

FROM: THE NORTH SHORE RADIO CLUB INC.,
Box 171, Oshawa, LH 7L1.



Sept / 82

TO:

VE3CRK
DAY, Ralph
454 Holcan Ave.
OSHAWA, Ontario
L1G 5X6

INTERNATIONAL CIVIL AVIATION ORGANIZATION
PHONETIC ALPHABET

A	ALFA	N	NOVEMBER
B	BRAVO	O	OSCAR
C	CHARLIE	P	PAPA
D	DELTA	Q	QUEBEC
E	ECHO	R	ROMEO
F	FOXTROT	S	SIERRA
G	GOLF	T	TANGO
H	HOTEL	U	UNIFORM
I	INDIA	V	VICTOR
J	JULIETT	W	WHISKEY
K	KILO	X	X-RAY
L	LIMA	Y	YANKEE
M	MIKE	Z	ZULU

" S P A R K S "

THE NORTH SHORE AMATEUR RADIO CLUB INC.

SEPT ~~MAY~~ 1982 EDITION

OFFICERS & EXECUTIVE

Directors	Colin Bell	VE3CEU	723-7842
	Bob Elston	VE3LLE	725-5124
	Bob Leet	VE3LLZ	725-1236
	Mac McFarlane	VE3IKG	723-8484
	Hank Verwoerd	VE3FHV	571-0863
President	Bob Elston	VE3LLE	725-5124
Vice-Pres.	Mac McFarlane	VE3IKG	723-8484
Treasurer	Hank Verwoerd	VE3FHV	571-0863
Secretary	Colin Bell	VE3CEU	723-7842
Registrar	John Pluister	VE3FGL	655-4269
Get-Well-Cards	Ted Brant	VE3ADD	668-3561
Editor	Doug Smith	VE3MKC	705-786-2086
Tech Editor	Phil Leith	VE3LNE	728-8167

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Club Repeater: VE3OSH 147.72 In.
147.12 Out.

Club Station: VE3NSR

NETS:- The 2 Meter Net meets every THURSDAY on the club repeater at 19:30 local, with Roy VE3AAF at control.

The 10 Meter Net meets SUNDAY at 10:00 local, on 28.200Mhz. (plus or minus beacon QRM).

* * * * *

N E X T M E E T I N G

THE NEXT REGULAR MEETING TO BE HELD AT THE OLD STAND, THE CAFETERIA OF O'NEILL C.I. FOR THOSE WHO ARE NOT FAMILIER WITH THE ENTRANCE, PARKING IS ON THE EAST SIDE OF THE SCHOOL AND THE DOOR IN ON THE SOUTH EAST CORNER OF THE BUILDING. ONCE ENTERED, TURN LEFT AND PROCEED THRU DOUBLE DOORS ON LEFT. FOLLOW HALL WAY TO RIGHT AND PROCEED UP LOW STAIR CASE, CAFETERIA WILL BE SECOND DOOR (OR THIRD) ON THE RIGHT. THIS IS A GOOD TIME TO GET TO MEET AND GREET NEW AND OLDER FRIENDS. BRING A FRIEND, HE OR SHE JUST MIGHT TURN TO RADIO. REMEMBER THIS HELPS TO KEEP "OUR" CLUB ACTIVE AND STRONG.

ED.

NEWS AND VIEWS

WORDS FROM THE PREZ.

I HAVE A GRIEVENCE;!

WE, ALL OF US ARE WASTING A LOT OF REPEATER TIME BY WEARING OUT OUR CALL SIGN! WE DO NOT NEED TO USE OUR CALL SIGN EVERY DARN TIME WE KEY OUR MIC.. UNLESS I MISSED SOMETHINGSOMEPLACE IN THE RULES AND REGS. IT STATES ROUGHLY, WE MUST USE OUR CALL SIGN AT THE BEGINNING AND END OF EVERY COMMUNICATION OR EVERY 30 MINUTES THEREAFTER. WE ARE ALL PROUD OF OUR CALLS BUT LETS CUIT WORKING THEM TO DEATH.

YOURS FOR BETTER COMMUNICATIONS,

ROB ELSTON

LOOK !!! SHOW AND TELL hmmm, SOUNDS KINDA RISKY FOR OUR MILD MANNERD RADIO CLUB. THIS CAN BE A GREAT NITE IF YOU DON'T LEAVE IT FOR THE OTHER GUY TO BRING HIS STUFF. GATHER UP SOME OF YOUR OWN TOYS AND SHOW THE NEW KIDS IN TOWN HOW SOME OF THIS EQUIPMENT CAN AID THE SHACK. REMEMBER DON'T LEAVE IT FOR THE OTHER GUY.

AS A BOUNIS ^{SOME ONE} ~~RAY PETLEY VE3IC~~ WILL BE THERE WITH SOME TEST EOIPMENT SUCH AS FREQUENCY COUNTER AND DEVIATION CHECKER ONER. I THINK I'LL GET THERE FIRST, THATS WHY NO ONE HAS ^{(HEARD VERY MUCH FROM ME. MY RIG IS SAID TO BE OUT OF WHAK.}
_{HOPE FULLY (LAST MINUTE CHANGE)}

HERE IS SOMETHING WORTHWHILE AND FOR THOSE WHO LIKE HORSES ONE COULD HAVE A SUPER DAY. THE DURHAM REGION HORSE BACK RIDING FOR THE HANDICAPED IS TO BE HELD AT HOSKIN STABLES BLACKSTOCK ONTARIO. THE DATE IS SAT. SEPT. 25th. THE TIME FROM START TO FINISH IS 08:30hrs (8:30 AM) TO 16:00hrs (4:00 PM) ANY PERSONS ABLE TO ASSIST FOR ALL OF THE DAY OR ANY PART THERE OF WITH A HAND HELD OR PORTABLE 2 METER EQUIPMENT SHOULD CONTACT RALPH DAY VE3CRK
THANKS RALPH.

THE EXECUTIVE AND MEMBERSHIP ARE PROUD TO PRESENT DON AMIS WA2ACN , WITH AN HONOURARY MEMBERSHIP IN RECOGNITION OF HIS CONSISTANCY TOWIT, CHECKING IN TO THE N.S.A.R.C. 2METER NET, ONCE A WEEK, WITHOUT FAIL, FROM AUG. 15th 1977 to AUG. 19th 1982.

CONGRATULATIONS FROM US ALL DON. 73 & 88's

SIGNED THE N.S.A.R.C.

HARRY WESTWOOD HAS SOME NEW THINGS FOR THE REPEATER, SUCH AS A NEW CMOS DECODER AND NEW TRANSMITTER TUBES. THIS SOUNDS PRETTY SIMPLE BUT ITS NOT REALLY. ALL THIS EQUIPMENT HAS TO BE TIED TO-GETHER WITH HARRYS EXPERTISE. HARRY ALSO GAVE ME A BIG SCOOP THAT I DIDN'T KNOW. THE REPEATER NORMALLY HAS 33 WATTS INTO THE ANTENNA WITH AN E.R.P. OF 100 WATTS. (back to the books for some eh.)

OUR REPEATER WILL HAVE A SWAP NET IN THE NEAR FUTURE. THIS WILL BE RUN BY MAC VE3IKG, THE EXPECTED DATE IS THE 15th OF SEPT.82. AND THE TIME WILL BE 19:30hrs THE OPERATING INSTRUCTIONS WILL BE GIVEN AT START OF NET.

JACK ELSTON WILL TRY TO SET UP CODE AND THEORY CLASSES EARLY IN OCTOBER FOR MONDAY NITES.

10 CLASSES @ 37.50 80% ATTENDANCE AND YOU CAN GET THE SECOND 10 FOR 37.50. ALL 20 LESSONS FOR THE SPECIAL PRICE OF ONLY 75.00. IT'S A STEAK
ED,

*** TECHNICAL SECTION ***

This month a circuit based on a CMOS IC, the 4011, an IC consisting of 4 dual input Nand Gates. The circuit is a touch sensitive switch which should make an interesting alternative for the conventional switch in your next project.

Fig.1 - shows the schematic for the switch which uses 2 of the 4 gates in a 4011, therefore 2 switches can be made from one IC.

Fig.2 - is the 4011 pinout.

Since CMOS IC's cannot deliver much output current, the output must usually be buffered. Three output configurations are shown in Fig.1 for varying Load requirements.

Output A - is unbuffered, and is suitable for driving other CMOS circuits only.

Output B - has a single transistor buffer for output currents up to about 20 ma. This circuit is suitable for driving TTL IC's LED's transistor circuit etc. The LED may be omitted if visual indication is not required.

Output C - is a dual transistor buffer capable of output currents up to about 150 ma. This output is ideal for driving a relay coil.

The transistors can be any general purpose PNP silicon type. All resistors are 1/4 watt. The switch changes state when a finger simultaneously contacts the touch plate and ground. Build the circuit with output B and design your own touch plate. The LED will indicate the switching action.

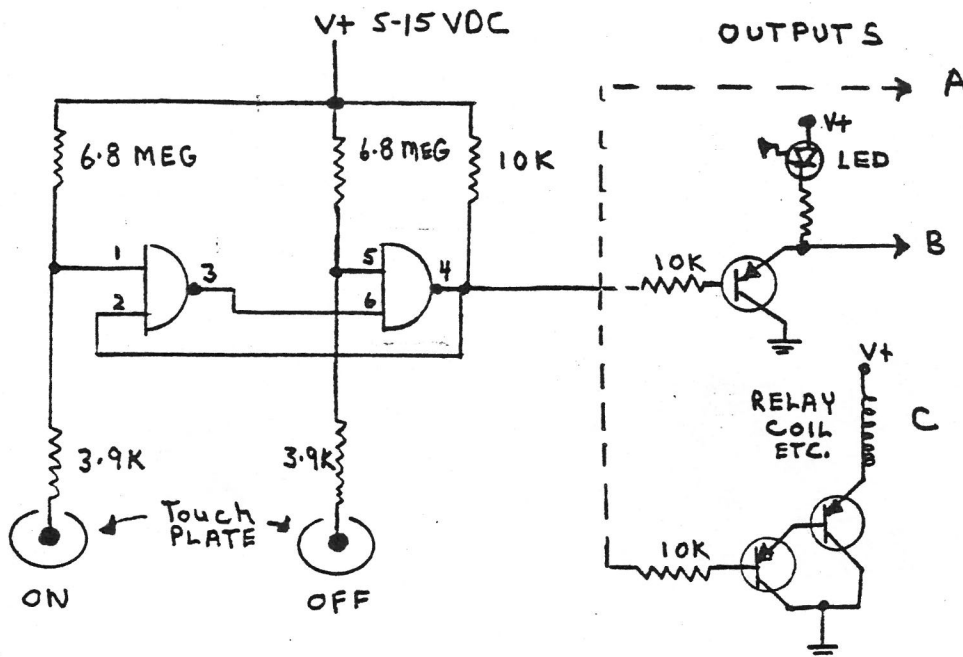


FIG 1 TOUCH SENSITIVE SWITCH

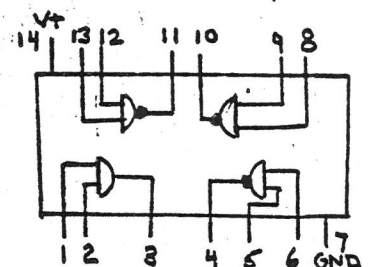


FIG 2 4011 PINOUT

SATELLITE TV PART 3

THE LNA:

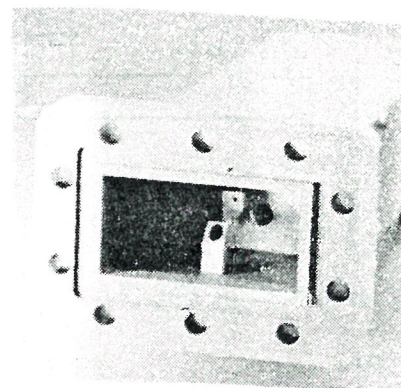
The LNA (LOW NOISE AMPLIFIER) is one of the most important components of a satellite receiving station. It must amplify the very weak 4GHz signals emerging from the Antenna feed horn, without adding any noise of its own. As with any preamplifier which should be mounted as close as possible to the antenna, the LNA is designed to bolt directly to the rectangular waveguide port of the antenna feedhorn. Most commercial LNA's designed for home use provide approximately 50db of gain with noise figures of 1.2 to 1.5db.

The commercial LNA typically uses GasFet transistors for the first two stages biased for minimum noise figure and bipolar transistors for the remaining stages biased for maximum gain. The microwave transistors and FETS tend to be very expensive.

At microwave frequencies normal wiring doesn't work and a technique called stripline is used to "wire" the amplifier. Stripline is a printed circuit technique where one side of the board is solid copper clad, called the ground plane, the other side contains the active devices, printed inductors and transmission lines and microwave capacitors called chip capacitors. The 1980 (and possibly other years) ARRL handbook shows a simple stripline filter which illustrates stripline technique.

The amplified 4Ghz output of the LNA is connected to a high quality low loss coax and routed to the inside of the house to the receiver location. Depending on the length of coax run, coax diameters of 3/8" to 7/8" are required. Generally LNA's require 15V to 24VDC to power the active circuits. The DC is usually delivered from the receiver to the LNA through the coax. This method is often used to power VHF preamplifiers, and saves running an extra pair of wires from the receiver to the LNA.

SHOWN BELOW IS A PHOTO OF A TYPICAL LNA.



VE3 LNE

WE'RE NEARLY THERE!

In our last publicity release sent to you earlier this summer, we mentioned a number of things, and this release, which will be the final one from us here at the Convention Committee, since time is moving right along.

So this will be a series of reminders.

1. THE PLACE - Waterloo Motor Inn, Waterloo, with its expanded facilities and extra rooms. If you haven't reserved by now, get get going - the rooms are going pretty quickly.

2. THE DATES - Friday, Saturday and Sunday, October 1,2,3, 1982

THE FLEA MARKET - 8 a.m. to 3 p.m., Saturday, October 2, and it will be in the new well-lit portion of the hotel, by the swimming pool. Your registration includes entry to the flea market, so register early and save money.

DRAWS - as well as the usual major prize draws and the hourly prize draws, there will be a draw for a synthesized hand-held rig, for RSO members only, and anyone who becomes a member prior to draw time.

FORUMS -all forums will start at 10.45 a.m. Sorry, but at the moment we don't have times or locations, since they are still working on the new wing.

Antenna forum with Yuri Blanarovich, VE3BMV.....DX with Gary Hammond, VE3GCO..
.... Live Satellite TV Demo with Ed Laevens.....Color SSTV with Syd Horne,
VE3EGO and Russ Dryden, VE3AUU.....Packet Radio with Glen Simpson, VE3DSP....
ACSB Mobile, with A.J. Bonney.....the RSO Annual General Meeting.....

LADIES' PROGRAM - the ladies program will be on a separate program from the main convention program, and will be in your "goody bag". Arts and crafts display...visit to "Woodside"....china forum with the largest Royal Doulton dealer in the area.....ladies' hospitality suite (new with the 1982 convention).... lunch and prize draw around the pool.....again the major prize is a Waterloo County hand-made quilt.....all events at the Waterloo Motor Inn.....


AND FINALLY, MOST IMPORTANT - For registration and information, call this number.....

(519) 745-3866

All of you who attended the Convention last year will remember the excellent entertainment and the mouthwatering Friday buffet and Saturday banquet - this year, more of the same. Gemutlichkeit!!

See you October 1 in Waterloo.

73


Merrick Jarrett, VE3BCZ
Chairman, Publicity C ommittee
RSO '82 Convention

REGISTRATION INFORMATION

A registration badge gives you access to all sessions, forums, displays, flea markets, etc., and a chance to win major prizes of amateur equipment. Non-registered family members may attend the Saturday Banquet and the Friday Buffet and Dance if one member is registered. Ladies attending the noon luncheon program must be registered.

All advance registrations forms received will be entered into a free advance registration prize draw for a two-meter hand held transceiver. In addition, there will be a free draw for all RSO members registered and all RSO memberships purchased at the Convention prior to the Saturday night Banquet. These two draws will be held at the Saturday Banquet. Winner will not have to be present to win.

| PROGRAM | ADVANCE PRICE | CONVENTION DAY PRICE |
|--|---------------|----------------------|
| Regular Registration | \$ 5.00 | \$ 7.00 |
| Seller's Flea Market Tables
(Sat. 8 a.m.-3 p.m.), each | 5.00 | 5.00 |
| Friday night Gemutlichkeit
Cocktails 6-7 p.m., Buffet 7-8 p.m.
Entertainment and Dance 8 p.m.-1 a.m. | | |
| Full Buffet, Entertainment and Dance | 9.00 | 9.00 |
| Entertainment and Dance only | 5.00 | 5.00 |
| Saturday Night Banquet and Dance
Cocktails 6-7 p.m.
Banquet 7 p.m. | 20.00 | 20.00 |
| Ladies' Program | | |
| Ladies' Registration | 4.00 | 5.00 |
| Saturday Noon Luncheon, 1 p.m. | 6.00 | 6.00 |
| Bus Tour, Saturday 9.00 a.m. | 1.00 | 1.00 |

All advance registration tickets will be held and can be picked up at the advance registration desk, starting 2 p.m. Friday, October 1. Because of mail delivery delays all advance registrations should be mailed before September 15, 1982. Any tickets not picked up will have the prize draw stubs filled out and deposited in the prize drums.

The Convention Committee will attempt to make hotel registrations for those wishing to stay at the Convention hotel. The room rate is \$46.00 per night plus Provincial Sales Tax. Most rooms have 2 double beds and up to 2 people can stay for the basic rate. \$5.00 per person is charged for up to two additional persons.

If you wish to stay at the Waterloo Motor Inn, reserve early. One night's deposit is required to hold your room. This can be made by cheque or a VISA number. Those making a hotel reservation will be sent a room confirmation.

Hotel reservations must be received by September 1, 1982. After that date, contact the hotel direct at (519) 884-0220 and specify that you wish RSO Convention rooms.

**1982 R S O CONVENTION
OCTOBER 1, 2, 3, 1982
WATERLOO MOTOR INN**

PLEASE FILL OUT AND MAIL THIS PAGE WITH YOUR REMITTANCE

1982 R S O CONVENTION
OCTOBER 1, 2, 3, 1982
WATERLOO MOTOR INN

1. REGISTRATION

Advance Registration (\$7.00 at door) _____ tickets @ \$ 5.00 = \$ _____

Seller's Table for Flea Market _____ tickets @ \$ 5.00 = \$ _____

2. SOCIAL ACTIVITIES

Friday Night "Gemutlichkeit"
Buffet, Entertainment and Dance _____ tickets @ \$ 9.00 = \$ _____

Entertainment and Dance only _____ tickets @ \$ 5.00 = \$ _____

Saturday Night
Banquet and Dance _____ tickets @ \$20.00 = \$ _____

3. LADIES' PROGRAM

Advance Registration (\$5.00 at door) _____ tickets @ \$ 4.00 = \$ _____

Saturday Noon Luncheon _____ tickets @ \$ 6.00 = \$ _____

Saturday Waterloo County Bus Tour _____ tickets @ \$ 1.00 = \$ _____

Total Tickets _____ Total \$ _____

4. HOTEL RESERVATIONS - WATERLOO MOTOR INN ONLY

Fri. Night _____ Sat. Night _____ Total persons in party _____

One night deposit _____ Room(s) @ \$46.00 + PST = \$ _____

Grand Total \$ _____

Payable by cheque () Money Order () VISA ()

To - RSO CONVENTION COMMITTEE VISA No. _____

P.O. Box 2261, Station "B" Expiry Date _____

KITCHENER, Ontario N2H 6M2 Signature _____

Name _____ Call _____

Address _____ Phone _____

City _____ Prov. _____ Post. Code _____

RSO Member - () yes () no

Office Use Only - Rec'd () Checked () Entered () Hotel ()