is incorporated or chartered. An association must obey the laws of the country in which it is incorporated. CARF is incorporated in Canada while the ARRL is incorporated in the United States. Some countries enact or have laws to control the behaviour of their subsidiaries or divisions in other countries. CARF is not affected by U.S. laws and if the Canadian government decides to change Canadian laws governing our incorporation or business methods, then CARF, as a totally Canadian association, has a good opportunity to have its views heard. On the other hand, the ARRL is governed by U.S. law.

c) The source and control of the utilization of the association's resources. As its officers and voting members are Canadians, CARF utilizes its income to benefit its members at large. It is equally axiomatic that the ARRL uses its resources to benefit its members.

It is not enough for an organization to say it is independent in these circumstances; it has to be able to prove it by reference to the above criteria as well as by its actions.

Beside the benefit of being able to determine what we want to do in our own context, there are other benefits flowing from this independence. Canada has its own values, a unique geography, a smaller population with different distribution and radio spectrum needs and pressures different from those in the United States. When these are allowed to react freely in Canada, optimum solutions for Canadian Amateurs will emerge. This would not happen were Canadians submerged among our American friends. Independence is a must if we want the best for ourselves. Additionally, independence lets us look objectively at what goes on in foreign countries, analyze the good and bad features and helps us choose the best for Canada.

The ARRL has proposed that there should be a Council which would end ARRL and CARF individual representation to DOC and be the replacement. The Council would comprise three members from the ARRL's Canadian Division and two from CARF. The Chairman would come alternately from CARF and ARRL's Canadian Division and would vote only in case of a tie. The other features of the proposal are insignificant in the larger context.

The real issue here is: "Should we now submit our association to domination by an American-controlled association?"

When one looks at CARF's performance they see a good job being done. CARF has a good national periodical, "The Canadian Amateur", and a good news service that keep Canadian Amateurs well informed on regulatory and policy matters of importance to them. Further "The Canadian Amateur" is also an accessible outlet for those Amateurs who want to write. CARF has a good QSL Bureau and good training aids written to suit Canadian needs. We have a referendum procedure second to none for obtaining Amateur opinion needed for responding on any regulatory issue affecting Amateurs and Amateurs from all across the country support it. We have an Ottawa staff that maintains an effective liaison with the DOC and other Government Departments.

Without doubt CARF must maintain

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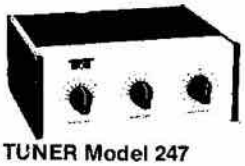

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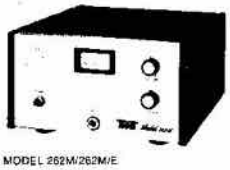

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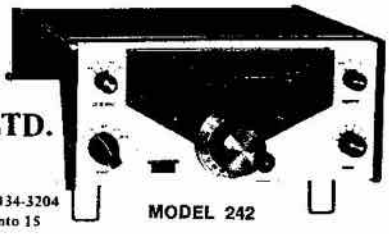
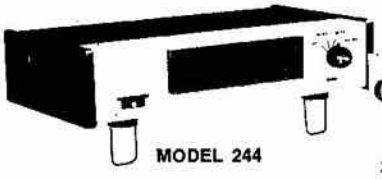


DIGITAL READOUT



MODEL 244

MODEL 242

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its independence if it is to present the authentic view of Canadian Amateurs to the Government and if it is to ensure the future of the Canadian Amateur Experimental Service.

CARF feels, however, that within this policy there are possibilities for working in a cooperative way with the Canadian Division of the ARRL. CARF will continue to look for such possibilities and in each case cooperate to the extent that it can.

After all, these are exciting times and Canadian Amateurs are pretty "up-front" as proven by their tremendous response to the two national Symposiums and to the DOC's "Experimenter" Certificate proposal. They deserve their own and independent organization, the Canadian Amateur Radio Federation.

Ottawa, September 16, 1978.
W.J.Wilson, President.

WARC 1979 Report

As reported in our last WARC update, the Canadian Interdepartmental Committee on WARC '79 issued a supplement to the proposals made last April for the Canadian position on frequency allocations by the ITU after 1979. CARF Working Group on WARC '79 studied the paper and made the following comments on it to the CIC:

10 kHz Allocation in each Amateur Band for Disaster Operation

When a national disaster such as an earthquake or flood has occurred, Amateurs have responded by quickly organizing special net operations mainly on an ad hoc basis, depending upon the particular Amateurs involved in the early stages. In almost all cases, the Amateurs involved have selected a net frequency which is interference-free within one of the bands and which is capable of sustaining satisfactory communications. In general, net frequencies have been respected. The Federation does not believe it is necessary or desireable to allocate special 10 kHz bands within the Amateur bands for disaster communications. Such allocations could very easily disrupt other net operations. Allowing Amateurs to choose the frequencies within their bands which are best suited to the disaster operation will result in smoother and more efficient operations.

216 - 225 MHz

Reference is made to the requirement for maritime mobile small craft personal communication frequencies which might be satisfied in this band (among others). Because it is understood that only about 1 MHz is required, it would better be accommodated in the 216 -220 MHz band or other bands given in the Supplement (as alternatives).

It is agreed that frequency allocations for orbiting Amateur satellites must be on a world-wide basis. It appears from results of earlier conferences that there will be great difficulty obtaining such agreement in Regions 1 and 3 at the WARC 1979.

It is anticipated that digital transmissions such as packet radio will be feasible over Amateur satellites. This would open up a whole new long-distance activity if satellite frequencies could be obtained say between 222 and 223 MHz. The Federation recommends that Canada should continue to press strongly for this allocation.

As an alternative to world acceptance of a sub-allocation in the 220 -225 MHz band for orbiting satellites, the Federation recommends that the 222 - 223 MHz band should be proposed for Amateur satellites in geostationery orbit in Region 2 (over North and South America). Transponders for geostationery (Amateur) satellites are now in the design stage in Canada and are scheduled for launch after 1979.

Satellite Frequencies

The Federation again recommends strong support for the proposals for Amateur satellite allocations in the 435 - 438 MHz, 1290 - 1300 MHz, 2300 -2310 MHz, 3390 - 3400 MHz, 5650 -5670 MHz, 10475 - 10500 MHz and 240 -250 CHz bands. It is recognized that to be practical, the actual allocated bands should be agreed upon by both Canada and the United States.

Suppression of Footnote 318

This is related to the use of radio

altimeters in the 420 -450 MHz band. Sharing of this band with Amateurs for this purpose could jeopardize the safety of aircraft. The Federation strongly agrees to the suppression of this footnote.

Article 41 -- Amateur Stations

The Federation is pleased to find that the CIC has agreed to withdraw the proposal to revise Radio Regulation 1563, Article 41. (which states the code requirement...Ed.) It strongly recommends retention of this regulation as it now stands.

10100 - 10300 kHz Exclusive Amateur World-Wide

The Federation again strongly supports the proposal for an Amateur allocation in this band as explained in its submission dated May 31, 1978. While not a direct compensation for any loss in the 3500 -4000 kHz band, should this occur, it would serve a very useful and valuable purpose. Even a 100 kHz band as proposed by the FCC would be most useful.

18100 - 18500 kHz

This band was recommended by the Federation in its proposals dated October 15, 1976. It is still a valid recommendation although not supported by the CIC Second Draft Proposals. Because of more erratic propagation it is not a good substitute for the 10100 - 10300 kHz proposal.

Changes TO THE RADIO REGULATIONS

The recent changes made to the regulations affecting the Amateur Experimental Service, which included the new "Digital" Operator's certificate were contained in the DOC's amended bulletin TRC 25, effective September 30. This bulletin may be obtained from DOC offices and in comparing it with the previous issue the following changes will be noted:

45. (2) has been expanded to provide definitions for pulse (P) type emissions.

45 (5) has been amended to refer to the new Schedule VIII concerning frequencies authorized for use by holders of the new Amateur Digital Radio Operator's Certificate (ADROC).

45 (6) is a new sub-section limiting the use of pulse (P) type emissions.

46. (4.1) is a new sub-sections limiting holders of ADROC's to the frequencies set out in the new Schedule VIII.

47. concerning maximum power has been amended to refer to Schedule VIII.

48. (1) & (2) concerning interference from Amateur stations have been redrafted in a new section 48. without change of intent.

49. setting forth the operator certificate(s) to be held by an operator of an Amateur station have been expanded to include the ADROC.

50. (1.1) has been expanded to permit non-licensed persons to take part in packet transmissions as well as radiotelephone and radioteletype operations if the licensee is present and retains physical control of the station.

51. (2) has been expanded to require the station call sign, during packet transmissions, to be sent "as an ASCII mapping of the call sign transmitted within the packet header".

52. concerns the type of communications permitted to be handled and languages used by Amateur stations. Minor editing has been made for clarification without change of intent and a new sub-section (8) has been added -- "The use of any secret code or cipher as any part or the whole of any transmission is not permitted."

55. has been amended to set new band width limits of 2000 Hz for television and facsimile transmissions below 420 MHz.

59. concerning modulation parameters and limits has been expanded to provide for pulse modulation.

59.1 is a new section delineating types of emissions referred to in a new column (III) in the Schedules and designated by numbers (1 through 7).

61.1 & 61.2 are new sections setting forth power limitations for pulse type emissions - 100W PEP and 10W average below 1215 MHz and 2.5kW PEP and 25W average above 1215 MHz.

Schedule VIII has been added and lists the frequencies and types of emission available for holders of ADRO certificates.

Copies of TRC-25 may be obtained from any DOC office.

VE3ZS

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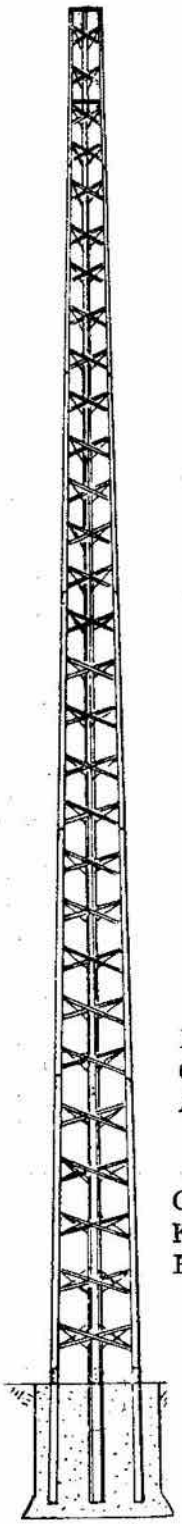

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Each section is 8 ft. long and has beaded channel legs riveted together with "X" braces. Legs and braces are high tensile steel, heavily galvanized before fabrication. Rivets are solid heat treated aluminum. Sections fit accurately together and are joined by heat treated nuts and bolts. The uniform tapered leg design together with evenly spaced "X" braces give the tower greater strength and reliability.

NOTE: All DMXHD Series Ham towers are shipped complete with the following:
8 ft. tower sections, top plate with cast aluminum mast clamp, rotor plate, three 4 ft. concrete base stubs, special nuts, bolts and washers. (No mast is included in package).

Model No.	Height of Tower	Tower Section Supplied	Wt. in lbs.
DMXHD-32	32	DMX3T, DMX4, DMX5, DMX6	170
DMXHD-40	40	DMX3T, DMX4, DMX5, DMX6, DMX7	241
DMXHD-48	48	DMX3T, DMX4, DMX5, DMX6, DMX7, DMX8	314

DMX-HD-40	225.00
DMX-HD-48	269.00
DMX-MD-48	245.00
DMX-MD-56	295.00
BBMB Bearing	16.50
HD Mast 2" x 8' 12ga.	18.00

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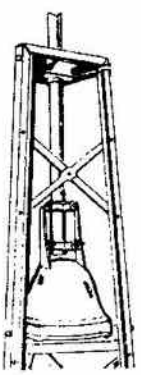

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CANADAWARD

The Canadian Amateur Radio Federation Inc. is pleased to announce the following awards available to all Radio Amateurs, worldwide.

CANADAWARD -- A colourful certificate will be issued to any Amateur who confirms two-way QSO's with all Canadian Provinces and Territories. All Separate awards are issued for each band on which the applicant qualifies. (12 cards per band - see list below) A Mode endorsement is available if all QSO's are made on the same mode (CW, SSB, RTTY, SSTV). Contacts made after 1 July 1977 only will count for this award. Submit the 12 cards with One Dollar ($1.00) Canadian or US funds or 10 IRC's plus sufficient funds for return postage. CARF members need send only funds for return postage.

5 Band CANADAWARD -- A special plaque will be issued to any Amateur who confirms two-way QSO's with all Canadian Provinces and Territories on each of five separate bands. (total of 60 cards - 12 cards per band - see list below) Contacts made after 1 July 1977 only will count for this award. Submit the 60 cards with Seven Dollars ($7.00) Canadian or US funds or 70 IRC's plus sufficient funds for return postage. All CARF awards are FREE to CARF members. CARF members need send only funds for return postage.

6 Band CANADAWARD, 7 Band CANADAWARD, etc. -- Special endorsements to the basic 5 Band CANADAWARD will be issued to any Amateur who confirms two-way QSO's with all Canadian Provinces and Territories on more than 5 Bands. Submit the additional cards with sufficient funds for return postage.

LIST OF CANADIAN PROVINCES AND TERRITORIES

VO1/VO2 Newfoundland/Labrador
VE1 Prince Edward Island
VE1 Nova Scotia
VE1 New Brunswick
VE2 Quebec
VE3 Ontario
VE4 Manitoba
VE5 Saskatchewan
VE6 Alberta
VE7 British Columbia
VE8 Yukon Territory
VE8 Northwest Territories

NOTE -- VO2, Labrador, is part of the Province of Newfoundland and counts for Newfoundland.

All Amateur bands may be used. Each distinct satellite mode (432in/144out, 144in/29out, 144in/432out, etc.) will count as a separate band.

Mail all applications for the CANADAWARDs to: P.O.Box 76752, Vancouver, B.C., Canada, V5R 5S7.

QSL Cards

This handsome QSL card is offered to CARF members at a special price of $12.75 postpaid per 200 card lot (Ontario residents add 7% Sales Tax).

The standard design will be printed with your name, call and address, (in place of the CARF address), as shown -- Printed in blue ink on buff card stock with the outline map in silver. The 3 1/2 x 5 1/2" cards are printed on one side only. A plain reverse side gives lots of space for comments and the address.

Other card designs are available in larger lots and slightly higher prices. Send 25c in coin or stamps for a sample sheet and order form. (French texts are available.)

Send orders to CARF, Box 356, Kingston, Ont. K7L 4W2.

Outgoing and incoming QSL card service is FREE to all CARF members! Your cards will be sent FREE to other countries and to provincial QSL Bureaux in Canada.

Sort your cards alphabetically by country and call and send to CARF QSL BUREAU, Box 66, Islington, Ont. M9A 4X1, along with a stamped self-addressed envelope (5"x7" preferred) with your membership number in the lower left hand corner of both envelopes.

BANNED COUNTRIES LIST

Iraq, Khmer Republic**, Libya, Pakistan, Somalia, Turkey, Viet-Nam*, Peoples Democratic Republic of Yemen.

*-Stations XV5AA, XV5AB and XV5AC were authorized to exchange communications with Amateurs of other countries by the former Saigon regime.

**-Station XU1AA has been authorized to exchange communications with Amateurs of other countries.

THIRD PARTY TRAFFIC AGREEMENTS

Bolivia, Chile, Columbia, Costa Rica, Dominican Republic, Guyana, Honduras, El Salvador, Israel, Nicaragua, Peru, Trinidad, Tobago, U.S.A. (Territories and Possessions), Guatemala, Uruguay, Venezuela.

RECIPROCAL LICENCING AGREEMENTS

Belgium, Brazil, Columbia, Dominica, Dominican Republic, France Ecuador, Federal Republic of Germany, Guatemala, Israel, Peru, Luxemburg, Netherlands, Norway, Nicaragua, Poland, Portugal, Republic of Panama, Senegal. Switzerland, U.S.A., Uruguay, Venezuela, Denmark, Iceland and Finland.

Note: all Commonwealth countries are eligible for reciprocal operating privileges to Canadian Amateurs.

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In 1977 Norm North, WA1D3R, was assigned to Thule, Greenland. With him went his Heath HW-7, a dipole antenna, and a goal...work all 50 states!

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