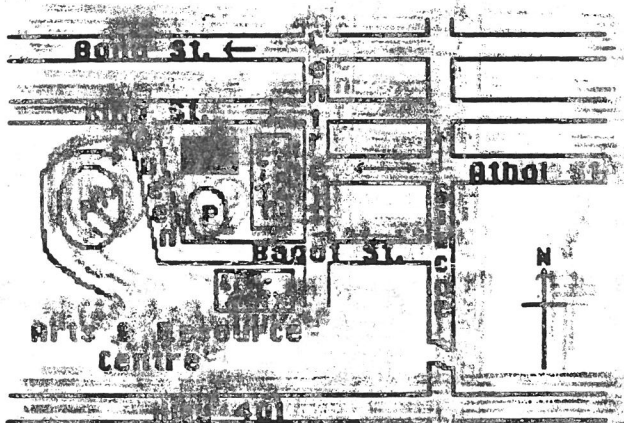


**NORTH**

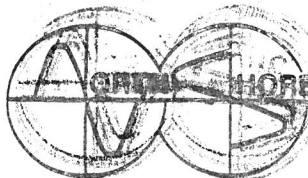
**SHORE AMATEUR RADIO CLUB INC.**

**P.O. BOX #171, OSHAWA, ONT., L1H 7L1**

**First Class Première classe**



**Next meeting at the  
Arts & Resource Centre  
2nd Monday of each Month  
8:00 PM**



**NORTH SHORE AMATEUR RADIO CLUB INC.**

**P.O. BOX #171, OSHAWA, ONT., L1H 7L1**

=====

ELECTED DIRECTORS

-----

PRESIDENT	RALPH DAY	VE3 CRK	416-576-8738
SECRETARY	RAY ZAMBONELLI	VE3 OUB	416-723-2467
TREASURER	MIKE SHERBA	VE3 DKW	416-723-7674
PROGRAM DIRECTOR	JOE WHITE	VE3 IHS	416-623-4069
PAST/VICE PRESIDENT	RICK GIBSON	VE3 ASH	416-434-2886

NON-ELECTED OFFICERS (SUBJECT TO CHANGES)

-----

REGISTRAR	KEITH WYARD-SCOTT	VE3 GDF	416-723-5758
SPECIAL EVENTS COORD.	RALPH DAY	VE3 CRK	416-576-8738
GET-WELL CARDS	COLIN BELL	VE3 GDF	416-723-7482
2-METER NET CONTROL	ROY MILLER	VE3 AAF	416-852-5447
MEMBERSHIP LIST & LABELS	PAUL DALE	VE3 LHZ	416-434-6741
INSTRUCTION COORD.	RICK GIBSON	VE3 ASH	416-434-2886
AUDITOR	HARRY WESTWOOD	VE3 QG	416-683-5104

=====

CLUB STATION.....VE3 NSR

CLUB REPEATER.....VE3 OSH 147.720 MHZ IN 147.120 MHZ OUT.

2-METER NET HOSTED BY ROY (AAF)(OR A STAND-IN)CONVENES EVERY THURSDAY AT 19:30 LOCAL TIME ON THE CLUBS REPEATER (OSH). AS PART OF THE NET, CODE PRACTICE IS PROVIDED BY BERNIE (ATI) BEGINNING AT 20:30 LOCAL.

10-METER NET (UNOFFICIAL)- A GROUP OF LOCAL HAMS MEET SUNDAYS ON 28.200 MHZ USING CW FROM 09:00 TO 10:00 LOCAL THEN SWITCH TO SSB PHONE UNTIL EXHAUSTED OR XYL'S CALL DINNER

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CONTRIBUTIONS TO NEWSLETTER

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EDITORS-	KEITH WYARD-SCOTT	VE3 GDF	416-723-5758
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CONTRIBUTIONS MAY BE MAILED (ATTENTION THE EDITOR) TO THE N.S.A.R.C., BOX #171, OSHAWA, ONT., L1H 7L1 OR, IF URGENT, CBBL ONE OF THE EDITORS DIRECTLY.

NOTE!- OPINIONS EXPRESSED ARE THOSE OF THE WRITERS AND DO NOT, OF NECESSITY, REFLECT THOSE OF N.S.A.R.C. MEMBERS IN GENERAL. ARTICLES DEEMED TO BE DEFAMATORY WILL NOT BE ACCEPTED.

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NEXT MEETING - MONDAY, DEC.12, 1988 AT 20:00 LOCAL (8:00 P.M.) IN THE GREEN ROOM OF THE ARTS RESOURCE CENTRE (BEHIND CITY HALL - CENTRE STREET SOUTH- SEE MAP ON FRONT PAGE)

PROGRAM-THIS MONTH THE MEETING WILL FEATURE A LOT OF TALK AND A LITTLE WINE AND CHEESE TO MAKE LISTENING EASIER. YOU WILL ALSO HAVE THE OPPORTUNITY TO NOMINATE REPLACEMENTS FOR TWO DIRECTORS TO RUN IN THE JANUARY ELECTIONS (IF YOU HAVE THEIR APPROVAL).

=====

ON BEHALF OF ALL EXECUTIVE AND MEMBERS

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*****		*****
* MERRY CHRISTMAS *	AND	* HAPPY NEW YEAR *
*****		*****

-----  
MORE APOLOGIES  
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I REGRET THAT I WILL HAVE TO KEEP THIS BULLETIN TO FEWER PAGES THAN I WOULD LIKE BUT I HAVE HAD A HARD TIME GETTING BACK INTO THE SWING OF THINGS AFTER MY VISIT 'DOWN-UNDER' (I EVEN VISITED---READY--- 'DOWN-UNDER-DOWN-UNDER' AS THE TASMANIANS REFER TO THEIR ISLAND) AND ON THE WAY HOME, HAWAII.

I WOULD LIKE YOU ALL TO KNOW THAT, WHILE I WAS AWAY, THE BULLETIN WAS PUBLISHED BY LARRY (ASB). I'M SURE YOU HAVE NOTICED THE DIFFERENCE IN THE PRINTING OF THE OCTOBER AND NOVEMBER ISSUES. LARRY HAS ACCESS TO A BETTER PRINTER AND A MORE SOPHISTICATED SOFTWARE THAN I CURRENTLY HAVE AS WELL AS A BETTER KNOWLEDGE OF WHAT MAY BE INTERESTING TO YOU MORE ADVANCED HAMS. WE CAN ALSO THANK LARRY FOR PAGES 3 & 4 IN THIS ISSUE.

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A MORE TIMELY TOPIC  
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THE TIME WHEN WE MUST RE-ELECT OR REPLACE SOME OF OUR EXECUTIVE DIRECTORS HAS COME AGAIN AND I NEED NOT REMIND YOU THAT THE CONTINUED OPERATION OF THIS, OR ANY OTHER, CLUB DEPENDS ON AN ACTIVE EXECUTIVE AS WELL AS NEW AND CONSTRUCTIVE IDEAS. I WOULD NOT LIKE TO HAVE YOU THINK THAT OUR PRESENT EXECUTIVE HAS RUN OUT OF IDEAS BUT AT LEAST TWO OF THEM (JOE, IHS AND RICK, ASH) CANNOT CONTINUE TO SERVE IN THEIR PRESENT CAPACITIES DUE TO HEAVY WORKLOADS IN OTHER AREAS.

ONLY YOU, EITHER BY OFFERING YOUR OWN SERVICES OR HELPING TO ELECT SOMEONE WHO CAN SERVE, CAN ENSURE THAT THIS CLUB WILL CONTINUE TO ATTEMPT TO SERVE THE NEEDS OF AMATEUR RADIO IN THIS AREA. PERHAPS YOU KNOW SOMEONE IN THE CLUB WHO WOULD BE EXECUTIVE MATERIAL AND WOULD NEED ONLY A LITTLE ENCOURAGEMENT TO STAND FOR ELECTION; IF YOU DO, TALK TO HIM ABOUT IT AND, IF HE AGREES, USE THE FORM AT THE BOTTOM OF PAGE 5 TO NOMINATE HIM. YOU WILL NOTICE THAT THE FORM IS ON THE BACK OF THE MEMBERSHIP RENEWAL FORM (WHY NOT KILL TWO BIRDS WITH ONE STAMP?).

ALSO ON THE BACK PAGE, YOU WILL FIND A PROXY FORM THAT YOU MAY USE TO AUTHORIZE A MEMBER (MAY I SUGGEST ONE OF THE PRESENT EXECUTIVE) TO EXERCISE YOUR VOTE FOR A PARTICULAR CANDIDATE OR IN SUPPORT OF THEIR OWN CHOICE. IF YOU FEEL YOU WILL NOT BE ABLE TO ATTEND THE MEETING IN PERSON, PLEASE USE YOUR PROXY IT WILL ENSURE THAT THE EXECUTIVE HAS BEEN CHOSEN BY THE MAJORITY OF THE MEMBERS AND NOT JUST BY A MAJORITY OF THOSE WHO CAN ATTEND IN PERSON.

-----  
Did YOU Know?  
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THAT OUR MEMBERSHIP HAS AUTHORIZED THE EXECUTIVE TO SET ASIDE MONIES TO PURCHASE THE NEW CONTROLLER FOR THE REPEATER AS RECOMMENDED BY THE TECHNICAL COMMITTEE. THE RECOMMENDED CONTROLLER WILL HAVE MANY CAPABILITIES THAT OUR PRESENT CONTROLLER LACKS AND WILL PAVE THE WAY FOR OUR TECHNICAL COMMITTEE TO LOOK AT FUTURE IMPROVEMENTS AND WHO KNOWS WHAT THE FUTURE WILL BRING?

THAT WE ARE MAILING THIS AND FUTURE ISSUES OF THE BULLETIN IN REGULAR BUSINESS-SIZE ENVELOPES AND SAVING MONEY? IT'S TRUE!!! -THE COST OF PRE-STAMPED ENVELOPE FROM THE POST OFFICE IS ONLY 4 CENTS MORE THAN THE STAMP ALONE. THE COST OF PRINTING OUR OUTSIDE SHEET IS IN THE NEIGHBOURHOOD OF 5 CENTS. HOWEVER WE DO HAVE THE LOSS OF THE MAP ON THE BACK WHICH IS MORE THAN OFFSET BY THE REDUCTION OF RETURNED BULLETINS WHICH HAVE BEEN CAUGHT IN THE SORTING MACHINES.

The following article is a publication of *CARF*, the Canadian Amateur Radio Federation Inc. It is continued here from the November bulletin.

## Successful Electromagnetic Compatibility

### Guidelines for the Radio Amateur

Author: Bill Wilson, VE3NR. \*

- 17) *Collect good articles on solving EMC problems.* Your club can help. A file of good articles on how to resolve EMC problems will serve an Amateur well. New methods of constructing the electronic packages in CE equipment have come into use in the past few years as have methods of improving equipment compatibility. At this time, the methods of resolving EMC problems are not yet well covered in readily available handbooks.
- 18) *Belong to an Amateur radio club and encourage it to help Amateurs with EMC problems, preferably through an EMC committee.* Clubs can do a great deal to help Amateurs resolve EMC problems just as they have done with EMI problems involving radio receivers in the past.
- 19) *Design and build your station for good compatibility with your neighbour's equipment.* Locate your antennas as far away from your neighbours' homes as practicable. Then ensure that all the RF energy your transmitters generate gets up to your antennas and radiates from there and not from your RF transmission lines, house wiring, plumbing, eaves troughing, telephone drops, etc. When you achieve this your station will work well and you will have taken the most important steps towards minimizing EMC problems.

Here are a few additional suggestions:

- a) *Build a good station ground within a few feet of your equipment.*  
It should comprise at least two deeply driven ground rods each of which is connected to the station ground busbar inside the shack with #10 copper wire. You need to keep impedances to ground as low as possible.
- b) *Filter the station's AC power supply.*  
The idea is to prevent RF energy getting back into the power lines. The handbooks tell how to build one. This filter must also be grounded to the station ground. A separate AC circuit from the service entrance fuse or breaker panel will also help.
- c) *Keep your equipment close to ground.*  
It is more difficult to control the radiation from a station that is on, say, the second floor of a house when compared with the basement. See also a) above.

*Continued on page 4...*

... continued from page 3

- d) *Always use a band pass or low pass filter on your transmitter output.*  
Such a filter, to do its job properly, must work into a well matched transmission line. If this is not possible, an antenna tuning unit should be used to match the transmission line impedance to that of the filter's output.
- e) *Use a balun or 9 inches of high permeability ferrite beads on the coax feeder where it connects to a dipole antenna.*  
This will ensure that equal power will be fed to the two sides of the dipole and will help keep RF currents off the outside of your coax feeder and away from your home and your neighbours'.
- f) *Use good quality coax feeders in which the shielding is especially dense and therefore more effective in containing the RF energy flowing to your antennas.*
- g) *Feeders should be led away from the antennas at right angles for at least 1/4 wavelength.*  
This, along with c), e) and f) above will minimize the flow of RF feedback currents down the outside of the feeders and into the station as well as undesireably strong fields in nearby residences. By the way, these tricks will also help resolve EMI problems and, of course, prevent "tingle-touch".
- h) *Always monitor the performance of the station with good meters that are continuously in circuit.*  
There is no point in designing and building a good station if one does not regularly check its performance with good meters. An SWR meter permanently in the transmission line to the antenna is the best as, once the station has been properly adjusted, it will show any changes in the whole radiating system.
- i) *Use no more power than is needed for the communication.*  
Don't let the desire for a 30 over 9 report or the desire to know that the blowers on your amplifier tubes will work, get you into trouble with your neighbours.

20) To conclude:

The average Amateur station kicks up a fairly strong RF field around it and a lot of consumer electronic equipment will not function properly in such fields. When maximum legal power is used along with a beam, the environment is much worse for CE equipment. Communications Canada knows about these problems - many more station licensees than just Amateurs are reminding them every day. Until the time when the Radio Act is amended and Communications Canada can control susceptibility, Amateurs should see EMC problems as another challenging facet of Amateur Radio. It is hoped that these guidelines will help Amateurs to resolve these problems without also creating "people problems" to complicate things.

## R A D I O ' S A N C E S T O R S

## POPOV ALEKSANDR S.

Born 1859 Died 1906

Popov was the son of a priest, and was expected to follow in his father's footsteps. He graduated from the seminary in Perm, and became very interested in physics, mathematics and engineering. He was admitted to the faculty of Physics and Mathematics at the University of St. Petersburg.

While he was still a student in 1881, Popov worked at the Elektrotechnik artel, which ran the first small electric power stations in Russia, and the first electrical lighting installations using arc lamps.

In 1883 he went to teach at the Russian Navy's Torpedo School at Kronstadt to train naval specialists in electrical engineering. He lectured and conducted laboratory sessions in electricity and magnetism.

Recognizing the significance of Hertz' discovery of electromagnetic waves, Popov went to work on efforts to receive them over long distances. Unaware at the

time of Marconi's wireless experiments, Popov constructed his first primitive radio receiver, a device to register electrical disturbances - a lightning detector. In March 1896 he demonstrated the transmission of Hertzian waves between various points in St. Petersburg University to an audience of the city's Physical Society. The story goes that the words "Heinrich Hertz were transmitted in Morse Code, and transcribed on a blackboard by the Society's President. Marconi's first public demonstration was in November of that same year - 1896.

By 1898 Popov had developed ship-to-shore radio communication over a distance of 6 miles, which he extended to 30 miles a year later.

Popov's work with Hertzian waves simultaneously with Marconi's is worthy of recognition. His public demonstration came before Marconi's, but there is evidence that Marconi did successfully demonstrate radio transmission "at an earlier date - but not before an audience of scientists."

It is difficult to establish positively **who invented radio.** Marconi, Fessenden, Hertz, Popov or even Nathan B. Stubblefield? Look back over the Splatter articles on **Radio's Ancestors & make your choice!**

## André Marie Ampère

By David Adams VE3 HBF

Ampere was the founder of the science of electromagnetism, for whom the unit of electric current was named.

His father was a wealthy merchant, who encouraged Andre-Marie to educate himself through exposure to books of all sorts. He studied the 35-volume "Encyclopedie" so intensely that he was able thirty years later to quote whole articles from it. And by the time he was 12 he had mastered all the mathematics then known. He taught himself Latin when he realized that some of the books he wanted to read were in that language.

The Encyclopedie and Catholicism were the two great influences in Ampere's life, which seesawed between doubt and faith. An intensely

emotional man, he was devastated when his wife Julie died in 1803 after only four years of marriage.



André-Marie Ampère, detail of an oil painting by an unknown artist  
The Mansell Collection.

Ampere was not a methodical experimenter. He would have a brilliant flash of insight, which he would pursue relentlessly to its conclusion.

A paper on Probability earned him a post at the Ecole Polytechnique in Paris.

A second marriage in 1806 was a disaster from the word "go". He was swindled by his father-in-law, and his

wife and mother-in-law made his life unbearable. His daughter married a drunkard. Yet Ampere's sufferings reinforced his religious faith, and he advanced from Inspector-General of the new university system to Professor of Astronomy at the University of Paris.

Oersted's discovery of electromagnetism in 1820 turned the scientific world of the day upside down. Hadn't Coulomb 35 years earlier supposedly proved that there was no interaction between electricity and magnetism? Ampere however accepted Oersted's discovery without question, and like Faraday in England, went straight to work; in a few weeks the science of electrodynamics was born. He discovered the relationship between two current-carrying wires. By curling wires in helices Ampere was able to propound a new theory of magnetism as electricity in motion.

Ampere was born in 1775 and died in 1836.

FURTHER ACKNOWLEDGEMENTS

WE THANK YORK REGION A.R.C. FOR THE PRECEDING PAGE AND OUR OWN GLEN (AEQ) FOR RESURRECTING THE FOLLOWING FROM AN OLD ISSUE OF CQ MAGAZINE (DEC. 1960).

'T WAS THE NIGHT BEFORE...?

'Twas the night before last and all through the shack
The equipment as always was still out of whack.
The fones had a bad spot someplace in the line,
And the rusty alarm clock refused to keep time.
My oversize ashtray was littered with snipes,
Gum wrappers, stub pencils, a couple of pipes.
The trusty dot-maker all covered with dust
Was fighting, but feebly, the onset of rust.
My old Hallicrafters with a flat 6A8
Was trying to pull through a weak VE8.
While down from the window there happened to tumble
A dozen-odd wires; Egad! What a jumble!
A junkbox was bursting with mouldy old gear,
Neglected, but cherished, for many a year.
The logbook just bristled with skeds, ads, and notes,
'The Loading of Pentodes', and 'How to Raise Goats'.
A trusty long skyhook swung under the stars
(a dandy emitter of black TV bars).
I turned on the box that gives out the noise,
Thinking I'd hear all the usual boys.
Then out of the speaker came a whopping CQ,
A clean-sounding signal, I paused to see who.
His transmissions were brief, his words were so clear,
His procedure the kind that a guy likes to hear.
I zeroed him quickly and flipped on the soup,
Never dreaming he'd answer a rig with no poop.
Said he: "The handle on this end is Sandy,
Just finished working your sweet, rich, old Aunty.
She's sending a gift with a value eternal;
She's sending you CQ, 'The Amateur's Journal' ".
And I heard him repeat: (noise here is infernal)
"All true, active HAMS need 'The Amateur's Journal' ".
The moral is this: Quick! Send in your dough!
CQ gives you what YOU want to know.
However you do it, be it by key or mike,
You'll find in it all the things that you like.
And, lest I forget it, (my schedule's so tight)
MERRY CHRISTMAS to all, and to all, a 'GOODNIGHT'.

NOMINATION FORM --1989 ELECTIONS--N.S.A.R.C.

I,....., A FULLY PAID 1989 MEMBER OF THE NORTH SHORE AMATEUR RADIO CLUB, WOULD LIKE TO NOMINATE ..... WHO IS (OR WILL BE) A FULLY PAID 1989 MEMBER OF THE CLUB, FOR ONE OF CLUB DIRECTORS. HE HAS ASSURED ME THAT HE WILL STAND FOR ELECTION.

SIGNED.....
SECONDED.....
for election committee

S(ome) W(ant) A(11) P(eruse)

THIS IS YOUR SWAP, SELL OR BUY COLUMN --TO HAVE AN ARTICLE LISTED, JUST MAIL INFORMATION TO THE EDITOR OR PHONE IT IN (723-5758)

FOR SALE--NO NEW ITEMS  
WANTED----NO NEW ITEMS

FUTURE MEETING SPECIAL FEATURES

JANUARY 9,1989-- ANNUAL ELECTION MEETING---REMEMBER !!! ONLY PAID UP 1989 MEMBERS ARE ELEGIBLE TO VOTE-- IF YOU CANNOT ATTEND USE FORM BELOW AS PROXY AUTHORITY  
FEBRUARY 13,1989-CLUB PHOTO (WILL BE POSTPONED IF WEATHER BAD)  
MARCH 13,1989----TAB--1989 MAMBERSHIP LIST IN BULLETIN.

PROXY AUTHORIZATION FOR 1989 ELECTIONS --NORTH SHORE AMATEUR RADIO CLUB

I,....., A FULLY PAID 1989 MEMBER OF THE NORTH SHORE AMATEUR RADIO CLUB INC. HEREBY AUTHORIZE ..... A FULLY PAID 1989 MEMBER OF THE CLUB AS MY PROXY TO CAST MY VOTE AS PER FOLLOWS:  
( ) MY SPECIFIC INSTRUCTIONS -OR- ( ) FOR THE CANDIDATE(S) OF HIS CHOICE  
SIGNED.....

PERMANENT REMINDER

IF YOU ARE READING THIS NEWSLETTER OVER THE SHOULDER OF THE HAM WHOSE NAME APPEARS ON THE MAILING LABEL BECAUSE YOU FORGOT TO MAIL IN YOUR RENEWAL OR BECAUSE YOU HAVE NEVER BEEN A MEMBER OF OUR CLUB, NOW'S YOUR CHANCE! PLEASE, USE THE FORM AND INFORMATION BELOW TO JOIN US. (IF THE OWNER WON'T PART WITH IT, USE A FACSIMILE (OR SOMETHING SIMILAR).

HELD OVER BY POPULAR REQUEST AND OUR LOVE FOR YOU!!

FULL MEMBERSHIP-- \$15.00 CDN, (10.50 U.S.)-- INCLUDES FULL VOTING PRIVILEGES AND MONTHLY NEWS BULLETIN FOR ONE CALENDAR YEAR (JANUARY TO DECEMBER, JULY & AUGUST EXCEPTED)  
ASSOCIATE MEMBERSHIP-- \$10.00 CDN (7.00 U.S.)--INCLUDES BULLETIN ONLY AND A HEARTY WELCOME TO ANY MEETINGS YOU CAN GET TO EITHER IN PERSON, OVER THE LAND LINE, OR ON THE AIR.  
2ND FAMILY MEMBER--\$5.00 CDN (3.50 U.S.)--FULL VOTING PRIVILEGES BUT NO MONTHLY BULLETIN (ASSUMED LIVING IN THE SAME HOUSE)

TO JOIN US, OR TO MAKE CHANGES TO MAILING ADDRESS, SIMPLY (YOU'RE A HAM AREN'T YOU?) FILL IN THE FOLLOWING FORM AND MAIL IT ALONG WITH THE APPROPRIATE FEE TO THE REGISTRAR OF THE N.S.A.R.C. AT HIS HOME ADDRESS (PREFERRABLY) 298 DOVER STREET, OSHAWA, ONTARIO, L1G 6G6 OR TO THE CLUB BOX #171, OSHAWA,ONTARIO, L1H 7L1.

NAME- \_\_\_\_\_ CALL- \_\_\_\_\_  
STREET & NO.- \_\_\_\_\_ APMT- \_\_\_\_\_  
CITY \_\_\_\_\_ PROV. OR STATE- \_\_\_\_\_  
POSTAL OR ZIP CODE- \_\_\_\_\_ TELEPHONE- \_\_\_\_\_  
MEMBERSHIP-FULL \_\_\_\_\_ ASSOC \_\_\_\_\_ FAM \_\_\_\_\_ FEE \_\_\_\_\_  
DONATIONS FOR REPEATER FUND (IF YOU DESIRE) \_\_\_\_\_ AMOUNT \_\_\_\_\_