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Rig Switcher

IARU News

Marconi Day

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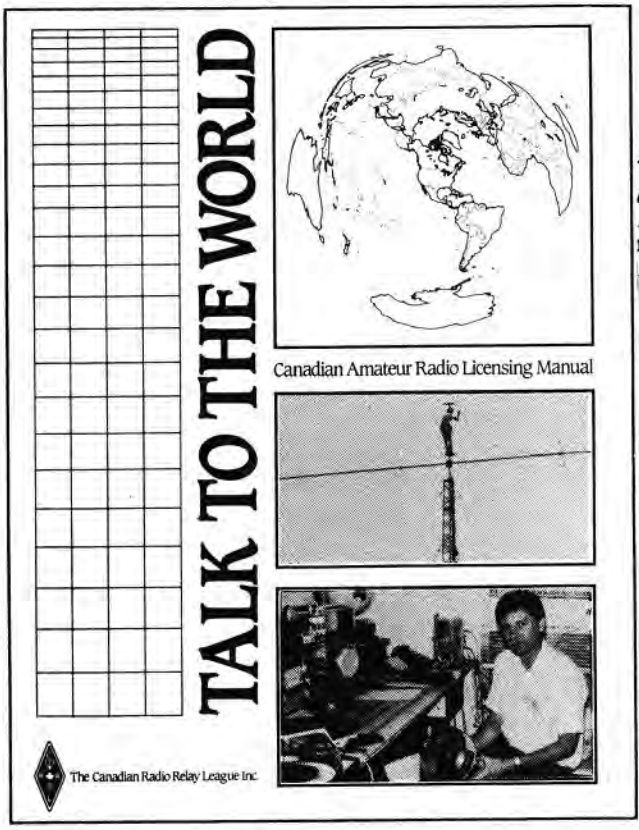

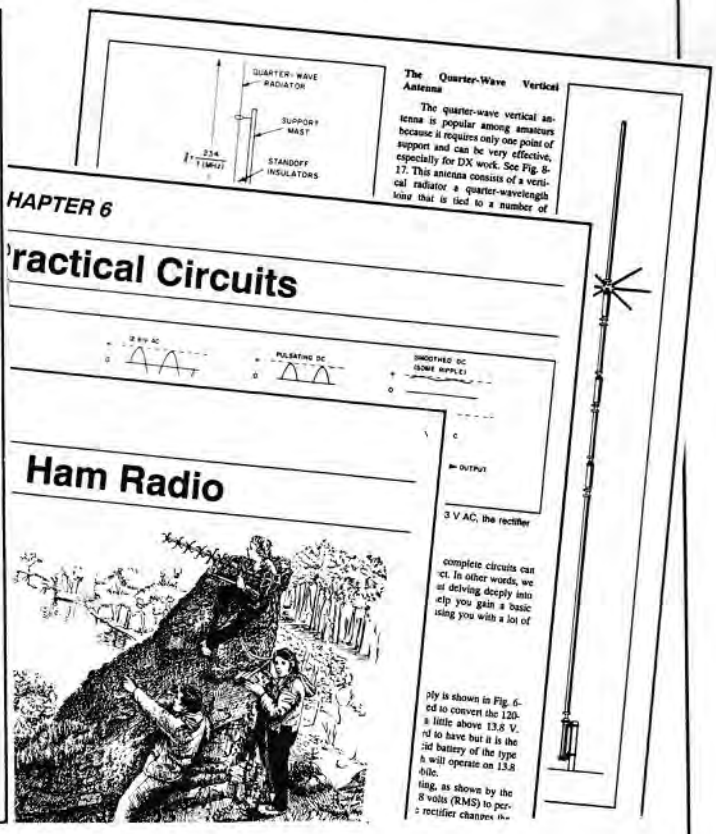

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The Canadian Radio Relay League

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QST CANADA

QST Canada (ISSN 0840-1670) is published monthly by CRRL Publishing, Inc., to provide radio amateurs, others interested in radio communications and electronics, and the general public with information related to the science of Amateur Radio communications.

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Printing and Distribution

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Box 7009, Station E
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Office Location

2025 Richmond Street
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Subscription rates: $27 for one year (seniors over 65 with proof of age, $24 for one year); in combination with *QST*: $49 for one year (seniors, $46 for one year). *QST* is available separately. Two- and three-year subscriptions are available at multiples of the yearly rate.

ABOUT THE COVER

Field Day, 1990, and it won't start. Bill Pilgrim, VE3GKC (left) and Gerry Lebel, VE3LOQ, ponder the imponderables as Murphy strikes the generator at VE3QST. ■

It Seems to Us.../Il nous semble...

Keeping Up with the News

Early in July, the telephone at CRRL Headquarters was ringing off the wall with calls from amateurs concerned about a page in a Radio Shack™ flyer. On that page, we, and just about anyone else, were invited to "Keep up with the news with a 10-metre ham transceiver." The transceiver, an attractive 25-watt unit for CW and SSB, was pictured alongside a cellular telephone, a CB transceiver and several marine transceivers. A disclaimer at the bottom of the page advised that a licence was necessary to operate marine and Amateur Radio transceivers, but it did not distinguish between the Restricted Radiotelephone Operator's certificate needed for a marine radio and the Amateur Radio Operator's certificate needed for the 10-metre unit. In addition, the disclaimer looked very much like the US Surgeon-General's warning that cigarette smoking can be hazardous to your health. In the context of that page, it carried about the same amount of weight. It did little to dispel the impression that just about anyone with $300 could buy and enjoy using a "10-metre ham transceiver" to "keep up with the news".

We decided to put Radio Shack to the test. We went over to a local store and asked to see the unit. The first thing we noted was a warning affixed to the top of the transceiver: ATTENTION: IT IS ILLEGAL TO TRANSMIT ON THIS RADIO TRANSCEIVER WITHOUT HAVING A VALID AMATEUR RADIO LICENCE. A similar message was printed on the carton. We asked what this meant. We were told that all Radio Shack stores had been given strict orders not to sell the transceiver to anyone who could not produce an Amateur Radio licence. *They had to see your licence before they would sell you the unit.* Later we learned that several other London-area amateurs had visited other Radio Shack stores and tried a similar exercise with similar results. All came away as we did, with a sense that Radio Shack was trying to act in good faith, and that the 10-metre transceivers would not end up in the hands of the general public.

Still, all this begs the question, Why did Radio Shack present the transceiver as it did? Lack of knowledge about Amateur Radio? Lack of knowledge on the part of a copy writer? We can see this happening. Many people, even in the electronics industry, have only a vague idea of what Amateur Radio is and what the requirements are to become a radio amateur.

Whatever, we would respectfully suggest that if Radio Shack is really interested in selling these units, the best place to advertise them is *QST Canada* or in *TCA*.. That's where the market is. Offering Amateur Radio equipment in a flyer directed to the general public is an invitation to trouble. We hope that Radio Shack is listening.

GETTING SERIOUS ABOUT WARC

The agenda has been published and we know a lot more about WARC that we did a few weeks ago. We now know that there will be two WARCs, one in 1992 and a second in 1993. Neither will be a general WARC like WARC '79. These WARCs will be addressing specific issues that recent specialized WARCs were unable to deal with. We also know that Amateur Radio is not on the agenda, at least not on the official agenda. However, there are several threats to Amateur Radio—particularly from HF broadcasting and a new mobile satellite service that could use a few megahertz in the VHF-UHF range.

We know things are getting serious when IARU officials get together for a week and spend all their waking hours talking about WARC. We know things are getting serious when we hear that there could be a tradeoff: 50 kHz off the top of the 40-metre band in exchange for 50 kHz at the bottom. We know things are getting serious when the IARU Monitoring System is sent out to have a look and find out just how much spectrum the HF broadcasters are using and how much do they really need. We know things are getting serious when IARU publishes a professional-quality newsletter with the sole purpose of helping IARU member-societies coordinate their efforts in making government contacts, selling Amateur Radio and helping authorities get the best people on their WARC delegations.

A few months ago, CRRL Past President Tom Atkins wrote about preparing for WARC. Back then, it seemed too early to get excited. It's not too early now.

The first WARC is less than two years away. What can you do? First, continue to support CRRL. Support CARF too. Merger may be coming, but it's not yet time to stop supporting both organizations. Second, contribute to the Defence of Amateur Radio Fund, specifically set up to help IARU defend our amateur frequencies. At present, there is about $7000 in this fund, but in this rich country of Canada we should be shooting for five times this amount, maybe more.

Address of the fund is c/o Tim Ellam, VE6SH, 107 Strathern Rise SW, Calgary, AB T3H 1R5. Please give as if Amateur Radio depended on it. It does.—*Harry MacLean, VE3GRO* ■

Letters/Lettres

Conducted By Harry MacLean, VE3GRO

All letters are considered carefully. Letters are edited and may be condensed in order to have more information and readers' views presented. The publishers of *QST Canada* assume no responsibility for statements made by correspondents.

SPACE VS PACKET

The following letter was addressed to SOPRA, the Southern Ontario Packet Radio Association.

The July *QST Canada* VHF-UHF column focussed on use of 145.50–145.575 MHz and suggested that packet radio should move to accommodate space communications. In their most recent bandplans, ARRL and CRRL have requested that 145.50, 145.525, 145.55 and 145.575 MHz be set aside for international Space Shuttle and MIR FM-voice communications.

As packet frequency coordinator, I will no longer coordinate LAN and digipeater packet radio on 145.51, 145.53, 145.55 and 145.57 MHz. I suggest that any using these frequencies consider using other frequencies. Three packet channels are allocated at 145.61, 145.63 and 145.65 MHz. Also, every effort should be made to use 144.91–145.09 MHz.

The original frequencies, 145.51 MHz and so on, were suggested in 1986 and did not take space communications into consideration. While the SOPRA frequency, 145.59 MHz, was in use before any other frequencies came on the scene, the loss of a regional frequency to accommodate a worldwide use would be in the highest spirit and tradition of international Amateur Radio cooperation. *—Eric Meth, VE3NUU, Packet Frequency Coordinator, Western New York-Southern Ontario Repeater Council, Scarborough, ON* ■

Calendar

Attention: Deadline for items is the 20th of the second month preceding month of publication. For example, information should reach *QST Canada* by January 20 to be included in a March issue.

Ancaster, ON: Eighth Annual Fleamarket, September 15, at Marritt Hall, Ancaster Fairgrounds, 625 Highway 53 East. Sponsored by Hamilton ARC. Talk-in on VE3NCF, 146.76 MHz (–), and 146.52-MHz simplex. For more information, contact Hamilton ARC at Box 253, Hamilton, ON L8N 3C8, or Paul, VE3NYC, Tel (416) 664-5247.

Calgary, AB: 6th Annual Fleamarket, September 15, at Parkhill Community Centre, 4013 Stanley Rd SW. Sponsored by Novatel ARC. Opens 0900. Admission: $2. Tables: $2. Talk-in on VE6NRC, 146.76 MHz (–) and 146.52-MHz simplex. For more information or to reserve tables, contact Novatel ARC at 1020 64th Ave NE, Calgary, AB T2E 7V8.

Kelowna, BC: Okanagan Valley Hamfair, September 1–2 at Camp Dunlop, Lakeshore Rd. Sponsored by Okanagan Valley Hamfair Society. Fleamarket, commercial dealers, boat anchor auction, QCWA meeting, contests and forums. Talk-in on Kelowna: 146.82 MHz (–), Vernon: 146.88 MHz (–), and Penticton: 146.92 MHz (–). For more information, contact Orin Beebe, Box 477, Penticton, BC V2A 6K6, or Doug McIntyre, VE7APS, Tel (604) 764-8637.

Kingston, ON: Eastern Ontario Fleamarket, September 22 at St Margaret's Church, 690 Sir John A Macdonald Blvd. Sponsored by Kingston ARC. Opens 0900, 0730 for vendors. Tables: small $5, large $10, dealers $20. General admission: $1. Talk-in on VE3KER, 146.94 MHz (–). For more information, contact Bill Bushell, VE3DXY, Box 1402, Kingston, ON K7L 5C6, Tel (613) 546-4155.

London, ON: 9th Computer Networking Conference, September 22, at London Regional Art Gallery, 421 Ridout St N. Sponsored by ARRL and CRRL. Registration: $US 20 or $CDN 25, includes luncheon and copy of conference proceedings. Talk-in on VE3TTT, 147.18 MHz (+). For more information, see ad in July or August *QST Canada*, or contact Harry MacLean, VE3GRO, 500 Riverside Dr, London, ON N6H 2R7, Tel (519) 473-1668.

London, ON: 13th Annual Fleamarket, October 14 at the Pot O'Gold Bingo Palace, Hamilton and Gore Rds. Sponsored by London ARC. Large indoor sales area, snack bar. Opens 0900, 0800 for vendors. Tables: $5. Admission: $4, children 14 and under free. Talk-in on VE3LON, 147.06 MHz (+). For more information, contact Dave Noon, VE3IAE, Box 82, Station B, London, ON N6A 4V3, Tel (519) 453-2292.

Nanaimo, BC: Ham Happening 1990, September 15, at Nanaimo Curling Park. Sponsored by Nanaimo ARA. Swap 'n shop, dealers, pot-luck dinner, guest speaker, RV parking (no hookups) Talk-in on 145.43 MHz (–) and 146.64 MHz (–). For more information, contact Eva Jantz, VE7NTZ, Tel (604) 758-9199, or Bill Stewart, VE7JY, Tel (604) 758-9752.

Salmon Arm, BC: Mini-Hamfest, September 7–9 at Sunnybrae Hall, 15 km west of Salmon Arm. Sponsored by Salmon Arm Seniors ARC. Estate auction, corn roast, VE7ALV's famous pancakes, dance. Talk-in on 146.76 MHz (–), 146.88 MHz (–) and 147.02 MHz (+). For more information, contact the club at Box 95, Salmon Arm, BC V1E 4N2. ■

The Rig Switcher

Moving between two HF rigs—instantly.

By George Spencer, VE3AGS
R. R. 1
Jordan, ON L0R 1S0

Many amateurs, particularly those who have been licensed for a long time, have more than one rig available for use. I have a Kenwood TS-830 which is my main rig, but I also have a Kenwood TS-430S which I use for mobile operation *and* at home with an ac power supply.

For many years, I used a coaxial relay to switch the antennas between the two rigs. A switch on the speaker, a feature on many Kenwood speakers, was used to transfer the speaker between the two rigs. Then I began thinking. Wouldn't it be nice if all the circuits, the antenna relay, the speaker, the ALC for my linear amplifier and various keying circuits were all transferred from rig to rig by the operation of just one switch? Thus the "rig switcher" described below.

Relays

My Dow coaxial relay had a 117-volt ac coil, but I have always operated it with dc to eliminate the low-level hum that appears when operating it with ac. Of course, the dc voltage required is much less than 117 volts. This relay had a coil resistance of 300 ohms. It pulled in at 12 volts and dropped out at 1 volt. It held in very strongly with 18 volts, drawing about 60 mA.

I needed a second relay to switch four additional circuits. A Potter and Brumfield relay with a 115-volt coil was on hand, source long forgotten. This relay had a coil resistance of 2700 ohms. It pulled in at 44 volts and dropped out at 6 volts. It held in very strongly with 48 volts, drawing about 18 mA.

The circuit in Fig 1 was developed. The final value of R1, placed in series with the coaxial relay, was found experimentally. It was chosen so both relays would pull in at the same time when the ac line voltage was raised by a variac. It wouldn't be essential that they pull in together like this, but since I was choosing the resistor, I thought I might as well avoid double clicks as the relays closed.

The power supply was built around the smallest transformer in my junk box. It had a no-load output voltage of 28 volts ac. To get more voltage, we used a voltage doubler rectifier circuit resulting in a final no-load output of 70 volts dc. Regulation of this kind of power supply is poor, and under load the output voltage dropped to 48 volts. However, this was still plenty to provide snappy operation of the two relays. You might require different voltages. It all depends on your relays.

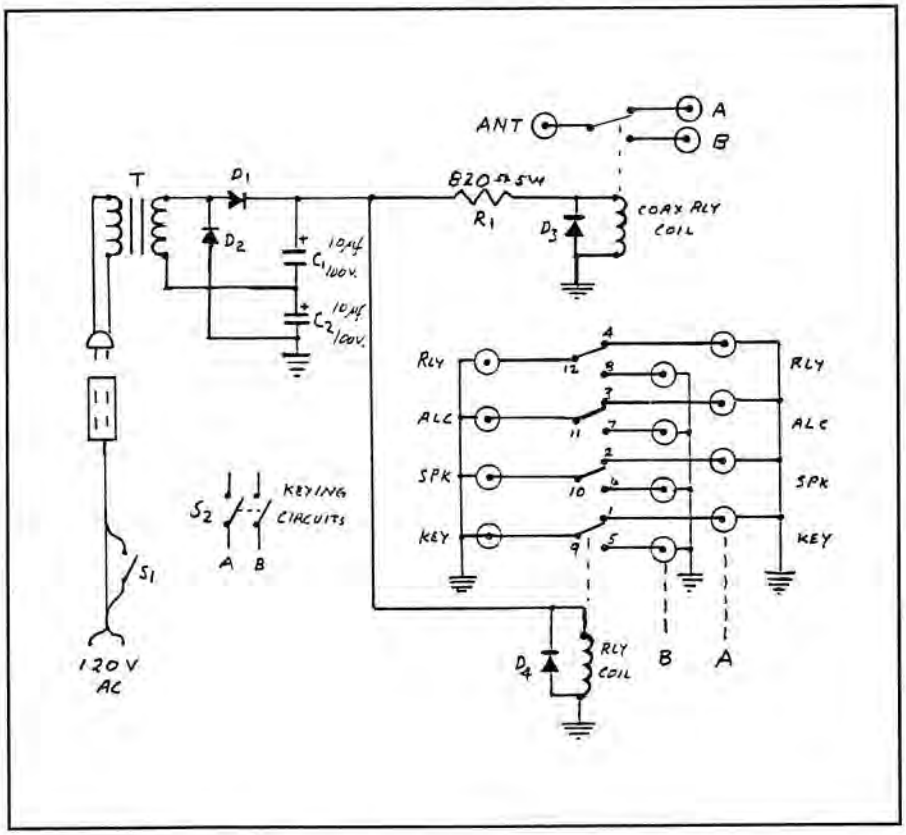

Fig 1—Schematic of the "rig switcher": lots of surplus components. S1, S2 are at the console.

Suitable relays can be found at Amateur Radio fleamarkets at a fraction of their original cost. My coaxial relay, a fleamarket special, appeared to have an open coil, but the problem simply turned out to be a bad solder joint at the terminals—a common occurrence. A coaxial relay is not really needed at HF. A single five- or six-pole relay could have be used to handle all the circuits. If you go this route, look for the kind with ceramic insulation and a contact current rating of about five amps.

Transformer

The transformer should be small. Discarded radios are possible sources. Total capacity required is about of five volt-amps for the secondary winding. In my case, I needed 50 volts for the 4PDT relay. If a lower-voltage 4PDT relay is available, the value of R1 can be reduced.

Other Components

The three RCA-type terminal strips were purchased at Radio Shack. Rectifier diodes were simply ones I had on hand. They were rated at 400 volts PIV. The filter capacitors were also ones on hand. Their value is not critical as long as they can handle the voltage and have sufficient capacity to prevent the relay coils from humming.

Silicon diodes across the relay coils prevent counter-EMF from puncturing the coils and prevent sparking at any switches that might control the relays. They also prevent certain relays from inadvertently magnetizing and locking in—most annoying! Their PIV rating should be at least double the coil voltage, and their current rating may be as low as 100 mA.

Everything is mounted in a standard 5.25- by 3- by 2.125-inch box, Radio

Shack 270-278 or Hammond 1411N. Check the photos for details.

Construction

The only critical part is getting the wiring to the 4PDT relay correct. The Potter and Brumfield relay I used was of the plug-in variety and had terminals numbered as in Fig 1. Other relays will have different connections. Check every relay terminal with an ohmmeter if you can. Once everything is wired, check again with an ohmmeter, to make sure everything is headed to Rig A. Then energize the coils and make sure everything is headed to rig B.

Something I neglected to do was provide a ground for each jack on the terminal strip. I assumed a common ground would be established through the input-output cables. This was true when all the cables were plugged in, but resulted in a frustrating waste of time when testing with only certain cables. The photos were taken before I corrected this fault.

Using the Rig Switcher

Standards RCA-connector patch cables were used to interconnect everything. You can end up with quite a rat's nest of cables so be sure to identify the ends of every cable to prevent future frustration.

Two toggle switches are mounted on the control console of my station: one shorts out the keying circuits of both rigs for tuning. With this switch, I can leave the key plugs to both rigs pushed in. The other is the switch in the 120-Vac line. It simply controls the power at a duplex receptacle that provides the power for the rig switcher.

Some Final Notes

The coaxial relay has a set of DPDT contacts that are not used. These might prove handy if additional circuits were to be switched later. If you don't use a linear amplifier, the DPDT contacts on the coax relay could handle the switching of the keying and speaker circuits, simplifying things a lot.

One factor, peculiar to my case and perhaps to others, is that the keying on my TS-530 is negative, but the keying on my TS-430S is positive. Therefore, the keying lines cannot be tied together. I once considered adding an inverter circuit, but in the end I found it much simpler to leave the two keying lines separate and to use a DPDT toggle switch to short both keying circuits to ground for tuning. Separate (+) and (–) jacks are available on my keyer and my TNC. They are left connected to the two rigs at all times, no switching necessary. Thus, the RCA jack marked "key" on the rig selector is not used with my present two rigs.

If you have two rigs, try a rig-switcher. Modify it for your particular set of circumstances. It will add greatly to your operating pleasure. ■

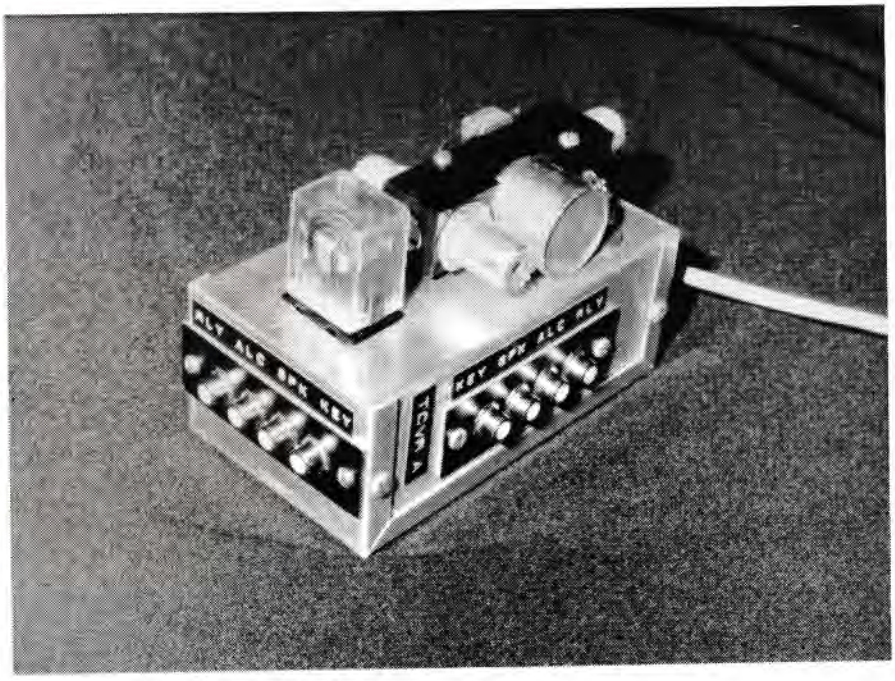

Fig 2—The "rig switcher": RCA-type phono jacks are mounted on three sides.

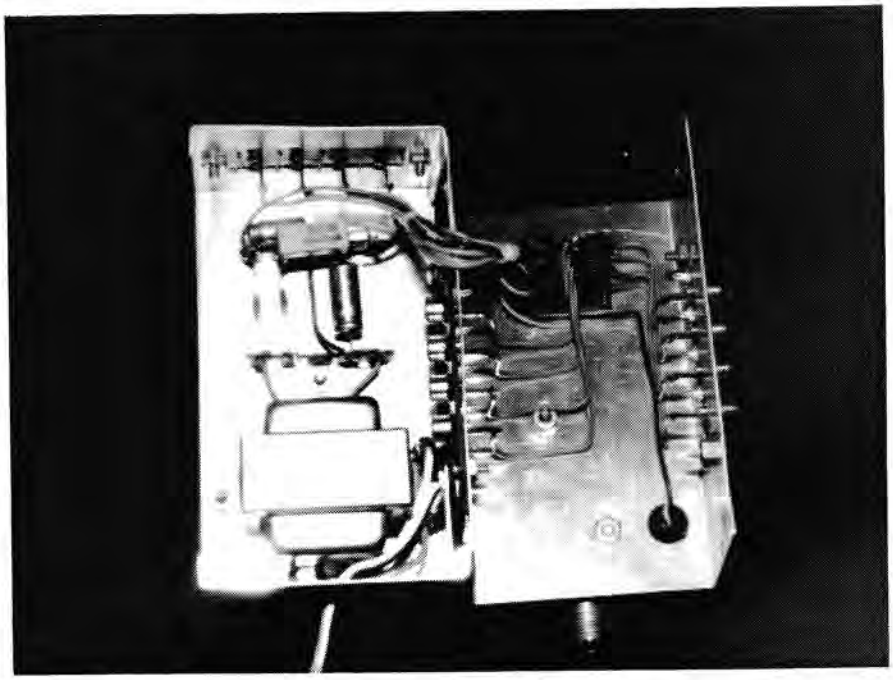

Fig 3—Placement of parts: Don't forget to ground those jacks! *(Photos by the author)*

VE1IMD: International Marconi Day

Nova Scotia amateurs participate in an annual tradition.

By Jack Columbus, VE1XT
75 Parkwood Dr
Sydney River, NS B1S 1H6

Where would we be if it hadn't been for the genius of a young Italian by the name of Gugliemo Marconi? Probably collecting stamps. Certainly not chasing DX!

For the past several years, the international Amateur Radio community has honoured Marconi, the "Father of Radio" by operating special-event stations on International Marconi Day, the Saturday closest to the date of Marconi's birth. This year's activities took place on Saturday, April 21. More than a dozen stations were set up on both sides of the Atlantic, at or near sites where the "Wizard of Wireless" originally installed experimental stations around the turn of the century,

1990 International Marconi Day marked a first for radio amateurs in Nova Scotia. It was the first year that one of the participating stations, VE1IMD, operated from the recently-opened Marconi Museum at Table Head, Glace Bay, Nova Scotia. Here, on this site, on December 15, 1902, Signor Marconi successfully transmitted the first wireless message across the Atlantic from west to east. (The Atlantic had been bridged the previous year in the opposite direction.)

Members of Sydney Amateur Radio Club were excited about the prospect of operating during International Marconi Day. For many of them, it was their first opportunity to operate from the museum.

Preparations began on Friday afternoon, just prior to the start of operations at 0000 UTC Saturday. With the museum closed for most of the winter, it was necessary to check for damage to the 15-metre high self-supporting tower. A three-element tribander had been erected for the official opening of the museum last summer, but high winds had caused structural damage within a month.

The tower was secured and a replacement beam was made available for the special day. While April weather conditions in the Maritimes aren't ideal for antenna work, several club members volunteered to strap on the safety belts, climb the tower and raise the new beam. Meanwhile, other members ensured that station equipment inside the museum was in working condition.

In short order, everything was checked out and VE1IMD was ready for the 1990 edition of the International Marconi Day. When the clock reached 0000 UTC, one of the newest Amateur Radio stations came on the air,—from the site of one of the oldest radio stations in the world.

Top: Gerry, VE3GK (back to camera) and Chris, VE1AKO, operating VE1IMD. Bottom: VE1AKO, Tom, VE1XQ, and Hal, VE1JL, take a break from operating. *(Photos by the author)*

Club members operated the station for the full 24 hours, joining the other Marconi day operators worldwide. Several hundred contacts were made, including contacts with other Marconi Day stations.

In all, fourteen special-event stations were scheduled to be on the air, operating from sites in Canada, the US, the UK, Ireland, France, Italy and South Africa. By working at least ten of these, you were able to qualify for the Marconi Day Award. This award, available to amateurs and SWLs was sponsored by Cornwall Amateur Radio Club, Box 100, Truro, Cornwall, TR1 1RX England. ■

Conducted By Harry MacLean, VE3GRO

CRRL-CARF Talks Continue

Members of the CARF-CRRL Merger Committee met in Kingston, Ontario, on Saturday, July 14. The committee produced a draft version of a constitution for a new single Canadian Amateur Radio organization. The draft incorporated the best of the present CRRL and CARF constitutions. It included definitions, aims and objectives, administrative regions, duties of officers and directors and methods of election. Next meeting: mid-September in Whitby, Ontario.

ACROSS CANADA

❒ DOC has released a draft version of its new RIC-24, the syllabus for Canada's Restructured Amateur Service. This document is now being translated into French and will soon be available from DOC offices across Canada. A word DOC's new exams. Initially, DOC will rely on the present questions bank, keeping, of course, the new syllabus firmly in mind. New questions, supplied by CRRL and CARF, are expected to be added next year.

❒ DOC has granted additional time for those who wish to submit comments on shortcomings in the Radio Regulations. New deadline for comments is 1990 September 30.

❒ CRRL has already submitted its comments on the Radio Regulations. Major point in the CRRL submission: Under the new Radiocommunications Act, the Minister of Communications has clearcut authority to control all types of radio and non-radio equipment that may be susceptible to the operation of radio transmitters. The Minister must use this new authority to protect both consumers and licensed transmitter operators. The submission, prepared by CRRL's Ottawa liaison, Ray Perrin, VE3FN, detailed the extent of the problem, noted DOC efforts to date, and outlined measures now being taken in other jurisdictions, particularly in Europe. Text of the submission will appear in October *QST Canada*.

❒ Congratulations to Harold Davies, VE1JL, of Sydney Mines, Nova Scotia, who was Canadian winner in the 1990 Bermuda Contest. Harold, who amassed 54,000 points, will have an opportunity to pick up his trophy this fall, in Bermuda, of course, all expenses paid.

❒ Several Montreal-area amateurs attended the unveiling of a plaque commemorating the life and work of the Canadian inventor, Reginald Aubrey Fessenden. Fessenden was the first to transmit the human voice by radio—and the first to present a "radio broadcast"—a 1906 Christmas program in which Fessenden gave a short speech and played Handel's "Largo" on the violin. The plaque is located at Fessenden's birthplace in Knowlton, Quebec.

❒ West Island (Quebec) Amateur Radio Club conducted a DXpedition to Zone 2—that's a rare one—on August 11–17. VE2CWI, operated from Radisson, Quebec, on all HF bands. QSL to West Island ARC, Box 884, Dorval, PQ H9R 4Z6.

❒ Packet radio enthusiasts: Don't forget the 9th Computer Networking Conference, co-sponsored by ARRL and CRRL, to be held in London, Ontario, on Saturday, 1990 September 22. Already, conference organizers have received registrations from as far away as California and the Netherlands. For details on the conference, see July or August *QST Canada*.

SOUTH OF THE BORDER

❒ The US FCC has announced new rules for amateurs who are disabled. An amateur may now upgrade to a General, Advanced or Extra-class licence without taking a 13- or 20-wpm code test, if a physician states the amateur has a permanent disability that prevents him or her from copying code.

❒ Fuel-line leaks continue to plague the Space Shuttle. Missions STS-35 and STS-37, with Amateur Radio on board, have been delayed for an indefinite period.

WARC UPDATE

ITU, the International Telecommunications Union, has released its agenda for WARC-92. As expected, WARC-92 is not a general WARC. It has been called to address specific issues that recent specialized WARCs were unable to deal with. Amateur Radio is not an agenda item. However, Amateur Radio is threatened by a number of agenda items, particularly "the possible extension of the frequency spectrum allocated exclusively to HF broadcasting". It is expected that broadcasters will be looking for new frequencies in and around the 40-metre band. Several administrations are looking for frequencies for a new mobile-satellite service in and around our 2-metre band. It now appears that WARC-92 will be followed by a second conference—a WARC-93. IARU, the International Amateur Radio Union, is monitoring developments closely and is making preparations to defend amateur frequencies.

NOTES FROM ALL OVER

❒ According to Japan's Ministry of Posts and Telecommunications, there are now over 1,000,000 radio amateurs in Japan.

❒ Israel has shorten its "banned countries list". Israeli amateurs may now communicate with amateurs in many neighbouring Arab countries even though Israel has no peace treaties with those countries. [Editor's note: this may have changed with the current mid-east crisis.]

❒ Burma has applied for IARU membership—a good indication that Burmese Amateur Radio activity is on the rise.

❒ A new South African Novice licence will include a code requirement. On passing a 5-wpm code test and a written exam on operating procedures and "the ITU phonetic alphabet", South African novices, who will use ZU1 callsigns, will be allowed to use five watts on portions of the 160, 80 15 and 10-metre HF bands and the 70-centimetre UHF band.

❒ On July 22, N4HY remedied a CPU crash aboard the DO-17 DOVE satellite. Shortly afterwards, ZS6HKV copied DOVE's 2-metre beacon. Two days later, the satellite died again, apparently the result of a software timer doing its job. At press time, AMSAT officials were predicting a full recovery. Listen for DOVE on 145.825-MHz FM. ■

CRRL President Bruce Balla, VE2QO, makes a stop at the AMSAT-DL booth at the Inter-radio hamfest in Hanover, FRG, last November. Bruce has been an AMSAT member and an active user of the OSCAR satellites for many years. *(CQ-DL photo)* ■

VHF-UHF/THF-UHF

Conducted By Dana Shtun, VE3DSS
500 Willard Ave, Toronto, ON M6S 3R6
Tel (416) 763-1761

June VHF "Do"

On June 30, we attended the 40th Toronto VHF Society's post-VHF contest "do", held at the QTH of Ted Sparrow, VE3BQN, Elmvale, Ontario (FN04). Among the guests: VE3FGU, VE3QF, VE3CRU, VE3BFM, VE3RBS, VE3DIR, VE3KDH, VE3XYM, VE3PEP, a number of SWLs and XYLs and Al Katz, K2UYH. Due to the large crowd, the meeting moved to the United Church Hall in Elmvale, and Tony, VE3DIR, welcomed Al and related how he had once taught Al how to make tea. Al was pleased to tell us that this art had come in handy when entertaining guests from the UK. Al then gave the group a lively talk on moonbounce, showing just how much the state of the art had changed, particularly at 432 MHz since he had first spoken to groups on the subject over 10 years ago. Today, with advances in receivers and preamplifiers, the critical component in the system is the antenna. Accordingly, Al detailed how to design an array with a clean pattern (minimal sidelobes) to eliminate picking up terrestrial noise (both black-body and manmade). Al also discussed libration fading, polarization problems and their resolution, and antenna construction. He spoke at length on the fact that you can work many stations worldwide on EME using simple equipment such as a single long yagi and just a few hundred watts. We had a wonderful time and hope that the next get together, after the September contest will be as enjoyable. Our thanks to Ted and his wife Sandy for the fine hospitality, piles of food and their support of VHF-UHF CW and SSB operation!

COMMENT

VHF activity is truly alive and well in all corners of the world. As I have mentioned in past columns, the 6-metre band is now available in many European countries. We salute those who have worked so hard to convince their respective governments that they deserved this new spectrum! In many ways the Europeans seem to make far more use of VHF frequencies for various types of communications including SSB, FM voice, CW, and packet. They appear very enthusiastic in mounting DXpeditions to rare grid squares, and they make extensive use of meteor scatter, field-aligned irregularities, aurora and so on. I sense a far more orientation to the "physical science" of VHFing, more interest in exploring the VHF bands and finding out why we can work DX, more interest in building VHF gear, and more interest in "hands on" activities than I see in Canada. In contrast, we seem to be more interested in kerchunking our local repeaters and complaining about the state of Amateur Radio. Perhaps we're a bit spoiled. Unfortunately, sometimes spoiled kids are taught a lesson. Enough said. ■

50 MHz

❒ On June 3, a solar flare and transequatorial F-layer propagation opened the band to South America from VE3ASO (FN25). At 2130 UTC, Dennis heard CX8BE calling CQ on 50.114 MHz and getting no answers. But their QSO was in the bag despite Dennis' amplifier not being ready. Then Dennis went on to work FM5WD, PJ2BR, HH7PV and KP4BZ. Look south during these flares, everyone!

❒ Just before the June VHF Contest, early-morning sporadic E brought C6AFR crashing into the Toronto area from the Treasure Key in the Bahamas (FL16). E-skip persisted throughout the contest showing its characteristic fast QSB at critical times—like when trying to exchange grid squares! From New Brunswick, Greg, VE1XH sent us a copy of the VE1MUF (ops VE1XH and VE1WL) contest log. 6-metre contacts included C6AFR, VE1BF (FN65), KB9CEQ (EM49) and K4SC (EL98).

❒ Doug, VE5UF, writes that in Saskatchewan, the 6-metre sporadic-E season took off a bit later than expected. Doug ought to know as he has a four-channel chart recorder going at all times, monitoring TV channel 2 on 50.125 MHz and a number of 43-MHz paging systems. He notes that the band has been open from Saskatoon to Ontario and Quebec at some pretty unlikely times. Many in the Ontario gang have been active chasing grid squares, catching many single- and double-hop openings out to the west.

❒ In foreign news courtesy of the KA3B *6-Meter Report*, Luxembourg is now represented by four stations on 50 MHz: LX1JX, LX1SI, LX1DK and LX1DB. QSLs for CT1DTQ should be sent to his QSL manager, DK3RV. The first QSO between San Marino and the US took place on June 28 when Tony, T77C, worked Al, K4CKS, at 2016 UTC. Ted, G4UPS, heard both ends of the QSO. China is QRV on 6 metres and there were numerous QSO's between BZ4AA and Japanese stations during July 6 and 14. Look for a possible October DXpedition to Christmas Island. Call will be VK9X.

❒ Beacon activity is on the rise. According to KA3B, a new beacon, VO1MUN, is on the air from St John's, Newfoundland on 50.037 MHz. Reception reports go Memorial University ARC, Box 51, St John's, NF A1C 5H3. Barry, VE4MA, called from Winnipeg to advise that the University of Saskatchewan is planning an auroral beacon of enormous proportions! The beacon will run 1–2 kW CW centred at 49.99 MHz using four distinct carriers one kHz apart. The antenna will consist of twelve six-element Cushcraft Boomers, each with a 34-foot boom. This "monster" is being set up 120 miles northeast of Thompson, Manitoba, and should make a dandy propagation indicator, perhaps for the entire northern hemisphere. With the solar flux sitting around 200 early in August, anything to indicate good propagation will help!

144 MHz

❒ On May 31, 144 MHz opened to Texas and Louisiana for over an hour. VE3DSS, VE3FAC, VE3SST, VE3DTQ, VE3BGH, VE3DHL, VE3FGU and VE3PFC were all in there. During the 144.24-MHz Gaslight Net, N5KZP broke in and the rush was on! Stations worked included KB5LE (EM32), N5KZP (EL39), KB5IUA (EL29), WB5UFS (EL29), WB5UOI (EM20), NZ5C (EM11), W5VY (EM00), W5SXD (EL29), and N5NS (EM32). Later that evening, Clarke, VE3WCB, made the best DX contact by QSOing W5SC in DM91. Heard by VE3EMS, VE3KDH, VE3DIR and VE3DSS; Fred, W5FF, in New Mexico, 1500 miles away. Fred was busy working into W8 and managed a QSO with W2DRZ in Jamestown, New York. Tony, VE3DIR, needs Fred for state number 40! Ernie, VE3HD also caught the opening and worked eight stations including WB5VOI (EM20), N5EEU (EL29), NV5W (EL09) and N5WS (EM12).

❒ While all this was going on Ted, VE3BQN (FN04), was working 4X1IF via the lunar route. Ted's 2-metre array of eight Cushcraft 32-19s is performing very well, and he hopes that many of you who read this column will become motivated and follow his example.

❒ Out west, Ross, VE5LY (DO70), writes that he caught a wild E-session at about the same time that things were hopping in the east. On May 28, he worked NØAFT (EM48) and WØDFK (EM47). On June 2 at 0130 UTC, Ross heard the NN7K beacon on 50.072 MHz. It was very strong, indicative of short skip and an MUF above 50 MHz! A quick check of the FM broadcast band showed that the MUF was at least 107.5 MHz with an unidentified "Spanish speaking station" heard at 107 MHz! At 0207 UTC Ross, contacted N5JHV (DM62) and they QSYed to 144 MHz, where they were surprised to find the band open between them! During the next half hour VE5LY worked stations in DM61, DM62, and DM65 with most signals S5 to S7. Ross has plans to be on during the Perseids meteor shower this year on both 144 and 220 MHz.

❒ During the June VHF Contest, Daniel, VE2BAP, Gilles VE2DRW, Bernard, VE2BBW, and Maxime, VE2MFJ, operated the Union Metropolitaine des Sans-filistes club

station, VE2UMS, from FN45 atop Mt Megantic near Montreal. Running 160 watts to an eleven-element vertically polarized yagi, they managed to work 46 stations in ten grids! Daniel promises to be in the September contest running horizontal polarization, which should make for some very interesting DX contacts from 3625 feet. Congratulations and welcome to VHF DXing!

❒ Randy, VE6BOJ (DO31), reported relatively quiet conditions during the contest this year. He ran 330 watts to a 14-element Hy-Gain yagi. Best contacts were VE6JW (DO33), N7CW (DN16) and N7FX(CN87).

❒ Gary, VE3OGS (FN03) reported working some great DX on aurora. Between 2155 and 2207 UTC on June 12, he worked K1DQV (FM19), WD4MBE (EM96) and K4QIF (FM16). Peter, VE3EMS, reported that during the buzz session the stations in Pennsylvania were working into Georgia, Alabama, South Carolina and Arkansas. In addition, he worked N4AR (EM77) and K4QIF. Apparently the aurora was widespread.

❒ On the evening of June 14, Kevin, VE3KDH, and Peter, VE3EMS, (FN02) worked some real DX under what could be considered only average conditions for early summer. Our boys worked far south including N4LFX (FM06), KZ4Q (FMO6), WD4MBE, N4NDG (EM95) and WA4VCC (EM940) in South Carolina! At times only Peter, being the farthest south of the two, had the propagation, but as the evening wore on, Kevin began working more and more of the stations with 300 watts to an array of four Boomers.

❒ June 18 brought more excitement as the MUF rapidly moved from 50 MHz, through the FM broadcast band and hit at least 146 MHz at 2320 UTC. Yours truly had been waiting for something like this, and quickly QSYed to packet on 145.01 MHz. As I disconnected from VE3NUU, I spotted a W4 disconnecting from a digipeater in Florida. A quick QSY to 144.2 SSB brought up W4EMB (EL95) in Miami. Other lucky Canadians working stations during this opening: VE3KDH, VE3WCB, and VE3FGU (FN04). The opening did not last long, and the crowding of 144.2 MHz resulted in a losing a couple of contacts to EL97. Oh well, better QRM than nothing!

❒ The evening of July 3–4 brought excitement of the tropo variety. Kevin, VE3KDH (FN03) got on at 0355 UTC and over the next four hours worked the following: N8UM/4 (EM85), KC4YO (EM75), KC4IS in Tennesee (EM76), W2GU (EM75), K4CKS (EM74), WB4JGG (EM75), WB4AXQ in Alabama (EM64), VE3CZM (FN25) off the back of the array, W4FSO in North Carolina (FM14), WC2K (FM29), WA2ONK (FN20), KM4ID in South Carolina (EM93), KA3NLF (FM19), AA4JJ (FM08), WA4PGM (FM07), W1AJD (FN31), NE4C (FM06), and AB4QH (FM06). Kevin is nearing VUCC, not bad for someone active on VHF SSB for only one year!

❒ On August 3, Kevin, VE3KDH, and John, VE3OZB, headed for Northern Ontario on a grid-hopping DXpedition. Despite wet weather, they put FN95, EN85, EN86 and EN96 on the air, both on 144 and 432 MHz. Signals into Toronto were consistently S9 plus.

432 MHz

Despite having only four of his eight yagis connected to the feedline, Ted, VE3BQN (FN04) worked several stations on 432 moonbounce. Yes, everyone, that's with only four yagis! To date, Ted has worked, DK1KR, K2UYH, K1FO and PA3CSQ. Hans, VE3CRU, is concerned that Ted will beat him to WAS if he is not careful. Hans needs three states! Meanwhile, Ted found a pin was broken off of one coax connnector at a power divider, so he got busy with his dental tools and built a new connector. Glad to see that the skills he has honed over years of practising dentistry can be channelled into worthwhile areas like Amateur Radio. Despite noise problems, Ted, VE3BQN, and John, VE1BVL, managed a QSO. John runs 700 watts to six 22-element K1FO yagis.

❒ During the July 4 tropo opening, Kevin, VE3KDH, worked KC4IS (EN76), WB4AXQ (EM64) and KC4YO (EM75). Kevin comments that 432 is quite a DX band.

OTHER BANDS

❒ 220 MHz was fairly active during the June VHF Contest. Stations as far south as Virginia were worked by VE3DSS.

❒ Barry, VE4MA, continues to make Winnipeg a hotbed of UHF activity with his 902-MHz 33-cm exploits. Barry has confirmed that his interference is from the superregenerative receivers in some well known brands of garage door openers. He is investigating the seriousness of the spurious radiations and promises to report his findings soon. Meanwhile, he has chalked up some very impressive 902-MHz contacts via the moonbounce route, including K5JL who runs 60 watts to a 28-foot dish, WBØTEM who runs 50 watts to a 30-foot dish, and WØRAP who runs 250 watts to a 16-foot dish. Barry further relates that Mark, WBØTEM, broke in during a sked with AF1T in New Hampshire to tell Barry that he was hearing both of them quite well. Apparently AF1T was not hearing Barry due to polarity lockout. Barry's signal, upon return from the moon had become vertically polarized.

❒ Dennis, VE3ASO (FN25), made six contacts on random CQs during the 1296-MHz Spring Sprints. He contacted KA2TVA (FN20), N2IQU, KD5RO, WB3CZG, and K1TR (FN32). During the June contest Peter, VE3EMS (FN02), managed to work some good DX using just eight watts and a single loop yagi. From his QTH in Dunnville, Ontario, he worked the following grids: EN79, EN91, FN01, FN12, FN13, FN03, FN02, FN23, FN20, FN32 and EN90. Not bad for flat band conditions! I suspect that the N6CA design loop yagi, despite its shorter boom, functions very well.

❒ Peter, VE3EMS, and Steve, VE3SMA (EN93), made the grade during the last week of July. Clarke VE3WCB is now QRV and looking for skeds on our 1296-MHz band.

❒ Barry, VE4MA, is getting ready for a September moonbounce sked with a German station who is QRV with a 12-metre dish. Barry continues his work to generate power on our 9-cm band. More on his efforts in our November column.

SSB MOBILE

❒ While driving north to Elmvale, yours truly fired up the mobile SSB rig and gave a call on 144.2 MHz. Kevin, VE3KDH, 25 miles behind us, came back and we continued our QSO all the way to VE3BQN's. Out of curiosity we tried the same thing on the way home and continued solid for the entire 1-1/2 hours. We went QRT ony when I was in the driveway and Kevin was out in the far western part of Mississauga. Over a poor path exceeding 20 miles, SSB mobile came through clearly. Kevin and John, VE3OZB, had a similar experience on their grid-hopping DXpedition to Northern Ontario. They were able to keep in touch with stations in Toronto from as far north as Tobermory! More on SSB mobile operation in our November column.

REPEATER NOTE

❒ The first 2400-MHz repeater in Japan (and perhaps in the world—none are listed in the *ARRL Repeater Directory*) went into operation on May 16.

CONTESTS

❒ Don't forget the September QSO Party, scheduled for September 8–10. Remember to send a copy of your log directly to ARRL, and also send a copy of your cover sheet to VE3DSS for consideration towards the Canadian certificates. We will report on Canadian results in the June VHF Contest in our November column.

❒ Don't forget the CRRL Fall Sprints. Both US and Casnadian amateurs are invited to participate, with the announcement below also appearing in September *QST*. ■

CRRL VHF-UHF Fall Sprints

Dates and Times:

902–3456 MHz—2300 September 27 to 0300 September 28

432 MHz— 2300 October 4 to 0300 October 5

220 MHz—2300 October 9 to 0300 October 10

144 MHz—2300 October 15 to 0300 October 15

50 MHz—1000 October 27 to 0300 October 28

All times in UTC. Note special start time for 6-metre sprint.

Exchanges and Scoring:

Exchange callsign and grid square. Each band is a separate contest. Submit separate log for each band. This also applies to the four bands scheduled for September 27. Count one point per QSO. Final score for each band: total number of contacts multiplied by the total number of grid squares worked on that band.

Reporting:

Send results (cover sheet and log) to CRRL VHF-UHF Fall Sprints, Dana Shtun, VE3DSS, 500 Willard Ave, Toronto, ON M6S 3R6 Canada. Look for scores in *QST Canada* and in *QST*. Certificates will be issued for the high scores in each CRRL and ARRL Section. ■

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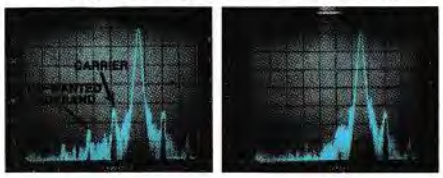

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Region 1 Conference Report

Over 180 delegates from more than 40 countries attended the IARU Region 1 Conference held in Torremolinos, Spain. The conference dealt with an extremely full agenda, but its main focus of attention was on preparations for the upcoming World Administrative Radio Conferences (WARCs), one to be held in Seville, Spain, in 1992, and the second to be held in Geneva, Switzerland, in 1993.

The conference was officially opened by Dr Pekka Tarjanne, Secretary-General of ITU. It was chaired by Region 1 Chairman L V D Nadort, PAØLOU, assisted by Region 1 Secretary John Allaway, G3FKM, and members of the Region 1 executive committee. URE, Union de Radioaficionados Espanoles, headed by its president, Gonzalo Belay Pumares, EA1RF, was official host of the conference. Many delegates from Eastern Europe attended, travelling to the West for the first time—a most welcome sign.

Observers from IARU Region 2 included its President Alberto Shaio, HK3DEU/W1, Secretary Tom Atkins, VE3CDM, Director Frank Butler, W4RH, WARC Preparations Director Pedro Seidemann, YV5BP, and ARRL Executive Vice President David Sumner, K1ZZ. Noel Eaton, VE3CJ, who served as IARU president during WARC '79, was a special guest. Observers from IARU Region 3 included its Chairman David Rankin, 9V1RH, Secretary Masayoshi Fujioka, JM1UXU, and Director Keigo Komura, JA1KAB.

To help strengthen Region 1's special fund for promoting Amateur Radio in developing countries, and provide additional funding for the ongoing WARC preparations, Region 1 increased its annual dues by about 30%.

The IARU World Administrative Council met following the conference. The meeting, chaired by IARU President Dick Baldwin, W1RU, with Vice President Michael Owen, VK3KI and representatives from all IARU regions, again focussed on WARC preparations.

IARU President Emeritus Noel Eaton, VE3CJ (left) and IARU Region 2 Secretary Tom Atkins, VE3CDM, attended the IARU Region 1Conference recently held in Torremolinos, Spain. Noel, a past president of IARU, was a guest of Region 1. Tom, a past president of CRRL, attended as member of the worldwide IARU Administrative Council. The conference dealt extensively with preparations for the upcoming WARCs. *(Photo courtesy VE3CDM)*

WARC COUNTDOWN

IARU has a new publication: *WARC Countdown*. According to its editor, David Sumner, K1ZZ, *WARC Countdown* "... will provide a way to communicate news and exchange information essential to worldwide preparations [for WARC]. ... In the months to come, we will be asking for your full support for the WARC effort. Please respond as if the future of Amateur Radio depends on it. It does."

WARC Countdown being produced in English, French and Spanish. Below, some items from the first two issues:

❒ IARU is documenting the value of Amateur Radio to the world community, stressing the following: a) Amateur Radio as a national resource, b) Amateur Radio as a vital component of community service, c) the need for Amateur Radio in emergencies, both national and international, and d) the use of Amateur Radio for conducting experiments and developing technology that can benefit all communications services.

❒ *WARC Countdown* asks IARU member-societies to provide names of key people in their country's administration. These names may become useful as IARU prepares the case for Amateur Radio.

❒ The IARU WARC-92 Implementation Plan calls for representatives of the IARU regional organizations to visit the administrations of their countries, to elicit goodwill and support for Amateur Radio. Special attention is being focussed to 49 ITU-member countries, mostly in Africa and the Middle East, who do not have an IARU representation.

❒ The IARU Administrative Council is asking each IARU member-society to do everything possible to ensure that at least one licensed radio amateur is designated as a full participant on their country's WARC delegation. IARU, believes that the case for Amateur Radio can best be made by those who are personally familiar with the technological, economic and sociological benefits of Amateur Radio. ■

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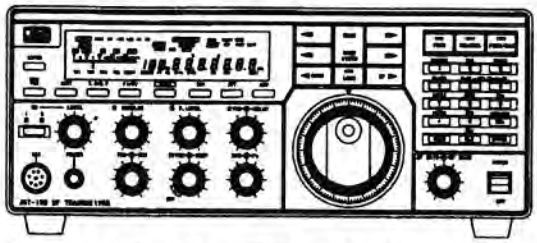

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Dual receive capability.
High performance S.S.B. filter options.
Electronic keyer.
Plus all the features of the popular TS940!

TS950S. The base model includes the electronic keyer, antenna tuner and power supply. **$CALL.**
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VE3EVJ, Hugh Jackson, Pickering, ON
VE3GDO, Art Rawlins, Orangeville, ON
VE3GZ, Jim Camden, St Paul's, ON
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VE6ALJ, Dennis Court, Edmonton, AB
VE6AOF, D Page MacPhee, Calgary, AB
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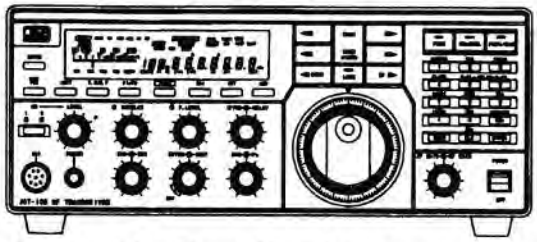

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    Dual memory scan
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  - **d) Scan stop modes**

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  - **e) Scan direction**
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Earthquake in BC?

Last year, we obtained a copy of a brief prepared by the Association of Professional Engineers of British Columbia (APEBC) for the British Columbia government. That brief, entitled *Seismic Risk in British Columbia* presented a scary assessment of the risk of major earthquake on the west coast. It also provided a forecast of the damage that might result. The conclusion was "... assuming an upper limit of M7.5 on the Richter scale, based on recorded earthquakes since 1872, the risk in the Lower Mainland and on Vancouver Island is substantial. The occurrence of such an earthquake today in the built-up areas of the province would result in catastrophic damage and loss of life."

The brief continued: "The last major earthquake near Vancouver occurred in 1872. It was greater than M7 and was centered south of Chilliwack. The last major earthquake on Vancouver Island occurred in 1946. It had a magnitude of M7.3 and was centered near Campbell River. Because of the simple wood-framed structures and sparse population within 50 km of these epicentres, there was very little property damage or loss of life. However, over the past 100 years and particularly in the last 40 years, the populations of the Lower Mainland and Vancouver Island have grown considerably and major buildings and other large manmade structures have been constructed in these areas."

When one recalls that the 1971 San Fernando earthquake had an intensity of M6.5 and the 1985 Mexico City earthquake had an intensity of M8.1, prospects for British Columbia are not good.

Much planning and organizing has been done by the authorities, but in the opinion of APEBC, much more effort is needed to minimize the effects of a major earthquake. For example, APEBC recommends "a program for upgrading, where required, high-risk facilities like hospitals, schools, police stations, and other buildings needed immediately following a disaster." Also recommended: better coordination and comprehensive testing of emergency preparedness plans.

Ernie Savage, VE7FB, is SM and SEC for British Columbia. He reports that 110 BC amateurs are registered with ARES. He is working to increase interest, but he is concerned by the lack of interest shown by many amateurs. Perhaps an appreciation of earthquake risks will heighten interest and help Ernie in his efforts.

EMERGENCY TESTS

❒ Several months ago, Chatham-Kent ARC in southwestern Ontario called a simulated emergency test. The scenario: an aircraft down somewhere in Kent County. It was Sunday. Janet, VE3FUN, the EC, initiated the telephone callup at 1230. Eight local amateurs responded and a few more joined in when Janet activated the emergency net. A faint signal from the aircraft was copied on 146.52 MHz. With assistance from two home stations, VE3GAZ and VE3OEM, the signal was pinpointed to an area along the Thames River about four miles west of Chatham. Within minutes of narrowing the signal down to this area, Stan, VE3SM (who incidentally was the 99th person to obtain an amateur licence in Canada), found the simulated aircraft—actually a blue Ford van with VE3CMC and VE3VAL at the controls. The entire exercise took only 90 minutes fom beginning to end.

❒ Don't forget this year's SET (Simulated Emergency Test), to be held in October. Your SEC or SM will have the details. —*Bob Boyd, VE3SV* ■

Field Organization Reports June 1990

CRRL Section Emergency Coordinator Reports

Reports were received from the following SECs (DECs and ECs reporting to SECs are listed in brackets) denoting a total ARES membership of 984.

Reporting	ARES Members
VE3GV (VE3s EFX, FOB, GNW, LPM, LKI, MB, SV)	580
VE4TM	50
VE6AFO	265
VE7FB	89

CRRL Section Traffic Manager Reports

Call	Orig	Rcvd	Sent	Dlvd	Total
VE1YS	0	8	9	1	18
VE1BTV	0	7	7	0	14
VE1ALU	1	5	4	1	11
VE1DLC	0	6	1	0	7
VE2BP	9	14	12	22	57
VE2WH	2	14	9	21	46
VE2ALE	0	3	1	1	5
VE3ORN	6	49	45	9	109
VE3GSQ	0	59	40	3	102
VE3BDM	1	74	9	1	85
VE3GNW	0	39	43	1	83
VE3CYR	0	55	24	3	82
VE3BCZ	9	24	33	2	68
VE3GT	0	14	31	0	45
VE3ISD	1	14	21	0	39
VE3KXB	0	8	9	2	19
VE3SB	0	7	9	1	17
VE3AJN	0	4	8	0	12
VE3KCZ	0	5	3	3	11
VE3NVJ	0	4	2	2	8
VE3LPM	1	0	6	0	7
VE3DVE	0	2	4	0	6
VE3MNI	0	1	5	0	6
VE3WV	0	1	1	1	3
VE4JA	23	84	76	30	223
VE4JR	0	20	15	5	40
VE4LB	0	15	10	0	25
VE6CPP	-	-	-	-	35
VE6CE	3	12	6	0	21
VE6XG	0	6	8	4	18
VE6GUS	-	-	-	-	14
VE6ABC	-	-	-	-	13
VE6AKY	-	-	-	-	4
VE6EO	-	-	-	-	2
VE7BNI	15	68	99	31	213
VE7EJU	1	97	68	2	168
VE7ANG	1	83	80	1	165
VE7BCL	2	26	14	14	56
VE7XA	4	19	24	4	51
VE7CCJ	6	22	7	1	36
VE7FME	4	14	6	2	26
VE7FB	2	11	7	5	25
VE7AVA	0	11	11	1	23
VE7OM	1	3	6	0	10
VE7ESA	0	9	6	0	15
VE7FVG	0	8	1	0	9
VE7EGM	1	3	4	0	8

National Traffic System

Net (Mgr)	Sess	QNI	QTC
APN (VE1YS)	28	132	0
KTN (VE3AJN)	13	91	8
OLN (VE3POJ)	30	500	31
OPN (VE3BDM)	30	442	88
OQN-D (VE3ORN)	29	86	43
OQN-E (VE3CYR)	26	82	70
OQN-L (VE3GSQ)	19	36	23
MTN (VE4IX)	16	80	25
MEPN (VE4LB)	30	550	16
APSN (VE6AKY)	30	695	7
ATN (VE6CPP)	30	157	60
BCEN (VE7EJU)	30	705	220

Brass Pounders' League

This listing is available to amateurs who report to their SM a traffic total of 500 or a sum of originations and delivery points of 100 or more for any calendar month. All messages must be handled on amateur frequencies, using standard ARRL-CRRL form, within 48 hours of receipt.

BPL: None this month

Public Service Honour Roll

This listing is available to amateurs whose public service performance during the month indicated qualifies for 60 or more points in the following nine categories (as reported to their SM). Please note maximum points for each category: (1) Checking into CW nets, 1 point each, max 30; (2) Checking into phone/RTTY nets, 1 point each, max 30; (3) NCS CW nets, 3 points each, max 12; (4) NCS phone/RTTY nets, 3 points each, max 12; (5) Performing assigned NTS liaison, 3 points each, max 12; (6) Delivering a formal message to a third party, 1 point each, no max; (7) Handling an emergency message, 5 points each, no max; (8) Serving as an EC or NM for an entire month, 5 points max; (9) Participating in a public-service event, 5 points each, no max. Amateurs who qualify for Public Service Honour Roll 12 consecutive months, or 18 months out of a 24-month period, will be awarded a special certificate from CRRL Headquarters.

PSHR: VE4JA (136), VE3ORN (98),VE4LB (96), VE3BDM (93), VE3GNW (94), VE4STU (77), VE3BCZ (74), VE3CYR (67)

Service and Specialized Nets

Independent Net Managers: Your monthly reports are welcomed. Send to CRRL, Box 7009, Station E, London, ON N5Y 4J9.

Net (Mgr)	Sess	QNI	QTC
ARES Canada (VE3GV)	4	111	2
ARES Ontario (VE3GV)	1	4	0
CRRL ONTARS (VE3FQV)	30	6869	0
Grey-Bruce (VE3BDM)	30	71	23
Grey-Bruce SS (VE3BDM)	30	80	47

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A Hidden Multiband Dipole

Many of us have reached a stage in life where we have sold our homes and moved into a condominium—an apartment or a townhouse. I did this and found that antennas were not welcome in these developments. As a result I had to "go off the air".

Recently, I became "itchy" to get back into our great hobby. I tried a QRP rig with a mobile antenna on my car. This worked well, but instead of satisfying my urge, it stimulated me to devise some kind of antenna that would work on at least three bands and be virtually invisible to the condominium owners and our other neighbours.

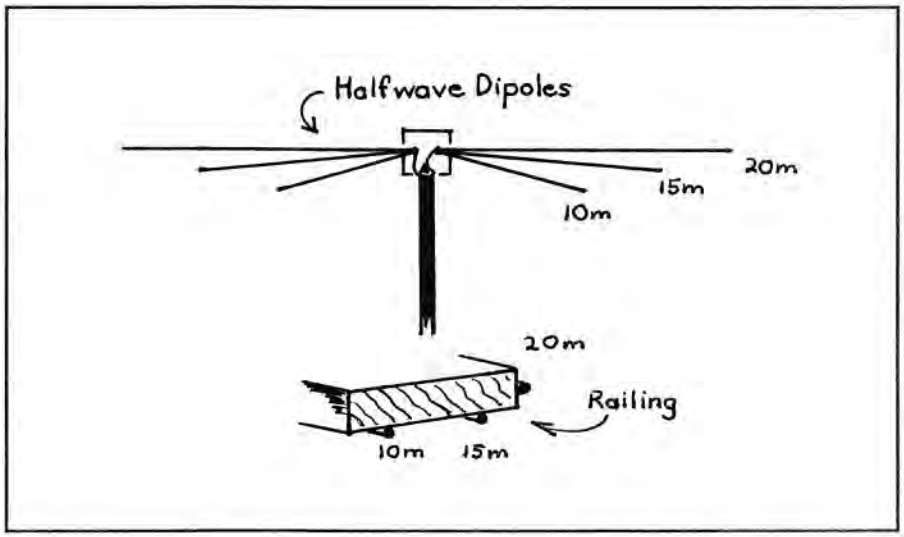
I talked to a number of amateurs and received many suggestions, but few of them seemed to fit my situation. I eventually adopted and adapted an idea in the *ARRL Antenna Book*.: parallel halfwave dipoles. A description follows.

Originally, I wanted an antenna for the 10–40-metre bands. I quickly found out that a half-wavelength on 40 metres would involve running wire all over the condo. I settled for 10, 15 and 20 metres.

Because invisibility was important, I used lamp cord that matched the colour of the condo. I used one cord—that is, a pair of wires—for quarter-wave legs for the 10- and 15-metre bands, first cutting the whole cord for 15 metres and then separating and cutting back one wire for 10 metres. For the 20-metre band, I used the whole cord, connecting the two wires in parallel.

Length for each quarter-wave leg of the antenna was as follows:

14.1 MHz — 15' 1"
21.2 MHz — 11' 3"
28.2 MHz — 7' 8"



Of course, lengths may have to be adjusted depending on proximity of other wires, eavestroughing and the like. I left the insulation on all wires.

The wires were joined to terminals bolted to a small plexiglass insulator. In theory, this was a balanced antenna but 50-ohm coax was used without a balun.

The need to make the antenna unobtrusive led me to staple the three wires along the wood balcony railing (see diagram above). I separated the wires as much as possible: 3–4 inches. To weatherproof the antenna, connections at the centre insulators were coated with silicon sealant.

What happened when I tried the antenna? It worked! Within an hour I contacted over 20 countries with many 59 and 599 reports. A world was reopened—one that I had missed for years.

The best band by far was 20 metres. I thought that having used both wires in the cord had something to do with this, so I replaced the single wire on 15 metres with a double one. It seemed to be better. I had some difficulty getting the SWR down on all three bands, so I cut the coax feedline to one-half wavelength for 15-metres. It must have been a lucky length. All three bands were now fully operative.

This antenna defies many good design and construction practices, but it works well for me. I certainly can't compete with the "big guns" when DXing, but I can reach Europe most any time and the Pacific area quite often. For amateurs who can't put up a "real antenna", this may be a solution. It certainly is better than "going off the air". This antenna works, neighbours are unaware of its existence and it costs only about four dollars! —*Bill Scaldwell, VE3KGO* ■

New Products/Nouveaux Produits

AEA MM-3 MORSE MACHINE

Is the Advanced Electronics Applications (AEA) MM-3 Morse Machine the ultimate Morse machine like it says? I work CW almost exclusively and I'm particularly active in contests, so that's the question I asked when I first saw the ad for the MM-3. I gave AEA a call and their promotion people kindly agreed to loan me an MM-3 for an evaluation.

The MM-3 arrived a few weeks later. It was a very exciting moment when I opened the box and placed the contents on the table. I found the MM-3 to be stylishly packaged. The slanted top panel contains a 4 x 4 keypad, an on/off/volume control, a speed control, four green LED mode indicators, two yellow memory bank LEDs and a red transmit LED. Also, there is an easily readable list of all the programmable commands, organized by mode and permanently posted on the front panel.

The rear panel has connectors for power, a keyer paddle, two keyer outputs and headphones. Two RCA-type phono jacks make up the programmable RS-232-compatible I/O port. Using this, all programmable functions can be controlled by a computer. The internal ASCII/Morse converter can be programmed to send ASCII characters to a computer as Morse code is sent with the paddle, or ASCII characters can be sent from the computer and converted to Morse code. The RS-232 port also facilitates downloading messages from the computer to any of the keyer's twenty memories.

The MM-3 is a full-featured, high-performance keyer with programmable 2–99 wpm or 5–45 wpm speed selection and 8k of RAM (32k optional) for storing characters. It has six programmable modes: KEYER/MEMORY SEND, BEACON (to automatically repeat a Morse or serial ASCII message at a programmed interval of 1–999 seconds), MEMORY LOAD, TRAINER (to create random code groups at steadily increasing speed), MORSE TERMINAL and QSO SIMULATOR.

I followed the installation instructions and connected a power source (9–16 volts dc is required; a power supply is not included) a keyer paddle, the RS-232 line to my computer and the keyer output to my transceiver. I also connected the remote switches. The MM-3 has two memory banks, A and B, each with ten memories. Memories A1 to A4 can be individually activated by remote switches—a great feature for contesters.

In the instruction manual, the four-page quick reference chapter quickly acquainted me with the MM-3 and ensured that I would operate it properly. The concise step-by-step explanations gave a clear overview of each mode of operation. The remainder of the manual provided in-depth material on individual operating modes and programmable features.

Over the next few weeks, I put the MM-3 through its paces. In time, I made several thousand QSOs with it, many of these in contests. I found that the MM-3 does everything that AEA claims it will.

The MM-3 has a few shortcomings. Once in a while, I found it would hang up. The AEA people told me this was due to a software bug. Buyer beware! If you buy an MM-3, make sure it has the latest ROM release. Personally, I wish that AEA and other companies that manufacture products with ROMs would offer an optional upgrade service for their customers. At the very least, they could inform product owners that a new version of a ROM has been released: a simple courtesy.

One feature lacking in the MM-3 is the ability to vary interword and intercharacter spacing. Predetermined word spacing is used by the ASCII/Morse converter. Most of us do not send machine-perfect code and if your style is to take a little extra time to send successive characters in a word, the ASCII/Morse converter will sometimes interpret that extra time as a word space. When this happens, the ASCII character string displayed on the computer screen ends up with incorrect word spaces. This can be annoying.

My remaining complaints pertain primarily to the use of the MM-3 in contests. One of the MM-3's excellent features is the ability to insert a serial number in a message. After the message is sent, the serial number is automatically incremented. The MM-3 can be instructed to abbreviate the serial number in the traditional manner, 9 as "N", 0 as "T", 1 as "A" or any combination of these. Now, in most contests, the serial number is proceeded by a signal report. But the MM-3 cannot be programmed to abbreviate other numbers such as in a signal report.

Contesters know that lot of time is spent sending a CQ TEST DE XXX message. A good place to store this message is in memory A1. One excellent feature of the MM-3 is the ability to repeat the A1 message after a predetermined delay interval. When you hear a station calling (you'd be using QSK for this), all you do to interrupt the repeating message is to touch the keyer paddle or the #, 0–9, C or D key on the keypad. The quickest and most natural movement is to touch the keyer paddle. Unfortunately, this initiates a dot or dash which keys the transceiver and frequently results in the loss of a character—often in the call letters of the caller. Time is lost, and time can mean points in a contest.

But these are small frustrations. In Canada, the AEA MM-3 Morse Machine costs about $300. It is well built, extremely user friendly and has a clearly written instruction manual. Is the MM-3 Morse Machine worth the money? I can only say that I really didn't want to return the evaluation unit! Thank you, AEA! —*Sylvan Katz, VE5ZX* ■

MOVING?

All copies of *QST* for Canadian addresses and all copies of *QST Canada* are processed at CRRL Headquarters. If you are moving, please send your change of address notice to CRRL, Box 7009, Station E, London, ON N5Y 4J9. We appreciate eight weeks' notice if possible. Quote your call sign or the seven-digit number from your mailing label. ■

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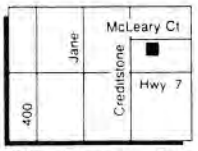

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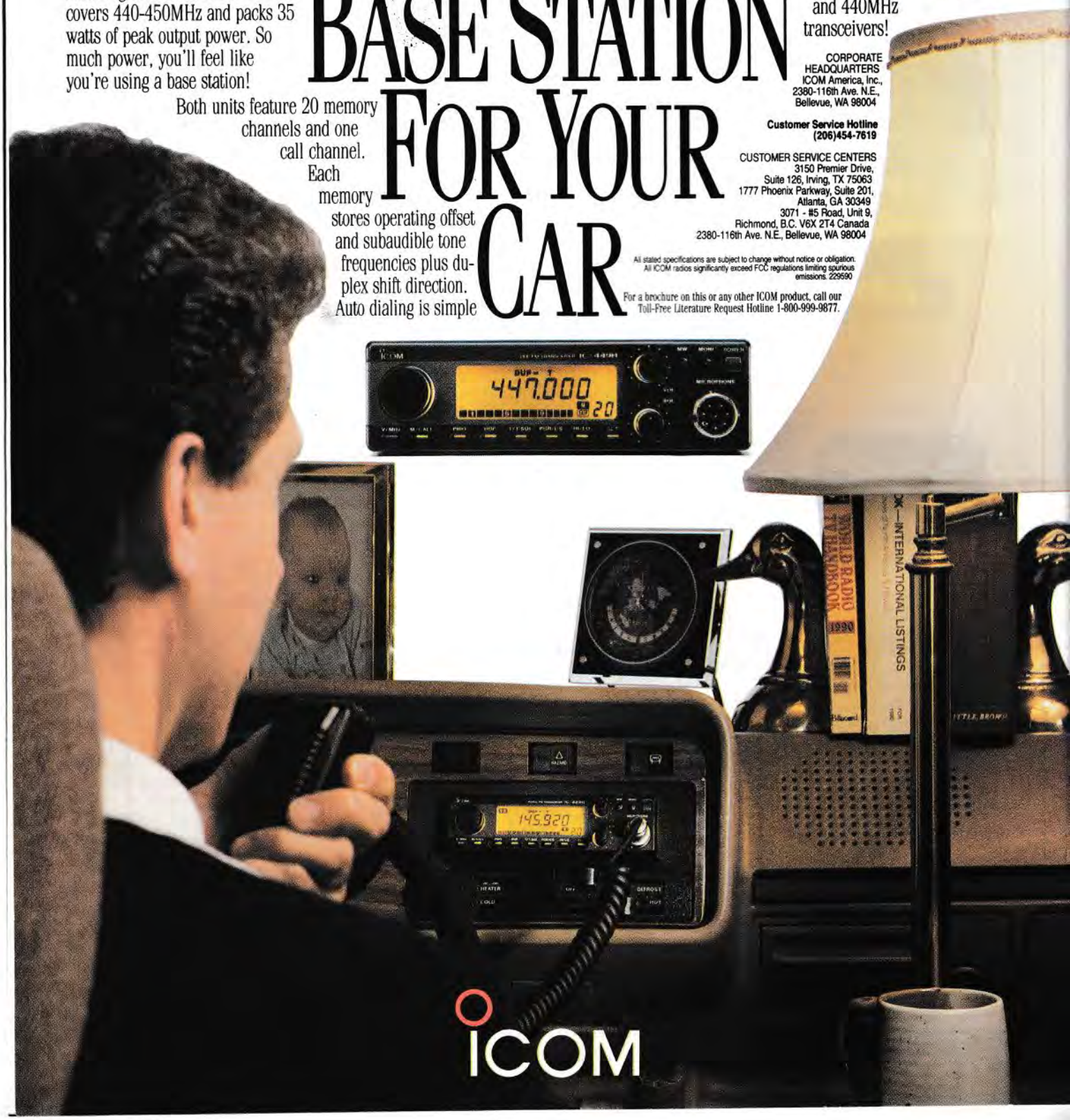

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