JUNE 77

THE GROUNDWAVE

The Official Bulletin of the

OTTAWA AMATEUR RADIO CLUB

Box 8873, Ottawa, Ont. K1G 3J2

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OTTAWA AMATEUR RADIO CLUB

STAN HILL VE3DQ

THE GROUNDWAVE - OFFICIAL BULLETIN OF THE OTTAWA AMATEUR RADIO CLUB --- JUNE 1977

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DEADLINE FOR COPY for the mid-summer issue will be July 2. Publication will be sometime during July or August. Address all correspondence to:
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THE OTTAWA AMATEUR RADIO CLUB is an association of Radio Amateurs devoted to the promotion of interest in Amateur Radio communications in the Ottawa regional area, and to promote the advancement of the technical competence and achievement of Club members.

THE CAPITAL CITY NET meets every Monday evening at 2000 hours on the Club repeater, VE3CRA (146.34/146.94), to pass traffic and make announcements of interest to Amateurs in the Ottawa regional area. THE SWAP NET, a service of the Ottawa Valley Mobile Radio Club Inc., and conducted by Ed, VE3GX, is also repeated at this time (except during the months of July and August). To list items or make enquiries, call Ed at 733-1721.

THE NEXT REGULAR MEETING of the Ottawa Amateur Radio Club will be held in the National Research Council, 100 Sussex Drive, Ottawa on Wednesday June 1, 1977 at 2000 hours. The main item on the program will be a talk entitled "Wallpaper" by Frank Haigh, VE3EVK.

THE OARC EXECUTIVE meets regularly in the Board Room of CFRA, 150 Isabella St., Ottawa at 2000 hours on the second Monday following the regular Club meeting.

LISTEN TO THE GROUNDWAVE NET on the Monday evening preceeding the regular OARC meeting. Bud, VE3UD, reads THE GROUNDWAVE for the benefit of white-caners in the area and everyone is welcome to tune in at 2100 hours on, or near, 3770 kHz.

RENEW YOUR ARRL MEMBERSHIP through the OARC and everyone benefits - you save the cheque or M.O. fee and the postage, and the Club retains $1.00 of the regular renewal fee. See Hank, VE3BR, at any of the meetings.

MAUREEN NEILL, VE3FZY, spends her working day around the Civic Hospital and has offered to visit any Amateur confined there. If you know of anyone who would appreciate a visit, call Maureen at 725-4581, or after 5:30 p.m., at 233-9941. Maureen reports that Norm Lewrey, VE3HO, is back in hospital again - we wish him a speedy recovery.

WANTED - NO, NEEDED! - FOR FIELD DAY - lengths of rope, lots of it, the loan of a beam for the day and also an extendable tower, similar to that used last year if possible. Call Rick, VE3HVA, if you can help with any of these items, at 737-0782.

NOTICE TO ALL CLUB MEMBERS re the bulk purchase of Low Pass Filters. Up to now there are nine (9) names only on the list. The response so far has been disappointing. Someone is going to miss out this time around. Don't delay!!! The price is $26.70 plus P.S.T. There may be a 50¢ charge for shipping. Contact Rick, VE3HVA, evenings at 737-0782 if you are interested.

REPORTS OF THE VISIT TO THE AIMONTE MONITORING STATION by Club members have been enthusiastic and quite favourable. It looks like those of us who could not make it really missed something worthwhile.

YOU KNOW THAT YOU'RE AHEAD - - - - - when you get kicked from behind!!!

MINUTES OF THE PREVIOUS MEETING A regular meeting of the OARC was held at the Auditorium of the N.R.C., Sussex Drive, on 4th May 1977. The meeting was called to order at 2005 hours and the visitors were welcomed by President Penny, VE3ERO.

The minutes of the previous meeting were accepted as printed in THE GROUNDWAVE on a motion by Larry, VE3CRX, seconded by Ken, VE3HTL.

Bud, VE3UD, gave an interesting short talk on dipole antennas.

Field Day will be held June 25 & 26, contact Zyg, VE3GZS, if you wish to volunteer your services or rigs, antennas.

Dominion Store tapes - please save them for a worthy cause either for the Club, or in conjunction with the Medical Secretaries for a wheelchair for the Children's Hospital. Maureen, VE3FZY, will be custodian of the tapes.

Fred, VE2DNW, thanked everyone for help in testing the synthesizer.

Holland Shepherd, VE3DV, gave an interesting talk on traffic net operation.

Vote of thanks given by Rick, VE3HVA, for the speakers, also unanimous thanks from the floor.

Motion by Dave, VE3BTY, seconded by Syd, VE3GVI, that the meeting adjourn at 2215. Maureen Neill, VE3FZY, Secretary

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SPECIAL REMINDER to all RSO Delegates and affiliated Clubs. Your help is again requested in obtaining 1977 nominations for the Clifford Marsh Memorial Trophy, which is awarded annually by the Society to the ONTARIO AMATEUR OF THE YEAR. Self-sacrificing assistance to others is the main attribute. No special forms are required to nominate the amateur of your choice. Please write the brief citation, giving all the reasons for the nomination and have it signed by all those who wish to be associated with the nomination. It should then be forwarded to Dan Robertson, VE3FOV, Chairman, RSO Public Relations prior to August 30th 1977.

THE OARC PICNIC is tentatively planned for Sunday August 7 in Vincent Massey Park. More details will appear in the summer issue of THE GROUNDWAVE.

THE FIRST (to my knowledge) split-split-channel repeater in Canada went into operation recently in Toronto when VE3DTO began operating on 146.235/146.835 MHz. Also, VE3TBF (The Black Fly), Bancroft, is reported operational on 147.72/147.12 MHz.

SELECTIVE CALLING DEVICES, as you have probably heard, are increasing in popularity. Rob, VE3ACY, has volunteered to act as area Tone Coordinator. His function would be to hold a listing of the numbers in use and to allot numbers to individuals requesting them, avoiding possible duplication. If you wish to list your number or reserve a number or block of numbers for possible future use, call Rob at 523-4246 or via repeater VE2CRA. Comments and/or suggestions are also welcome.

THE NATIONAL CAPITAL CHAPTER of the Quarter Century Wireless Association held their spring dinner meeting on May 18 at the Eastview Hotel. Members and their wives enjoyed a most delicious dinner followed by a talk by Ross Smyth, VE3FI, on the early days of radio and radio-operating in the Arctic. Ross has had some really unique and interesting experiences and it was a most enjoyable evening.

CLUB MEMBERS ARE AGAIN REMINDED about Field Day on the weekend of June 25/26, same location as last year - on the west bank of the Rideau River opposite Mooney's Bay - road access is from Highway 16 opposite the Carleton Heights Elementary School.

We are hoping to run four stations again and all help will be greatly appreciated either in the way of manpower or the loan of equipment, rigs, trailers, antennas, etc.

In any case, come along first thing on Saturday morning to help set up and on Sunday afternoon to help tear down. Contact Zyg, VE3GZS, 233-5841, or Paul, VE3ICV, 825-4143 for further details.

SOME FELLOWS DREAM OF WORTHY ACCOMPLISHMENTS-----

-----others stay awake and accomplish them!!!

COMMUNICATING THROUGH SIX MILES OF SOLID ROCK Boring through 6.3 miles of the Colorado Rockies to penetrate the Continental Divide with ribbons of mainline steel is the Denver & Rio Grande Western RR "Moffat Tunnel" just 50 miles west of Denver at 9094 feet above sea level. Trains approach the single-track tunnel and, as if by magic, rolling steel doors (or curtains) raise to permit the passage and control ventilation. With a roar from the 2,3,4 or 5 GM locomotive units leading the way, the 4500-ton train plunges into the tunnel for its journey to the other portal at 40 MPH. Directed by a track-side sign to change the frequency of their radios to the special frequency used in the tunnel, the conductor and engineer are equipped to communicate between the locomotive and caboose as well as the Denver dispatcher's office. (The recent thriller "Ski Train" was filmed for TV in this territory).

The antenna system is over six miles of leaky coax hung on the north wall of the tunnel at a height equal to the antenna on the engine and caboose and broken into four sections with a Yagi at each portal pointed down the track and hooked to the leaky coax. Each section of the antenna is connected to a radio system located in four equally-spaced tunnel "refuges" or six-foot square fibreglass buildings in the tunnel. In turn, these four radio systems are 60-wall Motorola Micor Compa-stations with duplexer, 12-volt battery and charger powered and connected to the east portal building by a 25-pair cable.

When any of the "refuge" receivers hears a signal on the tunnel frequency, it sends the received audio via a separate cable pair to the comparator at the east portal. The comparator selects the strongest signal and keys up all four refuge transmitters via a common cable pair. They transmit on an associated frequency.

When the train dispatcher in downtown Denver wishes to call a train in the tunnel, he selects the proper switch on his console and depresses his PTT button. His voice is carried five miles to North Yard via microwave and then on an openwire carrier the remaining distance to East Portal; thereby keying up all four transmitters and the comparator continues to send the best received audio back down the carrier path to Denver.

When a train creqman wishes to call the dispatch in Denver, he pushes the dispatch call switch on his radio control head for a three-second burst of 1477 Hz tone, which lets the dispatcher know, by a bell and a light, of the call while also sending back a 900 Hz "answer-back" tone. Caboose and engine radios are mostly Motorola Micors and Motrans, 45 and 30 watts respectively; all controlling locomotives and all cabooses have such radios, while Motorola HT-220 radios are generally carried by conductors and brakemen on this route.

(Credit: Dave Schulta, KØSUH of D&RGWRR via LEARA Newsletter and St. Paul Groundwave-

PROPOSAL FOR AN AWARD FOR OUTSTANDING SERVICE by the OARC

Background - The Ottawa Amateur Radio Club is dedicated to the promotion of interest in Amateur Radio communications in the Ottawa area, and to the advancement of the technical competence and achievement of Club members. Accordingly it is proposed that the OARC recognize significant and meritorious contributions by Ottawa area amateurs by an award which may be presented annually for outstanding service to amateur radio.

Award - It is proposed that the award be a suitably framed certificate to be presented at the December meeting of the OARC.

Eligibility - Any Ottawa area amateur radio operator properly nominated and duly selected for recognition. The amateur must be in possession of a valid Canadian Amateur Certificate of Proficiency in Radio, and the service recognized must have been performed while the candidate was pursuing his hobby as an amateur in the Ottawa area within the two years prior to nomination. It is not necessary to be a member of the OARC to receive this award.

Nomination - Any licensed amateur familiar with the service(s) performed can make a nomination. The nomination shall be made as follows:

a. by letter including a full description of the service(s) performed, as well as the candidate's name, address and callsign.
b. the nomination shall be submitted to the OARC Executive at or before the October meeting of the OARC.

Judging - The OARC Executive shall select three impartial judges who will consider the nominations. At least one judge must be a licensed amateur, but it will not be necessary for all judges to be licensed. The judges shall be empowered to select

(Continued on page 5)

NAVAIDS Navigation, that unique art of bumbling your way from point 'A' to point 'B', has come a long way from the sextant and timepiece.

The sextant has essentially remained unchanged since its invention by Thomas Godfrey in 1730. Used with almanacs, the device allows determination of latitude by measurement of the heavenly bodies above the horizon, or their angular distance as seen in the sky. The other co-ordinate needed to fix a position - longitude - can be plotted by a chronometer. Inasmuch as the earth rotates 15 deg. per hour, the only thing necessary to establish the longitude of a place is to know the difference in time at any moment between it and the reference place from which longitude is measured. (Remember Greenwich?)

Our other long-time friend, the magnetic compass, is probably at least a thousand years old. The first compass was simply a small round bar of magnetized iron floating in a bowl of water by means of a reed or piece of wood. This magnificient instrument derives directions by the influence of the directive force of the earth's magnetic field upon a magnetized needle. Canada has the honour of having the north magnetic pole, in the vicinity of Prince of Wales Island, located in her territory.

While the compass, sextant, timepiece and dead-reckoning method are still widely-used today, electronic navigation has also come into a right of its own. Rudimentary electronic navigation started with a transmitter and receiver, equipped with a moveable antenna coupled to an indicator. The receiver could be used either airborne or on a fixed base as a direction finder. Together with a good map, and a generous quantity of transmitters, one could meander almost anywhere.

As always, man cannot leave well enough alone. The development of greater complex nav-aids came rapidly. Progress brought us through the four course radio range, then to higher frequencies to suppress static and provide more accurate information with the VHF omni range, UHF TACAN and UHF distance measuring equipment. Solid state joined the bandwagon on the ground and in the cockpit allowing even more utilization of present concepts by bringing area navigation or RNAV in play. RNAV provided the pilot with flexibility. By using an off-set computer he can electronically move the VOR/DME data to position the station at co-ordinates he desires. At the start of the late sixties and coming into the seventies, autonomy arrived in airborne equipment again. Not since the Barnstormers has the navigator had the right to set his own destiny, regardless of ground stations. The internal navigation system, INS, provides pinpoint accuracy over thousands of miles without the aid of ground equipment; a spin-off from nuclear submarine technology, the saving alone in fuel by flying a true-line could pay for the INS in a commercial jet liner.

The newest wizard of electronic gadgets to arrive on the scene for navigation is the Global Positioning System, or Nav-Star. In the mid-1980's several satellites will be orbiting the earth at a known height which will ensure that at least six will be above the local horizon. Latitude, longitude and altitude data will be available by the aircraft receiver measuring the precise time taken for a satellite's signal to reach it. Working in the 'L' band, the satellite also transmits its exact present position. Nav-Star, together with digital sophistication and micro-processors, will undoubtedly attain the highest perfection for Nav-Aids known to man. (Credit: G. Powell in IBEW Electronic Group -News)-

AWARD PROPOSAL (Continued from page 4) or reject as many candidates as they deem fit. It is not necessary that an award be made if they feel the nominations do not merit it. The decision of the judges shall be final. The judges shall base their decision on: a. the benefit of the nominee's contribution to an individual or group. b. the amount of ingenuity, self-sacrifice, and time spent in performing the service. c. the recognition credited to amateur radio by the nominee's contribution.

Typical Activities that Could Qualify for the Award:

a. emergency communications work in a disaster such as a flood, earthquake, hurricane, explosion, etc. b. helping amateurs and others with specialized problems through application of amateur radio knowledge and expertise. c. service to the community by organizing communications for public events. d. by providing communications for civilians and servicemen isolated in remote locations. e. contributions to the advance of technology that are useful to amateur radio eg. slow-scan TV, OSCAR, etc. f. the training and support of people interested in amateur radio.

(This proposal will be brought up before the OARC membership at the next (June) meeting for discussion and subsequent adoption or rejection)

ESPERANTO AND THE RADIO AMATEUR by Bruce Spanton, VE3BRS

I seem to recall that some years ago a radio amateur handbook advised amateurs that they should always try to be diplomatic and friendly in their foreign contacts because they can be, in effect, ambassadors of good-will and international understanding when they work foreign amateurs. Also, I have seen the idea expressed in THE GROUNDWAVE (and elsewhere) that amateurs should acquire operating skills and practices that are in pace with the world of advanced communications technology, and that they should be encouraged to contribute to the "state-of-the-art" in communications.

It seems to me that this ACQUIRING OF OPERATING SKILLS AND (APPROVED) PRACTICES --KEEPING IN PACE WITH ADVANCING TECHNOLOGY -- AND CONTRIBUTING TO THE STATE-OF-THE-ART IN COMMUNICATIONS -- should go along with radio amateurs -- IMPROVING THEIR LANGUAGE COMMUNICATION SKILLS. And what botter way is there to promote international "good-will" in amateur radio communications, than by being prepared to meet the foreign amateur on neutral and easier ground -- by learning and using, whenever possible and appropriate, the neutral and easy-to-learn International language? This would relieve the foreign amateur from the stress or struggle of trying to speak our English (or French) which may be a lot too difficult for him to speak well.

When I recently returned to operating an amateur station after a few years of absence, one of my first foreign DX contacts replied to my call with the words: PLEASE GO SLOW OLD MAN - MY ENGLISH IS NOT SO GOOD AND I MAY HAVE SOME DIFFICULTY. He had a beautiful signal and he indicated that my signal was very good as well, but the obstacle in the way of our having a good communication was a language barrier. I wish he had been an Esperantist because I would gladly have shared the struggle with him by speaking Esperanto, although I am still somewhat less than fluent in speaking it. A few more months of practice and a few good contacts with Esperantist amateurs and I will help to set an example for others to follow.

Most Esperantists are very friendly people with a serious interest in the life of their community -- a community which they consider to be world-wide. Let's realize that just as radio can bridge the gap of distance in world communication, so can the International Language bridge the language gap between people of different national languages -- especially when more of us learn to use Esperanto.

Did you know that in 1954, and a few times since, the Universal Esperanto Association (UEA) was nominated a candidate for the Nobel Peace Prize? The nomination was supported by many Members of Parliament, statesman, university professors, scientists, educationists and other well-known world personalities. Although the UEA has not yet won the prize, the fact that it has often been nominated and supported by eminent people, is an encourgging sign of the high esteem with which Esperanto is held in the minds of world leaders. The late Winston Churchill (Prime Minister of Great Britain during World War II) stated in his later years that he did not believe there could ever be lasting peace in the world until the political leaders of the various countries all learned to speak one common language. Gis Revido!

LETTER TO THE EDITOR: Dear Carl; Just a note to let you know that we finally got out here to God's Country, but as yet am not on any of the HF bands. I will let you know when I am, and try to arrange a sked with some of the hams in tha Ottawa area. Two metres is working, but, surprisingly, there is not the activity out here that there is in the Ottawa area. The coverage is excellent, but the hams just aren't as gabby as those in the East. Because of the size of the metropolitan area, there are several Clubs. Their activities are not coordinated, and their publications are financed through advertising. Some are pretty fancy. I now have my new call - VE7CME. My address is as follows: W. John Watson, VE7CME, 15430 Royal Avenue, White Rock, B.C., V4B 1N1.

Kindest regards to all. 73's, John

THE DX CORNER (Continued from page 7)

Many thanks to VE3CXL, VE3DMC and VE3EJK for their contributions. We are losing Cliff, VE3EJK, who is about to become a VE4. Hope you get a real antenna farm out there Cliff and can you imagine what you will do with an outside antenna?

Hap, VE3HRC

PENNY'S TWO CENT'S WORTH Here we are coming up to the last meeting before the summer, a chance to line up all the antenna workers you may require because no one would delay antenna work until the snow flies..... Watch for the two major summer events the Picnic on August 7 which gives us a chance to 'eye-ball' with other Amateurs and their families while the youngsters run off excess energy and consume immense quantities of food (right Marg?), and the biggest event (HF) of the year - Field Day - a time and chance to work together, to drink too much coffee, to miss out on most of a night's sleep, to brush up on competitive Amateur skills, to survive the weather extremes (chilly nights and blistering days), and to somehow enjoy every minute and vow to be back again next year. Also, watch for the Amateur display at Sears on June 17/18. If you could help 'man' the display, please call Heinz, VE3GOS (836-2238 or 828-2444) who wants a YL Amateur on duty as much of the time as possible as well as OM's. Can you spare a couple of hours to give publicity to your favourite hobby? --call Heinz right now!

The visits to the monitoring station, though not full to capacity, were most worthwhile with the Amateurs getting an interesting description of the equipment and work of the station as well as to twist the dials of receivers and examine signals on a spectrum analyser, etc. Our thanks for the warm welcome received to the station operators and manager. Did you miss out?

Congratulations to the 29 graduates of Gerry's class at Algonquin. Try to encourage them, and all newcomers, in the proper procedures rather than criticize them. Getting started isn't always easy, so volunteer some of your expertise and time to help instead of complaining of any mistakes made.

See you at Field Day - 73, 88, Penny, VE3ERO, OARC President

THE DX CORNER by Hap Chafe, VE3HRC

Sorry that I missed getting a column in last month but at press time I was cooling my heels (well, not exactly my heels!) in the Civic Hospital after some surgery. Many thanks for the kind wishes from so many of you and a special thanks to Maureen, VE3FZY, for her visits. They were much appreciated. I had hoped to work lots of DX during my convalescence at home but our friendly Hydro shattered that with a daytime S9 line-noise on all bands.

Predictions are that 20 metres will be best to the far East during the mornings with central and western Asia opening up in the afternoon to late evening. Fifteen metres should be best in the afternoon to Europe and later to Africa. These predictions are courtesy of HR Report. Here is a sampling of what has been worked lately from the Ottawa area:

15M	SSB	HH2MC	(308 1230)		20M	CW	SV1FT	(027 2200)	Crete
		PY5EX	(304 2227)				HBØBLC	(024 0400)	
		JY9CR	(304 1515)				ISØDFK	(061 2230)	
	CW	4X4VG	(033 1500)				OY1R	(016 1140)	
		CR3AGD	(021 1500)				4X4YM	(012 2300)	
		HKØBKX	(100 1230)	San Andres Il.			UI8ADN	(009 0145)	
		4U1ITU	(036 2100)				VU2GW	(003 0115)	
20M	SSB	ZP5DP	(200 0000)				VK6HQ	(007 1245)	
		SP5DOI	(180 2000)				UJ8JCA	(025 1400)	
		IU4ACJ	(180 2230)				EP2VN	(028 1330)	
		VK3HE	(275 0330)				EA8AT	(080 1130)	
		HA4KYH	(185 0030)				EL2EV	(045 0100)	
		ZL1KN	(180 0300)				UKØBKX	(062 1100)	
		7X2BK	(168 1915)		40M	CW	CT2BZ	(020 0900)	
		4Z4HF	(192 1800)				JH1BUO	(008 1100)	
		9H1FF	(216 2030)				VK4FJ	(004 1130)	Lord Howe Il.
		JY5YG	(260 2100)				VKØAC	(031 1200)	
		KA6YL	(199 1230)				KZ5EK	(028 1300)	
		EA8LS	(227 2300)		80M	SSB	ZS6DW	(772 0430)	
		VR3AR	(195 0330)	Xmas Island			G3WMZ	(780 0430)	
		CE3BII	(185 2330)				PJ9LOF	(790 1000)	
							OA4VR	(780 1030)	

(Continued on page 6)

SQUELCH "POP" ELIMINATION ON THE STANDARD SRC-146A HANDIE-TALKIE

Although this modification is aimed at the STANDARD SRC-146A radio, it could well be used on rigs with similar problems of squelch "pop" such as the VHF Engineering receivers, some FT-221's and tuneable VHF receivers.

The problem of squelch "pop" in the STANDARD 146A doesn't become troublesome until one tries to use an earphone, mobile phone handset or external speaker. When any of these accessories are used, the "pop" reaches a particularly loud level. When using a handset or earphone, the problem becomes irritating to the point where one would be tempted to disconnect the accessories.

Looking into the schematic of the STANDARD, one can see that conventional FM receiver techniques are used. The detected audio is fed to a pot acting as a volume control and coupled by a low value electrolytic capacitor to the input of an audio pre-amp and squelch switch collector. The audio preamp can be either an IC or emitter follower, depending on when the radio was manufactured. Noise from the limiter is rectified, then amplified and used to drive the base of the squelch switch, whose emitter is at ground. The rectified noise biases the base of the transister forward, turning the transistor "on", and shorting the DC and audio on that line to ground potential, effectively squelching the radio. The rectified and amplified noise produces about .65 volts at the base of the transister, while a quieting signal produces about .15 to .20 volts, not enough to turn the transister "on", but allowing DC and audio to drive the preamp and following audio amp stage. The transition time of the squelch switch transister from the "on" to the "off" position is quite fast, allowing power to hit the audio preamp suddenly, creating the characteristic "pop". The trick now is to slow the transition time down so that the audio preamp turns on gradually, eliminating the "pop" but fast enough so no communications are lost. There are two methods of doing this, and both will work, but one method is preferable. We don't have to worry about the power going to the audio amp, as B-plus is always applied to these stages, but the preamp is another story, as the power is switched by the squelch switch. The most favourable method of slowing down the transition time is by placing an electrolytic capacitor across the base of the switch to ground. This also places a 4.7 mF capacitor and a 47 K resistor in parallel with this capacitor. One could place this capacitor from the collector of the switch to ground but changes in audio quality and quantity become apparent. By experimenting, a value of 35 to 50 mF across the squelch switch input seems preferable, but too high a value will result in a long squelch tail hang-in, and a lower value doesn't quite solve the problem. The capacitor that I used was 35 mF rated at 6 volts (the lowest I could find) and is connected between the "hot" side of the 47 K resistor (R070) and any convenient ground point. The resistor is covered with insulation but can be scraped off carefully and some thin insulated wire can be connected between this point and the positive end of the capacitor.

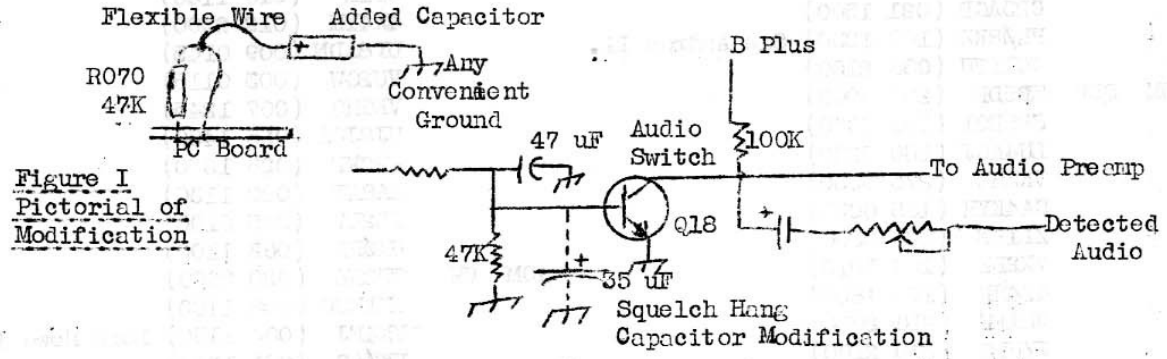


Figure I Pictorial of Modification

Figure II Schematic of Modification (SRC-146A Circuitry)

by Adrian Brookes, VE3GOJ

HOW MANY OF US ARE LIVING IN THE "METALLIC" AGE-----

-----gold in our teeth, silver in our hair and lead in our pants?????

ALL HAIL TO HEINRICH HERTZ from Ham Shack Gossip via Amateur Radio News Svc.

When Heinrich Hertz completed his famous experiments in Frankfort, Germany, in the year 1887-88, he finished his notes, folded his books, put his equipment on the top shelf, and moved on to his next project. He had no idea of the mighty force he had loosed upon humanity. He was long on education, but short on vision. Marconi, on the other hand, could see a need for such a device. So he took Hertz's oscillator, a Frenchman's detector (Branley coherer) and managed to get his signals out of the back yard. Marconi was soon covering dozens of miles, then ship-to-shore, which had been his objective to begin with. There were soon dozens of people with sharp pencils and slide-rules working with the oscillator and hundreds of miles were being covered. People such as Sir Oliver Lodge gave us tuned circuits, Reginald Fessenden gave us the first continuous wave transmitter, Lee DeForest gave us the real piece de resistance in the three-element vacuum tube which was not only a detector but an amplifier and generator as well (After a seven year fight in the courts, he got credit for it too). G.W. Pickard brought us the first solid-state detector, the old familiar galena crystal and other minerals to rectify high frequencies. Heissing gave us our first system of plate modulation, the constant current system, thus radio-telephony became practical. Armstrong created the first feed-back regenerative receiver, later the famous super-hetrodyne principle, and still later he originated frequency-modulation. There were, also, other hundreds in addition to those pioneers working on different angles which included Amateur radio and high frequency operation. Much sleep was lost, but much was accomplished.

The sad part is that all the hard work of the individuals who made all this possible has been forgotten. The guy with the idiot box has paid his money - and it had better work! Ask the good buddy yapping on CB who Reginald Fessenden was and he will tell you that he doesn't keep up with the latest rock singers. Familiarity breeds contempt and this is certainly the case in this electronic age.

WHAT'S IN A NAME? If you were starting an Amateur Radio Club Bulletin, what would you call it? Here are a few names already in use. No doubt there are hundreds more.

The Groundwave (of course)	Bulletin (very original)	Newsletter (also original)
The Scope	Squelch Tale	The Common Ground
QUA	RST	....Calling
....Carrier	The Hamateur	Short Skip
Collector and Emitter	Printed Circuit	Hamsplatter
Smoke Signals	Harmonics	Scatter
....Log	The Hilltopper	Bandspread
Ham-Hum	Overmodulation	The Coherer
VOX	The Call Letter	Rambler
Break-in	Spark Gap	Grid Leak

.....and the list goes on and on and on.....

HOW MANY REMEMBER TOM SWIFT? How many know that Tom was an ardent Amateur (among many other ardent things)? Tom's manner of speaking tends to give him away.

"B-plus is a little low here", said Tom weakly.
"My final's running a bit red", said Tom heatedly.
"MY VOX is working better", said Tom instantly.
"I'm on 1296", said Tom loftily.
"Please QSY", said Tom shiftily.
"I'm afraid I blew a fuse", said Tom delightedly.
"My antenna's not on you", said Tom obliquely.
"SWR is about 10 to 1", said Tom reflectively.
"Everything is home-brew", said Tom craftily.
"Using a 90 Hz filter now", said Tom sharply.
"J u s t g o t m y N o v i c e", s a i d T o m s l o w l y.

(Blame for the above rests with the Amateur Radio News Service)

IT'S ONLY HUMAN NATURE to think wise things-----

-----and do ridiculous ones!

CLUES TO CROSSWORD ON OPPOSITE PAGE (Clues with suffix -cw indicate CW abbvs.)

ACROSS

1. CW language
4. DC potential applied to control grid of a vacuum tube
6. Principal tube anode
10. Check into net (op sig)
11. Meter type
12. Plate potential - abbv
14. Pre-SSB mode
16. Female op
17. F1 mode
18. Therefore
19. Poor operator
20. Required for CW reception
21. 3.1416
23. W6 state - abbv
24. Unit of capacitance
27. Name - slang
29. Unit of weight - metric
30. To receive
31. Minimum value of a changing current
32. Not any
33. The giving off of electrons
37. Male ham
38. Some prefer to chase this
39. Elementary particle of negative electricity
44. Unit of relative power
46. To loan
47. To wear away
48. To proceed
49. Used for storage
52. This is -cw
54. Used to adjust a small coil
57. Radio wave or AC that carries intelligence
58. End of contact -cw
60. Million - abbv
61. Burnt remains
62. Pre-SOS SOS
63. Produced by heterodyning - abbv
66. ___ and fro
68. Used to increase a signal
72. Isolating circuit
74. Xmtr output power plus antenna gain minus line loss - abbv
76. Closing down -cw
77. Radio or TV ___
78. CW signal report
79. Amateur satellite
81. Word after -cw
82. Over -cw
83. Wait -cw
85. Transmitter - abbv
86. What we try to avoid radiating

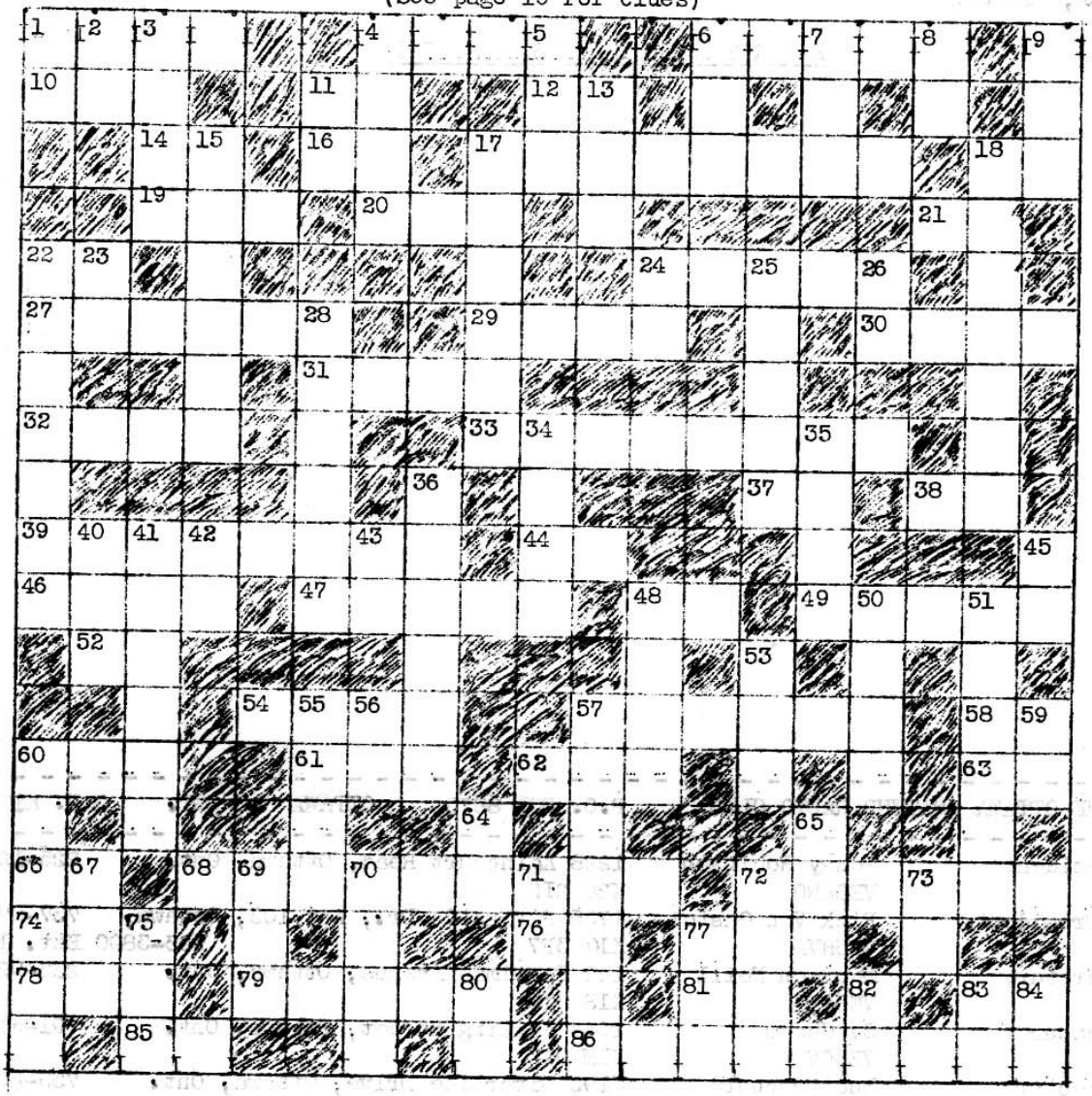
DOWN

1. General call
2. Activated equipment is this
3. Frequency control device
4. NE51 or #47 for example
5. Her
6. Variable resistor
7. Unit of current - abbv
8. And -cw
9. Used to change frequency
11. Very -cw
13. The band of 3 to 30 kHz
15. Center
17. Switch type
18. Term used to describe transmitting and receiving on the same frequency
22. A set frequency
23. All after -cw
24. Popular 2-metre mode
25. What hams use
26. Current which travels in one direction only
28. Last
34. Emission type - alternate expression
35. Leave out
36. Sufficient
40. Light-emitting diode - abbv
41. Inherent power to produce an effect
42. ARRL CW contest
43. Gate type
45. Word count -cw
48. Tube part
50. Controlled by berticle sync in TV
51. Beginning ham
53. Radiator - abbv
55. Another name for 4 DOWN
56. You and I
57. Used to quiet receiver between calls
59. Audio frequency - abbv
60. VOM/VTVM devices
64. The band of 3 to 30 MHz
65. Bolt mate
67. Official relay station - abbv
69. Unit of conductance
70. Securing device
71. State-of-the-art component
72. Directional antenna
73. From -cw
75. Some prefer this to VOX
77. The favoruite subject of some
80. Rhode Island - abbv
82. Specified station go ahead -cw
83. Periodic current - abbv
84. Popular contest - abbv

VE3ACY

SUPER SUPER DUPER CROSSWORD PUZZLE by Rob Bareham, VE3ACY

(See page 10 for clues)



A MUST FOR ANYONE travelling in the Barrie and surrounding 'cottage country' is the repeater pair 25/85. Members of the LSR Repeater Group operate an ONTARS-type traffic net for that area on Saturdays, Sundays and holidays and are performing an excellent service. They have someone standing by to take and correlate traffic reports from the area and make frequent announcements that they are available with this info and are ready to render whatever other assistance they can to motorists in the vicinity. This is a far cry from the usual hap-hazard type of repeater operation usually encountered. While most Amateurs are ready and willing to give what assistance or information they can, usually it is uncorrelated and without a feel for the current, or developing, traffic situation. Here, they have taken an excellent communication system, applied it to the situation at hand and have come up with a worth-while Amateur service.

THE FASTEST GROWING THING IN NATURE IS A FISH-----

-----especially between the time it is caught and the time the fisherman describes it to his friends!!!

THE OTTAWA AMATEUR RADIO CLUB
BOX 8873, OTTAWA, ONTARIO,
CANADA, K1G 3J2

F I R S T C L A S S M A I L

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